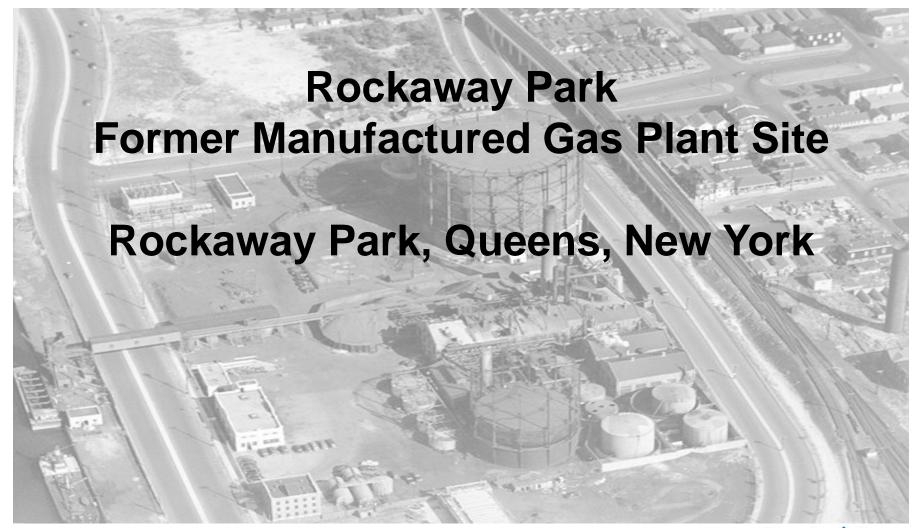
Community Board 14 Presentation April 12, 2011



Introductions

- Douglas MacNeal NYSDEC Project Manager
- Thomas Campbell National Grid Project Manager
- Matt O'Neil GEI Consultants, Inc.
 - Performed the Remedial Investigation
 - Feasibility Study
- Janos Szeman Paulus Sokolowski and Sartor, Engineering, P.C.
 - Engineer of Record



Presentation Outline

- Overview of the Site Remedy
- Remedial Activities Completed
 - Excavation (Completed Site-Wide)
 - On-Site NAPL Migration Barrier Wall (65 ft deep)
 - Site-Wide Cap Construction (80% Complete)
- Remedial Activities Remaining
 - On-Site NAPL Migration Barrier Wall (65-120 ft)
 - Off-Site NAPL Migration Barrier Wall (Bulkhead)
- Site Controls
- Questions



Site Remedy from NYSDEC Record of Decision

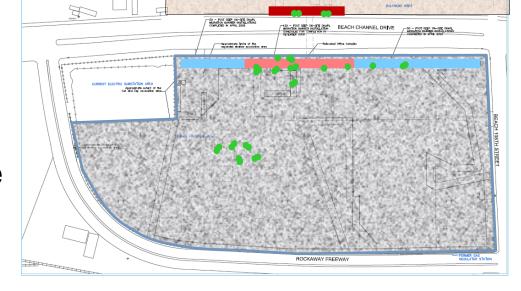
Excavate Visible MGP Tar to 8 Feet Below Grade

Install On-Site and Off-Site NAPL Migration Barrier

Walls at Various Depths

Install DNAPL Recovery Wells

- Install a Two-Foot Thick
 Soil Cover Across the Site
- Develop a Site Management Plan



- Environmental Easement to Ensure Long Term Maintenance and Protection of Remedy

