



# Williams Onshore Contractor Safety Handbook



**Version 2**

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## Introduction

Contractor Safety Handbook User,

Williams is committed to the continuous improvement of environmental, health and safety performance to protect the public, our employees, Contractors, and the communities where we work and live. Achieving zero injuries and zero incidents is our primary goal.

Williams intends to meet or exceed all applicable environmental, health and safety laws and regulations, and to facilitate full and open discussions to address responsible standards and practices where laws and regulations do not exist.

The safety and health of all workers and the protection of our environment is of utmost importance to Williams. No job is so urgent that it cannot be done safely. Unsafe conditions and/or work practices are not acceptable on Williams' sites and must be resolved before work can continue.

Contractors' safety success can only be accomplished through the committed efforts of Contractors and their employees.

This Handbook is an expression of Williams' understanding and commitment to environmental protection and helping contractors in keeping all contractor workers safe. At Williams, we expect every Williams employee and contractor employee to use the right tools for the job. We hope you will find this handbook a valuable tool.



Brian Perilloux  
Senior Vice President  
Operational Excellence

## **Purpose**

This handbook provides Contractor and Williams Employees with a reference to environmental, health and safety requirements that are generally applicable to Williams' engineering and construction work.

Contractors are expected to develop, adopt, maintain and certify the implementation of such health and safety procedures, policies and programs as necessary to comply with all applicable federal, state and local regulations that may apply to Contractors' work activities to complete the contractual scope of work, including the minimum standards referenced in this handbook.

Contractors are responsible for the development of a project-specific Environmental, Health & Safety (EH&S) Plan specifically for the scope of work to be performed. Contractors shall submit the required EH&S plan to Williams before beginning work.

Should situations arise where doubt exists regarding proper safe work methods, please bring it to the attention of the Authorized Williams Representative.

Williams is continuously looking for ways to improve our EH&S programs. If you have feedback for improvement or changes to this document, please share them with an Authorized Williams Representative.

## **Not Exhaustive and Not Legal Advice**

This handbook is not comprehensive and provides suggested best management practices and guidance to Williams' Contractors and Williams Employees regarding contractor work performed on Williams' property including projects on any right of way or facility. All OSHA and EPA regulations and Williams Safety Procedures must be followed.

## **Safety is a Condition of Continued Service**

Safety is not an option, it is a requirement. The failure of any contract worker to perform work in a safe manner may result in that worker's removal from Williams' projects or facilities. A Contractor's failure to remove unsafe workers from the project work-site may result in termination of the contract between Williams and that Contractor.

Williams' goal is to achieve "Operational Excellence" for its employees and contractors. In order to achieve "Operational Excellence" we must always, follow safe work practices and regulations, comply with all applicable rules and regulations, encourage and recognize safe work behaviors, ensure safety devices are in place and properly maintained, meet or exceed customer requirements, and make the right safety decisions before performing any Work task.

The contents of this handbook must be reviewed, discussed and understood by all contractor personnel before any Work is to be performed.

## **Overview of Responsibilities**

Williams' Responsibilities – All Williams Employees assigned to a construction project must attend training on the contents of this handbook and understand the requirements herein. They should ensure that all contractors are aware of the expectations and have a copy of the handbook. Most importantly, they should ensure that all contractors working for Williams are meeting the expectations presented in the handbook.

Williams will conduct periodic audits of contractor's safety programs.

The Authorized Williams Representative may ask to review program contents including policies and procedures, training records, Behavior Based Observations (BBS), work permits, work plans and any other parts of the safety program deemed appropriate for construction work.

Contractors and Williams Employees are encouraged to participate in employee observation and employee coaching program. There are “One Minute Observation” and “One Minute Coaching” programs that stimulate conversations around safe work behaviors. Williams believes participation in such programs should be practiced by all levels of the company.

Contractor Responsibilities – Contractor, and their subcontractors, shall ensure compliance with all applicable rules, regulations, orders, standards and interpretations promulgated under the Occupational Safety and Health Act (1970), the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Clean Air Act (CAA), and all other applicable laws, ordinances, rules, regulations and orders of any agency having jurisdiction over the environment and the safety and health of persons or property or the protections of the same to protect them from injury, illness, damage or loss.

Contractor shall take all possible measures necessary to protect all personnel in the work areas and shall adhere to Company and Industry Standards.

Contractor shall develop a site specific Environmental, Health and Safety (EH&S) plan. The EH&S Plan shall be available to the Authorized Williams Representative upon request.

Contractor shall be responsible for providing safety training including, the Williams Onshore Contractor Safety Handbook, the Contractor’s EH&S plan, language translation, and encouraging safe work performance to all employees under contractor supervision through pre-job/new hire safety orientations, frequent safety meetings and daily tailgate meetings.

Contractor shall provide experienced and qualified personnel and ensure that all of the Contractors' employees and subcontractors' employees are trained to do the required job tasks. Contractor shall ensure proper staffing of crews for the safe completion of the work.

Contractor shall designate at least one person to be Contractor's safety and environmental representative for each Company project. The person can have other roles or duties as determined by the Contractor.

The Contractor's safety and environmental representative(s) will be located at or near the project work site(s). Contractor's safety representative shall have sufficient facility construction safety related experience and knowledge, education and skills necessary to anticipate, identify, evaluate and control worksite hazardous conditions and practices.

Contractor shall be aware that Contractor's safety performance will be continuously evaluated by the Company's Construction Management Team. Safety Performance evaluations will include, observed safe and unsafe work behaviors, recordable incidents, reporting of requested safety related data and the Contractors ability to follow good safety program methods including OSHA and Company guidelines.

Contractor's Foreman or Safety and Environmental Representative shall be responsible for conducting regular site safety assessments, safety training, accident investigations/root cause analysis, and enforcement of all environmental, safety, health and accident prevention procedures, including the enforcement of the Contractor's safety program.

Written documentation which includes a copy of the training that has been provided and a list of contractor employees and subcontractor employees that attended the training shall be provided to the Authorized Williams Representative upon request.

All accidents, near hits, spills, releases, and safety or environmental noncompliance issues must be reported immediately to the Authorized Williams Representative. All accidents and incidents requested by

Company will be investigated by Contractor to the root cause level, and formally documented by Contractor using either the Company Incident Root Cause Analysis form, or Contractor's equivalent form, provided such form is of acceptable industry standard and acceptable to Company. A copy of the report shall be furnished to the Authorized Williams Representative for review.

## **Reporting Requirements (Metrics)**

Contractor will provide to Company, on a monthly basis, a summary of all accidents and near misses/hits experienced on the project, the total man-hours worked on the project (for Contractor and sub-contractor). Injuries for Contractor and their sub-contractors will be categorized as recordable – lost time, restricted duty, medical case, fatality, or non-recordable – first aid.

Contractor must provide Company with updated records by the 9<sup>th</sup> day of each month, communicating the following safety data as it occurs while performing work on Company projects to include:

- Contact information and project information
- Contractor and Sub-contractor man-hours worked
- Number of employees (Contractor and sub-contractor)
- First Aid cases
- Lost Time Incidents
- Number of no-injury incidents (i.e., damaged equipment, pipeline strikes, power line strikes, near misses/hits)
- Number of Motor Vehicle Accidents (MVAs) related to this project work
- Miles driven
- Contractor and sub-contractor Employee Hours Worked
- Contractor and sub-contractor Employee Miles Driven
- Recordable injuries

- Environmental Spills and Releases (reportable and non-reportable)
- NOVs
- Inadvertent Returns

Safety data shall be submitted electronically using the ISNetwork reporting tool. Any questions regarding this reporting tool should be directed to the Williams Construction Safety Representative.

The contractor is ultimately responsible for their employees and subcontractor employee's safety and for ensuring that they perform their day-to-day work in a safe manner. The contractor must read, become familiar with, and follow the contents of this handbook and consult with the Authorized Williams Representative should questions arise regarding the contents of the handbook.

This handbook is intended to supplement, not replace, the contractor's safety program. In the event a Williams procedure and the contractor's procedure conflict, the more stringent rule should be followed and the Authorized Williams Representative should be notified.

## **Professional Conduct**

Williams expects its employees and contractors to conduct themselves in a professional manner. Horseplay, practical jokes, and harassment are not allowed. No form of harassment or fighting will be tolerated while on locations under Williams' control. Depending on the severity, additional repercussions, such as involvement of regulatory agencies and law enforcement, may result.

## **Agency Inspections**

Agency inspections may occur while working at the project site, by federal, state or local agencies. At no time shall a contractor or representative of a contractor act as a representative for Williams or be authorized to speak or act on Williams behalf. If any agency inspector visits a work site, they shall be directed to speak to the Authorized

Williams Representative. All agency inspections shall be immediately documented by completing the Williams' Agency Inspection Record form, or other Williams approved form.

**Definitions**

- Contractor** A contractor is defined as any company or individual working for Williams by way of contract, subcontract, or purchase order, performing work or providing services or equipment to or for Williams
- Contractor Supervisor** Any individual representing the contractor company that supervises the work of a contractor, contractors or subcontractors
- Authorized Williams Representative** Any Williams employee responsible for a project(s) (i.e. Project Manager, Construction Chief, and Construction Safety Representative, Construction Safety and Environmental Representative, Environmental Compliance Representative,)
- In-Service** Pipeline, facility, equipment or associated system that is operational
- Incidents** An incident is defined as a worker or contractor near hit/miss, injury or illness, injury of others, Motor Vehicle Accident, fires, property damage or loss, security breach, theft, spill or release or bomb threat.

## **Short Service Employee Plan**

A short service employee plan must be in place before a short service employee is allowed to work on a Williams project. A short service is any worker with less than 6 months of experience in the same job type or with current employer. All short service workers shall work alongside an experienced worker and never alone.

Contractor employees who quit and return to work for the same employer within a one year period and assigned to the same job type will not be considered a short service employee.

Information regarding the short service employee, including the contractor employees name and type of work qualified to perform will be given to the Authorized Williams Representative at least 24 hours before the short service employee's arrival at the project site. In the event the short service information is not presented to the Williams Authorized Representative, the short service employee may not be permitted to work on the project.

Short service employees must be knowledgeable of the contents of the Williams Onshore Contractor Safety Handbook. A short service employee shall not participate in an unfamiliar task (new task) without a dedicated and competent member of the contractor's employee group being present.

Primary Contractors and subcontractors must have a short service employee plan.

## **Authorization to Stop Work**



William Employees and Contractors are given the authority, and the responsibility, without fear of reprimand or retaliation, to immediately STOP any work activity that is believed to present a danger to themselves, co-workers, contractors, the public or the environment.

William Employees and Contractors are empowered to get involved, to question, and to seek to rectify any situation that is identified as not being in compliance with our safety policies or safe work practices.

William Employees and Contractors have the authority, and the responsibility, to report any unsafe conditions or acts to supervision.

## **Landowner Concerns**

While on a construction project, if a Contractor or Contractor employee is approached by a landowner or other stakeholder with concerns or complaints:

- Acknowledge the complaint or concern.
- Obtain the person's name and contact information.
- Obtain information on the nature of the complaint.
- Immediately notify Contractor Supervision and the Authorized Williams Representative.
- Please do not offer any suggestions or resolutions to the complaint and let the landowner know you will pass the information along to the appropriate Williams Representative.

## Drugs and Alcohol



Williams supports and enforces standards, policies, and procedures for maintaining a drug-free and alcohol-free workplace.

Contractors must have an approved Drug and Alcohol program as required conforming to 49 CFR Part 40 before performing any work deemed by Williams to be safety sensitive. The Drug and Alcohol program must include random testing and must include a minimum annual testing rate of 25% of the total population of the contractor's personnel.

Consumption of and/or possession of alcoholic beverages on Williams' job sites is prohibited. The possession, transfer, purchase, sale, use, or distribution of unauthorized drugs while on Williams' premises or while engaged in Williams' work is prohibited.

All Williams Employees and Contractor employees shall report to work in a fit and proper condition to perform their jobs in a safe, competent manner. Any person under the influence of alcohol or controlled substances is prohibited from entering the premises, engaging in business, or operating equipment. Violators will be permanently removed from all Williams worksites.

