

## **POLICY**

E & B Oilfield Services Inc. has adopted this policy to ensure the safety of employees who use scaffolding in doing their work.

## **REFERENCES**

- §1926 Subpart L – Scaffold:
  - §1926.450 – Scope, application and definitions applicable to this subpart
  - §1926.451 – General requirements
  - §1926.454 – Training requirements
- E & B Oilfield Services Inc. Fall Protection Policy

## **RESPONSIBILITIES**

The following engineering controls, training requirements and safe work practices will be enforced by Kirk Duncan to protect our employees from hazards associated with the erecting and use of scaffolds:

- Training of all employees that work on scaffolds is conducted by "qualified" persons.
- An inspection of the scaffold will be conducted by a competent person and deemed safe before being used.

### **Competent Person**

The competent person will be trained in accordance with the Occupational Safety and Health Administration (OSHA) and responsible for:

- Directing employees who erect, dismantle, move or alter scaffolding
- Determining if it is safe for employees to work from a scaffold during storms or high winds, and ensure that a personal fall arrest system (PFAS) is in place
- Training employees involved in erecting, disassembling, moving, operating, repairing, maintaining or inspecting scaffolding to recognize associated work hazards
- Inspecting scaffolds and scaffold components for visible defects before each work shift, after any occurrence which could affect the structural integrity and to authorize prompt corrective action
- Inspecting ropes on suspended scaffolds before each work shift and after every occurrence that could affect the structural integrity and to authorize prompt corrective actions
- Suspension scaffolds: Evaluating direct connections to support the load to be imposed
- Erectors and dismantler's: Determining the feasibility and safety of providing fall protection and access
- Scaffold components: Determining if a scaffold will be structurally sound when intermixing components from different manufacturer's and determining if galvanic action has affected the capacity when using components of dissimilar metals

## **Qualified Person**

Qualified persons will be responsible for:

- Designing and loading scaffolds in accordance with design specifications
- Training employees working on the scaffolds to recognize the associated hazards and understand procedures to control or minimize those hazards
- For suspension scaffolds:
  - Designing platforms on two-point adjustable suspension types that are less than 36 inches wide to prevent instability
  - Making swaged attachments and spliced eyes on wire suspension ropes
  - Designing components in accordance with design specifications

## **TRAINING**

Before use, each E & B Oilfield Services Inc. employee who performs work erecting, disassembling, moving or working with scaffolds in any way is trained under the supervision of Kirk Duncan, who is designated as the qualified person for E & B Oilfield Services Inc., to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. Retraining will occur when conditions change or as needed.

The training program, at a minimum, addresses the following hazards:

- Assessment of any electrical hazards, fall hazards and falling object hazards in the work area
- The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the scaffolding and fall protection systems and falling object protection systems being used
- Proper use of the scaffold and the proper handling of materials on the scaffold
- Maximum intended loads and the load carrying capacities of the scaffolds used
- The nature of scaffold hazards
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting and maintaining the type of scaffold being used
- The design criteria, maximum intended load carrying capacity and intended use of the scaffold
- Any other safety topics deemed pertinent to the particular worksite, scaffold system or fall protection systems being used
- Retraining is required when scaffold application, type of scaffold used or when job conditions change

When E & B Oilfield Services Inc. has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, E & B Oilfield Services Inc. will retrain each such employee so that the requisite proficiency is regained. Retraining is required in at least the following situations:

- Where changes at the worksite present a hazard about which an employee has not been previously trained
- Where changes in the types of scaffolds, fall protection, falling object protection or other equipment present a hazard about which an employee has not been previously trained
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

## **DEFINITIONS**

Adjustable suspension scaffold means a suspension scaffold equipped with a hoist(s) that can be operated by an employee(s) on the scaffold.

Bearer (putlog) means a horizontal transverse scaffold member (which may be supported by ledgers or runners) upon which the scaffold platform rests and which joins scaffold uprights, posts, poles and similar members.

Boatswains' chair means a single-point adjustable suspension scaffold consisting of a seat or sling designed to support one (1) employee in a sitting position.

Body belt (safety belt) means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline or deceleration device.

Body harness means a design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders, with means for attaching it to other components of a PFAS. Brace means a rigid connection that holds one (1) scaffold member in a fixed position with respect to another member, or to a building or structure.

