

PPG INDUSTRIES, INC.
INDUSTRIAL CHEMICAL DIVISION
LAKE CHARLES, LOUISIANA

LD-1121E

CONTINUING PROGRAM OF MONITORING ATMOSPHERIC CONTAMINANTS
WITHIN THE LAKE CHARLES PLANT

by

Mark Wood

December 29, 1972

Distribution

W. B. Graybill
H. J. Hoenes, Jr.
H. B. Lovejoy
D. L. Duncan
M. Davis
C. Burns
M. Burns
T. Taylor
R. Eakin
R. Kaspar
E. McVicker
W. Chapman
C. P. LeBlanc
Central Files - G.O.
Lee Grant
Zeb Bell
Technical Files (6)
Author
Laboratory File

Key Words

Occupational Environment
Atmospheric Contaminants
Monitaire Sampler
MSA Universal Pump
Andersen Mini Sampler
Electrostatic Precipitation
Unico Gas Detector
Mercury Vapor Detector
OSHA
Silver Wool Mercury Monitor
Hydrogen Sulfide Detector

1 BB 0000137 1

CONTINUING PROGRAM OF MONITORING ATMOSPHERIC CONTAMINANTS
WITHIN THE LAKE CHARLES PLANT
LD-1121E

ABSTRACT

The tables composing this report are continuations of occupational environment surveys started early in 1969 and contain data from all plant areas from May 1972 to December 1972.

INTRODUCTION

The periodic investigation of employee's occupational environments initiated in 1969 is described in detail in LD-1121. This report is an addendum and contains tabulated data collected from May 1972 through December 1972.

DISCUSSION

In addition to routine area monitoring for mercury vapor, a new method has been developed and used. Eight-hour personnel monitoring using silver wool as a mercury adsorber has been used on several employees in the Mercury Circuit Area and results are reported in Table 1. A description of the silver wool method is reported in LD-1324.

Another additional survey reported in Table 1 is hydrogen sulfide monitoring of individuals working around the sulfide sump and the mercury settling pond. A very sensitive badge detector manufactured by Metronics Associates was employed.

Heat stress analyses are not reported since OSHA has adopted these measurements only to determine areas that would fall under the classification of potential heat stress working environments. Sufficient data have been collected in the Diaphragm Cells and Mercury Circuit Areas to warrant a program of heat stress prevention measures as outlined by OSHA for potential high heat exposure work places.

Results of occupational environment surveys, tabulated by areas, are appended. Table 7 on the Sodium Chlorate Plant has been deleted.

Author:

Mark Wood

Date

Approved:

C. P. LeBlanc

Date

Approved:

H. B. Hoenes, Jr.

Date

MW:rw

BB 0000138 1

A P P E N D I X

| BB 0000139 |

Threshold Limit Values
of
Airborne Contaminants and Physical Agents
(Existing within the Lake Charles Plant)

<u>Contaminant</u>	<u>T.L.V. Concentration</u>
Ammonia	50 ppm (intended change 25 ppm)
Chlorine	1 ppm
Hydrogen Chloride	5 ppm
Hydrogen Sulfide	10 ppm
Lead	0.20 mg/M ³ (intended change - 0.15 mg/M ³)
Mercury	0.05 mg/M ³
Methyl Chloroform	350 ppm
Perchloroethylene	100 ppm
Phosgene	0.1 ppm
Sodium Hydroxide	2 mg/M ³
Trichloroethylene	100 ppm
Vinyl Chloride	500 ppm (intended change - 200 ppm)
<u>Mineral Dusts</u>	
Nuisance Dust	10 mg/M ³
Asbestos	5 fibers > 5 μ /ml
Silica Pigments	6 mg/M ³ (adopted by PPG Industries, Inc.)

From: 1971 Edition, Threshold Limit Values of Airborne Contaminants
Adopted by ACGIH (American Conferences of Governmental Industrial
Hygienists)

Federal Register, Volume 36, Number 105, p 10503-10506.

BB 0000140 1