Appendix 4.13-3

Additional Phase II Environmental Site Assessment

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ADDITIONAL PHASE II ENVIRONMENTAL SITE ASSESSMENT On Former Green Tree Golf Course 999 Leisure Town Road Vacaville, California 94538

For

LOEWKE PLANNING ASSOCIATES, INC.

By

GeoSolve, Inc.

Project No. 2018-18

June 24, 2021

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rcampbell@geosolve-inc.com • (925) 963-1198

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Project No. 2016-24
June 24, 2021

Mr. Michael Loewke, A.I.C.P.
Loewke Planning Associates, Inc.
Mike@loewke.com

Subject: Former Green Tree Golf Course
999 Leisure Town Road
Vacaville, California
ADDITIONAL PHASE II ENVIRONMENTAL SITE ASSESSMENT

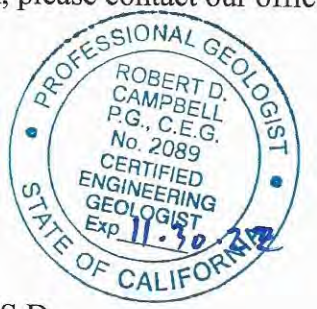
References:
1) Phase I Environmental Site Assessment at former Green Tree Golf Course, 999 Leisure Town Road, Vacaville, California
By ***GeoSolve, Inc.***
Dated June 24, 2021

2) Phase II Environmental Site Assessment at former Green Tree Golf Course, 999 Leisure Town Road, Vacaville, California
By ***GeoSolve, Inc.***
Dated June 24, 2021

Dear Mr. Loewke:

At your request, ***GeoSolve, Inc.*** has conducted an Additional Phase II Environmental Site Assessment for the above referenced site. The following is a copy of the report, which presents the results of our additional assessment, conclusions, and recommendations for limited soil remediation on the subject site. Should you have any questions relating to the contents of this report or require any additional information, please contact our office at your convenience.

Sincerely,
GeoSolve, Inc.



Robert D. Campbell, M.S., P.G., C.E.G., Q.S.D.
Principal Engineering Geologist

Copies: 1 to Loewke Planning Associates, Inc.

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INTRODUCTION

At your request, ***GeoSolve, Inc.*** has prepared this Additional Phase II Environmental Site Assessment (ESA) for the above referenced site. Based on the results of our Phase I ESA conducted at the subject site (Reference 1), three Recognized Environmental Conditions (RECs) were documented at the subject site. These RECs included: 1) potential organochlorine and arsenic pesticide residues within the surficial soil; 2) surficial lead around the structures and 3) an un-sued 550-gallon gasoline underground storage tank (UST), which may still be situated beneath the former maintenance yard. ***GeoSolve, Inc.*** conduced a Phase II ESA (Reference 2) to evaluate the three RECs identified in the Phase I ESA. The results of the Phase II ESA indicated an elevated concentration of lead around the northern edge of the former maintenance yard and the possible contamination of subsurface soil and groundwater around the former USTs.

The purpose of this work was to evaluate the lateral and vertical extent of lead within the surficial soil on the northern edge of the former maintenance yard and evaluate the lateral and vertical extent of gasoline and diesel hydrocarbons in subsurface soil and groundwater around the former USTs.

General

Site Background

The subject property is situated within the southeastern portion of Vacaville in Solano County, California, and is comprised of 22 parcels totaling approximately 185.4 acres comprised of the former Green Tree Golf Course. The site is located at 999 Leisure Town Road in Vacaville, California. The property is bounded by Leisure Town Road to the east, Gilly Road to the north, and residential properties to the south and west. Sequoia Drive bisects the golf course between the northern 9 holes and southern 9 holes. The former Green Tree Golf Course was vacant, and the water hazards were dry, and grasses were dead. The location of the site is shown on Figure 1, Site Vicinity Map and Figure 2, Site Plan.

The local topography slopes gradually to the southeast and ranges in elevation from approximately 75 feet to 80 feet above mean sea level (msl). Ulatis Creek is situated on the southern portion of the property and flows west along local drainage. Drainage at the site appears to be toward the southeast, along local topography.

Local Geology and Hydrogeology

Based on published geologic map from Helley et al. (1979), the subject site is underlain by Holocene age coarse-grained alluvium (Qhac), medium-grained alluvium (Qham) and fine-grained

alluvium (Qhaf), which grade courser to finer from the southwest toward the northeast. The course-grained alluvium consists of unconsolidated, moderately sorted, permeable sand and silt with coarse sand and gravel becoming abundant toward alluvial fan heads and in narrow canyons. The coarse-grained alluvium was deposited along ancient alluvial fans eroding from hillsides into valleys. The coarse-grained alluvium ranges from 10 feet to 50 feet in thickness. The medium-grained alluvium consists of unconsolidated, moderately sorted, moderately permeable fine sandy silt and clayey silt with occasional thin beds of course sand with a maximum thickness of 12 feet and was formed along alluvial fan and levee deposits. The fine-grained alluvium consists of unconsolidated, plastic, moderately to poorly sorted silt and clay in organic material and is generally less than 10 feet in thickness. The fine-grained alluvium was formed by standing floodwaters. The course-, medium-, and fine-grained alluvium is underlain by alternating layers of clay, silt, sand, and gravel for up to 1 kilometer (km) in depth, and overlie Tertiary sedimentary and Franciscan Complex bedrock.

The active trace of the Cordelia Fault is situated approximately 20-miles southwest of the site and the Cordelia Fault is considered active by the Alquist-Priolo Earthquake Fault Zoning Act (AP-Zone) of 1994, and is listed as a strike-slip fault with right-lateral movement (http://gmw.consrv.ca.gov/shmp/download/ap/pdf/FAIRFIELD_S.PDF and http://gmw.consrv.ca.gov/shmp/download/ap/pdf/CORDELIA.PDF). The subject site is situated on coarse-grained alluvium; therefore, the liquefaction risk at the subject site is not probable during a moderate to strong earthquake event.

Based depth to groundwater data collected during this Additional Phase II ESA, depth to water (DTW) was measured at approximately 15 feet to 18 feet below ground surface (bgs) and flows toward the southeast.

ADDITIONAL PHASE II ENVIRONMENTAL SITE ASSESSMENT

Prior to conducting fieldwork, a Site-Specific Health and Safety Plan was prepared and left on the job site, which detailed the directions to the nearest hospital and recommended personal protective equipment (PPE) level. Level D was selected for this project. In addition, the randomly selected boring locations were marked in white paint and underground service alert (USA) was contacted at least 48-hours prior to commencement of fieldwork to identify any underground utilities. Pacific Gas and Electric Company (PG&E) utility locator met us on site to map all electrical and gas lines.

Fieldwork

On April 18, 2018, a ***GeoSolve, Inc.*** field geologist visited the property and supervised Penecore Drilling, Inc. of Woodland, California, a State-licensed drilling contractor (C57-802334) advance two borings (B-1 and B-2) to groundwater around the former fuel USTs using a GeoProbe 6600 track-mounted direct-push drilling rig, equipped with a stainless steel, dual-tube acetate lined sampling system, to obtain continuous soil cores at the site. All borings were advanced to 20 feet bgs and the field geologist logged each boring in accordance with the Unified Soil Classification System (USCS) using continuous-cored soil samples.

Soil Sample Collection

Acetate liners were extracted from all borings for description and laboratory analysis. Soil samples were hand collected at 10-, 15-, and 20-feet bgs by hand using a hack saw, in which the sample lengths were measured using a ruler, and the cut sample ends were covered with Teflon tape, capped, labeled, and placed within a pre-chilled ice-chest for temporary storage. The locations of borings B-1 through B-25 are shown on Figure 3, Boring Location.

