

ENSURE ALL EMPLOYEES AND SUB-CONTRACTORS WORKING FOR AVALANCHE ACID REVIEW THIS NEWSLETTER.  
IT IS A KEY PART OF OUR SAFETY PROGRAM



# JANUARY 2019 VOL.1

## MONTHLY HEALTH & SAFETY NEWSLETTER

### SAFETY TOPICS

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### SAFETY SUGGESTIONS/CONCERNS

If there is a topic or item that you would like either reviewed in a monthly newsletter or discussed at the quarterly safety meetings; please fill out suggestions and concerns form and please drop a note in the Safety Basket and we will do our best to accommodate your safety requests.

### HEALTH & SAFETY POLICY

The Health Safety and Environment Policy is intended to serve as an Environmental Health and Safety guide for all personnel who are required to follow these policies and procedures when working for Avalanche Acid Hauling Ltd . We are committed to conducting business safely and to continually improving our policies and practices for the future. The policies are designed to meet and/or exceed all Government regulations, and oil and gas recommended practices. No activity is more important than protecting the Health and Safety of our employees, contract operators and our customers. Our goal is Zero incidents and Zero harm to our people, communities and Environment in which we all work and live.

#### *Management and Supervisors*

- Place the highest priority on the health and safety of the preservation and protection of the environment
- Conduct our operations in a way that protects the safety and health of our employees, public and clients
- Ensure of employees with regular and consistent job-related training
- Require participation in our safety program from all levels and employees of Avalanche Acid Hauling Ltd
- Strive beyond compliance in our operations towards all applicable legal and regulatory requirements.
- Investigate incidents to determine root of cause and share learning's

#### *Workers*

- Participate in safety training programs
- Wear and use all personal protective equipment
- Obey all safety rules; follow recommended safe work procedures, codes of practice and policies
- Notify management and supervisors of hazards and any unsafe work
- Refuse to do work when unsafe conditions exist or are not competent to perform the job

#### *Accountability*

- Hold individuals answerable who choose not to perform their Health, Safety and Environmental responsibilities.

#### *Continuous Improvement*

- Regularly audit our health and safety program to recognize areas for future improvement
- Take step to minimize, control and eliminate all identified hazards.
- Maintain safety statistics to track and identify development opportunities
- Monitor company carrier profile and driver documentation

#### *Communication*

- Ensure all employees are aware of their right to refuse work if they establish their work to be unsafe
- Notify employees of potential hazards on a continual basis
- Perform regular safety meetings to discuss safety issues, concerns and opportunities with our employees.

Proud Members Of



### COMPANY RULES

For any company, rules are in place to protect the health and safety of employees so that unsafe working habits can be eliminated. Avalanche Acid Hauling Ltd will ensure that all employees are treated equally and fairly, so that employees at all levels of our company are aware of the general rules and know that they must be enforced to ensure the safety of all workers. Any disregard for our rules will lead to immediate disciplinary action at the discretion of management and supervisors.

- Accidents, injuries, near misses, spills and occupational illnesses, regardless of severity, will be promptly reported to supervisors
- First Aid Treatment is to be obtained immediately for any injury, however small it may seem
- Following safe job / work procedures and practices where applicable
- Personal Protective Equipment appropriate to the job will be worn at all times when in the shop and on the worksite. Minimum requirements are hard hat, steel toed boots, and safety glasses
- Avoid wearing loose fitting clothing
- Jewellery is prohibited on the worksites where a hazard may arise, with the exception of medical alert tags which must be break away style
- Damaging, disabling or interfering with safety, fire-fighting, or first aid equipment is strictly prohibited
- Do not disable, modify or remove any safeguard on equipment / tools
- Never operate a piece of equipment or perform a job that you are not competent on
- Unauthorized passengers, operators or animals are strictly prohibited in any Avalanche Acid Hauling vehicle/equipment. Management MUST approve any person or animal that is riding in or operating company vehicle/equipment prior to departure or use of equipment.
- Misuse of company equipment and tools is not permitted
- All vehicles will be operated in a safe and courteous manner in compliance with all private, local, provincial, and federal laws
- Housekeeping in equipment, company vehicles and shop are mandatory at all times, to keep a safe work area
- Running is not permitted anywhere except in the case of an emergency
- Horseplay, fighting, practical jokes, gambling, stealing, possession of firearms are strictly forbidden on the job
- Possession or use on the job of intoxicating beverages or unauthorized drugs is strictly forbidden
- Report fit for duty each day
- All employees are required to treat each other with respect and dignity to prevent workplace violence
- Workplace violence and harassment will not be tolerated
- Smoking is prohibited in all company property, including buildings, vehicles, and equipment. Any smokers must be at least 5 meters from any entrance or window as per the Tobacco Reduction Act
- There will be no smoking within 50 meters of surface hydrocarbon facilities and 7.5 meters from all fuel pumps and vehicles being refueled.
- All employees have the right and responsibility to refuse any unsafe work and must report to supervisor immediately for control of hazards

