

HEALTH AND SAFETY Policy 341 – Rope Access

1.0 PURPOSE

Westlake, Plaquemine Operations (Westlake) is committed to providing a safe and healthy work environment and protecting all persons working in our facilities from uncontrolled hazards in the workplace. This policy outlines the steps required to establish a rope access policy, protecting approved rope access technicians working in the plant from site-specific hazards associated with performing rope access work on elevated equipment and piping systems. This policy outlines the requirements and criteria for the use of rope access, including the specific operations and circumstances for which it shall be employed.

2.0 SCOPE

This policy applies to all employees who operate, conduct maintenance, and/or provide services for Westlake's processes. It does not void the requirements of any other Westlake site policy.

3.0 DEFINITIONS

- 3.1 **Affected Employee** - Employees impacted by the performance of permitted work, which may include hot work
- 3.2 **Authorized employee** - Employees trained and authorized to perform permitted work in the plant
- 3.3 **Fire Watch** – A person assigned to a hot work project whose sole responsibility is the safety of the open flame hot work activity. This individual must be trained in the use of a portable fire extinguisher.
- 3.4 **Hot Work** - Any operation that can produce a spark, arc, flame, or sufficient heat to cause the ignition of ordinary combustible materials, combustible dust, flammable gases, or vapors.
- 3.5 **Intrinsically Safe** – A protection technique for the safe operation of electrical equipment in hazardous areas by limiting the energy, electrical and thermal, available for ignition.
- 3.6 **Permit-Required Area** – Any location other than a designated area approved for hot work and made fire-safe by removing or protecting combustible materials from ignition sources.
- 3.7 **Process Area** – An area employed in production where an action, operation, or treatment involving chemical, industrial, manufacturing, or processing factors or methods is carried out using substances that may contain or could lead to a potential flammable and/or combustible hazard(s).

HEALTH AND SAFETY Policy 341 – Rope Access

- 3.8 **Safe Work Permit:** This is a multifaceted safety planning tool that ensures necessary safety precautions are addressed before beginning work on site. It is also used to authorize Hot Work.
- 3.9 **SPRAT** - The Society of Professional Rope Access Technicians
- 3.10 **IRATA** - Industrial Rope Access Trade Association

4.0 RESPONSIBILITIES

- 4.1 Equipment Owner
 - 4.1.1 Approved rope access contractors are responsible for their individual fall protection and shall follow all rules and guidelines outlined in this policy. Rope access personnel also must follow all standards and policies recognized by SPRAT or IRATA.
 - 4.1.2 Westlake management, supervisors, and contract supervisors are responsible for ensuring their respective employees adhere to the rules and regulations outlined in this policy.
 - 4.1.3 The Westlake representative authorizing the admittance of rope access contractors shall be responsible for communicating the requirements of this policy and its enforcement.
- 4.2 Contractors
 - 4.2.1 Review and comply with all requirements of the safe work permit policy, their company policy and the governing body of their certification (SPRAT or IRATA).

5.0 POLICY

5.1 ROPE ACCESS

- 5.1.1 This section of the Westlake Plaquemine Rope Access policy outlines the unique principles of using rope access methods for working at heights. It should be recognized that Rope access is different from fall arrest and rope rescue and has its own requirements in terms of equipment, training, and work practices. ANSI Z359.0 E2.149 states, "Rope Access differs from fall arrest, fall restraint, and other fall protection techniques in that the authorized person is generally fully suspended by the rope system during work. The safe use of rope access systems requires specific competence in rope access techniques, acquired through training and experience,

HEALTH AND SAFETY Policy 341 – Rope Access

and confirmed by independent assessment and certification from a competent individual who is authorized to assess and certify rope access skills and knowledge”.

