



DOW CHEMICAL U.S.A.

JANUARY 11, 1985

LOUISIANA DIVISION
P. O. BOX 150
PLAQUEMINE, LOUISIANA 70765-0150
504 389-8000

HUGO ANDRICAIN	DISTR. SERVICES
TONY GRANT	RAILROAD
SHIFT SUPERVISORS	RAILROAD
O. C. DICKERSON	RAILROAD
BULLETIN BOARD	RAILROAD
GLYNN SMITH	TANK CAR CLEANING/INSPECTION
BULLETIN BOARD	TANK CAR CLEANING/INSPECTION
DANNIE KENNEDY	INDUSTRIAL HYGIENE
ELAYNE HYATT	SAFETY SUPERINTENDENT
RICHARD BROWNFIELD	RAILROAD MAINTENANCE

FOR YOUR INFORMATION, FOLLOWING ARE PERSONNEL EXPOSURE LEVELS, SHOWN
IN PARTS PER MILLION, FROM TANK CAR SAMPLES TAKEN IN 1984 DURING CLEANING
OPERATIONS. TLV'S LISTED ARE MAXIMUM ALLOWABLE EXPOSURES. SAMPLES WERE
TAKEN WITH PERSONNEL MONITORING PUMPS.

J. L. Moreau, Jr.
J. L. MOREAU, JR.
INDUSTRIAL HYGIENE
RAILROAD/MARINE

lrj

TANK CAR CLEANING

TIME WEIGHTED AVERAGES - PERSONNEL

<u>METHYLENE CHLORIDE TLV-100</u>	<u>PERCHLORO- ETHYLENE TLV-50</u>	<u>METHYL CHLORIDE TLV-50</u>	<u>ETHYLENE OXIDE TLV-1</u>	<u>BUTADIENE TLV-50</u>
2.33	1.77	< 0.45	< 1.52	< 0.49
6.70	8.08	< 0.60	< 1.77	< 0.52
			< 1.06	< 0.10
			< 0.98	< 0.16

