

29 April 2010
 03-2110CNET.09.01
 IOS/03070/BEM-MIS/00003996

Mr. Richard L. Feinberg, P.G.
 Senior Project Manager
 AECOM
 30 Knightsbridge Road, Suite 520
 Piscataway, NJ 08854

Re: PPG Hudson County Chrome Sites 202, 203, and 204

Dear Mr. Feinberg:

As per your request, BEM Systems, Inc. (BEM) is pleased to provide the information related to the above referenced chrome sites. These sites are located on three parcels that New Jersey Transit (NJ TRANSIT) acquired to construct the Hudson-Bergen Light Rail Transit (HBLRT) and are detailed as follows:

Table 1 NJ TRANSIT Parcel Property Acquisition

NJ TRANSIT Property Parcel Number	Previous Owner Name	Block	Lot	Area (Acre)	Municipality	General Site Description
205	Caven Point Realty	2020	3	2.643	Jersey City	Yard and Shop
		2033	7, 7A, 9			
		2144	B4			
5E	Conrail	2145	41C, 41U, 56, 62	9.255	Jersey City	NJ TRANSIT ROW for HBLRT
15	Robush Corporation	1776	2	2.021	Jersey City	West Side Avenue Park & Ride

During the course of construction, remedial activities were implemented as appropriate ("hot spot" excavation, underground storage tank closure, capping), and these activities are summarized in the Minimum Operable Segment-1 (MOS-1) electronic Remedial Action Report (eRAR) dated October 2004. Summaries of the sections presenting the details of the remedial activities related to these parcels are provided here.

NJ TRANSIT Property Parcel No. 205 – Former Caven Point Realty Property

NJ TRANSIT designed and implemented a soil sampling program for Parcel 205 by considering former land use, and then collecting samples from test pits and borings. The locations are presented in the figure for Parcel No. 205. Soil samples were collected between January of 1993 and January of 1995 and submitted to a State of New Jersey-certified and NJDEP-approved laboratory for chemical analysis. Soil samples were collected from multiple depths within the borings, and sample depths varied based upon the proposed construction in corresponding areas. All soil samples were analyzed for the USEPA Target Compound List /Target Analyte List (TCL/TAL) parameters:

ALASKA
 ARIZONA
 FLORIDA
 LOUISIANA
 NEW JERSEY
 TEXAS
 VIRGINIA

- TCL Volatile Organic Compounds with a library search of the 10 highest peaks (TCL-VOC+10);
- TCL Base/Neutral/Acid extractable organic compounds with a library search of the 20 highest peaks (TCL-BNA+20);
- TAL Metals;
- Pesticides;
- Polychlorinated Biphenyls (PCBs);
- Cyanide; and
- Herbicides (additional to the TCL+30 parameters).

Additionally, some soil samples were analyzed for Chromium VI and Total Petroleum Hydrocarbons (TPHC), based upon historical use/known contamination, or field observations. All soil sample analytical results were compared to the most stringent NJDEP Soil Cleanup Criteria (SCC) for the current zoning – either Non-Residential Direct Contact (NRDC) SCC or Impact to Groundwater (IGW) SCC. The exceedances of the most stringent SCC are included on the figure. If data is not presented for a location, then no exceedances of the SCC were located there.

At one location, on Parcel No. 205, the concentration of zinc exceeded the NJDEP NRDCSCC by over an order of magnitude (greater than 10 times). At two other locations, Chromium VI exceeded the NJDEP NRDCSCC. These locations therefore qualified as “hot spots”. A total of three hot spots were identified on the property. Table 1 below presents the locations of the hot spots and the contaminants of concern with the associated concentration and soil cleanup criteria.

