

NEWCART CONTRACTING (1993) /SAFETY SERVICES LTD.

ON-LINE ORIENTATION

Welcome to the Newcart Contracting / Newcart Safety Services.

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Newcart Contracting Ltd. is a company wholly owned and operated by Scott Varcoe. Newcart Contracting Ltd. is located and operated out of Rocky Mountain House, AB.

The company has been in operation since 1993, and the main area of operation is Oil and Gas Plant Construction and Turn Around Maintenance.

The company's main focus is: **All jobs can be done safely with pre-planning and input from all the workers and management, together.**

Newcart Contracting Ltd. prides itself in the fact that during the companies operation there has been no serious incidents to any workers or trades that assisted us in our endeavors. This is a statement that all work can, and will be done with the safety of our people and others always coming first.

OUR EXPECTED WORK GOALS SHALL BE:

**EVERYONE GOES HOME SAFE
AT THE END OF THE DAY.**

**NO - Loss Time Incidents
NO - Environmental Impacts
NO - Motor Vehicle Accidents**

THE GREATEST REWARD FOR WORKING SAFELY IS TOMORROW.

Work expectations and behavior on the job are an important part of any company's safety culture and at Newcart Contracting Ltd. we believe that with the proper work ethics and safety culture we will continue to excel in our chosen field.

We shall always perform our jobs with the utmost professionalism with detail to the safety of ourselves, the client and the general public on any site we are called to work at.

We must always prepare to start the work day with clear goals and the realization that safety starts with the individual, and as a team we can perform our work to the standards that we have come to expect from Newcart Contracting Ltd.

The company has an extensive Health and Safety Manual that contains the company Policies and Procedures. Work units also have a copy of the Policies and Procedures. These manuals are available on the job sites and allow all workers to review any questions and concerns they may have.

Accident and near miss reporting are an important part of any company's safety culture. We can only improve if we know and understand the issues that arise in the field. The need to report accidents and near misses will allow the company to address any problems and deficits we have. This will only allow us to improve and grow as a company.

When you need to report a near miss or incident you will bring it to your supervisors as soon as you are able. The proper paperwork will then be done and forwarded to the office for the next step in a chain that will be decided by management. The need to report as soon as possible allows any problem to be dealt with and can avoid a reoccurrence that could be harmful to another worker.

There are times when we are put in a position where we could be asked to do work that appears to put us or another person in danger as we see it. This is called **imminent danger**, and we will not do this. **The term imminent danger means that a task being done can or will put a person at risk of injury or death, this is a regulated and is against all policies and procedures. NO person shall perform a task that puts one or any other person at risk by law.**

When this happens you must immediately stop work and report this to your supervisor. There will be an investigation, and if there is an issue, it must be addressed before any work can proceed.

The office will be notified, if at any time a work stoppage is caused by imminent danger, and upper management must be involved in this matter.

There are also times when we need **the right to refuse** to do a task. We shall refuse a task that we are not hired to do and a task that we are not competent to perform. The right to refuse is a Regulation, as well as a Company Policy. When asked to perform a task that you do not understand or can not do, bring it up to your foreman or to upper management to rectify.

The following will be a condensed version of some of our **Safety Manual**. You will follow through the Orientation and at the end you will find an **Orientation Test** that will need to be completed.

Any unanswered questions you have can be answered by your supervisor or foreman at the job site. There will also be a Safety Manual that will assist you.

ASBESTOS TRAINING

The use of asbestos has been forbidden for many years, although there is still asbestos on many job sites.

The reason that the product was eliminated was the fact that the fibers are a known cancer causing agent. When the asbestos is disturbed, the fine fibers that become airborne can enter the lungs and cause health problems.

The work sites we are at are of many different ages, so we will, or can have asbestos on site.

When on a work site, if you think that there is asbestos, you need to inform the client to the concern. This must be addressed in the pre-job hazard assessment prior to the work starting.

When piping on a work site has the product, it is normally marked or will be encapsulated by professional asbestos abatement crews. They will mark the repairs (blue; in Alberta, orange; in BC).

Ask the client if you see these markings on a piping system. There can also be asbestos on steel structures and cement columns, so be aware of this. The asbestos will be inert and pose no health issue if it is left in the original state, so we must not disturb it.

