

TO: Tom Huffman

~~TO:~~ JCL: ERT: MIH: AJO: RF

XF: RF

FROM: T. G. Grumbles (For the Team)

DATE: March 11, 1991

SUBJ: AD-HOC HEALTH AND SAFETY AUDIT TEAM

Interoffice  
Communication

VISTA

A team consisting of Keith Fogg, Brent White, Mike Lunsford, and Tom Grumbles met after the Safety Directors meeting of February 28 to develop a proposal for the development and implementation of a combined industrial hygiene and safety program audit program. The proposal is based on the consensus reached during the meeting on the desirability, content and general format of such a program. The consensus reached included the following:

1. To combine the industrial hygiene and safety audit programs into one safety and health program audit system.
2. To develop a program in-house that was quantifiable, verifiable and "check-list" driven. This would achieve a repeatable and consistent system.
3. The audit should assess compliance and program success.

Based on the above elements below is the team's general proposal for the audit program as well as recommendations on how to proceed.

#### GOAL OF OCCUPATIONAL SAFETY AND HEALTH AUDIT PROCESS

The Occupational Safety and Health Auditing Process is designed to provide Management with a quantitative measurement system to assess the quality and effectiveness of the manufacturing Occupational Safety and Health programs. This process is designed to be measurable and repeatable, to communicate the status of current programs in order to aid management in its goal of continuous improvement in the Occupational Safety and Health programs, and to be a tool for management in reaching regulatory compliance in those areas.

#### CONDUCT OF THE AUDITS

WHO: The audits would be conducted by a team of Vista personnel of varying size dependent on the size and complexity of the plant. The team would consist of:

- 1) At least one safety and health professional
2. Operations Management personnel - Plant Manager to Superintendent level is recommended.
3. Other - Medical, legal, etc. as appropriate

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HOW: The general protocol of the audits would be as follows:

1. Audit is scheduled and a team assembled
2. Prior to the audit, the team requests materials be sent for review to make on-site time efficient.
3. A pre-audit review is held with on-site management
4. A closing conference is held prior to the team leaving the site to review preliminary findings.
5. A report is written and distributed to the Plant Manager and Houston Manufacturing Management. The report will be a "report of findings" with few or no recommendations on addressing the "findings".
6. Follow-up on the report, as required, is started.

WHAT IS AUDITED: The elements in Attachment I are the elements of the plant's safety and health program that will be audited. It is recognized that some elements may not be applicable at all sites, particularly in the health standards area. Therefore, the audit sections will be independent modules.

RESOURCES TO DEVELOP: The team believes that the audit modules can be developed by individual safety directors and Houston in a period of approximately two months. The modules would then be reviewed and "calibrated" by the ad-hoc team to assure consistency of question format, verification required, and scoring rationale. This would probably take 2-3 days of meeting time and additional time for review and word processing. However, it is conceivable that the program could be developed in a 3 month time-frame. This would require management support of the resources, mostly man-hours, required and encouragement of plant managers to assure their safety director's participation. A sample module is attached (Attachment 2).

No attempt has been made to estimate total man-hours to develop.

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RESOURCES TO DO: Based on our past experience with industrial hygiene audits and the ILCI program at two plants, following is an estimate of the resources needed to conduct the first full round of audits.

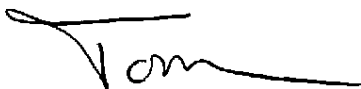
| PLANT     | TEAM SIZE | DAYS ON-SITE | ADDITIONAL DAYS (PREP, REPORTS, ETC.) |
|-----------|-----------|--------------|---------------------------------------|
| LCCP      | 4         | 5            | 2                                     |
| LCVCM     | 3         | 4            | 2                                     |
| LCLAB     | 3         | 3            | 2                                     |
| ABERDEEN  | 4         | 5            | 2                                     |
| OKC       | 2         | 2            | 1                                     |
| BALTIMORE | 3         | 4            | 2                                     |
| HAMMOND   | 2         | 1            | 1                                     |
| BLANE     | 2         | 2            | 1                                     |
| PREMIERE  | 2         | 2            | 1                                     |
| R&D       | 2         | 1 1/2        | 1                                     |

Additional costs would be incurred for travel.

It should be noted that several elements of this proposal differ significantly from the conduct of past Industrial Hygiene audits and require a conscious decision for management support. Specifically,

1. The use of operations personnel as team members is new. It is felt this has multiple benefits and will help meet the resources needed to accomplish the program.
2. The result of the audit will be a report of findings with few or no recommendations for addressing the audit results.
3. A specific audit follow-up procedure, such as quarterly reports, would be an integral part of the program.
4. This is a combined safety and health audit. Therefore, it is not clear who would administer the program. It is recommended that the manager of manufacturing, or his designee do this. The scheduling of audits and assembling of teams is not a trivial exercise.

The team has developed a preliminary list of assignments for module development and can proceed with the next step when directed. Please contact us if you have any questions on the above. Our general goal should be to develop the program and conduct at least one audit before the end of the fiscal year.



