



Contractor H&S Reference Guide

Rev. 5



Westlake Chemical - Plaquemine Operations

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❖ Introduction

Welcome to Westlake Chemical-Plaquemine Operations, and thank you for being a part of our team.

This document is to assist in promoting a safe and healthy work environment for all those entering our facility. The following will provide you with a baseline knowledge of requirements and guidelines used at our facility, and will assist you with becoming familiar with our plant. This document is not intended to encompass all requirements for the site and is only to be used as a tool to assist with increasing safety awareness. Please see all of Westlake Plaquemine's Health and Safety Procedures at <http://westlake.com/plaquemine-ehs>. Items contained in this guide are subject to change based on turnaround plans, variances, and other special circumstances. If you have additional questions, please contact a Westlake Representative.

All contractors and subcontractors are required to adhere to all requirements set forth in this document as well as Westlake's Health and Safety Procedures. All contractors and subcontractors are also required to adhere to all rules and regulations set forth by federal, state, and local agencies. Any willful violation of an established rule or regulation may result in termination and removal from the site.

People are our number one asset, and our goal at Westlake is that everyone goes home the same way they came to work. We can contribute to this by living our vision statement at the Plaquemine site:

"To have a safety culture where:

- All levels of management are exhibiting visible safety leadership
- Employees and contractors are empowered and equipped to manage all hazards within their span of control
- Employees and contractors are accountable for their personal safety and look out for the safety of their co-workers"

As our founder T.T. Chao once said, "We have put safety first, and it will remain our number one priority. No job can be so important, or urgent, that people cannot take the time to work safely. Life is precious and irreplaceable."

PACE Principles

We create a strong culture of safety at Westlake through our use of the **PACE** principles:

P – Make It **Personal**

A – **Ask** Open-ended Questions

C – **Create An Environment** Where Everyone Feels Comfortable Asking Questions

E – **Escalation** Is A Right And A Responsibility

Employees and contractors must always use **PACE** principles when conducting tailgate meetings, issuing and receiving permits, and completing tasks onsite.

Responsibilities

Contractors are responsible for maintaining a high degree of safety awareness at all times. Continuous safety monitoring of all employees is a necessity to implement productive safety programs. Contractors will be held responsible for all unsafe acts occurring in their work area. Contractors must own their safety, and the safety of others, by creating and maintaining a safe work environment as well as escalating issues. Everyone has the right and responsibility to use “Stop Work Authority.” If you see an unsafe act which is immediately dangerous to health or safety, you must stop the job until the issue is resolved.

To assist with increasing safety awareness, all contractors must submit a Safety Plan when the project crew size is 25 persons or greater. The safety plan must contain, at a minimum, those items set forth in HSP 325 – Contractor Safety Management. This safety plan will be specific to the job being completed. See Appendix B for a copy of the Safety Plan Worksheet which is required to be submitted with the Safety Plan.

In addition to a Safety Plan, project crew sizes of 25 persons or greater will require a dedicated Contractor Safety Representative. The Contractor Safety Representative (the safety representative working for the contractor) must not have any other duties and must meet the requirements set forth in HSP 325.

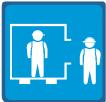
All primary contractors are responsible for the safety of any subcontractors working for the primary contractor’s company. Subcontractors will also be held accountable for their actions onsite.

Westlake's 8 Life Critical Rules

Westlake has identified 8 clear and consistent Life Critical Rules specific to life-critical activities, and these rules are intended to save lives.

The following Life Critical Rules Are:

- Mandatory and applicable across ALL Westlake sites.
- Specific to Life Critical activities.
- Simple and easy to understand.



Rule 1: Work in Confined Spaces

Obtain authorization and valid permit prior to entering a confined space.

- Concerning confined spaces, you must ensure with Entry Supervisor that:
 - All acceptable entry conditions are met and recorded on permit(s) before authorizing prior to entry
 - Rescue preplans have been reviewed and understood, specific PPE identified and implemented, and atmospheric monitoring and ventilation are in place
 - The space is isolated from the process
 - The space is cleaned and purged for safe entry
 - The entry supervisor, attendant, and entrant(s) are trained and understand their qualified and authorized to perform primary job functions. required duties
 - Post-Confined Space Entry Conference is conducted and documented on permit



Rule 2: Work on Powered Systems

Verify energy isolation and Lockout/Tagout/Try-out prior to beginning work and use the specified life protecting equipment.

- Before performing service or maintenance on equipment:
 - Ensure equipment has been Isolated, locked, tagged, and “verified” / “tried” for control of hazardous energy with Westlake Operations
 - Contractor supervisor confirms adequate equipment isolation by walking down lockout list with Westlake Operations the equipment is adequately isolated
 - Attach personal locks or group locks to lockbox
- Key Points for Control of Hazardous Energy:
 - ONLY Operations is responsible for equipment preparation or isolation
 - Operations applies orange tags and green locks to all isolation points
 - Operations affixes red lock with LOTO tag to group lockbox
 - Each party is responsible for removing the same locks they originally affixed to the group lockbox at the end of each shift. The following shift must repeat the LOTO procedure outlined in HSP-317
 - ONLY Operations is responsible for putting equipment back into service



Rule 3: Work requiring valid approved Permits

Work with a valid and approved permit when required.

- Confirm with Westlake Ops that the permit is accurately filled out
- Ensure with Westlake Ops that the permit identifies all required PPE
- Where applicable, confirm the LEL and Oxygen readings have been recorded
- Where required, have a qualified fire watch or confined space attendant on duty
- Where required, have the certified competent person sign the permit



Rule 4: Bypassing/disabling mechanical safety devices/process control interlocks

Obtain authorization before overriding or disabling safety critical equipment.

- Confirm all mechanical safety devices are in place before using mechanical equipment or tools
- Do not remove or modify any mechanical devices before or while using mechanical equipment or tools
- Obtain the required level of authorization before bypassing or disabling safety protection devices
 - *If approval is obtained, ensure a plan for other safeguards exist and is in place.*



Rule 5: Working from elevated heights

Protect yourself from a fall when working at elevated heights 4 ft. or above.

- Wear a personal fall arrest system when:
 - Working at or above a height of 4 ft. outside of protective equipment or safeguards
 - When inside a personnel lift basket
 - Performing elevated work on yellow-tagged scaffolds
 - Use a personal fall arrest system while working from fixed or portable ladders
 - Portable ladders must also be tied-off to prevent tipping
 - Ladders must be Extra Heavy Duty, IA Rating, ANSI-ASC A14.5 Approved, and Non-Metal.
 - A-Frame ladders cannot be taller than 10ft.
 - Extension ladders cannot extend longer than 24ft.
 - Only use approved, inspected scaffolding and ladders
 - Keep your eyes on your path
 - *Please escalate to Westlake Operations any actions or conditions that actively or have the potential to pose a fall hazard.*



Rule 6: Process piping and equipment line opening

Protect yourself from a potential unexpected release of hazardous chemical.

