| N     |           | Sover           | eign (         | Consi      | ulting                       | Inc.                        |             | Boring/Well ID  |           |           |                      | D     | rilling N           | Method D                              | etails                         |             |
|-------|-----------|-----------------|----------------|------------|------------------------------|-----------------------------|-------------|---|-----------|-----------|----------------------|-------|---------------------|---------------------------------------|--------------------------------|-------------|
|       |           |                 | Science        | e. Servic  | e. Solutio                   | ns                          |             | SHM-13-01   |           |           | Bit                  | (     | Casing              | Soil                                  | Sampler                        | Rock Core   |
|       | 1011      |                 |                |            | on.com                       | 1                           |             | Sheet 1 of 3  |           | Type:     | Sonic                |       | Steel               | 5                                     | Sonic                          | Sonic       |
|       | ent:      |                 | US AC          |            |                              |                             |             | Drilling Co.: Glacier Drilli  | _         | Size:     | 6"                   |       | 6"                  |                                       | 4'                             | 4"          |
|       | ject:     |                 | Fort De        | evens -    | SHL                          |                             |             | Drill Rig: Geoprobe 8140 Drill Method: Roto-sonic   |           | SPT:      | Hammer-              |       | NA                  | Fall -                                | NA                             |             |
|       | ject r    | lumber:         | Former         | Fort D     | lavane                       |                             |             | Drill Method: Roto-sonic Foreman: Mark School   |           | Wo        | ll Type:             |       | onitorin<br>Overbur | ng Well I                             | Details Diameter:              | 2"          |
| LUC   | auon      |                 | Shepley        |            |                              |                             |             | SCI Inspector: PJV  | K.        |           | ll Head:             |       | Standpi             |                                       | Casing:                        | PVC         |
|       |           |                 | Sample         |            |                              |                             |             | Start Date: 5/23/2013   |           |           | titude:              |       |                     | -                                     | ırface Elev:                   |             |
|       |           |                 |                |            |                              |                             |             | Completion Date: 5/28/2013  |           |           | igitude:             |       |                     |                                       | asing Elev:                    |             |
|       | Q         | ji.             | Ft.)           | - Blow/6   | ing<br>sec/1                 | ting<br>1v)                 | ple         | 2012013   |           | Loi       | igitude.             |       |                     | _                                     | asing Liev.                    |             |
| ч     | le I      | Rec.            | val (          | · Bic      | min Cor                      | Tes                         | r Tg        |   |           | Str       | atum                 | SS    | Test 1              | Roring                                | Monitori                       | ing Well    |
| Depth | Sample ID | Pen./Rec. (in.) | Interval (Ft.) | SPT        | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv) | Water Table | Sample Description  |           |           | nge (ft.)            | Notes | 1 650 1             | _                                     | nstructio                      | _           |
| I     | S-1       | 120/60          | 0-10           | NA         | NA                           | NA                          |             | 0-24" - Very dark gray (2.5Y 3/1) moist to wet, Organ   | nic       | Citai     | ige (it.)            | 1     |                     |                                       | mstructio                      |             |
|       |           |                 |                |            |                              |                             |             | Materials, PEAT   |           |           |                      |       |                     | Ce                                    | ement 0 - 2'                   |             |
| 2     |           |                 |                |            |                              |                             |             |   |           | P         | EAT                  |       |                     |                                       |                                |             |
| _     |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
| 4     |           |                 |                |            |                              |                             |             | 24"-36" - Olive brown (2.5Y 4/3), moist to wet, medi  | um to     |           |                      |       |                     |                                       |                                |             |
| ·     |           |                 |                |            |                              |                             |             | coarse SAND, little fine sand, trace sub-rounded to su  |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | fine to coarse gravel   |           |           |                      |       |                     | N                                     |                                |             |
| 6     |           |                 |                |            |                              |                             |             | 36"-48" - Light yellowish brown (2.5Y 6/3) moist to v   | wet fine  |           |                      |       |                     |                                       |                                |             |
| Ü     |           |                 |                |            |                              |                             |             | SAND  | wet, mie  | S         | AND                  |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             | l           |   |           |           |                      |       |                     |                                       |                                |             |
| 8     |           |                 |                |            |                              |                             |             | 48"-60" - Olive brown (2.5Y 4/3), moist to wet, media   | um to     |           |                      |       |                     |                                       |                                |             |
| Ü     |           |                 |                |            |                              |                             |             | coarse SAND, little fine sand, trace sub-rounded to su  |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | fine to coarse gravel   |           |           |                      |       |                     |                                       | 6.1.1.1.40                     | DIAC D.     |
| 10    |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       | Schedule 40<br>- 39' (+ 2.5' S |             |
|       | S-2       | 120/65          | 10-20          | NA         | NA                           | NA                          |             | Olive brown (2.5Y 4/3), moist to wet, medium to coar  | rse       |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | SAND, little fine sand, trace sub-rounded to sub angu   | lar fine  |           |                      |       |                     | N                                     |                                | 21 - 241    |
| 12    |           |                 |                |            |                              |                             |             | to coarse gravel  |           |           |                      |       |                     | N                                     | rilling Cutting                | gs 2" - 34" |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
| 14    |           |                 |                |            |                              |                             | •           |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | GP-13-01-015 = <1.0 ppb   |           |           |                      | 2     |                     | N                                     |                                |             |
| 16    |           |                 |                |            |                              |                             |             | G1-13-01-013 = <1.0 ppb   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             | ł           |   |           |           |                      |       |                     |                                       |                                |             |
| 18    |           |                 |                |            |                              |                             |             |   |           | S         | AND                  |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       | Schedule 40                    |             |
|       |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     | No                                    | - 39' (+ 2.5' \$               | stick up)   |
| 20    |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       | S-3       | 120/0           | 20-30          | NA         | NA                           | NA                          |             | NR- 4"sonic bit became lodged and un-threaded, lost<br>Attempt to re-thread unsuccessful. Over drill with 6" t  |           |           |                      |       |                     | Dı                                    | rilling Cutting                | gs 2' - 34' |
|       |           |                 |                |            |                              |                             |             | retrieve 4' bit end.  | 10        |           |                      |       |                     |                                       |                                |             |
| 22    |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | Observed limited amounts of 6" casing materials remoduring retrieval process- appears to be same material a     |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | during retrieval process- appears to be same material a   | as above  |           |                      |       |                     |                                       |                                |             |
| 24    |           |                 |                |            |                              |                             |             |   |           |           |                      |       |                     |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | GP-13-01-025 = <1.0 ppb   |           |           |                      | 2     | 1                   |                                       |                                |             |
| Note  | es:       | 1) Recove       | ery values     | are skev   | ved due to                   | the soil s                  | samp        | e collection bag technique used with roto-sonic drilling  | g         | Key:      |                      | Ĺ     |                     | Cemen                                 | t                              |             |
|       |           | 2) GW pr        | -              | -          |                              |                             |             | making distinction between natural and meabout 11   | noleo     |           | Bedrock              | Č     |                     |                                       | uttings/Nativ                  | e Soils     |
|       |           | difficult r     |                |            |                              |                             |             | making distinction between natural and mechanical bre   | zaKS      | 8         | teel Casing<br>Grout | 6     | H                   | <ul><li>Benton</li><li>Sand</li></ul> | me                             |             |
|       |           |                 | _              |            |                              |                             |             | illed 5/28/13.  |           | Op        | en bedrock           |       |                     | Screen                                |                                |             |
| D -   | .oul      | 5)              | aati 1'        |            |                              |                             | 1           | also between cell times and the ten 12  | .al W ·   | 1 1 av 1  | dine                 |       | <u> </u>            | Riser                                 |                                |             |
| Kem   | arks:     |                 |                | -          |                              |                             |             | ries between soil types and the transition may be gradu<br>roundwater may occur due to factors other than those |           |           | -                    |       | -                   |                                       |                                |             |
|       |           |                 |                |            |                              |                             |             | c vapors (referenced to an isobutylene standard) measured   | -         |           |                      |       |                     |                                       |                                |             |
|       |           |                 | -              |            |                              |                             |             | Ev lamp and set to a reference factor of 0.53 (benzene)   |           | round ar- | face                 |       |                     |                                       |                                |             |
|       |           | <u> </u>        | oannate V      | vater tabl | ic INA=I                     | or whhile                   | cault       | NR=No Recovery bgs=below ground surface ags   | -auuve gi | ounu Stil | iacc                 |       |                     |                                       |                                |             |

| 7     |                 | Sove            | reign (           | Cons         | ulting                        | Inc.                        |             | Boring/Well ID   |            |                     | D        | rilling N     | Method Details               |            |
|-------|-----------------|-----------------|-------------------|--------------|-------------------------------|-----------------------------|-------------|--|------------|---------------------|----------|---------------|------------------------------|------------|
|       |                 |                 | Science           | e. Servic    | e. Solutio                    | ons                         |             | SHM-13-01  |            | Bit                 | (        | Casing        | Soil Sampler                 | Rock Core  |
|       | 1011            |                 |                   |              | on.com                        | 1                           |             | Sheet 2 of 3   | Type:      | Sonic               |          | Steel         | Sonic                        | Sonic      |
| Cli   |                 |                 | US AC             |              | CIII                          |                             |             | Drilling Co.: Glacier Drilling   | Size:      | 6"                  |          | 6"            | 4'                           | 4"         |
|       | ject:<br>iect N | Number:         | Fort De           | evens -      | SHL                           |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic   | SPT:       | Hammer-             | М        | NA<br>onitori | Fall - NA<br>ng Well Details |            |
|       | ation           |                 | Former            | Fort D       | evens                         |                             |             | Foreman: Mark Schock   | Well       | l Type:             |          | Overbur       | · ·                          | 2"         |
|       |                 |                 | Shepley           | y Hill I     | andfill                       |                             |             | SCI Inspector: PJV   | Well       | l Head:             |          | Standpi       | ipe Casing:                  | PVC        |
|       |                 | ,               | Sample            | Inforn       | nation                        |                             |             | Start Date: 5/23/2013  | Lati       | itude:              |          |               | Surface Elev:                |            |
|       |                 | 3               | $\widehat{\cdot}$ | 9            | , L                           | <b>5.0</b>                  | e           | Completion Date: 5/28/2013   | Long       | gitude:             |          |               | Casing Elev:                 |            |
|       | А               |                 | 1.<br>F           | low/         | oring                         | estin<br>omv)               | <b>Fabl</b> |  |            |                     |          |               |                              |            |
| Depth | Sample ID       | Pen./Rec. (in.) | Interval (Ft.)    | SPT - Blow/6 | Rock coring<br>time minsec/1' | Field Testing<br>PID (ppmv) | Water Table |  | Stra       | atum                | Notes    | Test          | Boring/ Monitori             | ng Well    |
| De    | San             | Pel             | In                | SP           | <u> </u>                      | # E                         | Š           | Sample Description   | Chan       | ige (ft.)           | ž        |               | Construction                 | n          |
| 26    |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               | $\mathcal{O}$                |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               |                              |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          | )             |                              |            |
| 28    |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               | 2" Schedule 40               |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               | 0' - 39' (+ 2.5' S           | ыск ир)    |
| 20    |                 |                 |                   |              |                               |                             |             |  | SA         | AND                 |          |               | Daillian Continu             | - 21 - 241 |
| 30    | S-4             | 120/0           | 30-40             | NA           | NA                            | NA                          |             | Over drill to 40' with 6" to retrieve 4" bit   |            |                     |          |               | Drilling Cutting             | gs 2 - 34  |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               |                              |            |
| 32    |                 |                 |                   |              |                               |                             |             | Observed limited amounts of 6" casing materials removed<br>during retrieval process- appears to be same material as above,       |            |                     |          | )             |                              |            |
|       |                 |                 |                   |              |                               |                             |             | a zone of fine sand and silt apparent  |            |                     |          |               | $\mathcal{O}$                |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               |                              |            |
| 34    |                 |                 |                   |              |                               |                             |             |  |            |                     |          | 7             | 73                           |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          | Н             | Н                            |            |
| 26    |                 |                 |                   |              |                               |                             |             | GP-13-01-035 = <1.0  ppb   |            |                     | 2        | H             | Bentonite 34' -              | 271        |
| 36    |                 |                 |                   |              |                               |                             |             |  |            |                     |          | Н             | Bentonite 34 -               | 31         |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          | Н             | H                            |            |
| 38    |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               |                              |            |
|       |                 |                 |                   |              |                               |                             |             |  | C A        | AND                 |          |               | 1.0                          |            |
|       |                 |                 |                   |              |                               |                             |             |  | SF         | AND                 |          |               | <b>∃</b> ∷l                  |            |
| 40    | S-5             | 132/92          | 40-51             | NA           | NA                            | NA                          |             | 0.20" Olim harry (2.5% 4/2) and to add and limit to  |            |                     |          |               | 70                           |            |
|       | 3-3             | 132/92          | 40-31             | IVA          | IVA                           | IVA                         |             | 0-20" - Olive brown (2.5Y 4/3), wet to sat, medium to coarse SAND, little fine sand, trace sub-rounded to sub angular fine       |            |                     |          |               | ∄∷∖                          |            |
| 42    |                 |                 |                   |              |                               |                             |             | to coarse gravel   |            |                     |          | -             | - 11                         |            |
|       |                 |                 |                   |              |                               |                             |             | 20"-80" - Light Olive brown (2.5Y 5/3), sat, fine SAND, little   |            |                     |          |               | <b>∃</b> ∶1                  |            |
|       |                 |                 |                   |              |                               |                             |             | silt, with sub-rounded to rounded fine to coarse gravel at<br>bottom above till zone   |            |                     |          | -             | #2 Morie Sand                | 37' - 50'  |
| 44    |                 |                 |                   |              |                               |                             |             | Bottom above thi Zone  |            |                     |          |               | 2" Schedule 40               |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          | · -           | Wellscreen - 0.0             | 01" slot   |
| 16    |                 |                 |                   |              |                               |                             |             | GP-13-01-045 = 1.1 ppb   |            |                     | 2        |               | <b>∃</b> ::1                 |            |
| 46    |                 |                 |                   |              |                               |                             |             |  | SA         | AND                 |          | ·  -          | <b>∃</b> ∴}                  |            |
|       |                 |                 |                   |              |                               |                             |             |  |            |                     |          |               | 7.1                          |            |
| 48    |                 |                 |                   |              |                               |                             |             |  |            |                     |          | ·:-           | <b>∃</b> ::1                 |            |
|       |                 |                 |                   |              |                               |                             |             | 2011 2021 20 111   |            |                     |          |               | <b>]</b> ::                  |            |
|       |                 |                 |                   |              |                               |                             |             | 80"-92" - Grayish brown (2.5Y 5/2), sat, fine to medium SAND, some coarse sand, little sub-angular fine to coarse                |            |                     | ł        |               | #2 Morie Sand                | 49' - 50'  |
| Note  |                 | 1) Bassa        |                   | ana alsas    | and due to                    | . 4h                        |             | gravel, trace silt. Dense (TILL)   | _          | `ILL                |          |               | Comont                       |            |
| Note  | s.              |                 |                   |              |                               | dissolved.                  |             | le collection bag technique used with roto-sonic drilling  | Key:       | Bedrock             | Ç.       |               | Cement Drill Cuttings/Nativ  | e Soils    |
|       |                 |                 | -                 |              |                               |                             |             | making distinction between natural and mechanical breaks   | St         | teel Casing         |          |               | Bentonite                    |            |
|       |                 |                 |                   |              |                               | s (Σ) value<br>PVC well     |             | alled 5/28/13.   | One        | Grout<br>en bedrock | ð.       | -             | Sand<br>Screen               |            |
| _     | ,               | 5)              |                   |              |                               |                             |             |  |            |                     | <u> </u> |               | Riser                        |            |
| Rem   | arks:           |                 |                   | -            |                               |                             |             | ries between soil types and the transition may be gradual. Wate groundwater may occur due to factors other than those present as |            | -                   |          | -             |                              |            |
|       |                 | 2) Field t      | esting valu       | ues repre    | sent total                    | volatile o                  | rgan        | c vapors (referenced to an isobutylene standard) measured in the   |            |                     |          |               |                              |            |
|       |                 |                 |                   |              |                               |                             |             | Ev lamp and set to a reference factor of 0.53 (benzene).  NR=No Recovery bgs=below ground surface ags=above g                    | round surf | face                |          |               |                              |            |

