

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



MAY 2019 VOL.5

MONTHLY HEALTH & SAFETY NEWSLETTER

SAFETY TOPICS

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POSITIVE EMPLOYEE REVIEW

Shout out to Skylar Ross for his exceptional work at a job for Chevron.

An inspection was completed on Skylar and his equipment from a Chevron Representative. It was noted in the inspection:

- that the condition of the truck both inside and out was clean
- Procedures, binders, registration and certificates were all organized and easily accessible
- The pump box was well maintained with no leaks
- Signage was clean and visible during unloading
- All PPE that Chevron requires was donned (Hard Hat, Full Face Shield, Rain Gear, Gloves and Boots)

Avalanche Acid Hauling believes that workers are the face of the company and we appreciate all the hard work to maintain a safe, clean image for the company. Keep up the great work team, and a huge

KUDOS to Skylar Ross 😊



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.



Proud Members Of



HAZARDOUS IDENTIFICATION TRAINING

What is a hazard?

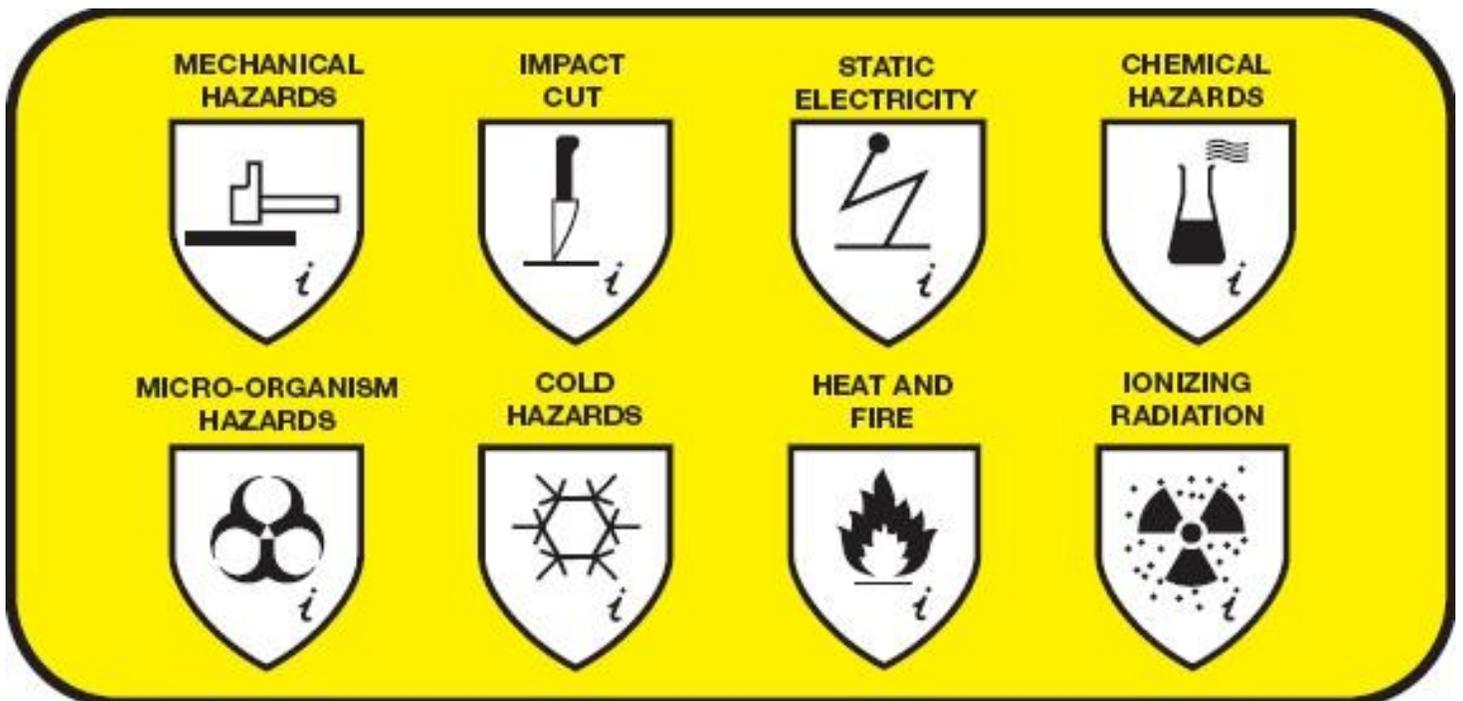
The meaning of the word hazard can be confusing. Often dictionaries do not give specific definitions or combine it with the term "risk". For example, one dictionary defines hazard as "a danger or risk" which helps explain why many people use the terms interchangeably.

