
From: Dave Larsen <dlarsen@reiengineering.com>
Sent: Thursday, August 17, 2017 3:52 PM
To: Stoltz, Carrie R - DNR
Subject: RE: Lou John Soil Excavation and piping proposal
Attachments: 6190 Sub Slab work.pdf

Following our discussion today, I have prepared the following scope of services approval request.

Wells to be abandoned include:

- MW5, 8, 9, 17, 18, 19.

I would like to keep MW1R and MW2R for water level measurements only. MW6, MW7 and MW16 will be sampled along with Lou John wells MW1-MW3.

Sub slab samples will be located in the following areas:

- Crawlspace/basement. Access through a trap door in building and supposed to be concreted. Will either install port in floor or SW sidewall, or both. Will document location and dimensions on subsequent report.
- SW corner of main floor, unless basement is in this area, but Client doesn't believe it extends that far.

Let me know if you have any questions.

Thank you,

David N. Larsen P.G




Hydrogeologist / Professional Geologist



David N. Larsen, P.G.
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From: Stoltz, Carrie R - DNR [mailto:Carrie.Stoltz@wisconsin.gov]
Sent: Monday, July 03, 2017 4:01 PM
To: Dave Larsen <dlarsen@reiengineering.com>
Subject: RE: Lou John Soil Excavation and piping proposal

Hi Dave, do you have a timeframe for this or questions? Carrie

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Carrie Stoltz

Phone (715)365-8942

Carrie.Stoltz@Wisconsin.gov

From: Stoltz, Carrie R - DNR

Sent: Tuesday, June 27, 2017 12:26 PM

To: 'Dave Larsen'

Subject: RE: Lou John Soil Excavation and piping proposal

Hi Dave, I went over this site with David Swimm (per John's request). The cost request should be revised or a supplemental request submitted to investigate VI first (sub slab sampling). Then based on those findings, the excavation cost request may need to be modified to allow for backfilling with finer grained material (if there is a VI risk) and the excavation should go below the water table (13-15') and start at 9' bgs (this is based on soil contamination results) in order to fully address the contamination. An excavation depth was not included in the cost request. A pump truck may be needed to remove GW accumulation during the excavation. Trench boxes or shoring may be needed due to the soil type.

There are also a number of MWs that should be abandoned (we can discuss) and that task could be performed during the VI investigation. The MWs that are contaminated due to the Amoco site could be abandoned.

The issue of underground/utility corridor contamination should be discussed/investigated because this will be a concern of the closure committee. REI should have submitted a figure with the SI report that shows the location(s) of the utilities as required by NR 716. Also, the cross sections submitted with the SI do not include AAMW-7 and should. MW-1 was included in the cross section, but it has no GW contamination.

An SVE system would be problematic because the contamination is below the water table by AAMW-7. SVE as you know would not address contamination below the water table. Also, soils are permeable sands, so the extent of unsaturated soil contamination away from the source is probably limited (infiltration to water table and only spread laterally from there). It is likely the unsaturated zone contaminated soil is limited.

If you have any questions, I will be in a meeting today starting at 1:30 til 4:30. I can be reached on Wednesday. Thanks for your patience, Carrie

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Carrie Stoltz

Phone (715)365-8942

Carrie.Stoltz@Wisconsin.gov

From: Dave Larsen [<mailto:dlarsen@reiengineering.com>]

Sent: Monday, June 05, 2017 4:25 PM

To: Stoltz, Carrie R - DNR

Subject: Lou John Soil Excavation and piping proposal

Lou John soil excavation and piping install proposal. Assume 250 ton dig, install three 4" SVE wells and piping for option on SVE install at a later date. Reason for SVE option is known LNAPL at AAMW7 and assumed impact beneath sidewalks/roads adjacent to site. REI will also place a vapor curtain along excavation sidewall to separate impacted material from clean backfill and to also focus vacuum away from clean backfill.

U&C work:

- Sample wells qtlly (PVOC/N). All wells round #1 and #4. Only MW1-3 and AAMW6 and AAMW7 rounds 2 and 3 and also water level measure AAMW2 rounds 2-3.

- Letter report after dig and after 4th sample event.

Let me know if you have any questions or concerns.

Thank you,

David N. Larsen P.G

Hydrogeologist / Professional Geologist



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Usual and Customary Standardized Invoice #22

July 2017 - December 2017



RR-083A

PECFA #: 54001-1026-00
 BRRT's #: 03-49-514936
 Site Name: Lou John Appraisal
 Site Address: 300 N. Keller Ave, Amery, WI

Vendor Name: REI
 Invoice #: _____
 Invoice Date: 8-17-17 Proposal Date
 Check #: _____

U&C Total \$ 4,620.60
 Variance to U&C Total \$ 2,681.31
 Grand Total \$ 7,301.91

