



## The Design of Lead Plant Changing Rooms and Washing Facilities

The main principles of good design for a lead plant changing room and washing facilities are:

1. Location
2. Segregation
3. Containment

### 1 Location

The changing room should be located on the perimeter of the lead plant so that access to the "leaded" area is only possible through a lead free area.

Locate all amenities for those employees working in the lead areas in the same building as the changing rooms, that is, works clothing, safety equipment, washing facilities and canteen.

### 2 Segregation

Segregate the clean and plant changing rooms with access from the clean side to the plant side through a corridor that passes the plant clothing and safety store. Works personnel should leave all their own clothes, including underwear, in their designated lockers. The lockers should have coded locks so that there is no need to take any keys onto the plant. There should be access to a bathroom and toilet from the clean changing room so that personal matters are attended to prior to work.

Access to the plant from the clean locker room should be via a corridor with a one-way restaurant door so that once you pass through it you cannot go back into the clean area without passing through the washroom. The corridor should take the works personnel past the clothing store where they can collect clean overalls and or any necessary safety equipment. As you enter the corridor personnel should place a simple disposable or washable sandal or sock on their feet for hygiene purposes. These socks or sandals are discarded at the end of the shift or placed in the wash-bin. When works personnel have changed into their works clothing and are wearing the appropriate safety equipment they should leave the changing room by the only exit to the plant.

### 3 Containment

At the end of their shift or to take their meal break plant personnel should enter the only entrance to the changing room. Outside the entrance there should be ample boot cleaners, which do not need to be electric powered vacuum brush cleaners, upturned wet brushes in standing water will do. After cleaning their boots employees should enter the lobby area of the changing room and remove their boots. Then all contaminated works clothing should be removed and placed in the "used clothing bin" located in the lobby of the changing room. This should be a sealed bin with an envelope slot in facing the entrance to the plant so that contaminated clothing can be pushed into the bin without creating any lead laden dust.



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The "used clothing bin" can have more than one slot if segregation of the various items of clothing is required, for example socks, gloves, overalls and so on. Furthermore water soluble bags can be used to line the bins so that full bags can be placed straight into the washing machines thereby avoiding exposure risks to the amenity and laundry attendants as they sort through the clothing.

Works personnel should then proceed to the shower and washroom area through another one way door, so that personnel cannot return to the plant room from the shower area. Ideally, the design should be such that operators must pass through automatic showers so that everybody has to shower as they leave the plant. Toilets, soap dispensers and clean towels and so on, should be available in the shower room.

"Clean" plant personnel can then exit the washroom and return to the clean changing room through another one way door. Personnel can then change back onto their clean clothes and either leave the plant at the end of their shift or go to the canteen for their meal break.

The above strategy and design for a plant changing room minimizes the risk of lead exposure. However, there are a number of additional points to bear in mind:

- a) The whole washroom, canteen and changing facility should be air conditioned, but the pressure in the plant changing room should be less than elsewhere so that lead dust does not enter the clean areas.
- b) As plant personnel do not have any money, clean drinking water must be freely available on the plant.
- c) Safety equipment must be returned to the safety store at the end of each shift for cleaning.
- d) Smoking must be banned otherwise plant personnel will undermine the segregation strategy if they are allowed to take cigarettes onto the plant and then return to the clean areas with them.
- e) Access to and from the canteen and laundry must be carefully considered to maintain the highest level of segregation.
- f) Similar facilities should be built side by side for men and women if both sexes work on the plant.



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