

TO	T. S. Bialke	FIELD POINT OR DEPT. & BLDG. NO.	Akron-D/0020, 5H	DATE YOUR LETTER
FROM	A. D. Simpson	FIELD POINT OR DEPT. & BLDG. NO.	Louisville Environmental	DEC 11 1981
SUBJECT				DATE THIS LETTER Dec. 7, 1981

UPDATE OF STATUS OF 1981 INDUSTRIAL HYGIENE SURVEY RECOMMENDATIONS

On August 21, 1981 the Louisville facility responded to the eight recommendations made pertinent to its 1981 Industrial Hygiene Audit. At that time, additional action was required in order to address some of those recommendations. This is to provide an update of their status.

Item 1:

- a. Move intake for plant breathing air to an area less contaminated with organics.
- b. Install a filtration system to remove organic vapors at the breathing air compressor. Following the bed, install a THA to monitor for breakthrough of organics.

Responsibility: K. M. Stich

Status: Entire recommendation is addressed in two engineering design jobs, U-302 and P-506S. The filtration system in (b.) has been ordered with delivery expected in late December. Installation of the filter and the THA is projected for January. The breathing air intake will have a filter installed on it, and will be relocated sometime in Spring, 1982.

Item 2:

Addressed as complete in August 31, 1981 response.

Item 3:

Check operator exposure to ammonia (NH₃) fumes in the refrigeration building at least twice weekly in the next three months and again in the winter months. If levels are found to be consistently at or above 15 ppm, the refrigeration building ventilation system will have to be modified to provide for fresh air at the operator's work station.

Responsibility: A. D. Simpson/C. W. Keeney, P. N. Bradford

Status: Eighteen static samples were taken in Bldg. 115 during June with average results of 8.9 ppm NH₃ and a maximum of 22 ppm NH₃. Six NH₃ badge samples on the Bldg. 115 refrigeration operator were taken in October. These averaged 14.8 ppm NH₃ with a maximum of 20.69 ppm NH₃. Per your letter of November 6, we do not plan to conduct additional sampling at this time. However, should conditions worsen in Bldg. 115, we shall remonitor.

Item 4:

Develop an inventory of chemical and physical hazards to which employees working in each job class would be routinely exposed.

Responsibility: A. D. Simpson/C. W. Keeney

Status: A list of chemicals used in each production area in a quantity exceeding 500 pounds per month has been compiled. The process of meeting with an area representative to determine which job classes are routinely exposed and at what level, is approximately 50 percent complete.

Item 5:

Addressed as complete in August 31, 1981 response.

Item 6:

Completely enclose the 4" line strip blow-off within a sound barrier.

Responsibility: W. C. Fultz

Status: Line has been used on an intermittent basis during November and December. No plans for use in 1982. Hearing protection required in area. Enclosure will not be installed at this time.

Items 7-8:

Addressed as complete in August 31, 1981 response.

The status of incomplete items listed herein will be reported as progress is made. Please address any questions you might have to me.

Alice Simpson
Alice D. Simpson

tap

cc: E. L. Beeler/H. E. Barrett/W. Yesowitch
C. M. Fischer/A. Brightwell/P. N. Bradford
W. C. Fultz/R. E. Tarlton
R. J. Grahek/L. A. Grady/D. L. Humphrey/J. W. Robben/P. A. Wagner
W. C. Holbrook (Cleveland)
G. R. Pruitt/M. D. Schrader/A. S. Flynn
H. Waltemate (Cleveland)

26094002

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E. L. Beeler Louisville

T. S. Bialke Akron - D/0020, 5-H

9-15-82

Industrial Hygiene Survey; 1982

During the period July 27-30, 1982 an industrial hygiene survey was conducted at the Louisville Chemical plant. I want to thank A. Simpson, M. Keeney and W. Yesowitch for their help in making my visit productive.

The plant has taken action addressing all of the previous year's recommendations. Only recurring problem at Louisville is that the Environmental Health group is not being kept informed of process changes and modifications which may impact adversely upon employees' health.

Respirator usage during hazardous tasks involving exposure to VCM and AN need to be reviewed. Noise exposures in the compound area have increased. Lead handling by the 9" A-line operator needs to be improved.

Louisville is to be complimented on completion of their hazard inventory for the medical information system and for timely submission of follow-up reports addressing industrial hygiene survey recommendations.

T. S. Bialke
T. S. Bialke

v

cc: E.B.Katzenmeyer, Jr./H.W.Dietz
M.D.Schrader
J.W.Robben
E.Martinelli/H.Waltemate
W.C.Becker
N.Aquino/W.Lodge
W.Niederst/E.Osborne
R.Steller/K.Greene
W.Yesowitch/A.Simpson

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Louisville IH Survey; 1982

Findings

Recommendations

Exp.Date
Completion

1.
Responsi-
bility

Items from 1981 Survey

1. Louisville Environmental Department was unaware of modification to compound 9" A line cuber noise enclosure, which resulted in increased ambient noise levels in mill area. Noise in the area was 89 dBA on 4/13/81 and 93-94 dBA on 7/28/82.

