APPENDIX A: SOIL/FILL AREA/VOLUME DELINEATION INFORMATION

Appendix A
Remedial Footprint Information

Remedial investigation (RI) soil results and historical data were used to develop the footprints for the soil and soil gas remedial alternatives. Appendix A prepared by USEPA describes the methodology used to prepare these footprints; delineations will be completed during the remedial design. All of the data used for this evaluation are provided in Table 3-5A through Table 3-5D in the Feasibility Study (FS) Report. For each sample listed in the Table 3-5 series, information is provided on the property lot number, location identification (ID), sample date, depth interval in units of feet below ground surface (bgs), sample type (indicating a primary environmental sample or a quality control field duplicate), and information on the associated parent and field duplicate pair. The laboratory results and the associated qualifier are presented. The RI soil data were provided by PPG Industries, Inc. (PPG) and their consultants, Woodard & Curran, on January 17, 2020. The historical data were provided by PPG/Woodard & Curran as Appendix F of the 2015 Site Characterization Summary Report (SCSR).

The data were processed before the graphical analyses were performed, as follows:

- Non-detected results were represented by the quantitation limit.
- Total PCB concentrations were calculated as the sum of the detected (available) PCB Aroclor results. When all of the PCB Aroclors were non-detected, the Total PCB concentration was represented by the highest quantitation limit of individual PCB Aroclor.
- Total Xylenes concentrations were calculated as the sum of detected Xylene isomers. When both Xylene isomers were non-detected, the Total Xylenes concentration was represented by the highest quantitation limit of individual Xylene isomers.
- Field duplicate results were averaged prior to inclusion. For Total PCBs and Total Xylenes, the summations were calculated first for the parent and field duplicate samples, and then averaged
- Soil results representing "fill" from the soil mound on Lot 68 (Borings B-59 and B-60) were not included in the evaluation because the mound is removed in winter 2019.

Both the RI dataset and the historical dataset have some data limitations and uncertainties. These uncertainties are acknowledged here, but they do not affect their utility in developing the remedial footprint:

- The RI data were generated for the United States Environmental Protection Agency (EPA) CERLCA process while the historic data were generated for the New Jersey Department of Environmental Protection (NJDEP) Site Remediation Program (SRP).
- The RI data were validated in accordance with the USEPA Region 2 guidelines, while the historical data would have been generated to satisfy the NJDEP SRP data quality.
- PPG/Woodard & Curran provided electronic geographical coordinates for the RI data. Historical data were provided as aerial maps in the SCSR, which EPA digitized and converted to coordinates.
- Depth intervals are provided for all of the historic data used in the evaluation, except for one study conducted on Lot 58. Based on the SCSR, these soil samples were collected from borings that advanced to a depth of less than 14 feet bgs.
- Neither the RI soil boring nor the historical soil borings generated continuous soils samples along the full length of the boring. Consequently, there is no depth profile available to identify the depth of contamination, which limits the estimation of volume. Footprints are provided in terms of acreage, outlining the extent that the remedial response would occur. Delineations, including depth of contamination, will be completed during the remedial design. Remedial design delineation includes sampling non-detected locations with quantitation limit equal to or greater than PRG/ARAR.
- Other than Lot 68, historical data represent samples collected in 2008-2010.

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The following historical data were removed from consideration and not evaluated:

- Historical soil data collected in the 1980s on Lot 1 and Lot 69 were removed from consideration.
- A remedial response occurred on Lot 68 in 1992. Historical data collected prior to 1992 were removed from consideration. Confirmation soil sampling in 1994 and 1995 were included.
- A remedial response occurred on Lot 70 in 2012. Historical data collected prior to 2012 were removed from consideration.
- Any historical data missing coordinates or not found in the SCSR Appendix F sampling maps (for lots 1 and 70) were removed from consideration.

The FS Section 3.7.1 developed risk-based preliminary remedial goal (PRG) values for soil parameters identified as chemicals of potential concern (COPCs) in the Baseline Human Health Risk Assessment (BHHRA): lead and copper. The FS also developed risk-based PRGs for soil parameters to be protective of vapor intrusion (soil gas) for naphthalene, Total Xylenes, and trichloroethylene (TCE). Additional, COPCs were identified by comparing the RI soil results to the NJDEP Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS), which are the Applicable and or Relevant and Appropriate Requirements (ARARs) for soils. Contaminants exceeding the ARARs were identified as COPCs. A total of 11 parameters were identified as COPCs (refer to summary table below).

Alternatives	Class	COPCs	Standard	ARAR/PRG (mg/kg)
SOIL	Metals	Arsenic	ARAR	19
		Copper	PRG	526
		Lead	PRG	800
	PAHs	Benz[a]anthracene	ARAR	17
		Benzo[a]pyrene	ARAR	2
		Benzo[b]fluoranthene	ARAR	17
		Dibenzo[a,h]anthracene	ARAR	2
	PCB	Total PCBs	ARAR	1
	VOCs	Benzene	ARAR	5
		Naphthalene	ARAR	17
		Vinyl Chloride	ARAR	2
SOIL GAS	VOCs	Naphthalene	PRG	0.62
		Trichloroethylene	PRG	0.02
		Total Xylenes	PRG	6.5

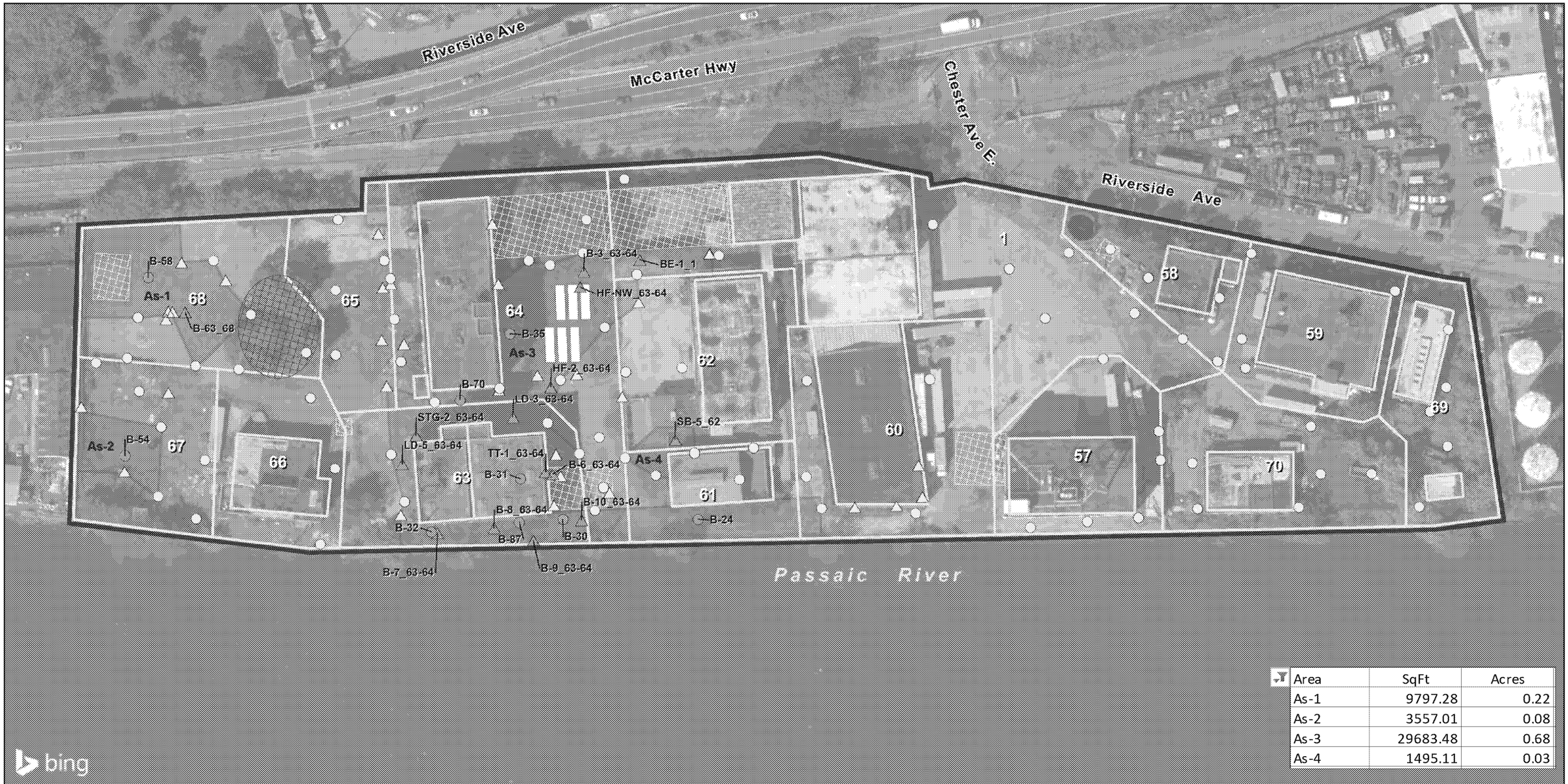
The footprints of the remedial actions for soil and soil gas media were determined based on a point-by-point evaluation (also known as single point compliance) as follow (delineations, including depth of contamination, will be completed during the remedial design):

- Exceedances in the RI and historical soil data were identified by comparing the highest concentration of each COPC in each soil boring to the relevant ARAR or PRG. If all of the data were reported as non-detected, then the highest quantitation limit was compared to the relevant ARAR or PRG.
- Data were then plotted and denoted on the map as exceeding or not exceeding the relevant ARAR or PRG.