5.2 PLANNING AND MANAGEMENT

- 5.2.1 A level 3 rope access technician is responsible for planning rope access work to ensure that work is conducted safely. This plan is to be submitted before the beginning of work, and an approval form must be completed daily and signed by the Maintenance Manager, Unit Manager, or Superintendent, and the HSE department.
- 5.2.2 A safe work plan, a Job Hazard Analysis (JHA), and an approved rope access plan shall be in place before any work, rigging, or staging of equipment. A representative from the Westlake safety department is required to review each Job Hazard Analysis (JHA) before work commences. JHA and rope access plan must cover ascending and descending path hazards with mitigations. As part of this review, it must cover hazards along the path or in adjacent areas (e.g., PSV vents, hot or cold equipment, specific chemical hazards, tank vents with/ chemical, instruments in the path, etc.)
- 5.2.3 The tie-off or anchor points must be identified and inspected prior to staging equipment. These must be identified in the safe work plan.
- 5.2.4 As part of the permitting process, a pre-rope access briefing and safety consultation should be conducted to discuss the objective(s) of the rope access work to be performed. This should take place at the job site location. It should include a discussion of any site-specific policies to be followed, any emergency protocols or considerations (e.g., evacuation and rescue), and any operational hazards or environmental conditions that could affect the work site. This meeting should include members of the rope access team and the person issuing the permit to work.
- 5.2.5 Any other relevant Westlake documents for performing the scope of work should be considered at this briefing.
- 5.2.6 A rope access-specific Job Hazard Analysis (JHA) shall be completed before commencing work. At the daily “toolbox” meeting, each member of the team shall sign the JHA to verify that the information on the JHA has been communicated and is fully understood by all. The Rope Access JHA should include, as a minimum:
 - 5.2.6.1 Site Representative contact details, including emergency contact information for Health and Safety, and activating EMS.
 - 5.2.6.2 A detailed description of the worksite location(s), including specific unit and equipment designations.
 - 5.2.6.3 A brief description of the work to be performed.

HEALTH AND SAFETY Policy 341 – Rope Access

- 5.2.6.4 A list of tools required and controls to prevent injury or dropped equipment.
- 5.2.6.5 The unique hazards associated with the rope access work site, the work to be performed, and the methods used to mitigate those hazards.
- 5.2.6.6 A list of required permits and procedural documents (e.g., confined space, etc.).
- 5.2.6.7 Verification of lock-out/ tag-out and energy isolation.
- 5.2.6.8 A list of PPE to be used.
- 5.2.6.9 Verification of pre-work equipment inspections.
- 5.2.6.10 A rope access rigging plan includes access methods to be used, identification of all anchor points, and methods used to mitigate specific risks, such as from side impact, hot pipes, and sharp edges.
- 5.2.6.11 Arrangements for exclusion zones, barricading of hazard areas, and specific methods to be used.
- 5.2.6.12 A communication plan including methods for communication between any involved third-party personnel (e.g., crane operators, plant operations, etc.).
- 5.2.6.13 A rope access rescue plan, including protocols and egress plans in the event of an immediate need to leave the elevated worksite, and responsibilities in terms of the rescue duties of the rope access team members and any on-site safety personnel.
- 5.2.6.14 Assembly locations in the event of fire/ release and/or alarm. Location of nearest safety shower.
- 5.2.6.15 Any changes in scope, work operations, or worksite conditions shall cause a review of the JHA, with any changes receiving the necessary management approval and amendments to the JHA and other relevant permit documents.

5.3 TRAINING AND COMPETENCE

- 5.3.1 All rope access personnel shall be certified SPRAT or IRATA technicians.
- 5.3.2 All technicians should be trained and competent to carry out the work scope required and should only be allocated tasks appropriate to their level of certification.
- 5.3.3 Technicians who have been inactive in rope access for more than 6 months shall have received refresher training.
- 5.3.4 Valid certification cards and rope access log books can verify certification status and experience levels.

5.4 SUPERVISION

- 5.4.1 A Rope Access Level III Supervisor must be present on all rope access work sites.

