September 13, 2018

Kathy Bahnick
Port of Seattle
Pier 69
2711 Alaskan Way
Seattle, WA 98121

Re: Navy Hoist Remedial Excavation Completion Report, Port of Seattle Terminal 91

Dear Kathy,

This letter describes remedial excavation conducted at the Terminal 91 Building 136 area (DU B.36) in July 2018 to address contamination associated with hydraulic lifts that were discovered during routine maintenance paving (Figure 1). December 2017 reconnaissance sampling confirmed petroleum in soil and groundwater samples exceeding Model Toxics Control Act (MTCA) Method A cleanup levels adjacent to the hoists (Pacific Groundwater Group [PGG] 2018).

The remedial excavation and sampling were conducted consistent with the remediation plan (PGG 2018) and with the Contamination Contingency Work Plan in Exhibit E of the Terminal 91 Agreed Order (DE 8938).

Confirmation sampling from the sidewalls and base of the excavation were all below applicable MTCA cleanup levels indicating that excavation successfully removed impacted soils. Excavation and confirmation sampling details are discussed below.

INTRODUCTION

Terminal 91 is underlain by fill, tide marsh silts and sands, and clay (PGG 2018). The contact between fill and tide deposits has organic material with peat and woody debris that ranges from small wood fibers to logs. The depth to groundwater is approximately 6.5 feet below ground surface (bgs).

The Navy Hoist remedial excavation is located in discrete unit DU B.36 of Terminal 91 (Figures 1 and 2). DU B.36 is the former Navy Transportation Building, Building 136. Building 136 included hydraulic hoists as depicted in the August 1961 drawings (PGG 2018; Landau 2012). Building 136 was demolished in the late 1970s. The hydraulic lift assemblies were discovered during paving operations in September 2017 and included two narrow concrete basins/troughs with hoists at each end. Hydraulic oil was released into a trough housing the hoists when one of the hoists was accidently damaged, and a vacuum

truck was used to remove oil and water from the trough the following day. Reconnaissance soil and groundwater sampling around the hoists in December 2017 confirmed soil and groundwater concentrations exceeding MTCA diesel- and oil-range total petroleum hydrocarbon (TPH) cleanup levels. The extent of contamination suggests that releases likely predated the 2017 discovery and incidental release. Based on these findings, a remediation plan was developed to remove the concrete troughs and impacted soils by excavation (PGG 2018).

REMEDIAL EXCAVATION

Remedial excavation was conducted by the Port Construction Services (PCS) from July 1, 2018 to July 16, 2018. The excavation was extended to the limits of field indications of petroleum based on odor and staining. Confirmation samples were collected from the depth interval where petroleum was observed in the excavated soils prior to removal (near water table). Petroleum was not observed at the sidewalls or base of the excavation at the conclusion of soil removal and no sheen was observed on water that accumulated in the base of the excavation on July 16, 2018. At the conclusion of excavation, the base of the excavation extended to a depth of 9 to 10 feet bgs.

During excavation, observations of soil types and the presence of woody debris were consistent with reconnaissance boring observations. Photos during excavation are included in Appendix A. Woody debris was observed at the contact between native sands near the water table and overlying fill. Woody debris included logs and what appeared to be a wooden trough traversing the excavation in a northwest to southeast direction. The trough was approximately 10 feet below ground surface and below the water table. Field observations did not indicate petroleum impacts inside the trough. The lateral extent of the trough beyond the excavation is not known.

Clean overburden without indication of petroleum impacts was stockpiled onsite. Composite soil samples from the stockpiled material were non-detect for TPH-diesel and -oil (Table 1). Impacted soil was loaded directly from the excavation into trucks for offsite disposal. A total of 494 tons of impacted soil was transported to Waste Management for disposal. Disposal manifests are included in Appendix B.

Groundwater Control

The excavation was dewatered to allow soils to be removed without free liquids, as required for disposal at Waste Management and to simplify soil handling. Groundwater that accumulated in the base of the excavation was pumped into an adjacent temporary storage tank (see photos in Appendix A). Approximately 10,000 gallons of oily water were disposed of by tanker truck to Marine Vacuum Services, Inc. (MarVac) in Seattle, Washington. Bills of landing for the water disposal are included in Appendix B.

Backfill

The excavation was backfilled with the stockpiled clean overburden soils, approximately 360 tons of gravel borrow, and 189 tons of base course material.

CONFIRMATION SAMPLING

All confirmation samples had no detections of diesel or oil and were therefore well below applicable MTCA cleanup levels indicating that excavation successfully removed all petroleum impacted soils (Table 1). The following sections describe sample collection, cleanup levels, analytical results, and data quality assurance.

SAMPLE COLLECTION

Samples were collected using clean, gloved hands directly into laboratory-provided sample containers. Gloves were changed between samples. Samples were placed into coolers with ice and chain of custody maintained until delivery to OnSite Environmental in Redmond, Washington. Confirmation samples were collected from the side wall and floor of the excavation using an empty excavator bucket and the sample container filled from soils in the excavator bucket.

Eight soil samples were submitted for analysis as confirmation samples. If odor or staining indicative of petroleum impacts was observed in the sidewall or floor soils of the excavation, additional excavation was directed for those areas.

There were no field indications of petroleum impacts in the sidewalls or floor of the excavation at the conclusion of excavation. There was no visible sheen on groundwater in the base of the excavation at the conclusion of excavation. Sidewall soil samples were collected from the approximate depth interval where contamination was observed in excavated soils.

Two composite soil samples were collected from the clean overburden soil stockpiles.

