

**Table 5-7
Benzene Analytical Results in the Unsaturated Soil Zone Compared to IGW Soil Screening Level
Forrest Street, Garfield Avenue Group
PPG, Jersey City, New Jersey**

													Analyte CAS-RN Units DIGWSSL	BENZENE 71-43-2 mg/kg 0.005	
Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4)	Sample ID (G5, G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G4, G8, G9)	Sample End Elevation (ft NAVD88) (G4, G10)	Lab ID (G11)	Lab SDG (G11)	Date Collected (G12)	Sample Status (G13, G14)	Sample Type (G15)	Validated (Y/N) (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes
CC10B	P4-FOR-CC10B	10.7	P4-FOR-CC10B-3.0-3.5	3.0 - 3.5 ft	7.7	7.2	JC22855-5A	JC22855A	06/23/2016	remaining	N	Y	0.0010		S1
FF9B	P4-FOR-FF9B	12.2	P4-FOR-FF9B-1.0-1.5	1.0 - 1.5 ft	11.2	10.7	JC22855-9A	JC22855A	06/23/2016	remaining	N	Y	0.0045		
FF9B	P4-FOR-FF9B	12.2	P4-FOR-FF9B-3.0-3.5	3.0 - 3.5 ft	9.2	8.7	JC22855-12A	JC22855A	06/23/2016	remaining	N	Y	0.0275		S2
FF9B	P4-FOR-FF9B	12.2	P4-FOR-FF9B-3.0-3.5X	3.0 - 3.5 ft	9.2	8.7	JC22855-13A	JC22855A	06/23/2016	remaining	FD	Y	0.0170		S2
FF9B	P4-FOR-FF9B	12.2	P4-FOR-FF9B-5.0-5.5	5.0 - 5.5 ft	7.2	6.7	JC22855-14A	JC22855A	06/23/2016	remaining	N	Y	0.582		S2
HH8B	EF-07	13.3	EF-B07-2.5	2.5 - 3.0 ft	10.8	10.3	460-25301-13	460253011	04/13/2011	remaining	N	Y	1.5		S2
HH8B	EF-07	13.3	EF-B07-6.0	6.0 - 6.5 ft	7.3	6.8	460-25350-1	460253501	04/14/2011	remaining	N	Y	< 0.00083	U	
Y12B	P4-FOR-Y12B	10.5	P4-FOR-Y12B-0.5-1.0	0.5 - 1.0 ft	9.9	9.4	JC22855-17A	JC22855A	06/23/2016	remaining	N	Y	< 0.00012	U	S3
Y12B	P4-FOR-Y12B	10.5	P4-FOR-Y12B-2.0-2.5	2.0 - 2.5 ft	8.4	7.9	JC22855-18A	JC22855A	06/23/2016	remaining	N	Y	< 0.00013	U	S3
Y12B	P4-FOR-Y12BR	10.5	P4-FOR-Y12BR-0.5-1.0	0.5 - 1.0 ft	9.9	9.4	JC23104-12A	JC23104A	06/28/2016	remaining	N	Y	0.0012		S3

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ABBREVIATIONS:

ACO - Administrative Consent Order
bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
DIGWSSL - Default Impact to Groundwater Soil Screening Level
El. - elevation
FD - field duplicate sample type
Forrest RAWP - March 2018 *Interim Remedial Action Work Plan, Forrest Street and Forrest Street Properties Deferred Remediation Areas* (AECOM)
ft - feet
HDPE - high-density polyethylene
IGW - Impact to Groundwater
JCO - Judicial Consent Order
mg/kg - milligrams per kilogram
MGP - manufactured gas plant
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
SDG - sample delivery group
U.S. - United States

QUALIFIERS:

U - The analyte was not detected above the sample reporting limit shown.

GENERAL NOTES:

- G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Row V through HH (extending west to east) and Grid Column 7B through 12B (extending from south to north).
- G2. "Location ID" refers to the location name where samples were collected.
- G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
- G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
- G5. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs. In some cases, the "Sample ID" in the table is a variant of the sample ID in the laboratory report and/or data validation report. In these cases, the "Lab ID" associates the sample results to the laboratory report and/or data validation report.
- G6. This table compares sample results from the unsaturated zone to the DIGWSSLs. The groundwater elevation (above which is the unsaturated zone) on this Site was estimated as the 50th percentile groundwater elevation from seven monitoring wells located on or adjacent to Forrest Street gauged between December 2003 and December 2016. The monitoring well locations and data are included in Appendix A. The estimated groundwater elevation for this Site is El. 6.3 ft NAVD88.
- G7. "Depth Interval" is based on the "Location Elevation."
- G8. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
- G9. In some grids, there may be up to 0.1 ft variation between the sample start elevation of the pit bottom or sidewall sample and the post-excavation elevation survey point due to rounding of the numbers.
- G10. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
- G11. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
- G12. "Date Collected" refers to the date the soil sample was collected.
- G13. "Sample Status" of "remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location.
- G14. The post-excavation survey points and 1-ft post-excavation contours representing the as-built terminal excavation elevations are provided on Figure 5-7.
- G15. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
- G16. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
- G17. "Result" refers to the analytical result which is reported in mg/kg.
- G18. Bold text indicates that the result exceeds the DIGWSSL. Non-bold text indicates that the result does not exceed the DIGWSSL.
- G19. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.
- G20. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.

SPECIFIC NOTES:

- S1. This sample is remaining in place within the Forrest Street Utility Offset, which is being addressed via engineering controls (HDPE Liner) and institutional controls (notice in lieu of deed notice), as appropriate for the abutting Forrest Street Properties' current use, as described in the Forrest RAWP.
- S2. In Grids FF9B and HH8B, the benzene concentrations in samples P4-FOR-FF9B-3.0-3.5 and its field duplicate P4-FOR-FF9B-3.0-3.5X, P4-FOR-FF9B-5.0-5.5, and EF-B07-2.5 exceed the DIGWSSL. The benzene concentrations in these samples are not related to MGP impacts emanating from Site 114 as per the September 2018 *Forrest Street and Forrest Street Properties Emanating-From Parameters (Revision 1)* (AECOM) technical memorandum. As these exceedances are not associated with MGP operations, they do not fall under purview of the ACO and JCO and are the responsibility of the property owner.
- S3. This sample is remaining in place within the 100 Forrest Street Loading Dock Driveway, which is being addressed via engineering controls (Existing Asphalt and Concrete Cap) and institutional controls (notice in lieu of deed notice), as appropriate for the abutting Forrest Street Properties' current use, as described in the Forrest RAWP.