Bricklayers' square scaffold means a supported scaffold composed of framed squares which support a platform.

Carpenters' bracket scaffold means a supported scaffold consisting of a platform supported by brackets attached to building or structural walls.

Catenary scaffold means a suspension scaffold consisting of a platform supported by two (2) essentially horizontal and parallel ropes attached to structural members of a building or other structure. Additional support may be provided by vertical pickups.

Chimney hoist means a multi-point adjustable suspension scaffold used to provide access to work inside chimneys. (See multi-point adjustable "suspension scaffold.")

Cleat means a structural block used at the end of a platform to prevent the platform from slipping off its supports. Cleats are also used to provide footing on sloped surfaces such as crawling boards.

Competent person means 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.

Continuous run scaffold (run scaffold) means a two-point or multi-point adjustable suspension scaffold constructed using a series of interconnected braced scaffold members or supporting structures erected to form a continuous scaffold.

Coupler means a device for locking together the tubes of a tube and coupler scaffold.

Crawling board (chicken ladder) means a supported scaffold consisting of a plank with cleats spaced and secured to provide footing, for use on sloped surfaces such as roofs.

Deceleration device means any mechanism, such as a rope grab, rip-stitch lanyard, specially woven lanyard, tearing or deforming lanyard, or automatic self-retracting lifeline lanyard, which dissipates a substantial amount of energy during a fall arrest or limits the energy imposed on an employee during fall arrest.

Double pole (independent pole) scaffold means a supported scaffold consisting of a platform(s) resting on cross beams (bearers) supported by ledgers and a double row of uprights independent of support (except ties, guys, braces) from any structure.

Equivalent means alternative designs, materials or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

Exposed power lines mean electrical power lines which are accessible to employees, and which are not shielded from contact. Such lines do not include extension cords or power tool cords.

Eye or Eye splice means a loop with or without a thimble at the end of a wire rope.

Fabricated decking and planking means manufactured platforms made of wood (including laminated wood, and solid sawn wood planks), metal or other materials.

Fabricated frame scaffold (tubular welded frame scaffold) means a scaffold consisting of a platform(s) supported on fabricated end frames with integral posts, horizontal bearers and intermediate members.

Failure means load refusal, breakage or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

Float (ship) scaffold means a suspension scaffold consisting of a braced platform resting on two parallel bearers and hung from overhead supports by ropes of fixed length.

Form scaffold means a supported scaffold consisting of a platform supported by brackets attached to formwork.

Guardrail system means a vertical barrier, consisting of, but not limited to, top rails, midrails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lower levels.

Hoist means a manual or power-operated mechanical device to raise or lower a suspended scaffold.

Horse scaffold means a supported scaffold consisting of a platform supported by construction horses (sawhorses). Horse scaffolds constructed of metal are sometimes known as trestle scaffolds.

Independent pole scaffold (see "Double pole scaffold").

Interior hung scaffold means a suspension scaffold consisting of a platform suspended from the ceiling or roof structure by fixed length supports.

Ladder jack scaffold means a supported scaffold consisting of a platform resting on brackets attached to ladders.

Ladder stand means a mobile, fixed-size, self-supporting ladder consisting of a wide flat tread ladder in the form of stairs.

Landing means a platform at the end of a flight of stairs.

Large area scaffold means a pole scaffold, tube and coupler scaffold, systems scaffold or fabricated frame scaffold erected over substantially the entire work area. For example: A scaffold erected over the entire floor area of a room.

Lean-to scaffold means a supported scaffold which is kept erect by tilting it toward and resting it against a building or structure.

Lifeline means a component consisting of a flexible line that connects to an anchorage at one (1) end to hang vertically (vertical lifeline), or that connects to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a PFAS to the anchorage.

Lower levels mean areas below the level where the employee is located and to which an employee can fall. Such areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water and equipment.

Masons' adjustable supported scaffold (see "Self-contained adjustable scaffold").

Masons' multi-point adjustable suspension scaffold means a continuous run suspension scaffold designed and used for masonry operations.

Maximum intended load means 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.

Mobile scaffold means a powered or unpowered, portable, caster or wheel-mounted supported scaffold.

Multi-level suspended scaffold means a two-point or multi-point adjustable suspension scaffold with a series of platforms at various levels resting on common stirrups.

