

Design of Changing Rooms and Washing Facilities

Aim of the Guidance Note

This guidance note provides advice on how to design changing rooms and washing facilities for lead smelters, lead mines and battery manufacturing plants in order to reduce occupational exposure.

The lead industry, represented by the International Lead Association (ILA), is committed to the safe production and use of lead, to the benefit of the global economy and society in general, whilst safeguarding human health and minimising the impact of its operations on the environment.

ILA members subscribe to a set of principles embodied in the **Lead Action 21 Charter***. In the spirit of that Charter, a series of Guidance Notes has been produced to help inform employers and workers around the world on how to work safely with lead.

[*ila-lead.org/responsibility/la21-charter](http://ila-lead.org/responsibility/la21-charter)



Individual hot shower unit, UK



In-house laundry, Colombia

There are three main principles to consider when planning the design of changing room and washing facilities:

- Location
- Segregation
- Containment

Location

It is important to ensure that access to the 'leaded areas' of a plant is through a lead-free area. Ideally, all employee facilities, including changing rooms, work clothing storage (work clothing is clothing worn in leaded areas), safety equipment, washing facilities and the canteen, should be housed in a single building on the perimeter of the plant. This will ensure that personnel do not enter or leave the operating areas without passing through the changing rooms and administrative staff do not have to enter the leaded operating areas.

Segregation

The changing rooms should be segregated, one 'clean' changing room will be for employees starting work and the second 'plant side' changing room will be for employees finishing work.

The 'clean' changing room is joined to the 'plant side' changing room by a corridor so that personnel can pass through without leaving the amenities block. Ideally access should be through a corridor that uses a one-way door, which means employees entering the plant cannot leave without going through the plant side washroom.

The corridor leading to the 'plant side' changing room should take employees past the clothing and equipment store where they can collect clean overalls and any necessary safety equipment.

Disposable, or washable, sandals or socks should be available in the clothing store to be worn on the feet for hygiene purposes. At the end of a shift, this footwear should be collected in a covered bin for disposal in the furnace or other suitable disposal system.

Only when employees have changed into work clothing and are wearing the appropriate safety equipment should they leave the changing room by a single exit to the plant.



Plant changing room Colombia



Clean work clothing is sorted and returned to the employees lockers, Colombia



A Clean Locker room, UK

Containment

At the end of a shift, or to take a meal break, employees should enter the 'plant side' changing room to clean their boots/shoes.

Once their boots or shoes are clean, employees should enter the lobby area of the changing room to remove all work clothing, including boots and shoes. All used clothes are then left in a dedicated sealed bin in the lobby.

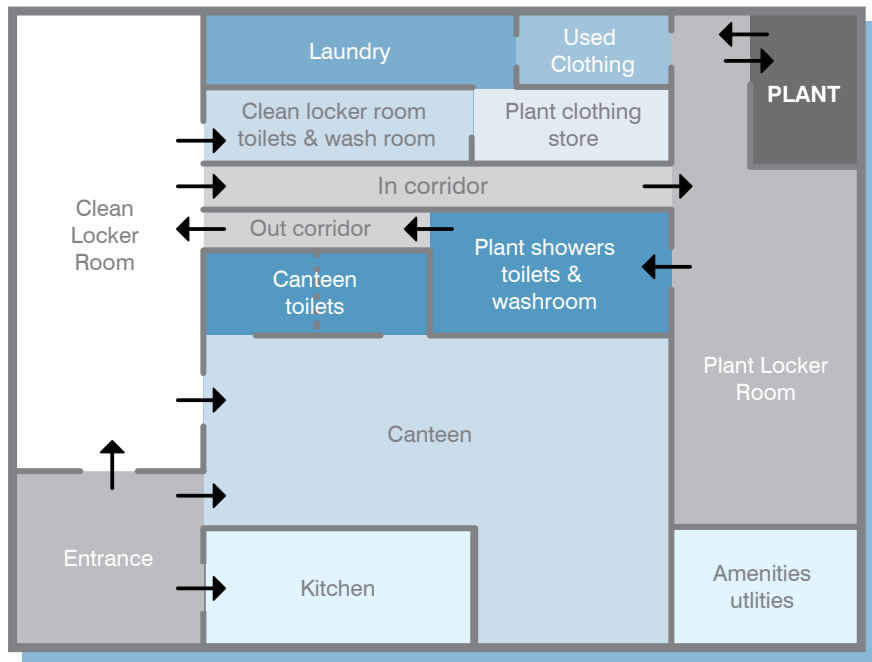
More than one collection bin can be used to segregate overalls, gloves, socks etc. The bins should also be lined with water soluble bags which can be put directly into a washing machine thereby reducing the risk of the personnel working in the laundry being exposed to lead dust.