*\*The information does not take precedence over applicable government legislation\**



## COLD WEATHER TIPS

### 1) Listen to the weather forecast

- Check the Environment Canada weather forecast before going out.
- Listen for a **wind chill** warning. Warnings are based on local climate and are issued when significant wind chills are expected.

### 2) Plan ahead

- Develop a cold weather **safety plan in advance** to ensure that safety concerns are addressed when it's very cold, or when the wind chill is significant. For example, schools could hold recess indoors, outside workers could schedule warm-up breaks, and those involved in winter recreation could reduce the amount of time they spend outdoors.

### 3) Dress warmly

- Dress in **layers**, with a wind resistant outer layer.
- When it is cold, **wear a hat**, mittens or insulated gloves. Keep your face warm with a scarf, neck tube or facemask.
- Wear warm and waterproof footwear. When it is very cold, or when the wind chill is significant, cover as much exposed skin as possible. Your body's extremities, such as the ears, nose, fingers and toes lose heat the fastest.

### 4) Seek shelter

- When the wind chill is significant, get out of the wind and limit the time you spend outside.

### 5) Stay dry

- Wet clothing chills the body rapidly.
- Remove outer layers of clothing or open your coat if you are sweating.

### 6) Keep active

- Walking or running will help warm you by generating body heat.

### 7) Be aware

- Watch for signs of frostbite and hypothermia (see below).
- Some people are more susceptible to the cold, particularly children, the elderly and those with circulation problems.
- Check on elderly relatives and neighbours to ensure they are warm enough and have sufficient supplies, particularly when the weather is cold or snowy. They might not feel comfortable going outside to shop and may require food, medications and other supplies.
- The use of alcohol, tobacco and certain medications will increase your susceptibility to cold.

### Hypothermia

- Being cold over a prolonged period of time can cause a drop in body temperature
- Shivering, confusion and loss of muscular control (e.g., difficulty walking) can occur.
- It can progress to a life-threatening condition where shivering stops or the person loses consciousness. Cardiac arrest may occur.

### What to do:

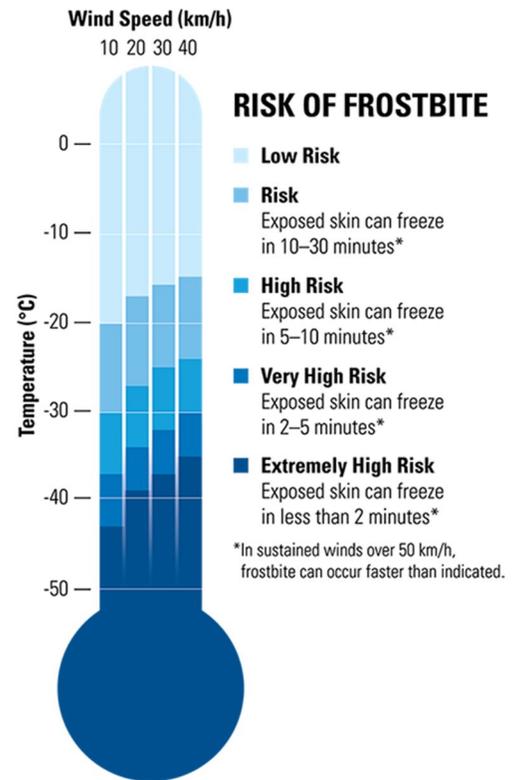
- Get medical attention immediately.
- Lay the person down and avoid rough handling, particularly if the person is unconscious.
- Get the person indoors.
- Gently remove wet clothing.
- Warm the person gradually and slowly, using available sources of heat.