Table 2 Parcel No. 205 Hot Spot Locations

Hot Spot Location	Contaminant of Concern	Depth of Contaminant of Concern	Concentration (mg/kg)	NJDEP NRDCSCC (mg/kg)
G01-B12	Zinc	2' – 4'	24,100	1,500
G01-B77	Chromium VI	0' – 1.5'	12.8	10
G01-B13	Chromium VI	0' – 2'	23.3	10

These hot spots were later excavated and the materials were transported off-site for either disposal or recycling. Post-excavation samples were then collected and submitted for the appropriate analysis to verify that the extent of hot spot material had been successfully remediated. None of the post-excavation samples exceeded the most stringent NJDEP SCC. The hot spot location with associated volume and number of confirmatory post-excavation soil samples is presented in Table 2.

Table 3 Parcel No. 205 Hot Spot Remedial Action

Hot Spot Location (Construction Station Cell No.)	Contaminant(s) of Concern	Number of Delineation Soil Samples Collected	Volume Excavated (CY)	Date of Excavation	Number of Post- Excavation Soil Samples Collected
G01-B12 (484-L4)	Zinc	31 from 9 borings	11	8/8/97	2
G01-B77 (486-L3)	Chromium VI	13 from 7 borings	12.2	8/7/97	2
G01-B13 (486-L3)	Chromium VI	14 from 7 borings	8.3	8/7/97	2

NJ Transit Property Parcel No. 5E – Former Conrail Property

NJ TRANSIT designed and implemented a soil-sampling program for Parcel 5E by considering former land use, and then collecting samples from test pits or borings. The locations are presented in the figure for Parcel No. 5E. Soil samples were collected between December of 1991 and September of 1995 and submitted to a State of New Jersey-certified and NJDEP-approved laboratory for chemical analysis. Soil samples were collected from multiple depths within the borings, and sample depths varied based upon the proposed construction in corresponding areas. All soil samples were analyzed for the USEPA TCL/TAL parameters.

Additionally, some soil samples were analyzed for Chromium VI and Total Petroleum Hydrocarbons (TPHC), based upon historical use/known contamination, or field observations. All soil sample analytical results were compared to the most stringent NJDEP Soil Cleanup Criteria (SCC) for the current zoning – either NRDC SCC or IGW SCC. The exceedances of the most stringent SCC are included on the figure.

None of the locations on Parcel No. 5E exceeded the NJDEP NRDCSCC by over an order of magnitude (greater than 10 times) nor did concentrations of Chromium VI exceed the NJDEP NRDCSCC. Therefore no hot spots were excavated and transported off-site for disposal or recycling. Exceedances of the most stringent NJDEP NRDC SCC are presented on the Figure for Parcel No. 5E.

NJ TRANSIT Property Parcel No. 15 – Former Robush Corporation Property

During a geophysical investigation, a UST was identified at the former Robush Corporation property located in Jersey City. The NJDEP files indicated that a 2,000-gallon UST had been abandoned in-place and filled with grout in accordance with a NJDEP-approved Closure Plan. NJDEP records also indicated that the site was an Industrial Site Recovery Act (ISRA) case (Case No. 91031). Based on the findings, the NJDEP Case Manager for the H-BLRTS project advised that to bring the UST closure to an end, NJ TRANSIT should remove the tank and perform a site assessment in accordance with the TRSR N.J.A.C. 7:26E requirements. During construction activities, it was found that the tank was actually a 3,000-gallon UST (UST-RB1) filled with grout previously used to store gasoline. Since the UST had been abandoned in-place in accordance with the NJDEP-approved Closure Plan, no UST Closure Plan, Closure Plan Approval Application or Registration Questionnaire were submitted to the NJDEP prior to closure.

On 26 March 1998, the UST was permanently closed. Upon removal of the UST from the ground, the tank was inspected and found to have no corrosion holes or signs of deterioration. The UST was disposed of off-site as construction/demolition debris. Six post-excavation soil samples were collected from the sidewalls and base of the excavation and analyzed for lead and TCL VOC+10. No lead or VOCs were detected above the NJDEP NRDCSCC. The locations of the post excavation samples are presented on the Figure for Parcel No. 15.