- When involved in process piping or equipment line opening:
 - Review and understand the physical and chemical risks
 - When entering the line opening's affected area, wear the required PPE until all line openings are completed
 - Prior to starting permitted work, take the time to locate, identify and communicate with your crew any nearby emergency equipment (ex: safety showers, eye wash stations, fire extinguishers etc.)
 - Position yourself outside the line of fire
 - Beware of sudden release of accumulated liquid or solid material.
- *If you encounter abnormal conditions, stop job activities and contact operations.*
- *Also, stop work if any uncontrolled or unexpected product is released, evacuate the area and notify operations immediately.*



Rule 7: Operating material handling equipment

Safely operate mechanical material equipment. Do not walk under a suspended load.

- Only operate cranes or forklifts:
 - Within the manufacturer's specified parameters
 - *Before each use, ensure all safety devices are operable and inspections are completed.*
 - If trained and authorized
- Additional safety requirements for operating mechanical material equipment:
 - Always wear your seatbelt
 - Never operate a crane directly above or near high voltage lines or equipment without sufficient authorization
 - Never use a mobile phone or operate while distracted



Rule 8: Work in hazardous atmospheres

Conduct atmospheric tests when required.

- Never enter an area containing a potentially explosive atmosphere with objects which could generate a spark or ignition
- Monitor ambient air conditions during hot work
- Acquire a work permit for all work generating hot spots
- Wear specified PPE as detailed on the approved permit
- For Confined Space Entry, AT LEAST one entrant must wear a personal atmospheric monitor per work zone. The quantity and location of the personal atmospheric monitor(s) will be determined by the Entry Supervisor.

❖ Plant Entry Requirements

In order to be granted plant entry, the following must be met:

Visitors

- Completed the Westlake Visitor Orientation
- Possess a valid government-issued photo I.D.
- Must be escorted by a Westlake Representative or Nested Contractor unless they possess a valid TWIC and the Westlake Site-Specific

Workers

- Company has an acceptable grade in ISNetwork
- Completed the OSHA Basic Orientation Plus, SAF BASIC, or Safety Essentials at an Association of Reciprocal Safety Councils (ARSC).
- Completed Basic Orientation Plus, SAF BASIC , or Safety Essentials *Refresher* where required.
- Completed Westlake Site Specific at an ARSC or remotely
- Possess a valid TWIC
- Possess a valid government-issued photo I.D.

Course description and Codes:

Course	Course Code	Method	Time	Description
SAF Basic – Remote Proctored	12BASICV	Web-Based-Facility Based Computer Training	3 hours	This new course is now accepted in place of the Basic Orientation Plus (BOP). Students with a computer and camera can take this course online (24 hrs. availability) or at the local Alliance Safety Council. The course meets all of the contractor PSM requirements. Students will receive a digital ID, which must be presented when arriving to obtain an entry badge.
SAF Basic – Refresher Remote Proctored	12BASIUUV	Web-Based-Facility Based Computer Training	1 hour	This new course is a refresher for the SAF Basic. Students with a computer and camera can take this course online (24-hour availability) or at the local Alliance Safety Council. The course meets all of the PSM requirements. Students will receive a digital ID, which must be presented when arriving to obtain an entry badge.
Safety Essentials	SE-SAFE	Web-Based Computer Training	3 hours	This new course is now accepted in lieu of SAF BASIC or Basic Orientation Plus. The course meets all of the contractor PSM requirements. Students will receive a digital ID, which must be presented when arriving to obtain an entry badge. The course is available at the following link: HASC - Home
Westlake Plaquemine Site and Unit Orientation	12WLKPLQ	Facility-Based Computer Training	1.30 hours	This is our standard site orientation course. This course must be taken at one of the Alliance Safety Council Locations. <i>Prerequisites: BOP, SAF Basic, or Safety Essentials</i>
Westlake Plaquemine Site and Unit Orientation (Remote Proctored)	12WSLPLV	Web-Based-Facility Based Computer Training	1.30 hours	This new course allows contract employees to complete the Westlake Plaquemine site-specific remotely. Students with a computer and camera can take this course online (24 hrs. availability) or at the local

				Alliance Safety Council. Students will receive a digital ID, which will be presented when arriving to obtain an entry badge. Prerequisites: BOP, SAF Basic, or Safety Essentials
Westlake Plaquemine Visitor Orientation	12WLKV	Web-Based Facility-Based Computer Training	30 mins	This new course allows visitors/vendors to complete the Westlake Plaquemine visitor orientation remotely. Students with a computer and camera can take this course online (24 hrs. availability) or at the local Alliance Safety Council. Students will receive a digital ID, which will be presented when arriving to obtain an entry badge.
Basic Orientation Plus (BOP)– ARSC Reciprocal	12BR	Instructor-Led	6.30 hours	This is the original course that was required to meet PSM requirements. This instructor-led course must be taken at the Alliance Safety Council. SAF Basic will be accepted in lieu of this course.
Basic Orientation Plus (BOP) Refresher – ARSC Reciprocal	12BR1	Facility-Based Computer Training	2 hours	This is the refresher for the original course required to meet PSM requirements. This computer-based course must be taken at the Alliance Safety Council.

Badge Request

Please use the following link or QR code for all badge requests and renewals. This form must be filled out to request badging for contractor personnel. Upon scanning this code OR by clicking the link, instructions walk the user through a series of questions to help get your company employees badges for access to our facility.

Please contact the HSE department for any questions.

[Badge Request Form](#)



Delivery Drivers

- Completed the Westlake Visitor Orientation
- Possess a valid state-issued driver's license
- Possess a TWIC
- Possess paperwork showing what is to be picked up / dropped off

Placards with the name of the company must be present on both sides of any vehicle entering the plant. Hangtags issued at the gate must be hung on the rearview mirror.

In order to ensure the safety and well-being of all personnel entering our complex, it is important they are capable of comprehending all plant warning signs as well as verbal and written instructions. For this reason, personnel must possess a minimum level of proficiency in the English language to be allowed access into the plant. This minimum level will be gauged by the successful completion of all orientation documentation and tests without assistance from others.

Subcontractors must be approved in ISNetworld before being allowed access onsite. Many times, contractors have to utilize subcontractors for unplanned work such as failed rental equipment. It is the responsibility of the primary contractor to ensure that the rental equipment being used can be serviced by an approved contractor before bringing the equipment onsite.

