

INDUSTRIAL HYGIENE STAFF
1982 PROGRAMS PRESENTATION
February 12, 1982

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|------------------------------------|-----------------|
| I. INTRODUCTION | Norman Brusk |
| II. NOISE CONTROL PROGRAM | Rick Hackman |
| III. VINYL CHLORIDE PROGRAM | Mark Gruenwald |
| IV. INSULSPRAY | William Hoychuk |
| V. FORMALDEHYDE MONITORING PROGRAM | Norman Brusk |

INTRODUCTION

I. Borden Industrial Hygiene Evolving:

A. From Fire Fighting

1. React
2. At Plant Location

B. To Program Approach

1. Act
2. Systematic
3. Preventative

C. Goal

1. Reduce Risk
2. Eliminate Hazards

II. Major Programs Targeted for 1982

A. Noise

Rick Hackman

B. Vinyl Chloride

Mark Gruenwald

C. Insulspray

William Hoychuk

D. Formaldehyde

Norm Brusk

III. Other Programs and Activities

- A. Lead
- B. Confined Space
- C. Solvents
- D. Ammonia
- E. Carbon Monoxide
- F. "Right to Know"
- G. Dermatitis/Sensitization
- H. Respiratory Protection
- I. Training
- J. Dichlorobenzidine
- K. Polyvinyl Chloride Dust

SECTION I

NOISE CONTROL PROGRAM

1. Initial Survey
2. Hearing Protection
3. Engineering Controls

Goal: Reduction of work related, premature hearing loss.

SECTION II

THE NEW OSHA HEARING CONSERVATION AMENDMENT

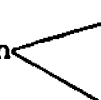
requires:

1. Workplace Monitoring (by Feb. 22, 1982).
2. Provide annual audiometric testing for all employees exposed to 85 dBA (or greater) for an 8-hour average (by August 22, 1982).
3. Provide Hearing Protection for all Employees exposed to 85 dBA (or greater) for an 8-hour average. (Mandatory hearing protector use for exposures over 90 dBA for 8-hours).
4. Provide Training.

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SECTION III

BORDEN PLANTS AFFECTED

Consumer Products Division  Food Division: 41 Plants
(39 surveyed)

Dairy Division: 53 Plants
(36 surveyed)

Chemical Division  47 Plants (24 surveyed)

International  5 Plants (5 surveyed)

SECTION IV

THE PLAN

- PHASE I: 1. Information letter & questionnaire sent to plants.
2. Telephone/mail follow-up.
- PHASE II: 1. Review existing noise/I.H. surveys for applicable data.
- PHASE III: 1. Evaluate and select firm(s) to provide audiometric testing.
- PHASE IV: 1. Have audiometric testing performed.
2. Review results.
- PHASE V: 1. Review of program status.
2. Follow-up surveys.
3. Follow-up audiometric testing.
4. Training

Sources (Measured at operator/ listener distance from source)	Aural Effect	Sound Level in Decibels
Shotgun blast	Human ear	140
Jet plane at take-off	Pain Threshold	
Firecrackers, exploding		
Rock Music (amplified)	Uncomfortably	120
Hockey game crowd	Loud	
Thunder, severe		
Pneumatic jackhammer		
Powered lawn mower	Extremely	100
Tractor, farm type	Loud	
Subway train (interior)		
Motorcycle		
Snowmobile		
Cocktail party (100 guests)		
Window air-conditioner	Moderately	80
Crowded restaurant	Loud	
Diesel-powered truck/tractor		
Singing birds	Quiet	60
Normal conversation		
Rustle of leaves	Very Quiet	40
Faucet, dripping		
Light rainfall		
Whisper	Just Audible	10
Threshold of Hearing		0

FIG. 1 —Levels of some familiar sounds.

VINYL CHLORIDE PROGRAM

- I. INTRODUCTION
 - A. Objective of VCM Program.
 - B. Challenge to Industrial Hygiene Staff to insure program effectiveness.
- II. Planned activities in 1982 for VCM Program.
 - A. Audit of Thermoplastic VCM Programs.
 - 1. Illiopolis, IL
 - 2. Leominster, MA
 - B. Quantitative Fit Testing of Negative Pressure VCM Cannister Respirators.
- III. VCM Compliance Program Requirements.
 - A. VCM Monitoring & Control
 - B. Annual Training
 - C. Medical Surveillance
 - D. Signs & Labels
 - E. Recordkeeping
 - F. Written Compliance Program
- IV. VCM Monitoring & Control System
 - A. Objective of System - Worker Protection
 - B. Basic Concept/Elements of System - Leak Detection and Prevention
 - C. Mechanics of System
 - 1. Fixed Area Monitoring & Alarm System
 - a. Worker Responsibilities
 - b. Support (Safety Technician) Responsibilities
 - c. Supervisory Responsibilities