1. Recommendations addressing increase in noise levels in mill area due to cuber room modification can be found under items from current survey section. Last year's survey revealed that the Hycar department modified its ventilation system which influenced employee AN exposures without informing the environmental department. This year it was discovered that the compound department removed a section of the 9" cuber noise enclosure and replaced it with Koroklear. The wall section was removed to allow for installation of a monorail system, resulting in increased noise outside the enclosure in front of the Koroklear from 89 to 93-94 dBA. This situation again demonstrates the need for process modifications that impact upon employee health and environment to be reviewed by the environmental department prior to implementation. The environmental department reviews all AR's, GPO's and SOP's, but this change slipped through. The process/production managers must be made aware of the fact that changes in processes, production equipment, or existing safeguards may impact upon employees health. Production must involve the environmental department early in the decision making process when changes are being contemplated.

2. Breathing air intake not moved, but filter bed with total hydrocarbon and VCM monitors installed.

2. If filter bed provides extra removal of organics as expected and shown by monitors, no further action is required. If breakthrough of organics occurs, consideration should be given to moving air intake.

3. Operator in refrigeration building provided with enclosure with fresh air and air conditioning. Ammonia and noise levels greatly reduced.

3. Action on recommendation complete.

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Louisville IH Survey; 1982

Findings

Recommendations

Exp.Date
Completion

2.
Responsi-
bility

Items from 1981 Survey (con't)

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|--|---|
| 4. Hazard inventory completed. | 4. Recommendation satisfactorily addressed. |
| 5. 9" A line spare cuber enclosed. | 5. Recommendation satisfactorily addressed. |
| 6. All other items from 1981 survey completed. | |

Items from this Survey

- | | |
|---|---|
| 1. General Notice SA-501, "Breathing Air for Respirators" requires various actions to commence when THA sample point above the charcoal bed detects 10 ppm. | 1. Recommended that SA-501 be rewritten to require responses to be made based on THA levels detected by sample point downstream of filter. Action to change filter or alert users is required only if filter bed capacity if overloaded. |
| 2. Some personnel monitoring samples for VCM and AN analysed 4-7 days after collection. | 2. The turnaround time for analysis of VCM and AN must be shortened. Personnel samples for VCM and AN should not be kept more than 24 hours before analysis. The longer it takes to get results back to the area for follow-up, the less likely it is that operating conditions, causing a result to be high, will be remembered and corrected. |
| 3. Hycar transfer operator did not wear respirator while performing a task that required one. | 3. The routine questioning of the transfer operator who was being sampled for AN revealed that he did not wear a respirator when sampling the blowdown operation. This confirmed conversations with other plant employees who indicated they felt respirators were not being worn where procedures required such use. All tasks that require respirator protection in the AN and VCL areas have been identified and need for respirator wearing during hazardous tasks needs to be reemphasized and enforced where necessary. |

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Louisville IH Survey; 1982

Findings

4.(a) 9" A-line cuber noise enclosure had section of solid wall replaced with flexible Koroklear curtains due to installation of monorail system; area noise readings 93-94 dBA.

(b) 9" A-line Farrel operator's noise exposure 121%, 8-hr. TWA, 90 dBA base. Hearing protection worn.

(c) 9" A-line cuber operator noise exposure 431.5%, 8-hr. TWA, 90 dBA base. Hearing protection worn; much time spent in cuber due to problems with stock.

5. Illness recorded as work-related not referred to environmental department for follow-up.

6. 1981 personnel monitoring results not included in each employee's medical record.

Recommendations

4.(a) Replace Koroklear section of cuber room with original solid wall.

(b) Conduct noise dosimetry on 9" farrel and cuber operations. Obtain three per exposed employee to determine current exposure conditions and ensure compliance with OSHA noise citation abatement plan.

5. Employees at Louisville freely report to the dispensary with work-related illnesses. Plant management is to be congratulated on establishing and maintaining such rapport. When employees are diagnosed as having a work-related illness, respiratory irritation, dermatitis, etc., such cases should be reported to the environmental department for investigation. It is the environmental department's responsibility to determine what caused the illness, how it occurred, to sample the work environment if necessary, and recommend preventive measures to keep the incident from recurring.

6. At the end of each calendar year a computer printout is provided with that year's personnel monitoring results done on employees. The printout is to be placed in each employee's medical file and becomes the hard copy of monitoring results. The monitoring cards from which the data have been input into the computer can then be destroyed.

3.
Exp.Date Responsi-
Completion bility

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Findings

7. Laboratory hoods checked annually, but results not provided to environmental department or posted on lab hoods.

8. Lab hood #3 in instrument lab has airflow less than 50 fpm.

Recommendations

7. Results of annual lab hood ventilation results must be provided to the Louisville environmental department for review. Results must also be placed on each lab hood to provide users with information on status of hood and when next check is due. Attachment I is an example of a label that could be used.

8. Upgrade the referenced lab hood ventilation rate to provide for 80 fpm across the face when opened to normal operating position. Attach. II is a sketch of a hood modification plan by Roy Marshke at Brecksville R & D Center. The modification increases the airflow of a typical hood from 28 fpm across the open face to 80 fpm. The modification simply reduces the area of the hood face. If a hood is operating at 400 cubic ft. per minute with a face opening of 10 sq. ft., the face velocity would be 40 fpm. If the hood face area is reduced by one-half, the face velocity will increase to 80 fpm. The modification consists of providing for a lock that keeps the horizontal sash hood from being opened too far without unlocking it. A vertical safety shield which is on a rail that can be slid from side to side is also installed. The vertical shield is narrow enough for the lab worker to reach around. Also, an airfoil is attached to the front, creating a laminar airflow pattern across the lab hood bench top. An alarm system is built into the hood that will respond, both audibly and visually when (1) static pressure drops too low or (2) when the hood sash is raised above the lock position. The modifications include parts which are available from the hood manufacturer. Contact Roy Marschke at the Brecksville R & D Center, ext. 5273, for more detailed drawings and parts suppliers. Brecksville has estimated such a retrofit may be done for about \$1,000-\$2,000 per hood. No modifications to ventilation or A/C systems is necessary.

Exp. Date Responsi-
Completion bility

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Louisville IH Survey; 1982

5.

Findings

Recommendations

Exp.Date Responsi-
Completion bility

9. 9" A-line Henschel operators
8-hr. TWA lead exposure - 182
ug/M³.

9. The 9" A-line Henschel operator was
sampled on two occasions for lead. His
results were 7.5 ug/M³ on 7/28/82 and 182
on 7/29/82 (see Table III). On 7/28 the
line was down part of the day for a product
changeover. The ventilation of the hood
over the Henschel opening should be upgraded
to 100 fpm over its open face providing such
a rate does not adversely affect the addition
of pigments. The hood could also be modified
to allow for better disposal of empty lead
pigment bags. Attach. III is a schematic of
a bag disposal chute attached to a hood. The
Henschel operator must wear a toxic dust
respirator when handling lead pigments.

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Discussion:

The Louisville plant has posted all noise hazardous areas and requires hearing protection to be worn while working in these designated areas. I judged compliance with the hearing protection requirement to be very good. I saw only two employees during my visit without hearing protection in a posted area. There has been some controversy about hearing protection preventing employees who wear them from hearing warning signals or speech from fellow employees. The best reply to such concerns can be found in the Supervisor's Safety Manual published in 1978 by the National Safety Council. On page 181 it states, under a section entitled "Overcoming objections to the wearing of hearing protection", "although some people object to ear plugs because they believe they will not be able to understand conversation, tests have shown that when a noise level is higher than about 85 dB, speech is more easily understood with ear plugs in than it is without them. At worst, a person wearing ear plugs is like one who is moderately hard of hearing, rather than deaf."

Three noise dosimeter readings were taken in the LPA. A recovery operator and maintenance foreman both received an 8-hour TWA noise dose of less than 25%. The dryer operator received a noise dose of 60.8%. The LPA is posted as noise hazardous; hearing protection is worn by all employees in the posted areas and audiometric exams are given (see Table IV).

Employee exposures to lead from operation of the autobagger were checked. One result was obtained with a value of 19.6 ug/M³. When operating normally, the autoweigher does not overexpose employees to lead. Toxic dust respirators are still to be worn during air pallet changeover or clean-up.

Two personnel samples were collected for acrylonitrile in the Hycar operation. No overexposures were found (see Table II).

Three personnel samples were collected for VCM on employees working in the large poly area; a dryer operator, a poly operator and a day operator were monitored. No result exceeded the action level of 0.5 ppm VCM. A latex charge operator and a latex recovery operator in Bldg. 121 were also monitored for VCM. The recovery operator had a result of 0.7 ppm VCM. He wore a respirator during a hazardous task which accounts for reading above the action level, but below the 1 ppm TLV (see Table I).

All monitoring results listed in the attached tables are to be entered by the plant into the Chemical Group's personnel monitoring system.

As in the past, please respond to the survey recommendations within 60 days of receipt of this report and quarterly thereafter until all items have been satisfactorily addressed.

TSB

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