OTG EnviroEngineering Solutions, Inc.

October 9, 2020

Ms. Nancy Humphrey
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

Subject: Proposal for Environmental Tasks at Two Sites,
City of Emeryville, California

Dear Ms. Humphrey:

OTG EnviroEngineering Solutions, Inc. (OTG) is pleased to present this proposal to City of Emeryville (the City) to conduct environmental tasks at the following two sites:

1. Fire Station #35 (FS#35, formerly Fire Station #2)
   Location: 6303 Hollis Street, Emeryville, CA
   ACDEH Case #RO61
   GeoTracker Global ID T0600101925

2. Emeryville Senior Center
   Location: 4321 Salem Street, Emeryville, CA
   ACDEH Case #RO3284
   GeoTracker Global ID T10000011179

FS#35 had two underground storage tanks (USTs) on site: one 1,000-gallon gasoline UST and one 1,000-gallon diesel UST, both of which were removed in October 1995. Since then, the site has been investigated under the supervision of Alameda County Department of Environmental Health (ACDEH). Currently, the site has six (6) groundwater monitoring wells and eight (8) vapor monitoring probes. Based on the information collected up to today, the case appears suitable for closure under the State Water Resources Control Board's Low Threat Underground Storage Tank Case Closure Policy (LTCP). Tasks presented in the next Section are based on this assumption.

The City originally planned to remove a 1,500-gallon heating oil UST located in front of the City-owned Veterans Memorial Building Senior Center (Sr. Center). However, when the UST was exposed on February 25, 2016, it was found that the UST was already filled with cement and fill pipe and delivery pipe were removed and capped. ACDEH then approved the closure of the UST in-place. A groundwater sample collected within the excavation pit reported 1,200 ug/L TPH-g, 3,700 ug/L TPH-d, 1,800 ug/L TPH-mo, 2.8 ug/L benzene and other petroleum hydrocarbon related VOCs. ACDEH issued a letter to the City (June 17, 2019) requesting site characterization and/or cleanup. Tasks presented in the next Section are based on available site information and ACDEH's requirement for characterization of UST sites.

SCOPE OF WORK

Task 1000 – FS#35

The six groundwater monitoring wells and the eight vapor monitoring probes are expected to be sampled one more time. All available date will then be incorporated into a Site Conceptual Model (SCM) for closure evaluation under the State LTCP program. If approved for case closure, all groundwater monitoring wells and vapor probes will be destroyed per State and County well destruction requirements. Task details include:

- Groundwater samples will be collected from each of the six monitoring wells per standard well sampling protocols. Samples will be analyzed for TPH-gas, TPH-diesel, and VOCs by EPA Method 8260. A monitoring report will be prepared to present analytical results.
- The eight vapor monitoring probes will be sampled per DTSC's protocols (Advisory – Active Soil Gas Investigation, CalEPA 2015). Vapor samples will be analyzed for TPH-g by TO-3 Method, for VOCs by TO-15 Method, and for fixed gases (oxygen, carbon monoxide, carbon dioxide, methane, and helium) by ASTM D1946 Method. A monitoring report will be prepared to present analytical results.
- A Site Conceptual Model (SCM) will be developed to incorporate all relevant investigation data. The model will be used for evaluation of case closure under the State LTCP program. This task also includes preparation of review summaries and attending meetings with regulators for case closure review.
- Once the case is approved for closure, the six groundwater monitoring wells and eight vapor monitoring probes will be destroyed per State and County well destruction standards. One of the vapor probes (SV-6) is located on the pedestrian sidewalk of 63rd Street. An encroachment permit will be obtained from City of Emeryville for its destruction and the concrete sidewalk will be repaired per City requirements.

Task 2000 – Sr. Center

In response to the ACDEH letter of June 17, 2019, the following tasks are proposed to characterize the extent of soil and groundwater impact from the in-place closed UST.

- A work plan will be prepared and submitted to ACDEH to characterize the extent of soil and groundwater impact by petroleum hydrocarbons.
- Three groundwater monitoring wells (2-in diameter and maximum 20-ft deep) and three additional 15-ft deep soil borings will be installed. Soil and groundwater samples will be collected for analyses of TPH-g, TPH-d, TPH-mo, BTEX, MTBE, and Naphthalene. An investigation report will be prepared. Since the UST is partially located beneath pedestrian sidewalk lane, it is anticipated that an encroachment permit from the City of

Emeryville will be required and traffic controls will be needed for the proposed investigation.

- The three wells will be monitored quarterly for one-year, and quarterly monitoring reports will be submitted to ACDEH.
- A well and surface water body survey will be conducted within ¼ mile radius of the site.
- At the completion of the one-year quarterly monitoring, a SCM will prepared to incorporate all relevant investigation data. The model will be used for evaluation of potential case closure under the State LTCP program. This task also includes preparation of review summaries and attending meetings with regulators.

COST ESTIMATE

The costs to perform the above scope of work are estimated as follows:

Task 1000 –	Fire Station #35	$59,102
Task 2000 –	Senior Center	$72,923
TOTAL		**$132,025**

Detailed breakdown of the estimated cost are presented in Tables 1 and 2. OTG proposes to perform the work on a time-and-materials basis, not exceeding the above estimated amount without first obtaining written approval from the City.

CONCLUSIONS

OTG appreciates the opportunity to present this proposal to the City of Emeryville and is looking forward to assisting you with this important project. Please call Xinggang Tong at (510) 612-0857 if you have questions or comments.

Sincerely,
OTG EnviroEngineering Solutions, Inc.

Xinggang Tong, PhD, PE
Principal

TABLE 1 - BREAKDOWN OF COST ESTIMATE
Tasks for Fire Station #35, Emeryville, CA

			Task 1100 - groundwat		Task 1200 - soil vapor		Task 1300 - SCM &		Task 1400 -destruction	
			monitoring per event		monitoring per event		closure support tasks		wells & vapor probes	
LABOR CATEGORY	Rate	Unit	#of unit	Cost	# of unit	Cost				
Clerk	$58	hr		$0		$0		$0		$0
Project assistant	$75	hr	2	$150	2	$150	4	$300	2	$150
Staff professional	$105	hr		$0		$0		$0		$0
Professional	$125	hr	16	$2,000	16	$2,000	32	$4,000	32	$4,000
Project professional	$140	hr		$0		$0		$0		$0
Senior project professional	$162	hr	28	$4,536	28	$4,536	48	$7,776	30	$4,860
Project manager	$175	hr	2	$350	2	$350	8	$1,400	4	$700
LABOR SUBTOTAL				$7,036		$7,036		$13,476		$9,710
OTHER DIRECT COSTS (ODC)										
Vehicle Charge	$100	per day	1	$100	1	$100		$0	1	$100
Drilling subcontract	estimate			$0		0		$0		$4,500
Permit fee for well destruction										$2,850
concrete sub for st restoration	estimate									$2,500
traffic control for st restoration	estimate									$3,000
Chem Analysis (8015 & 8260)	$165	per sample	7	$1,155	0	$0		$0	1	$165
Chem Analysis (TO-15, TO-3)	$265	per sample		$0	8	$2,120		$0		$0
Fixed Gas ASTM D1946	$80			$0	8	$640		$0		$0
Field supplies & consumables	estimate			$100		$150		$0		$200
Eq rental	estimate	per day	1	$240		$950		$0		
Waste disposal	estimate			$380		$0		$0		$500
Health & Safety Supplies	$36.00	per day	1	$36	1	$36		$0	1	$36
ODC SUBTOTAL				$2,011		$3,996		$0		$13,851
10% markup of ODC				$201		$400		$0.0		$1,385.1
Total by Tasks				**$9,248**		**$11,432**		**$13,476.0**		**$24,946**
Project Total Cost:				**$59,102**						

TABLE 2 - BREAKDOWN OF COST ESTIMATE
Tasks for Senior Center UST Case, Emeryville, CA

			Task 2100 - workplan & well installation		Task 2200 - groundwate monitoring per event		Task 2300 - survey of wells & water body		Task 2400 -SCM & regulatory support	
LABOR CATEGORY	Rate	Unit	#of unit	Cost	# of unit	Cost				
Clerk	$58	hr		$0		$0		$0		$0
Project assistant	$75	hr	4	$300		$0		$0	2	$150
Staff professional	$105	hr		$0		$0		$0		$0
Professional	$125	hr	24	$3,000	12	$1,500	16	$2,000	24	$3,000
Project professional	$140	hr		$0		$0		$0		$0
Senior project professional	$162	hr	48	$7,776	24	$3,888	24	$3,888	40	$6,480
Project manager	$175	hr	4	$700		$0		$0	2	$350
LABOR SUBTOTAL				$11,776		$5,388		$5,888		$9,980
OTHER DIRECT COSTS (ODC)										
Vehicle Charge	$100	per day	1	$100	1	$100		$0		$0
Drilling subcontract	estimate			$6,200		0		$0		$0
Permit fee for well construction				$1,800						
sub for utility survey				$600						
sub for traffic control	estimate			$3,000						
Chem Analysis (8015 & 8260)	$165	per sample	20	$3,300	4	$660		$0		$0
Field supplies & consumables	estimate			$150		$50		$0		$0
Eq rental	estimate	per day	1	$240		$240		$0		
Waste disposal	estimate			$800		$250		$0		
Health & Safety Supplies	$36.00	per day	1	$36	1	$36		$0		$0
ODC SUBTOTAL				$16,226		$1,336		$0		$0
10% markup of ODC				$1,623		$134		$0.0		$0.0
Total by Tasks				**$29,625**		**$6,858**		**$5,888.0**		**$9,980**
					4 events =	**$27,430**				
Project Total Cost:				**$72,923**						