| Sovereign Consulting Inc. |                  |                   |                         |               |                               |                             |             | Boring/Well ID  |             |                        | D     | rilling M                     | ethod Details                     |           |
|---------------------------|------------------|-------------------|-------------------------|---------------|-------------------------------|-----------------------------|-------------|---|-------------|------------------------|-------|-------------------------------|-----------------------------------|-----------|
|                           |                  |                   | Science                 | e. Servic     | e. Solutio                    | ons                         |             | SHM-13-01   |             | Bit                    |       | Casing                        | Soil Sampler                      | Rock Core |
| 9 0                       | 1010             |                   |                         |               | on.com                        | 1                           |             | Sheet 3 of 3  | Type:       | Sonic                  |       | Steel                         | Sonic                             | Sonic     |
|                           | ent:             |                   | US AC                   |               | ~                             |                             |             | Drilling Co.: Glacier Drilling  | Size:       | 6"                     |       | 6"                            | 4'                                | 4"        |
|                           | ject:            |                   | Fort De                 | evens -       | SHL                           |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic                                    | SPT:        | Hammer-                |       | NA ·                          | Fall - NA                         |           |
|                           | gect N<br>cation | lumber:           | Former                  | Fort D        | evens                         |                             |             | Foreman: Roto-sonic  Mark Schock  | Wel         | l Type:                |       | <b>onitoring</b><br>Overburde | g Well Details<br>en Diameter:    | 2"        |
| Loc                       | ation            | •                 | Shepley                 |               |                               |                             |             | SCI Inspector: PJV  |             | l Head:                |       | Standpip                      |                                   | PVC       |
|                           |                  | 5                 | Sample                  |               |                               |                             |             | Start Date: 5/23/2013   | Lat         | titude:                |       |                               | _ Surface Elev:                   |           |
|                           |                  |                   |                         |               |                               |                             |             | Completion Date: 5/28/2013  |             | gitude:                |       |                               | _ Casing Elev:                    |           |
|                           | D                | Pen./Rec. (in.)   | Ft.)                    | SPT - Blow/6" | Rock coring<br>time minsec/1' | Field Testing<br>PID (ppmv) | able        | 5,20,2012   | 2011        | .g.raac.               |       |                               | _ casing ziev.                    |           |
| h                         | ple I            | Rec               | val                     | ğ             | nin                           | l Tes                       | er T        |   | Str         | atum                   | es    | Test B                        | oring/ Monitor                    | ing Well  |
| Depth                     | Sample ID        | Pen.              | Interval (Ft.)          | SPT           | Rock                          | Field<br>PID                | Water Table | Sample Description  |             | nge (ft.)              | Notes |                               | Construction                      | _         |
|                           | 9,               |                   |                         | <u> </u>      |                               |                             | Ĺ           | bumpie Degeripeion  |             | -ge (100)              | Ė     | * *                           |                                   | ·         |
|                           | D 1              | 60/21             | 51.56                   | 27.4          | 27.4                          | 27.4                        |             | GP-13-01-051 = 1.3 ppb  | Т           | TILL                   | 2     | 3.3                           |                                   |           |
| 52                        | R-1              | 60/31             | 51-56                   | NA            | NA                            | NA                          |             | Bedrock @ 51' Sonic core 51' - 56' Poor recovery due to jammed catching basket in liner |             |                        | 3     | 88                            |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             | $\Sigma$ of sticks = 0"   |             |                        | 4     | 22                            | 23                                |           |
|                           |                  |                   |                         |               |                               |                             |             | RQD = 0%  | DEE         | ND OCK                 |       | 88                            | G 501 . 561                       |           |
| 54                        |                  |                   |                         |               |                               |                             |             | Igneous rock, coarse grained granodiorite, dark gray (NO3)                              | BEL         | DROCK                  |       | 22                            | Grout 50' - 56'                   |           |
|                           |                  |                   |                         |               |                               |                             |             | matrix with white (N9) to very light gray (N8) grains, (Ayer                            |             |                        |       | 3.3                           |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             | Granodiorite)   |             |                        |       | 888                           |                                   |           |
| 56                        |                  |                   |                         |               |                               |                             |             | BORING END @ 56'  |             |                        |       | 22                            | <b>8</b>                          |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        | 1     |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 58                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 60                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 62                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 64                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 66                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 68                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| 70                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        | 1     |                               |                                   |           |
| 72                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             | 1           |   |             |                        |       |                               |                                   |           |
| 74                        |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
|                           |                  |                   |                         |               |                               |                             |             |   |             |                        |       |                               |                                   |           |
| Note                      | es:              |                   | -                       |               |                               |                             | -           | e collection bag technique used with roto-sonic drilling                                | Key:        | ъ.                     |       |                               | Cement                            | a ::      |
|                           |                  | _                 | ofile samp<br>% mavbe s | -             |                               |                             |             | making distinction between natural and mechanical breaks                                | 9           | Bedrock<br>teel Casing | Ċ     | 1                             | Drill Cuttings/Nativ<br>Bentonite | ve Soils  |
|                           |                  |                   | esulting ir             |               |                               |                             |             | and incentined of the interface and incentined of taxs                                  |             | Grout                  | Ø     |                               | Sand                              |           |
|                           |                  |                   | ck hole gro             | outed on      | 5/23/13.                      | PVC well                    | inst        | alled 5/28/13.  | Op          | en bedrock             | Γ     |                               | Screen                            |           |
| Rem                       | narks:           | 5)<br>1) Stratifi | cation line             | es renres     | ent appro                     | ximate bo                   | unds        | ries between soil types and the transition may be gradual. Water                        | r level rea | idings were            | com   | pleted at                     | Riser                             |           |
| 2.011                     |                  |                   |                         | -             |                               |                             |             | groundwater may occur due to factors other than those present at                        |             | -                      |       | -                             |                                   |           |
|                           |                  |                   | _                       | -             |                               |                             | -           | c vapors (referenced to an isobutylene standard) measured in the                        | e headspa   | ce of a seal           | led s | oil sample                    | e with                            |           |
|                           |                  |                   | -                       |               |                               |                             |             | Ev lamp and set to a reference factor of 0.53 (benzene).                                | round over  | face                   |       |                               |                                   |           |
|                           |                  | <u> Appi</u>      | OAIIIIate V             | vater tab     | 1 1 MA-1                      | TOT APPIL                   | aut         | NR=No Recovery bgs=below ground surface ags=above gr                                    | round Stiff | iacc                   |       |                               |                                   |           |

|             |                | Sove   | reign          | Cons          | ulting                        | Inc.                        |             | Boring/Well ID   |          |                         | D      | rillin       | g M  | ethod Details                            |
|-------------|----------------|--|----------------|---------------|-------------------------------|-----------------------------|-------------|--|----------|-------------------------|--------|--------------|------|--|
| aniation of | and the second |  | Science        | e. Servic     | e. Solutio                    | ns                          |             | SHM-13-02  |          | Bit                     |        | Casin        | ıg   | Soil Sampler Rock Core                   |
|             | 1111           |  |                |               | on.com                        | <u> </u>                    |             | Sheet 1 of 4   | Type:    | Sonic                   |        | Steel        | 1    | Sonic Sonic                              |
|             | ent:           |  | US AC          |               | CLIT                          |                             |             | Drilling Co.: Glacier Drilling   | Size:    | 6"                      |        | 6"           |      | 4' 4"                                    |
|             | oject:         | Number:  | Fort De        | evens -       | SHL                           |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic   | SPT:     | Hammer-                 |        | NA<br>Ionito |      | Fall - NA                                |
|             | cation         |  | Former         | · Fort F      | )evens                        |                             |             | Foreman: Roto-solic  Mark Schock   | V        | ell Type:               |        | Overb        | _    | g Well Details<br>en Diameter: 2"        |
| Loc         | cution         | •  | Shepley        |               |                               |                             |             | SCI Inspector: PJV & JAG   |          | ell Head:               |        | Stan         |      |  |
|             |                | (  | Sample         |               |                               |                             |             | Start Date: 4/18/2013  | 1        | Latitude:               |        |              |      | Surface Elev:                            |
|             |                |  |                | ŧ.            | <u> </u>                      |                             |             | Completion Date: 4/22/2013   |          | ongitude:               |        |              |      | Casing Elev:                             |
|             | Q              | Pen./Rec. (in.)                                  | Ft.            | SPT - Blow/6' | Rock coring<br>time minsec/1' | Field Testing<br>PID (ppmv) | Water Table |  |          |                         |        |              |      |  |
| ч           | -le I          | Rec  | val            | ĕ.            | min g                         | Tes<br>(ppn                 | r Ta        |  | S        | tratum                  | es     | Tes          | st B | oring/ Monitoring Well                   |
| Depth       | Sample ID      | Pen./  | Interval (Ft.) | SPT           | Rock                          | Field                       | Wate        | Sample Description   |          | ange (ft.)              | Notes  |              |      | Construction                             |
|             | S-1            | 60/39  | 0-5            | NA            | NA                            | NA                          |             | Topsoil Series Description   |          | OP SOIL                 | 1      |              |      | Constituction                            |
|             |                |  |                |               |                               |                             |             | D (10VD 5/2) 1 1' (CAND )  |          |                         |        |              |      | Cement 0 - 2'                            |
| 2           |                |  |                |               |                               |                             |             | Brown (10YR 5/3), dry, medium to coarse SAND, trace sub-rounded fine gravel.                                 |          |                         |        |              |      |  |
| -           |                |  |                |               |                               |                             |             | rounded line graver.   |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 4           |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| -           |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 6           | S-2            | 60/47  | 5-10           | NA            | NA                            | NA                          |             | Brown (10YR 5/3), dry, medium to coarse SAND, trace sub-rounded fine gravel, coarse gravel & cobbles.        |          |                         |        |              |      |  |
| 0           |                |  |                |               |                               |                             |             | Tourided fine graver, coarse graver & coopies.   | S        | AND &                   |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  | (        | GRAVEL                  |        |              |      |  |
| 0           |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 8           |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 10          |                |  |                |               |                               |                             |             |  |          |                         |        |              |      | 2" Schedule 40 PVC Riser                 |
| 10          | S-3            | 120/70   | 10-20          | NA            | NA                            | NA                          |             | Brown (10YR 5/3), damp to moist, medium SAND, little   |          |                         |        |              |      | 0' - 60' (+ 2.5' Stick up)               |
|             |                |  |                |               |                               |                             |             | coarse sand  |          |                         |        |              |      |  |
| 10          |                |  |                |               |                               |                             |             |  |          |                         |        |              |      | Drilling Cuttings 2' - 55'               |
| 12          |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 1.4         |                |  |                |               |                               |                             | •           |  |          |                         |        |              |      |  |
| 14          |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 16          |                |  |                |               |                               |                             |             | GP-13-02-015 = <1.0  ppb   |          |                         | 2      |              |      |  |
| 16          |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 10          |                |  |                |               |                               |                             |             |  |          | ANID 0                  |        |              |      |  |
| 18          |                |  |                |               |                               |                             |             |  |          | SAND &<br>SRAVEL        |        |              |      | 2" Schedule 40 PVC Riser                 |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      | 0' - 60' (+ 2.5' Stick up)               |
| 20          |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 20          | S-4            | 120/94   | 20-30          | NA            | NA                            | NA                          |             | Top 55" - Brown(10YR 5/3), damp to moist, medium SAND,   |          |                         |        |              |      | Drilling Cuttings 2' - 55'               |
|             |                | -  |                |               |                               |                             |             | little coarse sand   |          |                         |        |              |      |  |
| 22          |                |  |                |               |                               |                             |             | 55"-72" - Brown (10YR 5/3), damp to moist, fine SAND, trace medium to coarse sand                            | 2        |                         |        |              |      |  |
| 22          |                |  |                |               |                               |                             |             | 72"-94" - Grayish brown (10YR 5/2) damp to moist, medium   |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             | to coarse SAND, trace fine sand  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             |  |          |                         |        |              |      |  |
| 24          |                | <del>                                     </del> |                |               |                               |                             |             |  |          |                         |        |              |      |  |
|             |                |  |                |               |                               |                             |             | GP-13-02-025 = <1.0 ppb  |          |                         | 2      |              |      |  |
| Note        | es:            |  | -              |               |                               |                             |             | le collection bag technique used with roto-sonic drilling  | Key:     | Dad1                    | . 2002 |              | (11) | Cement Drill Cuttings/Native Soils       |
|             |                |  |                |               | ation for o                   |                             |             | making distinction between natural and mechanical breaks   |          | Bedrock<br>Steel Casing | VX.    | χ.           |      | Drill Cuttings/Native Soils<br>Bentonite |
|             |                |  |                |               | m of stick                    |                             |             | Cara control control   |          | Grout                   | ٦      | 8            |      | Sand                                     |
|             |                |  | ck hole gr     | outed on      | 4/19/13.                      | PVC wel                     | l inst      | alled 4/22/13.   | (        | Open bedrock            |        | •            |      | Screen                                   |
| Ran         | narks:         | 5)<br>1) Stratif                                 | ication lin    | eg renro      | ent annro                     | vimate b                    | nin-A       | aries between soil types and the transition may be gradual. War  | er level | readings was            | re co  | mnlet        | ed o | Riser                                    |
| Kell        | ikii KS.       |  |                |               |                               |                             |             | groundwater may occur due to factors other than those present  |          |                         |        |              |      |  |
|             |                | 2) Field t                                       | esting val     | ues repre     | esent total                   | volatile o                  | rgan        | ic vapors (referenced to an isobutylene standard) measured in the  |          |                         |        |              |      |  |
|             |                |  | -              |               |                               |                             |             | Ev lamp and set to a reference factor of 0.53 (benzene).  NR=No Recovery bgs=below ground surface ags=above; | ground   | surface                 |        |              |      |  |