An Authorized Williams Representative may search those entering, working in, or exiting Williams' locations without prior announcement. This is a condition of entry onto every Williams property or job site.

Any Williams Employee or Contractor employee found to be in violation of the drug and alcohol policy, or test positive on any drug or alcohol test, will not be permitted to work on any Williams project.

Use of prescription or over-the-counter medication is permitted only if such use does not have side effects that could adversely affect work performance. All Williams employees and Contractor employees should consult with their physicians before taking any medications that might adversely affect their safety and work performance.

Williams recommends that Contractor employees who work in safety sensitive functions, and are using over-the-counter or prescription drugs that include warnings about driving, operation of machinery, or any other potentially dangerous operation, should notify Contractor supervision of the prescription warnings. If a contractor brings prescription drugs onto a Williams project location, the medication must be in the bottle or container in which it was originally dispensed and must be prescribed to the individual.

Internet prescriptions are not to be used while working on a Williams project and such prescriptions are unacceptable for use according to the Department of Transportation's drug testing regulations as stated in the "Interpretive guidance to 49 CFR 40.141.

Any incident resulting in property damage of Williams property or the Contractor property should require a drug test of those involved.

Williams reserves the right to request an alcohol and drug test for those involved in any incident.

Drug and Alcohol Programs will be evaluated by Williams Authorized Personnel.

## **Weapons**



Williams prohibits the use, possession, transportation, or sale of unauthorized explosives, unauthorized flammable materials, firearms, or other weapons while on company premises, engaged in company business, or operating company equipment.

## Environmental, Health & Safety Meetings



All visitors, including Williams employees, visiting a construction site shall be given a visitor's orientation. The orientation will include PPE requirements, specific activities occurring at the site for the day, "Emergency" plans including site alarms and their meaning, muster points, verification that everyone is accounted for, and environmental requirements and plans as applicable to the project.

The Contractor shall provide a thorough safety and environmental orientation for all employees and subcontractors before they start on the job. The safety training shall include a Williams "Construction Safety Orientation" program, discussions on The Williams Onshore Contractor Safety Handbook" and site specific safety and environmental issues and requirements. All Contractor employees will receive a safety hardhat decal after attending the Company Safety orientation and must keep the safety decal visible at all times; decal shall be good for one year. Written documentation, including the training program synopsis and a list of contractor employees and/or subcontractor employees that attended the training, will be submitted upon request to an Authorized Williams Representative.

Contractor will communicate to their employees and sub-contractor employees that they are required to attend all safety meetings and safety training programs.

## **Pre-Job (Kick-Off) Meetings**

Pre-job (Kick-off) meetings are required for all projects. These meetings may include Contractors' management team, the Williams management team, and possibly other company support teams when necessary.

The meeting purpose is:

- To discuss potential safety hazards
- To ensure all parties understand the scope of work
- To discuss planning that has been done as it relates to environmental, health and safety
- To discuss quality initiatives
- To ensure all project related-permits and plans are supplied to the Contractor

Contractors are responsible for conducting Daily Safety Tailgate (Toolbox) meetings with their workers and subcontractors that will address the specific tasks, assignments, and environmental, health, and safety processes to be followed and completed safely.

Some Safety Tailgate meetings may address specific tasks such as:

- Work around above ground or underground utilities
- A critical lift
- Flaring gas or conducting a blowdown
- Significant operational change
- Pressure testing
- Confined space entry
- Use of paint with high concentrations of lead
- Inclement weather
- Water body crossing
- An incident where lessons learned need to be conveyed
- Environmental requirements and permitting requirements and permitting concerns (need for silt fence, Waste Management Plant, Waste Management.....etc...)
- Protecting Wetlands
- Cleaning Roads

- Asbestos abatement
- Hazardous Material and Hazardous Waste

## **Job Planning**

Work plans/permits are intended to eliminate incidents, service disruptions, process upsets and abnormal conditions caused by lack of communication, coordination or planning of construction activities. Contractors are required to provide work plans and discuss those work plans with the Authorized Williams Representative.

Work Plans may include but are not limited to the following work activities:

- Non-Routine Work
- Hot Work
- Confined Space
- Isolation of Hazardous Energy
- Electrical Safety
- Lifting and Rigging
- Bypassing Critical Protection
- Work at Height
- Excavation
- Simultaneous operations

## **Job Safety Analysis**

If the job/project requires a JSA, it will be thoroughly discussed in either a Safety Tailgate meeting or formal Safety meeting.

Prior to starting any work that has the potential to result in the injury of workers, harm to the environment, or damage to property, the contractor shall perform and document a JSA. It is recommended that this JSA includes routine, non-routine, and high-risk work. A JSA is a method used to identify, analyze and record:

- The steps involved in performing a specific job
- The existing or potential safety and health hazards associated with each step

- The recommended actions and/or procedures that will eliminate or reduce these hazards and the risks of a workplace injury or illness.

Typically there are ten energy sources to be aware of while at a construction site. The following Energy Sources should be considered during all construction activities.

## Energy Sources

TYPE	DESCRIPTION (EXAMPLES)
<p><b>Gravity</b></p> 	<ul style="list-style-type: none"> <li>• Trips, Slips and Falls</li> <li>• Falling Object</li> <li>• Lifts (Critical Lifts)</li> <li>• Collapsing Temporary Supports</li> <li>• Stable Ground and Slopes</li> <li>• Excavation (holes and spoils)</li> <li>• Other</li> </ul>
<p><b>Motion</b></p> 	<ul style="list-style-type: none"> <li>• Vehicles, Trucks, Machines</li> <li>• Walking (be seen on the job site)</li> <li>• Moving Materials/Equipment</li> <li>• Flowing (gas, water, oil, product, etc.)</li> <li>• Wind</li> <li>• Lifting/Lowering</li> <li>• Position (body/equipment)</li> <li>• Straining or Bending (human)</li> <li>• Other</li> </ul>
<p><b>Mechanical</b></p> 	<ul style="list-style-type: none"> <li>• Rotating Equipment</li> <li>• Compressed Springs/Strained Connections</li> <li>• Motors/Pumps</li> <li>• Integrity (Maintenance/Wear and Tear/Corrosion/Paint/Etc) □</li> </ul> <p>Other</p>
<p><b>Electrical</b></p> 	<ul style="list-style-type: none"> <li>• Power lines</li> <li>• Transformers</li> <li>• Static Charges</li> <li>• Atmospheric (lightning)</li> <li>• Energized Equipment</li> <li>• Wiring</li> <li>• Batteries</li> <li>• Other</li> </ul>

 <p><b>Pressure</b></p>	<ul style="list-style-type: none"> <li>• Piping</li> <li>• Vessels</li> <li>• Tanks</li> <li>• Compressed Cylinders</li> <li>• Control Lines (instrument Air, etc)</li> <li>• Pneumatic and Hydraulic Equipment □ Other</li> </ul>
<p><b>TYPE</b></p>	<p><b>DESCRIPTION (EXAMPLES)</b></p>
 <p><b>Temperature</b></p>	<ul style="list-style-type: none"> <li>• Ignition Sources (in combustible areas)</li> <li>• Hot or Cold Surfaces</li> <li>• Liquid or Gases</li> <li>• Steam</li> <li>• Friction</li> <li>• Open Flame</li> <li>• Weather Conditions</li> <li>• Other</li> </ul>
 <p><b>Chemical</b></p>	<ul style="list-style-type: none"> <li>• Flammable/Hazardous Vapors</li> <li>• Reactive Materials/Hazards</li> <li>• Toxic Compounds or Chemicals</li> <li>• Oxygen deficient atmospheres</li> <li>• Fumes, Dust and Debris</li> <li>• Combustible Materials (grinding, open flame, environment, etc.)</li> <li>• Integrity (corrosive, etc.)</li> <li>• Other</li> </ul>
 <p><b>Radiant</b></p>	<ul style="list-style-type: none"> <li>• Lighting Issues</li> <li>• Welding Arc</li> <li>• X-Rays</li> <li>• Microwaves</li> <li>• Solar Rays (e.g. sunburn/skin)</li> <li>• Heat (flares/exhaust stacks, etc.)</li> <li>• Human environment/ weather (Heat) □ Other</li> </ul>
 <p><b>Sound</b></p>	<ul style="list-style-type: none"> <li>• Equipment Noise</li> <li>• Impact Noise and Vibration</li> <li>• High Pressure Releases</li> <li>• Human environment/public</li> <li>• Noise Impacting Work Communication □ Other</li> </ul>

<b>Biological</b> 	<ul style="list-style-type: none"><li>• Blood Borne Pathogens</li><li>• Bacteria/Viruses</li><li>• Insects/Animals</li><li>• Improperly Handled Food</li><li>• Contaminated Water(s)</li><li>• Other</li></ul>
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## Safe Work Practices

Contractors will designate trained Safety Representatives within their organizations to communicate and enforce all safety, health, and accident prevention procedures.

Contractors will communicate to all employees that it is their responsibility to work safely.

## Hot Work Permits



Prior to any hot work or times when gas may be present, a meeting will be held with Company and Contractor to review the work and assign responsibilities. Contractor shall furnish materials needed (i.e.....appropriate equipment, gas detectors, fire extinguishers, etc...). Contractor shall designate a person (fire watch) for each hot work permit area. Gas detectors must be used to assure appropriate atmospheric levels are achieved at all times. The person cannot have any other roles or duties while performing the fire watch role.

The use of non-spark-proof tools and/or non-explosion-proof equipment, and other work involving open flames shall be controlled so as not to cause a fire or explosion hazard during Hot Work activities.

Hot Work Permits are issued for only the work area listed on the permit. If any other work is required in the area for which the Hot Work permission was issued, a separate permit must be issued for the work not covered under the original permit.

## **Gas Detection**

After obtaining approval from the Authorized Williams Representative, Contractor will assign an employee who is trained in the use of gas detection equipment to perform atmospheric testing. All testing shall be performed using equipment (combustible gas detectors, LEL monitors, etc.) which has been verifiably calibrated and/or tested immediately prior to use per the manufactures' recommendations. Gas test readings must be documented and recorded on the Hot Work Permit. If the LEL readings are acceptable ( $\leq 10\%$  LEL), a Hot Work Permit may be issued. Williams may assign an employee, trained in the use of gas detection equipment, to perform atmospheric testing as necessary.

If Hot Work is to be performed within a Confined Space, the LEL must be 0% and oxygen content must be greater than 19.5% and less than 23.5%.

If 0% LEL cannot be obtained, an analysis of the factors affecting the LEL must be performed and written control measures developed that maintain the LEL at or below 10% before proceeding with the Hot Work.

The deviation and the Work Plan must be approved by the Construction Leadership Team member and the Construction Safety Representative.

## **Fire Watch**



Fire watchers shall be required whenever welding or cutting is performed in locations where other than a minor fire might develop, or any of the following conditions exist:

- Appreciable combustible material, in building construction or contents, closer than 35ft (10.7 m) to the point of operation
- Appreciable combustibles are more than 35ft (10.7 m) away but are easily ignited by sparks

Fire Watch must wear proper PPE.

Fire watchers shall have fire extinguishing equipment readily available and be trained in its use.

They shall be familiar with facilities for sounding an alarm in the event of a fire and shall watch for fires in all exposed areas, trying to extinguish them only when obviously within the capacity of the equipment available, or otherwise sound the alarm.

Fire Watch must remain on duty for a minimum of 30 minutes after hot work is completed.

## **Health Management**

Contractors shall meet or exceed the requirement of 29 CFR 1926.50 throughout the performance of the work, and include provisions for health, sanitation and medical facilities and services. Williams employees and Contractor employees shall be made aware of potential exposures at each worksite.

Contractor shall provide documentation supporting its compliance with the requirements of the regulation.

## **Hazard Communication Program**

The Contractor's employees are required to observe all posted warning signs.