### Frostbite

- A more severe condition, where both the skin and the underlying tissue (fat, muscle, bone) are frozen.
- Skin appears white and waxy and is hard to the touch.
- No sensation - the area is numb or tingling.

### What to do:

- Frostbite can be serious, and can result in amputation. Get medical help!
- Do not rub or massage the area.
- Do not warm the area until you can ensure it will stay warm.
- Warm the area gradually; use body heat, or warm water (40°C to 42°C). Avoid direct heat which can burn the skin.

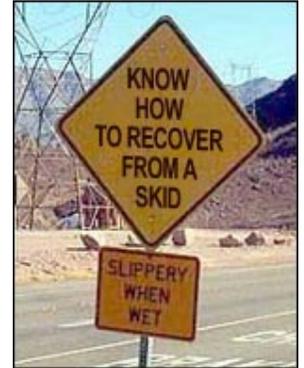


Adapted from Environment Canada's Wind Chill Index:  
<http://www.ec.gc.ca/meteo-weather/default.asp?lang=En&n=5FBF816A-1>

### DEFENSIVE DRIVING – KNOW HOW TO RECOVER FROM A SKID

**What's the best way not to get into a skid?** Avoid it in the first place! One of the best ways to avoid trouble on the road (not just skids) is to drive smoothly. True professionals drive so seamlessly that you do not feel anything when they shift, turn, or brake. Plan ahead, watch carefully, and slow down, especially if you are unfamiliar with the road. Skids almost always happen because the vehicle was running too fast for conditions.

**Be careful when conditions might be slippery**, as this is when most skids occur. But no matter what the road's surface condition is, skids are caused by driver error. Try to turn too sharply, enter a turn too quickly, or use excessive acceleration or braking, and you'll get the chance to practice skids! Keep your brakes maintained and properly adjusted, because a lateral imbalance in your brakes can cause or aggravate a skid.



**There are two common types of skids.** "Over steer" (or fishtailing) occurs when your front wheels are taking a shorter path than desired and the rear-end breaks loose and fishtails. This is the result of power and side forces causing loss of traction on the rear wheels; there is too much power applied for the existing steering input and the resulting side forces causes the rear wheels to break free, often as a result of trying to accelerate out of a turn. "Understeer" (or plowing) occurs when you have too much steering input for the power you are applying (too sharp an angle between the tires and the direction of motion), and the front wheels skid ahead as a result.

**Professional driving instructors** advise a new way of teaching skid recovery, instead of the old rule, which was, "Turn into the skid." They say this "new" way is more understandable to non-professionals, but either way, they adamantly say the result is the same. This change was made because many folks didn't clearly understand what "turn into the skid" means.

**If you find yourself in an over-steer skid**, first thing to do is get off the gas, keep your foot off the brakes, or smoothly release brake pressure if already applied, and if you are driving a standard shift vehicle, disengage the clutch. *Quickly* turn the steering wheel in the direction you want the *front* of the car to go (down the road). Specifically, *this means align your tires with the direction of your intended travel*. As your vehicle turns back in the correct direction, you must then counter steer in time to stop the turning and stay on your desired path. If you do not do this promptly, the vehicle will continue to turn past your intended direction, and you may then skid in that direction. You may have to counter-steer more than once to get things under control.

**Note:** *There are two situations where the previous techniques could actually make the skid recovery more difficult. When you are driving either a front-wheel drive vehicle or a rear-wheel drive with the four-wheel drive engaged, a quick reduction on the accelerator can cause a result in a loss of control that mimics what happens when the brake pedal is depressed – namely, the front wheels are slowed faster than the rear wheels increasing the over-steer skid problem. What is generally recommended is to place the vehicle into neutral (or depress the clutch) to allow the front wheels to coast as the vehicle is turned in the direction described above.*

**For an under-steer skid**, slightly reduce your steering input *while slowing* (without heavy braking) so you'll regain your directional control as the tires again grip the road surface. In this skid, the critical issue is to reduce speed so that you can regain a grip on the road and complete your turn. Even just a slight decrease in steering input, combined with the reduction in speed, may be enough to stop the skid from progressing.