|             |  | Sove            | reign          | Cons         | ulting                        | Inc.                                   |             | Boring/Well I   | D                          |            |                      | D         | rilling  | Metl       | nod Details               |              |
|-------------|--|-----------------|----------------|--------------|-------------------------------|--|-------------|---|----------------------------|------------|----------------------|-----------|----------|------------|---------------------------|--------------|
| Managaran ( | Andreas of the second  |                 | Science        | e. Servic    | e. Solutio                    | ns                                     |             | SHM-13-02   |                            |            | Bit                  | ,         | Casing   |            | Soil Sampler              | Rock Core    |
|             |  |                 |                |              | on.com                        |  |             | Sheet 2 of 4  |                            | Type:      | Sonic                |           | Steel    |            | Sonic                     | Sonic        |
|             | ent:   |                 | US AC          |              | CIII                          |  |             |   | cier Drilling              | Size:      | 6"                   |           | 6"       |            | 4'<br>E.II. NA            | 4"           |
|             | oject:<br>viect N  | Jumher:         | Fort Do        | evens -      | SHL                           |  |             |   | robe 8140 LS<br>Roto-sonic | SPT:       | Hammer-              | м         | NA       |            | Fall - NA<br>Vell Details |              |
|             | cation   |                 | Former         | · Fort E     | )evens                        |  |             |   | ark Schock                 | We         | ll Type:             |           | Overbu   | - 0        | Diameter:                 | 2"           |
|             |  |                 | Sheple         |              |                               |  |             |   | JV & JAG                   |            | ll Head:             |           | Standı   |            | Casing:                   | PVC          |
|             |  | ;               | Sample         | Inforn       | nation                        |  |             | Start Date: 4   | 1/18/2013                  | La         | titude:              |           |          |            | Surface Elev:             |              |
|             |  | 3               | (              | 6''          | 1.                            | pu.                                    | 4)          | Completion Date: 4  | 1/22/2013                  | Lor        | ngitude:             |           |          |            | Casing Elev:              |              |
|             | А  | c.<br>Ē         | Ę              | low/         | ring<br>nsec/                 | sting<br>mv)                           | able        |   |                            |            |                      |           |          |            |                           |              |
| Ð           | Sample ID  | Pen./Rec. (in.) | Interval (Ft.) | SPT - Blow/6 | Rock coring<br>time minsec/1' | Field Testing<br>PID (ppmv)            | Water Table |   |                            | Stı        | ratum                | Notes     | Test     | Во         | ring/ Monitor             | ring Well    |
| Depth       | San  | Pen             | Inte           | SP           | Roc                           | Fiel                                   | Wa          | Sample Descripti  | ion                        | Cha        | nge (ft.)            | ž         |          |            | Construction              | n            |
| 26          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
| 20          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
| 28          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            | 2" Schedule 40            | 0 PVC Riser  |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            | 0' - 60' (+ 2.5'          | Stick up)    |
|             |  |                 |                |              |                               |  | -           |   |                            | SA         | ND &                 |           |          |            |                           |              |
| 30          |  |                 |                |              |                               |  |             |   |                            |            | AVEL                 |           |          |            | Drilling Cuttir           | ngs 2' - 55' |
|             | S-5  | 120/47          | 30-40          | NA           | NA                            | NA                                     |             | Grayish brown (10YR 5/2) wet, fine to me coarse sand, sub-rounded fine gravel               | nedium SAND, trace         |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  | 1           | Significant loss of soils during recovery p   | process due to soil        |            |                      |           |          |            |                           |              |
| 32          |  |                 |                |              |                               |  |             | basket malfunction  |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
| 24          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
| 34          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      | _         |          |            |                           |              |
| 36          |  |                 |                |              |                               |  |             | GP-13-02-035 = <1.0  ppb  |                            |            |                      | 2         |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
| 38          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            | SA         | ND &                 |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            | AVEL                 |           |          |            | 2" Schedule 40            |              |
| 40          | S-6  | 120/97          | 40-50          | NA           | NA                            | NA                                     |             | Tom 24!! Drown (10VD 4/2) softwarfold   | Gua ta madinm              |            |                      |           |          |            | 0' - 60' (+ 2.5'          | Stick up)    |
|             | 3-0  | 120/97          | 40-30          | INA          | INA                           | INA                                    |             | Top 24" - Brown (10YR 4/3), saturated, a SAND, little coarse sand                           | ime to medium              |            |                      |           |          |            |                           |              |
| 12          |  |                 |                |              |                               |  |             | 24"-42" - Brown (10YR 4/3), saturated, r  |                            |            |                      |           |          |            | Drilling Cuttir           | ngs 2' - 55' |
| 42          |  |                 |                |              |                               |  |             | SAND, trace fine sand, sub-angular fine   | gravei                     |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             | 42"-97" - Brown (10YR 4/3), saturated, f  | ine SAND                   |            |                      |           |          |            |                           |              |
| 44          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  | -           | GP-13-02-045 = <1.0 ppb   |                            |            |                      | 2         |          |            |                           |              |
| 46          |  |                 |                |              |                               |  |             | ··· rr*   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            | ND &<br>AVEL         |           |          |            |                           |              |
|             |  |                 | ·              |              |                               | ······································ |             |   |                            |            |                      |           |          |            |                           |              |
| 48          |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
|             |  |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |
| Not         | es:  | 1) Recov        | ery values     | are skev     | ved due to                    | the soil s                             | samp        | I<br>le collection bag technique used with roto   | -sonic drilling            | Key:       |                      |           | 1111     | C          | l'ement                   |              |
|             | GW profile sampling location for dissolved A     ROD % maybe skewed low due to sonic meth  |                 |                |              |                               |  |             |   |                            | _          | Bedrock              | <b>XX</b> | \$       | ~          | Prill Cuttings/Nati       | ve Soils     |
|             | <ol> <li>RQD % maybe skewed low due to sonic meth-<br/>difficult resulting in low sum of sticks (Σ) values</li> </ol>  |                 |                |              |                               |  |             | making distinction between natural and n  | nechanical breaks          | S          | teel Casing<br>Grout | 888       |          |            | sentonite<br>and          |              |
|             | 4) Bedrock hole grouted on 4/19/13. PVC well in  |                 |                |              |                               |  |             | alled 4/22/13.  |                            | Or         | en bedrock           | 000       | <u> </u> | $\equiv$ s | creen                     |              |
| Ren         | 5) Remarks: 1) Stratification lines represent approximate bour   |                 |                |              |                               |  | Ning        | aries hetween soil types and the transition   | may be oradual. Water      | er level r | eadinos wer          | e co      | mplete   |            | iser                      |              |
|             |  | times and       | d under co     | nditions     | stated. Fl                    | uctuation                              | is of       | groundwater may occur due to factors other  | er than those present a    | t the tim  | e measurem           | ents      | were r   | nade.      |                           |              |
|             |  | ,               | _              |              |                               |  | _           | ic vapors (referenced to an isobutylene sta<br>Ev lamp and set to a reference factor of 0.5 |                            | e headsp   | ace of a sea         | led s     | oil sar  | nple v     | with                      |              |
|             | a Ion Science photoionization detector with a 10.6 Ev lamp and set to a reference factor of 0.53 (benzene).  ▼= Approximate water table NA=Not Applicable NR=No Recovery bgs=below ground surface ags=above ground surface |                 |                |              |                               |  |             |   |                            |            |                      |           |          |            |                           |              |

