

CONOCO CHEMICALS: INDUSTRIAL HYGIENE AUDIT SYSTEM

- Basic Goals:
1. To assure that all feasible steps are being taken to adequately protect the health of Conoco Chemicals employees.
 2. To assure compliance with federal and local regulations.
 3. Assess adherence to company policies and good practice.
 4. Identify areas of need based on the above and make recommendations to aid in meeting those needs.

Procedure: Each plant will be audited at least every two years with actual frequency determined by need. The audit will be conducted in three phases as outlined below.

1. Pre-Audit - prior to the audit the plant will be contacted to arrange a time of visit agreeable to all. The time spent in the plant will vary dependent on size of the plant and extent of the existing program.

The plant to be audited will be notified of the audit criteria to enable preparation of necessary materials for review and assure the availability of key personnel to be interviewed.

2. Site Visit - the on site audit will consist of two basic parts.
 - a. The majority of the audit will be performed "in-office". An opening conference will be held with management and other affected staff personnel to describe the purpose and process of the audit. The major activity will involve review of written programs, air sampling data, recordkeeping, and overall administration of the program. The specific aspects of this review are attached as Appendix I.
 - b. The second phase of the audit will involve a walk-through inspection of the plant. This walkthrough will be done in OSHA style to identify obvious areas of non-compliance as well as allow for an assessment of administration and success of written programs.
 - c. A closing conference will be held with appropriate plant management before the audit team leaves the plant. Audit findings, preliminary recommendations, and report format and distribution will be discussed.
3. Post-Audit - A written report of the audit findings will be addressed to the plant manager, with a copy to the Vice President of Operations, General Manager of Manufacturing, and Medical Director.

Audit Team: The audit will be conducted by the Director of Industrial Hygiene, a Corporate Medical Department Hygienist, and a Person involved in hygiene activities from another Conoco Chemicals Plant.

INDUSTRIAL HYGIENE AUDIT

ON-SITE CRITERIA

The following items will be considered where applicable to the given facility or operation under review. This list is a guideline and not intended to be all inclusive or totally limiting.

A) Program Administration

- 1) Definition of Responsibilities (Departments, People)
- 2) Structure of the program
- 3) Administration of the program
- 4) Communications (in-plant, external)

B) Review of Written Programs

- 1) Chemical Exposure Abatement Programs
- 2) Written determinations
- 3) Portions of Safety Procedures with reference to industrial hygiene procedures (if applicable)
- 4) Other specific programs (i.e. Respiratory protection, education programs) will be reviewed at other times during the audit.

C) Plant Recognition of Hazards

- 1) Chemicals present in the plant
- 2) Current list of chemicals
- 3) Availability of MSDS's or similar information on chemicals in the plant
- 4) Communication with the purchasing group
- 5) Review of new chemicals or new uses of chemicals in the plant
- 6) Periodic review/updating of material
- 7) Inventory of radiation devices

D) Hazard Evaluation Programs

- 1) Sampling program review
 - a) what agents/chemicals are sampled
 - b) sampling frequency
 - c) criteria for sampling frequency
- 2) Program Administration
 - a) placement of sampling devices
 - b) observation of sampling
 - c) job/task information for overexposure determinations
 - d) sample retrieval and labeling
 - e) sample storage
- 3) Sample Analysis
- 4) Reporting of Results
 - a) format
 - b) distribution
- 5) Input to Industrial Hygiene Computer Storage and Retrieval System
- 6) Sampling Records
- 7) Sampling Equipment and Methods
 - a) what's available
 - b) Calibration of equipment (frequency, records, methods)

E) Hazard Control

- 1) Review of specific control procedures
- 2) Input and review of proposed process or equipment changes
- 3) Evaluation of newly installed controls
- 4) Ventilation systems review
 - a) needs and use
 - b) testing of devices (hoods, exhausters, etc.)
 - c) maintenance of systems
 - d) records of inspections
- 5) Respiratory Protection Program
 - a) review of program for compliance with OSHA regs
 - b) administration of program
 - c) record keeping
- 6) Other personal protective equipment
 - a) need
 - b) selection
 - c) availability and use
- 7) Radiation
 - a) surveys by qualified person
 - b) test of on/off mechanisms for sealed sources
 - c) permits

F) Review Of Exposure Records

- 1) Regulatory compliance
- 2) Compliance with company policies
- 3) Record keeping

G. Education Programs

- 1) Present program review
- 2) Frequency of training
- 3) Administration of programs

H) Medical Surveillance Programs

- 1) Administration of program
- 2) Results of review of program previously done by Dr Massad will be discussed

I) Storage and Handling of Hazardous Materials

- 1) Facilities
- 2) Equipment used
- 3) Methods used
- 4) Labeling/identification in plant

J) General Sanitation

- 1) Eating facilities
- 2) Restrooms
- 3) Change rooms
- 4) Potable water supply
- 5) General housekeeping

K) Employee Awareness of Hazards

- 1) Personnel interviews to be conducted
- 2) Work practices observed

L. Miscellaneous

- 1) Sign-posting in plant
- 2) Light levels in work areas