If you do expose the asbestos:

- **Leave the area immediately**
- **Contact the control room or your supervisor.**
- **The area must be ribboned off to prevent people from entering the area.**

There are products that have replaced asbestos in the work site and they can look familiar to the untrained eye. We are not in the position to know the difference, so we will exit the area and get the proper crews to do a site assessment.

CHEMICAL & BIOLOGICAL HAZARDS

There are many types of hazards that we encounter during the work day in our industry.

Due to the nature of the workplace we are exposed to many things we do not think of as a hazard to us or our are co-workers.

The first thing that we must do is a through inventory of our job scope. This will give us an idea what will be needed to proceed with the task. Ensure that the client is involved with this stage.

There are many chemicals at all site that range from being carcindigins, nerve toxins and many other side effects that must be brought up in the pre-job.

The need to refer to the MSDS sheet is mandatory to the specific hazards.

The area is wide and varied so we will always side on caution and assume that any hazard is present until proven otherwise.

- The use of PPE is mandatory and the need to do a complete survey is mandatory, always refer to the MSDS sheets for all products.**
 - Ensure that all PPE is available on site and workers use is mandatory.**
 - All hazards must be on the pre-job assessment and the PPE will be stated as the control mechanism, all workers will be informed of all of the issues.**
 - There are hazards that are not man-made and are part of the environment (hanta-virus, avian flu, etc.), these are a hazard that we see on occasion and there seems to be more of them to be aware of each season.**
 - THERE ARE WIDE RANGING HAZARDS. WE NEED TO DO THE COMPELETE ASSESSMENT AND ENSURE WE COVER ALL THE ISSUES AND ALL WORKERS MUST BE INFORMED.**
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CRANES, HOISTS & LIFTING DEVICES

We use lifting devices at most sites we are at, and there are some important rules we must follow.

All equipment must be fit for the task and certified and stamped by a Professional Engineer.

The equipment needs to be operated by a competent worker, and upon request, the worker must demonstrate the ability to use equipment. The use of a Log Book is mandatory and must be kept current and ready for inspection.

A lift calculation shall be done if the lift exceeds 75% of the equipments rating.

The operator shall ensure no lift is attempted if there is a potential of an unsafe lift.

The operator must as reasonably practicable never lift a load over workers, as all workers must be aware of the lift area and the dangers. The operator must know of the worker(s) in the lift zone.

The use of a tag lines are required as a means to stop or control movement of the load.

LIFTING DEVICES

- **The tag line must be sufficient to control the load and used in a way to prevent the load from striking the worker and allows separation for worker.**
- **The tag line cannot be used in situations where it could harm the worker.**
- **Caution must be used in tight areas, assess the type of tag line length, energized lines, snag points, etc.**
- **A communication system must be used between operator and signalman, only one signalman shall be used and they will be designated by a vest or wristlet.**

- The operator will not move a load unless informed by the signal person.

SLINGS

- The worker must ensure that the load will not exceed the load rating of the equipment being used.
 - The maximum load rating is determined by the manufacturer and will be legible and visible on the rigging.
 - The rigging must be inspected before each use and throughout the shift to ensure it is safe and functional.
 - The worker shall not use rigging that is in poor condition.
 - When there are sharp edges, guards must be in place to protect slings.
 - All slings must meet ASME Standards, there must be capacity data sheets that are available. Slings will be permanently and legibly marked with manufactures name, trademark with code and stock number.
 - When the signs of wear are apparent they will be taken out of service after they exceed manufacture specifications, and this must be reported to the supervisor on site.
 - When in doubt, refer to regulations and your supervisor.
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EMERGENCY PREPARENESS

All sites must have an emergency response plan. The plan needs to take into consideration the hazards and potential hazards that you may encounter on the work site.

The first thing that needs to be done is a site assessment and a list of the hazards. There needs to be selected muster points set out and they must be marked.

Emergency numbers must be posted for police, fire and ambulance. Driving distance for emergency services should be considered in your assessment.

There is a government service that will set up your work site. All the response units would know the particulars of your work site as soon as the information is dispatched (S.T.A.R.S. 1-800-888-4567 or # stars) This is a good service to use.