Groundwater Sample Collection

Once soil sampling activities were completed in each boring, 1-inch diameter temporary PVC well screening was placed in each boring and ¼-inch Teflon tubing was placed down each 1-inch temporary well screening. A hand-check valve was then connected to the Teflon tubing and groundwater was manually pumped from each boring into four 40 milliliter (ml) VOAs and one 250-ml plastic bottle and consisted of groundwater samples B-1 and B-2 The containers were sealed, checked for headspace, labeled, and placed within a pre-chilled ice chest for temporary storage.

Once sampling activities were completed in all the borings, the borings were backfilled with neat cement to grade.

Lead Soil Sampling

A ***GeoSolve, Inc.*** field geologist, equipped with a hand-auger, visited the northern portion of the former maintenance yard building and advanced five shallow borings (L-1 through L-5) to approximately 2 feet bgs. Soil samples were collected using laboratory supplied clean glass jars, which were sealed, labeled, and placed within a pre-chilled ice chest for temporary storage. The location of the shallow borings L-1 through L-5 are shown on Figure 3.

Laboratory Analytical Methods

Soil Samples

Soil samples B1-10, B1-15, B1-20, B2-10, B2-15, and B2-20 were submitted to McCampbell Analytical, Inc., a State-certified hazardous waste testing laboratory (Certification No. 1644) in Pittsburg, California, for analysis. The soil samples were analyzed for total petroleum hydrocarbons reported as gasoline (TPHg), gasoline constituent's benzene, toluene, ethyl benzene, total xylenes (BTEX) and methyl tertiary butyl ether (MTBE), total extractable petroleum hydrocarbons reported as diesel and motor-oil (TEPHd and TEPHmo) with silica-gel cleanup and total lead using Environmental Protection Agency (EPA) Methods SW5030B/SW8021B/8015Bm, SW3550B/3630C/SW8015B and SW3050B/SW6020 on standard turnaround.

Shallow soil samples L1-1, L1-2, L2-1, L2-2, L3-1, L3-2, L4-1, L4-2, L5-1, and L5-2 were analyzed for total lead using EPA Methods SW3050B/SW6020 on standard turnaround.

Groundwater Samples

Groundwater samples B-1 and B-2 were analyzed by McCampbell Analytical, Inc. for TPHg, BTEX, MTBE, TEPHd and TEPHmo (with silica gel cleanup) and total lead using EPA Methods SW5030B/SW8021B/8015Bm and SW3550B/3630C/SW8015B on standard turnaround.

Laboratory Analytical Results

Soil Samples

Laboratory analytical results of subsurface soil samples B1-10 through B2-20 indicated no detectable concentrations of TPHg (less than 1.0 milligram per kilogram [mg/Kg]), BTEX (less than 0.005 mg/Kg), TEPHd, or TEPHmo (less than 1.0 mg/Kg and less than 5.0 mg/Kg). Lead was detected at concentrations ranging from 5.9 mg/Kg to 9.7 mg/Kg.

Lead was detected in all shallow soil samples collected from L-1 through L-5 at concentrations ranging from 13 mg/kg to 210 mg/Kg in soil sample L2-1.

The laboratory analytical results are shown on Table 1, Analytical Results of Soil Samples, and a copy of the McCampbell Analytical, Inc. laboratory analytical report and chain-of-custody document are attached to Appendix A.

Table 1
Analytical Results of Soil Samples
999 Leisure Town Road
Vacaville, California
April 18, 2018

Sample ID	Depth (feet)	TPHg (mg/Kg)	TEPHd (mg/Kg)	TEPHmo (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Xylenes (mg/Kg)	Lead (mg/Kg)
B1-10	10	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	8.2
B1-15	15	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	8.0
B1-20	20	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	5.9
B2-10	10	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	9.7
B2-15	15	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	4.9
B2-20	20	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.015	6.3
L1-1	1	NA	NA	NA	NA	NA	NA	NA	49
L1-2	2	NA	NA	NA	NA	NA	NA	NA	54
L2-1	1	NA	NA	NA	NA	NA	NA	NA	**210**
L2-2	2	NA	NA	NA	NA	NA	NA	NA	70
L3-1	1	NA	NA	NA	NA	NA	NA	NA	64
L3-2	2	NA	NA	NA	NA	NA	NA	NA	**150**
L4-1	1	NA	NA	NA	NA	NA	NA	NA	13
L4-2	2	NA	NA	NA	NA	NA	NA	NA	18
L5-1	1	NA	NA	NA	NA	NA	NA	NA	9.5
L5-2	2	NA	NA	NA	NA	NA	NA	NA	12
ESLs	---	*100*	*500*	*500*	*0.23*	*970*	*5.1*	*560*	*80*

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).
NA = Not analyzed.
ESLs = Environmental Screening Levels, RWQCB – Region 2, February 2016.

Groundwater Samples

Groundwater samples B-1 and B-2 indicated no detectable concentrations of TPHg, TEPHd, TEPHmo or BTEX. MTBE was detected at a very low concentration of 5.4 micrograms per liter (µg/L), which is below the Environmental Screening Level (ESL) of 1,300 µg/L established by the Regional Water Quality Control Board – Region 2 (February 2016). Lead was detected slightly above the maximum contaminant level (MCL) for drinking water of 15 µg/L.

The laboratory analytical results are shown on Table 2, Analytical Results of Groundwater Samples, and a copy of the McCampbell Analytical, Inc. laboratory analytical report and chain-of-custody document are attached to Appendix A.

Table 2
Analytical Results of Groundwater Samples
999 Leisure Town Road
Vacaville, California
April 18, 2018

Sample ID	Depth (feet)	TPHg (mg/Kg)	TEPHd (mg/Kg)	TEPHmo (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Xylenes (mg/Kg)	Lead (µg/L)
B-1	12	<50	<50	<250	<0.50	<0.50	<0.50	<0.50	91
B-2	12	<50	<50	<250	<0.50	<0.50	<0.50	<0.50	44
ESLs	---	*220*	*150*	*150*	*1.1*	*3,600*	*13*	*1,300*	*15*

µg/L = micrograms per liter, equivalent to parts per billion (ppb).
NA = Not analyzed.
ESLs = Environmental Screening Levels, RWQCB – Region 2, February 2016.

DISCUSSION

No detectable to very low concentrations of organochloride pesticides were detected in soil samples collected at 0.5 foot within borings B-1 through B-25 indicated organochloride pesticides were used on the property; however, their use was limited and/or was discontinued a long time ago. No pesticide detected, including DDT, DDE, DDD, Dieldrin or Chlordane, was detected above the California Regional Water Quality Control Board – Region 2 (RWQCB) residential Environmental Screening Levels (ESLs) of 1.7 mg/Kg and 1.7 mg/Kg, 2.0 mg/Kg 0.030 mg/Kg or 0.44 mg/Kg (RWQCB, December 2013).

Lead was mostly detected below the residential ESL of 80 mg/Kg with the exception of sample S-5, which indicated an elevated lead concentration of 8,200 mg/Kg. This elevated lead concentration represents a Federal Hazardous Waste level, which is lead concentrations greater than 1,000 mg/Kg). The likely source of the elevated lead is most likely old leaded paint and/or lead materials.