Plant Entry PPE includes:

- Hard hat (Class E)
- Safety glasses with side shields (Must meet ANSI Z87.1)
- Closed-toed, leather footwear
- Acid gas escape respirator (Recommended Model: Honeywell 7902)
- Hearing Protection where noise levels exceed 85 dBA
- Long Pants

PPE Required for Entry into Process Areas:

- Hard hat (Class E)
- Safety glasses with side shields (Must meet ANSI Z87.1)
- Safety-toed, non-porous, leather footwear
- Acid gas escape respirator (Recommended Model: Honeywell 7902)
- Hearing Protection where noise levels exceed 85 dBA
- FRC; Long sleeve shirt and long pants or coveralls (Shirt must be tucked in)
- Gloves on hands (Must be specific to the task you are completing)
- Mono-goggles (Must be on your person; Must be donned when required; Must be worn in direct contact with the head; Retainer rings are not allowed)

Note: The PPE requirements above are the minimum PPE requirements to enter the facility. Contractors must also follow the PPE requirements for the task being completed.

❖ Emergencies

In the case of an emergency:

- Dial **333** from any in-plant phone or dial **(225) 685-2500** from any external phone. You may also use a plant radio tuned to the **Emergency Channel**.
- Calmly state your name, location, and extent of the emergency.

Westlake has several emergency response teams which are trained to handle various situations. Using the emergency notification system is the best way to get personnel the appropriate treatment as quickly as possible.

During a Complex-Wide alarm or a Unit-Specific alarm, all personnel must immediately shut down combustion engines and begin moving to Shelter-in-Place Locations. Personnel should determine the general area of the emergency relative to their position, observe wind direction, and move upwind and/or cross wind to the nearest Shelter-in-Place location based on the location of the emergency. Once at the Shelter-in-Place location, a head count must be taken of all employees and submitted to the Headcount Monitor for that building. You must also report your headcount to your Contract Monitor (Westlake Representative/Project Manager).

When the contract work force exceeds five (5) personnel, the Contractor will provide at least one (1) employee trained in Basic First Aid and CPR/AED to be onsite at all times during project work hours. The contract work force includes subcontractors as well. The contractor must also maintain a first aid kit meeting ANSI standards and of adequate size for the number of employees working on the project.

❖ Incident / Injury / Near Miss & Man Hour Reporting

Contractors must report all injuries, illnesses, incidents (including environmental incidents), and near misses as soon as possible to operations. Contractors must also notify the Contract Monitor and the Westlake HSE Department of any injuries, illnesses, incidents or near misses as soon as possible, but no later than thirty (30) minutes after the incident.

If a contract employee must be taken offsite for medical treatment or evaluation, the HSE Department must be notified immediately.

The contractor will investigate each injury, illness, or incident and submit a written incident notification by the end of the shift on which the event occurred. A root cause analysis, or 5-Y, must also be submitted to the Contract Monitor and HSE Department per HSP 110 Incident Investigation.

The work hours for each contractor must be submitted monthly through ISNetworld. This information must be reported by the 5th of each month for the previous month. (ex. January work hours worked must be reported by February 5th). The report will only include hours spent working on a Westlake, Plaquemine project.

Subcontractors are responsible for reporting their own work hours, and should not be included in the primary contractor's work hour report.

❖ Drug / Alcohol Policy

Contractors on working time, operating any Westlake or Contractor equipment, present on Westlake property, or conducting Westlake-sponsored events are prohibited from:

- being impaired or under the influence of alcohol, drugs and/or over-the-counter drugs, if such impairment or influence adversely affects the Contractor's work performance, the safety of the Contractor or of others, or puts at risk Westlake's reputation.
- the presence of any detectable amount of alcohol and/or illegal drugs in the person's system
- the possession of drug paraphernalia or drugs
- alcohol inside of the fence line

Contractors must have a drug testing policy which addresses the following:

- Pre and Post-Employment Testing
- Post-Incident Testing
- Reasonable Suspicion Testing
- Random Testing (10% annual minimum)
- Unlawful Activity
- Fit for Duty
- Searches
- Refusal to Cooperate

❖ Weather

Lightning

When lightning has been detected by the Weather Service within seven (7) miles of the Plaquemine site, a Lightning Alert will be sent out over the plant radio and the plant-wide speaker system.

When a Lightning Alert is issued, the following actions must take place:

- All personnel conducting non-essential work on exposed, elevated structures, or personnel working in exposed areas without overhead protection, must bring their task to a safe state and evacuate to a protected area.

- All crane and aerial lift operations must be brought to a safe position and the workers must evacuate to a protected area.
- All confined spaces must be terminated and evacuated.

When no lightning has been detected within seven (7) miles of the Plaquemine site for thirty (30) minutes, an All Clear Alert will be given by the Weather Service and communicated to the site over the plant radio and the plant-wide speaker system. Site procedures must be followed before returning to work including reissuance of permits.

Tornado

When a Tornado Warning has been issued for a geographical area which includes the Plaquemine site, the Tornado Warning Alert will be sent out over the plant radio and the plant-wide speaker system.

When a Tornado Warning Alert has been issued, the following actions must take place:

- All personnel engaged in outdoor activities, or in vehicles shall move into permanent structures as quickly as possible.
- All personnel working in non-permanent buildings shall move to permanent structures.
- Personnel in permanent structures shall move to the ground floor away from windows and into central hallways and rooms.

Once the Tornado Warning has been lifted, an All Clear will be communicated to the site over the plant radio and the plant-wide speaker system. Site procedures must be followed before returning to work including reissuance of permits.

❖ Facility Siting

All temporary buildings, otherwise known as a c-cans, tents, sheds, etc., that are intended to be occupied on Westlake property must be reviewed by the Emergency Response Contact. A Louisiana State Fire Marshalls' Request for Exemption will be completed and submitted to the Louisiana State Fire Marshall by the Emergency Response Supervisor before the building can be occupied. No building (i.e. tent, trailer, shack, c-can, etc.) will be occupied without the Request for Exemption being approved by the Fire Marshalls' office.

❖ Vehicle / Railroad / Traffic Safety

All personnel entering the site are required to obey all safety rules and regulations pertaining to the operation of vehicles / mobile equipment as if they were on federal, state, and local roadways. Vehicles and mobile equipment must always be operated in a safe manner.

The plant speed limit is 15 miles per hour unless otherwise posted.

A 360 degree walk around must be conducted before moving vehicles / mobile equipment. Drivers must sound a repetitive horn blow while backing up unless the vehicle is equipped with a backup alarm. It is required to use a spotter when maneuvering in tight areas or when there are nearby hazards.

Personnel may only pass bicycles, vehicles, or pedestrians if it can be accomplished in a safe manner. Vehicles / mobile equipment may not pass others if it requires operation of the equipment above the posted speed limit.

Seat belts are required to be worn in all vehicles / mobile equipment that are equipped with seat belts.

Drivers are required to obtain a vehicle entry permit from operations before entering a process area with a vehicle, and vehicles must not be left running unattended.

Vehicles / mobile equipment must immediately drive to the side of the road, shut down the engine, and leave the keys in the unlocked vehicle during an emergency alarm.