- Polygons were then manually created using professional judgement to encircle and bound the exceedances by the nearest "clean" boring (below ARAR/PRG or nondetect concentration) and/or existing features, such as buildings (existing and partially demolished buildings) and/or the study area. Effort was taken to minimize the polygon areas. Polygons were developed irrespective of lot boundaries.
- All polygons areas for all the COPCs were assimilated into one composite figure and were summed after removing overlapping polygons to generate a footprint for the remedial action. One footprint was created for the Soil/Fill Alternatives and another was created for the Soil Gas Alternative.
- Spatial data processing was performed using ESRI ArcGIS 10.71 in the New Jersey State Plane NAD83 Coordinate System. Area calculations were performed for each polygon area of each analyte as shown in the table below. The aggregate extents of soil and soil gas remedial action areas were calculated using the dissolve function to eliminate overlapping areas.
- Total composite acreage (units of acres) used in the FS and cost estimates.

Figure	COPCs	Area	SqFt	Acres
Figure A-1	Arsenic	As-1	9797.28	0.22
		As-2	3557.01	0.08
		As-3	29683.48	0.68
		As-4	1495.11	0.03
Figure A-2	Copper	Cu-1	5,743.13	0.13
		Cu-2	4,433.10	0.1
		Cu-3	2,438.08	0.06
		Cu-4	2,091.23	0.05
Figure A-3	Lead	Pb-1	18,516.69	0.43
		Pb-2	9,187.38	0.21
		Pb-3	26,921.45	0.62
		Pb-4	4,740.73	0.11
		Pb-5	26,631.58	0.61
		Pb-6	9,187.91	0.21
Figure A-4	Benzo(a)anthracene	B(a)A-1	3,275.03	0.08
Figure A-5	Benzo(a)pyrene	B(a)P-1	10,480.44	0.24
		B(a)P-2	8,259.46	0.19
		B(a)P-3	688	0.02
		B(a)P-4	2,542.09	0.06
		B(a)P-5	7,060.72	0.16
		B(a)P-6	2,275.93	0.05
		B(a)P-7	1,740.20	0.04
		B(a)P-8	12,753.11	0.29
		B(a)P-9	6,776.92	0.16
		B(a)P-10	7,554.76	0.17
		B(a)P-11	4,473.71	0.1
		B(a)P-12	1,048.54	0.02
		B(a)P-13	2,821.15	0.06
		B(a)P-14	3,193.07	0.07
Figure A-6	Benzo(b)fluoranthene	B(b)F-1	3,273.98	0.08

Figure	COPCs	Area	SqFt	Acres
Figure A-7	Dibenzo(a,h)anthracene	D(a,h)A-1	2,558.98	0.06
		D(a,h)A-2	4,020.10	0.09
Figure A-8	PCBs (Total)	PCB-1	3,661.67	0.08
		PCB-2	3,311.66	0.08
		PCB-3	7,001.54	0.16
		PCB-4	10,318.49	0.24
Figure A-9	Benzene	Benzene-1	5,206.38	0.12
		Benzene-2	5,205.43	0.12
Figure A-10	Naphthalene	NAPH-1	3,203.09	0.07
Figure A-11	Vinyl Chloride	VC-1	2,935.72	0.07
		VC-2	4,084.71	0.09
Figure A-12	**Footprint of the Soil/Fill Remedial Alternative (composite figure of all parameters)**		**157,654.08**	**3.62**
Figure A-13	Naphthalene	NAPH-1	13671.79	0.31
		NAPH-2	2527.79	0.06
		NAPH-3	8077.46	0.19
		NAPH-4	16078.8	0.37
		NAPH-5	11021.63	0.25
		NAPH-6	2077.04	0.05
		NAPH-7	37278.79	0.86
		NAPH-8	3687.5	0.08
Figure A-14	Trichloroethene	TCE-1	28907.11	0.66
		TCE-2	4532.19	0.1
		TCE-3	51815.44	1.19
		TCE-4	5036.7	0.12
		TCE-5	1742.84	0.04
		TCE-6	23382.09	0.54
Figure A-15	Xylenes (Total)	Xy-1	6832.53	0.16
		Xy-2	3749.6	0.09
		Xy-3	6933.22	0.16
		Xy-4	9386.19	0.22
		Xy-5	1685.91	0.04
		Xy-6	12740.48	0.29
		Xy-7	3087.33	0.07
Figure A-16	**Footprint of the Soil/Fill Remedial Alternative (composite figure of all parameters)**		**164,179.88**	**3.77**



Area	SqFt	Acres
As-1	9797.28	0.22
As-2	3557.01	0.08
As-3	29683.48	0.68
As-4	1495.11	0.03

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Footprint of Remedial Action
- Parcel (Newark, Oct 2017)

- RI Soil Boring
- Historical Sample
- Result Not Detected
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.

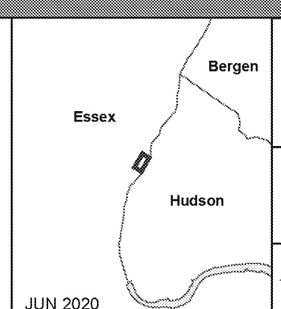


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Figure A-1
Site-Wide Soil Sampling Results for Soil Alternatives: Arsenic
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

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Area	SqFt	Acres
Cu-1	5,743.13	0.13
Cu-2	4,433.10	0.10
Cu-3	2,438.08	0.06
Cu-4	2,091.23	0.05

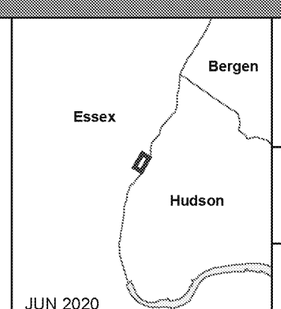
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Result Not Detected
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.



JUN 2020

Figure A-2
Site-Wide Soil Sampling Results for Soil Alternatives: Copper
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

