

ATLANTIC YARDS ARENA AND REDEVELOPMENT PROJECT

Mitigation Monitoring

Presented by: Jeff Martirano (HDR)
Project Engineer

Presentation to the Atlantic Yards District Service Cabinet



- HDR Engineering, Inc. retained by ESDC in May, 2007 as the Mitigation Monitor for the Project
- Coordinate with the developer's On-site Environmental Monitor (OEM) to confirm compliance with environmental commitments in the FEIS and the Memorandum of Environmental Commitments (MEC)
- On-site a minimum of once a week:
 - Weekly meetings with the OEM and Mitigation Engineers (ME's)
 - Observe construction activities
 - Review project documentation

HDR's Role

The MEC stipulates the FEIS environmental commitments the developer must abide by to minimize the impact of the project and its construction on the community

Major requirements include:

- Air Quality Measures
- Noise Abatement
- Traffic Mitigation
- Rodent Control
- Soil Remediation
- Protection of Historic Buildings

Air Quality Measures pertaining to dust suppression include:

- Limiting speed of on-site vehicles
- Gravel cover at site exits
- Wheel washing stations at site exits
- Water spraying of dusty surfaces
- Dust control on drill rigs
- Rolldown tops required on open dump trucks



- A** Water spraying of a drill rig in the arena site
- B** Automated tire wash station at Pacific Street site exit
- C** Automated tire wash station in use

Air Quality Measures – Dust Suppression



- D** Gravel applied to Dean Street site exit
- E** Gravel applied to Block 1129 staging area exit
- F** 5 MPH Signage posted in the railyard

Air Quality Measures – Dust Suppression

Air Quality Measures pertaining to Particulate Matter (PM) and Volatile Organic Compound (VOC) monitoring include:

- Verifying proper position of monitors in accordance with wind conditions and site activity
- Reviewing on-site logbook of daily monitor readings



- A** PM Monitor on northwestern perimeter
- B** PM Monitor on Sixth Avenue Bridge
- C** VOC Monitor positioned on perimeter of gas station site on arena block

Air Quality Measures – PM and VOC Monitoring

Air Quality Measures pertaining to Diesel Particulate Filter (DPF) compliance:

- Required for non-road vehicles greater than 50 hp
- Required for concrete trucks and concrete pump trucks
- Equivalent effective technology can be submitted for review
- Ultra Low Sulfur Diesel (ULSD) fuel

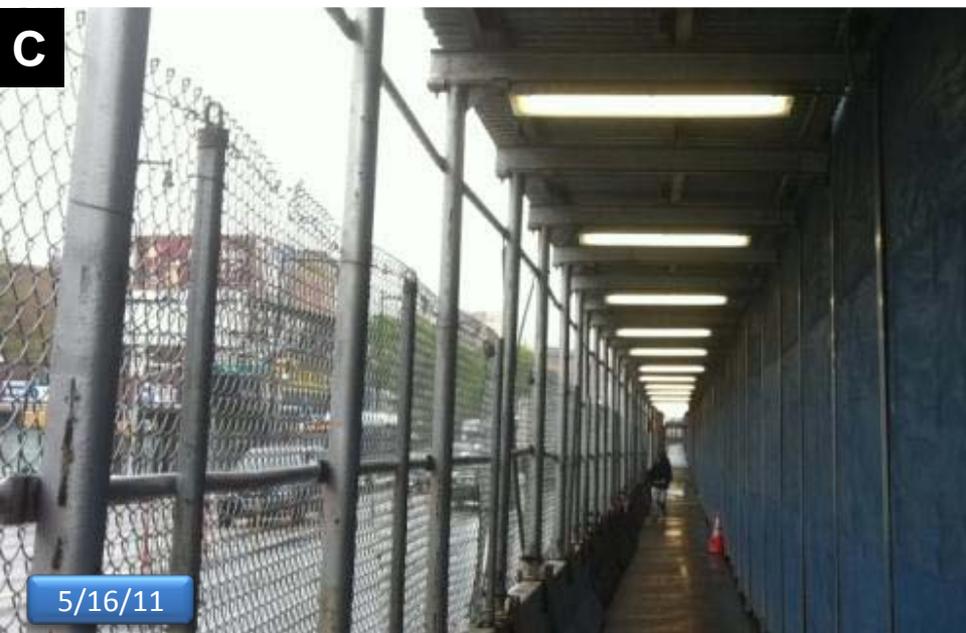


- A** DPF installed on drill rig and two compressors
- B** DPF installed on crane
- C** DPF installed on compressor

Air Quality Measures - DPF's

Noise Attenuation measures include:

- Electrical powered equipment as practicable
- Positioning and shielding noisier equipment away from residences and other noise sensitive uses
- Installing 8 foot or 16 foot tall noise attenuation fencing in designated areas
- Providing double glazed windows and air conditioning units to qualifying residents



- A** Hunt Site Trailer powered by temporary electrification
- B** Electrical junction box in Transit Site
- C** Perimeter lighting along Flatbush Avenue

