

Readville 5 Yard Facility
Public Involvement Plan Meeting
November 5, 2008



Agenda

- **Welcome**
 - Janis Kearney, MBTA
- **Meeting Kick-Off**
 - Ilyas Bhatti, President, The Bhatti Group
- **Results of Environmental Investigation**
 - Elissa Brown, LSP, Earth Tech AECOM
- **Questions and Answers**
 - Ilyas Bhatti, President, The Bhatti Group
- **Closing Remarks**
 - Debra Darby, Site Remediation Specialist, MBTA



Meeting Kick-Off

- **Goals for this meeting**
 - **To present the result** of the environmental sampling and discuss remedial measures
 - To begin to **solicit and address concerns**
 - To inform you how to **access information** and how to provide **comments after the meeting**



Meeting Kick-Off

- **Sign - In**
- **Recognition of Officials**
- **Meeting Rules**
 - Reserve questions until end of presentation
 - Pads and pens provided



MassDEP Report

- **Supplemental Phase II**
 - Soil Sampling
 - Risk Characterization
- **Supplemental Phase III**
 - Remedial Alternatives Analysis
- **Revised Phase IV**
 - Remedy Implementation Plan



Supplemental Phase II – Comprehensive Site Assessment - Soil Stockpiles

- **Additional Stockpile Sampling**

- Shallow, mid-depth, deep
- Field screening
- Laboratory analysis of select samples
 - Lead
 - Arsenic
 - Leachable lead
 - Petroleum hydrocarbons/PAHs
- Results confirmed earlier evaluation



Supplemental Phase II – Comprehensive Site Assessment - Sitewide Soil

- **Confirmation of Developer's Soil Data**
 - Focused in worst areas
 - Field screening
 - Laboratory analysis of select samples
 - Lead
 - Arsenic
 - Leachable lead
 - Petroleum hydrocarbons/PAHs
 - Confirmed earlier results
 - Lead
 - Most soil impacts are at the soil surface (0 – 3 ft)



Supplemental Phase II – Comprehensive Site Assessment - Groundwater

- **Groundwater**
 - Previous testing indicated no groundwater contamination
 - No further testing was conducted this summer



Supplemental Phase II – Comprehensive Site Assessment - Results

- **Risk Characterization**
 - Evaluates **risk under current conditions**
 - No significant risk to the environment
 - No significant risk to safety
 - No significant human health risk off-site

 - Risk to human health for on-site workers
 - Risk to public welfare
 - Conclusion
 - Soil remediation is required



Supplemental Phase III – Remedial Alternatives Analysis – Evaluation Process

- **Incorporates new Phase II data**
- **Cleanup goal - MBTA rail yard**



Comparison of Risk-Based Cleanup Levels – Commercial / Industrial (parts per million)

Compound	Original Phase II (as amended)	Developer	Earth Tech AECOM
Lead	2,900	1,765	1,765
Arsenic	36	1,687	36



Comparison of Soil Cleanup Levels^{*} (parts per million)

Compound	Background Concentration	Risk-Based Cleanup Level	Upper Concentration Limits
Lead	1,100	1,765	3,000
Arsenic	21	36	200

* Final background concentrations and risk-based cleanup levels may change pending review by MassDEP.



Supplemental Phase III – Remedial Alternatives Analysis – Evaluation Process

- **What is feasibility analysis?**
 - With the commercial/industrial goal in mind
 - Effectiveness
 - Short and long-term reliability
 - Implementability
 - Cost
 - Risks
 - Benefits
 - Timeliness
 - Non-pecuniary affects
 - Evaluate feasibility of reducing levels to below Upper Concentration Limits



Supplemental Phase III – Remedial Alternatives Analysis – Evaluation Process

- **Four alternatives evaluated**
 1. Remove all soil above risk-based levels/off-site disposal
 2. Remove all soil above UCLs/off-site disposal
 3. Remove soil to below UCLs and to meet risk-based cleanup levels/off-site disposal
 4. Cap contaminated soil with an engineered barrier

