

March 9, 2020

Ms. Rita Azzolino and Mr. Joseph Azzolino

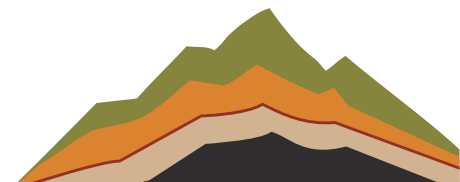
Subject: Soil Analytical Test Results
2364 Rd 20
San Pablo, California
Geo-Engineering Solutions Proposal No. 78-1225

Dear Ms. & Mr. Azzolino:

Pursuant to your request, Geo-Engineering Solutions, Inc. (Geo-Eng) provided analytical sampling and testing services of on-site soil for the subject site. On February 24, 2020, a Geo-Eng representative collected three soil discrete samples (S1 through S3) from the subject site. Geo-Eng was not made aware of any past environmental issues or concerns at the site. The soil samples were transported on-ice, under a Chain-of-Custody, to a California State-Certified laboratory for testing.

The soil sample were analyzed on a standard turnaround time for the presence of Asbestos by CARB 435, Organochlorine Pesticides by EPA Method 8081A, PCBs by EPA Method 8082, Volatile Organic Compounds by EPA Method 8260B, Semi-Volatile Organics by EPA Method 8270C, California Metals by EPA Method 6020, Total Petroleum Hydrocarbon (TPH) as Gasoline with BTEX and MTBE by EPA Method 8021B/8015Bm, and TPH-diesel and TPH-motor oil by EPA Method 8015B.

For your assistance, the attached Table 1 compares the analytical results to the January 2019 California Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs), assuming direct exposure to human health risk levels for shallow soils under residential and commercial/industrial land use scenarios, as well as for direct exposure to human health risk levels under and land use at any depth for construction workers. These screening levels are assumed to be conservative. Constituents whose concentrations exceeded the noted SFRWQCB ESLs are noted in bold in the table. We note that waste facilities provide their own criteria for acceptance of off-haul material and these results should be provided and screened by them for acceptance or further testing requirements as applicable. We recommend that the results be reviewed immediately to determine whether any additional testing or extraction requirements are warranted. Additional testing may require additional sampling depending on the quantity of sample remaining in the analytical testing laboratory's custody.



Only arsenic was detected in the three soil samples S1 through S3 at concentration of 6.2 mg/kg, 6.5 mg/kg and 9.4 mg/kg, respectively, exceeding the ESL standards. However, the indicated level is not considered to be high enough to be a concern since background arsenic levels are naturally elevated in the Bay Area, and in any case are not high enough to warrant STLC testing. The San Francisco RWQCB website references a 2011 Master's thesis that evaluates background arsenic concentrations in the San Francisco Bay Region. This thesis proposes an upper (99th percentile) estimate of background arsenic of 11 mg/kg within undifferentiated urbanized Bay Area flatland soils.

Chromium was detected in soil sample S2 at a concentration of 67 mg/kg, above the Tier 1-ESLs. Soluble Threshold Limit Concentrations (STLC) is used to define the "soluble fraction" that classifies a "waste" as California hazardous. Non-hazardous disposal facilities utilize a rule-of-thumb guideline to interpret total contaminant concentrations relative to the STLC hazardous waste criteria. Soils or waste with total contaminant concentrations in excess of 10 times the STLC (50 mg/kg) have the potential to be classified as hazardous and they are also analyzed by the California Waste Extraction Test (WET) when the subsequent solute analysis results exceeds the STLC for Cr (5 mg/L). The result of the STLC for chromium was not detected in the lab. Therefore, the soil is not considered to be a California hazardous waste.

It is our pleasure to be of service to you. If you should have any questions regarding this letter or would like to request additional sampling or testing, undersigned at (925) 433--0450; or by e-mail at eswenson@geo-eng.net.

Sincerely,
GEO-ENGINEERING SOLUTIONS, INC.


Nicolas Haddad, PE
Senior Geotechnical Engineer




Eric J. Swenson, G.E., C.E.G.
President



Attachments: Table 1, Soil Analytical Results
McCampbell Analytical Reports with chain of custody

Table 1
Summary of Soil Analytical Results
2364 Rd 20, San Pablo, CA

Sample ID	S1	S2	S3	Direct Exposure Human Health Risk Levels		
						Construction Worker Any Land Use Any Depth Soil Exposure
				Residential	Commercial	
				Shallow Soil Exposure		
	(mg/kg)					
CAM 17 Metals						
Antimony	0.59	0.58	0.59	11	160	50
Arsenic	6.2	6.5	9.4	0.26	3.6	0.98
Barium	180	170	120	15,000	220,000	3,000
Beryllium	ND	0.61	ND	16	230	27
Cadmium	0.27	ND	0.94	78	1,100	51
Chromium	43	67	44	-	-	-
Cobalt	10	12	9.3	23	350	28
Copper	22	27	130	3,100	47,000	14,000
Lead (TTLC)	23	14	37	80	320	160
Mercury	0.5	0.37	0.21	13	190	44
Molybdenum	ND	0.72	ND	390	5,800	1,800
Nickel	47	72	42	820	11,000	86
Selenium	1.2	1.2	1	390	5,800	1,700
Silver	ND	ND	ND	390	5,800	1,800
Thallium	ND	ND	ND	78	12	4
Vanadium	44	62	43	390	5,800	470
Zinc	70	66	91	23,000	350,000	110,000
Pesticides/PCBs						
Chlordane	ND	ND	ND	36	500	130
p,p-DDD	ND	ND	ND	-	-	-
p,p-DDE	ND	ND	ND	-	-	-
p,p-DDT	ND	ND	ND	37	520	140
Volatile Organics						
TPH (gasoline)	ND	ND	ND	430	200	1,800
TPH (diesel)	17	8.7	3.2	260	1,200	1,100
TPH (motor Oil)	140	71	88	12,000	180,000	54,000
Benzene	ND	ND	ND	11	47	45
Ethylbenzene	ND	ND	ND	3,400	21,000	15,000
MTBE	ND	ND	ND	16,000	66,000	65,000
Toluene	ND	ND	ND	1,100	5,300	4,700
Total Xylenes	ND	ND	ND	580	2,500	2,400
Semi-Volatile Organics						
Acenphthylene	ND	0.028	ND	3,600	45,000	10,000
Anthracene	ND	0.078	0.022	18,000	230,000	50,000
Benzo (a) anthracene	ND	0.14	ND	-	-	-
Benzo (a) pyrene	ND	0.061	ND	18	220	10
Benzo (b) fluoranthene	ND	ND	ND	-	-	-
Benzo (g,h,i) perylene	0.042	0.041	ND	-	-	-
Benzo (K) fluoranthene	0.025	0.046	ND	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	ND	ND	1,300	16,000	3,800
Chrysene	ND	0.11	ND	-	-	-
Dibenzo (a,h) anthracene	ND	ND	ND	-	-	-
Fluoranthene	0.044	0.24	0.076	2,400	30,000	6,700
Fluorene	ND	ND	ND	2,400	30,000	6,700
2-Methylnaphthalene	ND	ND	ND	240	3,000	670
Indeno (1,2,3-cd) pyrene	ND	ND	ND	-	-	-
Pentachlorophenol	ND	ND	ND	250	2,800	560
Phenanthrene	ND	0.27	ND	-	-	-
Phenol	ND	ND	ND	23,000	350,000	98,000
Pyrene	0.044	0.19	0.064	1,800	230,000	5,000

ND Not Detectable

TTLC = Total Threshold Limit Concentrations

STLC = Soluble Threshold Limit Concentrations

Reported Concentrations in bold exceed the corresponding January 2019 SFRWQCB ESL standards



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2002874

Report Created for: Geo-Engineering Solutions, Inc.

2570 San Ramon Valley Blvd A102
San Ramon, CA 94583

Project Contact: Nicolas Haddad

Project P.O.: 1225

Project: 78-1225; San Pablo

Project Received: 02/24/2020

Analytical Report reviewed & approved for release on 03/02/2020 by:

Christine Askari
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Geo-Engineering Solutions, Inc.
Project: 78-1225; San Pablo
WorkOrder: 2002874

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Geo-Engineering Solutions, Inc.
Project: 78-1225; San Pablo
WorkOrder: 2002874

Analytical Qualifiers

B	Analyte detected in the associated Method Blank and in the sample
J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
a3	Sample diluted due to high organic content.
a4	Reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
c2	Surrogate recovery outside of the control limits due to matrix interference.
e2	Diesel range compounds are significant; no recognizable pattern
e7	Oil range compounds are significant
e8	Pattern resembles kerosene/kerosene range/jet fuel range
k10	CARB 435 Exception 1 - No asbestos detected. The limit of quantitation (LOQ) = 0.25%.

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validates the prep batch.
F2	LCS/LCSD recovery and/or RPD/RSD is out of acceptance criteria.
F3	The surrogate standard recovery and/or RPD is outside of acceptance limits.
F16	RawVal < LQL.



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	GC23 02242039.d	194497

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.10	100	02/25/2020 02:56
a-BHC	ND	0.10	100	02/25/2020 02:56
b-BHC	ND	0.10	100	02/25/2020 02:56
d-BHC	ND	0.10	100	02/25/2020 02:56
g-BHC	ND	0.10	100	02/25/2020 02:56
Chlordane (Technical)	ND	2.5	100	02/25/2020 02:56
a-Chlordane	ND	0.10	100	02/25/2020 02:56
g-Chlordane	ND	0.10	100	02/25/2020 02:56
p,p-DDD	ND	0.10	100	02/25/2020 02:56
p,p-DDE	ND	0.10	100	02/25/2020 02:56
p,p-DDT	ND	0.10	100	02/25/2020 02:56
Dieldrin	ND	0.10	100	02/25/2020 02:56
Endosulfan I	ND	0.10	100	02/25/2020 02:56
Endosulfan II	ND	0.10	100	02/25/2020 02:56
Endosulfan sulfate	ND	0.10	100	02/25/2020 02:56
Endrin	ND	0.10	100	02/25/2020 02:56
Endrin aldehyde	ND	0.10	100	02/25/2020 02:56
Endrin ketone	ND	0.10	100	02/25/2020 02:56
Heptachlor	ND	0.10	100	02/25/2020 02:56
Heptachlor epoxide	ND	0.10	100	02/25/2020 02:56
Hexachlorobenzene	ND	1.0	100	02/25/2020 02:56
Hexachlorocyclopentadiene	ND	2.0	100	02/25/2020 02:56
Methoxychlor	ND	0.10	100	02/25/2020 02:56
Toxaphene	ND	5.0	100	02/25/2020 02:56
Aroclor1016	ND	5.0	100	02/25/2020 02:56
Aroclor1221	ND	5.0	100	02/25/2020 02:56
Aroclor1232	ND	5.0	100	02/25/2020 02:56
Aroclor1242	ND	5.0	100	02/25/2020 02:56
Aroclor1248	ND	5.0	100	02/25/2020 02:56
Aroclor1254	ND	5.0	100	02/25/2020 02:56
Aroclor1260	ND	5.0	100	02/25/2020 02:56
PCBs, total	ND	5.0	100	02/25/2020 02:56

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	112	69-143	02/25/2020 02:56

Analyst(s): LT

Analytical Comments: a3

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC23 02242053.d	194497

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.020	20	02/25/2020 06:36
a-BHC	ND	0.020	20	02/25/2020 06:36
b-BHC	ND	0.020	20	02/25/2020 06:36
d-BHC	ND	0.020	20	02/25/2020 06:36
g-BHC	ND	0.020	20	02/25/2020 06:36
Chlordane (Technical)	ND	0.50	20	02/25/2020 06:36
a-Chlordane	ND	0.020	20	02/25/2020 06:36
g-Chlordane	ND	0.020	20	02/25/2020 06:36
p,p-DDD	ND	0.020	20	02/25/2020 06:36
p,p-DDE	ND	0.020	20	02/25/2020 06:36
p,p-DDT	ND	0.020	20	02/25/2020 06:36
Dieldrin	ND	0.020	20	02/25/2020 06:36
Endosulfan I	ND	0.020	20	02/25/2020 06:36
Endosulfan II	ND	0.020	20	02/25/2020 06:36
Endosulfan sulfate	ND	0.020	20	02/25/2020 06:36
Endrin	ND	0.020	20	02/25/2020 06:36
Endrin aldehyde	ND	0.020	20	02/25/2020 06:36
Endrin ketone	ND	0.020	20	02/25/2020 06:36
Heptachlor	ND	0.020	20	02/25/2020 06:36
Heptachlor epoxide	ND	0.020	20	02/25/2020 06:36
Hexachlorobenzene	ND	0.20	20	02/25/2020 06:36
Hexachlorocyclopentadiene	ND	0.40	20	02/25/2020 06:36
Methoxychlor	ND	0.020	20	02/25/2020 06:36
Toxaphene	ND	1.0	20	02/25/2020 06:36
Aroclor1016	ND	1.0	20	02/25/2020 06:36
Aroclor1221	ND	1.0	20	02/25/2020 06:36
Aroclor1232	ND	1.0	20	02/25/2020 06:36
Aroclor1242	ND	1.0	20	02/25/2020 06:36
Aroclor1248	ND	1.0	20	02/25/2020 06:36
Aroclor1254	ND	1.0	20	02/25/2020 06:36
Aroclor1260	ND	1.0	20	02/25/2020 06:36
PCBs, total	ND	1.0	20	02/25/2020 06:36

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	120	69-143	02/25/2020 06:36

Analyst(s): LT

Analytical Comments: a3

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	GC23 02242054.d	194497

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.050	50	02/25/2020 06:51
a-BHC	ND	0.050	50	02/25/2020 06:51
b-BHC	ND	0.050	50	02/25/2020 06:51
d-BHC	ND	0.050	50	02/25/2020 06:51
g-BHC	ND	0.050	50	02/25/2020 06:51
Chlordane (Technical)	ND	1.2	50	02/25/2020 06:51
a-Chlordane	ND	0.050	50	02/25/2020 06:51
g-Chlordane	ND	0.050	50	02/25/2020 06:51
p,p-DDD	ND	0.050	50	02/25/2020 06:51
p,p-DDE	ND	0.050	50	02/25/2020 06:51
p,p-DDT	ND	0.050	50	02/25/2020 06:51
Dieldrin	ND	0.050	50	02/25/2020 06:51
Endosulfan I	ND	0.050	50	02/25/2020 06:51
Endosulfan II	ND	0.050	50	02/25/2020 06:51
Endosulfan sulfate	ND	0.050	50	02/25/2020 06:51
Endrin	ND	0.050	50	02/25/2020 06:51
Endrin aldehyde	ND	0.050	50	02/25/2020 06:51
Endrin ketone	ND	0.050	50	02/25/2020 06:51
Heptachlor	ND	0.050	50	02/25/2020 06:51
Heptachlor epoxide	ND	0.050	50	02/25/2020 06:51
Hexachlorobenzene	ND	0.50	50	02/25/2020 06:51
Hexachlorocyclopentadiene	ND	1.0	50	02/25/2020 06:51
Methoxychlor	ND	0.050	50	02/25/2020 06:51
Toxaphene	ND	2.5	50	02/25/2020 06:51
Aroclor1016	ND	2.5	50	02/25/2020 06:51
Aroclor1221	ND	2.5	50	02/25/2020 06:51
Aroclor1232	ND	2.5	50	02/25/2020 06:51
Aroclor1242	ND	2.5	50	02/25/2020 06:51
Aroclor1248	ND	2.5	50	02/25/2020 06:51
Aroclor1254	ND	2.5	50	02/25/2020 06:51
Aroclor1260	ND	2.5	50	02/25/2020 06:51
PCBs, total	ND	2.5	50	02/25/2020 06:51