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0 100 200 Feet

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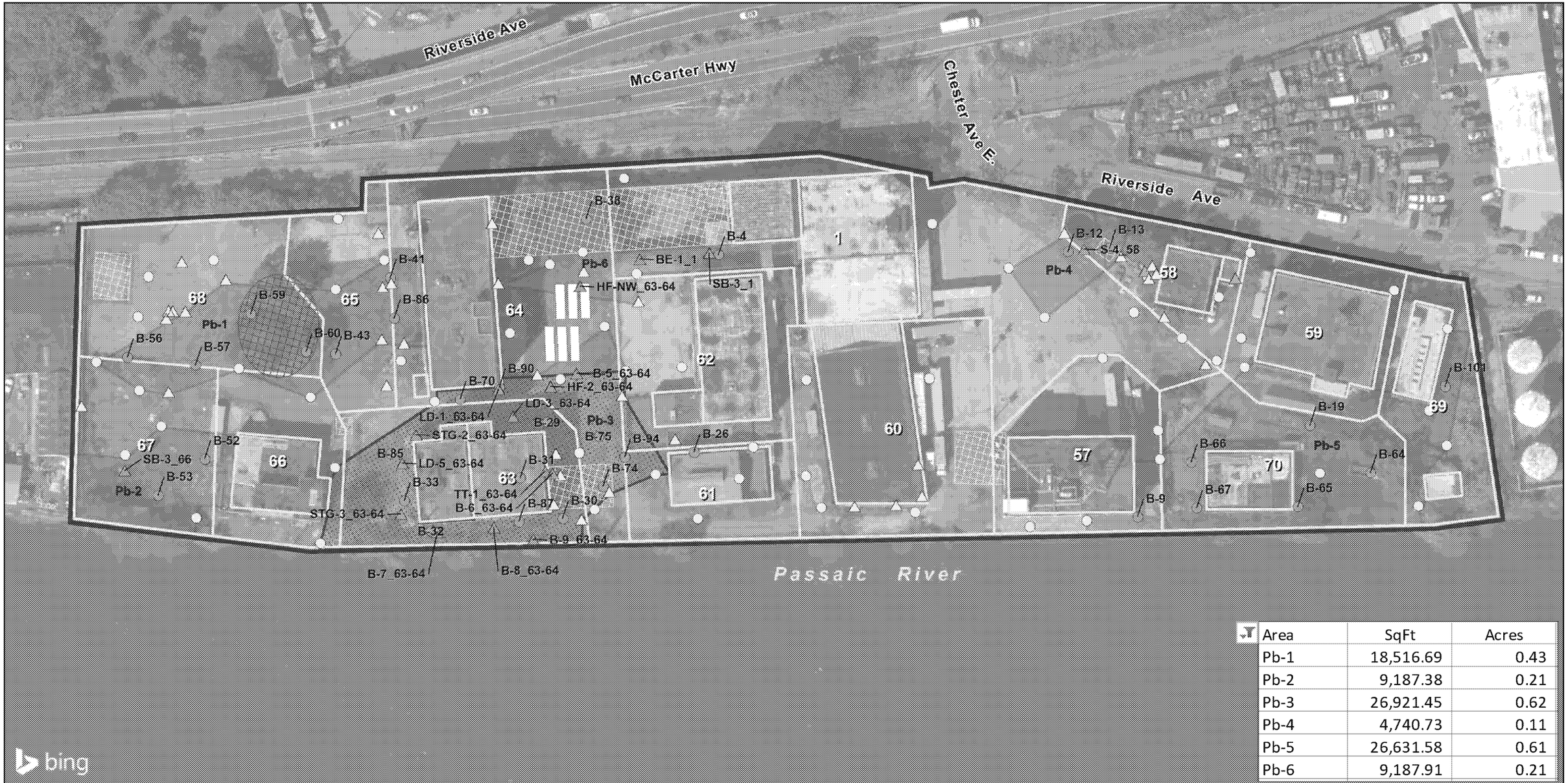


Area	SqFt	Acres
Pb-1	18,516.69	0.43
Pb-2	9,187.38	0.21
Pb-3	26,921.45	0.62
Pb-4	4,740.73	0.11
Pb-5	26,631.58	0.61
Pb-6	9,187.91	0.21

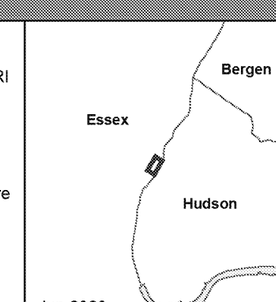
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action
- Footprint of Soil Alternative 4 for Lead Removal

- RI Soil Boring
- Historical Sample
- Result Not Detected
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.



Jun 2020

Figure A-3
Site-Wide Soil Sampling Results for Soil Alternatives: Lead
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

N
0 100 200 Feet

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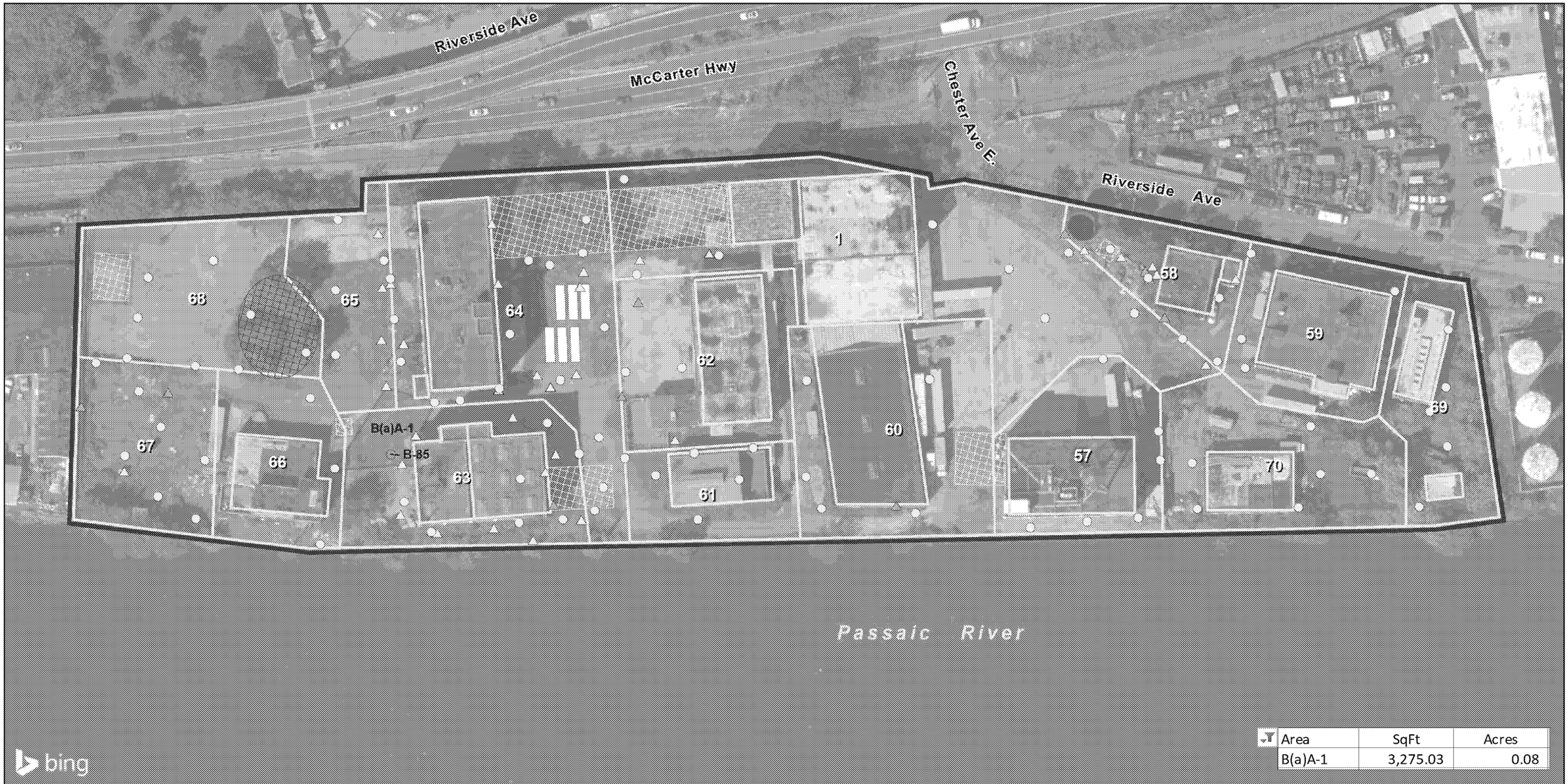


Area	SqFt	Acres
B(a)A-1	3,275.03	0.08

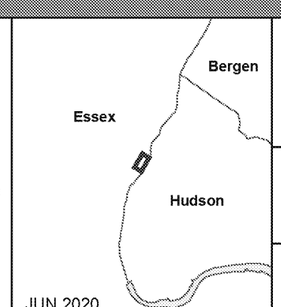
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.



JUN 2020

Figure A-4
Site-Wide Sample Results for
Soil Alternatives: Benzo(a)anthracene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

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Parameter	SqFt	Acres
B(a)P-1	10,480.44	0.24
B(a)P-2	8,259.46	0.19
B(a)P-3	688.00	0.02
B(a)P-4	2,542.09	0.06
B(a)P-5	7,060.72	0.16
B(a)P-6	2,275.93	0.05
B(a)P-7	1,740.20	0.04
B(a)P-8	12,753.11	0.29
B(a)P-9	6,776.92	0.16
B(a)P-10	7,554.76	0.17
B(a)P-11	4,473.71	0.10
B(a)P-12	1,048.54	0.02
B(a)P-13	2,821.15	0.06
B(a)P-14	3,193.07	0.07

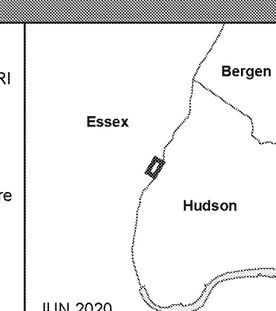
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.



