## Smith, Ralph N - DNR

**From:** Dave Larsen <dlarsen@reiengineering.com>
**Sent:** Thursday, July 12, 2018 8:34 AM
**To:** Smith, Ralph N - DNR; Saari, Christopher A - DNR; Stoltz, Carrie R - DNR
**Subject:** Bayside - Remedial Scope Approval
**Attachments:** 1921_001.pdf; GR17-006REV2.pdf; 6198 Soil Excavation CBI 7-11-2018.pdf

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Following the numerous discussions we have had since the April draft remedial costing submittal, we all agreed that a better option for this site was not known, and we are reluctantly moving forward with the earlier proposed option of a soil excavation to address the LNAPL near MW2, membrane placement to address direct contact concerns and use of a carbon based injectate to address the petroleum related groundwater contaminant plume.

The scope was modified a bit from the earlier proposal – added additional injectate (9,000# carbon total). We are still dangerously close to max cap on this one. Because of that I am proposing semi-annual post remedial sampling on select wells.
Semi-Annual: MW2, MW3, MW4, MW5, MW7, MW8, MW11, MW13 and PZ1 (PVOC/N). Also the potable at the Town of Bennett (DW-VOC).
Annual Sampling: MW1, MW6, MW9, MW10, MW12 and MW13 (PVOC/N) and onsite potable (DW-VOC). None of the temp wells are proposed to be sampled.

Reporting: Post construction completion report and single groundwater sampling report second proposed sampling event.

Again, the intent is to complete Bayside work immediately after Moose. This may require weekend work, which puts all of into significant overtime, but if it makes financial sense, we may want to go that route rather than mobilize back to the respective offices. Another issue will be fact that REI cant transport carbon for both Moose and Bayside in single mobilization and another delivery option will need to be determined. Again, the intent is to limit overall costs charged against the Bayside budget and some of the decisions will need to be made in the field at the time the work is being completed.

Please feel free to discuss this proposal with me, but understand that a quick turn on approval, if approvable, is requested. REI will still need to prepare and submit the injection request along with the WPDES permit application.

Thank you,
*David N. Larsen P.G*
*Senior Hydrogeologist / Professional Geologist*

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
4080 N. 20th Avenue
Wausau, WI 54401
REIengineering.com

David N. Larsen, P.G.
Senior Hydrogeologist
Dlarsen@REIengineering.com
Tel: 1-877-734-7745
715-675-9784
Cell: 715-551-3434
Fax: 715-675-4060

Connect with us :



---

**From:** Dave Larsen
**Sent:** Tuesday, April 17, 2018 3:17 PM
**To:** ''Smith, Ralph N - COMMERCE' (Ralph.Smith@Wisconsin.gov)' <Ralph.Smith@Wisconsin.gov>; Saari, Christopher A - DNR (Christopher.Saari@Wisconsin.gov) <Christopher.Saari@Wisconsin.gov>
**Subject:** Bayside

Hello, just wanted to forward a draft version of the proposed remedial response (hybrid approach) for Bayside. Please don't put this on BRRTS. Once we are all in agreement I will clean it up and provide a formal proposal.

Big issue is that proposed costs bring this project up to about $195K, or $5K over budget. This scope includes a soil excavation (500 ton), membrane placement for direct contact soils and carbon injections for groundwater remediation. Also 4 rounds of qtly sampling post remediation.

Cost savings will be realized because carbon contractor is basing mob from North Carolina and they will be operating out of WI at the time. I am trying to perform this scope after the proposed carbon injection at Moose Junction and Moose has a good budget and the mob charges for Bayside could all be based on a mob from Moose. This would require all parties to work weekends (overtime) or incur additional mob fees. I also have a few logistical issues with carbon, as REI cant transport carbon for both Moose and Bayside in 1 trip (too heavy) and will need to have it shipped to the Bayside site.

For the carbon work, REI will need to mobilize with an enclosed trailer to provide dry storage for the carbon, we also need to provide poly tanks for a water source and other misc needs. REI also needs to mobilize in a 2$^{nd}$ truck to bring a large diesel generator (tandem axle unit weighing more than 7,500 pounds).

Anyway, intent is to perform a max 500 ton dig around MW2 to a depth of 3' (due to LNAPL). Will also need to level and grade area where membrane is proposed and then cover with 3-6" gravel. Finally, perform carbon injection (9000#), submit remedial report (variance) and conduct 4 rounds of groundwater sampling followed by another report. I need to squeeze about $15K out of this budget to make it work and allow us to prepare a closure packet and abandon the wells. That's only collecting 4 rounds of post remedial groundwater samples before closure.

I have reservations on this one, but really don't have any better options. Let's discuss.

Thank you,

*David N. Larsen P.G*
*Senior Hydrogeologist / Professional Geologist*

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
4080 N. 20th Avenue
Wausau, WI 54401
REIengineering.com

**David N. Larsen, P.G.**
**Senior Hydrogeologist**
Dlarsen@REIengineering.com

Tel: 1-877-734-7745
715-675-9784
Cell: 715-551-3434
Fax: 715-675-4060

Connect with us :

# Usual and Customary Standardized Invoice #23
# January 2018- July 2018

RR-092a

PECFA #: 54873-8210-22
BRRTS #: 03-16-000971
Site Name: Bayside Forestry
Site Address: 922 E Cty Hwy L, Solon Springs

Vendor Name: REI
Invoice #:
Invoice Date: Proposal Date 7/11/2018
Check #:

U&C Total $ 7,151.00
Variance to U&C Total $ 112,520.41
Grand Total $ 119,671.41

| 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 | 27 | $ 1,956.15 |
| 1 | GW Sampling | | GS25 | Primary Mob/Demob | Site | $ 628.11 | 2 | $ 1,256.22 |
| 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 | 2 | $ 84.22 |
| 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 |
| 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 | | 33 | $ 1,473.42 |
| 36 | Change Order Request | | COR05 | Change Order Request (cost cap exceedance requests) | Change Order | $ 381.78 | 1 | $ 381.78 |
| Variance | Soil Excavation | | | | Variance | $25,893.65 | 1 | $ 25,893.65 |
| Variance | Carbon Injection | | | | Variance | $78,411.11 | 1 | $ 78,411.11 |
| Variance | Membrane Placement | | | | Variance | $8,215.65 | 1 | $ 8,215.65 |

Costs reimbursed to date $74,097.74

Proposed **$119,671.41**

**Total** **$193,769.15**

# Usual and Customary Standardized Invoice #23
# January 2018- July 2018

RR-092A

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **TOTAL LAB CHARGES** | **$ 1,473.42** | | **TASK 33** | **33** | **$1,473.42** | **TASK 24** | | **0** | **$ -** |
| 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 | 24 | $ 728.40 | | | | | |
| 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 | 3 | $ 528.90 | | | | | |
| WATER | W21 | EDB Method 504 | SAMPLE | $ | 95.45 | | $ - | MAX COST | SAMPLES | TOTAL | | |
| SOILS | S1 | GRO | SAMPLE | $ | 24.78 | | $ - | $ 24.78 | | $ - | | |
| SOILS | S2 | DRO | SAMPLE | $ | 30.35 | | $ - | $ 30.35 | | $ - | | |
| SOILS | S3 | GRO/PVOC | SAMPLE | $ | 28.14 | | $ - | $ 28.14 | | $ - | | |
| SOILS | S4 | PVOC | SAMPLE | $ | 25.83 | | $ - | $ 25.83 | | $ - | | |
| SOILS | S5 | PVOC + 1,2 DCA + Naphthalene | SAMPLE | $ | 49.46 | | $ - | $ 49.46 | | $ - | | |
| SOILS | S6 | PVOC + Naphthalene | SAMPLE | $ | 36.02 | 6 | $ 216.12 | $ 36.02 | | $ - | | |
| SOILS | S7 | VOC | SAMPLE | $ | 71.93 | | $ - | $ 71.93 | | $ - | | |
| SOILS | S8 | SPLP Extraction VOC only | SAMPLE | $ | 50.61 | | $ - | $ 50.61 | | $ - | | |
| SOILS | S9 | PAH | SAMPLE | $ | 72.98 | | $ - | $ 72.98 | | $ - | | |
| SOILS | S10 | Lead | SAMPLE | $ | 12.39 | | $ - | $ 12.39 | | $ - | | |
| SOILS | S11 | Cadmium | SAMPLE | $ | 14.60 | | $ - | | **TASK 24 TOTAL** | **$ -** | | |
| SOILS | S12 | Free Liquid | SAMPLE | $ | 11.24 | | $ - | | | | | |
| 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 | | $ - | | | |
| LNAPL | LFPS01 | Viscosity + Density<br>Interfacial tension I (LNAPL/water [dyne/cm])<br>Interfacial tension II (LNAPL/air [dyne/cm])<br>Interfacial tension III (water/air) [dyne/cm]) | SAMPLE | $ 561.33 | | $ - | | | |
| | | | | | **TASK 33 TOTAL** | **$ 1,473.42** | | | |