|   |   | Sove                   | reign                     | Cons          | ulting                                  | Inc.                                    |             | Boring/W  | ell ID                     |                 |                  | Dı        | rilling N             | Method Details            |              |
|---|---|------------------------|---------------------------|---------------|---|---|-------------|---|----------------------------|-----------------|------------------|-----------|-----------------------|---------------------------|--------------|
| The second second   |   |                        |                           |               | e. Solutio                              |   |             | SHM-13  |                            |                 | Bit              |           | Casing                | Soil Sampler              | Rock Core    |
| Clie  | mt:                                     |                        | US AC                     |               | on.com                                  |   |             | Sheet 3 o   | of 4 Glacier Drilling      | Type:           | Sonic<br>6"      |           | Steel<br>6"           | Sonic<br>4'               | Sonic<br>4"  |
|   | ject:                                   |                        | Fort De                   |               | SHL                                     |   |             |   | Geoprobe 8140 LS           | Size:<br>SPT: F | Hammer-          |           | NA                    | Fall - NA                 | 4"           |
|   |   | lumber:                |                           |               | OTTE                                    |   |             | Drill Method:   | Roto-sonic                 | DI 1. 1         | - Automotive     | M         |                       | ng Well Details           |              |
| Loc   | ation                                   | :                      | Former                    |               |   |   |             | Foreman:  | Mark Schock                | Well T          |                  |           | Overbur               |                           | 2"           |
|   |   |                        | Sheple                    |               |   |   |             | SCI Inspector:  | PJV & JAG                  | Well H          |                  |           | Standpi               | _                         | PVC          |
|   |   | - 1                    | Sample                    | iniorn        | nation                                  |   |             | Start Date:   | 4/18/2013                  | Latitu          |                  |           |                       | <del></del>               |              |
|   | _                                       | ( <b>ji</b>            | £.                        | 9/m           | ng<br>ec/1'                             | ing<br>(v.                              | ple         | Completion Date:  | 4/22/2013                  | Longit          | tude:            |           |                       | Casing Elev:              |              |
| _   | ll el                                   | Rec.                   | val (                     | - Blo         | cori                                    | Test                                    | r Ta        |   |                            | Strat           | tum              | Sa        | Test                  | Boring/ Monito            | ring Well    |
| Depth   | Sample ID                               | Pen./Rec. (in.)        | Interval (Ft.)            | SPT - Blow/6' | Rock coring<br>time minsec/1            | Field Testing<br>PID (ppmv)             | Water Table | Sample Desc   | rintion                    | Change          | e (ft.)          | Notes     | Test                  | Constructi                | _            |
|   | S-7                                     | 120/90                 | 50-60                     | NA            | NA                                      | NA                                      |             | Brown (10YR 4/3), saturated, medi   |                            | - Calling       | (200)            |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             | fine sand, sub-angular fine gravel  |                            |                 |                  |           |                       |                           |              |
| 52  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       | ////                      | 0 PVC Riser  |
|   |   |                        |                           |               |   |   |             |   |                            | SANE            | <b>7.6</b>       |           |                       | 0' - 60' (+ 2.5'          | Stick up)    |
|   |   |                        |                           |               |   |   |             |   |                            | GRAV            |                  |           |                       |                           |              |
| 54  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       | Drilling Cutti            | ngs 2' - 55' |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   | *************************************** |                        |                           |               |   |   |             | GP-13-02-055 = <1.0  ppb  |                            |                 |                  | 2         | $\parallel \parallel$ | <b>III</b>                |              |
| 56  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               | *******************************         |   |             |   |                            |                 |                  |           |                       | Bentonite 55'             | - 58'        |
| 58  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
| 36  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       | #2 Morie San              | 4 501 711    |
| 60  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       | #2 Mone San               | u 38 - /1    |
|   | S-8                                     | 120/108                | 60-70                     | NA            | NA                                      | NA                                      |             | Top 24" - Brown (10YR 4/3), satur   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             | SAND, trace sub-angular fine grave  | el                         |                 |                  |           | -                     |                           |              |
| 62  |   |                        |                           |               |   |   |             | 24"-48" - Brown (10YR 5/3), satur   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             | SAND, little coarse sand, trace sub   | -angular fine gravel       | SANE<br>GRAV    |                  |           | -                     |                           |              |
|   |   | ********************** |                           |               | *************************************** | *************************************** |             | 48"-108" - Brown (10YR 4/3), satu   | rated, fine SAND           | Ora 1           | , 22             |           |                       | 2" Schedule 4             |              |
| 64  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           | -                     | Wellscreen -<br>60' - 70' | 0.01" slot   |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
| 66  |   |                        |                           |               |   |   |             | GP-13-02-065 = <1.0  ppb  |                            |                 |                  | 2         | :::  <u> </u>         |                           |              |
| 00  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
| 68  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           | -                     |                           |              |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
| 70  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   | S-9                                     | 12/12                  | 70-71                     | NA            | NA                                      | NA                                      |             | Brown (10YR 4/3), saturated, fine coarse sand, sub-angular fine grave       | *                          |                 |                  |           |                       | #2 Morie San              | d 70' - 71'  |
|   | R-1                                     | 72/72                  | 71-77                     | NA            | NA                                      | NA                                      |             | GP-13-02-071 = <1.0  ppb  |                            |                 |                  | 2         | <b>****</b>           | ****                      | 4,0 ,1       |
| 72  |   |                        |                           |               |   |   |             | Bedrock @ 71' Sonic core 71' - 77'<br>Σ of sticks = 9"                      |                            | BEDR            | OCK              | 3         |                       | <b>****</b>               |              |
|   |   |                        |                           |               |   |   |             | RQD = 12.5%   |                            | BLDK            | OCK              | 4         |                       | Grout 71' - 77            | •            |
| 74  |   |                        |                           |               |   |   |             | Igneous rock, coarse grained grano  |                            |                 |                  |           |                       |                           |              |
| 74 matrix with moderate orange pink (10R 7/4) and white (N9) to very light gray (N8) grains, (Ayer Granodiorite)  |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             |   |                            |                 |                  |           |                       |                           |              |
| Notes: 1) Recovery values are skewed due to the soil sample collection bag technique used with roto-sonic drilling 2) GW profile sampling location for dissolved As  Cement  Bedrock  Drill Cuttings/Native Soils |   |                        |                           |               |   |   |             |   |                            |                 |                  | ive Soils |                       |                           |              |
|   |   | 3) RQD                 | % maybe s                 | skewed lo     | ow due to                               | sonic me                                | thod        | making distinction between natural  | and mechanical breaks      | Stee            | el Casing        | ~         |                       | Bentonite                 |              |
|   |   |                        | resulting i<br>ck hole gr |               |   |   |             | alled 4/22/13.  |                            | Onen            | Grout<br>bedrock | 888       | ! 🖺                   | Sand<br>Screen            |              |
|   |   | 5)                     |                           |               |   |   |             |   |                            | •               |                  |           |                       | Riser                     |              |
| Rem   | arks:                                   |                        |                           |               |   |   |             | aries between soil types and the tran<br>groundwater may occur due to facto |                            |                 |                  |           |                       |                           |              |
|   |   |                        |                           |               |   |   |             | ic vapors (referenced to an isobutyle                                       | •                          |                 |                  |           |                       |                           |              |
|   |   |                        | -                         |               |   |   |             | Ev lamp and set to a reference factor                                       |                            |                 |                  |           |                       |                           |              |
|   |   | <u>▼</u> = App         | roximate v                | water tab     | ie NA=N                                 | not Appli                               | cable       | e NR=No Recovery bgs=below g  | ground surtace ags=above g | round surfa     | ice              |           |                       |                           |              |

| The second second second | Sovereign Consulting Inc. Science. Service. Solutions  www.sovcon.com |   |                |                  |                                  |                             |             | SHM                              | /Well ID<br>I-13-02  |          | Bit                   |           | rilling N |             | d Details<br>Soil Sampler | Rock Core |
|--------------------------|---|---|----------------|------------------|----------------------------------|-----------------------------|-------------|----------------------------------|--|----------|-----------------------|-----------|-----------|-------------|---------------------------|-----------|
|                          |   |   |                |                  | con.com                          | 1                           |             |                                  | 4 of 4   | Type:    | Sonic                 |           | Steel     |             | Sonic                     | Sonic     |
|                          | ent:  |   | US AC          |                  |                                  |                             |             | Drilling Co.:                    | Glacier Drilling   | Size:    | 6"                    |           | 6"        |             | 4'                        | 4"        |
|                          | ject:   |   | Fort D         |                  | SHL                              |                             |             | Drill Rig:                       | Geoprobe 8140 LS   | SPT:     | Hammer-               |           | NA        |             | ıll - NA                  |           |
|                          | -   | Number:                                 |                |                  |                                  |                             |             | Drill Method:                    | Roto-sonic   |          |                       | M         | onitorii  | ıg We       | ll Details                |           |
| Lo                       | cation  | :                                       | Former         |                  |                                  |                             |             | Foreman:                         | Mark Schock  | W        | ell Type:             | (         | Overbur   | den         | Diameter:                 | 2"        |
|                          |   |   | Sheple         | y Hill I         | Landfill                         |                             |             | SCI Inspector:                   | PJV & JAG  | W        | ell Head:             |           | Standpi   | pe          | Casing:                   | PVC       |
|                          |   | :                                       | Sample         | Inform           | nation                           |                             |             | Start Date:                      | 4/18/2013  | L        | atitude:              |           |           |             | Surface Elev:             |           |
|                          |   | in.)                                    | ıt.)           |                  | gı                               | ing<br>v)                   | ole         | Completion Date:                 | 4/22/2013  | Lo       | ongitude:             |           |           |             | Casing Elev:              |           |
|                          | e II  | ec.                                     | a (i           | ξ.               | orii<br>2/1'                     | resti<br>pm                 | Tal         |                                  |  |          | -                     |           |           |             | -                         |           |
| Depth                    | Sample ID   | Pen/Rec. (in.)                          | Interval (Ft.) | SPT -<br>Blow/6" | Rock coring<br>time<br>minsec/1' | Field Testing<br>PID (ppmv) | Water Table |                                  |  |          | tratum                | Not       | Test      |             | ng/ Monitor               |           |
| De                       | Sa  | Pe                                      | Ē              | <u> </u>         |                                  | <u> </u>                    | ×           | Sample I                         | Description  | Cha      | inge (ft.)            | Ž         | ****      | ****        | Construction              | n         |
| 76                       |   |   |                |                  |                                  |                             |             |                                  |  | RE       | EDROCK                |           |           |             |                           |           |
| 70                       |   |   |                |                  |                                  |                             |             |                                  |  |          | brock                 |           |           |             | Grout 71' - 77'           |           |
|                          |   |   |                |                  |                                  |                             |             | BORING                           | END @ 77'  |          |                       | ]         | ₩₩        | ₩₩          |                           |           |
| 78                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| /0                       |   |   |                |                  |                                  |                             |             | -                                |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 00                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 80                       |   |   |                |                  |                                  |                             |             | -                                |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 02                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 82                       |   |   |                |                  |                                  |                             |             | -                                |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 84                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 04                       |   |   |                |                  |                                  |                             |             | -                                |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 86                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 00                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             | -           |                                  |  |          |                       |           |           |             |                           |           |
| 88                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   | *************************************** |                |                  |                                  |                             | -           |                                  |  |          |                       |           |           |             |                           |           |
| 90                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             | -           |                                  |  |          |                       |           |           |             |                           |           |
| 92                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             | -           |                                  |  |          |                       |           |           |             |                           |           |
| 94                       |   |   |                |                  | ļ                                |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 96                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| 98                       |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  |  |          |                       |           |           |             |                           |           |
| Not                      | ec.   | 1) Recov                                | ery value      | are clear        | wed due to                       | the soil                    | Samm        | le collection bag technique use  | d with roto-sonic drilling   | Key:     |                       |           |           | Can         | ment                      |           |
| 1100                     | · 3.  |   |                |                  | eation for o                     |                             |             | to concention ong teeninque use  | a with 10to-30th utilling  | ixcy.    | Bedrock               | <b>**</b> | 10        |             | ll Cuttings/Nati          | ve Soils  |
|                          |   | 3) RQD                                  | % maybe        | skewed l         | ow due to                        | sonic me                    | thod        | making distinction between na    | tural and mechanical breaks  |          | Steel Casing          | Ľ         |           | Ben         | ntonite                   |           |
|                          |   |   | _              |                  | m of stick                       |                             |             | talled 4/22/13.                  |  |          | Grout<br>Open bedrock | <b>₩</b>  |           | San<br>Scre |                           |           |
|                          |   | 4) Bearo<br>5)                          | ck note gi     | outed of         | 17/17/13.                        | ı ve wel                    | 111S        | anou <del>4</del> /22/13.        |  |          | pen bedrock           | İ         | i 🗀       | Rise        |                           |           |
| Ren                      | narks:  | 1) Stratif                              |                |                  |                                  |                             |             |                                  | e transition may be gradual. Wa                                      |          |                       |           |           | at          |                           |           |
|                          |   |   |                |                  |                                  |                             |             |                                  | factors other than those present<br>outylene standard) measured in t |          |                       |           |           |             | th                        |           |
|                          |   |   |                |                  |                                  |                             |             | Ev lamp and set to a reference f |  | ne neads | pace of a sea         | ncu S     | ou saill  | pic WII     |                           |           |
|                          |   |   | -              |                  |                                  |                             |             | -                                | low ground surface ags=above   | ground s | urface                |           |           |             |                           |           |

| Carrier o  |  | Sove             | U              |               | ulting                                |                             |             | Boring/W   |                              |                         | D      |             | g Method Details                                       |
|------------|--|------------------|----------------|---------------|---------------------------------------|-----------------------------|-------------|--|------------------------------|-------------------------|--------|-------------|--|
| THE STREET |  |                  |                |               | e. Solutio                            |                             |             | SHM-13<br>Sheet 1 o  |                              | Bit                     |        | Casin       |  |
| Clie       | ent:   |                  | US AC          |               | on.com                                | <u>l</u>                    |             | Drilling Co.:  | Glacier Drilling             | Type: Sonic<br>Size: 6" |        | Steel<br>6" | Sonic Sonic 4' 4"                                      |
|            | ject:  |                  | Fort De        |               | SHL                                   |                             |             |  | Geoprobe 8140 LS             | SPT: Hammer             | -      | NA          | Fall - NA  |
|            |  | Number:          |                |               |                                       |                             |             | Drill Method:  | Roto-sonic                   |                         |        |             | ring Well Details                                      |
| Loc        | ation  | :                | Former         |               |                                       |                             |             | Foreman:   | Mark Schock                  | Well Type:              |        | Overb       | ourden Diameter: 2"                                    |
| <u></u>    | 1  |                  | Sheple         | y Hill I      | andfill                               |                             |             | SCI Inspector:   | PJV & JAG                    | Well Head:              |        | Stanc       | dpipe Casing: PVC                                      |
|            |  |                  | Sample         | Inform        | nation                                |                             |             | Start Date:  | 4/22/2013                    | Latitude:               |        |             | Surface Elev:  |
|            |  | 3                | _              | 9             | ÷                                     | Þ.                          | 4)          | Completion Date:   | 4/24/2013                    | Longitude:              |        |             | Casing Elev:   |
|            | <b>a</b>   | Pen./Rec. (in.)  | Interval (Ft.) | SPT - Blow/6' | Rock coring<br>time minsec/1          | Field Testing<br>PID (ppmv) | Water Table |  |                              |                         |        |             |  |
| th         | Sample ID  | Æe               | rval           | <u> </u>      | k co                                  | T Te                        | er T        |  |                              | Stratum                 | es     | Tes         | st Boring/ Monitoring Well                             |
| Depth      | Sam  | Pen.             | Inte           | SPT           | Rocl                                  | E E                         | Wat         | Sample Desc  | cription                     | Change (ft.)            | Notes  |             | Construction   |
|            | S-1  | 96/52            | 0-8            | NA            | NA                                    | NA                          |             | 0-8" - Topsoil and organic material  |                              | TOP SOIL                | 1      |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             | Cement 0 - 2'  |
| 2          |  |                  |                |               |                                       |                             |             | 8" - 40" - Very dark grayish brown SAND, some angular fine gravel, li      |                              |                         |        |             |  |
| 2          |  |                  |                |               |                                       |                             |             | angular coarse gravel to cobbles   | ittic incurum sana, tracc    |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             | 40" - 52" - Olive brown (2.5Y 4/3)   | wet, coarse SAND, some       |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             | sub-angular fine gravel, trace angul                                       | ar coarse gravel to cobbles  |                         |        |             |  |
| 4          |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
| 6          |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              | SAND &<br>GRAVEL        |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              | GRAVEL                  |        |             |  |
| 8          |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            | S-2  | 144/47           | 8-20           | NA            | NA                                    | NA                          | _           |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             | <u> </u>    | Olive brown (2.5Y 4/4) wet, mediu<br>sub-angular coarse gravel, little sub |                              |                         |        |             | 2" Schedule 40 PVC Riser                               |
| 10         |  |                  |                |               |                                       |                             |             | cobbles  | 5-rounded fine graver, trace |                         |        |             | 0' - 42' (+ 2.5' Stick up)                             |
|            |  |                  |                |               |                                       |                             |             | GP-13-03-010 = <1.0  ppb   |                              |                         | 2      |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             | D 111 G 11 27 27                                       |
| 12         |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             | Drilling Cuttings 2' - 37'                             |
| 12         |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
| 1.4        |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
| 14         |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
| 16         |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
| 18         |  |                  |                |               |                                       |                             |             |  |                              | SAND &                  |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              | GRAVEL                  |        |             | 2" Schedule 40 PVC Riser<br>0' - 42' (+ 2.5' Stick up) |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             | 12 ( 2.5 Stick up)                                     |
| 20         |  |                  |                |               |                                       |                             |             | GP-13-03-020 = 1.7 ppb   | _                            |                         | 2      |             |  |
|            | S-3  | 120/94           | 20-30          | NA            | NA                                    | NA                          |             | Olive brown (2.5Y 4/3) wet, mediu<br>sub-angular coarse gravel, little sub |                              |                         |        |             | Drilling Cuttings 2' - 37'                             |
|            |  |                  |                |               |                                       |                             |             | cobbles  | rounded fine graver, trace   |                         |        |             |  |
| 22         |  |                  |                |               |                                       | <u></u>                     | L           | Light olive brown (2.5Y 5/4) wet, 1  | medium to coarse SAND        |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             | Yellowish brown (10YR 5/6), wet, little sub-rounded fine gravel, trace     |                              |                         |        |             |  |
| 24         |  |                  |                |               |                                       |                             |             | intic sub-rounded fine graver, trace                                       | sub-rounded coarse graver    |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
| Nat        | 20.  | 1) D aas         | oru vol        | oro also-     | und dess to                           | the call                    |             | la collection has technique us - 1   | th rata cania deillina       | Vous                    | +      | 111)        | Coment   |
| 11016      | tes: 1) Recovery values are skewed due to the soil sample collection bag technique used with roto-sonic drilling  2) GW profile sampling location for dissolved As  Key: Cement  Bedrock Drill Cuttings/Native Soils |                  |                |               |                                       |                             |             |  |                              |                         |        |             |  |
|            |  |                  |                |               |                                       |                             |             | making distinction between natural   | and mechanical breaks        | Steel Casin             | V.V    | ĵ           | Bentonite  |
|            |  |                  | _              |               | m of stick                            |                             |             |  |                              | Grou                    | مم     | 8           | Sand   |
|            |  |                  | ck hole gr     | outed on      | 4/22/13.                              | PVC wel                     | l inst      | alled 4/24/13.   |                              | Open bedroc             | k      | ;           | Screen   |
| Rem        | arks:  | 5)<br>1) Stratif | ication lin    | nes renres    | sent appro                            | ximate ho                   | ound        | aries between soil types and the tran                                      | sition may be gradual Water  | er level readings we    | ere co | mplet       | Riser<br>ed at   |
|            |  |                  |                | •             | • •                                   |                             |             | groundwater may occur due to factor  |                              |                         |        | •           |  |
|            |  |                  | _              | -             |                                       |                             | -           | ic vapors (referenced to an isobutyle                                      |                              | e headspace of a se     | aled   | soil sa     | ample with   |
|            |  |                  |                |               |                                       |                             |             | Ev lamp and set to a reference factor  NR=No Recovery bgs=below            |                              | round surface           |        |             |  |
|            |  | <u>-</u> - App   | CAIIIALE \     | maioi tab     | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | vor Appii                   | -aui        | L THE THE RECEDENCY DESTREED !   | broana sarrace ags—above g   | round surrace           |        |             |  |

