



Environment

Prepared for:
PPG Industries, Inc.
Allison Park, PA

Prepared by:
AECOM
Piscataway, NJ
March 2012

Preliminary Assessment Report
Hudson County Chromate Site 204
Monitor Street (West of New Jersey
Turnpike)
Jersey City, Hudson County, New Jersey





Environment

Prepared for:
PPG Industries, Inc.
Allison Park, PA

Prepared by:
AECOM
Piscataway, NJ
March 2012

Preliminary Assessment Report
Hudson County Chromate Site 204
Monitor Street (West of New Jersey
Turnpike)
Jersey City, Hudson County, New Jersey

Contents

1.0 Introduction.....	1-1
1.1 Resources Utilized.....	1-1
2.0 Site Setting and Historical Information	2-1
2.1 Site Setting.....	2-1
2.2 Site History.....	2-2
2.2.1 Summary of Ownership and Operations.....	2-2
2.2.2 Sanborn Map Review	2-2
2.2.3 Historical Topographic Map Review.....	2-3
2.2.4 Aerial Photograph Review.....	2-4
2.2.5 Current Operations	2-4
2.2.6 Present and Past Production Processes	2-4
2.3 Raw Materials, Products, Formulations, Hazardous Substances and Wastes	2-5
2.4 Wastewater Discharges.....	2-5
2.5 Storm Water Discharges	2-5
2.6 Previous Environmental Investigations and Remedial Activities.....	2-5
2.7 Site Visit and Local Records Search.....	2-6
2.8 Areas of Concern.....	2-6
2.8.1 Rail Car	2-6
2.8.2 Other Areas of Concern.....	2-7
2.9 Case Inventory Document.....	2-8

List of Figures

Figure 1 Site Location Map

Figure 2 Tax Block and Lot

Figure 3 BEM Boring Location Map

Figure 4 AOC Location Map

List of Appendices

Appendix A Site Photographs

Appendix B Historic Data

Appendix C NJDEP Data Miner Search Results

Appendix D NJ Transit Parcel 5E – Analytical Results Summary

Appendix E AECOM Memo to Michael McCabe – January 24, 2011

Appendix F NJDEP Preliminary Assessment Form and Certifications

Appendix G Excerpts from Electronic Remedial Action Report (e-RAR) - BEM Systems

1.0 Introduction

This Preliminary Assessment (“PA”) Report has been prepared by AECOM on behalf of PPG Industries, Inc. (“PPG”) with regard to Hudson County Chromate (“HCC”) Site 204 (“Site”). The preparation of this PA was requested by the New Jersey Department of Environmental Protection (“NJDEP”) to assess the potential for Areas of Concern (“AOCs”) at Site 204 specifically related to Chromate Chemical Processing Waste (“CCPW”) and/or the presence of CCPW-impacted material.

AECOM’s visual inspection of Site 204 was conducted on May 25, 2011. Photographs of Site conditions at the time of the inspection are provided in **Appendix A**.

According to NJDEP, Site 204 includes the entirety of Jersey City Tax Block 2145 Lots 41c, 56 and 62, and is approximately 8.5 acres in size (**Figure 2**). The NJDEP Site Remediation Preferred Identification (SRP-ID) number is G000044585. According to the Jersey City Tax Assessor, the street address for the Site is Monitor St (West Side of New Jersey Turnpike), Jersey City, New Jersey.

Known aliases for the Site include:

- Conrail Edgewater Branch
- NJ Transit Parcel No. 5E
- NJDEP Orphan Site #2
- 250 Johnston Avenue

The Site was included in the NJDEP’s May 2, 2005 approval of an electronic Remedial Action Report (“e-RAR”) (dated October 2004), for soil investigation and soil reuse activities conducted at the Site by BEM Systems, Inc. (“BEM”) on behalf of NJ Transit. These activities were performed in accordance with the Memorandum of Agreement (MOA) dated 20 April, 1992, between NJ Transit and the NJDEP for the Hudson-Bergen Light Rail Transit System (H-BLRTS) project.

Based on the findings as presented in this PA Report, AOCs related to the presence of CCPW or CCPW-impacted materials have not been identified, and no further action (“NFA”) is proposed with regard to further CCPW investigation by PPG at the Site.

