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Buffalo District



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Formerly Utilized Sites Remedial Action Program (FUSRAP)

DISMANTLING OF
LINDE BUILDING 14

TONAWANDA, NEW YORK



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The Linde Site



Record of Decision

- Building 14 - April 2003

- World class R&D facility
- Bold vision for expansion
- NYS Empire Development Zone
- Remedial action supports future expansion plans





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Purpose of Information Session



Provide information concerning
the removal of Building 14



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Building 14 - History

In the 1940s, Building 14 served as a Manhattan Engineer District testing laboratory & uranium separation facility:

- Prior decontamination (1996-99) was effective in removing accessible contamination (safe for workers)
- Inaccessible contamination remains in areas such as in load bearing walls, beneath concrete floor, etc.



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Experience at Work

U.S. Army Corps of Engineers managing all cleanup work at Linde

- Proven track record in environmental cleanup
- On-site since 1997

Shaw Environmental Inc. will remove Building 14

- Experienced contractor in radiological clean up
- On-site since 2000
- Successfully removed several buildings from site
- Excellent on-site safety record (over 1600 days)
- Over 165,000 tons of material removed to date



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Decision to Remove Building 14

The Removal of Building 14 is part of the overall cleanup plan for the Linde site:

- Corps needed to remove contaminated soils in inaccessible portions of Building 14 area
- Several cleanup options were examined
- Provides certainty for long-term use of the property
- Record of Decision signed April 2003 with community involvement



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Thorough and Coordinated Planning

Planning:

- Began developing project work plans in May 2003
- Coordinated with:
 - Praxair
 - Local safety and school district officials
 - State and Federal environmental officials
- Examined meteorological conditions that may impact work



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Thorough and Coordinated Planning

Building 14





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Thorough and Coordinated Planning

Site Preparation:

- Established perimeter fencing
- Relocated utility tunnels & Improved access roads
- Conducted hazardous material surveys (asbestos, lead paint, etc.)
- Evaluated dust control measures (industry standards and new technologies)
- Conducted radiological surveys to pinpoint contaminated areas



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Thorough and Coordinated Planning

Utility Tunnel Replacement





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Safe • Methodical • Phased Dismantling & Removal

4-month process (starting in April)

- General Phases
- Asbestos removal
- Precision dismantling of building interior
- Sectioned removal of roof structure
- Dismantling of superstructure
- Excavation of contaminated soils
- Disposal of all material at permitted facilities out of state
- Final surveys to ensure compliance with cleanup criteria



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Safe • Methodical • Phased Dismantling & Removal

Environmental Monitoring

- No reportable off-site releases
- Perimeter high-volume air monitors
 - 11 located throughout site
 - Including Holmes Elementary School
 - 1 background monitor off-site
- Environmental dosimeters at the site boundary
- General area low-volume air monitors
 - Adjacent to work area



