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SCS ENGINEERS

August 23, 2017
File No. 270375217

Mr. Mark Green, P.E., PTOE
City of Lee's Summit
220 SE Green Street
Lee's Summit, Missouri 64063

Re: **Proposal to Provide Environmental Services**
Phase I/Limited Phase II Environmental Site Assessment
Jefferson Street Properties

Dear Mr. Green:

SCS Engineers (SCS) is pleased to provide this scope of work and cost estimate to the City of Lee's Summit to perform limited Phase II site assessment activities to support the SW Jefferson Street road expansion project. This proposal has been prepared in response to the bid request for a Phase II Environmental Site Assessment (ESA), received via email on August 16, 2017. This letter briefly summarizes the project information and describes our recommended site assessment scope of work and estimated fees.

PROJECT INFORMATION

SCS understands the City is planning to widen SW Jefferson Street to three lanes between Persels and Oldham Roads. The road expansion is anticipated to be performed in the spring of 2018. As part of the road expansion, the City is considering acquiring additional easements and Right-of-Way for properties along the east side of SW Jefferson Street.

SCS has reviewed an environmental database report of the subject area, dated June 16, 2017, provided by the City with the request for proposal. The report identified six addresses in the work area associated with various State or Federal environmental databases. To assess the potential environmental liabilities associated with the properties considered for acquisition, SCS recommends performing a Phase I and Limited Phase II ESA. The Phase I ESA will provide additional historical data regarding the properties, which we anticipate will be helpful for identifying appropriate further (Phase II) assessment activities. Our recommended activities are described herein.

SCOPE OF WORK

Phase I Environmental Site Assessment

SCS will complete a Phase I ESA of the subject area in general accordance with *ASTM E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment* and the United States Environmental Protection Agency "All Appropriate Inquiry" Final Rule provisions (40 CFR Part 312). SCS's Phase I ESA process will include the following components.

- Site reconnaissance (site visit) of the subject properties.
- Interviews with past and/or present property owners or property managers.
- Review of reasonably ascertainable and practically reviewable historical site information and records including, but not limited to, aerial photographs, Sanborn insurance maps, and topographic maps.
- Review of reasonably ascertainable and practically reviewable federal and state regulatory databases.
- Review of reasonably ascertainable and practically reviewable prior assessment and survey reports.
- Interviews of local regulatory agencies, such as fire department, health department, and local planning and zoning departments as appropriate.

Phase I ESA Report

The results of the inquiry will be documented in a written report that will include an opinion as to whether the inquiry has identified a release or threatened release of hazardous substances and other statements specified under 40 CFR Part 312.21. To the extent that there are data gaps in the information developed in the course of conducting the above inquiries, SCS will comment upon the significance of these gaps with regard to the ability to identify conditions indicative of a release or threatened release of hazardous substances on the subject sites. All tasks will be conducted by, or under the direct supervision of, an Environmental Professional (EP) as defined by 40 CFR Part 312.10. The City agrees to coordinate access to the properties and provide any available documentation regarding operations and/or previous environmental assessments.

In accordance with 40 CFR Part 312.22, the Innocent Landowner defense provided by All Appropriate Inquiry must include the following information provided by the person seeking to establish said defense. These items are not the responsibility of the EP are not included in this proposed scope of work.

- Any specialized knowledge or experience of the person seeking to establish said defense.
- The relationship of the purchase price to the fair market value of the subject properties (assuming the sites are not contaminated).

- Any commonly known or reasonably ascertainable information about the subject properties.
- Title search (this information can be obtained by SCS for inclusion in the final report, although this is not required under the Standard and is not included in the proposed cost.)
- Chain of Title Review. A complete review of chain of title is not included in this scope of work. However, SCS will review the most recent property title records that are reasonably accessible through the County Recorder of Deeds. This will include searching for existing environmental liens and activity use limitations.

Additional reviews of state and regulatory agency files will be limited to information that can be obtained on-line or through telephone conversations with regulatory agency representatives.

We will submit preliminary Phase I ESA documentation electronically within two weeks of the receipt of written notice to proceed. The final Phase I ESA be combined with results of the Limited Phase II ESA, described below.

Phase II Environmental Site Assessment

To evaluate the potential impacts to soil and groundwater at the subject properties, limited site assessment activities will be performed. Up to ten probes are proposed to be advanced at the subject properties, near or downgradient of identified areas of potential environmental concern, as identified by the Phase I *recognized environmental conditions* (RECs). In addition, three probes will be advanced upgradient of the subject properties to obtain background analytical data. Probe locations are anticipated to be advanced to a maximum total depth of 25 feet below ground surface (bgs) for soil and groundwater sample collection. One surface soil sample (1 to 3 feet) will be collected from each boring, as well as a subsurface soil sample based on field screening measurements. Soil and groundwater samples will be collected as described in the following paragraphs.

