Tanner Springs Park **CAP INSPECTION REPORT** 2020

Site: Tanner Springs Park Inspection Date: 10/09/2020

Background: Tanner Springs Park is a municipal park located in NW Portland. Area soils beneath the cap may contain elevated concentrations of petroleum hydrocarbons, lead, and/or polynuclear aromatic hydrocarbons. For Tanner Springs Park, the cap consists of landscaped soil, concrete sidewalks, wood walkways, water features, and other hardscaping. This inspection report was completed to assess the condition of the capped area which includes the entire park.

Location Description: (*i.e.,* boundary streets)
NW Marshall, NW Northrup, NW 11th, and NW 10th streets (1N1E34BB Lot 2613)

Party Performing Inspection / Preparing Report:		**Contact Numbers:**
Bethany Nabhan	Environmental Specialist / BES	503-823-5524
John O'Donovan	Engineer III / BES	503-823-7881
Kyle DeHart	Risk Specialist II / Portland Parks & Recreation	503-502-4534

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

Hardscape Areas: Inspect concrete sidewalks and walkways 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 areas requiring maintenance.

Hardscaped areas are in good condition. Only minor cracking and evidence of settling was observed in the concrete sidewalks around the park and the pathways within the park.

Cracks, Settlement? Yes **X** No__

Location(s):

One (1) new crack in a concrete tile was observed immediately adjacent to an electrical vault at the northwest corner of the park (see photo point 9 and figure 1). This crack was very minor and does not pose a concern of cap penetration. This crack will be monitored in future inspections and photographed to document any changes.

Cracking at the tops of both sets of staircases in the northeast and southeast corners of the Park was observed, with caulking in fair to poor condition (see photo points 2 and 5 and figure 1). This does not pose a risk of cap penetration.

There were three (3) locations along the cobble pathway in the western portion of the park where separation was noted. All three (3) had been previously repaired with caulking. The westernmost patch, near the sidewalk, is in good condition (see photo point 12 and figure 1). The next patch moving east along the path is in fair condition (photo point 11 and figure 1), and the final patch moving further into the park is in poor condition (see photo point 10 and figure 1). These cracks do not pose a risk of cap penetration.

Maintenance required? Yes **X** No__

A new caulk patch was applied by Parks to the crack in the cobblestone pathway located in the Park (see photo point 10 and figure 1). This repair occurred within one week of the noted deficiency. A photo of the repair is provided. This repair is protective of the cap.

Holes, Penetrations? Yes__ No **X**

Location: None

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 grass and planted areas, were inspected for holes, cracks and visual evidence of exposed demarcation fabric.

Exposed Soil or Fabric? Yes **X** No__

Location: One (1) area of surface erosion was observed in the northern central portion of the park (see photo point 13 and figure 1). Soil was eroded away in one small area, approximately 1 ft by 3 ft in size, and was less than 6 inches deep. Thick black plastic sheeting was exposed at the surface. We have no evidence that this plastic sheeting represents the cap or demarcation fabric.

Maintenance required? Yes **X** No__

This eroded area was patched by Parks with new topsoil to bring it back to grade (see photo point 13 and figure 1). A receipt showing the source of the soil patch material and laboratory data from BES's Water Pollution Control Lab indicating that the material is free of contaminants of concern for the site are attached. This area will be monitored in future inspections and photographed to document any changes.

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 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.

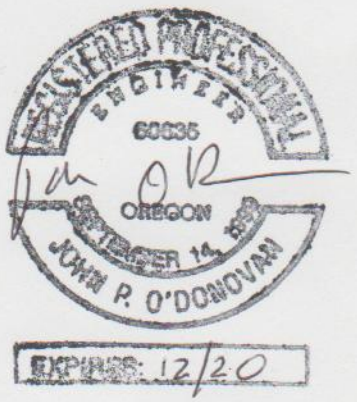
Additional Comments:

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 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: Kevin Dana



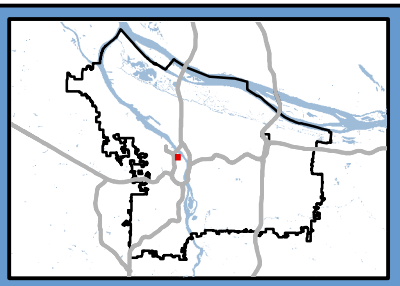


Figure 1:

Tanner Springs Park
2020 Cap Inspection
Photo Locations Map

Legend

- Photo
- Taxlots

1 inch = 41.67 feet

N
W E
S

Map Created by: bethanyn October 12, 2020

Map Produced in ArcMap

Photo Point 1 – Minor cracks in concrete pavement looks the same as it did during last year's inspection.