Arsenic was detected at concentrations ranging from 2.4 mg/Kg to 11 mg/Kg, which represents background arsenic concentrations, especially based on the arsenic background soil sample analytical result up to 9.4 mg/Kg in AS-4. Although the residential ESL for arsenic is 0.39 mg/Kg, the current standard of care methodology through the California Environmental Protection Agency (Cal EPA) and its divisions Department of Toxic Substances Control (DTSC) and the RWQCB utilize background arsenic concentrations to establish permissible levels.

Potential Natural Arsenic Sources and Background Concentrations

Arsenic occurs in more than 200 minerals and is present mainly in the heavy-mineral fraction of soil as arsenate (As^{+5}) or the oxidized form of arsenic. Arsenic is naturally found in the arsenic-ore mineral arsenopyrite (FeAsS) and abundant concentrations of arsenic have been detected in the minerals pyrite (up to 77,000 mg/Kg), marcasite (up to 126,000 mg/Kg), ferric oxyhydroxide and hematite (up to 77,000 mg/Kg) as trace elements (Campbell, 2006). Conversely, the lowest levels of arsenic are found in granitic sandy soils (Chang and et. al., 2004). Higher arsenic levels are associated with alluvial soils, rich in organic matter and soils derived from shales and hydrothermally and metamorphically altered bedrock, ancient hot-spring deposits (Campbell, 2006). Furthermore, in the Background Metal Concentrations in Soils within Northern Santa Clara County, California (Scott, 1991), the maximum concentration detected for arsenic was reported as 20 mg/Kg.

Upper Confidence Limit Concentration Calculations for Arsenic

GeoSolve, Inc. utilized the EPA's ProUCL 4.00.02 statistical computer program to calculate the background 95% UCL and 95% UCL for arsenic at the subject site indicated a background concentration of 11.5 mg/Kg and an average arsenic concentration of 7.69 using the 95% Student's-t UCL.

The only adverse condition detected at the subject property regarding chemical constituents was lead in sample S-5, which indicated a Federal Hazardous Waste concentration of 8,200 mg/Kg. The soil around the northern edge of the maintenance building should be excavated down to 2 feet bgs in a 10 foot by 15-foot area. The soil must be placed within a 20 cubic yard roll-off bin lined with 6-mil Visqueen. The excavated soil must be re-analyzed for disposal and properly disposed a Hazardous Waste Class I accepting landfill under own-signed Hazardous Waste Manifests. We estimate approximately 20 cubic yards of soil will be excavated and disposed form the property. Disposal costs will depend on re-analyses for disposal, but will probably range from **$10,000 to $15,000**.

CONCLUSIONS

Based on the laboratory analytical results of soil samples collected from borings B-1 through B-25, surficial soil lead samples, and the statistical ProUCL calculations, ***GeoSolve, Inc.*** concludes the following:

- No elevated concentrations of organochloride pesticides were detected in any soil sample analyzed from random borings B-1 through B-25 and were detected below all residential ESLs.

- Most lead concentrations were detected below residential ESL of 80 mg/Kg in surficial soil samples S-1 through S-4, and S-6 through S-8.

- An elevated lead concentration was detected in surficial soil sample S-5 at 8,200 mg/Kg along the northern edge of the former maintenance yard building, which was detected above the Federal Hazardous Waste level of 1,000 mg/Kg and will require remediation.

- The arsenic concentrations detected in all 29 soil samples were determined to be within background concentrations based on the 95% UCL calculations.

- We estimate approximately 20 cubic yards of lead-impacted soil will be generated around sample S-5, the northern edge of the former maintenance yard building.

- Estimated soil excavation and disposal costs will most likely range from $10,000 to $15,000, which does not include professional services or out-of-scope project changes.

RECOMMENDATIONS

Based on the conclusions presented within this Additional Phase II ESA, ***GeoSolve, Inc.*** recommends the following:

- An estimated 20 cubic yards (28 tons) of soil must be excavated and disposed along the northern edge of the former maintenance yard building in a 10 foot by 15 foot by 2-foot excavation by a California Hazardous Waste licensed contractor, undersigned California Hazardous Waste manifests to accepting Class I landfill. Excavation activities should be observed and recorded by a California Professional Geologist and/or Professional Engineer certified in environmental remediation. Excavated soil must be placed within 20 cubic yard Visqueen lined roll-off bins and/or transport trucks. Similarly, excavated soil can be temporary stockpiled on site and placed on and covered with Visqueen.

- Confirmation soil samples must be collected from the excavation limits to determine if the lead impacted soil was removed from the site. Approximately 10 confirmation soil samples should be randomly collected from the excavation limits using clean laboratory supplied glass jars, which should be capped, labeled, and placed, within a pre-chilled ice chest for temporary storage. The confirmation soil samples should be delivered under chain-of-custody documentation to a State-Certified hazardous waste testing laboratory and analyzed for lead analysis using EPA Methods SW3550B/SW6020. If lead concentrations exceed 80 mg/Kg, then additional excavation must be conducted along with additional confirmation soil sampling as described above.

- The excavated areas must be backfilled and compacted with clean imported will to a 95% maximum dry-density. In addition, excavation activities may or may not require demolition of the structures prior to fieldwork and a grading permit will most likely be required by the City of Vacaville.

LIMITATIONS

This report has been prepared for the specific application to this project in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in this area. This report contains information reported to ***GeoSolve, Inc.***, by other sources, accordingly, and errors or omissions may be present that ***GeoSolve, Inc.*** cannot be responsible for. The findings of this report apply to the present condition of the subject property only (as of October 19, 2016); the opinions expressed herein are subject to revision in light of new information relevant to the site and/or in its immediate surroundings. Results from Phase I environmental investigations are based on surficial evidence and public records and databases only. Subsurface conditions of the site cannot be properly evaluated without performing a subsurface environmental investigation and actually testing of the soil, and groundwater for potential contaminants.

REFERENCES

Campbell, R.D., March 2006. Evaluation of Arsenic Levels and Speciation in Groundwater within Pleasanton, California, California State University East, Bay M.S. Geology Thesis, 165 pp.

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Scott, Christina Marie, December 1991. *Background Metal Concentrations in Soils in Northern Santa Clara County, California – M.S. Thesis at the University of San Francisco Environmental Management Program*, 7 pages.

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http://gmw.consrv.ca.gov/shmp/download/ap/pdf/FAIRFIELD_S.PDF