Contractors shall develop and implement a hazard communication program (HAZCOM) that meets or exceeds the requirements outlined in 29 CFR 1910.1200. This program shall include provisions for container labeling, collection, storage, and availability of Safety Data Sheets, and appropriate training programs.

Up-to-date SDS information shall be made available for every hazardous material brought onto the worksite(s). All SDS information shall be made available to Williams upon request.

Williams facilities may contain asbestos, lead, benzene, and other harmful substances. Contractors shall consult with the Authorized Williams Representative to determine if these substances are present, and develop a mitigation plan for worker exposure. Contractors must immediately notify the Authorized Williams Representative if previously unknown harmful substances are identified.

Contractor Personnel must be able to read and understand all labels and posted warning signs.

Hazardous Materials which may be encountered may include: asbestos, lead, arsine gas, and benzene.

## Asbestos



Asbestos can be dangerous if not handled properly. Breathing asbestos dust is hazardous. Asbestos insulation that is not damaged or friable (hand Pressure can crumble, pulverize, or reduce it to powder when dry) generally does not produce asbestos fibers at a dangerous level, especially in non-enclosed structures.

To minimize health risks, it is important not to drill, cut, remove, tear, step on, brush against, hammer on, or in any way disturb suspected asbestos.

Contact an Authorized Williams Representative if it is necessary to disturb any suspected asbestos, or if you notice any determination in the conditions of the suspected asbestos. Only trained personnel with proper equipment will disturb or remove asbestos. Additionally, some states require use of a state-certified asbestos contractor, and submission of an advance 10-day written notice, prior to commencement of any asbestos abatement activities.

## Benzene

Benzene can be found in produced gas, in a gaseous form. Benzene is known to cause cancer in humans, so it is important to limit your exposure to it. To know what benzene concentrations exist and the PPE requirements that apply, you should refer to the SDS for the product information.

Leather gloves or clothing saturated with liquid containing benzene should be removed and cleaned or properly discarded to prevent

prolonged skin exposure. Reduced exposure and risks can be accomplished by keeping your work area and your clothing as clean as possible.

## **Lead**



Overexposure to lead can result in serious short-term (acute) or longer term (chronic) health effects. Inorganic lead may be absorbed into the body by ingestion or inhalation. Lead is most commonly found in paints and coatings. Abrasive blasting or burning of painted surfaces probably pose the greatest potential for lead exposure. Check with the Authorized Williams Representative to identify areas that may pose the threat of lead.

## **Arsine Gas**

Arsine Gas is difficult to detect in normal gas streams. It is believed that Arsine Gas may exist in areas where gas streams become stagnant, primarily at the end-points of some lines. Authorized Williams Representatives will test for Arsine Gas in areas where the potential for it exists.

## **Welding, Burning, Cutting, Fumes & Ultraviolet Light**

An evaluation of PPE shall be completed for each welding and cutting task. These are minimum requirements for protective devices and solutions:

- Hardhats with full-face shields and safety glasses are required for all buffing, chipping and grinding operations.

- Helmets with protective ANSI approved shaded lenses, proper gloves, and arm protection shall be used during all arc welding or gas cutting operations.
- Goggles or other suitable eye protection with appropriate shade selection shall be used during all gas welding, cutting or brazing operations.
- Helpers and personnel in the immediate area shall use proper eye protection. When not engaged in a welding or brazing activity, safety glasses with side shields shall be worn by welders and welders' helpers.
- Except when engaged in light work, such as test fitting pieces, all welders should wear flameproof gauntlet gloves.
- Mechanical ventilation at a minimum rate of 2,000 cubic feet per welder should be provided when welding is done in the following situations:
  - In a space less than 10,000 cubic feet per welder
  - In a room having a ceiling less than 16 feet
  - Where the welding space contains partitions, balconies or other structural barriers to the extent they significantly obstruct cross ventilation
  - When welding or cutting on galvanized materials
  - Where the nature of the welding, cutting or brazing work is such that the release of toxic fumes or gases is possible in an enclosed/non-ventilated area. This includes work on stainless steel, zinc, lead and/or degreasing or cleaning compounds containing hydrocarbons.

## **Heat Stress, Fatigue and Cold Weather**

Contractors are expected to have heat and cold weather plans.

Williams employees and Contractor employees are to be made aware of heat stress and fatigue management plans, which will address workers' heat stress and fatigue, as well as cold weather work.

Fatigue in the workplace is a real issue and is a hazard that can be addressed successfully. Contractors should raise the awareness of workers to recognize symptoms of dehydration, fatigue and heat stroke.

Workers that are on the job for extended hours and those who are not getting the proper rest for any reason are subject to effects of fatigue.

Excessive fatigue can impair driving skill and can negatively impact reaction time.

Contractors should pay close attention to and monitor the condition of employees who are working extended hours and talk to employees before they leave the work site to assess their condition.

## **Housekeeping**



It is the contractor's responsibility to keep their work areas clean, orderly and in a condition conducive to safe work. Work areas, i.e. exits, aisle space, and emergency equipment, shall be kept clean and free from obstructions and debris.

Contractor shall, at all times, keep site free from accumulations of waste materials and rubbish, shall keep weeds and other vegetation cut and shall maintain stored material and equipment in a manner that will avoid risk of damage to materials or become a hazard to personnel, equipment, materials or facility.

Parking vehicles or storing equipment in the path of exits is forbidden.

Do not obstruct stairways, aisles or passageways. Keep equipment rooms clean at all times and do not use them as storage areas.

Keep all floor surfaces clean and dry. Spilled oil, material, or liquids on floors or walkways shall be promptly cleaned or removed. *Caution* or *Wet Floor* signs should be posted as required.

Only use fire-safe solvents for cleaning with a flash point greater than 140° F and below 200° F. Segregate waste when necessary, including oily rags from regular trash.

Label all containers, bottles, buckets, etc. with name of substance. Do not place cords in walkways or areas that impose a tripping hazard.

## Personal Electronic Devices



Personal electronic devices (i.e. phones, pagers, cameras, iPad, iPod, and computers) **are ignition sources**. These devices may not be used without an approved Hot Work Permit while inside the boundary of an in-service system where hydro-carbons may be present. Any questions related to application of this expectation should be directed to the Williams' Representative on-site.

Flash lights and Communication radios must be appropriately rated for hazard class location.

Cell phone use on construction sites is prohibited unless granted by the Williams Authorized Representative.

## Motor Vehicles



Williams' employees and Contractor employees (and subcontractors' employees) are required to follow all applicable rules and regulations, including locally established speed limits, when operating motor vehicles on Williams' property or Williams' project job sites.

No one driving any type of motor vehicle or operating any type of work equipment while working on a Williams project shall use cellular telephones, in either hand-held or hands-free mode. This usage is strictly prohibited.

ATVs shall be used only by trained personnel. Training documentation shall be provided to the Authorized Williams Representative upon request. An approved helmet must be worn when operating an ATV on Williams's projects.

Anyone backing a vehicle must complete a 360° walk around of the vehicle or use a spotter.

## Tools and Equipment



Williams' employees and Contractors shall ensure that all their equipment and tools are in good condition and meet regulatory and functional requirements. Williams reserves the right to restrict entrance to or have equipment or material removed from a site that is found to be in an unsafe condition or is not in compliance with regulations.

Contractor shall conduct pre-use inspections of equipment, machines, and tools, and shall be responsible for repairs and/or replacement of all defective equipment, machines, and tools that may be a potential cause of injury. Contractor shall document and record inspections, repairs and/or replacement of equipment, machines and protective equipment. Records shall be provided to the Authorized Williams Representative upon request.

Contractor shall place all equipment in a manner that is disengaged and/or deactivated, keys removed, doors locked, and booms lowered during non-working hours.

Contractor shall not use mat maneuvering hooks mounted on backhoe buckets for any lifting other than for equipment mats. All other lifting utilizing a hook shall have a safety latch. Use of all latches must be discussed with the Authorized Representative.

If excavating equipment is equipped with quick connect couplers for attachment of buckets, Contractor shall ensure that the equipment operators have been properly trained to operate the equipment safely and in accordance with the equipment manufacturer's operating and

maintenance instructions. Contractor shall ensure that operators completely engage all attachments and locking mechanisms before excavating work commences. Contractor shall ensure that all personnel are removed or guarded from the swing radius hazard areas when disconnect buckets are tested or used.

All power tools should be de-energized when not in use.

The use of Williams' equipment by Contractors is not permitted unless written authorization is received from an Authorized Williams Representative.

## **Compressed Gas Cylinders**



Contractors involved in work that requires the use of compressed gas cylinders, shall ensure that cylinders are handled in accordance with OSHA 29 CFR 1926.350.

Oxygen Cylinders are pressurized to 2,400 pounds-per-square-inch-gauge (psig) at 70° F when full. Oxygen alone will not burn; however, it supports combustion.

Do not lubricate or allow oil or grease to contaminate oxygen connections to prevent spontaneous explosions and fires that may occur when oxygen contacts oil or grease under pressure.

Separate Oxygen and hydrocarbons, do not use oxygen in place of compressed air, and separate oxygen cylinders and fuel-gas cylinders.

Acetylene cylinders are to be stored upright to prevent the acetone from draining into the valves or fittings.

Do not use acetylene at a hose pressure exceeding 15 psig to reduce the possibility of an explosion. Acetylene is extremely unstable at pressures above 15 psig.

## Personal Protective Equipment

Contractors shall require and ensure that all its employees wear personal protective equipment when working conditions expose its employees to hazardous conditions as specified in 29 CFR 1926 Subpart E, Personal Protective and Life Saving Equipment; 29 CFR 1926 Subpart M, Fall Protection; and 29 CFR 1910 Subpart I, Personal Protective Equipment (PPE).

Contractor shall provide (at no additional cost to Company) and Contractor's personnel shall be required to wear various types of PPE at times while on the job site.

Minimum PPE requirements for construction sites (excluding office areas and occupant compartments of vehicles) are:

- Hard Hats must be worn at all times. Hard Hats must meet the ANSI Type I standard
  - Class G hard hats will be used by workers not entering the limited approach boundary of Exposed energized electrical conductors or circuit parts
  - Class E (Electrical) hard hats will be used by workers entering the limited approach boundary of exposed energized electrical conductors or circuit parts
  - Use only hard hat liners or balaclavas that are Flame Resistant
  - Inspect the hard hat shell at each use and replace when dents, cracks, nicks, gouges, or any damage due to impact, penetration, abrasions, rough treatment, or wear that might reduce the degree of protection are found; or when thermoplastic degradation is found
  - Check elasticity within the hard hat shell at each use and replace when elasticity is not exhibited or cracks appear due to brittleness. Using both hands, compress the shell inward from the sides about one inch and release (avoid dropping the shell). The shell should quickly return to its original shape

- Replace all hard hats at least four years from the date of manufacture, regardless of physical appearance
- Inspect the hard hat suspension at each use and replace when cracks, frayed or cut crown straps, torn headbands, or damaged, torn, or pliable size adjustment slots are found
- Wear the appropriate helmet when operating off-road vehicles such as snowmobiles and All-Terrain Vehicles (ATVs)
- Replace the entire hard hat suspension system every 12 months
- Wear Safety glasses at all times meeting the requirement of:
  - ANSI Z87.1 or
  - ANSI Z87.1+ (high impact)
  - Incorporate a prescription into safety glasses that meet these requirements, including side shields
  - In lieu of side shields, wear eye protection that can be worn over prescription lenses (goggles, face-shields, etc...) without disturbing the proper position of the prescription lenses
  - Safety glasses will be worn when goggles or face shields are removed during welding and flame cutting
- Hearing Protection with a minimum Noise Reduction Rating (NRR) of 30 must be worn in areas designated as “hearing protection required”, unless site specific data indicates a lower PR is acceptable. Wear ear muffs, in addition to ear plugs, in areas designated as “double hearing protection required”.
  - All areas with hazardous noise levels may not be labeled as hearing protection required, but may be time and task dependent. If ambient noise levels are above normal conversation volume, hearing protection must be worn in the area or for the duration of the high noise task.
- Safety toed boots (steel or composite reinforced) must be worn at all times and:

- Must meet ASTM F2413 standards
- No metal protrudes from footwear
- Must have treaded soles and a defined heel
- Safety boots must be worn, athletic shoes are not permitted
- Non-ankle supported safety shoes and athletic shoes are not permitted
- Must have toe, heel, and sole puncture protection
- Must have spark resistant soles
- Heels must resist liquid penetration
- Non-sparking ice creepers may be worn
- Must be constructed of a material that prevents the rapid passage of liquids
- Rubber steel toed boots meeting the ASTM F2413 standard may be used
- Safety Footwear which prohibits the rapid passage of liquids is prohibited
- Wear a high visibility vest as the outer garment with a minimum ANSI Class 3 HRC-1
  - When working within 100 feet of a roadway where traffic speeds are greater than 50 mph
  - When working within 100 feet of a roadway where traffic speeds are less than 50 mph and where visibility is impaired due to vegetation or weather conditions
  - When working any greenfield construction projects where visibility is impaired due to vegetation or weather conditions
  - When working as a spotter for heavy equipment on brownfield project sites where visibility is impaired due to vegetation or weather conditions (additional local site/procedures or requirements must be considered)
- Wear a high visibility vest as the outer garment, with a minimum ANSI Class 2 HRC-1

- When working on any Greenfield construction project when weather conditions are clear and visibility is not inhibited
- When working near heavy equipment on brownfield project sites when weather conditions are clear and visibility is not inhibited (additional local site/procedures or requirements must be considered)
- When working within 100 feet of a roadway where traffic speeds are less than 50 mph when weather conditions are clear and visibility is not limited  
EXCEPTION: High visibility outer garments are not required to be FRC rated if working on a Greenfield construction project more than 500 feet from an active facility, including ROWs, prior to the introduction of hydrocarbons

No job shall start until the proper PPE has been identified and provided to workers. Each individual is responsible for the proper care of this equipment.

Rings (wedding or finger rings, facial rings or posts), necklaces, earring hoops, and other loose jewelry, must not be worn when working in areas where they could catch on moving objects, sharp protrusions, or be exposed to electrical circuits.

## **Flame Resistant Clothing (FRC)**



Minimum FRC requirements for construction activities (excluding office areas, break areas that are outside of process areas and occupant compartments of vehicles) are:

- Flame Resistant Clothing (FRC) Must be worn as the outermost layer
- In any Company facility, including ROWs
- Brownfield Projects
  - Involves an addition to an already existing facility and FRC is required.
  - Brownfield projects include new pipelines constructed within a right-of-way with active pipelines.
  - If an employee travels from a Greenfield project to an active facility, FRC is required at the existing facility.
  - Any time a Greenfield construction project comes within 500' of an in-service facility, the project transitions to a Brownfield project.
- FRC will meet all the following requirements
  - NFPA 2113/2112 guidelines for general purpose work (excluding electrical energized work)
  - A minimum HRC 1 rating
  - A minimum ATPV value no less than 4
  - A minimum no less than HRC-1 value for outerwear garments, i.e., raincoats and cold weather gear
  - Rainwear must also meet ASTM F2733 specifications
  - A statement similar to the following must be printed legibly on the product label:  
**MEETS THE REQUIREMENTS OF NFPA 2112**
  - Shirts will be long sleeved, fully buttoned excluding collar button, and tucked into pants, with the sleeves rolled down and buttoned at the waist
  - Pants will be full length and worn over boots
  - Wear garments under FRC that are FR clothing or made of natural cotton, wool, or silk fibers
  - Replace FRC garments when frayed, ripped or torn
  - Store FRCs in a manner that prevents physical damage; damage from moisture, dust, or other deteriorating agents; or contamination from flammable or combustible materials

- Clean FRCs prior to their initial use in accordance with manufacture's specifications in order to maintain flame resistance and thermal protection properties. Do not use starch, fabric softener, or bleach
- Make repairs and approved alterations to components that comply with the original FRC specifications and construction.
- Clean, repair, or replace FRC that is contaminated with flammable materials, worn, or damaged to the extent that the protective qualities are impaired

## **Pneumatic Testing Pipe**

When conducting an approved pneumatic pressure test of a given system, precautionary measures regarding PPE include the following:

- The minimum PPE requirements for tests less than 50% SMYS shall consist of FRC, hard hats, safety glasses, steel-toed shoes, and hearing protection for all individuals designated to enter the testing area to inspect for leaks
- The minimum PPE requirements for tests exceeding 50% SMYS shall consists of FRC, Kevlar body armor, face shields, helmets, safety glasses, steel-toed shoes, and hearing protection for all individuals designated to enter the testing area to inspect for leaks.
- Everyone must adhere to the clearance area requirements as referenced in the work plans.

## Hand Protection



Appropriate gloves (cloth, cut-resistant, leather or leather-palmed gloves) must be worn when hands are exposed to potential hazards such as burns, cuts, punctures, or abrasions, when handling chemicals or hazardous materials where absorption is a concern (chemical resistant gloves), and when performing electrical work (certified gloves for electrical work).

Welding specific, flameproof, gauntlet gloves must be worn during all arc welding, gas welding, or gas cutting operations except when engaged in light work such as test-fitting pieces.

## Respiratory Protection



Contractors whose workers perform work that requires respiratory protection, must have a written Respiratory Protection Program that meets, at a minimum, the requirements of 29 CFR 1910.134. Contractors must ensure that their workers are properly trained, medically cleared, fit-tested, and that the program is properly implemented and documented.

## **Environmental Practices**

### **Cultural and Archaeological Artifacts**

Contractors working in or near any site that may contain cultural artifacts or archeological antiquities need to remain alert. Should a cultural or archeological site be uncovered, the contractor must cease work and immediately notify the Authorized Williams Representative, who will notify the appropriate regulatory agency.

### **Ecologically Sensitive Habitats**



Precautions should be taken in sensitive habitat areas to protect adjacent drainages, waters, wetlands, protected flora, raptor nests, sage grouse, etc. Contact the Authorized Williams Representative regarding concerns or questions when working in sensitive habitats.

### **Erosion and Sedimentation/Water Bodies and Wetlands**

Contractor will be supplied copies of all soil erosion and sedimentation control plans, and all permits related to wetlands, stream crossings, and water body crossings, as applicable for the project. The Contractor will maintain copies of each permit and plan at the job site throughout the project.

The Contractor will work within the designated limits of disturbance (LOD) outlined in these documents and comply with their requirements. The LOD must include all workspace, temporary workspace, fabrication areas, and access roads.

Changes in LOD, stream crossing procedures, or soil erosion and sedimentation control measures from those approved in the plans and permits must be reviewed and approved by the Authorized Williams Representative. The Contractor shall conduct routine inspections of all control measures to assess if they are effective or need to be revised.

Erosion and sedimentation controls must be inspected as required and repairs made in a timely manner. Any impacts to a water body or outside of the LOD must be reported to the Authorized Williams Representative immediately.

### **Hazardous Materials Management**

Contractor shall maintain an inventory of all chemicals, oils, fuels and other hazardous substances brought onto the job site. Proper enclosures and containers must be used. Safety Data Sheets (SDS – formerly known as Material Safety Data Sheets (MSDS) must be available for these materials and will be reviewed before any of these hazardous substances are handled.

All chemical storage, wastes, vehicle fueling, and loading/unloading areas should be located at least 100 feet from any water body. Adequately stocked emergency spill response kits shall be readily available. If an item from a spill response kit is used, it should be promptly replaced. Any frac and Baker tanks brought to the job site for storing liquids shall be deemed “certified clean” prior to being used.

Williams Employees and Contractor Employees are responsible for handling, labeling, storing, inspecting, characterizing, profiling, documenting, transporting and disposing of all waste in accordance with Williams’ policies and procedures and with the applicable federal, state, and local regulations. The Authorized Williams Representative or the designated Environmental Compliance Representative, if one is assigned, should provide adequate oversight in order to ensure that compliance is maintained at all times.

Contractor and Subcontractor shall implement good Housekeeping Practices throughout the entire length of the project, and maintain their immediate worksites free of harmful spills, emissions, releases, discharges, and other pollutants.

## **Hazardous Waste Management**

Contractors and Subcontractors shall comply with all local, state, and federal laws, rules and regulations related to the management of hazardous waste, including but not limited to the Resource Conservation and Recovery Act (RCRA). Under guidance provided by the designated Authorized Williams Representative, or the designated Environmental Compliance Representative, if one is assigned, the Contractor will sample, characterize, and profile all waste, and ensure that all wastes is disposed of at a Williams-approved disposal facility. In order to streamline this process, the Contractor may be required to complete a Waste Management Plan.

Waste is to be classified as “Hazardous Waste” if any of the following conditions exist:

- The waste is a listed hazardous waste in 40 CFR 261. The lists are generally referred to as: F-List, K-List, P-List, and U-List
- The results of laboratory analysis indicate that the waste meets one of the following criteria specified in 40 CFR 261 as being characteristically hazardous:
  - D001: Ignitability - flashpoint less than 140 degrees Fahrenheit
  - D002 Corrosiveness – pH <2 or pH >12.5
  - D003 Reactivity – is explosive or releases harmful quantities of cyanide or sulfide gas
  - D004 – D043: Toxicity - leaches certain metals, organics, chlorinated organics, pesticides, or herbicides

Note: Some hazardous waste is exempt from the federal and state hazardous waste regulations if it is generated on the Exploration & Production side of the business.

## **Other Regulated Waste Management**

Some types of waste must be handled and disposed of in accordance with regulations other than RCRA. These wastes include but are not limited to:

- Asbestos
- NORM
- PCB waste
- Certain remediation waste

Disposal of all construction waste should be reviewed with the Authorized Williams Representative to ensure that all federal, state, and local requirements are being met.

## **Pollution Prevention and Waste Minimization**

Pollution prevention is the responsibility of all Contractors and their Subcontractors. All Contractors and Subcontractors shall comply with all local, state, and federal laws, rules and regulations relative to spill prevention, pollution control, and waste minimization. If the Contractor encounters, identifies or suspects a potential pollution hazard or spill/release event occurring during an operation, immediate steps must be taken to eliminate the hazard and/or minimize the effect. The Authorized Williams Representative must subsequently be immediately notified.

Good housekeeping practices shall be employed at all times throughout the project. Contractors must maintain their immediate work areas and keep them free from harmful spills, discharges, or releases.

Work involving the blowdown or flaring of gas shall be communicated to the Authorized Williams Representative. Subsequently, an assessment shall be conducted to determine what state/regional air permitting requirements may be applicable.

Work involving in-service lines must have the appropriate work-plans and work permits and must be approved by the Authorized Williams Representative.

The appropriate containment devices will be positioned to catch oil or other types of liquids which may have to be drained or allowed to run out of lines or equipment to allow work to progress. Containment devices must have the appropriate drain plugs in place prior to being used.

Contractors shall develop and implement a Storm water Pollution Prevention Plan for all onshore work.

Waste generated on a Williams project must be handled according to Williams' waste procedures. Prohibited activities include, but are not limited to:

- Burning of liquid or solid materials in pits, piles, drums, or other open containers
- Disposal of any liquid waste in landfills
- Disposal of waste, including contaminated PPE, in containers constructed of material not compatible with the waste, or dedicated to the waste being disposed of
- Disposal of waste at disposal facilities that are not Williams approved (Contact your Authorized Williams Representative for waste management guidance, such as sampling, characterizing, profiling, storing, labeling, inspecting, transporting, and disposal at approved disposal facilities)

Contractor shall implement waste minimization practices throughout the project by:

- Ordering only the amount of chemicals or other materials needed to do the job
- Returning unused chemicals or other materials to the vendor when possible
- Reusing chemicals or other materials when possible
- Recycling or reclaiming wastes when possible

- Requiring all painting and x-ray subcontractors to take their waste with them once the project is complete

### **Other Environmental Site Issues**

Contractor Employees and Williams Employees understand that unanticipated environmental issues may be encountered during construction. This may include undocumented disposal areas, mine voids, acid mine drainage, evidence of past spills, or abandoned industrial operations. If these are discovered, the Authorized Williams Representative should be contacted before proceeding.