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	98	69-143	02/25/2020 06:51

Analyst(s): LT

Analytical Comments: a3



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020		GC10 02252012.D	194475
Analytes	Result	RL	DF	Date Analyzed		
Acetone	ND	0.10	1	02/25/2020 14:37		
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/25/2020 14:37		
Benzene	ND	0.0050	1	02/25/2020 14:37		
Bromobenzene	ND	0.0050	1	02/25/2020 14:37		
Bromochloromethane	ND	0.0050	1	02/25/2020 14:37		
Bromodichloromethane	ND	0.0050	1	02/25/2020 14:37		
Bromoform	ND	0.0050	1	02/25/2020 14:37		
Bromomethane	ND	0.0050	1	02/25/2020 14:37		
2-Butanone (MEK)	ND	0.050	1	02/25/2020 14:37		
t-Butyl alcohol (TBA)	ND	0.050	1	02/25/2020 14:37		
n-Butyl benzene	ND	0.0050	1	02/25/2020 14:37		
sec-Butyl benzene	ND	0.0050	1	02/25/2020 14:37		
tert-Butyl benzene	ND	0.0050	1	02/25/2020 14:37		
Carbon Disulfide	ND	0.0050	1	02/25/2020 14:37		
Carbon Tetrachloride	ND	0.0050	1	02/25/2020 14:37		
Chlorobenzene	ND	0.0050	1	02/25/2020 14:37		
Chloroethane	ND	0.0050	1	02/25/2020 14:37		
Chloroform	ND	0.0050	1	02/25/2020 14:37		
Chloromethane	ND	0.0050	1	02/25/2020 14:37		
2-Chlorotoluene	ND	0.0050	1	02/25/2020 14:37		
4-Chlorotoluene	ND	0.0050	1	02/25/2020 14:37		
Dibromochloromethane	ND	0.0050	1	02/25/2020 14:37		
1,2-Dibromo-3-chloropropane	ND	0.0050	1	02/25/2020 14:37		
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/25/2020 14:37		
Dibromomethane	ND	0.0050	1	02/25/2020 14:37		
1,2-Dichlorobenzene	ND	0.0050	1	02/25/2020 14:37		
1,3-Dichlorobenzene	ND	0.0050	1	02/25/2020 14:37		
1,4-Dichlorobenzene	ND	0.0050	1	02/25/2020 14:37		
Dichlorodifluoromethane	ND	0.0050	1	02/25/2020 14:37		
1,1-Dichloroethane	ND	0.0050	1	02/25/2020 14:37		
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/25/2020 14:37		
1,1-Dichloroethene	ND	0.0050	1	02/25/2020 14:37		
cis-1,2-Dichloroethene	ND	0.0050	1	02/25/2020 14:37		
trans-1,2-Dichloroethene	ND	0.0050	1	02/25/2020 14:37		
1,2-Dichloropropane	ND	0.0050	1	02/25/2020 14:37		
1,3-Dichloropropane	ND	0.0050	1	02/25/2020 14:37		
2,2-Dichloropropane	ND	0.0050	1	02/25/2020 14:37		

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	GC10 02252012.D	194475
<u>Analytes</u>	<u>Result</u>		<u>RL</u> <u>DF</u>		<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050 1		02/25/2020 14:37
cis-1,3-Dichloropropene	ND		0.0050 1		02/25/2020 14:37
trans-1,3-Dichloropropene	ND		0.0050 1		02/25/2020 14:37
Diisopropyl ether (DIPE)	ND		0.0050 1		02/25/2020 14:37
Ethylbenzene	ND		0.0050 1		02/25/2020 14:37
Ethyl tert-butyl ether (ETBE)	ND		0.0050 1		02/25/2020 14:37
Freon 113	ND		0.0050 1		02/25/2020 14:37
Hexachlorobutadiene	ND		0.0050 1		02/25/2020 14:37
Hexachloroethane	ND		0.0050 1		02/25/2020 14:37
2-Hexanone	ND		0.0050 1		02/25/2020 14:37
Isopropylbenzene	ND		0.0050 1		02/25/2020 14:37
4-Isopropyl toluene	ND		0.0050 1		02/25/2020 14:37
Methyl-t-butyl ether (MTBE)	ND		0.0050 1		02/25/2020 14:37
Methylene chloride	ND		0.020 1		02/25/2020 14:37
4-Methyl-2-pentanone (MIBK)	ND		0.0050 1		02/25/2020 14:37
Naphthalene	ND		0.0050 1		02/25/2020 14:37
n-Propyl benzene	ND		0.0050 1		02/25/2020 14:37
Styrene	ND		0.0050 1		02/25/2020 14:37
1,1,1,2-Tetrachloroethane	ND		0.0050 1		02/25/2020 14:37
1,1,2,2-Tetrachloroethane	ND		0.0050 1		02/25/2020 14:37
Tetrachloroethene	ND		0.0050 1		02/25/2020 14:37
Toluene	ND		0.0050 1		02/25/2020 14:37
1,2,3-Trichlorobenzene	ND		0.0050 1		02/25/2020 14:37
1,2,4-Trichlorobenzene	ND		0.0050 1		02/25/2020 14:37
1,1,1-Trichloroethane	ND		0.0050 1		02/25/2020 14:37
1,1,2-Trichloroethane	ND		0.0050 1		02/25/2020 14:37
Trichloroethene	ND		0.0050 1		02/25/2020 14:37
Trichlorofluoromethane	ND		0.0050 1		02/25/2020 14:37
1,2,3-Trichloropropane	ND		0.0050 1		02/25/2020 14:37
1,2,4-Trimethylbenzene	ND		0.0050 1		02/25/2020 14:37
1,3,5-Trimethylbenzene	ND		0.0050 1		02/25/2020 14:37
Vinyl Chloride	ND		0.0050 1		02/25/2020 14:37
m,p-Xylene	ND		0.0050 1		02/25/2020 14:37
o-Xylene	ND		0.0050 1		02/25/2020 14:37
Xylenes, Total	ND		0.0050 1		02/25/2020 14:37

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	GC10 02252012.D	194475

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	89	66-116		02/25/2020 14:37
Toluene-d8	108	86-110		02/25/2020 14:37
4-BFB	89	71-114		02/25/2020 14:37
Benzene-d6	76	62-122		02/25/2020 14:37
Ethylbenzene-d10	94	69-130		02/25/2020 14:37
1,2-DCB-d4	72	55-108		02/25/2020 14:37

Analyst(s): KF



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC38 02272030.D	194475
<u>Analytes</u>	<u>Result</u>		<u>RL</u> <u>DF</u>		<u>Date Analyzed</u>
Acetone	ND		0.10 1		02/28/2020 02:52
tert-Amyl methyl ether (TAME)	ND		0.0050 1		02/28/2020 02:52
Benzene	ND		0.0050 1		02/28/2020 02:52
Bromobenzene	ND		0.0050 1		02/28/2020 02:52
Bromochloromethane	ND		0.0050 1		02/28/2020 02:52
Bromodichloromethane	ND		0.0050 1		02/28/2020 02:52
Bromoform	ND		0.0050 1		02/28/2020 02:52
Bromomethane	ND		0.0050 1		02/28/2020 02:52
2-Butanone (MEK)	ND		0.050 1		02/28/2020 02:52
t-Butyl alcohol (TBA)	ND		0.050 1		02/28/2020 02:52
n-Butyl benzene	ND		0.0050 1		02/28/2020 02:52
sec-Butyl benzene	ND		0.0050 1		02/28/2020 02:52
tert-Butyl benzene	ND		0.0050 1		02/28/2020 02:52
Carbon Disulfide	ND		0.0050 1		02/28/2020 02:52
Carbon Tetrachloride	ND		0.0050 1		02/28/2020 02:52
Chlorobenzene	ND		0.0050 1		02/28/2020 02:52
Chloroethane	ND		0.0050 1		02/28/2020 02:52
Chloroform	ND		0.0050 1		02/28/2020 02:52
Chloromethane	ND		0.0050 1		02/28/2020 02:52
2-Chlorotoluene	ND		0.0050 1		02/28/2020 02:52
4-Chlorotoluene	ND		0.0050 1		02/28/2020 02:52
Dibromochloromethane	ND		0.0050 1		02/28/2020 02:52
1,2-Dibromo-3-chloropropane	ND		0.0050 1		02/28/2020 02:52
1,2-Dibromoethane (EDB)	ND		0.0040 1		02/28/2020 02:52
Dibromomethane	ND		0.0050 1		02/28/2020 02:52
1,2-Dichlorobenzene	ND		0.0050 1		02/28/2020 02:52
1,3-Dichlorobenzene	ND		0.0050 1		02/28/2020 02:52
1,4-Dichlorobenzene	ND		0.0050 1		02/28/2020 02:52
Dichlorodifluoromethane	ND		0.0050 1		02/28/2020 02:52
1,1-Dichloroethane	ND		0.0050 1		02/28/2020 02:52
1,2-Dichloroethane (1,2-DCA)	ND		0.0040 1		02/28/2020 02:52
1,1-Dichloroethene	ND		0.0050 1		02/28/2020 02:52
cis-1,2-Dichloroethene	ND		0.0050 1		02/28/2020 02:52
trans-1,2-Dichloroethene	ND		0.0050 1		02/28/2020 02:52
1,2-Dichloropropane	ND		0.0050 1		02/28/2020 02:52
1,3-Dichloropropane	ND		0.0050 1		02/28/2020 02:52
2,2-Dichloropropane	ND		0.0050 1		02/28/2020 02:52

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC38 02272030.D	194475
<u>Analytes</u>	<u>Result</u>		<u>RL</u> <u>DF</u>		<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050 1		02/28/2020 02:52
cis-1,3-Dichloropropene	ND		0.0050 1		02/28/2020 02:52
trans-1,3-Dichloropropene	ND		0.0050 1		02/28/2020 02:52
Diisopropyl ether (DIPE)	ND		0.0050 1		02/28/2020 02:52
Ethylbenzene	ND		0.0050 1		02/28/2020 02:52
Ethyl tert-butyl ether (ETBE)	ND		0.0050 1		02/28/2020 02:52
Freon 113	ND		0.0050 1		02/28/2020 02:52
Hexachlorobutadiene	ND		0.0050 1		02/28/2020 02:52
Hexachloroethane	ND		0.0050 1		02/28/2020 02:52
2-Hexanone	ND		0.0050 1		02/28/2020 02:52
Isopropylbenzene	ND		0.0050 1		02/28/2020 02:52
4-Isopropyl toluene	ND		0.0050 1		02/28/2020 02:52
Methyl-t-butyl ether (MTBE)	ND		0.0050 1		02/28/2020 02:52
Methylene chloride	ND		0.020 1		02/28/2020 02:52
4-Methyl-2-pentanone (MIBK)	ND		0.0050 1		02/28/2020 02:52
Naphthalene	ND		0.0050 1		02/28/2020 02:52
n-Propyl benzene	ND		0.0050 1		02/28/2020 02:52
Styrene	ND		0.0050 1		02/28/2020 02:52
1,1,1,2-Tetrachloroethane	ND		0.0050 1		02/28/2020 02:52
1,1,2,2-Tetrachloroethane	ND		0.0050 1		02/28/2020 02:52
Tetrachloroethene	ND		0.0050 1		02/28/2020 02:52
Toluene	ND		0.0050 1		02/28/2020 02:52
1,2,3-Trichlorobenzene	ND		0.0050 1		02/28/2020 02:52
1,2,4-Trichlorobenzene	ND		0.0050 1		02/28/2020 02:52
1,1,1-Trichloroethane	ND		0.0050 1		02/28/2020 02:52
1,1,2-Trichloroethane	ND		0.0050 1		02/28/2020 02:52
Trichloroethene	ND		0.0050 1		02/28/2020 02:52
Trichlorofluoromethane	ND		0.0050 1		02/28/2020 02:52
1,2,3-Trichloropropane	ND		0.0050 1		02/28/2020 02:52
1,2,4-Trimethylbenzene	ND		0.0050 1		02/28/2020 02:52
1,3,5-Trimethylbenzene	ND		0.0050 1		02/28/2020 02:52
Vinyl Chloride	ND		0.0050 1		02/28/2020 02:52
m,p-Xylene	ND		0.0050 1		02/28/2020 02:52
o-Xylene	ND		0.0050 1		02/28/2020 02:52
Xylenes, Total	ND		0.0050 1		02/28/2020 02:52

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC38 02272030.D	194475

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	66-116		02/28/2020 02:52
Toluene-d8	101	86-110		02/28/2020 02:52
4-BFB	87	71-114		02/28/2020 02:52
Benzene-d6	69	62-122		02/28/2020 02:52
Ethylbenzene-d10	81	69-130		02/28/2020 02:52
1,2-DCB-d4	69	55-108		02/28/2020 02:52

Analyst(s): KF



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020		GC38 02272031.D	194475
Analytes	Result	RL	DF	Date Analyzed		
Acetone	ND	0.10	1	02/28/2020 03:30		
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/28/2020 03:30		
Benzene	ND	0.0050	1	02/28/2020 03:30		
Bromobenzene	ND	0.0050	1	02/28/2020 03:30		
Bromochloromethane	ND	0.0050	1	02/28/2020 03:30		
Bromodichloromethane	ND	0.0050	1	02/28/2020 03:30		
Bromoform	ND	0.0050	1	02/28/2020 03:30		
Bromomethane	ND	0.0050	1	02/28/2020 03:30		
2-Butanone (MEK)	ND	0.050	1	02/28/2020 03:30		
t-Butyl alcohol (TBA)	ND	0.050	1	02/28/2020 03:30		
n-Butyl benzene	ND	0.0050	1	02/28/2020 03:30		
sec-Butyl benzene	ND	0.0050	1	02/28/2020 03:30		
tert-Butyl benzene	ND	0.0050	1	02/28/2020 03:30		
Carbon Disulfide	ND	0.0050	1	02/28/2020 03:30		
Carbon Tetrachloride	ND	0.0050	1	02/28/2020 03:30		
Chlorobenzene	ND	0.0050	1	02/28/2020 03:30		
Chloroethane	ND	0.0050	1	02/28/2020 03:30		
Chloroform	ND	0.0050	1	02/28/2020 03:30		
Chloromethane	ND	0.0050	1	02/28/2020 03:30		
2-Chlorotoluene	ND	0.0050	1	02/28/2020 03:30		
4-Chlorotoluene	ND	0.0050	1	02/28/2020 03:30		
Dibromochloromethane	ND	0.0050	1	02/28/2020 03:30		
1,2-Dibromo-3-chloropropane	ND	0.0050	1	02/28/2020 03:30		
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/28/2020 03:30		
Dibromomethane	ND	0.0050	1	02/28/2020 03:30		
1,2-Dichlorobenzene	ND	0.0050	1	02/28/2020 03:30		
1,3-Dichlorobenzene	ND	0.0050	1	02/28/2020 03:30		
1,4-Dichlorobenzene	ND	0.0050	1	02/28/2020 03:30		
Dichlorodifluoromethane	ND	0.0050	1	02/28/2020 03:30		
1,1-Dichloroethane	ND	0.0050	1	02/28/2020 03:30		
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/28/2020 03:30		
1,1-Dichloroethene	ND	0.0050	1	02/28/2020 03:30		
cis-1,2-Dichloroethene	ND	0.0050	1	02/28/2020 03:30		
trans-1,2-Dichloroethene	ND	0.0050	1	02/28/2020 03:30		
1,2-Dichloropropane	ND	0.0050	1	02/28/2020 03:30		
1,3-Dichloropropane	ND	0.0050	1	02/28/2020 03:30		
2,2-Dichloropropane	ND	0.0050	1	02/28/2020 03:30		

