PORTLAND PARKS & RECREATION
Healthy Parks, Healthy Portland

February 22, 2023

Kara Master
Oregon Department of Environmental Quality
Northwest Region
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Dear Ms. Master:

Attached is a copy of the Annual Cap Inspection Report for The Fields Park (ESCI ID 5443). Please feel free to contact me if you have any questions.

Sincerely,

Alex Shook
Environmental Compliance Professional
Portland Parks and Recreation
6437 SE Division Street, Portland, OR 97206
Email: alex.shook@portlandoregon.gov
Phone: 503.250.0670

The Fields Park – ECSI 5443 **CAP INSPECTION REPORT** 2022

Site: The Fields Neighborhood Park Inspection Date: 12/7/2022

Background: The Fields Neighborhood Park (the Site) is a 3.3-acre municipal park located northeast of the intersection of NW Overton Street and NW 11th Avenue in Portland, Oregon. The Site is situated in a portion of the former 26-acre Hoyt Street Rail Yard (HSRY) and is listed on the Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) database as Hoyt St. Rail Yard - The Fields (ECSI Site ID: 5443). During historical HSRY operations, impacts to soil and groundwater occurred. Remaining impacts beneath the park include soils containing elevated concentrations of petroleum hydrocarbons, lead, and polynuclear aromatic hydrocarbons (PAHs).

In December 2000 a Record of Decision (ROD) was published by DEQ for the HSRY and in January 2011 an Explanation of Significant Difference (ESD) was published by the DEQ for the Site. In addition, an Inspection and Maintenance Plan was prepared and approved by DEQ [Inspection and Maintenance Plan, AMEC Environment and Infrastructure, July 2013]. The 2000 ROD, the 2011 ESD, and the 2013 Inspection and Maintenance Plan describe remedial action requirements for the Site.

The selected remedial action for The Fields Neighborhood Park is an engineered soil cap with an underlying demarcation layer (geotextile fabric marker). To meet this requirement a continuous soil cap was installed across the entire site. The soil cap consists of clean soil or concrete (*e.g.,* structure foundations, pathways, and sidewalks) at a thickness of (2) feet in the greater park area and (3) feet in the children's play area as outlined in the ROD and ESD. The Inspection and Maintenance Plan states that *"annual surface cap inspections shall be conducted followed by the submittal of inspection reports to DEQ. After 5 years of annual inspections, DEQ will review Site conditions in order to determine whether less frequent inspection intervals are warranted."*

This inspection report was completed to assess the condition of the capped area which includes the entire park (*i.e.,* landscaped soil, structure foundations, perimeter sidewalks, internal pathways, and storm water drainage features) and to document any potential breaches to the cap. This inspection report fulfills the annual surface cap inspection requirement for 2022.

Location Description: (*i.e.,* boundary streets)
NW 11th, NW Overton, and NW Naito (1N1E 34BB Lot 2629)
City blocks 18, 21, 22, and 25

Party Performing Inspection / Preparing Report:		**Contact Numbers:**
Bethany Nabhan	Environmental Specialist / BES	503-823-1144
John O'Donovan	Engineer III / BES	503-823-7881
Alex Shook	Risk Specialist II / Portland Parks & Recreation	503-250-0670

Inspection Performed For:
Portland Parks & Recreation
6437 SE Division St.
Portland, OR 97206

Hardscape Areas: Inspect the concrete foundation, sidewalks, and pathways for evidence of cracks or unusual weathering that show the potential to allow soil to migrate through the cap or allow direct exposure to soils. List observations made and area(s) requiring maintenance.

Hardscaped areas are in good condition. Based on our assessment, the cap is not compromised in the hardscape areas of the park. See attached Figure 1 and Photo Log.

Cracks, Settlement? Yes **X** No___

Location(s):

Only minor cracking and evidence of settling was observed in the concrete sidewalks and structural foundations on the perimeter of the park (photo points 1-3, 6-13, and 18). These minor cracks (generally <0.5 inches) have been observed in previous inspections and do not appear to penetrate the cap. Separation at the cracks was not observed. One (1) brick pathway is separating slightly but the separation has not changed in the past few years (photo point #4) and does not appear to penetrate the cap. Two new photo monitoring points were added during this year's inspection. Photo point 17 is described in the Holes, Breaches, Penetrations section below. Photo point 18 is an additional minor pavement crack at the E side of the park. Monitoring wells 2, 3, and 4 were also inspected for cracking, separation, and signs of damage. All monitoring well monuments were in good condition. See attached Photo Log for copies of previous and current year inspection photos. BES will continue to monitor these locations in the following years.

Maintenance required? Yes ___ No **X**

Holes, Breaches, Penetrations? Yes ___ No **X**

There were two observed utility potholes located on the W sidewalk of the park (photo point 17). These potholes were identified as being completed as part of the upcoming Pacific Power Willamette River Crossing project. The objective of the potholing was to verify the depth of existing utilities in the area and finalize design plans. According to the contractor the potholes were advanced to 29 inches below surface. No demarcation fabric was encountered, and the potholes were backfilled with ¾-inch minus compact rock and patched with asphalt. No exposed subsurface soil was observed during the inspection. BES will continue to monitor these locations in the following years.

Maintenance required? Yes___ No **X**

Landscape Areas: Inspect landscape areas for evidence of holes, animal burrows, or cracks that could expose the underlying soil. List observations made and area(s) requiring maintenance.

Landscaped areas, including the central grass area, other areas with plantings, as well as the dog off-leash area in the northern end of the park and the children's playground in the southern end of the park, were inspected for holes, cracks, and visual evidence of exposed demarcation geotextile fabric. Two (2) previously filled holes were observed to be in the central grass area (photo point 14). These holes were approximately 0.5-1.5 ft in diameter and less than 1 ft deep. No other damage was observed in the landscaped areas. The dog off-leash area and the children's playground were both in excellent condition and no damage was observed. Evidence of animal burrows were not observed this year and Parks staff continues to control for rodents in the park (photo point 16). See attached Photo Log for copies of previous and current year inspection photos.

