

# SAFE WORK PRACTICE - HANDLING PETROLEUM

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## Application(s)

The purpose of this procedure is to establish a standard for the safety of workers involved with handling petroleum products. This procedure will identify potential hazards and the minimum requirements to be followed while handling petroleum. All employees involved with handling petroleum must be protected against hazards which have the potential to cause injury or death, such as, fire and explosion, engulfment, exposure to toxic materials and / or oxygen deficient atmospheres. Handling petroleum can occur over many different applications. Some of these different applications could be as follows:

- Fueling Heavy Equipment
- Fueling Passenger Vehicles ( work truck, rented vehicle )
- Fueling Petroleum Powered Small Equipment
- Fueling Petroleum Powered Tools
- Transfer of Petroleum Products into Smaller Containers (barrel, jerry can, etc.)

This document is intended for the purposes of reference and review for the members of the work crew(s) that will be expected to perform this specific task at the job site. In all cases the work crew that is to perform the required task should initiate or review and then sign-off on a separate work site / task specific Job Safety Analysis (JSA) prior to performing the work.

## Procedures

### 1. Define Job Requirements

- Hold pre-job meeting with all workers that will performing duties on the work-site ( includes all & sub-contractor's workers )
- Review the specific techniques & methods for all the job-processes to be carried out at this work-site
- Complete the Daily Tailgate Meeting, Job Safety Analysis (JSA) and, if required The Emergency Response Plan (ERP)

### 2. Establish a Specific Safety Perimeter to the As Defined Petroleum Handling Area(s)

- Ensure that a safe restrictive distance from any public access is controlled & always maintained
- Define the controlled access entry to both the general & specific entry areas of the petroleum handling area

### **3. Gather & Inspect all the Equipment to be used in the Petroleum Handling Area**

- Where applicable all / any equipment that requires certification must be inspected & validated as being certified
- All equipment must be in acceptable working condition

### **4. Perform Required Procedures in the Petroleum Handling Area**

- All required procedures are to be documented & must be followed

### **5. Re-gather & Inspect all the Equipment that was used in the Petroleum Handling Area**

- All equipment is to be prepared / dismantled for storage & must be inspected for improprieties or breakage
- Where rejected equipment is found – it must be “Locked or Tagged Out”, with the equipment being removed from service / use until properly repaired or replaced.

### **6. De-Brief Work Crew**

- Meet with all members of the work crew(s) involved – input & feed-back is required from all & must be documented

### **7. Secure Work-site Area(s) to the As Specified Post-work Safety Status**

- Finalized worksite inspection should be completed
- Site to be left in agreed upon physical state

<b>Areas of Risk</b>	<b>Mandatory Protective Methods/Measures</b>	<b>Additional Measures</b>
<b>HEAD</b>	CSA certified & approved hard hat. The hard hat is to be worn in the manner the manufacturer suggests - with the peak facing forward. The exterior of the hard hat will be maintained in a clean condition. Only required stickers will be on the hard hat.	Chin straps may be required as per the actual requirements of use. Seasonal liners may be used as they are required.
<b>EYE / FACE</b>	CSA certified & approved safety eye glasses. Prescription eye wear must also be CSA approved complete with side-shields or they can be covered using a standard issue pair of safety glasses. CSA approved goggles can also be used as main or alternate protection	An approved face shield may be used for additional protection but CSA approved eye wear must still be worn underneath.
<b>RESPIRATORY</b>	Workers individually & personally issued / fitted ½ mask respirator must be available on the worksite. Where applicable a risk assessment for respiratory protection will dictate the need for mandatory use & type of respirator that would be required.	A full-face respirator is available for use. Any newly issued mask must be fit-tested before being used by the operator.
<b>BODY</b>	Standard issue reflective coveralls are to be worn on the worksite by workers. Where dictated by being on petroleum based worksites, coveralls must be of the fire-rated NOMEX type. When on nonpetroleum based worksites, cotton coveralls are acceptable to wear.	When acceptable – a florescent vest with approved reflective striping may be worn as a minimum requirement.
<b>HAND</b>	Standard issue leather-palmed gloves must be on the worksite & readily available to the worker(s). Where dictated these same style of gloves may be required to be kept on the workers person once they have entered onto the worksite.	Seasonal & many other styles of chemical resistant gloves can be made available to workers.
<b>FEET</b>	CSA certified & approved safety boots must be worn. Boots must have leather uppers & measure a distance of 6 inches minimum, from the ground. This policy applies to all boots - including any type of rubber or winter style of boots worn for seasonal protection.	Boots must be maintained in acceptable condition. Any worn holes or cuts to the outer shell of the boot are not acceptable.
<b>CHEMICAL</b>	Chemical resistant gloves (SOLVEX & NITRILE) along with TY-VEK outerwear suits & personal respirators will be made available on the worksite. Where identified - in the as dedicated exclusion zone(s) the appropriate protective clothing must be worn.	When chemical protection rules are in effect, the appropriate decontamination facilities must also be in place.
<b>FIRE / BURNS / EXPLOSIONS</b>	When working on any petroleum based worksite all sources of ignition must be maintained under control at all times. The appropriate & dedicated fire extinguishers must be available on site at all times. Smoking is allowed only in the as designated area(s).	An emergency response plan including firefighting procedures will be documented & posted on the worksite.
<b>ENVIRONMENTAL</b>	At least one (1) standard issue EGT spill kit will be located on the worksite at all times. Any on site fuel or chemicals will be properly stored & maintained to prevent any spilling of materials. Proper berms, cabinets or spill pallets can be utilized for this purpose.	An onsite MSDS binder or data system will be available for immediate reference for any substance as required environmental protection.
<b>TASK SPECIFIC</b>	Certain materials may require the use of specialized PPE. Wearing of an approved harness & equipment for a fall restraint application must be in effect for all those that will enter the as designated working at heights area(s) – both general & specific area(s) Extreme caution is to be exercised when refueling of equipment is required. Proper fire extinguisher(s) must be present ( within 5 ft of where re-fueling is taking place )	Ask your supervisor if specialized PPE is required and refer to the MSDS for the material you are working with. Life jackets shall be worn if the workers are exposed to falling into liquid of sufficient depth for drowning.