Photo Point 2 – cracks in pavement and work caulking at the top of the stairs

Photo Point 3 – Minor cracks in pavement have not changed since last year's inspection.

Photo Point 4 – Minor crack in pavement has not changed since last year

Photo Point 5 – Minor cracks in pavement at top of staircase

Photo Point 6 – minor cracks in pavement around bike rental station

Photo Point 7 – minor cracks in pavement. Photos collected to monitor cracks over time.

Photo Point 8 – Minor wear at panel edge.

Photo Point 9 (2 photos) – (top photo) crack in panel on right has not changed since 2019 inspection. New crack has formed in the panel on the left. (bottom photo) electrical utility vault, likely for streetcar, adjacent to minor cracks in pavement shown in top photo.

Photo Point 10 – separation of landscaping cobbles. Appeared to have previously been patched with caulking. Patch mostly gone now. No holes into subsurface observed here. Photos of the repair are provided below.

Photo Point 11 – Another location where separation of landscaping cobbles was observed. Caulking patch mostly still there. Photos of the repair are provided below.

Photo Point 12 – Third location where separation of cobbles patched. This patch is in decent shape.

Photo Point 13 – Area of surface erosion. Thick black material observed at the surface (above) Repair soil patch (below)

PR00122348 29
DPO 22224187
MD 5000548165

LONNIE ENDICOTT EXCAVATING
P.O. BOX 578
CARLTON, OR 97111
(503) 852-6900 • (503) 852-6147

INVOICE

NAME: City of Portland
DATE: 9-12-17
ADDRESS: Washington Park
6437 SE Division PDX
PHONE: 503 823 3635

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D
Dan					

QTY.	DESCRIPTION	AMOUNT
1 ld	Sandy loam	$285.00

WO # 261411
CAT # 204
CC # 8PKPT cc900040
ACCT # 532600
TOTAL # 285.00
INITIALS KDB

TAX

RECEIVED BY

TOTAL $285.00

11242

THANK YOU

All claims and returned goods MUST be accompanied by this bill.

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:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Project Mgr:	Bethany Nabhan
Received:	11/4/20 15:00		
Submitted By:	CSA		

Sample	Laboratory ID	Matrix	Type	Sample Collection Date Start	Sample Collection Date End	Qualifier
WAPK Sandy Loam 1	W20K042-01	Soil	Composite	11/04/20 13:40	11/04/20 13:40	
WAPK Sandy Loam 2	W20K042-02	Soil	Composite	11/04/20 13:50	11/04/20 13:50	

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
General Chemistry									
Total Solids									
WAPK Sandy Loam 1 : W20K042-01									
Total solids	**87.0**	% W/W	0.01		B20K070	11/05/20	11/06/20	SM 2540G	
WAPK Sandy Loam 2 : W20K042-02									
Total solids	**85.6**	% W/W	0.01		B20K070	11/05/20	11/06/20	SM 2540G	
Total Metals									
Total Metals by ICPMS									
WAPK Sandy Loam 1 : W20K042-01									
Cadmium	**0.208**	mg/kg dry	0.065	20	B20K144	11/09/20	11/09/20	EPA 6020	
Chromium	**29.4**	mg/kg dry	0.130	20	B20K144	11/09/20	11/09/20	EPA 6020	
Lead	**5.79**	mg/kg dry	0.260	20	B20K144	11/09/20	11/09/20	EPA 6020	
WAPK Sandy Loam 2 : W20K042-02									
Cadmium	**0.123**	mg/kg dry	0.063	20	B20K144	11/09/20	11/09/20	EPA 6020	
Chromium	**31.4**	mg/kg dry	0.126	20	B20K144	11/09/20	11/09/20	EPA 6020	
Lead	**4.96**	mg/kg dry	0.253	20	B20K144	11/09/20	11/09/20	EPA 6020	

Reported: 12/01/20 14:15

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

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Project:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
Fuels									
Diesel/Oil Hydrocarbons by GC-FID									
WAPK Sandy Loam 1 : W20K042-01									F7
Diesel	ND	mg/kg dry	28	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Lube oil	ND	mg/kg dry	56	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
2-Fluorobiphenyl	*20.7*	mg/kg dry	*22.4*	*92%*	*50-150*	*B20K075*	*11/05/20*	*11/05/20*	*NWTPH-Dx*	
WAPK Sandy Loam 2 : W20K042-02									F7
Diesel	ND	mg/kg dry	25	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Lube oil	ND	mg/kg dry	49	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
2-Fluorobiphenyl	*17.6*	mg/kg dry	*19.6*	*90%*	*50-150*	*B20K075*	*11/05/20*	*11/05/20*	*NWTPH-Dx*	