Upon the completion of the UST closure, the excavation was backfilled with the stockpiled overburden. NJ TRANSIT recommended that the NJDEP render a "No Further Action" decision concerning the UST closure at the property. All details about the UST closure were included in the UST Removal and Final Assessment Report dated June 1998 submitted to the NJDEP. The NJDEP report approval is pending which is expected to coincide with the NFA for the light rail project.

Should you require additional information, please do not hesitate to contact me at 908.598.2600, extension 154.

Sincerely,

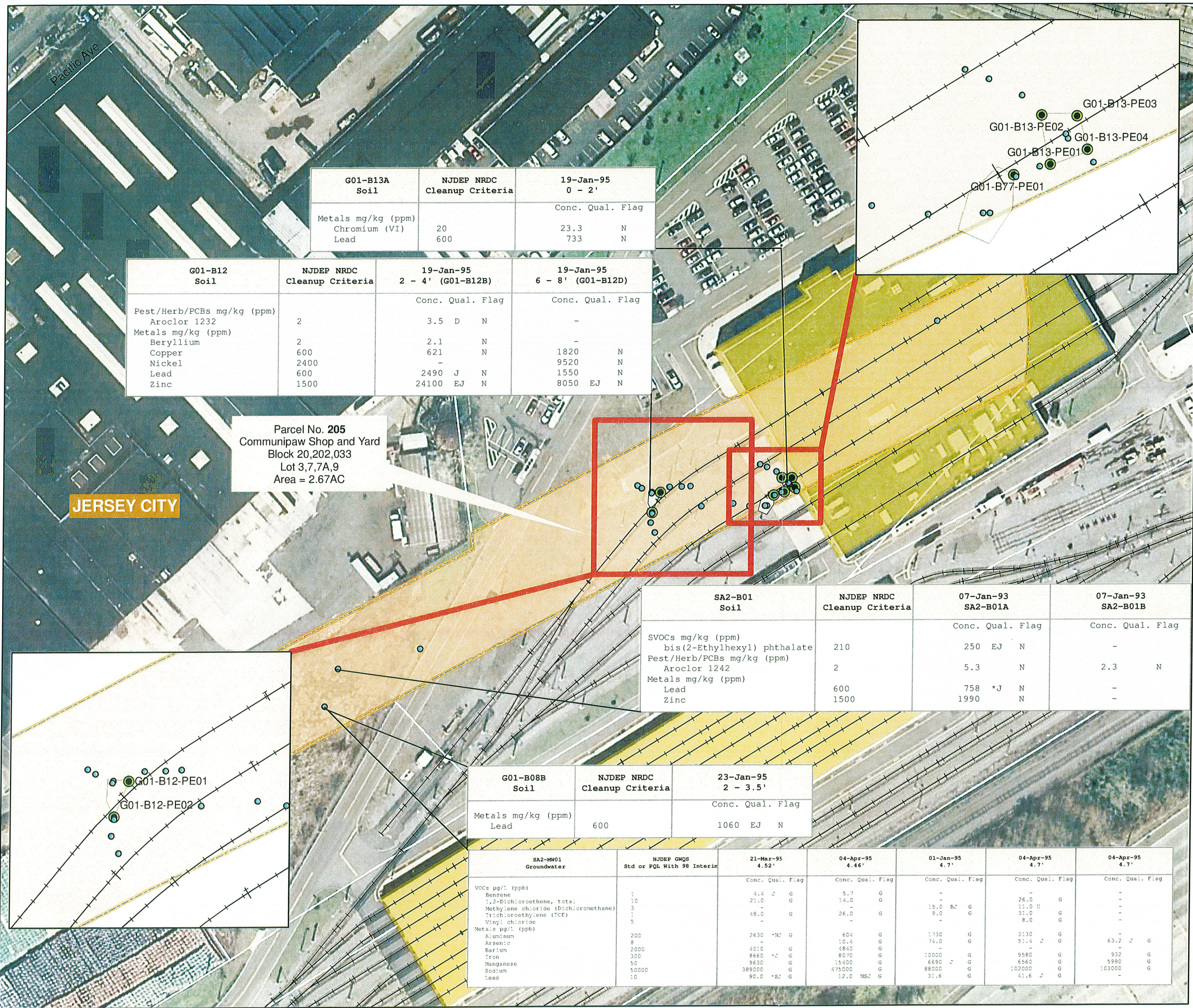
BEM Systems, Inc.