## Job Safety Analysis

BASIC JOB STEPS	IDENTIFIED & POTENTIAL HAZARDS	HAZARD MITIGATION/CONTROLS
<p><b>1. Define Job Requirements</b></p> <ul style="list-style-type: none"> <li>• Hold pre-job meeting with all workers that will performing duties on the work-site (includes all &amp; subcontractor's workers)</li> <li>• Review the specific techniques &amp; methods for all the job-processes to be carried out at this work-site</li> <li>• Determine if a dedicated refueling area is required</li> <li>• Complete the Daily Tailgate Meeting, Job Safety Analysis (JSA), The Emergency Response Plan (ERP), if required</li> </ul> <p><b>** NOTE **</b></p> <p><b>The hazard assessment specific to Handling of Petroleum will be detailed in the JSA.</b></p> <p><b>This JSA process must be completed &amp; signed off prior to anyone any petroleum products.</b></p>	<ul style="list-style-type: none"> <li>• Inexperienced / untrained workers</li> <li>• Improper PPE, tools or equipment</li> <li>• Injury to EGT, subcontractor or third-party workers on and adjacent to - the actual work-site</li> <li>• Damage to equipment, structures, vehicles or other equipment located on the actual work-site</li> <li>• Equipment failure</li> <li>• Inclement weather</li> </ul>	<ul style="list-style-type: none"> <li>• An experienced supervisor is to be on the work-site at all times, while all the required job-specific work is in process</li> <li>• Supervisor to ensure all required work is executed in compliance with all permits &amp; governmental regulations</li> <li>• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> <li>• Physical inspection of all worksite areas (includes the removing / identifying of specific hazards &amp; related areas)</li> <li>• Completion of the Daily Tailgate Meeting</li> <li>• Ensure that a Job Safety Analysis (JSA) for the entire job-task is completed. All members of the work crew required to perform the job task must review and sign-off on having read and understood the specifics of the JSA in question</li> <li>• Complete ERP</li> <li>• Daily (Pre-use) inspection procedures of all equipment / tools (Equipment Log)</li> <li>• Use of Field Level Risk Assessment Cards</li> <li>• Review all on-site Safety program applications</li> <li>• All personnel entering worksite will receive a site-specific orientation</li> <li>• A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.</li> </ul>