Exposed Soil or Fabric? Yes ___ No **X**

Maintenance required? Yes **X** No ___

The two holes noted above were backfilled by Parks staff to maintain the two (2) foot cap prior to the cap inspection. Laboratory data from BES's Water Pollution Control Lab demonstrating the soil used as backfill is free of contaminants of concern for the site are attached. The soil that was used as backfill was surplus clean fill from the South Waterfront Greenway project.

Surface Water Drainage Features: Inspect storm water drainage paths and catch basins for evidence of blockage by debris or erosion damage caused by inadequate drainage control. List observations made and area(s) requiring maintenance.

Storm water drainage paths and catch basins were clear and functional during the inspection.

Groundwater Seepage Areas: Note any evidence of groundwater seepage areas and associated problems.

No groundwater seepage areas were observed during the inspection.

Additional Comments:
Photographs have been taken of all areas of concern to document the condition of the cap. Photographic evidence includes pictures of any damage and repairs performed.

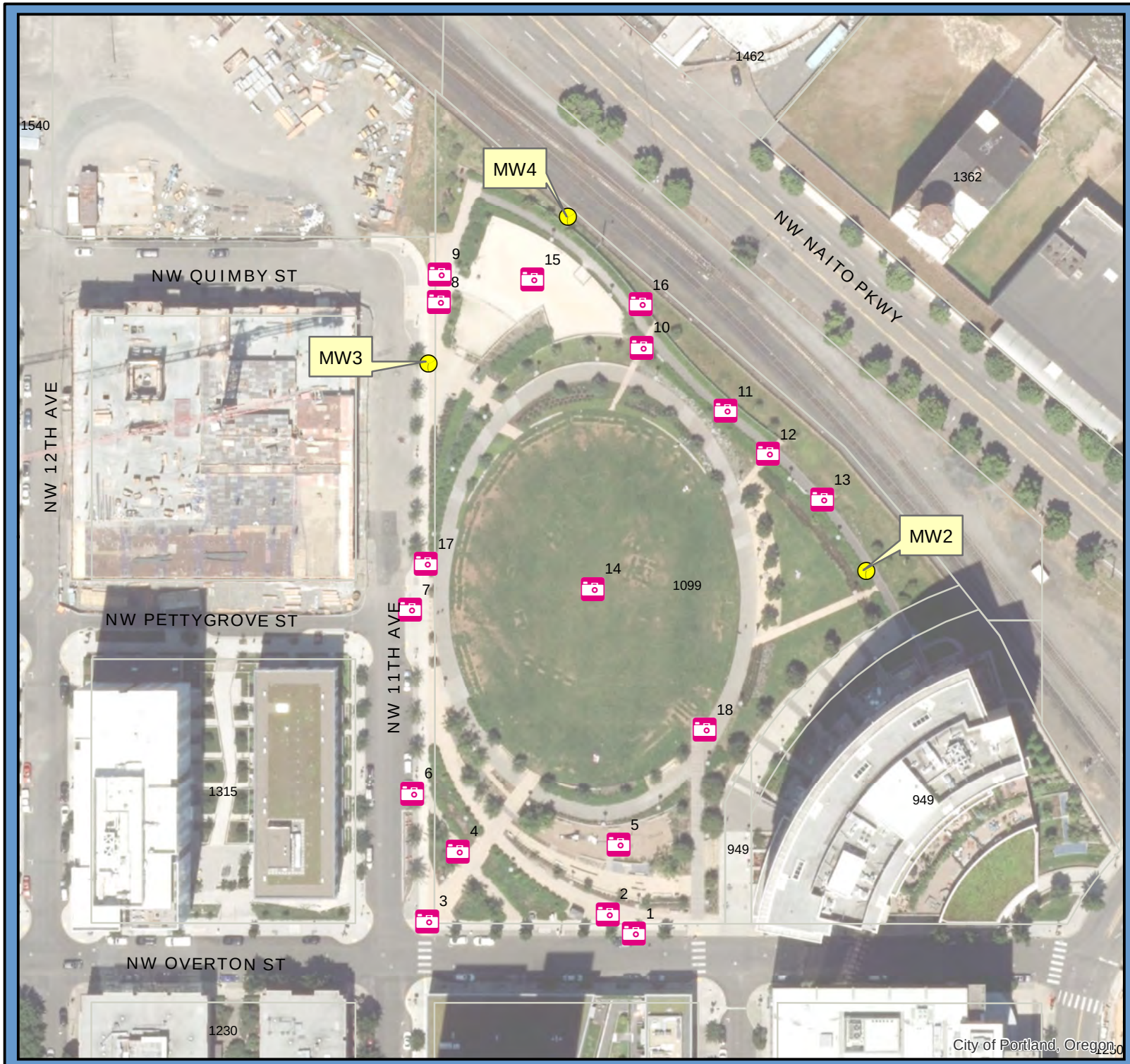
Please see the attached Photo Locations Map and Photo Log.

Send one copy of completed Inspection Report, with supporting documentation including photographs and maintenance and repair records to:

Oregon Department of Environmental Quality
NW Region UST Cleanups & Environmental Cleanup Programs
700 NE Multnomah St., Suite #600
Portland, OR 97232
ATTN: Kara Master

Figure 1

Map of Photo Inspection Points



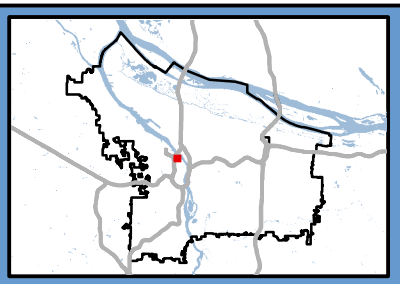


Figure 1

Fields Park
Annual Cap Inspection
Photo Locations Map

Legend

- Monitoring Well
- Yearly Monitoring Locations
- Taxlots

1:1,231

N
W E
S

Map Created by: MeghanS

December 20, 2022

Map Produced in ArcMap

Attachment 1

Photo Log

The Fields Park Annual Cap Inspection Photo Log

Photo Point #1

- 2020 inspection photo: 
- 2021 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Photo Point #2