CLEANUP LEVELS

Soil TPH-diesel and -oil analytical results are compared to MTCA Method A cleanup levels for unrestricted use (Table 1):

Soil

- Diesel Range: 2,000 mg/kg
- Lube Oil Range: 2,000 mg/kg

No groundwater samples were collected for analysis and comparison to cleanup levels.

ANALYTICAL RESULTS

Soil samples were analyzed by method Northwest Total Petroleum Hydrocarbon-Diesel Extended (NWTPH-Dx) with silica gel cleanup, consistent with the Washington Department of Ecology's (Ecology) Petroleum Guidance and the Remediation Plan (Ecology 2016; PGG 2018).

- All excavation confirmation samples were non-detect with reporting limits below cleanup levels (Table 1).
- Both soil stockpile samples were non-detect with reporting limits below cleanup levels.

The analytical results confirm the field observations that petroleum impacted soil has been removed from the Navy Hoist excavation area.

QUALITY ASSURANCE REVIEW

The laboratory data reports in Appendix C were reviewed for quality assurance.

- All surrogate recoveries were within control limits.
- All method blanks were non-detect.
- All field duplicates were non-detect, as were samples.
- All continuing calibration analyses were within control limits.
- Some samples arrived at the laboratory above target temperatures (0 to 6°C) because there was not sufficient time to bring the samples to temperature during transport to the lab. No corrective action was taken.
- All samples were analyzed within holding times.

The data are considered appropriate for the intended use.

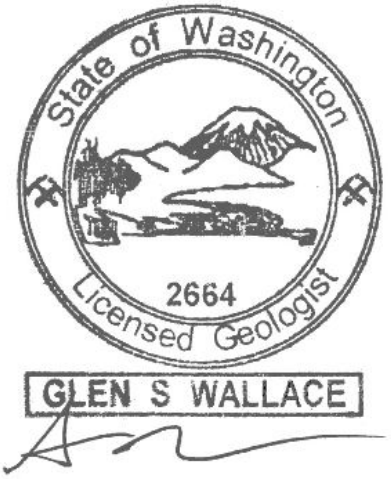
CLOSING

PGG's work was performed, and this report prepared, using generally accepted hydrogeologic practices used at this time and in this vicinity, for exclusive application to Terminal 91 and for the exclusive use of the Port of Seattle. This is in lieu of other warranties, express or implied.

We trust that this information meets your needs. Please do not hesitate to contact us if you have any questions or comments.

Sincerely,

Pacific Groundwater Group



Glen Wallace, PhD
Associate Geologist

Attachments:

Table 1. Analytical Results

Figure 1. Site Location
Figure 2. Sample Locations

Appendix A: Site Photographs
Appendix B: Disposal Manifests
Appendix C: Laboratory Analytical Reports

RemediationCompletion9-11-18.docx

REFERENCES

Washington Department of Ecology (Ecology), 2016. Guidance for Remediation of Petroleum Contaminated Sites. Toxics Cleanup Program Publication No. 10-09-057. Revised June 2016.

OnSite Environmental, 2017. Transmittal Memorandum. Laboratory Reference Number 1709-270. SD01- Sampling Support; T91-Navy. September 25, 2017.

Pacific Groundwater Group (PGG), 2017. Terminal 91 Building 136 Navy Hoist Environmental Investigation Work Plan. December 7, 2017.

Pacific Groundwater Group (PGG), 2018. Navy Hoist Data Summary and Remediation Plan. May 9, 2018.

PES Environmental, 2013. Compliance Monitoring Plan, Terminal 91 Tank Farm Clean-up, Port of Seattle, Seattle, Washington. Prepared for Port of Seattle. July 11, 2013.

Pinnacle Geosciences, 2007. Summary Report, EPA Brownfields Assessment Non-RCRA Area, Port of Seattle Terminal 91, Seattle, Washington. August 17, 2007.

Pinnacle Geosciences, 2011. Locomotive fueling area and Building 136 investigation. April 27, 2011.

Table 1. Analytical Results

Port of Seattle Terminal 91

Confirmation Soil Analytical Results

Sample	Date	Depth	Location	Diesel	Lube Oil
MTCA Method A CUL				*2,000*	*2,000*
Confirmation Samples					
B36-WF	7/6/2018	10	Floor	25 U	50 U
B36-SW	7/6/2018	7	Sidewall	25 U	50 U
B36-SEW	7/6/2018	7	Sidewall	25 U	50 U
B36-NWSW	7/13/2018	7	Sidewall	35 U	69 U
B36-NF	7/13/2018	10	Floor	34 U	68 U
B36-NESW	7/13/2018	7	Sidewall	32 U	63 U
B36-EW	7/16/2018	7	Sidewall	30 U	59 U
B36-EF	7/16/2018	10	Floor	29 U	58 U
Stockpile Samples					
B36-SP-1	7/6/2018	--	Stockpile	25 U	50 U
B36-SP-2	7/6/2018	--	Stockpile	25 U	50 U

All soil results in mg/kg.

U indicates a non-detect at reporting limit shown.

Soil samples had silica gel cleanup prior to analysis.

Depths in approximate feet below top of pavement.