Smoking is not permitted in vehicles / mobile equipment anywhere on the site. Cell phone use is not permitted while the vehicle / mobile equipment is in motion.

No personnel will be permitted to ride in the bed of a truck.

Always expect the movement of trains, engines, or cars at any time in either direction. Always use Stop, Look, and Listen before crossing and railroad tracks. Never pass under, over, or between cars less than one hundred (100) feet apart on the same track, or within fifty (50) feet around the end of a car or engine. It is prohibited to go under or around any crossing arm, chain, or other barrier device or to disobey the commands of a railroad operator.

Vehicles, materials, or equipment must not be placed within ten (10) feet from any railroad track.

❖ Hazard Management

All personnel are required to:

- Identify all hazards associated with their work (i.e. noise, heat, chemical, physical)
- Assess the risk associated with the hazards (What are the potential consequences from exposure to the hazard?)
- Identify and implement controls to manage the hazards (safe work practices, PPE, etc)
- Have recovery measures in place in the event something goes wrong (i.e. personal fall protection, emergency procedures)

All contractors are required to complete a JSA (Job Safety Analysis), or equivalent, before beginning any work on site.

The use of JSAs, permits, good communication, and PACE all assist in hazard management.

❖ Safety Data Sheets

Safety Data Sheets (SDSs) meeting the OSHA HazCom standard are required for all chemicals manufactured, stored, or used on site.

Before bringing a chemical onsite, it must be approved via the Westlake SDS chemical management system, SpheraCloud™.

SDSs are made available on the intranet through SpheraCloud™ as well as a backup copy at the Main Security Center. If an SDS is needed, or you have questions about whether a chemical is approved, contact operations or the HSE Department.

❖ General Safety

Barricading

Contractors will furnish, erect, maintain and dismantle all barriers required for their work. All barricades must be tagged on all sides and must state the company name and the reason for the barricade.

Barricades are required:

- Around process openings
- Around crane superstructures and swing paths
- To define hazard areas of overhead work
- Around open excavations
- Around fall-through or trip hazards
- Around work areas where x-ray activities are being performed
- For prevention of entry into unattended confined spaces
- To protect personnel from potentially hazardous conditions or situations

Yellow barricades indicate **“CAUTION”**. Personnel must be aware of the hazards before entering and obtain permission from the owner of the barricade.

Red barricades indicate **“DANGER”**. Personnel must be aware of the hazards, obtain permission from the barricade owner, and sign onto the Safe Work Permit before entering.

X-ray barricades are yellow and magenta. Entry into an x-ray barricade is only permitted if adequately trained and issued a safe permit to do so.

All temporary holes/openings in walking/working surfaces, including excavations, must be guarded using “hard” barricades or regulatory coverings to prevent a person from falling in, stepping through, or tripping into the hole. Other areas that present a hazard immediately dangerous to life or health that warrants unwanted personnel entry must also be hard barricaded. Personnel entering a barricade must have on, at a minimum, the same level of PPE as others within the barricade and as identified on any permits.

Utility Stations / Hoses / Connections

Hoses connected to utility stations must meet the following color-coding requirements:

- Steam – Red
- Water – Blue
- Plant Air – Green
- Nitrogen – Black
- CA Wash Water – Yellow

See HSP 312 – Utility Identification for required fittings.

Although contractors may bring in and use hoses and fittings which are different than those specified, only specified hoses and fittings can be connected to any Westlake utilities. Modification of utility connections or breathing air connections is prohibited.

Anti-whip devices or pins must be used where possible.

Plant air is backed up by nitrogen and plant air is never considered acceptable to use for breathing air. Also, air-powered tools used in confined spaces must never utilize plant air.

Electrical

All cord sets, receptacles, and electrical tools must not be “daisy chained” or connected in a series. Cords must never be ran through doorways, and they must be rated for the work being done. The maximum allowable length of an extension cord is 100ft. If a contractor needs additional length, contact Maintenance I&E for support. Contractors will provide ground fault circuit interrupter (GFCI) protection for all cord sets, receptacles, and electrical tools including connections to generators and equipment connected by cord and plug for use by employees.

All portable equipment must be grounded while in use to designated grounding locations – HSP 306 Electrical Safety, this includes welding machines, generators, hydro-blasting equipment, vacuum trucks, etc.



All electrical equipment and lines will be considered energized until Westlake I&E has verified that it is not through the LOTO process. It is required to maintain a distance of at least ten (10) feet from power lines with mobile equipment, such as manlifts, aerial lifts, etc. Cranes must maintain a distance of at least twenty (20) feet from power lines. If a crane needs to approach closer than twenty (20) feet from a power line, see HSP 330 – Cranes, Derricks, and Rigging.

Housekeeping

During the course of construction, alteration, or repairs, all debris will be kept cleared from work areas, passageways, and stairs.

Housekeeping is to be an ongoing process throughout the day, and not performed only at the completion of the day's work.

Regarding waste and scrap, ensure that your area has proper waste identification bins or roll offs, such as scrap metal or industrial waste. Only dispose of waste in properly identified bins. If you have environmental needs, contact your Westlake Contact or Contract Monitor.

Cell Phone Usage

Cell phones are not permitted in process areas, and are not allowed for use while operating vehicles/mobile equipment.

Photograph Policy

Personnel requesting to use photographic equipment must attain approval from their Contract Monitor. A Westlake Representative must be present any time pictures are taken within the plant boundaries unless the contractor is nested at the Plaquemine site. The Contract Monitor must approve all photos/videos taken before allowing the photos/videos to leave the site.

Personnel using photographic equipment must attain a Safe Work Permit, or verbal approval when a Safe Work Permit does not apply.

Any pictures taken in Class I, Division 2 areas and above require a Hot Work Permit.

Camera phones are never considered approved photographic equipment.

Smoking Policy

Smoking, including vaping, is only allowed in designated areas and is not allowed in vehicles or inside of buildings.

Temporary smoking areas may be established with approval from the HSE Department and the Unit Production Manager. Temporary smoking areas are only valid with the issuance of a Hot Work Permit for every shift the smoking area is being used. The smoking areas must not be within fifty (50) feet of flammable or combustible liquids, and must have a fire extinguisher present.

Gas Cylinders

Cylinders must be in an upright position and secured at all times. Modifications to any type of gas cylinders are prohibited.

Empty cylinders must be stored separately from full cylinders.

Cylinders of oxygen must not be stored closer than twenty (20) feet from cylinders of flammable gas unless a five (5) foot protective barrier is installed between them with a thirty (30) minute fire rating.

❖ Permitting

Safe Work Permit

A Safe Work Permit (SWP) is required for all work within process areas. All permits will be issued by operations.