- 2020 inspection photo: 
- 2021 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Photo Point #3

- 2019 inspection photo: 
- 2020 inspection photo: 
- 2021 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

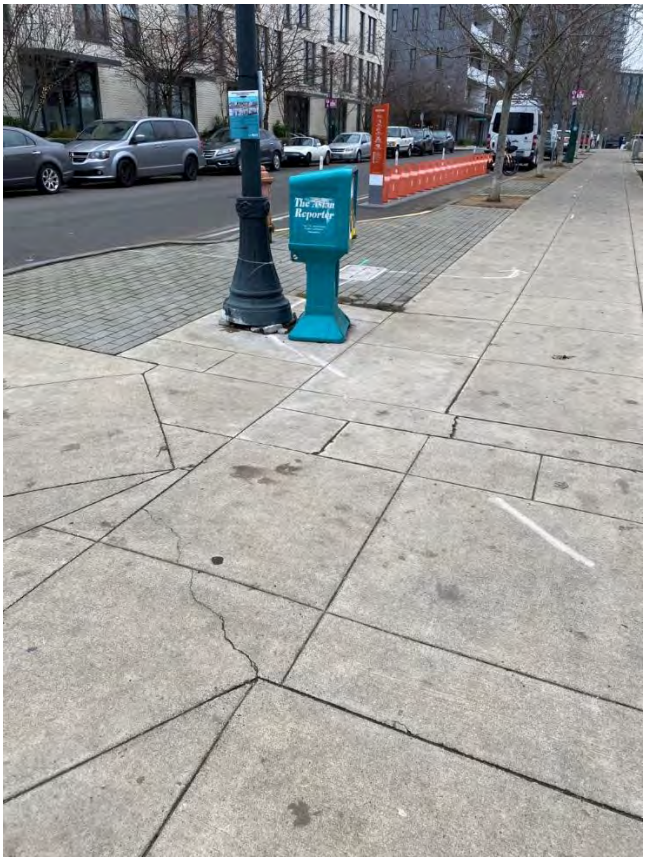
- 2022 inspection photo: 

Photo Point #4

- 2019 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2020 inspection photo: 
- 2021 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo: 

Photo Point #5

- 2019 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2020 inspection photo: 
- 2021 inspection photo: 

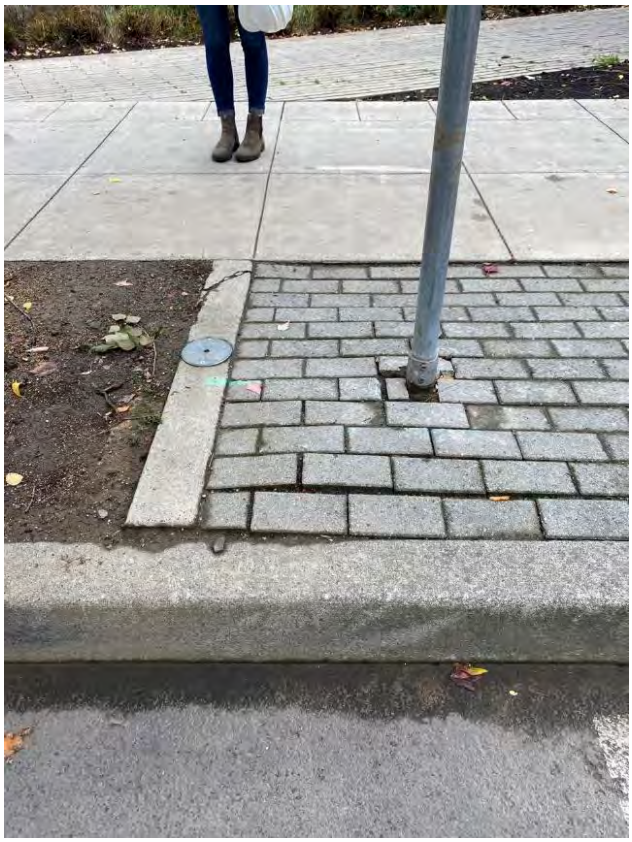
The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo: 

Photo Point #6

- 2020 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2021 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Photo Point #7

- 2019 inspection photo: 
- 2020 inspection photo: 
- 2021 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo: 

Photo Point #8

- 2020 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2021 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Photo Point #9

- 2019 inspection photo: 
- 2020 inspection photo: 
- 2021 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo: 

Photo Point #10

- 2019 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2020 inspection photo:

- 2021 inspection photo:

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo: 

Photo Point #11

- 2019 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2020 inspection photo: 
- 2021 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Photo Point #12

- 2020 inspection photo: 
- 2021 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo: 

Photo Point #13

- 2019 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2020 inspection photo: 
- 2021 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Photo Point #14 (center grassy area)

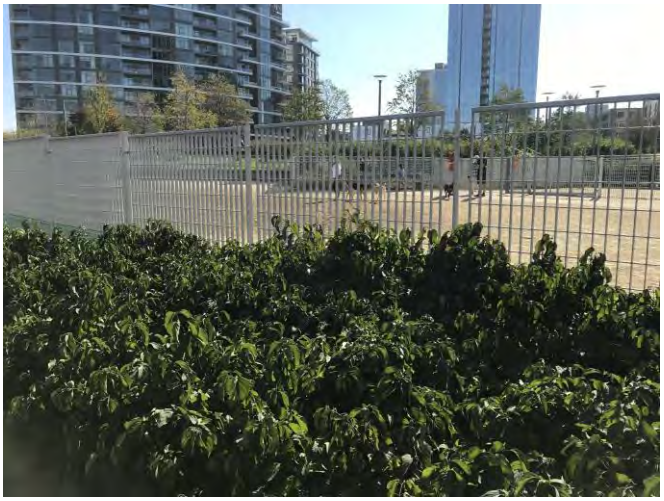
- 2022 hole #1 prior to inspection:  Hole #1 pre-fill
- 2022 hole #2 prior to inspection:  Hole #2 pre-fill

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo 1:  Hole #1 filled
- 2022 inspection photo 2:  Hole #2 filled