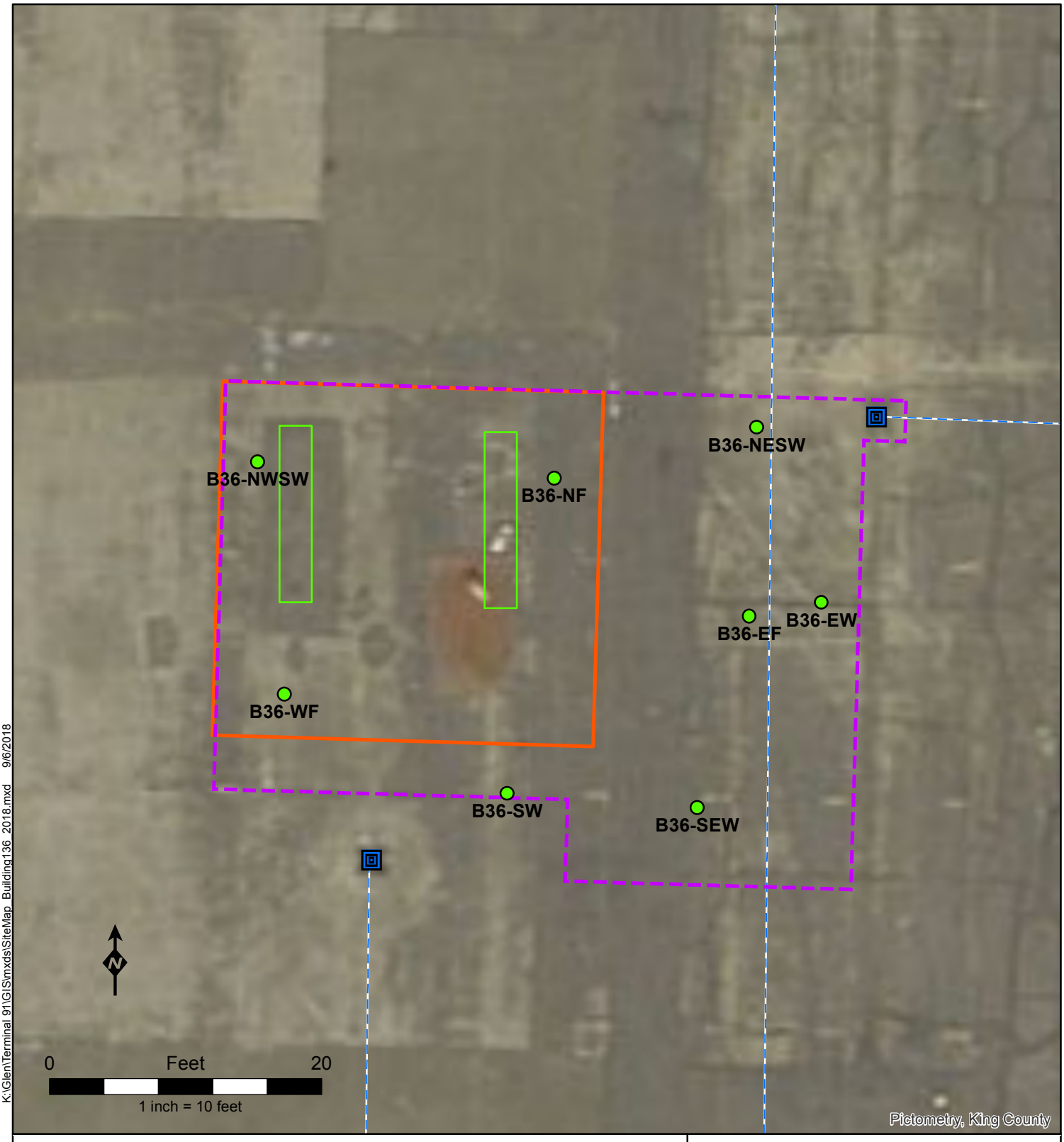
K:\Glen\Terminal 91\GIS\mxds\SiteVicinity.mxd 9/3/2018

Hoist Location

Figure 1
Site Location

Port of Seattle Terminal 91
Navy Hoist

PgG



K:\Glen\Terminal 91\GIS\mxds\SiteMap_Building136_2018.mxd 9/6/2018

Confirmation Sample Locations

Catch Basin

Excavation Extent 2018

Trough Locations

Pavement Removed (2017)

Utility Lines (Based on SPU data and Site Visit)

2017 Aerial

Figure 2
Sample Locations

Port of Seattle Terminal 91
Navy Hoist

PgG

APPENDIX A SITE PHOTOGRAPHS

Excavation at conclusion of excavation, with view looking NNE. North-south oriented sewer line is visible on right side of excavation. A steel or iron pipe with a capped end is visible in the NE corner of the excavation; that pipe is of unknown origin and connection. July 16, 2018.

Excavation at conclusion of remediation, with view looking E. July 16, 2018.

View to the SW showing clean western edge of excavation, dewatering pump, and discharge tanks. July 13, 2018.

Nearing the completion of excavation with view to south. The capillary zone and slow groundwater seepage into the excavation are visible on the south wall of the excavation. July 13, 2016.

Direct-loading impacted soils into truck for disposal. The western concrete hydraulic lift trough is visible at the left (west) side of the excavation. July 6, 2018.

Removing impacted soils. Wooden boards formerly part of the wooden trough are visible just below the excavator bucket. July 6, 2018.

Stockpiling clean overburden to the northwest of the excavation. West hydraulic lift trough is still in place on left side of excavation. The east trough has been broken up and removed. July 3, 2018.