JUN 2020

Figure A-5
Site-Wide Soil Sampling Results for Soil Alternatives: Benzo(a)pyrene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

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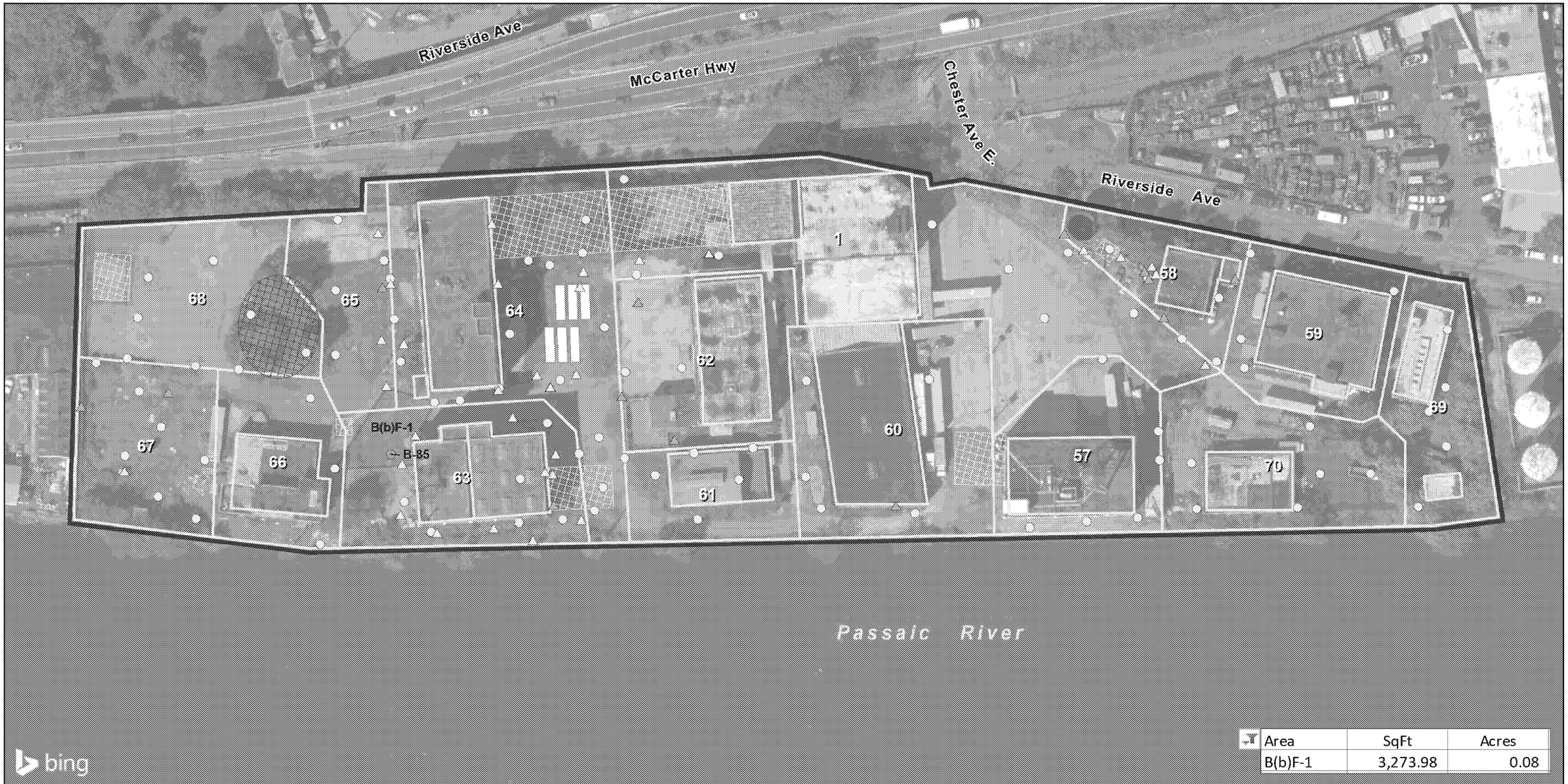


Area	SqFt	Acres
B(b)F-1	3,273.98	0.08

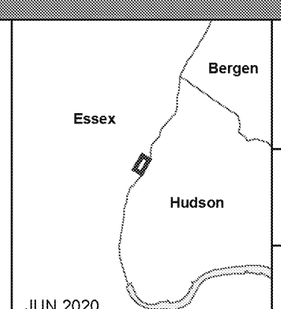
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Result Not Detected
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.



JUN 2020

Figure A-6
Site-Wide Sampling Results for Soil Alternatives: Benzo(b)fluoranthene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

N 0 100 200 Feet

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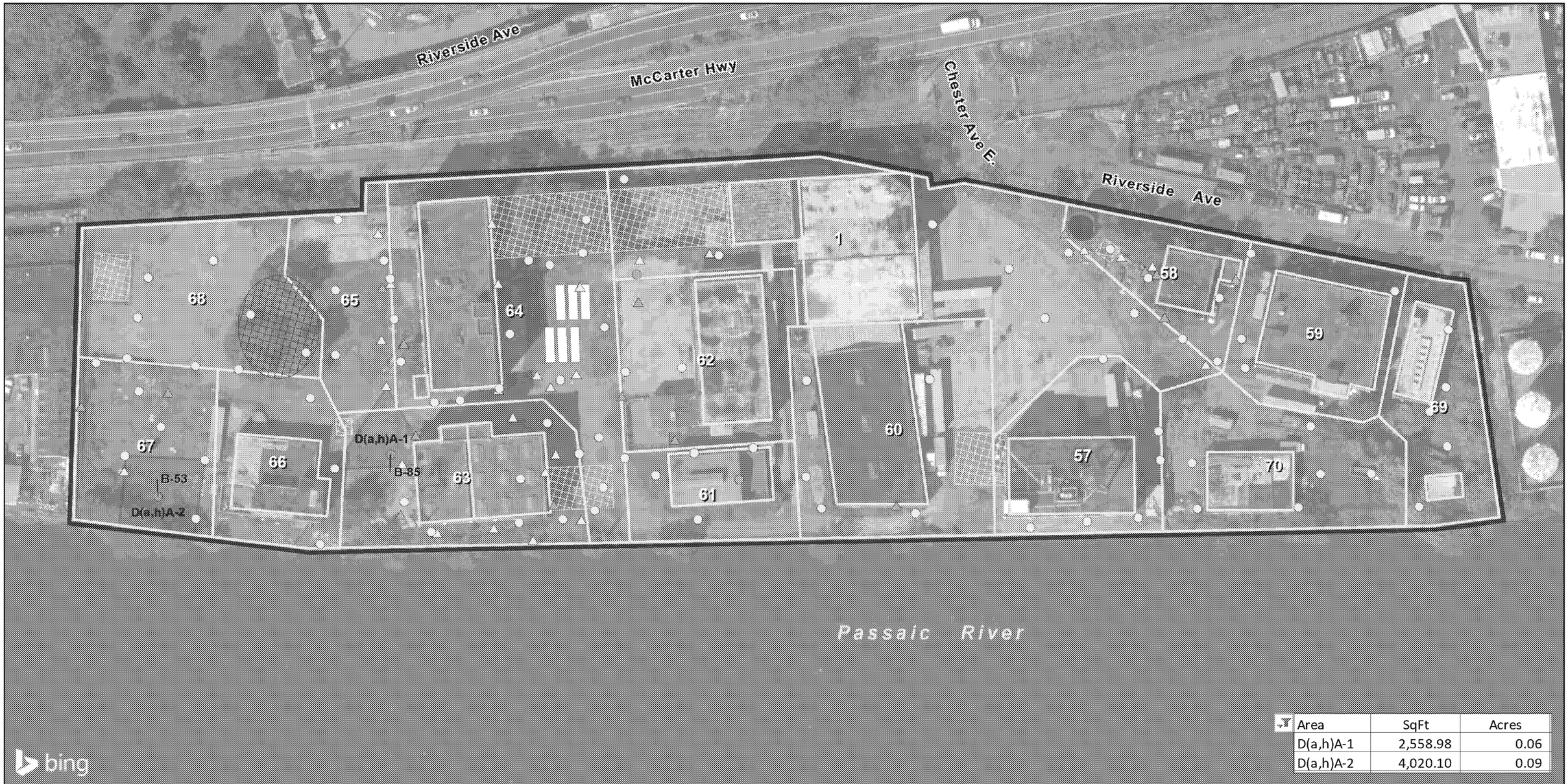


Area	SqFt	Acres
D(a,h)A-1	2,558.98	0.06
D(a,h)A-2	4,020.10	0.09

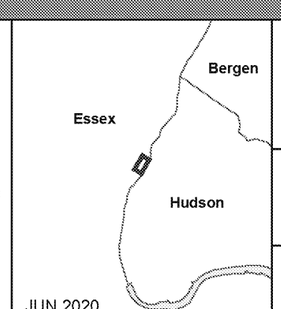
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.



