GALLOWAY ENVIRONMENTAL, INC
15600 NE 8th Street, Suite B1, 617 (425) 894-8607
Bellevue, WA 98008
Dylan@GallowayEnvironmental.com

May 20, 2020

Tamarah Hancock
Scarsella Bros. Inc.
PO Box 68697
Seattle, Washington 98168

Emailed to: Tamarah.k@scarsellabros.com and Jenifer.m@scarsellabros.com

SUBJECT: SUMMARY STATUS REPORT — GROUNDWATER MONITORING WELL SAMPLE RESULTS AT THE FIRWOOD PIT PROPERTY IN EDGEWOOD, WA
SEPA PROJECT #1808 – CLEAR AND GRADE PERMIT #3492

Dear Ms. Hancock:

This letter report presents a summary of Galloway Environmental, Inc.'s (GEI's) findings from the groundwater monitoring event at the Firwood Pit property for May 2020.

The scope of work for this quarterly groundwater monitoring report is based on the City of Edgewood's Final Conditions for Firwood Pit Reclamation – Original SEPA project #1808, Clear and Grade Permit #3492 which was updated on November 26, 2018. This report generally includes: 1) chemical analytical results of water samples, and 2) physical properties of groundwater in the monitoring wells.

INTRODUCTION

The Firwood Mine was a sand and gravel surface mine that was exhausted of its aggregate resource before March 1, 2000 when it was assigned and leased to Scarsella Bros., Inc. by the Tim Corliss and Son Company and is now in the reclamation process. The mine is located in the general area east of Freeman Road, adjacent to the west side of 90th Avenue East, south of 33rd Street East, and northeast of Simons Creek. The Site is in the City of Edgewood, Pierce County, Washington.

GROUNDWATER SAMPLE COLLECTION SUMMARY

On May 12, 2020, GEI collected groundwater samples from monitoring wells MW-1, MW-2, MW-3b, and MW-4. Monitoring well MW-3b is a replacement of monitoring well MW-3a. Prior to sample collection, GEI gauged and purged the wells to attain groundwater samples that were representative of the site.

During the purging process for the monitoring wells, water quality parameters were measured using a multiparameter water quality meter (model YSI 556 MPS) to measure pH, temperature, conductivity, and dissolved oxygen (DO). Per the updated clear and grade permit, GEI utilized an oxygen-reduction potential (ORP) meter (model Extech SDL 100) to measure ORP. The YSI 556 MPS meter was calibrated prior to well purging using a 3-point pH calibration process (pH valued at 4.02, 7.02, and 10.04) and a 3-point conductivity process (conductivity valued at 84 micrograms per centimeter [µg/cm], 1,413 µg/cm, and 12,880 µg/cm). Additionally, to quantify turbidity throughout the purging process, GEI utilized a turbidity meter (model Lamotte #2020T).

Sample collection was initiated upon attaining stabilized water quality parameters, including pH within 0.1 SU, conductivity within 5%, and temperature within 0.1 degrees Celsius (˚C) for at least three consecutive readings.

The pH measured at the conclusion of the purging process ranged from 6.14 (MW-2) to 6.84 (MW-3b). The conductivity measured at the conclusion of the purging process ranged from 0.186 milliSiemens per centimeter (mS/cm) (MW-2) to 0.857 mS/cm (MW-1). The DO measured at the conclusion of the purging process ranged from 0.78 milligrams per liter (mg/L) (MW-1) to 5.18 mg/L (MW-4). The ORP measured at the conclusion of the purging process ranged from 11 millivolts (mV) (MW-3b) to 45 mV (MW-4). Turbidity measured at the conclusion of the purging process ranged from 0.24 Nephelometric Turbidity Units (NTU) (MW-1) to over 100 NTU (MW-3b). The water color was observed to be clear in MW-1 and MW-2, brown in MW-3b, and slightly opaque in MW-4 at the conclusion of the purging process. GEI purged a minimum of three well volumes from each well, or until water quality parameters were stabilized

GEI purged a total of 4.9 gallons from MW-1, 3.2 gallons from MW-2, 5.7 gallons from MW-3b, and 3.5 gallons from MW-4.

GROUNDWATER SAMPLE ANALYSES SUMMARY

All samples were submitted to OnSite Environmental, Inc., located at 14648 NE 95th St., Redmond, Washington (OnSite Environmental) for analyses of petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID) method and dissolved arsenic using the USEPA method 200.8. Due to the detection of lube oil-range petroleum hydrocarbons (TPH-Oil) in the sample that was collected from MW-1, follow-up analysis was conducted to determine the concentration of TPH-Oil in the sample.

Below is a summary of the laboratory analytical results. Attachment 1 includes the laboratory analytical report for this monitoring event.

Laboratory analyses resulted in the detection of TPH-Oil in the sample collected from MW-1 at a concentration of 0.25 milligrams per liter (mg/L), below its Model Toxics Control Act (MTCA) Method A Cleanup Level of 0.50 mg/L. Laboratory analyses resulted in no detections of petroleum hydrocarbons at concentrations equal to or exceeding their respective laboratory practical quantitation limits (PQLs) in any of the other samples analyzed.

