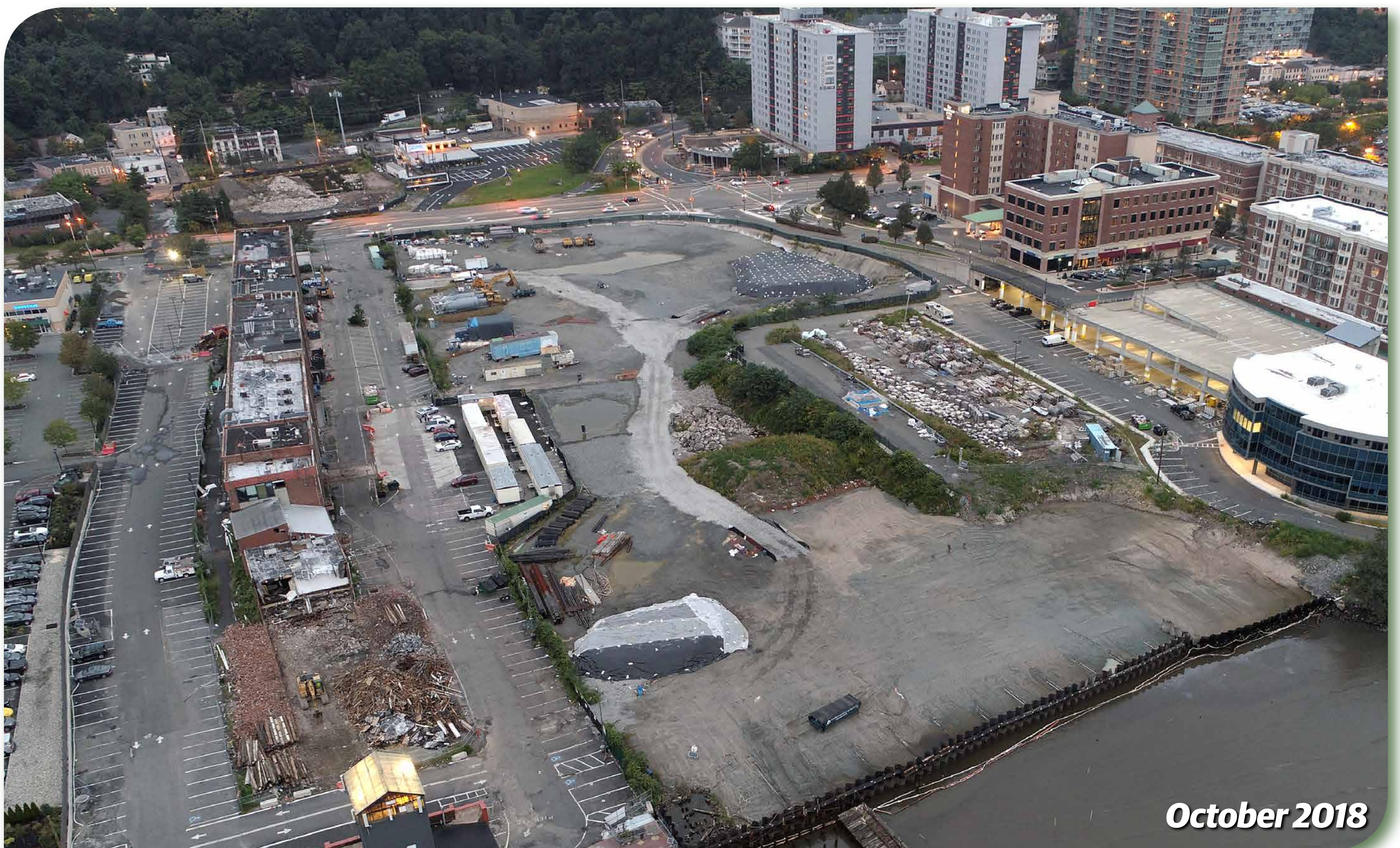
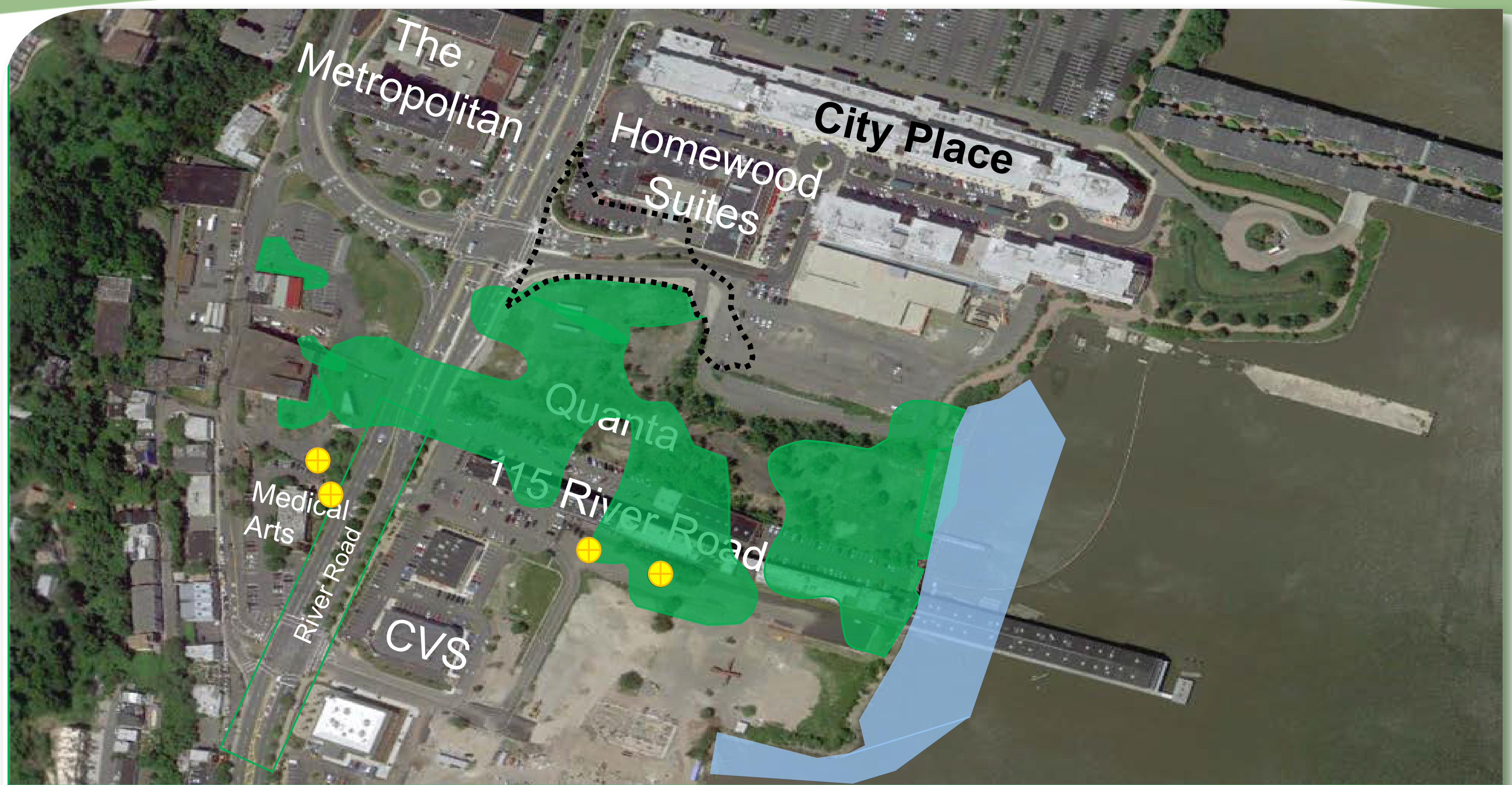