JUN 2020

Figure A-7
Site-Wide Sample Results for
Soil Alternatives: Dibenzo(a,h)anthracene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

N 0 100 200 Feet

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Area	SqFt	Acres
PCB-1	3,661.67	0.08
PCB-2	3,311.66	0.08
PCB-3	7,001.54	0.16
PCB-4	10,318.49	0.24

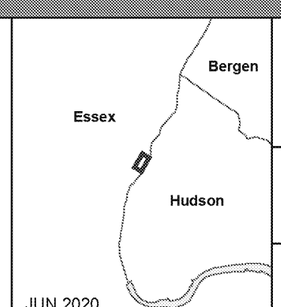
Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Result Not Detected
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.
3. Total PCBs calculation is consistant with the BHHRA.



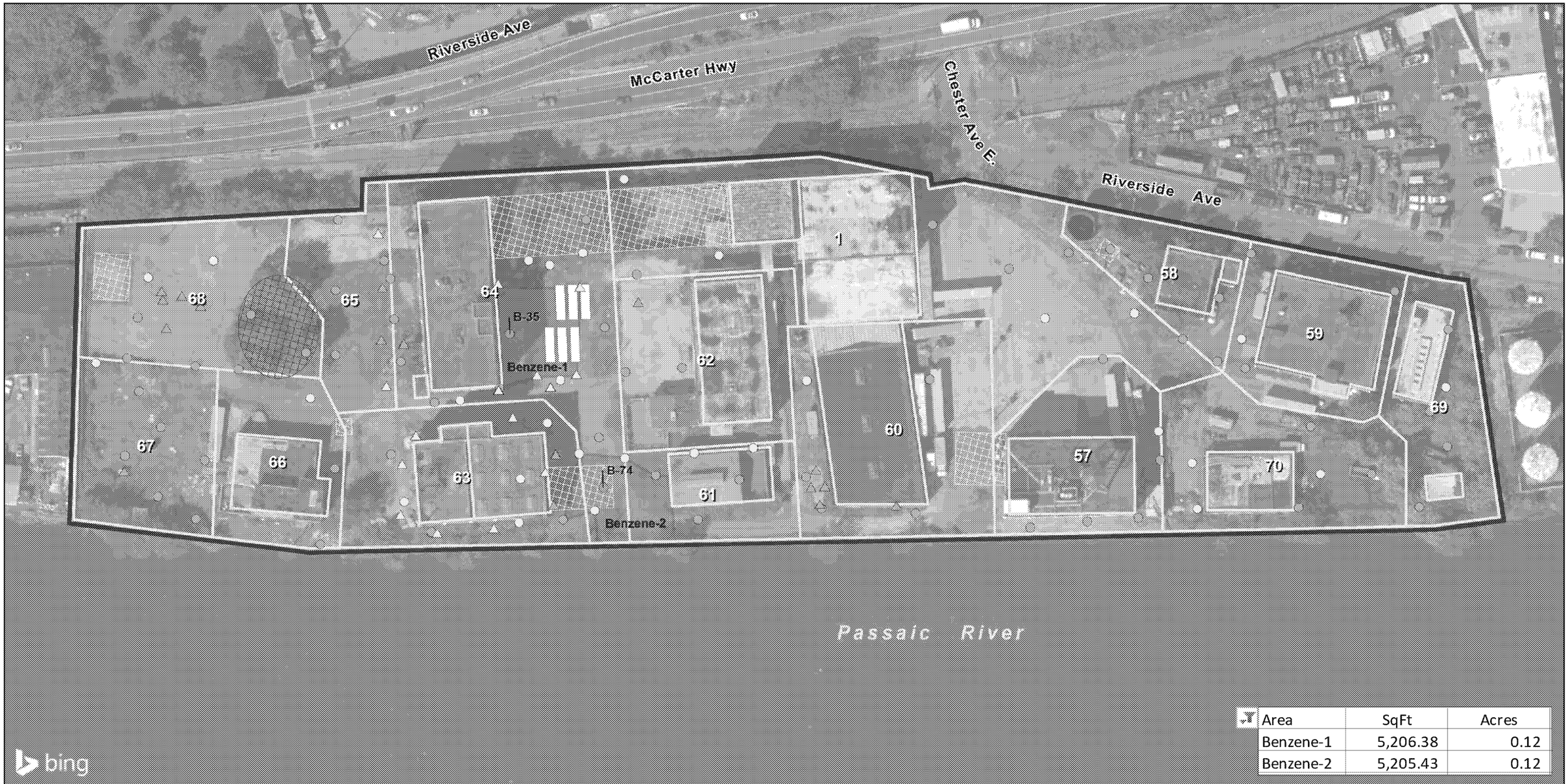
JUN 2020

Figure A-8
Site-Wide Sampling Results for Soil Alternatives: PCBs (Total)
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

N 0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_PCBRemovalArea.mxd



Area	SqFt	Acres
Benzene-1	5,206.38	0.12
Benzene-2	5,205.43	0.12

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.