FALL PROTECTION

Fall protection is required when working above 3 meters, or if there is a danger less than 3 meters.

This is a government regulation and all workers must adhere to this rule.

The three main parts are:

- **the harness**
- **the lanyard**
- **the anchor sling**

All equipment must meet or exceed CSA Standards.

The equipment is designed to stop a fall, and therefore, it is life saving equipment and will be dealt as such. All equipment will be inspected before each use.

The harness will be a full body style, and must be fitted properly.

The lanyard will be made of wire, rope or other material appropriate to hazards on site.

There needs to be a shock absorber that works in conjunction to the lanyard.

There can be connections used with the above equipment (Example: carabineers, snap hooks, etc.).

- **All equipment must have two deliberate manual actions (self closing). The equipment must have the breaking strength and manufacturers name or trademark visible.**

- The equipment needs to be inspected before each use and if used in a fall arrest capacity it must be taken out of service and reported to your supervisor.
 - There is also the fall restraint equipment. We use this to prevent a worker from falling (limits a distance a worker will drop, self-retracting device) a limited drop of 1.2 meters. The equipment will be anchored above the worker.
 - All equipment must be compatible with the work environment.
 - The equipment must be used so the worker will not hit the ground.
 - The anchor points should be carefully planned and limit the falling distance to 1.2 meters.
 - The shortest length of lanyard should be chosen and if an anchor point cannot be above the worker it must be as reasonably practicable as possible to limit the workers fall?
 - The use of fall protection should be used as a last resort and always needs to be put in your pre-job hazard assessment.
 - There needs to be a fall protection rescue plan in place when using fall protection.
 - The pre-job must state the hazards, type of equipment used, anchor points, if possible, and the rescue plan.
 - This must be discussed with the workers before work starts and be on the work site.
 - The plan must be updated if conditions change.
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FLAMMABLE & CONBUSTIBLES

The nature of your job puts us in an area where the risk of fire and explosions are always a potential.

The pre-job hazard assessment must deal with this issue.

The first thing to do is the elimination of the hazard by use of purging and washing. We need to ask the client what type of product the system held, and what was the system purged with, if done?

The threat of a fire at the work site is of paramount importance, due to the nature of the sites and the potential of loss of control. This is one of the most critical things we must assess, and ensure we have complete understanding of.

Flammable products are substances that when exposed to flames, sparks or other heat sources, will start on fire when conditions are right.

- If you remove one part of the triangle, the fire hazard does not exist. Think about removing one part of the triangle.**
- Remember that all substances (with their own properties) will start a fire at different rates, temperatures and circumstances.**
- Combustibles will burn, and they can or will cause an explosion. The most common thought would be gasoline. There are many types of combustibles, and they all need oxygen and a heat source to burn or explode.**
- Due to the fact that combustibles are normally found in a cloud form or can be contained, this poses a monumental hazard to property and people, due to the explosion potential.**
- There are some substances that we see that are combustible and do not need the heat source to ignite. These are pyrophoric and special attention has to be used. These can have auto-ignition due to the oxygen exposure. Some catalysts can also start up with the exposure to oxygen.**
- Caution must be used when we expose substances to their flash point/ auto ignition temperatures. This will allow them to start on fire without notice. You must be aware at all times the substances we are working with because all products can be different.**
- Disposal of some products, when done improperly can result in a fire. Mixing two or more products can start a fire.**
- The need to mitigate the hazards as reasonably as practicable at all times is paramount. Fire extinguishers' must be down and gas monitoring must be done at all times. Fire watch (if required) and all**

the proper PPE as stated in the pre-job hazard assessment must be in place.

- The need to have proper job procedures and policies are found in the safety manual.
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GENERAL HEALTH & SAFETY REQUIREMENTS

HOUSEKEEPING

Housekeeping is a major concern on all work sites. The need to keep the work site clean is a priority at all times. The incidents of trip, slips and falls are a large part of our reportable injuries. The crews will maintain the site as clean as reasonably practicable at all times.

LIGHTING

The work site shall have sufficient lighting to allow all tasks to be done safely. The lighting shall be protected against damage.