1.1 Resources Utilized

During the conduct of this PA, a number of sources of historical information were evaluated. A listing of the resources used to compile the site history is provided below:

Name of Resource	Date of document reviewed	Appendix #
<i>Sanborn Maps</i>	<i>Various</i>	<i>Appendix B</i>
<i>Historic Topographic Maps</i>	<i>Various</i>	<i>Appendix B</i>
<i>Historic Aerial Photographs</i>	<i>Various</i>	<i>Appendix B</i>
<i>EDR Chain of Title Report</i>	<i>October 26, 2011</i>	<i>Appendix B</i>
<i>New Jersey Transit Hudson-Bergen Light Rail Transit System Remedial Investigation/Remedial Alternatives Analysis, Group 1A –Edgewater Branch - Volume I, prepared by BEM Systems, Inc., Florham Park, NJ</i>	<i>December 1995</i>	<i>Not Included</i>
<i>NJDEP Data Miner Results</i>	<i>October 2011</i>	<i>Appendix C</i>
<i>NJ Transit Parcel 5E – Analytical Results Summary (included as Figure in Letter to Richard Feinberg (AECOM) from BEM Systems regarding PPG Hudson County Chrome Sites 202, 203 and 204, dated April 29, 2010)</i>	<i>April 29, 2010</i>	<i>Appendix D</i>
<i>Memorandum to Michael McCabe regarding PPG Industries, Inc. – Hudson County Chromate Sites 202,203 and 204, prepared by AECOM dated January 24, 2011</i>	<i>January 24, 2011</i>	<i>Appendix E</i>
<i>NJDEP Correspondence to NJ Transit dated May 2, 2005 regarding NJDEP electronic Remedial Action Report (e-RAR) Approval for Hudson Bergen Light Rail Transit System – MOS1</i>	<i>May 2, 2005</i>	<i>Appendix E</i>
<i>NJDEP Preliminary Assessment Form and Certifications</i>		<i>Appendix F</i>
<i>Hudson-Bergen Light Rail Transit System Minimal Operational System – 1 Project, electronic Remedial Action report (e-RAR), Volume I, prepared for NJDEP/NJ Transit by BEM Systems, Inc.¹</i>	<i>October 2004</i>	<i>Appendix G</i>

¹ Note that PPG/AECOM has been unable to obtain a complete copy of the e-RAR from either BEM Systems or NJ Transit; only excerpted portions of the report have been provided to PPG/AECOM for review

2.0 Site Setting and Historical Information

2.1 Site Setting

As depicted on **Figure 2**, Site 204 is located in a residential/commercial area of Jersey City, situated between Johnston Avenue to the South, Pacific Avenue to the North, an elevated railroad line (National Docks Railway) to the West, and an elevated section of the New Jersey Turnpike (NJTPK) Newark Bay-Hudson County Extension (aka Route 78) to the East.

The Hudson-Bergen Light Rail (HBLR) tracks run north-south along the southern half of the parcel, eventually curving to the east heading off-site beneath the NJTPK. Historically, the Site has been located within the remnants of a former rail yard and rail car staging area (formerly owned by Lehigh Valley Terminal Railway and later by Conrail Corp.)

Site 204 is presently a railroad right of way. The Sanborn maps indicate that the property at Site 204 was historically used as a rail yard. Currently, the Site is mostly vacant, with the exception of the HBLR tracks and the active NJTP elevated roadway along the eastern Site boundary.

Two large areas of raised land covered by asphalt pavement are located on the eastern half of the parcel, situated north and south of the light rail tracks. Based on information presented in the e-RAR prepared by BEM (**Appendix G**, page 26) these paved areas are presumably engineering controls used to cap stockpiles of project related soils approved for re-use at the Site. The e-RAR indicates soils were re-used throughout the Group 1A-Edgewater Branch stretch of HBLR (within which Site 204 is included) in accordance with a NJDEP approved Soil Reuse Plan (SRP); however, the SRP was not provided to AECOM for review, and confirmation that these areas of the Site were utilized for soil reuse activities cannot be verified.