APPENDIX B DISPOSAL MANIFESTS

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20732
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/05/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# P1438S
Container
Driver JR SOLO
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound
In	07/05/2018 08:36:44	Scale 1	kfunk2	
Out	07/05/2018 08:44:05	Scale 1	kfunk2	

Gross	61960 lb
Tare	28360 lb
Net	33600 lb
Tons	16.80

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	16.80	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	16.80	Tons				KING
3	GOND TON-GONDOLA PER TON	100	16.80	Tons				KING

Total Ticket

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20737

Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF
Ticket Date	07/05/2018	Vehicle#	P1438
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JR SOLO
Route		Check#	
Hauling Ticket#		Billing#	0000174
Destination		Grid	

Volume

PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/05/2018 10:49:09	Scale 1	kfunk2		Gross	107620 lb
Out	07/05/2018 10:49:09		kfunk2		Tare	41000 lb
					Net	66620 lb
					Tons	33.31

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	33.31	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	33.31	Tons				KING
3	GOND TON-GONDOLA PER TON	100	33.31	Tons				KING

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20744

Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF
Ticket Date	07/05/2018	Vehicle#	P1438
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JR SOLO
Route		Check#	
Hauling Ticket#		Billing#	0000174
Destination		Grid	

Volume

PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/05/2018 13:08:52	Scale 1	kfunk2		Gross	101180 lb
Out	07/05/2018 13:08:52		kfunk2		Tare	41000 lb
					Net	60180 lb
					Tons	30.09

Comments POS-KF

Product		LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	30.09	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	30.09	Tons				
3	GOND TON-GONDOLA PER TON	100	30.09	Tons				

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20751
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291 Carrier SELF SELF
Ticket Date 07/06/2018 Vehicle# P1438 Volume
Payment Type Credit Account Container
Manual Ticket# Driver JR SOLO
Route Check#
Hauling Ticket# Billing# 0000174
Destination Grid
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/06/2018 07:25:41	Scale 1	kfunk2		Gross	91080 lb
Out	07/06/2018 07:25:41		kfunk2		Tare	41000 lb
					Net	50080 lb
					Tons	25.04

Comments POS-KF

Product		LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	25.04	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	25.04	Tons				KING
3	GOND TON-GONDOLA PER TON	100	25.04	Tons				KING

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20755
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/06/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# P1438
Container
Driver JR SOLO
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound
In	07/06/2018 08:57:38	Scale 1	kfunk2	
Out	07/06/2018 08:57:38		kfunk2	

Gross	96400 lb
Tare	41000 lb
Net	55400 lb
Tons	27.70

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	27.70	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	27.70	Tons				
3	GOND TON-GONDOLA PER TON	100	27.70	Tons				

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20760

Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF
Ticket Date	07/06/2018	Vehicle#	P1438
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JR SOLO
Route		Check#	
Hauling Ticket#		Billing#	0000174
Destination		Grid	

Volume

PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/06/2018 10:58:37	Scale 1	kfunk2		Gross	105220 lb
Out	07/06/2018 10:58:37		kfunk2		Tare	41000 lb
					Net	64220 lb
					Tons	32.11

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	32.11	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	32.11	Tons				KING
3	GOND TON-GONDOLA PER TON	100	32.11	Tons				KING

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20767
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291 Carrier SELF SELF
Ticket Date 07/06/2018 Vehicle# P1438 Volume
Payment Type Credit Account Container
Manual Ticket# Driver JR SOLO
Route Check#
Hauling Ticket# Billing# 0000174
Destination Grid
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/06/2018 13:04:33	Scale 1	kfunk2		Gross	103260 lb
Out	07/06/2018 13:04:33		kfunk2		Tare	41000 lb
					Net	62260 lb
					Tons	31.13

Comments POS-KF

Product		LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	31.13	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	31.13	Tons				
3	GOND TON-GONDOLA PER TON	100	31.13	Tons				

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20784

Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF
Ticket Date	07/09/2018	Vehicle#	P1438
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	TONY HARRIS
Route		Check#	
Hauling Ticket#		Billing#	0000174
Destination		Grid	

Volume

PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/09/2018 11:57:57	Scale 1	kfunk2		Gross	100360 lb
Out	07/09/2018 11:57:57		kfunk2		Tare	41000 lb
					Net	59360 lb
					Tons	29.68

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	29.68	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	29.68	Tons				
3	GOND TON-GONDOLA PER TON	100	29.68	Tons				

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20792

Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291 Carrier SELF SELF
Ticket Date 07/09/2018 Vehicle# P1438 Volume
Payment Type Credit Account Container
Manual Ticket# Driver TONY HARRIS
Route Check#
Hauling Ticket# Billing# 0000174
Destination Grid
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/09/2018 13:52:39	Scale 1	kfunk2		Gross	100540 lb
Out	07/09/2018 13:52:39		kfunk2		Tare	41000 lb
					Net	59540 lb
					Tons	29.77

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	29.77	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	29.77	Tons				
3	GOND TON-GONDOLA PER TON	100	29.77	Tons				

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20864

Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF		
Ticket Date	07/11/2018	Vehicle#	P1438	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TONY HARRIS		
Route		Check#			
Hauling Ticket#		Billing#	0000174		
Destination		Grid			

PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/11/2018 12:48:35	Scale 1	kfunk2		Gross	98400 lb
Out	07/11/2018 12:48:35		kfunk2		Tare	41000 lb
					Net	57400 lb
					Tons	28.70

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	28.70	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	28.70	Tons				KING
3	GOND TON-GONDOLA PER TON	100	28.70	Tons				KING

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20878
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/12/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# P1438
Container
Driver TONY HARRIS
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound		
In	07/12/2018 08:47:52	Scale 1	kfunk2		Gross	92960 lb
Out	07/12/2018 08:47:52		kfunk2		Tare	41000 lb
					Net	51960 lb
					Tons	25.98

