

PLAINTIFF'S EXHIBIT

KRC-381

INDUSTRIAL HYGIENE MONITORING PROGRAM
1987

7 13

1B 001248

SWRf/Asbestos 7548

1987
INDUSTRIAL HYGIENE MONITORING PROGRAM
SOUTHWESTERN REFINING COMPANY

P-PERSONNEL
A-AREA

1B 001249

Controlled Substance	OSHA Standard	Location	Monitoring	Frequency	Pump Flowrate	Collection Medium
Asbestos	8-TWA = .2 fibers/cc	Insulation removal containing Asbestos	P-full shift	Each occurrence	1.5 LPM max. vol 240 liters	Membrane filter 0.8µ AA (MCEF) Open Face 25 MM cassette w/50 m extension cowl
Benzene	8-TWA = 10 5 ppm STEL = 5 ppm	Washwater Plant Op Crude I & II Units BTX Unit Platformer Unit Sulfolane Unit Barges/Landfarm Main Laboratory Crude I Laboratory Compressor House Knock Engine Room Vehicle Maintenance Bays Air Comp. @ Sandblast yard	P-full shift P-full shift STEL-15 min.	Annually Annually Annually	0.1-0.2 LPM max. vol 10 liters	Activated charcoal
Carbon Monoxide	8-TWA = 50 ppm STEL = 400 ppm	Compressor House Knock Engine Room Vehicle Maintenance Bays Air Comp. @ Sandblast yard	A-Grab	As Needed	Follow manufacturer's Specifications	Detector Tube: Draeger CH25601 (5-700 ppm) Direct Reading-Ecolyzer
Hydrogen Fluoride	8-TWA = 3 ppm STEL = 6 ppm ACGIH "C" = 3 ppm	Alkylation Unit CMB Pit (Alky Unit)	P-full shift STEL-15 min. Area	Annually Annually	1.0 LPM max. vol 120 liters " "	Membrane filter 0.8µ (MCEF) with backup pad treated with alkaline fixative solution (Dissolve 25g sodium carbonate in water, add 20 ml glycerol, and dilute to 1 liter)
Hydrogen Sulfide	8-TWA = 10 ppm STEL = 15 ppm "C" = 20 ppm	Sample draw locations with potential H ₂ S Area Sample Sulfur Complex (Long Duration)	P-full shift A-Grab	Annually	0.1-0.1 LPM max. vol 2 liters	Midget Impinger with 10 ml of cadmium sulfide Detector tubes: Draeger-67-19001 (1-200 ppm) Draeger-CH-29101 (100-2000 ppm) Draeger-CH-28101 (0.2-7 vol%) Draeger-67-28141 (5-60 ppm)

SWRf/Asbestos 7549

<u>Controlled Substance</u>	<u>OSHA Standard</u>	<u>Location</u>	<u>Monitoring</u>	<u>Frequency</u>	<u>Pump Flowrate</u>	<u>Collection Medium</u>
Iron Oxide Fume	8-TWA = 10 mg/M ³	Welding Operations	P-full shift	Annually	2.0 LPM max. vol = 960 liters	Membrane filter 0.8 AA (MCEF)
Chromium (metals & insoluble salts)	8-TWA = 1.0mg/M ³	Welding Operations Rods - Arcaloy 310 McKay E309 310 CB16	P-full shift	Annually	2.0 LPM max. vol. = 960 liters	Membrane filter 0.8 AA (MCEF)
Nickel (metal & soluble compounds)	8-TWA = 1.0mg/M ³	Welding Operations Rods - Arcaloy 310 McKay E309, 310 CB16	P-full shift	Annually	2.0 LPM min. vol = 200 liters max. vol = 960 liters	Membrane filter 0.8 AA (MCEF)
Toluene	8-TWA = 200 ppm "C" = 300 ppm	See Benzene	P-full shift STEL-15 min.	Annually	0.1-0.2 LPM max. vol=10 liters	Activated charcoal
Xylene	8-TWA = 100 ppm	See Benzene	P-full shift	Annually	0.1-0.2 LPM max. vol = 10 liters	Activated charcoal
MTBE		Barges	P-full shift	Annually	0.1-0.2 LPM max. vol = 20 liters	Activated charcoal
Noise	8-TWA = 90 dBA Action level = 85 dBA	Throughout Facility	P-full shift (noise dosimeters) A-Grab (sound level meter A-scale slow response)	Bi-Annually (Subsequent to process or engineering change)		Noise Dosimeter sound level
Heat		Throughout Facility	A-Grab	Each occurrence		WBGT