HEALTH AND SAFETY Policy 341 – Rope Access

- 5.4.2 It is recommended that the supervisor's certification be consistent with that of the technicians under their care.
- 5.4.3 If the Level III Supervisor must go on ropes, another qualified team member shall be designated and appropriately trained to perform rescue duties under the worksite conditions.

5.5 EQUIPMENT

- 5.5.1.1 The technician(s) shall inspect all equipment before use in accordance with the manufacturer's instructions to determine whether it is safe for its intended use.
- 5.5.1.2 The manufacturer's recommendations for the use, care, inspection, and maintenance of rope access equipment shall be followed.
- 5.5.1.3 Pre-use equipment inspections shall be verified by the Level III Supervisor and documented on the JHA.
- 5.5.1.4 Damaged or defective rope access equipment shall be immediately removed from service.

5.6 WORK METHODS

- 5.6.1 Work from ropes is typically performed using two independently anchored lines: one as the primary means of access and support, and the other as a backup safety line. Rope access technicians may also use various techniques, including mobile aid climbing in combination with harnesses and other devices, to maintain safety while climbing through structures or transitioning from one area to the next, and as the primary means of support at the work location.
- 5.6.2 The rope access team must have a minimum of two certified rope access operatives on all work sites, one of which must be a Rope Access Level III Supervisor. More certified technicians may be necessary or required in some situations. The team size must be appropriate for the task and provide the ability to respond in the event of an emergency
- 5.6.3 A minimum of three technicians is recommended for most work associated with petrochemical facilities to ensure adequate rescue capabilities and situational awareness.
- 5.6.4 All tools needed for work at height shall have lanyards attached and be tethered to prevent them from falling. Bulky, awkward, or heavy items should be connected to a separate line secured to an independent anchor system. Small items such as fasteners can be carried or hauled in a suitable container, such as a sturdy bag equipped with a top closure drawstring.

HEALTH AND SAFETY Policy 341 – Rope Access

5.6.5 Open flame hot work shall be conducted from rope access in conjunction with mobile aid tools to ensure protection of ropes while working.

5.6.6 LOTO may be completed by a rope access technician due to limited accessibility of the equipment. An operator that is certified in that area and on that equipment may accompany the rope access technician to Lock Out/Tag Out the equipment while maintaining 100% visual contact with that employee to ensure its proper location.

5.6.7 Process openings may be completed by a rope access technician due to limited accessibility of the equipment. An operator that is certified in that area and on that equipment MUST accompany the rope access technician to complete the process opening of the equipment while maintaining 100% visual contact with that employee to ensure its proper documented location. All process openings done via rope access MUST utilize the same PPE as notated in the PPE matrix.

5.7 EXCLUSION ZONES

5.7.1 Exclusion zones shall be established to isolate hazard areas from other personnel.

5.7.2 Exclusion zones shall prevent unauthorized persons from walking or working beneath employees performing rope access operations.

5.7.3 Barricading and/or warning signs shall be placed on all levels where personnel or objects may be at risk from work activities, exposed edges, or dropped objects.

5.7.4 The approved ropes access contractor will provide the rescue plan, personnel, and equipment

5.8 RESCUE PLAN/EMERGENCY POLICYS

5.8.1 A written rescue plan must be outlined before work begins. The contractor is responsible for their own rescue. The main objective of the rope access team's rescue plan is to identify how to safely move affected personnel from the location of the accident to a place of safety and interface with the existing emergency response teams.

5.8.2 If Westlake agrees to provide any elements of the rescue plan, the responsibility for rescue equipment or duties should be clearly stated. These might include equipment or medical response, but Westlake will not provide high-angle rescue for rope access jobs. For each job, the rescue plan should include the following:

5.8.2.1 Designated rescue leader and an alternate leader.

5.8.2.2 Emergency resources, including contact numbers, rescue capabilities or limitations, and estimated response time.

5.8.2.3 A reliable communication system between team members, facility management, and EMS responders.

5.8.2.4 Best locations to transfer the patient to EMS personnel.

HEALTH AND SAFETY Policy 341 – Rope Access

- 5.8.2.5 Type of rescue operations that may be needed (hauling, lowering, etc.)
- 5.8.2.6 Minimum number of people needed to perform a rescue.
- 5.8.2.7 Special equipment and anchors are needed.
- 5.8.2.8 First aid measures /consideration of potential for suspension trauma.
- 5.8.3 Where work is carried out overwater, suitable rescue equipment shall be provided, and measures adopted to arrange for prompt rescue.