Remaining areas of the Site are predominantly vegetated with apparent signs of dumped construction/demolition debris, household rubbish, abandoned automobile parts and tires, and other miscellaneous debris. An asphalt paved access road runs the length of the Site, west of the Light Rail tracks, from Pacific Avenue southwards towards Johnston Ave, but is not an active public roadway.

Based on a review of Sanborn Maps, historic industries in the immediate vicinity of the Site have included foundries, chemical manufacturers, scrap metal and junk yards, container shipping and storage, metal bed manufacturing, movie screen manufacturing, timber yards and lumber companies, and cattle pens.

Based on the results of previous environmental investigations² on and near the Site, area geology consists of disturbed and undisrupted soils and fill material overlying bedrock. Fill materials have been characterized as composed of chiefly sand, gravel and silt with varying amounts of cinders, coals, ash, concrete, brick fragments, wood, railroad ballast, plastic and assorted debris.

² New Jersey Transit Hudson-Bergen Light Rail System – Remedial Investigation/Remedial Alternatives analysis, Group 1A Edgewater Branch, Volume I, prepared by BEM Systems, Inc., Florham Park, NJ (December 13, 1995)

Drainage on the Site is by infiltration and overland flow. Stagnant water was found in one of the paved lots. Dumping of construction debris and household rubbish is evident in this area.

This site is not known to have been used for production and storage of CCPW.

Depth to groundwater reportedly ranges from 2 to 9 feet below ground surface (“bgs”). Groundwater flow patterns in the vicinity of the Site have likely been impacted by significant disruption and disturbance to the sub surface related to development activity, but in general groundwater flow is expected to mirror local topography, which slopes gently to the east towards the Hudson River approximately ½-mile to the east..

The latitude/longitude coordinates for the center of the Site are 40.713125, -74.054942.

2.2 Site History

In accordance with N.J.A.C. 7:26E-3.1(c)1i, a narrative description of the past industrial/ commercial operation(s) conducted on site by each owner and operator is provided below.

2.2.1 Summary of Ownership and Operations

The following table presents AECOM's understanding of the ownership and operational history of the Site.

Name of Property Owner	From	To
<i>Lehigh Valley Railroad</i>	<i>Prior to 1940</i>	<i>1980</i>
<i>Consolidated Rail Corporation</i>	<i>1980</i>	<i>1996</i>
<i>NJ Transit Corporation</i>	<i>1996</i>	<i>Present</i>
Name of Operator	From	To
<i>Lehigh Valley Railroad – rail yard</i>	<i>Prior to 1940</i>	<i>1980</i>
<i>Consolidated Rail Corporation – rail yard</i>	<i>1980</i>	<i>1996</i>
<i>NJ Transit Corporation – rail yard/light rail right-of-way</i>	<i>1996</i>	<i>Present</i>

2.2.2 Sanborn Map Review

AECOM requested a Certified Sanborn Map Report for the Site, which was provided by Environmental Data Resources, Inc. (“EDR”). Maps were provided for various years from 1896 through 2006. Copies of the Sanborn Maps are provided in **Appendix B**. A summary of information obtained from AECOM's review of the maps is provided below.

The 1896 Sanborn Map indicates the Site was used as a railway yard by the Lehigh Valley Terminal Railway Company. An elevated railway (National Docks Railway) is depicted running north to south adjacent and west of the Site. Mill Creek is located east of the Site. Johnson Avenue is depicted at the

southern end of the Site, and the Morris Canal is depicted running west to east across the northern end of the Site.

The 1911 Sanborn Map indicates that Site use is basically unchanged from the 1896 map, except that a Coal Yard is depicted at the northern end of the Site, adjacent to and south of the Morris Canal. Additionally, the Morris Canal appears to be partially filled. Mill Creek is still visible to the east. The elevated railway (National Docks Railway) is depicted running north to south adjacent and west of the Site.

The 1951 Sanborn Map indicates that the Coal Yard was replaced with a Junk Yard at the northern area of the Site. A contractor's yard is visible at the northeast corner of the Site. Lehigh Valley Terminal Railway lines cover most of the remaining area of the site. Mill Creek is still visible to the east. The elevated railway (National Docks Railway) is depicted running north to south adjacent and west of the Site.

