May 7, 2021

Ms. Albiona Balliu
Sr Project Manager
City of Key West
1300 White Street
Key West, Florida 33040

SUBJECT: Proposal for Offsite Voluntary Source Removal
College Road Affordable Housing Project
Stock Island, Key West, Florida, 33040

1.0 INTRODUCTION

Tetra Tech, Inc. (Tt) is pleased to present this proposal to the City of Key West (City) to prepare a Voluntary Source Removal for the College Road Affordable Housing project. The purpose of this scope is to outline the remedial measures necessary to remove the offsite documented area of organochlorine pesticide (OCP) soil contamination identified by Tt in the Site Assessment Report Revision 1 dated October 22, 2020, Tt suggested that soils below Commercial Industrial Standards remain in place, based on the current and future land use of the offsite parcels to remain Commercial Industrial. However, the Florida Department of Environmental Protection (FDEP) and Florida Keys Aqueduct Authority (FKAA) did not concur with this recommendation and opted to remove soils that exceed Residential Direct Exposure (DER) and Leachability Based on Groundwater Criteria (LBOGC) Soil Clean Up Target Levels (SCTLs) established under Chapter 62-777, F.A.C. Table II.

The discharge originated on parcel ID #00072082-002200 located at 5220 (formerly 5224 Florida Keys Mosquito Control Unit) College Road, Key West FL, herein referred to as the "source property." The contaminated site ("site") as defined in Section 376.301, F.S., is larger than the source property. The following adjacent parcels are also part of the contaminated site. The adjacent parcel immediately northeast, listed as parcel ID# 00072080-001700, has a location address listed as 5226 College Road, and is owned by the FKAA. The adjacent parcel immediately to the east, listed as parcel ID# 00072082-003100, also has a location address listed as 5226 College Road, and is owned by the City of Key West. These adjacent parcels contain potable water storage tanks and other public water system components owned and operated by the FKAA.

Currently, there is no soil exceeding the Chapter 62-777, F.A.C, Table II DER SCTLs present on the proposed College Road Affordable Housing Project property. However, based on a portion of the north and east sidewall sample analytical information collected during the excavation, there is

limited soil exceedances present just inside the FKAA property boundary that are above the DER SCTLs, but they are below the Commercial/Industrial SCTLs for OCPs.

As a response to comments dated December 18, 2020, the FDEP recommended the removal of the documented OCP impacted soils on the adjacent parcel to the north and east of the Mosquito Control former chemical storage area. The majority of the OCP impacted soils were encountered in the 0.5 foot depth interval on the adjacent north parcel and the 0.5 to 3 foot interval on the adjacent east parcel. Estimates indicate about 525 sf (60 tons / 27 cy) of OCP impacted soils would need to be removed from these offsite areas. However, confirmation of the excavation area with 10 soil borings will be conducted prior to the excavation to better delineate the impacted areas. This work is scheduled to be completed on May 12, 2021. Please be informed that the actual excavation will be based on the results of the May 12, 2021, sampling event and the current areas of excavation are conceptual and not finalized. The current limits of the excavation are based on assumptions of widely spaced soil borings. We understand that the City is in need of a budgetary estimate at this time as a placeholder for the commission meeting. Based on the current plume size, we have an estimate of 27 cy of material that will need to be removed. To caveat this we have included budget for an additional excavating, hauling, disposal and oversite up to a total of 56 cy. We will only bill the City for the contingent effort if it is required, prorated to the amount required to be dealt with.

The FDEP also stated it would be beneficial to coordinate this work with the adjacent tenant and land owner (FKAA). The FKAA has signed an Inter Local Agreement (ILA) with the City of Key West with respect to this project. Based on the ILA, The FKAA has proposed to conduct the excavation with its own staff and personnel due to the presence of tanks and infrastructure in the proposed excavation areas.

This proposal was prepared at the request of the City in prior discussions. Tt recommends the following scope of work for the OCP Voluntary Source Removal (VSR).

2.0 VOLUNTARY SOURCE REMOVAL

2.1 Health and Safety Plan

Tetra Tech will prepare and employ an updated Site-Specific Health and Safety Plan (HASP) for the Tetra Tech controlled (non FKAA) activities conducted at the subject site which complies with the Occupational Safety and Health Administration (OSHA) guidelines specified in 29 CFR 1910.120. The HASP will include information concerning: suspected contaminants to be encountered; effects of the suspected contaminants on humans; site history; a map of restricted site safety boundaries; required detection and protective equipment; personnel site authorization; decontamination procedures; severe weather procedures; visual and written directions for hospital emergencies; and other essential health and safety information. Additionally, the HASP will include specific information related to the excavation, backfill, grading, and restoration activities. PLEASE BE INFORMED THAT THIS HASP WILL ONLY BE APPLIED TO THE EMPLOYEES OF TETRA TECH AND THEIR SUBCONTRACTOR PREFERRED DRILLING SOLUTIONS. THE FKAA WILL BE RESPOSNISBLE FOR THEIR OWN HEALTH AND

SAFETY AS IT APPLIES TO THE WORK COMPLETED BY THEIR EMPLOYEES AND SUBCONTRACTORS.