2. Plant Monitoring Tours of Regulated Areas
3. Personnel Monitoring
4. Data Analysis
 - a. Operational Errors - Work Practices
 - b. Mechanical Errors - Engineering Controls
- D. System Evaluation
 1. Review of Data & Records For Consistency
 2. Observation of Plant Personnel In Complying With Requirements of Program
 3. Determination of Frequency & Duration of Excursions and Reportable Incidents
- E. Summary Report To Management

4. QUANTITATIVE FIT TESTING AT THERMOPLASTIC PLANTS

- A. Objective of Fit Testing VCM Cannister Respirators
- B. Development of Acceptable Method
 1. Adaptation of High Efficiency Filter to Cannister
 2. Performance Testing in Lab

VINYL CHLORIDE STANDARD

1910.1017

OSHA COMPLIANCE REQUIREMENTS

VCM MONITORING & CONTROL PROGRAM

ANNUAL TRAINING

MEDICAL SURVEILLANCE

SIGNS & LABELS

RECORDKEEPING

WRITTEN COMPLIANCE PROGRAM

BOR 005344

MVC LEAK SHEET

9359

MVC LEAK LISTED BELOW WAS
IMINED TO BE THE CAUSE OF HIGH
S OF MVC IN THE WORKING ENVIRON-
YOUR IMMEDIATE ATTENTION TO THE
LEM IS REQUIRED.

DATE _____

SHIFT _____

TIME _____

_____ PPM/LOCATION _____

JMENT USED: _____ CENTURY _____ HNU

DIATE TEMPORARY REMEDY _____

ANENT REMEDY _____

COMPLETED _____ CHECKED BY SAFETY TECH _____

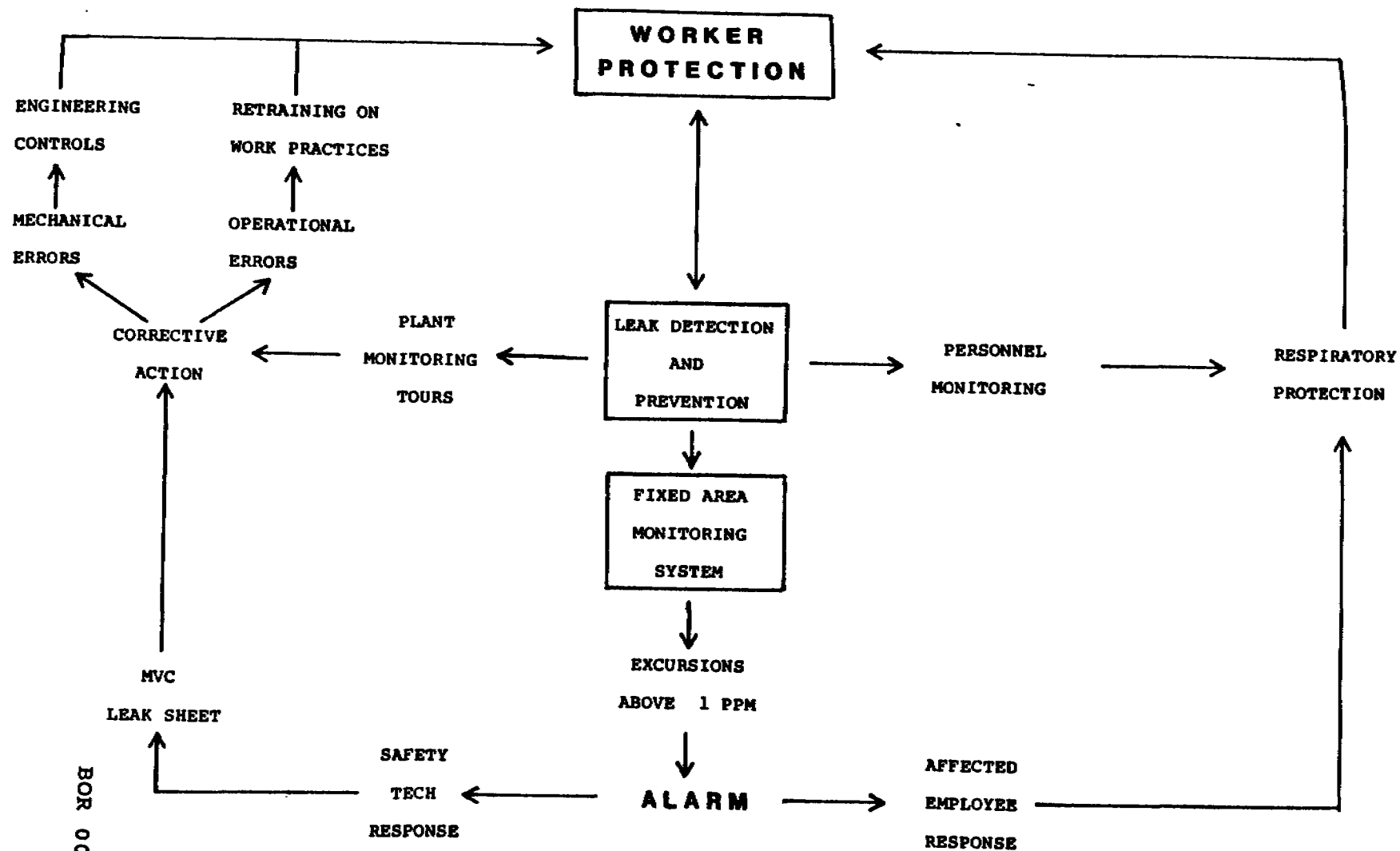
TY TECHNICIAN _____

FOREMAN OR GROUP LEADER _____

ION FOR LEAK CHECK: _____

A SUPERINTENDENT _____
PLT® MCPC® MRP® M.S. PAT.