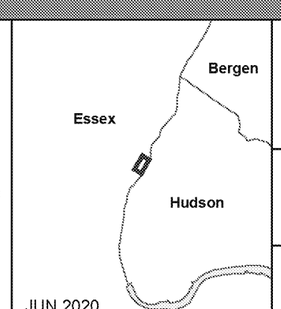


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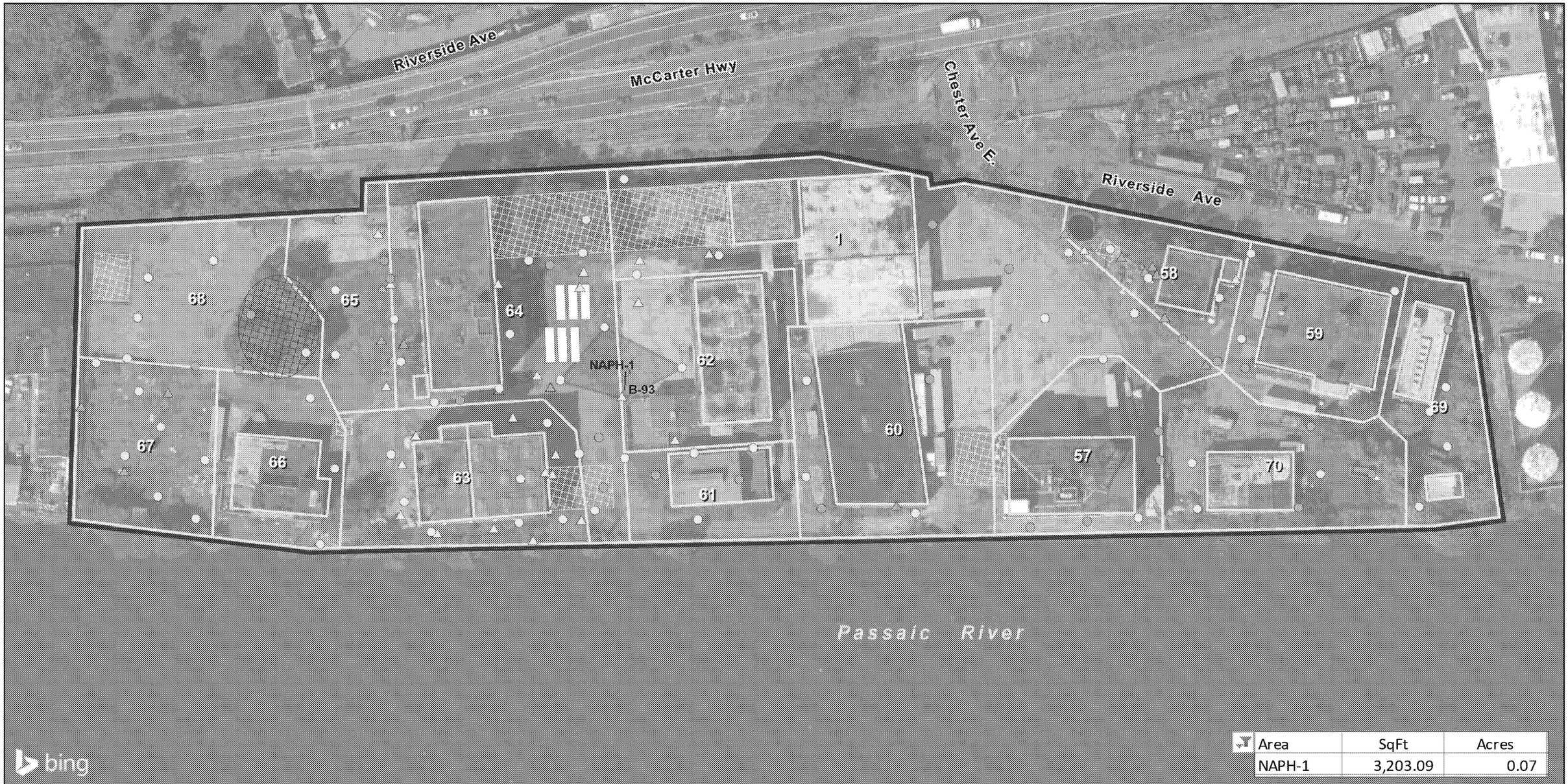
Figure A-9
Site-Wide Soil Sampling Results for Soil Alternatives: Benzene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_BenzeneRemoval.mxd



Area	SqFt	Acres
NAPH-1	3,203.09	0.07

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below ARAR/PRG
- Detection Exceeds ARAR/PRG

2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

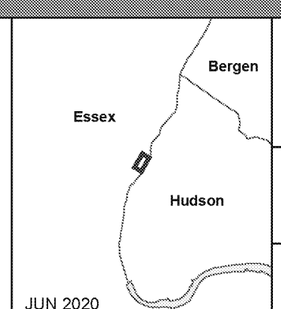


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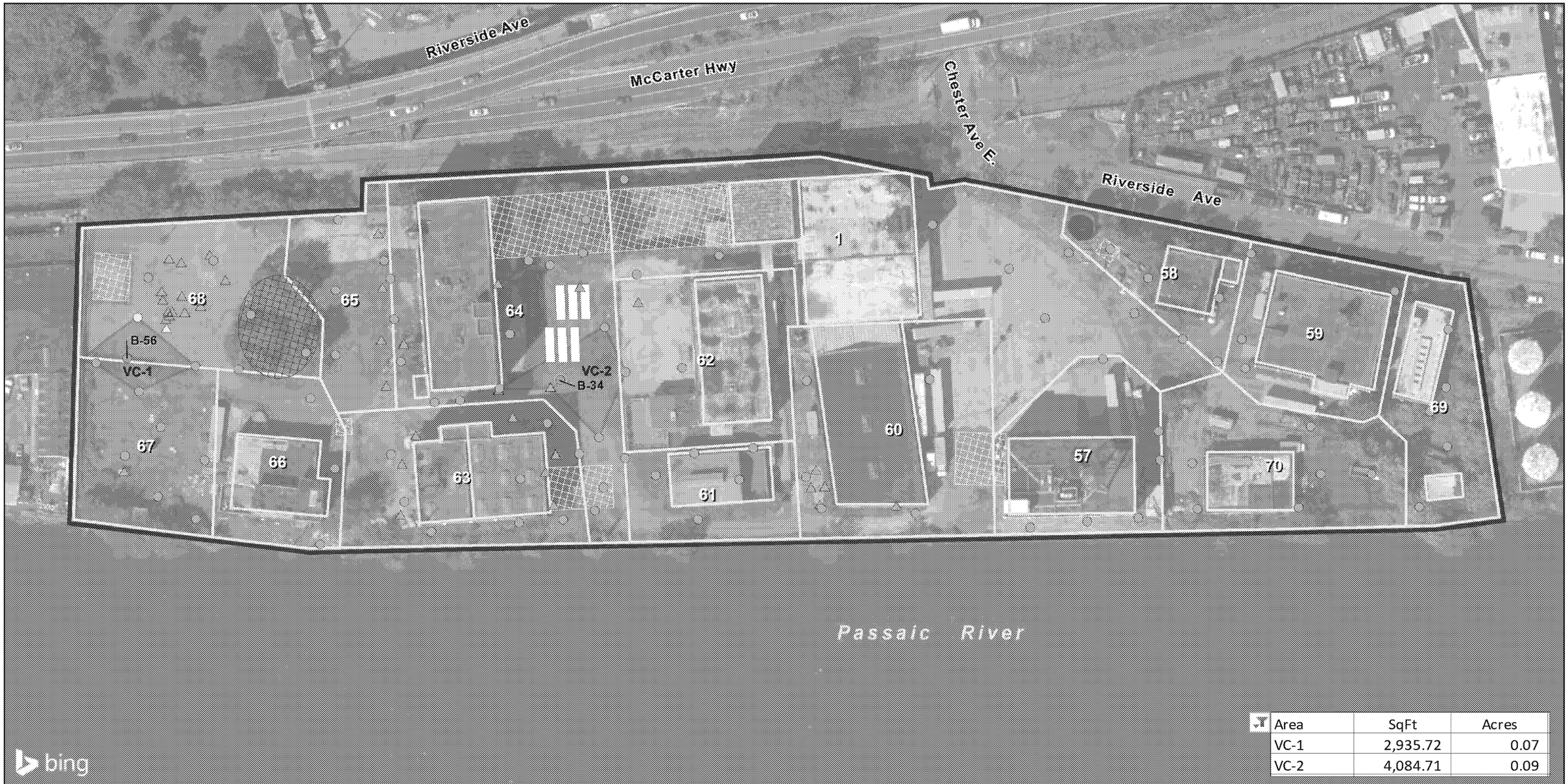
Figure A-10
Site-Wide Sampling Results for Soil Alternatives: Naphthalene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

N 0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_NaphthaleneSoilRemovalArea.mxd



Area	SqFt	Acres
VC-1	2,935.72	0.07
VC-2	4,084.71	0.09

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- Historical Sample
- RI Soil Boring
- Detection Exceeds ARAR/PRG
- Detection Below ARAR/PRG
- Non-Detect
- * RI ARAR Exceedance (nondetect reported at quantitation limit)

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.

