

TO	D. Frey	FIELD POINT OR DEPT. & BLDG. NO.	Pedricktown	DATE YOUR LETTER
FROM	T.S. Bialke	FIELD POINT OR DEPT. & BLDG. NO.	Akron - D/0020, 5-H	DATE THIS LETTER
SUBJECT	Industrial Hygiene Survey; November 14-17, 1983			

During the period November 14-17, 1983, an industrial hygiene survey was conducted at the Pedricktown chemical plant. The plant's industrial hygiene program elements are all in order as the plant had 78 elements rated satisfactory out of a total of 83 elements.

Items found that need attention as a result of this survey are periodic measurements of ventilation systems for lead control, fit testing of employees who are required to wear negative pressure respirators, periodic inspections and compliance with OSHA VCM monitoring requirements.

Please respond to the recommendations contained herein within 60 days of the receipt of this report and semi-annually thereafter until all have been addressed.

I wish to thank C. McCann for his help during the survey.

T.S. Bialke
T. S. Bialke

v

cc: J.A. Kiel/C.E. McCann
G. Lefebvre/H. Waltemate
F. Krause/N. Aquino/R. Kaminski
D. Hall/W. Neiderst
~~E.B. Katzenmeyer, Jr./H.W. Dietz, MD~~

*Tom - Item 7 pg. 2 does not
meet requirements of OSHA
Sec 1910.134. Please resolve
& let me know outcome.*
cel

26195001

BFG46758

Items from 1982 Survey

<u>Recommendations</u>	<u>Action</u>
1. Develop a hazard inventory for each job.	1. Hazard inventory complete except for laboratory. Action partially complete.
2. Update plant respirator procedure.	2. Procedure updated 9/82. Action complete.
3. Update plant hearing protection procedure.	3. Procedure updated 8/82. Action complete.
4. Update plant lead handling procedure.	4. Procedure updated 1/83. Action complete.
5. Post Bldg. 505, 2nd floor LPA and LPA utility as noise hazardous.	5. All areas have been posted. Action complete.
6. Conduct periodic noise dosimetry on workers exposed to noise above 85 dBA.	6. Plant is obtaining one noise dosimeter reading per exposed employee once per year. Action complete.
7. Prevent fugitive PVC dust emission from 9" Henschel mixer.	7. Sources of PVC dust have been sealed. Action complete.
8. Document LPA employee VCM exposure.	8. LPA employee VCM exposures average less than 0.5 ppm.

135002

<u>Current Findings</u>	<u>Recommendations</u>	<u>Responsi- bility</u>	<u>Exp. Date Comp.</u>
<u>PVC Compound</u>			
1. Millman's 8-hr. TWA noise exposure 152.8% and 101.6%. Cuber packager TWA noise exposure 77.6% and 92.6%. See Table I.	1. The high exposure of the millman (152.8%) was a result of his having to spend more time in cuber room than usual. Results of monitoring show that the Pedricktown compound noise exposures have not increased since the abatement of the 1977 OSHA noise citation. Continuous attention must be paid to noise in the compounding area to ensure levels do not increase.		
2. Helper operator's lead exposure 46.0 and 48.0 ug/M ³ . Mixer operator's lead exposure 66.5 ug/M ³ . OSHA PEL is 50 ug/M ³ . 3M toxic dust respirator worn. See Table II.	2. Since installation of the air pallet in the compound operation, lead exposures have been reduced. Sample 1 (J.Norton 46.0 ug/M ³ , 11/15/83) and Sample 2 (J.Spano, 66.5 ug/M ³ , 11/15/83) were collected on a day when the operators were having trouble hooking up an air pallet. The mixer operators higher exposure may be due to lead settling down on him from the air pallet system located above him. Sample No. 2 (J.Norton, helper/48.0 ug/M ³) was collected on a day where apparently no unusual problems occurred. These data indicate that Pedricktown is marginally in compliance with the lead standard of 50 ug/M ³ . Any upset will put the worker above the lead standard; fortunately respirators are worn so employees receive a measure of protection.		

BFG46759

Current Findings

Recommendations

Respon-
sibility Exp.Date Comp.

2. Lead (con't)

Since the exposures monitored are at or above the PEL, the OSHA lead standard requires that air monitoring be conducted quarterly on the mixer operator whose exposure is above the PEL and every six months on the helper whose exposure is between 35 and 50 ug/M³ [OSHA 1910.1025(d)(b)(ii) & (iii)]. The standard also requires the plant to conduct blood lead and ZPP exams every six months on employees exposed above the action level of 35 ug/M³ [OSHA 1910.1025(j)(2)(i)(a)].

3. No periodic measuring of local exhaust ventilation systems used to control lead.

3. The OSHA lead standard 1910.1025 (e)(5)(i) requires that measurements must be made at least every three months at ventilation systems used to control lead exposures to demonstrate the effectiveness of the system. Measuring either the capture velocity, duct pressure or static pressure will comply with the standard. Ventilation systems that need to be checked are the mixer ventilation, bag compactor, and weigh booths which are occasionally used for lead when the air pallet system is down.