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BOR 005346

FORMALDEHYDE TESTING
INSULSPRAY HOMES

- I. INTRODUCTION
 - A. Objective of Presentation
 - B. Consumer Requests for Air Testing
 - C. Objective of Conducting Air Testing in the Home
- II. PRE-VISIT PREPARATIONS
 - A. Homeowner Contract
 - B. Preparation of Sampling Equipment
- III. SAMPLING PROCEDURES IN THE HOME
 - A. Calibration
 - B. Sample Placement
 - C. Sampling Parameters
 - D. Collection of other Data
 - E. Sampling Completion
- IV. SAMPLE ANALYSIS
 - A. NIOSH Chromotropic Acid Method
- V. REPORT AND RECORDKEEPING FORMAT
 - A. Standard Report to Legal
 - 1. Cover Letter
 - 2. Completed Data Sheet
 - 3. Additional Data Attachment
 - B. Recordkeeping

FORMALDEHYDE MONITORING PROGRAM

I. Background

- A. Statement of Policy:
 - 1/2 ppm Employee Exposures
- B. Formaldehyde Monitoring Program developed as result of several factors;
 - 1. 1976 NIOSH Recommendations for Workplace Exposures to formaldehyde
 - 2. Possible future Regulatory actions
 - 3. Media attention
- C. The Program was established in order to:
 - 1. Avoid "knee-jerk" reactions to any promulgation of standards.
 - 2. Demonstrate to Borden customers that formaldehyde control is obtainable even under "worst-case" conditions.
 - 3. Reduce Labor Relations effects.
- D. Review of the Formaldehyde Limits:
 - 1. NIOSH
 - 2. ACGIH
 - 3. OSHA
 - 4. NIOSH Recommended Standard
 - a) More stringent than OSHA
 - b) Provides protection against irritative effects
 - c) Provides protection against safety hazards.
- E. Program Aspects:
 - a. Exposure Limits
 - b. Medical
 - c. Labels & Signs
 - d. Protective equipment
 - e. Worker Training
 - f. Work practices & engineering controls
 - g. Sanitation
 - h. Monitoring and records

F. A joint effort to meet the Program Requirement:

1. Plant Management
2. Chemical Division Management
3. Industrial Health Department

Monitoring Program

A. Premeasurement Review

1. Status Survey
 - a. Item by Item
 - b. Determine remaining requirements
 - c. Schedule actions
 - d. Follow-up
2. Sampling Locations Determinations
 - a. Floor plan
 - b. Where formaldehyde stored and used
 - c. Source point
 - d. Additionally, other areas for documentation purposes
3. Type of Monitoring Determination
 - a. Source
 - b. Area
 - c. Personal

Based on exposures & representative levels, area samples determined appropriate.
4. Frequency of Sampling/Sampling Times
 - a. Purposes - trends and shifts
 - b. Concentration
 - c. Equipment and analytical method
 - d. Fluctuations

B. Monitoring

1. Plant Personnel are trained to:
 - a. Set up sampling equipment
 - b. Calibrate sampling pumps
 - c. Correctly place the samples
 - d. Properly handle the collected samples

2. Analytical Training

- a. Reagent preparation
- b. Analytical procedure
- c. Sample handling
- d. Instrumentation Calibrator
- e. Calculation of results

3. Sample results with raw data are sent to the Industrial Health Department for review of:

- a. Math errors
- b. Calculations
- c. Sample times, etc.
- d. Trends

Plant Management and Chemical Division Managements also review the results to take corrective actions where necessary.

4. Evaluation of the program. Monitoring Results are not necessarily indicative of the effectiveness of the program. Evaluation requires "performance" criteria.

- a. Employee Complaints
- b. Health Problems
- c. NIOSH/OSHA Studies or Investigations

1982 Goals and Activities

A. To ensure that the formaldehyde program is functioning properly and to provide renewed interest and attention to the program, annual audits are conducted at each of the plant locations.

B. These locations are:

Demopolis, Al
Louisville, KY
Fayetteville, NC
Diboll, TX
Sheboygan, WI
Kent, WA

Fremont, CA
Geismar, LA
LaGrande, OR
Springfield, OR
Missoula, MT

C. Components of the Audit:

1. Collection of air samples with those run by plant
2. Submission of prepared known samples
3. Evaluation of plant air sampling and analysis
4. Review of sampling sites

Report

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