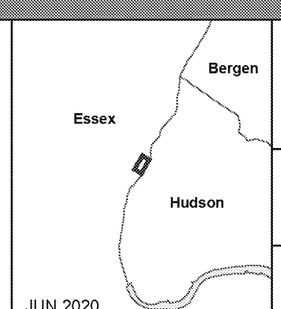


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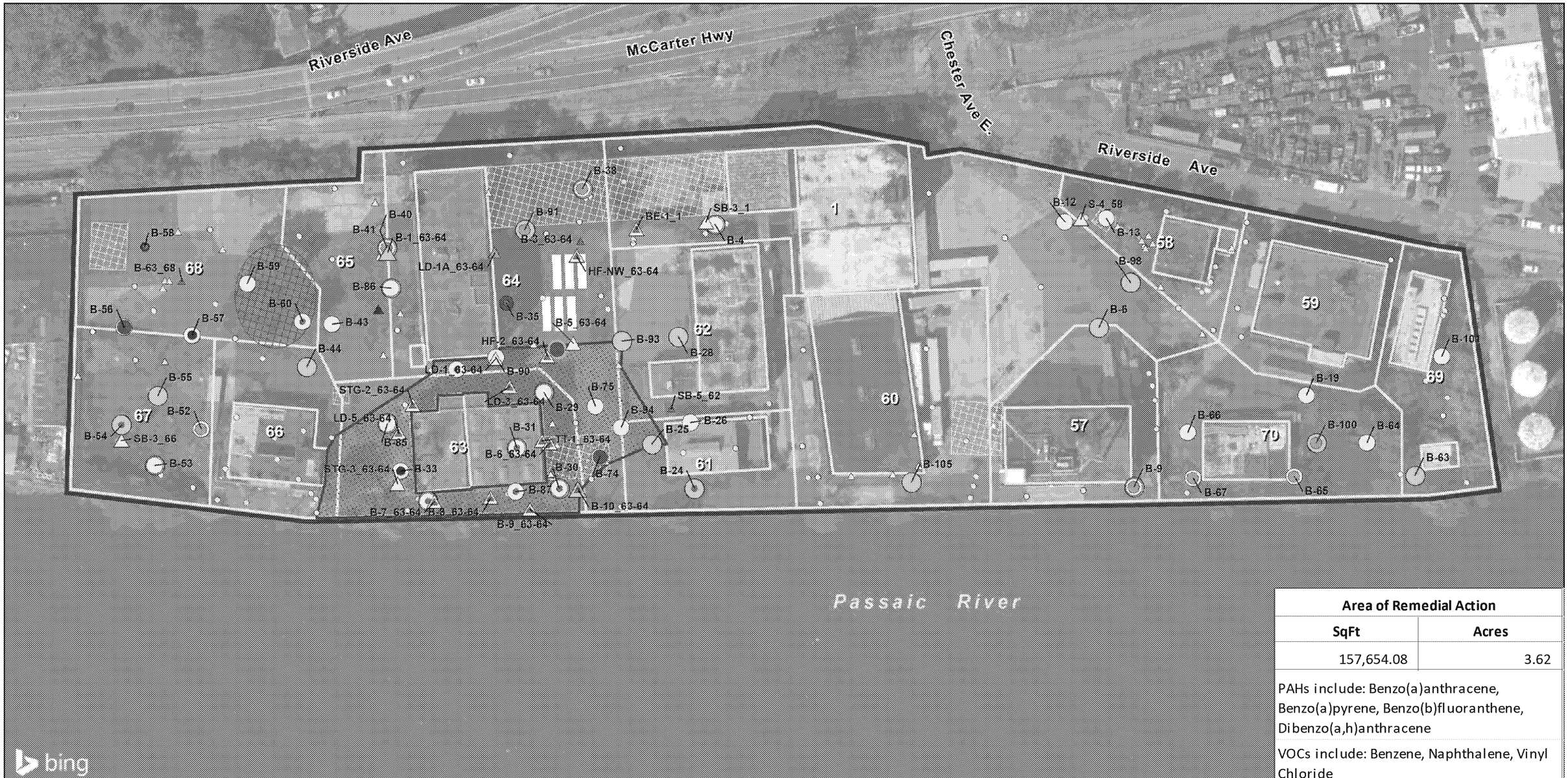
Figure A-11
Site-Wide Sampling Results for Soil Alternatives: Vinyl Chloride
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_VinylChlorideRemovalArea.mxd



Area of Remedial Action	
SqFt	Acres
157,654.08	3.62

PAHs include: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene

VOCs include: Benzene, Naphthalene, Vinyl Chloride

Study Area
Parcel (Newark, Oct 2017)
Structure
Existing
Demolished/Partially Demolished
UST
Former Soil Mound

Footprint of Remedial
Footprint of Soil Alternative 4 for Focused Lead Removal
Historical Sample
RI Soil Boring
* RI ARAR/PRG Exceedance (nondetect reported at quantitation limit)

Boring Location with ARAR/PRG Soil Exceedance *
Arsenic
Copper
PCBs (Total)
Lead
PAH
VOCs

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.
3. Total PCBs calculation is consistent with the BHHRA.

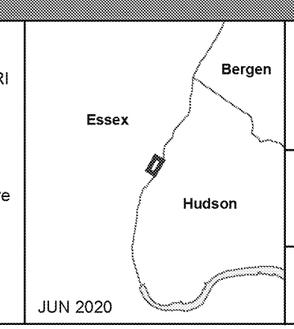
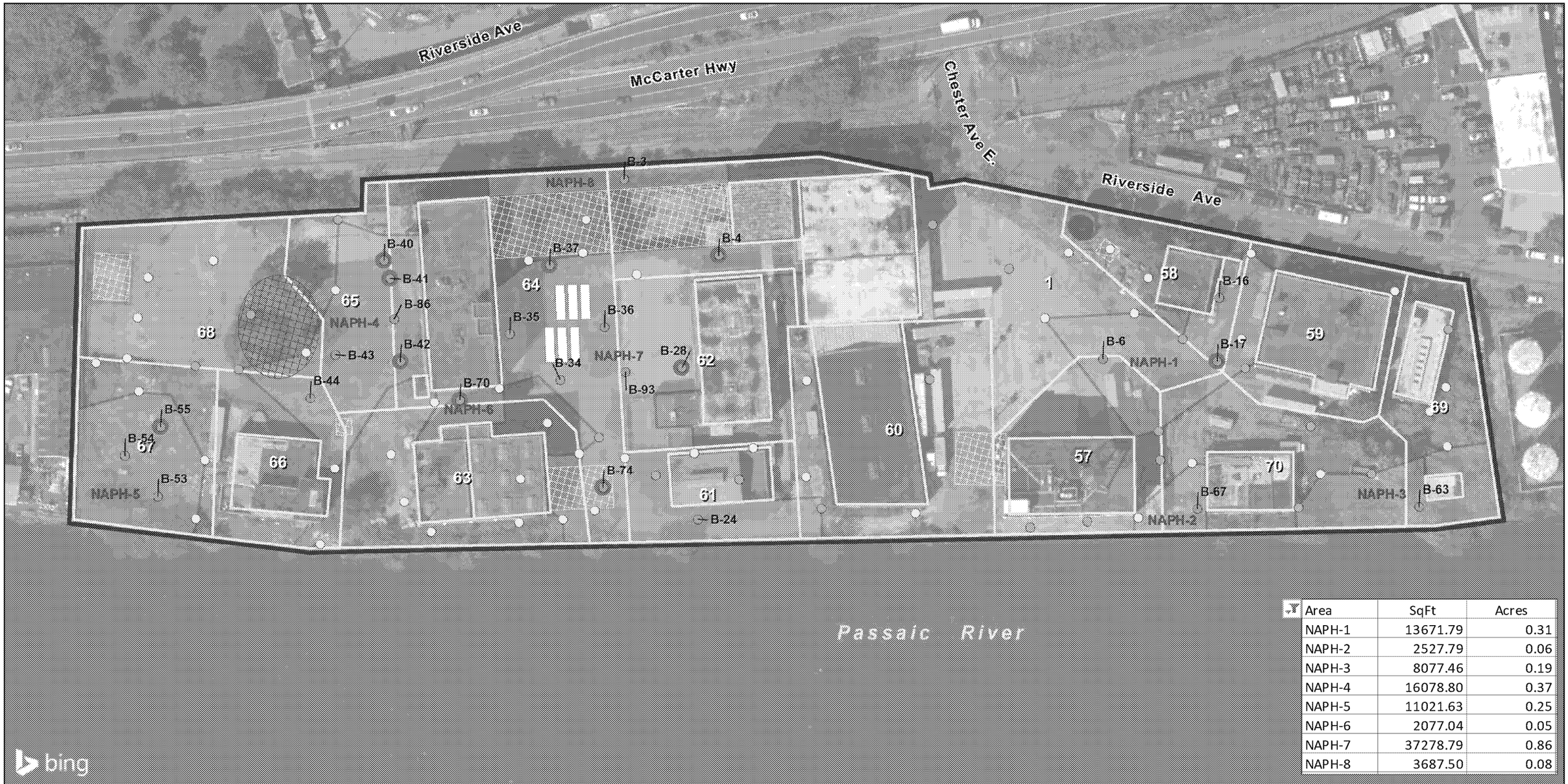


Figure A-12
Site-Wide Sampling Results for Soil Alternatives: Combined Parameters
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_SoilCompositeRemovalArea.mxd



Area	SqFt	Acres
NAPH-1	13671.79	0.31
NAPH-2	2527.79	0.06
NAPH-3	8077.46	0.19
NAPH-4	16078.80	0.37
NAPH-5	11021.63	0.25
NAPH-6	2077.04	0.05
NAPH-7	37278.79	0.86
NAPH-8	3687.50	0.08

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- Historical Sample
- RI Soil Boring
- Detection Below PRG
- Non-Detect
- Detection Exceeds PRG
- PRG Exceedance (nondetect reported at quantitation limit)

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.