There needs to be emergency lighting, so that if the worker is in danger and the regular lighting fails, back up lighting is in place. This intrinsically safe lighting must be the type that allows the worker to leave the site or start necessary equipment and restore normal lighting.

STORAGE

No danger can be posed to the workers during transit of storage containers. No pallets are to be used if damaged. The load on the pallets can not surpass the weight specifications of the pallet.

RETRAINING HOSES AND PIPING

- The use of hose and piping are a major part of our work scope and there are times when they are exposed to high pressure. All hoses under pressure must be restrained if they pose potential harm to workers. If piping or hoses with more than 2000kpa can not be restrained, the connections must be designed and used to manufactures specifications.

SECURING EQUIPMENT AND MATERIALS

- **All workers must eliminate the potential hazards when moving equipment and loads. Attention must be followed and all reasonable efforts made to limit damage from dislodgement, spillage and damage.**
 - **There are many things that we do each day. We need to assess all the potential hazards on the job. We must ensure that all workers on site understand and have input.**
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HOT WORK TRAINING

Hot work is a condition where a hazardous atmosphere may exist. This condition does not normally occur, but for a limited time, a flammable substance is, or may be, in the atmosphere of the work area.

The hot work is on, or in, an installation or item of equipment that contained a flammable substance, or its residue. The residue may release a flammable gas or vapor(s) if exposed to heat.

No work will begin until a hot work permit is issued. This will state the nature of the hazard, type and atmospheric testing, safe work procedures and the precautionary measures to be taken, as well as PPE.

Ensure that work area is cleared of combustible materials or is suitably isolated from combustibles.

Procedures must be implemented to ensure continuous safe performance.

There must be atmospheric testing at set intervals and the flammable limit will not exceed 20% of the substances lower explosive limit.

The possibility of explosive dust must be taken into account.

The nature of our work makes this our most common permit, they all have the potential of a flammable release. The use of vehicles, non-intrinsic tools and cutting equipment all require a hot work permit.

The use of this permit is mandatory as per regulation and company policy. All workers will read and understand the required safety protocols.

JOB HAZARD ASSESSMENT (aka JHA)

All jobs we do must have a pre-job hazard assessment to ensure that all dangers will be addressed before work starts.

The assessment will describe the work that will be done and the hazards associated with the task. The steps to eliminate or mitigate the risk will be in the assessment.

The whole crew will be involved with the discussion, and input is required by all the workers.

The risks must include all known hazards, as well as any potential hazards that might occur. The client (operations) should be included in this discussion to ensure that nothing is overlooked.

This step is a company policy, as well as regulation. All hazards need to be written down and all workers need to know them before they start the task.

PPE is the last line of defense and will be used after all other means to control the hazards are in place.

POTENTIAL HAZARDS

Some of the hazards are, but not limited to:

TRAPPED PRESURE
LIVE SYSTEMS
TOXIC ENVIROMENTS
LACK OF OXYGEN
MOVING EQUIPMENT
SPILL CONTAINMENT

STORED ENERGY
FIRE HAZARDS
ELECTRICTY
WORKING AT HEIGHTS
CONFINED SPACES

All these hazards will or could be encountered. They need to be addressed in the pre-job with the crew. Ensure that you discuss all the real and possible hazards to eliminate the risk.

LOCKOUT/ TAGOUT PRODEDURES

The need to understand the following is of utmost importance, due to the fact that we work in energized and live facilities on most sites we visit.

There are different types of lockout / tagout procedures and we need to be familiar with all of them.

Lockout / Tagout = LOTO

All systems we will work on will have a LOTO done on them and we will ensure that the proper procedure is done on the equipment.

PIPING AND VESSELS

This is the most common type of LOTO that we will be exposed to. The need to de-pressure and isolate the system is company policy and regulations.

There are three types that are used in the industry. The first one is the use of blinds. This is done by placing a blind (metal barrier) between two flanges to isolate a piece of equipment from the live system.

There is the blanking system, which is removing a section of pipe and installing a solid blank flange to isolate the equipment. All blinds or blanks must be clearly marked to indicate the placement.