The 1979 Sanborn Map indicates that the Morris Canal has been completely filled in along the north side of the Site, and the Junk Yard and Contractor's Yards are no longer present. The elevated steel and concrete viaduct for the NJTPK Newark Bay Extension is visible running along the eastern Site boundary, and the Mill Creek is visible to the east beyond the NJTPK. The elevated railway (National Docks Railway) is depicted running north to south adjacent and west of the Site. Lehigh Valley Terminal Railway lines cover most of the remaining area of the site.

The 1989, 1990, 1993, 1994, 1995, 1999, 2001, 2002, 2003, 2005, 2006 depict the Site basically the same as the 1979 Map.

2.2.3 Historical Topographic Map Review

AECOM requested a Historic Topographic Map Report for the Site, which was provided by Environmental Data Resources, Inc. (EDR). Maps were provided for various years from 1891, 1900, 1905, 1947, 1955, 1967 and 1981. Copies of the Topographic Maps are provided in **Appendix B**. A summary of information obtained from AECOM's review of the maps is provided below.

The 1891 Topographic map depicts the area of Jersey City near the Site as sparsely developed. The Newark & New York Railroad line is visible adjacent and west of the Site.

The 1900 and 1905 Topographic maps depict the Site and surrounding area similar to the 1891 map, except that the railroad line adjacent and west of the Site is labeled as Lehigh Valley Rail Road.

The 1947 Topographic map depicts the area of Jersey City near the Site as more developed. The Site is still depicted as a rail yard. The north of the Site is shown as vacant and is bordered by Pacific Avenue.

The 1955, 1967 and 1981 maps show the NJTP running past the eastern boundary of the Site. More development across Jersey City and the Site's surroundings can be seen and the Lehigh Valley Rail Road running through the Site converges to the east going underneath the NJTP.

2.2.4 Aerial Photograph Review

AECOM requested an Aerial Photo Decade Package for the Site, which was provided by EDR (**Appendix B**). AECOM also reviewed available stereo pair aerial photographs at the NJDEP Bureau of Tidelands Management in Trenton, NJ.

Aerial coverage provided for the Site by EDR included the years 1943, 1953, 1966, 1976, 1985, 1994, 1995 and 2006. Aerial photographs reviewed at NJDEP included the years 1940, 1951, 1953, 1961, 1974, 1978, 1995 and 2002.

A review of aerial photographs indicates that the property has been a rail yard occupied by Lehigh Valley Terminal Railways since (at least) 1943. The western side of the Site consists of a rail line that converges out to the east of the lot in due course. The northern portion of the Site appears to be a combination of some building structures with vacant lots and marshy areas.

The aerial photograph from 1966 shows the existence of the NJTP along the east side of the Site, and which is visible in all the aeriels reported thereafter. The northern portion of the Site appears to be primarily vacant at this point. The use of the Site as a rail yard appears to be ongoing.

The 1976 and 1985 aerial photographs indicate the rail yard is not longer active. No rail cars or tracks are visible (although the quality of the 1976 photo is not good).

In 1994, the Site appears to be a vacant lot with wooded overgrowth. The railroad tracks on the west boundary of the Site are also visible in all aerial photographs.

In 2006, the aerial photograph shows an access road running north-south and parallel to the rail line. The Site also has two paved lots, due north and south of the converging rail line. The smaller lot has a pile of soil covered with vegetation. There appears to be a significant change in elevation of these lots as compared to the surrounding areas and the rail line, which was also verified during the field visit by AECOM in 2011.

2.2.5 Current Operations

With the exception of the presence of an active light rail line on the Site, there are no known current operations being conducted at the property.

2.2.6 Present and Past Production Processes

No current industrial operations or production processes were observed at the time of site inspection.

Based on the Sanborn Map review, historic Site uses included storage for rail cars, coal storage and use of the north side of the Site as a Junk Yard. No indication of past production processes was noted in the historic information reviewed. It should be noted that coal, and in particular coal combustion byproducts (coal ash) generally contain rather high concentrations of polycyclic aromatic hydrocarbons ("PAHs") and trace metals including lead, arsenic, thallium, zinc, beryllium and chromium.

