



Bruce Carter Associates, L.L.C.

ENVIRONMENTAL CONSULTANTS

AIR • WATER • SOLID WASTE • OSHA • REMEDIATION SERVICES

**RWP ADDENDUM 2
CLOSURE AND POST-CLOSURE
FORMER COLUMBUS WOOD TREATING
53 LAFAYETTE AVENUE
Columbus, Indiana 47201
Bruce Carter Associates, LLC
October 2, 2013**

1.0 BACKGROUND AND PURPOSE

1.1 Background

The former Columbus Wood Treating site, located at 53 Lafayette Avenue, includes a single parcel totaling 1.24 acres. Coal and coke processing appears to have been conducted on the site from 1885 to 1903 and wood treating operations began in the 1920's. Wood treating included the use of creosote and pentachlorophenol. The plant was closed in 1970 and the buildings were destroyed in a fire in 1971. All structures were removed and the site was covered with foundry sand fill.

The site was remediated in 2012 in accordance with a Remediation Work Plan (RWP), dated March 15, 2012, as prepared by Bruce Carter Associates, L.L.C. (BCA) and approved by the Indiana Brownfield Program (IBP). BCA provided technical observation for the remediation which was conducted by HIS Constructors, Inc (HIS) under contract to the Columbus Redevelopment Commission (CRC). Funding for the project was provided (mostly) through loans from the Indiana Finance Authority (IFA) with regulatory oversight from the IBP.

The remediation included primarily in-situ solidification/ stabilization of impacted on-site soil in the vadose zone, as well as some in the saturated zone. Other tasks included soil removal for landfill disposal, and removal and disposal of an underground storage tank (UST) and associated tank liquids. Upon completion, the treated area was covered with several feet of clean overburden soil, an impermeable geomembrane, 2½ feet of granular cover and topsoil and a vegetative cover. The soil remediation work was completed on June 30, 2012 and final tank residuals disposal was completed in August, 2012. A Closure Report, dated September 28, 2012, was submitted to and accepted by IBP. The RWP required the installation of additional soil borings/monitoring wells in the down-gradient direction from the site, and monitoring of groundwater from all on-site

and off-site wells every six months for a period of two years.

A total of 14 new monitoring wells (MW-15 to MW-22D) were installed on and downgradient of the site in August and September, 2012. The first round of post-remediation groundwater samples was collected from September 26-28, 2012. The results were submitted to the CRC and the IBP in a letter report dated November 5, 2012. The results of the first round of post-remediation groundwater samples indicated that the plume of impacted groundwater extended further downgradient beyond the limits of the new wells. Based on the first round of samples the IBP required the installation of three additional downgradient monitoring wells and two one-time groundwater probe samples.

The probes and wells were installed in February 2013 and the second full round of groundwater samples were collected from April 16 to May 2, 2013. The results were submitted to the CRC and IBP in a report dated July 11, 2013. Measurable free product was found to be present in two of the wells at and downgradient of the source of the plume. Based on the sampling results the plume was found to extend to the southeast beyond the downgradient wells.

1.2 Purpose

This document is Addendum 2 to the RWP dated March 15, 2012. The purpose of this Addendum is to establish the conditions necessary to receive a No Further Action letter. The City of Columbus seeks to close the site in accordance with IND. CODE 13-12-3-2 and 13-25-5-8.5 (as amended), the Risk Integrated System of Closure (RISC) guidance, and the 2012 Remediation Closure Guide (RCG) guidance (as amended). Specifically, the City seeks closure by reducing the source and implementing a risk management program to control future exposure pathways. Exposure pathways have or will be managed with institutional controls (ICs), or other appropriate measures to be implemented post-closure, including but not limited to environmental restrictive covenants (ERC) and/or an environmental restrictive ordinance (ERO). Potential exposure pathways include surface soil, subsurface soil, groundwater and vapor.

Surface Soil

Prior to remediation, surface soil on the site was determined to contain PAHs in excess of the RISC Residential Default Closure Levels (RDCLs), but not in excess of the Recreational or Industrial DCLs. Most (but not all) of the surface soil exceeding the RDCLs was removed or covered. The residential exposure pathway will be controlled through an IC, specifically, an ERC limiting land use to recreational or commercial/industrial.

Subsurface Soil

Prior to remediation, subsurface soil was found to exceed the ICL-direct and construction limits for SVOCs, mostly from about 7 to 20 feet. Vadose zone subsurface soil was remediated by treatment or removal of all soil exceeding the ICL-Direct from

the surface to 10 feet below grade, ICL-Construction from 10 to 20 feet, or an ICL-Direct value for PCP. Treated soils were covered by several feet of fill (containing <IDCL), a geomembrane, and 2.5 feet of clean fill, top soil and vegetative cover. The construction exposure pathway will be further controlled by an ERC requiring IDEM notification and appropriate protective measures prior to any excavation which penetrates to treated soil.

Migration to Groundwater

Soil on the site was found to exceed the limits for migration to groundwater. Most of the source material in the vadose zone was removed from the site or remediated by soil solidification/stabilization. The soil solidification/stabilization method was designed to reduce the potential migration to groundwater from the source material by reducing its permeability and leachability. Pilot tests for the design demonstrated permeability reduced to $<10^{-6}$ cm/sec and leachability by 97.5% (based on naphthalene and PCP in SPLP extracts). Further, a geomembrane was installed over the treated area to reduce groundwater infiltration into the treated area.

Groundwater

A groundwater plume (exceeding the residential levels) is present on and downgradient of the site. There are no active private wells (other than monitoring wells) in or near the plume. The exposure pathway will be controlled by an ERO or ERCs (or other appropriate measures) prohibiting wells for use of the groundwater (other than monitoring) applicable to all parcels affected by the plume and to a distance downgradient. This area is referred to as the Exposure Control Area (ECA) and is depicted on Figure F.