2.2 Permits

Tetra Tech has researched the City of Key West regulations to determine applicable permit requirements for this project. As needed, agency approvals or permits will be applied for and obtained prior to construction. FKAA and the City will be responsible for all permits necessary for construction.

This subsection identifies standard permits, as generally required, to implement the specified remedy. In conjunction with each permit is an estimate of the lead-time required under normal conditions to obtain the permit.

Permit Type	Responsible Agency	Normal Lead Time
Well abandonment / Installation	SFWMD	2 weeks

2.3 Underground Utilities

Any surface, overhead, or underground structure impediments are to be identified following mobilization. Per the Underground Facility Damage and Prevention and Safety Act, Sections 556.101 – 556.111, F.S., prior to implementation of the planned excavation, the Sunshine One Call service should contacted to perform a locate of the primary underground utilities (e.g., electric, telephone, water, sewer, gas) that service the subject properties. Underground work shall comply with Sections 553.60-553.64. F.S. The FKAA will be responsible for notifying all utilities within the proposed dig sites. TETRA TECH RECOMMENDS THAT A PRIVATE UTILITY LOCATING SERVICE BE CONTRACTED BY THE CITY AND FKAA PRIOR TO EXCAVATION.

2.4 Erosion and Sediment Pollution Control

Based on the relatively small footprint and limited depth of the planned excavation and governing regulations, a SWPPP and coverage under the General NPDES Permit for Construction Activities may not be required. However, the following Erosion and Sediment Pollution Control measures, at a minimum, should be undertaken by the FKAA and the City as Best Management Practices (BMPs):

- Installation of silt fences around the limits of excavation and any soil staging areas.
- Routine inspection and maintenance of silt fences.

Removal and disposal of soil erosion and sediment pollution control measures will be performed at the completion of site activities**.**

2.5 Site Preparation, Soil Excavation, Transportation, & Disposal

2.5.1 Site Preparation

The City and FKAA will be responsible for removing any equipment, vehicles, or other items from the excavation and staging areas.

2.5.2 Soil Excavation

The excavation area will be white-lined during mobilization activities. Exclusion zones should be installed around the work area using barricades and temporary fencing. Barricades should be placed, in addition to industry-typical bright orange plastic mesh, to keep pedestrians and vehicular traffic out of the construction and buffer zones. This is a commercial area and the noise during construction activities is not anticipated to be a concern.

Due to the contaminant concentrations in the soils, methods of dust control suppression should be utilized (e.g., water truck or onsite source). Mitigation for dust control will require the use of water trucks or similar type equipment.

2.5.3 Implementation

The recommended on-site remedy includes removal and disposal of contaminated soils from the site. The soil will be excavated down to a maximum depth of 3 feet bls within. Caution will be exercised for excavation activities to avoid damage to existing underground items (e.g., transmission lines and site infrastructure, etc.). It is anticipated that a portion of the excavation might be done at the water table interface. When and if encountered, saturated soils should be staged adjacent to the excavation and allowed to gravity drain back into the excavated area.

2.5.4 Transportation and Disposal

The on-site remedy is anticipated to generate approximately 60 tons of organochlorine pesticide contaminated soil for transportation to an approved landfill facility permitted to accept contaminated soil. Excavated soil will be direct loaded into rolloff containers and it will be picked up then transported as non-hazardous solid waste to the approved landfill for disposal. The final weighing will be performed at the disposal facility. The transportation and disposal will be paid according to these weight tickets. The contractor is responsible for ensuring that contaminated material is not deposited along the truck hauling route. In the event that material is spilled, the contractor must take prompt action to remove the material from the impacted surface. Tetra Tech and its contractor will be responsible for this task.

2.5.5 Site Restoration

This section identifies activities that will be associated with restoring the affected areas. In general, restoration will be to original lines and grades. All areas disturbed by the excavation activities should be restored/stabilized using permanent stabilization activities. No surface water or subsurface water flow patterns will be changed**.** The FKAA and a different City vendor will be responsible for site restoration**.**

2.5.6 Placement of Backfill

Once the required depth is achieved, the excavation will be backfilled by FKAA with the use of clean imported fill in maximum lifts of 12” followed by vibratory compaction to achieve a finished grade to the existing ground surface. If the bottom of the excavation contains moist or saturated soils, these should be backfilled with #57 stone to achieve adequate separation from the water table. The clean fill will be obtained certified clean through due diligence with analysis of natural borrow material, located near the site. Prior to bringing the backfill on-site, one soil sample will have been taken from the off-site source of clean backfill, tested using expedited laboratory analysis, data reviewed, and source of fill approved as specified in the Florida Department of Environmental Protection guidelines. Compaction tests should be performed at a rate of one test

per lift and results should be within an acceptable range. Sieve analysis shall be performed at a testing frequency of 1 test per 300 yd3.

2.5.7 Demobilization

Once the site is restored, demobilization will occur. The excavation equipment will be decontaminated before leaving the site by Tetra Tech/ Preferred Drilling Solutions. All rinse water will be captured at the temporary decon pad and containerized for analysis and disposal. The decon pad itself will also be deconstructed and placed into the rolloff upon completion.

3.0 POST-EXCAVATION MONITORING

3.1 Confirmation Soil Sampling

Confirmatory samples will be collected by Tetra Tech from each of the 4 sidewalls and excavation bottom for the purposes of achieving Residential SCTLs on each separate excavation. The sample intervals will be in accordance with FDEP guidelines and will be collected at 0-0.5, 0.5-2 and 2-3 feet.

3.2 Reporting

A construction completion report will be prepared by Tetra Tech following completion of field work. This report will document the actions taken, waste manifests, weight tickets, before-and-after photographs, and record drawings. The text of the report will be formatted in Microsoft Word® with the tables in Microsoft Excel.® Individual site figures, in AutoCAD, depicting the relative location of each sampling point will be prepared and a summation of analytical detections above standards. A hard copy and an electronic copy of the report will be submitted to the City.

4.0 PROJECT SCHEDULE, FEE, AND LIMITATIONS

Tt is prepared to begin implementation of this project immediately upon receipt of authorization to proceed from the City. After receipt of authorization to proceed from the City, the Construction Completion Report will be submitted to the City within 20 business days of completion of field activities which includes time allotted for laboratory turn-around.

For this proposal, we have assumed that one electronic and one hard copy of the report will be prepared and submitted to the City.

Tt proposes to perform the scope of work described herein on lump sum basis in accordance with the terms and conditions of our current MSA (#20-002) with the City. The proposed cost to complete the VSR is **$113,200**. A summary breakdown of our cost estimate to complete the scope of work is provided in Attachment B. For this proposal we have selected Jupiter Environmental Laboratories as the primary analytical laboratory. We have selected PDS as the drilling and excavation contractor.

Tt will keep the City abreast of anticipated changes, if any that may occur. We will not initiate additional work without your prior authorization. We appreciate the opportunity to submit this

proposal and look forward to working with the City on this project. If you have any questions or require additional information, please feel free to contact the undersigned at your earliest convenience.

Respectfully Submitted,
Tetra Tech, Inc.

Dave Frodsham
Project Manager

Accepted By:

Key West College Rd. VSR	_____
CONTRACT OR PROJECT NAME	CLIENT
	
_____	_____
By (PRINT NAME)	BY (PRINT NAME)
Project Manager	_____
TITLE	TITLE
5/7/21	_____
SIGNATURE DATE	SIGNATURE DATE

Cost Model:

CITY OF KEY WEST (CLIENT 55111) COLLEGE RD. VSR - PESTICIDES-ADD ON			TASK 1 SOIL EXCAVATION (60), AND CLEAN FILL SOIL SAMPLING (6), AUTOCADD PLAN GENERATION (12) (SOIL REMEDIATION ONSITE)		TASK 2 OFFSITE CONSTRUCTION COMPLETION REPORT		TASK 3 CONTINGENCY FOR EXTRA SOIL REMOVAL STANDBY ONSITE WITH EQUIPMENT		TOTAL	
NAME	TITLE	UNIT RATE	QTY	PRICE	QTY	PRICE	QTY	PRICE	QTY	PRICE
TETRA TECH STAFF										
OUELLETTE, SHAWN	ENG/SCI/PLANNER STAFF V	$ 140.00	9.0	$ 1,260.00	18.0	$2,520	-		27.0	$3,780
FRODSHAM, DAVID	ENG/SCI/PLANNER SENIOR STAFF II	$ 175.00	2.0	$ 350.00	4.0	$700	-		6.0	$1,050
BOBERG, LORI	PROJECT SUPPORT SERVICES I	$ 65.00	4.0	$ 260.00	-		-		4.0	$260
MARTINEZ RIVERA, FRANCISCO J.	ENG/SCI/PLANNER STAFF III	$ 120.00	13.0	$ 1,560.00	20.0	$2,400	-		33.0	$3,960
MC DONALD, ANA P	PROJECT SUPPORT SERVICES MANAGER	$ 172.00	-	$ -	-		-		-	
MCGAHEE, STUART E	SENIOR PRINCIPAL	$ 245.00	-	$ -	-		-		-	
MENDOZA, MICHAEL	ENG/SCI/PLANNER STAFF II	$ 110.00	-	$ -	-		-		-	
POLSKI, DENNIS V	ENG/SCI/PLANNER STAFF II	$ 110.00	-	$ -	-		-		-	
WARREN, CAPRICE M.	PROJECT SUPPORT SERVICES III	$ 124.00	3.0	$ 372.00	-		3.0	$372	6.0	$744
ZULOAGA, PATRICK	ENG/SCI/PLANNER SENIOR STAFF IV	$ 195.00	-	$ -	-		-		-	
PROCTOR, BRIAN	SENIOR PRINCIPAL	$ 245.00	$ -	$ -	-		-		-	
FROELICH, TAMI	ENG/SCI/PLANNER SENIOR STAFF IV	$ 195.00	$ -	$ -	-		-		-	
ENDICOTT, JESSICA	ENG/SCI/PLANNER STAFF III	$ 120.00	$ 66.00	$ 7,920.00	-		22.0	$2,640	88.0	$10,560
			$ -	$ -	-				-	
TOTAL LABOR COST			97.0	$ 11,722.00	42.0	$5,620	25.0	$3,012	164.0	$20,354
EXTERNAL SUBCONTRACTOR										
FKLS		$ 3,000.00	$ 1.00	$ 3,285.00	-	$ -		$ -	1.0	$3,285
PREFERRED DRILLING (DECONTAMINATION / SOIL TRANSPORT AND DISP		$ 34,082.00	$ 1.00	$ 37,320.00	-	$ -		$ -	1.0	$37,320
PREFERRED DRILLING (CONTINGENCY FOR EXTRA SOIL REMOVAL)		$ 25,000.00	$ -	$ -	-	$ -	$1	$ 27,375.00	1.0	$27,375
PREFERRED DRILLING (ONSITE WELL REINSTALL)			$ -	$ -	-	$ -		$ -	-	
PREFERRED DRILLING (OFFSITE ASSESSMENT)		$ 4,500.00	$ -	$ -	-	$ -		$ -	-	
PACE ANALYTICAL LABORATORIES (CLEAN FILL SAMPLING)		$ 1,400.00	$ 1.00	$ 1,533.00	-	$ -		$ -	1.0	$1,533
PACE ANALYTICAL LABORATORIES (OFFSITE SIDE WALL SAMPLING FAST T		$ 6,000.00	$ 1.00	$ 6,570.00	-	$ -	$1	$ 6,570.00	2.0	$13,140
PACE ANALYTICAL GROUNDWATER QUARTERLY SAMPLING		$ 1,000.00	$ -	$ -	-	$ -		$ -	-	
IDW DISPOSAL (DECONTAMINATION WATER)		$ 300.00	$ 7.00	$ 2,100.00		$ -		$ -	7.0	$2,100
TOTAL EXTERNAL SUBCONTRACTOR			11.0	$50,808	-			$33,945	13.0	$84,753
TRAVEL										
R/T AIRFARE		$ 500.00	$ -	$ -	-				-	
MILEAGE		$ 0.575	$ -	$ -	-				-	
RENTAL CAR W/FUEL		$ 100.00	5.0	$ 500.00	2.0	$200	$3	$300	10.0	$1,000
MISC. TRAVEL COSTS (GAS, PARKING, TOLLS)		$ 50.00	-	$ -	-				-	
LODGING		$ 300.00	5.0	$ 2,500.00	1.0	$500	$3	$1,500	9.0	$4,500
PER DIEM		$ 67.00	5.0	$ 335.00	1.0	$67	$3	$201	9.0	$603
									-	
TOTAL TRAVEL COSTS			15.0	$3,335	4.0	$767		$2,001	28.0	$6,103
OTHER DIRECT COSTS / RENTAL EQUIPMENT/LABORATORY										
SHIPPING		$ 120.00	$ 2.00	$ 240.00	-				2.0	$240
			$ -	$ -	-				-	
REPRODUCTION - B&W		$ 0.08	$ -	$ -	-				-	
REPRODUCTION - COLOR		$ 0.42	$ -	$ -	-		-		-	
MISC. EQUIP & SUPPLIES		$ 250.00	$ 5.00	$1,250	-		$2	$500	7.0	$1,750
									-	
TOTAL OTHER DIRECT COSTS			7.0	$1,490			$2	500.0	9.0	$1,990
TETRA TECH OWNED EQUIPMENT										
BOAT		$ 250.00	$ -	$ -	-				-	
									-	
TOTAL TT EQUIPMENT										
GRAND TOTAL				$67,355		$6,387		$39,458		$113,200