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	25.98	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	25.98	Tons				
3	GOND TON-GONDOLA PER TON	100	25.98	Tons				

203 WM

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20880
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/12/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# P1438
Container
Driver TONY HARRIS
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound
In	07/12/2018 11:05:32	Scale 1	kfunk2	
Out	07/12/2018 11:05:32		kfunk2	

Gross	104060 lb
Tare	41000 lb
Net	63060 lb
Tons	31.53

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	31.53	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	31.53	Tons				
3	GOND TON-GONDOLA PER TON	100	31.53	Tons				

203 WM

Total Ticket

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20883
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/12/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# P1438
Container
Driver TONY HARRIS
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound		
In	07/12/2018 13:39:46	Scale 1	kfunk2		Gross	98620 lb
Out	07/12/2018 13:39:46		kfunk2		Tare	41000 lb
					Net	57620 lb
					Tons	28.81

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	28.81	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	28.81	Tons				
3	GOND TON-GONDOLA PER TON	100	28.81	Tons				

Total Ticket

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20888
Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF		
Ticket Date	07/13/2018	Vehicle#	P1438	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TONY HARRIS		
Route		Check#			
Hauling Ticket#		Billing#	0000174		
Destination		Grid			
PO#	1) 112911WAD 2) S-00319047 3) S-00319047				

	Time	Scale	Operator	Inbound		
In	07/13/2018 08:31:30	Scale 1	kfunk2		Gross	106340 lb
Out	07/13/2018 08:31:30		kfunk2		Tare	41000 lb
					Net	65340 lb
					Tons	32.67

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	32.67	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	32.67	Tons				
3	GOND TON-GONDOLA PER TON	100	32.67	Tons				

Driver's Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20904

Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/13/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# P1438
Container
Driver TONY HARRIS
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound
In	07/13/2018 10:36:51	Scale 1	kfunk2	
Out	07/13/2018 10:36:51		kfunk2	

Gross	97060 lb
Tare	41000 lb
Net	56060 lb
Tons	28.03

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	28.03	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	28.03	Tons				
3	GOND TON-GONDOLA PER TON	100	28.03	Tons				

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20934
Ph: 206-694-0600

Customer Name PORT OF SEATTLE PROFILE 11291
Ticket Date 07/16/2018
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 1) 112911WAD 2) S-00319047 3) S-00319047

Carrier SELF SELF
Vehicle# 1591L
Container
Driver TONY HARRIS
Check#
Billing# 0000174
Grid

Volume

	Time	Scale	Operator	Inbound		
In	07/16/2018 10:17:17	Scale 1	kfunk2		Gross	101420 lb
Out	07/16/2018 10:17:17		kfunk2		Tare	39600 lb
					Net	61820 lb
					Tons	30.91

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	30.91	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	30.91	Tons				
3	GOND TON-GONDOLA PER TON	100	30.91	Tons				

Total Ticket

Signature

WASTE MANAGEMENT

8th Ave Reload
7400 8th Ave S
Seattle, WA, 98108

Reprint
Ticket# 20936

Ph: 206-694-0600

Customer Name	PORT OF SEATTLE PROFILE 11291	Carrier	SELF SELF
Ticket Date	07/16/2018	Vehicle#	1591L
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	TONY HARRIS
Route		Check#	
Hauling Ticket#		Billing#	0000174
Destination		Grid	

PO# 1) 112911WAD 2) S-00319047 3) S-00319047

	Time	Scale	Operator	Inbound		
In	07/16/2018 11:44:21	Scale 1	kfunk2		Gross	102740 lb
Out	07/16/2018 11:44:21		kfunk2		Tare	39600 lb
					Net	63140 lb
					Tons	31.57

Comments POS-KF

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	ENVCLEANUP RGCPCS-Tons-E	100	31.57	Tons				KING
2	FEA FEE TON-FUEL, ENVIRO	100	31.57	Tons				
3	GOND TON-GONDOLA PER TON	100	31.57	Tons				

STRAIGHT BILL OF LADING - ORIGINAL - NOT NEGOTIABLE

NRC
9520 10th Avenue S. Suite 150
Seattle, WA 98108

Tracking No. 72292

Carrier _____ SCAC _____ Carrier's No. 128814

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations:

at _____, date 8/6/18 from Pier 91 10K Fuel Alternative

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on it's route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: Consignee	MAR-Vac
Street	
Destination	Seattle, WA Zip
Route	
Delivering Carrier	NRC

FROM: Shipper	Port Seattle
Street	Pier 91 2100 W Wheeler St
Origin	Seattle, WA Zip 98119
Vehicle Number	2055
U.S. DOT Hazmat Reg. Number	

Number and Type of Packages	HM	I.D. Number	Description of Articles	Hazard Class	Pkg. Grp.	Total Quantity (mass, volume, or activity)	Weight (subject to correction)	Class or Rate
1 Vacuum			Oily Water & Sediment			5500	gallons	
			(Not Regulated By DOT)					
			JOB # 128514					
			Profile # 2071918					

Remit COD to:
Address:
City: State: Zip:

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding $ Per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

LMS 8/6/18
(Signature of Consignor)