Site Preparation

SCS assumes the City will coordinate and/or provide site access to the various properties for the field activities. SCS will clear utilities by contacting Missouri One Call prior to the Phase II field activities. SCS assumes that sufficient overhead clearance will allow the boring work to proceed without requiring shielding or other overhead utility provisions. SCS will prepare a site-specific Health and Safety Plan and will utilize a Quality Assurance Project Plan (QAPP) during the Phase II field activities.

Site Safety

As stated above, SCS will develop a safety plan to be used by our personnel during field services. It is anticipated that a modified EPA Level D work uniform consisting of hard hats, safety glasses, rubber gloves, and steel toed boots will be required by all personnel in the work area. This level of protection may be upgraded while sampling activities are being conducted if

petroleum or chemically saturated soils and/or liquids are encountered and there is increased risk for personal exposure. SCS personnel have completed EPA/OSHA 40-hour training and subsequent annual 8-hour refresher courses for work around hazardous materials per 29 CFR 1910.120.

Soil Sampling

SCS will mobilize its own direct push (Geoprobe®) sampling equipment and qualified personnel experienced in the operation of the unit to advance the proposed probe locations. Borings will be advanced to the top of groundwater or an estimated total depth of approximately 25 feet bgs for collection of soil samples, using a 3½-inch diameter Macro-Core (MC) Soil Sampler. The MC sampler will utilize disposable polyethylene liners to aid in preserving the integrity of the soil samples.

An SCS geologist will maintain boring logs to record field screening measurements, observations of soil type, soil colors, the presence of staining or odors, and the location and depth of samples collected. Soil samples will be continuously collected from each probe location. A portion of the soil samples will be utilized to perform field screening for volatile organic compounds (VOCs) using a photoionization detector (PID). One surface soil sample will be collected from the each of the soil probe locations, as well as a subsurface soil sample based on field screening. Soil samples will be transferred into laboratory supplied containers and placed in a cooler with ice to maintain a temperature near 4 degrees Celsius (°C) while being transported to the laboratory under standard chain-of-custody procedures.

Groundwater Sampling

Based on review of well logs in the subject site area, groundwater may be encountered at depths between approximately 10 to 20 feet bgs. The probes will be advanced to groundwater, refusal, or 25 feet bgs, whichever occurs first, for the collection of groundwater samples. Groundwater samples will be collected by advancing a Screen Point-15 Stainless Steel sampler to the desired depth. At depth, a new length of 1/4-inch (ID) polyethylene tubing will be inserted into the pipe equipped with a stainless steel foot valve and disposable bearing. The tubing collection system allows for rapid sample collection. If groundwater flow is sufficient, the tubing system can be utilized to "purge" the probe, allowing for the collection of a sample less laden with sediment.

Optionally, if groundwater is not readily available via the above method, SCS will install temporary PVC casings with a screen interval in the borings. The temporary casings will be allowed to sit overnight for the accumulation of groundwater, and then sampled as described above.

Upon retrieval to the surface, groundwater samples will be transferred into laboratory-supplied containers and placed in a cooler with ice to maintain a temperature near 4°C while being transported to the laboratory under standard chain-of-custody procedures.

Analytical Testing

Soil and groundwater samples will be collected from the proposed probe locations as described herein and submitted to ESC Lab Sciences (ESC) in Mt. Juliet, Tennessee for analysis of the following anticipated contaminants of concern:

- Volatile organic compounds (VOCs) and gasoline range total petroleum hydrocarbons (TPH-GRO) analysis by EPA Method 8260;
- Diesel and oil range total petroleum hydrocarbons (TPH-DRO/ORO) and poly-cyclic aromatic hydrocarbons (PAH) analysis by EPA Method 8270; and
- RCRA 8 metals analysis by EPA Methods 6010 and 7471.

One soil and one groundwater field duplicate will be collected and submitted for the same laboratory analysis as the original samples. One equipment rinsate blank will be collected and submitted for VOCs analysis. One trip blank will also be shipped with the samples and submitted analysis of VOCs. For purposes of this proposal, a standard turnaround time of 7 to 10 days will be requested.