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAX UNIT COST	UNITS	TOTAL MAX
1	GW Sampling		GS05	Sample Collection	Well	\$ 72.45	6	\$ 434.70
1	GW Sampling		GS20	Measure Water Levels (for wells not being sampled)	Well	\$ 14.70	2	\$ 29.40
1	GW Sampling		GS25	Primary Mob/Demob	Site	\$ 628.11	1	\$ 628.11
3	LNAPL Assessment & Removal		LAR05	Removal Activity (Limited to 12 per site)	Well	\$ 47.67	1	\$ 47.67
4	Waste Disposal	Consultant	WD05	Consultant Coordination	Site	\$ 137.13	2	\$ 274.26
4	Waste Disposal	Commodity	WD10	GW Sample and/or Purge	Drum	\$ 42.11	1	\$ 42.11
4	Waste Disposal	Commodity	WD15	Drill Cuttings	Drum	\$ 108.15	1	\$ 108.15
4	Waste Disposal	Commodity	WD25	Primary Mob/Demob	Site	\$ 287.70	2	\$ 575.40
6	Letter Report/Addendum		LRA05	Letter Report/Addendum	Letter	\$ 1,039.29	1	\$ 1,039.29
8	Well Abandonment	Consultant	WAB05	Coordination	Site	\$ 162.86	1	\$ 162.86
8	Well Abandonment	Consultant	WAB10	Water column < 30 ft	Ft	\$ 2.52	99	\$ 249.48
8	Well Abandonment	Consultant	WAB20	Bentonite Pellets (50lb bag - 1/4" pellet)	Bag	\$ 10.82	4	\$ 43.28
8	Well Abandonment	Consultant	WAB25	Portland Cement (94lb bag)	Bag	\$ 8.19	3	\$ 24.57
15	Misc. Drilling Activities & Supplies		MDT21	Drum, 55 gal. DOT steel	Each	\$ 55.13	2	\$ 110.26
33	Schedule Of Laboratory Maximums	Commodity		Laboratory (see task 33 total on Lab Schedule)	Lab Schedule		6	\$ 182.10
34	Consultant Incremental Mob/Demob		IMD05	Incremental Mob/Demob	Site	\$ 287.18	1	\$ 287.18
36	Change Order Request		COR05	Change Order Request (cost cap exceedance requests)	Change Order	\$ 381.78	1	\$ 381.78
Variance	Sub Slab Vapor Sampling				Variance	\$2,681.31	1	\$ 2,681.31

Usual and Customary Standardized Invoice #22

July 2017 - December 2017



RR-083A

TOTAL LAB CHARGES \$ 182.10 TASK 33 6 \$ 182.10 TASK 24 0 \$ -

MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS	MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES	TOTAL
AIR	A1	Benzene	SAMPLE	\$ 44.94		\$ -			
AIR	A2	BETX	SAMPLE	\$ 49.46		\$ -			
AIR	A3	GRO	SAMPLE	\$ 46.10		\$ -			
AIR	A4	VOC's	SAMPLE	\$ 71.93		\$ -			
WATER	W1	GRO/PVOC	SAMPLE	\$ 29.19		\$ -			
WATER	W2	PVOC	SAMPLE	\$ 26.99		\$ -			
WATER	W3	PVOC + 1,2 DCA	SAMPLE	\$ 43.79		\$ -			
WATER	W4	PVOC + Naphthalene	SAMPLE	\$ 30.35	6	\$ 182.10			
WATER	W5	VOC	SAMPLE	\$ 71.93		\$ -			
WATER	W6	PAH	SAMPLE	\$ 72.98		\$ -			
WATER	W7	Lead	SAMPLE	\$ 12.39		\$ -			
WATER	W8	Cadmium	SAMPLE	\$ 13.55		\$ -			
WATER	W9	Hardness	SAMPLE	\$ 12.39		\$ -			
WATER	W10	BOD, Total	SAMPLE	\$ 23.63		\$ -			
WATER	W11	Nitrate	SAMPLE	\$ 11.24		\$ -			
WATER	W12	Total Kjeldahl	SAMPLE	\$ 20.27		\$ -			
WATER	W13	Ammonia	SAMPLE	\$ 16.91		\$ -			
WATER	W14	Sulfate	SAMPLE	\$ 10.19		\$ -			
WATER	W15	Iron	SAMPLE	\$ 10.19		\$ -			
WATER	W16	Manganese	SAMPLE	\$ 10.19		\$ -			
WATER	W17	Alkalinity	SAMPLE	\$ 10.19		\$ -			
WATER	W18	methane	SAMPLE	\$ 46.10		\$ -			
WATER	W19	Phosphorous	SAMPLE	\$ 18.06		\$ -			
WATER	W20	VOC Method 524.2	SAMPLE	\$ 176.30		\$ -			
WATER	W21	EDB Method 504	SAMPLE	\$ 95.45		\$ -			
SOILS	S1	GRO	SAMPLE	\$ 24.78		\$ -	MAX COST	SAMPLES	TOTAL
SOILS	S2	DRO	SAMPLE	\$ 30.35		\$ -	\$ 24.78		\$ -
SOILS	S3	GRO/PVOC	SAMPLE	\$ 28.14		\$ -	\$ 30.35		\$ -
SOILS	S4	PVOC	SAMPLE	\$ 25.83		\$ -	\$ 28.14		\$ -
SOILS	S5	PVOC + 1,2 DCA + Naphthalene	SAMPLE	\$ 49.46		\$ -	\$ 25.83		\$ -
SOILS	S6	PVOC + Naphthalene	SAMPLE	\$ 36.02		\$ -	\$ 49.46		\$ -
SOILS	S7	VOC	SAMPLE	\$ 71.93		\$ -	\$ 36.02		\$ -
SOILS	S8	SPLP Extraction VOC only	SAMPLE	\$ 50.61		\$ -	\$ 71.93		\$ -
SOILS	S9	PAH	SAMPLE	\$ 72.98		\$ -	\$ 50.61		\$ -
SOILS	S10	Lead	SAMPLE	\$ 12.39		\$ -	\$ 72.98		\$ -
SOILS	S11	Cadmium	SAMPLE	\$ 14.60		\$ -	\$ 12.39		\$ -
SOILS	S12	Free Liquid	SAMPLE	\$ 11.24		\$ -	TASK 24 TOTAL \$ -		
SOILS	S13	Flash Point	SAMPLE	\$ 25.83		\$ -			
SOILS	S14	Grain Size - dry	SAMPLE	\$ 42.74		\$ -			
SOILS	S15	Grain Size - wet	SAMPLE	\$ 57.33		\$ -			
SOILS	S16	Bulk Density	SAMPLE	\$ 13.55		\$ -			

MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS	MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES	TOTAL
SOILS	S17	Permeability	SAMPLE	\$ 41.58		\$ -			
SOILS	S18	Nitrogen as Total Kjeldahl	SAMPLE	\$ 20.27		\$ -			
SOILS	S19	Nitrogen as Ammonia	SAMPLE	\$ 16.91		\$ -			
SOILS	S20	% Organic Matter	SAMPLE	\$ 29.19		\$ -			
SOILS	S21	TOC as NPOC	SAMPLE	\$ 57.33		\$ -			
SOILS	S22	Soil Moisture Content	SAMPLE	\$ 6.83		\$ -			
SOILS	S23	Air Filled Porosity	SAMPLE	\$ 25.83		\$ -			
SOILS	S24	% Total Solids	SAMPLE	\$ 6.83		\$ -			
SOILS	S25	Field Capacity	SAMPLE	\$ 28.14		\$ -			
SOILS	S26	TCLP Lead	SAMPLE	\$ 83.16		\$ -			
SOILS	S27	Cation Exchange (Ca, MG, & K)	SAMPLE	\$ 26.99		\$ -			
SOILS	S28	TCLP Cadmium	SAMPLE	\$ 83.16		\$ -			
SOILS	S29	TCLP Benzene	SAMPLE	\$ 83.16		\$ -			
		Viscosity + Density							
LNAPL	LFPS01	Interfacial tension I (LNAPL/water [dyne/cm])	SAMPLE	\$ 561.33		\$ -			
		Interfacial tension II (LNAPL/air [dyne/cm])							
		Interfacial tension III (water/air) [dyne/cm])							
TASK 33 TOTAL						\$ 182.10			

Variance Request
Lou John Appraisal
Sub-slab vapor sampling
8-17-17 Proposal Date

Unit Costs are based on present values on above listed date

Cat #	Description	Units	Quantity	Unit Cost	Event	Events	Total Cost	Subtotal
Commodity Costs								
	Summa Cannister - TO15	ea	3	\$247.00	\$741.00	1	\$741.00	
Total Commodity								\$741.00
Field Time								
	Job prep and coordination	hr	1	\$109.67	\$109.67	1	\$109.67	
	Sub slab air sample port install	hr	0.75	\$109.67	\$82.25	3	\$246.76	
	Sub-Slab Sample Collection	hr	0.75	\$109.67	\$82.25	3	\$246.76	
Total Field Time								\$603.19
Documentation and Reporting								
	Data Interpretation	hr	1	\$109.67	\$109.67	1	\$109.67	
	CAD Technician	hr	1	\$67.02	\$67.02	1	\$67.02	
	Administrative	hr	1	\$46.53	\$46.53	1	\$46.53	
	Project Management - Staff Hydrogeologist	hr	1.5	\$109.67	\$164.51	1	\$164.51	
Total Documentation and Reporting								\$387.73
Supplies and Equipment								
	Core Drill	day	1	\$75.00	\$75.00	1	\$75.00	
	Soil Gas Sampling Kit	day	1	\$145.00	\$145.00	1	\$145.00	
	Subslab Vapor Monitoring Point	ea	3	\$79.80	\$239.40	1	\$239.40	
	Shop Vac	day	1	\$15.00	\$15.00	1	\$15.00	
	Helium shroud with helium	ea	1	\$25.00	\$25.00	1	\$25.00	
	Helium Meter	day	1	\$100.00	\$100.00	1	\$100.00	
	Field screening meters for O2, CO, CO2, LEL and methane	day	1	\$350.00	\$350.00	1	\$350.00	
Total Supplies								\$949.40
Total								\$2,681.31