

**Preliminary Draft Report**

**Phase II ESA Step B Summary Report and  
Contaminated Soil Disposal Cost Estimate  
For Parcel 189 (Extra Space Storage Inc.)**

**350 Adams Street, Louisville, KY 40206**

**The Ohio River Bridges Project, Section 1  
Kennedy Interchange Reconstruction**

***Prepared for:***

**Kentucky Transportation Associates (KTA)  
c/o Qk4  
815 West Market Street, Suite 300  
Louisville, Kentucky 40202  
Phone (502) 585-2222**

***Prepared by:***

**Barr & Prevest, Inc. (BPI)  
2800 Corporate Exchange Drive  
Suite 240, Columbus, OH 43231  
Phone (614) 714-0270**

**November 29, 2010**

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### **CONFIDENTIALITY NOTICE**

In accordance with Kentucky Transportation Cabinet, Office of Legal Services instructions, this Phase II Environmental Site Assessment (ESA) Step B Investigation Report is a preliminary draft document, and is subject to review by KYTC, which has sole authority and discretion for its use and distribution. It is also subject to revision by Barr & Prevest, Inc. following KYTC's review and comments. Because it is anticipated that the data, information, and laboratory results contained in this preliminary draft report, including narrative and attachments, may be used in condemnation proceedings for the subject Parcel, the complete report should be maintained Confidential to the maximum appropriate extent.

DRAFT

**PARCEL 189 - EXTRA SPACE STORAGE INC. ["FORMER LOUISVILLE VENEER MILL"]**

**189.1 Brief Introduction**

This is Barr & Prevest, Inc.'s (BPI) preliminary draft Phase II Environmental Site Assessment (ESA) Step B Investigation Report under Contract Modification No. 6 to Kentucky Transportation Associates (KTA) for the Kentucky Transportation Cabinet's (KYTC) right-of-way Parcel 189 (Site No. 69) scheduled for priority acquisition in 2011 on the Ohio River Bridges, Section 1, Kennedy Interchange Reconstruction Project. Included in this draft report are a detail summary of the investigation performed, the analytical laboratory results obtained, and a budget cost estimate for onsite treatment, and off-site landfill disposal of the planned excavated contaminated soils.

**189.2 Executive Summary**

The pertinent findings of Barr & Prevest's Phase II ESA Step B investigation and contaminated soil disposal budget cost estimate for Parcel 189 are summarized as follows:

- Several Polynuclear Aromatic Hydrocarbon semi-volatile compounds (PNA or PAH SVOCs ) exceed both 2002 EPA Region 9 Residential and Industrial PRGs across the site. Predominate among these compounds is benzo[a]pyrene, a carcinogen, which exceeds the PRGs in almost all of the 70 soil samples obtained;
- The RCRA metal arsenic (As), also a carcinogen, exceeded both its EPA Residential and Industrial PRGs in all 70 soil samples, but does not appear to exceed its RCRA Toxicity Characteristic Leaching Procedure (TCLP) concentration limit value for the samples obtained;
- Although lead (Pb) was found to exceed its Residential and Industrial PRGs in only a relatively small fraction (30% and 10%, respectively) of the total number of samples, it exceeded its TCLP concentration limit value of 5 mg/l in five samples, one of which is in the 0-2' soil interval planned for excavation and therefore will need to be treated onsite at an estimated cost of \$113,750 before onsite reuse or offsite landfill disposal;
- In the event that the approximately 22,500 tons of >PRGs excavated contaminated soils cannot or will not be reused onsite as roadway/embankment backfill, the current budget cost estimate for transportation to and disposal at Waste Management, Inc.'s Outer Loop non-hazardous waste landfill in Louisville is \$954,350.

**189.3 Parcel Information**

The following summarizes or references the pertinent project data and information for Parcel 189:

Site/Parcel Location Map: ..... See Attach. 2, Figure 189-2, Parcel Location Map

Site/Parcel Latitude and Longitude: ..... N 38° 15' 35" W 85° 43' 59" (UTM NAD83)

Parcel Primary or Business Site Address: ..... 350 Adams Street, Louisville, KY 40206-1654

Street Addresses, Site/Property Owners and Lessees/Operators by Jefferson County Parcel ID#:

Parcel ID#	Street Address	Property Owner	Lessee/Operator
019C0053	350 Adams Street	Extra Space Storage Inc.	(Same as Property Owner)

Property Owner(s)/Contact Information: ..... Brent Hardy, V.P. Facilities, Extra Space Storage Inc., 2795 East Cottonwood Parkway, Suite 400, Salt Lake City, UT 84121; phone 801/365-4469.

Lessee/Operator(s)/Contact Information:..... (Same as Property Owner)

On-Site Point of Contact (P.O.C.)..... Ryan Dayhoff, Site Manager; ph. 502/584-1931

Relevant Parcel Areas:

Total Parcel Area: ..... 174,314 Square Feet (4.002 Acres)  
Area to be Acquired: ..... 174,314 Square Feet (4.002 Acres)  
Area to be Disturbed: ..... 174,314 Square Feet (4.002 Acres)

Zoning Classification/Current Land Use: ..... Industrial/Commercial. Parcel 189 a public self-storage facility.

(For additional Parcel 189 information and references, e.g., Site Geology and Hydrogeology, where available; Site Conditions and Environmental History; and Risk Management Plan Status, see Barr & Prevest's August 31, 2007 draft Phase II ESA Step A investigation report for Site 69.)

#### **189.4 Sampling and Analysis Plan**

The pertinent site/parcel-specific Hazmat Phase II ESA Step B Geoprobe drilling, soil sampling, and laboratory analysis plan data and information for Parcel 189 are summarized as follows:

##### *Geoprobe Drilling and Sampling:*

Geoprobe Drilling Date(s): ..... July 21, 22, and 23, 2010  
Geoprobe Drilling Firm: ..... Geo Logic, Inc., New Albany, IN  
Geoprobe Equipment: ..... 4x4 Truck-Mounted Geoprobe Model 77000  
Environmental Field Geologist: ..... Brian Lenihan, CHMM  
Planned Geoprobe boring spacing: ..... 100' x 100' square grid  
(See Attachment 3, Figure 189-2 Soil Boring Locations Drawing)

	<i>Planned</i>	<i>Actual</i>	<i>% of Plan</i>
Number Borings to 20' Termination: .....	18	18	100%
Number Borings to 40' Termination: .....	0	0	-
Total Lineal Feet Geoprobe Drilling: .....	360	403*	112%*
Number of Drilling Days at 120'/day: .....	3	3	100%
Number of Laboratory Soil Samples: .....	72	70	97%

..... \* Includes Geoprobe boring refusals footage

(For boring locations data and information not provided on the gINT boring logs in Attachment 4, including surveyed KY State Plane North-NAD 1983 coordinates and ground surface elevations, see Attachment 5, Table 189-1 As-Drilled Soil Boring Locations Coordinates and Elevations.).

##### *Analytical Laboratory Analyses:*

Laboratory Analyses, All Samples: ..... Polynuclear Aromatic Hydrocarbons (PNA/PAHs)  
RCRA total metals Arsenic and Lead only  
Contingent Laboratory Analyses: ..... VOCs (PID >100 ppm, and/or solvent odor)  
TPH (free product; petroleum product odor)  
TCLP lead (where total lead >~400 mg/kg)

Analytical Laboratory used:..... Microbac Laboratories, Kentucky Division, 3323  
Gilmore Industrial Blvd., Louisville; tel. 962-6400.

**189.5 Laboratory Results**

Microbac Laboratories' complete laboratory reports or "Certificates of Analysis (COA)" for Parcel 189 are provided here as Attachment 6. These reports are summarized in Attachment 7, Table 189-2 Summary Table of Analytical Laboratory Results with Comparisons to the October 2002, EPA Region 9 Preliminary Remediation Goals (PRGs). [Note: In addition to the COAs provided here, electronic data deliverables (EDDs) of the laboratory results, in the form of Excel spreadsheet files, can be made available to KYTC/DEA and/or KYDEP/DWM upon request.]

The following table further condenses the findings in Attachment 7, Table 189-2, identifying the specific compounds and metals that have been found to exceed either a Region 9 Residential or Industrial PRG. The ratios shown for each compound and metal found to exceed a PRG is the number of soil borings (locations) and samples where its PRG has been exceeded compared to the total numbers of borings and samples, respectively, the purpose of which is to provide a semi-quantitative indication or measure of whether the contamination is localized or is pervasive across the site in area and/or depth.

Summary table of compounds and metals exceeding an October 2002, EPA Region 9 soil PRG:

> RESIDENTIAL PRGs	Borings	Samples	> INDUSTRIAL PRGs-	Borings	Samples
<b>Volatile Organic Compounds (VOCs):</b>					
(None)	0/1	0/2	(None)	0/1	0/2
<b>Polynuclear Aromatic Hydrocarbons (PNAs)</b>					
Benzo[a]anthracene	18/18	54/70	Benzo[a]anthracene	13/18	23/70
Benzo[b]fluoranthene	18/18	57/70	Benzo[b]fluoranthene	13/18	27/70
Benzo[k]fluoranthene	6/18	10/70	Benzo[k]fluoranthene	2/18	3/70
Benzo[a]pyrene	18/18	68/70	Benzo[a]pyrene	18/18	64/70
Dibenzo[a,h]anthracene	18/18	60/70	Dibenzo[a,h]anthracene	15/18	33/70
Indeno[1,2,3-c,d]pyrene	14/18	29/70	Indeno[1,2,3-c,d]pyrene	5/18	7/70
<b>Total Arsenic and Lead</b>					
Arsenic (As)	18/18	70/70	Arsenic (As)	18/18	70/70
Lead (Pb)	12/18	21/70	Lead (Pb)	6/18	7/70

Notes:

1. Because no Volatile Organic Compounds (VOCs), non-PNA/PAH Semivolatile Compounds (SVOCs), or RCRA metals other than arsenic and lead, were not found to exceed a PRG in the 2006/07 ESA Step A investigation of Site 69, these constituents were not proposed for the current Step B investigation other than for VOCs on a field observation-contingent basis;
2. Two soil samples (SB189-2 5-10' and 10-20') were analyzed for VOCs due to measurable field PID readings, but except for very low concentrations of acetone and methylene chloride (both common 'laboratory artifacts'), all were reported as non-detect (N.D.);
3. No field or laboratory observations of petroleum-product odors were reported, and therefore no contingent Total Petroleum Hydrocarbon (TPH) analyses were requested or performed.

4. Several soil samples were analyzed for TCLP lead based on their prior-reported total lead results, five of which exceeded the limit of 5 mg/l. TCLP results are discussed further below.

### 189.6 Arsenic Background

Alternatively to comparing the total arsenic results to the Region 9 PRGs, the Division of Waste Management (KYDEP/DWM) allows comparison to the less stringent of Kentucky's generic statewide background values and the Bluegrass Region-specific (of which Louisville is a part of) background values. As provided by DWM (ref. Shawn Cecil November 8, 2010 email to Christa Turner/KYTC/DEA), the Bluegrass Region arsenic background values are the less stringent of the data sets, and are therefore used here for comparison to the total arsenic laboratory results.

"The following three criteria may be used to demonstrate that the site data is background:

1. The mean site concentration for inorganic constituents must be below the 95% UCL of the mean concentrations of background for inorganic constituents;
2. At least half of the data points should be less than the 60th percentile;
3. No data points should be above the upper bound value (95th percentile)."

Note: It is Barr & Prevest's understanding that all three background criteria must be satisfied for an affirmative 'demonstration' that a site/parcel's arsenic data is background, as defined in 401 KAR 42:005, and in accordance with Kentucky Guidance for Ambient Background Assessment (January 8, 2004).

Comparison of Phase II ESA Steps A and B total arsenic results for all soil samples and depths:

All Samples	Bluegrass Limit Value	ESA Step A Data Result	ESA Step B Data Result	Combined A & B Results	Pass/Fail
# of Samples	-	15	70	85	-
Criteria 1.	<b>13.1 mg/kg</b>	9.9 mg/kg	10.5 mg/kg	10.4 mg/kg	<b>Pass</b>
Criteria 2.	<b>10.6</b> "	66.7% <	50.0% <	50.6% <	<b>Pass</b>
Criteria 3.	<b>22.7</b> "	26 mg/kg	20 mg/kg	26 mg/kg	<b>FAIL</b>

Comparison of Phase II ESA Steps A and B total arsenic results for all 0-2 ft. soil samples only:

0-2' Samples	Bluegrass Limit Value	ESA Step A Data Result	ESA Step B Data Result	Combined A & B Results	Pass/Fail
# of Samples	-	5	18	23	-
Criteria 1.	<b>13.1 mg/kg</b>	10.8 mg/kg	11.5 mg/kg	11.3 mg/kg	<b>Pass</b>
Criteria 2.	<b>10.6</b> "	40.0% <	33.3% <	34.8% <	<b>FAIL</b>
Criteria 3.	<b>22.7</b> "	16 mg/kg	18 mg/kg	18 mg/kg	<b>Pass</b>

Based on the Bluegrass Region background concentration limit values, Parcel 189's total arsenic results do not satisfy all three criteria and, therefore, cannot be considered ambient background.

### 189.7 TCLP-Excess Lead

Toxicity Characteristic Leaching Procedure (TCLP) laboratory analysis for lead was performed on 19 of the 70 soil samples obtained in Step B based on their first-reported total lead analysis results, all performed within the laboratory-prescribed sample holding time limit of 180 days for extraction. (TCLP analysis was not proposed or performed in Step A.) The RCRA (Resource and Recovery Act) TCLP concentration limit for lead is 5.0 mg/L, above which a soil becomes a RCRA 'characteristic' hazardous waste for toxicity upon excavation/removal from the ground.

As shown in the following table, of the 19 soil samples selected for TCLP lead analysis, five exceeded/failed the 5.0 mg/L concentration limit value, including one (SB189-11) from the 0-2' interval planned for excavation on Parcel 189. The affected quantity and budget cost estimate for onsite treatment/stabilization and offsite non-hazardous waste landfill disposal of this TCLP-excess soil will be developed and presented further below.

Soil Boring	Sample Interval	Total Lead (mg/kg)	TCLP Lead (mg/l)	Pass/Fail	5 mg/l Equiv. Total Lead *
SB189-1	0-2'	730	<0.0027	Pass	>10 <sup>6</sup> mg/kg
SB189-2	5-10'	890	0.37	Pass	12,000
SB189-4	10-20'	1,300	0.58	Pass	11,200
SB189-7	2-5'	910	4.6	Pass	989
SB189-11	0-2'	1,200	19	FAIL	316
SB189-11	2-5'	330	0.37	Pass	4,460
SB189-12	0-2'	620	2.0	Pass	1,550
SB189-12	2-5'	520	1.8	Pass	1,440
SB189-12	5-10'	730	4.3	Pass	849
SB189-13	0-2'	480	0.043	Pass	5,580
SB189-14	0-2'	360	0.47	Pass	3,830
SB189-14	2-5'	550	3.1	Pass	887
SB189-15	0-2'	700	2.3	Pass	1,520
SB189-16	5-10'	690	9.3	FAIL	371
SB189-16	10-20'	4,200	6.3	FAIL	3,330
SB189-17	0-2'	700	1.5	Pass	2,330
SB189-17	2-5'	3,200	38	FAIL	421
SB189-17	10-20'	870	5.7	FAIL	763
SB189-18	0-2'	520	1.8	Pass	1,440

\* Calculated based on assumed linearity between total and TCLP concentrations for a specific compound.

### 189.8 Excavated Soil Quantities

The planned excavated soil area, depth, and volume quantities basis used here for Parcel 189 are from KTA/WMB, Inc.'s September 16, 2010-revised "Estimate of Excavation Quantities on Parcels Being Acquired in Identified Areas of Contamination" summary spreadsheet, are based on preliminary embankment/roadway and structure designs, and are subject to revision. These quantities are as follows:

Disturbance/Quantities:	Area	Depth	Volume	Weight*
Embankment/Roadway	167,423 ft <sup>2</sup>	2 ft.	12,402 yd <sup>3</sup>	19,861 tons
Sewer	6,891	5	1,276	2,639
Structure	0	-	0	0
Totals:	174,314 ft <sup>2</sup>	-	13,678 yd <sup>3</sup>	22,158 tons

\* Tons calculated at 120 lbs/cu.ft. (3,240 lbs/cu.yd.)

Call 22,500 tons.

#### Notes:

1. Included in these quantities is an estimated 100 ft. x 100 ft. x 2 ft. deep = 20,000 ft<sup>3</sup> (740 yd<sup>3</sup>), or approximately 1,250 tons of TCLP-excess lead contaminated soil centered on soil boring SB189-11, which will require onsite treatment/stabilization prior to offsite landfill disposal.

2. The total excavated soil quantities (13,678 cu. yds., 22,500 tons) are based on the currently planned embankment/roadway construction 'disturbance' or 'affected' areas and depths, and are irrespective of contamination. Therefore, soil excavation costs are not included in the contaminated soil disposal budget cost estimate provided further below;
3. Significantly, however, because arsenic was found to exceed both its Industrial PRG in all (100%) of the samples and its alternative ambient background criteria, 100% of the planned excavated soil is therefore assumed to be contaminated and subject to offsite disposal as discussed next. [The PNA/PAH compound benzo(a)pyrene was similarly found to exceed its Industrial PRG in all of the soil boring locations, and in almost all (91%) of the samples.]

### 189.9 Soil Disposal Basis

In lieu of onsite reuse of the excavated contaminated soils as embankment/roadway backfill, which Barr & Prevest understands is currently not considered to be a viable option by KYTC due to concerns for public health and safety from temporarily storing excavated contaminated soils onsite in an urban area pending its reuse, and uncertainties regarding construction sequencing and timing, there are three offsite landfill disposal possibilities for the excavated soils, as follows:

- 1) *Non-Hazardous Waste Landfill* – Assuming the TCLP-excess lead contaminated soil can be successfully treated and stabilized onsite, and therefore is no longer a 'characteristic' RCRA hazardous waste, it should be able to be disposed of in a non-hazardous waste (Subtitle D) landfill such as Waste Management, Inc's Outer Loop Landfill in Louisville. However, this may first need to be approved by DWM, and a waste profile must then be submitted to the landfill operator, including certification that the soil is not RCRA-hazardous;
- 2) *Direct Hazardous Waste Landfill* – In the unlikely but possible event that the TCLP-excess lead contaminated soil is successfully treated onsite but for any reason is not approved by DWM, or is not accepted by Waste Management, Inc, for disposal at the Outer Loop Landfill, it will instead need to be transported to and disposed of in a Subtitle C or hazardous waste landfill such as Waste Management's in Emelle, Alabama;
- 3) *Haz. Waste Landfill w/Stabilization* – If for any reason the TCLP-excess lead contaminated soil cannot be treated onsite, or is not successfully or certifiably treated to below applicable regulatory standards, it will need to be permitted for and transported to a RCRA hazardous waste (Subtitle C) landfill and treated/stabilized by them prior to disposal in that landfill.

### 189.10 Budget Cost Estimate

Current unit cost (per ton) budget quotations for the three excavated contaminated soil offsite landfill disposal possibilities were obtained from Waste Management, Inc. (WM) representatives in Louisville and Emelle, AL (see quotations, Attachment 8), and are summarized as follows:

Disposition Unit Costs	Onsite TCLP-Lead Stabiliz.	Non-Haz. Landfill	Haz. Landfill (No Stabiliz.)	Haz. Landfill Stabilization
Transportation	n/a	\$8.00/ton	\$93.00/ton	\$93.00/ton
Trans. Fuel Surcharge	n/a	Incl.	\$19.00	\$19.00
Chemical Stabilization	\$91.00/ton	n/a	n/a	\$91.00
Landfill Disposal Fee	n/a	\$26.00	\$93.00	\$93.00
Landfill 'Environ.' Fee	n/a	1.2% \$0.31	\$11.00	\$22.00
Jefferson County Tax	n/a	5.0% \$1.30	n/a	n/a
KY and AL State Tax	n/a	\$1.75	\$21.00	\$21.00
<b>Total Unit Costs:</b>	<b>\$91.00/ton</b>	<b>\$37.36/ton</b>	<b>\$237.00/ton</b>	<b>\$339.00/ton</b>

Based on these unit costs, first, the estimated cost for onsite treatment/stabilization of the TCLP-excess lead contaminated soil is 1,250 tons x \$91.00/ton = \$113,750.

Next, the estimated cost for transport to and offsite disposal at the Outer Loop Landfill, including the onsite-treated TCLP-excess lead contaminated soil, is 22,500 tons x \$37.36/ton = \$840,600.

Last, therefore, the total estimated cost for onsite treatment and offsite transportation and landfill disposal of Site 69 Parcel 189's planned excavated contaminated soils is \$113,750 + \$840,600 = \$954,350.

Marshall Levy



Barr & Prevest, Inc.

#### **Attachments**

1. KYTC's October 2, 2006, Right of Entry Notification Letter to Parcel 189 Property Owner(s);
2. Figure 189-1 Parcel Location Map Drawing;
3. Figure 189-2 Soil Boring Locations Drawing;
4. gINT Soil Boring Logs;
5. Table 189-1 As-Drilled Soil Boring Locations Coordinates and Elevations;
6. Analytical Laboratory Reports (Certificates of Analysis);
7. Table 189-2 Summary Spreadsheet of Phase II ESA Step B Soil Sample Laboratory Results with Comparisons to the October 2002 EPA Region 9 Preliminary Remediation Goals (PRGs);
8. Waste Management, Inc. Outer Loop Landfill Non-Hazardous Waste Disposal Quotation.

**ATTACHMENT 1**

**Copy of KYTC's October 2, 2006, Right of Entry Notification Letter to Property Owner**

**DRAFT**



## TRANSPORTATION CABINET

Frankfort, Kentucky 40622  
www.kentucky.gov

**Ernie Fletcher**  
Governor

**Bill Nighbert**  
Secretary

**Marc Williams**  
Commissioner of Highways

October 2, 2006

Extra Space Storage, Inc.  
Attn: Tammy Liton  
2795 East Cottonwood Parkway, Suite 400  
Salt Lake City, UT 84121

RE: The Ohio River Bridges Project - Section 1 - Kennedy Interchange Reconstruction Project

Subject: Notice of Kentucky Transportation Cabinet Employees and Agents Right of Entry

Dear Property Owner:

As part of the Ohio River Bridges Project, the Federal Highway Administration (FHWA), in 2003, authorized the reconstruction of the Kennedy Interchange, a/k/a Spaghetti Junction, in downtown Louisville. The authorized design alternative, which was recommended by the Kentucky Transportation Cabinet (KYTC) and selected by FHWA, includes the relocation of the Kennedy Interchange to the south of its current location to allow for more efficient traffic movements and improved safety (the "Project"). Based on the current Project design, the Commonwealth of Kentucky has determined that a portion or possibly all of your properties described as:

- PVA Block 19C Lot 0053 (350 Adams Street)

This property lies within the project corridor, and may therefore be subject to acquisition by KYTC pursuant to Kentucky Revised Statutes (KRS) Chapter 416.

In accordance with FHWA guidelines, it is necessary that geotechnical and environmental assessments be performed on the properties within the Project corridor prior to acquisition. Accordingly, surface and subsurface soil and groundwater samples will need to be obtained from your Property. The scope of these assessments will include, but not necessarily be limited to, drilling of boreholes, sampling, and laboratory analysis of the samples obtained to determine or confirm the presence of environmental contaminants, and to collect data for geotechnical evaluations.

KRS 416.560(4) gives the Commonwealth, its employees, and agents, the right to enter upon land being considered for acquisition for public projects in order to perform studies, surveys, tests, soundings, and appraisals ("Site Assessment Activities"), provided that the owner of the land or the party in whose name the property is assessed for purposes of taxation has been notified at least ten (10) days prior to entry on the property.

You are hereby notified that the Commonwealth of Kentucky, by and through its employees or agents, considers it necessary to enter upon your Property to perform Site Assessment Activities pursuant to KRS 416.560(4). No sooner than ten (10) days after your receipt of this notice letter, but as soon thereafter as

is practicable, the Commonwealth's employees and/or agents need to enter your Property under the provisions of KRS 416.560(4).

The Commonwealth has contracted for the services associated with Site Assessment Activities through its agents, Qk4 ("Qk4"), Fuller, Mossbarger, Scott and May Engineers ("FMSM"), and Wang Engineering, Inc. ("WEI"). Prior to entering upon your Property, a representative from either FMSM or WEI will contact you to answer any questions that you may have, and to inform you of the date and time that the Site Assessment Activities will begin.

We have prepared the attached "Frequently Asked Questions" (FAQ) supplemental information sheet to address some of the potential concerns of affected property owners. If you have any further questions prior to being contacted by FMSM or WEI, please do not hesitate to call me at 502-564-0319, or Glen Kelly, Project Manager for Qk4. Glen can be contacted by phone at 502-585-2222, or by mail at 815 West Market Street, Suite 300, Louisville, KY 40202. On behalf of the Commonwealth of Kentucky, thank you for your cooperation in this matter.

Sincerely,



Bart Bryant, P.E., Project Manager  
Kentucky Transportation Cabinet

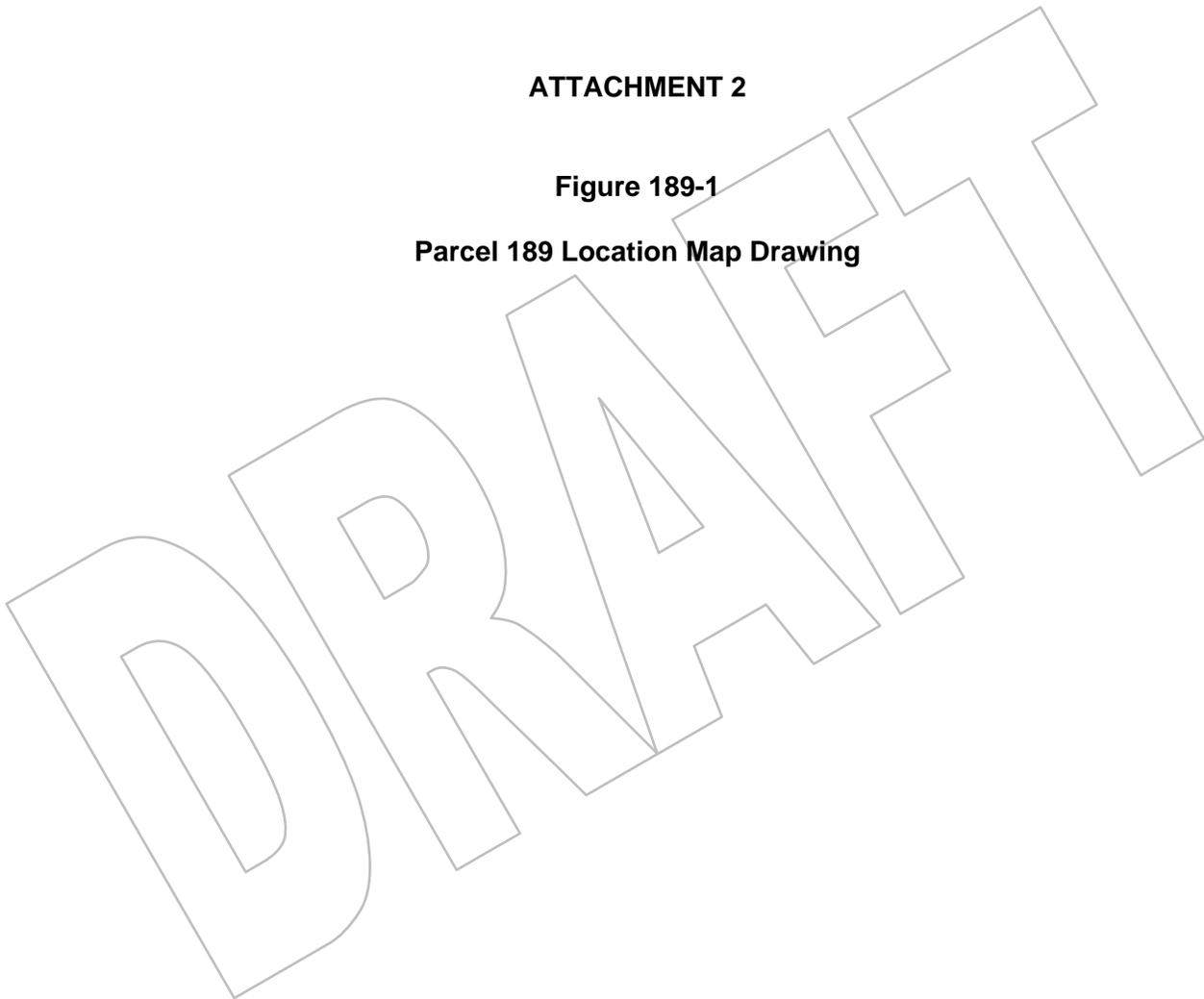
Cc: Todd Shipp  
David Waldner  
John Sacksteder  
Glen Kelly



**ATTACHMENT 2**

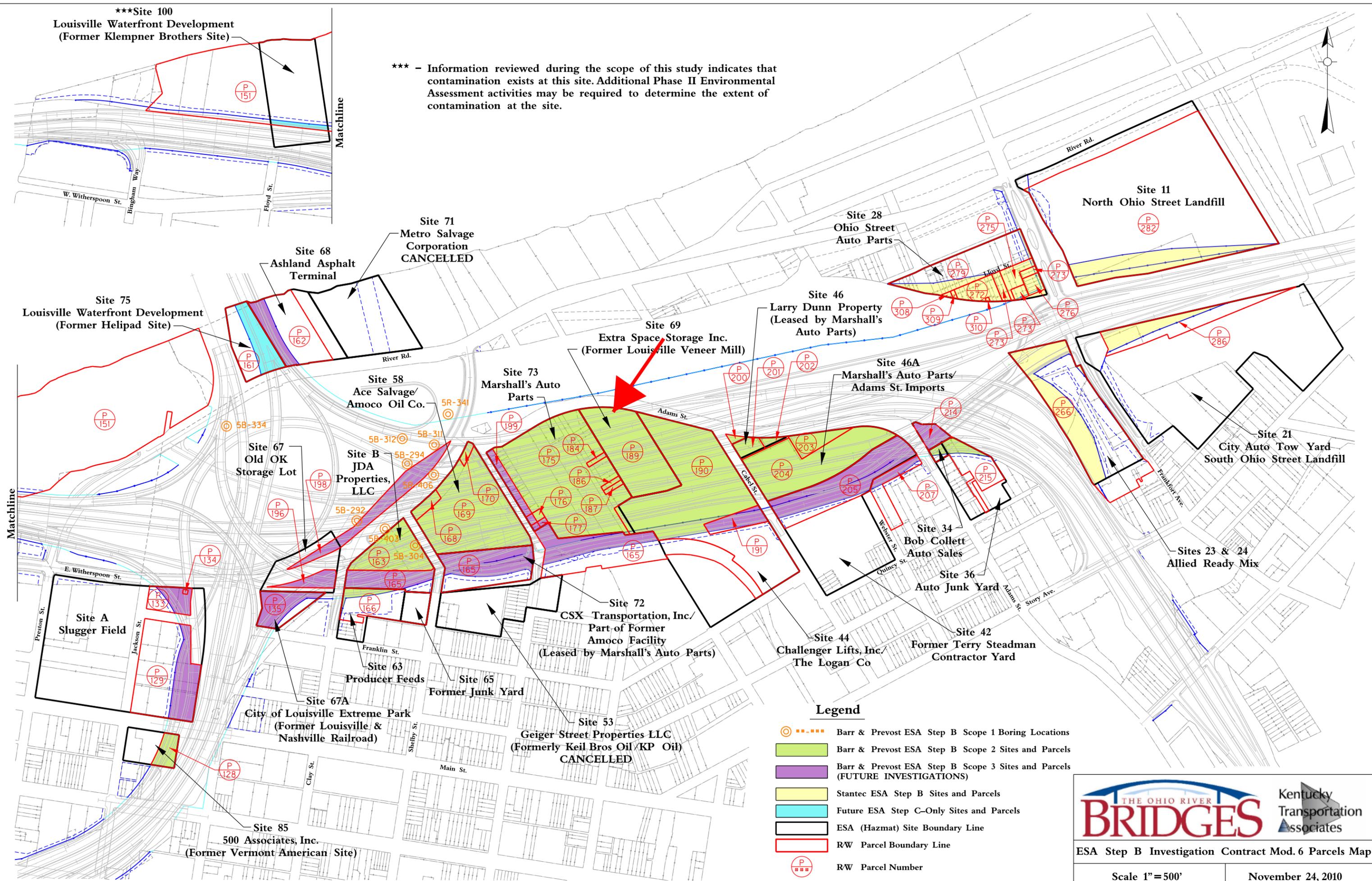
**Figure 189-1**

**Parcel 189 Location Map Drawing**



\*\*\*Site 100  
Louisville Waterfront Development  
(Former Klempner Brothers Site)

\*\*\* - Information reviewed during the scope of this study indicates that contamination exists at this site. Additional Phase II Environmental Assessment activities may be required to determine the extent of contamination at the site.



**Legend**

- ⊙ - - - - - Barr & Prevost ESA Step B Scope 1 Boring Locations
- Barr & Prevost ESA Step B Scope 2 Sites and Parcels
- Barr & Prevost ESA Step B Scope 3 Sites and Parcels (FUTURE INVESTIGATIONS)
- Stantec ESA Step B Sites and Parcels
- Future ESA Step C-Only Sites and Parcels
- ESA (Hazmat) Site Boundary Line
- R/W Parcel Boundary Line
- Ⓟ R/W Parcel Number

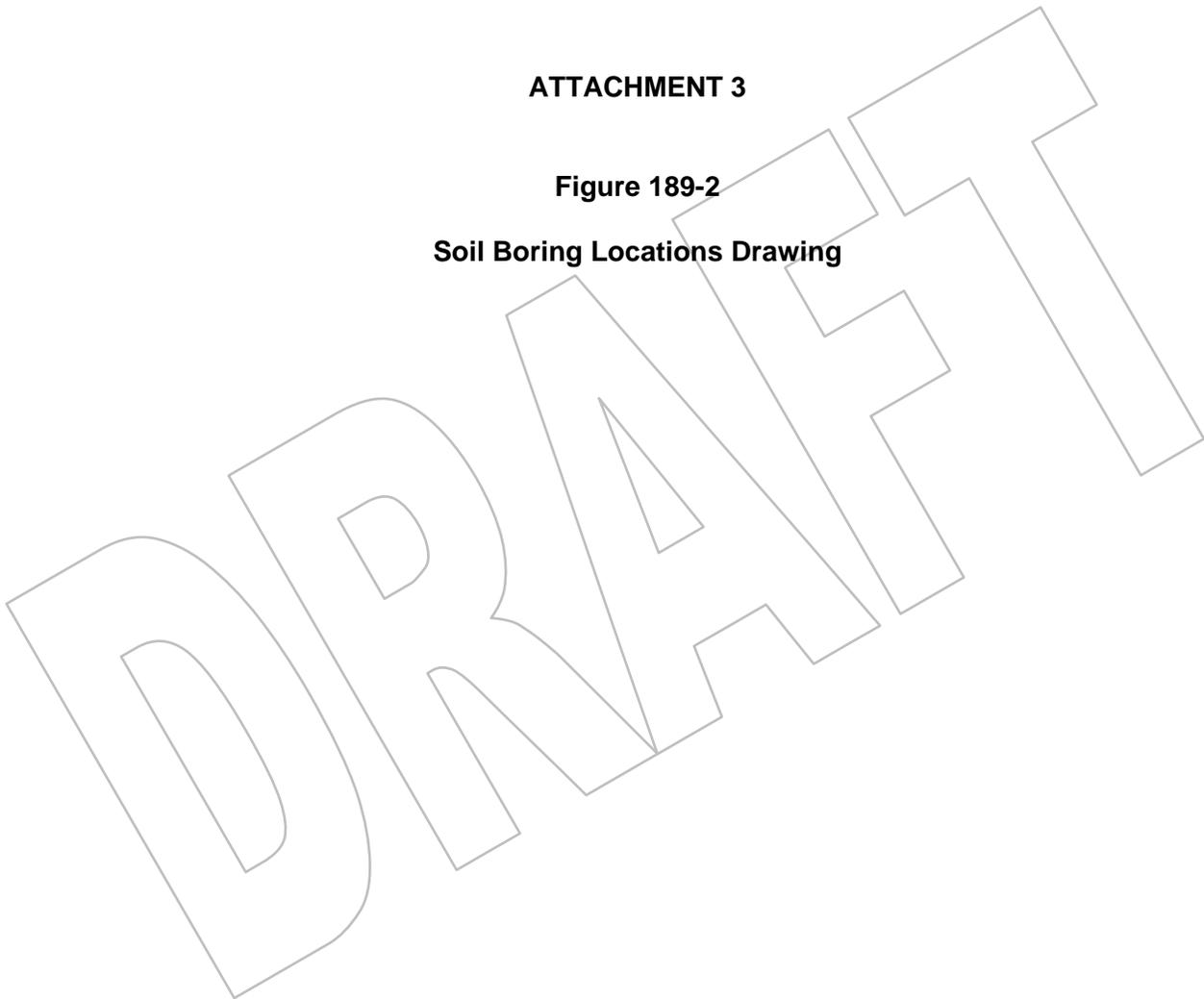



ESA Step B Investigation Contract Mod. 6 Parcels Map  
 Scale 1" = 500'      November 24, 2010

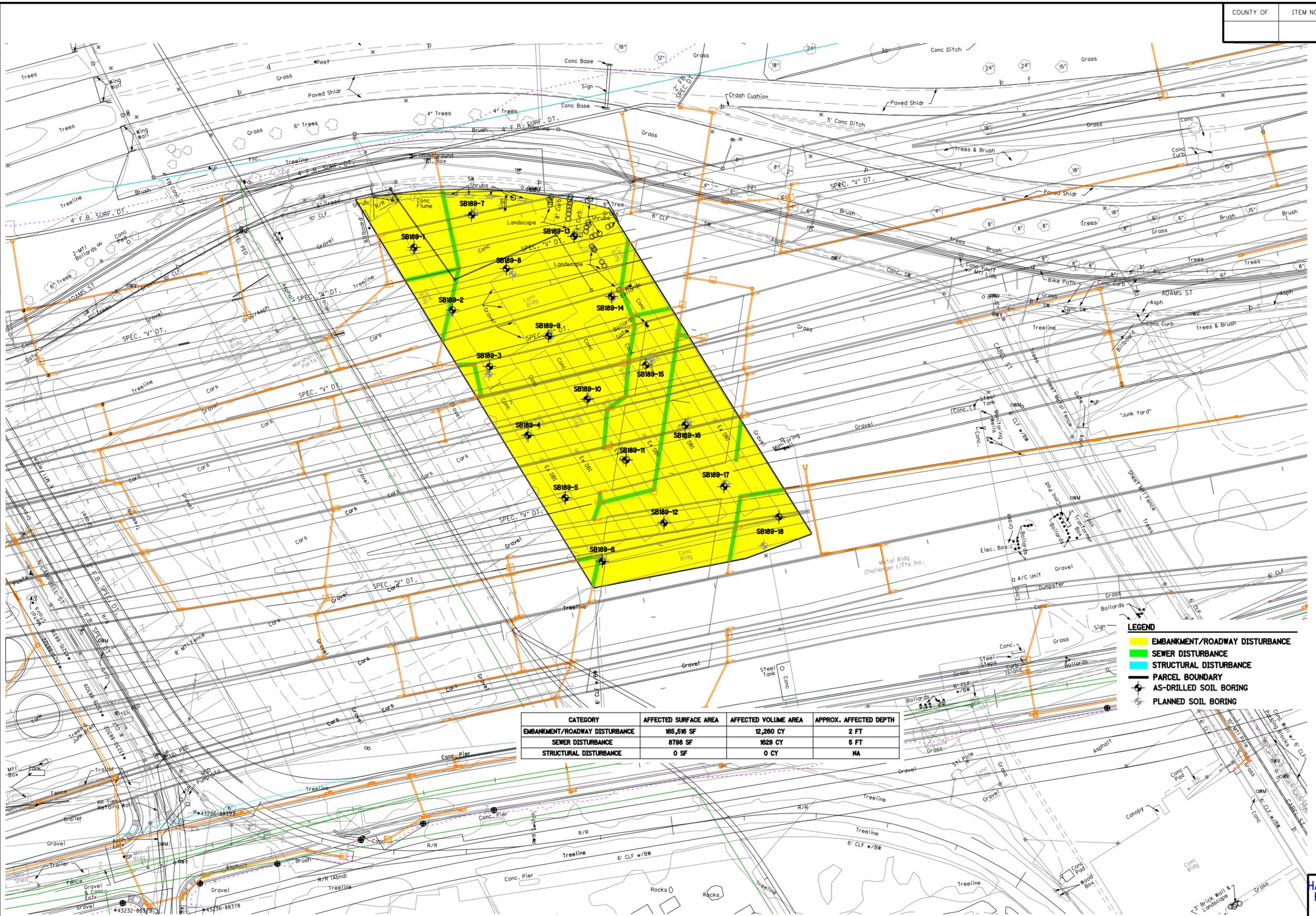
**ATTACHMENT 3**

**Figure 189-2**

**Soil Boring Locations Drawing**



PREPARED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_



- LEGEND**
- EMBANKMENT/ROADWAY DISTURBANCE
  - SEWER DISTURBANCE
  - STRUCTURAL DISTURBANCE
  - PARCEL BOUNDARY
  - AS-DRILLED SOIL BORING
  - PLANNED SOIL BORING

CATEGORY	AFFECTED SURFACE AREA	AFFECTED VOLUME AREA	APPROX. AFFECTED DEPTH
EMBANKMENT/ROADWAY DISTURBANCE	165,516 SF	12,280 CY	2 FT
SEWER DISTURBANCE	8798 SF	1628 CY	5 FT
STRUCTURAL DISTURBANCE	0 SF	0 CY	NA

USER: \$\$\$\$USER\$\$\$\$  
 DATE: \$\$\$\$DATE\$\$\$\$  
 FILE NAME: \$\$\$\$designs\$filespecifications\$\$\$\$  
 E-SHEET NAME:

**ATTACHMENT 4**

**gINT Soil Boring Logs**

**DRAFT**

**ATTACHMENT 5**

**Table 189-1**

**As-Drilled Soil Boring Locations Coordinates and Elevations**

**DRAFT**

**COORDINATE DATA SUBMISSION FORM**  
**KYTC DIVISION OF MATERIALS - GEOTECHNICAL BRANCH**

**Date:** August 12, 2010

**County:** Jefferson

**Road Number:** Interstate 64 Mainline

**Survey Crew Consultant:** Qk4

**Contact Person:** Ben Shinabery, PLS

**Kennedy Interchange Project**

**Datum Notes:**

- The horizontal coordinates are based on the NAD83, KY North Zone, State Plane Coordinate System and are in U.S. Survey Feet.
- Elevations are based on the NAVD 88 Vertical Datum.
- The horizontal coordinates and elevations of the holes are based on the "As-Drilled" positions.