## Additional Site-Specific Safety Requirements



### Warning Signs/Barricades

Signs are for informing personnel of potential hazards and, therefore, must be obeyed.

Signs are not a substitute for education, training, or proper planning.

Signs should be installed in areas where hazards exist or have the potential to exist, such as areas that may have overhead obstructions, including utilities or areas where work is being performed overhead.

Other examples include confined space warning signs, signs that designate specific permit requirements for work areas, or signs designating PPE.

Barricades are required around most

- Excavations
- Holes or openings in floor or roof areas
- Edges of roofs and elevated platforms
- Around certain types of overhead work
- Pipeline excavations
- Hazardous areas where ignition sources could cause an explosion or fire
- Wherever necessary to warn people against falling in, through or off of

Barricades and/or guard services shall be employed in highly populated areas, school grounds, residential areas, etc., to keep people out of excavations and off equipment, pipeline or materials.

#### Erection of Barricades:

- Barricades shall be 42-inches high and encompass the area of concern.
- Erect barricades before the hole is cut and extend them as the excavation progresses.
- Numerous excavations in one area may be barricaded effectively by erecting a barricade around the general area.
- Blinking lights shall be used on roadblocks and other pathways after dark.
- Leave an entrance, opening, or gate where practical.

## **Right Of Way/Roadside Work**



Contractor employees and Williams employees working in a public ROW, or otherwise exposed to vehicular traffic, are required to wear, warning vests marked with (or made of) reflective and highly visible material.

All vests used by employees when exposed to vehicular traffic must comply with OSHA Sub Part G, 29 CFR 1926.201

Contractors shall ensure barricades, cones, flashers, and warning signs are placed in strategic locations when working on or near roads and other areas where vehicular traffic may be a hazard. Signage, flashers, and/or flaggers must meet state and local traffic requirements.

In areas where there may be pedestrian or vehicular traffic, Contractor shall install safety fence to prevent pedestrians or vehicles from entering the work areas. Contractor shall install safety fence before the work begins, and safety fence shall be maintained through construction activity until excavations are backfilled and work traffic has ceased.

Contractor shall surround all open excavations with safety fence at the end of each working day to prevent unauthorized entry.

Contractor shall assign traffic control or flagging operations on highways and road construction work zones which shall meet the requirements of the Federal Manual of Uniform Traffic Control Guidelines.

If part of the work site and extra work space is occupied by a radio tower with guy wires, Contractor shall exercise caution in this area to avoid damage to these facilities. In work areas that are adjacent to or in overhead power line rights-of-way, Contractor shall be aware of these hazards of operating equipment in such areas and shall take precautions to ensure the safety of personnel and the integrity of the existing power line facilities.

## **Overhead Structure and Utility Markings**



If at any time, equipment or material has the potential or capability to be closer than a minimum of 35 feet to energized power lines, an Overhead Power Line Evaluation Form must be completed and returned to the

Williams Representative or his designee before any work begins at the project location.

Every overhead structure, power line, telephone line, cable, guide wire, etc., that crosses or encroaches within 25 feet of the ROW, or that crosses a temporary ROW access road, must be clearly marked. Markers must be installed under these structures at both sides of both ends of the affected ROW, and the markers must be located within two feet of the point directly below the outside edges of the overhead structure unless the structure is an energized power line.

Goal post markers will be installed before and after overhead power lines at both sides of both ends of the affected ROW at a minimum of 20 feet from directly below the power line. The goal post markers should be located at a distance from the power line that prevents equipment from approaching distances.

Utility lines that parallel the ROW must be marked every 50 feet until they separate from the pipeline ROW by at least 25 feet. The overhead-structure and utility-line markers must be brightly colored, no less than five feet tall and must have a warning sign affixed to the marker that says, "WARNING – Limited Overhead Clearance HAZARD."

All cranes, aerial lifts, extended boom equipment, and excavation equipment operating within 100 feet of any overhead structure or utility line must have a dedicated spotter. The spotter must maintain clear line of sight with the equipment operator, the overhead structures and lines, and the warning markers at all times. Work must cease when the spotter's view is obstructed.

If markers and signs are damaged or removed, work shall cease in the area until the markers and/or signs are replaced.

Anytime pipeline construction activities including excavations are conducted in a right-of-way shared by high-voltage alternating current (HVAC) power lines, Contractor must contact the owner/operator of the

overhead power lines prior to any work beginning. Depending on the type of work and potential exposure to energized power lines, the line may have to be de-energized and visibly grounded or insulating barriers may have to be used to prevent physical contact with the line.

Contractor must follow OSHA 1926.1408 Power line Safety (up to 350 kV) equipment operations, 1926.1409 Power line safety (over 350 kV), 1926.1410 Power line safety (all voltages), equipment operations closer that table A zone, and 1926.1411 Power line safety while traveling under or near power lines with no load, and all other applicable provisions under the updated crane standard Subpart CC Cranes and Derricks in Construction.

Contractor shall designate a spotter to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means. The spotter must be positioned so as to be able to visually monitor the clearance between the equipment and the power lines. The designated spotter cannot be assigned other duties that interfere with the ability to give a timely danger warning to the crane operator.

In the event the operator of the piece of equipment cannot observe signals from the spotter then the operator will cease movement of the equipment.

Table A – Minimum Clearance Distances

Voltage (Nominal, kV, Alternating Current)	Minimum Clearance Distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
Over 350 to 500	25
Over 500 to 750	35

Over 750 to 1,000	45
Over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution)

On very high voltage lines special steps must be taken to ensure induced current is mitigated. A de-energized power line does not eliminate the need for goal posts and spotters.

## Excavation Safety



### Excavation Required Practices

Contractor is to notify Company a minimum of 48 hours in advance prior to scheduling any work. No work is to take place over existing Company pipelines unless approved by the Authorized Company Representative.

All trenching and excavation shall be performed under the supervision and in the line of sight of a Contractor-supplied Competent Person as defined by OSHA. The Competent Person shall inspect the excavation before each shift begins and after any changes in the excavation environment.

Daily inspections of excavations, the adjacent areas, and protective systems shall be made by the Contractor's Excavation Competent Person for evidence of a situation that could result in possible cave-ins, indications of a failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the Competent Person prior to the start of work and as needed throughout the work shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence.

The Competent Person shall document the pre-entry evaluation of the excavation, soil classification, protective system and authorization for

entry on Company's Excavation Checklist or similar Contractor form or log.

No excavation or mechanical work shall occur on a pipeline ROW which has an existing Williams Pipeline without a Williams Representative present.

Contractor shall furnish material needed to make excavations in compliance with Company safety requirements and OSHA regulations including 29 CFR Part 1926.650 through 1926.652, Subpart P.

In addition to the written daily excavation evaluation form, Contractors shall obtain an excavation permit process for all of the following situations:

- Before breaking the surface with power tools or equipment
- When the excavation is anticipated to reach a depth which requires benching or shoring
- When it is anticipated that the controls prompted by a specialized work permit are necessary to manage the risks of the excavation

Contractors excavating around Williams pipelines and piping always require a written plan to be developed and forwarded to the responsible Williams Representative prior to any excavation.

Contractors are required to evaluate all excavations using the Contractor's "Confined Space Plan" before personnel may enter the excavation. An "Emergency Action Plan" must be developed and in place before any entry into the excavation or trench.

Ladders, ramps, or other suitable egress shall be provided so that workers are always within 25 feet (7.6 m) of an egress when working in an excavation or trench that is four feet or deeper.

Make certain that all necessary PPE, SCBAs, lifelines, and harnesses are used and available in the event of an emergency.

## One Call



Initiation of the One Call process is the responsibility of the Contractor before any excavation begins. Contractor shall be aware of, and the potential for, any gas, oil, water, electrical, and telephone lines, which cross the right-of-way and shall take all necessary precautions to protect any foreign lines while performing work on any Williams project.

Contractor must initiate the “One Call” process a minimum of 48 hours before any Work (digging, prodding, and shoveling) begins (or within the period required by state law).

In locations where the 811 “One-Call” system does not exist, Company will make every effort to locate all underground facilities that now exist by using, line markers or any other signage available. If no state law governs the One Call process, contact the Authorized Williams Representative for project requirement details (refer to OSHA 29 CFR 1926.652).

Call Before You Dig. 1-800-245-4848 or 811

Contractor shall notify the Authorized Williams Representative when excavation is required within ten feet of any gas, oil, or water lines or telephone or electric cables, whether such pipelines belong to Company or are foreign, in order that Company and Contractor may agree upon and approve an excavation method.

Contractor will provide advance notification to owner of any pipeline or other facility crossing and provide the owner the option to have a representative present at the time of crossing. Contractor must provide all One Call information to, and receive confirmation to proceed from the Authorized Williams Representative. Before receiving confirmation, no excavation activities will be allowed to commence.

## **Locate Using Hand or Hydro-Excavation**



Excavations within the boundary of a Williams' facility or in-service pipeline system will be completed through hand or Hydro-excavation (Hydro-vac) methods. At a minimum, hand digging or Hydro-vac shall be used to identify underground utilities inside the plant area and the remainder of the excavation can be completed by hand digging.

Proper PPE must be worn during all Hydro-vac operations. The Contractor is responsible for evaluating work requirements and providing their employees with the proper PPE for the job, however the use of face shields should be considered during hydro-vac operations.

Hydro-excavation is the preferred method of soil removal in areas considered to be congested with underground utilities and may be used to pothole pipelines for visual verification

The existing underground facilities must be exposed, so that the equipment operator and/or qualified spotter can see the exposed facilities when the excavation equipment is in operation.

If there is any question as to the location of existing facilities, Contractors shall require continued hand or hydro-excavation to further expose and delineate the location of the facilities.

Absolute verification of the location of the existing underground facilities is required before any adjacent mechanical excavation is allowed.

No mechanical excavation machines shall be permitted inside of operating facilities without documented approval of the operating facilities manager. (the tendency is to say no mechanical digging inside the fence but no two facilities are the same and the plant manager should be a part of the decision)

### **Visual Verification Requirement**

Use the hand or hydro-excavation locations as reference points to mark any remaining soil over the existing underground facilities with florescent paint between the excavated locations for the entire width of the new ROW.

Place a wooden lathe or pin flagging the edge of the ROW on each side of the centerline of the new ROW.

No paint marks or pin flags shall be installed unless the facilities have been positively located by hand or hydro-excavation.

### **Williams Excavation Involvement**

No excavation or mechanical work shall occur on a pipeline ROW which has an existing Williams' pipeline without a Williams Representative present.

When the Williams Representative leaves the site, all excavation adjacent to existing Williams' pipelines must stop.

When Contractors have completed the excavation activities for the day in the vicinity of pressurized piping, they must notify the onsite Williams Representative.

## **Excavation Equipment**



Side-cutting teeth shall be removed from excavating buckets near pipelines and piping.

Excavation equipment shall have a temporary digging bar across the teeth to prevent the teeth from coming into contact with pipelines or piping.

Picks, axes, jackhammers, hammer hoes, and augers shall not be used until pipelines or piping is exposed and its location is visually confirmed.

The backhoe bucket and other powered equipment, such as hammer hoes and augers, shall not travel within two feet of a pipeline or piping. Final stripping on sides, top and bottom of pipelines and piping shall be by hand, hydro-vac excavation, or other approved non-mechanical means.

When excavating an encroaching ditch line, after the existing pipeline has been located by hand or hydro-excavation, the mechanical excavation equipment must be positioned so that, if extended, the equipment's bucket will not reach within two feet of the existing pipeline or underground utility.

Backhoe buckets should be curled each time the bucket is brought back into the excavation area or is moved over or above the pipeline piping.

When excavating for crossing of a pipeline (transverse to the excavation or trench direction), the pipeline must be exposed and the excavation equipment must be positioned so that the bucket will not reach within two feet of the pipeline.

Machine digging shall only occur parallel to the pipeline or piping.

After pipeline or piping has been located and exposed, the operator must be able to see the pipeline and the spotter while excavating.