**Table 1**
**Variance Request**
**Bayside Forestry**
**Soil Excavation**
**Proposal Date 7/11/2018**

**Unit Costs are based on present values on above listed date**

| Cat # | Description | Units | Quantity | Unit Cost | Event | Events | Total Cost | Subtotal |
|---|---|---|---|---|---|---|---|---|
| | **Commodity Charges** | | | | | | | |
| | Excavation Contractor (SGS) | lump | 1 | $23,000.00 | $23,000.00 | 1 | $23,000.00 | |
| | | | | | | **Total Commodity Charges** | | **$23,000.00** |
| | **Consulting Charges** | | | | | | | |
| | Soil Disposal Profiling | hr | 5 | $109.67 | $548.35 | 1 | $548.35 | |
| | Project Management | hr | 6 | $109.67 | $658.02 | 1 | $658.02 | |
| | Administrative | hr | 4 | $42.65 | $170.60 | 1 | $170.60 | |
| | | | | | | **Total Commodity Charges** | | **$1,376.97** |
| | **Estimated 1-2 days to complete (per winning bid provider)** | | | | | | | |
| | Excavation Oversight | hr | 12 | $91.39 | $1,096.68 | 1 | $1,096.68 | |
| | Rebuild MW2 | lump | 1 | $150.00 | $150.00 | 1 | $150.00 | |
| | | | | | | **Total Commodity Charges** | | **$1,096.68** |
| | **Equipment** | | | | | | | |
| | PID | day | 2 | $100.00 | $200.00 | 1 | $200.00 | |
| | Scale | day | 2 | $35.00 | $70.00 | 1 | $70.00 | |
| | Signage | day | 2 | $75.00 | $150.00 | 1 | $150.00 | |
| | | | | | | **Total Equipment Charges** | | **$420.00** |
| | **Total** | | | | | | | **$25,893.65** |

\\REIFNP\Projects\6100-6199\6198 - Bayside Forestry\Proposed Work\Remediation\[6198 Soil Excavation CBI 7-11-2018.xlsx]Excavation

# SGS

**Environmental Contracting, LLC.**

N2570 Daytona Drive, Merrill, WI 54452

715-539-2803 ~ Fax: 715-539-2661

jay@sgs-env.com


| PROPOSED TO | | DATE: July 11, 2018 |
|---|---|---|
| **Remedial Engineering, Inc.**<br>**4080 N. 20th Ave.**<br>**Wausau, WI 54401**<br>**Attention: Dave Larsen**<br><br>**Phone: 715-675-9784**<br>**Fax: 715-675-4060**<br>**Email: dlarsen@reiengineering.com** | **LOCATION** | Bayside Forestry<br><br>Solon Springs, WI |

Cost estimate to excavate, transport, and dispose of 450 tons of impacted soil to the Republic Landfill in Sarona. Backfill with sand.

| DESCRIPTION | QTY | UNITS | PER UNIT | TOTAL |
|---|---|---|---|---|
| Mobilization | 1 | Lump sum | 2,280.00 | 2,525.00 |
| Excavation & loading of impacted soil | 450 | Tons | 4.00 | 1,800.00 |
| Transportation to Republic Sarona | 450 | Tons | 14.50 | 6,525.00 |
| Disposal | 450 | Tons | 18.00 | 8,100.00 |
| Backfill - Sand | 450 | Tons | 9.00 | 4,050.00 |
| | | | | |
| **TOTAL** | | | | **$ 23,000.00** |

| | |
|---|---|
| Jay A. Schlueter – Owner / Manager | |
| **Authorized SGS Signature** | **Purchaser's Signature** |
| ** Document becomes a contract when signed by purchaser. If this quote is accepted, please return 1 signed copy to this office. | TERMS: PAYMENTS DUE UPON COMPLETION |

Eden Springs WI - Budget Only

| | | | |
|---|---|---|---|
| Mobilization | 1 | 1500 | 1,500 |
| Excavate | 500 | 5 | 2,500 |
| Haul | 500 | 14 | 7,000 |
| Disposal | 500 | 20 | 10,000 |
| Fill | 400 | 10 | 4000 |
| Gravel | 100 | 15 | 1500 |
| Backfill / Cleanup | 500 | 5 | 2500 |

29,000 -

DKS
2520 Wilson St
Menomonie WI 54751

3-26-18

**Table 2**
**Bayside Forestry**
**CBI Quote**
**Proposal Date 7/11/2018**

| | | | | |
|---|---|---|---|---|
| **Commodity Services (9,000 Pounds Carbon Injection)** | | | | |
| CBI Contractor (Quote Attached) | lump | 1 | $46,275.00 | $46,275.00 |
| Geoprobe Contractor (Quote Attached) | lump | 1 | $9,080.00 | $9,080.00 |
| | | | **Sub Total** | **$55,355.00** |
| **Design** | | | | |
| Subcontractor Design and Coordination (REI) | hr | 20 | $109.67 | $2,193.40 |
| | | | **Sub Total** | **$2,193.40** |
| **Injection Oversight** | | | | |
| Project Management | hr | 5 | $109.67 | $548.35 |
| Administrative | hr | 2 | $42.65 | $85.30 |
| Injection Permit Preparation | hr | 8 | $109.67 | $877.36 |
| Job Prep | hr | 12 | $79.20 | $950.40 |
| Field Time - Injection (Sr Level) - Assume 10 hr days | hr | 50 | $109.67 | $5,483.50 |
| Field Time - Injection (Jr Level) - Assume 10 hr days | hr | 50 | $79.20 | $3,960.00 |
| Travel (REI x 2) | hr | 18 | $79.20 | $1,425.60 |
| Mileage Diesel Truck | mi | 1000 | $0.770 | $770.00 |
| Per diem per person (2 man) | day | 10 | $113.72 | $1,137.20 |
| | | | **Sub Total** | **$15,237.71** |
| **Supplies and Equipment** | | | | |
| 20' enclosed trailer | day | 5 | $250.00 | $1,250.00 |
| 480v, 100 kVA Diesel Generator | day | 5 | $625.00 | $3,125.00 |
| Portable dual phase vacuum system | lump | 1 | $500.00 | $500.00 |
| 1500 gallon poly tank and pump | day | 5 | $150.00 | $750.00 |
| | | | **Sub Total** | **$5,625.00** |
| | | | **Total** | **$78,411.11** |

**REI Travel Breakdown:**

Diesel truck #1 to pull trailer with carbon and misc supplies. Enclosed trailer to keep carbon dry.
Diesel truck #2 to pull generator, transport additional carbon

| | | |
|---|---|---|
| Round trip to site from REI office | 425 | miles |
| Round trip to motel (Solon Springs) | 16 | miles (pre-flooding) |

GESTRA

GESTRA Engineering, Inc.
191 W. Edgerton Avenue
Milwaukee, WI 53205
Phone: (414)-933-7444
Fax: (414) 933-7844

## Break Down of Contract Drilling

Project: Bayside Carbon Injections
Proposal Number: P18192-60 Revised
Site Location: Hwy L & STH 53, Bennet,WI
Date: 7/10/2018
Client: REI Engineering — **Attn: Dave Larsen P.G.**
Estimated By: TRW