4. Mixer operator and helper described problems with central vacuum system making it impossible to utilize for cleanup around the air pallet and in the mixer area.

4. A portable industrial vacuum cleaner with a high frequency filter would greatly enhance the cleanup of spilled lead pigments and improve housekeeping in the compound/mixing area. I previously supplied C. McCann with literature on industrial vacuum cleaners suitable for lead service.

Mass. Dispersion and LPA

5. Some filter ends of area GC probes in mass. dispersion, and LPA found in need of replacement.

5. Place area GC probe filters on routine maintenance check; replace all filters at least once per year.

Latex

6. Approximately two liters of formaldehyde are added to tank cars twice per week using a self-closing jug.

6. During formaldehyde transfer and addition, employees must wear an organic vapor cartridge respirator.

7. Employees required to wear a negative pressure respirator are not being fit tested.

7. All employees required to wear a respirator, except for the single-use disposable particulate type, must be fit tested per the Pedricktown respirator policy.

8. Three eyewash fountains found that did not provide sufficient water streams or were contaminated with rust.

8. Initiate a preventive maintenance program for all eyewash fountains in the latex area. PM must include monthly testing and sufficient flow rates so that water streams meet 6-10 inches above the fountain base.

BFG46760

20195003

<u>Current Findings</u>	<u>Recommendations</u>	<u>Responsi- bility</u>	<u>Exp.Date</u>	<u>Comp.</u>
<u>Industrial Hygiene Department</u>				
9. Review of 1983 VCM monitoring shows OSHA monitoring requirements are not being met. A number of employees with VCM exposures above 0.5 and 1 ppm were not remonitored in 1983.	9. The OSHA VCM standard 1910.1017 requires that employees with VCM exposures of 0.5 to 1 ppm be monitored quarterly until two results greater than seven days apart show exposures to be below 0.5 ppm. If exposures are found to be greater than 1 ppm, those employees must be monitored monthly until two samples greater than seven days apart are below 1 ppm. A scheduling program is available through the Cleveland personnel monitoring system that will schedule and preprint monitoring cards per the OSHA standard requirements. Monitoring all VCM exposed employees at least once/year is at the plant's option.			
10. When a lead sample is collected for analysis, the sample is also analyzed for antimony.	10. Discontinue the analysis of lead samples for antimony. Results have shown that concomitant antimony and lead exposures are not excessive.			
11. Respirators in latex, mass, and suspension found with straps needing replacement and soiled.	11. Pedricktown's respirator protection policy SA-30-C places the responsibility for maintaining the respirator clean and serviceable upon the employee. The procedure does not establish a requirement for periodic checks by management to ensure this is being done. My findings point to a need for periodic inspection of respiratory protection.			

Discussion

Over the past several years, the BFG chemical plants have acquired a large amount of personnel monitoring data documenting exposures to a variety of chemicals. Chemicals that have been monitored are those regulated by OSHA, or are of particular concern to BFG because of amount used or toxic nature. Many substances are used within the BFG Chemical Group for which we have no personnel monitoring data. In an attempt to begin to develop a database on worker exposure to chemicals whose toxic effects are unknown or suggested to be hazardous, the Chemical Group will be asked to set a goal in 1984 to evaluate worker exposure to 3 to 5 chemicals the plant has interest in and that have not been monitored for in the past. Coordinate selection and development of sampling procedures with me in Akron, ext. 4224.

Attachment I contains the completed Chemical Group industrial hygiene audit checklist for Pedricktown. The audit checklist is derived from the Chemical Group industrial hygiene standard IH-101 and IH-101A, contained in the Group Safety Manual. The audit checklist covers two main areas of plant industrial hygiene programs. These are the I.H. program administration and I.H. procedures. Contained within these two areas, the checklist notes 83 requirements that are rated satisfactory, needs attention, or does not apply. The Pedricktown industrial hygiene program was found to be satisfactory, meeting 78 of the program requirements. Five requirements are not being met and are addressed in the "Current Findings" section of this report.

Since this is a first attempt to formally utilize the audit checklist to evaluate a plant I.H. program, comparison with other plants cannot be made. However, I think a plant that has 78 satisfactory items out of 83 is an accomplishment to be commended.

TABLE I.

LEAD MONITORING RESULTS
Pedricktown, Nov. 1983

<u>Date</u>	<u>Employee/SS#</u>	<u>Job</u>	<u>Respirator</u>	<u>Sample Time (min.)</u>	<u>Concentration (ug/M³)</u>
11/15	J. Norton 148-50-9309	Helper	Yes	368	46.0
11/16	J. Norton 148-50-9309	Helper	Yes	400	48.0
11/15	J. Spano	Mixer oper.	Yes	394	66.5

Samples collected with duPont P2500 pump and 0.8u mixed cellulose ester filter,
AA analysis.

