PLAINTIFF'S EXHIBIT
tabbies
CEL-120

MONITORING GUIDELINES

	PRIORITY RATING
MONITORING TO INSURE ACCEPTABLE EXPOSURE TO REGULATED OR SUSPECT CARCINOGENS (BENZENE, HYDRAZINE, 1,1,1 TRICHLORO-ETHANE)	1
MONITORING INDICATED BY AMES TEST OR OTHER TOXICOLOGICAL TESTING	2
MONITORING TO DETERMINE COMPLIANCE POSITION WITH NEW OSHA REGULATIONS	2
MONITORING CHEMICALS WITH POTENTIALLY HIGH EXPOSURES IN THE PLANT (MeOH, NO_2, NITRIC ACID, ETC.)	2
MONITORING OF CHEMICALS ASSOCIATED WITH NEW UNIT STARTUPS	3
MONITORING CHEMICALS THROUGHOUT THE PLANT WITH EXPOSURE RATINGS OF 3 (MODERATE POTENTIAL FOR EXPOSURE)	3
MONITORING TO DETERMINE COMPLIANCE POSITION WITH NEW NIOSH RECOMMENDATIONS (I.E., VINYL ACETATE)	3
MONITORING CHEMICALS THROUGHOUT THE PLANT WITH EXPOSURE RATINGS OF 2 (MINOR CONTACT)	4

EXPOSURE RATINGS

1 - NO CONTACT - CHARACTERIZED BY CLOSED CHEMICAL SYSTEM WHICH PREVENTS OCCUPATIONAL EXPOSURE.

2 - MINOR CONTACT - CHARACTERIZED BY SEMI-CLOSED SYSTEMS WITH LOW LEVEL EXPOSURE LIKELY.

3 - MODERATE POTENTIAL CONTACT - CHARACTERIZED BY MANUAL OPERATIONS SUCH AS BAGGING CHEMICALS, CATCHING SAMPLES, MATERIALS HANDLING.

4 - MAJOR POTENTIAL CONTACT - CHARACTERIZED BY MANUAL AND MAINTENANCE OPERATIONS SUCH AS EMERGENCY REPAIRS, CLEAN UP SPILLS, PACKAGING VOLATILE OR DUSTY MATERIALS WITHOUT EXHAUST VENTILATION, CHANGING CATALYST, CLEANING VESSELS.

PROPOSED INDUSTRIAL HYGIENE MONITORING PROGRAM - 1979

	EXPOSURE	NO. SAMPLES	PRIORITY
CHOX			
CYCLOHEXANE	3	4-6	3
BENZENE	2	4-6	1
NOx	3	8-10	3
AMMONIA	2	8-10	4
NITRIC ACID	3	8-10	3
HMDA/HDO			
HMDA	3	4-6	3
HMI	3	4-6	3
AMMONIA	3	8-10	3
COPPER CHROMITE	3	4-6	3
DIATOMACEOUS EARTH	3	4-6	3
ALCOHOLS (MeOH, HEXANOL, ETC.)	3	4-6	3
NYLON SALT/ADIPIC			
NITRIC ACID	4	8-10	2
NOx	4(3)	8-10	2
ADIPIC ACID (DUST)	3	4-6	3
NYLON SALT (DUST)	3	4-6	3
METHANOL	4	50	2
AMMONIUM METAVANADATE	3	4-6	4
WAREHOUSE			
VINYL ACETATE	3	8-10	3
HMDA	3	4-6	3
1,6 HDO	3	4-6	3
CYCLOHEXANE	3	4-6	3
HMI	3	4-6	3
BENZENE (CYCLO & NAPHTHA)	3	8-10	1
CARBON MONOXIDE	3	8-10	3

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	EXPOSURE	NO. SAMPLES	PRIORITY
UTILITIES			
CALCIUM OXIDE (LIME)	3	4-6	3
HYDRAZINE	2	4-6	1
CARBON MONOXIDE	2	20	3
FERROUS SULFATE	2	4-6	4
CHROMATES (COOLING TOWER)	3	8-10	3
NICKEL CARBONYL			
ACETALDEHYDE/HOAc/VA			
ACETIC ACID	3	8-10	3
ACETALDEHYDE	2(3)	8-10	4
HYDRAQUINONE	3	4-6	3
POTASSIUM ACETATE	3	4-6	3
PARABENZOQUINONE	3	4-6	3
MANGANESE ACETATE	3	4-6	3
CHLOROACETALDEHYDE	2(3)	4-6	2
VINYL ACETATE	2(3)	10-15	3
OXO-BUTANOL			
TPP	2	4-6	4
CARBON MONOXIDE	2	20	3
BUTANOL	3	4-6	3
ISOBUTANOL	3	4-6	3
BUTYRALDEHYDE	3	4-6	3
ISOBUTYRALDEHYDE	3	4-6	3
POX			
CARBON MONOXIDE	2	20	3
BENZENE	3	8-10	1
HYDROGEN SULFIDE	2	8-10	3
OXO-PROPANOL			
CARBON MONOXIDE	2	20	3
TPP	2	4-6	3
PROPANOL	3	4-6	3