Noise Attenuation Measures - Site Electrification



- A 16' fence constructed along Flatbush Avenue
- B 16' fence construction along Dean Street
- C ¾" plywood fencing being attached to 16' fence along Flatbush Avenue

Noise Attenuation Measures - Noise Abatement Fencing

Traffic Mitigation measures include:

- Maintenance and Protection of Traffic (MPT) Plans
- ‘Truck rules’ that specify routing, idling limits, and queuing locations
- Logistics plans for specific construction activities that could impact traffic



- A** Reversible lane on Flatbush Avenue
- B** Pedestrian safety measures on south side of Atlantic Avenue east of Flatbush Avenue
- C** 8' lane closure fencing erected along Atlantic Avenue

Traffic Mitigation – Maintenance and Protection of Traffic (MPT) Implementation



- A Trucks properly queued on Pacific Street between Carlton Avenue and Vanderbilt Avenue
- B Truck rules signage posted on Pacific Street
- C 'No Idling' signage posted along Atlantic Avenue

Traffic Mitigation - Truck Rules

Rodent control measures include:

- Rodent Control Program approved by the NYCDOB
- Bait traps at various locations on-site
- Preventing the stockpiling of garbage on-site



- A** Bait traps delivered to the site
- B** Bait traps deployed in arena site
- C** Bait traps deployed on Pacific Street

Rodent Control

Soil Remediation measures are enforced by NYSDEC

HDR confirms:

- FCRC is working with NYSDEC to comply with its Remedial Action Plans
- VOC monitoring is being performed when required
- VOC contaminated soil piles are covered
- FCRC is appropriately reporting discoveries of undocumented spills and underground storage tanks
- Soil manifest documentation

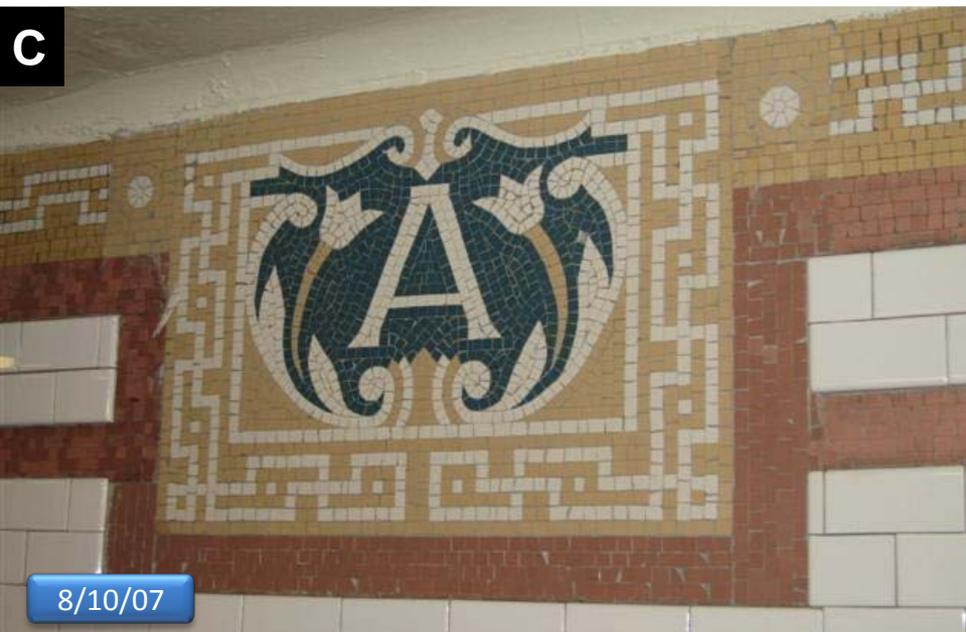


- A** RegenOx™ injections being performed in the U-Haul Lot
- B** UST on plastic in gas station site on arena block
- C** Covered contaminated soil pile on arena block

Soil Remediation Measures

Protection of Historic Resources measures include:

- Vibration monitoring during certain construction activities within 90 feet of Historic Resources
- Construction Protection Plans
- Historic American Building Surveys
- Phase 1B Archeological Reports



- A** Vibration monitor installed in historic building on Carlton Avenue
- B** Photo from the Phase 1B Archeological Study
- C** Atlantic Avenue Subway Station tile to be salvaged

Protection of Historic Resources

Contractors generally in compliance but there have been incidents of non-compliance observed and corrected, including:

- Isolated incidents of uncovered/partially covered soil piles
- Some drivers not following truck routes, queuing and idling requirements
- Delay of VOC monitoring at the gas station on the arena site
- Improper removal of an unknown fuel oil underground storage tank in arena site
- Initial inadequate placement/quantity of air monitors
- Equipment occasionally on site without proper DPF

Incidents of Non-Compliance

Additional information can be found on ESD's website at:

<http://www.esd.ny.gov/AtlanticYards>

Follow Up Information Available