HOLE NUMBER	STATION	OFFSET	ELEVATION (Feet)	LATITUDE	LONGITUDE	NORTHING	EASTING
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**Parcel 189**

SB189-1	386+89.60	326.5 Lt.	449.6	N38° 15' 37.15927"	W85° 44' 02.64091"	280312.82	1214310.50
SB189-2	387+22.03	230.9 Lt.	449.5	N38° 15' 36.31704"	W85° 44' 01.96086"	280226.76	1214363.36
SB189-3	387+54.74	143.5 Lt.	449.3	N38° 15' 35.55522"	W85° 44' 01.30216"	280148.86	1214414.65
SB189-4	387+85.58	39.6 Lt.	449.0	N38° 15' 34.62991"	W85° 44' 00.61679"	280054.39	1214467.80
SB189-5	388+16.46	55.8 Rt.	449.1	N38° 15' 33.78595"	W85° 43' 59.95629"	279968.18	1214519.10
SB189-6	388+46.88	152.6 Rt.	448.2	N38° 15' 32.92862"	W85° 43' 59.29752"	279880.62	1214570.24
SB189-7	387+76.66	352.3 Lt.	449.0	N38° 15' 37.61133"	W85° 44' 01.65753"	280357.28	1214389.66
SB189-8	388+07.30	269.8 Lt.	450.2	N38° 15' 36.89152"	W85° 44' 01.03855"	280283.68	1214437.85
SB189-9	388+43.21	166.3 Lt.	449.8	N38° 15' 35.98181"	W85° 44' 00.29255"	280190.71	1214495.86
SB189-10	388+75.82	69.6 Lt.	449.6	N38° 15' 35.13015"	W85° 43' 59.60732"	280103.69	1214549.12
SB189-11	389+09.77	23.7 Rt.	449.3	N38° 15' 34.31368"	W85° 43' 58.91565"	280020.22	1214602.95
SB189-12	389+41.52	119.9 Rt.	449.8	N38° 15' 33.46483"	W85° 43' 58.24239"	279933.50	1214655.26
SB189-13	389+08.09	292.4 Lt.	445.8	N38° 15' 37.34474"	W85° 43' 59.87826"	280328.03	1214531.12
SB189-14	389+40.12	200.2 Lt.	449.4	N38° 15' 36.53524"	W85° 43' 59.21356"	280245.30	1214582.81
SB189-15	389+65.47	97.6 Lt.	449.3	N38° 15' 35.60942"	W85° 43' 58.59891"	280150.87	1214630.32
SB189-16	389+99.93	4.8 Lt.	449.6	N38° 15' 34.79943"	W85° 43' 57.90262"	280068.05	1214684.53
SB189-17	390+33.32	89.6 Rt.	449.9	N38° 15' 33.97124"	W85° 43' 57.21461"	279983.40	1214738.05
SB189-18	390+98.13	146.9 Rt.	449.5	N38° 15' 33.57371"	W85° 43' 56.25464"	279941.96	1214813.96

**ATTACHMENT 6**

**Analytical Laboratory Reports (Certificates of Analysis)**

**DRAFT**



# Microbac Laboratories, Inc.

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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY  
2800 CORPORATE EXCHANGE DRIVE  
SUITE 240  
COLUMBUS, OH 43231

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 001 <b>SB 189-1 / 0'-2'</b>								Date & Time Sampled: 07/21/2010 @ 8:00:
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		83.6	%				07/22/2010	AXC
pH by SW846 9045D		7.40	SU				07/22/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.049	mg/Kg	1x	0.036	0.0061	07/27/2010	LJC
Anthracene		0.19	mg/Kg	1x	0.036	0.0083	07/27/2010	LJC
Benzo[a]anthracene		1.2	mg/Kg	1x	0.036	0.0058	07/27/2010	LJC
Benzo[b]fluoranthene		1.7	mg/Kg	1x	0.036	0.0074	07/27/2010	LJC
Benzo[k]fluoranthene		1.4	mg/Kg	1x	0.036	0.0089	07/27/2010	LJC
Benzo[a]pyrene		1.3	mg/Kg	1x	0.036	0.0074	07/27/2010	LJC
Chrysene		1.3	mg/Kg	1x	0.036	0.0053	07/27/2010	LJC
Dibenzo[a,h]anthracene		0.25	mg/Kg	1x	0.036	0.012	07/27/2010	LJC
Fluoranthene		1.6	mg/Kg	1x	0.036	0.0060	07/27/2010	LJC
Fluorene		0.046	mg/Kg	1x	0.036	0.0060	07/27/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.65	mg/Kg	1x	0.036	0.011	07/27/2010	LJC
Naphthalene	J1	0.021	mg/Kg	1x	0.036	0.0045	07/27/2010	LJC
Pyrene		1.1	mg/Kg	1x	0.036	0.0056	07/27/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		41	%	1x			07/27/2010	LJC
SR / 2-Fluorobiphenyl		48	%	1x			07/27/2010	LJC
SR / P-Terphenyl		38	%	1x			07/27/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		13	mg/Kg	1x	2.9	0.21	07/23/2010	EML
Lead	M3	730	mg/Kg	1x	0.29	0.053	07/23/2010	EML
Lead, TCLP		N.D.	mg/L	1x	0.020	0.0027	07/29/2010	EML

Sample: 002 **SB 189-1 / 2'-5'**

Date & Time Sampled: 07/21/2010 @ 8:10:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		81.9	%				07/22/2010	AXC
pH by SW846 9045D		8.19	SU				07/22/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.44	mg/Kg	1x	0.035	0.0060	07/27/2010	LJC
Anthracene		1.4	mg/Kg	1x	0.035	0.0082	07/27/2010	LJC
Benzo[a]anthracene		9.2	mg/Kg	40x	1.4	0.23	08/02/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 002 SB 189-1 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 8:10:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[b]fluoranthene	11	mg/Kg	40x	1.4	0.29	08/02/2010	LJC
Benzo[k]fluoranthene	9.3	mg/Kg	40x	1.4	0.35	08/02/2010	LJC
Benzo[a]pyrene	9.2	mg/Kg	40x	1.4	0.29	08/02/2010	LJC
Chrysene	9.9	mg/Kg	40x	1.4	0.21	08/02/2010	LJC
Dibenzo[a,h]anthracene	1.1	mg/Kg	1x	0.035	0.012	07/27/2010	LJC
Fluoranthene	24	mg/Kg	40x	1.4	0.24	08/02/2010	LJC
Fluorene	0.46	mg/Kg	1x	0.035	0.0060	07/27/2010	LJC
Indeno[1,2,3-c,d]pyrene	3.0	mg/Kg	1x	0.035	0.011	07/27/2010	LJC
Naphthalene	0.11	mg/Kg	1x	0.035	0.0045	07/27/2010	LJC
Pyrene	19	mg/Kg	40x	1.4	0.22	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	46	%	1x			07/27/2010	LJC
SR / 2-Fluorobiphenyl	50	%	1x			07/27/2010	LJC
SR / P-Terphenyl	34	%	1x			07/27/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	14	mg/Kg	1x	3.0	0.21	07/23/2010	EML
Lead	430	mg/Kg	1x	0.30	0.053	07/23/2010	EML

Sample: 003 SB 189-1 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 8:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	80.4	%				07/22/2010	AXC
pH by SW846 9045D	7.81	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---				07/27/2010	RFV
Acenaphthene	0.20	mg/Kg	1x	0.036	0.0060	07/27/2010	LJC
Anthracene	0.70	mg/Kg	1x	0.036	0.0082	07/27/2010	LJC
Benzo[a]anthracene	4.7	mg/Kg	5x	0.18	0.029	08/02/2010	LJC
Benzo[b]fluoranthene	7.4	mg/Kg	5x	0.18	0.037	08/02/2010	LJC
Benzo[k]fluoranthene	5.3	mg/Kg	5x	0.18	0.044	08/02/2010	LJC
Benzo[a]pyrene	4.9	mg/Kg	5x	0.18	0.037	08/02/2010	LJC
Chrysene	5.0	mg/Kg	5x	0.18	0.027	08/02/2010	LJC
Dibenzo[a,h]anthracene	0.72	mg/Kg	1x	0.036	0.012	07/27/2010	LJC
Fluoranthene	12	mg/Kg	5x	0.18	0.030	08/02/2010	LJC
Fluorene	0.18	mg/Kg	1x	0.036	0.0060	07/27/2010	LJC



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Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 003 <b>SB 189-1 / 5'-10'</b>							Date & Time Sampled: 07/21/2010 @ 8:30:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Indeno[1,2,3-c,d]pyrene		1.9	mg/Kg	1x	0.036	0.011	07/27/2010	LJC
Naphthalene		0.038	mg/Kg	1x	0.036	0.0045	07/27/2010	LJC
Pyrene		9.6	mg/Kg	5x	0.18	0.028	08/02/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		39	%	1x			07/27/2010	LJC
SR / 2-Fluorobiphenyl		44	%	1x			07/27/2010	LJC
SR / P-Terphenyl		72	%	5x			08/02/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		12	mg/Kg	1x	3.1	0.22	07/23/2010	EML
Lead		290	mg/Kg	1x	0.31	0.055	07/23/2010	EML
Sample: 004 <b>SB 189-1 / 10'-20'</b>							Date & Time Sampled: 07/21/2010 @ 8:50:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		80.1	%				07/22/2010	AXC
pH by SW846 9045D		7.78	SU				07/22/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.14	mg/Kg	1x	0.037	0.0063	07/27/2010	LJC
Anthracene		0.54	mg/Kg	1x	0.037	0.0085	07/27/2010	LJC
Benzo[a]anthracene		4.2	mg/Kg	5x	0.18	0.030	08/02/2010	LJC
Benzo[b]fluoranthene		4.2	mg/Kg	5x	0.18	0.038	08/02/2010	LJC
Benzo[k]fluoranthene		4.6	mg/Kg	5x	0.18	0.046	08/02/2010	LJC
Benzo[a]pyrene		3.8	mg/Kg	5x	0.18	0.038	08/02/2010	LJC
Chrysene		4.1	mg/Kg	5x	0.18	0.028	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.43	mg/Kg	1x	0.037	0.012	07/27/2010	LJC
Fluoranthene		10	mg/Kg	5x	0.18	0.031	08/02/2010	LJC
Fluorene		0.18	mg/Kg	1x	0.037	0.0062	07/27/2010	LJC
Indeno[1,2,3-c,d]pyrene		1.2	mg/Kg	1x	0.037	0.011	07/27/2010	LJC
Naphthalene		0.076	mg/Kg	1x	0.037	0.0047	07/27/2010	LJC
Pyrene		12	mg/Kg	5x	0.18	0.029	08/02/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		52	%	1x			07/27/2010	LJC
SR / 2-Fluorobiphenyl		59	%	1x			07/27/2010	LJC
SR / P-Terphenyl		34	%	1x			07/27/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

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1007-01454

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Date Reported 08/19/2010  
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Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 004 **SB 189-1 / 10'-20'** Date & Time Sampled: 07/21/2010 @ 8:50:

All soil sample analysis results except TCLP reported on a dry weight basis

### Total RCRA Metals by Method SW846-6010C

Arsenic		13	mg/Kg	1x	3.0	0.22	07/23/2010	EML
Lead		250	mg/Kg	1x	0.30	0.054	07/23/2010	EML

Sample: 005 **SB 189-2 / 0'-2'** Date & Time Sampled: 07/21/2010 @ 9:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		72	%				07/22/2010	AXC
pH by SW846 9045D		7.45	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.091	mg/Kg	1x	0.042	0.0070		07/27/2010	RFV
Anthracene	0.24	mg/Kg	1x	0.042	0.0096		07/27/2010	LJC
Benzo[a]anthracene	0.59	mg/Kg	1x	0.042	0.0068		07/27/2010	LJC
Benzo[b]fluoranthene	0.75	mg/Kg	1x	0.042	0.0086		07/27/2010	LJC
Benzo[k]fluoranthene	0.57	mg/Kg	1x	0.042	0.010		07/27/2010	LJC
Benzo[a]pyrene	0.61	mg/Kg	1x	0.042	0.0087		07/27/2010	LJC
Chrysene	0.60	mg/Kg	1x	0.042	0.0062		07/27/2010	LJC
Dibenzo[a,h]anthracene	0.15	mg/Kg	1x	0.042	0.014		07/27/2010	LJC
Fluoranthene	0.70	mg/Kg	1x	0.042	0.0070		07/27/2010	LJC
Fluorene	0.087	mg/Kg	1x	0.042	0.0070		07/27/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.27	mg/Kg	1x	0.042	0.013		07/27/2010	LJC
Naphthalene	N.D.	mg/Kg	1x	0.042	0.0053		07/27/2010	LJC
Pyrene	0.49	mg/Kg	1x	0.042	0.0065		07/27/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	49	%	1x				07/27/2010	LJC
SR / 2-Fluorobiphenyl	58	%	1x				07/27/2010	LJC
SR / P-Terphenyl	32	%	1x				07/27/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		18	mg/Kg	1x	3.4	0.24	07/24/2010	EML
Lead		56	mg/Kg	1x	0.34	0.061	07/24/2010	EML

Sample: 006 **SB 189-2 / 2'-5'** Date & Time Sampled: 07/21/2010 @ 9:50:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		80.7	%				07/22/2010	AXC
pH by SW846 9045D		7.84	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C



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Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 006 SB 189-2 / 2'-5' Date & Time Sampled: 07/21/2010 @ 9:50:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.068	mg/Kg	1x	0.037	0.0062	07/27/2010	RFV	
Anthracene	0.21	mg/Kg	1x	0.037	0.0085	07/27/2010	LJC	
Benzo[a]anthracene	0.87	mg/Kg	1x	0.037	0.0060	07/27/2010	LJC	
Benzo[b]fluoranthene	1.1	mg/Kg	1x	0.037	0.0076	07/27/2010	LJC	
Benzo[k]fluoranthene	0.80	mg/Kg	1x	0.037	0.0091	07/27/2010	LJC	
Benzo[a]pyrene	0.95	mg/Kg	1x	0.037	0.0076	07/27/2010	LJC	
Chrysene	0.88	mg/Kg	1x	0.037	0.0055	07/27/2010	LJC	
Dibenzo[a,h]anthracene	0.20	mg/Kg	1x	0.037	0.012	07/27/2010	LJC	
Fluoranthene	0.88	mg/Kg	1x	0.037	0.0062	07/27/2010	LJC	
Fluorene	0.068	mg/Kg	1x	0.037	0.0062	07/27/2010	LJC	
Indeno[1,2,3-c,d]pyrene	0.49	mg/Kg	1x	0.037	0.011	07/27/2010	LJC	
Naphthalene	0.057	mg/Kg	1x	0.037	0.0046	07/27/2010	LJC	
Pyrene	0.61	mg/Kg	1x	0.037	0.0057	07/27/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	52	%	1x			07/27/2010	LJC	
SR / 2-Fluorobiphenyl	59	%	1x			07/27/2010	LJC	
SR / P-Terphenyl	31	%	1x			07/27/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic	10	mg/Kg	1x	3.1	0.22	07/24/2010	EML	
Lead	400	mg/Kg	1x	0.31	0.056	07/24/2010	EML	

Sample: 007 SB 189-3 / 0'-2'

Date & Time Sampled: 07/21/2010 @ 1:15:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	81.9	%				07/22/2010	AXC	
pH by SW846 9045D	7.50	SU				07/22/2010	CMA	

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.29	mg/Kg	1x	0.037	0.0062	07/27/2010	RFV	
Anthracene	0.82	mg/Kg	1x	0.037	0.0085	07/27/2010	LJC	
Benzo[a]anthracene	5.3	mg/Kg	5x	0.18	0.030	08/02/2010	LJC	
Benzo[b]fluoranthene	7.9	mg/Kg	5x	0.18	0.038	08/02/2010	LJC	
Benzo[k]fluoranthene	5.7	mg/Kg	5x	0.18	0.046	08/02/2010	LJC	
Benzo[a]pyrene	5.4	mg/Kg	5x	0.18	0.038	08/02/2010	LJC	



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 007 SB 189-3 / 0'-2'

Date & Time Sampled: 07/21/2010 @ 1:15:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Chrysene		5.3	mg/Kg	5x	0.18	0.027	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.63	mg/Kg	1x	0.037	0.012	07/27/2010	LJC
Fluoranthene		14	mg/Kg	5x	0.18	0.031	08/02/2010	LJC
Fluorene		0.25	mg/Kg	1x	0.037	0.0062	07/27/2010	LJC
Indeno[1,2,3-c,d]pyrene		1.7	mg/Kg	1x	0.037	0.011	07/27/2010	LJC
Naphthalene		0.060	mg/Kg	1x	0.037	0.0047	07/27/2010	LJC
Pyrene		11	mg/Kg	5x	0.18	0.029	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		44	%	1x			07/27/2010	LJC
SR / 2-Fluorobiphenyl		51	%	1x			07/27/2010	LJC
SR / P-Terphenyl		31	%	1x			07/27/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.3	mg/Kg	1x	3.0	0.22	07/24/2010	EML
Lead		390	mg/Kg	1x	0.30	0.054	07/24/2010	EML

Sample: 008 SB 189-3 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 1:20:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		85.3	%				07/22/2010	AXC
pH by SW846 9045D		10.90	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	J1	0.019	mg/Kg	1x	0.035	0.0060	07/27/2010	RFV
Anthracene		0.068	mg/Kg	1x	0.035	0.0081	07/27/2010	LJC
Benzo[a]anthracene		0.29	mg/Kg	1x	0.035	0.0057	07/27/2010	LJC
Benzo[b]fluoranthene		0.34	mg/Kg	1x	0.035	0.0073	07/27/2010	LJC
Benzo[k]fluoranthene		0.28	mg/Kg	1x	0.035	0.0088	07/27/2010	LJC
Benzo[a]pyrene		0.29	mg/Kg	1x	0.035	0.0073	07/27/2010	LJC
Chrysene		0.29	mg/Kg	1x	0.035	0.0053	07/27/2010	LJC
Dibenzo[a,h]anthracene		0.073	mg/Kg	1x	0.035	0.012	07/27/2010	LJC
Fluoranthene		0.36	mg/Kg	1x	0.035	0.0059	07/27/2010	LJC
Fluorene	J1	0.022	mg/Kg	1x	0.035	0.0059	07/27/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.12	mg/Kg	1x	0.035	0.011	07/27/2010	LJC
Naphthalene	J1	0.029	mg/Kg	1x	0.035	0.0045	07/27/2010	LJC
Pyrene		0.24	mg/Kg	1x	0.035	0.0055	07/27/2010	LJC



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## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 008 SB 189-3 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 1:20:

All soil sample analysis results except TCLP reported on a dry weight basis

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		45	%	1x			07/27/2010	LJC
SR / 2-Fluorobiphenyl		53	%	1x			07/27/2010	LJC
SR / P-Terphenyl		33	%	1x			07/27/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		20	mg/Kg	1x	2.8	0.20	07/24/2010	EML
Lead		89	mg/Kg	1x	0.28	0.051	07/24/2010	EML

Sample: 009 SB 189-3 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 1:45:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		85.6	%				07/22/2010	AXC
pH by SW846 9045D		9.36	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.14	mg/Kg	1x	0.034	0.0057		08/02/2010	LJC
Anthracene	0.36	mg/Kg	1x	0.034	0.0078		08/02/2010	LJC
Benzo[a]anthracene	1.2	mg/Kg	1x	0.034	0.0055		08/02/2010	LJC
Benzo[b]fluoranthene	1.4	mg/Kg	1x	0.034	0.0070		08/02/2010	LJC
Benzo[k]fluoranthene	1.5	mg/Kg	1x	0.034	0.0084		08/02/2010	LJC
Benzo[a]pyrene	1.1	mg/Kg	1x	0.034	0.0070		08/02/2010	LJC
Chrysene	1.1	mg/Kg	1x	0.034	0.0051		08/02/2010	LJC
Dibenzo[a,h]anthracene	0.094	mg/Kg	1x	0.034	0.011		08/02/2010	LJC
Fluoranthene	4.8	mg/Kg	5x	0.17	0.029		08/13/2010	LJC
Fluorene	0.13	mg/Kg	1x	0.034	0.0057		08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.23	mg/Kg	1x	0.034	0.010		08/02/2010	LJC
Naphthalene	0.076	mg/Kg	1x	0.034	0.0043		08/02/2010	LJC
Pyrene	3.8	mg/Kg	5x	0.17	0.026		08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		47	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		41	%	1x			08/02/2010	LJC
SR / P-Terphenyl		57	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		6.8	mg/Kg	1x	2.8	0.20	07/24/2010	EML
Lead		250	mg/Kg	1x	0.28	0.050	07/24/2010	EML

Sample: 010 SB 189-3 / 10'-20'

Date & Time Sampled: 07/21/2010 @ 2:05:



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Chemical, Biological, Physical, Molecular, and Toxicological Services

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1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 010 **SB 189-3 / 10'-20'** Date & Time Sampled: 07/21/2010 @ 2:05:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		88	%				07/22/2010	AXC
pH by SW846 9045D		10.48	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.26	mg/Kg	1x	0.034	0.0058		08/02/2010	LJC
Anthracene	0.56	mg/Kg	1x	0.034	0.0079		08/02/2010	LJC
Benzo[a]anthracene	1.4	mg/Kg	1x	0.034	0.0055		08/02/2010	LJC
Benzo[b]fluoranthene	2.2	mg/Kg	1x	0.034	0.0071		08/02/2010	LJC
Benzo[k]fluoranthene	1.5	mg/Kg	1x	0.034	0.0085		08/02/2010	LJC
Benzo[a]pyrene	1.4	mg/Kg	1x	0.034	0.0071		08/02/2010	LJC
Chrysene	1.3	mg/Kg	1x	0.034	0.0051		08/02/2010	LJC
Dibenzo[a,h]anthracene	0.13	mg/Kg	1x	0.034	0.011		08/02/2010	LJC
Fluoranthene	6.5	mg/Kg	5x	0.17	0.029		08/13/2010	LJC
Fluorene	0.25	mg/Kg	1x	0.034	0.0057		08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.31	mg/Kg	1x	0.034	0.010		08/02/2010	LJC
Naphthalene	0.12	mg/Kg	1x	0.034	0.0043		08/02/2010	LJC
Pyrene	5.2	mg/Kg	5x	0.17	0.027		08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	42	%	1x				08/02/2010	LJC
SR / 2-Fluorobiphenyl	38	%	1x				08/02/2010	LJC
SR / P-Terphenyl	56	%	1x				08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	14	mg/Kg	1x	2.8	0.20		07/24/2010	EML
Lead	380	mg/Kg	1x	0.28	0.051		07/24/2010	EML

Sample: 011 **SB 189-4 / 0'-2'** Date & Time Sampled: 07/21/2010 @ 3:30:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		83.3	%				07/22/2010	AXC
pH by SW846 9045D		11.18	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.093	mg/Kg	1x	0.036	0.0060		08/02/2010	LJC
Anthracene	0.30	mg/Kg	1x	0.036	0.0082		08/02/2010	LJC
Benzo[a]anthracene	1.5	mg/Kg	1x	0.036	0.0058		08/02/2010	LJC
Benzo[b]fluoranthene	2.4	mg/Kg	1x	0.036	0.0074		08/02/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 011 SB 189-4 / 0'-2'

Date & Time Sampled: 07/21/2010 @ 3:30:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[k]fluoranthene		1.9	mg/Kg	1x	0.036	0.0089	08/02/2010	LJC
Benzo[a]pyrene		1.6	mg/Kg	1x	0.036	0.0074	08/02/2010	LJC
Chrysene		1.6	mg/Kg	1x	0.036	0.0053	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.16	mg/Kg	1x	0.036	0.012	08/02/2010	LJC
Fluoranthene		6.5	mg/Kg	5x	0.18	0.030	08/13/2010	LJC
Fluorene		0.091	mg/Kg	1x	0.036	0.0060	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.39	mg/Kg	1x	0.036	0.011	08/02/2010	LJC
Naphthalene		0.054	mg/Kg	1x	0.036	0.0045	08/02/2010	LJC
Pyrene		5.4	mg/Kg	5x	0.18	0.028	08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		46	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		42	%	1x			08/02/2010	LJC
SR / P-Terphenyl		53	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	1x	3.0	0.21	07/27/2010	EML
Lead	M3	260	mg/Kg	1x	3.0	0.053	07/27/2010	EML

Sample: 012 SB 189-4 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 3:50:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		87.3	%				07/22/2010	AXC
pH by SW846 9045D		7.75	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.17	mg/Kg	1x	0.034	0.0058	08/02/2010	LJC
Anthracene		0.47	mg/Kg	1x	0.034	0.0079	08/02/2010	LJC
Benzo[a]anthracene		2.2	mg/Kg	1x	0.034	0.0056	08/02/2010	LJC
Benzo[b]fluoranthene		4.4	mg/Kg	5x	0.17	0.036	08/13/2010	LJC
Benzo[k]fluoranthene		3.8	mg/Kg	5x	0.17	0.043	08/13/2010	LJC
Benzo[a]pyrene		2.2	mg/Kg	1x	0.034	0.0071	08/02/2010	LJC
Chrysene		2.2	mg/Kg	1x	0.034	0.0051	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.21	mg/Kg	1x	0.034	0.011	08/02/2010	LJC
Fluoranthene		8.3	mg/Kg	5x	0.17	0.029	08/13/2010	LJC
Fluorene		0.15	mg/Kg	1x	0.034	0.0058	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.56	mg/Kg	1x	0.034	0.010	08/02/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 012 SB 189-4 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 3:50:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Naphthalene		0.085	mg/Kg	1x	0.034	0.0044	08/02/2010	LJC
Pyrene		6.8	mg/Kg	5x	0.17	0.027	08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		73	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		62	%	1x			08/02/2010	LJC
SR / P-Terphenyl		71	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	1x	2.8	0.20	07/27/2010	EML
Lead		230	mg/Kg	1x	2.8	0.051	07/27/2010	EML

Sample: 013 SB 189-4 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 4:00:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		85.4	%				07/22/2010	AXC
pH by SW846 9045D		8.26	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.057	mg/Kg	1x	0.035	0.0060	08/02/2010	LJC
Anthracene		0.29	mg/Kg	1x	0.035	0.0082	08/02/2010	LJC
Benzo[a]anthracene		1.4	mg/Kg	1x	0.035	0.0058	08/02/2010	LJC
Benzo[b]fluoranthene		1.8	mg/Kg	1x	0.035	0.0074	08/02/2010	LJC
Benzo[k]fluoranthene		1.4	mg/Kg	1x	0.035	0.0088	08/02/2010	LJC
Benzo[a]pyrene		1.2	mg/Kg	1x	0.035	0.0074	08/02/2010	LJC
Chrysene		1.3	mg/Kg	1x	0.035	0.0053	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.12	mg/Kg	1x	0.035	0.012	08/02/2010	LJC
Fluoranthene		3.0	mg/Kg	1x	0.035	0.0060	08/02/2010	LJC
Fluorene		0.078	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.30	mg/Kg	1x	0.035	0.011	08/02/2010	LJC
Naphthalene		0.041	mg/Kg	1x	0.035	0.0045	08/02/2010	LJC
Pyrene		2.5	mg/Kg	1x	0.035	0.0055	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		64	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		55	%	1x			08/02/2010	LJC
SR / P-Terphenyl		61	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C



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1007-01454

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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 013 SB 189-4 / 5'-10'							Date & Time Sampled: 07/21/2010 @ 4:00:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		8.1	mg/Kg	1x	2.9	0.21	07/27/2010	EML
Lead		150	mg/Kg	1x	2.9	0.052	07/27/2010	EML
Sample: 014 SB 189-4 / 10'-20'							Date & Time Sampled: 07/21/2010 @ 4:20:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		81.4	%				07/22/2010	AXC
pH by SW846 9045D		7.97	SU				07/22/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.084	mg/Kg	1x	0.037	0.0063	08/02/2010	LJC
Anthracene		0.35	mg/Kg	1x	0.037	0.0085	08/02/2010	LJC
Benzo[a]anthracene		1.4	mg/Kg	1x	0.037	0.0060	08/02/2010	LJC
Benzo[b]fluoranthene		1.7	mg/Kg	1x	0.037	0.0077	08/02/2010	LJC
Benzo[k]fluoranthene		1.8	mg/Kg	1x	0.037	0.0092	08/02/2010	LJC
Benzo[a]pyrene		1.4	mg/Kg	1x	0.037	0.0077	08/02/2010	LJC
Chrysene		1.4	mg/Kg	1x	0.037	0.0055	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.16	mg/Kg	1x	0.037	0.012	08/02/2010	LJC
Fluoranthene		2.8	mg/Kg	1x	0.037	0.0062	08/02/2010	LJC
Fluorene		0.12	mg/Kg	1x	0.037	0.0062	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.45	mg/Kg	1x	0.037	0.011	08/02/2010	LJC
Naphthalene		0.068	mg/Kg	1x	0.037	0.0047	08/02/2010	LJC
Pyrene		2.1	mg/Kg	1x	0.037	0.0057	08/02/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		66	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		59	%	1x			08/02/2010	LJC
SR / P-Terphenyl		59	%	1x			08/02/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		12	mg/Kg	1x	3.0	0.22	07/27/2010	EML
Lead		1300	mg/Kg	1x	3.0	0.055	07/27/2010	EML
Lead, TCLP		0.58	mg/L	1x	0.020	0.0027	07/29/2010	EML
Sample: 015 SB 189-5 / 0'-2'							Date & Time Sampled: 07/21/2010 @ 4:50:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		85.2	%				07/22/2010	AXC
pH by SW846 9045D		10.23	SU				07/22/2010	CMA



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 015 SB 189-5 / 0'-2'

Date & Time Sampled: 07/21/2010 @ 4:50:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.20	mg/Kg	1x	0.035	0.0060	08/02/2010	LJC	RFV
Anthracene	0.65	mg/Kg	1x	0.035	0.0082	08/02/2010	LJC	
Benzo[a]anthracene	3.1	mg/Kg	5x	0.18	0.029	08/13/2010	LJC	
Benzo[b]fluoranthene	3.7	mg/Kg	5x	0.18	0.037	08/13/2010	LJC	
Benzo[k]fluoranthene	4.2	mg/Kg	5x	0.18	0.044	08/13/2010	LJC	
Benzo[a]pyrene	2.5	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC	
Chrysene	3.1	mg/Kg	5x	0.18	0.026	08/13/2010	LJC	
Dibenzo[a,h]anthracene	0.32	mg/Kg	1x	0.035	0.012	08/02/2010	LJC	
Fluoranthene	8.1	mg/Kg	5x	0.18	0.030	08/13/2010	LJC	
Fluorene	0.17	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC	
Indeno[1,2,3-c,d]pyrene	0.82	mg/Kg	1x	0.035	0.011	08/02/2010	LJC	
Naphthalene	J1 0.031	mg/Kg	1x	0.035	0.0045	08/02/2010	LJC	
Pyrene	6.7	mg/Kg	5x	0.18	0.028	08/13/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	58	%	1x			08/02/2010	LJC	
SR / 2-Fluorobiphenyl	53	%	1x			08/02/2010	LJC	
SR / P-Terphenyl	49	%	1x			08/02/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic	12	mg/Kg	1x	2.9	0.21	07/27/2010	EML	
Lead	260	mg/Kg	1x	2.9	0.052	07/27/2010	EML	

Sample: 016 SB 189-5 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 5:00:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	83.5	%				07/22/2010	AXC	
pH by SW846 9045D	9.95	SU				07/22/2010	CMA	

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.20	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC	RFV
Anthracene	0.97	mg/Kg	1x	0.036	0.0083	08/02/2010	LJC	
Benzo[a]anthracene	2.4	mg/Kg	1x	0.036	0.0058	08/02/2010	LJC	
Benzo[b]fluoranthene	4.6	mg/Kg	5x	0.18	0.037	08/13/2010	LJC	
Benzo[k]fluoranthene	2.3	mg/Kg	1x	0.036	0.0089	08/02/2010	LJC	
Benzo[a]pyrene	2.0	mg/Kg	1x	0.036	0.0074	08/02/2010	LJC	



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1007-01454

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MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 016 SB 189-5 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 5:00:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Chrysene		2.2	mg/Kg	1x	0.036	0.0053	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.23	mg/Kg	1x	0.036	0.012	08/02/2010	LJC
Fluoranthene		10	mg/Kg	5x	0.18	0.030	08/13/2010	LJC
Fluorene		0.23	mg/Kg	1x	0.036	0.0060	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.62	mg/Kg	1x	0.036	0.011	08/02/2010	LJC
Naphthalene		0.049	mg/Kg	1x	0.036	0.0045	08/02/2010	LJC
Pyrene		7.6	mg/Kg	5x	0.18	0.028	08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		66	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		60	%	1x			08/02/2010	LJC
SR / P-Terphenyl		55	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		7.5	mg/Kg	1x	2.9	0.21	07/27/2010	EML
Lead		150	mg/Kg	1x	2.9	0.052	07/27/2010	EML

Sample: 017 SB 189-5 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 5:10:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		82.7	%				07/22/2010	AXC
pH by SW846 9045D		8.12	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	J1	0.030	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Anthracene		0.091	mg/Kg	1x	0.036	0.0084	08/02/2010	LJC
Benzo[a]anthracene		0.33	mg/Kg	1x	0.036	0.0059	08/02/2010	LJC
Benzo[b]fluoranthene		0.41	mg/Kg	1x	0.036	0.0075	08/02/2010	LJC
Benzo[k]fluoranthene		0.43	mg/Kg	1x	0.036	0.0090	08/02/2010	LJC
Benzo[a]pyrene		0.33	mg/Kg	1x	0.036	0.0075	08/02/2010	LJC
Chrysene		0.34	mg/Kg	1x	0.036	0.0054	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.040	mg/Kg	1x	0.036	0.012	08/02/2010	LJC
Fluoranthene		0.63	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Fluorene		0.043	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.098	mg/Kg	1x	0.036	0.011	08/02/2010	LJC
Naphthalene		0.045	mg/Kg	1x	0.036	0.0046	08/02/2010	LJC
Pyrene		0.45	mg/Kg	1x	0.036	0.0057	08/02/2010	LJC



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1007-01454

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MARSHALL LEVY

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Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 017 SB 189-5 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 5:10:

All soil sample analysis results except TCLP reported on a dry weight basis

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		68	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		61	%	1x			08/02/2010	LJC
SR / P-Terphenyl		62	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.1	mg/Kg	1x	3.0	0.21	07/27/2010	EML
Lead		250	mg/Kg	1x	3.0	0.053	07/27/2010	EML

Sample: 018 SB 189-5 / 10'-20'

Date & Time Sampled: 07/21/2010 @ 5:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		81.1	%				07/22/2010	AXC
pH by SW846 9045D		6.94	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene	0.41	mg/Kg	1x	0.037	0.0063		08/02/2010	LJC
Anthracene	0.89	mg/Kg	1x	0.037	0.0086		08/02/2010	LJC
Benzo[a]anthracene	2.3	mg/Kg	1x	0.037	0.0060		08/02/2010	LJC
Benzo[b]fluoranthene	5.7	mg/Kg	5x	0.19	0.039		08/13/2010	LJC
Benzo[k]fluoranthene	2.2	mg/Kg	1x	0.037	0.0093		08/02/2010	LJC
Benzo[a]pyrene	2.1	mg/Kg	1x	0.037	0.0077		08/02/2010	LJC
Chrysene	4.1	mg/Kg	5x	0.19	0.028		08/13/2010	LJC
Dibenzo[a,h]anthracene	0.30	mg/Kg	1x	0.037	0.012		08/02/2010	LJC
Fluoranthene	9.4	mg/Kg	5x	0.19	0.031		08/13/2010	LJC
Fluorene	0.55	mg/Kg	1x	0.037	0.0063		08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.67	mg/Kg	1x	0.037	0.011		08/02/2010	LJC
Naphthalene	0.11	mg/Kg	1x	0.037	0.0047		08/02/2010	LJC
Pyrene	7.3	mg/Kg	5x	0.19	0.029		08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		64	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		58	%	1x			08/02/2010	LJC
SR / P-Terphenyl		53	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		6.6	mg/Kg	1x	3.0	0.22	07/27/2010	EML
Lead		120	mg/Kg	1x	3.0	0.054	07/27/2010	EML