AREA SAMPLESETHYLENE OXIDE
TLV-1

0.20
0.21
0.19
0.08
0.18
0.19
0.20

TANK CAR CLEANING

15 MINUTE EXCURSIONS - PERSONNEL

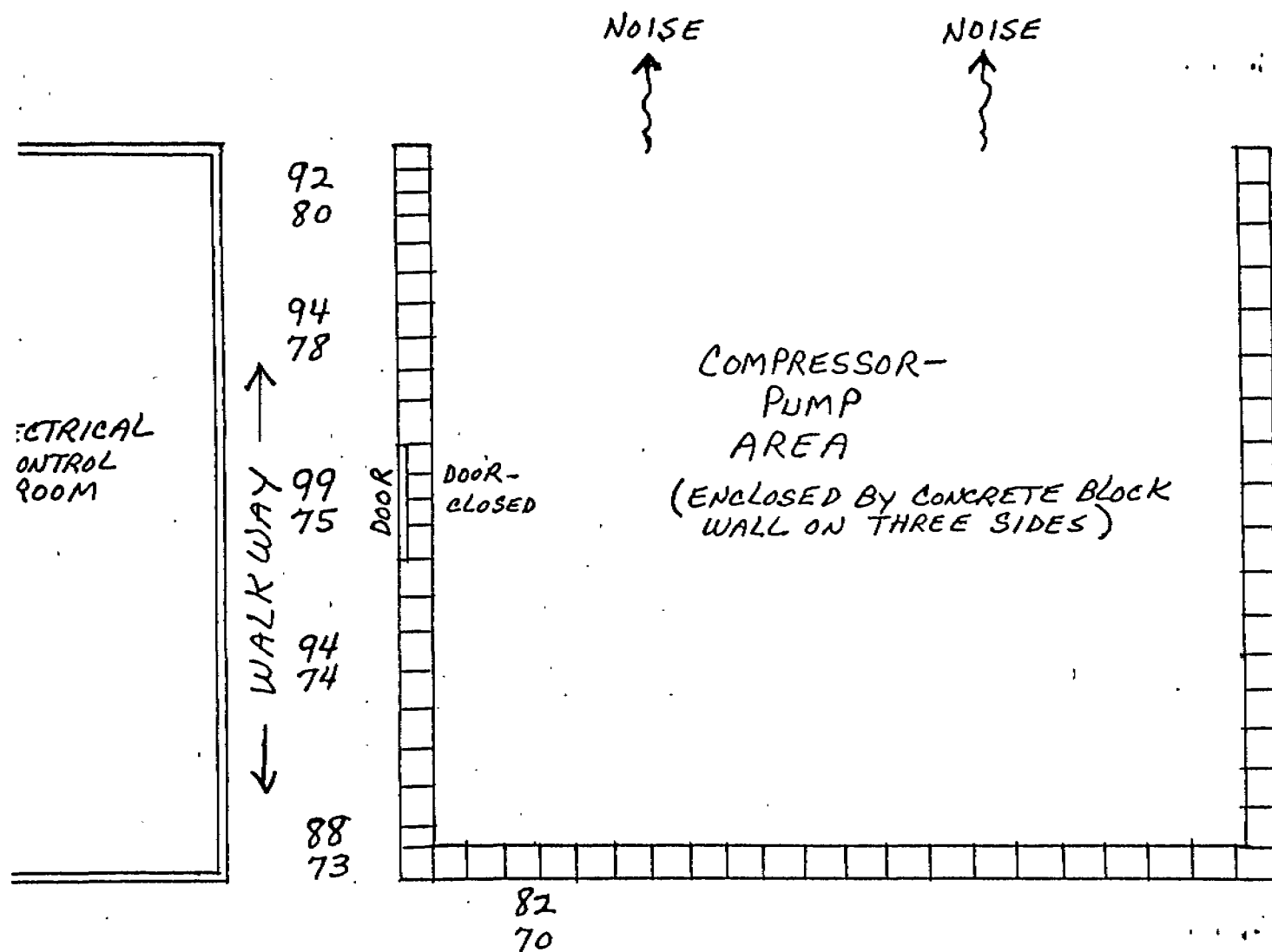
<u>METHYLENE CHLORIDE TLV-500</u>	<u>VINYL CHLORIDE TLV-5</u>	<u>METHYL CHLORIDE TLV-100</u>	<u>ETHYLENE OXIDE TLV-NOT ESTAB.</u>	<u>BUTADIENE TLV-200</u>
26.70	< 0.22	< 6.10	*2 - VOID	< 11.35
96.45	< 0.26			< 11.14
< 20.38	< 0.25			
	< 0.26			
	< 0.27			
	< 0.21			
	< 2.71			
	< 2.49			
	< 1.28			
	< 1.65			
	< 1.60			
	*4 - VOID			

* VOID - ANALYSIS LIMIT OF DETECTION TOO HIGH - ?

NOISE SURVEY OF COMPRESSOR-PUMP AREA WALKWAY AFTER DOOR WAS INSTALLED,
LOWER NUMERALS DENOTE NOISE LEVELS AFTER DOOR WAS INSTALLED.

DOOR INSTALLED 10-5-84

SURVEY MADE 10-8-84 WIND FROM SOUTH 7 MPH



NORTH

J.L. MOREAU
10-8-84

DO A 108674
CONFIDENTIAL

HEAT STRESS SURVEY - STOCK WAREHOUSE - BLDG. 4104

<u>DATE</u>	<u>TIME</u>	<u>WEATHER</u>	<u>WIND-MPH</u>	<u>RELATIVE HUMIDITY</u>	<u>OUTSIDE TEMP. F°</u>	<u>DRY BULB F°</u>	<u>WET BULB F°</u>	<u>GLOBE F°</u>	<u>WBGT F°</u>	<u>WBGT C°</u>
7-5	1010A.M.	PC	W-5	75%	99	89	82	89	84	28.9
7-5	1215P.M.	PC	NW 6-7	62%	95	93	82	101	88	31.1
7-5	215P.M.	PC	NW 10	59%	101	97	84	107	91	32.8
7-6	930A.M.	PC	SE 2	75%	88	88	81	88	83	28.3
7-6	1115A.M.	PC	SW 3	65%	92	92	82	97	87	30.6
7-6	100P.M.	PC	SE 6	70%	94	92	83	102	89	31.7
7-6	235P.M.	PC	SW 15	60%	96	94	82	101	88	31.1
7-9	900A.M.	CLEAR	CALM	80%	93	84	79	86	81	27.2
7-9	1100A.M.	CLEAR	SSE 4	69%	93	90	81	95	85	29.4
7-9	100P.M.	PC	SE 3	65%	96	92	82	93	85	29.4
7-9	300P.M.	PC	SSE 3	58%	101	96	83	104	89	31.7