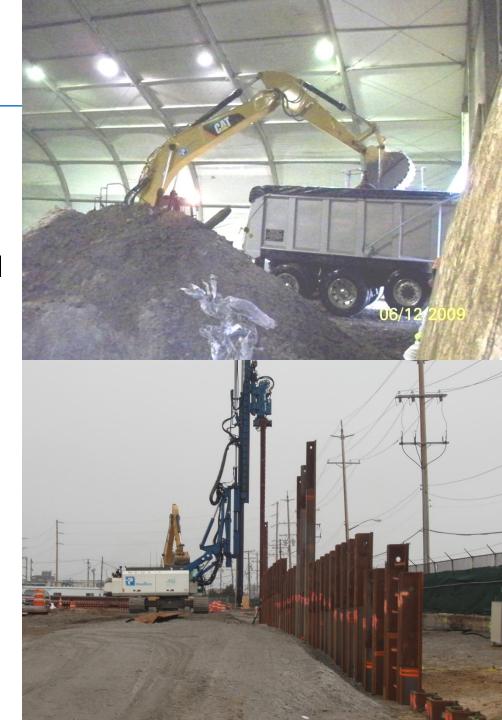
Rockaway Park Former MGP – Aerial 2010



5

Remedial Activities Completed

- Excavation Completed –September 2010
 - Removed 118,000 Cubic Yards of Contaminated Soil
- On Site DNAPL Migration Barrier (0-65 ft)
 - Installed 37,000 Square
 Feet of the On-Site Steel
 Sheet Pile Barrier Wall to a
 Depth of 65 Feet
- Site-Wide CAP
 - Construction Completed over 80% of Site