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Project:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier

Semivolatile Organics - SIM

Polynuclear Aromatic Hydrocarbons by GCMS-SIM

WAPK Sandy Loam 1 : W20K042-01

Acenaphthene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(g,h,i)perylene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluoranthene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	45	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Pyrene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
2-Methylnaphthalene-d10	*100*	ug/kg dry	*112*	*92%*	*31-129*	*B20K075*	*11/05/20*	*11/17/20*	*EPA 8270-SIM*
Fluoranthene-d10	*120*	ug/kg dry	*112*	*106%*	*63-132*	*B20K075*	*11/05/20*	*11/17/20*	*EPA 8270-SIM*

WAPK Sandy Loam 2 : W20K042-02

Acenaphthene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(g,h,i)perylene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluoranthene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	39	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Pyrene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
2-Methylnaphthalene-d10	*88*	ug/kg dry	*98.0*	*90%*	*31-129*	*B20K075*	*11/05/20*	*11/17/20*	*EPA 8270-SIM*
Fluoranthene-d10	*98*	ug/kg dry	*98.0*	*100%*	*63-132*	*B20K075*	*11/05/20*	*11/17/20*	*EPA 8270-SIM*

Reported: 12/01/20 14:15

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ORELAP Certification ID 4023

Project:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Quality Control Report

General Chemistry - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Solids - Batch B20K070									
Blank (B20K070-BLK1)									
Total solids	ND	% W/W	0.01					11/05/20 :11/06/20	
Duplicate (B20K070-DUP1)			**Source: W20K037-03**						
Total solids	**97.3**	% W/W	0.01		97.3		0.02 (5)	11/05/20 :11/06/20	

Total Metals - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B20K144									
Blank (B20K144-BLK1)									
Cadmium	ND	mg/kg wet	0.025					11/09/20 :11/09/20	
Chromium	ND	mg/kg wet	0.050					11/09/20 :11/09/20	
Lead	ND	mg/kg wet	0.100					11/09/20 :11/09/20	
Standard Reference Material (B20K144-SRM1)									
Cadmium	**109**	mg/kg wet	1.05	112		98% *(75-125)*		11/09/20 :11/09/20	
Chromium	**151**	mg/kg wet	2.11	166		91% *(75-125)*		11/09/20 :11/09/20	
Lead	**101**	mg/kg wet	4.22	114		89% *(75-125)*		11/09/20 :11/09/20	
Duplicate (B20K144-DUP1)			**Source: W20K042-01**						
Cadmium	**0.112**	mg/kg dry	0.060		0.208		60 (20)	11/09/20 :11/09/20	M8
Chromium	**28.9**	mg/kg dry	0.120		29.4		2 (20)	11/09/20 :11/09/20	
Lead	**5.07**	mg/kg dry	0.240		5.79		13 (20)	11/09/20 :11/09/20	
Matrix Spike (B20K144-MS1)			**Source: W20K042-01**						
Cadmium	**13.0**	mg/kg dry	0.163	13.0	0.208	98% *(75-125)*		11/09/20 :11/09/20	
Chromium	**66.6**	mg/kg dry	0.326	39.1	29.4	95% *(75-125)*		11/09/20 :11/09/20	
Lead	**65.8**	mg/kg dry	0.652	65.2	5.79	92% *(75-125)*		11/09/20 :11/09/20	

Reported: 12/01/20 14:15

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Project:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Fuels - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Diesel/Oil Hydrocarbons by GC-FID - Batch B20K075									
Blank (B20K075-BLK2)									F7
Diesel	ND	mg/kg wet	25					11/05/20 :11/05/20	
Lube oil	ND	mg/kg wet	50					11/05/20 :11/05/20	
Surrogate									
2-Fluorobiphenyl	*17.7*	mg/kg wet		*20.0*		88% *(50-150)*		11/05/20 :11/05/20	
LCS (B20K075-BS2)									F7
Diesel	**428**	mg/kg wet	25	400		107% *(50-150)*		11/05/20 :11/05/20	
Lube oil	**416**	mg/kg wet	50	400		104% *(50-150)*		11/05/20 :11/05/20	
Surrogate									
2-Fluorobiphenyl	*21.7*	mg/kg wet		*20.0*		109% *(50-150)*		11/05/20 :11/05/20	
Duplicate (B20K075-DUP1)			**Source: W20K042-01**						F7
Diesel	ND	mg/kg dry	26		ND		(50)	11/05/20 :11/05/20	
Lube oil	ND	mg/kg dry	52		ND		(50)	11/05/20 :11/05/20	
Surrogate									
2-Fluorobiphenyl	*19.3*	mg/kg dry		*20.8*		93% *(50-150)*		11/05/20 :11/05/20	