Sample: 019 SB 189-6 / 0'-2'

Date & Time Sampled: 07/21/2010 @ 6:00:



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 019 SB 189-6 / 0'-2'

Date & Time Sampled: 07/21/2010 @ 6:00:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.8	%				07/22/2010	AXC
pH by SW846 9045D		8.43	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene	J2	7.7	mg/Kg	1x	0.036	0.0060	08/02/2010	LJC
Anthracene		12	mg/Kg	100x	3.6	0.82	08/17/2010	LJC
Benzo[a]anthracene		19	mg/Kg	100x	3.6	0.58	08/17/2010	LJC
Benzo[b]fluoranthene		17	mg/Kg	100x	3.6	0.74	08/17/2010	LJC
Benzo[k]fluoranthene		18	mg/Kg	100x	3.6	0.89	08/17/2010	LJC
Benzo[a]pyrene		17	mg/Kg	100x	3.6	0.74	08/17/2010	LJC
Chrysene		19	mg/Kg	100x	3.6	0.53	08/17/2010	LJC
Dibenzo[a,h]anthracene		2.8	mg/Kg	1x	0.036	0.012	08/02/2010	LJC
Fluoranthene		66	mg/Kg	100x	3.6	0.60	08/17/2010	LJC
Fluorene		7.9	mg/Kg	100x	3.6	0.60	08/17/2010	LJC
Indeno[1,2,3-c,d]pyrene		4.1	mg/Kg	100x	3.6	1.1	08/17/2010	LJC
Naphthalene		0.48	mg/Kg	1x	0.036	0.0045	08/02/2010	LJC
Pyrene		49	mg/Kg	100x	3.6	0.55	08/17/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		54	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		51	%	1x			08/02/2010	LJC
SR / P-Terphenyl		41	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		13	mg/Kg	1x	2.9	0.21	07/27/2010	EML
Lead		330	mg/Kg	1x	2.9	0.052	07/27/2010	EML

Sample: 020 SB 189-6 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 6:10:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		87.6	%				07/22/2010	AXC
pH by SW846 9045D		7.64	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene		0.91	mg/Kg	1x	0.034	0.0058	08/02/2010	LJC
Anthracene		1.2	mg/Kg	20x	0.69	0.16	08/17/2010	LJC
Benzo[a]anthracene		3.5	mg/Kg	20x	0.69	0.11	08/17/2010	LJC
Benzo[b]fluoranthene		3.4	mg/Kg	20x	0.69	0.14	08/17/2010	LJC



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Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 020 SB 189-6 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 6:10:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[k]fluoranthene	3.5	mg/Kg	20x	0.69	0.17	08/17/2010	LJC
Benzo[a]pyrene	3.2	mg/Kg	20x	0.69	0.14	08/17/2010	LJC
Chrysene	3.6	mg/Kg	20x	0.69	0.10	08/17/2010	LJC
Dibenzo[a,h]anthracene	1.2	mg/Kg	1x	0.034	0.011	08/02/2010	LJC
Fluoranthene	10	mg/Kg	20x	0.69	0.12	08/17/2010	LJC
Fluorene	0.84	mg/Kg	1x	0.034	0.0058	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.79	mg/Kg	20x	0.69	0.21	08/17/2010	LJC
Naphthalene	0.20	mg/Kg	1x	0.034	0.0044	08/02/2010	LJC
Pyrene	8.1	mg/Kg	20x	0.69	0.11	08/17/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	61	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl	57	%	1x			08/02/2010	LJC
SR / P-Terphenyl	39	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	14	mg/Kg	1x	2.7	0.20	07/27/2010	EML
Lead	370	mg/Kg	1x	2.7	0.049	07/27/2010	EML

Sample: 021 SB 189-6 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 6:25:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	86.2	%				07/22/2010	AXC
pH by SW846 9045D	8.66	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED			---			
Acenaphthene	0.062	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Anthracene	0.19	mg/Kg	1x	0.035	0.0081	08/02/2010	LJC
Benzo[a]anthracene	0.72	mg/Kg	1x	0.035	0.0057	08/02/2010	LJC
Benzo[b]fluoranthene	1.1	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC
Benzo[k]fluoranthene	0.72	mg/Kg	1x	0.035	0.0087	08/02/2010	LJC
Benzo[a]pyrene	0.73	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC
Chrysene	0.70	mg/Kg	1x	0.035	0.0052	08/02/2010	LJC
Dibenzo[a,h]anthracene	0.073	mg/Kg	1x	0.035	0.012	08/02/2010	LJC
Fluoranthene	1.2	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Fluorene	0.065	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.19	mg/Kg	1x	0.035	0.011	08/02/2010	LJC



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 021 SB 189-6 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 6:25:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Naphthalene	J1	0.027	mg/Kg	1x	0.035	0.0044	08/02/2010	LJC
Pyrene		0.90	mg/Kg	1x	0.035	0.0054	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		58	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		56	%	1x			08/02/2010	LJC
SR / P-Terphenyl		59	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.2	mg/Kg	1x	2.8	0.20	07/27/2010	EML
Lead	M3	330	mg/Kg	1x	2.8	0.050	07/27/2010	EML

Sample: 022 SB 189-6 / 10'-20'

Date & Time Sampled: 07/21/2010 @ 6:35:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.5	%				07/22/2010	AXC
pH by SW846 9045D		7.55	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.24	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Anthracene		0.66	mg/Kg	1x	0.036	0.0083	08/02/2010	LJC
Benzo[a]anthracene		1.7	mg/Kg	1x	0.036	0.0058	08/02/2010	LJC
Benzo[b]fluoranthene		1.7	mg/Kg	1x	0.036	0.0074	08/02/2010	LJC
Benzo[k]fluoranthene		1.6	mg/Kg	1x	0.036	0.0089	08/02/2010	LJC
Benzo[a]pyrene		1.6	mg/Kg	1x	0.036	0.0074	08/02/2010	LJC
Chrysene		1.6	mg/Kg	1x	0.036	0.0053	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.31	mg/Kg	1x	0.036	0.012	08/02/2010	LJC
Fluoranthene		2.6	mg/Kg	1x	0.036	0.0060	08/02/2010	LJC
Fluorene		0.24	mg/Kg	1x	0.036	0.0060	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.84	mg/Kg	1x	0.036	0.011	08/02/2010	LJC
Naphthalene		0.13	mg/Kg	1x	0.036	0.0045	08/02/2010	LJC
Pyrene		1.8	mg/Kg	1x	0.036	0.0056	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		58	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		62	%	1x			08/02/2010	LJC
SR / P-Terphenyl		46	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 022 SB 189-6 / 10'-20' Date & Time Sampled: 07/21/2010 @ 6:35:

All soil sample analysis results except TCLP reported on a dry weight basis

### Total RCRA Metals by Method SW846-6010C

Arsenic		15	mg/Kg	1x	2.9	0.21	07/27/2010	EML
Lead		210	mg/Kg	1x	2.9	0.053	07/27/2010	EML

Sample: 023 SB 189-8 / 0'-2' Date & Time Sampled: 07/21/2010 @ 0:20:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		86	%				07/22/2010	AXC
pH by SW846 9045D		7.72	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene	J1	0.024	mg/Kg	1x	0.035	0.0059	07/27/2010	RFV
Anthracene		0.085	mg/Kg	1x	0.035	0.0081	08/02/2010	LJC
Benzo[a]anthracene		0.48	mg/Kg	1x	0.035	0.0057	08/02/2010	LJC
Benzo[b]fluoranthene		0.63	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC
Benzo[k]fluoranthene		0.41	mg/Kg	1x	0.035	0.0087	08/02/2010	LJC
Benzo[a]pyrene		0.49	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC
Chrysene		0.50	mg/Kg	1x	0.035	0.0052	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.10	mg/Kg	1x	0.035	0.012	08/02/2010	LJC
Fluoranthene		0.48	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Fluorene	J1	0.024	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.29	mg/Kg	1x	0.035	0.011	08/02/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.035	0.0044	08/02/2010	LJC
Pyrene		0.34	mg/Kg	1x	0.035	0.0054	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		60	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		63	%	1x			08/02/2010	LJC
SR / P-Terphenyl		37	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		7.1	mg/Kg	1x	2.8	0.20	07/27/2010	EML
Lead		170	mg/Kg	1x	2.8	0.050	07/27/2010	EML

Sample: 024 SB 189-8 / 2'-5' Date & Time Sampled: 07/21/2010 @ 0:25:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		85.1	%				07/22/2010	AXC
pH by SW846 9045D		7.64	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 024 SB 189-8 / 2'-5'

Date & Time Sampled: 07/21/2010 @ 0:25:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	N.D.	mg/Kg	1x	0.035	0.0060	08/02/2010	LJC	RFV
Anthracene	N.D.	mg/Kg	1x	0.035	0.0081	08/02/2010	LJC	
Benzo[a]anthracene	0.072	mg/Kg	1x	0.035	0.0057	08/02/2010	LJC	
Benzo[b]fluoranthene	0.085	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC	
Benzo[k]fluoranthene	0.10	mg/Kg	1x	0.035	0.0088	08/02/2010	LJC	
Benzo[a]pyrene	0.074	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC	
Chrysene	0.082	mg/Kg	1x	0.035	0.0053	08/02/2010	LJC	
Dibenzo[a,h]anthracene	N.D.	mg/Kg	1x	0.035	0.012	08/02/2010	LJC	
Fluoranthene	0.080	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC	
Fluorene	N.D.	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC	
Indeno[1,2,3-c,d]pyrene	0.052	mg/Kg	1x	0.035	0.011	08/02/2010	LJC	
Naphthalene	N.D.	mg/Kg	1x	0.035	0.0045	08/02/2010	LJC	
Pyrene	0.057	mg/Kg	1x	0.035	0.0055	08/02/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	60	%	1x			08/02/2010	LJC	
SR / 2-Fluorobiphenyl	61	%	1x			08/02/2010	LJC	
SR / P-Terphenyl	43	%	1x			08/02/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic	8.5	mg/Kg	1x	2.8	0.20	07/27/2010	EML	
Lead	50	mg/Kg	1x	2.8	0.051	07/27/2010	EML	

Sample: 025 SB 189-8 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 0:35:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	85.5	%				07/22/2010	AXC	
pH by SW846 9045D	7.56	SU				07/22/2010	CMA	

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.099	mg/Kg	1x	0.035	0.0060	08/02/2010	LJC	RFV
Anthracene	0.35	mg/Kg	1x	0.035	0.0081	08/02/2010	LJC	
Benzo[a]anthracene	1.1	mg/Kg	1x	0.035	0.0057	08/02/2010	LJC	
Benzo[b]fluoranthene	1.1	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC	
Benzo[k]fluoranthene	1.2	mg/Kg	1x	0.035	0.0088	08/02/2010	LJC	
Benzo[a]pyrene	1.0	mg/Kg	1x	0.035	0.0073	08/02/2010	LJC	



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 025 SB 189-8 / 5'-10'

Date & Time Sampled: 07/21/2010 @ 0:35:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Chrysene		1.1	mg/Kg	1x	0.035	0.0053	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.21	mg/Kg	1x	0.035	0.012	08/02/2010	LJC
Fluoranthene		1.4	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Fluorene		0.12	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.54	mg/Kg	1x	0.035	0.011	08/02/2010	LJC
Naphthalene		0.043	mg/Kg	1x	0.035	0.0045	08/02/2010	LJC
Pyrene		0.90	mg/Kg	1x	0.035	0.0055	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		48	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		58	%	1x			08/02/2010	LJC
SR / P-Terphenyl		40	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.9	mg/Kg	1x	2.8	0.20	07/27/2010	EML
Lead		290	mg/Kg	1x	2.8	0.051	07/27/2010	EML

Sample: 026 SB 189-8 / 10'-20'

Date & Time Sampled: 07/21/2010 @ 0:45:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		82.5	%				07/22/2010	AXC
pH by SW846 9045D		7.27	SU				07/22/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.071	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Anthracene		0.19	mg/Kg	1x	0.036	0.0084	08/02/2010	LJC
Benzo[a]anthracene		0.86	mg/Kg	1x	0.036	0.0059	08/02/2010	LJC
Benzo[b]fluoranthene		1.2	mg/Kg	1x	0.036	0.0075	08/02/2010	LJC
Benzo[k]fluoranthene		0.81	mg/Kg	1x	0.036	0.0090	08/02/2010	LJC
Benzo[a]pyrene		0.88	mg/Kg	1x	0.036	0.0075	08/02/2010	LJC
Chrysene		0.94	mg/Kg	1x	0.036	0.0054	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.18	mg/Kg	1x	0.036	0.012	08/02/2010	LJC
Fluoranthene		0.99	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Fluorene		0.076	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.49	mg/Kg	1x	0.036	0.011	08/02/2010	LJC
Naphthalene		0.11	mg/Kg	1x	0.036	0.0046	08/02/2010	LJC
Pyrene		0.67	mg/Kg	1x	0.036	0.0056	08/02/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/12/2010  
Date Received 07/22/2010  
Invoice No. 76962  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 026 SB 189-8 / 10'-20'							Date & Time Sampled: 07/21/2010 @ 0:45:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		49	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		60	%	1x			08/02/2010	LJC
SR / P-Terphenyl		40	%	1x			08/02/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		7.3	mg/Kg	1x	3.0	0.22	07/27/2010	EML
Lead		210	mg/Kg	1x	3.0	0.054	07/27/2010	EML

UNLESS OTHERWISE NOTED, SAMPLES ARE ANALYZED AS RECEIVED.



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report 1007-01454

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**  
**KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189**

**Date Reported 08/19/2010**  
**Date Due 08/12/2010**  
**Date Received 07/22/2010**  
**Invoice No. 76962**  
**Customer # B002**  
**Customer P.O. 072010**

#### Total Solids by SW846 3540C

**Samples** 001 002 003 004 005 006 007 008 009 010 011 012 013  
**QC Batch** 230719 **Date Analyzed:** 07/22/2010 **Technician:** AXC  
**RPD SAMP** 0.87 %

**Samples** 014 015 016 017 018 019 020 021 022 023 024 025 026  
**QC Batch** 230720 **Date Analyzed:** 07/22/2010 **Technician:** AXC  
**RPD SAMP** 0.39 %

#### pH by SW846 9045D

**Samples** 001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025  
**QC Batch** 230737 **Date Analyzed:** 07/22/2010 **Technician:** CMA  
**REF % REC** 7.02 %

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Acenaphthene

**Samples** 001 002 003 004 005 006 007 008 009 010 011 012  
**QC Batch** 985471 **Date Analyzed:** 07/27/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0056  
**REF % REC** 63 %  
**REF % DUP** 63 %  
**RPD REF** 0.54 %

**Samples** 013 014 015 016 017 018 019 020 021 022 023 024 025 026  
**QC Batch** 985493 **Date Analyzed:** 07/28/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0056  
**REF % REC** 77 %  
**REF % DUP** 72 %  
**RPD REF** 5.8 %

##### Anthracene

**Samples** 001 002 003 004 005 006 007 008 009 010 011 012  
**QC Batch** 985473 **Date Analyzed:** 07/27/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0077  
**REF % REC** 63 %  
**REF % DUP** 63 %  
**RPD REF** 0.24 %

**Samples** 013 014 015 016 017 018 019 020 021 022 023 024 025 026  
**QC Batch** 985495 **Date Analyzed:** 07/28/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0077  
**REF % REC** 81 %  
**REF % DUP** 74 %  
**RPD REF** 9.1 %





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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/22/2010

#### KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189 Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Benzo[a]anthracene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012
<b>QC Batch</b>	985476			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC			
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0054				
<b>REF % REC</b>				64 %								
<b>REF % DUP</b>				65 %								
<b>RPD REF</b>				2.1 %								

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985498			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0054						
<b>REF % REC</b>				79 %										
<b>REF % DUP</b>				74 %										
<b>RPD REF</b>				7.3 %										

##### Benzo[b]fluoranthene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985478			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0069					
<b>REF % REC</b>				73 %									
<b>REF % DUP</b>				72 %									
<b>RPD REF</b>				0.80 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985500			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0069						
<b>REF % REC</b>				88 %										
<b>REF % DUP</b>				75 %										
<b>RPD REF</b>				15 %										

##### Benzo[k]fluoranthene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985479			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0083					
<b>REF % REC</b>				68 %									
<b>REF % DUP</b>				71 %									
<b>RPD REF</b>				3.9 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985501			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0083						
<b>REF % REC</b>				85 %										
<b>REF % DUP</b>				85 %										
<b>RPD REF</b>				0.38 %										

##### Benzo[a]pyrene



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/22/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Benzo[a]pyrene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012
<b>QC Batch</b>	985480			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC			
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0069				
<b>REF % REC</b>				68 %								
<b>REF % DUP</b>				65 %								
<b>RPD REF</b>				4.7 %								

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985502			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0069						
<b>REF % REC</b>				82 %										
<b>REF % DUP</b>				76 %										
<b>RPD REF</b>				7.5 %										

##### Chrysene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985477			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0050					
<b>REF % REC</b>				65 %									
<b>REF % DUP</b>				65 %									
<b>RPD REF</b>				0.076 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985499			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0050						
<b>REF % REC</b>				81 %										
<b>REF % DUP</b>				76 %										
<b>RPD REF</b>				6.2 %										

##### Dibenzo[a,h]anthracene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985482			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.011					
<b>REF % REC</b>				68 %									
<b>REF % DUP</b>				67 %									
<b>RPD REF</b>				1.9 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985504			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.011						
<b>REF % REC</b>				84 %										
<b>REF % DUP</b>				82 %										
<b>RPD REF</b>				2.9 %										

##### Fluoranthene



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/22/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Fluoranthene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012
<b>QC Batch</b>	985474			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC			
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0056				
<b>REF % REC</b>				70 %								
<b>REF % DUP</b>				71 %								
<b>RPD REF</b>				1.5 %								

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985496			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0056						
<b>REF % REC</b>				91 %										
<b>REF % DUP</b>				78 %										
<b>RPD REF</b>				15 %										

##### Fluorene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985472			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0056					
<b>REF % REC</b>				64 %									
<b>REF % DUP</b>				65 %									
<b>RPD REF</b>				0.75 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985494			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0056						
<b>REF % REC</b>				78 %										
<b>REF % DUP</b>				72 %										
<b>RPD REF</b>				7.9 %										

##### Indeno[1,2,3-c,d]pyrene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985481			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.010					
<b>REF % REC</b>				68 %									
<b>REF % DUP</b>				67 %									
<b>RPD REF</b>				1.3 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985503			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.010						
<b>REF % REC</b>				84 %										
<b>REF % DUP</b>				80 %										
<b>RPD REF</b>				5.2 %										

##### Naphthalene



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01454

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/22/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Naphthalene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012
<b>QC Batch</b>	985470			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC			
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0042				
<b>REF % REC</b>				67 %								
<b>REF % DUP</b>				67 %								
<b>RPD REF</b>				1.2 %								

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985492			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0042						
<b>REF % REC</b>				79 %										
<b>REF % DUP</b>				76 %										
<b>RPD REF</b>				4.6 %										

##### Pyrene

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	
<b>QC Batch</b>	985475			<b>Date Analyzed:</b>	07/27/2010			<b>Technician:</b>	LJC				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0052					
<b>REF % REC</b>				67 %									
<b>REF % DUP</b>				70 %									
<b>RPD REF</b>				3.9 %									

<b>Samples</b>	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	985497			<b>Date Analyzed:</b>	07/28/2010			<b>Technician:</b>	LJC					
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	0.033	<b>MDL</b>	0.0052						
<b>REF % REC</b>				85 %										
<b>REF % DUP</b>				73 %										
<b>RPD REF</b>				15 %										

#### Total RCRA Metals by Method SW846-6010C

##### Arsenic

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010			
<b>QC Batch</b>	369396			<b>Date Analyzed:</b>	07/23/2010			<b>Technician:</b>	EML				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	5.0	<b>MDL</b>	0.36					
<b>SPIKE REC</b>				98 %									
<b>SPIKE DUP</b>				97 %									
<b>RPD SPIKE</b>				0.63 %									
<b>REF % SOIL</b>				96 %									

<b>Samples</b>	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	369488															



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### Total RCRA Metals by Method SW846-6010C

#### Arsenic

<b>Samples</b>	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	369488			<b>Date Analyzed:</b> 07/27/2010				<b>Technician:</b> EML								
<b>BLANK</b>	N.D. MG/KG			<b>PQL</b>		<b>5.0 MDL</b>		<b>0.36</b>								
<b>SPIKE REC</b>	84 %															
<b>SPIKE DUP</b>	84 %															
<b>RPD SPIKE</b>	0.56 %															
<b>REF % SOIL</b>	98 %															

#### Lead

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	
<b>QC Batch</b>	369397			<b>Date Analyzed:</b> 07/23/2010				<b>Technician:</b> EML			
<b>BLANK</b>	N.D. MG/KG			<b>PQL</b>		<b>0.50 MDL</b>		<b>0.090</b>			
<b>SPIKE REC</b>	99 %										
<b>SPIKE DUP</b>	97 %										
<b>RPD SPIKE</b>	0.53 %										
<b>REF % SOIL</b>	92 %										

<b>Samples</b>	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
<b>QC Batch</b>	369489			<b>Date Analyzed:</b> 07/27/2010				<b>Technician:</b> EML								
<b>BLANK</b>	N.D. MG/KG			<b>PQL</b>		<b>5.0 MDL</b>		<b>0.090</b>								
<b>SPIKE REC</b>	373 %															
<b>SPIKE DUP</b>	1060 %															
<b>RPD SPIKE</b>	43 %															
<b>REF % SOIL</b>	100 %															

#### Lead, TCLP

<b>Samples</b>	014
<b>QC Batch</b>	372216
<b>BLANK</b>	N.D. MG/L
<b>REF % REC</b>	91 %
<b>SPIKE REC</b>	93 %
<b>SPIKE DUP</b>	103 %
<b>RPD SPIKE</b>	8.6 %
<b>Date Analyzed:</b>	07/29/2010
<b>Technician:</b>	EML
<b>PQL</b>	<b>0.020 MDL 0.0027</b>

<b>Samples</b>	001
<b>QC Batch</b>	372234
<b>BLANK</b>	N.D. MG/L
<b>REF % REC</b>	91 %
<b>SPIKE REC</b>	93 %
<b>SPIKE DUP</b>	103 %
<b>RPD SPIKE</b>	8.6 %
<b>Date Analyzed:</b>	07/29/2010
<b>Technician:</b>	EML
<b>PQL</b>	<b>0.020 MDL 0.0027</b>



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**Chemical, Biological, Physical, Molecular, and Toxicological Services**

## ELECTRONIC CERTIFICATE OF ANALYSIS

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**

### QUALIFIER DEFINITIONS:

- AR** Results reported on an as received basis.
- B1** Analyte value in the method blank above control limit.
- B2** Analyte value in the method blank is between the method detection limit and the reporting detection limit.
- B3** BOD blank is over specifications. The reported result may be biased high.
- BOD1** BOD result estimated due to insufficient oxygen depletion.
- BOD2** BOD result estimated due to insufficient oxygen residual.
- BOD3** BOD result estimated due to inconsistent oxygen depletion
- C1** Continuing calibration verification (CCV) above upper control limit, analyte(s) not detected.
- CU** Customer specified reporting limit
- CE** Conclusion Entry
- CG** Confluent Growth
- DI** Surrogate recoveries out of compliance due to sample dilution.
- DW** Results reported on a dry weight basis.
- E1** Elevated reporting or detection limit(s) due to sample matrix interference and sample dilution.
- E2** Elevated reporting or detection limit(s) due to high analyte concentration and sample dilution.
- E3** Elevated reporting or detection limit(s) due to insufficient sample volume
- ES** Estimated microbiological count
- E4** Elevated reporting or detection limit(s) due to low level calibration variance
- F1** Test Method Epa 1010 Not Valid For Solid Samples. Samples Analyzed By A Modified 1010 Method.
- F2** No Flash Observed; Test Flame Is Being Extinguished By Sample At The Reported Temperature.
- F3** The result is estimated, as the sample can not be sufficiently cooled below the expected flashpoint.
- H1** Sample received outside of holding time for these analytes.
- H2** Analyte was prepared and/or analyzed outside of the analytical method holding time.
- J1** The analyte was positively identified; analyte was detected between the reporting limit and method detection limit and the result is an estimated value.
- J2** The analyte was positively identified; the result is above the quantitation range and is an estimated value.
- L1** Lab control sample (LCS) recovery below lower control limit, all other batch QC acceptable.
- L2** Lab control sample (LCS) recovery above upper control limit, all other batch QC acceptable.
- L3** Lab control sample (LCS) recovery above upper control limit, analyte not detected.
- M1** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased High.
- M2** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased Low.
- M3** Matrix Spike Recovery Outside Control Limits Due To Analyte Concentration. Matrix Spike Evaluation not applicable when sample concentration is  $\geq 4X$  Spike Concentration.
- MC** Miscellaneous (see conclusion statement)
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." Any associated quantitation is an estimate based on industry standard practices.
- ND** Not detected at or below the reporting limit (or method detection limit, if listed).
- NJ** The analysis indicates the presence of an analyte that has been "tentatively identified" and is an estimated value.
- OOC** The above value is over the client provided or regulatory specification for this parameter
- P1** Sample received was improperly preserved for these analytes.
- P2** Sample pH greater than method limit of 2.
- R** The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. the presence or absence of the analyte cannot be verified.
- TNC** Colonies too numerous to count
- R1** Relative percent difference (RPD) of matrix spike duplicates outside of control limit.
- R2** Relative percent difference (RPD) of LCS duplicates outside of control limit.
- R3** Relative percent difference (RPD) of sample duplicates outside of control limit.
- S1** One or more surrogates outside control limits, no target analytes detected.
- S2** One or more surrogates outside control limits due to matrix interference.
- S3** One or more surrogates outside control limits. the data was accepted based on the valid recovery of remaining surrogate(s).
- SUM** This total is the sum of several values, some which are less than their respective reporting limits. The total is an estimate.
- SUB** Analysis subcontracted.
- UJ** Analyte was not detected above the reporting limit, however, the reporting limit is approximate & may or may not represent the actual limit of quantitation necessary to accurately & precisely measure the analyte in the sample.
- V** Analyte concentration estimated due to sample matrix interference and/or high analyte concentration interference.



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*Member*



**Chemical, Biological, Physical, Molecular, and Toxicological Services**

**ELECTRONIC CERTIFICATE OF ANALYSIS**

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**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**

**RESPECTFULLY SUBMITTED:** \_\_\_\_\_

**MICROBAC LABORATORIES, INC.**

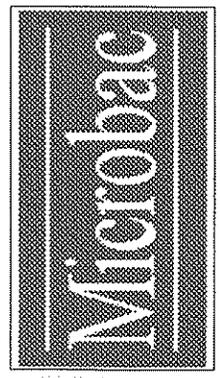
*As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate Federal, state, or local authorities before acting in reliance on the regulatory limits provided.*

*For any feedback concerning our services, please contact Andrew Clifton, the Laboratory Director at 502.962.6400. You may also contact both James Nokes, President and Robert Morgan, Chief Operating Officer at [president@microbac.com](mailto:president@microbac.com).*



CHAIN OF CUSTODY RECORD

Microbac Laboratories, Inc.
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Louisville, KY 40213
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Email: ken.ford@microbac.com



1007-01454 B002

COA No.: (by Laboratory)
Due Date:
Page 1 of 2

Microbac Quote No. 6151

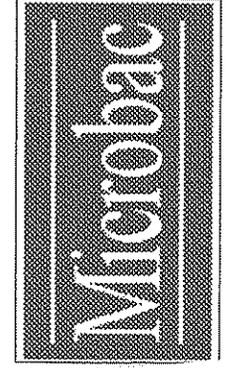
Table with columns: Client/bill to, Address, Email to, Phone #, Report to, Address, Email to, Phone #, Sampler, Site/Parcel, SAMPLE I.D. / DESCRIPTION, Date, Time, Number of Containers, Type of Containers, Preservative Used, Matrix (Soil, Water, Other), Laboratory Analyzes Requested (Total Arsenic and Lead (6010C), Total (13) PNAs (8270C), Total Solids, % (3540C), Solids pH (9045C), Total VOCs (8260B), TPH (Gravimetric), TCLP Lead (1311, 6010C), Temperature, °C), Relinquished By, Received By.

Handwritten notes and signatures at the bottom of the page, including 'Ken Ford' and 'On file'.



CHAIN OF CUSTODY RECORD

Microbac Laboratories, Inc.
3323 Gilmore Industrial Blvd.
Louisville, KY 40213
Phone: 502/962-6400
Fax: 502/962-6411
Email: ken.ford@microbac.com



1007-01454 B002

COA No.: 1007-01454 B002
Due Date:
Page 2 of 2

Microbac Quote No. 6151

Form containing client information, sample containers table, and laboratory analyses requested table.

Table with columns: Laboratory Analyses Requested, Contingent, Total VOCs (8260B), TPH (Gravimetric), TCLP Lead (1311, 6010C), Total Arsenic and Lead (6010C), Total (13) PNAs (8270C), Total Solids, % (3540C), Solids pH (9045C), Matrix (Soil, Water, Other), Preservative Used, Type of Containers, Number of Containers.

Table with columns: Client/bill to, Address, Email to, Phone #, Report to, Address, Email to, Phone #, Sampler, Site/Parcel, SAMPLE I.D. / DESCRIPTION, Date, Time, Relinquished By, Received By, Relinquished By, Received By.

Handwritten signatures and dates for Relinquished By and Received By.

Remarks/Special Instructions:
-- All results to be reported on dry weight basis;
-- Reports require Level II QC package;
-- Special QC and D.L.: Region 9 PRGs (2002)

ON ICE

Work Order / Certificate # 1007-1454

**Sample Receipt Information:**

Samples received via: UPS / FEDEX / USPS / ZIP / By Hand

COC & proper paperwork provided & complete / COC, samples & bottles in agreement: ~~YES~~ / NO

Appropriate bottles provided intact -w- sufficient volume; Preserved correctly; within hold: ~~YES~~ / NO

Client informed of discrepancies? (see customer communications) YES / NO

Cooler/Sample Temperature (Deg C)? LOU: ON Ice LEX: \_\_\_\_\_ EVV: \_\_\_\_\_ PAD: \_\_\_\_\_

Samples received on ice? YES / NO

# Containers received? LOU: 26 LEX: \_\_\_\_\_ EVV: \_\_\_\_\_ PAD: \_\_\_\_\_

Subbing out any analyses: (record analysis and subcontractor)

Pitt Erie Chicago Mass Camp Southern Knox Hauser Balt. Other

Analysis to be subcontracted:  
\_\_\_\_\_  
\_\_\_\_\_

Sample Receipt Comments: (Record Below)	
Date	
Init	
Customer Communications	
Date	
Init	
Date	
Init	
Date	
Init	



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY  
2800 CORPORATE EXCHANGE DRIVE  
SUITE 240  
COLUMBUS, OH 43231

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 001 <b>SB-189-9 / 0'-2'</b>							Date & Time Sampled: 07/22/2010 @ 8:30:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		80.1	%				07/23/2010	AXC
pH by SW846 9045D		8.78	SU				07/23/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.49	mg/Kg	1x	0.037	0.0063	08/02/2010	LJC
Anthracene		1.3	mg/Kg	1x	0.037	0.0086	08/02/2010	LJC
Benzo[a]anthracene		4.7	mg/Kg	5x	0.19	0.030	08/13/2010	LJC
Benzo[b]fluoranthene		6.6	mg/Kg	5x	0.19	0.039	08/13/2010	LJC
Benzo[k]fluoranthene		6.0	mg/Kg	5x	0.19	0.046	08/13/2010	LJC
Benzo[a]pyrene		4.7	mg/Kg	5x	0.19	0.039	08/13/2010	LJC
Chrysene		4.5	mg/Kg	5x	0.19	0.028	08/13/2010	LJC
Dibenzo[a,h]anthracene		0.54	mg/Kg	1x	0.037	0.012	08/02/2010	LJC
Fluoranthene		15	mg/Kg	5x	0.19	0.031	08/13/2010	LJC
Fluorene		0.50	mg/Kg	1x	0.037	0.0063	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		1.4	mg/Kg	1x	0.037	0.011	08/02/2010	LJC
Naphthalene		0.051	mg/Kg	1x	0.037	0.0047	08/02/2010	LJC
Pyrene		11	mg/Kg	5x	0.19	0.029	08/13/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		52	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		63	%	1x			08/02/2010	LJC
SR / P-Terphenyl		42	%	1x			08/02/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic	M3	14	mg/Kg	1x	3.0	0.22	07/30/2010	EML
Lead	M3	250	mg/Kg	1x	0.30	0.055	07/30/2010	EML
Sample: 002 <b>SB189-10 / 0'-2'</b>							Date & Time Sampled: 07/22/2010 @ 9:20:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		84.6	%				07/23/2010	AXC
pH by SW846 9045D		9.18	SU				07/23/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.81	mg/Kg	1x	0.035	0.0060	08/02/2010	LJC
Anthracene		5.3	mg/Kg	100x	3.5	0.82	08/17/2010	LJC
Benzo[a]anthracene		22	mg/Kg	100x	3.5	0.57	08/17/2010	LJC
Benzo[b]fluoranthene		26	mg/Kg	100x	3.5	0.73	08/17/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 002 **SB189-10 / 0'-2'**

Date & Time Sampled: 07/22/2010 @ 9:20:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[k]fluoranthene		25	mg/Kg	100x	3.5	0.88	08/17/2010	LJC
Benzo[a]pyrene		21	mg/Kg	100x	3.5	0.73	08/17/2010	LJC
Chrysene		23	mg/Kg	100x	3.5	0.53	08/17/2010	LJC
Dibenzo[a,h]anthracene	J1	2.6	mg/Kg	100x	3.5	1.2	08/17/2010	LJC
Fluoranthene		62	mg/Kg	100x	3.5	0.60	08/17/2010	LJC
Fluorene		0.84	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		5.1	mg/Kg	100x	3.5	1.1	08/17/2010	LJC
Naphthalene		0.17	mg/Kg	1x	0.035	0.0045	08/02/2010	LJC
Pyrene		50	mg/Kg	100x	3.5	0.55	08/17/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		44	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		54	%	1x			08/02/2010	LJC
SR / P-Terphenyl		24	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.5	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		320	mg/Kg	2x	0.58	0.10	07/30/2010	EML

Sample: 003 **SB189-10 / 2'-5'**

Date & Time Sampled: 07/22/2010 @ 9:35:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		81.8	%				07/23/2010	AXC
pH by SW846 9045D		8.38	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		1.5	mg/Kg	1x	0.037	0.0062	08/02/2010	LJC
Anthracene		5.5	mg/Kg	100x	3.7	0.84	08/17/2010	LJC
Benzo[a]anthracene		24	mg/Kg	100x	3.7	0.59	08/17/2010	LJC
Benzo[b]fluoranthene		27	mg/Kg	100x	3.7	0.76	08/17/2010	LJC
Benzo[k]fluoranthene		26	mg/Kg	100x	3.7	0.91	08/17/2010	LJC
Benzo[a]pyrene		23	mg/Kg	100x	3.7	0.76	08/17/2010	LJC
Chrysene		24	mg/Kg	100x	3.7	0.54	08/17/2010	LJC
Dibenzo[a,h]anthracene	J1	2.1	mg/Kg	100x	3.7	1.2	08/17/2010	LJC
Fluoranthene		68	mg/Kg	100x	3.7	0.61	08/17/2010	LJC
Fluorene		0.96	mg/Kg	1x	0.037	0.0061	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	J2	8.7	mg/Kg	1x	0.037	0.011	08/02/2010	LJC



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Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 003 **SB189-10 / 2'-5'**

Date & Time Sampled: 07/22/2010 @ 9:35:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Naphthalene		0.11	mg/Kg	1x	0.037	0.0046	08/02/2010	LJC
Pyrene		55	mg/Kg	100x	3.7	0.57	08/17/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		49	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		62	%	1x			08/02/2010	LJC
SR / P-Terphenyl		28	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		6.7	mg/Kg	2x	6.0	0.43	07/30/2010	EML
Lead		380	mg/Kg	2x	0.60	0.11	07/30/2010	EML

Sample: 004 **SB189-10 / 5'-10'**

Date & Time Sampled: 07/22/2010 @ 9:45:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		86.7	%				07/23/2010	AXC
pH by SW846 9045D		7.72	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene		0.16	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Anthracene		0.38	mg/Kg	1x	0.035	0.0080	08/02/2010	LJC
Benzo[a]anthracene		1.4	mg/Kg	1x	0.035	0.0056	08/02/2010	LJC
Benzo[b]fluoranthene		1.4	mg/Kg	1x	0.035	0.0072	08/02/2010	LJC
Benzo[k]fluoranthene		1.5	mg/Kg	1x	0.035	0.0087	08/02/2010	LJC
Benzo[a]pyrene		1.4	mg/Kg	1x	0.035	0.0072	08/02/2010	LJC
Chrysene		1.5	mg/Kg	1x	0.035	0.0052	08/02/2010	LJC
Dibenzo[a,h]anthracene		0.31	mg/Kg	1x	0.035	0.011	08/02/2010	LJC
Fluoranthene		1.8	mg/Kg	1x	0.035	0.0059	08/02/2010	LJC
Fluorene		0.21	mg/Kg	1x	0.035	0.0058	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.83	mg/Kg	1x	0.035	0.011	08/02/2010	LJC
Naphthalene		0.14	mg/Kg	1x	0.035	0.0044	08/02/2010	LJC
Pyrene		1.1	mg/Kg	1x	0.035	0.0054	08/02/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		40	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		57	%	1x			08/02/2010	LJC
SR / P-Terphenyl		33	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C



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Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 004 **SB189-10 / 5'-10'** Date & Time Sampled: 07/22/2010 @ 9:45:

All soil sample analysis results except TCLP reported on a dry weight basis

### Total RCRA Metals by Method SW846-6010C

Arsenic		5.9	mg/Kg	2x	5.6	0.40	07/30/2010	EML
Lead		120	mg/Kg	2x	0.56	0.10	07/30/2010	EML

Sample: 005 **SB189-10 / 10'-20'** Date & Time Sampled: 07/22/2010 @ 9:55:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		79.3	%				07/23/2010	AXC
pH by SW846 9045D		7.46	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene		0.51	mg/Kg	1x	0.038	0.0064	08/02/2010	LJC
Anthracene		2.1	mg/Kg	1x	0.038	0.0087	08/02/2010	LJC
Benzo[a]anthracene		13	mg/Kg	50x	1.9	0.31	08/13/2010	LJC
Benzo[b]fluoranthene		34	mg/Kg	50x	1.9	0.39	08/13/2010	LJC
Benzo[k]fluoranthene		19	mg/Kg	50x	1.9	0.47	08/13/2010	LJC
Benzo[a]pyrene		17	mg/Kg	50x	1.9	0.39	08/13/2010	LJC
Chrysene		16	mg/Kg	50x	1.9	0.28	08/13/2010	LJC
Dibenzo[a,h]anthracene	J2	5.4	mg/Kg	1x	0.038	0.012	08/02/2010	LJC
Fluoranthene		23	mg/Kg	50x	1.9	0.32	08/13/2010	LJC
Fluorene		0.59	mg/Kg	1x	0.038	0.0063	08/02/2010	LJC
Indeno[1,2,3-c,d]pyrene	J2	13	mg/Kg	1x	0.038	0.011	08/02/2010	LJC
Naphthalene		0.15	mg/Kg	1x	0.038	0.0048	08/02/2010	LJC
Pyrene		21	mg/Kg	50x	1.9	0.29	08/13/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		48	%	1x			08/02/2010	LJC
SR / 2-Fluorobiphenyl		69	%	1x			08/02/2010	LJC
SR / P-Terphenyl		39	%	1x			08/02/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	2x	6.1	0.44	07/30/2010	EML
Lead		300	mg/Kg	2x	0.61	0.11	07/30/2010	EML