Vapor Intrusion

No structures are present on the site, but a single structure is present within 100 feet of the groundwater plume. Soil gas sampling is planned at the structure for the only groundwater compound (naphthalene) in excess of the current RCG vapor intrusion groundwater screening level. With respect to the potential for additional exposure due to groundwater plume migration, the stability of the plume will be monitored by post-closure groundwater monitoring. An ERC on the Site will require that prior to occupancy of any new structures, the potential for vapor intrusion will be assessed and IDEM will concur that there is no unacceptable risk or confirm that additional measures, including mitigation, is necessary to address the potential VI pathway.

2.0 SCOPE OF WORK

The sampling and analysis procedures will follow the Quality Assurance Project Plan and Standard Operating Procedures (QAPP and Field SOP) and those recommended by the IDEM 2001 RISC guidance (as updated through 2011) and the 2012 Remediation Closure Guide (RCG) (as updated through March 2013) where not addressed in the prior documents.

2.1 Closure Plan

The purpose of the Closure Plan is to provide the information necessary to complete the evaluation and elimination of exposure pathways. Specifically, the plan completes the characterization of the plume, and addresses whether the potential vapor intrusion exposure pathway is complete.

1. Soil Gas Sampling. Out of an abundance of caution and as an additional layer of protection, IDEM requested that two rounds of soil gas samples be collected from two locations adjacent to the nearby office building. See Appendix A for the approved SAP for this work.
2. Groundwater Plume Limit Delineation. To complete the characterization of groundwater off-site, BCA proposes to advance four (4) temporary wells/ groundwater direct push probe samples (B-32, B-33, B-34 and B-35) at the locations as shown on the attached Figure F. One permanent monitoring well will be installed near the downgradient limit of the plume. The locations are as follows:
 - The four temporary wells/ probes will be placed as shown in Figure F and will be driven to the base of the shallow water table aquifer. Soil samples will be collected continuously and logged (see soil sampling procedures below). A temporary well casing will be installed at the bottom of the boring and a groundwater sample collected (see groundwater sampling procedures below). Results of the sampling will refine understanding of the axis of plume migration in the area.
 - Based on the results of the initial probes, one (1) permanent monitoring well will be placed along the axis of the plume and far enough downgradient to be beyond the limit of the plume. The new well will be sampled along with existing wells during the remaining two scheduled groundwater sampling events.
3. Free Product Delineation. Three temporary wells/ groundwater probes (B-36, B-37 and B-38) will be driven to the base of the aquifer at the locations shown on Figure F. The probes will be sampled continuously and the presence and thickness of visibly impacted zone will be noted on the boring log. Temporary

wells (1-inch ID, 10-foot screens) will be installed at the base of the aquifer and the well will be allowed to stabilize for at least 24 hours. An interface probe will be used to measure the thickness of free product in the temporary well, if any. Consistent with prior discussions, no groundwater or soil samples will be analyzed from wells with free product. Since the wells are temporary, they will be abandoned after the free product measurement.

4. Upgradient Wells. Based on the data, no further sampling and analyses will be required for four upgradient monitoring wells (MW-1, MW-3, MW-5 and MW-8). Since 2007, four rounds of samples have been collected from MW-1 and three rounds from each of the other three wells. Low levels, below the RDCL, were detected in MW-3 in 2007, but there have been no detections since then. All four wells will be abandoned (in accordance with DNR requirements) by sealing the casing with bentonite and removing the steel protective covers.

2.2 Post-Closure Plan

To ensure that there remains no unacceptable risk in connection with residual contamination, the CRC proposes a post-closing stewardship plan. The CRC suggests that after it is determined that there is an adequate understanding of plume behavior, then a Stewardship Agreement be executed for any future work. This plan would identify the future obligations to receive NFA determination. The obligations would include implementation of ERCs and/or an ERO to prevent or control some exposure pathways and a groundwater monitoring plan to confirm that the CSM for the site remains valid.

2.3 Field Methods

The following sections summarize the field methods applicable to this SAP. For detailed information on field methods see the Field Standard Operating Procedures (Appendix D of the RWP).

Soil/Groundwater Probes/Temporary Wells

The probes will be advanced by means of direct push probing. Unless the location has already been sampled to depth, the probes will be sampled continuously by utilizing 4-foot long macro-bore rods equipped with an acetate inner liner. Soil samples will be screened in the field with a photo-ionization detector (PID) and logged in accordance with the Unified Soil Classification System (UCS). Field evidence of contamination (PID, olfactory or staining) will be noted.

Groundwater samples will be collected by use of temporary 1" PVC sampling points placed in selected boreholes. Groundwater will be purged and sampled

following the IDEM Micro-Purge (Low-Flow) Sampling Option (revised November 3, 2009) to the extent possible. Field parameters (Temperature, Conductivity, Dissolved Oxygen, pH, and Oxygen Reduction Potential) will be monitored in each temporary sampling point during purging until at least three (3) parameters have stabilized. Micro-Purge sampling will be conducted with a non-contact stainless steel submersible bladder pump. If groundwater monitoring parameters cannot be stabilized, a sample will be collected regardless and a note will be recorded in the field book.

Soil cuttings and purge water from impacted areas will be treated as indicated below in Section 2.5.

Monitoring Well Installation

Soil samples will be collected continuously during drilling unless the location has been previously sampled. Borings will be advanced using 4¹/₄ inch hollow stem augers. Samples will be collected through the augers using a 1¹/₂ inch split spoon sampler driven 2 feet below the augers and retrieved and opened. Each split spoon sample will be screened using a Photoionization detector (PID).