There are many definitions for hazard but the more common definition when talking about workplace health and safety is:

A **hazard** is any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work.

Basically, a hazard can cause harm or adverse effects (to individuals as health effects or to organizations as property or equipment losses).

Sometimes a hazard is referred to as being the actual harm or the health effect it caused rather than the hazard. For example, the disease tuberculosis (TB) might be called a hazard by some but in general the TB-causing bacteria would be considered the "hazard" or "hazardous biological agent".



HAZARDOUS IDENTIFICATION TRAINING CONT'D

What are examples of a hazard?

Workplace hazards can come from a wide range of sources. General examples include any substance, material, process, practice, etc that has the ability to cause harm or adverse health effect to a person under certain conditions. See Table 1.

Table 1 Examples of Hazards and Their Effects		
Workplace Hazard	Example of Hazard	Example of Harm Caused
Thing	Knife	Cut
Substance	Benzene	Leukemia
Material	Asbestos	Mesothelioma
Source of Energy	Electricity	Shock, electrocution
Condition	Wet floor	Slips, falls
Process	Welding	Metal fume fever
Practice	Hard rock mining	Silicosis

As shown in Table 1, workplace hazards also include practices or conditions that release uncontrolled energy like:

- an object that could fall from a height (potential or gravitational energy),
- a run-away chemical reaction (chemical energy),
- the release of compressed gas or steam (pressure; high temperature),
- entanglement of hair or clothing in rotating equipment (kinetic energy), or
- contact with electrodes of a battery or capacitor (electrical energy).

What types of hazards are there?

A common way to classify hazards is by category:

- **biological** - bacteria, viruses, insects, plants, birds, animals, and humans, etc.,
- **chemical** - depends on the physical, chemical and toxic properties of the chemical.
- **ergonomic** - repetitive movements, improper set up of workstation, etc.,
- **physical** - radiation, magnetic fields, pressure extremes (high pressure or vacuum), noise, etc,
- **psychosocial** - stress, violence, etc.,
- **safety** - slipping/tripping hazards, inappropriate machine guarding, equipment malfunctions or breakdowns

HAZARDOUS IDENTIFICATION TRAINING CONT'D

What is risk?

Risk is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard. It may also apply to situations with property or equipment loss.

For example: The risk of developing cancer from smoking cigarettes could be expressed as "cigarette smokers are 12 times (for example) more likely to die of lung cancer than non-smokers". Another way of reporting risk is "a certain number, "Y", of smokers per 100,000 smokers will likely develop lung cancer" (depending on their age and how many years they have been smoking). These risks are expressed as a probability or likelihood of developing a disease or getting injured, whereas hazards refer to the possible consequences (e.g., lung cancer, emphysema and heart disease from cigarette smoking).

Factors that influence the degree of risk include:

- how much a person is exposed to a hazardous thing or condition,
- how the person is exposed (e.g., breathing in a vapour, skin contact), and
- how severe are the effects under the conditions of exposure

What is a risk assessment?

Risk assessment is the process where you:

- identify hazards,
- analyze or evaluate the risk associated with that hazard, and
- determine appropriate ways to eliminate or control the hazard.

Will exposure to hazards in the workplace always cause injury, illness or other adverse health effects?

Not necessarily. To answer this question, you need to know:

- what hazards are present,
- how a person is exposed (route of exposure, as well as how often and how much exposure occurred),
- what kind of effect could result from the specific exposure a person experienced,
- the risk (or likelihood) that exposure to a hazardous thing or condition would cause an injury, or disease or some incidence causing damage, and
- how severe would the damage, injury or harm (adverse health effect) be from the exposure.