Sample: 006 **SB189-11 / 0'-2'** Date & Time Sampled: 07/22/2010 @ 0:15:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.8	%				07/23/2010	AXC
pH by SW846 9045D		10.63	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 006 SB189-11 / 0'-2'

Date & Time Sampled: 07/22/2010 @ 0:15:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.51	mg/Kg	1x	0.036	0.0061	08/02/2010	LJC	RFV
Anthracene	1.9	mg/Kg	1x	0.036	0.0083	08/02/2010	LJC	
Benzo[a]anthracene	9.6	mg/Kg	50x	1.8	0.29	08/17/2010	LJC	
Benzo[b]fluoranthene	12	mg/Kg	50x	1.8	0.37	08/17/2010	LJC	
Benzo[k]fluoranthene	11	mg/Kg	50x	1.8	0.44	08/17/2010	LJC	
Benzo[a]pyrene	9.7	mg/Kg	50x	1.8	0.37	08/17/2010	LJC	
Chrysene	9.8	mg/Kg	50x	1.8	0.27	08/17/2010	LJC	
Dibenzo[a,h]anthracene	1.4	mg/Kg	1x	0.036	0.012	08/02/2010	LJC	
Fluoranthene	26	mg/Kg	50x	1.8	0.30	08/17/2010	LJC	
Fluorene	0.45	mg/Kg	1x	0.036	0.0060	08/02/2010	LJC	
Indeno[1,2,3-c,d]pyrene	2.0	mg/Kg	50x	1.8	0.54	08/17/2010	LJC	
Naphthalene	0.043	mg/Kg	1x	0.036	0.0045	08/02/2010	LJC	
Pyrene	22	mg/Kg	50x	1.8	0.28	08/17/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	36	%	1x			08/02/2010	LJC	
SR / 2-Fluorobiphenyl	58	%	1x			08/02/2010	LJC	
SR / P-Terphenyl	31	%	1x			08/02/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.0	mg/Kg	1x	3.0	0.21	07/30/2010	EML
Lead	M3	1200	mg/Kg	5x	1.5	0.27	07/30/2010	EML
Lead, TCLP		19	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 007 SB189-11 / 2'-5'

Date & Time Sampled: 07/22/2010 @ 0:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	83.1	%				07/23/2010	AXC	
pH by SW846 9045D	11.38	SU				07/23/2010	CMA	

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.076	mg/Kg	1x	0.036	0.0062	07/30/2010	LJC	RFV
Anthracene	0.35	mg/Kg	1x	0.036	0.0084	07/30/2010	LJC	
Benzo[a]anthracene	1.6	mg/Kg	1x	0.036	0.0059	07/30/2010	LJC	
Benzo[b]fluoranthene	2.2	mg/Kg	1x	0.036	0.0075	07/30/2010	LJC	
Benzo[k]fluoranthene	1.7	mg/Kg	1x	0.036	0.0091	07/30/2010	LJC	



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 007 SB189-11 / 2'-5' Date & Time Sampled: 07/22/2010 @ 0:30:

All soil sample analysis results except TCLP reported on a dry weight basis

**Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C**

Benzo[a]pyrene		1.6	mg/Kg	1x	0.036	0.0076	07/30/2010	LJC
Chrysene		1.6	mg/Kg	1x	0.036	0.0054	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.17	mg/Kg	1x	0.036	0.012	07/30/2010	LJC
Fluoranthene		3.9	mg/Kg	5x	0.18	0.031	08/03/2010	LJC
Fluorene		0.081	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.43	mg/Kg	1x	0.036	0.011	07/30/2010	LJC
Naphthalene	J1	0.021	mg/Kg	1x	0.036	0.0046	07/30/2010	LJC
Pyrene		3.2	mg/Kg	5x	0.18	0.028	08/03/2010	LJC

**Semivolatile Surrogates -Base Neutral**

SR / Nitrobenzene-D5		57	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		61	%	1x			07/30/2010	LJC
SR / P-Terphenyl		84	%	1x			07/30/2010	LJC

**Total RCRA Metals by Method SW846-6010C**

Arsenic		9.7	mg/Kg	2x	5.9	0.42	07/30/2010	EML
Lead		330	mg/Kg	2x	0.59	0.11	07/30/2010	EML

Sample: 008 SB189-11 / 5-'10' Date & Time Sampled: 07/22/2010 @ 0:40:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		87.8	%				07/23/2010	AXC
pH by SW846 9045D		10.29	SU				07/23/2010	CMA

**Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C**

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.058	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Anthracene		0.19	mg/Kg	1x	0.034	0.0080	07/30/2010	LJC
Benzo[a]anthracene		1.0	mg/Kg	1x	0.034	0.0056	07/30/2010	LJC
Benzo[b]fluoranthene		1.4	mg/Kg	1x	0.034	0.0071	07/30/2010	LJC
Benzo[k]fluoranthene		1.2	mg/Kg	1x	0.034	0.0086	07/30/2010	LJC
Benzo[a]pyrene		1.0	mg/Kg	1x	0.034	0.0072	07/30/2010	LJC
Chrysene		1.0	mg/Kg	1x	0.034	0.0051	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.095	mg/Kg	1x	0.034	0.011	07/30/2010	LJC
Fluoranthene		2.5	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Fluorene		0.055	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.24	mg/Kg	1x	0.034	0.010	07/30/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.034	0.0044	07/30/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 008 <b>SB189-11 / 5-'10'</b>							Date & Time Sampled: 07/22/2010 @ 0:40:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Pyrene		2.1	mg/Kg	1x	0.034	0.0054	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		55	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		57	%	1x			07/30/2010	LJC
SR / P-Terphenyl		81	%	1x			07/30/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		3.4	mg/Kg	1x	2.8	0.20	07/30/2010	EML
Lead		270	mg/Kg	1x	0.28	0.050	07/30/2010	EML
Sample: 009 <b>SB189-11 / 10'-20'</b>							Date & Time Sampled: 07/22/2010 @ 0:50:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		82.6	%				07/23/2010	AXC
pH by SW846 9045D		7.68	SU				07/23/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		N.D.	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Anthracene	J1	0.021	mg/Kg	1x	0.036	0.0083	07/30/2010	LJC
Benzo[a]anthracene		0.088	mg/Kg	1x	0.036	0.0058	07/30/2010	LJC
Benzo[b]fluoranthene		0.14	mg/Kg	1x	0.036	0.0074	07/30/2010	LJC
Benzo[k]fluoranthene		0.11	mg/Kg	1x	0.036	0.0089	07/30/2010	LJC
Benzo[a]pyrene		0.10	mg/Kg	1x	0.036	0.0074	07/30/2010	LJC
Chrysene		0.091	mg/Kg	1x	0.036	0.0053	07/30/2010	LJC
Dibenzo[a,h]anthracene	J1	0.030	mg/Kg	1x	0.036	0.012	07/30/2010	LJC
Fluoranthene		0.14	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Fluorene		N.D.	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.037	mg/Kg	1x	0.036	0.011	07/30/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.036	0.0045	07/30/2010	LJC
Pyrene		0.13	mg/Kg	1x	0.036	0.0056	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		52	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		54	%	1x			07/30/2010	LJC
SR / P-Terphenyl		70	%	1x			07/30/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		10	mg/Kg	2x	5.8	0.42	07/30/2010	EML



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Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 009 **SB189-11 / 10'-20'** Date & Time Sampled: 07/22/2010 @ 0:50:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Total RCRA Metals by Method SW846-6010C

Lead	120	mg/Kg	2x	0.58	0.11	07/30/2010	EML
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Sample: 010 **SB189-12 / 0'-2'** Date & Time Sampled: 07/22/2010 @ 1:10:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C	83.7	%				07/23/2010	AXC
pH by SW846 9045D	8.94	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---					
Acenaphthene	0.35	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC
Anthracene	1.1	mg/Kg	1x	0.036	0.0083	07/30/2010	LJC
Benzo[a]anthracene	4.4	mg/Kg	10x	0.36	0.059	08/03/2010	LJC
Benzo[b]fluoranthene	6.0	mg/Kg	10x	0.36	0.075	08/03/2010	LJC
Benzo[k]fluoranthene	4.7	mg/Kg	10x	0.36	0.090	08/03/2010	LJC
Benzo[a]pyrene	4.6	mg/Kg	10x	0.36	0.075	08/03/2010	LJC
Chrysene	4.4	mg/Kg	10x	0.36	0.054	08/03/2010	LJC
Dibenzo[a,h]anthracene	0.61	mg/Kg	1x	0.036	0.012	07/30/2010	LJC
Fluoranthene	11	mg/Kg	10x	0.36	0.061	08/03/2010	LJC
Fluorene	0.37	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene	1.7	mg/Kg	1x	0.036	0.011	07/30/2010	LJC
Naphthalene	0.13	mg/Kg	1x	0.036	0.0046	07/30/2010	LJC
Pyrene	8.6	mg/Kg	10x	0.36	0.056	08/03/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	59	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl	56	%	1x			07/30/2010	LJC
SR / P-Terphenyl	50	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	12	mg/Kg	2x	5.9	0.43	07/30/2010	EML
Lead	620	mg/Kg	2x	0.59	0.11	07/30/2010	EML
Lead, TCLP	2.0	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 011 **SB189-12 / 2'-5'** Date & Time Sampled: 07/22/2010 @ 1:20:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C	82.8	%				07/23/2010	AXC
pH by SW846 9045D	8.69	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C



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Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 011 SB189-12 / 2'-5'

Date & Time Sampled: 07/22/2010 @ 1:20:

All soil sample analysis results except TCLP reported on a dry weight basis

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.087	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC	RFV
Anthracene	0.37	mg/Kg	1x	0.036	0.0083	07/30/2010	LJC	
Benzo[a]anthracene	1.6	mg/Kg	1x	0.036	0.0058	07/30/2010	LJC	
Benzo[b]fluoranthene	1.9	mg/Kg	1x	0.036	0.0075	07/30/2010	LJC	
Benzo[k]fluoranthene	1.9	mg/Kg	1x	0.036	0.0090	07/30/2010	LJC	
Benzo[a]pyrene	1.6	mg/Kg	1x	0.036	0.0075	07/30/2010	LJC	
Chrysene	1.6	mg/Kg	1x	0.036	0.0054	07/30/2010	LJC	
Dibenzo[a,h]anthracene	0.26	mg/Kg	1x	0.036	0.012	07/30/2010	LJC	
Fluoranthene	2.4	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC	
Fluorene	0.11	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC	
Indeno[1,2,3-c,d]pyrene	0.66	mg/Kg	1x	0.036	0.011	07/30/2010	LJC	
Naphthalene	J1 0.033	mg/Kg	1x	0.036	0.0046	07/30/2010	LJC	
Pyrene	1.7	mg/Kg	1x	0.036	0.0056	07/30/2010	LJC	

#### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	46	%	1x			07/30/2010	LJC	
SR / 2-Fluorobiphenyl	45	%	1x			07/30/2010	LJC	
SR / P-Terphenyl	39	%	1x			07/30/2010	LJC	

#### Total RCRA Metals by Method SW846-6010C

Arsenic	12	mg/Kg	2x	6.0	0.43	07/30/2010	EML	
Lead	520	mg/Kg	2x	0.60	0.11	07/30/2010	EML	
Lead, TCLP	1.8	mg/L	1x	0.020	0.0027	08/02/2010	EML	

Sample: 012 SB189-12 / 5'-10'

Date & Time Sampled: 07/22/2010 @ 1:40:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	83.1	%				07/23/2010	AXC	
pH by SW846 9045D	7.88	SU				07/23/2010	CMA	

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.16	mg/Kg	1x	0.036	0.0062	07/30/2010	LJC	RFV
Anthracene	0.41	mg/Kg	1x	0.036	0.0084	07/30/2010	LJC	
Benzo[a]anthracene	1.4	mg/Kg	1x	0.036	0.0059	07/30/2010	LJC	
Benzo[b]fluoranthene	1.8	mg/Kg	1x	0.036	0.0075	07/30/2010	LJC	
Benzo[k]fluoranthene	1.6	mg/Kg	1x	0.036	0.0090	07/30/2010	LJC	



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## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
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Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 012 **SB189-12 / 5'-10'** Date & Time Sampled: 07/22/2010 @ 1:40:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[a]pyrene		1.4	mg/Kg	1x	0.036	0.0076	07/30/2010	LJC
Chrysene		1.5	mg/Kg	1x	0.036	0.0054	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.19	mg/Kg	1x	0.036	0.012	07/30/2010	LJC
Fluoranthene		2.4	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC
Fluorene		0.16	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.49	mg/Kg	1x	0.036	0.011	07/30/2010	LJC
Naphthalene		0.078	mg/Kg	1x	0.036	0.0046	07/30/2010	LJC
Pyrene		1.8	mg/Kg	1x	0.036	0.0057	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		60	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		58	%	1x			07/30/2010	LJC
SR / P-Terphenyl		56	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.1	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		730	mg/Kg	2x	0.58	0.10	07/30/2010	EML
Lead, TCLP		4.3	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 013 **SB189-12 / 10'-20'** Date & Time Sampled: 07/22/2010 @ 1:55:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		79.2	%				07/23/2010	AXC
pH by SW846 9045D		7.56	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---					07/27/2010	RFV
Acenaphthene		N.D.	mg/Kg	1x	0.038	0.0065	07/30/2010	LJC
Anthracene		N.D.	mg/Kg	1x	0.038	0.0088	07/30/2010	LJC
Benzo[a]anthracene		N.D.	mg/Kg	1x	0.038	0.0062	07/30/2010	LJC
Benzo[b]fluoranthene		N.D.	mg/Kg	1x	0.038	0.0079	07/30/2010	LJC
Benzo[k]fluoranthene		N.D.	mg/Kg	1x	0.038	0.0095	07/30/2010	LJC
Benzo[a]pyrene		N.D.	mg/Kg	1x	0.038	0.0079	07/30/2010	LJC
Chrysene		N.D.	mg/Kg	1x	0.038	0.0057	07/30/2010	LJC
Dibenzo[a,h]anthracene		N.D.	mg/Kg	1x	0.038	0.013	07/30/2010	LJC
Fluoranthene		N.D.	mg/Kg	1x	0.038	0.0064	07/30/2010	LJC
Fluorene		N.D.	mg/Kg	1x	0.038	0.0064	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		N.D.	mg/Kg	1x	0.038	0.012	07/30/2010	LJC



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 013 **SB189-12 / 10'-20'**

Date & Time Sampled: 07/22/2010 @ 1:55:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Naphthalene		N.D.	mg/Kg	1x	0.038	0.0048	07/30/2010	LJC
Pyrene		N.D.	mg/Kg	1x	0.038	0.0059	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		69	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		64	%	1x			07/30/2010	LJC
SR / P-Terphenyl		59	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		5.5	mg/Kg	1x	3.1	0.22	07/30/2010	EML
Lead		27	mg/Kg	2x	0.62	0.11	07/30/2010	EML

Sample: 014 **SB189-15 / 0'-2'**

Date & Time Sampled: 07/22/2010 @ 5:30:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		84.5	%				07/23/2010	AXC
pH by SW846 9045D		11.68	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene		0.76	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Anthracene		2.2	mg/Kg	1x	0.035	0.0081	07/30/2010	LJC
Benzo[a]anthracene		7.2	mg/Kg	20x	0.70	0.11	08/03/2010	LJC
Benzo[b]fluoranthene		11	mg/Kg	20x	0.70	0.15	08/03/2010	LJC
Benzo[k]fluoranthene		6.8	mg/Kg	20x	0.70	0.17	08/03/2010	LJC
Benzo[a]pyrene		7.2	mg/Kg	20x	0.70	0.15	08/03/2010	LJC
Chrysene		7.5	mg/Kg	20x	0.70	0.10	08/03/2010	LJC
Dibenzo[a,h]anthracene		1.1	mg/Kg	1x	0.035	0.012	07/30/2010	LJC
Fluoranthene		19	mg/Kg	20x	0.70	0.12	08/03/2010	LJC
Fluorene		0.71	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		1.7	mg/Kg	20x	0.70	0.21	08/03/2010	LJC
Naphthalene		0.14	mg/Kg	1x	0.035	0.0044	07/30/2010	LJC
Pyrene		15	mg/Kg	20x	0.70	0.11	08/03/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		57	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		57	%	1x			07/30/2010	LJC
SR / P-Terphenyl		40	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 014 **SB189-15 / 0'-2'** Date & Time Sampled: 07/22/2010 @ 5:30:

All soil sample analysis results except TCLP reported on a dry weight basis

### Total RCRA Metals by Method SW846-6010C

Arsenic		15	mg/Kg	2x	5.9	0.42	07/30/2010	EML
Lead		700	mg/Kg	2x	0.59	0.11	07/30/2010	EML
Lead, TCLP		2.3	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 015 **SB189-15 / 2'-5'** Date & Time Sampled: 07/22/2010 @ 5:45:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		84.7	%				07/23/2010	AXC
pH by SW846 9045D		8.42	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	52	mg/Kg	200x	7.0	1.2	08/03/2010	LJC	
Anthracene	120	mg/Kg	200x	7.0	1.6	08/03/2010	LJC	
Benzo[a]anthracene	140	mg/Kg	200x	7.0	1.1	08/03/2010	LJC	
Benzo[b]fluoranthene	110	mg/Kg	200x	7.0	1.5	08/03/2010	LJC	
Benzo[k]fluoranthene	88	mg/Kg	200x	7.0	1.7	08/03/2010	LJC	
Benzo[a]pyrene	110	mg/Kg	200x	7.0	1.5	08/03/2010	LJC	
Chrysene	120	mg/Kg	200x	7.0	1.0	08/03/2010	LJC	
Dibenzo[a,h]anthracene	14	mg/Kg	200x	7.0	2.3	08/03/2010	LJC	
Fluoranthene	370	mg/Kg	200x	7.0	1.2	08/03/2010	LJC	
Fluorene	90	mg/Kg	200x	7.0	1.2	08/03/2010	LJC	
Indeno[1,2,3-c,d]pyrene	32	mg/Kg	200x	7.0	2.1	08/03/2010	LJC	
Naphthalene	71	mg/Kg	200x	7.0	0.89	08/03/2010	LJC	
Pyrene	290	mg/Kg	200x	7.0	1.1	08/03/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	43	%	1x			07/30/2010	LJC	
SR / 2-Fluorobiphenyl	32	%	1x			07/30/2010	LJC	
SR / P-Terphenyl	65	%	1x			07/30/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic		13	mg/Kg	2x	5.7	0.41	07/30/2010	EML
Lead		330	mg/Kg	2x	0.57	0.10	07/30/2010	EML

Sample: 016 **SB189-15 / 5'-10'** Date & Time Sampled: 07/22/2010 @ 5:55:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.2	%				07/23/2010	AXC
pH by SW846 9045D		12.32	SU				07/23/2010	CMA



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 016 **SB189-15 / 5'-10'** Date & Time Sampled: 07/22/2010 @ 5:55:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.13	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC	RFV
Anthracene	0.50	mg/Kg	1x	0.036	0.0084	07/30/2010	LJC	
Benzo[a]anthracene	3.5	mg/Kg	5x	0.18	0.029	08/03/2010	LJC	
Benzo[b]fluoranthene	5.0	mg/Kg	5x	0.18	0.038	08/03/2010	LJC	
Benzo[k]fluoranthene	4.2	mg/Kg	5x	0.18	0.045	08/03/2010	LJC	
Benzo[a]pyrene	3.6	mg/Kg	5x	0.18	0.038	08/03/2010	LJC	
Chrysene	3.5	mg/Kg	5x	0.18	0.027	08/03/2010	LJC	
Dibenzo[a,h]anthracene	0.62	mg/Kg	1x	0.036	0.012	07/30/2010	LJC	
Fluoranthene	7.6	mg/Kg	5x	0.18	0.031	08/03/2010	LJC	
Fluorene	0.16	mg/Kg	1x	0.036	0.0061	07/30/2010	LJC	
Indeno[1,2,3-c,d]pyrene	1.6	mg/Kg	1x	0.036	0.011	07/30/2010	LJC	
Naphthalene	0.090	mg/Kg	1x	0.036	0.0046	07/30/2010	LJC	
Pyrene	2.5	mg/Kg	1x	0.036	0.0057	07/30/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	51	%	1x			07/30/2010	LJC	
SR / 2-Fluorobiphenyl	57	%	1x			07/30/2010	LJC	
SR / P-Terphenyl	48	%	1x			07/30/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.7	mg/Kg	1x	2.9	0.21	07/30/2010	EML
Lead	M3	310	mg/Kg	1x	0.29	0.053	07/30/2010	EML

Sample: 017 **SB189-15 / 10'-20'** Date & Time Sampled: 07/22/2010 @ 6:25:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	84.3	%				07/23/2010	AXC	
pH by SW846 9045D	8.04	SU				07/23/2010	CMA	

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.12	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC	RFV
Anthracene	0.35	mg/Kg	1x	0.036	0.0082	07/30/2010	LJC	
Benzo[a]anthracene	1.2	mg/Kg	1x	0.036	0.0058	07/30/2010	LJC	
Benzo[b]fluoranthene	1.6	mg/Kg	1x	0.036	0.0074	07/30/2010	LJC	
Benzo[k]fluoranthene	0.96	mg/Kg	1x	0.036	0.0089	07/30/2010	LJC	
Benzo[a]pyrene	1.2	mg/Kg	1x	0.036	0.0074	07/30/2010	LJC	



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## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 017 **SB189-15 / 10'-20'**

Date & Time Sampled: 07/22/2010 @ 6:25:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Chrysene		1.2	mg/Kg	1x	0.036	0.0053	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.34	mg/Kg	1x	0.036	0.012	07/30/2010	LJC
Fluoranthene		1.5	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Fluorene		0.12	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.70	mg/Kg	1x	0.036	0.011	07/30/2010	LJC
Naphthalene		0.080	mg/Kg	1x	0.036	0.0045	07/30/2010	LJC
Pyrene		0.98	mg/Kg	1x	0.036	0.0055	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		51	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		55	%	1x			07/30/2010	LJC
SR / P-Terphenyl		43	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.1	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		420	mg/Kg	2x	0.58	0.10	07/30/2010	EML

Sample: 018 **SB189-16 / 0'-2'**

Date & Time Sampled: 07/22/2010 @ 4:15:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		85.8	%				07/23/2010	AXC
pH by SW846 9045D		11.63	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.19	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Anthracene		0.68	mg/Kg	1x	0.035	0.0081	07/30/2010	LJC
Benzo[a]anthracene		4.8	mg/Kg	5x	0.17	0.028	08/03/2010	LJC
Benzo[b]fluoranthene		7.1	mg/Kg	5x	0.17	0.036	08/03/2010	LJC
Benzo[k]fluoranthene		6.3	mg/Kg	5x	0.17	0.043	08/03/2010	LJC
Benzo[a]pyrene		5.0	mg/Kg	5x	0.17	0.036	08/03/2010	LJC
Chrysene		4.7	mg/Kg	5x	0.17	0.026	08/03/2010	LJC
Dibenzo[a,h]anthracene		0.75	mg/Kg	1x	0.035	0.012	07/30/2010	LJC
Fluoranthene		12	mg/Kg	5x	0.17	0.029	08/03/2010	LJC
Fluorene		0.19	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		2.1	mg/Kg	1x	0.035	0.011	07/30/2010	LJC
Naphthalene		0.049	mg/Kg	1x	0.035	0.0044	07/30/2010	LJC
Pyrene		9.6	mg/Kg	5x	0.17	0.027	08/03/2010	LJC



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MARSHALL LEVY

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Date Due 08/06/2010  
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Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 018 SB189-16 / 0'-2'

Date & Time Sampled: 07/22/2010 @ 4:15:

All soil sample analysis results except TCLP reported on a dry weight basis

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		43	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		52	%	1x			07/30/2010	LJC
SR / P-Terphenyl		39	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		12	mg/Kg	2x	5.7	0.41	07/30/2010	EML
Lead		270	mg/Kg	2x	0.57	0.10	07/30/2010	EML

Sample: 019 SB189-16 / 2'-5'

Date & Time Sampled: 07/22/2010 @ 4:25:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.3	%				07/23/2010	AXC
pH by SW846 9045D		9.57	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.88	mg/Kg	1x	0.035	0.0060		07/30/2010	LJC
Anthracene	3.2	mg/Kg	20x	0.71	0.16		08/03/2010	LJC
Benzo[a]anthracene	12	mg/Kg	20x	0.71	0.11		08/03/2010	LJC
Benzo[b]fluoranthene	17	mg/Kg	20x	0.71	0.15		08/03/2010	LJC
Benzo[k]fluoranthene	15	mg/Kg	20x	0.71	0.18		08/03/2010	LJC
Benzo[a]pyrene	13	mg/Kg	20x	0.71	0.15		08/03/2010	LJC
Chrysene	12	mg/Kg	20x	0.71	0.11		08/03/2010	LJC
Dibenzo[a,h]anthracene	0.37	mg/Kg	1x	0.035	0.012		07/30/2010	LJC
Fluoranthene	31	mg/Kg	20x	0.71	0.12		08/03/2010	LJC
Fluorene	0.96	mg/Kg	1x	0.035	0.0059		07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene	2.5	mg/Kg	20x	0.71	0.21		08/03/2010	LJC
Naphthalene	0.11	mg/Kg	1x	0.035	0.0045		07/30/2010	LJC
Pyrene	24	mg/Kg	20x	0.71	0.11		08/03/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		54	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		55	%	1x			07/30/2010	LJC
SR / P-Terphenyl		58	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	2x	5.8	0.41	07/30/2010	EML
Lead		260	mg/Kg	2x	0.58	0.10	07/30/2010	EML

Sample: 020 SB189-16 / 5'-10'

Date & Time Sampled: 07/22/2010 @ 4:35:



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Chemical, Biological, Physical, Molecular, and Toxicological Services

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1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 020 <b>SB189-16 / 5'-10'</b>							Date & Time Sampled: 07/22/2010 @ 4:35:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		81.3	%				07/23/2010	AXC
pH by SW846 9045D		7.49	SU				07/23/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.051	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Anthracene		0.27	mg/Kg	1x	0.037	0.0085	07/30/2010	LJC
Benzo[a]anthracene		1.4	mg/Kg	1x	0.037	0.0060	07/30/2010	LJC
Benzo[b]fluoranthene		2.0	mg/Kg	1x	0.037	0.0076	07/30/2010	LJC
Benzo[k]fluoranthene		2.1	mg/Kg	1x	0.037	0.0092	07/30/2010	LJC
Benzo[a]pyrene		1.7	mg/Kg	1x	0.037	0.0076	07/30/2010	LJC
Chrysene		1.4	mg/Kg	1x	0.037	0.0055	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.22	mg/Kg	1x	0.037	0.012	07/30/2010	LJC
Fluoranthene		2.6	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Fluorene		0.070	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.60	mg/Kg	1x	0.037	0.011	07/30/2010	LJC
Naphthalene		0.13	mg/Kg	1x	0.037	0.0047	07/30/2010	LJC
Pyrene		2.0	mg/Kg	1x	0.037	0.0057	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		48	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		49	%	1x			07/30/2010	LJC
SR / P-Terphenyl		62	%	1x			07/30/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		11	mg/Kg	2x	6.0	0.43	07/30/2010	EML
Lead		690	mg/Kg	2x	0.60	0.11	07/30/2010	EML
Lead, TCLP		9.3	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 021 **SB189-16 / 10'-20'**

Date & Time Sampled: 07/22/2010 @ 4:55:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		81.5	%				07/23/2010	AXC
pH by SW846 9045D		8.11	SU				07/23/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		N.D.	mg/Kg	1x	0.037	0.0063	07/30/2010	LJC
Anthracene		N.D.	mg/Kg	1x	0.037	0.0085	07/30/2010	LJC
Benzo[a]anthracene		0.045	mg/Kg	1x	0.037	0.0060	07/30/2010	LJC



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1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
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Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 021 SB189-16 / 10'-20'

Date & Time Sampled: 07/22/2010 @ 4:55:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[b]fluoranthene		0.16	mg/Kg	1x	0.037	0.0077	07/30/2010	LJC
Benzo[k]fluoranthene		0.088	mg/Kg	1x	0.037	0.0092	07/30/2010	LJC
Benzo[a]pyrene		0.064	mg/Kg	1x	0.037	0.0077	07/30/2010	LJC
Chrysene		0.051	mg/Kg	1x	0.037	0.0055	07/30/2010	LJC
Dibenzo[a,h]anthracene		N.D.	mg/Kg	1x	0.037	0.012	07/30/2010	LJC
Fluoranthene		0.069	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Fluorene		N.D.	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.065	mg/Kg	1x	0.037	0.011	07/30/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.037	0.0047	07/30/2010	LJC
Pyrene		0.053	mg/Kg	1x	0.037	0.0058	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		56	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		52	%	1x			07/30/2010	LJC
SR / P-Terphenyl		70	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		18	mg/Kg	2x	5.9	0.43	07/30/2010	EML
Lead		4200	mg/Kg	10x	3.0	0.53	07/30/2010	EML
Lead, TCLP		6.3	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 022 SB189-17 / 0'-2'

Date & Time Sampled: 07/22/2010 @ 2:40:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.9	%				07/23/2010	AXC
pH by SW846 9045D		11.42	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.083	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Anthracene		0.24	mg/Kg	1x	0.036	0.0082	07/30/2010	LJC
Benzo[a]anthracene		1.1	mg/Kg	1x	0.036	0.0058	07/30/2010	LJC
Benzo[b]fluoranthene		1.6	mg/Kg	1x	0.036	0.0074	07/30/2010	LJC
Benzo[k]fluoranthene		1.5	mg/Kg	1x	0.036	0.0088	07/30/2010	LJC
Benzo[a]pyrene		1.2	mg/Kg	1x	0.036	0.0074	07/30/2010	LJC
Chrysene		1.2	mg/Kg	1x	0.036	0.0053	07/30/2010	LJC
Dibenzo[a,h]anthracene	J1	0.020	mg/Kg	1x	0.036	0.012	07/30/2010	LJC
Fluoranthene		1.9	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 022 SB189-17 / 0'-2'

Date & Time Sampled: 07/22/2010 @ 2:40:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Fluorene		0.081	mg/Kg	1x	0.036	0.0060	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.51	mg/Kg	1x	0.036	0.011	07/30/2010	LJC
Naphthalene	J1	0.024	mg/Kg	1x	0.036	0.0045	07/30/2010	LJC
Pyrene		1.4	mg/Kg	1x	0.036	0.0055	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		48	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		51	%	1x			07/30/2010	LJC
SR / P-Terphenyl		55	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	2x	5.7	0.41	07/30/2010	EML
Lead		700	mg/Kg	2x	0.57	0.10	07/30/2010	EML
Lead, TCLP		1.5	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 023 SB189-17 / 2'-5'

Date & Time Sampled: 07/22/2010 @ 2:50:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.9	%				07/23/2010	AXC
pH by SW846 9045D		8.13	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.042	mg/Kg	1x	0.035	0.0060	07/30/2010	LJC
Anthracene		0.13	mg/Kg	1x	0.035	0.0082	07/30/2010	LJC
Benzo[a]anthracene		0.53	mg/Kg	1x	0.035	0.0057	07/30/2010	LJC
Benzo[b]fluoranthene		0.72	mg/Kg	1x	0.035	0.0073	07/30/2010	LJC
Benzo[k]fluoranthene		0.59	mg/Kg	1x	0.035	0.0088	07/30/2010	LJC
Benzo[a]pyrene		0.55	mg/Kg	1x	0.035	0.0073	07/30/2010	LJC
Chrysene		0.56	mg/Kg	1x	0.035	0.0053	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.14	mg/Kg	1x	0.035	0.012	07/30/2010	LJC
Fluoranthene		0.78	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Fluorene		0.043	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.26	mg/Kg	1x	0.035	0.011	07/30/2010	LJC
Naphthalene	J1	0.021	mg/Kg	1x	0.035	0.0045	07/30/2010	LJC
Pyrene		0.59	mg/Kg	1x	0.035	0.0055	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		43	%	1x			07/30/2010	LJC
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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 023 **SB189-17 / 2'-5'**

Date & Time Sampled: 07/22/2010 @ 2:50:

*All soil sample analysis results except TCLP reported on a dry weight basis*

### Semivolatile Surrogates -Base Neutral

SR / 2-Fluorobiphenyl		46	%	1x			07/30/2010	LJC
SR / P-Terphenyl		44	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		14	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		3200	mg/Kg	5x	1.5	0.26	07/30/2010	EML
Lead, TCLP		38	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 024 **SB189-17 / 5'-10'**

Date & Time Sampled: 07/22/2010 @ 3:00:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		80.8	%				07/23/2010	AXC
pH by SW846 9045D		8.17	SU				07/23/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene		0.064	mg/Kg	1x	0.037	0.0063	07/30/2010	LJC
Anthracene		0.20	mg/Kg	1x	0.037	0.0086	07/30/2010	LJC
Benzo[a]anthracene		1.1	mg/Kg	1x	0.037	0.0060	07/30/2010	LJC
Benzo[b]fluoranthene		1.4	mg/Kg	1x	0.037	0.0077	07/30/2010	LJC
Benzo[k]fluoranthene		1.4	mg/Kg	1x	0.037	0.0092	07/30/2010	LJC
Benzo[a]pyrene		1.1	mg/Kg	1x	0.037	0.0077	07/30/2010	LJC
Chrysene		1.1	mg/Kg	1x	0.037	0.0055	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.15	mg/Kg	1x	0.037	0.012	07/30/2010	LJC
Fluoranthene		1.5	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Fluorene		0.075	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.40	mg/Kg	1x	0.037	0.011	07/30/2010	LJC
Naphthalene		0.040	mg/Kg	1x	0.037	0.0047	07/30/2010	LJC
Pyrene		1.2	mg/Kg	1x	0.037	0.0058	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		49	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		52	%	1x			07/30/2010	LJC
SR / P-Terphenyl		53	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.0	mg/Kg	2x	6.0	0.43	07/30/2010	EML
Lead		380	mg/Kg	2x	0.60	0.11	07/30/2010	EML

Sample: 025 **SB189-17 / 10'-20'**

Date & Time Sampled: 07/22/2010 @ 3:20:



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 76963  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 025 SB189-17 / 10'-20'							Date & Time Sampled: 07/22/2010 @ 3:20:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		81.3	%				07/23/2010	AXC
pH by SW846 9045D		7.59	SU				07/23/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene	J1	0.037	mg/Kg	1x	0.037	0.0063	07/30/2010	LJC
Anthracene		0.18	mg/Kg	1x	0.037	0.0086	07/30/2010	LJC
Benzo[a]anthracene		0.64	mg/Kg	1x	0.037	0.0060	07/30/2010	LJC
Benzo[b]fluoranthene		0.88	mg/Kg	1x	0.037	0.0077	07/30/2010	LJC
Benzo[k]fluoranthene		0.88	mg/Kg	1x	0.037	0.0092	07/30/2010	LJC
Benzo[a]pyrene		0.74	mg/Kg	1x	0.037	0.0077	07/30/2010	LJC
Chrysene		0.68	mg/Kg	1x	0.037	0.0055	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.13	mg/Kg	1x	0.037	0.012	07/30/2010	LJC
Fluoranthene		1.1	mg/Kg	1x	0.037	0.0063	07/30/2010	LJC
Fluorene	J1	0.035	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.37	mg/Kg	1x	0.037	0.011	07/30/2010	LJC
Naphthalene	J1	0.020	mg/Kg	1x	0.037	0.0047	07/30/2010	LJC
Pyrene		0.79	mg/Kg	1x	0.037	0.0058	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		55	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		57	%	1x			07/30/2010	LJC
SR / P-Terphenyl		53	%	1x			07/30/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		12	mg/Kg	2x	6.1	0.44	07/30/2010	EML
Lead		870	mg/Kg	2x	0.61	0.11	07/30/2010	EML
Lead, TCLP		5.7	mg/L	1x	0.020	0.0027	08/02/2010	EML

UNLESS OTHERWISE NOTED, SAMPLES ARE ANALYZED AS RECEIVED.