After pipeline or piping has been located and exposed, the spotter must be able to see the operator and the pipeline.

Actual excavation movement shall only be parallel to the existing pipeline or utility so the equipment operator can see the existing pipeline's or utility's path.

Crumbing is only allowed with the bucket teeth curled under the backhoe arm.

A designated qualified spotter must always be present while machine excavating is occurring.

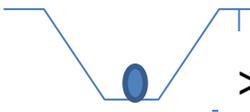
**Shoring / Sloping (Benching/Bracing)**



Excavations deeper than five feet (1.5 m) require sloping/benching or shoring/bracing before personnel may enter the excavation area.

Excavations greater than or equal to five feet deep are particularly hazardous and must be shored, unless:

- The face is cut back to a safe slope and the material in the face will remain stable under anticipated conditions of work and weather.
- Shoring is impracticable or unreasonable, and a Civil Engineer or other qualified professional has certified that adequate safety precautions have been taken.
- No one will be entering the excavation.
- The excavation has been properly shored/braced or sloped/benched before personnel may enter.



> 20' requires Engineer Approval

If an excavation or trench is greater than 20 feet (6m) deep, a registered professional engineer is required to review and approve the adequacy of the excavation/trench in writing.

Spoil piles should be kept two feet or more from the trench. Contractors' employees must be instructed not to work above or below a co-worker on sloped or benched excavations.

At no time shall a contractor employee be permitted to work above or below a co-worker.

## Fire Prevention



Fire prevention is vital to safe operations and construction activities. Williams and Contractors are responsible for ensuring that a fire prevention plan is in use and that all efforts are made to reduce fire potential.

When working on or near pipelines, piping, or equipment that contains flammable gas or liquids, a Hot Work Permit is required.

Contractor employees should be aware that typical ignition sources are welding arcs, cutting torches, electric power tools (such as drills, sanders, and grinders), dew point testers, and combustible engines (such as vehicles, pumps, bending machines, and lighters).

Pneumatic tools that chip, gouge, grind, or drill are also ignition sources that may require the use of Hot Work Permits. To prevent ignition, the heated surface created by pneumatic tools must be cooled with either cutting oil or water. This requirement must be stated on a non-welding Hot Work Permit.

If there is any doubt about whether or not a piece of equipment can ignite an air-natural gas mixture, contact Williams' Representative for guidance.

Personal electronic devices (phones, pagers, cameras, and computers) are also ignition sources, and a non-welding Hot Work Permit may be required in certain facilities and areas.

Good housekeeping practices are vital to ensuring potential fire hazards are minimized.

## Confined Space Entry



Contractors that provide services that require workers to enter a confined space are required to have a written confined space program that meets, at a minimum, the requirements of OSHA Standard 29 CFR 1910.146 for confined spaces.

All qualified Contractors who are to perform confined space entry operations must:

- Obtain information regarding confined space hazards and entry operations from Williams when working within the boundaries of any Williams' work site.
- Provide equipment, such as personal protective equipment, fire extinguishers, testing equipment, communications equipment, alarm systems and rescue equipment, meeting compliance for this standard. All equipment must have documented inspection/certification records.
- Coordinate entry operations with Williams, as required within Williams' in-service facilities. Some Williams facilities may require Contractors to use the site-specific Confined Space Entry Form. Contact the Williams Representative for specific requirements at each facility.
- Review the Contractor's Permit Required Confined Space Program with the Williams Representative
- Provide Williams with a copy of the completed entry permit to be posted on the location where the work is being performed.

- Upon completion of the permitted entry, Contractors shall maintain the completed entry permit at the offices for one year.

## Fall Protection / Working in Elevated Areas



> 6' requires full body harness

When working at an elevation of six feet or more above grade, floor, or an approved work surface, such as platforms and scaffolds, or when working in an area where a fall potential of greater than six feet exists, Williams employees and Contractor employees must use a full-body harness with a proper means of attachment.

Contractor's Fall Protection Plans will meet or exceed the requirements of 29 CFR 1926.503, and Subpart M Fall Protection standards

Contractors will be responsible for providing affected workers with fall protection equipment, and ensuring that Contractors' employees who must work at heights where safe platforms are not available, will use the equipment provided.

Contractor-owned equipment, such as ladders and scaffolding, must be maintained and used in compliance with 29 CFR 1910.25 through 1910.35.

Regardless of height, other situations that may require fall protection include, but are not limited to the following.

Working above potential hazards, Contractors must wear a full-body harness with 100% tie-off when working in areas that have no handrails or that have an open hole, and are more than six feet above the ground

floor, or deck level. The harness must have leg straps and a D-ring in the upper back between the shoulder blades. The harness must be properly attached to an appropriate anchor point.

Extra precautions shall be in place to prevent fall protection equipment from exposure to mechanical equipment, such as wearing fall protection equipment with dangling components that could become tangled in rotating equipment.

## Cranes and Rigging



Contractors are required to provide a copy of their site-specific Crane Safety Plan to the Williams Representative before beginning work if cranes will be used during the course of work on the project. Crane and Rigging Plans must follow the minimum requirements of 29 CFR 1926.1400-1442 “Cranes and Derricks” in the Construction Final Rule.

Only designated personnel, trained and qualified to perform specific duties, are permitted to operate a crane per OSHA 29 CFR 1910.179.

## Cranes and Weather

Generally, dynamic load charts are designed using 24-mph wind speeds. Each crane and load must be evaluated to ensure the manufacturer’s recommendations are accounted for regarding safe operating requirements related to wind speed and load dynamics.

Some cranes or crane configurations may have lower wind speed requirements that must be considered. If the wind conditions exceed 24 mph, Contractors should consider consulting with the manufacturer for possible temporary de-rating of the crane's dynamic load capacity.



> 35 mph – STOP WORK

Crane operations must be stopped when wind speeds are at or above 35 mph (or lower wind speeds set by the manufacturer), or when lightning is in the vicinity.

Utilize "Stop Work Authority" when inclement weather exists.

## **Suspended Loads**



Contractor shall ensure a safe distance shall be maintained when a load is suspended in the air.

Contractor shall ensure workers are a safe distance from suspended loads and shall be instructed when not to stand or work under a suspended load.

Workers shall be instructed not to go between the load and other objects where they may be trapped or crushed.

Non-conducting tag lines long enough to prevent workers from working under the load shall be used to control a suspended load and shall be attached before a load is lifted. Chains or steel cables are not acceptable.

If tag lines are impractical during final positioning of the load, caution shall be taken to ensure that no part of the person's body who is guiding the load is between the load and any stationary object, creating a pinch point situation.

When lifting a load with a gin-pole truck, a snub line from the load to the truck may be used in lieu of a hand-held tag line. However, a flagman shall be used.

## **Critical Lift**

When a Contractor is required to perform a critical lift, a Critical Lift Plan will be completed and submitted to the Williams Representative.

A critical lift plan shall be prepared by the Contractor at least two weeks prior to all critical lifts. Plan shall be available two weeks prior to all critical lifts for the Authorized Williams Representative to review.

The lift plan shall address items from OSHA 29 CFR Part 1926.752(e) Appendix A to Subpart R, Guidelines for Establishing the Components of a Site specific Erection Plan: Non-mandatory Guidelines for Complying with 29 CFR 1926.752(e) and address the special conditions of each lift.

While working within the boundaries of a Williams' in-service facility, Contractors will meet the requirements supplied by the onsite Williams Representative.

A Critical Lift Plan is required when:

- The load weight is 75% of the rated capacity of the crane relative to boom angle.
- The lift requires the use of more than one crane or derrick.
- The work will be performed when working within ten feet of power lines.
- The power lines must also be de-energized and grounded through coordination with the local power authority.
- The lift is a Blind, Complex, or Complicated lift.
- Any load, (personnel, equipment or material) is suspended or lifted over any existing or in-service equipment, piping, and/or structure.

## **Rigging**

Contractors shall ensure only trained and qualified persons are performing rigging functions as required in 29 CFR 1926.1400-1442 “Cranes and Derricks” in the Construction Final Rule.

All rigging slings shall be inspected prior to use following manufacturer's recommendations.

All damaged rigging must be properly disposed of to ensure it is not used during lifting operations.

## **Electrical Safety**



Electrical safety is the responsibility of all workers exposed to this type of work. All employees involved with electrical work activities must be trained and qualified to perform the work requirements.

### **General Electrical Safety**

Contractor employees and Williams employees will not touch electrical equipment while standing in water, on metal floors or ladders, on damp concrete, or on other well-grounded surfaces.

Contractor employees and Williams employees will not operate electrical equipment when their skin surfaces are damp or when they are wearing wet shoes or damp clothing.

Contractors will post caution signs on electrical equipment for voltages 600 volts and below.

Danger signs will be posted on electrical equipment for voltages above 600 volts.

### **Electrical Fuse Safety**

Contractor shall be familiar with potential hazards of electrical shock from induced AC voltages and currents while working parallel to HVAC transmission lines. Contractor shall ensure its personnel and subcontractors are trained and prepared to follow safety procedures before working in these areas. Safety procedures shall meet industry standards including NACE RP-01-77, and Company guidelines.

Contractor shall provide a Company approved safety coordinator to implement the safety procedures required by Company.

Contractor employees and Williams employees:

- Will de-energize circuits by using lockout and tag out procedures before replacing fuses
- Will not bridge fuses or circumvent the normal operation of circuit breakers
- Will not replace blown fuses with fuses having a higher-amperage or lower-voltage rating. To maintain proper circuit protection, have only qualified personnel replace blown fuses.
- Will use a fuse puller to remove cartridge fuses
- Shall not touch electrical equipment while standing in water, on metal floors or ladders, on damp concrete, or on other well-grounded surfaces

## **Extension Cords**



Contractor employees and Williams employees:

- Will inspect all extension cords prior to use
- Will remove damaged cords and properly discard them
- Will use extension cords in classified areas that are designed for explosion-proof service
- Will use extension cords only in temporary situations. Use proper construction methods to create permanent electrical connections.
- Will protect cords from contact with oil, hot surfaces, and chemicals
- Will not hang cords over nails or sharp edges. Will not place them where vehicles may run over them.
- Will always connect the non-explosion-proof connection first and disconnect it last when using adapter cords such as pigtails

- Will make and break all connections under zero energy state
- Will tape connections with electrical tape where two cords plug together
- Will not use cords where it may create a tripping hazard

## **Lockout/Tagout (Hazardous Energy Control)**



Contractor employees and Williams employees involved with work that requires isolation of energy sources shall have a written Lockout/Tagout Program that conforms to the requirements of OSHA 29 1910.147.

Contractors must provide documentation ensuring that personnel who will be involved with the lockout/tagout process are properly trained in the specifics of their written equipment-specific lockout/tagout procedures.

All lockout/tagout activity must also conform and be consistent with Williams' lockout/tagout procedures. It is the responsibility of all Contractors to coordinate all lockout/tagout with the Williams Representative on site.

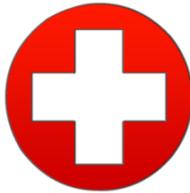
Contractors shall provide and have available their own lockout/tagout equipment including locks, chains, tags, and any other isolation devices that may be necessary during the lockout procedure.

Lockout/Tagout devices, including those installed by Williams or Contractors, are never to be bypassed, ignored, or otherwise defeated.

While working within the boundaries of an in-service system,

Contractors will utilize the site-specific facility Lockout/Tagout Process, obtained from the local Williams' Representative.

# Incident Management



## Emergency Action Plans

Contractors are required to have an Emergency Action Plan (EAP). The Contractors EAP must align with the local Williams Emergency Response Plan and/or Spill Response Plan when work is being performed within the boundaries of a Williams facility. Both plans should be reviewed by the Contractor and an Authorized Williams Representative.