### Estimate Based on the Request for Proposal

| | Units | Unit Price | Quantity | Total Cost | Assumptions |
|---|---|---|---|---|---|
| Mobilization/Demobilization | Lump Sum | $1,500.00 | 1 | $1,500.00 | Track mounted 7822 DT |
| Daily Probe Services 0-30' | Day | $1,250.00 | 5 | $6,250.00 | Blind probe to 18". Fee based on 10 on site hours/50 hrs per week.. Additional Hours will be charged at $150.00 Hr. Fee's based on one person crew, assistance to be provided by REI Engineering. |
| Probe Services over 10 Hrs/Day | Hour | $200.00 | 0 | $0.00 | |
| Temp Well Installation | Lineal Foot | $8.50 | 0 | $0.00 | |
| Filter Sand & Bentonite Seal | Lineal Foot | $5.00 | 0 | $0.00 | |
| Protective Covers | Each | $85.00 | 0 | $0.00 | 5 Inch flush covers. Does not include coring of pavement. |
| Boring Abandonment | Lineal Foot | $1.26 | 0 | TBD | Granular Bentonite TBD |
| Boring Abandonment | Lineal Foot | $3.00 | 0 | $0.00 | Bentonite Pellets |
| Pavement Penetration /Patch | Each | $15.00 | 0 | $0.00 | |
| Decontamination | Lump Sum | $350.00 | 1 | $350.00 | Assumed Pressure washing to be completed at the end of each Project. Removal of injectant to be easily removed with hot pressure washing. |
| D.O.T. Drum | Each | $65.00 | 0 | $0.00 | |
| Per Diem | Each | $150.00 | 6 | $900.00 | |
| Coordination | Hourly | $80.00 | 1.0 | $80.00 | GESTRA to call in a diggers hotline ticket. Client responsible for clearing all private utilities in the work areas. |
| **Total Estimated Project Cost** | | | | **$9,080.00** | |

### Additional Services

| | Units | Unit Rate | Quantity | Total Est. | Assumptions |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| Total | | | | | |
| **Project Total** | | | | | |

This quotation is an estimate and is not a Lump sum. GESTRA reserves the right to charge for services as performed according to the attached fee schedule.

Quotation Prepared By:

Timothy R. Winkler, Drilling Manager
Print Name and Position

Signature

7/10/2018

Quotation Accepted By:

Print Name and Position

Signature

Date

**Table 3**
**Bayside Forestry**
**Membrane Placement**
**Proposal Date 7/11/2018**

| Commodities | Units | Quantity | Rate | Events | Total | Subtotal |
|---|---|---|---|---|---|---|
| **TerraTex** | | | | | | |
| TerraTex Membrane | roll | 4 | $450.00 | 1 | $1,800.00 | |
| grading for placement of membrane 130 x 100' area | lump | 1 | $1,500.00 | 1 | $1,500.00 | |
| Gravel and placement of gravel over membrane | lump | 1 | $3,100.00 | 1 | $3,100.00 | |
| | | | | | **Sub Total** | **$6,400.00** |
| **Minimal Construction Documentation Report** | | | | | | |
| Drafting - as built report | hr | 4 | $67.02 | 1 | $268.08 | |
| Report Review - as built report | hr | 1 | $109.67 | 1 | $109.67 | |
| Secretarial - Misc | hr | 5 | $42.65 | 1 | $213.25 | |
| Secretarial - as built report | hr | 3 | $42.65 | 1 | $127.95 | |
| Summary Report - as built report | hr | 10 | $109.67 | 1 | $1,096.70 | |
| | | | | | **Sub Total** | **$1,815.65** |
| | | | | | **Membrane Installation Total** | **$8,215.65** |

\\REIFNP\Projects\6100-6199\6198 - Bayside Forestry\Proposed Work\Remediation\[6198 Soil Excavation CBI 7-11-2018.xlsx]Membrane

GEOLOGIC RESTORATION, PLLC

Remediation Consulting Services

April 17, 2018

David N. Larsen, P.G.
REI Engineering
4080 N. 20th Avenue
Wausau, WI 54401

**Re: Proposal for Carbon Based Injectate (CBI) Injection Services**
**Bayside Forestry Equipment**
**9222 E County Road L**
**Solon Springs, WI**
**BRTTS #03-16-000971**
**PECFA #54873-8210-22**
**GR Project # GR17-006REV2**

Dear Mr. Larsen:

Geologic Restoration, PLLC (GR) appreciates the opportunity to provide our proposal for CBI injection services to REI Engineering, Inc. (REI). Our proposal includes our understanding of the project information, our proposed scope of services, GR-320-IRC™ Carbon summary, CleanInject® process summary, fee estimate, schedule, assumptions and authorization information.

## Project Information

The following project information is based on reports and emails provided by REI.

The referenced property is located at 9222 E County Road L, Solon Springs, Wisconsin 54893 (Figure 1). The property was previously used as a gas station, automotive repair facility and towing service. The property is currently operating as a custom dock building facility. The property was reported to have five underground storage tanks (USTs) that were removed as of November 10, 1995. A petroleum release at the referenced property was reported to The Wisconsin Department of Natural Resources (WNDR) on November 11, 1995.

The site lithology has been described as fill material overlying layers of sand and clays. Multiple soil samples document the presence of petroleum compounds that exceed the WDNR Residual Contaminant Level (RCL).

The average depth to groundwater was reported to be approximately 3 feet below ground surface (bgs). Groundwater flow direction was measured to be north, northwest. A shallow downward vertical groundwater component was identified based on groundwater elevation data from the MW8 and PZ1 well nest. A potable water supply well that services the Town of Bennett Town Hall building is located approximately 120 feet from wells MW8/PZ1.

Groundwater sampling events performed in 2016 report a significant amount of petroleum constituents exceeding Enforcement Standards (ES) and Preventive Action Limits (PAL).

REI is considering carbon injection in groundwater and soil to reduce impacted soil and groundwater concentrations and limit offsite migration. GR has prepared a carbon injection plan based on the site information detailed above.

## Proposed Scope of Services

We will mobilize a CleanInject® injection trailer and crew to the site for performance of carbon based Injectate injection. **The goal of our injection plan is to reduce the concentrations of contaminants as much as possible with the limited amount of funds available. The scope of services proposed reflects these financial limitations and is not intended to completely remediate the site**. Based on our discussion, the following specifications will apply:

Approximately 45 Injection locations are proposed for the project (see Figure 1). Injections should be spaced approximately 10 feet apart from one another. Injections should be performed every 2 feet in depth with a total of approximately 5 injection intervals at each location. The injection depths should be between approximately 4 to 12 feet below ground surface.

Approximately 9,000 pounds of Carbon GR-320-IRC™ CBI should be injected at the subject site. Injection intervals should be alternated between odd and even depths at adjacent boring locations, if deemed necessary, to maximize the CBI distribution in the formation. The CBI load per injection interval was determined based on the proximity to the contamination source. GR will conduct the work using 40 hour HAZWOPER trained personnel in level D personal protective equipment. GR equipment operators are also third-party certified to operate heavy equipment onsite.

A Safety-Vac vacuum recovery system (or equivalent if provided by REI) will be used to recover CBI that surfaces. The recovered material will be reused, if possible, by pumping the slurry into available injection points. The injection point locations are selected to avoid monitoring wells; however, the CBI distribution is dictated by the formation materials and structure. Preferential pathways to monitoring wells or ground surface may exist causing CBI to flow beyond predicted radiuses of influence and enter wells or surface.

| Locations* | Injection Points | Injection Depth | Intervals | Carbon per Interval | Total Carbon |
|---|---|---|---|---|---|
| Onsite | 45 | 4 - 12 ft. | 5 | 40 lbs. | 9,000 lbs. |
| | | | | **TOTAL CARBON** | **9,000 lbs.** |

* See Figure 1 for injection point locations.

**ESTIMATED TOTAL CARBON**: ~ 9000 lbs.
**ESTIMATED WATER USAGE**: ~ 9500 gal.
**ESTIMATED INJECTION POINTS:** ~ 45
**ESTIMATED INJECTION INTERVALS: ~** 5

## GR-320-IRC CBI

GR-320-IRC CBI is a mixture of coal and coconut activated carbon. The carbon can be either virgin or reactivated, depending upon the requirements for the site. The particle size is that of a powdered activated carbon, with 90% of the particles passing the 320 sieve (44 microns or smaller). The particle size of the carbon facilitates the mixing with potable water into a slurry and the injection into the subsurface using the CleanInject system.

