



A Subsidiary of Union Pacific Corporation

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PLAINTIFF'S EXHIBIT

UPRC-186

CHEMICAL PERSONAL PROTECTIVE EQUIPMENT

REFERENCE PROCEDURE

NO. 61

Purpose

Adequate and proper personal protective equipment and clothing are required to safeguard the person against chemical exposure to the body.

Scope

Protective clothing and equipment is to be worn when potential harmful contact with a chemical in any state such as a solid, liquid, vapor, fume or gas exists or may develop. In order to assure a proper respirator fit the face must be clean shaven in the seal area of face pieces of respiratory equipment. Generally, possible exposure circumstances arise when operating problems occur, in obtaining samples, the performance of maintenance whether preventative or repair and handling in bulk or batch.

Identification Legend:

<u>Activity</u>	<u>Health Hazard Rating</u>
M - Maintenance	1. Practically nontoxic (Minor)
S - Sampling	2. Slightly toxic (Mild)
L - Handling (Loading) (Unloading)	3. Moderately toxic (Moderate)
O - Operating	4. Very toxic (Maximum)

Selection Procedure

Refer to personal protective devices selection procedure tables.

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PERSONAL PROTECTIVE DEVICES SELECTION PROCEDURE

PERSONAL PROTECTIVE DEVICES

CHEMICAL	ACTIVITY	GOGGLES	FACE SHIELD	SELF-CONTAINED BREATHING APPARATUS	RUBBER GLOVES	PROTECTIVE OVER-CLOTHING	RUBBER BOOTS	FIRE PROTECTION						HEALTH HAZARD RATING	PARTICULAR HAZARD
								CONSUMPTIBLE, FP >140°F	FLAMMABLE, FP <139°F	WATER	FOAM	HALON	DRY CHEMICAL		
ACETIC ACID TWA 10 ppm STEL 15 ppm	M			X	X	X			X	X	X	X	X	3	Respiratory
	S		X		X	X			X	X	X	X	X	3	Irritation &
	L				X	X			X	X	X	X	X	3	Skin Burns
AMMONIUM CHLORIDE TWA 10 mg/m ³	M		X		X	X								3	Skin Burns
	S	X			X									3	Plant Material
	L				X	X								3	Contains Free HCL
AQUA AMMONIA TWA 25 ppm STEL 35 ppm	M		X	X	X	X	X	X						3	Resp. Tract. Skin
	S		X		X			X						3	
	L				X	X	X	X						3	
BENZENE TWA 10 ppm STEL 25 ppm	M			X	X	X			X	X	X	X	X	3	Air supplied respirator at
	S	X			X				X	X	X	X	X	3	10 ppm. Proper organic vapor
	L				X	X			X	X	X	X	X	3	respirator. An eye & skin
															irritant. Leukemia suspect.
CAUSTIC SODA MAC 2 mg/m ³	M		X		X	X	X							4	Burn Skin and Eyes
	S		X		X		X							4	
	L		X		X	X	X							4	
CHLORINE TWA 1 ppm STEL 3 ppm	M	X		X	X									4	Respir. & Skin. Vapors
	S	X			X									4	Poisonous
	L	X			X									4	
CHROMATES TWA .05 ppm	M	X			X	X	X							2	Skin
	S	X			X									2	Irritant
	L	X			X	X	X							2	

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CHEMICAL	ACTIVITY	GOGGLES	FACE SHIELD	SELF-CONTAINED BREATHING APPARATUS	RUBBER GLOVES	PROTECTIVE OVER-CLOTHING	RUBBER BOOTS	FIRE PROTECTION						HEALTH HAZARD RATING	PARTICULAR HAZARD
								COMBUSTIBLE, FP >140°F	FLAMMABLE, FP <139°F	WATER	FOAM	HALON	DRY CHEMICAL		
ETHYL BENZENE IWA 100 ppm STEL 125 ppm	M	X			X	X	X		X	X	X	X	X	2	Burns to Skin
	S	X			X		X		X	X	X	X	X	2	& Eyes
	L	X		X	X	X	X		X	X	X	X	X	2	
ETHYL CHLORIDE IWA 1,000 ppm STEL 1,250 ppm	M			X	X	X			X	X		X	X	2	Irritating to Eyes, Skin,
	S	X				X			X	X		X	X	2	Nose, Throat
	L					X			X	X		X	X	2	
ETHYLENE Simple Asphyxiant	M			X					X	X		X	X	1	Irritating to Eyes, Nose,
	S	X							X	X		X	X	1	Throat
	L								X	X		X	X	1	Asphyxiant
ETHYLENE DIBROMIDE IWA 20 ppm	M			X	X	X								3	Vapor and Liquid
	S	X												3	Poisonous
	L													3	
ETHYLENE GLYCOL IWA 25 ppm STEL 25 ppm	M	X			X			X			X	X	X	1	Irritating to
	S	X						X			X	X	X	1	Sin & Eyes
	L	X						X			X	X	X	1	
FUEL OIL NO. 2 & 6 (Contains Heavy Aromatics)	M	X			X			X			X	X	X	1	Skin & Eyes irritant
	S	X			X			X			X	X	X	1	
	L	X			X			X			X	X	X	1	
HYDRAZINE TWA 0.1 ppm	M	X		X	X	X		X			X	X	X	4	Cancer Hazard
	S	X			X			X			X	X	X	4	
	L	X		X	X	X		X			X	X	X	4	