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report 1007-01517

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**  
**KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189**

**Date Reported 08/19/2010**  
**Date Due 08/06/2010**  
**Date Received 07/23/2010**  
**Invoice No. 76963**  
**Customer # B002**  
**Customer P.O. 072010**

#### Total Solids by SW846 3540C

**Samples** 001 002 003 004 005 006 007 008 009 010 011 012 013  
**QC Batch** 230806 **Date Analyzed:** 07/23/2010 **Technician:** AXC  
**RPD SAMP** 2.56 %

**Samples** 014 015 016 017 018 019 020 021 022 023 024 025  
**QC Batch** 230807 **Date Analyzed:** 07/23/2010 **Technician:** AXC  
**RPD SAMP** 0.94 %

#### pH by SW846 9045D

**Samples** 001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025  
**QC Batch** 230779 **Date Analyzed:** 07/23/2010 **Technician:** CMA  
**REF % REC** 7.02 %

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Acenaphthene

**Samples** 001 002 003 004 005 006  
**QC Batch** 985557 **Date Analyzed:** 07/28/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0056  
**REF % REC** 77 %  
**REF % DUP** 72 %  
**RPD REF** 5.8 %

**Samples** 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025  
**QC Batch** 985579 **Date Analyzed:** 07/30/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0056  
**REF % REC** 71 %  
**REF % DUP** 67 %  
**RPD REF** 5.7 %

##### Anthracene

**Samples** 001 002 003 004 005 006  
**QC Batch** 985559 **Date Analyzed:** 07/28/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0077  
**REF % REC** 81 %  
**REF % DUP** 74 %  
**RPD REF** 9.1 %

**Samples** 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025  
**QC Batch** 985581 **Date Analyzed:** 07/30/2010 **Technician:** LJC  
**BLANK** N.D. MG/KG **PQL** 0.033 **MDL** 0.0077  
**REF % REC** 74 %  
**REF % DUP** 77 %  
**RPD REF** 4.2 %



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/23/2010

#### KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189 Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Benzo[a]anthracene

<b>Samples</b>	001	002	003	004	005	006										
<b>QC Batch</b>	985562	<b>Date Analyzed:</b> 07/28/2010				<b>Technician:</b> LJC										
<b>BLANK</b>	N.D. MG/KG				<b>PQL</b>	0.033	<b>MDL</b>	0.0054								
<b>REF % REC</b>	79 %															
<b>REF % DUP</b>	74 %															
<b>RPD REF</b>	7.3 %															

<b>Samples</b>	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	
<b>QC Batch</b>	985584	<b>Date Analyzed:</b> 07/30/2010										<b>Technician:</b> LJC								
<b>BLANK</b>	N.D. MG/KG										<b>PQL</b>	0.033	<b>MDL</b>	0.0054						
<b>REF % REC</b>	72 %																			
<b>REF % DUP</b>	79 %																			
<b>RPD REF</b>	8.5 %																			

##### Benzo[b]fluoranthene

<b>Samples</b>	001	002	003	004	005	006														
<b>QC Batch</b>	985564	<b>Date Analyzed:</b> 07/28/2010				<b>Technician:</b> LJC														
<b>BLANK</b>	N.D. MG/KG				<b>PQL</b>	0.033	<b>MDL</b>	0.0069												
<b>REF % REC</b>	88 %																			
<b>REF % DUP</b>	75 %																			
<b>RPD REF</b>	15 %																			

<b>Samples</b>	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	
<b>QC Batch</b>	985586	<b>Date Analyzed:</b> 07/30/2010										<b>Technician:</b> LJC								
<b>BLANK</b>	N.D. MG/KG										<b>PQL</b>	0.033	<b>MDL</b>	0.0069						
<b>REF % REC</b>	76 %																			
<b>REF % DUP</b>	85 %																			
<b>RPD REF</b>	11 %																			

##### Benzo[k]fluoranthene

<b>Samples</b>	001	002	003	004	005	006														
<b>QC Batch</b>	985565	<b>Date Analyzed:</b> 07/28/2010				<b>Technician:</b> LJC														
<b>BLANK</b>	N.D. MG/KG				<b>PQL</b>	0.033	<b>MDL</b>	0.0083												
<b>REF % REC</b>	85 %																			
<b>REF % DUP</b>	85 %																			
<b>RPD REF</b>	0.38 %																			

<b>Samples</b>	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	
<b>QC Batch</b>	985587	<b>Date Analyzed:</b> 07/30/2010										<b>Technician:</b> LJC								
<b>BLANK</b>	N.D. MG/KG										<b>PQL</b>	0.033	<b>MDL</b>	0.0083						
<b>REF % REC</b>	83 %																			
<b>REF % DUP</b>	93 %																			
<b>RPD REF</b>	12 %																			

##### Benzo[a]pyrene



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/23/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

**Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C**

#### Benzo[a]pyrene

<b>Samples</b>	001	002	003	004	005	006										
<b>QC Batch</b>	985566		<b>Date Analyzed:</b>		07/28/2010		<b>Technician:</b>		LJC							
<b>BLANK</b>			N.D. MG/KG		<b>PQL</b>		<b>0.033</b>		<b>MDL</b>		<b>0.0069</b>					
<b>REF % REC</b>			82 %													
<b>REF % DUP</b>			76 %													
<b>RPD REF</b>			7.5 %													

<b>Samples</b>	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
<b>QC Batch</b>	985588		<b>Date Analyzed:</b>		07/30/2010		<b>Technician:</b>		LJC										
<b>BLANK</b>			N.D. MG/KG		<b>PQL</b>		<b>0.033</b>		<b>MDL</b>		<b>0.0069</b>								
<b>REF % REC</b>			76 %																
<b>REF % DUP</b>			82 %																
<b>RPD REF</b>			8.0 %																

#### Chrysene

<b>Samples</b>	001	002	003	004	005	006										
<b>QC Batch</b>	985563		<b>Date Analyzed:</b>		07/28/2010		<b>Technician:</b>		LJC							
<b>BLANK</b>			N.D. MG/KG		<b>PQL</b>		<b>0.033</b>		<b>MDL</b>		<b>0.0050</b>					
<b>REF % REC</b>			81 %													
<b>REF % DUP</b>			76 %													
<b>RPD REF</b>			6.2 %													

<b>Samples</b>	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
<b>QC Batch</b>	985585		<b>Date Analyzed:</b>		07/30/2010		<b>Technician:</b>		LJC										
<b>BLANK</b>			N.D. MG/KG		<b>PQL</b>		<b>0.033</b>		<b>MDL</b>		<b>0.0050</b>								
<b>REF % REC</b>			74 %																
<b>REF % DUP</b>			81 %																
<b>RPD REF</b>			8.9 %																

#### Dibenzo[a,h]anthracene

<b>Samples</b>	001	002	003	004	005	006										
<b>QC Batch</b>	985568		<b>Date Analyzed:</b>		07/28/2010		<b>Technician:</b>		LJC							
<b>BLANK</b>			N.D. MG/KG		<b>PQL</b>		<b>0.033</b>		<b>MDL</b>		<b>0.011</b>					
<b>REF % REC</b>			84 %													
<b>REF % DUP</b>			82 %													
<b>RPD REF</b>			2.9 %													

<b>Samples</b>	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
<b>QC Batch</b>	985590		<b>Date Analyzed:</b>		07/30/2010		<b>Technician:</b>		LJC										
<b>BLANK</b>			N.D. MG/KG		<b>PQL</b>		<b>0.033</b>		<b>MDL</b>		<b>0.011</b>								
<b>REF % REC</b>			77 %																
<b>REF % DUP</b>			84 %																
<b>RPD REF</b>			8.5 %																

#### Fluoranthene



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/23/2010

#### KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189 Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Fluoranthene

Samples	001	002	003	004	005	006													
QC Batch	985560					Date Analyzed:	07/28/2010					Technician: LJC							
BLANK	N.D. MG/KG					PQL	0.033					MDL	0.0056						
REF % REC	91 %																		
REF % DUP	78 %																		
RPD REF	15 %																		
Samples	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
QC Batch	985582					Date Analyzed:	07/30/2010					Technician: LJC							
BLANK	N.D. MG/KG					PQL	0.033					MDL	0.0056						
REF % REC	77 %																		
REF % DUP	85 %																		
RPD REF	9.8 %																		

##### Fluorene

Samples	001	002	003	004	005	006													
QC Batch	985558					Date Analyzed:	07/28/2010					Technician: LJC							
BLANK	N.D. MG/KG					PQL	0.033					MDL	0.0056						
REF % REC	78 %																		
REF % DUP	72 %																		
RPD REF	7.9 %																		
Samples	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
QC Batch	985580					Date Analyzed:	07/30/2010					Technician: LJC							
BLANK	N.D. MG/KG					PQL	0.033					MDL	0.0056						
REF % REC	70 %																		
REF % DUP	67 %																		
RPD REF	4.7 %																		

##### Indeno[1,2,3-c,d]pyrene

Samples	001	002	003	004	005	006													
QC Batch	985567					Date Analyzed:	07/28/2010					Technician: LJC							
BLANK	N.D. MG/KG					PQL	0.033					MDL	0.010						
REF % REC	84 %																		
REF % DUP	80 %																		
RPD REF	5.2 %																		
Samples	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
QC Batch	985589					Date Analyzed:	07/30/2010					Technician: LJC							
BLANK	N.D. MG/KG					PQL	0.033					MDL	0.010						
REF % REC	77 %																		
REF % DUP	83 %																		
RPD REF	8.2 %																		

##### Naphthalene



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/23/2010

#### KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Naphthalene

Samples	001	002	003	004	005	006													
QC Batch	985556						Date Analyzed:	07/28/2010				Technician: LJC							
BLANK	N.D. MG/KG						PQL	0.033		MDL	0.0042								
REF % REC	79 %																		
REF % DUP	76 %																		
RPD REF	4.6 %																		
Samples	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
QC Batch	985578						Date Analyzed:	07/30/2010				Technician: LJC							
BLANK	N.D. MG/KG						PQL	0.033		MDL	0.0042								
REF % REC	74 %																		
REF % DUP	70 %																		
RPD REF	5.3 %																		

##### Pyrene

Samples	001	002	003	004	005	006													
QC Batch	985561						Date Analyzed:	07/28/2010				Technician: LJC							
BLANK	N.D. MG/KG						PQL	0.033		MDL	0.0052								
REF % REC	85 %																		
REF % DUP	73 %																		
RPD REF	15 %																		
Samples	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025
QC Batch	985583						Date Analyzed:	07/30/2010				Technician: LJC							
BLANK	N.D. MG/KG						PQL	0.033		MDL	0.0052								
REF % REC	73 %																		
REF % DUP	80 %																		
RPD REF	13 %																		

#### Total RCRA Metals by Method SW846-6010C

##### Arsenic

Samples	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015					
QC Batch	370163						Date Analyzed:	07/30/2010				Technician: EML								
BLANK	N.D. MG/KG						PQL	5.0		MDL	0.36									
SPIKE REC	66 %																			
SPIKE DUP	84 %																			
RPD SPIKE	15 %																			
REF % SOIL	92 %																			
Samples	016	017	018	019	020	021	022	023	024	025										
QC Batch	370165																			



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## Quality Control Report

1007-01517

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/19/2010  
Date Received 07/23/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

### Total RCRA Metals by Method SW846-6010C

#### Arsenic

<b>Samples</b>	016	017	018	019	020	021	022	023	024	025			
<b>QC Batch</b>	370165			<b>Date Analyzed:</b>	07/30/2010			<b>Technician:</b>	EML				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	<b>5.0</b>	<b>MDL</b>	<b>0.36</b>					
<b>SPIKE REC</b>				90 %									
<b>SPIKE DUP</b>				85 %									
<b>RPD SPIKE</b>				4.5 %									
<b>REF % SOIL</b>				94 %									

#### Lead

<b>Samples</b>	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015
<b>QC Batch</b>	370164			<b>Date Analyzed:</b>	07/30/2010			<b>Technician:</b>	EML						
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	<b>5.0</b>	<b>MDL</b>	<b>0.090</b>							
<b>SPIKE REC</b>				26 %											
<b>SPIKE DUP</b>				0 %											
<b>RPD SPIKE</b>				37 %											
<b>REF % SOIL</b>				95 %											

<b>Samples</b>	016	017	018	019	020	021	022	023	024	025			
<b>QC Batch</b>	370166			<b>Date Analyzed:</b>	07/30/2010			<b>Technician:</b>	EML				
<b>BLANK</b>				N.D. MG/KG	<b>PQL</b>	<b>5.0</b>	<b>MDL</b>	<b>0.090</b>					
<b>SPIKE REC</b>				86 %									
<b>SPIKE DUP</b>				53 %									
<b>RPD SPIKE</b>				2.9 %									
<b>REF % SOIL</b>				94 %									

#### Lead, TCLP

<b>Samples</b>	006	010	011	012	014	020	021	022	023	025			
<b>QC Batch</b>	372224			<b>Date Analyzed:</b>	08/02/2010			<b>Technician:</b>	EML				
<b>BLANK</b>				N.D. MG/L	<b>PQL</b>	<b>0.020</b>	<b>MDL</b>	<b>0.0027</b>					
<b>REF % REC</b>				93 %									
<b>SPIKE REC</b>				78 %									
<b>SPIKE DUP</b>				74 %									



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**Chemical, Biological, Physical, Molecular, and Toxicological Services**

## ELECTRONIC CERTIFICATE OF ANALYSIS

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**

### QUALIFIER DEFINITIONS:

- AR** Results reported on an as received basis.
- B1** Analyte value in the method blank above control limit.
- B2** Analyte value in the method blank is between the method detection limit and the reporting detection limit.
- B3** BOD blank is over specifications. The reported result may be biased high.
- BOD1** BOD result estimated due to insufficient oxygen depletion.
- BOD2** BOD result estimated due to insufficient oxygen residual.
- BOD3** BOD result estimated due to inconsistent oxygen depletion
- C1** Continuing calibration verification (CCV) above upper control limit, analyte(s) not detected.
- CU** Customer specified reporting limit
- CE** Conclusion Entry
- CG** Confluent Growth
- DI** Surrogate recoveries out of compliance due to sample dilution.
- DW** Results reported on a dry weight basis.
- E1** Elevated reporting or detection limit(s) due to sample matrix interference and sample dilution.
- E2** Elevated reporting or detection limit(s) due to high analyte concentration and sample dilution.
- E3** Elevated reporting or detection limit(s) due to insufficient sample volume
- ES** Estimated microbiological count
- E4** Elevated reporting or detection limit(s) due to low level calibration variance
- F1** Test Method Epa 1010 Not Valid For Solid Samples. Samples Analyzed By A Modified 1010 Method.
- F2** No Flash Observed; Test Flame Is Being Extinguished By Sample At The Reported Temperature.
- F3** The result is estimated, as the sample can not be sufficiently cooled below the expected flashpoint.
- H1** Sample received outside of holding time for these analytes.
- H2** Analyte was prepared and/or analyzed outside of the analytical method holding time.
- J1** The analyte was positively identified; analyte was detected between the reporting limit and method detection limit and the result is an estimated value.
- J2** The analyte was positively identified; the result is above the quantitation range and is an estimated value.
- L1** Lab control sample (LCS) recovery below lower control limit, all other batch QC acceptable.
- L2** Lab control sample (LCS) recovery above upper control limit, all other batch QC acceptable.
- L3** Lab control sample (LCS) recovery above upper control limit, analyte not detected.
- M1** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased High.
- M2** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased Low.
- M3** Matrix Spike Recovery Outside Control Limits Due To Analyte Concentration. Matrix Spike Evaluation not applicable when sample concentration is  $\geq 4X$  Spike Concentration.
- MC** Miscellaneous (see conclusion statement)
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." Any associated quantitation is an estimate based on industry standard practices.
- ND** Not detected at or below the reporting limit (or method detection limit, if listed).
- NJ** The analysis indicates the presence of an analyte that has been "tentatively identified" and is an estimated value.
- OO** The above value is over the client provided or regulatory specification for this parameter
- P1** Sample received was improperly preserved for these analytes.
- P2** Sample pH greater than method limit of 2.
- R** The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. the presence or absence of the analyte cannot be verified.
- TNC** Colonies too numerous to count
- R1** Relative percent difference (RPD) of matrix spike duplicates outside of control limit.
- R2** Relative percent difference (RPD) of LCS duplicates outside of control limit.
- R3** Relative percent difference (RPD) of sample duplicates outside of control limit.
- S1** One or more surrogates outside control limits, no target analytes detected.
- S2** One or more surrogates outside control limits due to matrix interference.
- S3** One or more surrogates outside control limits. the data was accepted based on the valid recovery of remaining surrogate(s).
- SUM** This total is the sum of several values, some which are less than their respective reporting limits. The total is an estimate.
- SUB** Analysis subcontracted.
- UJ** Analyte was not detected above the reporting limit, however, the reporting limit is approximate & may or may not represent the actual limit of quantitation necessary to accurately & precisely measure the analyte in the sample.
- V** Analyte concentration estimated due to sample matrix interference and/or high analyte concentration interference.



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**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**

**RESPECTFULLY SUBMITTED:** \_\_\_\_\_

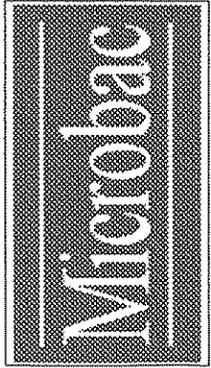
**MICROBAC LABORATORIES, INC.**

*As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate Federal, state, or local authorities before acting in reliance on the regulatory limits provided.  
For any feedback concerning our services, please contact Andrew Clifton, the Laboratory Director at 502.962.6400. You may also contact both James Nokes, President and Robert Morgan, Chief Operating Officer at [president@microbac.com](mailto:president@microbac.com).*



CHAIN OF CUSTODY RECORD

Microbac Laboratories, Inc.
3323 Gilmore Industrial Blvd.
Louisville, KY 40213
Phone: 502/962-6400
Fax: 502/962-6411
Email: ken.ford@microbac.com



COA No.: 1007-01517 B002

(by Laboratory)

Due Date:

Page 1 of 2

Microbac Quote No. 6151

Table with columns: Client/bill to, Address, Email to, Phone #, Report to, Address, Email to, Phone #, Sampler, Site/Parcel, SAMPLE I.D. / DESCRIPTION, Date, Time, Number of Containers, Type of Containers, Preservative Used, Matrix (Soil, Water, Other), Total Arsenic and Lead (6010C), Total (13) PNAs (8270C), Total Solids, % (3540C), Solids pH (9045C), Total VOCs (8260B), TPH (Gravimetric), TCLP Lead (1311, 6010C), Temperature, °C. Includes handwritten data for samples 1-24 and a signature section at the bottom.

1 2 3 4 5 6 7 8 9 10 11 12 13 22 23 24

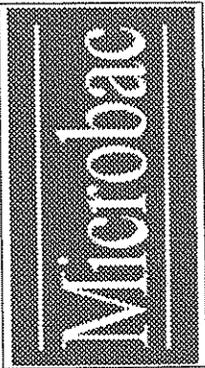
ON ICE



1007-01517

CHAIN OF CUSTODY RECORD

Microbac Laboratories, Inc.
3323 Gilmore Industrial Blvd.
Louisville, KY 40213
Phone: 502/962-6400
Fax: 502/962-6411
Email: ken.ford@microbac.com



COA No.:

(by Laboratory)

Due Date:

Page 2 of 2

Microbac Quote No. 6151

Client/bill to: Barr & Prevost, Inc., Attn: Robin Lamb, P.O.#
Address: 2800 Corporate Exchange Dr., Columbus, OH 43231
Email to: rlamb@barreng.com
Phone #: 614/714-0270, ext. 101
Report to: Barr & Prevost, Inc., Attn: Marshall Levy
Address: 2800 Corporate Exchange Dr., Columbus, OH 43231
Email to: mlevy@barreng.com
Phone #: 614/257-7599
Sampler: Brian Lenihan, CHMM
Site/Parcel: S69/P189 (Extra Space Storage Inc., 350 Adams St.)

Table with columns: SAMPLE I.D. / DESCRIPTION, Date, Time. Rows include sample IDs like 56189-17, 56189-10, etc.

Main data table with columns: Number of Containers, Type of Containers, Preservative Used, Matrix (Soil, Water, Other), Total Arsenic and Lead (6010C), Total (13) PNAs (8270C), Total Solids, % (3540C), Solids pH (9045C), Total VOCs (8260B), TPH (Gravimetric), TCLP Lead (1311, 6010C), Temperature, °C.

Relinquished By: [Signature]
Received By: [Signature]
Relinquished By: Ken Ford
Received By: [Signature]

Remarks/Special Instructions: ON ICE
-- All results to be reported on dry weight basis;
-- Reports require Level II QC package;
-- Special QC and D.L.: Region 9 PRGs (2002)

25
18
19
20
21
14
15
16
17

# PROJECT DOCUMENTATION LOG

Work Order / Certificate # 1007-1517

## Sample Receipt Information:

Samples received via: UPS / FEDEX / USPS / ZIP / **By Hand**

COC & proper paperwork provided & complete / COC, samples & bottles in agreement: **YES** / NO

Appropriate bottles provided intact -w- sufficient volume; Presevered correctly; within hold: **YES** / NO

Client informed of discrepancies? (see customer communications) YES / NO

Cooler/Sample Temperature (Deg C)? LOU: ICE LEX: \_\_\_\_\_ EVV: \_\_\_\_\_ PAD: \_\_\_\_\_

Samples received on ice? **YES** / NO

# Containers received? LOU: 25 LEX: \_\_\_\_\_ EVV: \_\_\_\_\_ PAD: \_\_\_\_\_

Subbing out any analyses: (record analysis and subcontractor)

Pitt Erie Chicago Mass Camp Southern Knox Hauser Balt. Other

Analysis to be subcontracted:

### Sample Reciept Comments: (Record Below)

Date	
Init	

### Customer Communications

Date	
Init	

Date	
Init	

Date	
Init	



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY  
2800 CORPORATE EXCHANGE DRIVE  
SUITE 240  
COLUMBUS, OH 43231

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 001 SB 189-2 / 5'-10'							Date & Time Sampled: 07/23/2010 @ 9:10:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		86.1	%				07/26/2010	AXC
pH by SW846 9045D		7.93	SU				07/24/2010	CMA
<b>Volatile Organic Compounds (VOCs) by Method SW846-8260B</b>								
Acetone		0.057	mg/Kg	1x	0.015	0.0099	07/26/2010	JGF
Acrolein		N.D.	mg/Kg	1x	0.030	0.0026	07/26/2010	JGF
Acrylonitrile		N.D.	mg/Kg	1x	0.0059	0.0016	07/26/2010	JGF
Benzene		N.D.	mg/Kg	1x	0.0024	0.0014	07/26/2010	JGF
Bromobenzene		N.D.	mg/Kg	1x	0.0059	0.00061	07/26/2010	JGF
Bromoform (tribromomethane)		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
Bromomethane		N.D.	mg/Kg	1x	0.0059	0.00094	07/26/2010	JGF
n-Butylbenzene		N.D.	mg/Kg	1x	0.0059	0.00090	07/26/2010	JGF
sec-Butylbenzene		N.D.	mg/Kg	1x	0.0059	0.0011	07/26/2010	JGF
tert-Butylbenzene		N.D.	mg/Kg	1x	0.0059	0.0011	07/26/2010	JGF
Carbon disulfide		N.D.	mg/Kg	1x	0.0059	0.0017	07/26/2010	JGF
Carbon tetrachloride		N.D.	mg/Kg	1x	0.0059	0.0013	07/26/2010	JGF
Chlorobenzene		N.D.	mg/Kg	1x	0.0059	0.00063	07/26/2010	JGF
Chloroethane		N.D.	mg/Kg	1x	0.0059	0.0016	07/26/2010	JGF
Chloroform		N.D.	mg/Kg	1x	0.0059	0.0015	07/26/2010	JGF
Chloromethane		N.D.	mg/Kg	1x	0.0059	0.0020	07/26/2010	JGF
2-Chlorotoluene [o-Chlorotoluene]		N.D.	mg/Kg	1x	0.0059	0.00090	07/26/2010	JGF
Cumene (Isopropylbenzene)		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
Dibromochloromethane		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
1,2-Dibromo-3-chloropropane		N.D.	mg/Kg	1x	0.0059	0.0013	07/26/2010	JGF
1,2-Dibromoethane [Ethylene Dibromide]		N.D.	mg/Kg	1x	0.0059	0.0013	07/26/2010	JGF
1,2-Dichlorobenzene		N.D.	mg/Kg	1x	0.0059	0.00085	07/26/2010	JGF
1,3-Dichlorobenzene		N.D.	mg/Kg	1x	0.0059	0.0011	07/26/2010	JGF
1,4-Dichlorobenzene		N.D.	mg/Kg	1x	0.0059	0.00056	07/26/2010	JGF
Dichlorobromomethane [Bromodichloromethane]		N.D.	mg/Kg	1x	0.0059	0.0013	07/26/2010	JGF
Dichlorodifluoromethane		N.D.	mg/Kg	1x	0.0059	0.0019	07/26/2010	JGF
1,1-Dichloroethane		N.D.	mg/Kg	1x	0.0059	0.0014	07/26/2010	JGF
1,2-Dichloroethane		N.D.	mg/Kg	1x	0.0059	0.0015	07/26/2010	JGF
1,1-Dichloroethylene		N.D.	mg/Kg	1x	0.0059	0.0023	07/26/2010	JGF
cis-1,2-Dichloroethylene		N.D.	mg/Kg	1x	0.0059	0.0015	07/26/2010	JGF
trans-1,2-Dichloroethylene		N.D.	mg/Kg	1x	0.0059	0.0017	07/26/2010	JGF
1,2-Dichloropropane		N.D.	mg/Kg	1x	0.0059	0.0011	07/26/2010	JGF



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
----------	----------	--------	------	----------	-----	-----	------	------

Sample: 001 SB 189-2 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 9:10:

All soil sample analysis results except TCLP reported on a dry weight basis

### Volatile Organic Compounds (VOCs) by Method SW846-8260B

1,3-Dichloropropene		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
Ethylbenzene		N.D.	mg/Kg	1x	0.0024	0.0011	07/26/2010	JGF
Hexachlorobutadiene		N.D.	mg/Kg	1x	0.0059	0.00088	07/26/2010	JGF
Methylene bromide [Dibromomethane]		N.D.	mg/Kg	1x	0.0059	0.0014	07/26/2010	JGF
Methylene chloride	L1	0.016	mg/Kg	1x	0.0059	0.0043	07/26/2010	JGF
Methyl ethyl ketone [MEK; 2-Butanone]		N.D.	mg/Kg	1x	0.015	0.0067	07/26/2010	JGF
Methyl isobutyl ketone		N.D.	mg/Kg	1x	0.015	0.0057	07/26/2010	JGF
n-Propylbenzene		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
Styrene		N.D.	mg/Kg	1x	0.0059	0.00095	07/26/2010	JGF
1,1,1,2-Tetrachloroethane		N.D.	mg/Kg	1x	0.0059	0.00096	07/26/2010	JGF
1,1,2,2-Tetrachloroethane		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
Tetrachloroethylene (PCE)		N.D.	mg/Kg	1x	0.0059	0.0012	07/26/2010	JGF
Toluene		N.D.	mg/Kg	1x	0.0024	0.0014	07/26/2010	JGF
1,2,4-Trichlorobenzene		N.D.	mg/Kg	1x	0.0059	0.00072	07/26/2010	JGF
1,1,1-Trichloroethane		N.D.	mg/Kg	1x	0.0059	0.0013	07/26/2010	JGF
1,1,2-Trichloroethane		N.D.	mg/Kg	1x	0.0059	0.0015	07/26/2010	JGF
Trichloroethylene (TCE)		N.D.	mg/Kg	1x	0.0059	0.0016	07/26/2010	JGF
Trichlorofluoromethane		N.D.	mg/Kg	1x	0.0059	0.0016	07/26/2010	JGF
1,2,3-Trichloropropane	L1	N.D.	mg/Kg	1x	0.0059	0.0015	07/26/2010	JGF
1,2,4-Trimethylbenzene		N.D.	mg/Kg	1x	0.0059	0.00087	07/26/2010	JGF
1,3,5-Trimethylbenzene		N.D.	mg/Kg	1x	0.0059	0.00090	07/26/2010	JGF
Vinyl acetate		N.D.	mg/Kg	1x	0.0059	0.0020	07/26/2010	JGF
Vinyl chloride	L1	N.D.	mg/Kg	1x	0.0059	0.0017	07/26/2010	JGF
Xylenes, total		N.D.	mg/Kg	1x	0.0024	0.0022	07/26/2010	JGF

### Volatile Surrogates

SR / BFB		101	%	1x			07/26/2010	JGF
SR / DBFM		104	%	1x			07/26/2010	JGF
SR / DCA		107	%	1x			07/26/2010	JGF
SR / TOL-D8		105	%	1x			07/26/2010	JGF

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---				07/27/2010	RFV
Acenaphthene		0.14	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Anthracene		0.51	mg/Kg	1x	0.035	0.0080	07/30/2010	LJC
Benzo[a]anthracene		1.5	mg/Kg	1x	0.035	0.0056	07/30/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 001 SB 189-2 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 9:10:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[b]fluoranthene		1.7	mg/Kg	1x	0.035	0.0072	07/30/2010	LJC
Benzo[k]fluoranthene		1.7	mg/Kg	1x	0.035	0.0086	07/30/2010	LJC
Benzo[a]pyrene		1.5	mg/Kg	1x	0.035	0.0072	07/30/2010	LJC
Chrysene		1.4	mg/Kg	1x	0.035	0.0052	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.29	mg/Kg	1x	0.035	0.011	07/30/2010	LJC
Fluoranthene		2.1	mg/Kg	1x	0.035	0.0058	07/30/2010	LJC
Fluorene		0.22	mg/Kg	1x	0.035	0.0058	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.80	mg/Kg	1x	0.035	0.011	07/30/2010	LJC
Naphthalene		0.14	mg/Kg	1x	0.035	0.0044	07/30/2010	LJC
Pyrene		1.4	mg/Kg	1x	0.035	0.0054	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		46	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		50	%	1x			07/30/2010	LJC
SR / P-Terphenyl		42	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		13	mg/Kg	1x	2.8	0.20	07/30/2010	EML
Lead	M3	890	mg/Kg	5x	1.4	0.25	07/30/2010	EML
Lead, TCLP		0.37	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 002 SB 189-2 / 10'-20'

Date & Time Sampled: 07/23/2010 @ 9:20:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		84.6	%				07/26/2010	AXC
pH by SW846 9045D		9.85	SU				07/24/2010	CMA

### Volatile Organic Compounds (VOCs) by Method SW846-8260B

Acetone		N.D.	mg/Kg	1x	0.015	0.010	07/26/2010	JGF
Acrolein		N.D.	mg/Kg	1x	0.031	0.0027	07/26/2010	JGF
Acrylonitrile		N.D.	mg/Kg	1x	0.0062	0.0017	07/26/2010	JGF
Benzene		N.D.	mg/Kg	1x	0.0025	0.0015	07/26/2010	JGF
Bromobenzene		N.D.	mg/Kg	1x	0.0062	0.00063	07/26/2010	JGF
Bromoform (tribromomethane)		N.D.	mg/Kg	1x	0.0062	0.0012	07/26/2010	JGF
Bromomethane		N.D.	mg/Kg	1x	0.0062	0.00098	07/26/2010	JGF
n-Butylbenzene		N.D.	mg/Kg	1x	0.0062	0.00094	07/26/2010	JGF
sec-Butylbenzene		N.D.	mg/Kg	1x	0.0062	0.0012	07/26/2010	JGF
tert-Butylbenzene		N.D.	mg/Kg	1x	0.0062	0.0011	07/26/2010	JGF



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 002 SB 189-2 / 10'-20'							Date & Time Sampled: 07/23/2010 @ 9:20:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Volatile Organic Compounds (VOCs) by Method SW846-8260B</b>								
Carbon disulfide		N.D.	mg/Kg	1x	0.0062	0.0018	07/26/2010	JGF
Carbon tetrachloride		N.D.	mg/Kg	1x	0.0062	0.0014	07/26/2010	JGF
Chlorobenzene		N.D.	mg/Kg	1x	0.0062	0.00065	07/26/2010	JGF
Chloroethane		N.D.	mg/Kg	1x	0.0062	0.0016	07/26/2010	JGF
Chloroform		N.D.	mg/Kg	1x	0.0062	0.0016	07/26/2010	JGF
Chloromethane		N.D.	mg/Kg	1x	0.0062	0.0021	07/26/2010	JGF
2-Chlorotoluene [o-Chlorotoluene]		N.D.	mg/Kg	1x	0.0062	0.00094	07/26/2010	JGF
Cumene (Isopropylbenzene)		N.D.	mg/Kg	1x	0.0062	0.0012	07/26/2010	JGF
Dibromochloromethane		N.D.	mg/Kg	1x	0.0062	0.0013	07/26/2010	JGF
1,2-Dibromo-3-chloropropane		N.D.	mg/Kg	1x	0.0062	0.0014	07/26/2010	JGF
1,2-Dibromoethane [Ethylene Dibromide]		N.D.	mg/Kg	1x	0.0062	0.0014	07/26/2010	JGF
1,2-Dichlorobenzene		N.D.	mg/Kg	1x	0.0062	0.00089	07/26/2010	JGF
1,3-Dichlorobenzene		N.D.	mg/Kg	1x	0.0062	0.0011	07/26/2010	JGF
1,4-Dichlorobenzene		N.D.	mg/Kg	1x	0.0062	0.00059	07/26/2010	JGF
Dichlorobromomethane [Bromodichloromethane]		N.D.	mg/Kg	1x	0.0062	0.0014	07/26/2010	JGF
Dichlorodifluoromethane		N.D.	mg/Kg	1x	0.0062	0.0020	07/26/2010	JGF
1,1-Dichloroethane		N.D.	mg/Kg	1x	0.0062	0.0015	07/26/2010	JGF
1,2-Dichloroethane		N.D.	mg/Kg	1x	0.0062	0.0016	07/26/2010	JGF
1,1-Dichloroethylene		N.D.	mg/Kg	1x	0.0062	0.0024	07/26/2010	JGF
cis-1,2-Dichloroethylene		N.D.	mg/Kg	1x	0.0062	0.0016	07/26/2010	JGF
trans-1,2-Dichloroethylene		N.D.	mg/Kg	1x	0.0062	0.0018	07/26/2010	JGF
1,2-Dichloropropane		N.D.	mg/Kg	1x	0.0062	0.0011	07/26/2010	JGF
1,3-Dichloropropene		N.D.	mg/Kg	1x	0.0062	0.0012	07/26/2010	JGF
Ethylbenzene		N.D.	mg/Kg	1x	0.0025	0.0011	07/26/2010	JGF
Hexachlorobutadiene		N.D.	mg/Kg	1x	0.0062	0.00091	07/26/2010	JGF
Methylene bromide [Dibromomethane]		N.D.	mg/Kg	1x	0.0062	0.0014	07/26/2010	JGF
Methylene chloride	L1	0.027	mg/Kg	1x	0.0062	0.0044	07/26/2010	JGF
Methyl ethyl ketone [MEK; 2-Butanone]		N.D.	mg/Kg	1x	0.015	0.0069	07/26/2010	JGF
Methyl isobutyl ketone		N.D.	mg/Kg	1x	0.015	0.0059	07/26/2010	JGF
n-Propylbenzene		N.D.	mg/Kg	1x	0.0062	0.0012	07/26/2010	JGF
Styrene		N.D.	mg/Kg	1x	0.0062	0.00098	07/26/2010	JGF
1,1,1,2-Tetrachloroethane		N.D.	mg/Kg	1x	0.0062	0.0010	07/26/2010	JGF
1,1,2,2-Tetrachloroethane		N.D.	mg/Kg	1x	0.0062	0.0012	07/26/2010	JGF
Tetrachloroethylene (PCE)		N.D.	mg/Kg	1x	0.0062	0.0013	07/26/2010	JGF



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 002 SB 189-2 / 10'-20'							Date & Time Sampled: 07/23/2010 @ 9:20:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Volatile Organic Compounds (VOCs) by Method SW846-8260B</b>								
Toluene		N.D.	mg/Kg	1x	0.0025	0.0014	07/26/2010	JGF
1,2,4-Trichlorobenzene		N.D.	mg/Kg	1x	0.0062	0.00075	07/26/2010	JGF
1,1,1-Trichloroethane		N.D.	mg/Kg	1x	0.0062	0.0014	07/26/2010	JGF
1,1,2-Trichloroethane		N.D.	mg/Kg	1x	0.0062	0.0015	07/26/2010	JGF
Trichloroethylene (TCE)		N.D.	mg/Kg	1x	0.0062	0.0016	07/26/2010	JGF
Trichlorofluoromethane		N.D.	mg/Kg	1x	0.0062	0.0017	07/26/2010	JGF
1,2,3-Trichloropropane	L1	N.D.	mg/Kg	1x	0.0062	0.0015	07/26/2010	JGF
1,2,4-Trimethylbenzene		N.D.	mg/Kg	1x	0.0062	0.00090	07/26/2010	JGF
1,3,5-Trimethylbenzene		N.D.	mg/Kg	1x	0.0062	0.00094	07/26/2010	JGF
Vinyl acetate		N.D.	mg/Kg	1x	0.0062	0.0021	07/26/2010	JGF
Vinyl chloride	L1	N.D.	mg/Kg	1x	0.0062	0.0018	07/26/2010	JGF
Xylenes, total		N.D.	mg/Kg	1x	0.0025	0.0022	07/26/2010	JGF
<b>Volatile Surrogates</b>								
SR / BFB		95	%	1x			07/26/2010	JGF
SR / DBFM	S3	123	%	1x			07/26/2010	JGF
SR / DCA	S3	126	%	1x			07/26/2010	JGF
SR / TOL-D8		105	%	1x			07/26/2010	JGF
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/28/2010	RFV
Acenaphthene	J1	0.018	mg/Kg	1x	0.035	0.0060	07/30/2010	LJC
Anthracene		0.067	mg/Kg	1x	0.035	0.0081	07/30/2010	LJC
Benzo[a]anthracene		0.25	mg/Kg	1x	0.035	0.0057	07/30/2010	LJC
Benzo[b]fluoranthene		0.27	mg/Kg	1x	0.035	0.0073	07/30/2010	LJC
Benzo[k]fluoranthene		0.35	mg/Kg	1x	0.035	0.0088	07/30/2010	LJC
Benzo[a]pyrene		0.24	mg/Kg	1x	0.035	0.0073	07/30/2010	LJC
Chrysene		0.26	mg/Kg	1x	0.035	0.0052	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.047	mg/Kg	1x	0.035	0.012	07/30/2010	LJC
Fluoranthene		0.36	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Fluorene	J1	0.026	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.10	mg/Kg	1x	0.035	0.011	07/30/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.035	0.0045	07/30/2010	LJC
Pyrene		0.25	mg/Kg	1x	0.035	0.0055	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		47	%	1x			07/30/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 002 SB 189-2 / 10'-20'

Date & Time Sampled: 07/23/2010 @ 9:20:

All soil sample analysis results except TCLP reported on a dry weight basis

### Semivolatile Surrogates -Base Neutral

SR / 2-Fluorobiphenyl		52	%	1x			07/30/2010	LJC
SR / P-Terphenyl		44	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.6	mg/Kg	2x	5.7	0.41	07/30/2010	EML
Lead		160	mg/Kg	2x	0.57	0.10	07/30/2010	EML

Sample: 003 SB 189-7 / 0'-2'

Date & Time Sampled: 07/23/2010 @ 1:20:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		85.6	%				07/26/2010	AXC
pH by SW846 9045D		11.45	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene	J1	0.028	mg/Kg	1x	0.035	0.0060	07/30/2010	LJC
Anthracene		0.20	mg/Kg	1x	0.035	0.0081	07/30/2010	LJC
Benzo[a]anthracene		0.89	mg/Kg	1x	0.035	0.0057	07/30/2010	LJC
Benzo[b]fluoranthene		1.00	mg/Kg	1x	0.035	0.0073	07/30/2010	LJC
Benzo[k]fluoranthene		1.0	mg/Kg	1x	0.035	0.0088	07/30/2010	LJC
Benzo[a]pyrene		0.85	mg/Kg	1x	0.035	0.0073	07/30/2010	LJC
Chrysene		0.86	mg/Kg	1x	0.035	0.0052	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.15	mg/Kg	1x	0.035	0.012	07/30/2010	LJC
Fluoranthene		1.2	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Fluorene		0.040	mg/Kg	1x	0.035	0.0059	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.38	mg/Kg	1x	0.035	0.011	07/30/2010	LJC
Naphthalene		0.049	mg/Kg	1x	0.035	0.0045	07/30/2010	LJC
Pyrene		0.84	mg/Kg	1x	0.035	0.0055	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		45	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		51	%	1x			07/30/2010	LJC
SR / P-Terphenyl		46	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		13	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		290	mg/Kg	2x	0.58	0.10	07/30/2010	EML

Sample: 004 SB 189-7 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 1:30:

All soil sample analysis results except TCLP reported on a dry weight basis



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Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 004 SB 189-7 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 1:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		80.5	%				07/26/2010	AXC
pH by SW846 9045D		8.17	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.20	mg/Kg	1x	0.038	0.0064		07/30/2010	LJC
Anthracene	0.85	mg/Kg	1x	0.038	0.0087		07/30/2010	LJC
Benzo[a]anthracene	3.9	mg/Kg	5x	0.19	0.030		08/03/2010	LJC
Benzo[b]fluoranthene	5.1	mg/Kg	5x	0.19	0.039		08/03/2010	LJC
Benzo[k]fluoranthene	4.3	mg/Kg	5x	0.19	0.047		08/03/2010	LJC
Benzo[a]pyrene	3.8	mg/Kg	5x	0.19	0.039		08/03/2010	LJC
Chrysene	3.8	mg/Kg	5x	0.19	0.028		08/03/2010	LJC
Dibenzo[a,h]anthracene	0.45	mg/Kg	1x	0.038	0.012		07/30/2010	LJC
Fluoranthene	11	mg/Kg	5x	0.19	0.032		08/03/2010	LJC
Fluorene	0.39	mg/Kg	1x	0.038	0.0063		07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene	1.2	mg/Kg	1x	0.038	0.011		07/30/2010	LJC
Naphthalene	0.13	mg/Kg	1x	0.038	0.0048		07/30/2010	LJC
Pyrene	8.8	mg/Kg	5x	0.19	0.029		08/03/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	50	%	1x				07/30/2010	LJC
SR / 2-Fluorobiphenyl	54	%	1x				07/30/2010	LJC
SR / P-Terphenyl	35	%	1x				07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	10	mg/Kg	2x	6.2	0.45		07/30/2010	EML
Lead	910	mg/Kg	2x	0.62	0.11		07/30/2010	EML
Lead, TCLP	4.6	mg/L	1x	0.020	0.0027		08/02/2010	EML