The effects can be acute, meaning that the injury or harm can occur or be felt as soon as a person comes in contact with the hazardous agent (e.g., a splash of acid in a person's eyes). Some responses to may be chronic (delayed). For example, exposure to poison ivy may cause red swelling on the skin two to six hours after contact with the plant. On the other hand, longer delays are possible: mesothelioma, a kind of cancer in the lining in the lung cavity, can develop over 20 years or more after exposure to asbestos.

Once the hazard is removed or eliminated, the effects may be reversible or irreversible. For example, a hazard may cause an injury that can heal completely (reversible) or result in an untreatable disease (irreversible).

HAZARDOUS IDENTIFICATION TRAINING CONT'D

Fire Hazard from Filling Portable Gas Cans in Pickup Trucks and Cars

Description of Hazard

In recent incidents reported to the National Institute for Occupational Safety and Health (NIOSH), fires spontaneously ignited when workers or others attempted to fill portable gasoline containers (gas cans) in the backs of pickup trucks equipped with plastic bed liners or in cars with carpeted surfaces. Serious skin burns and other injuries resulted. Similar incidents in the last few years have resulted in warning bulletins from several private and government organizations.

These fires result from the buildup of static electricity. The insulating effect of the bed liner or carpet prevents the static charge generated by gasoline flowing into the container or other sources from grounding. The discharge of this buildup to the grounded gasoline dispenser nozzle may cause a spark and ignite the gasoline. Both ungrounded metal (most hazardous) and plastic gas containers have been involved in these incidents.

Fire Hazard: Filling gas can in pickup truck with plastic bed liner.

Safe Practice: Always place gas can on ground before refueling. Touch can with gas dispenser nozzle before removing can lid. Keep gas dispenser nozzle in contact with can inlet when filling.

Recommendations For Prevention

Construction workers and others in small businesses who often work with gasoline powered equipment commonly use portable gasoline containers. Homeowners use gasoline cans for their lawn mowers and other equipment.



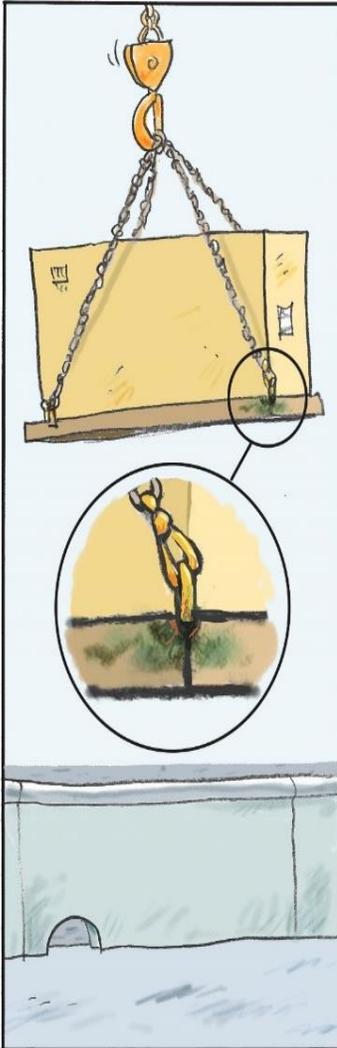
- Avoid the hazardous practice of leaving the portable gasoline containers in pickup trucks or cars when refueling!
- Before filling, always remove the containers from the vehicle and place them on the ground at a safe distance from the vehicle (provides path to dissipate static charge to ground).
- Touch the container with the gas dispenser nozzle before removing the container lid (provides another path to dissipate static charge to ground).
- Keep the nozzle in contact with the container inlet when filling (to dissipate static charge buildup from flow of gasoline).

Additional measures for prevention include the following:

- *Manufacturers or retailers:* Place a hazard label on all plastic liners being sold warning workers not to fill portable gas containers in the bed liner of the truck but always to place the containers on the ground before filling.
- *Gas stations:* Display a warning notice near gas pumps to place all portable gas containers on the ground before filling.
- *States:* Provide a warning notification to owners and users when new vehicles are licensed or when license plates are renewed.
- *Manufacturers:* Build bed liners that can be grounded to the metal truck bed, thereby dissipating potential electrostatic charge.

HAZARDOUS IDENTIFICATION TRAINING CONT'D

the rusty lifting gear



Unsafe condition • Unsafe act • Near miss • Accident

DEFENSIVE DRIVING – DRIVING IN MUD

Off-road maniacs seek it out, we played in it as kids and some may have even eaten it. But on the road, it seems to take on a life of its own as it spreads its maliciousness over asphalt or sits on the side waiting to swallow vehicles in one belch. It's mud.