- **Regardless of the alternative**
 - Remove hot spots
 - Remove stockpiles
 - Stabilize soil remaining
 - Implement deed restriction



Comparison of Four Remedial Alternatives

Alternative	Estimated Soil Volume to be Removed (cubic yards)	Estimated Cost (\$ Millions)
1. Remove All Soil Above Risk-Based Levels	48,600	\$23
2. Remove All Soil Above UCLs	34,100	\$16
3. Remove Soil to Below UCLs and Meet Risk-Based Cleanup Levels	11,550	\$ 5
4. Cap Contaminated Soil With Engineered Barrier	9,600	\$ 8



Supplemental Phase III – Remedial Alternatives Analysis – Preferred Alternative

- **Preferred Alternative**

- Remove soil to below UCLs and to meet risk-based cleanup levels/off-site disposal

- **Rationale**

- Reduces risk to meet future industrial/commercial use
- Allows for permanent closure under environmental regulations
- Protective of groundwater
- Doesn't require capping
- Leaves open the possibility of future additional remediation

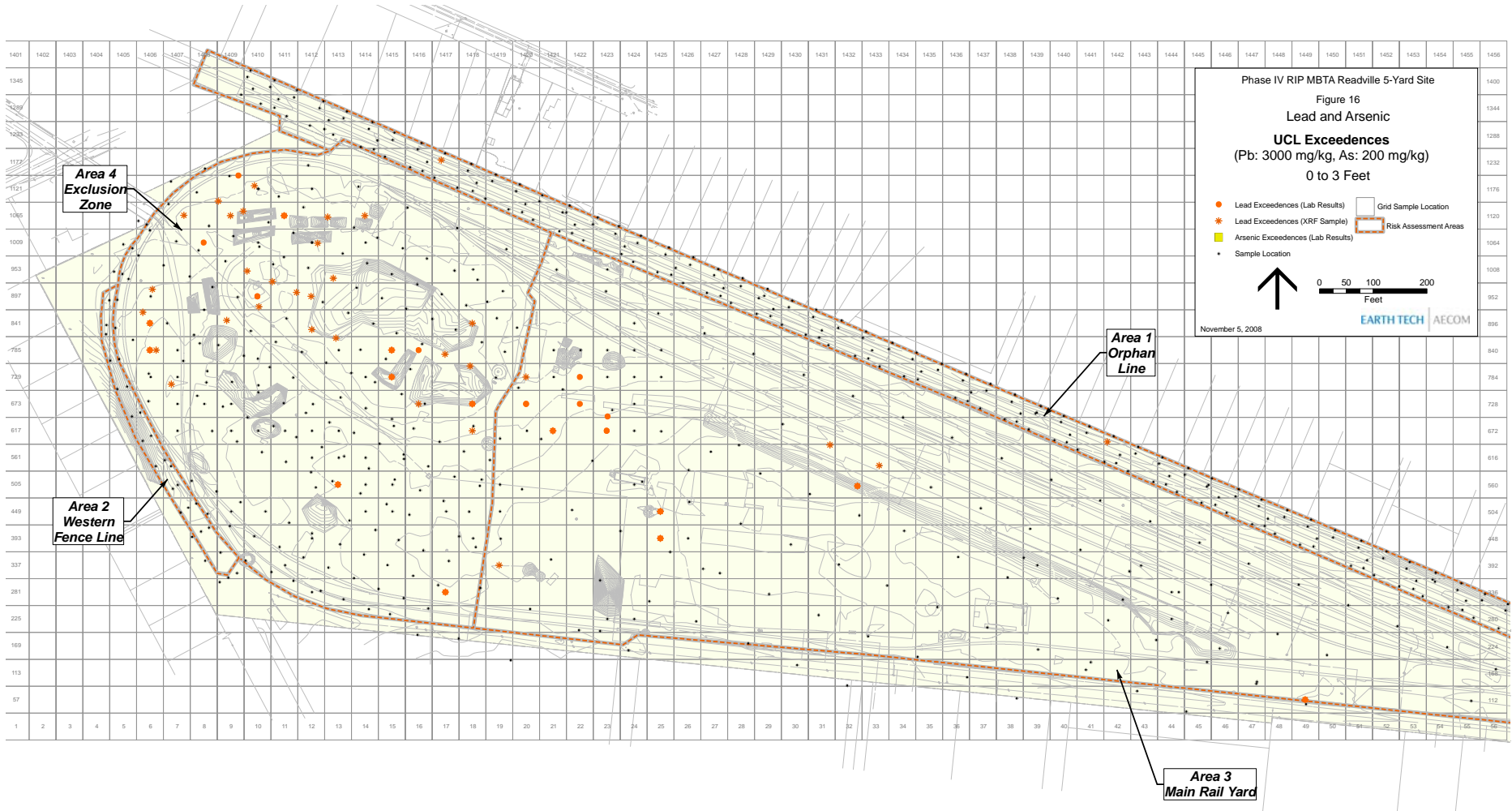


Revised Phase IV – Remedy Implementation Plan – Conceptual Plan

- **Conceptual engineering design plan**
 - Remove / Off-Site Disposal
 - The areas of highest contamination levels
 - Most of the stockpiles
 - Hotspots

 - Stabilize Remaining Soil

 - Implement deed restriction that requires that the site continue to be used for commercial/industrial purposes





EARTH TECH | AECOM

Phase IV RIP
MBTA Readville 5-Yard Site
Figure 19
Soil Excavation and Stockpile
Removal for Off-Site Treatment
& Disposal (Alternative 3)



Revised Phase IV – Remedy Implementation Plan - Results

- **After remediation**
 - No cap or engineered barrier
 - Sitewide contamination will be reduced to below UCLs
 - No significant risk to future site workers or the neighborhood
- **Timeframe**
 - Remediation work is expected to be completed within 18 months of awarding the remediation contract