## CleanInject Process

The CleanInject system was designed to safely, efficiently, and accurately transfer, mix, and inject CBI into the subsurface.

The GR-320-IRC carbon slurry is mixed within the CleanInject trailer by utilizing multiple components, including a graduated water tank, water transfer pump, mixing tank, carbon powder pump, and weighing scales. A 1000 lbs. carbon super sack is placed on the weighing scales via a fork lift and the initial weight is recorded. During the mixing process, a hose connected to the powder pump draws carbon from the super sack into the mixing tank. The water tank is filled by connecting a water source to the water spigot on the outside of the trailer. During mixing, the water source is shut off so the water tank volume can be recorded. Water and carbon are pumped into the mixing tank simultaneously via the transfer pump and powder pump; the mixture ratio is controlled by monitoring the carbon super sack weight via the scales, and the water volume within the graduated tank. Water sprayers inside the mixing tank provide dust suppression. The mixing tank is equipped with a mixer motor to keep the carbon slurry evenly distributed. The carbon slurry is actively recirculated by the injection pump which is described below.

The CleanInject injection trailer is equipped with an injection pump that is controlled by a variable frequency drive (VFD). The pump is capable of a flow rate up to approximately 45 gallons per minute (GPM) without any backpressure. To minimize daylighting, the pump is typically operated at its minimum frequency of 30 Hertz, which reduces the maximum flow rate to approximately 20 GPM. The actual flow rate during injection is dictated by the formation materials being injected into.

The injection pump inlet port pulls carbon slurry from the mixing tank via a high pressure hose. The pump outlet port connects to the injection line assembly in-between two high pressure ball valves and a pressure relief valve. One ball valve controls flow to the injection hose leading to the Geoprobe rig, the other valve controls flow to the recirculation line leading back to the mixing tank. The pressure relief valve has a hose that also leads back to the mixing tank.

The injection pump actively recirculates the carbon slurry while the system is running but not injecting. During the recirculation process, the recirculation valve is open and the injection valve is closed. The carbon slurry is pumped from the mixing tank to the injection line assembly and back into the mixing tank through the recirculation line. When it is time to inject, the injection valve is first opened, and then the recirculation valve is closed. The injection pressure is monitored on a pressure gauge attached to the injection line assembly. If the pressure exceeds 1000 PSI, the pressure relief valve automatically opens and carbon is directed back to the mixing tank. The amount of carbon slurry injected is measured by a fluid level gauge on the mixing tank. Once the current injection interval is complete, the recirculation valve is first opened, and then the injection valve is closed.

During injection, the starting pressure averages between roughly 50 to 150 PSI in order to open the check valve present within the injection tip connected to the Geoprobe rods. The maximum injection pressure is 1100 PSI; pressures exceeding 1000 PSI will open the pressure relief valve on the injection line. The injection/recirculation valves must be fully open or fully closed to prevent damage to internal components; therefore the actual pressure during injection is dictated by the formation materials and structure. In cases where low pressure injection is required, the recirculation valve can be left open during injection, causing excess pressure to flow through the recirculation line back to the mixing tank.

## Fee Estimate

The following unit rates will apply to the project:

| ITEM | AMOUNT | UNIT | UNIT RATE | COST |
|---|---|---|---|---|
| Reactivated Carbon GR-320-IRC™ and CleanInject® System | 9,000 | Pounds | $4.00 | $36,000.00 |
| Virgin Carbon GR-320-IRC™ and CleanInject® System | 9,000 | Pounds | $5.00 | $45,000.00 |
| **ITEM** | **AMOUNT** | **UNIT** | **UNIT RATE** | **COST** |
| Mobilization / Demobilization | 2,420 | Miles | $2.50 | $6,050.00 |
| Per Diem (2 Man Crew) | 10 | Nights | $300.00 | $3,000.00 |
| Safety-Vac Vacuum Recovery System | 5 | Days | $75.00 | $375.00 |
| Injection Tips | 1 | Tips | $200.00 | $200.00 |
| PPE (2 Man Crew) | 5 | Days | $30.00 | $150.00 |
| Truck Charge | 10 | Days | $50.00 | $500.00 |
| **ESTIMATED TOTAL** | | **REACTIVATED CARBON** | | **$46,275.00** |
| | | **VIRGIN CARBON** | | **$55,275.00** |

## Schedule

We expect to schedule the work within approximately two to three weeks of authorization, and we estimate the project will require 5 working days to complete. Due to the geographic location of the site, we anticipate performing the work when ambient temperatures are generally above 40 ºF and more favorable for CBI injection.

## Assumptions

GR assumes the following regarding the proposed CBI injection project:

- REI assures GR will have clear access to the site during daylight hours and that the site area will be cleared of any obstructions that could limit access to injection locations or equipment deployment.
- REI assures GR's injection equipment can remain on-site for the duration of the project.

- Probe\injection locations will be the responsibility of REI, including assurance that locations will be accessible to the probe rig, underground and above ground utilities will not interfere with the drilling process, and GR and REI have legal authorization to drill and inject (Underground Injection Control Permits) in the chosen locations. REI will provide necessary traffic control and safety equipment, personnel and permits for injection points located in sidewalks, streets, highways and other high traffic areas.
- REI will provide for private and/or public underground utility locators, as appropriate, and potential damage to utilities will not be the responsibility of GR.
- REI will provide a Geoprobe rig with 1.5" rods and tips capable of penetrating surface and formation materials to the desired injection depths. REI will also be responsible for sealing the completed injection locations and any surface repair required by State regulations or the property owner.
- REI will provide a 4000lb forklift for unloading carbon super sacks from a commercial carrier and for placing the carbon bags onto the weighing scales.
- REI will provide a potable water source onsite capable of producing at least 5 to 10 gallons per minute.
- REI will provide a trailer-mounted, 480volt, 100kVA, diesel generator and necessary fuel to power the generator during the injection project.
- Inclement weather will not interfere with drilling for more than three hours in each work day.
- If work cannot be completed in one day, charges for crew per-diem will be incurred at the cost listed in the fee estimate.
- Additional or lesser amounts of injectate will result in a change to the fees charged for the project.
- The subsurface contains no impenetrable material that would prevent the specified equipment from penetrating to the desired drilling depths.
- An upgrade to Level C personal protective equipment will result in a $50 per person per day equipment/supplies surcharge and a 10% surcharge on unit rates.
- Drilling surfaces will be thin (<3") asphalt. An additional fee will apply for pavement cutting, if concrete or thick asphalt is present. If ground is too soft to support injection and support equipment, additional charges may apply, or locations may be deemed unsuitable for injection.
- Unforeseen conditions, such as – but not limited to – asphalt pavement greater than 3 inches in thickness, location of pads in concrete areas, or overhead power, may require additional effort on a time and materials basis to complete the work. GR will contact you for authorization before conducting additional work.
- We assume that carbon that surfaces (day-lighting) can be collected (Safety-Vac Vacuum) and disposed on-site without drumming or other environmental considerations or pressure washed off paved surfaces. If we need to provide drums for other material collection, they will be charged at $65 each, and the fees for disposal of contents are not included.
- REI will be responsible for removing CBI that enters any onsite monitoring wells or remediation wells.
- REI will be responsible for any and all site cleanup required including disposal of super sacks and pallets.
- REI will provide a dry storage space onsite or waterproof tarps for the super sacks of Carbon GR-320-IRC™ which will be shipped to the site by a commercial carrier.
- Standby time or additional effort will be charged at a crew rate of $100 per hour.
- REI will hand clear probe locations prior to our arrival to minimize standby time.

## Authorization

To authorize us to proceed, please sign and return one copy of our proposal. The work will be performed in accordance with the attached Master Client Services Agreement which is incorporated herein by reference.

Geologic Restoration, PLLC sincerely appreciates the opportunity to provide REI with our proposal for CBI injection services. Please contact us if you have any questions or when we can be of further service.

