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July 7, 2017

Matt Thompson
Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
1300 West Clairemont Avenue
Eau Claire, WI 54701

**Subject: Change Order No. 15 for Environmental Services (DERF)
Interim Action
Former Kraft Cleaners
303-305 South 2nd Avenue, Wausau, Wisconsin
WDNR BRRTS No. 02-37-000294
AECOM Project No. 60299959**

Dear Mr. Thompson:

AECOM is submitting this Change Order for additional Interim Action services at Former Kraft Cleaners to modify the existing soil vapor extraction (SVE) system to address high-level source soil contamination remaining next to the apartment building at 113 Callon Street. Our Change Order also includes performing another set of confirmation soil borings for the purpose of checking the progress of source area remediation after the SVE system is shut off in late 2017 for the winter season. Consulting costs for tasks covered by this Change Order are based on hourly labor rates approved by the Wisconsin Department of Natural Resources (WDNR) on September 21, 2016.

Background

AECOM initiated an Interim Action in early 2014 to remediate tetrachloroethene (PCE) contaminated soil in the site's source area and to stop the migration of chlorinated volatile organic compound (CVOC) vapors detected beneath adjacent residential and commercial buildings. The Interim Action included installation of the SVE system having two vapor extraction wells. Operation of the SVE system started in June 2014.

In May 2014, a vapor mitigation system (i.e., a sub-slab depressurization system) was installed inside the basement of the adjacent apartment building at 113 Callon Street. The system installation was completed as a WDNR-mandated Immediate Action, in accordance with Chapter NR 708.05, WAC, to mitigate PCE and TCE vapor entering the building. System operation started in June 2014 and continues to operate at present.

In May 2015, the SVE system was expanded from two to six vapor extraction wells to remediate PCE source soil in a wider area and address CVOC soil vapors in the immediate vicinity of other buildings. The goal of the expanded Interim Action was to permanently reduce PCE levels in soil and CVOC vapors beneath adjacent buildings to levels protective of human health and the environment.

In April 2017, AECOM sampled 10 confirmation soil borings at the site to check the progress of PCE contaminated soil remediation using the SVE system. Results of the work were summarized in AECOM's Confirmation Soil Borings Report, dated May 16, 2017. PCE levels have been reduced site-wide to below NR 720 Industrial and Non-Industrial D-C RCLs and by approximately 80 percent to 90 percent from pre-remediation concentrations in the immediate source soil area.

The highest PCE levels remaining in soil were located immediately next to the apartment building at 113 Callon Street, including 7,100 µg/kg at 1 to 2 feet bgs and 14,700 µg/kg at 8 to 10 feet bgs, which

exceed the NR 720 RCL-gw for PCE and continue to pose a vapor intrusion (VI) risk. CVOCs were not detected below a depth of 14 feet bgs in the immediate source soil area.

CVOCs were not detected below a depth of 8 feet in outlying areas at the site. Analytical results for lateral limit confirmation borings suggest that further risk of VI to other buildings surrounding the source area is negligible, if not entirely eliminated.

The SVE system is currently operating using three of six vapor extraction wells (SVE-1, SVE-3, and SVE-5) to address soil contamination where PCE continues to pose a VI risk to the apartment building at 113 Callon Street. However, the effectiveness of the SVE system in reducing the threat of further VI to the building would be greatly improved by installing one additional vapor extraction well within the worst of the remaining contaminated soil in the summer of 2017.

Scope of Services

Additions to the Interim Action Scope of Services include the following:

1. Pre-Field Activities and Coordination

- a. Retain a subcontractor (Geiss Soil & Samples, LLC) to locate and clear underground utilities in the work area, drill and install one SVE well, transport and dispose of non-hazardous soil cuttings, and excavate approximately 30 linear feet of piping trench at the following location:
 - Next to the apartment building at 113 Callon Street, immediately north of the source area (see SVE-7 on enclosed site plan)
- b. Retain a subcontractor (Geiss Soil & Samples, LLC) to locate and clear underground utilities in the work area, advance confirmation soil borings (direct-push method), and transport and dispose of non-hazardous, investigation derived waste (IDW).

Note 1: AECOM solicited only one subcontractor bid for drilling and trenching services because AECOM maintains a continuing services subcontract agreement with Geiss Soil & Samples, LLC (Merrill, Wisconsin). The additional time and effort involved to solicit multiple bids from other drilling/trenching contractors, and to make a new subcontract agreement with the winning bidder would incur extra labor cost and likely cause a delay in construction of the additional SVE well.

Note 2: In accordance with AECOM's Standard Operating Procedure S3NA-405-PR1, underground utility locating will include calling Diggers Hotline, calling a private utility locating service for private properties, and hand clearing drilling locations to a depth of 5 feet.

- c. Retain a WDNR-certified laboratory (Pace Analytical Services) to analyze confirmation soil samples.
- d. Contact each adjacent property owner affected by the work (a total of three owners) by United States Mail to notify him/her of the fieldwork schedule and planned activities, and to coordinate site access.
- e. Contact the Lincoln County Landfill to obtain a waste generator profile approval for the off-site disposal of non-hazardous soil cuttings generated from borings and piping trench.

- f. Update the project-specific Safe Work Plan/Task Hazard Analysis (SWP/THA) for the site for additional services covered by this Change Order, which shall apply to AECOM personnel admitted to work on the project site.

2. SVE Well Installation, Trenching, Connection, SVE System Adjustments, and Waste Soil Disposal

- a. Drill and install one SVE well (2-inch diameter, Schedule 40 PVC casing and screen) to a maximum depth of 15 feet below ground surface near the location of previous confirmation boring CB-3 (see SVE-7 on enclosed site plan).

Note 3: The depth to groundwater is approximately 18 feet below ground surface.

- b. Excavate approximately 30 linear feet of trench (machine excavated) to a depth of 1 foot in the unpaved area next to the southwest corner of the apartment building at 113 Callon Street for the purpose of placing conveyance vacuum piping.
- c. Connect the interim action SVE trailer to the new SVE well using 2-inch diameter, Schedule 40 PVC piping. The piping run between the SVE trailer and SVE well will be buried in a shallow trench to minimize surface obstructions.
- d. Make adjustments to the SVE system as needed to incorporate and operate the new SVE well.
- e. Transport and dispose of non-hazardous, containerized soil cuttings at the Lincoln County Landfill.

3. Confirmation Borings, Sampling, Analysis, and Soil Cuttings Disposal

- a. Advance 10 soil borings to maximum depths of 8 and 14 feet below ground surface (bgs), depending on location, to confirm that PCE levels in the subsurface have been reduced to levels protective of human health and the environment. Proposed confirmation boring locations, including 3 immediate source area borings and 7 plume limit borings, are indicated on the enclosed site plan.
- b. Collect up to three confirmation soil samples for laboratory analysis from each of the 3 immediate source area borings at the following intervals:
 - One sample from the direct-contact zone (uppermost 4 feet)
 - One sample from an intermediate depth (6 to 8 feet bgs)
 - One sample from borehole bottom (12 to 14 feet bgs)
- c. Collect up to two confirmation soil samples for laboratory analysis from each of the 7 plume limit borings at the following intervals:
 - One sample from the direct-contact zone (uppermost 4 feet)
 - One sample from an intermediate depth (6 to 8 feet bgs)
- d. Laboratory analyze confirmation soil samples (a total of up to 23 samples) for volatile organic compounds (VOCs by EPA Method 8260) on normal, 10-day turnaround.

- e. Perform borehole closure in accordance with the requirements of the WAC, Chapter NR 141, upon completion of sampling. Prepare a borehole abandonment form for each soil boring (WDNR Form 3300-005).
- f. Photograph each confirmation boring location. Measure locations of confirmation borings from site features for use in preparing a site map.
- g. Transport and dispose of non-hazardous, containerized IDW (soil cuttings) at the Lincoln County Landfill.

4. Data Evaluation, Reporting, Evaluate Case Closure Scenarios, and Project Status Meeting

- a. Evaluate laboratory analytical results for confirmation samples against regulatory standards for soil established by NR 720, Wis. Admin. Code.
- b. Prepare an updated Confirmation Soil Borings Report (letter format) that summarizes the additional confirmation sampling and analysis findings. The updated report will include:
 - Descriptions and documentation of field and analytical procedures.
 - A tabulated summary of confirmation sample analytical results. Previous confirmation sample analytical results will be included with the table.
 - An updated site plan showing general site features, soil boring locations and confirmation sample analytical results.
 - Two updated cross-sections through the source area showing confirmation sample analytical results in profile.
 - Documentation, including completed field forms, laboratory analytical reports, sample chain of custody, and IDW disposal records.
- c. Submit one paper copy and one electronic copy of the updated report to the WCDA's director and WDNR's case manager.
- d. Evaluate feasible scenarios, estimated costs and timing to achieve case closure for the site based on the confirmation soil boring results.
- e. Coordinate and participate in a project status meeting at the WCDA's office in Wausau to review the following:
 - Results of confirmation soil borings
 - Feasible scenarios and estimates of cost to achieve case closure
 - Estimates of timing to achieve case closure

Assumptions

This Change Order is subject to the following assumptions:



1. Field work associated with the confirmation soil borings covered by this Change Order will be completed under one mobilization.
2. The local municipality will identify underground utility locations not covered by Diggers' Hotline. Location marking for such utilities will be provided at no cost to AECOM.
3. The confirmation borings will be sampled after the SVE system is shut down for the winter season.
4. Contaminated soil cuttings and waste soil generated from soil borings and trenching will be non-hazardous solid waste.

Cost

For informational purposes, the following is a summary of the total project costs (approved and proposed) for this site:

Original Bid	\$37,209.00	(approved August 27, 2008)
Change Order No. 1	\$13,980.00	(approved September 15, 2009)
Change Order No. 2	\$75,877.00	(approved May 24, 2013)
Change Order No. 3	\$16,446.00	(approved January 15, 2014)
Change Order No. 4 (no cost)	\$ 0.00	(approved March 27, 2014)
Change Order No. 5 (no cost)	\$ 0.00	(approved May 9, 2014)
Change Order No. 6	\$30,180.00	(approved April 28, 2014)
Change Order No. 7	\$28,378.00	(approved June 26, 2014)
Change Order No. 8	\$84,445.00	(approved November 13, 2014)
Change Order No. 9	\$60,523.00	(approved February 12, 2015)
Change Order No. 10 (email only)	\$1,083.00	(approved May 4, 2015)
Change Order No. 11 (email only)	\$3,365.00	(approved September 10, 2015)
Change Order No. 12	\$99,786.00	(approved December 4, 2015)
Change Order No. 13	\$9,317.00	(approved March 1, 2016)
Change Order No. 14	<u>\$12,586.00</u>	(approved November 11, 2016)
Subtotal (DERF approved to date)	\$473,175.00	
Change Order No. 15 (Interim Action)	<u>\$27,651.00</u>	(proposed)
Total Project Cost	\$500,826.00	

A detailed breakdown of estimated costs for the additional Interim Action services covered by this Change Order is provided on the enclosed Dry Cleaner Environmental Response Fund (DERF) Cost Estimate Sheets (Form 4400-233).

Schedule

The estimated schedule for Interim Action tasks covered by this change order is as follows:

1. Installation and connection of new SVE well (SVE-7): July 2017
2. Confirmation soil borings, sampling and analysis: November/December 2017
3. Updated Confirmation Soil Borings Report: February/March 2018
4. Project Status Meeting in Wausau: April 2018



Schedules are subject to change based on WDNR and WCDA approvals for project funding.

AECOM will initiate the proposed additional services following approval of this Change Order by the WDNR and WCDA.

Please contact Kyle Wagoner at 715-342-3038 if you have any questions or need further assistance.

Sincerely,

Kyle W. Wagoner, P.G., CHMM
Project Manager
kyle.wagoner@aecom.com
715-342-3038

David S. Senfelds, P.E., CHMM
Operations Manager, Environment
david.senfelds@aecom.com
715-342-3039

Enclosures: Site Plan Showing Proposed Confirmation Soil Boring Locations
DERF Cost Estimate Sheets

c/encl: Kevin Fabel, Environmental Coordinator, City of Wausau (electronic only)
Christian Schock, Director, Wausau Community Development Authority (electronic only)
Russell Wilson, Wausau Community Development Authority (electronic only)

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Consultant Name: AECOM
Site Name: Fmr Kraft Cleaners
BRRTS #:02-37-000294

Site Information

Site Name: Former Kraft Cleaners

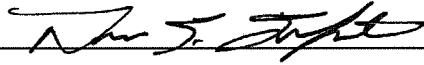
Consultant Name: AECOM

Applicant Name: Wausau Community
Development Authority

Interim Action Summary (DERF Change Order No. 15)

Drilling Costs Total =	\$4,789.00
Analytical Costs Total =	\$1,495.00
Consulting Costs =	\$20,152.00
Misc Costs Total =	\$1,215.00
Grand Total (Interim Action) =	\$27,651.00

Consultant Signature



Date

7/7/17

Please attach to these forms a written narrative specifying how the tasks outlined in these sheets will be performed.

Note: Labor Rates approved by WDNR September 21, 2016

Drilling Costs						
Task	Interval or Unit	Number of Borings, Wells or Quantity	Number of Samples	Total Number Feet Drilled/Abandoned	Cost/feet, Sample or Well	Total Cost
SVE Well Installation and Completion (Geiss, Hollow-Stem Auger)						
Drill (4.25" ID Hollow Stem Auger)	0 to 15ft	1		15	\$8.50	\$127.50
Install 2" Sch. 40 PVC SVE Well w/ 3 ft. stickup	feet	1		15	\$15.50	\$232.50
Flush-mount Well Cover - SVE Well	each	1			\$150.00	\$150.00
Locate U/G Utilities, Private Utility Locator	hour	3			\$250.00	\$750.00
Mobe/Demobe (Crew & Equip't)	each	1			\$250.00	\$250.00
Drums for Waste Soil (55 gallon, empty) - SVE Well & Piping Trench	each	4			\$50.00	\$200.00
Auger Borings (no sampling)						
						\$0.00
Auger Borings (specify split spoon sampling interval)						
						\$0.00
Confirmation Soil Borings (Geiss, Direct-Push Method)						
Confirmation Soil Borings & Sampling (soil only)	0-8 ft (7); 0-14 ft (3)	10 borings		98	\$7.00	\$686.00
Mobe/Demobe (Crew & Equip't)	lump sum	1			\$250.00	\$250.00
Locate Underground Utilities (Diggers Hotline only)	lump sum	1			\$25.00	\$25.00
Borehole Abandonment	per foot	10 borings		98	\$1.00	\$98.00
(asphalt, penetrate & patch, 6 in.)	each	5			\$10.00	\$50.00
Penetrate Pavements (concrete, penetrate & patch, 6 in.)	each	5			\$20.00	\$100.00
Containers for Soil Cuttings (5 gallon, plastic pail w/ snap-on lid, empty)	each	3			\$15.00	\$45.00
Well Development (if done by subcontractor)						
						\$0.00
Other (Geiss)						
Trenching by Machine (1' W x 1' Dp), includes mobe - SVE Well Piping Run	linear foot	30			\$42.50	\$1,275.00
Skid Stear to Handle Waste Soil - SVE Well & Piping Trench	day	1			\$550.00	\$550.00
Total Drilling Costs						\$4,789.00

Parameter	WI Certified Lab			Field Test/Field Kit			Mobile Lab			Total Costs
	\$/sample	# samples	Method Used	\$/sample	# samples	Method Used	\$/Sample \$/Day	# Samples # Days	Method Used	
Solids Analysis (Pace)										
VOCs (EPA 8260)	\$65.00	23	8260							\$1,495.00
TCLP VOCs (EPA 1311)										\$0.00
RCRA Metals										\$0.00
Duplicate Analyses										\$0.00
Blank Analyses										\$0.00
Other: (Specify)										\$0.00
Water Analysis (low flow sampling assumed unless otherwise indicated at bottom of this sheet)										
VOCs (EPA 8260)										\$0.00
Dissolved Oxygen*										\$0.00
Temperature*										\$0.00
Ferrous Iron*										\$0.00
Sulfate*										\$0.00
Sulfide*										\$0.00
ORP*										\$0.00
pH*										\$0.00
TOC*										\$0.00
Alkalinity*										\$0.00
Chloride*										\$0.00
Spec. Conductance*										\$0.00
Ethene/Ethane/Methane*										\$0.00
Hydrogen*										\$0.00
Carbon Dioxide*										\$0.00
RCRA Metals										\$0.00
Duplicate Analyses										\$0.00
Blank Analyses										\$0.00
Other: (Specify)										\$0.00
Air Analysis										
										\$0.00
										\$0.00
Waste Analyses (soil/water)										
										\$0.00
										\$0.00
Miscellaneous (specify)										
										\$0.00
										\$0.00
Charge for Mobile Lab (indicate # days and daily fee)										
Total Analytical Costs										\$1,495.00

* Natural Attenuation parameters required for consideration of NA as remedy.

Position (specify)	New Hourly Rate	SVE Well Install'n: Pre-Field Activit's & Coord'n, Drilling, Trench'g, Connect'n, SVE System Adjust's & Waste Soil Disposal	Confirmation Soil Borings: Pre-Field Activit's & Coord'n, Drilling, Sampling, Analysis, and Soil Cuttings Disposal	Data Eval'n, Reporting & Evaluate Closure Scenarios	Project Manage't, Sr. Review, Admin/Accounting & Meetings			Total Costs
Professional Staff								
Principal	\$ 170.00			3	4			\$1,190.00
Sr. Consultant	\$ 153.00	15	15	10	10			\$7,650.00
Consultant II	\$ 122.00	1						\$122.00
Technical Project Staff	\$ 93.00	3	3	24	4			\$3,162.00
Technical Staff	\$ 88.00	3	3	1				\$616.00
								\$0.00
Field Staff								
Consultant II	\$ 122.00	30						\$3,660.00
Technical Staff	\$ 88.00	15	16					\$2,728.00
								\$0.00
Office Support Staff								
CAD/Drafting	\$ 88.00			6				\$528.00
Clerical	\$ 62.00			5	3			\$496.00
								\$0.00
Total Consulting Costs								\$20,152.00

DERF Interim Action Misc Costs

Major Activity	Specifications	Commodity Unit (specify)	Unit Rate	Number of Units	Total Cost
Waste Soil & IDW Disposal (Geiss)					
Transport & Dispose of Drums at Lincoln County LF - SVE Well & Piping Trench	Waste Soil	55 gal steel drum	\$ 145.00	4	\$580.00
IDW Disposal at Lincoln County Landfill (est. 3 pails, non-haz) - Confirm'n Soil Borings	Soil Cuttings	5 gal plastic pail	\$ 45.00	3	\$135.00
Equipment Rental (list and include shipping costs if applicable)					
					\$0.00
					\$0.00
Field Supplies (list)					
					\$0.00
					\$0.00
Surveying					
					\$0.00
Personal Protection Equipment (list)					
					\$0.00
Sample Shipping Costs					
					\$0.00
Other (specify)					
Parts & Materials (SVE Well, Piping Trench & Connections)	allowance		\$ 500.00	1	\$500.00
					\$0.00
Total Miscellaneous Costs					\$1,215.00

Reminders: DERF does not reimburse for attorney, closure or GIS fees. Mileage and meals are also non-reimbursable. Also, costs to prepare a reimbursement application and discuss the application with the department are not reimbursable. No expedited shipping w/o prior PM approval.

DERF Co #15

DRILLING & TRENCHING SERVICES QUOTATION (SVE-7)
FORMER KRAFT CLEANERS - INTERIM ACTION
 303-305 South 2nd Avenue, Wausau, Wisconsin
 AECOM Project No. 60299959

ITEMS REQUIRED

ITEM	UNITS	QUANTITY	UNIT PRICE	COST
Mobilization & Per Diem	per day	1	\$ 250.00	\$ 250.00
Locate Underground Utilities (Digger's Hotline and Private Utility Locator)	hour lump sum	3	\$ 250.00	\$ 750.00
SVE Well Boring No. of Borings: 1 Drilling Method: HSA Auger Size: 4.25 in. I.D. Sampling: None Depth: 15 ft.	per foot	15	\$ 8.50 / ft.	\$ 127.50
SVE Well Installation No. of Wells: 1 Depth: 15 ft. Casing: 2 in. dia., Schedule 40 PVC Stickup Height w/ slip cap: 3 ft. Screen Size: 0.010 in. Slot, 10 ft. length	per foot	15	\$ 15.50 / ft.	\$ 232.50
Well Covers No. of Covers: 1 Type: Steel Flush-Mount w/ Bolt-Down Cover	each	1	\$ 150.00/cover	\$ 150.00
55-gallon drums (DOT approved)	each	4	\$ 75.00 / drum	\$ 300.00
SGS - Haul & Dispose of Drums No. of Drums: 4 Disposal at Lincoln County Landfill	each	4	\$ 145.00 / drum	\$ 580.00
Trenching (thru unpaved surface, 1' W x 1' Dp) <i>includes more</i>	linear foot	30	\$ 42.50 / ft.	\$ 1275.00
Skid Steer Rental (to manage soil cuttings)	per day	1	\$ 550.00	\$ 550.00
TOTAL				\$ 4215.00

Submitted By: Geiss Soil + Sample LLC
Company Name

Ginger Belgram
Company Representative Title

Ginger Belgram 6-29-17
Signature Date

KW
 6/29/2017

NOTE: ADR will only reimburse \$50 / drum (empty).

DRF Co #15

DRILLING SERVICES QUOTE
 Former Kraft Cleaners - Confirmation Soil Borings (Interim Action)
 303-305 South 2nd Avenue, Wausau, Wisconsin
 AECOM Project No. 60299959

ITEMS REQUIRED

ITEM	UNITS	QUANTITY	UNIT PRICE	COST
Mobilization	lump sum	1	\$ 250.00	\$ 250.00
Locate Underground Utilities (Digger's Hotline)	lump sum hour	1	\$ 25.00	\$ 25.00
Soil Borings No. of Borings: 10 Drilling Method: Direct Push Sampling: Continuous Depths: 8 feet (7) and 14 feet (3)	per foot	98	\$ 7.00 / ft.	\$ 686.00
Water Sampling	per sample	NA	\$ 35.00	NA
Borehole Abandonment	per foot	98	\$ 1.00 / ft.	\$ 98.00
Soil Cuttings Containers Provide 5-gallon plastic pails w/ snap-on lids	each	3	\$ 45.00	\$ 135.00
Soil Haul & Dispose of Soil Cuttings Estimated No. of Pails: 3 Disposal at Lincoln County Landfill	each	3	\$ 15.00	\$ 45.00
Penetrate Pavement Asphalt penetrate & patch (6 in. thick)	each	5	\$ 10.00	\$ 50.00
Penetrate Pavement Concrete penetrate & patch (6 in. thick)	each	5	\$ 20.00	\$ 100.00
Traffic Control	lump sum	NA	\$ 75.00	NA
			TOTAL	\$ 1389.00

Submitted By: Gess Soil & Samples
Ginger Belgram

Ginger Belgram 6/29/2017

Signature

Date

Krb