Contractors working on the specific job must sign the Safe Work Permit acknowledging they understand the scope of the job, the hazards associated with the work, and the controls that are put in place in order to perform the job safely.

Upon completion of the job, the contractor must return the field (tan) copy of the SWP to operations and ensure housekeeping is in order.

Hot Work Permit

The Hot Work Permit is contained within the Safe Work Permit. It is required for all activities within a process area which may produce sparks or flames, such as welding, cutting & burning. A Hot Work Permit will be issued for the following reasons: vehicle-entry (intended specifically for vehicles and equipment with internal combustion engines) and power, electric or pneumatic tools not approved for Class I, Division II areas. See HSP 203 for additional information.

Continuous atmospheric monitoring is required for all spark producing activities. Combustible material must be kept thirty-five (35) feet away from any hot work.

Fire Watches must:

- Wear a highly visible vest
- Have appropriate fire extinguishing equipment
- Possess an air horn
- Obtain a plant radio tuned to the appropriate operations channel for emergency response
- Conduct continuous monitoring throughout the job
- Not have any other duties that may interfere with the Fire Watch duties (fire watch cannot also be a confined space attendant)
- Stay at least thirty (30) minutes after hot work operations have ceased
- Be adequately trained

Confined Space Permit

A Confined Space Entry Permit is required for entry into any confined space.

Continuous atmospheric monitoring is required for all confined space entries except in special circumstances as stated in HSP 202.

A personal atmospheric monitor will be required for at least one entrant per work zone. The quantity and location of the personal atmospheric monitors will be determined by the Entry Supervisor.

Excavations greater than four (4) feet in depth will be considered confined spaces.

Confined Space Attendants must:

- Conduct continuous monitoring throughout the job and document the readings on the Confined Space Permit at least once per hour (the first reading must be taken immediately upon attending the space)

- Maintain an accurate count of authorized entrants by documenting their names, company, and time in and out on the Confined Space Permit
- Be stationed immediately outside of the point of entry/exit and able to communicate with the occupants throughout the entry
- Obtain a plant radio tuned to the appropriate operations channel for emergency response
- Order entrants to evacuate the area if an emergency condition presents itself
- Communicate with the Entry Supervisor if any changes occur
- Not have any other duties that may interfere with the Attendant duties (Confined Space Attendant cannot also be a Fire Watch)
- Be certified by their employer.

Hot Tap

A Hot Tap is the technique of welding and/or drilling, or the like, on in-service equipment.

A Hot Tap must not take place without an approved Hot Tap Permit per HSP-201: Hot Tap Permit.

❖ Control of Hazardous Energy (Lock Out / Tag Out)

The purpose of lock out / tag out is to protect workers from the unexpected release of hazardous energy or stored energy during their work activities. Therefore, it is required that all energy sources be isolated and verified before anyone begins work on a piece of equipment.

Lock Color Code:

- Red – Owner/Operations Lock
- Green – Isolation Lock
- Black – Long Term Lock
- Yellow – Maintenance Department Lock (Contractor provides this lock)
- Blue – Individual Lock (Contractor provides this lock)

Key Points:

- Do not remove any lock or tag without proper authorization
- Where potential exposure to hazardous energy exists, do not proceed with work until all equipment is properly isolated, locked, tagged, tried, with energy isolation verified.
- Personal locks must be affixed to the lock out box prior to working on equipment.

- The permit recipient must affix an orange “Do Not Operate” tag at each isolation point identified by the equipment owner, or sign an orange tag that was previously affixed to the isolation point, before beginning work.

Key Steps On:

- The equipment owner isolates equipment and prepares equipment for opening or cutting.
- The equipment owner applies tags and green isolation locks to all isolation points including bleeders.
- The equipment owner secures the key to isolation locks in the lock box and affixes owner their white “Do Not Operate” (DNO) tag and red owner/operations lock to the lock box.
- The contractor permit recipient verifies isolation by affixing orange tags (or signing a previously hung tag) at each isolation point.
- After verifying energy isolation, the contractor permit recipient affixes their orange tag and yellow lock to the lock box. (Assuming custody of lockout configuration.) The permit recipient shall then print and sign their name in the permit recipient acknowledgement section of the Energy Isolation and Verification List.
- Each member of the crew affixes a individual blue lock to the lock box. The supervisor/foreman must also hang a blue personal lock if working on equipment. All contractor locks must have the employee’s name and company name clearly printed on the body of the lock.
- Permitted work is not authorized to commence, until all steps are completed in the order above.

Key Steps Off:

- Each member of the crew removes their Individual blue locks from the lock box.
- After completion of the job and permit return, the contractor permit recipient shall remove their orange tag and yellow lock from the lock box.
 - If work is ongoing, then the yellow lock shall remain on the lock box.
- The equipment owner removes orange tags, white DNO tags, and green isolation locks from isolation points.
- The equipment owner places equipment back in service per unit SOPs.

❖ Process Piping, Equipment, & Vessel Opening

Our Process Piping, Equipment, and Vessel Opening procedure is in place to protect the worker from the potential unexpected release of hazardous materials or energy when working at the site. No process opening/cutting may begin without a Process Opening Permit which is a part of the Safe Work Permit. There are two main

categories of process piping, equipment, and vessel opening: process opening points and cut points.

Process Opening Points:

- Process opening points will utilize blue process opening tags. These tags may be hung in advance, signed, and dated by operations. The tags will also be signed by the supervisor/foreman at the time of the pre-job meeting.
- PPE will be selected in accordance with the PPE Matrix (See Appendix C) and cannot be downgraded until operations verifies cleared process confirmation (CPC).
- A pre-job field review must be conducted no more than two (2) hours before the job begins. If two (2) hours elapse between the time of the documented pre-job field review and the initial opening of the process, operations and the supervisor/foreman must reassemble at the job site to ensure that conditions are still acceptable. The revalidation will be documented in the “process opening” section of the Safe Work Permit.

Cut Points:

- Cut points will utilize white cut point tags. Operations will identify the line to be cut and the tags will be affixed by the contractor in the presence of operations, writing only the work order number on the tag.

- Operations, the foreman/supervisor, and the craftsman making the cut will sign and date the tag at the time of the cut.
- If the cut does not take place during the shift the cut tag was signed, the tag becomes invalid and a new tag must be affixed and signed.

Before opening or cutting into process equipment, ensure the process has been isolated, locked, tagged, and tried.

Before commencing work a red barricade must be erected with a minimum of a ten (10) foot radius. For elevated line openings/cuts, a minimum of a fifteen (15) foot radius or greater, depending on factors of the environment, must be achieved. The barricade must remain until the process has been capped or the process has been closed.

Stop work if any uncontrolled or unexpected product is released, and notify operations immediately.

Ensure the area is clean and all tags are properly disposed of once the work is completed.

❖ Respiratory Protection

Contractors are required to implement a Respiratory Protection Program that meets or exceeds Westlake's HSP-401 and OSHA's 29 CFR 1910.134.