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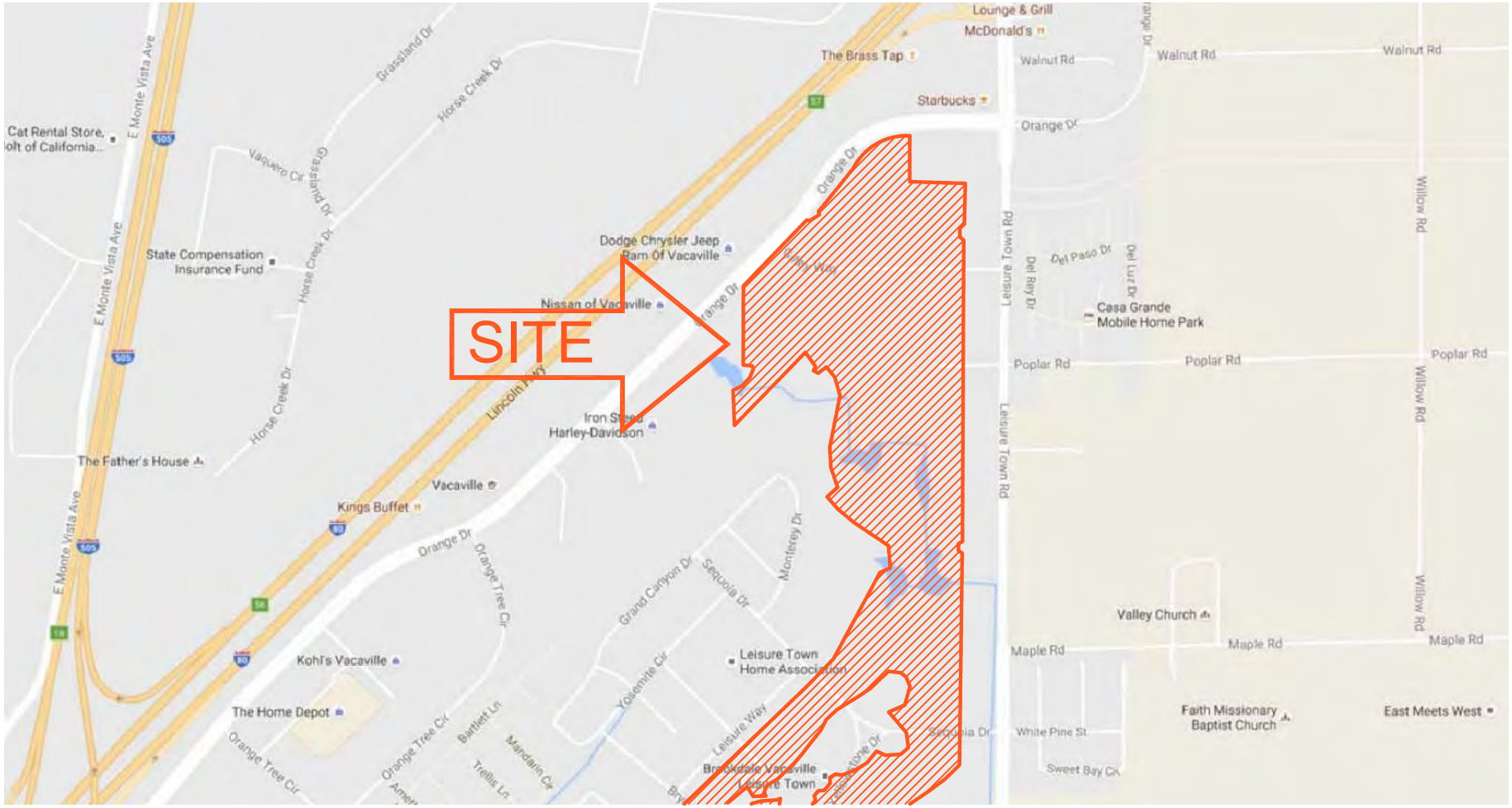
http://www.water.ca.gov/waterdatalibrary/groundwater/hydrographs/brr_hydro.cfm?CFGRIDKEY=48481



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VICINITY MAP

ADDITIONAL PHASE II - ENVIRONMENTAL SITE ASSESSMENT
SEQUOIA ECOLOGICAL CONSULTANTS
FORMER GREEN TREE GOLF COURSE
999 LEISURE TOWN ROAD
VACAVILLE, CALIFORNIA

Project No.	Drawn by:
2018-18	GC
Scale:	Date:
NTS	04/2018

Figure No.
1

LEGEND

B-1 Boring Location

L-1 Lead Sample Location

Former Location of UST

N

0 25 50 100

Approximate Scale (feet)

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BORING LOCATION

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FORMER GREEN TREE GOLF COURSE
999 LEISURE TOWN ROAD
VACAVILLE, CALIFORNIA

Project No.	Drawn by:
2018-18	GC
Scale:	Date:
AS SHOWN	04/2018

Figure No. 3

LEGEND

B-1 Boring Location

L-1 Lead Sample Location

Former Location of UST

N

0 25 50 100

Approximate Scale (feet)

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BORING LOCATION

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FORMER GREEN TREE GOLF COURSE
999 LEISURE TOWN ROAD
VACAVILLE, CALIFORNIA

Project No.	Drawn by:
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Scale:	Date:
AS SHOWN	04/2018

Figure No. 3

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BORING LOG

Client Name: Sequoia Ecological Consultants
Job/Site Name: Former Green Tree Golf Course
Location: 999 Leisure Town Road
Project Number: 2018-18
Driller: PeneCore Drilling
Drilling Method: Direct Push
Boring Diameter: 2.5 inches
Logged by: SB
Review by: RDC
Notes:

Boring Name: B-1
Drilling Started: 04-18-18
Drilling Completed: 04-18-18
Ground Surface Elevation:
Boring Location:
Total Boring depth: 20 feet
Depth to Water (First Encounter): 15 feet ▽
Depth to Water (Static): 12.1 feet ▼

Sample Condition: Undisturbed Sample; No Recovery; Disturbed Sample

Date Sampled	Well Detail	PID (ppm)	Sample ID	Depth (ft bgs)	Graphic Log	U.S.C.S.	Lithologic Description	Contact Depth (ft bgs)
				0			Gray, clayey SILT (ML), no odor, dry	
				5			Orange brown, clayey fine grained SAND (SC), no odor, damp	
				10			Orange brown, fine to medium grained SAND (SP), no odor, moist to wet	
				15			Orange brown, fine to medium grained SAND (SP), no odor, wet	
				20			Buff gray, silty CLAY (CL), no odor, saturated	

Boring was terminated at 20 feet below ground surface (bgs).
Groundwater was encountered.at 15 feet bgs and stabilized at 12.1 feet bgs.

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BORING LOG

Client Name: Sequoia Ecological Consultants
Job/Site Name: Former Green Tree Golf Course
Location: 999 Leisure Town Road
Project Number: 2018-18
Driller: PeneCore Drilling
Drilling Method: Direct Push
Boring Diameter: 2.5 inches
Logged by: SB
Review by: RDC
Notes:

Boring Name: B-2
Drilling Started: 04-18-18
Drilling Completed: 04-18-18
Ground Surface Elevation:
Boring Location:
Total Boring depth: 20 feet
Depth to Water (First Encounter): 18 feet ▽
Depth to Water (Static): 12.1 feet ▼

Sample Condition: Undisturbed Sample; No Recovery; Disturbed Sample

Date Sampled	Well Detail	PID (ppm)	Sample ID	Depth (ft bgs)	Graphic Log	U.S.C.S.	Lithologic Description	Contact Depth (ft bgs)
				0			Gray, clayey SILT (ML), no odor, dry	
				5			Orange brown, clayey fine grained SAND (SC) with silt, no odor, dry	
				10			Gray brown, silty fine grained SAND (SP), no odor, moist	
				15			Gray brown, fine to medium grained SAND (SP), no odor, wet	
							Gray, silty CLAY (CL), no odor, saturated	
				20				

Boring was terminated at 20 feet below ground surface (bgs).
Groundwater was encountered.at 18 feet bgs and stabilized at 12.1 feet bgs.

APPENDIX A

McCAMPBELL ANALYTICAL, INC. LABORATORY RESULTS AND CHAIN-OF-CUSTODY DOCUMENTS

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1804A85

Report Created for: Geosolve, Inc.