The double block and bleed system is also used. This is done by closing two valves with a bleed point between the two valves. When this system is used, the two closed valves will be identified and they must be secured from movement through inadvertent opening without excessive force. The open valve, between the two closed valves, needs to be secured open.

MACHINERY, EQUIPMENT LOTO

- The need to lockout / tagout equipment is a company policy as well as a government regulation and must be done.
- There must be a procedure to ensure no worker shall / can work on equipment without a LOTO.
- All equipment must have a energy isolating device or the equipment will be rendered inoperative by a system that prevents accidental activation.

- **ALL WORK MUST FOLLOW THESE PROCEDURES**

SECURING ISOLATION

- **Once the devices are in place to control hazardous energy, the workers involved will use a personal lock.**
 - **The worker shall verify that the equipment is effectively isolated (the attempt to energize the equipment will verify it is down).**
 - **If a worker is re-assigned, or work is extended, an effective orderly transfer of control must be established with adequate procedures.**
 - **Locks must be identified to whom and is assigned with a log.**
 - **Upon completion of work, a procedure must be in place to reinstate the equipment to live operation with no harm to workers, and all workers must be accounted for.**
 - **The worker who puts a lock on, shall be the one to take it off, or in an emergency, a company designate.**
 - **When many workers are on a system, a group procedure can be used. There must be a master tag procedure and all crew must review it and a crew lead must verify and sign off on the permit.**
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PERSONAL PROTECTIVE EQUIPMENT

The general rules for PPE.

There are several rules at all sites.

The use of a Hard Hat, Steel Toed Boots, Safety Glasses and Fire Retardant Coveralls.

The hard hat needs to be a CSA Standard and the proper type for the job.

The steel toe boots must meet CSA Standard and be of at least 6 inches of boot height.

The safety glasses also must be CSA Standard Z94.3, Z87.2

PORTABLE LADDER TRAINING

Work off portable ladders should be limited as much as possible. When possible, a temporary platform should be set up (scaffold).

The top two rungs of the ladder should not be used, unless designed for that purpose.

All ladders need to meet CSA Standard CAN3-Z11-M81.

All ladders need to be secured against movement and have a stable base with a incline no farther than one-quarter between base and the contact on the wall. The side rails need to extend 1 meter above the top of the platform / landing.

Fall protection may be required if above 3 meters.

Only light duty work will be done off ladders, if not reasonably practicable a platform or scaffold shall be erected.

A worker must maintain a three point contact with the ladder at all times. The centre of balance must be in the centre of the ladder at all times.

WORKING OFF LADDERS WILL BE AVOIDED AS MUCH AS POSSIBLE.

RADIATION EXPOSURE

There are times when we will be exposed to radiation on our sites. We will have specific work practices for this time. There will be third party crews at this time, and we will follow their **Policies and Procedures**.

There are **N.O.R.M.'s (naturally occurring radioactive material)** that can be on site. We will have a **Site Survey** done on-site and the areas will be identified to all workers.

Proper PPE will be required at all times when working in these areas.
This includes:

- Tyvek Coveralls
- Respirators / SABA's

All workers will have a **Site Specific Orientation** before working in these areas and all policies will be strictly adhered to.
Some sites will have **Radioactive Instrumentation** and these will be highly identified with the proper WHIMIS labeling.

SAFEGUARDS

We must ensure that all safeguards are in place to protect us from hazards such as moving parts, burns, electricity, flying / falling debris and all other hazards.

Regulations state no person is to remove a safeguard that is not designed to be removed.

The only time a safeguard is to be removed is to do repairs.

When a guard is removed to do a task, a procedure must be in place to ensure that the proper PPE is used and equal or greater protection to worker is attained.

The use of pre-job hazard assessment is company policy, as well as government regulation. This will assist you in the required safeguards that will be required and we must ensure that all precautions are always followed.

SCAFFOLDS & PLATFORMS

There are times when we are required to work at elevated heights. As a rule, we will have scaffolds that are built by a third party, or by the client.

There are a few different types of scaffolds and platforms that we use. All scaffolds and platforms will be built to code, and there are rules that must be followed.

All scaffolds will be tagged and if there is no tag WE will not use them.