Respectfully,

**Geologic Restoration, PLLC**

*Eric A Chew*

Eric A Chew, GIT
Project Geologist

*Brian E Chew Sr.*

Brian E Chew, Sr. P.G.
Principal Hydrogeologist

**Accepted By:**

X_____ Date: _____
Signature, Title and Printed Name

Attachments:

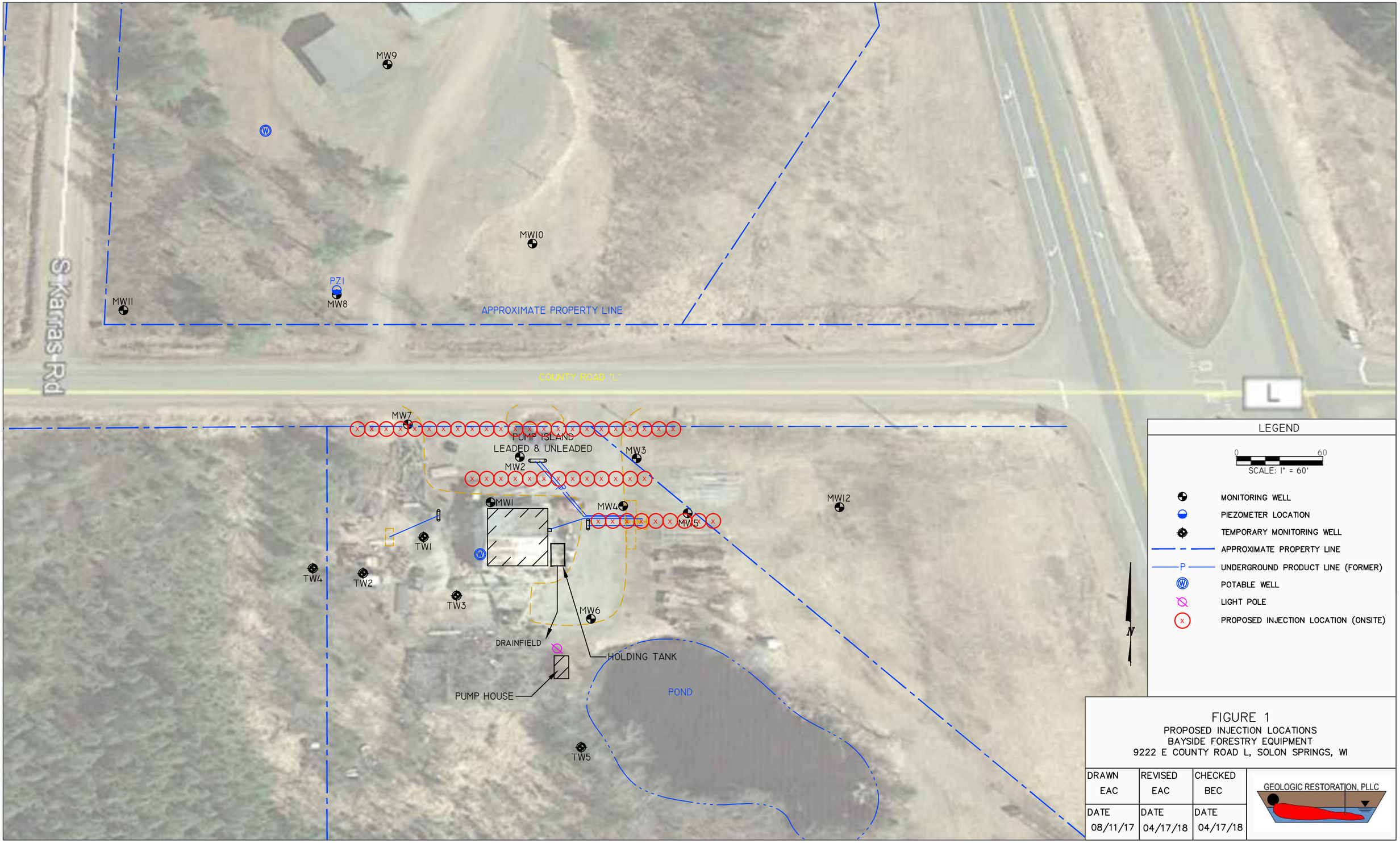



FIGURE 1
PROPOSED INJECTION LOCATIONS
BAYSIDE FORESTRY EQUIPMENT
9222 E COUNTY ROAD L, SOLON SPRINGS, WI

| DRAWN | REVISED | CHECKED |
|---|---|---|
| EAC | EAC | BEC |
| DATE | DATE | DATE |
| 08/11/17 | 04/17/18 | 04/17/18 |

GEOLOGIC RESTORATION, PLLC

**GEOLOGIC RESTORATION, PLLC**
MASTER CLIENT SERVICES AGREEMENT

This MASTER CLIENT SERVICES AGREEMENT constitutes the whole entire agreement

between Geologic Restoration, PLLC, a North Carolina corporation and REI Engineering, Inc.

(hereinafter called CLIENT).

## I. SCOPE OF SERVICES

GEOLOGIC RESTORATION will perform the scope of services outlined in any proposal prepared by GEOLOGIC RESTORATION and agreed to in writing and signed by an authorized representative of CLIENT. GEOLOGIC RESTORATION has no obligation to perform services and/or provide work product not expressly included in each proposal. CLIENT agrees that the proposal contains all criteria, design, and construction standards and other information relating to CLIENT's requirements for the services to be performed by GEOLOGIC RESTORATION.

## II. FEES, BILLING, TERMS, AND PAYMENT

The charges for the services, labor and materials provided by GEOLOGIC RESTORATION hereunder shall be based on time and materials, unit rates, and/or lump sum basis as described in the proposal. If the charges are to be on a time and materials and/or unit rate basis, a fee schedule may also be attached hereto or made available from GEOLOGIC RESTORATION at the CLIENT's request. CLIENT agrees to pay all of such charges. If CLIENT requests that GEOLOGIC RESTORATION perform any services or provide any materials in addition to and separate from the Scope of Services outlined in Section I, CLIENT agrees to reimburse GEOLOGIC RESTORATION directly for those services either following the basis in the proposal or following a mutually agreed upon basis.

GEOLOGIC RESTORATION may require a suitable retainer prior to commencement of our work. Such amount shall be held on account until the final invoice is prepared, at which time your account will be reconciled.

GEOLOGIC RESTORATION agrees to provide CLIENT with a description of services performed for CLIENT and the fees and charges associated with such services. Monthly invoices are due and payable in U.S. dollars upon receipt. Invoices not paid within thirty (30) days of date of invoice are subject to an interest charge of one and one-half percent (1.5%) on the outstanding balance for each month or portion thereof beyond the thirty (30) day period. CLIENT shall promptly notify GEOLOGIC RESTORATION in writing if CLIENT objects to any portion of an invoice, and in any event within fourteen (14) days of receipt of the statement containing the item to which the CLIENT objects. CLIENT is responsible for all costs and reasonable attorney's fees incurred by GEOLOGIC RESTORATION in collecting past due amounts, or in otherwise enforcing this agreement. GEOLOGIC RESTORATION without any liability to CLIENT, reserves the right to withhold any services, work product, and /or reports pending payment of CLIENT's invoices.

GEOLOGIC RESTORATION reserves the right to revise its fee schedule subject to thirty (30) day notice. In the event GEOLOGIC RESTORATION revises its fee schedule, CLIENT shall have fifteen (15) days from receipt of notice of the revision to determine whether to terminate this agreement.

## III. TERMINATION

CLIENT or GEOLOGIC RESTORATION may terminate this agreement for any reason and at any time by written notification to the other party. Termination will become effective thirty (30) calendar days after receipt of the termination notice. If this agreement is terminated, GEOLOGIC RESTORATION agrees to deliver to CLIENT all work product, reports, drafts and other

documents prepared pursuant to this agreement within fifteen (15) days of notice of termination, provided however that GEOLOGIC RESTORATION has been paid in full for all charges (i.e., fees and expenses) incurred by GEOLOGIC RESTORATION through the date of termination. Any revision to the scope of services shall be pursuant to a change order agreed to by CLIENT and made a part of this agreement.