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Typical Air Monitor



Alerting dust monitor



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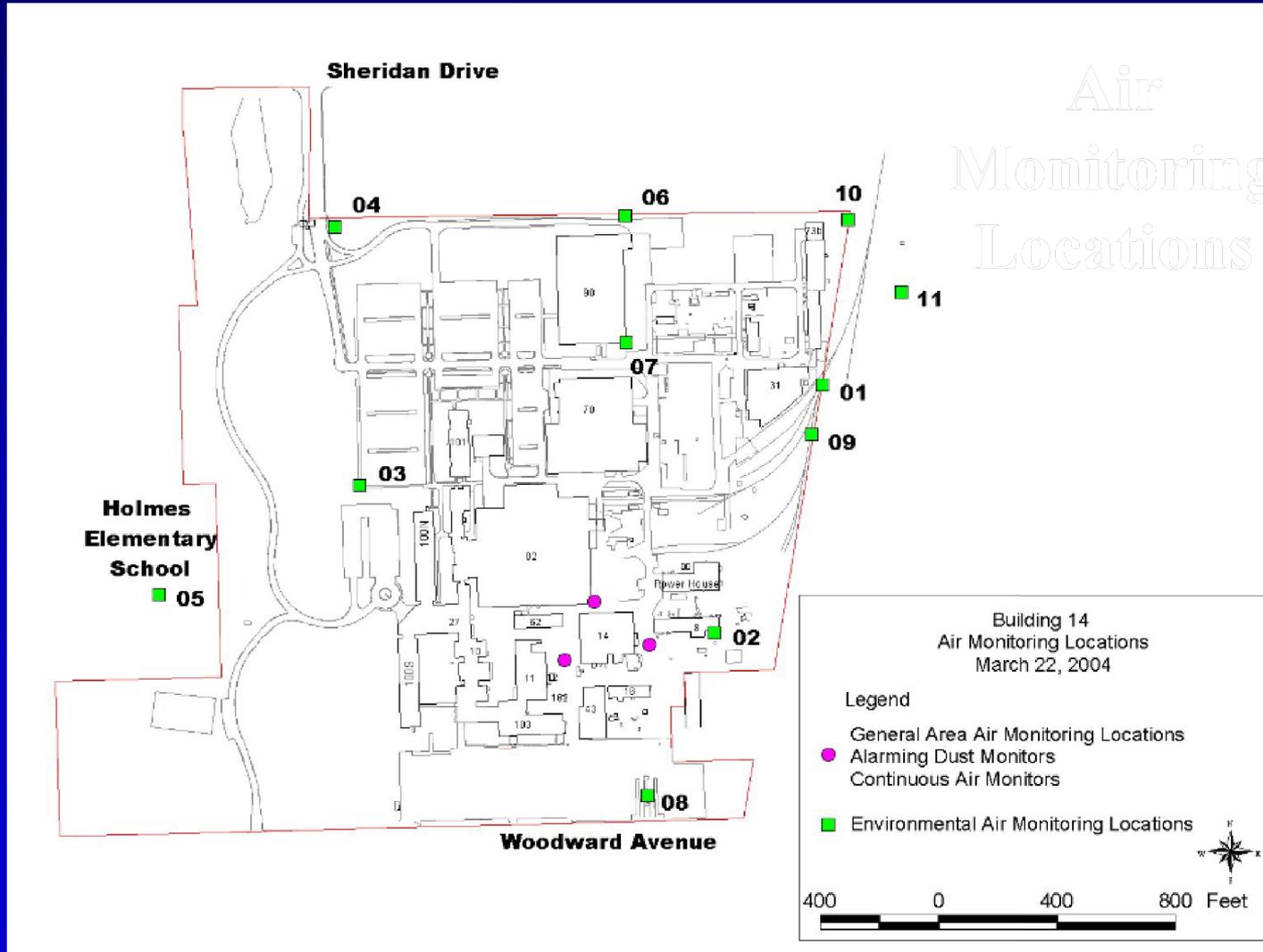
Environmental Monitoring, cont'd

- Alerting Dust Monitors
 - Adjacent to work areas
- Alerting Radiological Air Monitors
 - Adjacent to work areas



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Safe • Methodical • Phased Dismantling & Removal





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Safeguarding the Health & Safety of the Community and Workers

Performed a hazard analysis to evaluate possible
accident scenarios

- Under all scenarios, radiological levels are under NY State and Federal Clean Air Act standards
- Will not require emergency response for an airborne release

Precise Excavation Technique





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Safeguarding the Health & Safety of the Community and Workers

Safety of Community

- Coordinated with local safety officials & school district
- Will cover and secure all debris during off-hours
- Will ensure safe transport of materials through exclusive use of rail shipments
- Established an extensive Environmental Monitoring Program
- Dust Suppression
- Water Runoff Controls & Treatment



Exclusive-use containers



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Safeguarding the Health & Safety of the Community and Workers

Safety of Workers

- Strict adherence to OSHA regulations & Corps' safety manual
- Medical monitoring
 - Includes urine bioassay
 - ⑩ Entrance, exit, special event bioassay
 - ⑩ Conforms with Federal & State regulations and national standards
 - ⑩ Life-time record retention





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Wrap - Up

We will:

- Use trained radiological workers
- Perform daily safety inspections
- Require strict adherence to our approved work plans
- Remove & dispose of contaminated materials to permitted facilities out of NY State
- Meet cleanup criteria in the Record of Decision for Building 14



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Conclusion

We will:

- Dismantle Building 14 in a safe, methodical and controlled manner
- Remove the contaminated materials from the Linde site, permanently



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Questions

- One person speaks at a time
- State your name
- Speakers are limited to 5 minutes
(to allow everyone an opportunity to speak)
- Please use the microphone when speaking