Laboratory analyses resulted in the detection of dissolved arsenic in the sample collected from MW-1 at a concentration of 5.8 micrograms per liter (μg/L), exceeding its MTCA Method A Cleanup Level of 5.0 μg/L, but below its Maximum Contaminant Level (MCL) of 10.0 μg/L. Laboratory analyses resulted in no detections of dissolved arsenic at concentrations equal to or exceeding its respective laboratory PQL in any of the other samples analyzed.

GEI observed high turbidity and white particles (presumably from the well casing materials) in the purge water from MW-3b. GEI recommends developing the well to remove residual materials remaining in the well and ensure establishment of the natural hydraulic flow conditions of the formation.

As per the City of Edgewood's Final Conditions for the Clear and Grade Permit (#3492), petroleum hydrocarbon compounds and dissolved arsenic will be tested quarterly; and PAHs will be tested annually.

Should you have any questions regarding this report or if you would like to discuss our findings, please contact us at any of the addresses listed on top of this letter.

Respectfully Submitted,

GALLOWAY ENVIRONMENTAL, INC.

Dylan Galloway, REA

President

cc: Jenifer A. Morrison, SBI

Attachment 1
Laboratory Analytical Reports

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

May 19, 2020

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 28027
Laboratory Reference No. 2005-096

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on May 12, 2020.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

Case Narrative

Samples were collected on May 12, 2020 and received by the laboratory on May 12, 2020. 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: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	05-096-01					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-13-20	5-14-20	
Diesel Range Organics	**ND**	0.21	NWTPH-HCID	5-13-20	5-14-20	
Lube Oil Range Organics	**Detected**	0.21	NWTPH-HCID	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**MW-2**					
Laboratory ID:	05-096-02					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-13-20	5-14-20	
Diesel Range Organics	**ND**	0.21	NWTPH-HCID	5-13-20	5-14-20	
Lube Oil Range Organics	**ND**	0.21	NWTPH-HCID	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-3b**					
Laboratory ID:	05-096-03					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-13-20	5-14-20	
Diesel Range Organics	**ND**	0.22	NWTPH-HCID	5-13-20	5-14-20	
Lube Oil Range Organics	**ND**	0.22	NWTPH-HCID	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	05-096-04					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-13-20	5-14-20	
Diesel Range Organics	**ND**	0.21	NWTPH-HCID	5-13-20	5-14-20	
Lube Oil Range Organics	**ND**	0.21	NWTPH-HCID	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

Date of Report: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0513W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-13-20	5-14-20	
Diesel Range Organics	**ND**	0.20	NWTPH-HCID	5-13-20	5-14-20	
Lube Oil Range Organics	**ND**	0.20	NWTPH-HCID	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				

Date of Report: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

DISSOLVED ARSENIC
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	05-096-01					
Arsenic	**5.8**	3.0	EPA 200.8		5-13-20	
Client ID:	**MW-2**					
Laboratory ID:	05-096-02					
Arsenic	**ND**	3.0	EPA 200.8		5-13-20	
Client ID:	**MW-3b**					
Laboratory ID:	05-096-03					
Arsenic	**ND**	3.0	EPA 200.8		5-13-20	
Client ID:	**MW-4**					
Laboratory ID:	05-096-04					
Arsenic	**ND**	3.0	EPA 200.8		5-13-20	

Date of Report: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

DISSOLVED ARSENIC
EPA 200.8
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0513D1					
Arsenic	**ND**	3.0	EPA 200.8		5-13-20	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-096-01										
	ORIG	DUP									
Arsenic	**5.80**	**6.66**	NA	NA		NA		NA	14	20	
MATRIX SPIKES											
Laboratory ID:	05-096-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**84.6**	**87.6**	80.0	80.0	5.80	**99**	**102**	75-125	3	20	

Date of Report: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	05-096-01					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	5-13-20	5-14-20	
Lube Oil Range Organics	**0.25**	0.21	NWTPH-Dx	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

Date of Report: May 19, 2020
Samples Submitted: May 12, 2020
Laboratory Reference: 2005-096
Project: 28027

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0513W1					
Diesel Range Organics	**ND**	0.20	NWTPH-Dx	5-13-20	5-14-20	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	5-13-20	5-14-20	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0513W1										
	ORIG	DUP									
Diesel Fuel #2	**0.536**	**0.484**	NA	NA		NA		NA	10	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*117*	*101*	*50-150*			

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 methods 8260 & 8270, 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

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: Galloway Environmental, Inc
Project Number: 28027
Project Name: Firwood
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 05-096

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	Dissolved Arsenic FF				% Moisture
1	MW-1	5/12/20	0955	W	6	X			(X)														X				
2	MW-2	5/12/20	1100	W	6	X																	X				
3	MW-3S	5/12/20	1310	W	6	X																	X				
4	MW-4	5/12/20	1412	W	6	X																	X				

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	5/12/20	1538	⊗ Added 5/18/2020. DB (STA)
Received			5/12/20	1538	
Relinquished					
Received					
Relinquished					
Received					Data Package: Standard ☐ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