TOTAL 8 ROOF EXHAUST FANS - 1 OUT OF ORDER

(7 RUNNING DURING SURVEY)

2 DOORS - OPEN

2 SMALL VENTS ON NORTH WALL, EAST END, NOT OPEN

J. L. MOREAU, JR.
INDUSTRIAL HYGIENE
RAILROAD/MARINE

7-10-84



DOW CHEMICAL U.S.A.

REV
8(E)

April 12, 1984

LOUISIANA DIVISION
P. O. BOX 150
PLAQUEMINE, LOUISIANA 70784-0150
504 389-8000

Hugo Andricain - Major Manager
P. J. Prejean - Railroad
Ellis George - Tank Car Cleaning
Charlie Halphen- Industrial Hygiene
Dannie Kennedy - Industrial Hygiene
Elayne Hyatt - Safety

To keep our Beckman 6750 Analyzer at Tank Car Cleaning operating at peak efficiency, with a minimum of maintenance costs, the following is recommended and can be done by our personnel:

1. Inspection of analyzer filters, vacuum pump, sample lines and gas bottles using a daily check list (attached).
2. Re-align and secure all field sample points under Tank Car shed.
3. Number field sample points for easy location.
4. Install filters at all field sample points to minimize problems with water, steam, etc. clogging sample lines. These filters are on hand.

The daily inspection check list and location of sample points are attached.

Additionally, regular calibration of the analyzer by the Instrument Dept. is necessary, probably on a weekly basis. We do not have the expertise to do this.

I am available to instruct personnel or assist as needed.

J. L. Moreau, Jr.
J. L. Moreau, Jr.
Industrial Hygiene
Railroad/Marine

lrj

DAILY AREA ANALYZER CHECKLIST

DATE _____ NAME _____

1. INLET AIR FILTER CHECKS (Open bleed valve to blow out water vapor.)

COMMENTS

Filter #1	_____	_____
Filter #2	_____	_____
Filter #3	_____	_____
Filter #4	_____	_____

2. VACUUM PUMP OPERATION/FILTERS

COMMENTS

(Oil vapor -		
Filter #5 No bleed valve)	_____	_____
Filter #6	_____	_____

3. ROTOMETER OPERATION (Check ball position on all rotometers. If ball is seated, sample line is plugged with water. Refer to chart, locate corresponding field sample point and remove filter. Disconnect sample point tubing at outside of analyzer housing. Connect air line tubing to sample tubing. Open air needle valve and blow back for approximately 5 minutes. Check field sample point to insure that water has been blown out. Close needle valve on air sample line. Replace filter at field sample point. Disconnect air line tubing and store in analyzer housing. Reconnect sample tubing. Check for ball position on rotometer.)

COMMENTS

Rotometer, Sample Point #1	_____	_____
Rotometer, Sample Point #2	_____	_____
Rotometer, Sample Point #3	_____	_____
Rotometer, Sample Point #4	_____	_____
Rotometer, Sample Point #5	_____	_____
Rotometer, Sample Point #6	_____	_____
Rotometer, Sample Point #7	_____	_____
Rotometer, Sample Point #8	_____	_____
Rotometer, Sample Point #9	_____	_____
Rotometer, Sample Point #10	_____	_____