Multi-point adjustable suspension scaffold means a suspension scaffold consisting of a platform(s) which is suspended by more than two (2) ropes from overhead supports and equipped with means to raise and lower the platform to desired work levels. Such scaffolds include chimney hoists.

Needle beam scaffold means a platform suspended from needle beams.

Open sides and ends mean the edges of a platform that are more than 14 inches (36 cm) away horizontally from a sturdy, continuous, vertical surface (such as a building wall) or a sturdy, continuous horizontal surface (such as a floor), or a point of access. Exception: For plastering and lathing operations the horizontal threshold distance is 18 inches (46 cm).

Outrigger means the structural member of a supported scaffold used to increase the base width of a scaffold in order to provide support for and increased stability of the scaffold.

Outrigger beam (Thrust out) means the structural member of a suspension scaffold or outrigger scaffold which provides support for the scaffold by extending the scaffold point of attachment to a point out and away from the structure or building.

Outrigger scaffold means a supported scaffold consisting of a platform resting on outrigger beams (thrust outs) projecting beyond the wall or face of the building or structure, the inboard ends of which are secured inside the building or structure.

Overhand bricklaying means the process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. It includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.

PFAS means a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline or combinations of these.

Platform means a work surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks, fabricated decks and fabricated platforms.

Pole scaffold (see definitions for "Single-pole scaffold" and "Double (independent) pole scaffold").

Power operated hoist means a hoist which is powered by other than human energy.

Pump jack scaffold means a supported scaffold consisting of a platform supported by vertical poles and movable support brackets.

Qualified means one (1) who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work or the project.

Rated load means the manufacturer's specified maximum load to be lifted by a hoist or to be applied to a scaffold or scaffold component.

Repair bracket scaffold means a supported scaffold consisting of a platform supported by brackets which are secured in place around the circumference or perimeter of a chimney, stack, tank or other supporting structure by one (1) or more wire ropes placed around the supporting structure.

Roof bracket scaffold means a rooftop supported scaffold consisting of a platform resting on angular-shaped supports.

Runner (ledger or ribbon) means the lengthwise horizontal spacing or bracing member which may support the bearers.

Scaffold means any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

Self-contained adjustable scaffold means a combination supported and suspension scaffold consisting of an adjustable platform(s) mounted on an independent supporting frame(s) not a part of the object being worked on, and which is equipped with a means to permit the raising and lowering of the platform(s). Such systems include rolling roof rigs, rolling outrigger systems and some masons' adjustable supported scaffolds.

Shore scaffold means a supported scaffold which is placed against a building or structure and held in place with props.

Single-point adjustable suspension scaffold means a suspension scaffold consisting of a platform suspended by one (1) rope from an overhead support and equipped with means to permit the movement of the platform to desired work levels.

Single-pole scaffold means a supported scaffold consisting of a platform(s) resting on bearers, the outside ends of which are supported on runners secured to a single row of posts or uprights, and the inner ends of which are supported on or in a structure or building wall.

Stair tower (Scaffold stairway/tower) means a tower comprised of scaffold components and which contains internal stairway units and rest platforms. These towers are used to provide access to scaffold platforms and other elevated points such as floors and roofs.

Stall load means the load at which the prime-mover of a power-operated hoist stalls or the power to the prime-mover is automatically disconnected.

Step, platform, and trestle ladder scaffold means a platform resting directly on the rungs of step ladders or trestle ladders.

Stilts means a pair of poles or similar supports with raised footrests, used to permit walking above the ground or working surface.

Stonesetters' multi-point adjustable suspension scaffold means a continuous run suspension scaffold designed and used for stone setters' operations.

Supported scaffold means one (1) or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames or similar rigid support.

Suspension scaffold means one (1) or more platforms suspended by ropes or other non-rigid means from an overhead structure(s).

System scaffold means a scaffold consisting of posts with fixed connection points that accept runners, bearers and diagonals that can be interconnected at predetermined levels.

Tank builders' scaffold means a supported scaffold consisting of a platform resting on brackets that are either directly attached to a cylindrical tank or attached to devices that are attached to such a tank.

Top plate bracket scaffold means a scaffold supported by brackets that hook over or are attached to the top of a wall. This type of scaffold is similar to carpenters' bracket scaffolds and form scaffolds and is used in residential construction for setting trusses.