Any breathing air brought on site by a contractor must have a certificate of analysis certifying that all breathing air has been tested and meets specifications for Grade D Breathing air (CGA G-7.1-2004).

Breathing air brought on site must come from Westlake approved vendors only.

Plant air is backed up by nitrogen and plant air is never considered acceptable to use for breathing air. Modifications to any type of connections such as gas cylinders, utility stations, hoses, and breathing air cylinders are prohibited.

Personnel utilizing respiratory equipment are required to be fit tested for the specific respirator being used, and must be clean shaven.

❖ Fall Protection

Fall protection must be used at heights of four (4) feet and above, and must prevent workers from contacting a lower level in the event of a fall.

Personal fall protection systems will consist of a full body harness with a retractable personal fall limiter (PFL) capable of 100% tie-off. 100% tie-off must be maintained when utilizing personal fall protection. All snap hooks will be the locking type. The use of body belts or standard six (6) foot lanyards is prohibited.

Personal Fall Arrest Limitors (PFLs, etc.) are required to be used by all employees, contractors, etc. as a minimum standard. Traditional 6ft lanyards are not allowed and strictly prohibited. This includes workers using scaffolding, aerial lifts and working off of walking working surfaces, including ladders.

❖ Scaffolding

Scaffolding can only be utilized if a green or yellow scaffold tag is signed and dated by a competent person showing that the scaffold has been inspected for that shift. Scaffolds will only be erected, modified, inspected, and dismantled by a competent person.

Green Tag Scaffold: Scaffolding which complies with all OSHA standards will have a green tag affixed to the scaffold. No fall protection is required on this type of scaffold.

Yellow Tag Scaffold: Scaffolding that is missing one or more requirements per OSHA standards will have a yellow tag affixed to the scaffold. Fall protection is required on this type of scaffold.

To prevent scaffold fires, scaffold boards must be protected from smoldering/igniting when placed near a hot surface greater than 175 degrees Fahrenheit.

Scaffolds with landings / decks at and above 20ft shall have Self Retracting Lifelines (SRLs / YoYos) installed at every level.

Scaffolds shall not be tagged for use that have open sides, fall prevention components missing (IE handrails, midrails, toe boards) except where scaffolding is being built or erected. This does not include where equipment impedes installing such components.

- Plaquemine strictly prohibits scaffolding configurations that create leading edge hazards or IDLH / imminent danger fall hazard(s).
- Examples are leading edge, fall prevention components that are missing, poor planning during dismantling, etc.

❖ Cranes, Derricks, and Rigging

Documented daily, quarterly, and annual inspections shall be performed on all cranes, hoisting equipment, and rigging in accordance with current federal, state, and local regulations. This documentation must be accessible upon request.

All crane operators and crew members must have a pre-lift meeting before every lift in which the JSA, or equivalent, is reviewed, clear instructions given, and any questions or concerns addressed. The Crew Leader of the contractor performing the lift must document that this meeting took place.

Follow HSP 330 requirements when wind gusts or sustained winds twenty (20) miles per hour exist. All lifts must be suspended if the site is under a 7-mile lightning alert until the “return to work” alert has been issued.

Personnel must not conduct any work from a platform or man basket suspended from a crane, or operate a crane to perform a man basket lift, without an approved variance.

A lift will be considered a Critical Lift when any of the following exist:

- The load exceeds seventy-five (75) percent of the rated capacity of the crane as the crane is configured to perform the lift.
- More than one crane is used to lift a common, or single, load.
- A crane is used to make a personnel platform/man basket lift (Must also have an approved variance).
- A Westlake Representative requests a Critical Lift Plan.

A Critical Lift Requires a Critical Lift Plan to be submitted to the Contract Monitor by the Crane Owner at least forty-eight (48) hours prior to performing the lift.

A Critical Lift will not be permitted without an approved Critical Lift Approval Form (See Appendix D). The approved form must be presented to operations during the permitting process and must be kept with the Safe Work Permit at all times.

Cranes must maintain a distance of at least twenty (20) feet from power lines. If a crane needs to approach closer than twenty (20) feet from a power line, see HSP 330 – Cranes, Derricks, and Rigging.

See HSP 330 – Cranes, Derricks, and Rigging for entire procedure including information pertaining to crane construction, crane placement, crane movement, weather limitations, critical lifts, barricading, communication, rigging, and lifting near power lines.

❖ Abrasive Blasting

Abrasive blasting areas must be properly barricaded at all levels of elevation.

Anyone involved in or nearby blasting operations must use appropriate respiratory protection, and anyone inside of the barricade must have on the same level of PPE.

When abrasive blasting takes place in process areas, a Hot Work Permit must be obtained before beginning blasting activities.

All equipment must be properly rated for the application in which it is being used. Shielding, in case of hose rupture, must be present on the first six (6) feet of hose connected to the gun. Whip checks must be installed on all hose connections. The nozzle trigger will not be able to be locked in the open position. The blasting pot must be equipped with a pressure relieving device per the manufacturer's specifications to verify that the pressure has been relieved prior to opening the fill hatch.

A safety monitor must be positioned to cut off the system in the event of an emergency, and the monitor should have a clear line-of-site with the work taking place.

❖ Fatigue Management

Contractors are required to have a fatigue management plan/procedure and comply with the plan or procedure.

❖ Heat Stress

Contractors are required to manage heat stress hazards per their company's procedures.

All water coolers must be taped, dated, and changed a minimum of once per twenty-four (24) hours.

❖ Pandemic Response

It is the policy of Westlake Chemical to abide by local, state, and federal government public health guidelines. If you have any questions regarding Pandemic Response, you are encouraged to consult the Westlake Health & Safety Department, HSP 509-Pandemic Plan or visit the Center for Disease Control's (CDC) website:

<https://www.cdc.gov/>

Avoid crowded settings and other situations that increase the risk of exposure to infection. If it is necessary to be in a crowded setting, the time spent in a crowd should be as short as possible.

Employees should avoid close contact with their coworkers and customers (maintain a separation of at least 6 feet).

Minimize situations where groups of people are crowded together (e.g. use e-mail, phones and text messages for communication.) When meetings are necessary, avoid close contact by keeping a separation of at least 6 feet, where possible, and assure that there is proper ventilation in the meeting room. Ensure to abide by posted room occupancy signage.

Encourage sick employees to stay at home.

Encourage employees to wash their hands frequently with soap and water. If soap and water is unavailable, utilize hand sanitizer instead. Also, encourage your employees to avoid touching their noses, mouths, and eyes.

❖ Hydroblasting & Pressure Washing

The use of hands free, robotic, or automated methods shall be evaluated prior to hands on methods.