Smooth moves

Urbanites may go an entire lifetime without ever facing the challenge of driving through mud. But for the rest of us, the soothing patter of rain at night means we have to face varying degrees of quagmire the next morning. For some, the first sign of spring is the dirty, gray snowbanks melting away into rivers of mud. We've either learned to deal with it or become entombed by it.

So what do you do? Where do you go for advice if you're about to venture from the dry pavement of the city into the mud-coated countryside and still drive safely? Those off-roaders who go in search of it, like the Holy Grail, are some of the best sources of advice. While their techniques for driving through mud are valid, the major difference between them and us is the equipment. Our tires don't have huge lugs that grip mud with the consistency of peanut butter. And we don't have winches to haul us out if we fail to make it to the dry side. Lastly, our suspension clearance is dwarfed in comparison.

Therefore, the first piece of advice is simple. If the mud you're facing includes debris (think chunky peanut butter), don't even attempt traversing it. Or if the mud virtually camouflages the contour of the road under it, is still moving or is littered with stuck vehicles, simply turn around and try another route.

In relative terms, the easiest mud to survive is shallow, defined as 2 inches deep or less. But don't be deceived – even shallow mud can combine the characteristics of an ice rink and quicksand.

With any luck, you'll be entering this shallow mire at low speed. If you hit mud at speed, your vehicle can take on the characteristics of a luge on an ice chute. The key is to give the tires a chance to bite into the mud and find traction on the hard surface underneath. Keep your line through the sludge as straight as possible; turning the wheels causes more drag and can bog you down. This technique works for mud-covered asphalt or well-traveled dirt roads after normal rainfall. Off-roaders will tell you to drive as slow as you have to and as fast as you can, a riddle only they can answer. The translation: Momentum and torque will get you through.

In the thick of it

When you're in the mud, one of three things will happen.

First, you might get through it without incident. Hurray!

Second, you might skid. Do not hit the brakes. Gently back off on the gas pedal, and be conscious of where the front wheels are pointing. Assuming you were going slowly to begin with, your vehicle will decelerate and regain traction and the wheels will pull the vehicle in the direction they are pointed (explaining why it's important to know what direction that is). Once you're back in control of the vehicle, keep going.



DEFENSIVE DRIVING – DRIVING IN MUD

The third possibility is getting stuck. If this happens, keep steady pressure on the gas pedal and pray. The solution for off-roaders requires a little finesse. The tire tread may be clogged with mud, reducing traction. Press the accelerator to create a light wheel spin. The theory is that the centrifugal force will spin the mud from the tread and the tire can grip again.

You can also turn the steering wheel back and forth quickly – about one-eighth of a rotation. The tread pattern on even conventional street tires wraps up onto the tire wall. Moving the wheels, hypothetically, may give this tread a chance to gain enough grip to keep you moving. If none of this works, stop spinning your wheels. You'll just be digging a deeper rut.

Out of the rut

So, now you're stuck. First, try throwing the transmission into reverse and then keeping your wheels straight. You've got a good chance of returning to dry land. If you have floor mats, the rubber type is best as they'll have a chance to survive this ordeal. Slip them as far underneath the stuck tires as possible, on the side you want to travel toward. Slowly ease onto the accelerator and, hopefully, out of the rut. You can either kiss your mats goodbye or retrieve them once you're out of the mud. Also, once you're safely out of the mud, give your tires a chance to kick the muck out of the tread before you resume normal speeds.

Clear as mud

Here are a couple more tips. Flip on your windshield wipers before entering a particularly viscous mud puddle. There's a good chance you'll end up with globs of mud on your windshield; your wipers can deal with small globs as they hit the glass better than they can a windshield totally splattered.

If you arrive at a boggy area with obvious wheel ruts already imprinted, know your vehicle's limitations before you enter the ruts. I once saw a mini-pickup take off in the fresh tracks of a semi. The small truck's track was narrower than the semi's, and its clearance much lower. The result was not pretty.