|           |   | Sove            | reign          | Cons          | ulting                       | Inc.                                     |             | Boring/Well ID   |          |                     | D        | rilling I      | Metho    | od Details                        |             |
|-----------|---|-----------------|----------------|---------------|------------------------------|--|-------------|--|----------|---------------------|----------|----------------|----------|-----------------------------------|-------------|
| BARTATA A |   |                 | Science        | . Servic      | e. Solutio                   | ns                                       |             | SHM-13-03  |          | Bit                 |          | Casing         |          | Soil Sampler                      | Rock Core   |
| ACCUS.    |   |                 | www            | v.sovo        | on.com                       | l  |             | Sheet 2 of 3   | Type:    | Sonic               |          | Steel          |          | Sonic                             | Sonic       |
| Clie      | ent:  |                 | US AC          | Е             |                              |  |             | Drilling Co.: Glacier Drilling   | Size:    | 6"                  |          | 6"             |          | 4'                                | 4"          |
| Pro       | ject:   |                 | Fort De        | evens -       | SHL                          |  |             | Drill Rig: Geoprobe 8140 LS  | SPT:     | Hammer-             |          | NA             | F        | all - NA                          |             |
| Pro       | ject N  | lumber:         | AC001          |               |                              |  |             | Drill Method: Roto-sonic   |          |                     | M        | onitori        | ng W     | ell Details                       |             |
| Loc       | ation   | :               | Former         | Fort I        | Devens                       |  |             | Foreman: Mark Schock   | We       | ll Type:            |          | Overbur        | den      | Diameter:                         | 2"          |
|           |   |                 | Shepley        | y Hill I      | Landfill                     |  |             | SCI Inspector: PJV & JAG   | Wel      | ll Head:            |          | Standp         | ipe      | Casing:                           | PVC         |
|           |   | ,               | Sample         | Inform        | nation                       |  |             | Start Date: 4/22/2013  | La       | titude:             |          |                |          | Surface Elev:                     |             |
|           |   |                 |                | ÷_            |                              |  |             | Completion Date: 4/24/2013   | Lor      | ngitude:            |          |                |          | Casing Elev:                      |             |
|           | Q   | a<br>a          | ( <u>F</u>     | )/MC          | ing<br>sec/                  | ev.)                                     | aple        |  |          | _                   |          |                |          | _                                 |             |
| ч         | Sample ID   | Pen./Rec. (in.) | Interval (Ft.) | SPT - Blow/6' | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv)              | Water Table |  | Str      | ratum               | es       | Test           | Bor      | ing/ Monitor                      | ing Well    |
| Depth     | am)   | e.              | nter           | PT            | e kock                       | je j | Vate        | Sample Description   |          | nge (ft.)           | Notes    | Lest           | 201      | Construction                      | _           |
| I         | <b>9</b> 2  |                 |                | <u> </u>      | T # 5                        |  |             | Sample Description   | Citai    | iigt (it.)          | Į        |                |          | S                                 |             |
| 26        |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |
| 28        |   |                 |                |               |                              |  |             |  |          |                     |          |                |          | 2" Schedule 40                    | PVC Riser   |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          | 0' - 42' (+ 2.5' S                | Stick up)   |
|           |   |                 |                |               |                              |  |             |  | G A      | NID 0               |          |                |          |                                   |             |
| 30        |   |                 |                |               |                              |  |             | GP-13-03-030 = 17.6 ppb  |          | ND &<br>AVEL        | 2        |                |          | Drilling Cuttin                   | gs 2' - 37' |
|           | S-4   | 120/102         | 30-40          | NA            | NA                           | NA                                       |             | Reddish brown (2.5YR 4/3) wet, fine to medium SAND, trace  |          |                     | <u> </u> |                |          | 3                                 | J. = J,     |
|           |   |                 |                |               |                              |  |             | coarse sand, trace sub-rounded fine gravel   |          |                     | 1        |                |          |                                   |             |
| 32        |   |                 |                |               |                              |  |             |  |          |                     |          |                |          | 3                                 |             |
| 22        |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             | Bottom 8" - Dark yellowish brown (10YR 4/4), wet, coarse   |          |                     |          |                |          |                                   |             |
| 34        |   |                 |                |               |                              |  |             | SAND, some medium sand, little sub-rounded fine gravel,  |          |                     |          |                |          |                                   |             |
| 34        |   |                 |                |               |                              |  |             | little sub-rounded coarse gravel, trace sub-rounded cobbles  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          | 2" Schedule 40                    | PVC Riser   |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          | 0' - 42' (+ 2.5' S                | Stick up)   |
| 36        |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          | H              | Ħ        | Ì                                 |             |
| 38        |   |                 |                |               |                              |  |             |  |          |                     |          | $\blacksquare$ | ₩        | #                                 |             |
|           |   |                 |                |               |                              |  |             |  | SA       | ND &                |          |                |          | Bentonite 37' -                   | 40'         |
|           |   |                 |                |               |                              |  |             |  |          | AVEL                |          | Ш              | Ш        | #                                 |             |
| 40        |   |                 |                |               |                              |  |             | GP-13-03-040 = 22.6  ppb   |          |                     | 2        | Ш              | 世        | 掛                                 |             |
|           | S-5   | 120/77          | 40-50          | NA            | NA                           | NA                                       |             |  |          |                     |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             | 0-10" - Olive brown (2.5Y 4/3), wet, fine SAND   |          |                     |          |                |          |                                   |             |
| 42        |   |                 |                |               |                              |  |             |  |          |                     |          |                | _        |                                   |             |
|           |   |                 |                |               |                              |  |             | 10"-60" - Dark gray (2.5Y 4/1), wet, coarse SAND, trace sub-   |          |                     |          | :::            | 4:::     |                                   |             |
|           |   |                 |                |               |                              |  |             | angular fine gravel  |          |                     |          | -              | -        | #2 Morie Sand                     | 40' - 53'   |
| 44        |   |                 |                |               |                              |  |             |  |          |                     |          |                | ]        |                                   |             |
|           |   |                 |                |               |                              |  |             | 60"-77" - Grayish brown (2.5Y 5/2), wet, medium to coarse  |          |                     | 1        |                | 4:::     | 2" Schedule 40<br>Wellscreen - 0. |             |
|           |   |                 |                |               |                              |  |             | SAND, some sub-angular fine gravel, little sub-rounded coarse<br>gravel, trace sub-rounded cobbles                           |          |                     | 1        |                | $\dashv$ | Wellscreen - 0.                   | 01 8101     |
| 46        |   |                 |                |               |                              |  |             | J ,  |          |                     | 1        | l:::L          | ]        |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          | ND &                |          |                | 4:::     |                                   |             |
|           |   |                 |                |               |                              |  |             |  | GR       | AVEL                | 1        |                |          |                                   |             |
| 48        |   |                 |                |               |                              |  |             |  |          |                     | 1        |                | 7        |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     | 1        | [::E           | ]:::     |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          | :::            | 4:::     |                                   |             |
|           |   |                 |                |               |                              |  |             | GP-13-03-050 = 357 ppb   |          |                     | 2        |                | $\dashv$ |                                   |             |
| Note      | es:   | 1) Recov        | ery values     | are skev      | ved due to                   | the soil s                               | samp        | le collection bag technique used with roto-sonic drilling  | Key:     |                     | Ť        |                | Се       | ment                              |             |
|           |   |                 |                | -             | ation for c                  |  |             |  |          | Bedrock             | ₩        |                | -        | ill Cuttings/Nativ                | e Soils     |
|           |   |                 |                |               |                              |  |             | making distinction between natural and mechanical breaks   | S        | teel Casing         |          | Į 🏻            | _        | entonite                          |             |
|           | difficult resulting in low sum of sticks ( $\Sigma$ ) value<br>4) Bedrock hole grouted on 4/22/13. PVC well |                 |                |               |                              |  |             | ralled 4/24/13   | Or       | Grout<br>en bedrock |          | ፤              | Sa<br>Sc | nd<br>reen                        |             |
|           |   | 5)              | ca note gr     | oaicu oli     | r/44/1J.                     | . v C WCI                                | 1113        | miles 112 11 13.   | J Op     | on bearber          | ĺ        | i 🗀            | Ri       |                                   |             |
| Rem       | arks:   | 1) Stratif      |                |               |                              |  |             | aries between soil types and the transition may be gradual. Water  |          |                     |          |                | at       |                                   |             |
|           |   |                 |                |               |                              |  |             | groundwater may occur due to factors other than those present a  |          |                     |          |                |          | .i+h                              |             |
|           |   |                 |                |               |                              |  |             | ic vapors (referenced to an isobutylene standard) measured in th<br>Ev lamp and set to a reference factor of 0.53 (benzene). | e neadsp | ace of a sea        | ned      | son sam        | pie W    | iul                               |             |
|           |   |                 |                |               |                              |  |             | e NR=No Recovery bgs=below ground surface ags=above g  | round su | rface               |          |                |          |                                   |             |
|           |   |                 |                |               |                              |  |             |  |          |                     |          |                |          |                                   |             |