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	GC38 02272031.D	194475
<u>Analytes</u>	<u>Result</u>		<u>RL</u> <u>DF</u>		<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050 1		02/28/2020 03:30
cis-1,3-Dichloropropene	ND		0.0050 1		02/28/2020 03:30
trans-1,3-Dichloropropene	ND		0.0050 1		02/28/2020 03:30
Diisopropyl ether (DIPE)	ND		0.0050 1		02/28/2020 03:30
Ethylbenzene	ND		0.0050 1		02/28/2020 03:30
Ethyl tert-butyl ether (ETBE)	ND		0.0050 1		02/28/2020 03:30
Freon 113	ND		0.0050 1		02/28/2020 03:30
Hexachlorobutadiene	ND		0.0050 1		02/28/2020 03:30
Hexachloroethane	ND		0.0050 1		02/28/2020 03:30
2-Hexanone	ND		0.0050 1		02/28/2020 03:30
Isopropylbenzene	ND		0.0050 1		02/28/2020 03:30
4-Isopropyl toluene	ND		0.0050 1		02/28/2020 03:30
Methyl-t-butyl ether (MTBE)	ND		0.0050 1		02/28/2020 03:30
Methylene chloride	ND		0.020 1		02/28/2020 03:30
4-Methyl-2-pentanone (MIBK)	ND		0.0050 1		02/28/2020 03:30
Naphthalene	ND		0.0050 1		02/28/2020 03:30
n-Propyl benzene	ND		0.0050 1		02/28/2020 03:30
Styrene	ND		0.0050 1		02/28/2020 03:30
1,1,1,2-Tetrachloroethane	ND		0.0050 1		02/28/2020 03:30
1,1,2,2-Tetrachloroethane	ND		0.0050 1		02/28/2020 03:30
Tetrachloroethene	ND		0.0050 1		02/28/2020 03:30
Toluene	ND		0.0050 1		02/28/2020 03:30
1,2,3-Trichlorobenzene	ND		0.0050 1		02/28/2020 03:30
1,2,4-Trichlorobenzene	ND		0.0050 1		02/28/2020 03:30
1,1,1-Trichloroethane	ND		0.0050 1		02/28/2020 03:30
1,1,2-Trichloroethane	ND		0.0050 1		02/28/2020 03:30
Trichloroethene	ND		0.0050 1		02/28/2020 03:30
Trichlorofluoromethane	ND		0.0050 1		02/28/2020 03:30
1,2,3-Trichloropropane	ND		0.0050 1		02/28/2020 03:30
1,2,4-Trimethylbenzene	ND		0.0050 1		02/28/2020 03:30
1,3,5-Trimethylbenzene	ND		0.0050 1		02/28/2020 03:30
Vinyl Chloride	ND		0.0050 1		02/28/2020 03:30
m,p-Xylene	ND		0.0050 1		02/28/2020 03:30
o-Xylene	ND		0.0050 1		02/28/2020 03:30
Xylenes, Total	ND		0.0050 1		02/28/2020 03:30

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	GC38 02272031.D	194475

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	66-116		02/28/2020 03:30
Toluene-d8	102	86-110		02/28/2020 03:30
4-BFB	88	71-114		02/28/2020 03:30
Benzene-d6	67	62-122		02/28/2020 03:30
Ethylbenzene-d10	78	69-130		02/28/2020 03:30
1,2-DCB-d4	66	55-108		02/28/2020 03:30

Analyst(s): KF



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020		GC17 02252017.D	194583
Analytes	Result	RL	DE	Date Analyzed		
Acenaphthene	ND	0.021	2	02/25/2020 16:56		
Acenaphthylene	ND	0.021	2	02/25/2020 16:56		
Acetochlor	ND	4.0	2	02/25/2020 16:56		
Anthracene	ND	0.021	2	02/25/2020 16:56		
Benzidine	ND	20	2	02/25/2020 16:56		
Benzo (a) anthracene	ND	0.080	2	02/25/2020 16:56		
Benzo (a) pyrene	ND	0.040	2	02/25/2020 16:56		
Benzo (b) fluoranthene	ND	0.10	2	02/25/2020 16:56		
Benzo (g,h,i) perylene	0.042	0.040	2	02/25/2020 16:56		
Benzo (k) fluoranthene	0.025	0.021	2	02/25/2020 16:56		
Benzyl Alcohol	ND	20	2	02/25/2020 16:56		
1,1-Biphenyl	ND	0.21	2	02/25/2020 16:56		
Bis (2-chloroethoxy) Methane	ND	4.0	2	02/25/2020 16:56		
Bis (2-chloroethyl) Ether	ND	0.040	2	02/25/2020 16:56		
Bis (2-chloroisopropyl) Ether	ND	0.040	2	02/25/2020 16:56		
Bis (2-ethylhexyl) Adipate	ND	8.0	2	02/25/2020 16:56		
Bis (2-ethylhexyl) Phthalate	ND	0.080	2	02/25/2020 16:56		
4-Bromophenyl Phenyl Ether	ND	4.0	2	02/25/2020 16:56		
Butylbenzyl Phthalate	ND	0.40	2	02/25/2020 16:56		
4-Chloroaniline	ND	0.040	2	02/25/2020 16:56		
4-Chloro-3-methylphenol	ND	4.0	2	02/25/2020 16:56		
2-Chloronaphthalene	ND	4.0	2	02/25/2020 16:56		
2-Chlorophenol	ND	0.080	2	02/25/2020 16:56		
4-Chlorophenyl Phenyl Ether	ND	4.0	2	02/25/2020 16:56		
Chrysene	ND	0.040	2	02/25/2020 16:56		
Dibenzo (a,h) anthracene	ND	0.040	2	02/25/2020 16:56		
Dibenzofuran	ND	4.0	2	02/25/2020 16:56		
Di-n-butyl Phthalate	ND	0.080	2	02/25/2020 16:56		
1,2-Dichlorobenzene	ND	4.0	2	02/25/2020 16:56		
1,3-Dichlorobenzene	ND	4.0	2	02/25/2020 16:56		
1,4-Dichlorobenzene	ND	4.0	2	02/25/2020 16:56		
3,3-Dichlorobenzidine	ND	0.040	2	02/25/2020 16:56		
2,4-Dichlorophenol	ND	0.21	2	02/25/2020 16:56		
Diethyl Phthalate	ND	0.080	2	02/25/2020 16:56		
2,4-Dimethylphenol	ND	4.0	2	02/25/2020 16:56		
Dimethyl Phthalate	ND	0.040	2	02/25/2020 16:56		
4,6-Dinitro-2-methylphenol	ND	20	2	02/25/2020 16:56		

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020		GC17 02252017.D	194583
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>	
2,4-Dinitrophenol	ND		2.1	2	02/25/2020 16:56	
2,4-Dinitrotoluene	ND		0.10	2	02/25/2020 16:56	
2,6-Dinitrotoluene	ND		0.040	2	02/25/2020 16:56	
Di-n-octyl Phthalate	ND		0.080	2	02/25/2020 16:56	
1,2-Diphenylhydrazine	ND		4.0	2	02/25/2020 16:56	
Fluoranthene	0.044		0.021	2	02/25/2020 16:56	
Fluorene	ND		0.040	2	02/25/2020 16:56	
Hexachlorobenzene	ND		0.021	2	02/25/2020 16:56	
Hexachlorobutadiene	ND		0.040	2	02/25/2020 16:56	
Hexachlorocyclopentadiene	ND		32	2	02/25/2020 16:56	
Hexachloroethane	ND		0.040	2	02/25/2020 16:56	
Indeno (1,2,3-cd) pyrene	ND		0.040	2	02/25/2020 16:56	
Isophorone	ND		4.0	2	02/25/2020 16:56	
1-Methylnaphthalene	ND		0.021	2	02/25/2020 16:56	
2-Methylnaphthalene	ND		0.040	2	02/25/2020 16:56	
2-Methylphenol (o-Cresol)	ND		8.0	2	02/25/2020 16:56	
3 & 4-Methylphenol (m,p-Cresol)	ND		4.0	2	02/25/2020 16:56	
Naphthalene	ND		0.021	2	02/25/2020 16:56	
2-Nitroaniline	ND		20	2	02/25/2020 16:56	
3-Nitroaniline	ND		20	2	02/25/2020 16:56	
4-Nitroaniline	ND		20	2	02/25/2020 16:56	
Nitrobenzene	ND		4.0	2	02/25/2020 16:56	
2-Nitrophenol	ND		20	2	02/25/2020 16:56	
4-Nitrophenol	ND		20	2	02/25/2020 16:56	
N-Nitrosodiphenylamine	ND		4.0	2	02/25/2020 16:56	
N-Nitrosodi-n-propylamine	ND		4.0	2	02/25/2020 16:56	
Pentachlorophenol	ND		0.50	2	02/25/2020 16:56	
Phenanthrene	ND		0.080	2	02/25/2020 16:56	
Phenol	ND		0.080	2	02/25/2020 16:56	
Pyrene	0.044		0.040	2	02/25/2020 16:56	
Pyridine	ND		4.0	2	02/25/2020 16:56	
1,2,4-Trichlorobenzene	ND		4.0	2	02/25/2020 16:56	
2,4,5-Trichlorophenol	ND		0.040	2	02/25/2020 16:56	
2,4,6-Trichlorophenol	ND		0.21	2	02/25/2020 16:56	

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	GC17 02252017.D	194583

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
-----------------	---------------	-----------	-----------	----------------------

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
2-Fluorophenol	114	56-152	02/25/2020 16:56
Phenol-d5	100	54-146	02/25/2020 16:56
Nitrobenzene-d5	93	47-147	02/25/2020 16:56
2-Fluorobiphenyl	81	46-141	02/25/2020 16:56
2,4,6-Tribromophenol	71	25-166	02/25/2020 16:56
4-Terphenyl-d14	67	39-153	02/25/2020 16:56

Analyst(s): REB

Analytical Comments: a4



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020		GC17 02252018.D	194583
Analytes	Result	Qualifiers	RL	DE	Date Analyzed	
Acenaphthene	0.028		0.021	2	02/25/2020 17:24	
Acenaphthylene	ND		0.021	2	02/25/2020 17:24	
Acetochlor	ND		4.0	2	02/25/2020 17:24	
Anthracene	0.078		0.021	2	02/25/2020 17:24	
Benzidine	ND		20	2	02/25/2020 17:24	
Benzo (a) anthracene	0.14		0.080	2	02/25/2020 17:24	
Benzo (a) pyrene	0.061		0.040	2	02/25/2020 17:24	
Benzo (b) fluoranthene	ND		0.10	2	02/25/2020 17:24	
Benzo (g,h,i) perylene	0.041		0.040	2	02/25/2020 17:24	
Benzo (k) fluoranthene	0.046		0.021	2	02/25/2020 17:24	
Benzyl Alcohol	ND		20	2	02/25/2020 17:24	
1,1-Biphenyl	ND		0.21	2	02/25/2020 17:24	
Bis (2-chloroethoxy) Methane	ND		4.0	2	02/25/2020 17:24	
Bis (2-chloroethyl) Ether	ND		0.040	2	02/25/2020 17:24	
Bis (2-chloroisopropyl) Ether	ND		0.040	2	02/25/2020 17:24	
Bis (2-ethylhexyl) Adipate	ND		8.0	2	02/25/2020 17:24	
Bis (2-ethylhexyl) Phthalate	ND		0.080	2	02/25/2020 17:24	
4-Bromophenyl Phenyl Ether	ND		4.0	2	02/25/2020 17:24	
Butylbenzyl Phthalate	ND		0.40	2	02/25/2020 17:24	
4-Chloroaniline	ND		0.040	2	02/25/2020 17:24	
4-Chloro-3-methylphenol	ND		4.0	2	02/25/2020 17:24	
2-Chloronaphthalene	ND		4.0	2	02/25/2020 17:24	
2-Chlorophenol	ND		0.080	2	02/25/2020 17:24	
4-Chlorophenyl Phenyl Ether	ND		4.0	2	02/25/2020 17:24	
Chrysene	0.11	B	0.040	2	02/25/2020 17:24	
Dibenzo (a,h) anthracene	ND		0.040	2	02/25/2020 17:24	
Dibenzofuran	ND		4.0	2	02/25/2020 17:24	
Di-n-butyl Phthalate	ND		0.080	2	02/25/2020 17:24	
1,2-Dichlorobenzene	ND		4.0	2	02/25/2020 17:24	
1,3-Dichlorobenzene	ND		4.0	2	02/25/2020 17:24	
1,4-Dichlorobenzene	ND		4.0	2	02/25/2020 17:24	
3,3-Dichlorobenzidine	ND		0.040	2	02/25/2020 17:24	
2,4-Dichlorophenol	ND		0.21	2	02/25/2020 17:24	
Diethyl Phthalate	ND		0.080	2	02/25/2020 17:24	
2,4-Dimethylphenol	ND		4.0	2	02/25/2020 17:24	
Dimethyl Phthalate	ND		0.040	2	02/25/2020 17:24	
4,6-Dinitro-2-methylphenol	ND		20	2	02/25/2020 17:24	

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020		GC17 02252018.D	194583
Analytes	Result	Qualifiers	RL	DE	Date Analyzed	
2,4-Dinitrophenol	ND		2.1	2	02/25/2020 17:24	
2,4-Dinitrotoluene	ND		0.10	2	02/25/2020 17:24	
2,6-Dinitrotoluene	ND		0.040	2	02/25/2020 17:24	
Di-n-octyl Phthalate	ND		0.080	2	02/25/2020 17:24	
1,2-Diphenylhydrazine	ND		4.0	2	02/25/2020 17:24	
Fluoranthene	0.24	B	0.021	2	02/25/2020 17:24	
Fluorene	ND		0.040	2	02/25/2020 17:24	
Hexachlorobenzene	ND		0.021	2	02/25/2020 17:24	
Hexachlorobutadiene	ND		0.040	2	02/25/2020 17:24	
Hexachlorocyclopentadiene	ND		32	2	02/25/2020 17:24	
Hexachloroethane	ND		0.040	2	02/25/2020 17:24	
Indeno (1,2,3-cd) pyrene	ND		0.040	2	02/25/2020 17:24	
Isophorone	ND		4.0	2	02/25/2020 17:24	
1-Methylnaphthalene	ND		0.021	2	02/25/2020 17:24	
2-Methylnaphthalene	ND		0.040	2	02/25/2020 17:24	
2-Methylphenol (o-Cresol)	ND		8.0	2	02/25/2020 17:24	
3 & 4-Methylphenol (m,p-Cresol)	ND		4.0	2	02/25/2020 17:24	
Naphthalene	ND		0.021	2	02/25/2020 17:24	
2-Nitroaniline	ND		20	2	02/25/2020 17:24	
3-Nitroaniline	ND		20	2	02/25/2020 17:24	
4-Nitroaniline	ND		20	2	02/25/2020 17:24	
Nitrobenzene	ND		4.0	2	02/25/2020 17:24	
2-Nitrophenol	ND		20	2	02/25/2020 17:24	
4-Nitrophenol	ND		20	2	02/25/2020 17:24	
N-Nitrosodiphenylamine	ND		4.0	2	02/25/2020 17:24	
N-Nitrosodi-n-propylamine	ND		4.0	2	02/25/2020 17:24	
Pentachlorophenol	ND		0.50	2	02/25/2020 17:24	
Phenanthrene	0.27		0.080	2	02/25/2020 17:24	
Phenol	ND		0.080	2	02/25/2020 17:24	
Pyrene	0.19		0.040	2	02/25/2020 17:24	
Pyridine	ND		4.0	2	02/25/2020 17:24	
1,2,4-Trichlorobenzene	ND		4.0	2	02/25/2020 17:24	
2,4,5-Trichlorophenol	ND		0.040	2	02/25/2020 17:24	
2,4,6-Trichlorophenol	ND		0.21	2	02/25/2020 17:24	

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC17 02252018.D	194583

<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
-----------------	---------------	-------------------	-----------	-----------	----------------------

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
2-Fluorophenol	142	56-152	02/25/2020 17:24
Phenol-d5	108	54-146	02/25/2020 17:24
Nitrobenzene-d5	82	47-147	02/25/2020 17:24
2-Fluorobiphenyl	82	46-141	02/25/2020 17:24
2,4,6-Tribromophenol	73	25-166	02/25/2020 17:24
4-Terphenyl-d14	66	39-153	02/25/2020 17:24