MAINTENANCE	EXPOSURE	NO. SAMPLES	PRIORITY
METHANOL		10	3
CARBON MONOXIDE		10	3
NOx (AREA)		---	-
AMMONIA (AREA)		---	-
BENZENE		4-6	1
CHLOROACTALDEHYDE		4-6	2
1,1,1, TRICHLOROETHANE		4-6	1
TOTAL		400-497	

PERSONNEL PERFORMING MONITORING	NO. SAMPLES COMPLETED	
I.H. (JAN. - JUNE)	40-60)	190-260
I.H. AND TECH. (JULY - DEC.)	150-200)	
I.H. (JAN.)	10)	340-410
I.H. AND TECH. (FEB. - DEC.)	330-400)	

INDUSTRIAL HYGIENE
MONITORING FOR AIR CONTAMINANTS

I. DUST SAMPLES

A. RESPIRABLE AND NON-RESPIRABLE DUST - (CYCLONE SEPARATOR)

B. OSHA - PEL ON METALS

C. TWO MONITORING PUMPS

D. 15% OF TOTAL SAMPLES

II. CARBON MONOXIDE SAMPLES

A. CO DOSIMETER

B. CALIBRATION/READOUT CONSOLE

C. TWO MONITORING PUMPS

D. 20% OF TOTAL SAMPLES

III. ORGANIC VAPOR SAMPLES

A. TEST DEVELOPMENT OR MODIFICATION

B. STANDARDS PREPARATION AND CALIBRATION

C. DESORPTION EFFICIENCY

D. THREE MONITORING PUMPS

E. 65% OF TOTAL SAMPLES

GAS BLEND - STANDARDS PREPARATION

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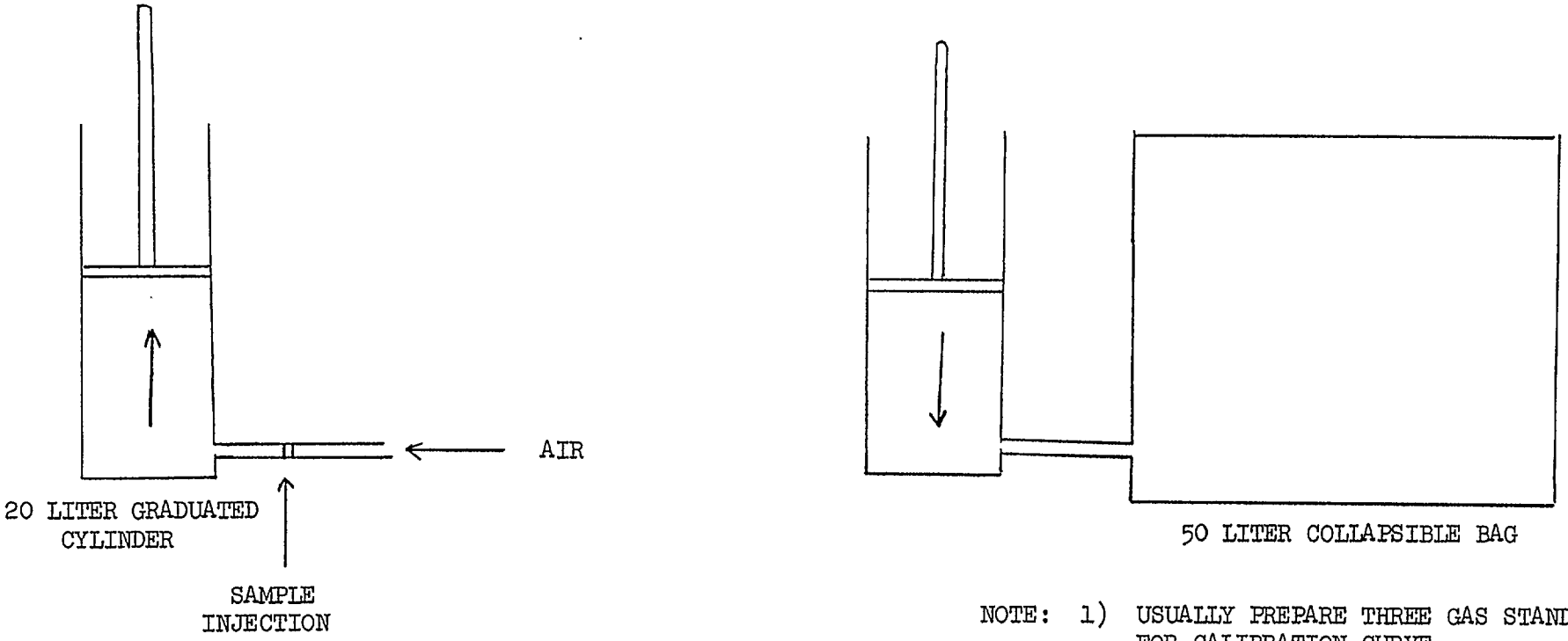

NOTE:
1) USUALLY PREPARE THREE GAS STANDARDS FOR CALIBRATION CURVE.
2) OFTEN NECESSARY TO RUN DUPLICATE OR TRIPLICATE SAMPLES ON A BLEND TO CHECK REPRODUCIBILITY.
3) MOST ORGANIC VAPOR ANALYSES DONE ON G.C. VIA THERMAL DESORBER OR CHEMICAL DESORPTION AND DIRECT G.C. INJECTION.