|  |                | Sove            | reign                    | Cons          | ulting                       | Inc.                        |             | Boring/W  |                            |                |                     | Dı         | rillin     | g Me                  | ethod D          | Oetails                 |             |
|--|----------------|-----------------|--------------------------|---------------|------------------------------|-----------------------------|-------------|---|----------------------------|----------------|---------------------|------------|------------|-----------------------|------------------|-------------------------|-------------|
| The state of the s | Market Comment |                 |                          |               | e. Solutio                   |                             |             | SHM-13  |                            |                | Bit                 |            | Casin      | -                     |                  | Sampler                 | Rock Core   |
| Clie   | ent.           |                 | US AC                    |               | on.com                       | <u>l</u>                    |             | Sheet 3 c   | of 3 Glacier Drilling      | Type:<br>Size: | Sonic<br>6"         |            | Steel      | 1                     |                  | Sonic<br>4'             | Sonic<br>4" |
|  | ject:          |                 | Fort De                  |               | SHL                          |                             |             |   | Geoprobe 8140 LS           | SPT:           | Hammer-             |            | NA         |                       | Fall -           |                         | 7           |
|  |                |                 | AC001                    |               |                              |                             |             | Drill Method:   | Roto-sonic                 |                |                     | M          | onito      | ring                  | Well I           | Details                 |             |
| Loc  | cation         | :               | Former<br>Shepley        |               |                              |                             |             | Foreman:<br>SCI Inspector:  | Mark Schock<br>PJV & JAG   |                | ll Type:            |            | Overb      |                       |                  | Diameter:               | 2"<br>PVC   |
|  |                |                 | Sample                   |               |                              |                             |             | Start Date:   | 4/22/2013                  |                | ll Head:<br>titude: |            | Stan       | apıpe                 |                  | Casing:<br>urface Elev: | PVC         |
|  |                |                 | oumpre                   |               |                              |                             |             | Completion Date:  | 4/24/2013                  |                | ngitude:            |            |            |                       | -                | asing Elev:             |             |
|  | Œ              | Pen./Rec. (in.) | (Ft.)                    | SPT - Blow/6' | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv) | Water Table | Compression Bure.   | .,2.,,2013                 | 20.            | g.ruue.             |            |            |                       |                  | asing ziev.             |             |
| ţ  | Sample ID      | ./Rec           | Interval (Ft.)           | - B           | k co<br>mir                  | d Te                        | ter T       |   |                            | Stı            | ratum               | tes        | Tes        | st B                  | oring            | / Monitor               | ing Well    |
| Depth  |                |                 |                          |               | Roc                          | Fie                         | Wat         | Sample Desc   |                            | Cha            | nge (ft.)           | Notes      |            |                       | Co               | nstructio               | n           |
|  | S-6            | 36/36           | 50-53                    | NA            | NA                           | NA                          |             | Gray (2.5Y 5/1), saturated, fine to a coarse sand, some silt, little sub-an |                            |                |                     |            |            |                       | 2"               | Schedule 40             | DVC         |
|  |                |                 |                          |               |                              |                             |             | angular coarse gravel. Rock frags a   |                            | ,              | TILL                |            |            |                       | C - 1 - 1 - 1    | ellscreen - 0.          |             |
| 52   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       | 42               | !' <b>-</b> 52'         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       | #2               | Morie Sand              | 52' - 53'   |
| l  | R-1            | 60/57           | 53-58                    | NA            | NA                           | NA                          |             | Bedrock @ 53' Sonic core 53' - 58'  |                            |                |                     |            | <b>***</b> | <b>***</b>            | <b>***</b>       |                         |             |
| 54   |                |                 |                          |               |                              |                             |             | Σ of sticks = 21"<br>RQD = 35%  |                            | BEI            | DROCK               | 4          | ▩          | ▓                     | <b>***</b>       |                         |             |
|  |                |                 |                          |               |                              |                             |             | Igneous rock, coarse grained grano  | , , ,                      |                |                     |            | ▩          | ▓                     | <b>‱</b> Gı      | rout 53' - 58'          |             |
| 56   |                |                 |                          |               |                              |                             |             | matrix with white (N9) to very ligh<br>Granodiorite)                        | t gray (N8) grains, (Ayer  |                |                     |            | <b>***</b> | ₩                     | <b>***</b>       |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            | ▩          | ₩                     | ▓                |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            | ▩          | ₩                     | ▓                |                         |             |
| 58   |                |                 |                          |               |                              |                             |             | BORING ENI  | O @ 58'                    |                |                     |            | <b>***</b> | ₩                     | <b>***</b>       |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 60   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 62   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 62   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 64   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 66   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 68   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 70   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| 72   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             | 1           |   |                            |                |                     |            |            |                       |                  |                         |             |
| 74   |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             |   |                            |                |                     |            |            |                       |                  |                         |             |
| Note   | es:            |                 | ery values<br>rofile sam |               |                              |                             | -           | le collection bag technique used wit  | th roto-sonic drilling     | Key:           | Bedrock             | <b>XXX</b> |            |                       | Cemen<br>Drill C | t<br>luttings/Nativ     | e Soils     |
|  |                |                 |                          | -             |                              |                             |             | making distinction between natural  | and mechanical breaks      | S              | Steel Casing        | XXX        |            | $\parallel \parallel$ | Benton           | _                       |             |
|  |                |                 | resulting i              |               |                              |                             |             | alled 4/24/13.  |                            | 0.             | Grout<br>en bedrock | 888        |            |                       | Sand<br>Screen   |                         |             |
|  |                | 5)              |                          |               |                              |                             |             |   |                            |                | •                   |            |            |                       | Riser            |                         |             |
| Rem  | narks:         |                 |                          |               |                              |                             |             | aries between soil types and the tran<br>groundwater may occur due to facto |                            |                |                     |            |            |                       |                  |                         |             |
|  |                |                 |                          |               |                              |                             |             | ic vapors (referenced to an isobutyle                                       | •                          |                |                     |            |            |                       |                  |                         |             |
|  |                |                 | -                        |               |                              |                             |             | Ev lamp and set to a reference factor                                       |                            |                |                     |            |            |                       |                  |                         |             |
|  |                | <u>▼</u> = App  | roximate v               | vater tab     | le NA=1                      | Not Appli                   | cable       | e NR=No Recovery bgs=below  | ground surface ags=above g | round su       | ırface              |            |            |                       |                  |                         |             |

| -   |                  | Sove            | reign (        | Cons         | ulting   | Inc.                                    |             | Boring/Wel  | 1 ID                       |                           | D     | rilling l             | Method Details                           |
|---|------------------|-----------------|----------------|--------------|--|---|-------------|---|----------------------------|---------------------------|-------|-----------------------|--|
| Manager and American  | And a second     |                 | Science        | . Servic     | e. Solutio                                       | ns                                      |             | SHM-13-   | 04                         | Bit                       |       | Casing                | Soil Sampler Rock Core                   |
|   |                  |                 | wwv            | v.sovc       | on.com   | 1                                       |             | Sheet 1 of  |                            | Type: Sonic               |       | Steel                 | Sonic Sonic                              |
|   | ent:             |                 | US AC          |              |  |   |             |   | Glacier Drilling           | Size: 6"                  |       | 6"                    | 4" 4"                                    |
|   | ject:            |                 | Fort De        | evens -      | SHL  |   |             |   | coprobe 8140 LS            | SPT: Hammer-              |       | NA                    | Fall - NA                                |
|   | gect P<br>cation | Number:         | Former         | Eart F       | Jarrana  |   |             | Drill Method:<br>Foreman:   | Roto-sonic<br>Mark Schock  | W-II T                    |       |                       | ng Well Details rden Diameter: 2"        |
| Loc   | zation           |                 | Shepley        |              |  |   |             | SCI Inspector:  | PJV & JAG                  | Well Type:<br>Well Head:  |       | Overbur<br>Flush M    |  |
|   |                  |                 | Sample         |              |  |   |             | Start Date:   | 4/15/2013                  | Latitude:                 | _     |                       | Surface Elev:                            |
|   |                  |                 | F              |              |  |   |             | Completion Date:  | 4/16/2013                  | Longitude:                |       |                       | Casing Elev:                             |
|   |                  | Pen./Rec. (in.) | Ft.)           | SPT - Blow/6 | Rock coring<br>time minsec/1'                    | Field Testing<br>PID (ppmv)             | ble         | Completion Bate.  | 4/10/2013                  | Longitude.                |       |                       | Cashig Elev.                             |
| ı   | le II            | Rec.            | val (          | · Bio        | eori<br>mins                                     | Tes                                     | r Ta        |   |                            | Stratum                   | S     | Toct                  | Boring/ Monitoring Well                  |
| Depth   | Sample ID        | en./            | Interval (Ft.) | Ţ.           | tock<br>me 1                                     | ied<br>TD (                             | Water Table | Comple Decem  | intion                     |                           | Notes | Test                  | Construction                             |
| I   | S-1              | 60/6            | 0-5            | NA           | NA   | NA                                      | <u> </u>    | Sample Descri Asphalt and concrete sidewalk base n                              |                            | Change (ft.) ASPHALT BASE |       |                       | Construction                             |
|   |                  |                 | -              |              |  |   |             |   |                            |                           |       |                       | Cement 0 - 1'                            |
|   |                  |                 |                |              |  |   |             | Very dark grayish brown (2.5Y 3/2),   | •                          |                           |       |                       |  |
| 2   |                  |                 |                |              |  |   |             | SAND, some coarse sand, some sub-a<br>sub-angular coarse gravel, trace silt tr  |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             | sub-angular coarse graver, trace sitt tr  | acc coopies                |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
| 4   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
|   | S-2              | 60/27           | 5-10           | NA           | NA   | NA                                      |             | Yellowish brown (10YR 5/4), damp,   | medium to coarse           |                           |       |                       |  |
| 6   |                  |                 |                |              |  |   |             | SAND, some sub-rounded fine gravel  |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             | coarse gravel   |                            | SAND &                    |       |                       |  |
|   |                  |                 |                |              |  |   | 1           |   |                            | GRAVEL                    |       |                       |  |
| 8   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
| 10  |                  |                 |                |              |  |   |             |   |                            |                           |       |                       | 2" Schedule 40 PVC Riser<br>0' - 20'     |
| 10  |                  |                 |                |              |  |   |             | Bit sunk 10' - 12'  |                            |                           |       |                       | 0 - 20                                   |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       | Drilling Cuttings 1' - 15'               |
| 12  | S-3              | 96/48           | 12-20          | NA           | NA   | NA                                      |             | 0-24" - Pale brown (10YR 6/3), damp   | fine SAND                  |                           |       |                       |  |
|   | 5-5              | 70/40           | 12-20          | 1171         | 1474   | 1171                                    |             | 0-24 - 1 ale blown (10 1 k 0/3), damp   | , IIIC SAIND               |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             | 24"-48" - Very dark grayish brown (1  |                            |                           |       |                       |  |
| 14  |                  |                 |                |              |  |   |             | medium SAND, some coarse sand, so   |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             | gravel, little sub-rounded coarse grave   | er, trace sitt             |                           |       |                       |  |
|   |                  |                 |                |              |  | *************************************** |             |   |                            | SAND &                    |       | $\mathbf{m}$          |  |
| 16  |                  |                 |                |              |  |   |             |   |                            | GRAVEL                    |       | Ш                     |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       | Ш                     | Bentonite 15' - 18'                      |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       | HH                    | Bentonite 13 - 18                        |
| 18  |                  |                 |                |              |  |   | ▼           |   |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       | 2" Schedule 40 PVC Riser                 |
|   |                  |                 |                | ************ |  |   |             |   |                            |                           |       |                       | 0' - 20'                                 |
| 20  |                  |                 |                |              |  |   |             |   |                            |                           |       |                       |  |
|   | S-4              | 120/91          | 20-30          | NA           | NA   | NA                                      |             | 0-30" - Dark grayish brown (2.5Y 4/2  |                            |                           |       | E                     |  |
|   |                  |                 |                |              |  |   |             | SAND, some coarse sand, some sub-r  | ounded fine gravel, little |                           |       | -                     | #2 Morie Sand 18' - 30'                  |
| 22  |                  |                 |                |              |  |   |             | sub-rounded coarse gravel, trace silt   |                            |                           |       | -                     |  |
| 22  |                  |                 |                |              |  |   |             |   |                            |                           |       | -                     | 2" Schedule 40 PVC                       |
|   |                  |                 |                |              |  |   |             |   |                            |                           |       |                       | Wellscreen - 0.01" slot                  |
| 24  |                  |                 |                |              |  |   |             | 30"-50" - Light olive brown (2.5Y 5/3   | s), wet, fine to medium    | SAND                      |       | -                     | 20' - 30'                                |
| 24  | <b>-</b>         |                 |                |              | <del>                                     </del> |   |             | SAND  |                            |                           |       |                       |  |
|   |                  |                 |                |              |  |   |             | GP-13-04-025 = 3,510 ppb  |                            |                           | 2     |                       |  |
| Note  | es:              |                 | -              |              |  |   | -           | le collection bag technique used with   | roto-sonic drilling        | Key:                      |       |                       | Cement                                   |
|   |                  |                 | rofile samp    | _            |  |   |             | making dictination between making 1   | d machanical breed-        | Bedrock<br>Steel Casing   | VV.   | 1                     | Drill Cuttings/Native Soils  H Bentonite |
| 3) RQD % maybe skewed low due to sonic method difficult resulting in low sum of sticks (Σ) values |                  |                 |                |              |  |   |             | making distinction octacen natural an   | ia medianical uteaks       | Grout                     | ٦     |                       | ⊞ Bentonite     ∴ Sand                   |
|   |                  |                 | _              |              |  |   |             | alled 4/16/13.  |                            | Open bedrock              | -000  | !                     | Screen                                   |
|   |                  | 5)              |                |              |  |   |             |   |                            | _                         |       | $\sqcup \!\!\! \perp$ | Riser                                    |
| Rem   | narks:           |                 |                | -            |  |   |             | aries between soil types and the transit  |                            | -                         |       | -                     |  |
|   |                  |                 |                |              |  |   |             | groundwater may occur due to factors<br>ic vapors (referenced to an isobutylene | -                          |                           |       |                       |  |
|   |                  |                 | _              | -            |  |   | -           | Ev lamp and set to a reference factor of  |                            |                           |       |                       |  |
| 1   |                  |                 |                |              |  |   |             | e NR=No Recovery bgs=below gro  |                            | round surface             |       |                       |  |