Contractors shall post an emergency telephone number list for medical services, Life Flight, Police, Sheriff, Fire Department, emergency spill response contractor, Williams Pipeline Control and any other pertinent phone numbers near readily accessible phones. All personnel working at the job site should have immediate access to applicable emergency phones numbers. Other components of the plan should include:

- Key contacts for Contractors
- How to handle medical emergencies
- How Contractors Supervision will ensure proper medical care for their workers
- Preferred doctors
- Evacuation procedures
- Emergency call sequence and action plan
- Designation of a central assembly area in case of evacuation and/or emergency
- How to secure an emergency site
- The media relations person designated by Williams

- The statement that Contractors or their subcontractors are not authorized to speak or act as an agent or representative on behalf of Williams

The EAP shall be communicated to all of the Contractor's employees.

Some of the Williams facilities will have alert and alarm systems in place. Contractor's Supervision shall be briefed on the site-specific systems, which may vary by location.

Contractor shall prepare an emergency medical response plan for electrical shock related injury before working in HVAC areas. The plan shall include adequate CPR response during all work hours.

The EAP shall identify emergency response procedures, First-Aid/CPR Trained employees, location of first -aid supplies and medical evacuation methods. Contractor shall consult with local emergency response agencies to identify all options for medical response, including communication and GPS coordinates.

## **Spill Response Plan**

Contractors must manage liquid materials used at the job site in a way that minimizes the occurrence of leaks, spills, or releases during the Project. Specific spill prevention measures are summarized in the Spill Response Plan.

Contractors are required to maintain a signed copy of the Spill Response Plan at the project site at all times. Contractors will immediately report any leak, spill, or release discovered to the Authorized Williams Representative.

Contractors will ensure preventative measures are implemented and control measures are regularly inspected. Contractors must maintain an appropriate number of spill response kits at the job site at all times. Any items used from the spill kits shall be promptly replaced.

At the discretion of the Authorized Williams Representative, grounds for removing equipment or machinery from the job site includes:

- Excessive maintenance
- Continually leaks oil or hydraulic fluid
- Leaking fuel system
- Presents a high potential safety concern to personnel
- Inadequate or enabled safety devices

Contractors will implement the Spill Response Plan in response to releases or spills, completing activities only if within their knowledge and capabilities. If necessary, an outside emergency spill response team should be notified. Each Spill Response Plan shall list at least one emergency response contractor that can be contacted should professional assistance become warranted.

If Contractors observe or discover a spill or release, appropriate personnel must take the following steps:

- Safety First. Ensure the safety of all personnel. Anyone who observes the spill or release should act carefully, cautiously, and reasonably.
- Immediately notify the Contractors' supervisor and the Authorized Williams Representative.

If required, Williams or the Authorized Williams' Representative will make the appropriate notifications to regulatory agencies.

## Incident Notification and Investigation



Contractors are required to have a process in place to report, record and investigate incidents and near hits and must correct any deficiencies found.

Contractors must communicate to their employees the necessity of immediately reporting injuries, incidents, and unsafe acts or conditions to supervision.

Failure to report an incident may result in the termination of the Contractor's contract with Williams.

Contractors are required to verbally notify the designated Williams Inspector, Williams Safety Representative, Williams Project Manager, or an Authorized Williams Representative(s) immediately after any incident, spill, or release. Information that is collected at that time will be used by Williams to determine if the incident must be reported to any regulatory agencies. Note that some reporting must be made to outside agencies within two (2) hours of discovery.

Contractors must subsequently report all spills, releases and noncompliance issues by using Williams' appropriate Emergency Incident Reporting form. The completed form is required within 24 hours of the reported event.

An incident report is also required to be submitted to Williams within 24 hours of the incident occurrence, and should include:

- The specific location of the incident
- Date and time of the incident

- The Contractor's name
- Description of the incident
- The project name or location
- Any supporting documents: Photos, eyewitness accounts, other supporting documents, etc.

The final incident report is required within five working days of the event and should include:

- Incident/Root Cause Analysis findings
- Corrective measures that have been applied

These notification guidelines are the minimum and of a general nature and are not to be construed as absolute.

Williams may participate in any analysis of any Contractor incidents as necessary and may perform an independent incident analysis where deemed necessary

## **Near Hits/Misses**

Contractors should encourage employees and subcontractor employees to report near misses/hits.

Once a near miss/hit or safety hazard is recognized, "stop work", call a "time out" or "safety huddle" to make the conditions safe to work in. Increased near miss/hit reporting can be extremely beneficial to keeping employees safe.

There is no right or wrong in near miss/hit reporting. If someone thinks that there is a near miss/hit, then there is; no questions asked.

A robust near miss/hit program will have a positive impact on keeping employees safe and will be part of the evaluation criteria when choosing contractors to work for Williams.

## **Incident Investigation/Root Cause Analysis**

Contractors are required to provide someone trained to lead an incident investigation to investigate and identify the causes of incidents so that systemic causes can be reduced or eliminated and future incidents prevented.

Contractors are also required to have a process in place to report, record and investigate incidents and near misses and correct any deficiencies found.

An incident investigation report is required for:

- Any incident resulting in an injury that requires attention from a medical professional
- All MVAs or equipment damage that take place on Williams property as deemed necessary by the Authorized Williams Representative.
- All fires
- Reportable spills, releases, near misses or minor incidents, which have the potential to result in a serious injury, environmental contamination, property loss, fire, MVA, or as directed by the Authorized Williams Representative
- Incidents that occur frequently
- All “Utility” damage including pipeline strikes, power line strikes or other damage

At a minimum, an investigation and resulting report should:

- Describe what happened, when, and where
- Determine the actual and potential loss or losses
- Determine the root cause of the incident
- Determine the risk of recurrence
- Develop controls to reduce the risk of recurrence
- Communicate the lessons learned

In situations where an incident involves multiple contractors and Williams personnel, Williams may lead the incident investigation. The

incident investigation team may be comprised of personnel from all affected Companies.

If there is not an Authorized Williams Representative on site, the Contractor Supervisor must contact the Williams Construction Coordinator or the Williams Project Manager.

An Authorized Williams Representative will assume the responsibility for all appropriate internal and external notifications at that point.

## **Greenfield to Brownfield Transitioning**

When transitioning from Greenfield Construction activity and merging into a Brownfield Construction phase the Authorized Williams Personnel and the Contractor Leadership Team shall meet with the Operations Leadership Team to discuss safety concerns and site specific operational information.

Discussion points may include:

- Williams/Site Emergency Response Plans
- Plans to introduce gas into the system
- Gas Handling Plans
- Permits to Work (PTW)
- Hot Work Permits/Confined Space Permits/LOTO
- Overall Site Expectations
- Identifying and Fencing areas currently flowing gas
- Any Planned Excavations in the area including equipment requirements routing plans
- PPE Requirements
- Muster Points
- Spotters for all Moving Equipment
- Housekeeping
- Incident Notification Plan
- Sign In and Out Requirements
- Other Site Specific topics as necessary

## **Pre-Startup Safety Review**

PSSR shall confirm, at a minimum, that construction, equipment and modifications are in accordance with design specifications and meet the requirements specified by the associated 943-1027 - Management of Change Form or CAN-943-1027 - Canada Management of Change Form (where applicable).

Additionally, a PSSR confirms that applicable Procedures are developed or revised and implemented, persons operating or maintaining the asset(s) have been trained on applicable Procedures, the asset is ready for commissioning and/or startup and post startup deliverables are identified and assigned.



## **WES-83 - Hazard / Near Miss Report**

### Instructions:

1. Use this form to document any hazards or near misses that you observe.
2. Intervene at once if you observe anything that immediately threatens a person's health or safety.
3. Take action as needed to prevent the hazard or near miss from causing injury or damage.

### Originator:

4. Record the physical location of the hazard or near miss.
5. Include your name, the date and time.
6. Describe the hazard or near miss. Include the exact location and nature of the hazard or near miss. Describe any work that was being performed when the near miss occurred.
7. Record any Actions Taken to remedy the hazard or near miss.
8. List any Additional Actions that are required to remedy the hazard or near miss.
9. Determine if the Additional Actions need to be conducted immediately or whether they can be scheduled with other on-going work activities.
10. Forward this report to the appropriate Supervisor.

### Supervisor and Safety Representative:

11. Review the Report and determine if an incident investigation is warranted.

12. Determine if the Additional Actions are warranted and schedule work accordingly.
13. Load Action Items into the Action Item Tracking system.
14. Track progress through final resolution.
15. Communicate back to the Originator on the final resolution of the hazard or near miss.



Immediate Action Required – High Urgency

**Additional Actions Required**


**Reviewed By**

<b>Supervisor</b>	
<b>Safety Rep</b>	
<b>Date Resolved</b>	
<b>Tracking No.</b>	

## **(Excavation Checklist)**

# (Critical Lift Plan)

WES-09 - JOB PLAN			
Job Name:		<input type="checkbox"/> New	<input type="checkbox"/> Revised
		Revision No:	
Location/Facility:		Asset:	
Prepared By:		Date Prepared:	
Revised By:		Date Revised:	
Project Manager:		Contact No:	
Start Date:		End Date:	
PO Number: (Optional)		MOC Number:	
Work Order Number: (Optional)		RFS Number: (Optional)	
Objective: (Purpose)			
Job Scope: (Definition)			
#	Job Steps <i>(Define and number the job steps. Identify When, who, what, where and unusual hazards and controls)</i>	Hazards	Hazard Controls
1			
2			
3			
4			
5			
6			
7			
8			
9			

# (Critical Lift Plan)

<i>Communications (Include only those involved and those affected)</i>				
Groups	Contact (Representative) Name	Involved	Affected	Phone Number
Scheduling		<input type="checkbox"/>	<input type="checkbox"/>	
Pipeline Control		<input type="checkbox"/>	<input type="checkbox"/>	
Operations		<input type="checkbox"/>	<input type="checkbox"/>	
Maintenance		<input type="checkbox"/>	<input type="checkbox"/>	
Contractor(s)		<input type="checkbox"/>	<input type="checkbox"/>	
Producers		<input type="checkbox"/>	<input type="checkbox"/>	
Upstream Operating Area		<input type="checkbox"/>	<input type="checkbox"/>	
Downstream Operating Area		<input type="checkbox"/>	<input type="checkbox"/>	
Shippers		<input type="checkbox"/>	<input type="checkbox"/>	
Customers		<input type="checkbox"/>	<input type="checkbox"/>	
Other - Landowner/Tenant:		<input type="checkbox"/>	<input type="checkbox"/>	
Other		<input type="checkbox"/>	<input type="checkbox"/>	
<i>Drawings/Maps/Etc. (List and attach the drawings/maps/etc. required to execute the job steps.)</i>				
Number	Title	Revision No.		
<i>Tools, Equipment &amp; Materials (List any special tools, equipment and materials required.)</i>				
Type/Description	Quantity	Source	Phone No.	
<i>Permits/Checklists (List the safety related permits or checklists required. List all required.)</i>				
Name	Job Steps to Which the Permit(s)/Checklist(s) Apply	Responsibility for Obtaining Permit(s)/Completing Checklist(s)		
<i>Procedures (Company O&amp;M, Site Specific O&amp;M, Baseline Maintenance, etc. List all to be used.)</i>				
Name	Job Steps to Which the Procedures Apply	Groups/Persons to Which the Procedures Apply		

# (Critical Lift Plan)

<b>Personal Protective Equipment (PPE)</b> <i>(List any additional PPE that is not listed in the hazard controls. Refer to WHA for minimums.)</i>			
<b>Reviews and Approvals</b> <i>(Approval indicates acceptance of the Job Plan.)</i>			
Responsibility	Approval Required	Representative's Name	Date Reviewed/Approved
Operations	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Maintenance	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Project Manager	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Contractor	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Inspector	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Safety Representative	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Other	Yes <input type="checkbox"/> No <input type="checkbox"/>		
<b>Distribution</b> <i>(Group, Group Representatives)</i>			
Group	Representative's Name	Date	
Scheduling (Commercial)			
Pipeline Control			
Operations			
Maintenance			
Contractor(s)			
Producers			
Upstream Operating Area			
Downstream Operating Area			
Other			