The Fields Park Annual Cap Inspection Photo Log

Photo Point #15 (off-leash dog park area)

- 2019 inspection photo: 
- 2020 inspection photo: 
- 2021 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

- 2022 inspection photo:

Photo Point #16 (rodent hole monitoring/vector control, many located around park)

- 2020 inspection photo:

The Fields Park Annual Cap Inspection Photo Log

- 2021 inspection photo:

- 2022 inspection photo:

The Fields Park Annual Cap Inspection Photo Log

Photo Point #17

- 2022 inspection photo: 

Photo Point #18

- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Monitoring Well #2

- 2019 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Monitoring Well #3

- 2018 inspection photo: 

- 2019 inspection photo: 
- 2022 inspection photo: 

The Fields Park Annual Cap Inspection Photo Log

Monitoring Well #4

- 2018 inspection photo: 
- 2022 inspection photo: 

Attachment 2

Lab Data

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

LABORATORY ANALYSIS REPORT

Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Project Mgr:	John O'Donovan
Received:	11/2/22 14:42		
Submitted By:	CSA		

Sample	Laboratory ID	Matrix	Type	Sample Collection Date Start	End	Qualifier
Comp-1	W22K033-01	Soil	Composite	11/02/22 13:30	11/02/22 13:30	
Comp-2	W22K033-02	Soil	Composite	11/02/22 13:35	11/02/22 13:35	

Analyte	Result	Units	MRL	MDL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
General Chemistry										
Total Solids										
Comp-1 : W22K033-01										
Total solids	**67.6**	% W/W	0.01			B22K074	11/03/22	11/04/22	SM 2540G	
Comp-2 : W22K033-02										
Total solids	**68.2**	% W/W	0.01			B22K074	11/03/22	11/04/22	SM 2540G	
Total Metals										
Total Metals by ICPMS										
Comp-1 : W22K033-01										
Arsenic	**4.42**	mg/kg dry	0.082		20	B22K068	11/03/22	11/03/22	EPA 6020	
Barium	**154**	mg/kg dry	1.63		20	B22K068	11/03/22	11/03/22	EPA 6020	
Cadmium	**0.262**	mg/kg dry	0.082		20	B22K068	11/03/22	11/03/22	EPA 6020	
Chromium	**22.1**	mg/kg dry	0.163		20	B22K068	11/03/22	11/03/22	EPA 6020	
Lead	**11.9**	mg/kg dry	0.327		20	B22K068	11/03/22	11/03/22	EPA 6020	
Mercury	**0.0383**	mg/kg dry	0.0123		20	B22K068	11/03/22	11/03/22	EPA 6020	
Selenium	ND	mg/kg dry	1.63		20	B22K068	11/03/22	11/03/22	EPA 6020	
Silver	ND	mg/kg dry	0.082		20	B22K068	11/03/22	11/03/22	EPA 6020	
Comp-2 : W22K033-02										
Arsenic	**4.79**	mg/kg dry	0.081		20	B22K068	11/03/22	11/03/22	EPA 6020	
Barium	**169**	mg/kg dry	1.63		20	B22K068	11/03/22	11/03/22	EPA 6020	
Cadmium	**0.251**	mg/kg dry	0.081		20	B22K068	11/03/22	11/03/22	EPA 6020	
Chromium	**25.5**	mg/kg dry	0.163		20	B22K068	11/03/22	11/03/22	EPA 6020	
Lead	**11.3**	mg/kg dry	0.326		20	B22K068	11/03/22	11/03/22	EPA 6020	
Mercury	**0.0364**	mg/kg dry	0.0122		20	B22K068	11/03/22	11/03/22	EPA 6020	
Selenium	ND	mg/kg dry	1.63		20	B22K068	11/03/22	11/03/22	EPA 6020	
Silver	ND	mg/kg dry	0.081		20	B22K068	11/03/22	11/03/22	EPA 6020	

Reported: 11/09/22 06:58

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

City of Portland
Water Pollution Control Laboratory
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ORELAP Certification ID 4023

Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Analyte	Result	Units	MRL	MDL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
Fuels										
Hydrocarbon Scan by GC-FID										
Comp-1 : W22K033-01										
Gasoline	ND	mg/kg dry	27		1	B22K062	11/03/22	11/03/22	NWTPH-HCID	
Diesel	ND	mg/kg dry	68		1	B22K062	11/03/22	11/03/22	NWTPH-HCID	
Lube oil	ND	mg/kg dry	136		1	B22K062	11/03/22	11/03/22	NWTPH-HCID	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***					
o-Terphenyl	*14.3*	mg/kg dry	*13.6*	*106%*	*50-150*	*B22K062*	*11/03/22*	*11/03/22*	*NWTPH-HCID*	
Comp-2 : W22K033-02										
Gasoline	ND	mg/kg dry	26		1	B22K062	11/03/22	11/03/22	NWTPH-HCID	
Diesel	ND	mg/kg dry	65		1	B22K062	11/03/22	11/03/22	NWTPH-HCID	
Lube oil	ND	mg/kg dry	131		1	B22K062	11/03/22	11/03/22	NWTPH-HCID	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***					
o-Terphenyl	*13.1*	mg/kg dry	*13.1*	*100%*	*50-150*	*B22K062*	*11/03/22*	*11/03/22*	*NWTPH-HCID*	

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Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Analyte	Result	Units	MRL	MDL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
Semivolatile Organics - SIM										
Polynuclear Aromatic Hydrocarbons by GCMS-SIM										
Comp-1 : W22K033-01										
Acenaphthene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(g,h,i)perylene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Fluoranthene	**30**	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	50		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Pyrene	**21**	ug/kg dry	12		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***					
2-Methylnaphthalene-d10	*110*	ug/kg dry	*125*	*88%*	*31-129*	*B22K077*	*11/03/22*	*11/03/22*	*EPA 8270-SIM*	
Fluoranthene-d10	*91*	ug/kg dry	*125*	*73%*	*63-132*	*B22K077*	*11/03/22*	*11/03/22*	*EPA 8270-SIM*	
Comp-2 : W22K033-02										
Acenaphthene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(g,h,i)perylene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Fluoranthene	**35**	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	50		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	25		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Pyrene	**29**	ug/kg dry	13		10	B22K077	11/03/22	11/03/22	EPA 8270-SIM	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***					
2-Methylnaphthalene-d10	*110*	ug/kg dry	*126*	*87%*	*31-129*	*B22K077*	*11/03/22*	*11/03/22*	*EPA 8270-SIM*	
Fluoranthene-d10	*120*	ug/kg dry	*126*	*94%*	*63-132*	*B22K077*	*11/03/22*	*11/03/22*	*EPA 8270-SIM*	

