

Key Environmental, Inc.

DATE: September 22, 2017

FROM: Kendra Chintella

SUBJECT: South Cavalcade Groundwater and Soil Sampling

SAMPLE DELIVERY GROUP (SDG): 600-153751-1

SAMPLES: TIN-03S, TIS-04S, M-99(TIN-03S), SOUTH CAVALCADE 1, TRIP BLANK

ANALYSES: Method 8260C (VOCs), 8270D LL (SVOCs), 6020A/6010C (Total and Dissolved Metals), 2540B (Percent Moisture)

LABORATORY: TestAmerica – Houston

The data contained in this SDG were evaluated with regard to the following parameters:

- ☐ Data Completeness
Noncompliances: None
- ☐ Holding Times
Noncompliances: None
- ☐ Laboratory Blank Contamination
Noncompliances: None
- ☐ Field Blank Contamination
Noncompliances: None
- ☐ Field Duplicate Precision
Noncompliances: See attached page for details.
- ☐ Surrogate Recoveries
Noncompliances: The surrogate recoveries of 2-fluorobiphenyl and nitrobenzene-d5 fell below the recovery limits in sample M-99. The sample was not re-extracted due to low sample volume. The PAHs in sample M-99 were qualified "UJ".
- ☐ Matrix Spike/Matrix Spike Duplicate
Noncompliances: The MS recovery of copper was above the recovery limits in the soil sample. No action was taken on this basis.
- ☐ Laboratory Control Sample
Noncompliances: None

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	TIN-03S	QUAL	M-99	QUAL	RPD
Arsenic, dissolved	1.2		1.3		8.00
Arsenic, total	1.2		1.3		8.00
Copper, dissolved	2.3		2	U	NC

NC – not calculated due to nondetect result

sys_loc_code sys_sample_code sample_date		TIN-03S TIN-03S-09122017 9/12/2017	TIN-03S M-99-09122017 9/12/2017	TIS-04S TIS-04S-09122017 9/12/2017
chemical_name	units			
Benzene	ug/l	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	1 U	1 U
Toluene	ug/l	1 U	1 U	1 U
Xylene	ug/l	2 U	2 U	2 U
1-Methylnaphthalene	ug/l	2 U	2 UJ	2 U
2-Methylnaphthalene	ug/l	1.5 U	1.5 UJ	1.5 U
Acenaphthene	ug/l	1 U	1 UJ	1 U
Anthracene	ug/l	1.5 U	1.5 UJ	1.5 U
Benzo(a)anthracene	ug/l	2 U	2 UJ	2 U
Benzo(a)pyrene	ug/l	1.5 U	1.5 UJ	1.5 U
Benzo(b)fluoranthene	ug/l	2 U	2 UJ	2 U
Benzo(g,h,i)perylene	ug/l	2.5 U	2.5 UJ	2.5 U
Benzo(k)fluoranthene	ug/l	2 U	2 UJ	2 U
Chrysene	ug/l	1.5 U	1.5 UJ	1.5 U
Dibenz(a,h)anthracene	ug/l	2.5 U	2.5 UJ	2.5 U
Fluoranthene	ug/l	2.5 U	2.5 UJ	2.5 U
Fluorene	ug/l	1.5 U	1.5 UJ	1.5 U
Indeno(1,2,3-cd)pyrene	ug/l	2 U	2 UJ	2 U
Pentachlorophenol	ug/l	2.5 U	2.5 U	2.5 U
Phenanthrene	ug/l	1.5 U	1.5 UJ	1.5 U
Pyrene	ug/l	2 U	2 UJ	2 U
Arsenic, total	ug/l	1.2	1.3	1 U
Chromium, total	ug/l	2 U	2 U	2 U
Copper, total	ug/l	2 U	2 U	2 U
Lead, total	ug/l	0.5 U	0.5 U	0.5 U
Zinc, total	ug/l	5 U	5 U	37
Arsenic, dissolved	ug/l	1.2	1.3	1.5
Chromium, dissolved	ug/l	2 U	2 U	2 U
Copper, dissolved	ug/l	2.3	2 U	2 U
Lead, dissolved	ug/l	0.5 U	0.5 U	0.5 U
Zinc, dissolved	ug/l	5 U	5 U	5 U

Notes

ug/l - micrograms per liter

U - result not detected at reported concentration

J - estimated result

Detections are in bold typeface

sys_loc_code sys_sample_code sample_date		SOUTH CAVALCADE 1 SOUTH CAVALCADE 1-09122017 9/12/2017
chemical_name	units	
Benzene	ug/kg	6.1 U
Ethylbenzene	ug/kg	6.1 U
Toluene	ug/kg	6.1 U
Xylene	ug/kg	6.1 U
1-Methylnaphthalene	ug/kg	350 U
2-Methylnaphthalene	ug/kg	350 U
Acenaphthene	ug/kg	350 U
Anthracene	ug/kg	420
Benzo(a)anthracene	ug/kg	1800
Benzo(a)pyrene	ug/kg	2500
Benzo(b)fluoranthene	ug/kg	6200
Benzo(g,h,i)perylene	ug/kg	1800
Benzo(k)fluoranthene	ug/kg	2100
Chrysene	ug/kg	3100
Dibenz(a,h)anthracene	ug/kg	430
Fluoranthene	ug/kg	2400
Fluorene	ug/kg	350 U
Indeno(1,2,3-cd)pyrene	ug/kg	1600
Naphthalene	ug/kg	350 U
Pentachlorophenol	ug/kg	1800 U
Phenanthrene	ug/kg	610
Pyrene	ug/kg	2600
Arsenic, total	mg/kg	7.6
Chromium, total	mg/kg	15
Copper, total	mg/kg	48
Lead, total	mg/kg	130
Zinc, total	mg/kg	140

Notes

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

U - result not detected at reported concentration

Detections are in bold typeface