1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566

Project Contact: Rob Campbell
Project P.O.:
Project: 2018-18; Green Tree Golf

Project Received: 04/18/2018

Analytical Report reviewed & approved for release on 04/26/2018 by:

Christine Askari
Project Manager

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Glossary of Terms & Qualifier Definitions

Client: Geosolve, Inc.
Project: 2018-18; Green Tree Golf
WorkOrder: 1804A85

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
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
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
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW5030B
Date Prepared:	4/18/18	**Analytical Method:**	SW8021B/8015Bm
Project:	2018-18; Green Tree Golf	**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
B1-10	1804A85-001A	Soil	04/18/2018	GC7 04191818.D	156750

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	04/19/2018 21:03
MTBE	ND	0.050	1	04/19/2018 21:03
Benzene	ND	0.0050	1	04/19/2018 21:03
Toluene	ND	0.0050	1	04/19/2018 21:03
Ethylbenzene	ND	0.0050	1	04/19/2018 21:03
Xylenes	ND	0.015	1	04/19/2018 21:03

Surrogates	REC (%)	Limits	
2-Fluorotoluene	82	62-126	04/19/2018 21:03

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-15	1804A85-002A	Soil	04/18/2018	GC7 04191819.D	156750

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	04/19/2018 21:32
MTBE	ND	0.050	1	04/19/2018 21:32
Benzene	ND	0.0050	1	04/19/2018 21:32
Toluene	ND	0.0050	1	04/19/2018 21:32
Ethylbenzene	ND	0.0050	1	04/19/2018 21:32
Xylenes	ND	0.015	1	04/19/2018 21:32

Surrogates	REC (%)	Limits	
2-Fluorotoluene	79	62-126	04/19/2018 21:32

Analyst(s): IA

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW5030B
Date Prepared:	4/18/18	**Analytical Method:**	SW8021B/8015Bm
Project:	2018-18; Green Tree Golf	**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
B1-20	1804A85-003A	Soil	04/18/2018	GC7 04191820.D	156750

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	04/19/2018 22:02
MTBE	ND	0.050	1	04/19/2018 22:02
Benzene	ND	0.0050	1	04/19/2018 22:02
Toluene	ND	0.0050	1	04/19/2018 22:02
Ethylbenzene	ND	0.0050	1	04/19/2018 22:02
Xylenes	ND	0.015	1	04/19/2018 22:02

Surrogates	REC (%)	Limits	
2-Fluorotoluene	81	62-126	04/19/2018 22:02

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-10	1804A85-004A	Soil	04/18/2018	GC7 04191827.D	156750

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	04/20/2018 01:28
MTBE	ND	0.050	1	04/20/2018 01:28
Benzene	ND	0.0050	1	04/20/2018 01:28
Toluene	ND	0.0050	1	04/20/2018 01:28
Ethylbenzene	ND	0.0050	1	04/20/2018 01:28
Xylenes	ND	0.015	1	04/20/2018 01:28

Surrogates	REC (%)	Limits	
2-Fluorotoluene	83	62-126	04/20/2018 01:28

Analyst(s): IA

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW5030B
Date Prepared:	4/18/18	**Analytical Method:**	SW8021B/8015Bm
Project:	2018-18; Green Tree Golf	**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
B2-15	1804A85-005A	Soil	04/18/2018	GC7 04191828.D	156750

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	04/20/2018 01:58
MTBE	ND	0.050	1	04/20/2018 01:58
Benzene	ND	0.0050	1	04/20/2018 01:58
Toluene	ND	0.0050	1	04/20/2018 01:58
Ethylbenzene	ND	0.0050	1	04/20/2018 01:58
Xylenes	ND	0.015	1	04/20/2018 01:58

Surrogates	REC (%)	Limits	
2-Fluorotoluene	81	62-126	04/20/2018 01:58

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-20	1804A85-006A	Soil	04/18/2018	GC7 04191829.D	156750

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	04/20/2018 02:27
MTBE	ND	0.050	1	04/20/2018 02:27
Benzene	ND	0.0050	1	04/20/2018 02:27
Toluene	ND	0.0050	1	04/20/2018 02:27
Ethylbenzene	ND	0.0050	1	04/20/2018 02:27
Xylenes	ND	0.015	1	04/20/2018 02:27

Surrogates	REC (%)	Limits	
2-Fluorotoluene	82	62-126	04/20/2018 02:27

Analyst(s): IA

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW5030B
Date Prepared:	4/20/18-4/21/18	**Analytical Method:**	SW8021B/8015Bm
Project:	2018-18; Green Tree Golf	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	**1804A85-007A**	**Water**	**04/18/2018**	**GC3 04191831.D**	**156906**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	04/20/2018 04:06
MTBE	ND	5.0	1	04/20/2018 04:06
Benzene	ND	0.50	1	04/20/2018 04:06
Toluene	ND	0.50	1	04/20/2018 04:06
Ethylbenzene	ND	0.50	1	04/20/2018 04:06
Xylenes	ND	0.50	1	04/20/2018 04:06

Surrogates	REC (%)	Limits	
aaa-TFT	100	90-117	04/20/2018 04:06

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	**1804A85-008A**	**Water**	**04/18/2018**	**GC3 04201839.D**	**156906**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	04/21/2018 07:18
MTBE	**5.4**	5.0	1	04/21/2018 07:18
Benzene	ND	0.50	1	04/21/2018 07:18
Toluene	ND	0.50	1	04/21/2018 07:18
Ethylbenzene	ND	0.50	1	04/21/2018 07:18
Xylenes	ND	0.50	1	04/21/2018 07:18

Surrogates	REC (%)	Limits	
aaa-TFT	97	90-117	04/21/2018 07:18

Analyst(s): IA

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW3050B
Date Prepared:	4/18/18-4/25/18	**Analytical Method:**	SW6020
Project:	2018-18; Green Tree Golf	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-10	1804A85-001A	Soil	04/18/2018	ICP-MS2 066SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**8.2**	0.50	1	04/20/2018 17:21

Surrogates	REC (%)	Limits	
Terbium	96	70-130	04/20/2018 17:21

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-15	1804A85-002A	Soil	04/18/2018	ICP-MS2 067SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**8.0**	0.50	1	04/20/2018 17:27

Surrogates	REC (%)	Limits	
Terbium	89	70-130	04/20/2018 17:27

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-20	1804A85-003A	Soil	04/18/2018	ICP-MS2 068SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**5.9**	0.50	1	04/20/2018 17:33

Surrogates	REC (%)	Limits	
Terbium	92	70-130	04/20/2018 17:33

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-10	1804A85-004A	Soil	04/18/2018	ICP-MS2 069SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**9.7**	0.50	1	04/20/2018 17:39

Surrogates	REC (%)	Limits	
Terbium	83	70-130	04/20/2018 17:39

Analyst(s): DB

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW3050B
Date Prepared:	4/18/18-4/25/18	**Analytical Method:**	SW6020
Project:	2018-18; Green Tree Golf	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-15	1804A85-005A	Soil	04/18/2018	ICP-MS2 070SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**4.9**	0.50	1	04/20/2018 17:45

Surrogates	REC (%)	Limits	
Terbium	90	70-130	04/20/2018 17:45

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-20	1804A85-006A	Soil	04/18/2018	ICP-MS2 071SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**6.3**	0.50	1	04/20/2018 17:51

Surrogates	REC (%)	Limits	
Terbium	90	70-130	04/20/2018 17:51

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L1-1	1804A85-009A	Soil	04/18/2018	ICP-MS2 072SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**49**	0.50	1	04/20/2018 17:57

Surrogates	REC (%)	Limits	
Terbium	92	70-130	04/20/2018 17:57

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L1-2	1804A85-010A	Soil	04/18/2018	ICP-MS2 073SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**54**	0.50	1	04/20/2018 18:03

Surrogates	REC (%)	Limits	
Terbium	92	70-130	04/20/2018 18:03

Analyst(s): DB

(Cont.)