DAILY AREA ANALYZER CHECKLIST
PAGE 2

4. CARRIER GAS AND FUEL GAS BOTTLE PRESSURES
(Change bottle if 4000# gauge reads less than 200#.)

COMMENTS

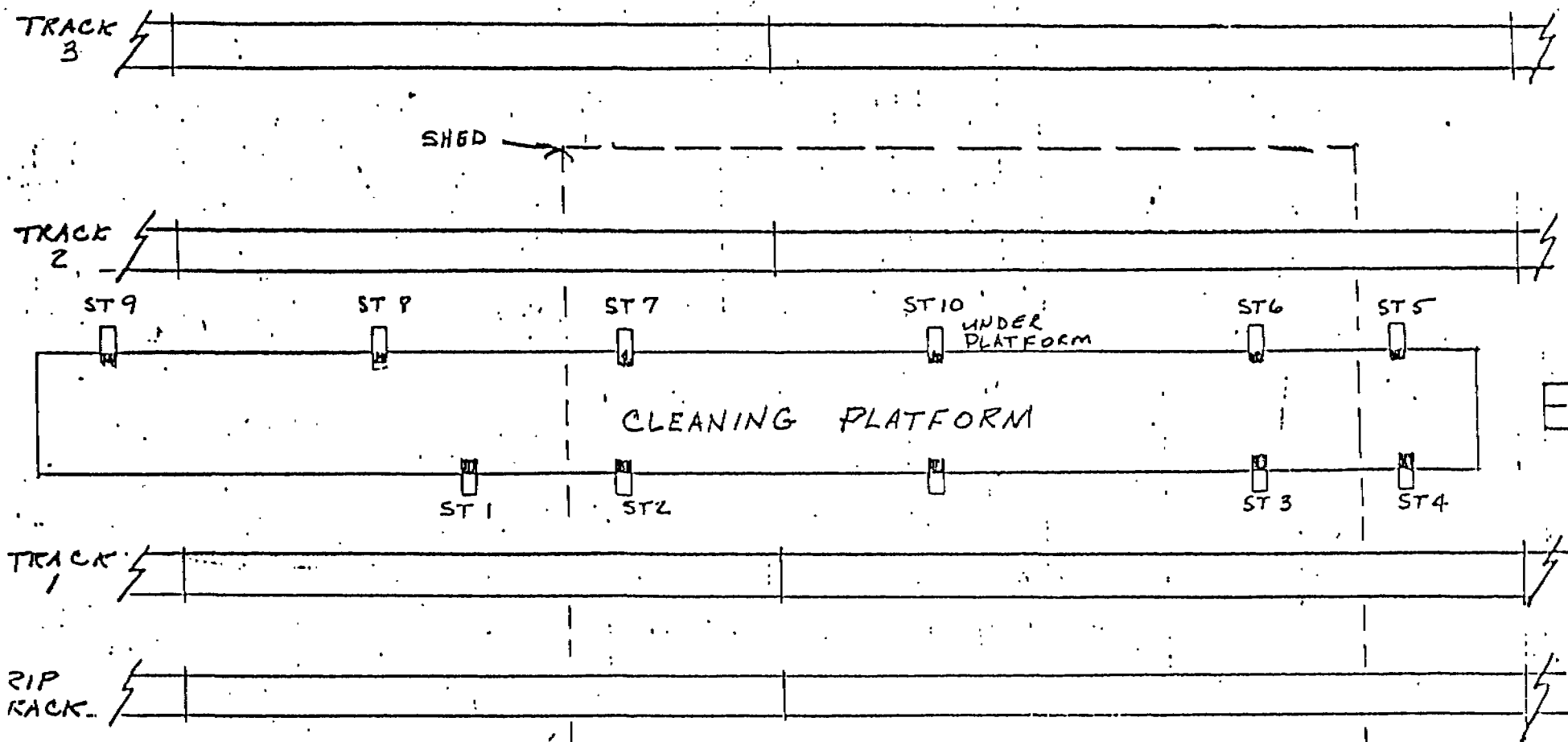
Zero Hydrogen - on stream	_____	_____
Zero Hydrogen - spare	_____	_____
Zero Helium - on stream	_____	_____
Zero Helium - spare	_____	_____
Zero Air - on stream	_____	_____
Zero Air - spare	_____	_____

NOTE: Filter elements should be changed when excessively
oily and wet.

