Contributing Factors
(Master Logic Diagram - MLD)

Risk of Adverse Health Effects of Airborne Lunar Dust Exposure

- Ocular injury from dust (1)
- Pulmonary irritation and fibrosis (2)
- Allergic reaction (3)
- Dermal effects (skin abrasion) (4)

MLD - Version 1
(iteration 5)

As of 8/20/09
Contributing Factors
(Master Logic Diagram - MLD)

Ocular injury from dust (1)

- Excessive amounts of dust in habitat environment (1a)
  - Maintenance of filter system releases dust
  - Filter system is inadequate
    - Linked to Engineering
  - PPE is not used or is ineffective
    - Linked to Med Ops

- Eyewash not available in timely fashion (1b)
  - Linked to Med Ops

- Exposure occurs before dust surface is passivated (1c)
  - Passivation rates are not determined
  - Effect of passivation on standards unknown

Contributing Factors
(Master Logic Diagram - MLD)

Pulmonary irritation and fibrosis

- Repeated exposures above safe limit as a result of inadequate airborne dust removal (2a)
  - Maintenance of filter system releases dust
  - Filter system is inadequate
    - Linked to Engineering
  - PPE is not used or is ineffective
    - Linked to Med Ops
  - Passivation rates are not determined
  - Effect of passivation on standards unknown
- Exposure occurs before dust surface is passivated (2b)
Contributing Factors
(Master Logic Diagram - MLD)

Allergic reaction
(3)

Repeated exposures as a result of inadequate airborne dust removal
(3a)

Maintenance of filter system releases dust

Filter system is inadequate

Linked to Engineering

PPE is not used or is ineffective

Linked to Med Ops

No screening for allergic sensitivity to lunar dust
(3b)