

Checklist for Evaluating Chemical Exposure

A. EVALUATE THE POTENTIAL FOR AIRBORNE EXPOSURE

1. Exposure Sources (rank high/medium/low)

- a. Types and amounts of chemicals in use or created by combustion or decomposition.
- b. Visible leaks, spills or emissions from process equipment, vents, stacks or from containers.
- c. Settled dust which may be resuspended into the air.
- d. Open containers from which liquids may evaporate.
- e. Heating or drying which may make a chemical more volatile or dusty.
- f. Odors. Consult an odor threshold table to get an estimate of concentration.
- g. Do air monitoring where the presence of a contaminant is suspected but cannot be verified by sight or smell.
- h. Visualize exposure by taking photographs or videotape.

2. Job Functions (estimate hours/day)

- a. Manual handling in general.
- b. Active verb job tasks such as grinding, scraping, sawing, cutting, sanding, drilling, spraying, measuring, mixing, blending, dumping, sweeping, wiping, pouring, crushing, filtering, extracting, packaging.

3. Control Failures

- a. Visible leaks from ventilation hoods, ductwork, collectors.
- b. Hoods which are located too far from the source or which are missing or broken.
- c. Ductwork which is clogged, dented or has holes.
- d. Insufficient make-up air to replace exhausted air.
- e. Contamination inside respirators.
- f. Improperly selected, maintained or used respirator.
- g. Lack or inadequate housekeeping equipment.
- h. Lack of or inadequate doffing and laundering procedures for clothing contaminated by dust.

B. EVALUATE THE POTENTIAL FOR ACCIDENTAL INGESTION

1. Exposure Sources(rank high/medium/low)

- a. Types and amounts of chemicals in use or created by combustion or decomposition. Solids are of primary concern.
- b. Contamination of work surfaces which may spread to food, beverage, gum, cigarettes, hands or face.
- c. Contamination of hands or face which may enter mouth.
- d. Do wipe sampling to verify the presence of a contaminant on work surfaces, hands, face, and so forth.

2. Control Failures

- a. Contamination of inside of respirator which may enter mouth.
- b. Contamination of lunchroom surfaces which may spread to food, beverage, gum, cigarettes, hands or face.

C. EVALUATE THE POTENTIAL FOR SKIN CONTACT AND ABSORPTION

1. Exposure Sources

- a. Types and amounts of chemicals in use or created by combustion or decomposition. Check dermal absorption potential. Do not rely upon OSHA SKIN notations. Assume most liquids will penetrate skin.
- b. Consider whether one chemical can act as a "carrier" for other chemicals.
- c. Visualize dermal exposure by taking photographs or videotape.

2. Job Functions

- a. Dipping hands into material.
- b. Handling of wet objects or rags.

3. Control Failures

- a. Contamination of inside of gloves.
- b. Improperly selected, maintained or used gloves.
- c. Improperly selected, maintained or used chemical protective clothing.
- d. Lack of or inadequate facilities for washing of hands and face close to work areas.
- e. Lack of or inadequate shower facilities.