## IV. WARRANTY

GEOLOGIC RESTORATION will perform the work under this agreement as an independent contractor/consultant utilizing reasonable care and skill in accordance and consistent with customary industry standards. This standard of care is the sole and exclusive standard of care that will be applied to measure GEOLOGIC RESTORATION's performance of the work. There are no other representations or warranties made by GEOLOGIC RESTORATION except those included specifically herein. In particular, but not by way of limitation, GEOLOGIC RESTORATION makes no representation or warranty that the implementation or use of the recommendations, or findings or conclusions of a report, if report is presented, will result in compliance with applicable law or provide a totally satisfactory result. Moreover, any and all implied representations or warranties arising out of the work are hereby expressly disclaimed and negated. IN PARTICULAR, BUT NOT BY WAY OF LIMITATION, NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY.

All recommendations, findings, and conclusions made by GEOLOGIC RESTORATION will be made to the best of GEOLOGIC RESTORATION's knowledge, opinion, and belief, based upon information CLIENT made available to GEOLOGIC RESTORATION at the time of review, and upon a variety of factors which may include, but are not limited to the following: federal, state, and local laws, rules, codes, regulations and ordinances; market conditions; energy costs; wage rates; and political climate. A change of any of the factors upon which the review is based may adversely affect the recommendations, findings, and conclusions, if any, expressed by GEOLOGIC RESTORATION.

## V. RESPONSIBILITY OF CLIENT TO PROVIDE ACCURATE AND SUFFICIENT INFORMATION

It is CLIENT's responsibility to disclose to GEOLOGIC RESTORATION prior environmental reports and analytical results relating to the work that is the subject of this agreement and to advise of known hazardous wastes or hazardous substances, petroleum products, underground storage tanks and other matters relevant to the work that is the subject of this Agreement. In addition, it is CLIENT's responsibility to disclose to GEOLOGIC RESTORATION its knowledge of the location of any man-made objects, including but not limited to underground utilities, relative to any field test or subsurface penetrations. When contracted to perform subsurface penetrations, Geologic Restoration will follow the industry standard of care regarding the location of utilities, piping and other subsurface obstacles prior to the advancement of borings, wells, trenches, excavations, or other subsurface penetrations. Specifically, Geologic Restoration will:

1. Contact ULOCO at least 48 hours prior to commencement of invasive activities;

2. Contract or have Geologic Restoration’s drilling contractor contract with a private utility location service to locate subsurface utilities, obstructions and proposed boring and/or excavation locations; and,

3. Hand auger or have Geologic Restoration’s drilling contractor hand auger the upper 4 feet of each boring or excavation to verify the absence of utilities.

Having done the above, or if Client or Clients contractor is responsible the above, Geologic Restoration shall not be responsible for any damages (direct or indirect) or injury to any persons or to public or private property whether within or outside of the areas covered by the Project including, but not limited to, any releases to the environment from contents of piping or subsurface vessels.

It is the client's responsibility to provide site-specific drawings of site utilities and system layouts, including, but not limited to underground storage tanks, product and dispenser piping, water, sewer, electrical, telecommunications lines, and any other underground utilities and to make available any other reasonably available information or persons with information concerning the site in the areas of Geologic Restoration's planned activities.

Unless otherwise noted, CLIENT warrants the accuracy and sufficiency of the information, plans, specifications and other material that it provides to GEOLOGIC RESTORATION for use in connection with GEOLOGIC RESTORATION performing its work under this Agreement, irrespective of whether such information and materials are provided directly by CLIENT to GEOLOGIC RESTORATION or indirectly from one of CLIENT's other contractors, dealers or agents.

## VI. CLIENT EXCLUSIVITY AND AUTHORITY

The work to be performed by GEOLOGIC RESTORATION under this Agreement is solely for the benefit of CLIENT. This Agreement shall not be construed as creating any contractual relationship of any kind between GEOLOGIC RESTORATION and any third party. It is the intent of GEOLOGIC RESTORATION and CLIENT that there are no third party beneficiaries of this Agreement. The fact that CLIENT may enter into other agreements with third parties that provide GEOLOGIC RESTORATION the authority to inspect or reject work being performed by the third party shall not give rise to any duty or responsibility on the part of GEOLOGIC RESTORATION in favor of such third party.

Further, CLIENT covenants and agrees that CLIENT has full legal authority, as agent, to contract for all of the owner(s) and agrees that representations, warranties, and indemnification provided herein extend to GEOLOGIC RESTORATION and its agents on behalf of these parties, but the work performed will not give rise to any responsibility on the part of GEOLOGIC RESTORATION and its agents to these third parties.

The information and materials provided by GEOLOGIC RESTORATION to CLIENT in connection with the work shall be utilized by CLIENT only for the purposes contemplated by this agreement, and shall not be provided by CLIENT to third parties for their use without the prior written consent of GEOLOGIC RESTORATION, except that GEOLOGIC RESTORATION agrees that information and materials provided by GEOLOGIC RESTORATION to CLIENT may be provided to and used by environmental agencies (including but not limited to the North Carolina Department of Environment, and Natural Resources or equivalent agencies in other states and the United States Environmental Protection Agency), CLIENT's attorneys, and pursuant to any valid court order.

GEOLOGIC RESTORATION agrees that all reports and other documents prepared for CLIENT pursuant to this agreement are the property of CLIENT, however GEOLOGIC RESTORATION may retain copies of all documents. GEOLOGIC RESTORATION also agrees that it will not disclose to any third party any documents, reports, laboratory data or other information generated, created or produced for CLIENT pursuant to this agreement unless required by law, pursuant to a valid court order or with written permission from CLIENT.

The following policy applies to documents retained by GEOLOGIC RESTORATION unless specific exceptions have been agreed to in the Client Services Agreement: appropriate correspondence, technical, contractual, health and safety information for this scope of work will be retained for a period of three years. After three years from the final report, projects will be purged to retain only technical reports, contractual agreements, health and safety documentation, and final status correspondence.

## VII. FIELD WORK AND HAZARDOUS SUBSTANCES

GEOLOGIC RESTORATION is to have free access to the applicable properties at the times and on the dates field activities are scheduled. Delays to GEOLOGIC RESTORATION beyond an aggregate total of 60 minutes during inspection are subject to waiting time charges to the extent such delays are caused by CLIENT or its employees, contractors or agents. Delays due to

locating or arising from damage to underground structures and cables are subject to waiting time charges.

The procedures performed do not assure that contamination will be detected or that contamination detected is indicative of the full scope of possible contamination at the site. Further, the laboratory analysis and organic vapor analyzer readings must be viewed as an indication only of conditions in the borings drilled. Further testing in any boreholes or in groundwater sampling can produce different test results. Geological and hydrogeological conditions and contamination levels can vary between specific locations on the same site. Nothing in this section limits or modifies the standard by which GEOLOGIC RESTORATION's performance will be measured as provided in Section III of this Agreement.

CLIENT acknowledges that GEOLOGIC RESTORATION and its subcontractors have played no part in the creation, placement, or existence of any hazardous substance or pollution sources which may exist at the site. CLIENT recognizes that common exploratory methods such as the advancement of borings and installation of wells have inherent risks, such as the potential to penetrate through contaminated material and serve as a conduit for the migration of the contamination. GEOLOGIC RESTORATION assumes no responsibility for such inherent risks and shall have no liability for them. CLIENT shall have complete responsibility for making any required disclosures to any governmental authority or third party, and for taking any action not specifically included in the proposed services. CLIENT shall be responsible for all costs and consequences arising from the discovery of unanticipated hazardous substances or pollutants. CLIENT acknowledges that under no circumstances is GEOLOGIC RESTORATION a generator, operator, treater, storer, transporter, or disposer of any hazardous substances or pollutants found at or near the site. All materials contaminated by hazardous substances or pollutants, including samples are the property and responsibility of CLIENT.

Should a contractor(s) not retained by GEOLOGIC RESTORATION be involved in the Work, CLIENT will advise such contractor(s) that GEOLOGIC RESTORATION's Work does not include supervision or direction of the means, methods or actual work of the contractor(s), his employees or agents. CLIENT will also inform contractor that the presence of GEOLOGIC RESTORATION's field representative for project administration, assessment, observation or testing will not relieve the contractor of its responsibilities for performing their work in accordance with the plans and specifications. If a contractor (not a subcontractor of GEOLOGIC RESTORATION) is involved in the Work, CLIENT agrees, in accordance with generally accepted construction practices, that the contractor will be solely and completely responsible for working conditions on the Subject Property, including security and safety of all persons and property during performance of their work, and compliance with all CLIENT safety requirements and OSHA regulations. These requirements will apply continuously and will not be limited to normal working hours. It is agreed that GEOLOGIC RESTORATION will not be responsible for the work of the contractor or their site safety or security on the Subject Property, other than for GEOLOGIC RESTORATION's employees and subcontractors, and that GEOLOGIC RESTORATION does not have the duty or right to stop the work of the contractor.

