

Lead Battery Manufacturing

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Environmental Controls

Employees may be exposed to lead while servicing and maintaining environmental controls.

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Normally, employees are not exposed to hazardous levels of airborne lead contaminants while servicing and maintaining waste water treatment systems. However, while handling lead-bearing wastes, sludge, and filters employees may come in contact with lead-containing wastes.



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Waste Water Treatment

Potential Sources of Exposure

- Liquid lead waste may splash on equipment and become airborne if it dries and becomes disturbed.
- Employees may contact leaded waste products while removing and transporting recovered lead, filter cake, or sludge.
- Employees may contact lead-containing materials during maintenance, repair and cleanup operations.



Figure 1
Waste water treatment area

Possible Engineering and Work Practice Controls

- Ensure that appropriate PPE is provided and used when handling leaded materials.
- Transfer recovered lead in covered or closed containers.
- Clean up spills and water mists, when necessary, to prevent leaded materials from drying.

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Air exhausted from ventilation systems is vented to cyclones, scrubbers, and bag houses for particulate removal. Dust must be removed from the separator (air pollution control equipment) and transported to storage, recycle streams, or to off-plant receivers. Dust collection systems can be a significant source of lead exposure if not properly operated, cleaned, and maintained.

Bag House

Potential Sources of Exposure

- Employees are at high risk of overexposure to lead dust:
 - While cleaning and maintaining dust collection systems (cyclones and bag houses).
 - While handling and transporting materials that were removed from dust collection systems (cyclones and bag houses).
 - While working near improperly maintained dust collection systems.



Figure 1
Bag house

Possible Engineering and Work Practice Controls

- Enclose or cover containers used to transport lead from dust collection systems.
 - ▶ [Dry Type Dust Collectors Dust Disposal](#)
 - ▶ [Dry Type Dust Collectors Discharge Valves 1](#)
 - ▶ [Dry Type Dust Collectors Discharge Valves 2](#)
- When working on or entering ventilation or dust-control equipment for maintenance or cleaning, implement proper permit required confined space entry and energy-control procedures.
- Use appropriate [Personal Protection Equipment](#).
- Ensure that dust-control equipment is designed, operated, and maintained properly on a scheduled basis to prevent breakdown and release of lead to the ambient environment.
 - [Dust Control Handbook: Fabric Collectors](#). OSHA, Bureau of Mines, and the U.S. Department of the Interior (1987, February), 29 pages. This section discusses how baghouses work, types of baghouses, advantages and disadvantages of each type, common operating problems and solutions, startup and shutdown procedures, and preventive maintenance procedures.
- Do not vent combustion gasses to bag houses because the moisture in their gasses will clog the filter materials.

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