5.9 ANCHORS

- 5.9.1 A competent person specifically trained in rope access shall determine appropriate anchorage and rigging.
- 5.9.2 Non-certified anchors should be capable of withstanding a load of 5000 pounds or at least two times the anticipated load as determined by a competent person.
- 5.9.3 Examples of Acceptable Anchors:
 - 5.9.3.1 Substantial structural steelwork (I-beams, Tubular steel, Box sections)
 - 5.9.3.2 Approved engineered or certified anchor points.
 - 5.9.3.3 Beam clamps and other anchor devices conforming to ANSI Z359
- 5.9.4 Criteria for Piping Anchor Points for Rope Access Operations
The schedule of piping must be verified before selecting Anchor Point.
 - 5.9.4.1 Carbon steel and chrome alloy within T-min
 - 5.9.4.1.1 Piping 6" or larger for spans up to 10' between pipe supports
 - 5.9.4.1.2 Piping 8" or larger for spans up to 20' between pipe supports
 - 5.9.4.1.3 Piping 12" or larger for spans up to 30' between pipe supports
 - 5.9.4.2 Stainless Steel and Alloy 20 within T-min
 - 5.9.4.2.1 Piping 10" or larger for spans up to 10' between pipe supports
 - 5.9.4.2.2 Piping 14" or larger for spans up to 20' between pipe supports
- 5.9.5 **Insulated pipes may be used only with HSE Leadership approval.**

5.9 REFERENCES

- 5.9.1 ANSI+ASSE+Z359.2-2007
- 5.9.2 ANSI+ASSE+359.0-2012

5.10 PERMITTING

- 5.10.1 To ensure any rope access work has been properly planned, the Rope Access Technician must be present during the safe work permit job walk. The checklist items should be discussed at the worksite during the job, and the safe work permit issuer and the Rope Access Supervisor should ensure that the Rope Access Approval Form is completed.

5.11 Approved Ropes Access Contractors

- 5.11.1 HSE will maintain a list of approved Ropes Access Contractors (Appendix B)

HEALTH AND SAFETY Policy 341 – Rope Access

- 5.11.2 In order to approve a contractor to do Ropes Access work onsite, the HSE department will meet with the group to understand their processes and safety plans
- 5.11.3 Audit their training facilities or practices
- 5.11.4 Each approved ropes access contractor will be reviewed at least every three years and maintained on the approved list.

6.0 APPENDICES

- 6.1 Rope Access Approval Form
- 6.2 HSE Approved Contractor List

Revision History

Rev	Changes	Approved	Date
1	Policy Created by Adam Rabalais	H. Garner	

HEALTH AND SAFETY Policy 341 – Rope Access

Appendix 6.1
 (HSP-341)

ROPE ACCESS APPROVAL FORM

Location:			
Contract Monitor			
Date		Work Order	
Location			
Equipment:			
Equip #			
Unit			
Verification of Rope Access Location and Approval:			
<u>Verified the Rope Access? Any policy deviation?</u>			
Unit Manager (Print)			
Unit Manager (Sign)			
Date:			
HSE Dept. (Print)			
HSE Dept. (Sign)			
Date:			
Contractor Monitor (Print)			
Contractor Monitor (Sign)			
Date:			

HEALTH AND SAFETY Policy 341 – Rope Access

Appendix 6.2
(HSP-341)

HSE Approved Rope Access Contractors

TSS	Acuren	