Tube and coupler scaffold mean a supported or suspended scaffold consisting of a platform(s) supported by tubing, erected with coupling devices connecting uprights, braces, bearers and runners.

Tubular welded frame scaffold (see "Fabricated frame scaffold").

Two-point suspension scaffold (swing stage) means a suspension scaffold consisting of a platform supported by hangers (stirrups) suspended by two (2) ropes from overhead supports and equipped with means to permit the raising and lowering of the platform to desired work levels.

Unstable objects mean items whose strength, configuration or lack of stability may allow them to become dislocated and shift and therefore may not properly support the loads imposed on them. Unstable objects do not constitute a safe base support for scaffolds, platforms or employees. Examples include, but are not limited to, barrels, boxes, loose brick and concrete blocks.

Vertical pickup means a rope used to support the horizontal rope in catenary scaffolds.

Walkway means a portion of a scaffold platform used only for access and not as a work level.

Window jack scaffold means a platform resting on a bracket or jack which projects through a window opening.

### SAFE PRACTICES

- Stationary scaffolds over 125 ft. in height and rolling scaffolds over 60 ft. in height will be designed by a professional engineer
- An inspection of the scaffold will be conducted by a competent person and deemed safe before being used
- Damaged or deteriorated equipment will not be used
- All scaffolding systems, components and fall protection systems used will be inspected by Kirk Duncan prior to use, before each work shift begins, after erecting or moving, and periodically through the work day to ensure the system is erected properly, that there is no damage to components of the system, and that the system is being used properly and safely
- Modifications of scaffold by non-qualified employees is prohibited. Only qualified and competent employee are allowed to modify scaffolding systems. Disciplinary action for non-qualified modifications will be enforced
- Any system or component of a system which is found to have a defect in manufacturing or design, damage, excessive wear, weathering, or corrosion, will be immediately removed from service and tagged to indicate that it is not to be used with a prominent tag, as shown below, which states:



- Employees are prohibited from working on scaffolds covered in snow, ice, or other slippery materials, except as necessary for the removal of such materials
- Work on scaffolds is prohibited during high winds or storms unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a PFAS or wind screens

- Unsafe equipment or conditions will be tagged out by a competent person and tags will be complied with
- Any repairs or modifications to a scaffold system or component of a system will be approved by Kirk Duncan before implementation
- Any violation of the above policy, misuse of scaffolds or misconduct while working on scaffolds will be subject to disciplinary action within the scope of Company policy, up to and including termination of employment

### Capacity/Loads

Each scaffold and scaffold component will be capable of supporting, without failure, its own weight and at least four (4) times the maximum intended load applied or transmitted to it. Scaffolds and scaffold components will not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.

### Platforms

Each platform on all working levels of scaffolds will be fully planked or decked between the front uprights and the guardrail supports as follows.

- Platforms will be entirely planked and decked with space not more than one (1) inch wide between the platforms and uprights
- The platform will not deflect more than 1/60 of the span when loaded
- All platforms will be kept clear of debris or other obstructions
- Wood planks will be inspected to see that there are graded for scaffold use, are sound and in good condition, straight grained, free from saw cuts, splits and holes
- Platforms and walkways will be at least 18 inches in width. When the work area is less than 18 inches wide, guardrails and/or PFAS will be used
- Where platforms are overlapped to create a long platform, the overlap will occur only over supports, and will not be less than 12 inches unless the platforms are nailed
- The front edge of all platforms will not be more than 14 inches from the face of the work without guardrails or PFAS
- A platform greater than ten (10) ft. in length will not extend over its support more than 18 inches, unless it is designed and installed so that the cantilevered portion of the platform is able to support employees without tipping, or has guardrails which block employee access to the cantilevered end
- Do not cover wood with opaque finishes, other than the edges for making identification
- Coatings will not obscure the top or bottom wood surfaces
- Each end of the platform, unless cleated or otherwise restrained by hooks or equivalent means, will extend over the centerline of its support at least six (6) inches
- Scaffold components manufactured by different manufacturers will not be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained. Scaffold components made of dissimilar metals will not be used together unless a competent person has determined that galvanic action will not reduce the strength of any component

## **Support Scaffolds**

Supported scaffolds are platforms supported by legs, outriggers beams, brackets, poles, uprights, posts, frames or similar rigid support. The structural members, poles, legs, posts, frames and uprights will be plumb and braced to prevent swaying and displacement.