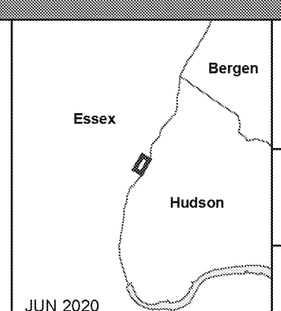


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Figure A-13
Site-Wide Soil Sampling Results for Soil Gas Alternatives: Naphthalene
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_SG_NaphthaleneRemovalArea.mxd

Area	SqFt	Acres
TCE-1	28907.11	0.66
TCE-2	4532.19	0.10
TCE-3	51815.44	1.19
TCE-4	5036.70	0.12
TCE-5	1742.84	0.04
TCE-6	23382.09	0.54

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below PRG
- Detection Exceeds PRG
- * PRG Exceedance (nondetect reported at quantitation limit)

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.

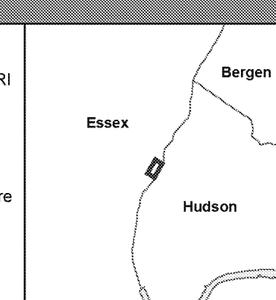

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Figure A-14
Site-Wide Soil Sampling Results for Soil Gas Alternative: TCE-PRG
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_SG_TrichloroethyleneRemovalArea.mxd

Area	SqFt	Acres
Xy-1	6832.53	0.16
Xy-2	3749.60	0.09
Xy-3	6933.22	0.16
Xy-4	9386.19	0.22
Xy-5	1685.91	0.04
Xy-6	12740.48	0.29
Xy-7	3087.33	0.07

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

- Study Area
- Parcel (Newark, Oct 2017)
- Footprint of Remedial Action

- RI Soil Boring
- Historical Sample
- Non-Detect
- Detection Below PRG
- Detection Exceeds PRG

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.
3. Total Xylenes calculation is consistant with the BHHRA.

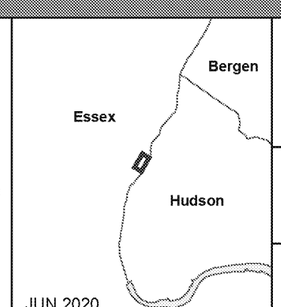

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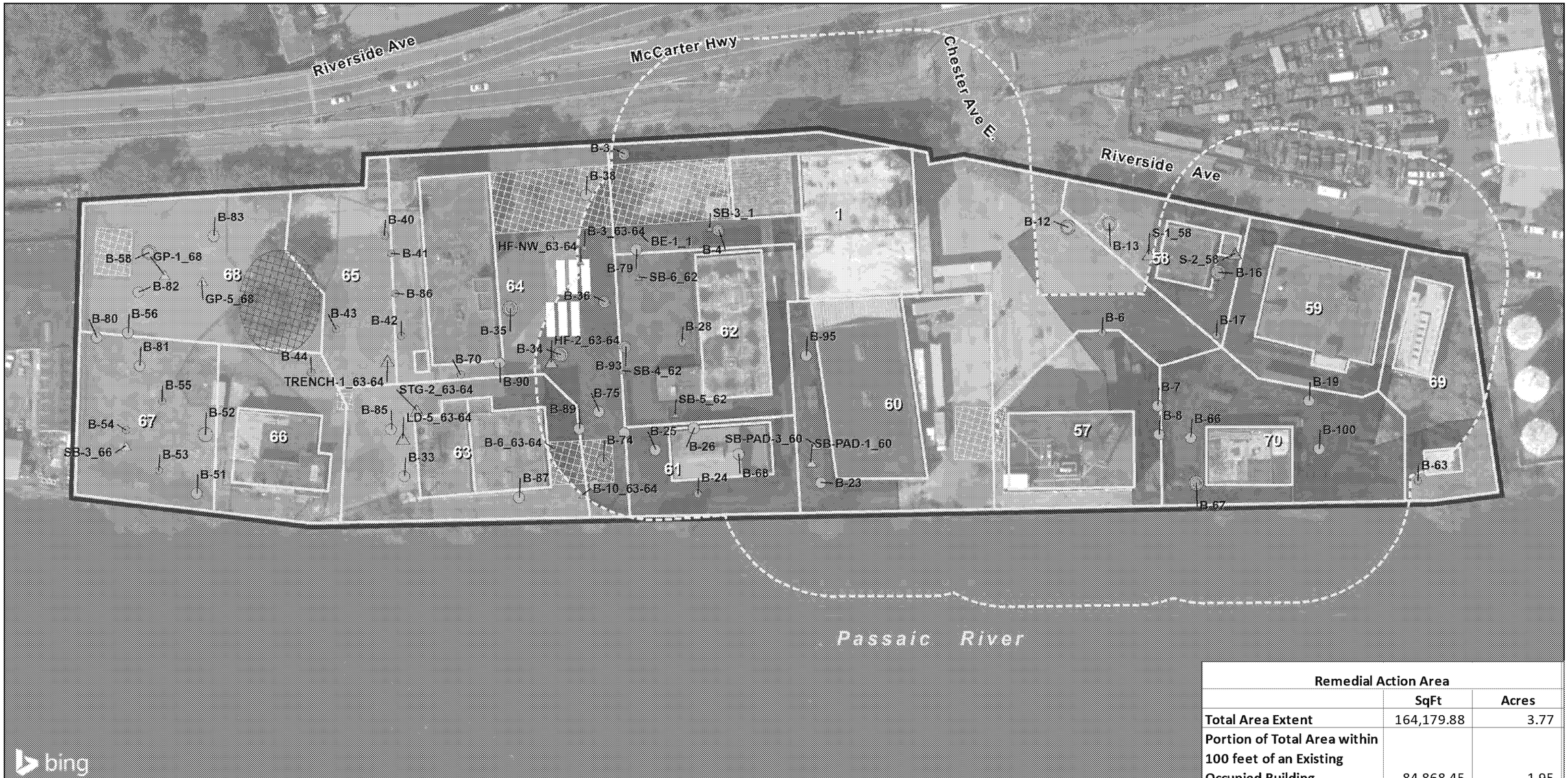
Figure A-15
Site-Wide Soil Gas Sampling Results for Soil Gas Alternatives: Xylenes (Total)
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

N
0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_SG_Xylenes RemovalArea.mxd



Remedial Action Area		
	SqFt	Acres
Total Area Extent	164,179.88	3.77
Portion of Total Area within 100 feet of an Existing Occupied Building	84,868.45	1.95

Structure
- Existing
- Demolished/Partially Demolished
- UST
- Former Soil Mound

* PRG Exceedances include nondetect results at Quantitation Limit.

- Study Area
- Parcel (Newark, Oct 2017)
- 100 Foot Buffer of Existing Occupied Building

Footprint of Remedial Action
- Within 100 feet of Existing Occupied Building
- Outside of 100-foot Occupied Building Area

Boring Location with PRG Soil Exceedance *
- Naphthalene
- TCE
- Xylene

PRG Exceedance
- Historical Sample Location
- RI Sample Location

Sources:
2020 "ArcGIS Map Service, Bing Aerial Photography"
2020 "PPG/Woodard & Curran Riverside Industrial Park RI Report"
2017 "City of Newark Parcel GIS", http://data.ci.newark.nj.us

Notes:
1. Field Duplicate and Parent Sample Concentrations were averaged.
2. Following the soil mound removal on lot 68, surface samples at locations B-59 and B-60 were not included in this evaluation.
3. Total Xylenes calculation is consistent with BHHRA.

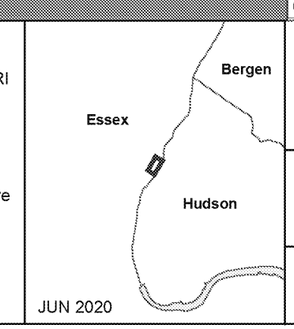


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Figure A-16
Site-Wide Sampling Results for Soil Gas Alternatives: Combined Parameters
Riverside Industrial Park Superfund Site
Essex County, New Jersey

Louis Berger

0 100 200 Feet

S:\Projects\passaic\MapDocuments\0024_RiversideIndustrial\FS_SoilGasCompositeRemovalArea.mxd