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Project:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B20K075									
Blank (B20K075-BLK1)									
Acenaphthene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Acenaphthylene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Anthracene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Benzo(a)anthracene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(a)pyrene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(b)fluoranthene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(g,h,i)perylene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(k)fluoranthene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Chrysene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Fluoranthene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Fluorene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Naphthalene	ND	ug/kg wet	40					11/05/20 :11/17/20	
Phenanthrene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Pyrene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Surrogate									
2-Methylnaphthalene-d10	*78*	ug/kg wet		*100*		78% *(31-129)*		11/05/20 :11/17/20	
Fluoranthene-d10	*110*	ug/kg wet		*100*		107% *(63-132)*		11/05/20 :11/17/20	
LCS (B20K075-BS1)									
Acenaphthene	**70.8**	ug/kg wet	20	80.0		88% *(49-122)*		11/05/20 :11/17/20	
Acenaphthylene	**74.4**	ug/kg wet	20	80.0		93% *(51-123)*		11/05/20 :11/17/20	
Anthracene	**82.4**	ug/kg wet	20	80.0		103% *(62-115)*		11/05/20 :11/17/20	
Benzo(a)anthracene	**80.8**	ug/kg wet	10	80.0		101% *(63-112)*		11/05/20 :11/17/20	
Benzo(a)pyrene	**77.6**	ug/kg wet	10	80.0		97% *(62-117)*		11/05/20 :11/17/20	
Benzo(b)fluoranthene	**67.6**	ug/kg wet	10	80.0		84% *(53-117)*		11/05/20 :11/17/20	
Benzo(g,h,i)perylene	**71.6**	ug/kg wet	10	80.0		90% *(42-128)*		11/05/20 :11/17/20	
Benzo(k)fluoranthene	**76.8**	ug/kg wet	10	80.0		96% *(53-124)*		11/05/20 :11/17/20	
Chrysene	**76.4**	ug/kg wet	10	80.0		96% *(63-119)*		11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	**70.8**	ug/kg wet	10	80.0		88% *(44-129)*		11/05/20 :11/17/20	
Fluoranthene	**81.2**	ug/kg wet	10	80.0		102% *(63-115)*		11/05/20 :11/17/20	
Fluorene	**73.6**	ug/kg wet	20	80.0		92% *(58-113)*		11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	**71.6**	ug/kg wet	10	80.0		90% *(46-127)*		11/05/20 :11/17/20	
Naphthalene	**77.2**	ug/kg wet	40	80.0		96% *(37-118)*		11/05/20 :11/17/20	
Phenanthrene	**77.6**	ug/kg wet	20	80.0		97% *(49-119)*		11/05/20 :11/17/20	
Pyrene	**83.6**	ug/kg wet	10	80.0		104% *(63-117)*		11/05/20 :11/17/20	
Surrogate									
2-Methylnaphthalene-d10	*85*	ug/kg wet		*100*		85% *(31-129)*		11/05/20 :11/17/20	
Fluoranthene-d10	*110*	ug/kg wet		*100*		114% *(63-132)*		11/05/20 :11/17/20	