Equipment Cleaning

Due to the potential for contamination at this site, sampling equipment will be cleaned prior to entering the site, between probe locations, and prior to departing the site. Cleaning activities will consist of an application of potable water and detergent (e.g. Alconox) with brushes, followed by a potable water rinse.

Waste Characterization/Disposal

SCS assumes groundwater investigative derived waste (IDW) will be non-hazardous. Soil cuttings and wastewater volumes are minimal when utilizing the above-described sampling methodologies. Sampling-derived wastes, including decontamination fluids and purge water, will be containerized, sampled for analysis, and disposed in an approved manner based on analytical results. Personal protective equipment will be disposed of as municipal solid waste.

Data Compilation and Report Preparation

Following completion of field activities and receipt of analytical data, a combination Phase I ESA and Limited Phase II ESA Report will be prepared. The Limited Phase II ESA portion of the report will include a summary of field methodology, boring location plan, boring logs and field screening data, laboratory analytical data, an assessment of the quality of the data collected, summary tables, and copies of laboratory reports and waste handling documentation. Analytical results will be compared to the Missouri Risk-Based Corrective Action (MRBCA) Default Target Levels (DTLs), the lowest action levels that trigger further assessment. An electronic version of the report will be provided to the City for review via email within four weeks of receipt of all analytical data. Printed copies of final reports can be provided if requested.

PROJECT FEE

SCS will complete the activities described herein for the estimated costs shown below.

Description	**Fee**
Phase I ESA	$4,313
Limited Phase II ESA	$20,272
Data Compilation and Reporting	$3,025
Total	**$27,610**

SCS will invoice this project on a time and materials basis in accordance with our approved contract rates, not to exceed the approved budget without prior approval. Our cost estimate is based on the following assumptions:

- The Phase II site investigation will consist of advancing up to 13 probes, each to a maximum total depth of 25 feet bgs. The field activities will be completed in two days; technician's hours are based on 2 hours roundtrip (per technician/professional) for mobilization, de-mobilization, and travel, and 20 hours (per technician/professional) for onsite work.

- Geologic conditions will allow samples to be collected utilizing the proposed Geoprobe methodology. If more difficult than anticipated conditions are encountered, a more powerful drilling rig may be necessary. SCS will provide a revised quote if a drill rig is required.

- Up to 13 proposed probe locations will be advanced to a maximum total depth of approximately 25 feet bgs; soil samples will be collected using a Geoprobe Macrocore sampler, and groundwater samples will be collected using a Geoprobe SP-15 sampler.

ACCEPTANCE OF WORK

We appreciate the opportunity to submit this proposal to the City of Lee's Summit to provide professional services associated with the performance of environmental assessment activities in support of the Jefferson Street project. If the proposed scope of work and fees presented herein meets your approval, we can proceed forward with a contract amendment work may begin by issuing a Purchase Order (PO) via the City's internal system to Stearns, Conrad, and Schmidt Consulting Engineers.

Please do not hesitate to call us (913) 681-0030 with questions or comments. Thank you for your consideration.

Sincerely,

Susan L. McCart

Susan L. McCart, P.E., P.G.
Senior Project Manager
SCS ENGINEERS

Anastasia Welch

Anastasia Welch, P.E.
Vice President
SCS ENGINEERS

Phase I ESA and Limited Phase II ESA
Jefferson Street Properties
Lee's Summit, Missouri

August 23, 2017

		RATE	x	QUANTITY	UNIT	=	COST
Task 1 - Phase I ESA							
Personnel							
Project Manager		$ 155.00	x	8	hours	=	$ 1,240.00
Project Professional - Site Recon		$ 95.00	x	9	hours	=	$ 855.00
Project Professional - Data Review and Reporting		$ 95.00	x	18	hours	=	$ 1,710.00
Expenses							
Utility Truck		$ 40.00	x	1	day	=	$ 40.00
Mileage		$ 0.75	x	50	miles	=	$ 37.50
Subcontractor							
Historical Reports, City Directories, Sanborn Maps		$ 431.25	x	1	each	=	$ 431.25
					Task 1 Total:		***$ 4,314***