Quanta Resources Superfund Site: Yesterday & Today



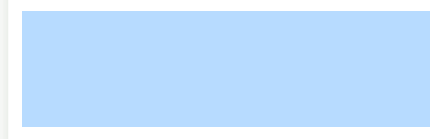

- Edgewater has a rich industrial history.
- Previous industrial practices from the late 1880s to the 1980s contaminated soil, surface water, river sediments, and groundwater.
- Cleanup at the Quanta site is underway.



EPA's Soil and Groundwater Cleanup Plan



LEGEND

- | | | | |
|--|---|---|--------------------------------------|
|  | In Place Solidification of Arsenic, Coal Tar, and Waste Oil |  | Deep NAPL Collection Wells |
|  | Groundwater Treatment (actual extent TBD) |  | HCAA Remedy (remedy being evaluated) |

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Soil solidification

- Mix cement into soil to permanently lock up heavy metals, coal tar, and waste oils so these contaminants cannot move

Deep collection well installation

- Install a deep well recovery system to capture “non-aqueous phase liquid” (NAPL)—mostly coal tar and used oil—to alleviate any future movement of that material

Groundwater treatment installation

- Permeable mat of reactive material which traps contaminants as groundwater flows through it
- Placed on top of underwater sediments to prevent contaminants in groundwater from reaching the Hudson River

High-concentration arsenic area (HCAA)

- Being evaluated under a separate schedule



www.epa.gov/superfund/quanta-resources
www.quantaremediation.com

Project Progress

Soil Cleanup Progress Before Summer Suspension

- Completed about 50% of the soil solidification
- Installed air monitoring system
- Constructed parking and walkways for the 115 River Road pier building
- Completed the majority of the new steel bulkhead along the shoreline to protect the river