Bonding and grounding remove stray currents and static electricity, which are potential ignition sources when a flammable atmosphere is present.

- **Bonding** is the equalizing of electric potential between two objects. It is achieved by joining metallic parts to form a path that ensures the safe conduction of any electrical current.
- **Grounding** is connecting a conductive object to ground (the earth or to some conducting body that serves in place of the earth), so the object is at zero electrical potential.



EXAMPLE OF A TRUCK BONDING CABLE REEL

### ACTIVITIES WHERE STATIC ELECTRICITY MAY BE PRESENT

- Loading or unloading of flammable materials, such as crude oil or liquid petroleum gas
- Using vacuum trucks
- Using pressure washers and steamers during tank and vessel cleaning
- Abrasive blasting
- Using centrifuges on drilling rigs

### EQUIPMENT USED TO MANAGE STATIC ELECTRICITY

- Grounding rods to dissipate charge
- Bonding cables and clamps to equalize charge
- Use of cable to dissipate charge on non-conductive materials such as plastic hose
- Multi-meter to measure electrical resistance
- Automatic bonding systems that warn when a bond is not present and interrupt the flow

### UNDERSTAND THE RISKS

Static electricity is created by the transfer of charged electrons from one material to another as they move against another. The resulting static discharge can create a spark adequate to ignite petroleum hydrocarbon vapours and gases.

- Preventing fires and explosions requires strict adherence to quality controls (i.e. controls that work as designed every time)
- Paint, rust and residue on bonding and grounding contact points can significantly limit the ability to dissipate static electricity
- Clamps need a strong spring to bite down on the attachment point for a good bond and to remain securely in place (screw clamps are superior to alligator clamps)
- In an all-metal bonding system, the total resistance should typically be less than 10 Ohms\* (units of electrical resistance)  
\*Refer to "Additional Resources" on second page
- Under low humidity conditions, such as a cold winter day, static electricity builds faster
- Never modify the design of equipment without a formal review of the risks





## WHAT CAN SUPERVISORS DO?

- Ensure a fire and explosion hazard management plan is in place for your work site; it should identify potential flammable hydrocarbons and ignition sources, and controls such as bonding and grounding
- Consider using a multi-meter to take ohm measurements in areas such as:
  - Bonding clamp to the vehicle frame
  - Bonding clamp to the grounding rod when affixed
- Ensure the metal components that contact multi-meter pins are free of paint, rust and residue
- If a flammable atmosphere could exist, make measurements with an intrinsically safe meter or under a hot work permit and associated controls
- Designate an acceptable Ohm ( $\Omega$ ) criterion for your equipment and repair or remove from service any deficient equipment

## WHAT CAN WORKERS DO?

- Understand the use and limitations of bonding and grounding equipment
- Ensure an adequate bond exists when materials are transferred or moved
- Never use or add unbonded components to equipment, such as adding a plastic extender (stinger) to the nozzle of pressure washers or using unbonded hose
- Before use, inspect the bonding cable and reel, especially the reel's attachment points to the vehicle frame and the cable's attachment point to the clamp
- Repair or remove from service any deficient equipment

## ADDITIONAL RESOURCES

- [NFPA 77: Recommended Practice on Static Electricity](#)
- [API 2219: Safe Operation of Vacuum Trucks Handling Flammable and Combustible Liquids in Petroleum Service](#)
- [Standata Electrical Safety Bulletin](#)
- [Fire and Explosion Management \(FEHM\) Guideline](#)

## PRESENT LIKE A PRO

### Before you begin:

Understand the topic and how it applies to you and your team.

Research your own company's experience and provide examples that pertain to your work areas.

If you're not able to answer a question, find the information and make sure you follow up.

Consider the audience. Are they familiar with the topic and the terminology?

### Involve the group:

Ask them to identify situations on your work site where bonding and grounding may be required.

Demonstrate how to make Ohm measurements of bonding equipment.

Review practices and procedures in relation to bonding and grounding.

Share past experiences of dealing with static electricity and the associated risks.

Ask the group for ways to improve the quality of this control on your work site.