Lastly, clean your vehicle! Mud holds moisture against metal and leads to rust and corrosion. Pay particular attention to the wheel wells and undercarriage. If mud dries and cakes on your driveshaft, it can throw it out of alignment and cause damage. Chances are if you've only encountered one or two shallow mud bogs, followed by open road traveled at normal speeds, you'll be in good shape. But it's still a good idea to exorcise all evidence of mud from your vehicle rather than wear it like a badge of courage, as some do.



While your mud adventure may not get you bragging rights among a pack of off-roaders, you can thank them and their experience for these practical safety tips and tricks.



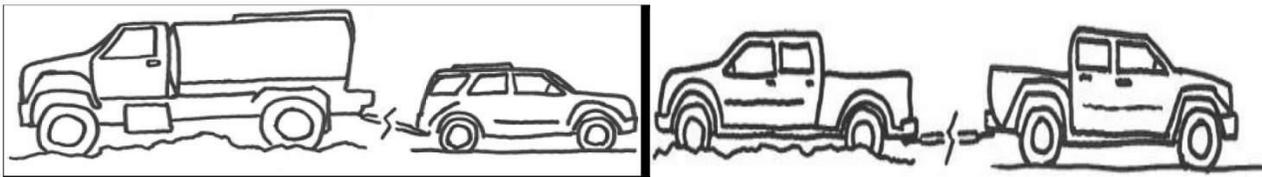
ENVIRONMENT, HEALTH & SAFETY ALERT

Vehicle Towing



Life Saving Rule

RULE #1: A certified tow truck is always your best option in vehicle recovery. However, if you must, there are do and do not's that you must always respect.



DO NOT:	DO:
<ul style="list-style-type: none"> • DO NOT use a lighter vehicle to pull the heavier vehicle out. • Do NOT use chains or tow straps that have a metal hook. • DO NOT attach to bumpers, ball hitches, bull bars, or tie down eyes. These can tear free under towing stress. 	<ul style="list-style-type: none"> • ONLY pull with a vehicle roughly the same size or larger than the stuck truck. • ONLY use a recovery strap with fabric loops. The minimum breaking strength of the strap must be twice the weight of the truck. • Only attach recovery strap securely to a load rated component, IE loop onto tow hooks, engineered recovery device or on shackle with pin in hitch receiver. Ensure the WLL (working load limit) of the hitch is suitable for the stuck vehicle • Workers must stay well clear of the area while the vehicle is attempting to be recovered • Always inspect the recovery strap before use.

Step by step Guide

1. Stop, consider the task at hand and assess the hazards
2. If the vehicle recovery takes place on or near a roadway, you must always implement a traffic warning or traffic control system.
3. Ensure that you have the correct equipment.
4. Check both vehicle weights and add the weights of any loads either vehicle is carrying
5. Ensure the recovery strap has a minimum breaking strength 2-3 times the total weight of the stuck truck
6. Ensure tow hooks, hitch receivers and shackles are rated to loads that exceed the recovery strap.
7. Clear out mud, sand, or snow from under the vehicle and in front of the tires in the pull direction
8. Position the pulling vehicle in line with the stuck vehicle – the pulling face forward, the stuck vehicle ideally begin pulling from the front
9. Lay out the recovery strap between the two vehicles and loop the strap onto a tow hook bolted to the vehicle frame or put the loop on a shackle which is properly pinned to frame mounted hitch rated for recovery.



MONTHLY HEALTH & SAFETY NEWSLETTER

SHOWER UNIT PROCEDURES (TRUCK MOUNTED – 6 MAN)