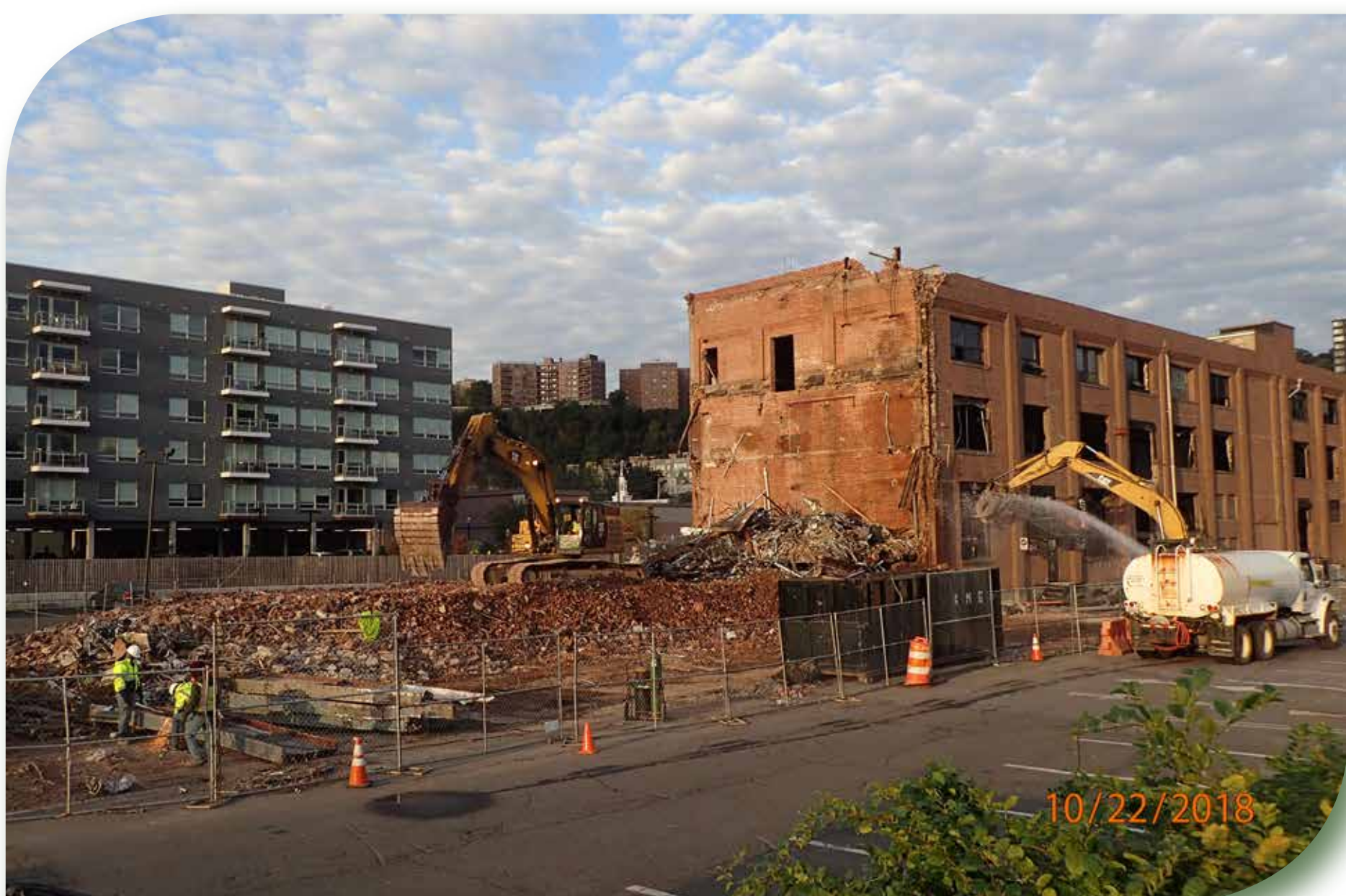
Demolition of 115 River Road Building

- Materials management
- Asbestos abatement (roofing materials) – no exceedances
- Interior and exterior demolition
- Continuous air monitoring for dust – no exceedances related to demolition

Before



During



During



Soil Cleanup Under Tents

- As a reflection of EPA's and Honeywell's commitment to protecting public health and the environment, tents will be used for almost all work, including debris management, loading trucks, and performing the intrusive soil cleanup.
- Tents are large fabric structures with aluminum frames, doors, lighting, and proper ventilation.
- Emissions and odors will be treated before being vented to the atmosphere.
- Workers will wear personal protective gear such as respirators inside the tents at the start of the project and periodically if needed.



Exterior of tent with carbon treatment



Soil remediation inside a tent

Photo courtesy of Northstar

Movable Tent Plan

Moving a tent structure by crane.



Photo courtesy of Northstar

Tent Movement

- Two tents will move across the site over the treatment areas.
- When treatment is done in an area, the tent will be moved by crane to the next area.

- Although most work is expected to be done under the tents, *there are some areas (approximately 10% of the site), where tents would be impracticable and unsafe.*
- In these limited areas, the remedy will be done in small work areas with air control measures such as odor suppressing foam, plastic poly sheeting and Posi-shell.



Air Treatment for Tents

- Air is treated using a large exterior carbon unit.
- Blowers pull air out of the tent into the carbon unit.
- Treated air is released above the ground through a stack on the carbon unit.
- Air in the tent is replaced approximately 6 times per hour for proper ventilation and safety.
- Carbon treatment is expected to be more than 95% effective.
- Technicians monitor air emissions from the stack and sample air inside the unit to determine when carbon needs to be replaced.
- Work will be completed in accordance with a New Jersey Department of Environmental Protection air permit equivalency.



Air Monitoring and Dust Control

- Extensive perimeter air monitoring for total volatile organic compounds (VOCs) and dust will resume.
- Offsite air monitoring for VOCs will resume.
- Results will be posted on website: www.quantaremediation.com