Reported: 11/09/22 06:58

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

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Water Pollution Control Laboratory
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ORELAP Certification ID 4023

Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Analyte	Result	Units	MRL	MDL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
Polychlorinated Biphenyls (PCBs)										
PCB Aroclors by GC-ECD										
Comp-1 : W22K033-01										
Aroclor 1016/1242	ND	ug/kg dry	7.04	3.52	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1221	ND	ug/kg dry	14.1	7.04	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1232	ND	ug/kg dry	7.04	3.52	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1248	ND	ug/kg dry	7.04	3.52	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1254	ND	ug/kg dry	7.04	3.52	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1260	ND	ug/kg dry	7.04	3.52	1	B22K063	11/03/22	11/03/22	EPA 8082	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***					
Tetrachloro-m-xylene	*5.44*	ug/kg dry	*7.04*	*77%*	*47.8-143*	*B22K063*	*11/03/22*	*11/03/22*	*EPA 8082*	
Decachlorobiphenyl	*2.95*	ug/kg dry	*7.04*	*42%*	*32.8-169*	*B22K063*	*11/03/22*	*11/03/22*	*EPA 8082*	
Comp-2 : W22K033-02										
Aroclor 1016/1242	ND	ug/kg dry	6.95	3.47	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1221	ND	ug/kg dry	13.9	6.95	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1232	ND	ug/kg dry	6.95	3.47	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1248	ND	ug/kg dry	6.95	3.47	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1254	ND	ug/kg dry	6.95	3.47	1	B22K063	11/03/22	11/03/22	EPA 8082	
Aroclor 1260	ND	ug/kg dry	6.95	3.47	1	B22K063	11/03/22	11/03/22	EPA 8082	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***					
Tetrachloro-m-xylene	*5.39*	ug/kg dry	*6.95*	*78%*	*47.8-143*	*B22K063*	*11/03/22*	*11/03/22*	*EPA 8082*	
Decachlorobiphenyl	*3.08*	ug/kg dry	*6.95*	*44%*	*32.8-169*	*B22K063*	*11/03/22*	*11/03/22*	*EPA 8082*	

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Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

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City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Quality Control Report

General Chemistry - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Solids - Batch B22K074										
Blank (B22K074-BLK1)										
Total solids	ND	% W/W	0.01						11/03/22 :11/04/22	
Duplicate (B22K074-DUP1)			**Source: W22K033-01**							
Total solids	**68.6**	% W/W	0.01			67.6		2 (5)	11/03/22 :11/04/22	

Total Metals - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B22K068										
Blank (B22K068-BLK1)										
Arsenic	ND	mg/kg wet	0.025						11/03/22 :11/03/22	
Barium	ND	mg/kg wet	0.500						11/03/22 :11/03/22	
Cadmium	ND	mg/kg wet	0.025						11/03/22 :11/03/22	
Chromium	ND	mg/kg wet	0.050						11/03/22 :11/03/22	
Lead	ND	mg/kg wet	0.100						11/03/22 :11/03/22	B2
Mercury	ND	mg/kg wet	0.00375						11/03/22 :11/03/22	
Selenium	ND	mg/kg wet	0.500						11/03/22 :11/03/22	
Silver	ND	mg/kg wet	0.025						11/03/22 :11/03/22	
Standard Reference Material (B22K068-SRM1)										
Arsenic	**90.8**	mg/kg wet	1.02		102		89% *(75-125)*		11/03/22 :11/03/22	
Barium	**307**	mg/kg wet	20.3		341		90% *(75-125)*		11/03/22 :11/03/22	
Cadmium	**116**	mg/kg wet	1.02		112		103% *(75-125)*		11/03/22 :11/03/22	
Chromium	**147**	mg/kg wet	2.03		166		88% *(75-125)*		11/03/22 :11/03/22	
Lead	**95.0**	mg/kg wet	4.06		114		83% *(75-125)*		11/03/22 :11/03/22	
Mercury	**5.33**	mg/kg wet	0.152		6.25		85% *(75-125)*		11/03/22 :11/03/22	
Selenium	**98.4**	mg/kg wet	20.3		99.4		99% *(75-125)*		11/03/22 :11/03/22	
Silver	**30.6**	mg/kg wet	1.02		34.9		88% *(75-125)*		11/03/22 :11/03/22	
Duplicate (B22K068-DUP1)			**Source: W22K033-01**							
Arsenic	**4.38**	mg/kg dry	0.082			4.42		1 (20)	11/03/22 :11/03/22	
Barium	**149**	mg/kg dry	1.64			154		4 (20)	11/03/22 :11/03/22	
Cadmium	**0.260**	mg/kg dry	0.082			0.262		0.5 (20)	11/03/22 :11/03/22	
Chromium	**23.8**	mg/kg dry	0.164			22.1		8 (20)	11/03/22 :11/03/22	
Lead	**10.5**	mg/kg dry	0.328			11.9		13 (20)	11/03/22 :11/03/22	
Mercury	**0.0306**	mg/kg dry	0.0123			0.0383		22 (20)	11/03/22 :11/03/22	M8
Selenium	ND	mg/kg dry	1.64			ND		(20)	11/03/22 :11/03/22	