- **Cost**
 - \$ 5.75 million included in FY 2007-2012 Capital Plan



Revised Phase IV – Remedy Implementation Plan – Plan Details

- **Detailed engineering plans and specifications**
 - Specifications will include:
 - Plan to monitor dust and immediately correct situation
 - Plan to ensure that trucks are clean and secure before leaving the site
 - Allowable truck routes to minimize disturbance to neighbors
 - Plan to ensure that trucks are clean and secure before leaving the site
 - Expected in Winter - Spring 2009



Schedule for Supplemental Phase II / III and Revised Phase IV Report

- **Draft report available:**
 - www.mbta.com/about_the_MBTA/environment
 - Dedham Public Library, 43 Church Street, Dedham
 - Hyde Park Branch Library, 35 Harvard Avenue, Hyde Park
 - DEP Northeast Office, 205B Lowell Street, Wilmington
- **Public comment period**
 - 20-day public comment period beginning today
 - Public comment period ends November 25, 2008
 - Debra Darby, MBTA, 10 Park Plaza, Boston, MA 02116
 - ddarby@mbta.com



Schedule for Remediation

- **Other key dates**
 - Final report to MassDEP on December 24, 2008
 - Public meeting on plan details: Winter - Spring 2009



Questions and Answers



Comparison of Dose from Fugitive Dust vs Total Dose

Scenario	Percent of Total Chronic Average Daily Dosage
Lead Hot Spot - Youth	
Ingestion of Dust	0.2 %
Inhalation of Dust	0.1 %
Ingestion of Soil	42.8 %
Dermal Contact with Soil	56.8 %
Lead Hot Spot - Adult	
Ingestion of Dust	0.3 %
Inhalation of Dust	0.2 %
Ingestion of Soil	37.0 %
Dermal Contact with Soil	62.5 %



Comparison of Maximum Soil Concentrations Detected (parts per million)

Compound	Original Phase II	Developer	Earth Tech
Stockpiles			
Lead	50,000	N/A	8,180
Arsenic	59	N/A	44
Soil			
Lead	24,000	67,300	49,100
Arsenic	140	253	70