Proposed Monitoring Network for Phase 2

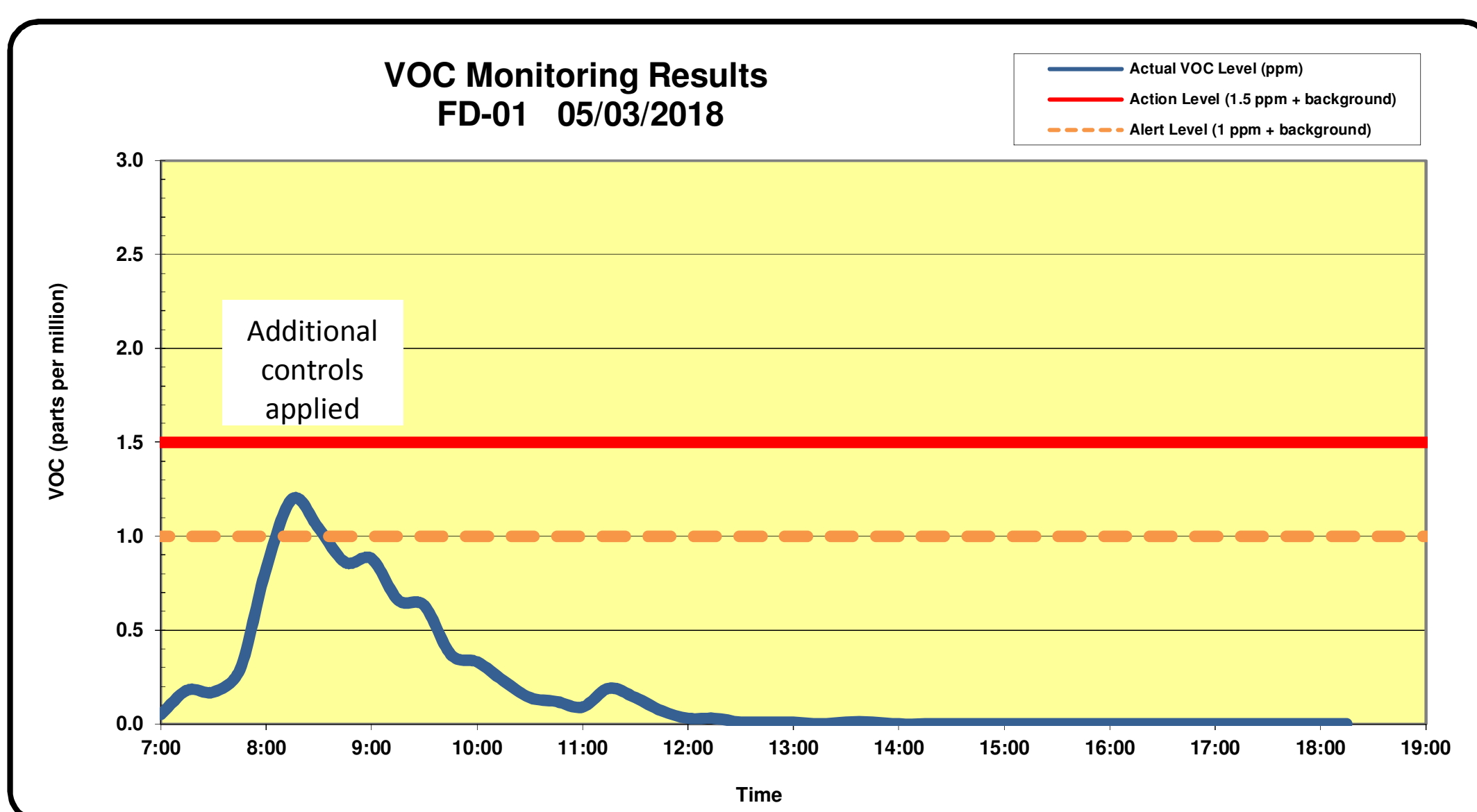


Real time air monitors

- Real-time air monitors measure dust and total VOCs during construction. Fixed and mobile air quality monitors are used.

Air sampling

- Air samples are being collected from 3 locations in City Place and iPark, and 1 location in The Promenade, The Metropolitan and Independence Harbor
- Samples will be analyzed for 17 VOCs present in soil at the site.
- Results will be compared to a conservative screening level used to be protective of people's health.
- Running averages for all chemicals tested previously tracked below project screening levels except naphthalene (a component of coal tar, commonly familiar as the chemical in mothballs).



Dust control

- Dust is monitored continuously at the fence line to remain below action levels.
- Posi-shell is sprayed for dust control.



