

CHEMICAL EXPOSURE INDEX AUDIT

CHLOR-ALKALI II

LOUISIANA DIVISION

JULY 1992

REFERENCE #12

QUESTION #28

Bob Bartholomew
July 1992

DO A 046976
CONFIDENTIAL

C-9 SCOTT AIR PACK TESTING---MARCH 1992

A. SPECIFIC ITEMS COVERED WITH EACH INDIVIDUAL WERE:

1. OPERATION OF THE REGULATOR BYPASS VALVE, MAIN LINE VALVE, AND PRESSURE DEMAND SWITCH---WHEN, WHY, AND HOW TO USE THEM.
2. EXPLANATION OF THE DEMAND FEATURE.
3. EXPLANATION OF THE WARNING ALARM AND ACTIONS TO TAKE.
4. PROPER METHOD OF DONNING AND DOFFING THE AIR PAC AND FACE MASK.

B. EACH EMPLOYEE PRACTICED DONNING AN AIR PACK.

NOTE: SINCE MOST TECHNICAL AND DAY OPERATIONS PERSONNEL ARE NOT REQUIRED TO BE ABLE TO USE A SCOTT AIR PACK IN THEIR NORMAL WORK DUTIES, THEY WERE NOT TESTED FOR DONNING SPEED.

INSTRUCTOR: DONNIE LANDRY

SCOTT AIR PACK SPEED TESTING

MARCH IS THE MONTH FOR THIS ANNUAL C-9 AUDIT. SUPERVISORS IN EACH GROUP ARE RESPONSIBLE FOR COMPLETION OF THIS AUDIT. TESTING WITH DOCUMENTATION SHOULD BE COMPLETED AND RETURNED TO DALE BY MARCH 31, 1992. TRAINING OF NEW PERSONNEL NOT FAMILIAR WITH SCOTT AIR PACKS SHOULD BE CONDUCTED AT THIS TIME ALSO. THANKS FOR YOUR HELP...

PERSON BEING TESTED	MASTER #	DATE
Larry P. McBurn	096112	3/25/92
Donnie Anderson	433169	3/25/92
Ray V. Kuhn	431966	3/25/92
Steve D. Dyer	089161	3/25/92
Dale Crockett	431684	3/25/92
W. W. Owen	096273	3/25/92
Lawan Palmer	099058	3-25-92
Ronald Thompson	144265	3-26-92
Bert Dyer	433196	3-26-92
Tom Normand	434515	3-27-92
Kevin Johnson	138576	3-27-92

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CHEMICAL EXPOSURE INDEX

192 date

PLANT: CAII
LOCATION: LAD
CHEMICAL: CHLORINE

TOTAL QUANTITY IN PLANT: 300000.00 lb
LARGEST SINGLE CONTAINMENT: 250000.00 lb
STORAGE TEMPERATURE: -10.00 deg F
STORAGE PRESSURE: 22.70 psia
BOILING POINT: -29.20 deg F
FLASH POINT: 0.00 deg F
MOLECULAR WEIGHT: 71.00
EEPG CONCENTRATION: 1.0 ppm

EXPOSURE RISK POTENTIAL SUMMARY

ACUTE HEALTH HAZARD FACTOR: 4 (1.0 - 9.9)
VAPOR QUANTITY FACTOR: 3 (1,000 lbs - 10,000 lbs)
MOLECULAR WEIGHT FACTOR: 4 (> 45)
PROCESS PENALTIES: 2 (overpressure or run-away reaction potential)

DISTANCE	DISTANCE FACTOR	E.R.P. VALUE
TO THE PUBLIC	3 (1000 ft - 5279 ft)	288
TO DOW PLANTS	4 (< 1000 ft)	384
TO OTHER BUSINESSES	3 (1000 ft - 5279 ft)	288

EXPOSURE RISK POTENTIAL TO THE PUBLIC = 288

BIANNUAL REVIEW - SITE, SUPERINTENDENT AND MAJOR MANAGER

THE CHEMICAL EXPOSURE INDEX IS A SIMPLE, EMPIRICAL AND RELATIVE METHOD
FOR RATING THE TOXIC HAZARDS OF CHEMICALS IN A QUANTITATIVE MANNER.

** FOR INTERNAL DOW USE ONLY **

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DISPERSION SUMMARY

TOTAL DISCHARGED =	6795.20 LBS	SOURCE HEIGHT =	0.00 FT
RELEASE DURATION =	15.00 MIN	SPILL AREA =	1000.00 FT**2
MOLECULAR WEIGHT =	71.00	SOURCE TEMPERATURE =	-29.20 DEG F
EEPG CONCENTRATION =	1.0 ppm	AMBIENT TEMPERATURE =	86.00 DEG F

THE RELEASE IS A LIQUID SPILL

THE RELEASE IS CONTINUOUS

THE RADII OF EXPOSURE ARE BASED ON PEAK CONCENTRATIONS

CONC (ppm)	RADII OF EXPOSURE (miles) @ ground level - @ plume centerline		
	UNSTABLE 12. mph (20 %)*	NEUTRAL 8. mph (40 %)*	STABLE 4. mph (40 %)*
1.0	1.321	7.511	60.807
10.0	0.438	1.776	8.238
100.0	0.160	0.459	1.730

* APPROXIMATE % OF TIME IN THIS WEATHER CONDITION

UNSTABLE ATMOSPHERIC CONDITION - SLIGHT SOLAR RADIATION WITH LOW WIND SPEEDS (<10 mph) OR STRONG RADIATION WITH HIGH WIND SPEEDS (>10 mph).

NEUTRAL ATMOSPHERIC CONDITION - WELL MIXED ATMOSPHERE DUE TO MODERATE/STRONG WIND SPEEDS (>7 mph) AND SLIGHT/MODERATE SOLAR RADIATION. ANY OVERCAST CONDITION.

STABLE ATMOSPHERIC CONDITION - LOW WIND SPEEDS (<10 mph) AT NIGHT.

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