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PERSONAL PROTECTIVE DEVICES SELECTION PROCEDURE

PERSONAL PROTECTIVE DEVICES

CHEMICAL	ACTIVITY	GOGGLES	FACE SHIELD	SELF-CONTAINED BREATHING APPARATUS	RUBBER GLOVES	PROTECTIVE OVER-CLOTHING	RUBBER BOOTS	FIRE PROTECTION						HEALTH HAZARD RATING	PARTICULAR HAZARD
								COMBUSTIBLE, FP > 140°F	FLAMMABLE, FP < 139°F	WATER	FOAM	HALON	DRY CHEMICAL		
HYDROGEN Simple Asphyxiant	M			X					X	X		X	X		Fire and Explosion Hazard
	S	X							X	X		X	X		
	L									X		X	X	1	
HYDROGEN BROMIDE TWA 3 ppm	M			X	X	X								4	Skin
	S		X		X	X								4	Irritant
	L				X	X									
HYDROGEN CHLORIDE TWA 5 ppm	M			X	X	X								4	Vapor or Liquid
	S		X		X	X								4	Poisonous
	L				X	X								4	
HYDROFLUORIC ACID Class D Clothing TWA 3 ppm				NEOPRENE REQUIRED - *SEE PROCEDURES 15 & 48											Immediately irritating to
	M			*VERY DANGEROUS											4 mucous membranes, rapid
				Emergency air supplied, full coverage acid											inflammation, intense burns
Class C Clothing Class B Clothing				suit, harness, lifeline, 2 on standby with											extremely irritating and
				full coverage suits											corrosive
	S	Hood		X	14"	X	X							3	Open Systems
	O	10"			14"									2	Closed Systems
LIME SLURRY	M	X			X									1	Contact with Lime & Water
	S	X			X									1	causes Burns
	L	X			X									1	
METHYL BENZYL ALCOHOL (MBA) TWA 1,000 ppm	M		X		X	X		X			X	X	X	2	Skin irritant
	S		X		X	X		X			X	X	X	2	
	L		X		X	X		X			X	X	X	2	

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PERSONAL PROTECTIVE DEVICES SELECTION PROCEDURE

PERSONAL PROTECTIVE DEVICES

CHEMICAL	ACTIVITY	GOGGLES	FACE SHIELD	SELF-CONTAINED BREATHING APPARATUS	RUBBER GLOVES	PROTECTIVE OVER-CLOTHING	RUBBER BOOTS	FIRE PROTECTION						HEALTH HAZARD RATING	PARTICULAR HAZARD
								COMBUSTIBLE, FP >140°F	FLAMMABLE, FP <139°F	WATER	FOAM	HALON	DRY CHEMICAL		
NATURAL GAS	M			X				X		X		X	X	1	Asphyxiant
	S							X		X		X	X	1	Explosion
	L							X		X		X	X	1	Hazard
NITROGEN	M			X										1	Asphyxiant
	S													1	
	L													1	
OCTANE WA 300 ppm TEL 375 ppm	M			X	X				X		X	X	X	1	High Conc. may cause
	S	X			X				X		X	X	X	1	dizziness
	L				X				X		X	X	X	1	
OXYGEN (GAS)	M													1	Do not permit contact with
	S													1	Oil
	L													1	
NITROGEN (LIQUID)	M	X			X	X	X							3	Frostbite
	S	X			X		X							3	Keep Away From
	L	X			X		X							3	Asphyxiant
PHOSPHORIC ACID WA 1 mg/m ³	M		X		X	X								4	Burns Skin & Eyes
	S		X		X	X								4	
	L		X		X	X								4	
POLYSTYRENE WA 100 ppm TEL 125 ppm	M			X	X				X	X	X	X	X	2	
	S	X			X				X	X	X	X	X	2	
	L				X				X	X	X	X	X	2	

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PERSONAL PROTECTIVE DEVICES SELECTION PROCEDURE

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PERSONAL PROTECTIVE DEVICES

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