Work Hours and Minimizing Construction Impacts

Noise and Work Hours

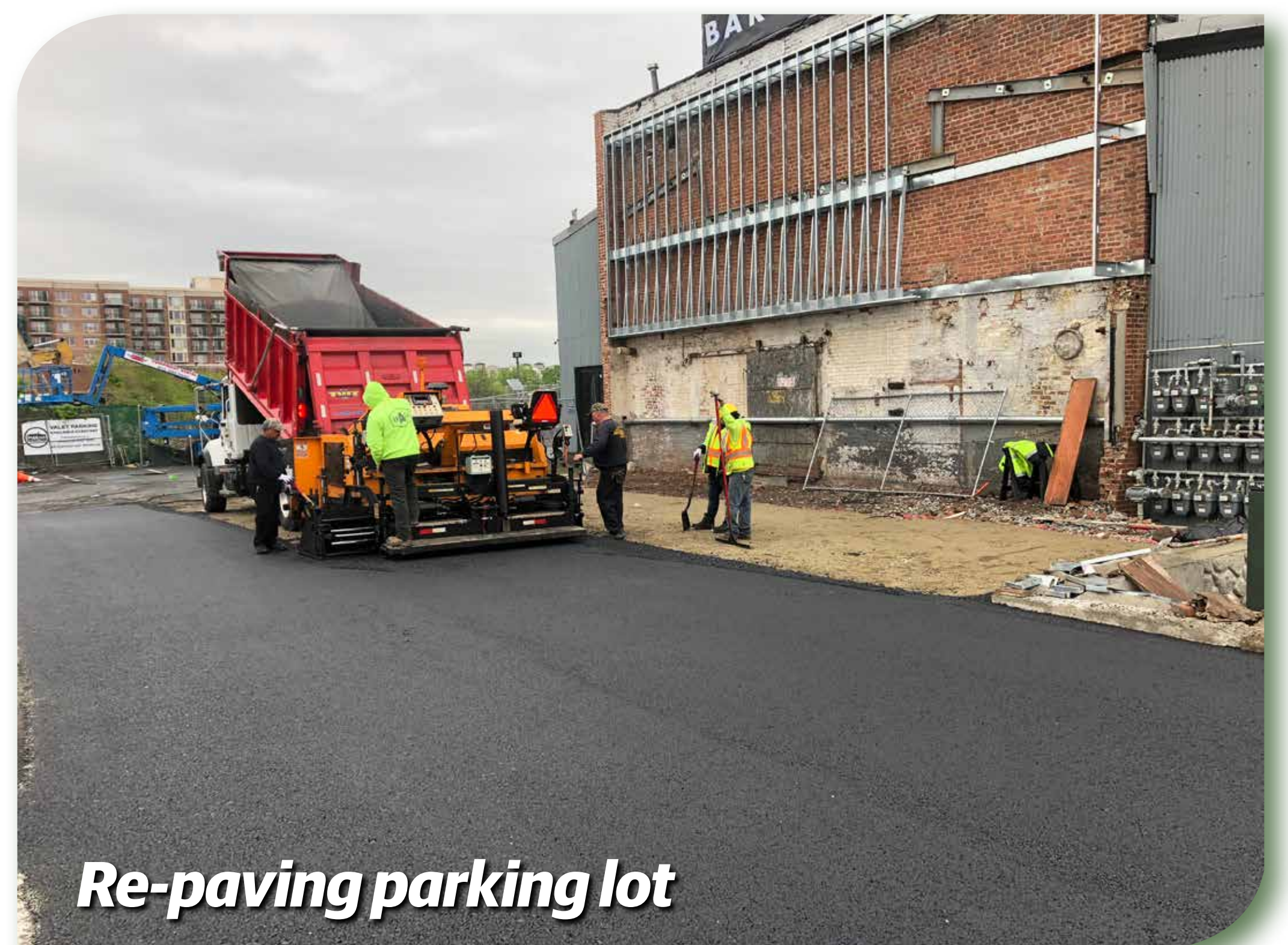
- Construction equipment has noise mufflers
- Work hours follow Borough regulations (7:30 a.m. – 6:00 p.m. weekdays)
- Regulations allow work on Saturdays but construction occurs only if necessary
- No work is performed on Sundays except emergency work



Perimeter fencing and traffic

Traffic

- Daily workers and occasional delivery trucks during ongoing construction
- Public access to local businesses is maintained. Signs, flaggers, fences, and email notification to tenants is used to direct traffic flow and keep drivers informed. New parking areas and walkways have been constructed as needed.



Re-paving parking lot

QUANTA RESOURCES
SUPERFUND SITE

**Cleanup Underway
Hazardous Materials Present
No Trespassing**

Call the U.S. Environmental Protection Agency at
201.807.0991
with site-related questions.



Honeywell
THE POWER OF CONNECTED

Perimeter fencing

Controlled Site Access

- Site is fenced and identified by signs.
- Site access is through a main entrance.
- Site is gated and locked after hours.

Remediation Contractor

NorthStar

- EPA has reviewed contractor's qualifications for this project
- Local contractor - East Hanover, NJ
- History of safety performance
- Experience performing similar soil solidification work throughout the U.S.
- Prior Quanta experience, 2013 Field Demonstration

National Safety Council, Occupational Excellence Achievement Award, 2003-2013



The National Safety Council has awarded NorthStar its Green Cross for Safety Excellence Achievement Award nine times. This award is granted to employers with Lost Workday Case Rates lower than half the average rate of employers in the same North American Industrial Classification System Code.

Example Project Working Under Tents

Phillips 66 Chanute Refinery

Chanute, Kansas, 2013



For More Information, Contact:

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Quanta Hotline: 201-807-0991