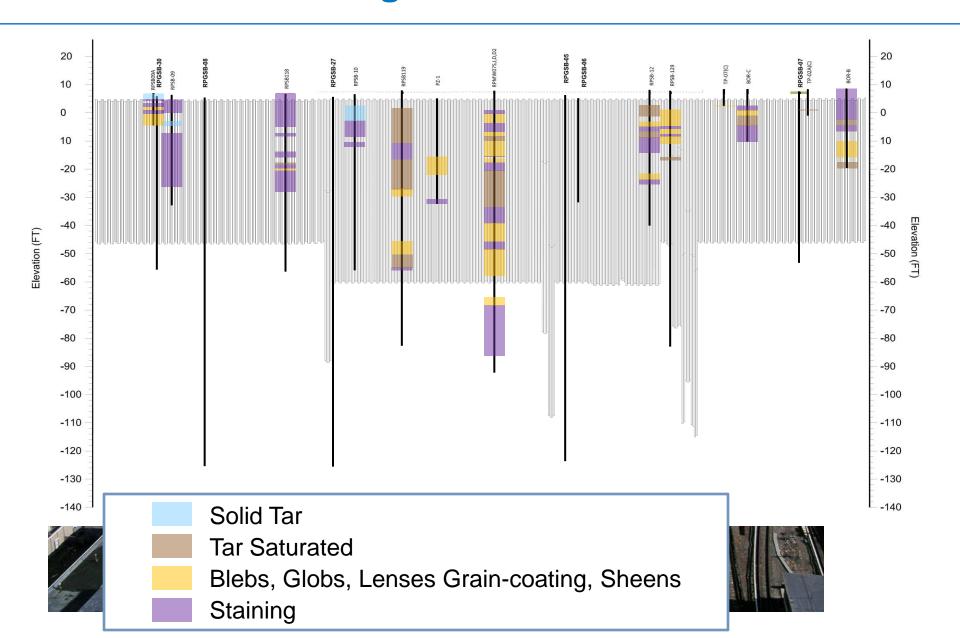


Remedial Activities Remaining

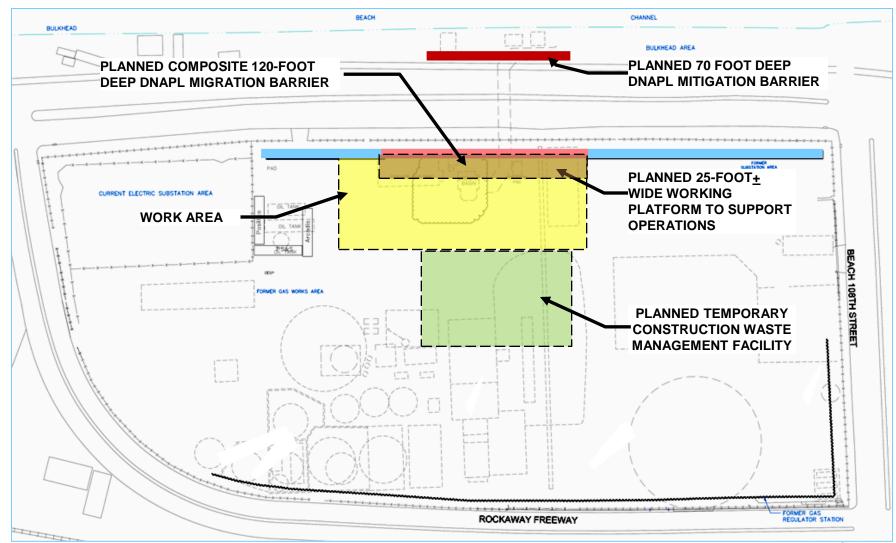
- On Site DNAPL Migration Barrier:
 - Install 15,000 Square Feet of the Deep Section of the (60-120 ft) of the On-Site Barrier Wall
 - Complete Site-Wide Cap
- Off Site DNAPL Migration Barrier:
 - Complete Remedy in City Owned Bulkhead Area
- Install DNAPL Recovery Wells



On Site DNAPL Migration Barrier



Remaining Work Areas



Soil-Cement Wall Installation

- NYSDEC-Approved Field Change Request-06A
 - Overlapping Jet Grouted Columns that Join with Waterloo Barrier
 - Construction of 120-Feet Deep Jet Grouted Columns
- Proven Technology at Depths Greater than 100-Feet
- Installed in 2009 as Remedy at the National Grid Clifton OU-1 Site; Successfully Evaluated by NYSDEC 2010



Soil-Cement Wall Installation

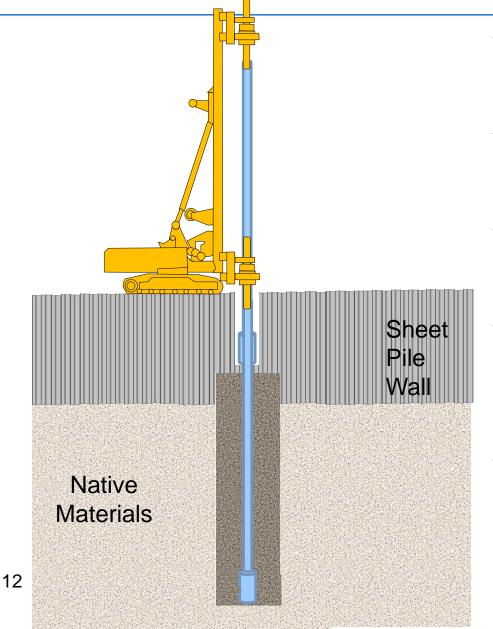


Jet Grouting System

- Drilling Equipment (Drill Rig with Mast and Drill Rods, Closed Loop Waste)
- Grout Plant (Material Silos, Mixers, and Pumps)