Analyst(s): REB

Analytical Comments: a4,c2



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020		GC17 02252019.D	194583
Analytes	Result	Qualifiers	RL	DE	Date Analyzed	
Acenaphthene	ND		0.021	2	02/25/2020 17:51	
Acenaphthylene	ND		0.021	2	02/25/2020 17:51	
Acetochlor	ND		4.0	2	02/25/2020 17:51	
Anthracene	0.022		0.021	2	02/25/2020 17:51	
Benzidine	ND		20	2	02/25/2020 17:51	
Benzo (a) anthracene	ND		0.080	2	02/25/2020 17:51	
Benzo (a) pyrene	ND		0.040	2	02/25/2020 17:51	
Benzo (b) fluoranthene	ND		0.10	2	02/25/2020 17:51	
Benzo (g,h,i) perylene	ND		0.040	2	02/25/2020 17:51	
Benzo (k) fluoranthene	ND		0.021	2	02/25/2020 17:51	
Benzyl Alcohol	ND		20	2	02/25/2020 17:51	
1,1-Biphenyl	ND		0.21	2	02/25/2020 17:51	
Bis (2-chloroethoxy) Methane	ND		4.0	2	02/25/2020 17:51	
Bis (2-chloroethyl) Ether	ND		0.040	2	02/25/2020 17:51	
Bis (2-chloroisopropyl) Ether	ND		0.040	2	02/25/2020 17:51	
Bis (2-ethylhexyl) Adipate	ND		8.0	2	02/25/2020 17:51	
Bis (2-ethylhexyl) Phthalate	ND		0.080	2	02/25/2020 17:51	
4-Bromophenyl Phenyl Ether	ND		4.0	2	02/25/2020 17:51	
Butylbenzyl Phthalate	ND		0.40	2	02/25/2020 17:51	
4-Chloroaniline	ND		0.040	2	02/25/2020 17:51	
4-Chloro-3-methylphenol	ND		4.0	2	02/25/2020 17:51	
2-Chloronaphthalene	ND		4.0	2	02/25/2020 17:51	
2-Chlorophenol	ND		0.080	2	02/25/2020 17:51	
4-Chlorophenyl Phenyl Ether	ND		4.0	2	02/25/2020 17:51	
Chrysene	ND		0.040	2	02/25/2020 17:51	
Dibenzo (a,h) anthracene	ND		0.040	2	02/25/2020 17:51	
Dibenzofuran	ND		4.0	2	02/25/2020 17:51	
Di-n-butyl Phthalate	ND		0.080	2	02/25/2020 17:51	
1,2-Dichlorobenzene	ND		4.0	2	02/25/2020 17:51	
1,3-Dichlorobenzene	ND		4.0	2	02/25/2020 17:51	
1,4-Dichlorobenzene	ND		4.0	2	02/25/2020 17:51	
3,3-Dichlorobenzidine	ND		0.040	2	02/25/2020 17:51	
2,4-Dichlorophenol	ND		0.21	2	02/25/2020 17:51	
Diethyl Phthalate	ND		0.080	2	02/25/2020 17:51	
2,4-Dimethylphenol	ND		4.0	2	02/25/2020 17:51	
Dimethyl Phthalate	ND		0.040	2	02/25/2020 17:51	
4,6-Dinitro-2-methylphenol	ND		20	2	02/25/2020 17:51	

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020		GC17 02252019.D	194583
Analytes	Result	Qualifiers	RL	DE	Date Analyzed	
2,4-Dinitrophenol	ND		2.1	2	02/25/2020 17:51	
2,4-Dinitrotoluene	ND		0.10	2	02/25/2020 17:51	
2,6-Dinitrotoluene	ND		0.040	2	02/25/2020 17:51	
Di-n-octyl Phthalate	ND		0.080	2	02/25/2020 17:51	
1,2-Diphenylhydrazine	ND		4.0	2	02/25/2020 17:51	
Fluoranthene	0.076	B	0.021	2	02/25/2020 17:51	
Fluorene	ND		0.040	2	02/25/2020 17:51	
Hexachlorobenzene	ND		0.021	2	02/25/2020 17:51	
Hexachlorobutadiene	ND		0.040	2	02/25/2020 17:51	
Hexachlorocyclopentadiene	ND		32	2	02/25/2020 17:51	
Hexachloroethane	ND		0.040	2	02/25/2020 17:51	
Indeno (1,2,3-cd) pyrene	ND		0.040	2	02/25/2020 17:51	
Isophorone	ND		4.0	2	02/25/2020 17:51	
1-Methylnaphthalene	ND		0.021	2	02/25/2020 17:51	
2-Methylnaphthalene	ND		0.040	2	02/25/2020 17:51	
2-Methylphenol (o-Cresol)	ND		8.0	2	02/25/2020 17:51	
3 & 4-Methylphenol (m,p-Cresol)	ND		4.0	2	02/25/2020 17:51	
Naphthalene	ND		0.021	2	02/25/2020 17:51	
2-Nitroaniline	ND		20	2	02/25/2020 17:51	
3-Nitroaniline	ND		20	2	02/25/2020 17:51	
4-Nitroaniline	ND		20	2	02/25/2020 17:51	
Nitrobenzene	ND		4.0	2	02/25/2020 17:51	
2-Nitrophenol	ND		20	2	02/25/2020 17:51	
4-Nitrophenol	ND		20	2	02/25/2020 17:51	
N-Nitrosodiphenylamine	ND		4.0	2	02/25/2020 17:51	
N-Nitrosodi-n-propylamine	ND		4.0	2	02/25/2020 17:51	
Pentachlorophenol	ND		0.50	2	02/25/2020 17:51	
Phenanthrene	ND		0.080	2	02/25/2020 17:51	
Phenol	ND		0.080	2	02/25/2020 17:51	
Pyrene	0.064		0.040	2	02/25/2020 17:51	
Pyridine	ND		4.0	2	02/25/2020 17:51	
1,2,4-Trichlorobenzene	ND		4.0	2	02/25/2020 17:51	
2,4,5-Trichlorophenol	ND		0.040	2	02/25/2020 17:51	
2,4,6-Trichlorophenol	ND		0.21	2	02/25/2020 17:51	

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/25/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	GC17 02252019.D	194583

Analytes	Result	Qualifiers	RL	DE	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	117		56-152		02/25/2020 17:51
Phenol-d5	94		54-146		02/25/2020 17:51
Nitrobenzene-d5	75		47-147		02/25/2020 17:51
2-Fluorobiphenyl	79		46-141		02/25/2020 17:51
2,4,6-Tribromophenol	67		25-166		02/25/2020 17:51
4-Terphenyl-d14	54		39-153		02/25/2020 17:51

Analyst(s): REB

Analytical Comments: a4



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020		ICP-MS4 174SMPL.d	194493
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>	
Antimony	0.59		0.50	1	02/25/2020 16:53	
Arsenic	6.2		0.50	1	02/25/2020 16:53	
Barium	180		5.0	1	02/25/2020 16:53	
Beryllium	ND		0.50	1	02/25/2020 16:53	
Cadmium	0.27		0.25	1	02/25/2020 16:53	
Chromium	43		0.50	1	02/25/2020 16:53	
Cobalt	10		0.50	1	02/25/2020 16:53	
Copper	22		0.50	1	02/25/2020 16:53	
Lead	23		0.50	1	02/25/2020 16:53	
Mercury	0.50	B	0.050	1	02/25/2020 16:53	
Molybdenum	ND		0.50	1	02/25/2020 16:53	
Nickel	47		0.50	1	02/25/2020 16:53	
Selenium	1.2		0.50	1	02/25/2020 16:53	
Silver	ND		0.50	1	02/25/2020 16:53	
Thallium	ND		0.50	1	02/25/2020 16:53	
Vanadium	44		0.50	1	02/25/2020 16:53	
Zinc	70		5.0	1	02/25/2020 16:53	

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
Terbium	91	70-130	02/25/2020 16:53

Analyst(s): ND



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected		Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020		ICP-MS4 175SMPL.d	194493
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>	
Antimony	0.58		0.50	1	02/25/2020 16:58	
Arsenic	6.5		0.50	1	02/25/2020 16:58	
Barium	170		5.0	1	02/25/2020 16:58	
Beryllium	0.61		0.50	1	02/25/2020 16:58	
Cadmium	ND		0.25	1	02/25/2020 16:58	
Chromium	67		0.50	1	02/25/2020 16:58	
Cobalt	12		0.50	1	02/25/2020 16:58	
Copper	27		0.50	1	02/25/2020 16:58	
Lead	14		0.50	1	02/25/2020 16:58	
Mercury	0.37	B	0.050	1	02/25/2020 16:58	
Molybdenum	0.72		0.50	1	02/25/2020 16:58	
Nickel	72		0.50	1	02/25/2020 16:58	
Selenium	1.2		0.50	1	02/25/2020 16:58	
Silver	ND		0.50	1	02/25/2020 16:58	
Thallium	ND		0.50	1	02/25/2020 16:58	
Vanadium	62		0.50	1	02/25/2020 16:58	
Zinc	66		5.0	1	02/25/2020 16:58	

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
Terbium	109	70-130	02/25/2020 16:58

Analyst(s): ND



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	ICP-MS4 176SMPL.d	194493

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Antimony	0.59		0.50	1	02/25/2020 17:02
Arsenic	9.4		0.50	1	02/25/2020 17:02
Barium	120		5.0	1	02/25/2020 17:02
Beryllium	ND		0.50	1	02/25/2020 17:02
Cadmium	0.94		0.25	1	02/25/2020 17:02
Chromium	44		0.50	1	02/25/2020 17:02
Cobalt	9.3		0.50	1	02/25/2020 17:02
Copper	130		0.50	1	02/25/2020 17:02
Lead	37		0.50	1	02/25/2020 17:02
Mercury	0.21	B	0.050	1	02/25/2020 17:02
Molybdenum	ND		0.50	1	02/25/2020 17:02
Nickel	42		0.50	1	02/25/2020 17:02
Selenium	1.0		0.50	1	02/25/2020 17:02
Silver	ND		0.50	1	02/25/2020 17:02
Thallium	ND		0.50	1	02/25/2020 17:02
Vanadium	43		0.50	1	02/25/2020 17:02
Zinc	91		5.0	1	02/25/2020 17:02

Surrogates	REC (%)	Limits	
Terbium	109	70-130	02/25/2020 17:02

Analyst(s): ND



Analytical Report

Client: Geo-Engineering Solutions, Inc.

Date Received: 02/24/2020 13:04

Date Prepared: 02/24/2020

Project: 78-1225; San Pablo

WorkOrder: 2002874

Extraction Method: CARB 435 Asbestos

Analytical Method: 435 CARB

Unit: %

Asbestos (CARB 435) 400 Point Count

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	Microscope	194666

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Asbestos	ND	NA	1	02/26/2020 10:50

Analyst(s): DA

Analytical Comments: k10

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	Microscope	194666

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Asbestos	ND	NA	1	02/26/2020 11:15

Analyst(s): DA

Analytical Comments: k10

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	Microscope	194666

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Asbestos	ND	NA	1	02/26/2020 11:40

Analyst(s): DA

Analytical Comments: k10



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020-02/27/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW5035
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	GC19 02242038.D	194495

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/25/2020 04:19
MTBE	ND	0.050	1	02/25/2020 04:19
Benzene	ND	0.0050	1	02/25/2020 04:19
Toluene	ND	0.0050	1	02/25/2020 04:19
Ethylbenzene	ND	0.0050	1	02/25/2020 04:19
m,p-Xylene	ND	0.010	1	02/25/2020 04:19
o-Xylene	ND	0.0050	1	02/25/2020 04:19
Xylenes	ND	0.0050	1	02/25/2020 04:19

Surrogates	REC (%)	Limits	
2-Fluorotoluene	93	62-126	02/25/2020 04:19

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC19 02242039.D	194495

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/25/2020 04:49
MTBE	ND	0.050	1	02/25/2020 04:49
Benzene	ND	0.0050	1	02/25/2020 04:49
Toluene	ND	0.0050	1	02/25/2020 04:49
Ethylbenzene	ND	0.0050	1	02/25/2020 04:49
m,p-Xylene	ND	0.010	1	02/25/2020 04:49
o-Xylene	ND	0.0050	1	02/25/2020 04:49
Xylenes	ND	0.0050	1	02/25/2020 04:49

Surrogates	REC (%)	Limits	
2-Fluorotoluene	92	62-126	02/25/2020 04:49

Analyst(s): IA

(Cont.)



Analytical Report

Client: Geo-Engineering Solutions, Inc.

Date Received: 02/24/2020 13:04

Date Prepared: 02/24/2020-02/27/2020

Project: 78-1225; San Pablo

WorkOrder: 2002874

Extraction Method: SW5035

Analytical Method: SW8021B/8015Bm

Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	GC3 02272016.D	194701

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/27/2020 21:50
MTBE	ND	0.050	1	02/27/2020 21:50
Benzene	ND	0.0050	1	02/27/2020 21:50
Toluene	ND	0.0050	1	02/27/2020 21:50
Ethylbenzene	ND	0.0050	1	02/27/2020 21:50
m,p-Xylene	ND	0.010	1	02/27/2020 21:50
o-Xylene	ND	0.0050	1	02/27/2020 21:50
Xylenes	ND	0.0050	1	02/27/2020 21:50

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	62-126	02/27/2020 21:50

Analyst(s): IA



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 02/24/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-1	2002874-001A	Soil	02/24/2020	GC31A 03022018.D	194496

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	17	1.0	1	03/02/2020 15:12
TPH-Motor Oil (C18-C36)	140	5.0	1	03/02/2020 15:12

Surrogates	REC (%)	Limits	
C9	102	70-130	03/02/2020 15:12

Analyst(s): JIS

Analytical Comments: e7,e2,e8

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	GC31B 02252027.D	194496

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	8.7	2.0	2	02/25/2020 18:35
TPH-Motor Oil (C18-C36)	71	10	2	02/25/2020 18:35

Surrogates	REC (%)	Limits	
C9	92	70-130	02/25/2020 18:35

Analyst(s): JIS

Analytical Comments: e7,e2,e8

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-3	2002874-003A	Soil	02/24/2020	GC9b 03022017.D	194496

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.2	1.0	1	03/02/2020 15:14
TPH-Motor Oil (C18-C36)	88	5.0	1	03/02/2020 15:14

Surrogates	REC (%)	Limits	
C9	88	70-130	03/02/2020 15:14

Analyst(s): JIS

Analytical Comments: e7,e2



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/25/2020
Instrument: GC23
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194497
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194497
2002874-001AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Aldrin	ND	0.000270	0.00100	-	-	-
a-BHC	ND	0.000100	0.00100	-	-	-
b-BHC	ND	0.000250	0.00100	-	-	-
d-BHC	ND	0.000370	0.00100	-	-	-
g-BHC	ND	0.0000970	0.00100	-	-	-
Chlordane (Technical)	ND	0.0160	0.0250	-	-	-
a-Chlordane	ND	0.000470	0.00100	-	-	-
g-Chlordane	ND	0.000210	0.00100	-	-	-
p,p-DDD	ND	0.000140	0.00100	-	-	-
p,p-DDE	ND	0.000320	0.00100	-	-	-
p,p-DDT	ND	0.000430	0.00100	-	-	-
Dieldrin	ND	0.000330	0.00100	-	-	-
Endosulfan I	ND	0.000650	0.00100	-	-	-
Endosulfan II	ND	0.000200	0.00100	-	-	-
Endosulfan sulfate	ND	0.000630	0.00100	-	-	-
Endrin	ND	0.000420	0.00100	-	-	-
Endrin aldehyde	ND	0.000200	0.00100	-	-	-
Endrin ketone	ND	0.000130	0.00100	-	-	-
Heptachlor	ND	0.000210	0.00100	-	-	-
Heptachlor epoxide	ND	0.000200	0.00100	-	-	-
Hexachlorobenzene	ND	0.000270	0.0100	-	-	-
Hexachlorocyclopentadiene	ND	0.000400	0.0200	-	-	-
Methoxychlor	ND	0.000890	0.00100	-	-	-
Toxaphene	ND	0.0350	0.0500	-	-	-
Aroclor1016	ND	0.00510	0.0500	-	-	-
Aroclor1221	ND	0.0110	0.0500	-	-	-
Aroclor1232	ND	0.00630	0.0500	-	-	-
Aroclor1242	ND	0.00670	0.0500	-	-	-
Aroclor1248	ND	0.00400	0.0500	-	-	-
Aroclor1254	ND	0.00680	0.0500	-	-	-
Aroclor1260	ND	0.00610	0.0500	-	-	-
Surrogate Recovery						
Decachlorobiphenyl	0.0531			0.05	106	75-136