www.epa.gov/superfund/quanta-resources

www.quantaremediation.com

Odor & Vapor Emission Control During Remediation



DGA grading

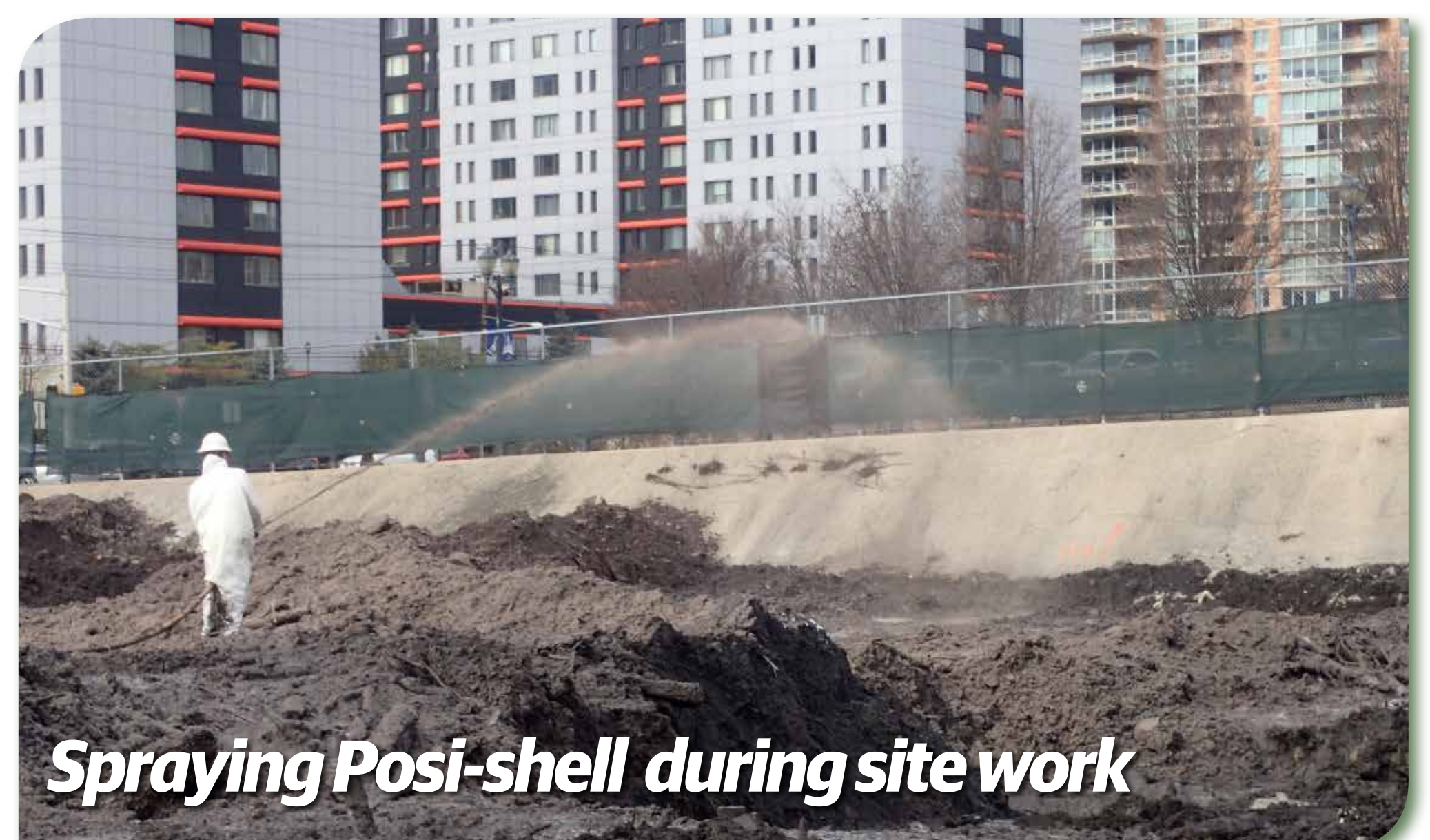
- **Minimize area of disturbed soil** – Excavated areas will be kept small (20 feet by 20 feet), completed, and covered with gravel before moving to the next location.



Spraying Rusmar during site work

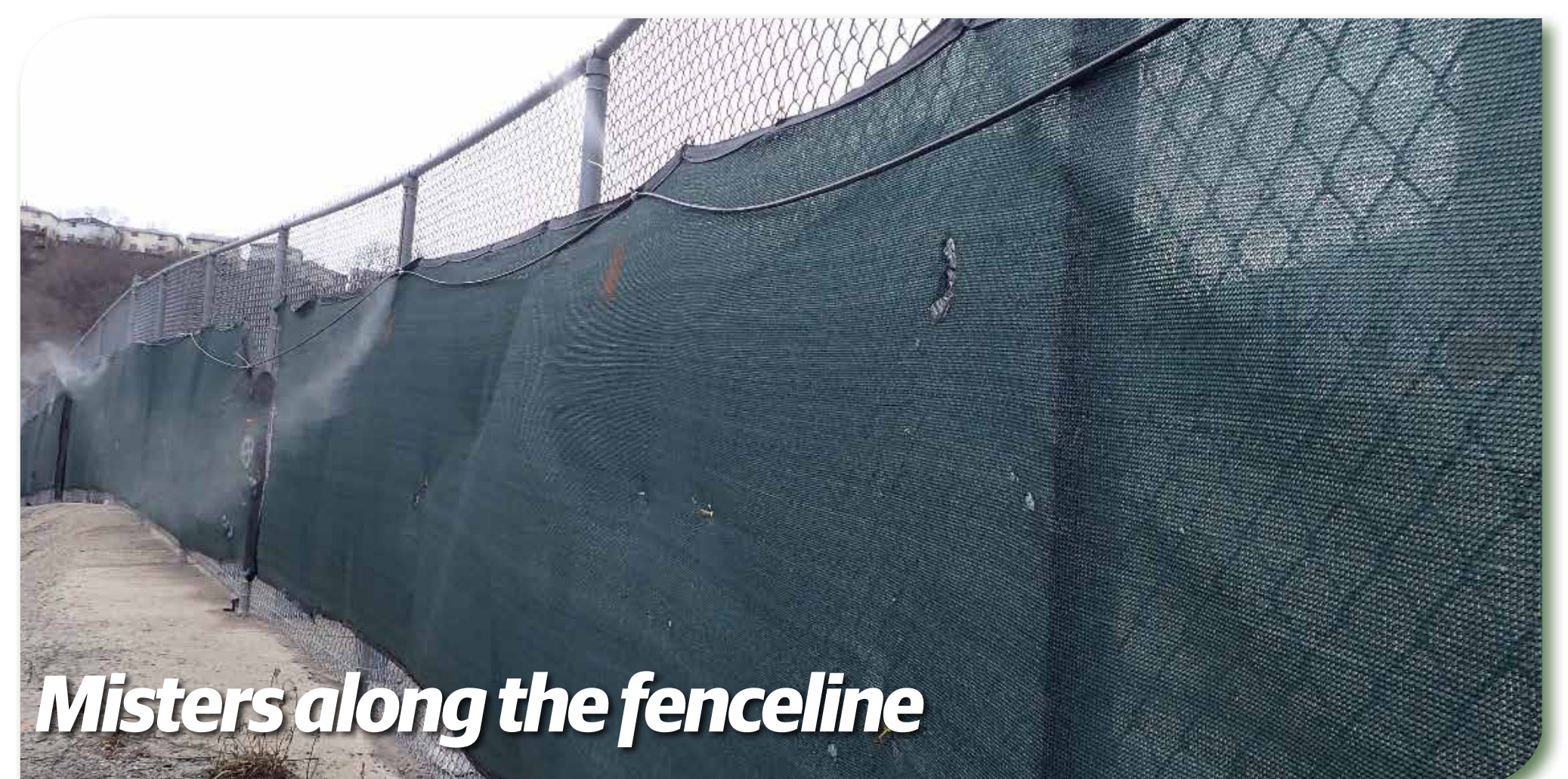
- **Posi-shell** – Posi-shell is a natural clay-based mortar more durable than foam that is sprayed continuously to manage odors and at the end of each work day. Portland cement is mixed in to help it set up faster and increase the effectiveness of the spray.