Based on the findings of this PA, no historical operations are known to have occurred at the Site that would be associated with the use or placement of CCPW, or CCPW-impacted material at the

property, and no documentation regarding the placement of CCPW or CCPW-impacted material at the Site was found.

2.3 Raw Materials, Products, Formulations, Hazardous Substances and Wastes

No specific information with regard to historic manufacturing processes, or types of raw materials utilized for past operations was available for review in the historic records reviewed for the Site.

In general, based upon the industry types/operations known to have been conducted on site, hazardous substances utilized for site operations likely included a variety of petroleum products (gasoline, diesel fuel, heating oil, lubricants and hydraulic fluids), coal, and coal combustion by-products.

2.4 Wastewater Discharges

No information regarding wastewater discharges for previous industrial operations were found during the conduct of this PA.

2.5 Storm Water Discharges

Precipitation that falls on the impervious surfaces (asphalt) generally runs off via sheet flow toward vegetated areas of the Site, including drainage swales that run along the light rail line and the elevated rail line. . At the time of the site inspection, there was no visual indication (staining, odors) that hazardous substances are migrating from the Site to storm water collection or drainage areas.

2.6 Previous Environmental Investigations and Remedial Activities

According to BEM's RI report from December 1995, a PA/Site Investigation (SI) was conducted for the Group 1A site area in May 1992. The investigation included a review of historical land use and environmental agency records, x-ray diffractometer survey for metal contamination, and surface soil sampling. As a result of this investigation, a Remedial Investigation/Remedial Alternative study was triggered and was commenced in 1995.

The RI conducted by BEM involved a soil investigation program for the Group 1A site area consisting of drilling and sampling of 30 borings and excavating 5 test pit locations. The sampling was conducted between August and September, 1995, and the sub-surface soil was found to have arsenic, beryllium, copper, Cr⁶⁺, copper, lead, thallium and zinc as the contaminants of concern. Based upon the number of soil borings advanced, and the overall acreage of the parcels, BEM advanced approximately 2 soil borings per acre of land. This frequency exceeded the NJDEP minimum standard, as defined at NJAC 7:26E-3.9 (f), which requires a minimum of one sample for every two acres at properties less than 10-acres in size.

Of the larger soil investigation for the Group 1A site area, a total of 19 borings were advanced within the Site 204 boundary, collecting 36 samples. Hexavalent chromium analysis was run on 33 soil samples, out of which three samples were found to exceed the former CrSCC of 10 mg/kg criteria. This resulted in deeming Site 204 as an HCC site by the NJDEP. Following are the results of the samples that exceeded the CrSCC criteria.

Boring ID	Contaminant of Concern	Depth of Sample	Former CrSCC (mg/kg)	Current Cr SRS (mg/kg)	Analytical Result (mg/kg)
G01A-B09B	Cr ⁶⁺	2' – 3.5'	10	20	14.7
G01A-B09D	Cr ⁶⁺	8' – 9.5'	10	20	11.2
G01A-B10C	Cr ⁶⁺	4' – 5.5'	10	20	12.2

The Boring Locations from which these samples were collected (G01A-B09 and G01A-B10) are depicted on Figure 3, and are located north and south of the light rail line respectively, near where the light rail turns east and heads under the NJTPK. Based on the October 2004 e-RAR from BEM systems, excavation and remediation was conducted for the Group 1A site area. There is however no evidence of any remedial action conducted within the bounds of Site 204 for the areas that had the Cr⁶⁺ exceedances for the then prevalent criteria of 10 mg/kg.

Considering the analytical results with reference to the current CrSCC criteria of 20 mg/kg, none of the abovementioned three samples, and any other samples collected at Site 204, are in exceedance of current soil remediation standards.

2.7 Site Visit and Local Records Search

AECOM's visual inspections of Site 204 were conducted on and May 25, 2011. A photo log of the areas inspected during the site visits is presented in **Appendix A**.

AECOM also conducted a review of local government agency records after submitting FOIA requests to the various local agencies. AECOM visited the Jersey City Municipal Authority, Tax Assessor, Construction Department, Engineering, Planning, and Health Departments. Records available for review at these agencies are referenced throughout this PA.