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/25/2020
Instrument: GC23
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194497
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194497
2002874-001AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0583	0.0608	0.050	117	122	92-133	4.19	20
a-BHC	0.0532	0.0550	0.050	106	110	96-140	3.43	20
b-BHC	0.0568	0.0591	0.050	114	118	77-137	3.99	20
d-BHC	0.0616	0.0649	0.050	123	130	89-145	5.26	20
g-BHC	0.0532	0.0556	0.050	106	111	92-134	4.44	20
a-Chlordane	0.0497	0.0522	0.050	99	104	72-134	4.90	20
g-Chlordane	0.0551	0.0581	0.050	110	116	86-132	5.19	20
p,p-DDD	0.0465	0.0499	0.050	93	100	35-140	7.05	20
p,p-DDE	0.0531	0.0564	0.050	106	113	83-138	5.96	20
p,p-DDT	0.0517	0.0563	0.050	103	113	70-137	8.47	20
Dieldrin	0.0509	0.0538	0.050	102	108	99-141	5.60	20
Endosulfan I	0.0481	0.0506	0.050	96	101	93-121	5.07	20
Endosulfan II	0.0485	0.0517	0.050	97	103	74-125	6.34	20
Endosulfan sulfate	0.0515	0.0556	0.050	103	111	66-138	7.63	20
Endrin	0.0467	0.0499	0.050	93	100	92-137	6.56	20
Endrin aldehyde	0.0466	0.0499	0.050	93	100	77-135	6.76	20
Endrin ketone	0.0487	0.0519	0.050	97	104	72-126	6.47	20
Heptachlor	0.0550	0.0587	0.050	110	117	89-136	6.38	20
Heptachlor epoxide	0.0522	0.0546	0.050	104	109	85-121	4.43	20
Hexachlorobenzene	0.0461	0.0485	0.050	92	97	87-127	4.99	20
Hexachlorocyclopentadiene	0.0489	0.0520	0.050	98	104	41-145	6.01	20
Methoxychlor	0.0472	0.0510	0.050	94	102	82-142	7.66	20
Aroclor1016	0.161	0.159	0.15	107	106	90-125	0.877	20
Aroclor1260	0.161	0.160	0.15	108	107	77-122	0.881	20

Surrogate Recovery

Decachlorobiphenyl	0.0498	0.0519	0.050	100	104	75-136	3.96	20
--------------------	--------	--------	-------	-----	-----	--------	------	----

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	100	0.0439	0.0502	0.050	ND<0.10	88	100	59-143	13.3	20
a-BHC	100	0.0371	0.0424	0.050	ND<0.10	74	85	42-159	13.3	20
b-BHC	100	0.0565	0.0652	0.050	ND<0.10	113	130	67-141	14.4	20
d-BHC	100	0.0395	0.0463	0.050	ND<0.10	79	93	38-164	15.7	20
g-BHC	100	0.0361	0.0423	0.050	ND<0.10	72	85	51-148	15.8	20
a-Chlordane	100	0.0706	0.0765	0.050	ND<0.10	141,F1	153,F1	70-130	7.96	20
g-Chlordane	100	0.0888	0.0948	0.050	ND<0.10	121	133	61-146	6.49	20

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/25/2020
Instrument: GC23
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194497
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194497
2002874-001AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
p,p-DDD	100	0.0368	0.0438	0.050	ND<0.10	74	88	10-158	17.5	20
p,p-DDE	100	0.0404	0.0477	0.050	ND<0.10	81	95	52-151	16.7	20
p,p-DDT	100	0.0534	0.0586	0.050	ND<0.10	107	117	53-137	9.25	20
Dieldrin	100	0.0421	0.0494	0.050	ND<0.10	84	99	58-163	15.9	20
Endosulfan I	100	0.0431	0.0516	0.050	ND<0.10	86	103	64-136	17.9	20
Endosulfan II	100	0.0469	0.0542	0.050	ND<0.10	94	108	46-141	14.4	20
Endosulfan sulfate	100	0.0399	0.0490	0.050	ND<0.10	80	98	45-144	20.4,F1	20
Endrin	100	0.0391	0.0453	0.050	ND<0.10	78	91	56-153	14.7	20
Endrin aldehyde	100	0.0429	0.0505	0.050	ND<0.10	86	101	63-134	16.2	20
Endrin ketone	100	0.0406	0.0478	0.050	ND<0.10	81	96	53-130	16.4	20
Heptachlor	100	0.0471	0.0539	0.050	ND<0.10	94	108	55-147	13.5	20
Heptachlor epoxide	100	0.0504	0.0534	0.050	ND<0.10	101	107	63-128	5.80	20
Hexachlorobenzene	100	0.0451	0.0516	0.050	ND<1.0	90	103	71-132	13.5	20
Hexachlorocyclopentadiene	100	0.0392	0.0447	0.050	ND<2.0	78	89	12-144	13.0	20
Methoxychlor	100	0.0454	0.0525	0.050	ND<0.10	91	105	70-150	14.5	20
Surrogate Recovery										
Decachlorobiphenyl	100	0.0702	0.0842	0.050		140	168,F3	69-143	18.2	20



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Acetone	ND	0.0390	0.100	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.00100	0.00500	-	-	-
Benzene	ND	0.00160	0.00500	-	-	-
Bromobenzene	ND	0.00300	0.00500	-	-	-
Bromochloromethane	ND	0.00150	0.00500	-	-	-
Bromodichloromethane	ND	0.00120	0.00500	-	-	-
Bromoform	ND	0.00120	0.00500	-	-	-
Bromomethane	ND	0.00200	0.00500	-	-	-
2-Butanone (MEK)	ND	0.0210	0.0500	-	-	-
t-Butyl alcohol (TBA)	ND	0.00530	0.0500	-	-	-
n-Butyl benzene	ND	0.00350	0.00500	-	-	-
sec-Butyl benzene	ND	0.00340	0.00500	-	-	-
tert-Butyl benzene	ND	0.00290	0.00500	-	-	-
Carbon Disulfide	ND	0.00360	0.00500	-	-	-
Carbon Tetrachloride	ND	0.00170	0.00500	-	-	-
Chlorobenzene	ND	0.00180	0.00500	-	-	-
Chloroethane	ND	0.00160	0.00500	-	-	-
Chloroform	ND	0.00160	0.00500	-	-	-
Chloromethane	ND	0.00170	0.00500	-	-	-
2-Chlorotoluene	ND	0.00220	0.00500	-	-	-
4-Chlorotoluene	ND	0.00240	0.00500	-	-	-
Dibromochloromethane	ND	0.00110	0.00500	-	-	-
1,2-Dibromo-3-chloropropane	ND	0.00370	0.00500	-	-	-
1,2-Dibromoethane (EDB)	ND	0.00130	0.00400	-	-	-
Dibromomethane	ND	0.00140	0.00500	-	-	-
1,2-Dichlorobenzene	ND	0.00320	0.00500	-	-	-
1,3-Dichlorobenzene	ND	0.00180	0.00500	-	-	-
1,4-Dichlorobenzene	ND	0.00180	0.00500	-	-	-
Dichlorodifluoromethane	ND	0.00110	0.00500	-	-	-
1,1-Dichloroethane	ND	0.00170	0.00500	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.00140	0.00400	-	-	-
1,1-Dichloroethene	ND	0.00170	0.00500	-	-	-
cis-1,2-Dichloroethene	ND	0.00150	0.00500	-	-	-
trans-1,2-Dichloroethene	ND	0.00160	0.00500	-	-	-
1,2-Dichloropropane	ND	0.00140	0.00500	-	-	-
1,3-Dichloropropane	ND	0.00160	0.00500	-	-	-
2,2-Dichloropropane	ND	0.00130	0.00500	-	-	-
1,1-Dichloropropene	ND	0.00180	0.00500	-	-	-

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
cis-1,3-Dichloropropene	ND	0.00150	0.00500	-	-	-
trans-1,3-Dichloropropene	ND	0.00140	0.00500	-	-	-
Diisopropyl ether (DIPE)	ND	0.00140	0.00500	-	-	-
Ethylbenzene	ND	0.00250	0.00500	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.00130	0.00500	-	-	-
Freon 113	ND	0.00160	0.00500	-	-	-
Hexachlorobutadiene	ND	0.00500	0.00500	-	-	-
Hexachloroethane	ND	0.00250	0.00500	-	-	-
2-Hexanone	ND	0.00220	0.00500	-	-	-
Isopropylbenzene	ND	0.00320	0.00500	-	-	-
4-Isopropyl toluene	ND	0.00320	0.00500	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.00130	0.00500	-	-	-
Methylene chloride	ND	0.0100	0.0200	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	0.000800	0.00500	-	-	-
Naphthalene	ND	0.00440	0.00500	-	-	-
n-Propyl benzene	ND	0.00290	0.00500	-	-	-
Styrene	ND	0.00300	0.00500	-	-	-
1,1,1,2-Tetrachloroethane	ND	0.00160	0.00500	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.00130	0.00500	-	-	-
Tetrachloroethene	ND	0.00230	0.00500	-	-	-
Toluene	ND	0.00240	0.00500	-	-	-
1,2,3-Trichlorobenzene	ND	0.00300	0.00500	-	-	-
1,2,4-Trichlorobenzene	ND	0.00290	0.00500	-	-	-
1,1,1-Trichloroethane	ND	0.00180	0.00500	-	-	-
1,1,2-Trichloroethane	ND	0.00190	0.00500	-	-	-
Trichloroethene	ND	0.00170	0.00500	-	-	-
Trichlorofluoromethane	ND	0.00160	0.00500	-	-	-
1,2,3-Trichloropropane	ND	0.00190	0.00500	-	-	-
1,2,4-Trimethylbenzene	ND	0.00280	0.00500	-	-	-
1,3,5-Trimethylbenzene	ND	0.00260	0.00500	-	-	-
Vinyl Chloride	ND	0.00150	0.00500	-	-	-
m,p-Xylene	ND	0.00400	0.00500	-	-	-
o-Xylene	ND	0.00180	0.00500	-	-	-

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery						
Dibromofluoromethane	0.110			0.125	88	66-112
Toluene-d8	0.130			0.125	104	92-109
4-BFB	0.0100			0.0125	80	72-112
Benzene-d6	0.0860			0.1	86	81-126
Ethylbenzene-d10	0.104			0.1	103	92-138
1,2-DCB-d4	0.0784			0.1	78	68-108



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acetone	0.256	0.265	0.20	128,F2	133,F2	59-127	3.78	20
tert-Amyl methyl ether (TAME)	0.0181	0.0188	0.020	91	94	54-98	3.53	20
Benzene	0.0201	0.0210	0.020	100	105	71-115	4.49	20
Bromobenzene	0.0176	0.0181	0.020	88	90	69-120	2.56	20
Bromochloromethane	0.0200	0.0206	0.020	100	103	63-117	2.85	20
Bromodichloromethane	0.0192	0.0201	0.020	96	100	61-109	4.24	20
Bromoform	0.0144	0.0149	0.020	72	74	46-87	3.47	20
Bromomethane	0.0171	0.0178	0.020	85	89	22-195	4.05	20
2-Butanone (MEK)	0.0810	0.0888	0.080	101	111	53-124	9.21	20
t-Butyl alcohol (TBA)	0.0846	0.0887	0.080	106	111	29-142	4.74	20
n-Butyl benzene	0.0266	0.0271	0.020	133	135	102-169	1.97	20
sec-Butyl benzene	0.0262	0.0270	0.020	131	135	100-166	3.25	20
tert-Butyl benzene	0.0232	0.0236	0.020	116	118	91-153	1.89	20
Carbon Disulfide	0.0194	0.0201	0.020	97	100	60-125	3.40	20
Carbon Tetrachloride	0.0198	0.0208	0.020	99	104	69-124	4.76	20
Chlorobenzene	0.0185	0.0191	0.020	93	96	73-116	3.06	20
Chloroethane	0.0181	0.0186	0.020	91	93	47-140	2.58	20
Chloroform	0.0205	0.0215	0.020	103	108	69-118	4.59	20
Chloromethane	0.0142	0.0145	0.020	71	73	30-132	2.07	20
2-Chlorotoluene	0.0205	0.0211	0.020	102	105	75-147	2.88	20
4-Chlorotoluene	0.0202	0.0208	0.020	101	104	75-137	2.71	20
Dibromochloromethane	0.0180	0.0188	0.020	90	94	57-105	4.55	20
1,2-Dibromo-3-chloropropane	0.00853	0.00897	0.010	85	90	36-103	5.10	20
1,2-Dibromoethane (EDB)	0.00933	0.00986	0.010	93	99	66-101	5.56	20
Dibromomethane	0.0183	0.0193	0.020	92	96	61-103	4.97	20
1,2-Dichlorobenzene	0.0162	0.0168	0.020	81	84	59-104	3.88	20
1,3-Dichlorobenzene	0.0187	0.0194	0.020	93	97	70-133	3.69	20
1,4-Dichlorobenzene	0.0191	0.0196	0.020	96	98	68-123	2.62	20
Dichlorodifluoromethane	0.00452	0.00478	0.020	23	24	13-107	5.70	20
1,1-Dichloroethane	0.0208	0.0216	0.020	104	108	69-118	4.06	20
1,2-Dichloroethane (1,2-DCA)	0.0204	0.0213	0.020	102	106	59-112	4.56	20
1,1-Dichloroethene	0.0196	0.0206	0.020	98	103	69-126	4.63	20
cis-1,2-Dichloroethene	0.0198	0.0206	0.020	99	103	69-116	4.31	20
trans-1,2-Dichloroethene	0.0200	0.0208	0.020	100	104	73-116	4.24	20
1,2-Dichloropropane	0.0189	0.0198	0.020	94	99	65-111	4.70	20
1,3-Dichloropropane	0.0196	0.0201	0.020	98	100	67-110	2.08	20
2,2-Dichloropropane	0.0225	0.0233	0.020	112	116	65-125	3.37	20
1,1-Dichloropropene	0.0204	0.0213	0.020	102	107	70-123	4.19	20

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.0215	0.0224	0.020	107	112	68-126	4.48	20
trans-1,3-Dichloropropene	0.0204	0.0214	0.020	102	107	69-117	4.75	20
Diisopropyl ether (DIPE)	0.0194	0.0202	0.020	97	101	57-110	4.11	20
Ethylbenzene	0.0203	0.0210	0.020	101	105	80-128	3.33	20
Ethyl tert-butyl ether (ETBE)	0.0194	0.0202	0.020	97	101	54-106	4.04	20
Freon 113	0.0169	0.0178	0.020	85	89	60-108	5.35	20
Hexachlorobutadiene	0.0263	0.0271	0.020	132	136	67-182	3.09	20
Hexachloroethane	0.0213	0.0220	0.020	107	110	85-156	3.23	20
2-Hexanone	0.0160	0.0166	0.020	80	83	37-90	3.80	20
Isopropylbenzene	0.0234	0.0241	0.020	117	121	64-167	3.00	20
4-Isopropyl toluene	0.0243	0.0251	0.020	121	125	88-167	3.20	20
Methyl-t-butyl ether (MTBE)	0.0195	0.0203	0.020	97	101	60-102	4.22	20
Methylene chloride	0.0207	0.0214	0.020	104	107	71-117	3.35	20
4-Methyl-2-pentanone (MIBK)	0.0165	0.0170	0.020	83	85	48-90	2.59	20
Naphthalene	0.0112	0.0114	0.020	56	57	29-65	1.10	20
n-Propyl benzene	0.0240	0.0244	0.020	120	122	88-161	1.84	20
Styrene	0.0164	0.0169	0.020	82	85	70-108	3.01	20
1,1,1,2-Tetrachloroethane	0.0190	0.0197	0.020	95	98	69-117	3.42	20
1,1,2,2-Tetrachloroethane	0.0182	0.0185	0.020	91	92	53-96	1.54	20
Tetrachloroethene	0.0216	0.0224	0.020	108	112	78-128	3.76	20
Toluene	0.0198	0.0204	0.020	99	102	78-121	2.83	20
1,2,3-Trichlorobenzene	0.0115	0.0115	0.020	57	58	35-80	0.427	20
1,2,4-Trichlorobenzene	0.0149	0.0155	0.020	75	77	46-101	3.78	20
1,1,1-Trichloroethane	0.0201	0.0212	0.020	100	106	69-121	5.59	20
1,1,2-Trichloroethane	0.0197	0.0205	0.020	98	103	64-104	4.27	20
Trichloroethene	0.0202	0.0214	0.020	101	107	73-118	5.83	20
Trichlorofluoromethane	0.0178	0.0185	0.020	89	93	31-119	4.09	20
1,2,3-Trichloropropane	0.00982	0.00995	0.010	98	100	65-107	1.33	20
1,2,4-Trimethylbenzene	0.0212	0.0217	0.020	106	108	80-147	2.05	20
1,3,5-Trimethylbenzene	0.0228	0.0232	0.020	114	116	83-156	1.71	20
Vinyl Chloride	0.00765	0.00793	0.010	77	79	40-125	3.56	20
m,p-Xylene	0.0385	0.0400	0.040	96	100	80-122	3.79	20
o-Xylene	0.0182	0.0190	0.020	91	95	79-116	4.29	20