**VIII. LIMITATIONS ON CLIENT'S RIGHTS AND REMEDIES**

GEOLOGIC RESTORATION shall not be liable in any way for work that is performed in accordance with the prescribed standard of care or for the failure to discover any condition that, pursuant to that standard, could not reasonably have been discovered as a result of the work performed.

CLIENT agrees that GEOLOGIC RESTORATION's liability for damage arising indirectly or directly out of or relating to any error, omission or other professional negligence of GEOLOGIC RESTORATION, its agents, employees, or subcontractors in the performance of work under this agreement or otherwise will be limited to a sum not to exceed the contract price under this Agreement defined as the total man-time charges and reimbursable expenses paid to GEOLOGIC RESTORATION under this Agreement and shall be limited to direct damages. Without limiting the foregoing, GEOLOGIC RESTORATION shall in no event be liable for economic, incidental or consequential damages. CLIENT hereby waives all such damages and

remedies other than recovery of the contract price under this Agreement, as above defined. In no event will GEOLOGIC RESTORATION's directors, owners, officers, employees, or agents be liable to CLIENT, or any third party, for any liabilities, losses, damages, or expenses of any nature whatsoever, whether direct or indirect, caused by or resulting from the work (or use of the work).

**IX. INDEMNIFICATION**

To the fullest extent permitted by law, CLIENT will defend, indemnify and hold harmless GEOLOGIC RESTORATION, its directors, owners, officers, agents, contractors, and employees against any and all claims, demands or causes of action, and all costs, losses, liabilities, expenses and judgments, incurred in connection therewith, including attorney's fees and court costs (collectively referred to as the "Damages"), brought by any of CLIENT's employees or representatives, or by any third party, based upon, in connection with, resulting from or arising out of any of the following: (a) CLIENT's or GEOLOGIC RESTORATION's actions or inactions, other than the gross negligence or willful misconduct of GEOLOGIC RESTORATION under this agreement, (b) CLIENT's use of the work that is the subject of this Agreement, (c) any allegation that GEOLOGIC RESTORATION has handled, operated, generated, treated, stored, transported, or disposed of hazardous waste under the Resource Conservation and Recovery Act of 1976 as amended or any other similar federal, state or local regulation or law provided GEOLOGIC RESTORATION has fully and completely complied with all laws, regulations and ordinances applicable to the handling and management of all hazardous wastes and hazardous substances or (d) the CLIENT'S actual or alleged violation of any federal, state or local law or regulation. In the event that both CLIENT and GEOLOGIC RESTORATION are adjudicated at fault with respect to damages or injuries sustained by the claimant, CLIENT shall indemnify GEOLOGIC RESTORATION for the portion of the damage or injuries caused by CLIENT.

Subject to the limitations set forth in Section VIII above, GEOLOGIC RESTORATION agrees to indemnify and hold harmless CLIENT, its directors, owners, officers, agents, contractors, and employees against any and all claims, demands or causes of action, and all costs, losses, liabilities, expenses and judgments incurred in connection therewith, including attorney's fees and court costs, brought by any person or third party based upon, in connection with, resulting from or arising out of GEOLOGIC RESTORATION'S gross negligence, fraud or willful misconduct in the performance of this agreement.

**X. ARBITRATION**

All claims, disputes and other matters in question between the CLIENT and GEOLOGIC RESTORATION arising out of, or relating to, this Agreement or the breach thereof and where the amount in controversy exceeds $10,000, may, at the option of either party, be decided by arbitration in accordance with the Rules of the American Arbitration Association then existing and the Federal Rules of Civil Procedure regarding this discovery. The foregoing agreement to arbitrate and any other agreement to arbitrate with an additional person or persons duly consented to by the CLIENT and GEOLOGIC RESTORATION shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

Note of the demand for arbitration shall be filed by the party electing arbitration in writing with the other party and with the American Arbitration Association. The demand to arbitration shall be made within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

Unless otherwise agreed in writing, GEOLOGIC RESTORATION shall carry on the work and maintain its progress during any arbitration proceedings, and the CLIENT shall continue to make payments to GEOLOGIC RESTORATION in accordance with this Agreement.

**XI. NON-WAIVER OF DEFAULTS**

Any failure by either party at any time, or from time to time, to enforce or require the strict keeping and performance of any of the terms and conditions of this Agreement, or to terminate this Agreement under section III, shall not affect or impair the right of that party at any time to avail itself of such remedies as it may have for any breach or breaches of such terms and conditions.

**XII. COMPLETE AGREEMENT**

This Agreement, along with its attachments, including the GEOLOGIC RESTORATION proposal incorporates all of the previous and contemporaneous discussions, representations, understandings, and agreements between the parties with respect to the subject matter of this Agreement. The terms and conditions expressed in this Agreement shall not be altered except in writing, signed by both parties. Use of any of CLIENT's pre-printed or standard business forms (such as purchase orders) in the administration of any portion of the services to be performed under this Agreement shall be for the CLIENT's convenience only, and any provision contained in any such form that is in conflict with the terms of this MASTER CLIENT SERVICES AGREEMENT shall be deemed stricken and null and void.

The headings in this Agreement are for general categorization and are not intended to be legal descriptions.

**XIII. APPLICABLE LAW**

This Agreement is governed by, and will be construed in accordance with the laws of the State of North Carolina. Any disputes shall be resolved in Charlotte, North Carolina. No delay or failure of performance due to causes outside of the reasonable control of GEOLOGIC RESTORATION shall be deemed a breach of this agreement. This agreement shall survive and be enforceable even if a provision of this agreement is found to be legally unenforceable.

**XIV. AUTHORIZATIONS**

By: _____ Date: _____

Geologic Restoration, PLLC - Signature & Typed/Written Name

Name of Client: _____

Organization, Entity, or Individual Responsible for Payment

Accepted By: _____ Date: _____

Signature and Title

_____

Typed or Written Name and Title

**GEOLOGIC RESTORATION, PLLC**
**2018 FEE SCHEDULE**

## A. PERSONNEL RATES

| | |
|---|---|
| Administrative Staff | $65.00 / hour |
| Technician | $65.00 / hour |
| CleanInject® Trailer Operator | $100.00 / hour |
| Senior Technician | $95.00 / hour |
| Professional I Staff | $65.00 / hour |
| Professional II Staff | $85.00 / hour |
| Project Manager | $95.00 / hour |
| Principal / Technical Specialist | $140.00 / hour |
| Expert Witness | $180.00 / hour |

**Overtime Rates for Hourly Workers**:

** Rates for Technicians and other hourly personnel will be charged at a 1.5 rate multiplier for non-injection work time over 8.0 hours per day and on weekends and at a 2.0 rate multiplier on holidays.*

## B. EXPENSE RATES

| | |
|---|---|
| PPE (2 Man Crew) | $30.00 / day |
| Truck Charge | $50.00 / day |
| Project Expenses | Cost + 15% |
| Subcontract Services | Cost + 15% |
| Supplies | Cost + 15% |
| Construction Services | Cost + 15% |

## C. TRAVEL

| | |
|---|---|
| Mileage | $0.75 / mile |
| CleanInject® Trailer Mobilization (Includes Labor) | $2.50 / mile |
| Meal Per Diem | $40.00 / day |
| Travel Expenses (hotel, airfare, car, etc.) | Cost + 15% |

## D. EQUIPMENT

**Carbon Injection Equipment Rates**

| | |
|---|---|
| CleanInject® Trailer and Reactivated Carbon GR-320-IRC™ | $4.00 / lb. |
| CleanInject® Trailer and Virgin Coconut Shell Carbon GR-320-IRC™ | $5.00 / lb. |
| Injection Tip | $200.00 / each |
| Injection Rod 1.5 Inch x 3 Feet – 4 hole | $200.00 / each |
| CleanInject® Trailer, Operator Standby Time | $100.00 / hr. |