		RATE	x	QUANTITY	UNIT	=	COST
Task 2a - Site Preparation (Coordination/Scheduling, Utilities, SHSP, QAPP)							
Personnel							
Project Manager		$ 155.00	x	4	hours	=	$ 620.00
Project Professional		$ 120.00	x	8	hours	=	$ 960.00
Task 2b - Phase II Site Assessment (Field Activities)							
Personnel							
Geologist		$ 95.00	x	16	hours	=	$ 1,520.00
Geologist - Travel		$ 95.00	x	2	hours	=	$ 190.00
Senior Field Technician		$ 75.00	x	16	hours	=	$ 1,200.00
Senior Field Technician - Travel		$ 75.00	x	2	hours	=	$ 150.00
					Personnel Subtotal:		***$ 4,640***
Expenses							
Truck with Trailer - Geoprobe Mobilization		$ 60.00	x	2	days	=	$ 120.00
Mileage - Geoprobe Mobilization		$ 0.85	x	50	miles	=	$ 42.50
Photoionization Detector		$ 100.00	x	2	days	=	$ 200.00
Full Day Meal Allowance (2 man crew)		$ 46.00	x	2	each	=	$ 92.00
Geoprobe		$ 750.00	x	2	days	=	$ 1,500.00
Soil Sampling Liners		$ 100.00	x	1	each	=	$ 100.00
Stainless Steel GW Points		$ 5.00	x	13	each	=	$ 65.00
Peristaltic Pump		$ 40.00	x	2	day	=	$ 80.00
Poly Tubing		$ 0.22	x	325	feet	=	$ 71.50
Bentonite (Probe Plugging)		$ 12.46	x	8	bags	=	$ 99.68
Quickcrete (Surface Patch)		$ 9.79	x	4	bags	=	$ 39.16
Temp Wells (If Needed)							
Screen (1" x 5' sections)		$ 10.24	x	13	each	=	$ 133.12
Riser (1" x 5' sections)		$ 7.12	x	52	each	=	$ 370.24
PVC Points		$ 4.45	x	13	each	=	$ 57.85
Filter Pack Sand		$ 7.57	x	13	bags	=	$ 98.41
Return Site Visit (Geologist)		$ 95.00	x	8	hours	=	$ 760.00
Return Site Visit (Expenses)		$ 100.00	x	1	lump sum	=	$ 100.00
					Expenses Subtotal:		***$ 3,929***
Soil Analytical	**Method**						
VOCs/GRO	*8260*	$ 48.60	x	27	samples	=	$ 1,312.20
TPH-DRO/ORO	*8270*	$ 70.00	x	27	samples	=	$ 1,890.00
PAHs	*8270*	$ 70.00	x	27	samples	=	$ 1,890.00
RCRA 8 Metals	*6010/7471*	$ 75.00	x	27	samples	=	$ 2,025.00

Note: Soil samples include two samples from each of 13 soil borings and one field duplicate.

Phase I ESA and Limited Phase II ESA
Jefferson Street Properties
Lee's Summit, Missouri

August 23, 2017

Groundwater Analytical	**Method**							
VOCs/GRO	*8260*	*$*	*70.00*	x	*14*	*samples*	= *$*	*980.00*
TPH-DRO/ORO	*8270*	*$*	*70.00*	x	*14*	*samples*	= *$*	*980.00*
PAHs	*8270*	*$*	*70.00*	x	*14*	*samples*	= *$*	*980.00*
RCRA 8 Metals	*6010/7471*	*$*	*40.00*	x	*14*	*samples*	= *$*	*560.00*
Rinsate Blank (VOCs)	*8260*	*$*	*70.00*	x	*1*	*samples*	= *$*	*70.00*
Trip Blank (VOCs)	*8260*	*$*	*70.00*	x	*1*	*samples*	= *$*	*70.00*
						Analytical Subtotal:	***$***	***10,757***

Note: Groundwater samples include one sample from each of 13 borings and one field duplicate.

Wastewater Disposal							
Wastewater Sampling for Disposal Authorization	*$*	*255.00*	x	*1*	*samples*	= *$*	*255.00*
Wastewater Disposal Cost	*$*	*690.00*	x	*1*	*lump sum*	= *$*	*690.00*
					Wastewater Disposal Subtotal:	***$***	***945***
					Task 2 Total:	***$***	***20,272***

	RATE		**x**	**QUANTITY**	**UNIT**	**=**	**COST**
Data Compilation and Reporting							
Personnel							
Project Manager	*$*	*155.00*	x	*4*	*hours*	= *$*	*620.00*
Staff Professional	*$*	*120.00*	x	*18*	*hours*	= *$*	*2,160.00*
CADD Technician	*$*	*90.00*	x	*2*	*hours*	= *$*	*180.00*
Clerical	*$*	*65.00*	x	*1*	*hour*	= *$*	*65.00*
					Personnel Subtotal:	***$***	***3,025***
					Task 3 Total:	***$***	***3,025***

Phase I ESA and Limited Phase II ESA Total: $ 27,610