- **Odor suppressing foam (Rusmar)** – A non-toxic foam is sprayed on exposed soil liberally and proactively to suppress odors.



Spraying Posi-shell during site work

- **Perimeter misters** – Mist generators are installed along perimeter fences for use as needed. Misters cannot be used during freezing temperatures.



Misters along the fenceline

- **Plastic poly sheeting** – When appropriate and safe for workers, plastic sheeting is used to cover stockpiles. Sand bags will be used to secure the plastic sheeting.



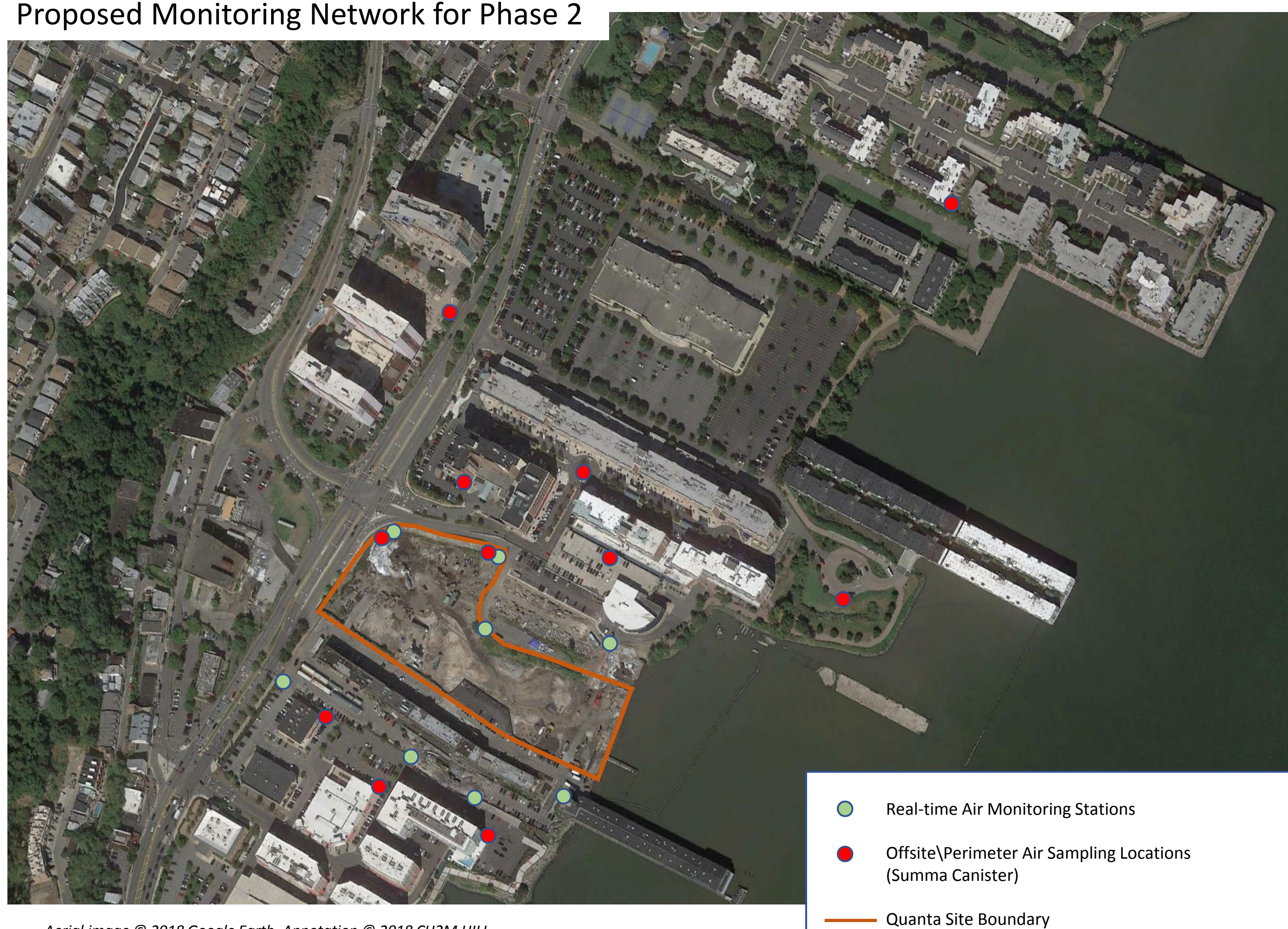
Plastic poly sheeting

Protecting Public Health

- Naphthalene is a common environmental contaminant. It's found in mothballs, cigarette smoke and vehicle exhaust. It is also a significant component of coal tar at the Quanta site.
- Typical urban background naphthalene levels are approximately $1\mu\text{g}/\text{m}^3$.
- Naphthalene samples collected at the fence line are not an accurate representation of concentrations in residential areas.