|  |                  | Sove            | reign (                                 | Cons          | ulting                       | Inc.                                    |             | Boring/Well ID  |                       | D          | rilling Method Details                              |
|--|------------------|-----------------|---|---------------|------------------------------|---|-------------|---|-----------------------|------------|---|
| and the second   | Andreas Comments |                 | Science                                 | . Servic      | e. Solutio                   | ns                                      |             | SHM-13-04   | Bit                   | (          | Casing Soil Sampler Rock Core                       |
| ACT OF THE PARTY O |                  |                 | www                                     | v.sovo        | on.com                       | 1                                       |             | Sheet 2 of 2  | Type: Sonic           |            | Steel Sonic Sonic                                   |
| Clie   | ent:             |                 | US AC                                   | E             |                              |   |             | Drilling Co.: Glacier Drilling  | Size: 6"              |            | 6" 4' 4"  |
|  | ject:            |                 | Fort De                                 | evens -       | SHL                          |   |             | Drill Rig: Geoprobe 8140 LS   | SPT: Hammer-          |            | NA Fall - NA  |
|  | -                | Number:         |   |               |                              |   |             | Drill Method: Roto-sonic  |                       |            | onitoring Well Details                              |
| Loc  | cation           | :               | Former                                  |               |                              |   |             | Foreman: Mark Schock  | Well Type:            |            | Overburden Diameter: 2"                             |
|  |                  |                 | Shepley                                 |               |                              |   |             | SCI Inspector: PJV & JAG  | Well Head:            | ŀ          | Tush Mount Casing: PVC                              |
|  |                  |                 | Sample                                  | Inforn        | nation                       |   |             | Start Date: 4/15/2013   | Latitude:             |            | Surface Elev:                                       |
|  |                  | j.              | 3                                       | 9/.           | g<br>c/1'                    | g (                                     | e           | Completion Date: 4/16/2013  | Longitude:            |            | Casing Elev:  |
|  | O S              | ್ರ              | I (F                                    | 3low          | orrin<br>inse                | esti                                    | Tab         |   |                       |            |   |
| Depth  | Sample ID        | Pen./Rec. (in.) | Interval (Ft.)                          | SPT - Blow/6' | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv)             | Water Table |   | Stratum               | Notes      | Test Boring/ Monitoring Well                        |
| De   | Saı              |                 | <u>H</u>                                | SP            | Ro<br>tir                    | FE E                                    | š           | Sample Description  | Change (ft.)          | ž          | Construction  |
| 26   |                  |                 |   |               |                              |   |             |   |                       |            |   |
| 20   |                  |                 |   |               |                              |   |             | 50'-91" - Olive gray (5Y 4/2), wet, fine to medium SAND   |                       |            | #2 Morie Sand 18' - 30'                             |
|  |                  |                 |   |               |                              |   |             |   |                       |            |   |
| 28   |                  |                 |   |               |                              |   |             |   |                       |            | 2" Schedule 40 PVC                                  |
| 20   |                  |                 |   |               |                              |   |             |   |                       |            | Wellscreen - 0.01" slot                             |
|  |                  |                 |   |               |                              |   |             |   | CANE                  |            | 20' - 30'   |
| 30   |                  |                 |   |               |                              |   |             |   | SAND                  |            |   |
| 50   | S-5              | 120/72          | 30-40                                   | NA            | NA                           | NA                                      |             |   |                       |            |   |
|  |                  |                 |   |               |                              |   |             | 0.40!! Olim harry (2.53/.4/2) and 6.55.45 and fine CAND   |                       |            |   |
| 32   |                  |                 |   |               |                              |   |             | 0-48" - Olive brown (2.5Y 4/3), wet, fine to medium SAND, some coarse sand, trace sub-rounded fine gravel                           |                       |            |   |
|  |                  |                 |   |               |                              |   |             |   |                       |            |   |
|  |                  |                 |   |               |                              |   |             |   |                       |            |   |
| 34   |                  |                 |   |               |                              |   |             |   |                       |            |   |
|  |                  |                 |   |               |                              |   |             |   |                       |            |   |
|  |                  |                 |   |               |                              |   |             | GP-13-04-035 = 21.1 ppb   |                       | 2          | Drilling Cuttings/Native<br>Soils and #2 Morie Sand |
| 36   |                  |                 |   |               |                              |   |             | Gr -13-04-033 – 21.1 pp0  |                       |            | 30' - 43'   |
|  |                  |                 |   |               |                              |   |             |   |                       |            |   |
|  |                  |                 | *************************************** |               |                              |   |             | 48"-72" - Olive gray (5Y 4/2), wet, fine to medium SAND   |                       |            |   |
| 38   |                  |                 |   |               |                              |   |             | onve gray (31 1/2), wet, fine to incutain 5/11/2  |                       |            |   |
|  |                  |                 |   |               |                              |   |             |   | SAND                  |            |   |
|  |                  |                 |   |               |                              |   |             |   | SAND                  |            |   |
| 40   |                  |                 |   |               |                              |   |             |   |                       |            |   |
|  | S-6              | 60/58           | 40-45                                   | NA            | NA                           | NA                                      |             | 0-30" - Light olive brown (2.5Y 5/4), wet, fine to medium SAND  |                       |            |   |
|  |                  |                 |   |               |                              |   |             | 30"-38" - Light olive brown (2.5Y 5/3), wet, fine SAND and  |                       |            |   |
| 42   |                  |                 |   |               |                              |   |             | SILT  |                       |            |   |
|  |                  |                 |   |               |                              |   |             | 38"-58" - Gray (2.5Y 5/1), damp, fine to medium SAND, some  |                       |            |   |
|  |                  |                 |   |               |                              | *************************************** |             | coarse sand, some silt, little sub-angular fine gravel, trace sub-  |                       | Ì          |   |
| 44   |                  |                 |   |               |                              |   |             | angular coarse gravel. Rock frags and pucks (TILL)  | TILL                  |            | <b>              </b>                               |
|  |                  |                 |   |               |                              |   |             | GP-13-04-045 = 3.0 ppb  |                       | 2          |   |
|  | R-1              | 60/57           | 45-50                                   | NA            | NA                           | NA                                      |             |   |                       | Ī          | Bentonite 43' - 50'                                 |
| 46   |                  |                 |   |               |                              |   |             | Bedrock @ 45' Sonic core 45' - 50'<br>Σ of sticks = 19"   |                       | 3          |   |
|  |                  |                 |   |               |                              |   |             | RQD = 32%   | BEDROCK               | 4          |   |
| 40   |                  |                 |   |               |                              |   |             | Igneous rock, coarse grained granodiorite, dark gray (NO3)  |                       |            |   |
| 48   |                  |                 |   |               |                              |   |             | matrix with white (N9) to very light gray (N8) grains, (Ayer Granodiorite)  |                       |            |   |
|  |                  |                 |   |               |                              |   |             | Gianodionici  |                       |            |   |
|  |                  |                 |   |               |                              |   |             |   |                       |            |   |
| Note   | es:              | 1) Recov        | ery values                              | are skev      | ved due to                   | the soil s                              | amp         | le collection bag technique used with roto-sonic drilling   | Key:                  |            | Cement  |
|  |                  | 2) GW pi        | ofile sam                               | pling loc     | ation for c                  | dissolved                               | As          |   | Bedrock               | <b>***</b> | Drill Cuttings/Native Soils                         |
|  |                  |                 | -                                       |               |                              |   |             | making distinction between natural and mechanical breaks  | Steel Casing          |            | Bentonite   |
|  |                  |                 | _                                       |               | m of stick<br>4/16/13.       |   |             | alled 4/16/13.  | Grout<br>Open bedrock | ***        | Sand Screen   |
|  |                  | 5)              |   |               |                              |   |             |   |                       |            | Riser   |
| Rem  | narks:           |                 |   | -             |                              |   |             | aries between soil types and the transition may be gradual. Wat-<br>groundwater may occur due to factors other than those present a | -                     |            | =   |
|  |                  |                 |   |               |                              |   |             | ic vapors (referenced to an isobutylene standard) measured in the   |                       |            |   |
|  |                  | a Ion Scie      | ence photo                              | oionizati     | on detecto                   | or with a                               | 0.6         | Ev lamp and set to a reference factor of 0.53 (benzene).  NR=No Recovery bes=below ground surface ags=above g                       | -                     |            |   |

|   |  | Sove            | reign          | Cons          | ulting                       | Inc.                        |             | Boring/Well ID   |                   |      | Dr        | rilling | g Me  | ethod Details                        |
|---|--|-----------------|----------------|---------------|------------------------------|-----------------------------|-------------|--|-------------------|------|-----------|---------|-------|--------------------------------------|
| Separation of the separate of | The second secon |                 | Science        | . Servic      | e. Solutio                   | ns                          |             | SHM-13-05  | Bi                | t    | (         | Casing  | g     | Soil Sampler Rock Core               |
|   |  |                 |                |               | on.com                       |                             |             | Sheet 1 of 4   | Type: Son         |      |           | Steel   |       | Sonic Sonic                          |
| Clie  |  |                 | US AC          |               | CLIT                         |                             |             | Drilling Co.: Glacier Drilling   | Size: 6'          |      |           | 6"      |       | 4' 4"                                |
|   | ject:  | Jumber:         | Fort De        | evens -       | SHL                          |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic   | SPT: Hamn         | ner- | M         | NA      | min a | Fall - NA Well Details               |
|   | cation   |                 | Former         | Fort F        | evens)                       |                             |             | Foreman: Roto-solite  Mark Schock  | Well Type:        |      |           | Overbi  |       |                                      |
| 200   |  | •               | Sheple         |               |                              |                             |             | SCI Inspector: PJV & JAG   | Well Head:        |      |           | lush I  |       |                                      |
|   |  | (               | Sample         | Inforn        | nation                       |                             |             | Start Date: 4/16/2013  | Latitude:         |      |           |         |       | Surface Elev:                        |
|   |  | ·               | _              | 9             | 1,                           | <b>b</b> 0                  |             | Completion Date: 4/18/2013   | Longitude:        |      |           |         |       | Casing Elev:                         |
|   | <b>a</b>   | Pen./Rec. (in.) | (Ft.           | SPT - Blow/6' | ing<br>isec/                 | sting<br>nv)                | Water Table | -  |                   |      |           |         |       |                                      |
| th  | Sample ID  | /Rec            | rval           | <u> </u>      | k co                         | Te<br>(pp                   | er T        |  | Stratum           |      | es        | Tes     | t B   | oring/ Monitoring Well               |
| Depth   | Sam  | Pen.            | Interval (Ft.) | SPT           | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv) | Wat         | Sample Description   | Change (ft        | t.)  | Notes     |         |       | Construction                         |
|   | S-1  | 36/36           | 0-3            | NA            | NA                           | NA                          |             | Asphalt road base materials  |                   |      | 1         |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  | ACDITALT DA       | C.F. |           | 1111    |       | Cement 0 - 1'                        |
| 2   |  |                 |                |               |                              |                             |             |  | ASPHALT BA        | SE   |           |         |       |                                      |
| _   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| 4   | S-2  | 84/19           | 3-10           | NA            | NA                           | NA                          |             | Brown (10YR 4/3), dry, fine to medium SAND, little coarse sand, little rounded fine gravel, trace rounded coarse gravel          |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             | gainer, made rounded mile graver, made rounded course graver   |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| 6   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  | SAND &            |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  | GRAVEL            |      |           |         |       |                                      |
| 8   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| ٥   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| 10  |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       | 2" Schedule 40 PVC Riser<br>0' - 75' |
| 10  | S-3  | 60/39           | 10-15          | NA            | NA                           | NA                          |             | Yellowish brown (10YR 5/4), dry, medium to coarse SAND,  |                   |      |           |         |       | 0 - 75                               |
|   |  |                 |                |               |                              |                             |             | little fine sand, trace fine rounded gravel  |                   |      |           |         |       |                                      |
| 10  |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       | Drilling Cuttings 1' - 70'           |
| 12  |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| 14  |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   | S-4  | 60/37           | 15-20          | NA            | NA                           | NA                          |             | Brown (10YR 4/3), damp, fine to medium SAND, some coarse   |                   |      |           |         |       |                                      |
| 16  |  |                 |                |               |                              |                             |             | sand, some sub-rounded fine gravel, trace sub-rounded coarse gravel  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  | 0.13 TD 0         |      |           |         |       |                                      |
| 18  |  |                 |                |               |                              |                             |             |  | SAND &<br>GRAVEL  |      |           |         |       | 2" Schedule 40 PVC Riser             |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       | 0' - 75'                             |
| 2.  |  |                 |                |               |                              |                             |             | CD 12.05.020 - <1.0 . 1  |                   |      | _         |         |       |                                      |
| 20  | S-5  | 120/94          | 20-30          | NA            | NA                           | NA                          |             | GP-13-05-020 = $<$ 1.0 ppb<br>0-32" - Brown (10YR 4/3), wet, medium to coarse SAND,  |                   |      | 2         |         |       | Drilling Cuttings 1' - 70'           |
|   |  | 120/71          | 20 30          | 1111          | 1 11.1                       |                             |             | trace sub-rounded to sub-angular fine gravel   |                   |      |           |         |       | Dinning Cultings 1 70                |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| 22  |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             | 32"-94" - Brown (10YR 4/3), wet, fine SAND, little medium  |                   |      |           |         |       |                                      |
| 24  |  |                 |                |               |                              |                             |             | sand   | SAND              |      |           |         |       |                                      |
|   |  |                 |                |               |                              |                             |             |  |                   |      |           |         |       |                                      |
| Note  | es:  |                 | -              |               |                              |                             |             | le collection bag technique used with roto-sonic drilling  | Key:              |      |           | ""      |       | Cement                               |
|   |  |                 |                |               | ation for d                  |                             |             | making distinction between netural and machanical busches  | Bedr<br>Stool Co. |      | <b>XX</b> |         |       | Drill Cuttings/Native Soils          |
|   |  |                 | -              |               | ow due to<br>m of stick:     |                             |             | making distinction between natural and mechanical breaks   | Steel Cas         | rout | <b></b>   | •       | щ     | Bentonite<br>Sand                    |
|   |  |                 | _              |               |                              |                             |             | alled 4/18/13.   | Open bedr         |      | ×XX       |         |       | Screen                               |
|   |  | 5)              |                |               |                              |                             |             |  | <u> </u>          |      |           | Щ       | _     | Riser                                |
| Rem   | arks:  |                 |                | -             |                              |                             |             | aries between soil types and the transition may be gradual. Wat<br>groundwater may occur due to factors other than those present | _                 |      |           | -       |       |                                      |
|   |  |                 |                |               |                              |                             |             | ic vapors (referenced to an isobutylene standard) measured in the  |                   |      |           |         |       |                                      |
|   |  |                 | -              |               |                              |                             |             | Ev lamp and set to a reference factor of 0.53 (benzene).   |                   |      |           |         |       |                                      |
|   |  | <b>▼</b> = App  | roximate v     | vater tab     | le NA=N                      | Not Appli                   | cabl        | e NR=No Recovery bgs=below ground surface ags=above g  | ground surface    |      |           |         |       |                                      |