See also: www.win-health.com/soluble-laundry-bags.html
and www.acedag.com/hot-water-soluble-laundry-bags.html

Employees should then pass through another one-way door

into an automatic shower and washroom area, equipped with soap dispensers, clean towels, toilets and automatic, electronic sensor controlled or foot pedal controlled taps. From this shower area, another one-way door leads employees back into the 'clean' side changing room where they can put on their own clothes at the end of a shift, and then go for a meal break.

An example of a suitable design for a changing room (This is not to scale)



Individual Shower Cubicles, UK

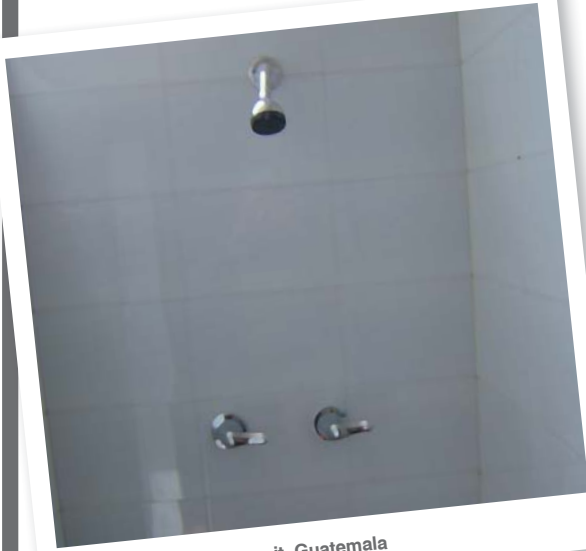


Foot controlled wash basin, UK

Checklist

This strategy and the plant changing room design minimises the risk of lead exposure for everyone who works in the plant. However, there are a number of points to bear in mind:

- ✓ The entire washroom, changing rooms and canteen facility should be air-conditioned, but the air pressure in the plant changing room should be less than elsewhere in the complex so that lead dust cannot enter the clean areas.
- ✓ Ample, clean drinking water must be freely available throughout the plant.
- ✓ Safety equipment must be returned to the safety store at the end of each shift for cleaning.
- ✓ To maintain the highest level of segregation, access to and from the canteen and laundry must be carefully considered.
- ✓ Similar facilities should be built side by side for male and female workers, if both sexes work in the plant.
- ✓ Smoking must be banned – the segregation strategy will be undermined if personnel are allowed to take cigarettes into the plant and then bring them back into clean areas.



Individual hot shower unit, Guatemala

Additional information

International Lead Management Center

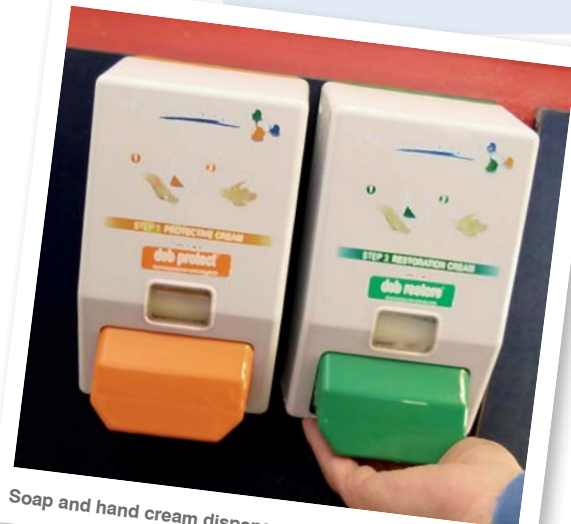
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Soap and hand cream dispensers, UK

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