- EPA is conducting 24-hour air sampling at off-site locations to better characterize naphthalene concentrations in the areas where people live, work and shop.



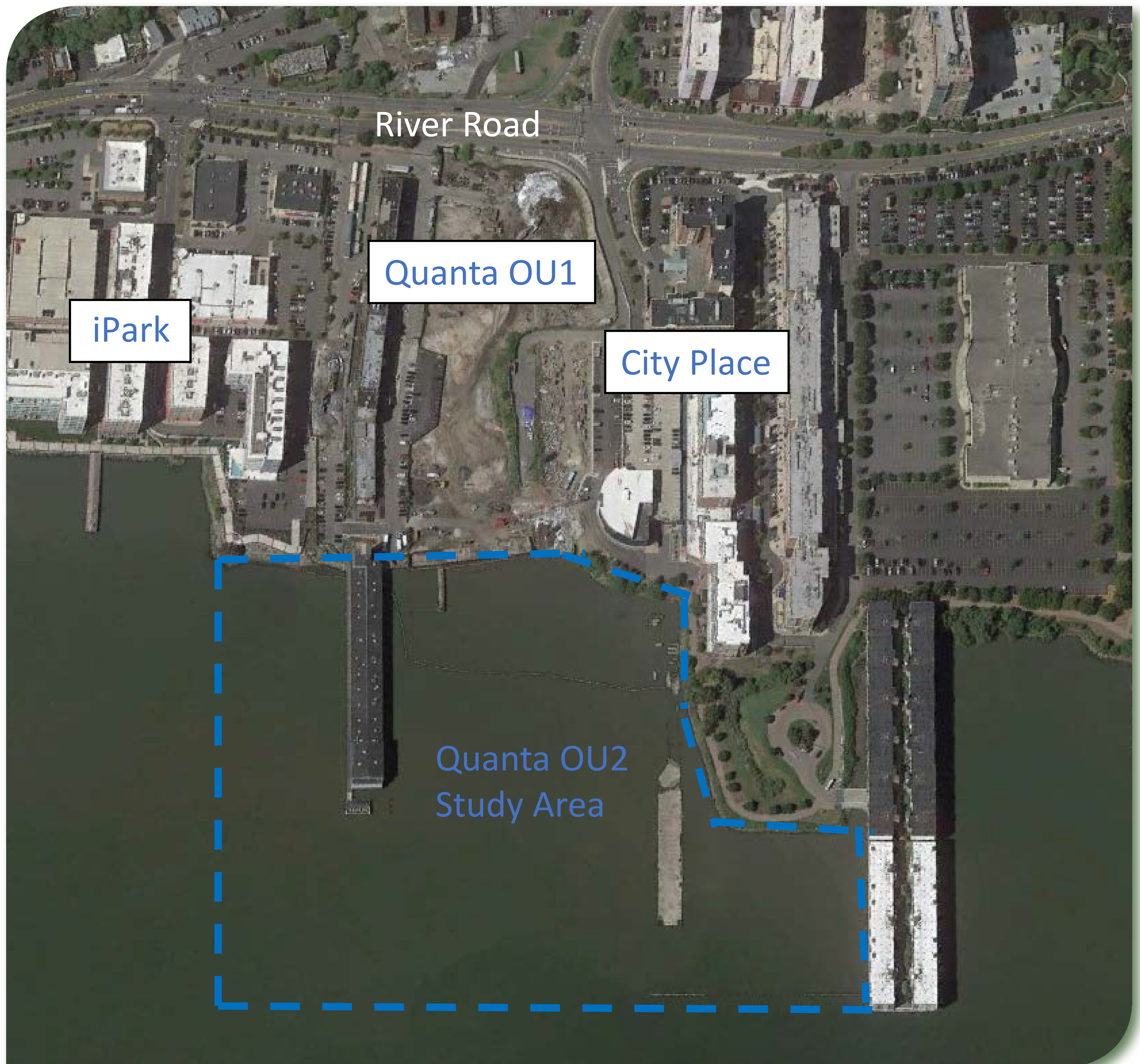
Proposed Monitoring Network for Phase 2



- EPA has set a screening level for naphthalene of $3.13\mu\text{g}/\text{m}^3$ for 24 hours. This very conservative value is used to protect people's health near the site.
- This screening level is not a "not to exceed" value. Short-term exceedances are not unexpected and do not pose an immediate risk to people's health but allow for necessary adjustments for on-site work.
- EPA will be collecting indoor air samples at buildings 500 and 600 of City Place.
- Sampling will help to determine a baseline level of naphthalene in the air when no work is occurring.



Quanta OU2 Study Area - Sediment



- Investigation Report Approved - July 2014
- Pre-Feasibility Study Investigation - Winter 2018



Quanta Resources Site: 1947 and 2018