Supported scaffolds with a height to base width ratio of more than 4:1 will be restrained by guying, tying, bracing or an equivalent means.

The following placements will be used for guys, ties and braces.

- Install guys, ties, or braces at the closest horizontal member to the 4:1 height and repeat vertically with the top restraint no further than 4:1 height from the top
- Vertically – every 20 ft. or less for scaffolds less than three (3) ft. wide and every 26 ft. or less for scaffolds more than three (3) ft. wide
- Horizontally – at each end; at intervals not to exceed 30 ft. from one (1) end

Supported scaffold poles, legs, posts, frames and uprights will bear on base plates and mud sills or other adequate firm foundation and will include the following:

- Footings will be level, sound, rigid and capable of supporting the loaded scaffold without settling or displacement
- Unstable objects will not be used to support working platforms
- Front-end loaders and similar pieces of equipment will not be used to support scaffold platforms unless specifically designed by the manufacturer for such use
- Forklifts will not be used to support scaffold platforms unless the platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied

Supported scaffold poles, legs, posts, frames and uprights will be plumb and braced to prevent swaying and displacement.

## **Suspended Scaffolds**

A suspension scaffold contains one (1) or more platforms suspended by ropes or other non-rigid means from an overhead structure, 1926.450(b), such as the following scaffolds: Single-point, multi-point, multi-level, two-point, adjustable, boatswain's chair, catenary, chimney hoist, continuous run, elevator false car, go-devils, interior hung, masons' and stone setters.

- All support devices will rest on surfaces that can support four (4) times the scaffold load when operating at the rated load of the hoist, or at least one-and-a-half (1 ½ ) times the load imposed on them by the scaffold at the stall capacity of the hoist, whichever is greater
- A competent person will evaluate all direct connections before use to confirm that the supporting surfaces are able to support the imposed load
- Suspension scaffolds will be secured to prevent them from swaying
- Guardrails, a PFAS or both will protect each employee more than ten (10) ft. (3.1 m) above a lower level from falling

- A competent person will inspect ropes for defects before each work shift and after every occurrence that will affect a rope's integrity
- When scaffold platforms are more than two (2) ft. (0.6 m) above or below a point of access, ladders, ramps, walkways, or similar surfaces will be used
- When using direct access, the surface will not be more than 24 inches (61 cm) above or 14 inches (36 cm) horizontally from the surface
- When lanyards are connected to horizontal lifelines or structural members on single-point or two-point adjustable scaffolds, the scaffold will have additional independent support lines equal to the suspension lines and have automatic locking devices
- Outrigger beams will be placed perpendicular to their bearing support
- Emergency escape and rescue devices will not be used as working platforms, unless designed to function as suspension scaffolds and emergency systems
- Tiebacks will be secured to a structurally sound anchorage on the building or structure. Sound anchorages do not include standpipes, vents, other piping systems or electrical conduit. A single tieback will be installed perpendicular to the face of the building or structure. Two (2) tiebacks installed at opposing angles are required when a perpendicular tieback cannot be installed
- Only those items specifically designed as counterweights will be used
- Counterweights will be secured by mechanical means to the outrigger beams
- Vertical lifelines will not be fastened to counterweight
- Sand, masonry units or rolls of roofing felt may not be used for counterweights
- The suspension ropes will be long enough to allow the scaffold to be lowered to the level below without the rope passing through the hoist or the end of the rope configured to prevent the end from passing through the hoist
- Repaired wire may not be used
- Drum hoists will contain no less than four (4) wraps of the rope at the lowest point
- Employers will replace wire rope when the following conditions exist: Kinks; six (6) randomly broken wires in one (1) rope lay or three (3) broken wires in one (1) strand in one (1) lay; one third (1/3) of the original diameter of the outside wires is lost; heat damage; evidence that the secondary brake has engaged the rope; and any other physical damage that impairs the function and strength of the rope
- Suspension ropes supporting adjustable suspension scaffolds will be a diameter large enough to provide sufficient surface area for the functioning of brake and hoist mechanisms
- Suspension ropes will be shielded from heat-producing processes
- Power-operated hoists used to raise or lower a suspended scaffold will be tested by a qualified testing laboratory
- The stall load of any scaffold hoist will not exceed three (3) times its rated load
- The stall load is the load at which the prime-mover (motor or engine) of a power-operated hoist stalls or the power to the prime-mover is automatically disconnected
- Gasoline power-operated hoists or equipment are not permitted