Sample: 005 SB 189-7 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 1:50:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		88.2	%				07/26/2010	AXC
pH by SW846 9045D		8.23	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	N.D.	mg/Kg	1x	0.034	0.0058		07/30/2010	LJC
Anthracene	J1	0.024	mg/Kg	1x	0.034	0.0079	07/30/2010	LJC
Benzo[a]anthracene		0.14	mg/Kg	1x	0.034	0.0056	07/30/2010	LJC



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1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 005 SB 189-7 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 1:50:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[b]fluoranthene	0.25	mg/Kg	1x	0.034	0.0071	07/30/2010	LJC
Benzo[k]fluoranthene	0.12	mg/Kg	1x	0.034	0.0085	07/30/2010	LJC
Benzo[a]pyrene	0.18	mg/Kg	1x	0.034	0.0071	07/30/2010	LJC
Chrysene	0.17	mg/Kg	1x	0.034	0.0051	07/30/2010	LJC
Dibenzo[a,h]anthracene	0.038	mg/Kg	1x	0.034	0.011	07/30/2010	LJC
Fluoranthene	0.14	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Fluorene	N.D.	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.11	mg/Kg	1x	0.034	0.010	07/30/2010	LJC
Naphthalene	0.061	mg/Kg	1x	0.034	0.0043	07/30/2010	LJC
Pyrene	0.11	mg/Kg	1x	0.034	0.0053	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	43	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl	47	%	1x			07/30/2010	LJC
SR / P-Terphenyl	33	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	11	mg/Kg	2x	5.5	0.40	07/30/2010	EML
Lead	130	mg/Kg	2x	0.55	0.099	07/30/2010	EML

Sample: 006 SB 189-7 / 10'-20'

Date & Time Sampled: 07/23/2010 @ 2:15:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	80.9	%				07/26/2010	AXC
pH by SW846 9045D	7.68	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---				07/28/2010	RFV
Acenaphthene	0.18	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Anthracene	0.52	mg/Kg	1x	0.037	0.0085	07/30/2010	LJC
Benzo[a]anthracene	1.1	mg/Kg	1x	0.037	0.0060	07/30/2010	LJC
Benzo[b]fluoranthene	1.2	mg/Kg	1x	0.037	0.0076	07/30/2010	LJC
Benzo[k]fluoranthene	0.88	mg/Kg	1x	0.037	0.0091	07/30/2010	LJC
Benzo[a]pyrene	0.92	mg/Kg	1x	0.037	0.0076	07/30/2010	LJC
Chrysene	1.0	mg/Kg	1x	0.037	0.0055	07/30/2010	LJC
Dibenzo[a,h]anthracene	0.16	mg/Kg	1x	0.037	0.012	07/30/2010	LJC
Fluoranthene	1.4	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC
Fluorene	0.24	mg/Kg	1x	0.037	0.0062	07/30/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
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Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 006 SB 189-7 / 10'-20'							Date & Time Sampled: 07/23/2010 @ 2:15:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Indeno[1,2,3-c,d]pyrene		0.40	mg/Kg	1x	0.037	0.011	07/30/2010	LJC
Naphthalene		0.049	mg/Kg	1x	0.037	0.0047	07/30/2010	LJC
Pyrene		0.82	mg/Kg	1x	0.037	0.0057	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		40	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		42	%	1x			07/30/2010	LJC
SR / P-Terphenyl		40	%	1x			07/30/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		9.2	mg/Kg	2x	6.0	0.43	07/30/2010	EML
Lead		150	mg/Kg	2x	0.60	0.11	07/30/2010	EML
Sample: 007 SB 189-9 / 2'-5'							Date & Time Sampled: 07/23/2010 @ 4:15:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		88.7	%				07/26/2010	AXC
pH by SW846 9045D		11.21	SU				07/24/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/28/2010	RFV
Acenaphthene		0.078	mg/Kg	1x	0.034	0.0057	07/30/2010	LJC
Anthracene		0.27	mg/Kg	1x	0.034	0.0078	07/30/2010	LJC
Benzo[a]anthracene		1.1	mg/Kg	1x	0.034	0.0055	07/30/2010	LJC
Benzo[b]fluoranthene		1.4	mg/Kg	1x	0.034	0.0070	07/30/2010	LJC
Benzo[k]fluoranthene		0.98	mg/Kg	1x	0.034	0.0084	07/30/2010	LJC
Benzo[a]pyrene		1.1	mg/Kg	1x	0.034	0.0070	07/30/2010	LJC
Chrysene		1.1	mg/Kg	1x	0.034	0.0051	07/30/2010	LJC
Dibenzo[a,h]anthracene		0.25	mg/Kg	1x	0.034	0.011	07/30/2010	LJC
Fluoranthene		1.4	mg/Kg	1x	0.034	0.0057	07/30/2010	LJC
Fluorene		0.080	mg/Kg	1x	0.034	0.0057	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.61	mg/Kg	1x	0.034	0.010	07/30/2010	LJC
Naphthalene	J1	0.020	mg/Kg	1x	0.034	0.0043	07/30/2010	LJC
Pyrene		0.88	mg/Kg	1x	0.034	0.0053	07/30/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		40	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		51	%	1x			07/30/2010	LJC
SR / P-Terphenyl		37	%	1x			07/30/2010	LJC



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Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 007 SB 189-9 / 2'-5' Date & Time Sampled: 07/23/2010 @ 4:15:

All soil sample analysis results except TCLP reported on a dry weight basis

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.4	mg/Kg	2x	5.5	0.39	07/30/2010	EML
Lead		110	mg/Kg	2x	0.55	0.098	07/30/2010	EML

Sample: 008 SB 189-9 / 5'-10' Date & Time Sampled: 07/23/2010 @ 4:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		90.4	%				07/26/2010	AXC
pH by SW846 9045D		8.32	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene	J1	0.029	mg/Kg	1x	0.033	0.0056	07/31/2010	LJC
Anthracene		0.054	mg/Kg	1x	0.033	0.0077	07/31/2010	LJC
Benzo[a]anthracene		0.25	mg/Kg	1x	0.033	0.0054	07/31/2010	LJC
Benzo[b]fluoranthene		0.29	mg/Kg	1x	0.033	0.0069	07/31/2010	LJC
Benzo[k]fluoranthene		0.34	mg/Kg	1x	0.033	0.0083	07/31/2010	LJC
Benzo[a]pyrene		0.29	mg/Kg	1x	0.033	0.0069	07/31/2010	LJC
Chrysene		0.29	mg/Kg	1x	0.033	0.0049	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.034	mg/Kg	1x	0.033	0.011	07/31/2010	LJC
Fluoranthene		0.26	mg/Kg	1x	0.033	0.0056	07/31/2010	LJC
Fluorene	J1	0.027	mg/Kg	1x	0.033	0.0056	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.15	mg/Kg	1x	0.033	0.010	07/31/2010	LJC
Naphthalene	J1	0.026	mg/Kg	1x	0.033	0.0042	07/31/2010	LJC
Pyrene		0.21	mg/Kg	1x	0.033	0.0052	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		48	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		52	%	1x			07/31/2010	LJC
SR / P-Terphenyl		38	%	1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		6.1	mg/Kg	2x	5.4	0.39	07/30/2010	EML
Lead		170	mg/Kg	2x	0.54	0.097	07/30/2010	EML

Sample: 009 SB 189-9 / 10'-20' Date & Time Sampled: 07/23/2010 @ 5:00:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.6	%				07/26/2010	AXC
pH by SW846 9045D		7.47	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 009 SB 189-9 / 10'-20' Date & Time Sampled: 07/23/2010 @ 5:00:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		N.D.	mg/Kg	1x	0.036	0.0061	07/31/2010	RFV
Anthracene	J1	0.028	mg/Kg	1x	0.036	0.0083	07/31/2010	LJC
Benzo[a]anthracene		0.20	mg/Kg	1x	0.036	0.0059	07/31/2010	LJC
Benzo[b]fluoranthene		0.31	mg/Kg	1x	0.036	0.0075	07/31/2010	LJC
Benzo[k]fluoranthene		0.29	mg/Kg	1x	0.036	0.0090	07/31/2010	LJC
Benzo[a]pyrene		0.60	mg/Kg	1x	0.036	0.0075	07/31/2010	LJC
Chrysene		0.23	mg/Kg	1x	0.036	0.0054	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.082	mg/Kg	1x	0.036	0.012	07/31/2010	LJC
Fluoranthene		0.16	mg/Kg	1x	0.036	0.0061	07/31/2010	LJC
Fluorene		N.D.	mg/Kg	1x	0.036	0.0061	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.14	mg/Kg	1x	0.036	0.011	07/31/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.036	0.0046	07/31/2010	LJC
Pyrene		0.12	mg/Kg	1x	0.036	0.0056	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	44	%		1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl	50	%		1x			07/31/2010	LJC
SR / P-Terphenyl	37	%		1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic	7.9	mg/Kg		2x	5.7	0.41	07/30/2010	EML
Lead	330	mg/Kg		2x	0.57	0.10	07/30/2010	EML

Sample: 010 SB 189-13 / 0'-2' Date & Time Sampled: 07/23/2010 @ 9:55:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	84.7	%					07/26/2010	AXC
pH by SW846 9045D	11.44	SU					07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	J1	0.024	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Anthracene		0.065	mg/Kg	1x	0.036	0.0082	07/31/2010	LJC
Benzo[a]anthracene		0.37	mg/Kg	1x	0.036	0.0058	07/31/2010	LJC
Benzo[b]fluoranthene		0.45	mg/Kg	1x	0.036	0.0074	07/31/2010	LJC
Benzo[k]fluoranthene		0.44	mg/Kg	1x	0.036	0.0089	07/31/2010	LJC
Benzo[a]pyrene		0.40	mg/Kg	1x	0.036	0.0074	07/31/2010	LJC



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 010 SB 189-13 / 0'-2'

Date & Time Sampled: 07/23/2010 @ 9:55:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Chrysene		0.41	mg/Kg	1x	0.036	0.0053	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.063	mg/Kg	1x	0.036	0.012	07/31/2010	LJC
Fluoranthene		0.41	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Fluorene	J1	0.019	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.19	mg/Kg	1x	0.036	0.011	07/31/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.036	0.0045	07/31/2010	LJC
Pyrene		0.28	mg/Kg	1x	0.036	0.0056	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		44	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		48	%	1x			07/31/2010	LJC
SR / P-Terphenyl		34	%	1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		9.0	mg/Kg	2x	5.9	0.42	07/30/2010	EML
Lead		480	mg/Kg	2x	0.59	0.11	07/30/2010	EML

Sample: 011 SB 189-13 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 0:05:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		84.3	%				07/26/2010	AXC
pH by SW846 9045D		9.38	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.048	mg/Kg	1x	0.035	0.0060	07/31/2010	LJC
Anthracene		0.19	mg/Kg	1x	0.035	0.0082	07/31/2010	LJC
Benzo[a]anthracene		1.0	mg/Kg	1x	0.035	0.0058	07/31/2010	LJC
Benzo[b]fluoranthene		1.0	mg/Kg	1x	0.035	0.0073	07/31/2010	LJC
Benzo[k]fluoranthene		1.00	mg/Kg	1x	0.035	0.0088	07/31/2010	LJC
Benzo[a]pyrene		0.89	mg/Kg	1x	0.035	0.0074	07/31/2010	LJC
Chrysene		1.0	mg/Kg	1x	0.035	0.0053	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.19	mg/Kg	1x	0.035	0.012	07/31/2010	LJC
Fluoranthene		1.1	mg/Kg	1x	0.035	0.0060	07/31/2010	LJC
Fluorene		0.053	mg/Kg	1x	0.035	0.0059	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.47	mg/Kg	1x	0.035	0.011	07/31/2010	LJC
Naphthalene		0.039	mg/Kg	1x	0.035	0.0045	07/31/2010	LJC
Pyrene		0.71	mg/Kg	1x	0.035	0.0055	07/31/2010	LJC



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 011 SB 189-13 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 0:05:

All soil sample analysis results except TCLP reported on a dry weight basis

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		50	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		53	%	1x			07/31/2010	LJC
SR / P-Terphenyl		36	%	1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		10	mg/Kg	2x	5.9	0.43	07/30/2010	EML
Lead		460	mg/Kg	2x	0.59	0.11	07/30/2010	EML

Sample: 012 SB 189-13 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 0:15:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		88.1	%				07/26/2010	AXC
pH by SW846 9045D		8.03	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene		N.D.	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Anthracene		N.D.	mg/Kg	1x	0.034	0.0079	07/30/2010	LJC
Benzo[a]anthracene	J1	0.022	mg/Kg	1x	0.034	0.0056	07/30/2010	LJC
Benzo[b]fluoranthene	J1	0.019	mg/Kg	1x	0.034	0.0071	07/30/2010	LJC
Benzo[k]fluoranthene	J1	0.021	mg/Kg	1x	0.034	0.0085	07/30/2010	LJC
Benzo[a]pyrene	J1	0.021	mg/Kg	1x	0.034	0.0071	07/30/2010	LJC
Chrysene	J1	0.023	mg/Kg	1x	0.034	0.0051	07/30/2010	LJC
Dibenzo[a,h]anthracene		N.D.	mg/Kg	1x	0.034	0.011	07/30/2010	LJC
Fluoranthene		0.044	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Fluorene		N.D.	mg/Kg	1x	0.034	0.0058	07/30/2010	LJC
Indeno[1,2,3-c,d]pyrene		N.D.	mg/Kg	1x	0.034	0.010	07/30/2010	LJC
Naphthalene		N.D.	mg/Kg	1x	0.034	0.0043	07/30/2010	LJC
Pyrene		0.036	mg/Kg	1x	0.034	0.0053	07/30/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		70	%	1x			07/30/2010	LJC
SR / 2-Fluorobiphenyl		65	%	1x			07/30/2010	LJC
SR / P-Terphenyl		80	%	1x			07/30/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		6.7	mg/Kg	2x	5.6	0.40	07/30/2010	EML
Lead		25	mg/Kg	2x	0.56	0.10	07/30/2010	EML

Sample: 013 SB 189-13 / 10'-20'

Date & Time Sampled: 07/23/2010 @ 0:25:



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 013 SB 189-13 / 10'-20'							Date & Time Sampled: 07/23/2010 @ 0:25:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
Total Solids by SW846 3540C		84.0	%				07/26/2010	AXC
pH by SW846 9045D		7.53	SU				07/24/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/28/2010	RFV
Acenaphthene		0.056	mg/Kg	1x	0.036	0.0061	07/31/2010	LJC
Anthracene		0.31	mg/Kg	1x	0.036	0.0083	07/31/2010	LJC
Benzo[a]anthracene		1.1	mg/Kg	1x	0.036	0.0058	07/31/2010	LJC
Benzo[b]fluoranthene		1.0	mg/Kg	1x	0.036	0.0075	07/31/2010	LJC
Benzo[k]fluoranthene		1.0	mg/Kg	1x	0.036	0.0090	07/31/2010	LJC
Benzo[a]pyrene		1.1	mg/Kg	1x	0.036	0.0075	07/31/2010	LJC
Chrysene		1.1	mg/Kg	1x	0.036	0.0054	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.25	mg/Kg	1x	0.036	0.012	07/31/2010	LJC
Fluoranthene		1.3	mg/Kg	1x	0.036	0.0061	07/31/2010	LJC
Fluorene		0.093	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.41	mg/Kg	1x	0.036	0.011	07/31/2010	LJC
Naphthalene	J1	0.032	mg/Kg	1x	0.036	0.0046	07/31/2010	LJC
Pyrene		0.83	mg/Kg	1x	0.036	0.0056	07/31/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		52	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		59	%	1x			07/31/2010	LJC
SR / P-Terphenyl		38	%	1x			07/31/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		6.1	mg/Kg	2x	5.7	0.41	07/30/2010	EML
Lead		90	mg/Kg	2x	0.57	0.10	07/30/2010	EML

Sample: 014 SB 189-14 / 0'-2'

Date & Time Sampled: 07/23/2010 @ 8:00:

*All soil sample analysis results except TCLP reported on a dry weight basis*

Total Solids by SW846 3540C		87.9	%				07/26/2010	AXC
pH by SW846 9045D		10.92	SU				07/24/2010	CMA
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Date Extracted PNA's		COMPLETED	---				07/28/2010	RFV
Acenaphthene		0.051	mg/Kg	1x	0.034	0.0058	07/31/2010	LJC
Anthracene		0.16	mg/Kg	1x	0.034	0.0079	07/31/2010	LJC
Benzo[a]anthracene		0.91	mg/Kg	1x	0.034	0.0055	07/31/2010	LJC
Benzo[b]fluoranthene		1.2	mg/Kg	1x	0.034	0.0071	07/31/2010	LJC



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## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 014 SB 189-14 / 0'-2'

Date & Time Sampled: 07/23/2010 @ 8:00:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Benzo[k]fluoranthene		1.0	mg/Kg	1x	0.034	0.0085	07/31/2010	LJC
Benzo[a]pyrene		0.97	mg/Kg	1x	0.034	0.0071	07/31/2010	LJC
Chrysene		0.96	mg/Kg	1x	0.034	0.0051	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.19	mg/Kg	1x	0.034	0.011	07/31/2010	LJC
Fluoranthene		1.0	mg/Kg	1x	0.034	0.0058	07/31/2010	LJC
Fluorene		0.045	mg/Kg	1x	0.034	0.0057	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.48	mg/Kg	1x	0.034	0.010	07/31/2010	LJC
Naphthalene	J1	0.020	mg/Kg	1x	0.034	0.0043	07/31/2010	LJC
Pyrene		0.71	mg/Kg	1x	0.034	0.0053	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		50	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		56	%	1x			07/31/2010	LJC
SR / P-Terphenyl		40	%	1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.5	mg/Kg	2x	5.5	0.39	07/30/2010	EML
Lead		360	mg/Kg	2x	0.55	0.098	07/30/2010	EML

Sample: 015 SB 189-14 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 8:15:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		84.3	%				07/26/2010	AXC
pH by SW846 9045D		8.34	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene		0.053	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Anthracene		0.23	mg/Kg	1x	0.036	0.0082	07/31/2010	LJC
Benzo[a]anthracene		1.2	mg/Kg	1x	0.036	0.0058	07/31/2010	LJC
Benzo[b]fluoranthene		1.2	mg/Kg	1x	0.036	0.0074	07/31/2010	LJC
Benzo[k]fluoranthene		1.2	mg/Kg	1x	0.036	0.0089	07/31/2010	LJC
Benzo[a]pyrene		1.1	mg/Kg	1x	0.036	0.0074	07/31/2010	LJC
Chrysene		1.3	mg/Kg	1x	0.036	0.0053	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.19	mg/Kg	1x	0.036	0.012	07/31/2010	LJC
Fluoranthene		1.3	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Fluorene		0.042	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.53	mg/Kg	1x	0.036	0.011	07/31/2010	LJC



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1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 015 SB 189-14 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 8:15:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Naphthalene		N.D.	mg/Kg	1x	0.036	0.0045	07/31/2010	LJC
Pyrene		0.83	mg/Kg	1x	0.036	0.0056	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		50	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		57	%	1x			07/31/2010	LJC
SR / P-Terphenyl		37	%	1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		550	mg/Kg	2x	0.58	0.10	07/30/2010	EML
Lead, TCLP		3.1	mg/L	1x	0.020	0.0027	08/02/2010	EML

Sample: 016 SB 189-14 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 8:30:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		83.0	%				07/26/2010	AXC
pH by SW846 9045D		9.96	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.044	mg/Kg	1x	0.036	0.0061		07/31/2010	LJC
Anthracene	0.27	mg/Kg	1x	0.036	0.0083		07/31/2010	LJC
Benzo[a]anthracene	1.6	mg/Kg	1x	0.036	0.0059		07/31/2010	LJC
Benzo[b]fluoranthene	1.4	mg/Kg	1x	0.036	0.0075		07/31/2010	LJC
Benzo[k]fluoranthene	1.5	mg/Kg	1x	0.036	0.0090		07/31/2010	LJC
Benzo[a]pyrene	1.4	mg/Kg	1x	0.036	0.0075		07/31/2010	LJC
Chrysene	1.6	mg/Kg	1x	0.036	0.0054		07/31/2010	LJC
Dibenzo[a,h]anthracene	0.22	mg/Kg	1x	0.036	0.012		07/31/2010	LJC
Fluoranthene	1.5	mg/Kg	1x	0.036	0.0061		07/31/2010	LJC
Fluorene	0.048	mg/Kg	1x	0.036	0.0061		07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene	0.67	mg/Kg	1x	0.036	0.011		07/31/2010	LJC
Naphthalene	J1	0.030	mg/Kg	1x	0.036	0.0046	07/31/2010	LJC
Pyrene		1.00	mg/Kg	1x	0.036	0.0056	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		51	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		54	%	1x			07/31/2010	LJC
SR / P-Terphenyl		33	%	1x			07/31/2010	LJC



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Chemical, Biological, Physical, Molecular, and Toxicological Services

## ELECTRONIC CERTIFICATE OF ANALYSIS

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 016 SB 189-14 / 5'-10'

Date & Time Sampled: 07/23/2010 @ 8:30:

All soil sample analysis results except TCLP reported on a dry weight basis

### Total RCRA Metals by Method SW846-6010C

Arsenic		11	mg/Kg	2x	5.8	0.42	07/30/2010	EML
Lead		480	mg/Kg	2x	0.58	0.10	07/30/2010	EML

Sample: 017 SB 189-14 / 10'-20'

Date & Time Sampled: 07/23/2010 @ 8:50:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		81.6	%				07/26/2010	AXC
pH by SW846 9045D		7.99	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's		COMPLETED	---					
Acenaphthene	J1	0.032	mg/Kg	1x	0.037	0.0063	07/31/2010	LJC
Anthracene		0.077	mg/Kg	1x	0.037	0.0086	07/31/2010	LJC
Benzo[a]anthracene		0.40	mg/Kg	1x	0.037	0.0060	07/31/2010	LJC
Benzo[b]fluoranthene		0.51	mg/Kg	1x	0.037	0.0077	07/31/2010	LJC
Benzo[k]fluoranthene		0.53	mg/Kg	1x	0.037	0.0092	07/31/2010	LJC
Benzo[a]pyrene		0.46	mg/Kg	1x	0.037	0.0077	07/31/2010	LJC
Chrysene		0.45	mg/Kg	1x	0.037	0.0055	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.11	mg/Kg	1x	0.037	0.012	07/31/2010	LJC
Fluoranthene		0.47	mg/Kg	1x	0.037	0.0062	07/31/2010	LJC
Fluorene	J1	0.028	mg/Kg	1x	0.037	0.0062	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.21	mg/Kg	1x	0.037	0.011	07/31/2010	LJC
Naphthalene		0.048	mg/Kg	1x	0.037	0.0047	07/31/2010	LJC
Pyrene		0.32	mg/Kg	1x	0.037	0.0058	07/31/2010	LJC

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5		65	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		67	%	1x			07/31/2010	LJC
SR / P-Terphenyl		43	%	1x			07/31/2010	LJC

### Total RCRA Metals by Method SW846-6010C

Arsenic		8.1	mg/Kg	2x	5.9	0.42	07/30/2010	EML
Lead		230	mg/Kg	2x	0.59	0.11	07/30/2010	EML

Sample: 018 SB 189-18 / 0'-2'

Date & Time Sampled: 07/23/2010 @ 0:45:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C		84.7	%				07/26/2010	AXC
pH by SW846 9045D		11.93	SU				07/24/2010	CMA

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C



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1007-01601

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MARSHALL LEVY

Date Reported 08/20/2010  
Date Due 08/06/2010  
Date Received 07/23/2010  
Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
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Sample: 018 SB 189-18 / 0'-2'

Date & Time Sampled: 07/23/2010 @ 0:45:

All soil sample analysis results except TCLP reported on a dry weight basis

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.047	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC	RFV
Anthracene	0.30	mg/Kg	1x	0.036	0.0083	07/31/2010	LJC	
Benzo[a]anthracene	2.4	mg/Kg	1x	0.036	0.0058	07/31/2010	LJC	
Benzo[b]fluoranthene	2.8	mg/Kg	1x	0.036	0.0074	07/31/2010	LJC	
Benzo[k]fluoranthene	2.1	mg/Kg	1x	0.036	0.0089	07/31/2010	LJC	
Benzo[a]pyrene	2.4	mg/Kg	1x	0.036	0.0074	07/31/2010	LJC	
Chrysene	2.4	mg/Kg	1x	0.036	0.0053	07/31/2010	LJC	
Dibenzo[a,h]anthracene	0.43	mg/Kg	1x	0.036	0.012	07/31/2010	LJC	
Fluoranthene	2.1	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC	
Fluorene	0.043	mg/Kg	1x	0.036	0.0060	07/31/2010	LJC	
Indeno[1,2,3-c,d]pyrene	1.2	mg/Kg	1x	0.036	0.011	07/31/2010	LJC	
Naphthalene	J1 0.021	mg/Kg	1x	0.036	0.0045	07/31/2010	LJC	
Pyrene	1.5	mg/Kg	1x	0.036	0.0056	07/31/2010	LJC	

### Semivolatile Surrogates -Base Neutral

SR / Nitrobenzene-D5	48	%	1x			07/31/2010	LJC	
SR / 2-Fluorobiphenyl	57	%	1x			07/31/2010	LJC	
SR / P-Terphenyl	33	%	1x			07/31/2010	LJC	

### Total RCRA Metals by Method SW846-6010C

Arsenic	12	mg/Kg	2x	5.8	0.42	07/30/2010	EML	
Lead	520	mg/Kg	2x	0.58	0.10	07/30/2010	EML	
Lead, TCLP	1.8	mg/L	1x	0.020	0.0027	08/02/2010	EML	

Sample: 019 SB 189-18 / 2'-5'

Date & Time Sampled: 07/23/2010 @ 1:00:

All soil sample analysis results except TCLP reported on a dry weight basis

Total Solids by SW846 3540C	87.8	%				07/26/2010	AXC	
pH by SW846 9045D	11.57	SU				07/24/2010	CMA	

### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

Date Extracted PNA's	COMPLETED	---						
Acenaphthene	0.072	mg/Kg	1x	0.034	0.0057	07/31/2010	LJC	RFV
Anthracene	0.31	mg/Kg	1x	0.034	0.0078	07/31/2010	LJC	
Benzo[a]anthracene	1.6	mg/Kg	1x	0.034	0.0055	07/31/2010	LJC	
Benzo[b]fluoranthene	1.8	mg/Kg	1x	0.034	0.0070	07/31/2010	LJC	
Benzo[k]fluoranthene	1.7	mg/Kg	1x	0.034	0.0084	07/31/2010	LJC	



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1007-01601

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MARSHALL LEVY

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Invoice No. 77140  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 019 SB 189-18 / 2'-5'							Date & Time Sampled: 07/23/2010 @ 1:00:	
<i>All soil sample analysis results except TCLP reported on a dry weight basis</i>								
<b>Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C</b>								
Benzo[a]pyrene		1.6	mg/Kg	1x	0.034	0.0070	07/31/2010	LJC
Chrysene		1.8	mg/Kg	1x	0.034	0.0050	07/31/2010	LJC
Dibenzo[a,h]anthracene		0.30	mg/Kg	1x	0.034	0.011	07/31/2010	LJC
Fluoranthene		1.9	mg/Kg	1x	0.034	0.0057	07/31/2010	LJC
Fluorene		0.11	mg/Kg	1x	0.034	0.0057	07/31/2010	LJC
Indeno[1,2,3-c,d]pyrene		0.81	mg/Kg	1x	0.034	0.010	07/31/2010	LJC
Naphthalene		0.086	mg/Kg	1x	0.034	0.0043	07/31/2010	LJC
Pyrene		1.2	mg/Kg	1x	0.034	0.0053	07/31/2010	LJC
<b>Semivolatile Surrogates -Base Neutral</b>								
SR / Nitrobenzene-D5		45	%	1x			07/31/2010	LJC
SR / 2-Fluorobiphenyl		58	%	1x			07/31/2010	LJC
SR / P-Terphenyl		31	%	1x			07/31/2010	LJC
<b>Total RCRA Metals by Method SW846-6010C</b>								
Arsenic		12	mg/Kg	2x	5.6	0.40	07/30/2010	EML
Lead		270	mg/Kg	2x	0.56	0.10	07/30/2010	EML

UNLESS OTHERWISE NOTED, SAMPLES ARE ANALYZED AS RECEIVED.



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report 1007-01601

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**  
**KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189**

**Date Reported 08/20/2010**  
**Date Due 08/06/2010**  
**Date Received 07/23/2010**  
**Invoice No. 77140**  
**Customer # B002**  
**Customer P.O. 072010**

#### Total Solids by SW846 3540C

Samples	001	002	003	004	005	006	007	008	009	010	011	012	013
QC Batch	230868		Date Analyzed: 07/27/2010					Technician: AXC					
DUPLICATE			0.89 %										
Samples	014	015	016	017	018	019							
QC Batch	230869		Date Analyzed: 07/27/2010					Technician: AXC					
DUPLICATE			0.50 %										

#### pH by SW846 9045D

Samples	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
QC Batch	230786		Date Analyzed: 07/24/2010					Technician: CMA												
REF % REC			7.04 %																	

#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### Acetone

Samples	001	002																	
QC Batch	985789		Date Analyzed: 07/26/2010					Technician: JGF											
BLANK			N.D. MG/KG					PQL	0.012	MDL	0.0084								

##### Acrolein

Samples	001	002																	
QC Batch	985790		Date Analyzed: 07/26/2010					Technician: JGF											
BLANK			N.D. MG/KG					PQL	0.025	MDL	0.0022								

##### Acrylonitrile

Samples	001	002																	
QC Batch	985792		Date Analyzed: 07/26/2010					Technician: JGF											
BLANK			N.D. MG/KG					PQL	0.005	MDL	0.0014								

##### Benzene

Samples	001	002																		
QC Batch	985801		Date Analyzed: 07/26/2010					Technician: JGF												
BLANK			N.D. MG/KG					PQL	0.002	MDL	0.0012									
REF % REC			91 %																	
REF % DUP			92 %																	
RPD REF			1.0 %																	

##### Bromobenzene

Samples	001	002																	
QC Batch	985820																		



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1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### Bromobenzene

<b>Samples</b>	001	002				
<b>QC Batch</b>	985820	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00052
<b>REF % REC</b>		93 %				
<b>REF % DUP</b>		97 %				
<b>RPD REF</b>		3.9 %				

##### Bromoform (tribromomethane)

<b>Samples</b>	001	002				
<b>QC Batch</b>	985817	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.0010
<b>REF % REC</b>		95 %				
<b>REF % DUP</b>		97 %				
<b>RPD REF</b>		1.7 %				

##### Bromomethane

<b>Samples</b>	001	002				
<b>QC Batch</b>	985784	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00080

##### n-Butylbenzene

<b>Samples</b>	001	002				
<b>QC Batch</b>	985831	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00076
<b>REF % REC</b>		77 %				
<b>REF % DUP</b>		82 %				
<b>RPD REF</b>		7.0 %				

##### sec-Butylbenzene

<b>Samples</b>	001	002				
<b>QC Batch</b>	985827	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00094
<b>REF % REC</b>		83 %				
<b>REF % DUP</b>		87 %				
<b>RPD REF</b>		4.8 %				

##### tert-Butylbenzene

<b>Samples</b>	001	002				
<b>QC Batch</b>	985825	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00091
<b>REF % REC</b>		84 %				
<b>REF % DUP</b>		86 %				
<b>RPD REF</b>		1.9 %				



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#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### Carbon disulfide

Samples 001 002  
QC Batch 985791 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0014

##### Carbon tetrachloride

Samples 001 002  
QC Batch 985800 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0011  
REF % REC 112 %  
REF % DUP 118 %  
RPD REF 5.2 %

##### Chlorobenzene

Samples 001 002  
QC Batch 985814 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.00053  
REF % REC 87 %  
REF % DUP 90 %  
RPD REF 3.9 %

##### Chloroethane

Samples 001 002  
QC Batch 985785 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0013  
REF % REC 92 %  
REF % DUP 94 %  
RPD REF 1.7 %

##### Chloroform

Samples 001 002  
QC Batch 985798 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0013  
REF % REC 116 %  
REF % DUP 121 %  
RPD REF 3.8 %

##### Chloromethane

Samples 001 002  
QC Batch 985783 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0017  
REF % REC 72 %  
REF % DUP 71 %  
RPD REF 1.1 %



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#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### 2-Chlorotoluene [o-Chlorotoluene]

<b>Samples</b>	001	002				
<b>QC Batch</b>	985823	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00076
<b>REF % REC</b>		81 %				
<b>REF % DUP</b>		84 %				
<b>RPD REF</b>		3.1 %				

##### Cumene (Isopropylbenzene)

<b>Samples</b>	001	002				
<b>QC Batch</b>	985819	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00099

##### Dibromochloromethane

<b>Samples</b>	001	002				
<b>QC Batch</b>	985810	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.0010
<b>REF % REC</b>		94 %				
<b>REF % DUP</b>		95 %				
<b>RPD REF</b>		0.56 %				

##### 1,2-Dibromo-3-chloropropane

<b>Samples</b>	001	002				
<b>QC Batch</b>	985832	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.0011
<b>REF % REC</b>		78 %				
<b>REF % DUP</b>		85 %				
<b>RPD REF</b>		8.8 %				

##### 1,2-Dibromoethane [Ethylene Dibromide]

<b>Samples</b>	001	002				
<b>QC Batch</b>	985811	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.0011

##### 1,2-Dichlorobenzene

<b>Samples</b>	001	002				
<b>QC Batch</b>	985830	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF	
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b>	0.00072
<b>REF % REC</b>		90 %				
<b>REF % DUP</b>		95 %				
<b>RPD REF</b>		4.9 %				

##### 1,3-Dichlorobenzene



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#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### 1,3-Dichlorobenzene

<b>Samples</b>	001 002				
<b>QC Batch</b>	985828	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.00090
<b>REF % REC</b>		88 %			
<b>REF % DUP</b>		91 %			
<b>RPD REF</b>		2.8 %			

##### 1,4-Dichlorobenzene

<b>Samples</b>	001 002				
<b>QC Batch</b>	985829	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.00048
<b>REF % REC</b>		88 %			
<b>REF % DUP</b>		92 %			
<b>RPD REF</b>		4.9 %			

##### Dichlorobromomethane [Bromodichloromethane]

<b>Samples</b>	001 002				
<b>QC Batch</b>	985806	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0011
<b>REF % REC</b>		105 %			
<b>REF % DUP</b>		108 %			
<b>RPD REF</b>		3.5 %			

##### Dichlorodifluoromethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985781	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0016
<b>REF % REC</b>		86 %			
<b>REF % DUP</b>		90 %			
<b>RPD REF</b>		4.1 %			

##### 1,1-Dichloroethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985794	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0012
<b>REF % REC</b>		94 %			
<b>REF % DUP</b>		97 %			
<b>RPD REF</b>		3.7 %			

##### 1,2-Dichloroethane

<b>Samples</b>	001 002
<b>QC Batch</b>	985802



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KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### 1,2-Dichloroethane

Samples 001 002  
QC Batch 985802 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0013  
REF % REC 104 %  
REF % DUP 105 %  
RPD REF 0.86 %

##### 1,1-Dichloroethylene

Samples 001 002  
QC Batch 985787 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0019  
REF % REC 105 %  
REF % DUP 107 %  
RPD REF 2.4 %

##### cis-1,2-Dichloroethylene

Samples 001 002  
QC Batch 985797 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0013

##### trans-1,2-Dichloroethylene

Samples 001 002  
QC Batch 985793 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0015

##### 1,2-Dichloropropane

Samples 001 002  
QC Batch 985805 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.00092  
REF % REC 92 %  
REF % DUP 94 %  
RPD REF 1.7 %

##### 1,3-Dichloropropene

Samples 001 002  
QC Batch 985780 No QC Reported

##### Ethylbenzene

Samples 001 002  
QC Batch 985815



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#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### Ethylbenzene

<b>Samples</b>	001	002			
<b>QC Batch</b>	985815		<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b> JGF
<b>BLANK</b>			N.D. MG/KG	<b>PQL</b> 0.002	<b>MDL</b> 0.00092
<b>REF % REC</b>			81 %		
<b>REF % DUP</b>			83 %		
<b>RPD REF</b>			2.7 %		

##### Hexachlorobutadiene

<b>Samples</b>	001	002			
<b>QC Batch</b>	985834		<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b> JGF
<b>BLANK</b>			N.D. MG/KG	<b>PQL</b> 0.005	<b>MDL</b> 0.00074
<b>REF % REC</b>			93 %		
<b>REF % DUP</b>			97 %		
<b>RPD REF</b>			4.1 %		

##### Methylene bromide [Dibromomethane]

<b>Samples</b>	001	002			
<b>QC Batch</b>	985804		<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b> JGF
<b>BLANK</b>			N.D. MG/KG	<b>PQL</b> 0.005	<b>MDL</b> 0.0012
<b>REF % REC</b>			122 %		
<b>REF % DUP</b>			128 %		
<b>RPD REF</b>			4.9 %		

##### Methylene chloride

<b>Samples</b>	001	002			
<b>QC Batch</b>	0		<i>No QC Reported</i>		

##### Methyl ethyl ketone [MEK; 2-Butanone]

<b>Samples</b>	001	002			
<b>QC Batch</b>	985796		<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b> JGF
<b>BLANK</b>			N.D. MG/KG	<b>PQL</b> 0.012	<b>MDL</b> 0.0056

##### Methyl isobutyl ketone

<b>Samples</b>	001	002			
<b>QC Batch</b>	985807		<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b> JGF
<b>BLANK</b>			N.D. MG/KG	<b>PQL</b> 0.012	<b>MDL</b> 0.0048

##### n-Propylbenzene

<b>Samples</b>	001	002			
<b>QC Batch</b>	985821				



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#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### n-Propylbenzene

<b>Samples</b>	001 002				
<b>QC Batch</b>	985821	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.00100
<b>REF % REC</b>		77 %			
<b>REF % DUP</b>		81 %			
<b>RPD REF</b>		4.3 %			

##### Styrene

<b>Samples</b>	001 002				
<b>QC Batch</b>	985816	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.00080
<b>REF % REC</b>		91 %			
<b>REF % DUP</b>		97 %			
<b>RPD REF</b>		5.5 %			

##### 1,1,1,2-Tetrachloroethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985813	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.00081
<b>REF % REC</b>		89 %			
<b>REF % DUP</b>		90 %			
<b>RPD REF</b>		0.49 %			