Stacey L. Felts-Bock, P.E.
Senior Project Manager

Attachment

cc: C. Dickerson (NJT)
M. Judd (NJT)
M. Patel (BEM)



G01-B13A Soil	NJDEP NRDC Cleanup Criteria	19-Jan-95 0 - 2'	Conc. Qual. Flag	
Metals mg/kg (ppm)				
Chromium (VI)	20	23.3	N	
Lead	600	733	N	

G01-B12 Soil	NJDEP NRDC Cleanup Criteria	19-Jan-95 2 - 4' (G01-B12B)	19-Jan-95 6 - 8' (G01-B12D)	Conc. Qual. Flag	
Pest/Herb/PCBs mg/kg (ppm)		Conc. Qual. Flag	Conc. Qual. Flag		
Aroclor 1232	2	3.5 D N	-		
Metals mg/kg (ppm)					
Beryllium	2	2.1 N	-		
Copper	600	621 N	1820 N		
Nickel	2400	-	9520 N		
Lead	600	2490 J N	1550 N		
Zinc	1500	24100 EJ N	8050 EJ N		

Parcel No. 205
Communipaw Shop and Yard
Block 20, 202, 033
Lot 3, 7, 7A, 9
Area = 2.67AC

SA2-B01 Soil	NJDEP NRDC Cleanup Criteria	07-Jan-93 SA2-B01A	07-Jan-93 SA2-B01B	Conc. Qual. Flag	
SVOCs mg/kg (ppm)		Conc. Qual. Flag	Conc. Qual. Flag		
bis(2-Ethylhexyl) phthalate	210	250 EJ N	-		
Pest/Herb/PCBs mg/kg (ppm)					
Aroclor 1242	2	5.3 N	2.3 N		
Metals mg/kg (ppm)					
Lead	600	758 *J N	-		
Zinc	1500	1990 N	-		

G01-B08B Soil	NJDEP NRDC Cleanup Criteria	23-Jan-95 2 - 3.5'	Conc. Qual. Flag	
Metals mg/kg (ppm)				
Lead	600	1060 EJ N		

SA2-MW01 Groundwater	NJDEP GWQS Std or PQL With 98 Interim	21-Mar-95 4.52'	04-Apr-95 4.46'	01-Jan-95 4.7'	04-Apr-95 4.7'	04-Apr-95 4.7'
VOCs µg/l (ppb)		Conc. Qual. Flag	Conc. Qual. Flag	Conc. Qual. Flag	Conc. Qual. Flag	Conc. Qual. Flag
Benzene	1	4.4 J G	5.7 G	-	26.0 G	-
1,2-Dichloroethene, total	10	21.0 G	14.0 G	-	11.0 G	-
Methylene chloride (Dichloromethane)	3	-	-	15.0 B ² G	31.0 G	-
Trichloroethylene (TCE)	1	48.0 G	26.0 G	9.0 G	8.0 G	-
Vinyl chloride	5	-	-	-	-	-
Metals µg/l (ppb)						
Aluminum	200	2630 *N ² G	604 G	1730 G	3130 G	-
Arsenic	9	-	10.4 G	76.0 G	51.4 J G	63.2 J G
Barium	2000	4010 G	4840 G	-	-	-
Cadmium	300	8660 *J G	8070 G	10000 G	9580 G	932 G
Copper	50	9630 G	15400 G	6690 G	6560 G	5990 G
Manganese	50000	389000 G	475000 G	86000 G	102000 G	103000 G
Sodium	10	90.0 *S ² G	12.0 NSJ G	31.6 G	41.6 J G	-
Lead						