- Drum hoists will contain no less than four (4) wraps of suspension rope at the lowest point of scaffold travel
- Gears and brakes will be enclosed
- An automatic braking and locking device, in addition to the operating brake, will engage when a hoist makes instantaneous change in momentum or an accelerated overspeed.
- Manually operated hoists used to raise or lower a suspended scaffold will be tested a listed by a qualified testing laboratory
- These hoists require a positive crank force to descend

Welding can be done from suspended scaffolds when:

- A grounding conductor is connected from the scaffold to the structure and is at least the size of the welding lead
- The grounding conductor is not attached in series with the welding process or the work piece
- An insulating material covers the suspension wire rope and extends at least four (4) ft. (1.2 m) above the hoist
- Insulated protective covers cover the hoist
- The tail line is guided, retained or both, so that it does not become grounded
- Each suspension rope and any other independent lines are insulated from grounding

### **Access Requirements**

Access will be provided when scaffold platforms are more than 24 inches above or below the point of access. Direct access is acceptable when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surfaces. Cross braces will not be used as a means of access.

Type of access which are permitted: Portable ladders tied off to the structure; hook-on ladders; attachable ladders; stairways; stair towers; ramps and walkways; or integral prefabricated frames.

When erecting or dismantling supported scaffolds, a safe means of access will be provided when a competent person has determined the feasibility and analyzed the site conditions.

## **FALL PROTECTION**

Fall protection includes guardrail systems and PFAS.

### **Guardrails**

All scaffolds more than six (6) ft. above the lower level will protect employees with guardrails on each open side of the scaffold. Guardrails will be installed along the open sides and ends before releasing the scaffold for use by the employees other than erection or dismantling crews.

Guardrails are not required when:

- The front end of all platforms are less than 14 inches from the face of the work
- When employees are plastering and lathing 18 inches or less from the front edge

Materials such as steel or plastic banding will not be used for top rails or mid-rails.

## Fall Arrest Systems

PFAS include harnesses, components of the harness/belt such as Dee-rings, and snap hooks, lifelines, and anchorage point. Employees working on scaffolds ten (10) ft. or more above ground/floor level will use fall protection in accordance with E & B Oilfield Services Inc.'s Fall Protection Program.

The following chart illustrates the type of fall protection required for specific scaffolds.

Type of Scaffold	Fall Protection Required
Aerial lifts	PFAS
Boatswains' chair	PFAS
Catenary scaffold	PFAS
Crawling board (chicken ladder)	PFAS, or a guardrail system, or 3/4inch (1.9 cm) diameter grabbling or equivalent handhold securely fastened beside each crawling board
Float scaffold	PFAS
Ladder jack scaffold	PFAS
Needle beam scaffold	PFAS
Self-contained scaffold	Both a PFAS and a guardrail system
Single-point and two-point suspension scaffolds	Both a PFAS
Supported scaffold	PFAS or guardrail system
All other scaffolds not specified above	PFAS or guardrail systems that meet the required criteria

## Clearance Distances between Scaffolds and Powerlines

The following table provides the clearance distances between scaffolds and powerlines, or any other conductive material, while being erected, used, dismantled, altered or moved.

Insulated Lines Voltage	Minimum Distance	Alternatives
Less than 300 V	Three (3) ft.	
300 to 50 kv	Ten (10) ft.	
More than 50 kv	Ten (10) plus 0.4 inches for each 1 kv over 50 kv	Two (2) times the length of the line insulator, but never less than ten (10) ft.
Uninsulated Lines Voltage	Minimum Distance	Alternatives
Less than 50 kv	Ten (10) ft,	
More than 50 kv	Ten (10) ft, plus General Rule: 0.4 inches for each 1 kv over 50 kv	Two (2) times the length of the line insulator, but never less than ten (10) ft.

However, scaffolds can be moved closer if it is necessary for the performance of work, provided the power lines are de-energized or protective coverings are installed to help prevent accidental contact.