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Surrogate Recovery								
Dibromofluoromethane	0.116	0.118	0.12	92	95	66-112	2.50	20
Toluene-d8	0.133	0.135	0.12	106	108	92-109	1.58	20
4-BFB	0.0136	0.0132	0.012	109	105	72-112	3.10	20
Benzene-d6	0.112	0.115	0.10	112	115	81-126	2.84	20
Ethylbenzene-d10	0.132	0.137	0.10	132	137	92-138	3.15	20
1,2-DCB-d4	0.0840	0.0856	0.10	84	86	68-108	1.87	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acetone	1	0.164	0.164	0.20	ND	82	82	48-114	0.120	20
tert-Amyl methyl ether (TAME)	1	0.0122	0.0129	0.020	ND	61	64	44-94	5.65	20
Benzene	1	0.0137	0.0146	0.020	ND	68	73	50-115	6.32	20
Bromobenzene	1	0.0135	0.0141	0.020	ND	67	70	60-114	4.07	20
Bromochloromethane	1	0.0130	0.0138	0.020	ND	65	69	50-113	6.03	20
Bromodichloromethane	1	0.0123	0.0130	0.020	ND	62	65	46-109	5.49	20
Bromoform	1	0.00923	0.00941	0.020	ND	46	47	38-83	1.99	20
Bromomethane	1	0.0192	0.0210	0.020	ND	96	105	10-149	9.09	20
2-Butanone (MEK)	1	0.0499	0.0507	0.080	ND	62	63	46-111	1.58	20
t-Butyl alcohol (TBA)	1	0.0494	0.0529	0.080	ND	62	66	32-112	6.91	20
n-Butyl benzene	1	0.0196	0.0202	0.020	ND	98	101	71-156	2.71	20
sec-Butyl benzene	1	0.0185	0.0193	0.020	ND	92	97	28-190	4.69	20
tert-Butyl benzene	1	0.0171	0.0180	0.020	ND	86	90	69-145	5.13	20
Carbon Disulfide	1	0.0115	0.0122	0.020	ND	58	61	19-135	5.20	20
Carbon Tetrachloride	1	0.0121	0.0126	0.020	ND	60	63	51-120	4.60	20
Chlorobenzene	1	0.0147	0.0156	0.020	ND	73	78	63-108	5.67	20
Chloroethane	1	0.0143	0.0151	0.020	ND	71	76	40-122	5.64	20
Chloroform	1	0.0138	0.0145	0.020	ND	69	73	55-114	5.23	20
Chloromethane	1	0.00621	0.00670	0.020	ND	31	33	14-128	7.58	20
2-Chlorotoluene	1	0.0162	0.0170	0.020	ND	81	85	45-153	4.59	20
4-Chlorotoluene	1	0.0164	0.0171	0.020	ND	82	86	65-126	4.34	20
Dibromochloromethane	1	0.0116	0.0123	0.020	ND	58	61	48-97	5.61	20
1,2-Dibromo-3-chloropropane	1	0.00471	0.00561	0.010	ND	47	56	32-95	17.5	20
1,2-Dibromoethane (EDB)	1	0.00651	0.00679	0.010	ND	65	68	52-99	4.20	20
Dibromomethane	1	0.0120	0.0129	0.020	ND	60	64	50-100	7.07	20
1,2-Dichlorobenzene	1	0.0124	0.0131	0.020	ND	62	65	38-116	5.79	20

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
1,3-Dichlorobenzene	1	0.0149	0.0156	0.020	ND	74	78	58-127	4.67	20
1,4-Dichlorobenzene	1	0.0142	0.0151	0.020	ND	71	75	54-123	5.78	20
Dichlorodifluoromethane	1	0.00288	0.00317	0.020	ND	14	16	8-93	9.67	20
1,1-Dichloroethane	1	0.0140	0.0148	0.020	ND	70	74	53-115	5.93	20
1,2-Dichloroethane (1,2-DCA)	1	0.0135	0.0145	0.020	ND	68	73	48-105	7.21	20
1,1-Dichloroethene	1	0.0126	0.0133	0.020	ND	63	66	47-127	5.07	20
cis-1,2-Dichloroethene	1	0.0135	0.0142	0.020	ND	67	71	56-111	5.40	20
trans-1,2-Dichloroethene	1	0.0131	0.0138	0.020	ND	66	69	51-115	5.19	20
1,2-Dichloropropane	1	0.0135	0.0144	0.020	ND	68	72	51-111	6.55	20
1,3-Dichloropropane	1	0.0141	0.0146	0.020	ND	70	73	51-109	3.59	20
2,2-Dichloropropane	1	0.0136	0.0144	0.020	ND	68	72	50-116	6.22	20
1,1-Dichloropropene	1	0.0133	0.0139	0.020	ND	66	69	46-124	4.73	20
cis-1,3-Dichloropropene	1	0.0136	0.0143	0.020	ND	68	72	41-127	4.85	20
trans-1,3-Dichloropropene	1	0.0135	0.0142	0.020	ND	68	71	50-111	4.99	20
Diisopropyl ether (DIPE)	1	0.0131	0.0138	0.020	ND	66	69	50-103	5.09	20
Ethylbenzene	1	0.0154	0.0162	0.020	ND	77	81	65-119	4.89	20
Ethyl tert-butyl ether (ETBE)	1	0.0135	0.0142	0.020	ND	68	71	47-100	4.61	20
Freon 113	1	0.0113	0.0118	0.020	ND	56	59	48-98	4.69	20
Hexachlorobutadiene	1	0.0132	0.0146	0.020	ND	66	73	36-166	10.3	20
Hexachloroethane	1	0.0163	0.0173	0.020	ND	81	86	61-146	6.07	20
2-Hexanone	1	0.0117	0.0128	0.020	ND	58	64	31-87	9.73	20
Isopropylbenzene	1	0.0158	0.0166	0.020	ND	79	83	24-171	4.62	20
4-Isopropyl toluene	1	0.0181	0.0189	0.020	ND	91	95	69-150	4.25	20
Methyl-t-butyl ether (MTBE)	1	0.0129	0.0135	0.020	ND	65	68	50-95	4.36	20
Methylene chloride	1	0.0134	0.0142	0.020	ND	67	71	39-123	6.34	20
4-Methyl-2-pentanone (MIBK)	1	0.0113	0.0119	0.020	ND	56	59	41-83	5.43	20
Naphthalene	1	0.00940	0.0101	0.020	ND	47	50	13-77	6.89	20
n-Propyl benzene	1	0.0171	0.0177	0.020	ND	85	88	26-184	3.44	20
Styrene	1	0.0130	0.0139	0.020	ND	65	69	54-105	6.67	20
1,1,1,2-Tetrachloroethane	1	0.0138	0.0144	0.020	ND	69	72	60-108	4.27	20
1,1,2,2-Tetrachloroethane	1	0.0128	0.0137	0.020	ND	64	69	37-108	7.18	20
Tetrachloroethene	1	0.0138	0.0144	0.020	ND	69	72	54-127	4.51	20
Toluene	1	0.0158	0.0165	0.020	ND	79	82	63-114	4.48	20
1,2,3-Trichlorobenzene	1	0.00912	0.00966	0.020	ND	46	48	14-97	5.72	20
1,2,4-Trichlorobenzene	1	0.0107	0.0111	0.020	ND	53	55	31-106	3.64	20
1,1,1-Trichloroethane	1	0.0126	0.0134	0.020	ND	63	67	55-114	6.13	20
1,1,2-Trichloroethane	1	0.0134	0.0140	0.020	ND	67	70	50-104	3.90	20
Trichloroethene	1	0.0128	0.0135	0.020	ND	64	68	47-127	5.58	20

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC10, GC16, GC18
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194475
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194475
2002874-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Trichlorofluoromethane	1	0.0112	0.0118	0.020	ND	56	59	9-119	5.74	20
1,2,3-Trichloropropane	1	0.00636	0.00707	0.010	ND	64	71	45-115	10.5	20
1,2,4-Trimethylbenzene	1	0.0174	0.0182	0.020	ND	87	91	69-133	4.75	20
1,3,5-Trimethylbenzene	1	0.0181	0.0188	0.020	ND	90	94	27-172	3.84	20
Vinyl Chloride	1	0.00568	0.00605	0.010	ND	57	61	33-114	6.26	20
m,p-Xylene	1	0.0299	0.0316	0.040	ND	75	79	62-117	5.64	20
o-Xylene	1	0.0147	0.0155	0.020	ND	73	78	19-144	5.55	20
Surrogate Recovery										
Dibromofluoromethane	1	0.111	0.111	0.12		89	89	66-116	0.357	20
Toluene-d8	1	0.135	0.136	0.12		108	108	86-110	0.207	20
4-BFB	1	0.0107	0.0106	0.012		85	85	71-114	0.383	20
Benzene-d6	1	0.0752	0.0765	0.10		75	77	62-122	1.79	20
Ethylbenzene-d10	1	0.0928	0.0937	0.10		93	94	69-130	0.986	20
1,2-DCB-d4	1	0.0732	0.0732	0.10		73	73	55-108	0.0402	20



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/25/2020
Date Analyzed: 02/26/2020
Instrument: GC21
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194583
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
1,1-Biphenyl	ND	0.00230	0.0130	-	-	-
1,2,4-Trichlorobenzene	ND	0.150	0.250	-	-	-
1,2-Dichlorobenzene	ND	0.150	0.250	-	-	-
1,2-Diphenylhydrazine	ND	0.150	0.250	-	-	-
1,3-Dichlorobenzene	ND	0.130	0.250	-	-	-
1,4-Dichlorobenzene	ND	0.180	0.250	-	-	-
1-Methylnaphthalene	ND	0.00110	0.00130	-	-	-
2,4,5-Trichlorophenol	ND	0.00130	0.00250	-	-	-
2,4,6-Trichlorophenol	ND	0.00120	0.0130	-	-	-
2,4-Dichlorophenol	ND	0.00170	0.0130	-	-	-
2,4-Dimethylphenol	ND	0.160	0.250	-	-	-
2,4-Dinitrophenol	ND	0.0510	0.130	-	-	-
2,4-Dinitrotoluene	ND	0.00110	0.00630	-	-	-
2,6-Dinitrotoluene	ND	0.00130	0.00250	-	-	-
2-Chloronaphthalene	ND	0.140	0.250	-	-	-
2-Chlorophenol	ND	0.00200	0.00500	-	-	-
2-Methylnaphthalene	ND	0.00170	0.00250	-	-	-
2-Methylphenol (o-Cresol)	ND	0.270	0.500	-	-	-
2-Nitroaniline	ND	0.690	1.20	-	-	-
2-Nitrophenol	ND	0.660	1.20	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	0.240	0.250	-	-	-
3,3-Dichlorobenzidine	ND	0.00160	0.00250	-	-	-
3-Nitroaniline	ND	0.840	1.20	-	-	-
4,6-Dinitro-2-methylphenol	ND	0.810	1.20	-	-	-
4-Bromophenyl Phenyl Ether	ND	0.150	0.250	-	-	-
4-Chloro-3-methylphenol	ND	0.200	0.250	-	-	-
4-Chloroaniline	ND	0.00160	0.00250	-	-	-
4-Chlorophenyl Phenyl Ether	ND	0.160	0.250	-	-	-
4-Nitroaniline	ND	1.10	1.20	-	-	-
4-Nitrophenol	ND	0.770	1.20	-	-	-
Acenaphthene	ND	0.000770	0.00130	-	-	-
Acenaphthylene	ND	0.000410	0.00130	-	-	-
Acetochlor	ND	0.250	0.250	-	-	-
Anthracene	ND	0.000820	0.00130	-	-	-
Benzidine	ND	0.670	1.20	-	-	-
Benzo (a) anthracene	ND	0.00430	0.00500	-	-	-
Benzo (a) pyrene	ND	0.00120	0.00250	-	-	-
Benzo (b) fluoranthene	ND	0.00160	0.00630	-	-	-

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/25/2020
Date Analyzed: 02/26/2020
Instrument: GC21
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194583
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Benzo (g,h,i) perylene	ND	0.00110	0.00250	-	-	-
Benzo (k) fluoranthene	ND	0.000790	0.00130	-	-	-
Benzyl Alcohol	ND	0.760	1.20	-	-	-
Bis (2-chloroethoxy) Methane	ND	0.150	0.250	-	-	-
Bis (2-chloroethyl) Ether	ND	0.00160	0.00250	-	-	-
Bis (2-chloroisopropyl) Ether	ND	0.00140	0.00250	-	-	-
Bis (2-ethylhexyl) Adipate	ND	0.150	0.500	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	0.00340	0.00500	-	-	-
Butylbenzyl Phthalate	ND	0.0210	0.0250	-	-	-
Chrysene	0.00114,J	0.000800	0.00250	-	-	-
Dibenzo (a,h) anthracene	ND	0.00150	0.00250	-	-	-
Dibenzofuran	ND	0.160	0.250	-	-	-
Diethyl Phthalate	ND	0.00360	0.00500	-	-	-
Dimethyl Phthalate	ND	0.00250	0.00250	-	-	-
Di-n-butyl Phthalate	0.00259,J	0.00250	0.00500	-	-	-
Di-n-octyl Phthalate	ND	0.00430	0.00500	-	-	-
Fluoranthene	0.00112,J	0.00110	0.00130	-	-	-
Fluorene	ND	0.000860	0.00250	-	-	-
Hexachlorobenzene	ND	0.000570	0.00130	-	-	-
Hexachlorobutadiene	ND	0.000420	0.00250	-	-	-
Hexachlorocyclopentadiene	ND	0.110	2.00	-	-	-
Hexachloroethane	ND	0.00110	0.00250	-	-	-
Indeno (1,2,3-cd) pyrene	0.00177,J	0.00100	0.00250	-	-	-
Isophorone	ND	0.150	0.250	-	-	-
Naphthalene	ND	0.000690	0.00130	-	-	-
Nitrobenzene	ND	0.160	0.250	-	-	-
N-Nitrosodimethylamine	ND	0.650	1.20	-	-	-
N-Nitrosodi-n-propylamine	ND	0.140	0.250	-	-	-
N-Nitrosodiphenylamine	ND	0.150	0.250	-	-	-
Pentachlorophenol	ND	0.0140	0.0310	-	-	-
Phenanthrene	ND	0.000670	0.00500	-	-	-
Phenol	ND	0.000940	0.00500	-	-	-
Pyrene	ND	0.00140	0.00250	-	-	-
Pyridine	ND	0.180	0.250	-	-	-

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.