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW3050B
Date Prepared:	4/18/18-4/25/18	**Analytical Method:**	SW6020
Project:	2018-18; Green Tree Golf	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L2-1	1804A85-011A	Soil	04/18/2018	ICP-MS2 077SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**210**	0.50	1	04/20/2018 18:28

Surrogates	REC (%)	Limits	
Terbium	87	70-130	04/20/2018 18:28

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L2-2	1804A85-012A	Soil	04/18/2018	ICP-MS2 078SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**70**	0.50	1	04/20/2018 18:34

Surrogates	REC (%)	Limits	
Terbium	96	70-130	04/20/2018 18:34

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L3-1	1804A85-013A	Soil	04/18/2018	ICP-MS2 079SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**64**	0.50	1	04/20/2018 18:40

Surrogates	REC (%)	Limits	
Terbium	91	70-130	04/20/2018 18:40

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L3-2	1804A85-014A	Soil	04/18/2018	ICP-MS2 080SMPL.D	156758

Analytes	Result	RL	DF	Date Analyzed
Lead	**150**	0.50	1	04/20/2018 18:46

Surrogates	REC (%)	Limits	
Terbium	97	70-130	04/20/2018 18:46

Analyst(s): DB

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW3050B
Date Prepared:	4/18/18-4/25/18	**Analytical Method:**	SW6020
Project:	2018-18; Green Tree Golf	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L4-1	1804A85-015A	Soil	04/18/2018	ICP-MS2 081SMPL.D	156744

Analytes	Result	RL	DF	Date Analyzed
Lead	**13**	0.50	1	04/20/2018 18:52

Surrogates	REC (%)	Limits	
Terbium	91	70-130	04/20/2018 18:52

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L4-2	1804A85-016A	Soil	04/18/2018	ICP-MS1 015SMPL.D	156765

Analytes	Result	RL	DF	Date Analyzed
Lead	**18**	0.50	1	04/19/2018 23:12

Surrogates	REC (%)	Limits	
Terbium	98	70-130	04/19/2018 23:12

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L5-1	1804A85-017A	Soil	04/18/2018	ICP-MS2 082SMPL.D	156765

Analytes	Result	RL	DF	Date Analyzed
Lead	**9.5**	0.50	1	04/20/2018 18:58

Surrogates	REC (%)	Limits	
Terbium	94	70-130	04/20/2018 18:58

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
L5-2	1804A85-018A	Soil	04/18/2018	ICP-MS1 026SMPL.D	157153

Analytes	Result	RL	DF	Date Analyzed
Lead	**12**	0.50	1	04/26/2018 10:39

Surrogates	REC (%)	Limits	
Terbium	99	70-130	04/26/2018 10:39

Analyst(s): JC

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	E200.8
Date Prepared:	4/18/18	**Analytical Method:**	E200.8
Project:	2018-18; Green Tree Golf	**Unit:**	µg/L

Total Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1804A85-007C	Water	04/18/2018	ICP-MS3 062SMPL.D	156748

Analytes	Result	RL	DF	Date Analyzed
Lead	**91**	5.0	10	04/20/2018 14:11

Surrogates	REC (%)	Limits	
Terbium	101	70-130	04/20/2018 14:11

Analyst(s): JC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1804A85-008C	Water	04/18/2018	ICP-MS3 061SMPL.D	156748

Analytes	Result	RL	DF	Date Analyzed
Lead	**44**	5.0	10	04/20/2018 14:04

Surrogates	REC (%)	Limits	
Terbium	106	70-130	04/20/2018 14:04

Analyst(s): JC

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Analytical Report

Client: Geosolve, Inc.
Date Received: 4/18/18 16:20
Date Prepared: 4/18/18
Project: 2018-18; Green Tree Golf

WorkOrder: 1804A85
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-10	1804A85-001A	Soil	04/18/2018	GC9a 04201816.D	156710

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/20/2018 19:34
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/20/2018 19:34

Surrogates	REC (%)	Limits	
C9	88	74-123	04/20/2018 19:34

Analyst(s): JIS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-15	1804A85-002A	Soil	04/18/2018	GC9a 04201822.D	156710

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/20/2018 21:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/20/2018 21:30

Surrogates	REC (%)	Limits	
C9	88	74-123	04/20/2018 21:30

Analyst(s): JIS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-20	1804A85-003A	Soil	04/18/2018	GC9b 04191863.D	156710

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/20/2018 09:46
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/20/2018 09:46

Surrogates	REC (%)	Limits	
C9	92	74-123	04/20/2018 09:46

Analyst(s): JIS

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW3550B/3630C
Date Prepared:	4/18/18	**Analytical Method:**	SW8015B
Project:	2018-18; Green Tree Golf	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-10	1804A85-004A	Soil	04/18/2018	GC9b 04191861.D	156710

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/20/2018 09:08
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/20/2018 09:08

Surrogates	REC (%)	Limits	
C9	92	74-123	04/20/2018 09:08

Analyst(s): JIS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-15	1804A85-005A	Soil	04/18/2018	GC9a 04201812.D	156710

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/20/2018 18:17
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/20/2018 18:17

Surrogates	REC (%)	Limits	
C9	88	74-123	04/20/2018 18:17

Analyst(s): JIS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-20	1804A85-006A	Soil	04/18/2018	GC9b 04191857.D	156710

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	04/20/2018 07:50
TPH-Motor Oil (C18-C36)	ND	5.0	1	04/20/2018 07:50

Surrogates	REC (%)	Limits	
C9	92	74-123	04/20/2018 07:50

Analyst(s): JIS

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Analytical Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Received:	4/18/18 16:20	**Extraction Method:**	SW3510C/3630C
Date Prepared:	4/18/18	**Analytical Method:**	SW8015B
Project:	2018-18; Green Tree Golf	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons w/ Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1804A85-007B	Water	04/18/2018	GC9b 04201845.D	156723

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	04/21/2018 13:13
TPH-Motor Oil (C18-C36)	ND	250	1	04/21/2018 13:13

Surrogates	REC (%)	Limits	
C9	92	61-139	04/21/2018 13:13

Analyst(s): JIS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1804A85-008B	Water	04/18/2018	GC9b 04201827.D	156723

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	04/20/2018 23:27
TPH-Motor Oil (C18-C36)	ND	250	1	04/20/2018 23:27

Surrogates	REC (%)	Limits	
C9	93	61-139	04/20/2018 23:27

Analyst(s): JIS

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156750
Date Analyzed:	4/19/18	**Extraction Method:**	SW5030B
Instrument:	GC19, GC7	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156750 1804A70-002AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	1.0	-	-	-
MTBE	ND	0.050	-	-	-
Benzene	ND	0.0050	-	-	-
Toluene	ND	0.0050	-	-	-
Ethylbenzene	ND	0.0050	-	-	-
Xylenes	ND	0.015	-	-	-
Surrogate Recovery					
2-Fluorotoluene	0.0883		0.10	88	75-134

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(btex)	0.497	-	0.60	83	-	82-118	-	-
MTBE	0.104	-	0.10	104	-	61-119	-	-
Benzene	0.116	-	0.10	116	-	77-128	-	-
Toluene	0.113	-	0.10	113	-	74-132	-	-
Ethylbenzene	0.117	-	0.10	117	-	84-127	-	-
Xylenes	0.339	-	0.30	113	-	86-129	-	-
Surrogate Recovery								
2-Fluorotoluene	0.0954	-	0.10	95	-	75-134	-	-

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.589	0.590	0.60	ND	98	98	58-129	0	20
MTBE	0.0888	0.0884	0.10	ND	89	88	47-118	0.508	20
Benzene	0.0915	0.0886	0.10	ND	92	89	55-129	3.21	20
Toluene	0.0931	0.0892	0.10	ND	92	88	56-130	4.33	20
Ethylbenzene	0.0950	0.0932	0.10	ND	95	93	63-129	1.99	20
Xylenes	0.290	0.285	0.30	ND	96	94	64-131	1.67	20
Surrogate Recovery									
2-Fluorotoluene	0.0813	0.0806	0.10		81	81	62-126	0	20