Hydroblasting includes pressures from 3,500 psig to 40,000 psig. The use of hydroblasting & pressure washing equipment with pressures above 40,000 psig requires approval from the Westlake Safety Department.

Hydroblasting equipment must be grounded to protect from a buildup of static electricity – **see section for Electrical Safety, HSP 306 Electrical Safety and HSP 333 Hydroblasting.**

Prior to performing hydroblasting and/or pressure washing, a pre-operational checklist (Appendix E issued by operations) and a JSA (both forms to be completed by contractor), or equivalent hazard assessment must be completed to assist in thoroughly identifying hazards and ensure the safe execution of the job with the crew. This document must be reviewed with the entire crew and be kept with the permit. The Supervisor/ Foreman of the crew must make operations aware of any changes in conditions or new hazards not previously identified.

Hydro blasting technicians and those within the barricaded area must have at a minimum the following PPE:

- Plant entry PPE
- Face shield
- Heavy duty rain suit or hydro blasting suit
- Rubber gloves
- Rubber boots with metatarsal protection (not required for pressure washing)
- Other PPE as required by the hazard of the chemicals present

There cannot be any manual handling of equipment to be blasted or washed during blasting / washing operations.

The pumping unit must be equipped with a safety valve and/or rupture disc capable of rapidly relieving the full capacity of the pump. Hoses must be inspected and whip-checks must be installed at each hose connection.

The shotgun overall length must be a minimum of sixty-six (66) inches from the butt stock to the end of the nozzle and the minimum length of the shotgun barrel must be forty-eight (48) inches with a single trigger or thirty-six (36) inches with dual triggers that require two-hand operation. The attached hose must be equipped with at least six (6) foot of Kevlar shielding when hydroblasting. All shotguns must be guarded against accidental activation of the gun. Shotguns must be equipped with a double dump or a safety latch activated single dump with a handle. Both hands must remain on the handle and/or trigger at all times.

The hydroblasting & pressure washing equipment and area must be barricaded using red barricade tape and tags and must be of sufficient size to protect others from the hazards. All hydroblasting equipment shall be properly grounded.

A safety device (anti-withdrawal) must be used to prevent the hose assembly from exiting the tube or pipe when lancing or line moleing operations occur. A cover or shield must also be placed on the open end of the tube or pipe. When moving the lance from one tube/pipe to the next the water pressure must be reduced to less than two-hundred (200) psig.

APPENDIX A

The QR Code and Hyperlink below are directly connected to the badge request form process. This form must be filled out to request badging for contractor personnel. Upon scanning this code OR by clicking the link, instructions walk the user through a series of questions to help get your company employees badges for access to our facility.

Please contact the HSE department for any questions.



[Westlake Plaquemine Badge Request \(office.com\)](https://office.com)

APPENDIX B Safety Plan Worksheet

Company Name:	
Project:	
Westlake Contract Monitor's Name:	
Westlake HSE Representative:	

Occupational Medical Provider:	
---------------------------------------	--

Key Contacts			
<u>Role</u>	<u>Contact Name</u>	<u>Cell Phone Number</u>	<u>Email Address</u>
Home Office			
Job Superintendent			
Site HSE Representative (Days)			
Site HSE Representative (Nights)			
Corporate HSE Contact			

Safety Plan Checklist	
	Safety Policy Statement, signed by the principal officer of the company, describing HSE goals
	Name, qualifications, and duties of Safety Representative; See HSP 325 for requirements
	Hazard Communication Program
	Respiratory Protection Program
	Fall Protection Plan
	Training Programs including all programs listed in Section 2.1.6 of Appendix A in HSP-325
	Name and qualifications of excavation competent person if applicable
	Name and training certification of First Aid, CPR/AED designee
	Process by which the project will be internally inspected for HSE deficiencies
	Safety Meeting Program
	Disciplinary Action Program
	Analysis of hazards anticipated with job tasks
	Emergency Response Plan

APPENDIX C

MINIMUM PROTECTIVE CLOTHING REQUIRED FOR POSSIBLE CHEMICAL CONTACT¹
Plaquemine Master List PPE MATRIX

CHEMICAL NAME	Chemical Protective Clothing				Respiratory Protection ²			Face/Eye Protection ³	Chemical Gloves						Chemical Boots
	CPF3 or Z300 w/ hood ⁴	Tychem SL w/ hood	Tyvek Coveralls- "paper suits"	Chemical Slicker w/ hood	Supplied Air (SAR/SCBA)	Air Purifying ⁵ (full-face)	Disposable N-95 Filtering Facepiece	Mono-goggles ⁶ and Faceshield	Nitrile (Best #730)	Neoprene (Best #6780)	Butyl (Best #878)	Viton-Butyl ⁶ (Best #890)	PVC (Best #64R)	Durable Work Gloves	PVC or Neoprene Boots
Acetone	X					X		X		X	X	X			X
Nalco 7468 Anti Foam								X	X						X
AF-12 Antifoam				X				X	X						X
Alpha-Methyl Styrene	X					X		X		X		X			X
AM 26				X				X			X				X
Anhydrous Ammonia		X			X			NA	X	X	X	X			X
Benzene	X				X			NA				X			X
Boiler Treatment (Nalco 1742)								X	X						X
Caustic Soda (Sodium Hydroxide)		X				X		X	X	X	X	X	X		X
Chlorine - liquid	X				X			NA				X			X
Chlorine - gas		X			X			NA	X	X	X	X			X
Nalco 3DT177				X				X	X						X
Nalco 3DT190								X	X						X
Cumene	X					X		X	X			X			X
Cumene Hydroperoxide	X				X			X			X	X			X
Ethylene (gas)					X			NA				X			
Ethylene Dichloride (EDC)	X				X			X		X	X	X			X
Evicas 90		X						X	X						X
Freon		X						X	X						X
Glycomul				X				X	X						X
Hydrated Lime			X				X	X		X					X
Hydrochloric Acid		X				X		X	X	X	X	X	X		X
Hydrogen/Natural Gas					X			NA						X	
Methocel Dispersants		X						X	X						X
Nitrogen					X			NA						X	
OS-1								X	X						X
OS-2002								X	X						X
P-14				X				X		X					X
Phenol	X					X		X		X	X	X			X
Phenol Heavy Bottoms		X						X		X					X
Phosphate (Ammonium Polyphosphate)								X	X						X
Plant Air								X						X	
PVA Dispersants (Alcotex)		X						X	X						X
PVC Slurry (Stripped)				X				X	X						X
PVC Slurry (Unstripped)				X	X			X	X			X			X
PVC Resin			X					X						X	
Tris (2-chloroethyl) amine	See "VCM Liquid Phase Direct Chlorination Area Safe Work Program" for information on Chemical PPE														
RO-5				X				X	X						X
Sanitary Waste Water (Biohazard)		X						X	X						X
Soda Ash			X				X	X		X					X
Sodium Hypochlorite (Hypo)		X						X	X	X					X
Sodium Nitrite (solution)		X						X	X						X
Sodium Sulfite (15%)		X						X	X						X
Sodium Thiosulfate (30%)		X						X	X						X
Steam Condensate				X				X	X	X	X	X	X	X	X
Sulfuric Acid		X				X		X	X	X	X	X	X		X
Trichloroethylene (TCE)	X				X			X				X			X
Vinyl Chloride- Liquid		X			X			NA	X		X	X			X
Vinyl Chloride- Vapor					X			NA	X		X	X			X
Water ⁷				X				X	X	X	X	X	X	X	X