Jet Grout Column Installation

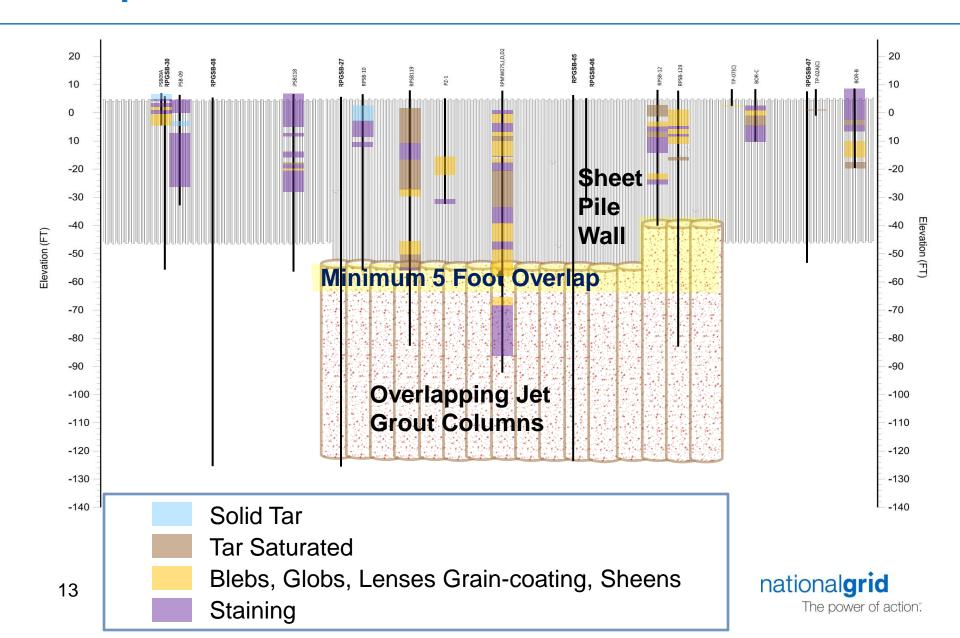


- Jet Grout Column Installed from Bottom Up
- Boring Advanced to 120 **Feet**
- Injection of Cement Grout into Soil Formation
- Column Overlaps Sheet Pile Wall (Minimum of 5 Feet)
- Excess Groundwater/Soil Pumped to Waste Management Facility

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The power of action."

Proposed Soil-Cement Barrier Wall



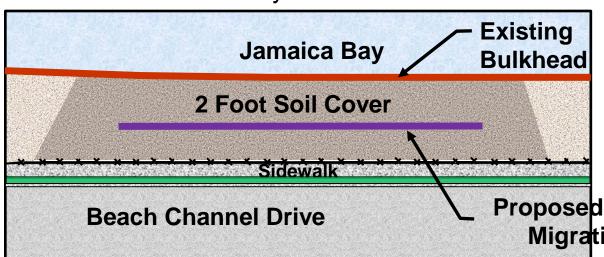
Site Controls

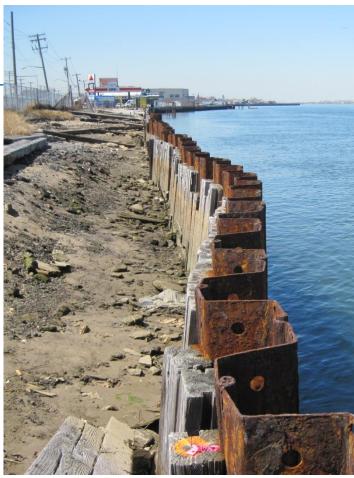
- Full Time NYSDEC Representative
- Labor Force is Trained and Certified
- Community Air Monitoring Plan 24/7
- Tent Equipped with a Vapor Management System
- Waste Slurry is Enclosed from Rig to the Waste Handling Facility
- Established Trucking Procedures: Lined Foamed Weighed Tarped Decontamination Station
- Dust Suppression Methods
- 24/7 Site Security



Off-Site DNAPL Barrier

- Existing Conditions Survey performed in April 2010
- Bulkhead Area Stabilization Required Prior to Remediation
- NYSDEC-Approved Remedial Design
 - Two-Foot Thick Site Wide Cap
 - 70-Foot Deep DNAPL Migration Barrier Wall
 - DNAPL Recovery Wells





Proposed 70-Ft DNAPL Migration Barrier

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Project Schedule - 2010-2011

On– Site Activities –

- Design of Jet Grout Columns August –December 2010
- Contractor Selection January 2011 to Present
- Contractor Mobilizes One Month from Award of Contract
- Jet Grout Column Construction Estimated Four to Six Month Duration
- Site Restoration Estimated One Month Duration
- Contractor Demobilizes Estimated One Month Duration

Off- Site Activities

 Complete Remedy in City Owned Bulkhead Area - To be Scheduled

Scheduled
The power of action:

Hotline - Website Reminder

Questions or Concerns about the work
 Call the National Grid Hotline at:
 718-403-3400

- Website: rockawayparkmgpsite.com
- NYSDEC Project Manager Douglas MacNeal (518) 402-9564