Date Prepared: 02/25/2020

Date Analyzed: 02/26/2020

Instrument: GC21

Matrix: Soil

Project: 78-1225; San Pablo

WorkOrder: 2002874

BatchID: 194583

Extraction Method: SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery						
2-Fluorophenol	1.21			1.25	97	54-131
Phenol-d5	1.21			1.25	97	52-129
Nitrobenzene-d5	1.13			1.25	90	43-127
2-Fluorobiphenyl	1.13			1.25	91	42-116
2,4,6-Tribromophenol	0.434			1.25	35,F3	39-119
4-Terphenyl-d14	0.919			1.25	74	36-118



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/25/2020
Date Analyzed: 02/26/2020
Instrument: GC21
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194583
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
1,1-Biphenyl	0.115	0.119	0.12	92	95	67-130	3.57	30
1,2,4-Trichlorobenzene	2.81	2.85	2.5	112	114	69-130	1.54	30
1,2-Dichlorobenzene	2.08	2.03	2.5	83	81	68-114	2.21	30
1,2-Diphenylhydrazine	2.66	2.67	2.5	106	107	62-142	0.579	30
1,3-Dichlorobenzene	2.13	2.05	2.5	85	82	69-116	3.76	30
1,4-Dichlorobenzene	2.18	2.13	2.5	87	85	64-117	2.23	30
1-Methylnaphthalene	0.115	0.117	0.12	92	93	65-134	1.63	30
2,4,5-Trichlorophenol	0.128	0.139	0.12	102	111	68-150	8.57	30
2,4,6-Trichlorophenol	0.120	0.132	0.12	96	105	70-144	9.46	30
2,4-Dichlorophenol	0.134	0.145	0.12	107	116	78-144	8.06	30
2,4-Dimethylphenol	2.73	2.79	2.5	109	111	71-152	2.08	30
2,4-Dinitrophenol	0.369	0.496	2.5	15	20	1-156	29.4	30
2,4-Dinitrotoluene	0.135	0.145	0.12	108	116	68-144	7.00	30
2,6-Dinitrotoluene	0.117	0.126	0.12	94	101	69-148	7.01	30
2-Chloronaphthalene	2.48	2.77	2.5	99	111	71-133	11.1	30
2-Chlorophenol	0.109	0.111	0.12	87	89	73-133	1.89	30
2-Methylnaphthalene	0.110	0.112	0.12	88	90	72-139	2.35	30
2-Methylphenol (o-Cresol)	2.83	2.78	2.5	113	111	69-138	1.88	30
2-Nitroaniline	13.9	14.3	12.5	111	114	72-143	2.68	30
2-Nitrophenol	13.2	13.9	12.5	106	111	80-141	4.80	30
3 & 4-Methylphenol (m,p-Cresol)	2.60	2.48	2.5	104	99	69-128	4.68	30
3,3-Dichlorobenzidine	0.110	0.115	0.12	88	92	11-163	4.36	30
3-Nitroaniline	13.8	13.9	12.5	110	111	57-122	0.710	30
4,6-Dinitro-2-methylphenol	3.20	4.12	12.5	26	33	14-155	25.3	30
4-Bromophenyl Phenyl Ether	2.47	2.52	2.5	99	101	68-136	1.66	30
4-Chloro-3-methylphenol	2.65	2.80	2.5	106	112	78-149	5.60	30
4-Chloroaniline	0.116	0.120	0.12	93	96	46-130	3.42	30
4-Chlorophenyl Phenyl Ether	2.46	2.57	2.5	98	103	71-132	4.18	30
4-Nitroaniline	13.9	13.9	12.5	111	112	68-133	0.452	30
4-Nitrophenol	12.6	13.2	12.5	101	105	67-144	4.08	30
Acenaphthene	0.131	0.136	0.12	105	109	68-134	3.77	30
Acenaphthylene	0.0936	0.0976	0.12	75	78	65-141	4.18	30
Acetochlor	2.59	2.66	2.5	104	106	65-136	2.82	30
Anthracene	0.150	0.152	0.12	120	121	65-147	1.25	30
Benzidine	9.52	9.12	12.5	76	73	7-97	4.36	30
Benzo (a) anthracene	0.108	0.113	0.12	87	90	61-136	4.37	30
Benzo (a) pyrene	0.101	0.109	0.12	81	87	59-150	7.72	30
Benzo (b) fluoranthene	0.0863	0.0905	0.12	69	72	43-160	4.73	30

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.

Date Prepared: 02/25/2020

Date Analyzed: 02/26/2020

Instrument: GC21

Matrix: Soil

Project: 78-1225; San Pablo

WorkOrder: 2002874

BatchID: 194583

Extraction Method: SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Benzo (g,h,i) perylene	0.114	0.121	0.12	91	97	54-142	6.27	30
Benzo (k) fluoranthene	0.140	0.142	0.12	112	114	59-141	1.12	30
Benzyl Alcohol	12.4	12.1	12.5	100	97	48-145	2.51	30
Bis (2-chloroethoxy) Methane	2.57	2.57	2.5	103	103	71-138	0.0662	30
Bis (2-chloroethyl) Ether	0.0929	0.0909	0.12	74	73	60-128	2.11	30
Bis (2-chloroisopropyl) Ether	0.105	0.102	0.12	84	82	67-129	2.25	30
Bis (2-ethylhexyl) Adipate	2.42	2.52	2.5	97	101	56-162	4.10	30
Bis (2-ethylhexyl) Phthalate	0.104	0.110	0.12	83	88	49-168	5.92	30
Butylbenzyl Phthalate	0.107	0.115	0.12	86	92	57-161	7.31	30
Chrysene	0.123	0.126	0.12	99	100	58-140	1.86	30
Dibenzo (a,h) anthracene	0.107	0.114	0.12	85	92	57-151	7.06	30
Dibenzofuran	2.39	2.48	2.5	96	99	70-134	3.63	30
Diethyl Phthalate	0.130	0.136	0.12	104	109	67-146	4.46	30
Dimethyl Phthalate	0.120	0.125	0.12	96	100	70-135	3.80	30
Di-n-butyl Phthalate	0.110	0.114	0.12	88	91	65-147	4.05	30
Di-n-octyl Phthalate	0.0958	0.104	0.12	77	83	51-175	8.23	30
Fluoranthene	0.115	0.117	0.12	92	94	66-146	1.83	30
Fluorene	0.130	0.136	0.12	104	109	72-142	4.34	30
Hexachlorobenzene	0.120	0.119	0.12	96	95	65-127	1.12	30
Hexachlorobutadiene	0.116	0.119	0.12	93	96	68-131	2.54	30
Hexachlorocyclopentadiene	12.2	13.3	12.5	97	106	38-134	8.58	30
Hexachloroethane	0.101	0.0995	0.12	81	80	57-117	1.47	30
Indeno (1,2,3-cd) pyrene	0.104	0.111	0.12	83	89	57-145	6.56	30
Isophorone	2.50	2.55	2.5	100	102	69-139	2.00	30
Naphthalene	0.108	0.109	0.12	86	87	64-127	1.41	30
Nitrobenzene	2.46	2.56	2.5	98	102	66-136	3.83	30
N-Nitrosodi-n-propylamine	2.14	2.08	2.5	86	83	74-118	3.06	30
N-Nitrosodiphenylamine	2.66	2.65	2.5	106	106	67-138	0.568	30
Pentachlorophenol	0.412	0.474	0.62	66	76	50-153	14.0	30
Phenanthrene	0.126	0.126	0.12	100	101	66-129	0.406	30
Phenol	0.496	0.485	0.50	99	97	58-136	2.25	30
Pyrene	0.128	0.131	0.12	102	105	55-148	2.70	30
Pyridine	1.56	1.56	2.5	62	62	46-93	0.165	30

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/25/2020
Date Analyzed: 02/26/2020
Instrument: GC21
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194583
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Surrogate Recovery								
2-Fluorophenol	1.04	1.04	1.25	83	83	68-128	0.277	30
Phenol-d5	1.06	1.07	1.25	85	86	73-121	1.39	30
Nitrobenzene-d5	1.05	1.12	1.25	84	90	59-138	7.17	30
2-Fluorobiphenyl	1.05	1.12	1.25	84	90	59-129	6.09	30
2,4,6-Tribromophenol	1.07	1.11	1.25	86	89	46-142	3.76	30
4-Terphenyl-d14	0.885	0.929	1.25	71	74	50-143	4.91	30

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
1,1-Biphenyl	2	0.121	0.131	0.12	ND<0.21	97	105	2-199	7.64	30
1,2,4-Trichlorobenzene	2	3.21	3.11	2.5	ND<4.0	129	124	36-129	3.38	30
1,2-Dichlorobenzene	2	2.70	2.83	2.5	ND<4.0	108	113	31-136	4.63	30
1,2-Diphenylhydrazine	2	2.45	2.48	2.5	ND<4.0	98	99	37-127	1.01	30
1,3-Dichlorobenzene	2	2.65	2.80	2.5	ND<4.0	106	112	33-129	5.37	30
1,4-Dichlorobenzene	2	2.73	2.90	2.5	ND<4.0	109	116	30-129	6.16	30
1-Methylnaphthalene	2	0.118	0.126	0.12	ND<0.021	94	101	28-150	6.65	30
2,4,5-Trichlorophenol	2	0.108	0.113	0.12	ND<0.040	87	90	36-143	4.22	30
2,4,6-Trichlorophenol	2	0.100	0.112	0.12	ND<0.21	80	90	30-139	11.6	30
2,4-Dichlorophenol	2	0.115	0.126	2.5	ND<0.21	5,F1	5,F1	45-134	9.48	30
2,4-Dimethylphenol	2	2.17	2.52	2.5	ND<4.0	87	101	27-149	15.0	30
2,4-Dinitrophenol	2	4.56	4.66	2.5	ND<2.1	182,F1	187,F1	2-153	2.29	30
2,4-Dinitrotoluene	2	0.168	0.171	0.12	ND<0.10	NR,F16	137	20-153	NR	30
2,6-Dinitrotoluene	2	0.133	0.144	0.12	ND<0.040	106	115	24-153	8.33	30
2-Chloronaphthalene	2	2.53	2.92	2.5	ND<4.0	101	117	35-124	14.3	30
2-Chlorophenol	2	0.120	0.130	0.12	ND<0.080	96	104	44-140	7.91	30
2-Methylnaphthalene	2	0.117	0.126	0.12	ND<0.040	93	101	38-139	7.81	30
2-Methylphenol (o-Cresol)	2	2.85	3.60	2.5	ND<8.0	114	144	36-145	23.2	30
2-Nitroaniline	2	10.1	11.7	12.5	ND<20	81	94	35-133	14.8	30
2-Nitrophenol	2	9.93	10.4	12.5	ND<20	79	83	38-127	4.46	30
3 & 4-Methylphenol (m,p-Cresol)	2	2.66	2.67	2.5	ND<4.0	106	107	29-158	0.601	30
3,3-Dichlorobenzidine	2	0.114	0.134	0.12	ND<0.040	91	107	16-152	16.1	30
3-Nitroaniline	2	10.2	11.5	12.5	ND<20	82	92	32-127	11.8	30
4,6-Dinitro-2-methylphenol	2	21.8	22.4	12.5	ND<20	175,F1	180,F1	2-145	2.69	30
4-Bromophenyl Phenyl Ether	2	2.32	2.50	2.5	ND<4.0	93	100	34-128	7.64	30
4-Chloro-3-methylphenol	2	2.02	2.23	2.5	ND<4.0	81	89	37-148	9.92	30

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/25/2020
Date Analyzed: 02/26/2020
Instrument: GC21
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194583
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
4-Chloroaniline	2	0.0976	0.115	0.12	ND<0.040	78	92	25-134	16.0	30
4-Chlorophenyl Phenyl Ether	2	2.63	2.68	2.5	ND<4.0	105	107	35-131	2.07	30
4-Nitroaniline	2	11.2	12.2	12.5	ND<20	89	97	34-132	8.50	30
4-Nitrophenol	2	10.2	11.5	12.5	ND<20	81	92	28-137	12.3	30
Acenaphthene	2	0.146	0.163	0.12	ND<0.021	117	130	31-140	10.7	30
Acenaphthylene	2	0.0902	0.101	0.12	ND<0.021	72	80	23-142	10.9	30
Acetochlor	2	1.78	1.89	2.5	ND<4.0	71	75	3-151	5.69	30
Anthracene	2	0.155	0.176	0.12	0.02157	107	124	27-142	12.8	30
Benzidine	2	3.49	4.20	12.5	ND<20	28	34	2-88	18.3	30
Benzo (a) anthracene	2	0.164	0.186	0.12	ND<0.080	71	88	2-149	12.3	30
Benzo (a) pyrene	2	0.127	0.150	0.12	ND<0.040	80	98	15-158	16.3	30
Benzo (b) fluoranthene	2	0.0968	0.118	0.62	ND<0.10	9	13	2-145	20.0	30
Benzo (g,h,i) perylene	2	0.147	0.182	0.12	ND<0.040	88	116	4-155	21.5	30
Benzo (k) fluoranthene	2	0.160	0.192	0.12	ND<0.021	112	138	19-148	18.4	30
Benzyl Alcohol	2	11.7	12.5	12.5	ND<20	94	100	2-163	6.85	30
Bis (2-chloroethoxy) Methane	2	2.46	2.58	2.5	ND<4.0	98	103	35-132	4.88	30
Bis (2-chloroethyl) Ether	2	0.108	0.117	0.12	ND<0.040	87	94	40-140	7.97	30
Bis (2-chloroisopropyl) Ether	2	0.125	0.133	0.12	ND<0.040	100	106	33-147	6.45	30
Bis (2-ethylhexyl) Adipate	2	2.61	3.06	2.5	ND<8.0	104	122	31-138	15.7	30
Bis (2-ethylhexyl) Phthalate	2	0.117	0.159	0.12	ND<0.080	94	127	6-195	30.0	30
Butylbenzyl Phthalate	2	0.103	0.128	0.12	ND<0.40	82	102	32-143	22.0	30
Chrysene	2	0.161	0.176	0.12	ND<0.040	100	113	18-137	9.22	30
Dibenzo (a,h) anthracene	2	0.0985	0.119	0.12	ND<0.040	79	96	18-149	19.1	30
Dibenzofuran	2	2.60	2.75	2.5	ND<4.0	104	110	34-132	5.49	30
Diethyl Phthalate	2	0.110	0.128	0.12	ND<0.080	88	102	38-146	14.6	30
Dimethyl Phthalate	2	0.105	0.118	0.12	ND<0.040	84	94	36-133	11.7	30
Di-n-butyl Phthalate	2	0.104	0.120	0.12	ND<0.080	83	96	42-145	14.6	30
Di-n-octyl Phthalate	2	0.117	0.163	0.12	ND<0.080	94	130	23-198	32.7,F1	30
Fluoranthene	2	0.165	0.192	0.12	0.07625	71	92	9-169	14.8	30
Fluorene	2	0.136	0.151	0.12	ND<0.040	109	121	31-148	10.0	30
Hexachlorobenzene	2	0.123	0.135	0.12	ND<0.021	98	108	33-124	8.99	30
Hexachlorobutadiene	2	0.128	0.134	0.12	ND<0.040	102	107	32-131	4.43	30
Hexachlorocyclopentadiene	2	12.8	14.6	12.5	ND<32	103	117,F1	2-108	12.8	30
Hexachloroethane	2	0.131	0.139	0.12	ND<0.040	105	111	25-134	5.78	30
Indeno (1,2,3-cd) pyrene	2	0.125	0.157	0.12	ND<0.040	85	111	11-152	23.0	30
Isophorone	2	2.16	2.38	2.5	ND<4.0	87	95	34-126	9.63	30
Naphthalene	2	0.118	0.125	0.12	ND<0.021	94	100	20-146	6.17	30
Nitrobenzene	2	2.21	2.48	2.5	ND<4.0	88	99	29-139	11.5	30

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.