Analytical Sampling Results

Location	Depth	Sample Date
Unit	Matrix	
ENV-10-S1	Soil	'16-Sep-09
		0 - 2'
		Conc. Qual. Flag
SVOCs mg/kg (ppm)		
Benzo(a)anthracene	86.0 E	NR
Analyte	Concentration	Qualifier Flag

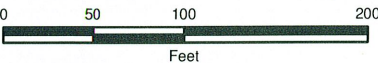
mg/kg or ppm = milligrams per kilogram or parts per million

Key to Flags/Qualifiers:

- D Analyte identified at a primary, secondary, or tertiary dilution
- E Concentration exceeds calibration range (organics) or serial dilution not within control limits (metals), therefore the result is estimated.
- G Exceeds Ground Water Quality Standard
- J Result is detected below the reporting limit and/or is an estimated concentration based on data assessment
- N Spiked sample recovery not within control limits, therefore the result is estimated.
- N Exceeds Non-Residential Direct Contact Soil Cleanup Level
- S Reported value was determined by the method of standard additions
- U Analyte analyzed for but undetected at the corresponding method detection or quantitation limit
- * Duplicate analysis not within control limits, therefore the result is estimated.

Key to Features

- Sample Locations
- Post Excavation Sample Location
- MOS-1 Alignment
- Extent of Excavation
- Property Boundary
- Structure



Data Sources:
Municipality: NJDEP 1995
Aerial Photography: NJOGIS 2007
Design: TFCRC



Hudson-Bergen Light Rail Transit System
Minimum Operational System-1

Parcel No. 205 Communipaw Shop and Yard Site Location Map

Proj. No.: 03-2110CNET-06

Date: April 2010

BEM 100 Passaic Avenue
Chatham, NJ 07928
(908)598-2600



Analytical Sampling Results

Location	Depth	Sample Date
Unit	Matrix	
ENV-10-S1	Soil	16-Sep-09
		0 - 2'
SVOCs mg/kg (ppm)		Conc. Qual. Flag
Benzo(a)anthracene		86.0 E NR

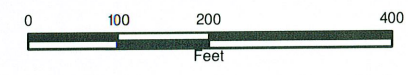
mg/kg or ppm = milligrams per kilogram or parts per million

Key to Flags/Qualifiers:

- D Analyte identified as a primary, secondary, or tertiary dilution.
- E Concentration exceeds calibration range (organics) or serial dilution not within control limits (metals), therefore results are estimated.
- G Exceeds Groundwater Quality Standard
- J Result is detected below the reporting limit and/or is an estimated concentration based on data assessment.
- N Exceeds Non-Residential Direct Contact Soil Cleanup Level
- S Reported value was determined by the method of standard additions
- U Analyte analyzed for but undetected at the corresponding method detection or quantitation limit
- * Duplicate analysis not within control limits, therefore the result is estimated.

Key to Features

- Sample Locations
- +—+— MOS-1 Alignment
- Property Boundary



Data Sources:
Municipality: NJDEP 1995
Aerial Photography: NJOGIS 2007
Design: TFCRC



The Way To Go.