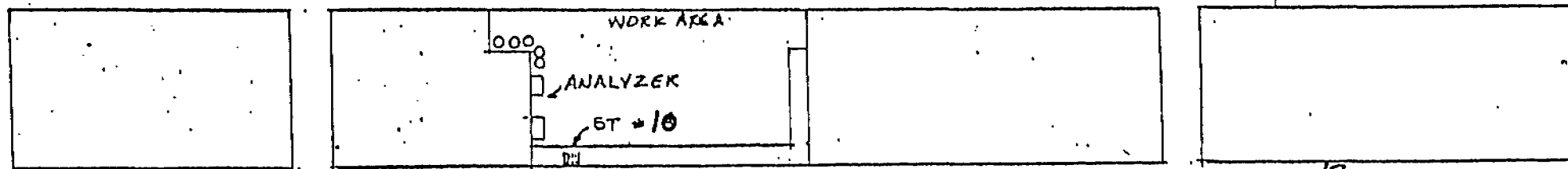
Revised: 10/29/84
LGS/lrj

STREAM LOCATIONS

DO A 108680
CONFIDENTIAL



10



STREAMS ~~11~~-11-12-13-14 AND 15 ARE
NOT CONNECTED FOR SERVICE.
STREAM #16 IS THE CALIBRATION
STREAM.

RAILROAD - TANK CAR CLEANING

ACCOMPLISHMENTS - 1984

EMPLOYEE EDUCATION PROGRAM - 100% PARTICIPATION

ZERO NON-COMPLIANCES - REFRIGERATED COMPOSITE WATER SAMPLER MONITORS
24 HOUR DISCHARGE.

NOISE SURVEY - EFFECTS OF SWITCH ENGINE HORN ON EMPLOYEES BLOCK 30.

NOISE ATTENUATION COMPRESSOR AND PUMP AREA - INSTALLED DOOR ON CONCRETE
BLOCK ENCLOSURE.

HEAT STRESS SURVEY STOCK WAREHOUSE BLDG. 4104.

BECKMAN 6750 ANALYZER - SECURED LINES, INSTALLED FILTERS AND NUMBERED ALL
FIELD SAMPLE POINTS FOR EASY LOCATION AND PREVENTIVE MAINTENANCE.
INSTITUTED PROGRAM OF DAILY INSPECTION OF GAS CYLINDERS, FILTERS AND
SAMPLE POINTS.

INSTALLED NEW SCRUBBER FOR VENTING ETHYLENE OXIDE AND PROPYLENE OXIDE
TANK CARS.

SOLVENTS TANK CARS SENT TO BLOCKS FOR DRAINING BEFORE CLEANING. CARS
WITH HEELS ARE REJECTED.

SELECTIVE PERSONNEL MONITORING DETERMINED BY REVIEW OF PREVIOUS EXPOSURE
DATA.

RAILROAD - TANK CAR CLEANING

GOALS - 1985

PROTECTING THE PHYSICAL WELFARE OF EMPLOYEES BY REDUCING CHEMICAL AND NOISE EXPOSURES.

CONTINUING 100% EMPLOYEE EDUCATION - CONSEQUENCES OF OVEREXPOSURE TO CHEMICALS AND NOISE, SURVEY RESULTS, ETC.

SPECIAL AMBIENT AIR AND NOISE SURVEYS AS NEEDED.

CONTINUING MONITORING OF PERSONNEL CHEMICAL EXPOSURES WITH EMPHASIS ON SUSPECT CARCINOGENS.

OUTFALL COLLECTION PIT - INSTALL WIRE MESH BASKET TO TRAP POLY PELLETS FROM WASH AREA, PREVENTING PELLET DISCHARGE TO OUTFALL AND RETURN CANAL.

COMPLETION OF PIPELINE TO CENTRAL WASTE TREATMENT FOR PERMANENT DISCHARGE OF WASH WATER FROM TANK CAR CLEANING.

ZERO NON-COMPLIANCES.

DO A 108682
CONFIDENTIAL