## WHY 0.05% BREATH ALCOHOL LEVELS

### Why has Alberta proposed tougher sanctions for drivers with a blood alcohol content of .05%?

There are currently sanctions in place to address drivers with a blood alcohol content of .05%. Currently, peace officers can issue a 24 hour disqualification to drivers whose ability to operate a motor vehicle is affected by alcohol. The changes to the *Traffic Safety Act* regarding the increase of these sanctions are intended to encourage drivers to become personally accountable for their actions behind the wheel and to take greater personal responsibility for their driving behaviour.

The following chart contains some of the more common symptoms people exhibit at various BAC levels, and the probable effects on driving ability:

Blood Alcohol Concentration (BAC) <sup>1</sup>	Typical Effects	Predictable Effects on Driving
.02%	<ul style="list-style-type: none"> <li>Some loss of judgment</li> <li>Relaxation</li> <li>Slight body warmth</li> <li>Altered mood</li> </ul>	<ul style="list-style-type: none"> <li>Decline in visual functions (rapid tracking of a moving target)</li> <li>Decline in ability to perform two tasks at the same time (divided attention)</li> </ul>
.05%	<ul style="list-style-type: none"> <li>Exaggerated behavior</li> <li>May have loss of small-muscle control (e.g., focusing your eyes)</li> <li>Impaired judgment</li> <li>Usually good feeling</li> <li>Lowered alertness</li> <li>Release of inhibition</li> </ul>	<ul style="list-style-type: none"> <li>Reduced coordination</li> <li>Reduced ability to track moving objects</li> <li>Difficulty steering</li> <li>Reduced response to emergency driving situations</li> </ul>
.08%	<ul style="list-style-type: none"> <li>Muscle coordination becomes poor (e.g., balance, speech, vision, reaction time, and hearing)</li> <li>Harder to detect danger</li> <li>Judgment, self-control, reasoning, and memory are impaired</li> </ul>	<ul style="list-style-type: none"> <li>Concentration</li> <li>Short-term memory loss</li> <li>Speed control</li> <li>Reduced information processing capability (e.g., signal detection, visual search)</li> <li>Impaired perception</li> </ul>
.10%	<ul style="list-style-type: none"> <li>Clear deterioration of reaction time and control</li> <li>Slurred speech, poor coordination, and slowed thinking</li> </ul>	<ul style="list-style-type: none"> <li>Reduced ability to maintain lane position and brake appropriately</li> </ul>
.15%	<ul style="list-style-type: none"> <li>Far less muscle control than normal</li> <li>Vomiting may occur (unless this level is reached slowly or a person has developed a tolerance for alcohol)</li> <li>Major loss of balance</li> </ul>	<ul style="list-style-type: none"> <li>Substantial impairment in vehicle control, attention to driving task, and in necessary visual and auditory information processing</li> </ul>

The above table was reproduced with the permission of the National Highway Traffic Safety Administration.

<sup>1</sup>Information in this table shows the BAC level at which the effect usually is first observed, and has been gathered from a variety of sources including the National Highway Traffic Safety Administration, the National Institute on Alcohol Abuse and Alcoholism, the American Medical Association, the National Commission Against Drunk Driving, and [www.webMD.com](http://www.webMD.com).

Source: <http://www.stopimpaireddriving.org/ABCsBACWeb/page2.htm>

# Sweet Site Turns Sour

In February we had a client production site turn from sweet to sour and go up to 100 PPM H2S. Thankfully, this occurrence resulted without harm. Complacency creeps into our lives every day, and my concern is that this happens with the potential for sites to turn sour. My question, is how do we keep our drivers engaged to remember these risks at all production sites? I would like to challenge the leadership of our carrier-companies to make sure that your drivers are not getting complacent and putting themselves at risk. In talking with some of our current carriers about how to manage this issue, I walked away with some easy wins that I wanted to share with all of you.

- Maintaining training (H2S Alive) current.
- Be aware of / use sour-loading procedures even when going to presumed sweet sites, where practicable.
- Test / have sour-loading PPE with you even when going to presumed sweet sites.
- Ensure driver’s competencies are such that they can handle the task and all potential risks associated with the work that you have assigned to them.
- Practice, practice, practice your emergency response scenarios.
- Ensure orientations are completed and understood prior to going to sites.
- Understand site Emergency Response Procedures and muster points.

Remember; if anyone feels unsafe or unsure, it is our expectation and the responsibility of every worker to PAUSE or STOP WORK without hesitation.

