Lead Delivery Procedure

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Description

Clean and transport 900 bricks totalling roughly 12 tons, split into 6 pallets, of lead from the fairport mine in Clevelend Ohio to SNOLab. The bricks will be washed and wrapped in plastic on the surface before being transported underground and stored in the SNOLab near the SNO+ detector. Bricks will be palletized prior to transport underground.

Identification of Hazards

1. Ingestion of lead dust
2. Contamination of personnel
3. Contamination of lab space
4. Personal hazard of dropping lead bricks

Mitigation of Hazards

1. When handling unwrapped bricks personel will wear filter masks, disposable Tyvek suits, safety glasses, and latex/nitrile gloves.
2. Bricks will be wrapped on the surface prior to being moved underground.
3. Unwrapped bricks will only come into contact with plastic (disposable materials).
4. Don't lift more than one brick at a time. Always wear steel-toed shoes while handling individual bricks.

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Procedure

1. The lead will arrive on 6 pallets totalling 900 bricks (12 tons) which will be transfered via forklift to an above ground lab for cleaning on-site.
2. Wearing all of the required clothing (Tyvek suit, safety glasses, filter masks, and disposable gloves), the bricks will be individually unpacked from the pallets to be cleaned.
3. Cleaning will consist of using ethanol to scrub the surface of each brick for contaminents and wrapping the bricks in Saran wrap.
4. Each brick will then be placed on a new clean pallet at 2 tons per pallet.
5. Each pallet will then be wrapped in two layers of plastic before transport underground.
6. The pallets will be individually transported underground to the SNOlab car wash.
7. The first layer of plastic will be removed and disposed of and the pallets will be placed near the SNO+ detector until usage.