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Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Total Metals - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B22K068										
Duplicate (B22K068-DUP1)			**Source: W22K033-01**							
Silver	ND	mg/kg dry	0.082			ND		(20)	11/03/22 :11/03/22	
Matrix Spike (B22K068-MS1)			**Source: W22K033-01**							
Arsenic	**18.8**	mg/kg dry	0.199		15.9	4.42	90% *(75-125)*		11/03/22 :11/03/22	
Barium	**362**	mg/kg dry	3.98		239	154	87% *(75-125)*		11/03/22 :11/03/22	
Cadmium	**15.2**	mg/kg dry	0.199		15.9	0.262	94% *(75-125)*		11/03/22 :11/03/22	
Chromium	**63.9**	mg/kg dry	0.398		47.7	22.1	88% *(75-125)*		11/03/22 :11/03/22	
Lead	**84.5**	mg/kg dry	0.795		79.5	11.9	91% *(75-125)*		11/03/22 :11/03/22	
Mercury	**0.781**	mg/kg dry	0.0298		0.795	0.0383	93% *(75-125)*		11/03/22 :11/03/22	
Selenium	**75.0**	mg/kg dry	3.98		79.5	ND	94% *(75-125)*		11/03/22 :11/03/22	
Silver	**14.7**	mg/kg dry	0.199		15.9	ND	92% *(75-125)*		11/03/22 :11/03/22	

Fuels - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Hydrocarbon Scan by GC-FID - Batch B22K062										
Blank (B22K062-BLK1)										
Gasoline	ND	mg/kg wet	17						11/03/22 :11/03/22	
Diesel	ND	mg/kg wet	42						11/03/22 :11/03/22	
Lube oil	ND	mg/kg wet	83						11/03/22 :11/03/22	
Surrogate										
o-Terphenyl	*7.89*	mg/kg wet			*8.33*		95% *(50-150)*		11/03/22 :11/03/22	
Duplicate (B22K062-DUP1)			**Source: W22K033-01**							
Gasoline	ND	mg/kg dry	26			ND			11/03/22 :11/03/22	
Diesel	ND	mg/kg dry	66			ND			11/03/22 :11/03/22	
Lube oil	ND	mg/kg dry	132			ND			11/03/22 :11/03/22	
Surrogate										
o-Terphenyl	*13.3*	mg/kg dry			*13.2*		101% *(50-150)*		11/03/22 :11/03/22	

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Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B22K077										
Blank (B22K077-BLK1)										
Acenaphthene	ND	ug/kg wet	17						11/03/22 :11/03/22	
Acenaphthylene	ND	ug/kg wet	17						11/03/22 :11/03/22	
Anthracene	ND	ug/kg wet	17						11/03/22 :11/03/22	
Benzo(a)anthracene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Benzo(a)pyrene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Benzo(b)fluoranthene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Benzo(g,h,i)perylene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Benzo(k)fluoranthene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Chrysene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Dibenzo(a,h)anthracene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Fluoranthene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Fluorene	ND	ug/kg wet	17						11/03/22 :11/03/22	
Indeno(1,2,3-cd)pyrene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Naphthalene	ND	ug/kg wet	33						11/03/22 :11/03/22	
Phenanthrene	ND	ug/kg wet	17						11/03/22 :11/03/22	
Pyrene	ND	ug/kg wet	8.3						11/03/22 :11/03/22	
Surrogate										
2-Methylnaphthalene-d10	*69*	ug/kg wet			*83.3*		82% *(31-129)*		11/03/22 :11/03/22	
Fluoranthene-d10	*73*	ug/kg wet			*83.3*		87% *(63-132)*		11/03/22 :11/03/22	
LCS (B22K077-BS1)										
Acenaphthene	**70.4**	ug/kg wet	20		80.0		88% *(49-122)*		11/03/22 :11/03/22	
Acenaphthylene	**76.0**	ug/kg wet	20		80.0		95% *(51-123)*		11/03/22 :11/03/22	
Anthracene	**66.0**	ug/kg wet	20		80.0		82% *(62-115)*		11/03/22 :11/03/22	
Benzo(a)anthracene	**68.0**	ug/kg wet	10		80.0		85% *(63-112)*		11/03/22 :11/03/22	
Benzo(a)pyrene	**76.4**	ug/kg wet	10		80.0		96% *(62-117)*		11/03/22 :11/03/22	
Benzo(b)fluoranthene	**80.8**	ug/kg wet	10		80.0		101% *(53-117)*		11/03/22 :11/03/22	V1
Benzo(g,h,i)perylene	**76.4**	ug/kg wet	10		80.0		96% *(42-128)*		11/03/22 :11/03/22	
Benzo(k)fluoranthene	**75.2**	ug/kg wet	10		80.0		94% *(53-124)*		11/03/22 :11/03/22	
Chrysene	**70.4**	ug/kg wet	10		80.0		88% *(63-119)*		11/03/22 :11/03/22	
Dibenzo(a,h)anthracene	**65.2**	ug/kg wet	10		80.0		82% *(44-129)*		11/03/22 :11/03/22	
Fluoranthene	**77.6**	ug/kg wet	10		80.0		97% *(63-115)*		11/03/22 :11/03/22	
Fluorene	**73.2**	ug/kg wet	20		80.0		92% *(58-113)*		11/03/22 :11/03/22	
Indeno(1,2,3-cd)pyrene	**70.8**	ug/kg wet	10		80.0		88% *(46-127)*		11/03/22 :11/03/22	
Naphthalene	**70.8**	ug/kg wet	40		80.0		88% *(37-118)*		11/03/22 :11/03/22	
Phenanthrene	**72.4**	ug/kg wet	20		80.0		90% *(49-119)*		11/03/22 :11/03/22	
Pyrene	**79.6**	ug/kg wet	10		80.0		100% *(63-117)*		11/03/22 :11/03/22	
Surrogate										
2-Methylnaphthalene-d10	*96*	ug/kg wet			*100*		96% *(31-129)*		11/03/22 :11/03/22	
Fluoranthene-d10	*100*	ug/kg wet			*100*		102% *(63-132)*		11/03/22 :11/03/22	
Duplicate (B22K077-DUP1)						**Source: W22K033-01**				