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/19/18	**BatchID:**	156906
Date Analyzed:	4/19/18	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156906 1804A60-002AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	50	-	-	-
MTBE	ND	5.0	-	-	-
Benzene	ND	0.50	-	-	-
Toluene	ND	0.50	-	-	-
Ethylbenzene	ND	0.50	-	-	-
Xylenes	ND	0.50	-	-	-
Surrogate Recovery					
aaa-TFT	9.58		10	96	89-116

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(btex)	64.0	-	60	107	-	78-116	-	-
MTBE	9.70	-	10	97	-	72-122	-	-
Benzene	9.69	-	10	97	-	81-123	-	-
Toluene	10.1	-	10	101	-	83-129	-	-
Ethylbenzene	10.1	-	10	101	-	88-126	-	-
Xylenes	30.6	-	30	102	-	87-131	-	-
Surrogate Recovery								
aaa-TFT	9.55	-	10	95	-	89-116	-	-

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	65.5	66.3	60	ND	109	110	63-133	1.11	20
MTBE	8.81	9.24	10	ND	88	92	69-122	4.74	20
Benzene	9.51	9.75	10	ND	95	97	84-125	2.45	20
Toluene	9.94	10.1	10	ND	99	101	87-131	1.91	20
Ethylbenzene	9.89	10.1	10	ND	99	101	92-126	2.10	20
Xylenes	29.9	30.4	30	ND	100	102	88-132	1.89	20
Surrogate Recovery									
aaa-TFT	9.51	9.74	10		95	97	90-117	2.39	20

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156744
Date Analyzed:	4/19/18	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1, ICP-MS3	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156744 1804A04-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	51.9	0.50	50	-	104	75-125
Surrogate Recovery							
Terbium	513	520		500	103	104	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	55.6	54.1	50	3.552	104	101	75-125	2.88	20
Surrogate Recovery									
Terbium	534	527	500		107	105	70-130	1.34	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	3.77	3.552	6.14	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

(Cont.)

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156758
Date Analyzed:	4/19/18 - 4/20/18	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156758 1804A82-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	48.9	0.50	50	-	98	75-125
Surrogate Recovery							
Terbium	466	513		500	93	103	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	59.8	63.4	50	15.83	88	95	75-125	5.83	20
Surrogate Recovery									
Terbium	474	500	500		95	100	70-130	5.34	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	16.5	15.83	4.23	20

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156765
Date Analyzed:	4/19/18	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156765 1804A85-016AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	48.4	0.50	50	-	97	75-125
Surrogate Recovery							
Terbium	500	502		500	100	100	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	61.2	73.2	50	18.49	85	109	75-125	17.9	20
Surrogate Recovery									
Terbium	497	507	500		99	101	70-130	1.89	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	18.2	18.49	1.57	20

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

(Cont.)

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/25/18	**BatchID:**	157153
Date Analyzed:	4/25/18	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-157153 1804D84-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	45.5	0.50	50	-	91	75-125
Surrogate Recovery							
Terbium	479	480		500	96	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	54.1	53.8	50	6.798	95	94	75-125	0.445	20
Surrogate Recovery									
Terbium	501	502	500		100	100	70-130	0	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	7.18	6.798	5.62	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156748
Date Analyzed:	4/19/18	**Extraction Method:**	E200.8
Instrument:	ICP-MS1, ICP-MS2	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156748 1804A69-001EMS/MSD

QC Summary Report for Total Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	51.0	0.50	50	-	102	85-115
Surrogate Recovery							
Terbium	755	759		750	101	101	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	56.2	57.0	50	4.289	104	106	75-125	1.47	20
Surrogate Recovery									
Terbium	820	825	750		109	110	70-130	0.620	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	4.30	4.289	0.256	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156710
Date Analyzed:	4/19/18	**Extraction Method:**	SW3550B/3630C
Instrument:	GC6A	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS-156710 1804975-033AMS/MSD

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	38.0	1.0	40	-	95	75-128
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.9	24.9		25	91	100	72-122

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	38.6	38.2	40	ND	97	95	71-134	1.19	30
Surrogate Recovery									
C9	24.4	23.8	25		98	95	78-126	2.69	30

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Quality Control Report

Client:	Geosolve, Inc.	**WorkOrder:**	1804A85
Date Prepared:	4/18/18	**BatchID:**	156723
Date Analyzed:	4/19/18	**Extraction Method:**	SW3510C/3630C
Instrument:	GC9a	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	2018-18; Green Tree Golf	**Sample ID:**	MB/LCS/LCSD-156723

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	545		625	87	68-127

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	982	1010	1000	98	101	86-142	2.46	30
Surrogate Recovery								
C9	558	562	625	89	90	68-127	0.653	30

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1804A85 **ClientCode: GSP**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☐ Detection Summary ☐ Dry-Weight

Report to:
Rob Campbell
Geosolve, Inc.
1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566
(925) 963-1198 FAX:
Email: rcampbell@geosolve-inc.com
cc/3rd Party:
PO:
Project: 2018-18; Green Tree Golf

Bill to:
Lisa Campbell
Geosolve, Inc.
1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566
lcampbell@geosolve-inc.com

Requested TAT: 5 days;
Date Received: **04/18/2018**
Date Logged: **04/18/2018**

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
1804A85-001	B1-10	Soil	4/18/2018 00:00	☐	A		A		A							
1804A85-002	B1-15	Soil	4/18/2018 00:00	☐	A		A		A							
1804A85-003	B1-20	Soil	4/18/2018 00:00	☐	A		A		A							
1804A85-004	B2-10	Soil	4/18/2018 00:00	☐	A		A		A							
1804A85-005	B2-15	Soil	4/18/2018 00:00	☐	A		A		A							
1804A85-006	B2-20	Soil	4/18/2018 00:00	☐	A		A		A							
1804A85-007	B-1	Water	4/18/2018 00:00	☐		A		C		B						
1804A85-008	B-2	Water	4/18/2018 00:00	☐		A		C		B						
1804A85-009	L1-1	Soil	4/18/2018 00:00	☐			A									
1804A85-010	L1-2	Soil	4/18/2018 00:00	☐			A									
1804A85-011	L2-1	Soil	4/18/2018 00:00	☐			A									
1804A85-012	L2-2	Soil	4/18/2018 00:00	☐			A									
1804A85-013	L3-1	Soil	4/18/2018 00:00	☐			A									
1804A85-014	L3-2	Soil	4/18/2018 00:00	☐			A									
1804A85-015	L4-1	Soil	4/18/2018 00:00	☐			A									

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	PBMS_TTLC_S	4	PBMS_TTLC_W
5	TPH(DMO)WSG_S	6	TPH(DMO)WSG_W	7		8	
9		10		11		12	

Prepared by: Nancy Palacios

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.