**Water Monitoring Equipment Rates**

| | |
|---|---|
| Water Level Indicator | $40.00 / day |
| Interface Probe | $60.00 / day |
| Peristaltic Pump | $75.00 / day |
| Redi-Flo Pump & Controller | $170.00 / day |
| Purge Pump (Proactive) | $160.00 / day |
| YSI 63 Conductivity, pH Meter | $70.00 / day |
| Dissolved Oxygen Meter | $70.00 / day |

**Soil Sampling Equipment**

| | |
|---|---|
| Sediment Sampler | $50.00 / day |
| Hand Auger | $45.00 / day |

**Air Monitoring Equipment**

| | |
|---|---|
| Organic Vapor Analyzer | $90.00 / day |
| Dwyer Magnehelic (analog) | $15.00 / day |

**Generic Field Equipment**

| | |
|---|---|
| Surveying Equipment (Transit or Laser) | $50.00 / day |
| Safety-Vac Vacuum Recovery System w/ EX40 Subaru 14 hp motor & 55 Gallon Drum | $75.00 / day |
| Magnetic Locator | $45.00 / day |
| Pressure Washer | $135.00 / day |
| Well Sampling Equipment | $20.00 / sample |
| Trimble GPS Unit | $145.00 / day |
| Concrete Coring Rig and Bit Usage | $150.00 / day |
| Abrasive Cutoff Saw | $35.00 / day |
| Light Stand | $25.00 / day |
| Trailer | $35.00 / day |
| Field Computer | $50.00 / day |
| Hammer Drill and Chisel | $100.00 / day |
| Husqvarna Brush Cutter | $50.00 / day |
| Honda 2” Trash Pump | $35.00 / day |
| Digital Camera | $40.00 / day |

S Karras Rd

MW9

– Soil Excavation

– Membrane

MW10

PZ1

MW8

MW11

APPROXIMATE PROPERTY LINE

COUNTY ROAD "L"

L

MW7

GRAVEL DRIVE

GP14

GRAVEL

PUMP ISLAND LEADED & UNLEADED

FORMER LOCATION 4,000 GAL. LEADED

GP13

PUMP ISLAND DIESEL

FORMER LOCATION 2,000 GAL. DIESEL

MW2

MW3

GP4

FORMER LOCATION 4,000 GAL. KEROSENE

GP2

MW12

MW5

FORMER LOCATION 1,000 GAL. DIESEL

HA-11

HA-8

HA-7

HA-6

HA-10

HA-9

TW1

HA-4

HA-3

HA-5

HA-2

TW4

TW2

TW3

HA-1

MW1

GP7

PUMP ISLAND KEROSENE

B6

B5

B4

MW6

FORMER LOCATION 4,000 GAL. UNLEADED

PUMP ISLAND DIESEL

DRAINFIELD

HOLDING TANK

PUMP HOUSE

POND

TW5

LEGEND

0 60

SCALE: 1" = 60'

PROPOSED EXCAVATION

SOIL BORING LOCATION

GEOPROBE SOIL BORING

MONITORING WELL

PIEZOMETER LOCATION

HAND AUGER SOIL BORING

TEMPORARY MONITORING WELL

APPROXIMATE PROPERTY LINE

UNDERGROUND PRODUCT LINE (FORMER)

POTABLE WELL

LIGHT POLE

N

REI Engineering, INC.

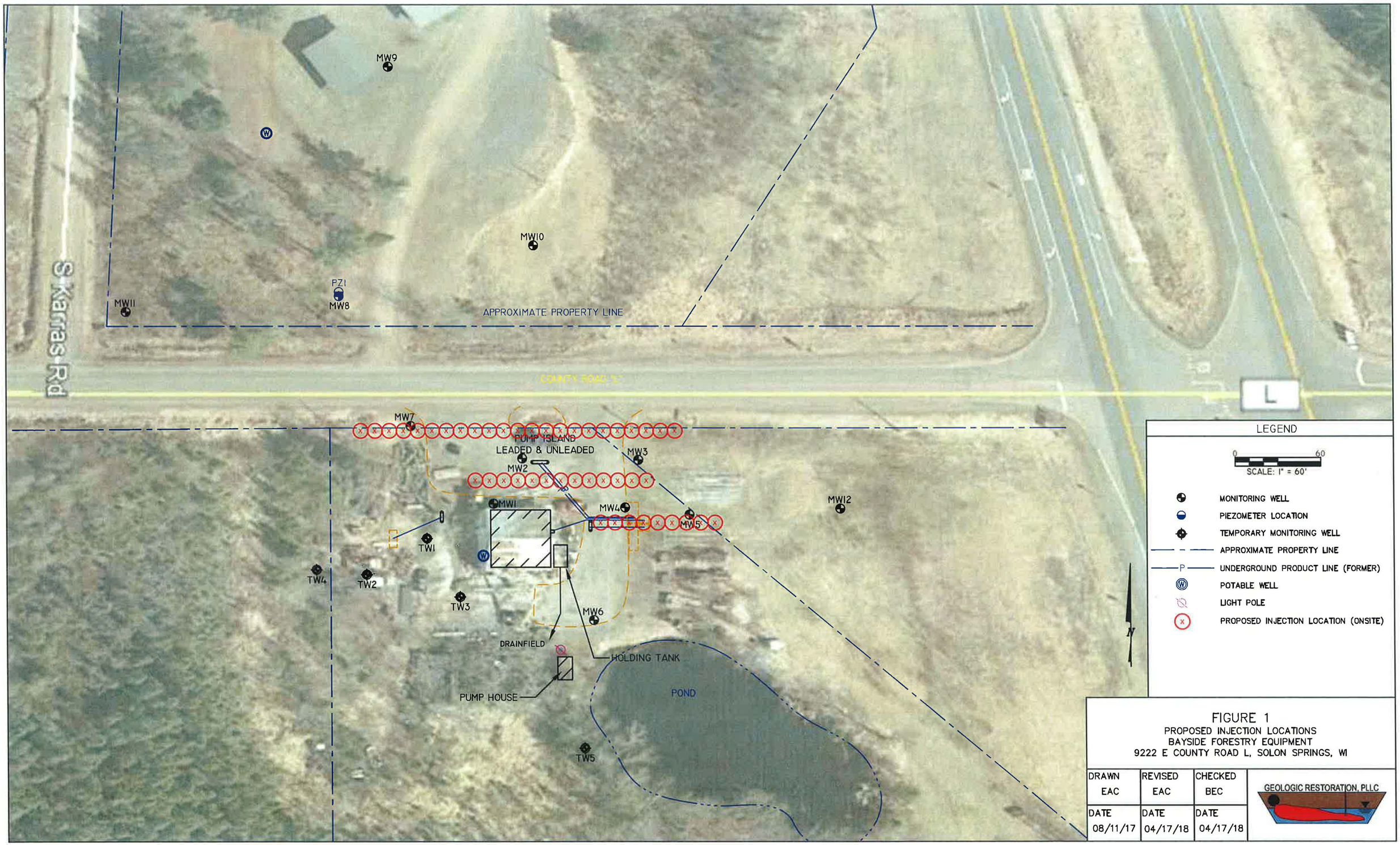
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

BAYSIDE FORESTRY
9222 EAST COUNTY COUNTY ROAD "L"
BENNETT, WISCONSIN 54873

FIGURE 7 : ESTIMATED EXTENT OF PROPOSED SOIL EXCAVATION

| PROJECT No. | DRAWN BY: | DATE: |
|---|---|---|
| 6198 | AJG | 4/20/2017 |

DRAWING FILE: P:\6100-6199\6198 - BAYSIDE FORESTRY\DWG\6198-EXCAVATION.DWG LAYOUT: EXCAVATION PLOTTED: APR 21, 2017 - 9:44AM PLOTTED BY: ALANG




# FIGURE 1

PROPOSED INJECTION LOCATIONS
BAYSIDE FORESTRY EQUIPMENT
9222 E COUNTY ROAD L, SOLON SPRINGS, WI

| DRAWN | REVISED | CHECKED | GEOLOGIC RESTORATION, PLLC |
|---|---|---|---|
| EAC | EAC | BEC | |
| DATE | DATE | DATE | |
| 08/11/17 | 04/17/18 | 04/17/18 | |