##### 1,1,2,2-Tetrachloroethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985822	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0010
<b>REF % REC</b>		80 %			
<b>REF % DUP</b>		82 %			
<b>RPD REF</b>		2.3 %			

##### Tetrachloroethylene (PCE)

<b>Samples</b>	001 002				
<b>QC Batch</b>	985812	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0010

##### Toluene

<b>Samples</b>	001 002				
<b>QC Batch</b>	985808	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.002	<b>MDL</b> 0.0012
<b>REF % REC</b>		87 %			
<b>REF % DUP</b>		94 %			
<b>RPD REF</b>		7.6 %			



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Date Received 07/23/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### 1,2,4-Trichlorobenzene

<b>Samples</b>	001 002				
<b>QC Batch</b>	985833	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.00061
<b>REF % REC</b>		91 %			
<b>REF % DUP</b>		100 %			
<b>RPD REF</b>		8.6 %			

##### 1,1,1-Trichloroethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985799	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0011
<b>REF % REC</b>		113 %			
<b>REF % DUP</b>		117 %			
<b>RPD REF</b>		3.4 %			

##### 1,1,2-Trichloroethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985809	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0012
<b>REF % REC</b>		84 %			
<b>REF % DUP</b>		88 %			
<b>RPD REF</b>		4.1 %			

##### Trichloroethylene (TCE)

<b>Samples</b>	001 002				
<b>QC Batch</b>	985803	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0013
<b>REF % REC</b>		102 %			
<b>REF % DUP</b>		101 %			
<b>RPD REF</b>		1.1 %			

##### Trichlorofluoromethane

<b>Samples</b>	001 002				
<b>QC Batch</b>	985786	<b>Date Analyzed:</b>	07/26/2010	<b>Technician:</b>	JGF
<b>BLANK</b>		N.D. MG/KG	<b>PQL</b>	0.005	<b>MDL</b> 0.0014
<b>REF % REC</b>		102 %			
<b>REF % DUP</b>		107 %			
<b>RPD REF</b>		4.8 %			

##### 1,2,3-Trichloropropane

<b>Samples</b>	001 002				
<b>QC Batch</b>	0	<i>No QC Reported</i>			



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## Chemical, Biological, Physical, Molecular, and Toxicological Services

### Quality Control Report

1007-01601

BARR & PREVOST, INC.  
MARSHALL LEVY

Date Reported 08/20/2010  
Date Received 07/23/2010

KENNEDY INTERCHANGE PROJECT / SITE 69 / PARCEL 189

#### Volatile Organic Compounds (VOCs) by Method SW846-8260B

##### 1,2,4-Trimethylbenzene

Samples 001 002  
QC Batch 985826 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.00073  
REF % REC 82 %  
REF % DUP 85 %  
RPD REF 3.1 %

##### 1,3,5-Trimethylbenzene

Samples 001 002  
QC Batch 985824 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.00076  
REF % REC 85 %  
REF % DUP 86 %  
RPD REF 0.70 %

##### Vinyl acetate

Samples 001 002  
QC Batch 985795 Date Analyzed: 07/26/2010 Technician: JGF  
BLANK N.D. MG/KG PQL 0.005 MDL 0.0017

##### Vinyl chloride

Samples 001 002  
QC Batch 0 No QC Reported

##### Xylenes, total

Samples 001 002  
QC Batch 985779 No QC Reported

#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Acenaphthene

Samples 001  
QC Batch 985412 Date Analyzed: 07/30/2010 Technician: LJC  
BLANK N.D. MG/KG PQL 0.033 MDL 0.0056  
REF % REC 71 %  
REF % DUP 67 %  
RPD REF 5.7 %  
Samples 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019  
QC Batch 985434



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#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Acenaphthene

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985434			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0056									
<b>REF % REC</b>				68 %															
<b>REF % DUP</b>				73 %															
<b>RPD REF</b>				7.6 %															

##### Anthracene

<b>Samples</b>	001
<b>QC Batch</b>	985414
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	74 %
<b>REF % DUP</b>	77 %
<b>RPD REF</b>	4.2 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985436			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0077									
<b>REF % REC</b>				71 %															
<b>REF % DUP</b>				75 %															
<b>RPD REF</b>				4.8 %															

##### Benzo[a]anthracene

<b>Samples</b>	001
<b>QC Batch</b>	985417
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	72 %
<b>REF % DUP</b>	79 %
<b>RPD REF</b>	8.5 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985439			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0054									
<b>REF % REC</b>				73 %															
<b>REF % DUP</b>				77 %															
<b>RPD REF</b>				5.3 %															

##### Benzo[b]fluoranthene

<b>Samples</b>	001
<b>QC Batch</b>	985419
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	76 %
<b>REF % DUP</b>	85 %
<b>RPD REF</b>	11 %



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#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Benzo[b]fluoranthene

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985441			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0069									
<b>REF % REC</b>				80 %															
<b>REF % DUP</b>				82 %															
<b>RPD REF</b>				2.8 %															

##### Benzo[k]fluoranthene

<b>Samples</b>	001
<b>QC Batch</b>	985420
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	83 %
<b>REF % DUP</b>	93 %
<b>RPD REF</b>	12 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985442			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0083									
<b>REF % REC</b>				79 %															
<b>REF % DUP</b>				86 %															
<b>RPD REF</b>				9.1 %															

##### Benzo[a]pyrene

<b>Samples</b>	001
<b>QC Batch</b>	985421
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	76 %
<b>REF % DUP</b>	82 %
<b>RPD REF</b>	8.0 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985443			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0069									
<b>REF % REC</b>				75 %															
<b>REF % DUP</b>				77 %															
<b>RPD REF</b>				1.9 %															

##### Chrysene

<b>Samples</b>	001
<b>QC Batch</b>	985418
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	74 %
<b>REF % DUP</b>	81 %
<b>RPD REF</b>	8.9 %



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#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Chrysene

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985440			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0050									
<b>REF % REC</b>				76 %															
<b>REF % DUP</b>				81 %															
<b>RPD REF</b>				6.6 %															

##### Dibenzo[a,h]anthracene

<b>Samples</b>	001
<b>QC Batch</b>	985423
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	77 %
<b>REF % DUP</b>	84 %
<b>RPD REF</b>	8.5 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985445			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.011									
<b>REF % REC</b>				76 %															
<b>REF % DUP</b>				80 %															
<b>RPD REF</b>				5.1 %															

##### Fluoranthene

<b>Samples</b>	001
<b>QC Batch</b>	985415
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	77 %
<b>REF % DUP</b>	85 %
<b>RPD REF</b>	9.8 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985437			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0056									
<b>REF % REC</b>				75 %															
<b>REF % DUP</b>				81 %															
<b>RPD REF</b>				7.2 %															

##### Fluorene

<b>Samples</b>	001
<b>QC Batch</b>	985413
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	70 %
<b>REF % DUP</b>	67 %
<b>RPD REF</b>	4.7 %



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#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Fluorene

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985435			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0056									
<b>REF % REC</b>				68 %															
<b>REF % DUP</b>				74 %															
<b>RPD REF</b>				8.0 %															

##### Indeno[1,2,3-c,d]pyrene

<b>Samples</b>	001
<b>QC Batch</b>	985422
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	77 %
<b>REF % DUP</b>	83 %
<b>RPD REF</b>	8.2 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985444			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.010									
<b>REF % REC</b>				75 %															
<b>REF % DUP</b>				80 %															
<b>RPD REF</b>				6.4 %															

##### Naphthalene

<b>Samples</b>	001
<b>QC Batch</b>	985411
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	74 %
<b>REF % DUP</b>	70 %
<b>RPD REF</b>	5.3 %

<b>Samples</b>	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
<b>QC Batch</b>	985433			<b>Date Analyzed:</b> 07/30/2010				<b>Technician:</b> LJC											
<b>BLANK</b>				N.D. MG/KG				<b>PQL</b> 0.033		<b>MDL</b> 0.0042									
<b>REF % REC</b>				70 %															
<b>REF % DUP</b>				74 %															
<b>RPD REF</b>				5.7 %															

##### Pyrene

<b>Samples</b>	001
<b>QC Batch</b>	985416
<b>BLANK</b>	N.D. MG/KG
<b>REF % REC</b>	73 %
<b>REF % DUP</b>	80 %
<b>RPD REF</b>	13 %



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#### Polynuclear Aromatic Hydrocarbons (PNAs) by Method SW846-8270C

##### Pyrene

Samples	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	
QC Batch	985438			Date Analyzed:			07/30/2010			Technician: LJC									
BLANK	N.D. MG/KG			PQL			0.033			MDL 0.0052									
REF % REC	71 %																		
REF % DUP	76 %																		
RPD REF	6.8 %																		

#### Total RCRA Metals by Method SW846-6010C

##### Arsenic

Samples	001	002	003	004	005	006	007	008	009	010			
QC Batch	370165			Date Analyzed:			07/30/2010			Technician: EML			
BLANK	N.D. MG/KG			PQL			5.0			MDL 0.36			
SPIKE REC	90 %												
SPIKE DUP	85 %												
RPD SPIKE	4.5 %												
REF % SOIL	94 %												

Samples	011	012	013	014	015	016	017	018	019				
QC Batch	370204			Date Analyzed:			07/30/2010			Technician: EML			
BLANK	N.D. MG/KG			PQL			5.0			MDL 0.36			
SPIKE REC	98 %												
SPIKE DUP	99 %												
RPD SPIKE	0.60 %												
REF % SOIL	91 %												

##### Lead

Samples	001	002	003	004	005	006	007	008	009	010			
QC Batch	370166			Date Analyzed:			07/30/2010			Technician: EML			
BLANK	N.D. MG/KG			PQL			5.0			MDL 0.090			
SPIKE REC	86 %												
SPIKE DUP	53 %												
RPD SPIKE	2.9 %												
REF % SOIL	94 %												

Samples	011	012	013	014	015	016	017	018	019				
QC Batch	370205			Date Analyzed:			07/30/2010			Technician: EML			
BLANK	N.D. MG/KG			PQL			5.0			MDL 0.090			
SPIKE REC	90 %												
SPIKE DUP	88 %												
RPD SPIKE	1.9 %												
REF % SOIL	91 %												

##### Lead, TCLP



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**Chemical, Biological, Physical, Molecular, and Toxicological Services**

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**Total RCRA Metals by Method SW846-6010C**

**Lead, TCLP**

Samples 004

QC Batch 370932

Date Analyzed: 08/02/2010

Technician: EML

BLANK	N.D. MG/L	PQL	0.020	MDL	0.0027
REF % REC	93 %				
SPIKE REC	78 %				
SPIKE DUP	74 %				
RPD SPIKE	0.38 %				

Samples 015 018

QC Batch 371025

Date Analyzed: 08/02/2010

Technician: EML

BLANK	N.D. MG/L	PQL	0.020	MDL	0.0027
REF % REC	90 %				
SPIKE REC	97 %				
SPIKE DUP	94 %				
RPD SPIKE	1.0 %				

Samples 001

QC Batch 372224

Date Analyzed: 08/02/2010

Technician: EML

BLANK	N.D. MG/L	PQL	0.020	MDL	0.0027
REF % REC	93 %				
SPIKE REC	78 %				
SPIKE DUP	74 %				



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**Chemical, Biological, Physical, Molecular, and Toxicological Services**

## ELECTRONIC CERTIFICATE OF ANALYSIS

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**

### QUALIFIER DEFINITIONS:

- AR** Results reported on an as received basis.
- B1** Analyte value in the method blank above control limit.
- B2** Analyte value in the method blank is between the method detection limit and the reporting detection limit.
- B3** BOD blank is over specifications. The reported result may be biased high.
- BOD1** BOD result estimated due to insufficient oxygen depletion.
- BOD2** BOD result estimated due to insufficient oxygen residual.
- BOD3** BOD result estimated due to inconsistent oxygen depletion
- C1** Continuing calibration verification (CCV) above upper control limit, analyte(s) not detected.
- CU** Customer specified reporting limit
- CE** Conclusion Entry
- CG** Confluent Growth
- DI** Surrogate recoveries out of compliance due to sample dilution.
- DW** Results reported on a dry weight basis.
- E1** Elevated reporting or detection limit(s) due to sample matrix interference and sample dilution.
- E2** Elevated reporting or detection limit(s) due to high analyte concentration and sample dilution.
- E3** Elevated reporting or detection limit(s) due to insufficient sample volume
- ES** Estimated microbiological count
- E4** Elevated reporting or detection limit(s) due to low level calibration variance
- F1** Test Method Epa 1010 Not Valid For Solid Samples. Samples Analyzed By A Modified 1010 Method.
- F2** No Flash Observed; Test Flame Is Being Extinguished By Sample At The Reported Temperature.
- F3** The result is estimated, as the sample can not be sufficiently cooled below the expected flashpoint.
- H1** Sample received outside of holding time for these analytes.
- H2** Analyte was prepared and/or analyzed outside of the analytical method holding time.
- J1** The analyte was positively identified; analyte was detected between the reporting limit and method detection limit and the result is an estimated value.
- J2** The analyte was positively identified; the result is above the quantitation range and is an estimated value.
- L1** Lab control sample (LCS) recovery below lower control limit, all other batch QC acceptable.
- L2** Lab control sample (LCS) recovery above upper control limit, all other batch QC acceptable.
- L3** Lab control sample (LCS) recovery above upper control limit, analyte not detected.
- M1** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased High.
- M2** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased Low.
- M3** Matrix Spike Recovery Outside Control Limits Due To Analyte Concentration. Matrix Spike Evaluation not applicable when sample concentration is  $\geq 4X$  Spike Concentration.
- MC** Miscellaneous (see conclusion statement)
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." Any associated quantitation is an estimate based on industry standard practices.
- ND** Not detected at or below the reporting limit (or method detection limit, if listed).
- NJ** The analysis indicates the presence of an analyte that has been "tentatively identified" and is an estimated value.
- OOC** The above value is over the client provided or regulatory specification for this parameter
- P1** Sample received was improperly preserved for these analytes.
- P2** Sample pH greater than method limit of 2.
- R** The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. the presence or absence of the analyte cannot be verified.
- TNC** Colonies too numerous to count
- R1** Relative percent difference (RPD) of matrix spike duplicates outside of control limit.
- R2** Relative percent difference (RPD) of LCS duplicates outside of control limit.
- R3** Relative percent difference (RPD) of sample duplicates outside of control limit.
- S1** One or more surrogates outside control limits, no target analytes detected.
- S2** One or more surrogates outside control limits due to matrix interference.
- S3** One or more surrogates outside control limits. the data was accepted based on the valid recovery of remaining surrogate(s).
- SUM** This total is the sum of several values, some which are less than their respective reporting limits. The total is an estimate.
- SUB** Analysis subcontracted.
- UJ** Analyte was not detected above the reporting limit, however, the reporting limit is approximate & may or may not represent the actual limit of quantitation necessary to accurately & precisely measure the analyte in the sample.
- V** Analyte concentration estimated due to sample matrix interference and/or high analyte concentration interference.



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*Member*



**Chemical, Biological, Physical, Molecular, and Toxicological Services**

**ELECTRONIC CERTIFICATE OF ANALYSIS**

**BARR & PREVOST, INC.**  
**MARSHALL LEVY**  
**2800 CORPORATE EXCHANGE DRIVE**  
**SUITE 240**  
**COLUMBUS, OH 43231**

**RESPECTFULLY SUBMITTED:** \_\_\_\_\_

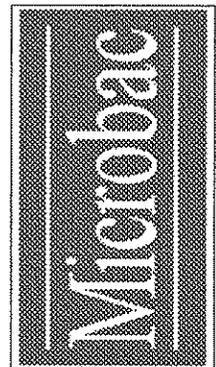
**MICROBAC LABORATORIES, INC.**

*As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate Federal, state, or local authorities before acting in reliance on the regulatory limits provided.  
For any feedback concerning our services, please contact Andrew Clifton, the Laboratory Director at 502.962.6400. You may also contact both James Nokes, President and Robert Morgan, Chief Operating Officer at [president@microbac.com](mailto:president@microbac.com).*



CHAIN OF CUSTODY RECORD

Microbac Laboratories, Inc.
3323 Gilmore Industrial Blvd.
Louisville, KY 40213
Phone: 502/962-6400
Fax: 502/962-6411
Email: ken.ford@microbac.com



1007-01601 B002

COA No.: (by Laboratory)

Due Date:

Page 1 of 2

Microbac Quote No. 6151

Form containing client information, sample containers, laboratory analyses requested, and a table of results with columns for sample ID, date, time, and various chemical analyses.

14
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Remarks/Special Instructions:
-- All results to be reported on dry weight basis;
-- Reports require Level II QC package;
-- Special QC and D.L.: Region 9 PRGs (2002)

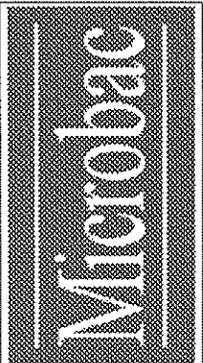
DN ICE
ON 318



CHAIN OF CUSTODY RECORD

1007-01601 B002

Microbac Laboratories, Inc.
3323 Gilmore Industrial Blvd.
Louisville, KY 40213
Phone: 502/962-6400
Fax: 502/962-6411
Email: ken.ford@microbac.com



COA No.: (by Laboratory)

Due Date:

Page 2 of 2

Microbac Quote No. 6151

Client/bill to: Barr & Prevost, Inc., Attn: Robin Lamb, P.O.#
Address: 2800 Corporate Exchange Dr., Columbus, OH 43231
Email to: rlamb@barreng.com
Phone #: 614/714-0270, ext. 101
Report to: Barr & Prevost, Inc., Attn: Marshall Levy
Address: 2800 Corporate Exchange Dr., Columbus, OH 43231
Email to: mlevy@barreng.com
Phone #: 614/257-7599
Sampler: Brian Lenihan, CHMM
Site/Parcel: S69/P189 (Extra Space Storage Inc., 350 Adams St.)

Table with 3 columns: SAMPLE I.D. / DESCRIPTION, Date, Time. Contains handwritten entries for samples 56189-9 2-5, 56189-9 5-10, and 56189-9 10-20.

Main analysis table with columns: Number of Containers, Type of Containers, Preservative Used, Matrix (Soil, Water, Other), Total Arsenic and Lead (6010C), Total (13) PNAs (8270C), Total Solids, % (3540C), Solids pH (9045C), Total VOCs (8260B), TPH (Gravimetric), TCLP Lead (1311, 6010C), Temperature, °C.

Relinquished By: [Signature]
Received By: Ken Ford
Relinquished By: Ken Ford
Received By: [Signature]

Remarks/Special Instructions:
-- All results to be reported on dry weight basis;
-- Reports require Level II QC package;
-- Special QC and D.L.: Region 9 PRGs (2002)

7 8 9

DN ICE ON ICE

# PROJECT DOCUMENTATION LOG

Work Order / Certificate # 1007-1601

## Sample Receipt Information:

Samples received via: UPS / FEDEX / USPS / ZIP / By Hand

COC & proper paperwork provided & complete / COC, samples & bottles in agreement: YES / NO

Appropriate bottles provided intact -w- sufficient volume; Presevered correctly; within hold: YES / NO

Client informed of discrepancies? (see customer communications) YES / NO

Cooler/Sample Temperature (Deg C)? LOU: on Ice LEX: \_\_\_\_\_ EVV: \_\_\_\_\_ PAD: \_\_\_\_\_

Samples received on ice? YES / NO

# Containers received? LOU: 19 LEX: \_\_\_\_\_ EVV: \_\_\_\_\_ PAD: \_\_\_\_\_

Subbing out any analyses: (record analysis and subcontractor)

Pitt Erie Chicago Mass Camp Southern Knox Hauser Balt. Other

Analysis to be subcontracted:

### Sample Receipt Comments: (Record Below)

Date
Init

### Customer Communications

Date
Init

Date
Init

Date
Init



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1010-00375

BARR & PREVOST  
MARSHALL LEVY  
2800 CORPORATE EXCHANGE DRIVE  
SUITE 240  
COLUMBUS, OH 43231

Date Reported 10/15/2010  
Date Due 10/15/2010  
Date Received 10/07/2010  
Invoice No. 80537  
Customer # B002  
Customer P.O. 072010

KENNEDY INTERCHANGE PROJECT #S69/P189(EXTRA SPACE STORAGE)

Analysis	Qualifer	Result	Unit	Dilution	PQL	MDL	Date	Tech
Sample: 001 SB 189-11 / 2'-5' <span style="float: right;">Date &amp; Time Sampled: 07/22/2010 @ 0:00:</span>								
<b>Total RCRA Metals by Method SW846-6010C</b>								
Lead, TCLP		0.37	mg/L	1x	0.020	0.0027	10/08/2010	EML
Sample: 002 SB 189-13 / 0'-2' <span style="float: right;">Date &amp; Time Sampled: 07/23/2010 @ 0:00:</span>								
<b>Total RCRA Metals by Method SW846-6010C</b>								
Lead, TCLP		0.043	mg/L	1x	0.020	0.0027	10/08/2010	EML
Sample: 003 SB 189-14 / 0'-2' <span style="float: right;">Date &amp; Time Sampled: 07/23/2010 @ 0:00:</span>								
<b>Total RCRA Metals by Method SW846-6010C</b>								
Lead, TCLP		0.47	mg/L	1x	0.020	0.0027	10/08/2010	EML

UNLESS OTHERWISE NOTED, SAMPLES ARE ANALYZED AS RECEIVED.



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**Chemical, Biological, Physical, Molecular, and Toxicological Services**

## Quality Control Report 1010-00375

**BARR & PREVOST  
MARSHALL LEVY  
2800 CORPORATE EXCHANGE DRIVE  
SUITE 240  
COLUMBUS, OH 43231  
KENNEDY INTERCHANGE PROJECT #S69/P189(EXTRA SPACE STORAGE)  
Total RCRA Metals by Method SW846-6010C**

**Date Reported 10/15/2010  
Date Due 10/15/2010  
Date Received 10/07/2010  
Invoice No. 80537  
Customer # B002  
Customer P.O. 072010**

### Lead, TCLP

Samples 001 002 003

QC Batch 385084

Date Analyzed: 10/08/2010

Technician: EML

BLANK	N.D. MG/L	PQL	0.020	MDL	0.0027
REF % REC	97 %				
SPIKE REC	94 %				
SPIKE DUP	98 %				
RPD SPIKE	3.7 %				



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MARSHALL LEVY  
2800 CORPORATE EXCHANGE DRIVE  
SUITE 240  
COLUMBUS, OH 43231**

### QUALIFIER DEFINITIONS:

- AR** Results reported on an as received basis.
- B1** Analyte value in the method blank above control limit.
- B2** Analyte value in the method blank is between the method detection limit and the reporting detection limit.
- B3** BOD blank is over specifications. The reported result may be biased high.
- BOD1** BOD result estimated due to insufficient oxygen depletion.
- BOD2** BOD result estimated due to insufficient oxygen residual.
- BOD3** BOD result estimated due to inconsistent oxygen depletion
- C1** Continuing calibration verification (CCV) above upper control limit, analyte(s) not detected.
- CU** Customer specified reporting limit
- CE** Conclusion Entry
- CG** Confluent Growth
- DI** Surrogate recoveries out of compliance due to sample dilution.
- DW** Results reported on a dry weight basis.
- E1** Elevated reporting or detection limit(s) due to sample matrix interference and sample dilution.
- E2** Elevated reporting or detection limit(s) due to high analyte concentration and sample dilution.
- E3** Elevated reporting or detection limit(s) due to insufficient sample volume
- ES** Estimated microbiological count
- E4** Elevated reporting or detection limit(s) due to low level calibration variance
- F1** Test Method Epa 1010 Not Valid For Solid Samples. Samples Analyzed By A Modified 1010 Method.
- F2** No Flash Observed; Test Flame Is Being Extinguished By Sample At The Reported Temperature.
- F3** The result is estimated, as the sample can not be sufficiently cooled below the expected flashpoint.
- H1** Sample received outside of holding time for these analytes.
- H2** Analyte was prepared and/or analyzed outside of the analytical method holding time.
- J1** The analyte was positively identified; analyte was detected between the reporting limit and method detection limit and the result is an estimated value.
- J2** The analyte was positively identified; the result is above the quantitation range and is an estimated value.
- L1** Lab control sample (LCS) recovery below lower control limit, all other batch QC acceptable.
- L2** Lab control sample (LCS) recovery above upper control limit, all other batch QC acceptable.
- L3** Lab control sample (LCS) recovery above upper control limit, analyte not detected.
- M1** Matrix Spike Recovery Outside Control Limits Due To Sample Matrix Interference, Biased High.
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- M3** Matrix Spike Recovery Outside Control Limits Due To Analyte Concentration. Matrix Spike Evaluation not applicable when sample concentration is  $\geq 4X$  Spike Concentration.
- MC** Miscellaneous (see conclusion statement)
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." Any associated quantitation is an estimate based on industry standard practices.
- ND** Not detected at or below the reporting limit (or method detection limit, if listed).
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- OOC** The above value is over the client provided or regulatory specification for this parameter
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- P2** Sample pH greater than method limit of 2.
- R** The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. the presence or absence of the analyte cannot be verified.
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- R1** Relative percent difference (RPD) of matrix spike duplicates outside of control limit.
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- S3** One or more surrogates outside control limits. the data was accepted based on the valid recovery of remaining surrogate(s).
- SUM** This total is the sum of several values, some which are less than their respective reporting limits. The total is an estimate.
- SUB** Analysis subcontracted.
- UJ** Analyte was not detected above the reporting limit, however, the reporting limit is approximate & may or may not represent the actual limit of quantitation necessary to accurately & precisely measure the analyte in the sample.
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**ATTACHMENT 7**

**Table 189-2**

**Summary Table of Soil Sample Laboratory Results with Comparisons  
to October 2002 EPA Region 9 Preliminary Remediation Goals (PRGs)**

**DRAFT**

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS WITH COMPARISONS TO THE OCTOBER 2002 EPA REGION 9 PRELIMINARY REMEDIATION GOALS (PRGS)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS												
	Direct Contact Soil (mg/kg)		SB189-1				SB189-2				SB189-3				
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	
			Laboratory I.D.:	1007-1454-01	1007-1454-02	1007-1454-03	1007-1454-04	1007-1454-05	1007-1454-06	1007-1601-01	1007-1601-02	1007-1454-07	1007-1454-08	1007-1454-09	1007-1454-10
Total Solids by Method SW846-3540C, %	n/a	n/a		83.6%	81.9%	80.4%	80.1%	72.0%	80.7%	86.1%	84.6%	81.9%	85.3%	85.6%	88.0%
Photoionization Detector (PID) Reading, ppm <sub>v</sub>	n/a	n/a		0.0	0.0	0.0	0.0/0.0	0.0	0.0	10.8	35.7/25.8	0.0	0.0	0.9	0.4/0.0
	See Rg. 9 keys in table legend														
<b>Volatile Organic Compounds (VOCs) by Method 8260B</b>	Rg. 9		Rg. 9	-	-	-	-	-	-	1x	1x	-	-	-	-
Acetone	1,570	nc	6,040	nc						0.057	N.D.				
Acrolein	0.103	nc	0.337	nc						N.D.	N.D.				
Acrylonitrile	0.209	ca*	0.491	ca*						N.D.	N.D.				
Benzene	0.601	ca*	1.31	ca*						N.D.	N.D.				
Bromobenzene	27.8	nc	92.2	nc						N.D.	N.D.				
Bromoform (tribromomethane)	61.6	ca*	218	ca*						N.D.	N.D.				
Bromomethane	3.90	nc	13.1	nc						N.D.	N.D.				
n-Butylbenzene	240	sat	240	sat						N.D.	N.D.				
sec-Butylbenzene	220	sat	220	sat						N.D.	N.D.				
tert-Butylbenzene	390	sat	390	sat						N.D.	N.D.				
Carbon disulfide	355	nc	720	sat						N.D.	N.D.				
Carbon tetrachloride	0.251	ca**	0.549	ca*						N.D.	N.D.				
Chlorobenzene	151	nc	530	nc						N.D.	N.D.				
Chloroethane	3.03	ca	6.49	ca						N.D.	N.D.				
Chloroform	3.56	ca/nc	11.7	ca/nc						N.D.	N.D.				
Chloromethane	1.23	ca	2.65	ca						N.D.	N.D.				
2-Chlorotoluene [o-Chlorotoluene]	158	nc	560	nc						N.D.	N.D.				
Isopropylbenzene [Cumene]	572	nc	1,980	nc						N.D.	N.D.				
Dibromochloromethane	1.11	ca	2.55	ca						N.D.	N.D.				
1,2-Dibromo-3-chloropropane	0.454	ca**	2.02	ca**						N.D.	N.D.				
1,2-Dibromoethane (Ethylene Dibromide)	0.00689	ca	0.0281	ca*						N.D.	N.D.				
Dichlorobromomethane [Bromodichloromethane]	0.824	ca	1.83	ca						N.D.	N.D.				
Dichlorodifluoromethane	93.9	nc	308	nc						N.D.	N.D.				
1,1-Dichloroethane	506	nc	1,740	nc						N.D.	N.D.				
1,2-Dichloroethane	0.278	ca*	0.603	ca*						N.D.	N.D.				
1,1-Dichloroethylene	124	nc	413	nc						N.D.	N.D.				
cis-1,2-Dichloroethylene	42.9	nc	146	nc						N.D.	N.D.				
trans-1,2-Dichloroethylene	69.5	nc	235	nc						N.D.	N.D.				
1,2-Dichloropropane	0.342	ca*	0.742	ca*						N.D.	N.D.				
1,3-Dichloropropene	0.777	ca	1.76	ca						N.D.	N.D.				
Ethylbenzene	8.92	ca	19.5	ca						N.D.	N.D.				
Methylene bromide (Dibromomethane)	66.9	nc	234	nc						N.D.	N.D.				
Methylene chloride	9.11	ca	20.5	ca						0.016	0.027				
Methyl ethyl ketone (MEK; 2-Butanone)	7,330	nc	27,100	nc						N.D.	N.D.				

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS WITH COMPARISONS TO THE OCTOBER 2002 EPA REGION 9 PRELIMINARY REMEDIATION GOALS (PRGS)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS													
	Direct Contact Soil (mg/kg)		SB189-1				SB189-2				SB189-3					
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)					
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)		
			Laboratory I.D.:	1007-1454-01	1007-1454-02	1007-1454-03	1007-1454-04	1007-1454-05	1007-1454-06	1007-1601-01	1007-1601-02	1007-1454-07	1007-1454-08	1007-1454-09	1007-1454-10	
Methyl isobutyl ketone [4-Methanol 2-Pentanone]	787	nc	2,840	nc							N.D.	N.D.				
n-Propylbenzene	240	sat	240	sat							N.D.	N.D.				
Styrene	1,700	sat	1,700	sat							N.D.	N.D.				
1,1,1,2-Tetrachloroethane	3.19	ca	7.28	ca							N.D.	N.D.				
1,1,2,2-Tetrachloroethane	0.408	ca	0.929	ca							N.D.	N.D.				
Tetrachloroethylene (PCE)	1.51	ca*	3.42	ca*							N.D.	N.D.				
Toluene	520	sat	520	sat							N.D.	N.D.				
1,1,1-Trichloroethane	1,200	sat	1,200	sat							N.D.	N.D.				
1,1,2-Trichloroethane	0.729	ca*	1.61	ca*							N.D.	N.D.				
Trichloroethylene (TCE)	0.0530	ca	0.115	ca							N.D.	N.D.				
Trichlorofluoromethane	386	nc	2,000	sat							N.D.	N.D.				
1,2,3-Trichloropropane	0.00501	ca	0.011	ca							N.D.	N.D.				
1,2,4-Trimethylbenzene	51.6	nc	170	nc							N.D.	N.D.				
1,3,5-Trimethylbenzene	21.3	nc	69.7	nc							N.D.	N.D.				
Vinyl acetate	426	nc	1,400	nc							N.D.	N.D.				
Vinyl chloride	0.0791	ca	0.746	ca							N.D.	N.D.				
Xylenes, total	275	nc	420	sat							N.D.	N.D.				
<b>Semivolatile Organic Compounds (SVOCs) by Method 8270C</b>																
Polynuclear Aromatic Hydrocarbon Compounds (PAHs or PNAs)					1x	1x, 40x*	1x, 5x*	1x, 5x*	1x	1x	1x	1x	1x, 5x*	1x	1x, 5x*	1x, 5x*
Acenaphthene	3,680	nc	29,200	nc	0.049	0.44	0.20	0.14	0.091	0.068	0.14	0.018	0.29	0.019	0.14	0.26
Anthracene	21,900	nc	100,000	max	0.19	1.4	0.70	0.54	0.24	0.21	0.51	0.067	0.82	0.068	0.36	0.56
Benzo[a]anthracene	0.621	ca	2.11	ca	1.2	9.2*	4.7*	4.2*	0.59	0.87	1.5	0.25	5.3*	0.29	1.2	1.4
Benzo[b]fluoranthene	0.621	ca	2.11	ca	1.7	11*	7.4*	4.2*	0.75	1.1	1.7	0.27	7.9*	0.34	1.4	2.2
Benzo[k]fluoranthene	6.21	ca	21.1	ca	1.4	9.3*	5.3*	4.6*	0.57	0.80	1.7	0.35	5.7*	0.28	1.5	1.5
Benzo[a]pyrene	0.0621	ca	0.211	ca	1.3	9.2*	4.9*	3.8*	0.61	0.95	1.5	0.24	5.4*	0.29	1.1	1.4
Chrysene	62.1	ca	211	ca	1.3	9.9*	5.0*	4.1*	0.60	0.88	1.4	0.26	5.3*	0.29	1.1	1.3
Dibenzo[a,h]anthracene	0.0621	ca	0.211	ca	0.25	1.1	0.72	0.43	0.15	0.20	0.29	0.047	0.63	0.073	0.094	0.13
Fluoranthene	2,290	nc	22,000	nc	1.6	24*	12*	10*	0.70	0.88	2.1	0.36	14*	0.36	4.8*	6.5*
Fluorene	2,750	nc	26,300	nc	0.046	0.46	0.18	0.18	0.087	0.068	0.22	0.026	0.25	0.022	0.13	0.25
Indeno[1,2,3-c,d]pyrene	0.621	ca	2.11	ca	0.65	3.0	1.9	1.2	0.27	0.49	0.80	0.10	1.7	0.12	0.23	0.31
Naphthalene	55.9	nc	188	nc	0.021	0.11	0.038	0.076	N.D.	0.057	0.14	N.D.	0.060	0.029	0.076	0.12
Pyrene	2,320	nc	29,100	nc	1.1	19*	9.6*	12*	0.49	0.61	1.4	0.25	11*	0.24	3.8*	5.2*
<b>Total Arsenic and Lead by Method 6010B</b>																
Arsenic (As)	0.390	ca*	1.59	ca	13	14	12	13	18	10	13	8.6	8.3	20	6.8	14
Lead (Pb)	400	nc	750	nc	730	430	290	250	56	400	890*	160	390	89	250	380
<b>Toxicity Characteristic Leaching Procedure (TCLP) by Method 6010B</b>																
Arsenic (As)					-	-	-	-	-	-	-	-	-	-	-	-
Lead (Pb)					N.D.	-	-	-	-	-	0.37	-	-	-	-	-

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-4				SB189-5				SB189-6			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)
			Laboratory I.D.:											
Total Solids by Method SW846-3540C, %	n/a	n/a	1007-1454-11	1007-1454-12	1007-1454-13	1007-1454-14	1007-1454-15	1007-1454-16	1007-1454-17	1007-1454-18	1007-1454-19	1007-1454-20	1007-1454-21	1007-1454-22
			83.3%	87.3%	85.4%	81.4%	85.2%	83.5%	82.7%	81.1%	83.8%	87.6%	86.2%	83.5%
Photoionization Detector (PID) Reading, ppm <sub>v</sub>	n/a	n/a	0.3	0.0	0.0	0.0/1.1	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0/0.0
	See Rg. 9 keys in table legend													
<b>Volatile Organic Compounds (VOCs) by Method 8260B</b>	Rg. 9	Rg. 9	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	1,570	nc	6,040	nc										
Acrolein	0.103	nc	0.337	nc										
Acrylonitrile	0.209	ca*	0.491	ca*										
Benzene	0.601	ca*	1.31	ca*										
Bromobenzene	27.8	nc	92.2	nc										
Bromoform (tribromomethane)	61.6	ca*	218	ca*										
Bromomethane	3.90	nc	13.1	nc										
n-Butylbenzene	240	sat	240	sat										
sec-Butylbenzene	220	sat	220	sat										
tert-Butylbenzene	390	sat	390	sat										
Carbon disulfide	355	nc	720	sat										
Carbon tetrachloride	0.251	ca**	0.549	ca*										
Chlorobenzene	151	nc	530	nc										
Chloroethane	3.03	ca	6.49	ca										
Chloroform	3.56	ca/nc	11.7	ca/nc										
Chloromethane	1.23	ca	2.65	ca										
2-Chlorotoluene [o-Chlorotoluene]	158	nc	560	nc										
Isopropylbenzene [Cumene]	572	nc	1,980	nc										
Dibromochloromethane	1.11	ca	2.55	ca										
1,2-Dibromo-3-chloropropane	0.454	ca**	2.02	ca**										
1,2-Dibromoethane (Ethylene Dibromide)	0.00689	ca	0.0281	ca*										
Dichlorobromomethane [Bromodichloromethane]	0.824	ca	1.83	ca										
Dichlorodifluoromethane	93.9	nc	308	nc										
1,1-Dichloroethane	506	nc	1,740	nc										
1,2-Dichloroethane	0.278	ca*	0.603	ca*										
1,1-Dichloroethylene	124	nc	413	nc										
cis-1,2-Dichloroethylene	42.9	nc	146	nc										
trans-1,2-Dichloroethylene	69.5	nc	235	nc										
1,2-Dichloropropane	0.342	ca*	0.742	ca*										
1,3-Dichloropropene	0.777	ca	1.76	ca										
Ethylbenzene	8.92	ca	19.5	ca										
Methylene bromide (Dibromomethane)	66.9	nc	234	nc										
Methylene chloride	9.11	ca	20.5	ca										
Methyl ethyl ketone (MEK; 2-Butanone)	7,330	nc	27,100	nc										