Tools/Equipment/Material Required : Acid truck and shower unit			Reviewed by: Roger Mitchell / Jamie Wojcichowsky Date: April 3 2019	
#	Job Steps	Hazards Associated	Controls	Persons Responsible
1.	Arrive on location, check in with medic (if applicable) and sign on to permits or other applicable document and position Truck.	<ul style="list-style-type: none"> - Ground personnel - Barricaded areas - Congestion - Rolling vehicles - Static Electricity 	<ul style="list-style-type: none"> - Always speak with company rep. before entering to be aware of all hazards on the worksite (site orientation) - Use spotters and good communication when backing up and when site is congested - Complete a JHA - Ensure chock blocks are utilized <p>Always ground unit</p>	Operator / Driver
2.	Open side door of shower unit. Put stairs on for easy access into shower unit. Check emergency towels. Check spare clothing.	<ul style="list-style-type: none"> - Slips, trips, falls - Pinch points - Over Exertion 	<ul style="list-style-type: none"> - Wear Proper PPE – FR rated coveralls, hard hat, steel toed boots, Rain Suit and safety glasses - 3 point contact - Proper lifting - Be aware of your surroundings 	Operator / Drivers
3.	Open back door (in cold weather open small hatch in door). Check oil levels and all other engine fluids in generator. Start engine for shower by pressing glow plug button and hold while turning key. Check temperature gauge to ensure correct water temperature for showers.	<ul style="list-style-type: none"> - Slips, trips, falls - Pinch points - Over Exertion 	<ul style="list-style-type: none"> - Wear Proper PPE – FR rated coveralls, hard hat, steel toed boots, Rain Suit and safety glasses - 3 point contact - Proper lifting - Be aware of your surroundings 	Operator / Drivers
4.	Enter shower unit through side door. Turn on switch labelled lights located to the right of the generator room door. Turn on switch labeled Pump 2 in order to test right side showers and eyewash. Ensure water is running out of each shower head and eyewash and is at proper temperature. Shut off shower head, eyewash and drain valves. Turn on Pump 1 switch and repeat the steps for left hand showers and eyewash. The stations are now primed and ready for use.	<ul style="list-style-type: none"> - Slips, trips, falls - Pinch points - Over Exertion 	<ul style="list-style-type: none"> - Wear Proper PPE – FR rated coveralls, hard hat, steel toed boots, Rain Suit and safety glasses - 3 point contact - Proper lifting - Be aware of your surroundings 	Operator / Drivers

SHOWER UNIT PROCEDURES (TRUCK MOUNTED – 6 MAN)– CONTINUED

5.	Exit shower unit and check all 4 drains are free of obstructions. Shower is now operational and ready for use.	<ul style="list-style-type: none"> - Slips, trips, falls - Pinch points - Over Exertion 	<ul style="list-style-type: none"> - Wear Proper PPE – FR rated coveralls, hard hat, steel toed boots, Rain Suit and safety glasses - 3 point contact - Proper lifting - Be aware of your surroundings 	Operator / Drivers
6.	To shut down shower unit turn engine off. Turn off switches labeled Pump 1 and Pump 2. Open all drains valves for eyewash and shower heads and open drain valves to drain all water out of the lines. Ensure that the 2 main water ball valves over top of water reservoir in back are open. Turn off light switch.	<ul style="list-style-type: none"> - Slips, trips, falls - Pinch points - Over Exertion 	<ul style="list-style-type: none"> - Wear Proper PPE – FR rated coveralls, hard hat, steel toed boots, Rain Suit and safety glasses - 3 point contact - Proper lifting - Be aware of your surroundings 	Operator / Drivers
7.	Remove wheel chocks and ground cables, complete thorough inspection to ensure cargo securement and all valves/hatches are shut and capped.	<ul style="list-style-type: none"> - Slip, trips and falls - Pinch points Over exertion 	<ul style="list-style-type: none"> - Ensure to wear steel toe Rubber boots, hard hats, FR rated rain suit, gloves, hearing protection, full face mask with cartridges, ice cleats when required Use proper ergonomics when lifting 	Operator / Driver

Safety Items Required				Risk Assessment	
x	Basic PPE - Hard Hat, Safety Glasses, Gloves, Steel Toed Boots, FR Coveralls, Ear Plugs			<p><u>MEDIUM HAZARD– POST RISK ASSESSMENT</u></p> <p>A condition or practice likely to cause:</p> <ul style="list-style-type: none"> An injury resulting in time off from work for any period of time A moderate loss or damage of property, equipment, or vehicles Substantial loss of company or client revenues greater than\$1,000.00 A serious environmental release that requires regulatory reporting Any media, or third party coverage <p>Action to be Taken:</p> <p>The hazard should be considered serious and some form of action taken</p>	
	SCBA/SABA		Goggles / Face Shield		
	Signs/Barriers		Chemical Apron / Rubber Gloves		
	Full face/cartridges		Chemical boots		
x	Permits	x	First Aid Kit		
	Ventilation		On-site shower facilities		
	Reflective Vest		Spotter		