## **SCAFFOLD CONSTRUCTION**

Kirk Duncan has been designated as the qualified person responsible for designing scaffolds. Scaffolds will be built to meet the design made by the qualified person.

Different types of scaffolds will be built to meet certain capacity requirements.

Scaffolds that directly connect to roofs and floors and counterweights used to balance adjustable suspension scaffolds, the load capacity will be capable of resisting at least four (4) times the tipping moment imposed by the scaffold operating at the rated load of the hoist or 1.5 (minimum) times the tipping moment imposed by the scaffold operating at the stall load of the hoist, whichever is greater.

For non-adjustable suspension scaffolds, the suspension rope (including connection hardware) will be able to support at least six (6) times the maximum load applied or transmitted to that rope.

For adjustable suspension scaffolds, the suspension rope (including connecting hardware) will be able to support at least (six) 6 times the maximum load applied or transmitted to that rope or at least two (2) times the stall load of the hoist, whichever is greater.

For other types of scaffolds, the scaffold and its components will be able to support its own weight and at least four (4) times the maximum intended load applied or transmitted to it.

Generally, scaffold platforms and walkways will be at least 18 inches (46 cm) wide. If conditions where the scaffold platforms and walkways are built does not allow for this, then the walkways and platforms will be as wide as possible.

The only exceptions to this requirements are ladder jack scaffolds, top plate bracket scaffolds, roof bracket scaffolds and pump jack scaffolds which all will be at least 12 inches (30 cm) wide.

Generally, the maximum distance from the front edge of any scaffold platform will not be more than 14 inches (36 cm) from the face of the work being done. Outrigger scaffolds will a maximum distance of three (3) inches (8 cm) while those used for plastering and lathing will be no more than 18 inches (46 cm) from the face.

However, if guardrail systems are built along the front edge or PFAS are used, then the maximum distance can be greater.

Each end of a platform that is ten (10) ft. or less in length will not extend more than 12 inches over the edge of its support unless the cantilevered portion of the scaffold is able to support employees and/or materials without tipping or has guardrails to prevent employees from accessing the cantilevered end.

Each end of a platform that is greater than ten (10) ft. in length will not extend more than 18 inches over the edge of its support unless the cantilevered portion of the scaffold is able to support employees and/or materials without tipping or has guardrails to prevent employees from accessing the cantilevered end.

On scaffolds where planks are abutted to create a long platform, each abutted end will rest on a separate support surface. Common support members such as "T" sections or the use of hook on platforms are also permitted.

**Fall Hazard Assessment**

Job Name:		Location
Date Assessed:	Related Operating Procedures Reviewed: <input type="checkbox"/> Yes <input type="checkbox"/> No	Location Marked and Entry Controlled: <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Fall Hazard Assessment Checklist</b>		
1. Can an employee enter the area without restriction and perform work?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Are fall prevention systems such as cages, guardrails, toe boards and manlifts in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Have slipping and tripping hazards been removed or controlled?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Have visual warnings of fall hazards been installed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Can the distance a worker could fall be reduced by installing platforms, nets, etc.?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Are any permanently installed floor coverings, gratings, hatches, or doors missing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Does the location contain any other recognized safety and or health hazards?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the space designated as a Permit Required Confined Space?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Have anchor points been designated and load tested?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Assessment Information: (indicate specifics with initials)		
Initials	Hazard	Remarks/Recommendations
	Total potential fall distance	
	Number of workers involved	
	Frequency of task	
	Obtainable anchors point strength	
	Required anchor point strength (not less than 5000 lbs.)	
Additional Requirements:		
Potential environmental conditions that could impact safety:		
Initials	Condition	Remarks/Recommendations
Possible required structural alterations:		
Initials	Alteration	Remarks/Recommendations
Possible task modification that may be required:		
Initials	Task	Remarks/Recommendations
Training requirements:		
Initials	Requirement	Remarks/Recommendations
Personal protective equipment required:		
Initials	Requirement	Remarks/Recommendations
Comments:		
<input type="checkbox"/> Approved <b>Authorization:</b> I certify that I have conducted a Fall Hazard Assessment of the above designated location and have detailed the findings of the assessment on this form. *Further detailed on attachment: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Title:	Date:	Time:
Name:	Signature:	

**Training Record**