2.8 Areas of Concern

The Area of Concern ("AOC") Checklist for all known current and former AOC has been completed, and is included in the completed NJDEP Preliminary Assessment/Site Investigation Form provided in **Appendix F**.

A summary description of current and former AOC is provided below. The location of each AOC is depicted on **Figure 4**.

2.8.1 Rail Car

In summary, based on a review of all available historic reference materials, most of the Site was utilized as railroad yard for storage of rail cars since at least the late 1800's through the mid-1970's.

The presence of environmental contaminants along railroad corridors is well documented, and is typically associated with residual impacts from railroad use and industrial uses along the corridor.

Types of contaminants can include: wood treating chemicals including creosote (railroad ties), oil, gasoline, diesel fuel, cleaning solvents and detergents (spills or leaks), herbicides, fossil fuel combustion products (SVOC's), PCB's leaked from in older transformers and capacitors used in train controls and electric generation, and a variety of residual metals.

Previous environmental investigations conducted by BEM on behalf of NJ Transit included soil sample collection and analysis at various areas of the Site. Based on the investigation results reported by BEM, no soil remedial actions are known to have been conducted. However, where contaminants remained above the most stringent cleanup criteria in effect at the time, administrative measures (Deed Notices) were put into place to ensure these issues were managed appropriately in the future.

It is important to note that the presence of CCPW was not reported at any time during the previous investigations of Site 204.

Based upon these findings, and the fact that this AOC is not specifically related to CCPW and/or the presence of CCPW-impacted material, No Further Action for this AOC is proposed.

2.8.2 Other Areas of Concern

Historic Coal Yard Operations

From the late 1800's through early 1900's the Site was operated primarily as a coal storage yard. Based on the configuration of the facility as depicted on the Sanborn maps, it appears that coal was transported to the Site primarily via rail car, which entered the Site via a rail spur from the main line. It should be noted that coal, and in particular coal combustion byproducts (coal ash) generally contain rather high concentrations of trace PAHs and metals including lead, arsenic, thallium, zinc, beryllium and chromium.

No information regarding previous investigations related to this historic use of the Site were found in the available records reviewed.

Based upon these findings, and the fact that this AOC is not specifically related CCPW and/or the presence of CCPW-impacted material, No Further Action for the AOC is proposed.

Stockpiled Soils

According to information presented in the *New Jersey Transit Hudson-Bergen Light Rail Transit System Remedial Investigation/Remedial Alternatives Analysis, Group 1A –Edgewater Branch - Volume I*, prepared by BEM Systems, Inc., Two large areas of raised land covered by asphalt pavement are located on the eastern half of the parcel, situated north and south of the light rail tracks. Based on information presented in the e-RAR prepared by BEM (**Appendix G**, page 26) these paved areas are presumably engineering controls used to cap stockpiles of project related soils approved for re-use at the Site. The e-RAR indicates soils were re-used throughout the Group 1A-Edgewater Branch stretch of HBLRTS (within which Site 204 is included) in accordance with a NJDEP approved Soil Reuse Plan (SRP); however, the SRP was not provided to AECOM for review, and confirmation that these areas of the Site were utilized for soil reuse activities cannot be verified.

There is no indication that these soils contained CCPW, or concentrations of Hexavalent chromium above the current most stringent remediation standard of 20 mg/kg. Based upon these findings, and

the fact that this AOC is not specifically related CCPW and/or the presence of CCPW-impacted material, No Further Action for the AOC is proposed.

2.9 Case Inventory Document

The Case Inventory Document (“CID”) is a summary of all AOCs and major case components that serve to form the basis for remedial decisions. A CID is provided with this PA in accordance with the requirements for conducting a preliminary assessment (N.J.A.C. 7:26E-3.2(a)6).

Figures

Appendix A
Site Photographs

Appendix B

Historic Data (The EDR™ Radius Map Report with GeoCheck®)

Appendix C

NJDEP Data Miner Search Results

Appendix D

NJ Transit Parcel 5E – Analytical Results Summary

Appendix E

**AECOM Memo to Michael
McCabe – January 24, 2011**

Appendix F

NJDEP Preliminary Assessment Form and Certifications

Appendix G

**Excerpts from e-RAR prepared
by BEM Systems**