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Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B22K077										
Duplicate (B22K077-DUP1)			**Source: W22K033-01**							
Acenaphthene	ND	ug/kg dry	28			ND		(30)	11/03/22 :11/03/22	
Acenaphthylene	ND	ug/kg dry	28			ND		(30)	11/03/22 :11/03/22	
Anthracene	ND	ug/kg dry	28			ND		(30)	11/03/22 :11/03/22	
Benzo(a)anthracene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Benzo(a)pyrene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Benzo(b)fluoranthene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Benzo(g,h,i)perylene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Benzo(k)fluoranthene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Chrysene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Dibenzo(a,h)anthracene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Fluoranthene	**30.9**	ug/kg dry	14			30.5		1 (30)	11/03/22 :11/03/22	
Fluorene	ND	ug/kg dry	28			ND		(30)	11/03/22 :11/03/22	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	14			ND		(30)	11/03/22 :11/03/22	
Naphthalene	ND	ug/kg dry	56			ND		(30)	11/03/22 :11/03/22	
Phenanthrene	ND	ug/kg dry	28			ND		(30)	11/03/22 :11/03/22	
Pyrene	**20.8**	ug/kg dry	14			21.0		1 (30)	11/03/22 :11/03/22	
Surrogate										
2-Methylnaphthalene-d10	*110*	ug/kg dry			*140*		81% *(31-129)*		11/03/22 :11/03/22	
Fluoranthene-d10	*100*	ug/kg dry			*140*		72% *(63-132)*		11/03/22 :11/03/22	
Matrix Spike (B22K077-MS1)			**Source: W22K033-01**							
Acenaphthene	**232**	ug/kg dry	29		291	ND	80% *(49-122)*		11/03/22 :11/03/22	
Acenaphthylene	**256**	ug/kg dry	29		291	ND	88% *(51-123)*		11/03/22 :11/03/22	
Anthracene	**210**	ug/kg dry	29		291	ND	72% *(62-115)*		11/03/22 :11/03/22	
Benzo(a)anthracene	**211**	ug/kg dry	15		291	ND	73% *(63-112)*		11/03/22 :11/03/22	
Benzo(a)pyrene	**209**	ug/kg dry	15		291	ND	72% *(62-117)*		11/03/22 :11/03/22	
Benzo(b)fluoranthene	**222**	ug/kg dry	15		291	ND	76% *(53-117)*		11/03/22 :11/03/22	V1
Benzo(g,h,i)perylene	**195**	ug/kg dry	15		291	ND	67% *(42-128)*		11/03/22 :11/03/22	
Benzo(k)fluoranthene	**212**	ug/kg dry	15		291	ND	73% *(53-124)*		11/03/22 :11/03/22	
Chrysene	**222**	ug/kg dry	15		291	ND	76% *(63-119)*		11/03/22 :11/03/22	
Dibenzo(a,h)anthracene	**191**	ug/kg dry	15		291	ND	66% *(44-129)*		11/03/22 :11/03/22	
Fluoranthene	**282**	ug/kg dry	15		291	30.5	87% *(63-115)*		11/03/22 :11/03/22	
Fluorene	**235**	ug/kg dry	29		291	ND	81% *(58-113)*		11/03/22 :11/03/22	
Indeno(1,2,3-cd)pyrene	**196**	ug/kg dry	15		291	ND	67% *(46-127)*		11/03/22 :11/03/22	
Naphthalene	**252**	ug/kg dry	58		291	ND	87% *(37-118)*		11/03/22 :11/03/22	
Phenanthrene	**239**	ug/kg dry	29		291	ND	82% *(49-119)*		11/03/22 :11/03/22	
Pyrene	**272**	ug/kg dry	15		291	21.0	86% *(63-117)*		11/03/22 :11/03/22	
Surrogate										
2-Methylnaphthalene-d10	*110*	ug/kg dry			*145*		77% *(31-129)*		11/03/22 :11/03/22	
Fluoranthene-d10	*100*	ug/kg dry			*145*		71% *(63-132)*		11/03/22 :11/03/22	

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Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Polychlorinated Biphenyls (PCBs) - QC

Analyte	Result	Units	MRL	MDL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
PCB Aroclors by GC-ECD - Batch B22K063										
Blank (B22K063-BLK1)										
Aroclor 1016/1242	ND	ug/kg wet	4.76	2.38					11/03/22 :11/03/22	
Aroclor 1221	ND	ug/kg wet	9.52	4.76					11/03/22 :11/03/22	
Aroclor 1232	ND	ug/kg wet	4.76	2.38					11/03/22 :11/03/22	
Aroclor 1248	ND	ug/kg wet	4.76	2.38					11/03/22 :11/03/22	
Aroclor 1254	ND	ug/kg wet	4.76	2.38					11/03/22 :11/03/22	
Aroclor 1260	ND	ug/kg wet	4.76	2.38					11/03/22 :11/03/22	
Surrogate										
Tetrachloro-m-xylene	*4.32*	ug/kg wet			*4.76*		91% *(47.8-143)*		11/03/22 :11/03/22	
Decachlorobiphenyl	*4.15*	ug/kg wet			*4.76*		87% *(32.8-169)*		11/03/22 :11/03/22	
LCS (B22K063-BS1)										
Aroclor 1254	**101.1**	ug/kg wet	10.0	5.00	100		101% *(70-130)*		11/03/22 :11/03/22	
Surrogate										
Tetrachloro-m-xylene	*8.99*	ug/kg wet			*10.0*		90% *(47.8-143)*		11/03/22 :11/03/22	
Decachlorobiphenyl	*8.20*	ug/kg wet			*10.0*		82% *(32.8-169)*		11/03/22 :11/03/22	
Duplicate (B22K063-DUP1)			**Source: W22K033-01**							
Aroclor 1016/1242	ND	ug/kg dry	6.95	3.48		ND		(20)	11/03/22 :11/03/22	
Aroclor 1221	ND	ug/kg dry	13.9	6.95		ND		(20)	11/03/22 :11/03/22	
Aroclor 1232	ND	ug/kg dry	6.95	3.48		ND		(20)	11/03/22 :11/03/22	
Aroclor 1248	ND	ug/kg dry	6.95	3.48		ND		(20)	11/03/22 :11/03/22	
Aroclor 1254	ND	ug/kg dry	6.95	3.48		ND		(20)	11/03/22 :11/03/22	
Aroclor 1260	ND	ug/kg dry	6.95	3.48		ND		(20)	11/03/22 :11/03/22	
Surrogate										
Tetrachloro-m-xylene	*4.61*	ug/kg dry			*6.95*		66% *(47.8-143)*		11/03/22 :11/03/22	
Decachlorobiphenyl	*2.25*	ug/kg dry			*6.95*		32% *(32.8-169)*		11/03/22 :11/03/22	*SU1*
Matrix Spike (B22K063-MS1)			**Source: W22K033-01**							
Aroclor 1254	**48.29**	ug/kg dry	7.33	3.67	73.3	ND	66% *(55.8-122)*		11/03/22 :11/03/22	
Surrogate										
Tetrachloro-m-xylene	*4.91*	ug/kg dry			*7.33*		67% *(47.8-143)*		11/03/22 :11/03/22	
Decachlorobiphenyl	*2.47*	ug/kg dry			*7.33*		34% *(32.8-169)*		11/03/22 :11/03/22	