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-4				SB189-5				SB189-6			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)
		Laboratory I.D.:	1007-1454-11	1007-1454-12	1007-1454-13	1007-1454-14	1007-1454-15	1007-1454-16	1007-1454-17	1007-1454-18	1007-1454-19	1007-1454-20	1007-1454-21	1007-1454-22
Methyl isobutyl ketone [4-Methanol 2-Pentanone]	787 nc	2,840 nc												
n-Propylbenzene	240 sat	240 sat												
Styrene	1,700 sat	1,700 sat												
1,1,1,2-Tetrachloroethane	3.19 ca	7.28 ca												
1,1,2,2-Tetrachloroethane	0.408 ca	0.929 ca												
Tetrachloroethylene (PCE)	1.51 ca*	3.42 ca*												
Toluene	520 sat	520 sat												
1,1,1-Trichloroethane	1,200 sat	1,200 sat												
1,1,2-Trichloroethane	0.729 ca*	1.61 ca*												
Trichloroethylene (TCE)	0.0530 ca	0.115 ca												
Trichlorofluoromethane	386 nc	2,000 sat												
1,2,3-Trichloropropane	0.00501 ca	0.011 ca												
1,2,4-Trimethylbenzene	51.6 nc	170 nc												
1,3,5-Trimethylbenzene	21.3 nc	69.7 nc												
Vinyl acetate	426 nc	1,400 nc												
Vinyl chloride	0.0791 ca	0.746 ca												
Xylenes, total	275 nc	420 sat												
<b>Semivolatile Organic Compounds (SVOCs) by Method 8270C</b>														
Polynuclear Aromatic Hydrocarbon Compounds (PAHs or PNAs)			1x, 5x*	1x, 5x*	1x	1x	1x, 5x*	1x, 5x*	1x	1x, 5x*	1x, 100x*	1x, 20x*	1x	1x
Acenaphthene	3,680 nc	29,200 nc	0.093	0.17	0.057	0.084	0.20	0.20	0.030	0.41	7.7	0.91	0.062	0.24
Anthracene	21,900 nc	100,000 max	0.30	0.47	0.29	0.35	0.65	0.97	0.091	0.89	12*	1.2*	0.19	0.66
Benzo[a]anthracene	0.621 ca	2.11 ca	1.5	2.2	1.4	1.4	3.1*	2.4	0.33	2.3	19*	3.5*	0.72	1.7
Benzo[b]fluoranthene	0.621 ca	2.11 ca	2.4	4.4*	1.8	1.7	3.7*	4.6*	0.41	5.7*	17*	3.4*	1.1	1.7
Benzo[k]fluoranthene	6.21 ca	21.1 ca	1.9	3.8*	1.4	1.8	4.2*	2.3	0.43	2.2	18*	3.5*	0.72	1.6
Benzo[a]pyrene	0.0621 ca	0.211 ca	1.6	2.2	1.2	1.4	2.5	2.0	0.33	2.1	17*	3.2*	0.73	1.6
Chrysene	62.1 ca	211 ca	1.6	2.2	1.3	1.4	3.1*	2.2	0.34	4.1*	19*	3.6*	0.70	1.6
Dibenzo[a,h]anthracene	0.0621 ca	0.211 ca	0.16	0.21	0.12	0.16	0.32	0.23	0.040	0.30	2.8	1.2	0.073	0.31
Fluoranthene	2,290 nc	22,000 nc	6.5*	8.3*	3.0	2.8	8.1*	10*	0.63	9.4*	66*	10*	1.2	2.6
Fluorene	2,750 nc	26,300 nc	0.091	0.15	0.078	0.12	0.17	0.23	0.043	0.55	7.9*	0.84	0.065	0.24
Indeno[1,2,3-c,d]pyrene	0.621 ca	2.11 ca	0.39	0.56	0.30	0.45	0.82	0.62	0.098	0.67	4.1*	0.79*	0.19	0.84
Naphthalene	55.9 nc	188 nc	0.054	0.085	0.041	0.068	0.031	0.049	0.045	0.11	0.48	0.20	0.027	0.13
Pyrene	2,320 nc	29,100 nc	5.4*	6.8*	2.5	2.1	6.7*	7.6*	0.45	7.3*	49*	8.1*	0.90	1.8
<b>Total Arsenic and Lead by Method 6010B</b>														
Arsenic (As)	0.390 ca*	1.59 ca	11	11	8.1	12	12	7.5	8.1	6.6	13	14	9.2	15
Lead (Pb)	400 nc	750 nc	260	230	150	1,300	260	150	250	120	330	370	330	210
<b>Toxicity Characteristic Leaching Procedure (TCLP) by Method 6010B</b>														
Arsenic (As)			-	-	-	-	-	-	-	-	-	-	-	-
Lead (Pb)			-	-	-	0.58	-	-	-	-	-	-	-	-

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-7				SB189-8				SB189-9			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)
Total Solids by Method SW846-3540C, %	n/a	n/a	1007-1601-03 85.6%	1007-1601-04 80.5%	1007-1601-05 88.2%	1007-1601-06 80.9%	1007-1454-23 86.0%	1007-1454-24 85.1%	1007-1454-25 85.5%	1007-1454-26 82.5%	1007-1517-01 80.1%	1007-1601-07 88.7%	1007-1601-08 90.4%	1007-1601-09 83.6%
Photoionization Detector (PID) Reading, ppm <sub>v</sub>	n/a	n/a	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0/0.0
	See Rg. 9 keys in table legend													
<b>Volatile Organic Compounds (VOCs) by Method 8260B</b>	Rg. 9	Rg. 9	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	1,570 nc	6,040 nc												
Acrolein	0.103 nc	0.337 nc												
Acrylonitrile	0.209 ca*	0.491 ca*												
Benzene	0.601 ca*	1.31 ca*												
Bromobenzene	27.8 nc	92.2 nc												
Bromoform (tribromomethane)	61.6 ca*	218 ca*												
Bromomethane	3.90 nc	13.1 nc												
n-Butylbenzene	240 sat	240 sat												
sec-Butylbenzene	220 sat	220 sat												
tert-Butylbenzene	390 sat	390 sat												
Carbon disulfide	355 nc	720 sat												
Carbon tetrachloride	0.251 ca**	0.549 ca*												
Chlorobenzene	151 nc	530 nc												
Chloroethane	3.03 ca	6.49 ca												
Chloroform	3.56 ca/nc	11.7 ca/nc												
Chloromethane	1.23 ca	2.65 ca												
2-Chlorotoluene [o-Chlorotoluene]	158 nc	560 nc												
Isopropylbenzene [Cumene]	572 nc	1,980 nc												
Dibromochloromethane	1.11 ca	2.55 ca												
1,2-Dibromo-3-chloropropane	0.454 ca**	2.02 ca**												
1,2-Dibromoethane (Ethylene Dibromide)	0.00689 ca	0.0281 ca*												
Dichlorobromomethane [Bromodichloromethane]	0.824 ca	1.83 ca												
Dichlorodifluoromethane	93.9 nc	308 nc												
1,1-Dichloroethane	506 nc	1,740 nc												
1,2-Dichloroethane	0.278 ca*	0.603 ca*												
1,1-Dichloroethylene	124 nc	413 nc												
cis-1,2-Dichloroethylene	42.9 nc	146 nc												
trans-1,2-Dichloroethylene	69.5 nc	235 nc												
1,2-Dichloropropane	0.342 ca*	0.742 ca*												
1,3-Dichloropropene	0.777 ca	1.76 ca												
Ethylbenzene	8.92 ca	19.5 ca												
Methylene bromide (Dibromomethane)	66.9 nc	234 nc												
Methylene chloride	9.11 ca	20.5 ca												
Methyl ethyl ketone (MEK; 2-Butanone)	7,330 nc	27,100 nc												

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-7				SB189-8				SB189-9			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)
		Laboratory I.D.:	1007-1601-03	1007-1601-04	1007-1601-05	1007-1601-06	1007-1454-23	1007-1454-24	1007-1454-25	1007-1454-26	1007-1517-01	1007-1601-07	1007-1601-08	1007-1601-09
Methyl isobutyl ketone [4-Methanol 2-Pentanone]	787 nc	2,840 nc												
n-Propylbenzene	240 sat	240 sat												
Styrene	1,700 sat	1,700 sat												
1,1,1,2-Tetrachloroethane	3.19 ca	7.28 ca												
1,1,2,2-Tetrachloroethane	0.408 ca	0.929 ca												
Tetrachloroethylene (PCE)	1.51 ca*	3.42 ca*												
Toluene	520 sat	520 sat												
1,1,1-Trichloroethane	1,200 sat	1,200 sat												
1,1,2-Trichloroethane	0.729 ca*	1.61 ca*												
Trichloroethylene (TCE)	0.0530 ca	0.115 ca												
Trichlorofluoromethane	386 nc	2,000 sat												
1,2,3-Trichloropropane	0.00501 ca	0.011 ca												
1,2,4-Trimethylbenzene	51.6 nc	170 nc												
1,3,5-Trimethylbenzene	21.3 nc	69.7 nc												
Vinyl acetate	426 nc	1,400 nc												
Vinyl chloride	0.0791 ca	0.746 ca												
Xylenes, total	275 nc	420 sat												
<b>Semivolatile Organic Compounds (SVOCs) by Method 8270C</b>														
Polynuclear Aromatic Hydrocarbon Compounds (PAHs or PNAs)			1x	1x, 5x*	1x	1x	1x	1x	1x	1x	1x, 5x*	1x	1x	1x
Acenaphthene	3,680 nc	29,200 nc	0.028	0.20	N.D.	0.18	0.024	N.D.	0.099	0.071	0.49	0.078	0.029	N.D.
Anthracene	21,900 nc	100,000 max	0.20	0.85	0.024	0.52	0.085	N.D.	0.35	0.19	1.3	0.27	0.054	0.028
Benzo[a]anthracene	0.621 ca	2.11 ca	0.89	3.9*	0.14	1.1	0.48	0.072	1.1	0.86	4.7*	1.1	0.25	0.20
Benzo[b]fluoranthene	0.621 ca	2.11 ca	1.0	5.1*	0.25	1.2	0.63	0.085	1.1	1.2	6.6*	1.4	0.29	0.31
Benzo[k]fluoranthene	6.21 ca	21.1 ca	1.0	4.3*	0.12	0.88	0.41	0.10	1.2	0.81	6.0*	0.98	0.34	0.29
Benzo[a]pyrene	0.0621 ca	0.211 ca	0.85	3.8*	0.18	0.92	0.49	0.074	1.0	0.88	4.7*	1.1	0.29	0.60
Chrysene	62.1 ca	211 ca	0.86	3.8*	0.17	1.0	0.50	0.082	1.1	0.94	4.5*	1.1	0.29	0.23
Dibenzo[a,h]anthracene	0.0621 ca	0.211 ca	0.15	0.45	0.038	0.16	0.10	N.D.	0.21	0.18	0.54	0.25	0.034	0.082
Fluoranthene	2,290 nc	22,000 nc	1.2	11*	0.14	1.4	0.48	0.080	1.4	0.99	15*	1.4	0.26	0.16
Fluorene	2,750 nc	26,300 nc	0.040	0.39	N.D.	0.24	0.024	N.D.	0.12	0.076	0.50	0.080	0.027	N.D.
Indeno[1,2,3-c,d]pyrene	0.621 ca	2.11 ca	0.38	1.2	0.11	0.40	0.29	0.052	0.54	0.49	1.4	0.61	0.15	0.14
Naphthalene	55.9 nc	188 nc	0.049	0.13	0.061	0.049	N.D.	N.D.	0.043	0.11	0.051	0.020	0.026	N.D.
Pyrene	2,320 nc	29,100 nc	0.84	8.8*	0.11	0.82	0.34	0.057	0.90	0.67	11*	0.88	0.21	0.12
<b>Total Arsenic and Lead by Method 6010B</b>														
Arsenic (As)	0.390 ca*	1.59 ca	13	10	11	9.2	7.1	8.5	9.9	7.3	14	9.4	6.1	7.9
Lead (Pb)	400 nc	750 nc	290	910	130	150	170	50	290	210	250	110	170	330
<b>Toxicity Characteristic Leaching Procedure (TCLP) by Method 6010B</b>														
Arsenic (As)			-	-	-	-	-	-	-	-	-	-	-	-
Lead (Pb)			-	4.6	-	-	-	-	-	-	-	-	-	-

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-10				SB189-11				SB189-12			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Nat.?)
			Laboratory I.D.:											
Total Solids by Method SW846-3540C, %	n/a	n/a	1007-1517-02	1007-1517-03	1007-1517-04	1007-1517-05	1007-1517-06	1007-1517-07	1007-1517-08	1007-1517-09	1007-1517-10	1007-1517-11	1007-1517-12	1007-1517-13
			84.6%	81.8%	86.7%	79.3%	83.8%	83.1%	87.8%	82.6%	83.7%	82.8%	83.1%	79.2%
Photoionization Detector (PID) Reading, ppm <sub>v</sub>	n/a	n/a	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0/0.0
	See Rg. 9 keys in table legend													
<b>Volatile Organic Compounds (VOCs) by Method 8260B</b>	Rg. 9	Rg. 9	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	1,570	nc	6,040	nc										
Acrolein	0.103	nc	0.337	nc										
Acrylonitrile	0.209	ca*	0.491	ca*										
Benzene	0.601	ca*	1.31	ca*										
Bromobenzene	27.8	nc	92.2	nc										
Bromoform (tribromomethane)	61.6	ca*	218	ca*										
Bromomethane	3.90	nc	13.1	nc										
n-Butylbenzene	240	sat	240	sat										
sec-Butylbenzene	220	sat	220	sat										
tert-Butylbenzene	390	sat	390	sat										
Carbon disulfide	355	nc	720	sat										
Carbon tetrachloride	0.251	ca**	0.549	ca*										
Chlorobenzene	151	nc	530	nc										
Chloroethane	3.03	ca	6.49	ca										
Chloroform	3.56	ca/nc	11.7	ca/nc										
Chloromethane	1.23	ca	2.65	ca										
2-Chlorotoluene [o-Chlorotoluene]	158	nc	560	nc										
Isopropylbenzene [Cumene]	572	nc	1,980	nc										
Dibromochloromethane	1.11	ca	2.55	ca										
1,2-Dibromo-3-chloropropane	0.454	ca**	2.02	ca**										
1,2-Dibromoethane (Ethylene Dibromide)	0.00689	ca	0.0281	ca*										
Dichlorobromomethane [Bromodichloromethane]	0.824	ca	1.83	ca										
Dichlorodifluoromethane	93.9	nc	308	nc										
1,1-Dichloroethane	506	nc	1,740	nc										
1,2-Dichloroethane	0.278	ca*	0.603	ca*										
1,1-Dichloroethylene	124	nc	413	nc										
cis-1,2-Dichloroethylene	42.9	nc	146	nc										
trans-1,2-Dichloroethylene	69.5	nc	235	nc										
1,2-Dichloropropane	0.342	ca*	0.742	ca*										
1,3-Dichloropropene	0.777	ca	1.76	ca										
Ethylbenzene	8.92	ca	19.5	ca										
Methylene bromide (Dibromomethane)	66.9	nc	234	nc										
Methylene chloride	9.11	ca	20.5	ca										
Methyl ethyl ketone (MEK; 2-Butanone)	7,330	nc	27,100	nc										

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-10				SB189-11				SB189-12			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Nat.?)
		Laboratory I.D.:	1007-1517-02	1007-1517-03	1007-1517-04	1007-1517-05	1007-1517-06	1007-1517-07	1007-1517-08	1007-1517-09	1007-1517-10	1007-1517-11	1007-1517-12	1007-1517-13
Methyl isobutyl ketone [4-Methanol 2-Pentanone]	787 nc	2,840 nc												
n-Propylbenzene	240 sat	240 sat												
Styrene	1,700 sat	1,700 sat												
1,1,1,2-Tetrachloroethane	3.19 ca	7.28 ca												
1,1,2,2-Tetrachloroethane	0.408 ca	0.929 ca												
Tetrachloroethylene (PCE)	1.51 ca*	3.42 ca*												
Toluene	520 sat	520 sat												
1,1,1-Trichloroethane	1,200 sat	1,200 sat												
1,1,2-Trichloroethane	0.729 ca*	1.61 ca*												
Trichloroethylene (TCE)	0.0530 ca	0.115 ca												
Trichlorofluoromethane	386 nc	2,000 sat												
1,2,3-Trichloropropane	0.00501 ca	0.011 ca												
1,2,4-Trimethylbenzene	51.6 nc	170 nc												
1,3,5-Trimethylbenzene	21.3 nc	69.7 nc												
Vinyl acetate	426 nc	1,400 nc												
Vinyl chloride	0.0791 ca	0.746 ca												
Xylenes, total	275 nc	420 sat												
<b>Semivolatile Organic Compounds (SVOCs) by Method 8270C</b>														
Polynuclear Aromatic Hydrocarbon Compounds (PAHs or PNAs)			1x, 100x*	1x, 100x*	1x	1x, 50x*	1x, 50x*	1x, 5x*	1x	1x	1x, 10x*	1x	1x	1x
Acenaphthene	3,680 nc	29,200 nc	0.81	1.5	0.16	0.51	0.51	0.076	0.058	N.D.	0.35	0.087	0.16	N.D.
Anthracene	21,900 nc	100,000 max	5.3*	5.5*	0.38	2.1	1.9	0.35	0.19	0.021	1.1	0.37	0.41	N.D.
Benzo[a]anthracene	0.621 ca	2.11 ca	22*	24*	1.4	13*	9.6*	1.6	1.0	0.088	4.4*	1.6	1.4	N.D.
Benzo[b]fluoranthene	0.621 ca	2.11 ca	26*	27*	1.4	34*	12*	2.2	1.4	0.14	6.0*	1.9	1.8	N.D.
Benzo[k]fluoranthene	6.21 ca	21.1 ca	25*	26*	1.5	19*	11*	1.7	1.2	0.11	4.7*	1.9	1.6	N.D.
Benzo[a]pyrene	0.0621 ca	0.211 ca	21*	23*	1.4	17*	9.7*	1.6	1.0	0.10	4.6*	1.6	1.4	N.D.
Chrysene	62.1 ca	211 ca	23*	24*	1.5	16*	9.8*	1.6	1.0	0.091	4.4*	1.6	1.5	N.D.
Dibenzo[a,h]anthracene	0.0621 ca	0.211 ca	2.6*	2.1*	0.31	5.4	1.4	0.17	0.095	0.030	0.61	0.26	0.19	N.D.
Fluoranthene	2,290 nc	22,000 nc	62*	68*	1.8	23*	26*	3.9*	2.5	0.14	11*	2.4	2.4	N.D.
Fluorene	2,750 nc	26,300 nc	0.84	0.96	0.21	0.59	0.45	0.081	0.055	N.D.	0.37	0.11	0.16	N.D.
Indeno[1,2,3-c,d]pyrene	0.621 ca	2.11 ca	5.1*	8.7	0.83	13	2.0*	0.43	0.24	0.037	1.7	0.66	0.49	N.D.
Naphthalene	55.9 nc	188 nc	0.17	0.11	0.14	0.15	0.043	0.021	N.D.	N.D.	0.13	0.033	0.078	N.D.
Pyrene	2,320 nc	29,100 nc	50*	55*	1.1	21*	22*	3.2*	2.1	0.13	8.6*	1.7	1.8	N.D.
<b>Total Arsenic and Lead by Method 6010B</b>			2x	2x	2x	2x	1x, 5x*	2x	1x	2x	2x	2x	2x	1x, 2x*
Arsenic (As)	0.390 ca*	1.59 ca	8.5	6.7	5.9	11	9	9.7	3.4	10	12	12	9.1	5.5
Lead (Pb)	400 nc	750 nc	320	380	120	300	1,200*	330	270	120	620	520	730	27*
<b>Toxicity Characteristic Leaching Procedure (TCLP) by Method 6010B</b>							1x	1x			1x	1x	1x	
Arsenic (As)			-	-	-	-	-	-	-	-	-	-	-	-
Lead (Pb)			-	-	-	-	19	0.37	-	-	2.0	1.8	4.3	-

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-13				SB189-14				SB189-15			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)
Total Solids by Method SW846-3540C, %	n/a	n/a	1007-1601-10 84.7%	1007-1601-11 84.3%	1007-1601-12 88.1%	1007-1601-13 84.0%	1007-1601-14 87.9%	1007-1601-15 84.3%	1007-1601-16 83.0%	1007-1601-17 81.6%	1007-1517-14 84.5%	1007-1517-15 84.7%	1007-1517-16 83.2%	1007-1517-17 84.3%
Photoionization Detector (PID) Reading, ppm <sub>v</sub>	n/a	n/a	0.0	0.0	0.0	0.0/0.0	0.0	0.0	4.8	7.7/0.0	0.0	0.0	0.0	0.0/0.0
	See Rg. 9 keys in table legend													
<b>Volatile Organic Compounds (VOCs) by Method 8260B</b>	Rg. 9	Rg. 9	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	1,570 nc	6,040 nc												
Acrolein	0.103 nc	0.337 nc												
Acrylonitrile	0.209 ca*	0.491 ca*												
Benzene	0.601 ca*	1.31 ca*												
Bromobenzene	27.8 nc	92.2 nc												
Bromoform (tribromomethane)	61.6 ca*	218 ca*												
Bromomethane	3.90 nc	13.1 nc												
n-Butylbenzene	240 sat	240 sat												
sec-Butylbenzene	220 sat	220 sat												
tert-Butylbenzene	390 sat	390 sat												
Carbon disulfide	355 nc	720 sat												
Carbon tetrachloride	0.251 ca**	0.549 ca*												
Chlorobenzene	151 nc	530 nc												
Chloroethane	3.03 ca	6.49 ca												
Chloroform	3.56 ca/nc	11.7 ca/nc												
Chloromethane	1.23 ca	2.65 ca												
2-Chlorotoluene [o-Chlorotoluene]	158 nc	560 nc												
Isopropylbenzene [Cumene]	572 nc	1,980 nc												
Dibromochloromethane	1.11 ca	2.55 ca												
1,2-Dibromo-3-chloropropane	0.454 ca**	2.02 ca**												
1,2-Dibromoethane (Ethylene Dibromide)	0.00689 ca	0.0281 ca*												
Dichlorobromomethane [Bromodichloromethane]	0.824 ca	1.83 ca												
Dichlorodifluoromethane	93.9 nc	308 nc												
1,1-Dichloroethane	506 nc	1,740 nc												
1,2-Dichloroethane	0.278 ca*	0.603 ca*												
1,1-Dichloroethylene	124 nc	413 nc												
cis-1,2-Dichloroethylene	42.9 nc	146 nc												
trans-1,2-Dichloroethylene	69.5 nc	235 nc												
1,2-Dichloropropane	0.342 ca*	0.742 ca*												
1,3-Dichloropropene	0.777 ca	1.76 ca												
Ethylbenzene	8.92 ca	19.5 ca												
Methylene bromide (Dibromomethane)	66.9 nc	234 nc												
Methylene chloride	9.11 ca	20.5 ca												
Methyl ethyl ketone (MEK; 2-Butanone)	7,330 nc	27,100 nc												

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS												
	Direct Contact Soil (mg/kg)		SB189-13				SB189-14				SB189-15				
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	
			Laboratory I.D.:	1007-1601-10	1007-1601-11	1007-1601-12	1007-1601-13	1007-1601-14	1007-1601-15	1007-1601-16	1007-1601-17	1007-1517-14	1007-1517-15	1007-1517-16	1007-1517-17
Methyl isobutyl ketone [4-Methanol 2-Pentanone]	787 nc	2,840 nc													
n-Propylbenzene	240 sat	240 sat													
Styrene	1,700 sat	1,700 sat													
1,1,1,2-Tetrachloroethane	3.19 ca	7.28 ca													
1,1,2,2-Tetrachloroethane	0.408 ca	0.929 ca													
Tetrachloroethylene (PCE)	1.51 ca*	3.42 ca*													
Toluene	520 sat	520 sat													
1,1,1-Trichloroethane	1,200 sat	1,200 sat													
1,1,2-Trichloroethane	0.729 ca*	1.61 ca*													
Trichloroethylene (TCE)	0.0530 ca	0.115 ca													
Trichlorofluoromethane	386 nc	2,000 sat													
1,2,3-Trichloropropane	0.00501 ca	0.011 ca													
1,2,4-Trimethylbenzene	51.6 nc	170 nc													
1,3,5-Trimethylbenzene	21.3 nc	69.7 nc													
Vinyl acetate	426 nc	1,400 nc													
Vinyl chloride	0.0791 ca	0.746 ca													
Xylenes, total	275 nc	420 sat													
<b>Semivolatile Organic Compounds (SVOCs) by Method 8270C</b>															
Polynuclear Aromatic Hydrocarbon Compounds (PAHs or PNAs)				1x	1x	1x	1x	1x	1x	1x	1x	1x, 20x*	200x	1x, 5x*	1x
Acenaphthene	3,680 nc	29,200 nc		0.024	0.048	N.D.	0.056	0.051	0.053	0.044	0.032	0.76	52	0.13	0.12
Anthracene	21,900 nc	100,000 max		0.065	0.19	N.D.	0.31	0.16	0.23	0.27	0.077	2.2	120	0.50	0.35
Benzo[a]anthracene	0.621 ca	2.11 ca		0.37	1.0	0.022	1.1	0.91	1.2	1.6	0.40	7.2*	140	3.5*	1.2
Benzo[b]fluoranthene	0.621 ca	2.11 ca		0.45	1.0	0.019	1.0	1.2	1.2	1.4	0.51	11*	110	5.0*	1.6
Benzo[k]fluoranthene	6.21 ca	21.1 ca		0.44	1.0	0.021	1.0	1.0	1.2	1.5	0.53	6.8*	88	4.2*	0.96
Benzo[a]pyrene	0.0621 ca	0.211 ca		0.40	0.89	0.021	1.1	0.97	1.1	1.4	0.46	7.2*	110	3.6*	1.2
Chrysene	62.1 ca	211 ca		0.41	1.0	0.023	1.1	0.96	1.3	1.6	0.45	7.5*	120	3.5*	1.2
Dibenzo[a,h]anthracene	0.0621 ca	0.211 ca		0.063	0.19	N.D.	0.25	0.19	0.19	0.22	0.11	1.1	14	0.62	0.34
Fluoranthene	2,290 nc	22,000 nc		0.41	1.1	0.044	1.3	1.0	1.3	1.5	0.47	19*	370	7.6*	1.5
Fluorene	2,750 nc	26,300 nc		0.019	0.053	N.D.	0.093	0.045	0.042	0.048	0.028	0.71	90	0.16	0.12
Indeno[1,2,3-c,d]pyrene	0.621 ca	2.11 ca		0.19	0.47	N.D.	0.41	0.48	0.53	0.67	0.21	1.7*	32	1.6	0.70
Naphthalene	55.9 nc	188 nc		N.D.	0.039	N.D.	0.032	0.020	N.D.	0.030	0.048	0.14	71	0.090	0.080
Pyrene	2,320 nc	29,100 nc		0.28	0.71	0.036	0.83	0.71	0.83	1.0	0.32	15*	290	2.5	0.98
<b>Total Arsenic and Lead by Method 6010B</b>															
Arsenic (As)	0.390 ca*	1.59 ca		9	10	6.7	6.1	8.5	11	11	8.1	15	13	8.7	9.1
Lead (Pb)	400 nc	750 nc		480	460	25	90	360	550	480	230	700	330	310	420
<b>Toxicity Characteristic Leaching Procedure (TCLP) by Method 6010B</b>															
Arsenic (As)				1x				1x	1x			1x			
Lead (Pb)				0.043	-	-	-	0.47	3.1	-	-	2.3	-	-	-

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-16				SB189-17				SB189-18			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Nat.?)	0-2' (Fill)	2-5' (Fill)	5-10'	10-20'
Total Solids by Method SW846-3540C, %	n/a	n/a	1007-1517-18 85.8%	1007-1517-19 83.3%	1007-1517-20 81.3%	1007-1517-21 81.5%	1007-1517-22 83.9%	1007-1517-23 83.9%	1007-1517-24 80.8%	1007-1517-25 81.3%	1007-1601-18 84.7%	1007-1601-19 87.8%	(6) Geoprobe Refusals No Samples Obtained	
Photoionization Detector (PID) Reading, ppm <sub>v</sub>	n/a	n/a	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0/0.0	0.0	0.0	-	-
See Rg. 9 keys in table legend														
<b>Volatile Organic Compounds (VOCs) by Method 8260B</b>	Rg. 9	Rg. 9	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	1,570 nc	6,040 nc												
Acrolein	0.103 nc	0.337 nc												
Acrylonitrile	0.209 ca*	0.491 ca*												
Benzene	0.601 ca*	1.31 ca*												
Bromobenzene	27.8 nc	92.2 nc												
Bromoform (tribromomethane)	61.6 ca*	218 ca*												
Bromomethane	3.90 nc	13.1 nc												
n-Butylbenzene	240 sat	240 sat												
sec-Butylbenzene	220 sat	220 sat												
tert-Butylbenzene	390 sat	390 sat												
Carbon disulfide	355 nc	720 sat												
Carbon tetrachloride	0.251 ca**	0.549 ca*												
Chlorobenzene	151 nc	530 nc												
Chloroethane	3.03 ca	6.49 ca												
Chloroform	3.56 ca/nc	11.7 ca/nc												
Chloromethane	1.23 ca	2.65 ca												
2-Chlorotoluene [o-Chlorotoluene]	158 nc	560 nc												
Isopropylbenzene [Cumene]	572 nc	1,980 nc												
Dibromochloromethane	1.11 ca	2.55 ca												
1,2-Dibromo-3-chloropropane	0.454 ca**	2.02 ca**												
1,2-Dibromoethane (Ethylene Dibromide)	0.00689 ca	0.0281 ca*												
Dichlorobromomethane [Bromodichloromethane]	0.824 ca	1.83 ca												
Dichlorodifluoromethane	93.9 nc	308 nc												
1,1-Dichloroethane	506 nc	1,740 nc												
1,2-Dichloroethane	0.278 ca*	0.603 ca*												
1,1-Dichloroethylene	124 nc	413 nc												
cis-1,2-Dichloroethylene	42.9 nc	146 nc												
trans-1,2-Dichloroethylene	69.5 nc	235 nc												
1,2-Dichloropropane	0.342 ca*	0.742 ca*												
1,3-Dichloropropene	0.777 ca	1.76 ca												
Ethylbenzene	8.92 ca	19.5 ca												
Methylene bromide (Dibromomethane)	66.9 nc	234 nc												
Methylene chloride	9.11 ca	20.5 ca												
Methyl ethyl ketone (MEK; 2-Butanone)	7,330 nc	27,100 nc												

TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS (Continued)

(See Table Legend on last sheet)

Chemical Group and Laboratory Method Compound or Metal Name (and Synonym)	2002 EPA REGION 9 PRG's		GEOPROBE SOIL BORING NO. / SOIL SAMPLE INTERVAL (NATIVE SOIL OR FILL MATERIAL) / LABORATORY I.D. / LABORATORY RESULTS											
	Direct Contact Soil (mg/kg)		SB189-16				SB189-17				SB189-18			
	Residential	Industrial	Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)				Soil (mg/kg, dry wt. basis)			
			0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Fill)	0-2' (Fill)	2-5' (Fill)	5-10' (Fill)	10-20' (Nat.?)	0-2' (Fill)	2-5' (Fill)	5-10'	10-20'
			Laboratory I.D.:	1007-1517-18	1007-1517-19	1007-1517-20	1007-1517-21	1007-1517-22	1007-1517-23	1007-1517-24	1007-1517-25	1007-1601-18	1007-1601-19	(6) Geoprobe Refusals
Methyl isobutyl ketone [4-Methanol 2-Pentanone]	787	nc	2,840	nc										
n-Propylbenzene	240	sat	240	sat										
Styrene	1,700	sat	1,700	sat										
1,1,1,2-Tetrachloroethane	3.19	ca	7.28	ca										
1,1,2,2-Tetrachloroethane	0.408	ca	0.929	ca										
Tetrachloroethylene (PCE)	1.51	ca*	3.42	ca*										
Toluene	520	sat	520	sat										
1,1,1-Trichloroethane	1,200	sat	1,200	sat										
1,1,2-Trichloroethane	0.729	ca*	1.61	ca*										
Trichloroethylene (TCE)	0.0530	ca	0.115	ca										
Trichlorofluoromethane	386	nc	2,000	sat										
1,2,3-Trichloropropane	0.00501	ca	0.011	ca										
1,2,4-Trimethylbenzene	51.6	nc	170	nc										
1,3,5-Trimethylbenzene	21.3	nc	69.7	nc										
Vinyl acetate	426	nc	1,400	nc										
Vinyl chloride	0.0791	ca	0.746	ca										
Xylenes, total	275	nc	420	sat										
<b>Semivolatile Organic Compounds (SVOCs) by Method 8270C</b>														
Polynuclear Aromatic Hydrocarbon Compounds (PAHs or PNAs)					1x, 5x*	1x, 20x*	1x	1x	1x	1x	1x	1x	1x	1x
Acenaphthene	3,680	nc	29,200	nc	0.19	0.88	0.051	N.D.	0.083	0.042	0.064	0.037	0.047	0.072
Anthracene	21,900	nc	100,000	max	0.68	3.2*	0.27	N.D.	0.24	0.13	0.20	0.18	0.30	0.31
Benzo[a]anthracene	0.621	ca	2.11	ca	4.8*	12*	1.4	0.045	1.1	0.53	1.1	0.64	2.4	1.6
Benzo[b]fluoranthene	0.621	ca	2.11	ca	7.1*	17*	2.0	0.16	1.6	0.72	1.4	0.88	2.8	1.8
Benzo[k]fluoranthene	6.21	ca	21.1	ca	6.3*	15*	2.1	0.088	1.5	0.59	1.4	0.88	2.1	1.7
Benzo[a]pyrene	0.0621	ca	0.211	ca	5.0*	13*	1.7	0.064	1.2	0.55	1.1	0.74	2.4	1.6
Chrysene	62.1	ca	211	ca	4.7*	12*	1.4	0.051	1.2	0.56	1.1	0.68	2.4	1.8
Dibenzo[a,h]anthracene	0.0621	ca	0.211	ca	0.75	0.37	0.22	N.D.	0.020	0.14	0.15	0.13	0.43	0.30
Fluoranthene	2,290	nc	22,000	nc	12*	31*	2.6	0.069	1.9	0.78	1.5	1.1	2.1	1.9
Fluorene	2,750	nc	26,300	nc	0.19	0.96	0.070	N.D.	0.081	0.043	0.075	0.035	0.043	0.11
Indeno[1,2,3-c,d]pyrene	0.621	ca	2.11	ca	2.1	2.5*	0.60	0.065	0.51	0.26	0.40	0.37	1.2	0.81
Naphthalene	55.9	nc	188	nc	0.049	0.11	0.13	N.D.	0.024	0.021	0.040	0.020	0.021	0.086
Pyrene	2,320	nc	29,100	nc	9.6*	24*	2.0	0.053	1.4	0.59	1.2	0.79	1.5	1.2
<b>Total Arsenic and Lead by Method 6010B</b>														
Arsenic (As)	0.390	ca*	1.59	ca	2x	2x	2x	2x, 10x*	2x	2x, 5x*	2x	2x	2x	2x
Lead (Pb)	400	nc	750	nc	12	11	11	18	11	14	8	12	12	12
<b>Toxicity Characteristic Leaching Procedure (TCLP) by Method 6010B</b>														
Arsenic (As)					-	-	-	-	-	-	-	-	-	-
Lead (Pb)					-	-	9.3	6.3	1.5	38	-	5.7	1.8	-

**TABLE 189-2 - SUMMARY TABLE OF ANALYTICAL LABORATORY RESULTS WITH COMPARISONS TO THE OCTOBER 2002 EPA REGION 9 PRELIMINARY REMEDIATION GOALS (PRGS)**

TABLE LEGEND:

*October 2002 EPA Region 9 PRGs Table Columns Keys:*

- n/a = Not Applicable
- nc = Noncancer PRG
- ca = Cancer PRG
- ca\* = Cancer PRG where nc < 100X ca
- ca\*\* = Cancer PRG where nc < 10X ca
- max = Ceiling limit (See Section 2.1 of the October 2002 EPA Region 9 PRGs Table User's Guide)
- sat = Soil Saturation (See Section 4.5)
- N.V. = No value is provided for this analyte in the October 2002 EPA Region 9 PRGs Tables

*Soil Boring and Laboratory Results Columns:*

- (Fill, F) = Sample Interval appears to be Fill Material
- (Nat., N) = Sample Interval appears to be Native Soil
- N.A., - = The analyte was Not Analyzed
- N.D. = The analyte was Not Detected above the laboratory Method Detection Limit (MDL)
- N.S. = The soil boring location was Not Sampled due to one or more Geoprobe refusals including offsets, or insufficient sample recoveries
- 1x, 10x... = Laboratory sample extract dilution factor (1x = no dilution) due to sample matrix interference and/or high analyte concentration interference
- Value = The analyte was detected and positively identified at the estimated concentration shown below the laboratory Practical Quantitation Limit (PQL)
- Value** = The analyte was detected and positively identified at the concentration shown above the laboratory Practical Quantitation Limit (PQL);
- Value** = The analyte concentration exceeds its October 2002 EPA Region 9 Preliminary Remediation Goal (PRG) for Residential soil
- Value** = The analyte concentration exceeds its October 2002 EPA Region 9 Preliminary Remediation Goal (PRG) for Industrial soil
- Value** = The analyte concentration exceeds its RCRA Toxicity Characteristic Leaching Procedure (TCLP) Limit Value (5.0 mg/L for Arsenic and Lead)

**ATTACHMENT 8**

**Waste Management, Inc. Outer Loop Landfill**

**Non-Hazardous Waste Disposal Quotation**

**DRAFT**



**Waste Management**

Industrial Technical Svc Center  
Highway 17 N. Mile Marker 163  
P.O. Box 55  
Emelle, AL 35459  
(205) 652-9721

August 24, 2010

Marshall Levy  
Barr Engineering  
Email: mlevy@barreng.com

\*\*\*FOR BUDGETARY PURPOSES ONLY\*\*\*

Waste Management is pleased to provide you with BUDGETARY PROPOSAL for the disposal of the below referenced material. Based on the information provided, the following summarizes our quotation.

**WASTE LOCATION**

Ohio River Bridges, Kennedy Interchange Reconstruction Project  
Site #85, Parcel 1128  
Louisville, KY

**WASTE DESCRIPTION**

Non Hazardous Soil

**WM FACILITY**

WM Outer Loop Landfill  
2673 Outer Loop  
Louisville, KY 40219

**DISPOSAL CHARGES**

\$26.00/Ton – Solid for Direct Landfill  
3 Ton Per Load Minimum

**PROFILE APPROVAL FEE**

\$ 50.00/Profile – Waste Approval Fee  
\$1.75/Ton – Kentucky Solid Waste Fee  
5% Host Community Fee  
Environmental Fee - \$5.00/Load (under 4 tons), \$10.00/Load (over 4 tons)  
Fuel Surcharge will apply – Varies based on current fuel prices  
\*\*See attached sheet for other charges that may apply \*\*

**TRANSPORTATION CHARGES**

\$ 8.00/Ton  
22 Ton Per Load Minimum

All pricing is contingent upon the review of the Generator's Waste Profile Sheet. All documents must be completed and signed by an authorizing signatory of the generator.

Upon acceptance of this proposal, please contact me at your earliest convenience for the paperwork required to begin the approval process.

This price is good for sixty (60) days. If not accepted in the allotted time, all pricing will expire.

Thank you for this opportunity to be of service to you. If you should have any questions, please do not hesitate to call me at 502/216.3327.

Sincerely,  
**WASTE MANAGEMENT**  
*Gregg Wroblewski*  
Industrial Account Manager  
GW/gh

**ATTACHMENT FOR FEES/SURCHARGES: (If Applicable)**

**APPROVAL FEES:**

<b>Profile Recertification Fee: \$ 25.00/Profile</b>
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**Preprinted Manifest - \$1.00/Each.**

**Spill Cleanup - \$500.00/load.**

**Certification of Burial/Destruction – \$200.00.**

**Wash-Out - \$200/load.**

**Special Handling/Burial - \$175.00.**

**Dig-Out - \$150.00.**

**Tarp - \$100.00/Each.**

**Additional Documentation – Tickets cc’s – \$50.00.**

**Record Management (Extra Copies) – \$50.00.**

**Waste Ban Items (Specify) - \$50.00.**

**Witness Destruction - \$50.00.**

**Unloading Fee (after 1 hour) - \$100.00/hour with a one hour minimum/load**