T. G. Grumbles  
(For the Team)

cc: K. Fogg, M. Lunsford-LCCP, Brent White-Okc

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**SAFETY AND HEALTH AUDIT PROGRAM MODULES  
OCCUPATIONAL SAFETY**

- I. Leadership and Administration
  - A. Safety & Health Policy
  - B. Management Commitment
  - C. OSHA Recordkeeping
- II. General Safety Rules
  - A. Personal Protective Equipment
  - B. Utility Hoses
  - C. Housekeeping
- III. Accident Investigation
- IV. Safety Control Permitting
  - A. Hot Work
  - B. Confined Spaces
  - C. Excavation
  - D. Lockout
  - E. General Permits
- V. Fire Protection and Training
- VI. Emergency Response
  - A. Emergency Plans
  - B. CAER
  - C. CTIRP
- VII. Process Safety
  - A. Relief Devices
  - B. P.M. Programs
  - C. Process Hazard Assessments
- VIII. Safety and Health Training
  - A. Safety Meetings
- IX. Mechanical Safety
  - A. Hand & Portable Tools
  - B. Compressed Gases
  - C. Welding/Cutting
  - D. Machine Guarding
  - E. Lifting Devices/Slings
- X. Electrical Safety
- XI. Crane Safety
- XII. Material Handling
- XIII. Walking/Working Surfaces
  - A. Ladders and Scaffolds
- XIV. First Aid
- XV. Contractor Safety
- XVI. General Safety Promotions
  - A. Off-the Job Safety

## OCCUPATIONAL HEALTH

- I. Health Hazard Identification and Evaluation
- II. Hazard Communication
- III. Hazwoper
- IV. Medical and Exposure Records
- V. Respiratory Protection
- VI. Hearing Conservation
- VII. Lighting and Ventilation
- VIII. Benzene
- IX. VCM
- X. Lead
- XI. Ethylene Oxide
- XII. Asbestos
- XIII. Radiation
- XIV. Laboratory

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## RESPIRATORY PROTECTION

MAJOR CATEGORIES  
SCORING SYSTEM

| <u>Category</u>                    | <u>Score Possible</u> |
|------------------------------------|-----------------------|
| 1. Training                        | 10                    |
| 2. Fit/Medical Testing and Records | 10                    |
| 3. Policy                          | 9                     |
| 4. Inspection                      | 9                     |
| 5. Selection                       | 8                     |
| 6. Maintenance                     | 8                     |
| 7. Care                            | 7                     |
| 8. Auditing                        | 7                     |
| 9. Breathing Air Quality           | 7                     |
| 10. Responsibilities               | 6                     |
| 11. Contractors                    | 5                     |
| 12. Work Area Surveillance         | 5                     |
| 13. Emergency Rescue (IDLH)        | 5                     |
| 14. Hose Fittings                  | 2                     |
| 15. Prescription Glasses           | 2                     |
| Total Points                       | 100                   |

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**MEASURE SYSTEM**  
**RESPIRATORY PROTECTION**

|                                                                  | <b>Total Points</b> |
|------------------------------------------------------------------|---------------------|
| 1. Training                                                      | 10                  |
| a. Are users instructed in the proper use of respirators?        |                     |
| b. Is training adequate?                                         |                     |
| c. Is training performed as required and records kept?           |                     |
| d. Is training evaluated?                                        |                     |
| e. Are users trained in proper selection of respirators?         |                     |
| f. Can employees demonstrate proper respirator use?              |                     |
| g. Are employees informed about the necessity of fit testing?    |                     |
| h. Are employees trained in the proper care of respirators?      |                     |
| 2. Fit + Medical Testing/Records                                 | 10                  |
| a. Is fit testing required?                                      |                     |
| b. Is fit testing performed as required?                         |                     |
| c. Is medical certification required?                            |                     |
| d. Are medical certification records kept?                       |                     |
| e. Is medical certification performed as required?               |                     |
| 3. Policy                                                        | 9                   |
| a. Does the plant have a written policy?                         |                     |
| b. Does the policy meet the requirements of OSHA 1910.134?       |                     |
| 4. Inspection                                                    | 8                   |
| a. Are inspections performed and records kept as required?       |                     |
| b. Are SCBA inspections performed and records kept?              |                     |
| c. Are escape respirator inspections performed and records kept? |                     |
| d. Are respirators inspected before and after each use?          |                     |

|                                                                           | Total Points |
|---------------------------------------------------------------------------|--------------|
| 5. Selection                                                              | 8            |
| a. Are respirators selected on the basis of hazard?                       |              |
| b. Are respirator systems NIOSH approved?                                 |              |
| c. Do respirators in use match the approved list?                         |              |
| d. Are respirators selected in accordance with ANSI standards?            |              |
| e. Does procedure cover respirators for specific jobs?                    |              |
| 6. Maintenance                                                            | 8            |
| a. Are respirators maintained properly?                                   |              |
| b. Does procedure identify who can repair respirators and to what extent? |              |
| 7. Care                                                                   | 7            |
| a. Are respirators cleaned and stored as required?                        |              |
| b. Are respirators disinfected as required?                               |              |
| 8. Auditing                                                               | 7            |
| a. Is an annual audit performed and records kept?                         |              |
| b. Are uncertified employees allowed to use respirators?                  |              |
| 9. Breathing Air Quality                                                  | 7            |
| a. Is breathing air quality checked as required?                          |              |
| b. Are records of quality checks kept?                                    |              |
| c. Are air cylinders marked as required?                                  |              |
| 10. Responsibilities                                                      | 6            |
| a. Are responsibilities assigned?                                         |              |
| 11. Contractors                                                           | 5            |
| a. Are contractors in compliance?                                         |              |

|                                                                                    | Total Points |
|------------------------------------------------------------------------------------|--------------|
| 12. Work Area Surveillance                                                         | 5            |
| a. Is work area surveillance performed as required?                                |              |
| 13. Emergency Rescue (IDLH)                                                        | 5            |
| a. Are IDLH emergency rescue procedures/ performance in compliance with standards? |              |
| 14. Hose Fittings                                                                  | 2            |
| a. Are fittings used on respiratory equipment unique and common for all equipment? |              |
| 15. Prescription Glasses                                                           | 2            |
| a. Are prescription glasses and inserts provided?                                  |              |

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