

To: Chuck Bush
Jim Griffin
Bob Kissling
Bob Krebs
Steve Williams

March 1, 1990

From: Dan Gleghorn

ALTC INDUSTRIAL HEALTH AUDIT

Enclosed is the final report of the Industrial Health Audit conducted at your facility by Paul Zakriski and myself during the period of January 22 - 25, 1990.

Your program has taken a leap forward since Jim Griffin came aboard. Many strategies are being implemented which will continue to strengthen your overall program.

During our audit, we pointed out conditions that violated BFGoodrich and OSHA standards or were inconsistent with good health practices.

The facility was rated with 73 items "Satisfactory", and 20 items "Need Attention"

The report format is laid out for you to write in your abatement program and indicate the status as Complete, In-Progress or Incomplete. A progress report giving the status of the items requiring attention is due 60 days after receipt of the report.

The report includes the following:

- I. Favorable Observations
- II. 1990 Items to be Corrected
- III. Facility Inspection Tour
- IV. Industrial Hygiene Program Rating
- V. Hearing Conservation Audit Checklist



Dan Gleghorn

cc: R. J. Grahek/C. J. Nosal
H. Waltemate
P. M. Zakriski - Brecksville
D. Dimas - Bath

NGC 12974

AVON LAKE TECHNICAL CENTER
INDUSTRIAL HEALTH AUDIT
JANUARY 22-25, 1990

I. FAVORABLE OBSERVATIONS

1. Excess chemical amnesty days are in progress. Old lab chemicals are being collected and disposed of. This should help the Hazard Communications Program.
2. Safety showers, eye washes and SCBA are inspection tagged similar to fire extinguishers. This is an excellent idea.
3. Building 414
 - a. We were advised by Jerry Bialko that a simulated vessel rescue last week, with a manikin, took 2.5 minutes from alarm to person out of the vessel and on the stretcher.
 - b. There will be a four-hour safety and training meeting this Saturday for all employees.
 - c. MSDS's are in the Control Room. The index is updated with a write-in procedure. The person receiving the MSDS registers it. This system has some good points.
4. All lab hoods in the facility are being checked and up-graded by Professional Balance Company. The documentation is impressive.
5. Immersion Lab: When the operator was questioned, he understood the hazards of a Brabender. This was a good test of Hazard Communication.
6. Extruder Building:
 - a. Three new ventilation systems are being installed. This should have a positive effect on this building.
 - b. SOP's for this area are about 95% complete. Employees are required to sign them to verify they received training.
 - c. MSDS's are stored by Raw Material Number and Alpha.
7. THA 1 and THA 2: GC and HNU's are calibrated every Monday morning.
8. Estane Lab: Barbara Kantola's MSDS system is the best in the facility.
9. Rupture Disc and Calibration: This is an excellent program.

AVON LAKE TECHNICAL CENTER
INDUSTRIAL HEALTH AUDIT
JANUARY 22-25, 1990

II. ITEMS TO BE CORRECTED

IH-1990-1 Engineering and/or maintenance efforts need to be directed to reducing noise in those areas/jobs with an eight-hour TWA exposure of 90 dbA or greater (100% dose) OSHA.

Note: Details of this effort must be documented.

(Although noise enclosures and other treatments are used, noise must be engineered out of equipment.)

Response

STATUS

____ Completed
____ In-Progress
____ Incomplete

IH-1990-2 Personnel working at noise hazardous jobs must receive annual training which includes at least the following information (OSHA).

- a. The effect of noise on hearing.
- b. The purpose of hearing protectors, the advantage/disadvantage and attenuation of various types, and instruction on selection, fitting, use and care.
- c. The purpose of audiometric testing and explanation of the test procedures.

The past training program in your facility was not acceptable. Send me a copy of your program which you intend to implement in the 2nd. quarter, 1990.

Response

NGC 12976

STATUS

____ Completed
____ In-Progress
____ Incomplete

IH-1990-3 Care must be exercised to insure a proper initial fit and correct use of all hearing protectors (OSHA). Note: With insert type hearing protectors (ear plugs), it is important that the ear canal be clear and free of impacted wax. The ears should be examined for impacted wax before plugs are fitted. If impacted wax is found, it should be removed by a nurse or physician. Any employee complaining of an ear problem should be referred to medical personnel for examination.

Avon Lake medical is qualified to handle, but fitting has not been done.

Advise when this program is being implemented during annual physicals.

Response

STATUS

____ Completed
____ In-Progress
____ Incomplete

IH-1990-4 Audiometric examinations must be provided for employees transferring to noise hazardous jobs.

Provide me a list of the Noise Hazardous Jobs you have developed and your implementation procedure.

Response

STATUS

____ Completed
____ In-Progress
____ Incomplete

IH-1990-5 Jim Griffin is conducting walk-through audits of your facility. It is recommended that Bob Krebs establish a management walk-through program.

Response

<u>STATUS</u>	
☐	Completed
☐	In-Progress
☐	Incomplete

IH-1990-6 Equipment in the Medical Department should have certification/calibration procedures and programs.

- a. Audiometer is okay.
- b. Spirometer receives a nurse check only. This instrument should be calibrated at least every two to three years.
- c. Develop a procedure to assure accuracy of the EKG unit.

Response

<u>STATUS</u>	
☐	Completed
☐	In-Progress
☐	Incomplete

3651j-4

NGC 12978

IH-1990-7 It is recommended that nurses be supported to attain certification as Occupational Health Nurses.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-8 A Hazard Inventory for Chemical and Physical Exposures by Department and job must be completed. (Per BFG SH&E Policy). This will satisfy the first step in the 1989 PEL project.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-9 An annual review, update and goals projection for Job Hazard Exposures is necessary.

I reviewed some of the draft documents Steve Williams has prepared and they look very good.

Please send me copies of these reports.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-10 Review your Hazard Review and Use Process and Committee structure.

Advise where you wish to modify either the procedure or committee structure.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

3651j-6

NGC 12980

IH-1990-11 Vinyl chloride training has to be more than giving an employee a report and having them read it. This was the previous approach in your facility.

Provide me a copy of your new training criteria and implementation program.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-12 Send me your training criteria and implementation program for lead.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-13 Submit your strategy to comply with the OSHA PEL's.

I know you are working on this project. I would like a step-by-step strategy.

Response

NGC 12981

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-14 Provide me with your criteria and implementation program for Respiratory Protection Training.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-15 Provide me with your criteria and implementation program for Respirator Fit Testing.

I know testing is being scheduled for February 22, 1990.
Please advise its completion and your future implementation plan.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

3651j-8

NGC 12982

IH-1990-16 Medical Examinations for Respiratory Protection must be performed in accordance with BFG Occupational Health Policies, Section 1.17, except that OSHA (1910.134) requires re-examination annually.

A new OSHA standard is in draft form and will probably be published later this year which will make Respiratory Protection Requirements more demanding.

Provide me with your criteria and implementation program for Respiratory Protection Medical Surveillance Examinations.

Response

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-17 Review environmental monitoring results to determine jobs that have unexpected non-compliant exposures.

Some monitoring results indicate non-compliant exposure without protection.

Advise me how you intend to handle this situation.

Response

NGC 12983

STATUS

☐ Completed
☐ In-Progress
☐ Incomplete

IH-1990-18 Labels indicating ventilation systems rating or flow-rating should be posted on the lab hood or equipment.

Response

STATUS

Completed
In-Progress
Incomplete

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2/27/90

3651j-10

NGC 12984

III. ALTC INDUSTRIAL HEALTH AUDIT
FACILITY INSPECTION TOUR

1. Building 421

- a. One SCBA mask not covered at SW corner.
- b. Ed Leeson's storage area needs review and clean-up. Some chemical has spilled on a shelf in the cabinet.
- c. 2nd floor: Remove face shield box that is empty.
- d. 3rd floor:
 - (1) The amount of chemicals stored on the production floor should be restricted.
 - (2) Bonding means needs to be provided so grounds are not made to Unastrut.
 - (3) This is the cleanest floor in the building.

2. Safety Showers, Eye Washes and SCBA are tagged like fire extinguishers. This is an excellent idea.

3. Building 414:

- a. Breathing Air is Instrument Air. There is a question as to how users are warned if there is a problem. A System must be developed to handle User Warning.

4. Ice House:

- a. The building is congested and needs a dual inventory (one in building and one remote.)
- b. Chemical storage compatibility needs to be reviewed.

5. Bunker Building:

- a. A dual inventory is needed.
- b. Catalyst jugs must be triple washed and slashed.
- c. The small chest freezer should be replaced.
- d. Housekeeping is poor.

6. Analytical Lab:

- a. MSDS book should have an index.
- b. Oven operator was wearing an air purifying respirator with a beard. This device will not provide protection to the user and it should be discontinued.
- c. Steve Williams will monitor this operation to determine whether respirator protection is needed.

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rjgleghorn
2/27/90

NGC 12985

7. Immersion:
 - a. Waste Solvent Can is not labeled.
8. Physical Test Lab:
 - a. Should have SOP on filling Liquid Nitrogen containers.
 - b. Dave Marshall's portion of Lab needs housekeeping improvement.
9. Latex Labs:
 - a. Emergency Exit was blocked. The exit should be cleared or the signs removed showing it as an emergency exit.
10. Latex Applications Lab:
 - a. Should have inventory of chemicals and an index in the MSDS books.
11. Extruder Building:
 - a. Need MSDS's on Tide, Ajax, etc. They are not used as in the home.
12. THA 1 & THA 2:
 - a. Need Warning for users of breathing air when there is a problem with the breathing air.
13. Medical:
 - a. The nursing staff/employee ratio should be reviewed.
14. Estane Lab:
 - a. An SOP on filling Nitrogen Containers is needed.
 - b. There is a need to review Training and Shielding on the Laser in the Monsanto Processability Tester. The present operators appear to be well trained and aware of the hazard.
15. A.E.D.L.:
 - a. Twin Sheet Oven must have heat limiting protection (against product degradation) or be vented outside or scrubbed.
 - b. Comet Vacuum Former needs electrical panel labeled.
16. Power House:
 - a. Breathing Air/Instrument Air System.
 - 1) Calibration of CO monitor is now annual. Should be weekly.
 - 2) The Breathing Air System must be brought up to BFG standards (Eng. Std. 404)
 - 3) The Dew Point instrument has been dismantled.
 - 4) There must be an SOP to notify user if there is a problem in the system.
 - 5) This situation was brought to the attention of Bob Sandfry. Vic Goode was with him.

IV. CHEMICAL GROUP INDUSTRIAL HYGIENE PROGRAM RATING

LOCATION: Avon Lake Technical Center

Date of Audit: January 22 - 25, 1990

RATING INDUSTRIAL HYGIENE PROGRAM ADMINISTRATION

Industrial Hygiene Coordinator

- S Named
- S Knowledgeable
- S Walk-throughs

Periodic Industrial Hygiene Program Reports

- S Timely
- S Content
- S Year-end Summary
- S Goal for Next Year

Medical Services

- S Physical Examination
- NA Medical Equipment Certification/Calibration
- NA Training
- S Illness and Complaint Investigation

Hazard Inventory

- NA Complete
- NA Annual Review and Update

Chemical Hazard Review and Use

- NA Committee Established

MSDS

- S Available
- S Employees Trained in Use

Reply to Industrial Hygiene Audits

- NA Initial
- NA Final Report

Training

- S Hazard Communication
- NA Vinyl Chloride
- NA Lead
- S Acrylonitrile
- S ETO
- S Butadiene

NGC 12987

Compliance with OSHA PEL's by Area From

NA Vinyl Chloride
S Acrylonitrile
NA Lead
S Noise
S ETO
S Butadiene

Respiratory Procedure

S Written
S Selected per Hazard
NA Training
NA Fit Testing
NA Medical Examination
S Cleaning
S Storage
S+ Inspection
S Approval
NA Usage

Asbestos Handling and Disposal

S Sources Identified
S Monitoring
S Medical Examination
S Demolition and Removal
S Protective Clothing
S Written

Industrial Hygiene Sampling

NA OSHA Compliance
NA Hazard Evaluation
S Special Requests
NA Sample Procedures
S Analytical Procedures/Cross Check Program
S Employee Interview

Hearing Conservation

S 20 Total (See Checklist Attached)
NA 4 Total (" " ")

Radiation

S Hazards Identified and Labeled
S License Requirements
S Records

NGC 12988

- S Dosimetry Program
- S Periodic Leak Check
- S Radiation Protection Officer

Ventilation for Health Hazard Control

- S Periodic Flow or Maintenance Checks

Lab Hoods

- S Yearly Flow Checked
- NA Rating or Flow-Rate Posted
- S Modifications Reviewed
- S New Systems Reviewed

Leak Detection

- DNA Written
- DNA Area Monitoring Response
- DNA Leak Repair Control

I.H. Equipment Calibration

Audiocimeters

- S Daily Calibration
- S Laboratory Calibration

Sound Level Meters

- DNA Daily Calibration
- DNA Laboratory Calibration/Three Years

- S Acoustic Field Calibrators Every three Years
- S Radiation Detection Device - Annually
- S Area Monitoring Devices
- S Personnel Monitoring Pumps

Laboratory Safety

- S Lab Hoods Adequate for Hazards
- S Lab Procedures Reviewed
- S Personnel Protective Clothing and Equipment

NGC 12989

Total Satisfactory: 73 Needs Attention: 23 Dose Not Apply: 5

* The Status of the Individual Program Elements will be Indicated by:

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

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02-22-90

V. HEARING CONSERVATION AUDIT CHECKLIST

LOCATION 3613

PLANT Avon Lake Tech. Center

	<u>O.K.</u>	<u>Needs</u> <u>Attn.</u>	<u>Need</u> <u>Help</u>
1. All jobs with an eight hour TWA exposure of 85 dBA (50% does), have been identified.	<u>X</u>	_____	_____
2. Noise hazardous areas have been posted.	<u>X</u>	_____	_____
3. A formal list is available at the plant specifically designating hazardous and non-hazardous noise exposure jobs.	<u>X</u>	_____	_____
4. Records are available showing monitoring results for those jobs that were monitored. <u>NOTE:</u> A copy of monitoring results should be sent to D/0020 in Akron. The plant must retain its records for at least two years (OSHA).	<u>X</u>	_____	_____
5. When employees working on noise hazardous jobs are monitored, they are informed of the monitoring results (OSHA).	<u>X</u>	_____	_____
6. Engineering and/or maintenance efforts have been directed to reducing noise in those areas/jobs with an eight hour TWA exposure of 90 dBA or greater (100% dose) (OSHA). <u>NOTE:</u> Details of this effort must be documented. (Although noise enclosures and other treatments are used, noise should be engineered out of equipment.)	_____	<u>X</u>	_____
7. Hearing protection is worn in all noise hazardous areas.	<u>X</u>	_____	_____
8. Hearing protectors in use are capable of reducing employee noise exposures to below 85 dBA (<u>NOTE:</u> "NRR" or attenuation factor on hearing protector package. Consult with D/0020 in Akron if more information is needed).	<u>X</u>	_____	_____
9. Employees are provided a choice of two or three different types/varieties of hearing protection (OSHA).	<u>X</u>	_____	_____

V. HEARING CONSERVATION AUDIT CHECKLIST

(continued)

-2-

10. Personnel working at noise hazardous jobs receive annual training which includes at least the following information (OSHA).

_____ X _____

- a. The effect of noise on hearing
- b. The purpose of hearing protectors, the advantage/disadvantage and attenuation of various types, and instructions on selection, fitting, use, and care
- c. The purpose of audiometric testing and an explanation of the test procedures

(The past training program was not acceptable. A program covering all aspects has been drafted and will be implemented in the 2nd quarter of 1990.)

11. Care is exercised to insure a proper initial fit and correct use of all hearing protectors (OSHA). NOTE: With inset-type hearing protectors (ear plugs), it is important that the ear canal be clear and free of impacted wax. The ears should be examined for impacted wax before plugs are fitted. If impacted wax is found, it should be removed by a nurse or physician. Any employee complaining of an ear problem should be referred to medical personnel for examination.

_____ X _____

(Avon Lake medical is qualified to handle, but more staff is needed in order to accomplish. This program is being implemented during annual physicals.)

12. Audiometric examinations are provided for:

- a. All new hires (pre-employment)
- b. Transfers to noise hazardous jobs. Jobs have been identified and program has been implemented.
- c. Employees working on noise hazardous jobs (annually)

X _____

_____ X _____

X _____

NOTE: Details for conducting proper audiometric exams are provided in BFG's OHP Manual, Section 5.05.

NGC 12991

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|------|--|----------|-------|-------|
| 13. | Audiograms are permanently retained for each employee. | <u>X</u> | _____ | _____ |
| 14. | Employees with audiograms showing a standard threshold shift (STS) are notified of this fact in writing within 21 days (OSHA).
<u>NOTE:</u> Employees showing a STS can be retested within 30 days. | <u>X</u> | _____ | _____ |
| 15. | Employees exhibiting a STS are refitted with hearing protection and retrained in its use (OSHA). <u>NOTE:</u> Hearing protectors with greater attenuation may be needed. | <u>X</u> | _____ | _____ |
| 16. | Employees showing shifts in their hearing are provided follow-up counseling based on the BFG quarterly Audio Action Report and Section 5.0-5 of the OHP manual. | <u>X</u> | _____ | _____ |
| 17.* | The audiometer in use satisfies requirements of the ANSI standard S3.6-1969. | <u>X</u> | _____ | _____ |
| 18.* | A biological calibration is performed daily on the audiometer before use. <u>NOTE:</u> Results of these tests must be kept on record for at least one year. (Electronic is used and this is appropriate.) | <u>X</u> | _____ | _____ |
| 19.* | An acoustic check is performed on the audiometer annually. <u>NOTE:</u> Audiometer must meet requirements of ANSI S3.6-1969. (daily) | <u>X</u> | _____ | _____ |
| 20.* | An exhaustive calibration of the audiometer is performed at least every two years by the manufacturer or his approved agent. <u>NOTE:</u> (#18, #19, #20) Results of all checks and calibrations must be kept on record. | <u>X</u> | _____ | _____ |
| 21. | A copy of the OSHA noise standard is posted in the workplace or is available to employees. A notice of availability has been posted on the bulletin board (OSHA). | <u>X</u> | _____ | _____ |
| 22. | Any information provided by OSHA pertaining to the standard is made available to affected employees. | <u>X</u> | _____ | _____ |
| 23. | Questionnaire answered by: | | | |
| | Name <u>Jim Griffin</u> | | | |
| | Title <u>Supervisor Safety and Health</u> | | | |
| | Plant # <u>Avon Lake Technical Center</u> | | | |

*Numbers 17, 18, 19, 20 - Where an outside audiometric testing service is employed, it must be established that these requirements are satisfied.