Once the total depth for each well is reached a monitoring well will be constructed. Wells will be constructed of a 2-inch diameter 10-foot section of 0.010-inch slotted schedule 40 PVC well screen and 2-inch diameter PVC riser. Sand will be installed to two feet above the well screen, followed by a 2-foot bentonite seal. The annulus will be grouted to the surface and a 6 inch diameter flush mount steel protective cover will be concreted in place. All wells will be developed until the water being extracted is visibly clear.

Groundwater sampling

Well water will be collected through disposable or dedicated tubing connected to a submersible pump. Groundwater will be purged and sampled following the IDEM Micro-Purge (Low-Flow) Sampling Option (revised November 3, 2009) to the extent possible. Samples will be collected from the wells after any three parameter (temperature, specific conductivity, pH, and oxygen reduction potential (ORP)) readings are stable per the conditions outlined in the IDEM Low Flow guidance. Groundwater samples will be pumped directly into sample bottles (of types specified by the EPA methods) provided by the analytical laboratory.

2.4 Laboratory Methods

All groundwater samples will be analyzed for SVOCs by method 8270/8270SIM.

In addition, all groundwater samples will be tested for the following geochemical parameters by field methods (as required for low-flow sampling):

- Temperature
- Specific conductivity
- pH
- oxygen reduction potential (ORP)
- Dissolved Oxygen

Soil Gas samples will be analyzed by TO-15 for naphthalene. Additional details regarding the soil gas sampling and analysis is included in the Soil Gas SAP. Other analytical methods will be as specified in the RWP. Analytical and QA/QC methods are discussed in more detail in the QAPP.

2.5 Quality Control

Quality control samples are collected and analyzed to assess the quality of the data resulting from the field sampling program. Quality control samples and laboratory reports will meet the requirements of the guidance. Equipment blanks will be collected for this project if samples are collected with non-disposable equipment and will include one (1) for the groundwater sampling equipment and one (1) for the soil sampling equipment. One (1) trip blank will be collected for the project (for CAHs only). Field duplicate samples of each matrix are collected at the rate of one (1) per 20 investigative samples. Matrix spikes and matrix spike duplicates (MS/MSD) are collected at a rate of one (1) per 20 investigative samples per sample matrix. The laboratory will include a DQO Level IV report package for final closure groundwater samples. Other laboratory reports will include a Level II report package.

2.6 Decontamination & Waste Handling

Sampling equipment utilized at the site will be decontaminated using a non-phosphate detergent wash and distilled water rinse prior to and following the collection of each sample to reduce the potential for cross contamination. All other procedures used to decontaminate equipment will be documented. Where practical, disposable sampling equipment will be used to eliminate the need for decontamination. Decontamination wash water from impacted locations will be treated as hazardous waste. Soil cuttings and purged groundwater from impacted zones will be treated as hazardous waste. Soil containing pentachlorophenol below the IDEM commercial direct exposure screening level may be treated or disposed as non-hazardous waste. Groundwater containing below RCRA limits may be handled as non-hazardous waste.

3.0 COST

The estimated costs of performing the proposed services are summarized below:

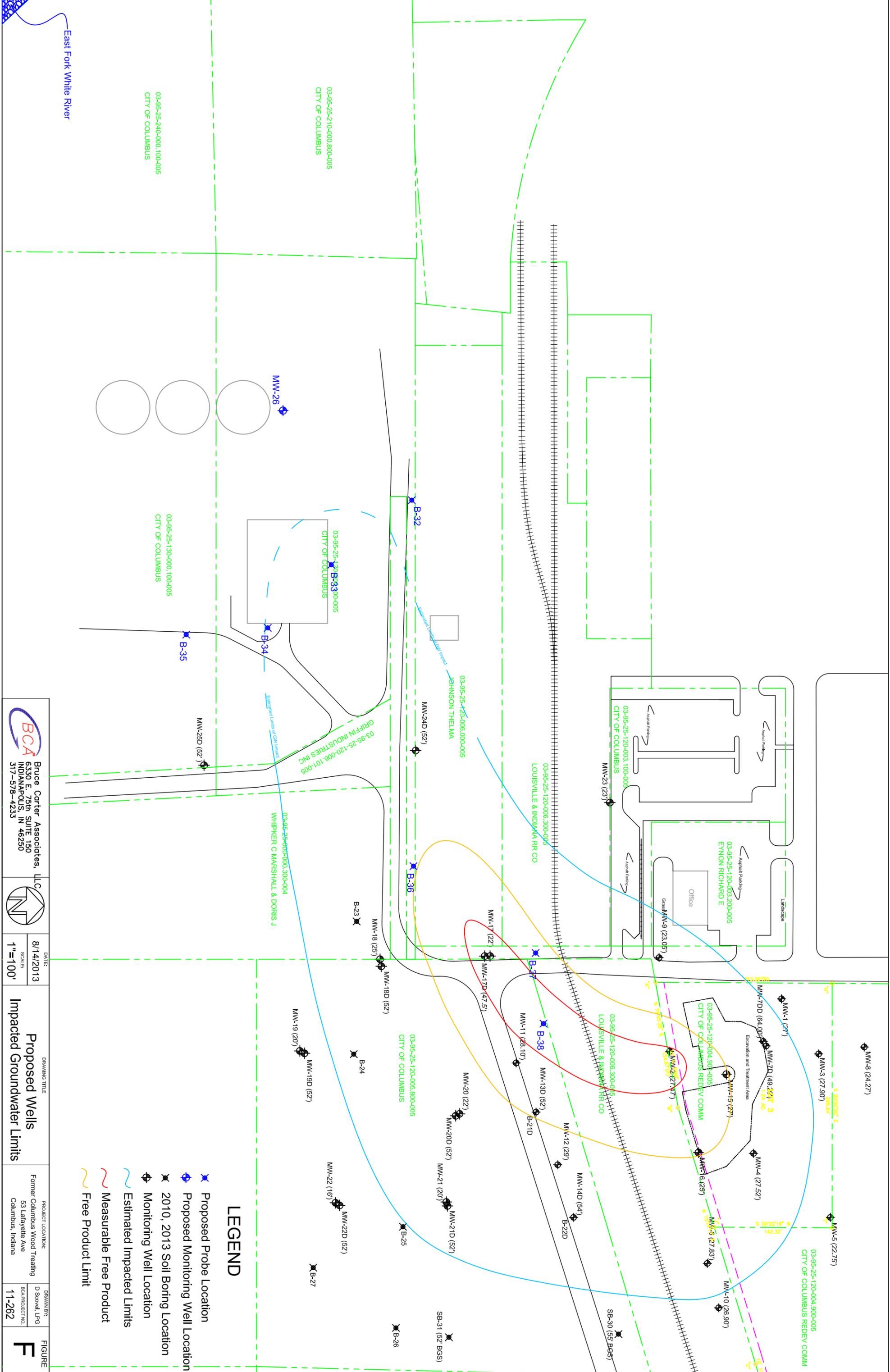
HIS Constructors – \$27,255

- Install seven probes/temporary wells to 55'
- Install one (permanent) monitoring well to 55'
- Abandon four (4) existing monitoring wells per DNR
- Dispose up to four (4) drums purge water (hazardous waste)

BCA - \$26,216

- Planning, IBP/City/Contractor coordination, SAP
- Sample and oversee probe/temporary well installation;
- Sample analysis, summary of results, IDEM coordination;
- Log & develop new well and abandonment of old wells;
- Documentation & report additions.

The costs are broken down in detail on the attached tables and contractor quotes. The costs would not be exceeded without approval of the client. BCA will invoice monthly on a time and materials basis per the approved contract fee schedules.



East Fork White River

03-95-25-210-000.800-005
CITY OF COLUMBUS

03-95-25-240-000.100-005
CITY OF COLUMBUS

03-95-25-420-006.000-005
JOHNSON THELMA

03-95-25-420-006.300-005
LOUISVILLE & INDIANA RR CO

03-95-25-120-006.101-005
GRIFIN INDUSTRIES INC

03-95-25-600-000.300-004
WHIPKER C MARSHALL & DORRIS J

03-95-25-120-004.901-005
CITY OF COLUMBUS REDEV COMM

03-95-25-120-005.800-005
CITY OF COLUMBUS

03-95-25-120-004.900-005
CITY OF COLUMBUS REDEV COMM

MMW-26 (52')

B-32

B-34

B-35

MMW-25D (52')

MMW-24D (52')

B-36

B-23

MMW-18 (25')

MMW-18D (52')

B-24

MMW-19 (20')

MMW-19D (52')

B-25

MMW-22 (16')

MMW-22D (52')

B-27

MMW-20 (22')

MMW-20D (52')

MMW-21 (20')

MMW-21D (52')

MMW-17 (22')

MMW-17D (47.5')

MMW-11 (28.10')

MMW-11D (52')

B-21D

MMW-12 (29')

MMW-14D (54')

B-22D

SB-30 (51' BGS)

MMW-1 (27')

MMW-2 (27.90')

MMW-3 (27.90')

MMW-4 (27.52')

MMW-5 (22.75')

MMW-6 (27.83')

MMW-7DD (64.00')

MMW-7D (49.25')

MMW-8 (24.27')

MMW-9 (23.05')

MMW-10 (26.90')

MMW-15 (27')

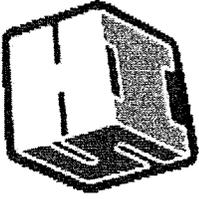
MMW-16 (27.77')

MMW-15 (27')

MMW-15 (27

CAT 2:	Monitoring Well Installation Oversight and Sampling Fall 2013							\$26,216
	Install 7 temporary wells/probes and 1 permanent well.							
	Sample Temporary probes							
	Summary Results							
Task 1:	Planning, IBP/City/Contractor coord, Sampling & Analysis Plan							
		Senior Engineer		55	hr	105	5775	
		Pjt Mgr/Geol/Scientist III		20	hr	88	1760	
Task 2:	Install Probes							\$12,399
	Field prep, sampling, handling							
		Senior Engineer		10	hr	105	1050	
		Pjt Mgr/Geol/Scientist III		73.5	hr	88	6468	
	Field Expenses							
		Misc Field Supplies		4	day	25	100	
		Water level meter		4	day	12	48	
		Interface Probe		1	ea	700	700	
		1-inch GW pump (low flow)		1	day	100	100	
		GW flow cell/multi sonde		1	day	150	150	
		0.170" Poly dual tube		260	ft	1.75	455	
		Travel - Mileage RT = 5		650	mi	0.4	260	
		Hotel (1 person)		0	ea	105	0	
	Subcontracts							
	Laboratory Analyses							
		GndWtr SVOC/PAH 8270SIM		4	ea	189.75	759	
		GW Field QA/QC Samples		3	ea	189.75	569.25	
	Drilling Contractor & drum disposal - See Contracting Section							
	Summary data after sampling							
		Senior Engineer		4	hr	105	420	
		Project Mngr/Scientist		15	hr	88	1320	
Task 3:	Install New Monitoring Well & Abandon Old wells							\$3,557
	Field prep, sampling, handling							
		Senior Engineer		5	hr	105	525	
		Pjt Mgr/Geol/Scientist III		29.5	hr	88	2596	
	Field Expenses							
		Misc Field Supplies		2	day	25	50	
		Pumps (2-inch dedicated)		1	ea	175	175	
		3/8" Poly sample tubing		55	ft	1.0	55	
		Travel - Mileage RT = 3		390	mi	0.4	156	
		Hotel (1 person)		0	ea	105	0	
	Subcontracts							
	Laboratory Analyses							
		GndWtr SVOC/PAH 8270SIM		0	ea	189.75	0	
		GW Field QA/QC Samples		0	ea	189.75	0	
	Drilling Contractor - See Contracting Section							
Task 4:	Addition to next GW sampling Report							\$2,725
		Senior Engineer		5	hr	105	525	
		Project Mngr/Scientist		25	hr	88	2200	

Former Wood Treating Facility Columbus, IN (Soil Borings & Monitoring Wells)



HIS Constructors, Inc.

5150 East 65th Street, Suite B

Indianapolis, IN 46220-4817

Contact: Ken Polston

Phone: (317) 284-1195

Fax: (317) 284-1185

Quote To: BCA Consultants

Name of Job: Former Wood Treating Facility

Attn: John Kilmer
Phone: 317-578-4233
Fax:

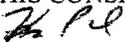
Plans by:
Date of Plans:
Revision Date:
Date of Bid: September 26, 2013

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
10	HIS PERSONAL ONSITE	7.00	DAY	600.00	4,200.00
20	PER QUOTE FROM EARTH EXPLORATION DATED 9/5/13	1.00	LS	19,750.00	19,750.00
30	DRUM DISPOSAL SOIL CUTTING (NON-HAZARDOUS SOLIDS)	1.00	EACH	232.00	232.00
40	DRUM DISPOSAL LIQUID DECO WATER (HAZARDOUS)	4 2.00	EACH	433.00	866.00 1732
GRAND TOTAL					\$25,048.00 25,914

NOTES:

1. BCA will be billed actual invoices plus 15% for Earth Exploration and EQ.
2. Pricing for drum disposal includes providing drums.

We appreciate the opportunity to submit this proposal. If you have any questions or require further information, please call me at 317-284-1195.

Sincerely,
HIS CONSTRUCTORS, Inc.

Ken Polston
Senior Estimator / Project Manager

September 5, 2013

Mr. Ken Polston
HIS Constructors, LLC
5150 E. 65th Street, Suite B
Indianapolis, IN 46220-4817



7770 West New York Street
Indianapolis, IN 46214-2988
317-273-1690 (FAX) 317-273-2250

2204 Yankee Street
Niles, MI 49120
269-262-4320 or 574-233-6820
(FAX) 269-262-4479

Re: Environmental Soil Borings
and Monitoring Wells
Former Columbus Wood Treating
Columbus, Indiana
EEI Proposal No.: P1-13-466.1

Dear Mr. Polston:

We are pleased to submit our cost estimate for the referenced work. This proposal is in response to your request in an electronic message on September 3, 2013. At this time, we understand the general scope of work will include the following:

1. In the first mobilization, seven soil probes to a depth of about 55 ft each with continuous soil sampling (48-in. drives). Groundwater samples are planned to be collected by others at each of these locations via temporary PVC sample points installed by EEI. The probes are anticipated to be located on soil and accessible by gravel paths. Others will remove the PVC and fill with bentonite supplied by us;
2. Abandonment of four 2-in. I.D. PVC wells to a depth of approximately 50 ft each in-place. The protective covers will be removed, the wells will be backfilled with bentonite chips, the casing cut off at a depth of about 2 ft below the ground surface, a concrete plug placed and the area finished in-kind;
3. Submitting well abandonment records to the Indiana Department of Natural Resources;
4. In a second mobilization, one soil boring advanced with 4¼-in. I.D. hollow stem augers to a depth of 55 ft with no soil sampling. The boring is reported to be situated on soil and accessible by a gravel path. The soil boring will be completed as a 2-in. I.D. Schedule 40 PVC well with 10 ft of 10-slot screen (machine cut), sand to about 2 ft above the screen, a bentonite chip seal, cement-bentonite grout to near the surface, an expandable locking cap and an above-ground well cover concreted in place. Others will develop the wells; and
5. Drilling tools and augers will be decontaminated prior to mobilization, between borings and before demobilization, while the probe and split spoon samplers will be washed with detergent (Liquinox or similar) and rinsed with tap water between samples. Auger cuttings from the borings will be spread out on site while decontamination water and well development water will be contained in 55-gal drums (DOT17H) to be left on-site for disposal by others.

Based on this information, we estimate the total cost to be on the order of \$17,170 as outlined in the attached Cost Estimate per Davis-Bacon Wage rates. The estimated total is based, in part,

Mr. Ken Polston
HIS Constructors, LLC
Former Wood Treating Facility – Columbus, IN

September 5, 2013
Page 2

on the soil boring/well locations being accessible to our truck-mounted drilling equipment and the probe locations being accessible to out track-mounted probe equipment, no standby or special services time, a source of water available on the site and all on-site work being performed under Level D personnel protection guidelines. Please note that due to the volatility of material costs, we reserve the right to increase prices after 30 days from the date of this proposal.

We expect to complete the assignment in seven days for the probing/abandonments and one day for the monitoring well using a two-person crew depending on the actual workscope and site, subsurface and weather conditions. Earth Exploration, Inc. will be required to contact Indiana 811 for public utility locates. Any private utilities, buried storage tanks or other subsurface appurtenances will be the responsibility of your company or a representative of the owner.

If you elect to utilize our services, please issue a purchase order referring to our proposal number. Thank you for your consideration.

Sincerely,

EARTH EXPLORATION, INC.



Jeffrey D. Mathis
Exploratory Field Services Manager



Richard D. Olson, P.E.
President

Attachment: Cost Estimate

COST ESTIMATE
Test Borings and Monitoring Wells
Former Columbus Wood Treating
Columbus, Indiana

Mobilization and demobilization	2 LS	\$400.00 / LS	\$800.00
Well abandonment	3 hr	\$182.00 / hr	\$546.00
Direct push sampling	63 hr	\$182.00 / hr	\$11,466.00
Direct push supplies			
Macro liners (48 in.)	56 ea	\$3.00 / ea	\$168.00
DT-21/22 liners (48-in., with catchers)	42 ea	\$5.00 / ea	\$210.00
Drilling with 4¼-inch I.D. hollow stem augers			
0 - 30 ft deep	30 ft	\$11.20 / ft	\$336.00
30 - 60 ft deep	25 ft	\$12.60 / ft	\$315.00
Split spoon samples	ea	\$16.80 / ea	
Pipe material - 1-in. I.D. Schedule 40 PVC			
Riser (5-ft section)	7 ea	\$8.00 / ea	\$56.00
Riser (10-ft section)	28 ea	\$12.00 / ea	\$336.00
Screen (5-ft section)	ea	\$13.00 / ea	
Screen (10-ft section)	7 ea	\$18.00 / ea	\$126.00
End plug	7 ea	\$5.00 / ea	\$35.00
Slip cap	7 ea	\$1.00 / ea	\$7.00
Pipe material - 2-in. I.D. Schedule 40 PVC			
Riser	50 ft	\$2.50 / ft	\$125.00
Screen	10 ft	\$4.00 / ft	\$40.00
End plugs	1 ea	\$8.00 / ea	\$8.00
Expanding caps	1 ea	\$21.00 / ea	\$21.00
Miscellaneous supplies			
Bentonite chips or powder	8 bag	\$11.00 / bag	\$88.00
Bentonite grout	bag	\$20.00 / bag	
Bentonite pellets	1 bckt	\$60.00 / bckt	\$60.00
Concrete (regular)	3 bag	\$6.00 / bag	\$18.00
Cement (47 lb bag)	8 bag	\$7.00 / bag	\$56.00
Sand (50 lb bag)	7 bag	\$8.00 / bag	\$56.00
Protective covers (above-ground)	1 ea	\$95.00 / ea	\$95.00
Auger knockout plugs (4¼ in.)	ea	\$21.00 / ea	
55-gallon steel drums	4 ea	\$40.00 / ea	\$160.00
Labor to install well materials	3.5 hr	\$182.00 / hr	\$637.00
Water hauling and auger washout	hr	\$182.00 / hr	
Decontamination and clean-up	2 hr	\$182.00 / hr	\$364.00
Well development	hr	\$182.00 / hr	
Other equipment, supplies and services			
Steam cleaner	1 day	\$50.00 / day	\$50.00
Standby or special services time	hr	\$182.00 / hr	
All-terrain mounted drilling equipment	day	\$100.00 / day	
Miscellaneous out-of-pocket expenses		cost + 10 %	
Debris removal	1 ea	\$100.00 / ea	\$100.00
Well abandonment records	1 LS	\$90.00 / LS	\$90.00
Submersible development pump (battery powered)	1 day	\$30.00 / day	\$30.00
Per diem	day	\$60.00 / day	
Overnight living	night	\$150.00 / night	
Support truck	7 day	\$100.00 / day	\$700.00
Utility locate	1 LS	\$75.00 / LS	\$75.00
		Estimated Total	\$17,174.00



THE ENVIRONMENTAL QUALITY COMPANY

36255 MICHIGAN AVENUE • WAYNE, MICHIGAN 48184 • tel 800-592-5489 • fax 800-592-5329

QUOTATION

DATE: SEPTEMBER 25, 2013
CUSTOMER: HIS

QUOTE No: 09252013KL
CONTACT: KEN POLSTON
PHONE: (317) 284-1195
FAX: (317) 284-1185
EMAIL: KEN.POLSTON@HISCONSTRUCTORS.COM

DEAR KEN,

EQ - The Environmental Quality Company is pleased to provide you with the following quotation for environmental management services. This pricing is contingent upon EQ credit approval as well as approval from the disposal facility (if applicable). Payment terms are net 30 days and this quotation is valid for 30 days.

DUNKIRK, NY – TRANSPORTATION AND DISPOSAL RATE

WOOD TREATING LIQUIDS (HAZARDOUS)	\$202.65/DM55
NON-HAZARDOUS SOLIDS	\$42.00/STOP
LTL TRANSPORTATION	\$210.00/STOP + \$23/DRUM
<i>THE PER DRUM FEE WILL ONLY APPLY TO THE HAZARDOUS DRUMS.</i>	

ADDITIONAL COSTS:

- AN INSURANCE SURCHARGE OF 1.5% WILL APPLY TO ALL INVOICES.
- AN ENERGY SURCHARGE APPLIES TO DISPOSAL. THIS SURCHARGE IS ADJUSTED QUARTERLY AND IS CURRENTLY 7.0%
- A FUEL SURCHARGE (BASED UPON THE WEEKLY NATIONAL AVERAGE FUEL PRICES) WILL APPLY TO ALL DIESEL-RELATED EQUIPMENT CHARGES.
- FOR FURTHER CONTRACTUAL INFORMATION, REFER TO THE ATTACHED **EQ STANDARD TERMS AND CONDITIONS**.

Thank you for this opportunity - EQ appreciates your interest in our services. I believe this quotation meets your specifications but please contact me at (734) 329-8022 if you have any questions. We are prepared to proceed with the above described work upon issuance of your purchase order or by your signature on this quotation. Please return by fax or email to the location below.

Amanda Kalinka, CHMM

Amanda Kalinka, CHMM
Customer Service Specialist
Phone: (734) 329-8022 Fax: (734) 329-8142
Amanda.Kalinka@EQOnline.com

ACCEPTANCE OF QUOTATION:

By: _____
Signature and Title-Authorized Representative

Date: _____

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EQ STANDARD TERMS AND CONDITIONS

Waste Disposal Conditions (if applicable):

1. Prices and services are contingent upon approval from the disposal facility. Approval of this material will be based upon waste analysis; a generator signed waste profile and an evaluation of a representative sample (if required) for a treatability study.
2. Quoted bulk disposal charges for solid materials will be billed by the cubic yard if the waste density is less than 2,000 pounds per cubic yard. If waste density is greater than 2,000 pounds per cubic yard, then disposal charges will be billed by the ton.
3. Surcharges from disposal facilities based on "as received" waste characteristics are in addition to quoted rates.
4. Improperly classified and/or rejected loads will be returned to the customer at their expense.
5. The Michigan DEQ will assess a manifest fee for all hazardous waste manifests used in the State of Michigan.

Industrial Services and Transportation Conditions (if applicable):

1. Washout or clean-out charges for residuals shall be at EQ cost+15% or at EQ Standard Rates unless otherwise specified.
2. A four (4) hour minimum and portal to portal charges apply to all equipment and personnel. Loading, unloading and cleaning of project specific materials and/or supplies, together with all regulatory preparation time shall be included in portal to portal charges.
3. For equipment, non-reusable materials, supplies and personnel not detailed in this quote but which become necessary to perform the work, EQ Standard Rates will be charged or cost plus 15% if not listed.
4. If disposal costs are not included in this quotation, the customer shall be responsible for securing disposal approvals and preparing all manifests and paperwork unless otherwise stated. These services, if performed and otherwise not quoted by EQ, shall be charged at \$40/hour.
5. This quote includes up to 1-hour loading/waiting time and up to 2 hours disposal time without extra cost. The customer shall be responsible for all waiting time of EQ outside the immediate control of EQ (i.e. no access to the work area/site, mandatory workplace breaks etc.) or any other influences outside the control of EQ. All loading or waiting time at the customer location beyond 1 hour and/or all disposal site time beyond 2 hours shall be surcharged at a rate of \$95/hour in ¼ hour increments. Such time shall be in addition to the base quotation and extend the fixed sum price.
6. In the event that the scope of work changes from that specified in this quote, out-of-scope work shall be at EQ Standard Rates and shall be in addition to the base quotation. No additional work shall be performed without the consent of the customer in writing.
7. Straight time hours are Monday-Friday from 8 a.m. to 4 p.m.; Overtime hours [time+1/2] are over 8 hours weekdays and Saturday; Sundays and Holidays are double time.

Lab Pack Conditions (if applicable):

1. In the event that the scope of work changes from that specified above, out-of-scope work shall be at EQ Standard Rates and shall be in addition to the base quotation. No additional work shall be performed without the consent of the customer in writing.
2. Materials and supplies not contained in the base quotation, but required to perform the above services shall be charged at listed rates in the EQ Standard Rate sheet or at cost plus 15% if not listed.
3. Regular time hours are Monday-Friday from 8 a.m. to 4 p.m.; Overtime hours (time+1/2) are over 8 hours weekdays and Saturday; Double Time is assessed all Sunday and Holiday Hours.
4. This project was based on regular time hours.
5. This proposal does not include pricing for explosive, radioactive, shock sensitive, pyrophoric, medical, compressed gas cylinders, banned or DEA controlled wastes. Pricing for these materials will be quoted on a case-by-case basis.
6. Waste streams cannot contain any unidentified hazardous constituents.
7. Onsite delays, changes or inaccuracies in the inventory may result in additional charges.
8. All shipping containers must be D.O.T. approved.
9. Pricing is subject to approval by the **TSDF**.
10. Material Safety Data Sheets (MSDS) and or analytical may be required prior to disposal.
11. Pricing was based on the inventory provided by the customer/generator.



STANDARD TERMS AND CONDITIONS

The Agreement between the Customer and EQ – The Environmental Quality Company and/or its member companies (hereinafter "EQ") related to or associated with Delivered Waste, as herein defined, shall be governed by the following Standard Terms and Conditions in addition to the terms and conditions contained in any Waste Characterization Report, Customer Approval Quote Confirmation, Generator Approval Notification, Notice of Waste Approval Expiration, and/or Credit Agreement associated with such Delivered Waste.

The Customer may use its standard forms (such as purchase orders, acknowledgments of orders, and invoices) to administer its dealings under this Agreement for convenience purposes, but all provisions thereof in conflict with these terms and conditions shall be deemed stricken.

Definitions

The following definitions shall apply for purposes of this Agreement:

"Acceptable Waste" shall mean any hazardous waste, as defined under applicable State or federal law, determined by EQ as acceptable for treatment and/or disposal in accordance with this Agreement.

"Delivered Wastes" shall mean all wastes (i) which are transported, delivered, or tendered to EQ by the Customer; (ii) which the Customer has arranged for the transport, delivery or tender to EQ; or (iii) which are transported, delivered, or tendered to EQ under a Credit Agreement between the Customer and EQ.

"Non-Conforming Wastes" shall mean wastes that (a) are not in accordance in all material respects with the warranties, descriptions, specifications or limitations stated in the Waste Characterization Report and this Agreement; (b) have constituents or components of a type or concentration not specifically identified in the Waste Characterization Report (i) which increase the nature or extent of the hazard and risk undertaken by EQ in treating and/or disposing of the waste, or (ii) for whose treatment and/or disposal a Waste Management Facility is not designed or permitted, or (iii) which increase the cost of treatment and/or disposal of waste beyond that specified in EQ's price quote; or (c) are not properly packaged, labeled, described, or placarded, or otherwise not in compliance with United States Department of Transportation and United States Environmental Protection Agency regulations.

Control of Operations.

EQ shall have sole control over all aspects of the operation of any treatment and/or disposal facility of EQ receiving Delivered Wastes under this Agreement (hereinafter, "Waste Management Facility"), including, without limitation, maintaining EQ's desired volume of Acceptable Wastes being delivered to any Waste Management Facility by the Customer or any other person or entity.

Identification of Waste

For each waste material to be transported, delivered, or tendered to EQ under this Agreement, the Customer shall provide, or cause to be provided, to EQ a representative sample of the waste material and a completed Waste Characterization Report containing a physical and chemical description or analysis of such waste material, which description shall conform with any and all guidelines for waste acceptance provided by EQ. On the basis of EQ's analysis of such representative sample of the waste material and such Waste Characterization Report, EQ will determine whether such wastes are Acceptable Wastes. EQ does not make any guarantee that it will handle any waste material or any particular quantity or type of waste material, and EQ reserves the right to decline to transport, treat and/or dispose of waste material. The Customer shall promptly furnish to EQ any information regarding known, suspected or planned changes in the composition of the waste material. Further, the Customer shall promptly inform EQ of any change in the characteristic or condition of the waste material which becomes known to the Customer subsequent to the date of the Waste Characterization Report.

Non-Conforming Wastes.

In the event that EQ at any time discovers that any Delivered Waste is Non-Conforming Waste, EQ may reject or revoke its acceptance of the Non-Conforming Waste. The Customer shall have seven (7) days to direct an alternative lawful manner of disposition of the waste, unless it is necessary by reason of law or otherwise to move the Non-Conforming Waste prior to expiration of the seven (7) day period. If the Customer does not direct an alternative disposal, at its option, EQ may return any such Non-Conforming Wastes to the Customer, and the Customer shall pay or reimburse EQ for all costs and expenses incurred by EQ in connection with the receipt, handling, sampling, analyses, transportation and return to the Customer of such Non-Conforming Wastes. If it is impossible or impractical for EQ to return the Non-Conforming Waste to the Customer, the Customer shall reimburse EQ for all costs, of any type or nature whatsoever, incurred by EQ, solely because such Delivered Waste was Non-Conforming Waste (including, but not limited to, all costs associated with any remedial steps necessary, due to the nature of the Non-Conforming Waste, in connection with material with which the Non-Conforming Waste may have been commingled and all expenses and charges for analyzing, handling, locating, preparing for transporting, storing and disposing of any Non-Conforming Waste).

Customer Warranty - Acceptable Wastes.

All Delivered Wastes shall be Acceptable Wastes and shall conform in all material respects to the description and specifications contained in the Waste Characterization Report. The information set forth in the Waste Characterization Report or any manifest, placard or label associated with any Delivered Wastes, or otherwise represented by the Customer or the generator (if other than the Customer) to EQ, is and shall be true, accurate and complete as of the date of receipt of the involved waste by EQ.

Customer Warranty - Title to Wastes.

Either the Customer or the generator (if other than the Customer) shall hold clear title, free of any all liens, claims, encumbrances, and charges to Delivered Waste until such waste is accepted by EQ.

Customer Warranty - Compliance with Laws.

The Customer shall comply with all applicable federal, state and local environmental statutes, regulations, and other governmental requirements, as well as directives issued by EQ from time to time, governing the transportation, treatment and/or disposal of Acceptable Wastes, including, but not limited to, all packaging, manifesting, containerization, placarding and labeling requirements.

Customer Warranty - Updating Information.

If the Customer receives information that Delivered Waste or other hazardous waste described in the Waste Characterization Report, or some component of such waste, presents or may present a hazard or risk to persons, property or the environment which was not disclosed to EQ, or if the Customer or generator (if other than the Customer) has changed the process by which such waste results, the Customer shall promptly report such information to EQ in writing.

Customer Indemnity.

The Customer shall indemnify, defend and hold harmless EQ, and its affiliated or related companies, and all of their respective present or future officers, directors, shareholders, employees and agents from and against any and all losses, damages, liabilities, penalties, fines, forfeitures, demands, claims, causes of action, suits, costs and expenses (including, but not limited to, reasonable costs of defense, settlement, and reasonable attorneys' fees), which may be asserted against any or all of them by any person or any governmental agency, or which any or all of them may hereafter suffer, incur, be responsible for or pay out, as a result of or in connection with bodily injuries (including, but not limited to, death, sickness, disease and emotional or mental distress) to any person (including EQ's employees), damage (including, but not limited to, loss of use) to any property (public or private), or any requirements to conduct or incur expense for investigative, removal or remedial expenses in connection with contamination of or adverse effect on the environment, or any violation or alleged violation of any statutes, ordinances, orders, rules or regulations of any governmental entity or agency, caused or arising out of (i) a breach of this Agreement by the Customer, (ii) the failure of any warranty of the Customer to be true, accurate and complete, or (iii) any willful or negligent act or omission of the Customer, or its employees or agents in connection with the performance of this Agreement.

Force Majeure

EQ shall not be liable for any failure to accept, receive, handle, treat, and/or dispose of Delivered Waste due to an act of God, fire, casualty, flood, war, strike, lockout, labor trouble, failure of public utilities, equipment failure, facility shutdown, injunction, accident, epidemic, riot, insurrection, destruction of operation or transportation facilities, the inability to procure materials, equipment, or sufficient personnel or energy in order to meet operational needs without the necessity of allocation, the failure or inability to obtain any governmental approvals or to meet Environmental Requirements (including, but not limited to voluntary or involuntary compliance with any act, exercise, assertion, or requirement of any governmental authority) which may temporarily or permanently prohibit operations of EQ, the Customer, or the Generator, or any other circumstances beyond the control of EQ which prevents or delays performance of any of its obligations under this Agreement.

Governing Laws

This Agreement shall in all respects be governed by and shall be construed in accordance with the laws of the State of Michigan applied to contracts executed and performed wholly within such state.

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