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1804A85 **ClientCode: GSP**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☑ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☑ Detection Summary ☑ Dry-Weight

Report to:
Rob Campbell
Geosolve, Inc.
1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566
(925) 963-1198 FAX:

Email: rcampbell@geosolve-inc.com
cc/3rd Party:
PO:
Project: 2018-18; Green Tree Golf

Bill to:
Lisa Campbell
Geosolve, Inc.
1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566
lcampbell@geosolve-inc.com

Requested TAT: 5 days;

Date Received: **04/18/2018**
Date Logged: **04/18/2018**

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
1804A85-016	L4-2	Soil	4/18/2018 00:00	☐			A									
1804A85-017	L5-1	Soil	4/18/2018 00:00	☐			A									
1804A85-018	L5-2	Soil	4/18/2018 00:00	☐			A									

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	PBMS_TTLC_S	4	PBMS_TTLC_W
5	TPH(DMO)WSG_S	6	TPH(DMO)WSG_W	7		8	
9		10		11		12	

Prepared by: Nancy Palacios

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.

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WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC. **Project:** 2018-18; Green Tree Golf **Work Order:** 1804A85
Client Contact: Rob Campbell **QC Level:** LEVEL 2
Contact's Email: rcampbell@geosolve-inc.com **Comments:** **Date Logged:** 4/18/2018

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ 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
1804A85-001A	B1-10	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	☐	4/18/2018	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1804A85-002A	B1-15	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	☐	4/18/2018	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1804A85-003A	B1-20	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	☐	4/18/2018	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1804A85-004A	B2-10	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	☐	4/18/2018	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1804A85-005A	B2-15	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	☐	4/18/2018	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1804A85-006A	B2-20	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	☐	4/18/2018	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.

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http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC. **Project:** 2018-18; Green Tree Golf **Work Order:** 1804A85
Client Contact: Rob Campbell **QC Level:** LEVEL 2
Contact's Email: rcampbell@geosolve-inc.com **Comments:** **Date Logged:** 4/18/2018

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ 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
1804A85-006A	B2-20	Soil	SW6020 (Lead)	1	Acetate Liner	☐	4/18/2018	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1804A85-007A	B-1	Water	SW8021B/8015Bm (G/MBTEX)	2	aVOA, Unpres	☐	4/18/2018	5 days	Present	☐	
1804A85-007B	B-1	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA, Unpres	☐	4/18/2018	5 days	Present	☐	
1804A85-007C	B-1	Water	E200.8 (Lead) (Total)	1	250mL HDPE w/ HNO3	☐	4/18/2018	5 days	Present	☐	
1804A85-008A	B-2	Water	SW8021B/8015Bm (G/MBTEX)	2	aVOA, Unpres	☐	4/18/2018	5 days	Present	☐	
1804A85-008B	B-2	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA, Unpres	☐	4/18/2018	5 days	Present	☐	
1804A85-008C	B-2	Water	E200.8 (Lead) (Total)	1	250mL HDPE w/ HNO3	☐	4/18/2018	5 days	Present	☐	
1804A85-009A	L1-1	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-010A	L1-2	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-011A	L2-1	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-012A	L2-2	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-013A	L3-1	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-014A	L3-2	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-015A	L4-1	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-016A	L4-2	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	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.

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WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC. **Project:** 2018-18; Green Tree Golf **Work Order:** 1804A85
Client Contact: Rob Campbell **QC Level:** LEVEL 2
Contact's Email: rcampbell@geosolve-inc.com **Comments:** **Date Logged:** 4/18/2018

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ 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
1804A85-017A	L5-1	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	5 days		☐	
1804A85-018A	L5-2	Soil	SW6020 (Lead)	1	mason Jar - 8oz	☐	4/18/2018	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).

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General COC

MAI Work Order # 1804A85

McCAMPBELL ANALYTICAL, INC.

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Telephone: (877) 252-9262 / Fax: (925) 252-9269
www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush | 2 Day Rush | 3 Day Rush | STD (X) | Quote #
J-Flag / MDL | ESL | Cleanup Approved | Bottle Order #
Delivery Format: PDF | GeoTracker EDF | EDD | Write On (DW) | EQuIS

Report To: Rob Campbell Bill To: GeoSolve, Inc.
Company: GeoSolve, Inc.
Email: rcampbell@geosolve-inc.com
Alt Email: Tele: 925-963-1198
Project Name: Green Tree Golf Project #: 2018-18
Project Location: Leisure Town Rd PO # 2018-18
Sampler Signature: Rob. Gell

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative	Analysis Requested
B1-10	4.18.18		1	Soil	Ice	X
B1-15			1			X
B1-20			1			X
B2-10			1			X
B2-15			1			X
B2-20			1	↓		X
B-1			5	Water	HNO3, HCl	X
B-2			5	↓	HNO3, HCl	X
L1-1			1	Soil		X
L1-2	↓		1	↓	↓	X

Analysis Requested:
- BTEX & TPH as Gas (8021/ 8015) MTBE
- TPH as Diesel (8015) + Motor Oil Without Silica Gel
- TPH as Diesel (8015) + Motor Oil With Silica Gel
- Total Oil & Grease (1664 / 9071) Without Silica Gel
- Total Petroleum Hydrocarbons - Oil & Grease (1664 / 9071) With Silica Gel
- Total Petroleum Hydrocarbons (418.1) With Silica Gel
- EPA 505/ 608 / 8081 (Cl Pesticides)
- EPA 608 / 8082 PCB's ; Aroclors only
- EPA 524.2 / 624 / 8260 (VOCs)
- EPA 525.2 / 625 / 8270 (SVOCs)
- EPA 8270 SIM / 8310 (PAHs / PNAs)
- CAM 17 Metals (200.8 / 6020)*
- Metals (200.8 / 6020)
- Baylands Requirements
- Lab to filter sample for dissolved metals analysis
- Total Lead

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Comments / Instructions

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Rob. Gell	4.18.18	1620		4/18/18	1620

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=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp 6.0 °C (wet) Initials RJ

Page 1 of 2

General COC

MAI Work Order # 1804A85

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CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush | 2 Day Rush | 3 Day Rush | STD (X) | Quote #
J-Flag / MDL | ESL | Cleanup Approved | Bottle Order #
Delivery Format: PDF | GeoTracker EDF | EDD | Write On (DW) | EQuIS

Report To: Rob Campbell Bill To: GeoSolve, Inc.
Company: GeoSolve, Inc.
Email: rcampbell@geosolve-inc.com
Alt Email: Tele: 925-963-1198
Project Name: Green Tree Golf Course Project #: 2018-18
Project Location: Lassen Town Rd PO # 2018-18
Sampler Signature: Rob. Campbell

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative
L2-1	4.18.18		1	soil	ice
L2-2	↓		1	↓	↓
L3-1			1		
L3-2			1		
L4-1			1		
L4-2			1		
L5-1			1		
L5-2			1		

Analysis Requested

BTEX & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015) + Motor Oil Without Silica Gel	TPH as Diesel (8015) + Motor Oil With Silica Gel	Total Oil & Grease (1664 / 9071) Without Silica Gel	Total Petroleum Hydrocarbons - Oil & Grease (1664 / 9071) With Silica Gel	Total Petroleum Hydrocarbons (418.1) With Silica Gel	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors only	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)*	Metals (200.8 / 6020)	Baylands Requirements	Lab to filter sample for dissolved metals analysis		Lead (7421)			
																	X	
																	X	
																	X	
																	X	
																	X	
																	X	
																	X	
																	X	

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Comments / Instructions

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Rob. Campbell	4.18.18	1020		4/18/18	1020

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=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp 6.0 °C Initials

wet

Page 2 of 2

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Sample Receipt Checklist

Client Name:	**Geosolve, Inc.**	Date and Time Received	**4/18/2018 16:20**
Project:	**2018-18; Green Tree Golf**	Date Logged:	**4/18/2018**
		Received by:	Jena Alfaro
WorkOrder №:	**1804A85** Matrix: Soil/Water	Logged by:	Nancy Palacios
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: 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; 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: