Soil Management Update

Office of Environmental Health and Safety

November 17, 2016
Columbia Point Soil

- Industrial uses over the past 300 years: a sewerage pumping station with coal-fired boilers, a manufacture gas plant and a municipal landfill.

- Large fairly homogeneous profile of fill extending to depths as much as 30 feet.

- Oil and hazardous materials (OHM) encountered some concentrations exceed “Reportable Concentrations”.

- All projects on campus require oversight by a Licensed Site Professional (LSP).
Over 500 soil samples (borings, test pits)
Campus Standards

- Goal – keep material on-site
- Standardized subsurface sampling
- Standardized Soil Management Plan
- Dust control and mitigation
- Soil demarcation barrier (plastic or rubber)
- Monitor vapor intrusion (sub-slab methane removal in buildings)
Soil Management Plan

- Licensed Site Professional (LSP) oversees
- Maximum reused on site either “as is” or crushed
- Extensive dust control measures
- Stockpile covering (sometimes not obvious)
- Daily report to Department of Environmental Protection (DEP)
- Work stoppage if air sample exceeds DEP threshold
- Contractor’s Safety Plan
Air Quality Monitoring

- Asbestos and other contaminants in soil are only a health concern if they become airborne
- Dust control measures are the best way to minimize health concerns
- Perimeter air monitoring program
  - Dust, VOCs, explosive gases
  - Asbestos – 4 sampling locations around each work site
  - Samples are sent to a lab and analyzed twice a day
  - Results are sent to DEP daily
  - Work with soil is stopped if samples show elevated level of asbestos or other contaminants.
Additional Requirements

- Wash water collected and filtered before recharge
- Clean cap placed under hardscape and over softscape (landscaping).
- Demarcation required everywhere – 2 layers under softscape and one layer under hardscape.
- Cap material tested (asbestos, SVOCs and 14 metals).
- Daily monitoring checklists filed by contractor, LSP rep.
- Daily cover checks monitored by LSP representative
Detailed Information on Each Stock Pile

- Screened Landfill — Covered with GeoMatrix-Fiber Mulch
- Topsoil/Loam — Covered with GeoMatrix-Fiber Mulch
- Demolished concrete structures
- On-site reclaimed asphalt, spread flat into an approximately 3-foot lift (Material was formerly a large stockpile.)
- Landfill — Covered with GeoMatrix-Fiber Mulch
- Landfill material with minor amounts of debris
- Imported processed fill material
- On-site Sand and Gravel Excavated from Bianculi Blvd.
- On-site reclaimed asphalt
- Lot S is the Current Location of the Active Stockpiling and Screening Processes. Stockpiles are covered with tarps or plastic sheeting during periods of inactivity.

Utility Corridor and Roadway Relocation
UMASS — BOSTON
Boston, Massachusetts

Current Stockpile Location Sketch
GZA Project No. 05.0033930.001.01
March 6, 2015
Not to Scale
Current Status of UCRR

- Linear construction generates a lot of excess soil ~190,000 tons
- Delays impacted start of new projects (R1 and parking garage)
- Excess soil will go:
  - into landforms (near the CPPS, the South Lot, the track area) and landscape areas under demarcation.
  - shipped off-campus – presence of asbestos requires disposal out-of-state
- Through 10/31/16 approximately 7,600 tons (240 loads) removed from the site.
- Approximately 15 trucks per day from 5-9 AM
- Air samples have not exceeded any regulatory limits
Education and Outreach

- Regular Construction Updates on soil-related activities
- Presentations to key groups on campus
- Meeting with individuals or departments with concerns
- Plain English summaries and all DEP approvals available on OEHS website
Questions?