Reported: 11/09/22 06:58

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Jennifer Shackelford, Laboratory Manager

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**South Waterfront Greenway Park**	Client:	Coordinated Site Analysis
Work Order:	**W22K033**	Received:	11/02/22 14:42

Qualifiers

B2	Analyte was detected in the Method Blank, but at a concentration less than one tenth the amount in the sample(s).
M8	The matrix duplicate control limit is not applicable at concentrations less than 5 times the reporting limit.
SU1	Recovery for one or more surrogate compounds was outside the acceptance range (low). Sample results may be low estimates.
V1	Continuing calibration verification was high; sample results for this analyte may be high estimates.

Definitions

DET	Analyte Detected	ND	Analyte Not Detected at or above the reporting limit
MRL	Method Reporting Limit	MDL	Method Detection Limit
NR	Not Reportable	dry	Sample results reported on a dry weight basis
% Rec.	Percent Recovery	RPD	Relative Percent Difference
*	This analyte is not certified under NELAP		

Reported: 11/09/22 06:58

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

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Date: 11-2-2022

Water Pollution Control Laboratory
6543 N. Burlington Ave.
Portland, Oregon 97203-4552
Sample Custodian: (503) 823-5696
General Lab: (503) 823-5681

City of Portland Chain-of-Custody

Bureau of Environmental Services

Lab Work Order #: W22K033
Collected By: B. Maram
Contact Info: 503-823-8672

Client Name: **Coordinated Site Assessment** 9/18/22
Project Number (if applicable):
Project Name: South Waterfront ~~Gateway~~ Park GREENWAY
CSA Contact Name: Brian Maram

Requested Analyses

Follow-up Tests:
- [x] Run TCLP metals if limit exceeded
- [x] Run NWTPH-Dx and NWTPH-Gx if detects on NWTPH-HCID
- [ ] Run PAHs if detects on NWTPH-Dx
- [x] Run VOCs if detects on NWTPH-Gx

Turn-Around-Time Request:
Need by Date: _____
- [ ] Standard (10 business days)
- [x] Rush (5 business days)
- [ ] Other: _____

Lab Number	Sample Name	Sample Date	Sample Time	Sample Type	Sample Matrix	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	PCB Aroclors (low-level)	PAHs	Priority Pollutant 13 Metals	RCRA 8 Metals	Total Metals (As, Cd, Cr, Cu, Pb, Hg, Zn)	Total Metals (Cd, Cr, Pb)	VOCs	TOC	HOLD	# of Containers	Remarks
01	Comp-1	11-2-22	13:30	C	SL	X			X	X		X						4	
02	Comp-2	11-2-22	13:35	C	SL	X			X	X		X						4	

Sample Type - G=Grab, C=Composite, FD=Field Duplicate, FDB=Field Decon Blank, EQB=Equipment Blank, TB=Trip Blank
Sample Matrix - DI = DI Water, G = Gas, GW = Groundwater, IWW = Industrial Wastewater, MWW = Municipal Wastewater, PC = Paint Chips, SED = Sediment, SL = Soil, STW = Stormwater, SFW = Surface water

Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date: 11-2-22	Date: 11/2/22	Date:	Date:
Printed Name: Brian Maram	Printed Name: Eleni Alexandrou	Printed Name:	Printed Name:
Time: 14:42	Time: 1442	Time:	Time:

WPCL Cooler Receipt Form

Work Order Number: W22K033 **Cooler Receipt Form Filled Out By:** EA

Project: South Waterfront ~~Gateway~~ GREENWAY Park

5 11/8/22

Received on ice: YES NO (circle one) *[If directly from field, indicate here:_____]*

Sample(s) Received From: CBWTP fridge_____ Client ✓ Courier_____ SR fridge _____

Temperature (°C): 13

	Yes	No	N/A
Is the COC present and signed?	✓		
Are sample bottles intact?	✓		
Do the COC and sample labels match?	✓		
Are the appropriate containers used?	✓		
Are samples appropriately preserved?			✓
Are VOA vials completely filled (zero Headspace)?			✓
Are alkalinity bottles completely filled (zero Headspace)? Note if filled in lab.			✓
Are samples received within holding times (except for pH and residual chlorine)?	✓		

Pres. #	Preservative	LIMS ID	Standard Preservation Amounts
1	**HNO_3 (1:1) to pH <2**		0.5mL/250mL; 1.0mL/500mL; 4-5 drops/50mL centrifuge tube
2	**H_2SO_4 (18N) to pH <2**		0.4mL/250mL; 0.8mL/500mL ; 1.6mL/1000mL
3	**HCl (1:1) to pH <2**		2.0mL/500mL; 4.0mL/1000mL
4	**HCl (1:1) to pH 2-3**		For TOC: 2-5 drops/250mL
5	**NaOH to pH >12**		4-10 pellets/500mL; 4 mL 10N/1000mL

Date	Time	Analyst	Sample LIMS ID	Bottle ID	Pres. #	Comments

Comments:_____