Reported: 12/01/20 14:15

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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:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B20K075									
Duplicate (B20K075-DUP2)			**Source: W20K042-01**						
Acenaphthene	ND	ug/kg dry	21		ND		(30)	11/05/20 :11/17/20	
Acenaphthylene	ND	ug/kg dry	21		ND		(30)	11/05/20 :11/17/20	
Anthracene	ND	ug/kg dry	21		ND		(30)	11/05/20 :11/17/20	
Benzo(a)anthracene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Benzo(a)pyrene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Benzo(b)fluoranthene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Benzo(g,h,i)perylene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Benzo(k)fluoranthene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Chrysene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Fluoranthene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Fluorene	ND	ug/kg dry	21		ND		(30)	11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Naphthalene	ND	ug/kg dry	42		ND		(30)	11/05/20 :11/17/20	
Phenanthrene	ND	ug/kg dry	21		ND		(30)	11/05/20 :11/17/20	
Pyrene	ND	ug/kg dry	10		ND		(30)	11/05/20 :11/17/20	
Surrogate									
2-Methylnaphthalene-d10	*85*	ug/kg dry		*104*		82% *(31-129)*		11/05/20 :11/17/20	
Fluoranthene-d10	*100*	ug/kg dry		*104*		99% *(63-132)*		11/05/20 :11/17/20	
Matrix Spike (B20K075-MS1)			**Source: W20K042-01**						
Acenaphthene	**185**	ug/kg dry	22	217	ND	85% *(49-122)*		11/05/20 :11/17/20	
Acenaphthylene	**200**	ug/kg dry	22	217	ND	92% *(51-123)*		11/05/20 :11/17/20	
Anthracene	**206**	ug/kg dry	22	217	ND	95% *(62-115)*		11/05/20 :11/17/20	
Benzo(a)anthracene	**205**	ug/kg dry	11	217	ND	95% *(63-112)*		11/05/20 :11/17/20	
Benzo(a)pyrene	**192**	ug/kg dry	11	217	ND	88% *(62-117)*		11/05/20 :11/17/20	
Benzo(b)fluoranthene	**167**	ug/kg dry	11	217	ND	77% *(53-117)*		11/05/20 :11/17/20	
Benzo(g,h,i)perylene	**173**	ug/kg dry	11	217	ND	80% *(42-128)*		11/05/20 :11/17/20	
Benzo(k)fluoranthene	**189**	ug/kg dry	11	217	ND	87% *(53-124)*		11/05/20 :11/17/20	
Chrysene	**188**	ug/kg dry	11	217	ND	87% *(63-119)*		11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	**177**	ug/kg dry	11	217	ND	81% *(44-129)*		11/05/20 :11/17/20	
Fluoranthene	**203**	ug/kg dry	11	217	ND	94% *(63-115)*		11/05/20 :11/17/20	
Fluorene	**179**	ug/kg dry	22	217	ND	82% *(58-113)*		11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	**175**	ug/kg dry	11	217	ND	81% *(46-127)*		11/05/20 :11/17/20	
Naphthalene	**192**	ug/kg dry	43	217	ND	88% *(37-118)*		11/05/20 :11/17/20	
Phenanthrene	**193**	ug/kg dry	22	217	ND	89% *(49-119)*		11/05/20 :11/17/20	
Pyrene	**209**	ug/kg dry	11	217	ND	96% *(63-117)*		11/05/20 :11/17/20	
Surrogate									
2-Methylnaphthalene-d10	*110*	ug/kg dry		*108*		102% *(31-129)*		11/05/20 :11/17/20	
Fluoranthene-d10	*120*	ug/kg dry		*108*		107% *(63-132)*		11/05/20 :11/17/20	

Reported: 12/01/20 14:15

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Jennifer Shackelford, Laboratory Manager

City of Portland
Water Pollution Control Laboratory
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ORELAP Certification ID 4023

Project:	**The Fields Park & Tanner Springs Park Inspections**	Client:	Coordinated Site Analysis
Work Order:	**W20K042**	Received:	11/04/20 15:00

Qualifiers

F7	This sample underwent silica gel clean-up.
M8	The matrix duplicate control limit is not applicable at concentrations less than 5 times the reporting limit.

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: 12/01/20 14:15

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

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Date: 11/4/2020

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 #: W20K042
Collected By: BLN
Contact Info: 3-1144

Client Name: **Coordinated Site Analysis** Project Number (if applicable): 7ESPKLB000048
Project Name: The Fields Park + Tanner Springs Park Inspect. CSA Contact Name: Bethany Nabhan

Requested Analyses

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

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

Lab Number	Sample Name	Sample Date	Sample Time	Grab or Comp	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	WAPK Sandy Loam 1	11/4/20	13:40	C	S		●			●					●				3	
02	WAPK Sandy Loam 2	11/4/20	13:50	C	S		●			●					●				3	

Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: Bethany Nabhan	Signature:	Signature:	Signature:
Printed Name: Bethany Nabhan	Printed Name: Matt Clark	Printed Name:	Printed Name:
Date: 11/4/20	Date: 11/4/20	Date:	Date:
Time: BLN 15:00	Time: 1500	Time:	Time:

CSA Standard WPCL COC

WPCL Cooler Receipt Form

Work Order Number: W20K042 **Cooler Receipt Form Filled Out By:** HC

Project: The Fields Park + Tanner Springs Park Inspect.

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

Sample(s) Received From: CBWTP fridge____ Client ✓ Courier____

Temperature (°C): 1.6

	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?			✓
Do VOA vials or alkalinity bottles have Headspace? (circle which this applies to)			✓
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**		1.0mL/500mL; 2.0mL/1000mL
4	**HCl (1:1) to pH 2-3**		For TOC: 2-5 drops/250mL
5	**NaOH (pellets) to pH >12**		4-10 pellets/500mL; 8-20 pellets/1000mL

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

Comments:_____