COD AMT: $

TOTAL CHARGES: $

COD FEE: ☐ Prepaid ☐ Collect $

FREIGHT CHARGES: ☐ Prepaid ☐ Collect

STRAIGHT BILL OF LADING - ORIGINAL - NOT NEGOTIABLE

NRC 9520 10th Avenue S. Suite 150 Seattle, WA 98108

Tracking No. 71059

Carrier _____ SCAC _____ Carrier's No. 128514

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations:

at _____, date 7-18-18 from _____

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood thoughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on it's route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: Consignee MARINE Street 1516 S GRAHAM ST Destination SEATTLE WA Zip	**FROM:** Shipper PORT OF SEATTLE Street PIER 91 Origin SEATTLE WA Zip
Route	
Delivering Carrier	Vehicle Number 2144 3344 — U.S. DOT Hazmat Reg. Number

Number and Type of Packages	HM	I.D. Number	Description of Articles	Hazard Class	Pkg. Grp.	Total Quantity (mass, volume, or activity)	Weight (subject to correction)	Class or Rate
1 TT			Mat nol Regulated					
			By D.O.T non			2400	gallon	
			Hazardous					
			NRC Job# 128514					
			Project# 104747 Acct: Const_03		PG3			

Remit COD to:
Address:
City: State: Zip:

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding $ Per

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706 (c)(1)(A) and (B).

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

COD AMT: $

TOTAL CHARGES: $

COD FEE: Prepaid ☐ Collect ☐ $

FREIGHT CHARGES: ☐ Prepaid ☐ Collect

PLACARDS REQUIRED

PLACARDS SUPPLIED ☐ BY SHIPPER ☐ BY CARRIER

DRIVER'S SIGNATURE:

SHIPPER: On Behalf of the Port of Seattle

PER: Edward J Manor DATE: 7/18/18

CARRIER: NRC

PER: [signature] DATE: 7-18-18

EMERGENCY RESPONSE TELEPHONE NUMBER: ( )

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172.604).

2

STRAIGHT BILL OF LADING - ORIGINAL - NOT NEGOTIABLE

NRC 9520 10th Avenue S. Suite 150 Seattle, WA 98108

Tracking No. 68564

Carrier _____ SCAC _____ Carrier's No. 128514

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations:

at _____, date 7-18-18 from _____

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood thoughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on it's route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO:	FROM:
Consignee MAR VAC	Shipper PORT OF SEATTLE
Street 1516 S GRAHAM ST	Street PIER 91
Destination SEATTLE WA Zip	Origin SEATTLE WA Zip
Route	
Delivering Carrier	Vehicle Number 2144.5544

U.S. DOT Hazmat Reg. Number

Number and Type of Packages	HM	I.D. Number	Description of Articles	Hazard Class	Pkg. Grp.	Total Quantity (mass, volume, or activity)	Weight (subject to correction)	Class or Rate
			Non Regulated Rq					
			D.O.T Non Hazardous			4800	gallon	
			Ground water					
		Prof.	NRC Job # 128514					
			Project # 104747, Act: CONST_03_PS;	/				

Remit COD to:
Address:
City: State: Zip:

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding $ Per

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706 (c)(1)(A) and (B).

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

COD AMT: $

TOTAL CHARGES: $

COD FEE: Prepaid ☐ Collect ☐ $

FREIGHT CHARGES: ☐ Prepaid ☐ Collect

PLACARDS REQUIRED

PLACARDS SUPPLIED ☐ BY SHIPPER ☐ BY CARRIER

DRIVER'S SIGNATURE:

SHIPPER: On behalf of the Port

PER: _____ DATE: 7/18/18

CARRIER: NRC

PER: _____ DATE: 7-18-18

EMERGENCY RESPONSE TELEPHONE NUMBER: ( )

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172.604).

2

APPENDIX C LABORATORY ANALYTICAL REPORTS

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 16, 2018

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Avenue E, Suite 200
Seattle, WA 98102

Re: Analytical Data for Project JG1601; T-91
Laboratory Reference No. 1807-083

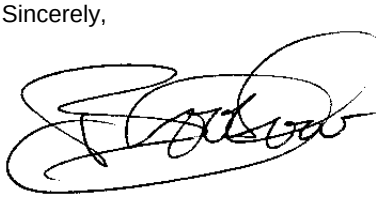
Dear Glen:

Enclosed are the analytical results and associated quality control data for samples submitted on July 13, 2018.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



Blair Goodrow
Project Manager

Enclosures

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-083
Project: JG1601; T-91
Professional Service Agreement: S-00319272

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
B36-NF	07-083-01	Soil	7-13-18	7-13-18	
B36-NWSW	07-083-02	Soil	7-13-18	7-13-18	
B36-NESW	07-083-03	Soil	7-13-18	7-13-18	

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-083
Project: JG1601; T-91
Professional Service Agreement: S-00319272

Case Narrative

Samples were collected on July 13, 2018 and received by the laboratory on July 13, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C. Please see Sample/Cooler Receipt form at the end of the report.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-083
Project: JG1601; T-91
Professional Service Agreement: S-00319272

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B36-NF**					
Laboratory ID:	07-083-01					
Diesel Range Organics	**ND**	34	NWTPH-Dx	7-13-18	7-13-18	X1
Lube Oil Range Organics	**ND**	68	NWTPH-Dx	7-13-18	7-13-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				
Client ID:	**B36-NWSW**					
Laboratory ID:	07-083-02					
Diesel Range Organics	**ND**	35	NWTPH-Dx	7-13-18	7-13-18	X1
Lube Oil Range Organics	**ND**	69	NWTPH-Dx	7-13-18	7-13-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				
Client ID:	**B36-NESW**					
Laboratory ID:	07-083-03					
Diesel Range Organics	**ND**	32	NWTPH-Dx	7-13-18	7-13-18	X1
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	7-13-18	7-13-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-083
Project: JG1601; T-91
Professional Service Agreement: S-00319272

