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SAFE OPERATING PROCEDURES

Cold Weather Safety

SOP 10-2

- 1) Along with air temperature, wind and moisture can create issues for employees working in the cold.
- 2) Wind can blow away the body's protective external layer of heat. For example, when the temperature is 25° F and the wind is blowing 25 mph, the wind chill is 9° F resulting in more hazardous conditions.
- 3) Water including sweat can displace body heat 25 times faster than dry air.
- 4) Whenever possible, schedule coldest part of work for the warmest part of the day.
- 5) Reorganize work procedures to minimize sitting still or standing for long periods of time.
- 6) All employees who have not been working in the cold environment must adjust to the cold before expecting to be fully productive (5-7 days).
- 7) To stay hydrated, drink water, sports drinks, or warm non-caffeinated beverages.
- 8) Caffeine is a diuretic which causes loss of water and increases dehydration and should be avoided.
- 9) Take regular rest breaks in a warm place, if possible.
- 10) Wear the proper clothing in layers. Wool, polypropylene or 50/50 cotton and polyester blend should be worn next to the skin. Outer garments should be of waterproof, wind resistant material like nylon.

A good example of layering would be a wool shirt or sweater over a cotton one and then an outer nylon jacket.

- 11) Employees should be sure to wear a hat or other head covering as up to 40% of heat loss occurs when the head is exposed.
- 12) During winter weather, hoodies should not be worn under hard hats. Winter liners made for hard hat use during winter weather should be worn instead.
- 13) Wear waterproof boots with two pairs of socks. The inner pair should be cotton and the outer pair wool.
- 14) Employees should wear gloves for light to moderate work anytime the air temperature falls below 40° F.
- 15) For air temperatures below freezing, insulated gloves should be worn.
- 16) Wet conditions in cold weather may necessitate water-proof insulated gloves. Breathable water-proof gloves allow moisture from sweating hands to wick away which will keep hands warmer.
- 17) Hand warmer products are available for extended work in cold weather.
- 18) Keep as dry as possible and have extra clothing readily available to change into if you do get wet.
- 19) Remember! The frequency of accidents is higher in cold weather. Make allowances for your slowed reflexes and numbed hands when doing your job.
- 20) Be aware of ice on sidewalks, pavement and in shaded areas around buildings. Avoid areas where accumulated ice may cause a slip and/or fall.

- 21) When working on ice covered surfaces, Ice Traction Cleats are available to be worn over work boots.
- 22) The National Weather Service Wind Chill Chart below should be used to plan work schedules in cold weather conditions. The Wind Chill Chart indicates amount of time where frostbite may occur for any exposed skin. Dress appropriately to protect exposed skin.

	Wind	Chill	Chart	
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	Temperature (°F)																		
	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
	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
(ho	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
Wind (mph)	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
pu	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
Wi	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																			
			W	ind (Chill	(°F) =	= 35.	74 +	0.62	15T ·	35.	75(V	0.16) -	+ 0.4	2751	(V ^{0.1}	16)		
						Whe	ere, T=	Air Ter	nperat	ture (°	F) V=	Wind S	speed	(mph)			Effe	ctive 1	1/01/01

Related SOP's

 Related SOP's

 General SOP's

 Chapter 10