26195005

BFG46762

TABLE II.

NOISE MONITORING RESULTS
Pedricktown; Nov. 1983

<u>Date</u>	<u>Employee/SS#</u>	<u>Job</u>	<u>Sample Time (min.)</u>	<u>Type H.P.</u>	<u>% - 8 Hr. TWA</u>
11/15	J. School* 143-46-1530	compound millman	376	muffs	152.8
11/15	D.J. Chila 151-40-6417	cube packaging	378	plugs	77.6
11/16	J. School	compound millman	401	muffs	101.6
11/16	D. Chila	cube packaging	396	plugs	92.6

*Mr. School indicated that on 11/15 he spent more time than usual in the cuber room.

All data collected with duPont Mark I dosimeters set on 80/90-5.

26195006

BFG46763

ATTACHMENT I

CHEMICAL GROUP INDUSTRIAL HYGIENE AUDIT CHECKLIST

LOCATION Pedricktown

DATE 11/16/83

S = Satisfactory
NA = Needs Attention
DNA = Does Not Apply

A. INDUSTRIAL HYGIENE PROGRAM ADMINISTRATION

1. Industrial Hygiene Coordinator

- a. Named
- b. Formal Training
- c. Walk-throughs

S
NA
S

2. Periodic Industrial Hygiene Program Reports

- a. Timely
- b. Content
- c. Year-end Summary
- d. Goals for Next Year

NA
S
S
S

3. Medical Services

- a. Physical Examination
- b. Medical Equipment Certification/
Calibration
- c. Training
- d. Illness and Complaint Investigation

S
S
S
S

4. Hazard Inventory

- a. Complete
- b. Annual Review and Update

S
DNA

5. Chemical Hazard Review and Use

- a. Committee Established
- b. MSDS
 - 1. Available
 - 2. Employees Trained in Use

S
S
S

6. Reply to Corporate Surveys

- a. Initial
- b. Quarterly Thereafter

S
S

wp6/3560q-4

BFG46764

26195007

S - Satisfactory
 NA - Needs Attention
 DNA - Does Not Apply

B. INDUSTRIAL HYGIENE PROCEDURES

1. Respiratory Procedure

- a. Written
- b. Selected per Hazard
- c. Training
- d. Fit Testing
- e. Medical Examination
- f. Cleaning
- g. Storage
- h. Inspection
- i. Approvals

S
S
S
S
S
S
S
NA
S

2. Asbestos Handling and Disposal

- a. Sources Identified
- b. Monitoring
- c. Medical Examination
- d. Demolition and Removal
- e. Protective Clothing
- g. Written

S
S
S
S
S
S

3. Industrial Hygiene Sampling

- a. Strategies
 - 1. OSHA compliance
 - 2. Hazard Evaluation
 - 3. Special Requests
- b. Sample Procedures
- c. Analytical Procedures/Cross Check Program
- d. Employee Interview

NA
S
S
S
S

4. Hearing Conservation and Noise Control

(Use Hearing Conservation Audit Checklist)

Total Satisfactory
 Total Needs Attention

22
0

5. Radiation

- a. Hazards Identified and Labeled
- b. License Requirements
- c. Records
- d. Dosimetry Program
- e. Periodic Leak Checks
- f. Radiation Protection Officer

S
S
S
DNA
S
S

S - Satisfactory
 NA - Needs Attention
 DNA - Does Not Apply

6.	Ventilation for Health Hazard Control	
a.	Periodic Flow or Maintenance Checks	<u>NA</u>
b.	Laboratory Hoods	
1.	Yearly Flow Checked	<u>S</u>
2.	Rating or Flow-Rate Posted	<u>S</u>
c.	Modifications Reviewed	<u>S</u>
d.	New Systems Reviewed	<u>S</u>
7.	Leak Detection	
a.	Written	<u>S</u>
b.	Area Monitoring Response	<u>S</u>
c.	Leak Repair Control	<u>S</u>
8.	I.H. Equipment Calibration	
a.	Audiocimeters	
1.	Daily Field Calibration	<u>S</u>
2.	Laboratory Calibration	<u>S</u>
b.	Sound Level Meters	
1.	Daily Field Calibration	<u>S</u>
2.	Laboratory Calibration/Three Years	<u>S</u>
c.	Acoustic Field Calibrators Every Three Years	<u>S</u>
d.	Radiation Detection Device - Annually	<u>DNA</u>
e.	Area Monitoring Devices	<u>S</u>
f.	Personnel Monitoring Pumps	<u>S</u>
9.	Laboratory Safety	
a.	Lab Hoods Adequate for Hazard	<u>S</u>
b.	Lab Procedures Reviewed	<u>S</u>
c.	Personnel Protective Clothing and Equipment	<u>S</u>
10.	Totals	
	Satisfactory	<u>78</u>
	Needs Attention	<u>S</u>