

SAFETY TOPIC

ISSUE DATE: December 2018



SAFETY
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SHAMROCK
ENERGY SOLUTIONS

COLD WEATHER SAFETY

The cold weather season is here and most areas have already begun to experience frigid temperatures. While perhaps less common than heat stress, cold stress can cause significant occupational injury to workers or be a catalyst for other occupational injuries or illnesses. The primary factors in evaluating a cold stress environment are air temperature and movement. Humidity can also be a factor. The most common way to evaluate cold conditions is through the national wind chill index (see page 2). The wind chill index combines air temperatures and wind speed to determine how cold it would feel to a person outside. Be aware that exposure to cold temperatures and high winds can lead to cold stress related injuries in a relatively short period of time and could result in several adverse health effects. Seek immediate medical attention if you or a co-worker experience any symptoms related to a cold stress injury or illness. The two most common cold related stressors are Hypothermia and Frostbite and each are briefly discussed below.

1. *Hypothermia* occurs when the body dissipates more heat than it absorbs and the normal body temperature (98.6°F) drops to less than 95°F. Symptoms include shivering, confusion, and loss of muscular control such as walking. If you or a co-worker believe someone is experiencing hypothermia, seek medical assistance as soon as possible. Move the person indoors and remove any wet clothing. Lay the person down and avoid rough handling especially if the person is unconscious. Warm the person gradually and slowly using the available sources of heat.
2. *Frostbite* is the localized freezing of the skin and underlying tissue (fat, muscle, bone). Skin will appear white and waxy, and is hard to touch. The area will also be numb or tingling with no sensation. Amputation may be required of the affected area in severe cases. Do not rub or massage the area. Do not warm the area until you can ensure it will stay warm. If the area gets frozen again, more tissue damage will occur. Warm the area gradually with body heat or warm water (100°F to 105°F) to thaw the frozen tissue. Avoid direct heat, which can burn the skin.

It is extremely important to dress properly during cold weather to prevent cold stress. Dress in layers to stay warm; but remember, your outer garment must consist of Flame Resistant Clothing (FRC). This may require taking an inventory of present clothing and bringing out your winter gear from home. When it is very cold or when the chill is significant, cover as much exposed skin as possible. The body's extremities such as ears, nose, fingers, and toes lose heat the fastest. We often see a warming trend in the South during the winter season, but that does not mean the cold weather is over so prepare accordingly.

Some platforms, work areas, or even homes may utilize electric space heaters to augment its heating system. If these devices are used, be especially vigilant to maintain a safe perimeter, a minimum of three feet, around the heater. Make sure any combustibles are properly stored, remove clothing, bedding, magazines, so that nothing contacts the heater and becomes a fire hazard. Turn off space heater upon leaving the area.

If operations require your attention, always utilize the buddy system especially when working nights or lower decks. Do not take any unnecessary risk to prolong exposure. Winter weather often bring strong winds and elevated sea states. After winter storms, make sure to perform a thorough inspection of boat landings and plus 10 areas to ensure they are intact including Emergency Shut Down (ESD) stations and handrails. If any are damaged or missing, report it to the Person-in-Charge (PIC) immediately and ensure proper notifications are made to the applicable governmental agencies. Make an inventory of life saving equipment and replace anything swept away. Monitor the plus areas for any open holes, which may have resulted from high seas. Hard barricade these areas with suitable material such as cables, chains, barricades, or guardrails to prevent workers from falling overboard. Flagger tape or rope is not considered suitable material as they lack the ability to prevent unintended access. Use added caution when loading and unloading vessels or during personnel basket transfers. Do NOT hesitate to utilize **STOP WORK AUTHORITY** if you feel unsafe or unsafe for someone else to transfer during rough conditions.

This year's winter weather is expected to bring plunging temperatures, possibly for an extended period of time. With proper anticipation and evaluation of the environment and utilizing proper safe work practices, employees can stay warm and continue to function in a safe, compliant, and productive manner.

**REMEMBER, YOU HAVE THE RIGHT AND RESPONSIBILITY TO
STOP WORK THAT IS UNSAFE!**



Wind Chill Chart



		Temperature (°F)																	
		40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98	

Frostbite Times

30 minutes

10 minutes

5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

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SAFE WINTER DRIVING

Driving in cold, winter weather can be hazardous and scary not only in regions that get snow and ice, but also in areas that bring frigid temperatures and rain. Additional preparations are necessary and can help make any trip safer or help motorists deal with an emergency. Adverse weather is a causal factor in many crashes, especially during the winter season. However, drivers can learn how to manage the risks of driving in winter conditions by applying safe driving techniques. Even if you heard it before, it is always good to be reminded of safe driving practices for winter conditions of any kind. Listed below are some recommendations for safe winter driving.

- » Conduct a thorough pre-trip inspection each day to ensure the vehicle and tires are in good condition for any road surface. *Weekly Vehicle Inspection Reports* must be completed on company vehicles and submitted to manager. Any deficiency noted during the inspection should be addressed at once
- » Perform 360° inspections around vehicles to check all clearances before moving the vehicle forward or reverse to seek and eliminate any potential hazards that may exist
- » Ensure electronic traction and stability control is *on* to help maintain control of the vehicle
- » Keep fuel tank at least half full
- » Accelerate and decelerate slowly
- » If possible, do NOT stop when going uphill to prevent loss of traction
- » Do NOT use cruise control when driving on slippery, wet, or icy road surfaces
- » Always look and steer in the direction where you want the vehicle to go
- » Slow down and increase following distances to 8-10 seconds and safe space around your vehicle
- » Keep equipment such as flashlight, jumper cables, shovel, snow brush, ice scraper, abrasive traction material (salt or cat litter) in vehicle at all time in the event of an emergency.
- » Watch weather reports before driving anywhere, and plan routes to optimize the best roads to travel on
- » Use personal journey management techniques by telling someone upon leaving and arriving at locations
- » Avoid fatigue by getting plenty of rest before traveling long distances
- » Dress for the weather; and if working, the outer garments must consist of FRC material as per policy
- » Carry a "Go Bag" with clothing, blankets, food, water, medication, and warming devices
- » Have reliable communications such as a cellular phone that is properly charged or with an available charging cable/accessory in case of an emergency or lengthy delay
- » If stuck or stranded, stay with the vehicle and call for assistance
- » Activate the vehicle's hazard lights if stranded to signal for assistance
- » Dial 911 if immediate emergency assistance is needed

If the weather is so bad that walking in it is difficult, then driving will also be difficult. If you do not have to get out on the road, stay home and wait until the roads improve. Do NOT allow yourself, family members, friends, co-workers, or anyone else that drives around you become a statistic.

In effort to be pro-active and prevent vehicle incidents this winter season, the HSE and training departments recently teamed up and implemented a *Winter Safety Driving* module on the intranet. The purpose of this module is to coach, train, and educate our team members to better recognize winter hazards on the road and apply safe driving techniques during winter conditions. The module has been assigned to all current team members in departments 11, 13, 14, and 16 who are approved to drive company vehicles. Team members can access the module by logging into the intranet and clicking *My Shamrock > My Testing*.

Although winter driving requires special care, safe driving should be an everyday habit. Everyone in the vehicle should wear seatbelts at all times. Never drink and drive. Never text while driving or get distracted by anything else inside the vehicle. These are essential for safe driving regardless of the weather. We want all our employees and their families to return home safely to each other every day from their travels.

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