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0713S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-13-18	7-13-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-13-18	7-13-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*140*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-080-08										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*91*	*85*	*50-150*			

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-083
Project: JG1601; T-91
Professional Service Agreement: S-00319272

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCV0713F-T2	100	96.4	3.6	+/-15%
CCV0713F-T3	100	102	-1.6	+/-15%
CCV0713R-T2	100	100	-0.2	+/-15%
CCV0713R-T3	100	101	-0.7	+/-15%
CCV0713R-V2	100	103	-3.4	+/-15%
CCV0713R-V3	100	90.9	9.1	+/-15%

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-083
Project: JG1601; T-91
Professional Service Agreement: S-00319272

% MOISTURE

Date Analyzed: 7-13-18

Client ID	Lab ID	% Moisture
B36-NF	07-083-01	26
B36-NWSW	07-083-02	28
B36-NESW	07-083-03	21

OnSite Environmental Inc.

Data Qualifiers

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: PGG
Project Number: J61601
Project Name: Navy Hoist
Project Manager: Glen Wallace
Sampled by: GSW

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days) except B36-NE
☐ See Notes (other)

Laboratory Number: 07-083

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (w/ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	B36-NF	7/13/18	925	S	1				X																		
2	B36-NWSW	↓	920	S	1				X																		
3	B36-NESW	↓	1030	S	1				X																		

	Signature	Company	Date	Time
Relinquished		PGG	7/13/18	1230
Received		Speedy	7-13-18	1230
Relinquished		speedy	7-13-18	1351
Received		ORE	7/13/18	1351
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

B36-NESW By Monday AM.
Silica Gel All Samples.

Data Package: Standard ☑ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: PGG

Client Project Name/Number: JG1601

OnSite Project Number: 07-083

Initiated by: MN

Date Initiated: 7/13/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 15		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4	

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 9, 2018

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Avenue E, Suite 200
Seattle, WA 98102

Re: Analytical Data for Project JG1601; T91-Navy Hoist
Laboratory Reference No. 1807-032

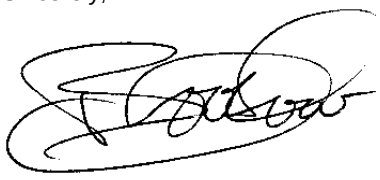
Dear Glen:

Enclosed are the analytical results and associated quality control data for samples submitted on July 9, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



Blair Goodrow
Project Manager

Enclosures

Date of Report: July 9, 2018
Samples Submitted: July 9, 2018
Laboratory Reference: 1807-032
Project: JG1601; T91-Navy Hoist

Case Narrative

Samples were collected on July 9, 2018 and received by the laboratory on July 9, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: July 9, 2018
Samples Submitted: July 9, 2018
Laboratory Reference: 1807-032
Project: JG1601; T91-Navy Hoist

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
B36-WF	07-032-01	Soil	7-6-18	7-6-18	
B36-SW	07-032-02	Soil	7-6-18	7-6-18	
B36-SEW	07-032-03	Soil	7-6-18	7-6-18	
B36-SP-1	07-032-04	Soil	7-6-18	7-6-18	
B36-SP-2	07-032-05	Soil	7-6-18	7-6-18	

Date of Report: July 9, 2018
Samples Submitted: July 9, 2018
Laboratory Reference: 1807-032
Project: JG1601; T91-Navy Hoist

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B36-WF**					
Laboratory ID:	07-032-01					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-6-18	7-6-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-6-18	7-6-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*114*	*50-150*				
Client ID:	**B36-SW**					
Laboratory ID:	07-032-02					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-6-18	7-6-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-6-18	7-6-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**B36-SEW**					
Laboratory ID:	07-032-03					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-6-18	7-6-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-6-18	7-6-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*137*	*50-150*				
Client ID:	**B36-SP-1**					
Laboratory ID:	07-032-04					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-6-18	7-6-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-6-18	7-6-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**B36-SP-2**					
Laboratory ID:	07-032-05					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-6-18	7-6-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-6-18	7-6-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				

Date of Report: July 9, 2018
Samples Submitted: July 9, 2018
Laboratory Reference: 1807-032
Project: JG1601; T91-Navy Hoist

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0706S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-6-18	7-6-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-6-18	7-6-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-032-05										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*102*	*112*	*50-150*			

Date of Report: July 9, 2018
Samples Submitted: July 9, 2018
Laboratory Reference: 1807-032
Project: JG1601; T91-Navy Hoist

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCV0706F-T1	100	93.8	6.2	+/-15%
CCV0706F-T2	100	92.3	7.7	+/-15%
CCV0706R-T1	100	96.6	3.4	+/-15%
CCV0706R-T2	100	91.6	8.4	+/-15%
CCV0706F-V1	100	95.4	4.6	+/-15%
CCV0706F-V2	100	92.4	7.6	+/-15%
CCV0706R-V1	100	91.5	8.5	+/-15%
CCV0706R-V2	100	89.4	10.6	+/-15%

Date of Report: July 9, 2018
Samples Submitted: July 9, 2018
Laboratory Reference: 1807-032
Project: JG1601; T91-Navy Hoist

% MOISTURE

Date Analyzed: 7-6-18

Client ID	Lab ID	% Moisture
B36-WF	07-032-01	19
B36-SW	07-032-02	13
B36-SEW	07-032-03	16
B36-SP-1	07-032-04	3
B36-SP-2	07-032-05	3