Date Prepared: 02/25/2020

Date Analyzed: 02/26/2020

Instrument: GC21

Matrix: Soil

Project: 78-1225; San Pablo

WorkOrder: 2002874

BatchID: 194583

Extraction Method: SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Sample ID: MB/LCS/LCSD-194583
2002874-003AMS/MSD

QC Summary Report for SW8270C

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine	2	2.65	2.50	2.5	ND<4.0	106	100	29-146	5.71	30
N-Nitrosodiphenylamine	2	2.36	2.68	2.5	ND<4.0	94	107	27-130	12.4	30
Pentachlorophenol	2	0.336	0.362	0.62	ND<0.50	54	58	3-129	7.62	30
Phenanthrene	2	0.199	0.218	0.12	ND<0.080	97	112	2-176	9.05	30
Phenol	2	0.500	0.556	0.50	ND<0.080	100	111	24-151	10.6	30
Pyrene	2	0.167	0.188	0.12	0.06383	82	99	17-144	12.0	30
Pyridine	2	ND<4.00	2.10	2.5	ND<4.0	NR,F1	84	2-110	NR	30

Surrogate Recovery

2-Fluorophenol	2	1.13	1.15	1.25		91	92	56-152	1.40	30
Phenol-d5	2	0.989	1.12	1.25		79	90	54-146	12.5	30
Nitrobenzene-d5	2	1.01	1.02	1.25		81	81	47-147	0.711	30
2-Fluorobiphenyl	2	1.04	1.19	1.25		83	95	46-141	13.4	30
2,4,6-Tribromophenol	2	0.793	0.892	1.25		63	71	25-166	11.7	30
4-Terphenyl-d14	2	0.772	0.886	1.25		62	71	39-153	13.8	30



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/25/2020
Instrument: ICP-MS4
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194493
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194493

QC Summary Report for Metals

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Antimony	ND	0.0940	0.500	-	-	-
Arsenic	ND	0.140	0.500	-	-	-
Barium	ND	0.970	5.00	-	-	-
Beryllium	ND	0.0720	0.500	-	-	-
Cadmium	ND	0.0580	0.250	-	-	-
Chromium	ND	0.0920	0.500	-	-	-
Cobalt	ND	0.0560	0.500	-	-	-
Copper	ND	0.0690	0.500	-	-	-
Lead	ND	0.0940	0.500	-	-	-
Mercury	0.00900,J	0.00500	0.0500	-	-	-
Molybdenum	ND	0.230	0.500	-	-	-
Nickel	ND	0.0720	0.500	-	-	-
Selenium	ND	0.130	0.500	-	-	-
Silver	ND	0.0550	0.500	-	-	-
Thallium	ND	0.100	0.500	-	-	-
Vanadium	ND	0.0640	0.500	-	-	-
Zinc	ND	1.40	5.00	-	-	-
Surrogate Recovery						
Terbium	526			500	105	70-130



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/25/2020
Instrument: ICP-MS4
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194493
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg
Sample ID: MB/LCS/LCSD-194493

QC Summary Report for Metals

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Antimony	57.6	60.3	50	115	121	75-125	4.66	20
Arsenic	55.7	59.9	50	111	120	75-125	7.32	20
Barium	534	566	500	107	113	75-125	5.81	20
Beryllium	56.2	59.4	50	112	119	75-125	5.57	20
Cadmium	56.5	60.7	50	113	121	75-125	7.21	20
Chromium	54.5	58.5	50	109	117	75-125	7.01	20
Cobalt	55.4	58.0	50	111	116	75-125	4.62	20
Copper	55.8	59.6	50	112	119	75-125	6.59	20
Lead	54.0	57.1	50	108	114	75-125	5.70	20
Mercury	1.34	1.44	1.25	107	115	75-125	7.12	20
Molybdenum	55.2	58.2	50	110	116	75-125	5.25	20
Nickel	55.7	60.0	50	111	120	75-125	7.44	20
Selenium	55.1	59.8	50	110	120	75-125	8.09	20
Silver	52.5	55.7	50	105	111	75-125	5.93	20
Thallium	53.2	56.4	50	106	113	75-125	5.89	20
Vanadium	54.6	58.6	50	109	117	75-125	7.09	20
Zinc	557	602	500	111	120	75-125	7.69	20
Surrogate Recovery								
Terbium	576	605	500	115	121	70-130	4.94	20



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC19, GC7
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194495
Extraction Method: SW5035
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194495
2002874-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	0.700	1.00	-	-	-
MTBE	ND	0.00400	0.0500	-	-	-
Benzene	ND	0.00300	0.00500	-	-	-
Toluene	ND	0.00200	0.00500	-	-	-
Ethylbenzene	ND	0.00220	0.00500	-	-	-
m,p-Xylene	ND	0.00300	0.0100	-	-	-
o-Xylene	ND	0.00100	0.00500	-	-	-
Surrogate Recovery						
2-Fluorotoluene	0.0944			0.1	94	75-134



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 02/25/2020
Instrument: GC19, GC7
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194495
Extraction Method: SW5035
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194495
2002874-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(btex)	0.529	0.520	0.60	88	87	82-118	1.54	20
MTBE	0.0779	0.0786	0.10	78	79	61-119	0.794	20
Benzene	0.0987	0.0954	0.10	99	95	77-128	3.36	20
Toluene	0.0997	0.0969	0.10	100	97	74-132	2.79	20
Ethylbenzene	0.101	0.0982	0.10	101	98	84-127	2.66	20
m,p-Xylene	0.208	0.203	0.20	104	102	80-120	2.35	20
o-Xylene	0.101	0.0995	0.10	101	99	80-120	1.94	20

Surrogate Recovery

2-Fluorotoluene	0.0977	0.0962	0.10	98	96	75-134	1.49	20
-----------------	--------	--------	------	----	----	--------	------	----

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	1	0.588	0.596	0.60	ND	98	99	58-129	1.34	20
MTBE	1	0.110	0.108	0.10	ND	104	102	47-118	1.47	20
Benzene	1	0.0946	0.0959	0.10	ND	95	96	55-129	1.37	20
Toluene	1	0.0992	0.100	0.10	ND	96	97	56-130	1.09	20
Ethylbenzene	1	0.0986	0.0998	0.10	ND	99	100	63-129	1.24	20
m,p-Xylene	1	0.206	0.212	0.20	ND	101	103	80-120	2.74	20
o-Xylene	1	0.0966	0.0974	0.10	ND	94	95	80-120	0.765	20

Surrogate Recovery

2-Fluorotoluene	1	0.0936	0.0952	0.10		94	95	62-126	1.73	20
-----------------	---	--------	--------	------	--	----	----	--------	------	----

(Cont.)



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/26/2020
Date Analyzed: 02/27/2020
Instrument: GC3
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194701
Extraction Method: SW5035
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194701

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	0.700	1.00	-	-	-
MTBE	ND	0.00400	0.0500	-	-	-
Benzene	ND	0.00300	0.00500	-	-	-
Toluene	ND	0.00200	0.00500	-	-	-
Ethylbenzene	ND	0.00220	0.00500	-	-	-
m,p-Xylene	ND	0.00300	0.0100	-	-	-
o-Xylene	ND	0.00100	0.00500	-	-	-

Surrogate Recovery

2-Fluorotoluene	0.0927			0.1	93	75-134
-----------------	--------	--	--	-----	----	--------

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(btex)	0.576	0.569	0.60	96	95	82-118	1.16	20
MTBE	0.0861	0.0922	0.10	86	92	61-119	6.85	20
Benzene	0.0957	0.0965	0.10	96	97	77-128	0.867	20
Toluene	0.0995	0.100	0.10	100	100	74-132	0.809	20
Ethylbenzene	0.0986	0.100	0.10	99	100	84-127	1.62	20
m,p-Xylene	0.200	0.202	0.20	100	101	80-120	1.00	20
o-Xylene	0.0960	0.0971	0.10	96	97	80-120	1.16	20

Surrogate Recovery

2-Fluorotoluene	0.0948	0.0958	0.10	95	96	75-134	0.998	20
-----------------	--------	--------	------	----	----	--------	-------	----



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 02/24/2020
Date Analyzed: 02/24/2020 - 03/02/2020
Instrument: GC31A, GC31B
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 194496
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS/LCSD-194496
2002874-001AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	0.830	1.00	-	-	-
TPH-Motor Oil (C18-C36)	ND	3.80	5.00	-	-	-

Surrogate Recovery

C9	23.3			25	93	70-130
----	------	--	--	----	----	--------

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	45.3	45.2	40	113	113	70-130	0.180	20

Surrogate Recovery

C9	23.1	22.9	25	92	92	70-130	0.919	20
----	------	------	----	----	----	--------	-------	----

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1	44.8	44.1	40	17.23	69,F1	67,F1	70-130	1.58	20

Surrogate Recovery

C9	1	24.2	24.3	25		97	97	70-130	0.510	20
----	---	------	------	----	--	----	----	--------	-------	----

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

☐ WaterTrax ☐ WriteOn ☐ EDF

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 2002874

ClientCode: GESIS

☐ Excel ☒ EQulS ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☐ Detection Summary ☒ Dry-Weight

Report to:

Nicolas Haddad
Geo-Engineering Solutions, Inc.
2570 San Ramon Valley Blvd A102
San Ramon, CA 94583
(925) 215-7789 FAX:

Email: nhaddad@geo-eng.net
cc/3rd Party:
PO: 1225
Project: 78-1225; San Pablo

Bill to:

Colin Frost
Geo-Engineering Solutions, Inc.
2570 San Ramon Valley Blvd A102
San Ramon, CA 94583
cfrost@geo-eng.net; aghosheh@geo-en

Requested TAT: 5 days;

Date Received: 02/24/2020

Date Logged: 02/24/2020

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2002874-001	S-1	Soil	2/24/2020 00:00	☐	A	A	A	A	A	A	A	A				
2002874-002	S-2	Soil	2/24/2020 00:00	☐	A	A	A	A	A	A	A	A				
2002874-003	S-3	Soil	2/24/2020 00:00	☐	A	A	A	A	A	A	A	A				

Test Legend:

1	8081PCB_S
5	CARB435_400
9	

2	8260B_S
6	G-MBTEx_S
10	

3	8270_SCSM_S
7	PRDisposal Fee
11	

4	CAM17MS_TTLC_S
8	TPH(DMO)_S
12	

Project Manager: Angela Rydelius

Prepared by: Tina Perez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: GEO-ENGINEERING SOLUTIONS, INC.

Project: 78-1225; San Pablo

Work Order: 2002874

Client Contact: Nicolas Haddad

QC Level: LEVEL 2

Contact's Email: nhaddad@geo-eng.net

Comments:

Date Logged: 2/24/2020

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☒ EQUIS ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2002874-001A	S-1	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ, Unpres	☐	2/24/2020	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
			Asbestos, CARB 435, 400 Point			☐		5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
2002874-002A	S-2	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ, Unpres	☐	2/24/2020	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
			Asbestos, CARB 435, 400 Point			☐		5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
2002874-003A	S-3	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ, Unpres	☐	2/24/2020	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: GEO-ENGINEERING SOLUTIONS, INC.

Project: 78-1225; San Pablo

Work Order: 2002874

Client Contact: Nicolas Haddad

QC Level: LEVEL 2

Contact's Email: nhaddad@geo-eng.net

Comments:

Date Logged: 2/24/2020

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☒ EQUIS ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2002874-003A	S-3	Soil	Asbestos, CARB 435, 400 Point	1	8OZ GJ, Unpres	☐	2/24/2020	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

Page 60 of 61



Sample Receipt Checklist

Client Name: **Geo-Engineering Solutions, Inc.**
Project: **78-1225; San Pablo**

Date and Time Received: **2/24/2020 13:04**

Date Logged: **2/24/2020**

Received by: **Tina Perez**

Logged by: **Tina Perez**

WorkOrder No: **2002874** Matrix: Soil
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Sample IDs noted by Client on COC?	Yes ☒	No ☐	
Date and Time of collection noted by Client on COC?	Yes ☒	No ☐	
Sampler's name noted on COC?	Yes ☐	No ☒	
COC agrees with Quote?	Yes ☐	No ☐	NA ☒

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☒
Shipping container/cooler in good condition?	Yes ☒	No ☐	
Samples in proper containers/bottles?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☒	No ☐	NA ☐
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

Sample/Temp Blank temperature	Temp: 5.6°C	NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐ No ☐	NA ☒
Sample labels checked for correct preservation?	Yes ☒ No ☐	
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes ☐ No ☐	NA ☒

UCMR Samples:

pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes ☐ No ☐	NA ☒
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes ☐ No ☐	NA ☒

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2002874 A

Report Created for: Geo-Engineering Solutions, Inc.

2570 San Ramon Valley Blvd A102
San Ramon, CA 94583

Project Contact: Nicolas Haddad

Project P.O.: 1225

Project: 78-1225; San Pablo

Project Received: 02/24/2020

Analytical Report reviewed & approved for release on 03/09/2020 by:

Susan Thompson
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Geo-Engineering Solutions, Inc.
Project: 78-1225; San Pablo
WorkOrder: 2002874 A

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: Geo-Engineering Solutions, Inc.
Date Received: 02/24/2020 13:04
Date Prepared: 03/03/2020
Project: 78-1225; San Pablo

WorkOrder: 2002874
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

Metals (STLC)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-2	2002874-002A	Soil	02/24/2020	ICP-MS4 784SMPL.d	195048

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	ND	0.10	1	03/05/2020 23:34

Analyst(s): DB



Quality Control Report

Client: Geo-Engineering Solutions, Inc.
Date Prepared: 03/03/2020
Date Analyzed: 03/05/2020
Instrument: ICP-MS4
Matrix: Soil
Project: 78-1225; San Pablo

WorkOrder: 2002874
BatchID: 195048
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L
Sample ID: MB/LCS/LCSD-195048

QC Summary Report for Metals (STLC)

Analyte	MB Result	MDL	RL			
Chromium	ND	0.100	0.100	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Chromium	9.39	9.39	10	94	94	75-125	0.0341	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

☐ WaterTrax ☐ WriteOn ☐ EDF

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 2002874 **A** ClientCode: GESIS

☐ Excel ☒ EQulS ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☐ Detection Summary ☒ Dry-Weight

Report to:

Nicolas Haddad
Geo-Engineering Solutions, Inc.
2570 San Ramon Valley Blvd A102
San Ramon, CA 94583
(925) 215-7789 FAX:

Email: nhaddad@geo-eng.net
cc/3rd Party:
PO: 1225
Project: 78-1225; San Pablo

Bill to:

Colin Frost
Geo-Engineering Solutions, Inc.
2570 San Ramon Valley Blvd A102
San Ramon, CA 94583
cfrost@geo-eng.net; aghosheh@geo-en

Requested TAT: 5 days;

Date Received: 02/24/2020

Date Logged: 02/24/2020

Date Add-On: 03/02/2020

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2002874-002	S-2	Soil	2/24/2020 00:00	☐	A											

Test Legend:

1	CRMS_STLC_S	2		3		4	
5		6		7		8	
9		10		11		12	

Project Manager: Angela Rydelius

Prepared by: Tina Perez

Add-On Prepared By: Kena Ponce

Comments: STLC Cr added 3/2/20 STAT

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: GEO-ENGINEERING SOLUTIONS, INC.

Project: 78-1225; San Pablo

Work Order: 2002874

Client Contact: Nicolas Haddad

QC Level: LEVEL 2

Contact's Email nhaddad@geo-eng.net

Comments: STLC Cr added 3/2/20 STAT

Date Logged: 2/24/2020

Date Add-On: 3/2/2020

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2002874-002A	S-2	Soil	SW6020 (Chromium) (STLC)	1	8OZ GJ, Unpres	2/24/2020	5 days*		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

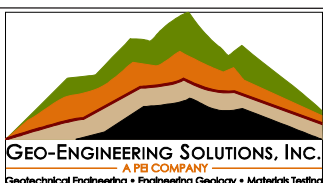
- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None

Page of




 Approximate Soil Sample Location



Residential Development
2364 Rd 20
San Pablo, CA

73-1225

March 2020

Site Map and CPT
Locations

Figure 1