¹ When chemical hazards cannot be controlled by employing effective engineering and/or administrative controls, appropriate personal protective equipment (PPE) may be used. The personal protective equipment requirements provided in this table are based on the assumption that process piping, equipment and vessels last containing a hazardous material may not be empty and have not been decontaminated. PPE shall not be downgraded until the line openings are completed and a Cleared Process Confirmation has been completed by operations. Some routine operations/maintenance tasks may warrant a lesser level of PPE than what is specified in this table and may be downgraded if a PPE hazard assessment supports the decision. Physical hazards (i.e. electrical, thermal, cut, abrasion, vibration, etc.) should also be considered when selecting appropriate PPE.

² All line opening tasks will be evaluated on an individual basis to determine the necessary level of respiratory protection. Based on an assessment, a full-face piece air purifying respirator may be acceptable for routine operations/maintenance tasks. If a hazard assessment determines that the recommended respiratory protection is not necessary, both a faceshield and monogoggles are required to be worn for liquid splash

³ Dupont Tychem CPF3 and Kappler Zytron 300 (Z300) suits provide equivalent chemical protection and can be interchanged.

⁴ The correct air-purifying cartridge must be selected for the potential hazard(s). The user must consider the physical state and concentration of all chemical agents involved as well as environmental conditions. (Contact a Westlake industrial hygienist for assistance or upgrade the respiratory protection to supplied air if there is any uncertainty.) Discard cartridges immediately after use or according to a written change-out

⁵ Monogoggles should be non-vented or have indirect vents (vent covers and/or baffles that preventing straight-line passage of liquids into the goggles). Monogoggles shall be adjusted so that they seal tightly against the face. N/A means that eye and face protection are provided by a full-face piece respirator. If determined by a Risk Assessment that respiratory protection is not needed, then monogoggles and face shield are

⁶ Users should be cautioned in using gloves made of a Viton/butyl rubber laminate as some chemicals (i.e. acetone) may cause severe swelling of Viton but has little effect on the butyl rubber. This may cause permanent damage to the gloves.

⁷ The composition of any water involved in a line opening must be taken into consideration. For potable water, a rain suit is acceptable.

APPENDIX D

Critical Lift Plan Approval Form

Lift Description: _____ WO#: _____

Location of Crane Set Up: _____

Crane Manufacturer, Model, Size: _____

Date(s) for which lift is approved: _____

Critical Lift Plan Requirements	✓
1. Notation of model and manufacturer of crane along with all inspection certificates.	
2. List of crane's configuration and counter-weight package.	
3. Crane's center of rotation in relation to load.	
4. Location of outriggers floats, mats and distribution pans/pads.	
5. Most severe ground bearing pressures expected.	
6. Minimum and maximum radii.	
7. Minimum and maximum boom angles.	
8. Net weight of load to be hoisted and source for determining weight of load.	
9. Gross weights to be hoisted.	
10. Gross chart capacity for maximum radii of the crane(s).	
11. Minimum parts of line required.	
12. Maximum percentage of chart capacities to be reached. (gross load/manufacturer's gross chart capacity).	
13. Path load will travel from pick to set.	
14. Maximum elevation load will be hoisted.	
15. Notation on drawing if capacity is determined by structural strength of crane or tipping capacity.	
16. Minimum headroom clearance between block and boom tip.	
17. Minimum clearances between load and boom.	
18. Minimum clearances between load, boom and nearby obstructions.	
19. Rotation of the load when required.	
20. Maximum allowable wind forces.	
21. Rigging diagram.	
22. Points of attachment with inspection reports and/or authorizations.	
23. Rigging equipment certifications / inspections, if applicable.	
24. Crane Operator(s)' certifications.	

Contract Monitor's Approval: _____ Date: _____

**This form, along with the Critical Lift Plan, must be presented to operations and must stay with the permit at all times*

APPENDIX E

Hydroblasting & Water Jet Cleaning Pre-Service & Operational Checklist

Checklist shall be completed and verified before Safe Work Permit is to be issued.

Unit or Area: _____ Date: _____ Company: _____

Equipment, structure or area being cleaned: _____

Maximum operating PSIG: _____

PERSONNEL	Yes / No / NA
Does the contractor have the minimum required PPE per site safety rules?	
Does the contractor have additional PPE required by the contractor's Job Safety Analysis?	
HYDROBLASTING EQUIPMENT	Yes / No / NA
Do the pressure relief valves installed on the hydroblasting pump display a current inspection tag?	
Has the contractor confirmed all hoses and fittings meet the correct pressure rating standards?	
Contractor has confirmed all hoses are in good operating condition free of kink, bubble or exposures?	
Contractor has confirmed all fittings are in good operating condition?	
Has the contractor confirmed all nozzles are free from plugging and in good operating condition?	
Has the contractor taken precautions to prevent line-mole reversal, if applicable?	
Has the contractor installed anti-withdrawal devices, if applicable?	
Has the contractor confirmed the dead-man valve is being used and functioning properly?	
Has the contractor confirmed the filter on the pump suction is clean and in good operating condition?	
Has the contractor confirmed the hookup, including pipes, hoses, and connections, has been pressure tested with water at the maximum operating pressure?	
If shotgunning, is there 8 feet of Kevlar shielding installed to high pressure hose? (Hydroblasting)	
If "shotgunning" operation, length of shotgun barrel complies with standard? (Hydroblasting) (overall length = 66"; nozzle length = 48" for single trigger and 36" for double trigger)	
Hydroblasting or water jet cleaning equipment does not interfere with process operations?	
Contractor confirmed anti-whip devices are installed on all hose-to-hose/hose-to-pump connections.	
Hydroblasting equipment grounded? Equipment to be hydroblasted grounded?	
LOCATION	Yes / No / NA
Barricades in place and warning signs posted? If minimum distance not met, additional barriers/panels installed to protect personnel and equipment?	
Waste handling considered and properly managed?	

Hydroblast Company Representative

(Sign & Date)



Notes ▶

[illegible]



Notes ▶

[illegible]

P Make It **Personal**

A **Ask** Open-Ended Questions

C **Create An Environment** Where Everyone Feels Comfortable Asking Questions

E **Escalation** Is A Right And A Responsibility