The first is a **GREEN tag** - this means that the scaffold is good to use.

The second is a **YELLOW tag** - this means caution, and we must follow the wording on the tag. It could be tie-off, or holes in the deck. We must always read the tag.

The third is a **RED tag** - **this means DO NOT USE. We will not ever use this scaffold, it has not been rated yet!**

The scaffolds may need modifying. When this happens, we use trained workers. We do not do this ourselves. If we move any part of the scaffold, it must have the tag removed **(this is why we do not do it, the scaffold would be disallowed for use).**

The scaffolds are re-inspected every 21 days and when modified (some jurisdictions are different, so check with your supervisor).

The scaffolds are built to building codes and therefore, we will only use trained builders (this is government regulations and code).

SLIPS, TRIPS AND FALLS

The need to address the slip, trip and falls in the workplace is necessary. Due to the fact that 60,000 workers are injured on the job every year because of these injuries.

We must be aware of surfaces that are slippery or have loose surfaces. When we encounter these, we must consider a means to improve them through a temporary or permanent solution.

The need to keep your attention on the task at hand is always paramount. We must ensure that the work space has tripping hazards removed, and the need to ensure proper footwear at all times.

We must ensure we have good lighting when working in shaded areas to ensure good footing and vision.

You must ensure that housekeeping is kept up and this must be maintained as reasonably practical as possible, to limit any tripping hazards.

Caution needs to be used when the work surfaces are uneven or transitional. Look for things that will be in your work area and if possible move them or change the work scope, if able.

- **Mental and physical condition can have a impact on these issues, if you are on medications this can impair your senses and reduce your reflexes. You may lose focus and you could take your mind off task, and this puts you in the danger zone of the unseen hazards.**
- **Physical condition can make for quicker reflexes and more limber muscles. This helps you recover and keep your balance.**
- **We need to keep the hazards of the slips, trips and falls in mind. These 3 hazards are what we are most often exposed to throughout each day. These are the things we do not really think of, until we have an injury.**

WORKING ALONE

The rules about working alone are basic and the need to follow them is a **government regulation as well as a company policy.**

Due to nature of our work, most of the time we will be working in at least a pair. When there is only one person working alone, there are potential issues.

Any worker working alone MUST have a means of communication to call for help, if needed.

There must be a time frame that will state a call-in time to a designate, depending on the job hazards.

The time frame should be mentioned on the pre-job toolbox with the call-in times.

WORKPLACE VIOLENCE

**THE OCCUPATIONAL HEALTH & SAFETY REGULATIONS
CONSIDER WORKPLACE VIOLENCE A HAZARD,
AND THEREFORE, PART OF THE ACT.**

**NEWCART CONTRACTING AND SAFETY SERVICES
BOTH HAVE POLICIES ABOUT WORKPLACE HARASSMENT AND
VIOLENCE. THE COMPANY HAS A ZERO TOLERANCE IN THIS MATTER.**

There can be many types of harassment such as verbal, physical, racial, or religious, and will not be tolerated. In all instances, it must be reported to your supervisor as soon as it happens.

There is a three step discipline program in the company and this policy will come into effect. Documentation must be completed.

IN SERIOUS CASES, MANAGEMENT MAY ACCELERATE THE PROCESS.

WORKING with SILICA, COAL DUST and LEAD

There are many things that we can be exposed to at the workplace.

We have discussed the asbestos issues. There are also other substances that are similar in the steps we take to limit our hazard exposures.

The use of silica sand in the Sand Blasting profession has been a staple for many years.

The silica power is known to cause health problems. The tendency now is to use less harmful abrasives, such as metal slag.

If you are using silica, there needs to be policies in place to ensure the health of the co-workers. **The areas need to be encapsulated to contain the dust, and the workers need to don the proper PPE to ensure that they do not inhale the dust.**

The need to do a Pre-job Hazard Assessment on all tasks is in the company policy, as well as regulation.

When a crew does not understand the hazard, they need to discuss this with the Client, the Job Supervisor, and the company Safety Representative.

The site pre-job should address all the known and potential hazards, and therefore, in the pre-planning all the issues will be brought to attention.

All workers involved in the task will understand the hazards.