BASIC JOB STEPS	IDENTIFIED & POTENTIAL HAZARDS	HAZARD MITIGATION/CONTROLS
<p><b>2. Establish A Specific Safety Perimeter To The Defined Petroleum handling Area(s)</b></p> <ul style="list-style-type: none"> <li>• Ensure that a safe restrictive distance from any public access is controlled &amp; always maintained</li> <li>• Define the controlled access entry to both the general &amp; specific entry areas of the petroleum handling area</li> </ul>	<ul style="list-style-type: none"> <li>• Slips, trips &amp; fall hazards</li> <li>• Uneven ground areas</li> <li>• In-experienced worker(s)</li> <li>• Unexpected fall / entry into confined space</li> <li>• Equipment failure</li> <li>• Inclement weather</li> </ul>	<ul style="list-style-type: none"> <li>• An experienced supervisor is to be on the work-site at all times, while all the required job-specific work is in process</li> <li>• Supervisor to ensure all required work is executed in compliance with all permits &amp; governmental regulations</li> <li>• Awareness of the existing ground surfaces &amp; other previously recognized hazards that workers are required to travel over / around</li> <li>• Physical inspection of all worksite areas (includes the removing / identifying of specific hazards &amp; related areas)</li> <li>• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> <li>• Wearing of an approved harness &amp; equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general &amp; specific area(s)</li> <li>• A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.</li> </ul>
<p><b>3. Gather &amp; Inspect All The Equipment To Be Used During The Handling of Petroleum</b></p> <ul style="list-style-type: none"> <li>• Where applicable all / any equipment that requires certification must be inspected &amp; validated as being certified</li> <li>• All equipment must be in acceptable working condition</li> </ul>	<ul style="list-style-type: none"> <li>• Slips, trips &amp; fall hazards</li> <li>• Uneven ground areas</li> <li>• In-experienced worker(s)</li> <li>• Unexpected fall from a height</li> <li>• Pinch-points</li> <li>• Muscle strain / injury to workers from lifting / carrying equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness of the existing ground surfaces &amp; other previously recognized hazards that workers are required to travel over / around</li> <li>• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> <li>• Wearing of an approved harness &amp; equipment for a fall restraint application must be in effect for all those that will enter the as designated working at height area(s) – both general &amp; specific area(s)</li> <li>• Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified &amp; as designated areas</li> <li>• Ensure workers know &amp; understand their own personal limitations when they are required to perform any manual lifting operations.</li> <li>• When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting &amp; get assistance if weight is more than 50 lbs.</li> <li>• A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.</li> </ul>

BASIC JOB STEPS	IDENTIFIED & POTENTIAL HAZARDS	HAZARD MITIGATION/CONTROLS
<p><b>4. Perform Petroleum Handling Procedure</b></p> <ul style="list-style-type: none"> <li>• A regular schedule for inspection of transfer equipment should be finalized &amp; maintained throughout its time at the worksite</li> </ul> <p><b>** NOTE **</b></p> <p><b>Extreme caution is to be exercised when refueling of equipment is required. Proper fire extinguisher must be present within 5 ft of where re-fueling is taking place</b></p>	<ul style="list-style-type: none"> <li>• Slips, trips &amp; fall hazards</li> <li>• Uneven ground areas</li> <li>• In-experienced &amp; untrained worker(s)</li> <li>• Unexpected fall from a height</li> <li>• Equipment failure</li> <li>• Fire / explosion hazard due to static charge build up</li> <li>• Product contamination / mix-up</li> <li>• Fuel spill / spray during re-fueling of equipment</li> <li>• Inhalation of toxic vapors</li> <li>• Use of incompatible storage containers</li> <li>• Inclement weather</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness of the existing ground surfaces &amp; other previously recognized hazards that workers are required to travel over / around</li> <li>• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> <li>• Wearing of an approved harness &amp; equipment for a fall restraint application must be in effect for all those that will enter the as designated work at heights area(s) – both general &amp; specific area(s)</li> <li>• All equipment used when transferring petroleum products must be properly grounded / bonded to prevent a static charge build up</li> <li>• Check that the container, tool, vehicle or equipment receiving the petroleum product is rated to accept that particular product. Do not use product from unlabeled container(s)</li> <li>• Review MSDS for product characteristics, PPE requirements, etc.</li> <li>• Work from the windward side when possible</li> <li>• A ½ mask or full face air purifying respirator must be available on site &amp; worn when required (minimum requirement = 1 unit for every worker)</li> <li>• Additional task-specific PPE requirements (Additional chemical protective gloves is mandatory for those workers responsible to perform this work)</li> <li>• Change clothing immediately if it becomes splashed / soaked with a petroleum product</li> <li>• Worker must wash a splashed / soaked area of their body promptly and thoroughly</li> <li>• Use only approved storage containers.</li> <li>• Label any small storage containers as per WHMIS requirements</li> <li>• Pre-use inspection of all equipment involved</li> <li>• Ensure Spill Kits are readily available for use at site</li> <li>• A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.</li> </ul>