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: PGG
Project Number: JG1601
Project Name: T91 - Navy Hobbit
Project Manager: Glen Wallace
Sampled by: GSW

Turnaround Request (in working days)
(Check One)
- [x] Same Day
- [ ] 1 Day
- [x] 2 Days
- [ ] 3 Days
- [ ] Standard (7 Days) (TPH analysis 5 Days)
- [ ] _____ (other)

Laboratory Number: 07-032

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	B36-WF	7/6/18	810	S	1				X																		X
2	B36-SW	7/6/18	920	S	1				X																		X
3	B36-SEW		840	S	1				X																		X
4	B36-SP-1		905	S	1				X																		X
5	B36-SP-2	7/6/18	908	S	1				X																		X

	Signature	Company	Date	Time
Relinquished		PGG	1126	7/6/18
Received		ALPHA	1124	7/6/18
Relinquished		ALPHA	12:40	7/6/18
Received		ONE	7/6/18	1240
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Data Monday
Silica Gel Cleanup all Samples.
Port + PGG EDDs.

Data Package: Standard ☑ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☑

Sample/Cooler Receipt and Acceptance Checklist

Client: PGG

Client Project Name/Number: JG1601

OnSite Project Number: 07-032

Initiated by: MV

Date Initiated: 7/6/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	Yes	(No)		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	Yes	(No)	Temperature: 14	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 17, 2018

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Avenue E, Suite 200
Seattle, WA 98102

Re: Analytical Data for Project JG1601
Laboratory Reference No. 1807-097

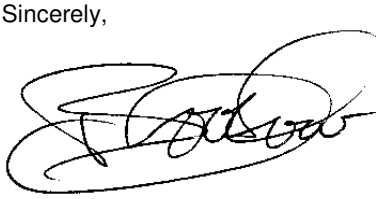
Dear Glen:

Enclosed are the analytical results and associated quality control data for samples submitted on July 16, 2018.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



Blair Goodrow
Project Manager

Enclosures

Date of Report: July 17, 2018
Samples Submitted: July 16, 2018
Laboratory Reference: 1807-097
Project: JG1601

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
B36-EF	07-097-01	Soil	7-16-18	7-16-18	
B36-EW	07-097-02	Soil	7-16-18	7-16-18	

Date of Report: July 17, 2018
Samples Submitted: July 16, 2018
Laboratory Reference: 1807-097
Project: JG1601

Case Narrative

Samples were collected on July 16, 2018 and received by the laboratory on July 16, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C. Please see Sample/Cooler Receipt form at the end of the report.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: July 17, 2018
Samples Submitted: July 16, 2018
Laboratory Reference: 1807-097
Project: JG1601

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B36-EF**					
Laboratory ID:	07-097-01					
Diesel Range Organics	**ND**	29	NWTPH-Dx	7-17-18	7-17-18	X1
Lube Oil Range Organics	**ND**	58	NWTPH-Dx	7-17-18	7-17-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**B36-EW**					
Laboratory ID:	07-097-02					
Diesel Range Organics	**ND**	30	NWTPH-Dx	7-17-18	7-17-18	X1
Lube Oil Range Organics	**ND**	59	NWTPH-Dx	7-17-18	7-17-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*122*	*50-150*				

Date of Report: July 17, 2018
Samples Submitted: July 16, 2018
Laboratory Reference: 1807-097
Project: JG1601

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0717S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	7-17-18	7-17-18	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	7-17-18	7-17-18	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*118*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-097-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*98*	*94*	*50-150*			

Date of Report: July 17, 2018
Samples Submitted: July 16, 2018
Laboratory Reference: 1807-097
Project: JG1601

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCV0717F-V1	100	94.5	5.5	+/-15%
CCV0717F-V2	100	95.6	4.4	+/-15%
CCV0717R-V1	100	91.2	8.8	+/-15%
CCV0717R-V2	100	89.8	10.2	+/-15%

Date of Report: July 16, 2018
Samples Submitted: July 13, 2018
Laboratory Reference: 1807-086
Project: 525-016

% MOISTURE

Date Analyzed: 7-16-18

Client ID	Lab ID	% Moisture
B36-EF	07-097-01	14
B36-EW	07-097-02	16

OnSite Environmental Inc.

Data Qualifiers

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: PGG
Project Number: 361601
Project Name: Navy Hoist - POS
Project Manager: Glen Wallace
Sampled by: GSW

Turnaround Request (in working days)
(Check One)
- ☐ Same Day
- ☑ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☐ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 07-097

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	B36-EF	7/16/18	1305	S	1
2	B36-EW	7/16/18	1300	S	1

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (w/ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1				X														↓
2				X														↓

	Signature	Company	Date	Time
Relinquished		PGG	7/16/18	1403
Received		Speedy Msngr	7-16-18	1403
Relinquished		Speedy Msngr	7-16-18	1826
Received		OSE	7/16/18	1826
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Silica Gel on all Samples.

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: PGG

Client Project Name/Number: JG1601

OnSite Project Number: 07-097

Initiated by: MW

Date Initiated: 7/16/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	(No)		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	(No)	Temperature: 34		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4	

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

P 206.329.0141 | **F** 206.329.6968

2377 Eastlake Avenue East | Seattle, WA 98102

P 206.842.3202 | **F** 206.842.5041

8150 West Port Madison NE | Bainbridge, WA 98110

P 360.570.8244 | **F** 360.570.0064

1627 Linwood Avenue SW | Tumwater, WA 98512

www.pgwg.com

PgG