I have attached the Ryder 7 Steps for Managing Work for reference. And please remember that starting work is not the first step.

*For more information please contact:  
Thomas\_lofthouse@ryder.com*

7 Steps For Managing Work Scope on Site		
1	Communicate	Did <b>Ryder</b> communicate to the Carrier the scope of work that needs to be performed when the equipment was requested? Does the <b>Carrier's driver</b> understand the scope of work to be performed before starting the route?
2	Plan	Does the <b>Carrier's driver</b> understand the hazards and risks associated with the work? Has the <b>Carrier</b> reviewed their <b>JSA</b> associated with the scope of work, with their driver prior to starting their route? Does the <b>Carrier's driver</b> have the training and is the training valid to perform the work before going on site?
3	Check Equipment	Does the <b>Carrier's driver</b> have the equipment and personal protective equipment to perform the work safely?
4	Prepare For Work	Has the <b>Carrier's driver</b> attended the pre-start meeting onsite? If not do they understand the scope of work? Has the <b>Carrier's driver</b> modified their <b>JSA</b> with any <b>new hazards</b> that have been identified in the specific area/line they will be working in? Have <b>controls</b> been put into place to <b>migrate the risk</b> ?
5	Control Energy	Has the <b>Carrier's driver</b> isolated energy sources (Lock, Tag out & Test), removed line of fire risks and ensure escape routes identified?
6	Final Check	100% Ready to Go - Is everything in place and verified by the <b>Carrier's driver</b> ?
7	Start Work	The <b>Carrier's driver</b> must comply/ Intervene/ respect/ follow the life saving rules/well barriers/ MOC/ STOP the job/Hands Free/Red zone/Change.

Carrier Drivers must attend the site pre-start. The pre-start meeting will communicate the aspect of work to be performed on site. Carrier Drivers must review their JSA prior to driving and again at the job site. At the job site drivers must modify their JSA with any new hazards that have been identified in the specific area/line they will be working in and the controls that will be put into place to migrate the risk. The modified JSA

**CHAINING UP**

**Tools/Equipment/Material Required :** Truck, Chains

#	Job Steps	Hazards Associated	Controls	Persons Responsible
1.	Exit cab of unit	- Rolling - Door - Steps	- - Make sure park brake is on - - Make sure to latch door if available - Use 3 point dismount	Operator / Driver
2.	Remove chains off hanger	- Lifting - Pinch points	- Use legs and arms, not back - Wear gloves and watch fingers	Operator / Driver
3.	Install chains over top of the tires	- Pinch points - Lifting	- Use legs and arms, not back - Wear gloves and watch fingers	Operator / Driver
4.	Tuck chains under in front of tires	- Pinch points	- Be aware of fingers and wear gloves	Operator / Driver
5.	Drive unit ahead	- Slips, trips, falls - Injury to others	- Use 3 point dismount - Ground personnel are clear	Operator / Driver
6.	Exit cab	- Rolling	- Wear gloves and be aware	Operator / Driver
7.	Tighten chains	- Pinch Points	- Wear gloves and be aware	Operator / Driver

Safety Items Required			Risk Assessment
<b>X</b>	Basic PPE - Hard Hat, Safety Glasses, Gloves, Steel Toed Boots, FR Coveralls, Ear Plugs		<p align="center"><b><u>LOW HAZARD – POST RISK ASSESSMENT</u></b></p> <p><b>A condition or practice likely to cause:</b></p> <ul style="list-style-type: none"> <li>• A First Aid or visit to a doctor for a precaution</li> <li>• Minor loss or damage to property, equipment, or vehicles</li> <li>• Loss of company or client revenue up to \$1,000.00</li> <li>• Small spill or release on site that doesn't require any regulatory reporting</li> </ul> <p><b>Action to be Taken:</b> The hazard may require further study and/or action to minimize potential</p>
	SCBA/SABA	Goggles / Face Shield	
	Signs/Barriers	Apron / Rubber Gloves	
<b>X</b>	Lock Out Equipment	Harness / Fall Protection	
	Permits	<b>X</b> First Aid Kit	
	Ventilation	<b>X</b> Fire Extinguisher	
<b>X</b>	Reflective Vest	Spotter	