BASIC JOB STEPS	IDENTIFIED & POTENTIAL HAZARDS	HAZARD MITIGATION/CONTROLS
<p><b>5. Exit The Confined Space</b></p> <ul style="list-style-type: none"> <li>• Dependent on vertical or horizontal application(s) - the as documented exit procedures must be followed</li> </ul>	<ul style="list-style-type: none"> <li>• Slips, trips &amp; fall hazards</li> <li>• Muscle strain / injury to workers from lifting / carrying equipment</li> <li>• In-experienced &amp; untrained worker(s)</li> <li>• Equipment failure</li> <li>• Exposure to atmospheric hazard</li> <li>• Inclement Weather</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness of the existing ground surfaces &amp; other previously recognized hazards that workers are required to travel over / around</li> <li>• Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> <li>• A stand-by worker must always : remain present at the CSE point of entry when someone has entered into the confined space – Have suitable means of communicating an emergency situation to a the emergency response contact - Have a suitable means of direct communication with workers who entered into the confined space</li> <li>• Wearing of an approved harness &amp; equipment for a fall restraint application must be in effect for all those that will enter the as designated area(s) – both general &amp; specific area(s)</li> <li>• Ensure workers know &amp; understand their own personal limitations when they are required to perform any manual lifting operations</li> <li>• When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting &amp; get assistance if weight is more than 50 lbs.</li> <li>• Air quality checks must be maintained on a regular basis throughout the entire period of entry into the confined space. All readings must be properly documented on the CSE Permit.</li> <li>• A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.</li> </ul>

BASIC JOB STEPS	IDENTIFIED & POTENTIAL HAZARDS	HAZARD MITIGATION/CONTROLS
<p><b>6. Re-gather &amp; Inspect All The Equipment That Was Used In The Demolition Procedure</b></p> <ul style="list-style-type: none"> <li>All equipment is to be prepared / dismantled for storage &amp; must be inspected for improprieties or breakage.</li> <li>Where rejected equipment is found – it must be “Locked or Tagged Out” With the equipment being removed from service until properly repaired.</li> </ul>	<ul style="list-style-type: none"> <li>Slips, trips &amp; fall hazards</li> <li>Uneven ground areas</li> <li>In-experienced &amp; untrained worker(s)</li> <li>Unexpected fall from a height</li> <li>Pinch-points</li> <li>Muscle strain / injury to workers from lifting /carrying equipment</li> <li>Inclement Weather</li> </ul>	<ul style="list-style-type: none"> <li>Awareness of the existing ground surfaces &amp; other previously recognized hazards that workers are required to travel over / around</li> <li>Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> <li>Wearing of an approved harness &amp; equipment for a fall restraint application must be in effect for all those that will enter the as designated working at heights area(s) – both general &amp; specific area(s)</li> <li>Identify all pinch-points for this task; inform workers to keep hands / fingers from these same as identified &amp; as designated areas</li> <li>Where equipment has come in contact with some type of contaminated materials, all equipment in question must be properly and thoroughly decontaminated of the offending materials before they leave the worksite.</li> <li>Ensure workers know &amp; understand their own personal limitations when they are required to perform any manual lifting operations.</li> <li>When required to lift - use the proper lifting techniques: lift with legs, keep back straight, position load close to body, do not twist when lifting &amp; get assistance if weight is more than 50 lbs.</li> <li>A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress</li> </ul>
<p><b>7. De-Brief Work Crew</b></p> <ul style="list-style-type: none"> <li>Meet with all members of the work crew(s) involved – input &amp; feedback is required from all &amp; must be documented</li> </ul>	<ul style="list-style-type: none"> <li>Improper information gained or omitted for any future reference procedural verifications or improvements to process</li> </ul>	<ul style="list-style-type: none"> <li>Worker(s) trained to complete assigned tasks (for the applicable job specific requirements on the necessary work procedures)</li> </ul>
<p><b>8. Secure Work-site Area(s) To The Specified Post-work Safety Status</b></p> <ul style="list-style-type: none"> <li>Finalized worksite inspection should be completed</li> <li>Site to be left in agreed upon physical state</li> </ul>	<ul style="list-style-type: none"> <li>Slips, trips &amp; fall hazards</li> <li>Uneven ground areas</li> <li>In-experienced worker(s)</li> <li>Inclement Weather</li> </ul>	<ul style="list-style-type: none"> <li>Awareness of the existing ground surfaces &amp; other previously recognized hazards that workers are required to travel over / around</li> <li>Worker(s) trained to complete assigned tasks ( for the applicable job specific requirements on the necessary work procedures )</li> <li>Complete a final physical inspection of all the entire worksite area(s). Documentation &amp; photos of completed work area(s) should be taken.</li> <li>A continual check of weather conditions is a mandatory requirement, cease work if electrical storm is threatening or is in progress.</li> </ul>