# (Critical Lift Plan)

) Pre-Job Meeting Attendees

Pre-Job Meeting (Review the Job Plan with personne/groups involved and/or personnel/groups affected).			
Facilitator:		Project Manager:	Date:
<b>Procedures Reviewed</b>		<b>Procedures Reviewed</b>	
█		█	
█		█	
█		█	
█		█	
█		█	
█		█	
	<b>Attendee</b>	<b>Company (Representing)</b>	
1	█		
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# (Critical Lift Plan)

**Complete This Checklist In Conjunction With the Crane Operator**

Location/Site: _____		Specific Area of Location/Site for Critical Lift: _____	
Date of Critical Lift: _____			
Contractor's Representative Responsible For Lift: _____			
Company Representative Responsible for Critical Lift: _____			
Description Of Item(s) To Be Lifted: _____			
Weight Of Item To Be Lifted: _____		<input type="checkbox"/> Actual <input type="checkbox"/> Estimated	
Weight Estimated By: _____		Weight Confirmed By: _____	
<b>Mobile Cranes</b>			
(Do Not Lift From Tires (On Rubber) Unless Necessary)			
Mobile Crane's Rated Capacity (Load Chart) _____		<input type="checkbox"/> On Outriggers <input type="checkbox"/> On Rubber	
Boom Length: _____		Gross Rated Capacity (GRC): _____	
Boom Angle: _____		Capacity Deductions (CD): _____	
Load Radius: _____			
Quadrant: _____		Net Rated Capacity (GRC - CD): _____	
<b>Overhead Cranes</b>		<b>Hoists</b>	
Overhead Crane's Rated Capacity: _____		Hoist's Rated Capacity: _____	
Rigging Method To Be Used: _____		Designated Rigger Or Tag-Man: _____	
Sling Configuration: _____		Sling's Rated Capacity: _____	
<b>Inspection Of Rigging and Hoisting Equipment</b>			
Lift Unit Inspector: _____		Date: _____	
Rigging Inspector: _____		Date: _____	
<b>Comments (Include any discrepancies and corrective actions):</b> _____			
<b>Pre-Lift Inspection</b>			
	<b>YES</b>	<b>NO</b>	<b>N/A</b>
Area clear of unauthorized personnel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barricades in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swing clearance adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequate clearance from power lines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Signalmen in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blocking of outriggers adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ground stable/level?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All tires off the ground (preferred)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hoist line in line with center of gravity of load?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weather conditions adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspected By: _____	Time: _____	Date: _____	



# (Critical Lift Plan)

## CRITICAL LIFTS

Critical Lifts are Lifts where the load weight is  $\geq 75\%$  of the rated capacity of the Crane relative to boom angle or Lifts requiring the use of more than one crane or derrick. Exercise the following precautions during Critical Lifts:

### SUPPORTING SURFACE

The ground must be compact and stable.

### BLOCKING

Unless crane sits on a concrete pad, outrigger blocking must be used and crawlers should be on pads or cribbing.

### LEVEL

The machinery deck or boom foot pins must be absolutely level.

### LOAD

The load weight must be determined exactly.

### CENTER OF GRAVITY

The location of the load's C of G must be determined and the crane hook positioned above it.

### LOAD RADIUS

The radius must be measured exactly.

### BOOM LENGTH

The boom length must be determined exactly.

**NOTE:** Even though the actual load weight may be small compared to the base rating of the crane, it can still be a Critical Lift. For example, a 1-ton load on a 50-ton capacity crane may seem insignificant, but if that crane's rated capacity at the actual load radius is only 2,400 lbs., the lift becomes critical.

### BOOM ANGLE

The boom angle, if necessary for determining the crane's capacity, must be determined exactly. Do not rely on the crane's boom angle indicator.

### WIND

Wind effects must be considered and the Critical Lift delayed if the loads are significant. If the wind speeds are in excess of 30 mph, do not make the Critical Lift. If the speeds are more than 20 mph, consider postponing it.

### REEVING

The reeving must be balanced.

### LOAD RIGGING

Check for adequacy and security. The weight of rigging must be known exactly.

### OPERATION

All control, machine and load movements must be made as slowly and smoothly as possible.

**CAUTION:** The determination of these parameters by untrained personnel or by using uncalibrated instruments is extremely hazardous.

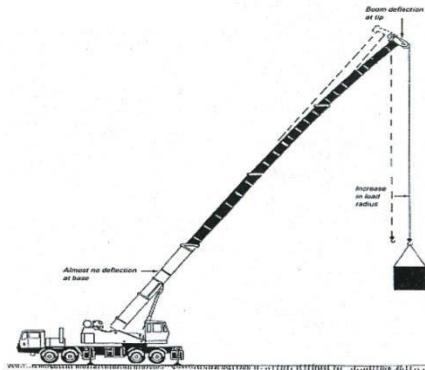
# (Critical Lift Plan)

## BOOM ANGLE INDICATORS AND CRITICAL LIFTS

Boom angle indicators are required on all mobile cranes but they must not be relied on for accuracy during Critical Lifts because:

- They can give as much as a  $2^{\circ}$  reading error in boom angle, which can substantially affect the gross capacity reading on the load chart.
- The indicators are mounted on the base section of the boom and may not register the deflection of the extended sections under heavy load, particularly if the wear pads are worn excessively. Consequently, the boom angle may actually be lower than the indicator reads.

For these reasons, using boom angle indicator readings during Critical Lifts can be misleading. Rely on load radius (where possible); or, if the boom angle must be used (for example when lifting from a jib), assume the correct reading to be *lower* than what the indicator actually says.



# (Excavation Checklist)

The **Competent Person** must complete this checklist (leaving no fields blank) **only** for excavations  $\geq 4$  feet deep which persons will enter. Complete this checklist **daily** before persons enter the excavation. Re-inspect the excavation and complete this checklist **anytime** conditions change which could affect the excavation or the safety of those in or around such (e.g. -precipitation, thaw, heavy traffic, vibration, caving, etc.)

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Excavation Purpose: \_\_\_\_\_ feet long \_\_\_\_\_ feet wide \_\_\_\_\_ feet deep  
 Excavation Size (approximate): \_\_\_\_\_ feet long \_\_\_\_\_ feet wide \_\_\_\_\_ feet deep  
 Competent Person: \_\_\_\_\_

**At least one visual and one manual test must be completed. Complete as many visual tests as possible.**

Visual Tests:  Soil Samples (Cohesiveness, Particle Size)  Spoil Pile (Clumps or Breakage)  Excavation Sides (Cracks or Spills)  
 Surface Water (Seepage or Accumulation)  Vibration  Adjacent Areas (Observe Layered Systems)

Manual Tests:  Plasticity  Dry Strength  Thumb Penetration  Penetrometer

Soil Classification (Check soil type as determined by visual and manual tests)			
Test Type	<input type="checkbox"/> Type A	<input type="checkbox"/> Type B	<input type="checkbox"/> Type C
<b>Visual</b>	Composition: fine grained particles, clay like	Composition: combination of angular gravels (similar to crushed rock), sandy loam, silty loam and silts	Composition: combination of rounded gravels, granular soils, sands and silts
<b>Manual</b>	Plasticity: 2' length and 1/8' thread does not tear. Thumb Penetration: can be indented but penetrated with great deal of effort - 3/4" or Less.	Thumb Penetration: Can be molded with moderate finger pressure and penetrated with some effort - 1/2" - 1".	Thumb Penetration: can be molded with light finger pressure and easily penetrated several inches with thumb - 1" or more.
<b>TEST RESULTS</b>			
Record Test Comments → _____			
Maximum Slope →			

**Excavations  $\geq 20$  feet deep require shore / shield design by a Registered Professional Engineer**

**Means of Egress (required if  $\geq 4$ ft. in depth)**  Stairways  Ramps  Ladders

**Workers must not be required to travel more than 25 feet to reach a stairway, ramps, and/or ladder**

Check Utilities in vicinity of work: Mark "U" for underground; "A" for above ground; or "N/A" (not applicable).

Electrical  Gas  Steam  Telephone  Water  Sewer

Are all underground utilities properly located, marked, and protected?  Yes  No

Excavation Site Conditions	Yes	No	N/A	Comments / Corrective Action		
Atmospheric monitoring required and completed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	%O <sub>2</sub>	%LEL	ppm Toxic(s)
Rescue lines and harness (per 5.05-ADM-021)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Surface encumbrances removed or supported?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Prior or existing excavation Crossing or Parallel to trench?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Materials and spoil pile a minimum of 2 ft. from edge?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Traffic control established with Barriers/Warning Systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
PPE / Reflective Vests used as required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Ladder extends $\geq 3$ ft. above excavation and is tied off?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Walkway installed? (required if $\geq 4$ ft. deep if persons will cross over)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Accumulating or accumulated water controlled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Competent Person: \_\_\_\_\_ Date: \_\_\_\_\_

Professional Engineer (excavations  $\geq 20$  ft. deep): \_\_\_\_\_ Date: \_\_\_\_\_

# (Incident Root Cause Analysis)

<b>(B) TITLE/DESCRIPTION:</b>				
Job Title of Primary Persons Directly Involved:			Location:	
Date:			Time:	
<b>OVERVIEW OF INCIDENT</b>				
<b>ANALYSIS TEAM MEMBERS (name &amp; title)</b>				
<b>(C) FACTUAL INFORMATION</b>				
Describe conditions. List title and company of employees onsite at the time of the incident. Describe fully the events and actions before, during and after the incident. Include pertinent information related to the incident. Facts should be in bullets and chronological. Facts state what happened (who, what, where, and how).				
<b>(D) COVERED TASKS(CT)</b>				
<p><b>Did the incident directly involve a Covered Task? Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <i>If yes, complete section; otherwise, skip section.</i></p> <p><b>Guidance:</b> Identify all applicable CTs, if any, associated with this incident. Verify employees were properly qualified prior to performing the covered tasks. If not, verify that the unqualified employees performing covered tasks were working within the proper span of control of a qualified person. Use of Span of Control requires adequate explanation of how it was used properly. (NOTE: Originating office of RCA is required to maintain record of proper documentation relating to applicable CTs &amp; Qualification of employees with this RCA in its OMS #0084 file.)</p>				
CT	CT Description	Employee Performing CT <small>Keep anonymity(i.e., Employee "A")</small>	Qualified?	Proper Span of Control?
			Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<b>SPAN OF CONTROL EXPLANATION (IF INVOKED):</b>				
<b>IMMEDIATE CAUSES</b>				
These include <b>acts</b> (personal actions) and/or <b>conditions</b> (jobsite circumstances). Answer the question "why" the factual observation occurred. Test the legitimacy: "if the cause is removed, the incident would (likely) not have happened."				
<b>BASIC (ROOT) CAUSES</b>				
These include the <b>personal factors</b> and/or <b>job factors</b> which allow the immediate causes to occur. To get to root causes, <b>answer WHY the intermediate causes</b> (listed above) <b>occurred</b> . Often discovered in paper evidence. Points to weakness in management system. Test the legitimacy: "if fixed, the problem goes away."				

## **(Incident Root Cause Analysis)**

**(E) RECOMMENDATIONS**

List suggested actions to address each of the immediate causes, root causes and additional observations identified. Address any concerns related to CTs. If implemented, future incidents should be prevented.

--

**ADDITIONAL OBSERVATIONS**

List additional observations related to the incident. Attach additional pages if necessary.

--

**(F) PHOTOS**

Insert any photos that help show the incident.

How to add large digital photos to this form:

- Activate the tool bar for pictures (click "view", "toolbars", "picture").
- Once you have added all the photos to the document, click on any photo.
- From the pictures tool bar select the icon with the little dog.
- Then pick either "tight" or "square" format.
- Right click the photo and select "format picture".
- Select the picture tab then choose "compress".
- Choose apply to "all pictures in document".
- Then select "ok" twice.
- All the pictures in the document are automatically sized to fit the space and the document size is greatly reduced.

Photo 1: (describe)	Photo 2: (describe)
Photo 3: (describe)	Photo 4: (describe)
Analysis Team Leader Name:	Approver Name(Optional):
Date:	Date:

## **(Incident Root Cause Analysis)**