Hudson-Bergen Light Rail Transit System

Minimum Operational System-1

Parcel No. 5E

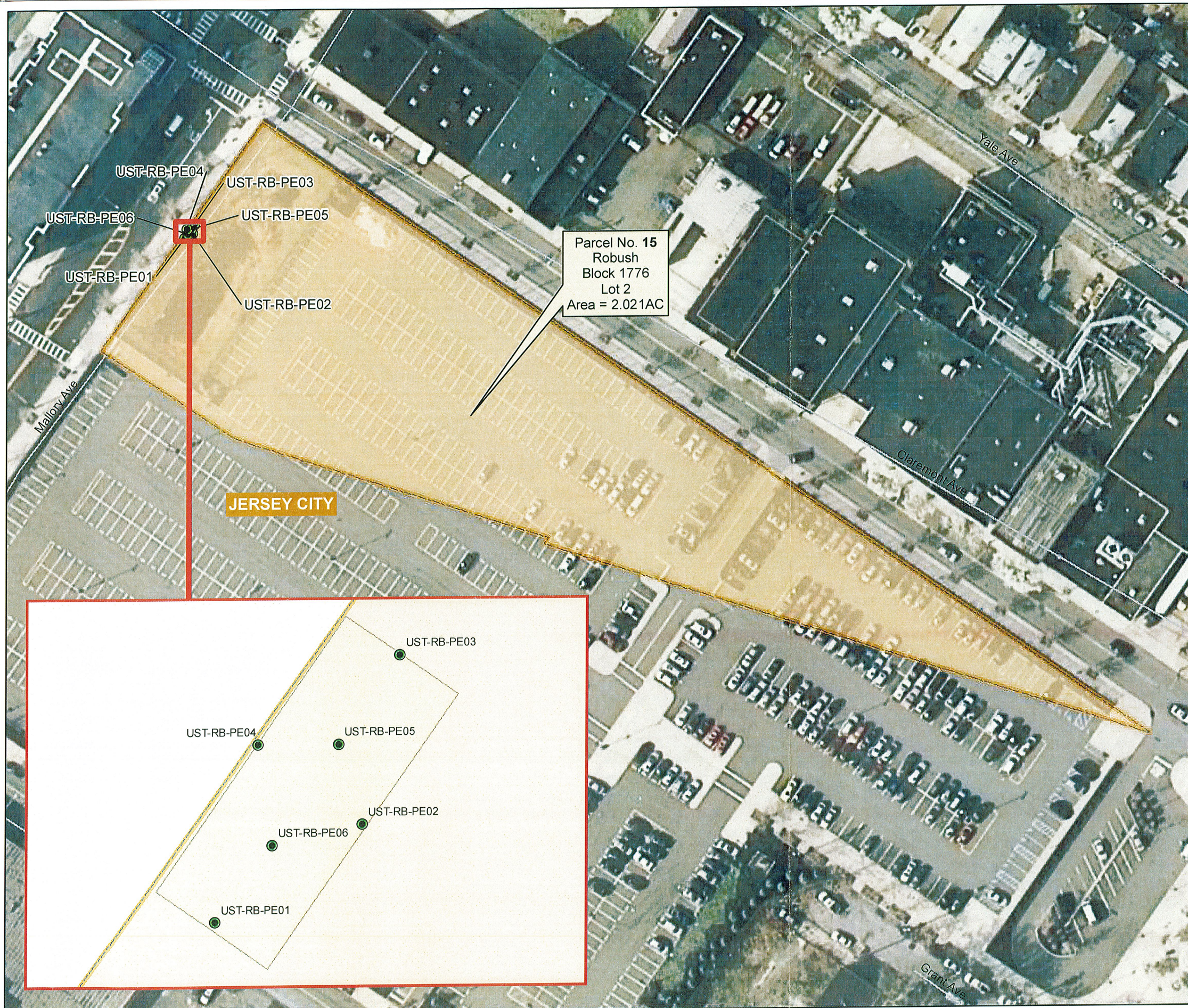
Site Location Map

Proj. No.: 03-2110CNET-06

Date: April 2010

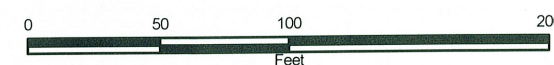
100 Passaic Avenue
Chatham, NJ 07928
(908)598-2600

This map was created using BEM's Geographic System (GIS)



Key to Features

- Post Excavation Sample Locations
- Extent of Excavation
- Property Boundary



Data Sources:
Municipality: NJDEP 1995
Aerial Photography: NJOGIS 2007
Design: TFCRC



Hudson-Bergen Light Rail Transit System
Minimum Operational System-1

Parcel No. 15 West Side Avenue Park & Ride Site Map

Proj. No.: 03-2110CNET-06

Date: April 2010

BEM 100 Passaic Avenue
Chatham, NJ 07928
(908)598-2600

This map was created using BEM's Geographic System (GIS)