|                            |                      | Sove                                  | reign                                   | Cons                               | ulting                                 | Inc.                                   |                        | Boring/V  |  |            |  | Dı    | illing I | Method Details                               |                                     |
|----------------------------|----------------------|---------------------------------------|---|------------------------------------|--|--|------------------------|---|--|------------|--|-------|----------|--|-------------------------------------|
| and the second             | Action of the second |                                       | Science                                 | e. Servic                          | e. Solutio                             | ns                                     |                        | SHM-1   |  |            | Bit  | (     | Casing   | Soil Sample                                  | r Rock Core                         |
| CI.                        | 2 1 1 1              |                                       |   |                                    | on.com                                 | 1                                      |                        | Sheet 2   |  | Type:      | Sonic  |       | Steel    | Sonic  | Sonic                               |
|                            | ent:                 |                                       | US AC                                   |                                    | CIII                                   |  |                        | Drilling Co.:   | Glacier Drilling   | Size:      | 6"   |       | 6"       | 4'   | 4"                                  |
|                            | oject:<br>viect N    | Number:                               | Fort De                                 |                                    | SHL                                    |  |                        | Drill Rig:<br>Drill Method:   | Geoprobe 8140 LS<br>Roto-sonic   | SPT:       | Hammer-  | М     | NA       | Fall - NA                                    | 4                                   |
|                            | cation               |                                       | Former                                  |                                    | Devens                                 |  |                        | Foreman:  | Mark Schock  | We         | ell Type:  |       | Overbur  |  | r: 2"                               |
|                            |                      |                                       | Sheple                                  | y Hill I                           | Landfill                               |  |                        | SCI Inspector:  | PJV & JAG  |            | ell Head:  | F     | lush M   | ount Casing                                  | PVC                                 |
|                            |                      |                                       | Sample                                  | Inform                             | nation                                 |  |                        | Start Date:   | 4/16/2013  | L          | atitude:   |       |          | Surface E                                    | lev:                                |
|                            |                      | િં                                    | $\overline{}$                           | 9                                  | <br>7.                                 | 5.0                                    | 9                      | Completion Date:  | 4/18/2013  | Lo         | ngitude:   |       |          | Casing El                                    | ev:                                 |
|                            | А                    |                                       | 1.<br>F.                                | low/                               | oring<br>nsec                          | estin<br>omv)                          | [ab]                   |   |  |            |  |       |          |  |                                     |
| Depth                      | Sample ID            | Pen./Rec. (in.)                       | Interval (Ft.)                          | SPT - Blow/6'                      | Rock coring<br>time minsec/1'          | Field Testing<br>PID (ppmv)            | Water Table            |   |  | St         | ratum  | Notes | Test     | Boring/ Mon                                  | _                                   |
| De                         | Sai                  |                                       | _ <u>I</u> _                            | SP                                 | Ei &                                   | <u> </u>                               | ×                      | Sample De   | scription  | Cha        | nge (ft.)  | ž     |          | Constru                                      | ction                               |
| 26<br>28<br>30<br>32       | S-6                  | 120/102                               | 30-40                                   | NA                                 | NA                                     | NA                                     | -                      | GP-13-05-030 = <1.0 ppb<br>Grayish brown (10YR 5/2), wet-s  | saturated, fine SAND   | S          | SAND   | 2     |          | 0' - 75'                                     | le 40 PVC Riser<br>uttings 1' - 70' |
| 34<br>36<br>38<br>40<br>42 | S-7                  | 120/60                                | 40-50                                   | NA                                 | NA                                     | NA                                     | -                      | GP-13-05-040 = <1.0 ppb<br>Grayish brown (10YR 5/2), wet-   | saturated, fine SAND   | S          | SAND   | 2     |          | 0' - 75'                                     | le 40 PVC Riser<br>uttings 1' - 70' |
| 46                         |                      |                                       |   |                                    |  |  | -                      | GP-13-05-050 = 33.5 ppb   |  | 5          | SAND   | 2     |          |  |                                     |
| Not                        | es:                  |                                       |   |                                    |  |  |                        | le collection bag technique used v  | vith roto-sonic drilling   | Key:       |  | ,     | ```      | Cement                                       |                                     |
| Ren                        | narks:               | 3) RQD<br>difficult<br>4) Bedro<br>5) | resulting i<br>ck hole gr               | skewed l<br>in low su<br>outed on  | ow due to<br>m of stick<br>1 4/17/13.  | sonic me<br>s (Σ) valu<br>PVC wel      | thod<br>ies<br>l inst  | making distinction between naturalled 4/18/13.  aries between soil types and the tr   |  | О          | Bedrock<br>Steel Casing<br>Grout<br>pen bedrock<br>readings were |       | npleted  | Drill Cuttings/i Bentonite Sand Screen Riser | Native Soils                        |
|                            |                      | times and<br>2) Field<br>a Ion Sci    | d under co<br>testing val<br>ence phote | nditions<br>ues repre<br>oionizati | stated. F<br>esent total<br>on detecto | luctuation<br>volatile or<br>or with a | ns of<br>organ<br>10.6 | groundwater may occur due to fac<br>iic vapors (referenced to an isobuty<br>Ev lamp and set to a reference fact<br>e NR=No Recovery bgs=belov | stors other than those present ylene standard) measured in the stor of 0.53 (benzene). | at the tin | ne measurement of a seal   | ents  | were m   | ade.   |                                     |

| P  |            | Sove                                    | reign            | Cons          | ulting                                  | Inc.                        |             | Boring/W   |                                |                |                        | D          | rilling l         | Method Details                 |             |
|--|------------|---|------------------|---------------|---|-----------------------------|-------------|--|--------------------------------|----------------|------------------------|------------|-------------------|--------------------------------|-------------|
| A CONTRACTOR OF THE PARTY OF TH | Market Co. |   |                  |               | e. Solutio                              |                             |             | SHM-13   |                                |                | Bit                    |            | Casing            | •                              | ck Core     |
| Clie   | ent:       |   | US AC            |               | on.com                                  | <u>l</u>                    |             | Sheet 3 c  | of 4 Glacier Drilling          | Type:<br>Size: | Sonic<br>6"            |            | Steel<br>6"       | Sonic S                        | Sonic<br>4" |
|  | ject:      |   | Fort De          |               | SHL                                     |                             |             |  | Geoprobe 8140 LS               | SPT:           | Hammer-                |            | NA                | Fall - NA                      | 7           |
|  |            |   | AC001            |               |   |                             |             | Drill Method:  | Roto-sonic                     |                |                        | M          | onitori           | ng Well Details                |             |
| Loc  | ation      | :                                       | Former<br>Sheple |               |   |                             |             | Foreman:<br>SCI Inspector:   | Mark Schock<br>PJV & JAG       |                | ell Type:<br>ell Head: |            | Overbur<br>Iush M |                                | 2"<br>PVC   |
|  |            |   | Sample           |               |   |                             |             | Start Date:  | 4/16/2013                      |                | atitude:               | Г          | iusii ivi         | Surface Elev:                  | · VC        |
|  |            |   | эшири            | -             |   |                             |             | Completion Date:   | 4/18/2013                      |                | ongitude:              |            |                   | Casing Elev:                   |             |
|  | В          | Pen./Rec. (in.)                         | (Ft.)            | SPT - Blow/6' | ing<br>sec/1                            | sting<br>nv)                | Water Table | completion Butt.   | .,10,2015                      |                | g.caae.                |            |                   |                                |             |
| th   | Sample ID  | /Rec                                    | Interval (Ft.)   | . B           | k cor                                   | d Te<br>(ppr                | er T        |  |                                | St             | ratum                  | tes        | Test              | Boring/ Monitoring             | Well        |
| Depth  | Sam        |   | Inte             | SPT           | Rock coring<br>time minsec/1            | Field Testing<br>PID (ppmv) | Wat         | Sample Desc  | cription                       | Cha            | nge (ft.)              | Notes      |                   | Construction                   |             |
|  | S-8        | 120/71                                  | 50-60            | NA            | NA                                      | NA                          |             | Gray (10YR 5/1), wet-saturated, fin  | ne SAND                        |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| 52   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   | 2" Schedule 40 PVC             | Riser       |
|  |            |   |                  |               |   |                             |             |  |                                |                | SAND                   |            |                   | 0' - 75'                       |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| 54   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   | Drilling Cuttings 1'           | - 70'       |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| 56   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| 30   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            | *************************************** |                  |               | *************************************** |                             |             |  |                                |                |                        |            |                   |                                |             |
| 58   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| 60   |            |   |                  |               |   |                             |             | GP-13-05-060 = 69.4 ppb  |                                |                |                        | 2          |                   |                                |             |
|  | S-9        | 120/106                                 | 60-70            | NA            | NA                                      | NA                          |             | Light olive brown (2.5Y 5/3), wet-s<br>SAND, with lenses of reddish brow       |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             | ,  | . ( ,                          |                |                        |            |                   |                                |             |
| 62   |            |   |                  |               |   |                             |             |  |                                |                | SAND                   |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                | SAND                   |            |                   |                                |             |
| 64   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   | 2" Schedule 40 PVC<br>0' - 75' | Riser       |
| 04   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   | 0 - 73                         |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   | Drilling Cuttings 1'           | 701         |
| 66   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   | Drilling Cuttings 1'           | - /0        |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| 68   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   | <b></b>                     |             |  |                                |                |                        |            |                   |                                |             |
| 70   | S-10       | 120/89                                  | 70-80            | NA            | NA                                      | NA                          |             | GP-13-05-070 = 2.4 ppb   |                                |                |                        | 2          |                   |                                |             |
|  | 5 10       | 120/07                                  | 70 00            | 1121          | 1171                                    | 1 12 1                      |             | СГ 13 03 070 2.1 рро   |                                |                |                        | _          | Ш                 |                                |             |
| 72   |            |   |                  |               |   |                             |             | Light olive brown (2.5Y 5/3), wet-<br>SAND, with lenses of reddish brow        |                                |                |                        |            | Ш                 |                                |             |
| 12   |            |   |                  |               |   |                             |             | SAIND, WITH TELESCS OF TEACHS IT DIOV  | vii (3 i K 4/4) saiids         |                | SAND                   |            | Ш                 | Bentonite 70' - 73'            |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            | Щ                 | ##                             |             |
| 74   |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
|  |            |   |                  |               |   |                             |             |  |                                |                |                        |            |                   |                                |             |
| Note   | es:        | 1) Recov                                | ery values       | are skev      | ved due to                              | the soil s                  | samp        | le collection bag technique used wit   | th roto-sonic drilling         | Key:           |                        |            |                   | Cement                         |             |
|  |            |   |                  | -             | ation for o                             |                             |             |  |                                |                | Bedrock                | <b>***</b> |                   | Drill Cuttings/Native Soi      | ils         |
|  |            |   | -                |               | ow due to<br>m of stick                 |                             |             | making distinction between natural   | and mechanical breaks          |                | Steel Casing<br>Grout  | ***        | ▍▐                | Bentonite Sand                 |             |
|  |            | 4) Bedro                                | _                |               |   |                             |             | alled 4/18/13.   |                                | C              | pen bedrock            | كمم        | 1 ⊨               | Screen                         |             |
| Rem  | arks:      | 5)<br>1) Stratif                        | ication lin      | ies renres    | sent annro                              | ximate bo                   | ound        | aries between soil types and the tran  | sition may be gradual Wat      | er level       | readings wer           | e co       | mpleted           | Riser<br>lat                   |             |
|  |            | times and                               | l under co       | nditions      | stated. F                               | luctuation                  | is of       | groundwater may occur due to facto   | ors other than those present a | at the tin     | ne measurem            | ents       | were m            | ade.                           |             |
|  |            |   | -                | -             |   |                             | -           | ic vapors (referenced to an isobutyle<br>Ev lamp and set to a reference factor |                                | e heads        | pace of a sea          | 1ed s      | soıl sam          | ple with                       |             |
|  |            |   | -                |               |   |                             |             | e NR=No Recovery bgs=below   |                                | ground s       | urface                 |            |                   |                                |             |

| 1000000    | m             | Sove            | reign          | Cons             | ulting                           | Inc.                                    |             | Boring/Well ID  |       |                          | D         | rillin     | g Mo       | ethod | l Details                  |             |
|------------|---------------|-----------------|----------------|------------------|----------------------------------|---|-------------|---|-------|--------------------------|-----------|------------|------------|-------|----------------------------|-------------|
| THE COLUMN |               |                 |                |                  | e. Solutio                       |   |             | SHM-13-05   |       | Bit                      | -         | Casir      | -          | S     | oil Sampler                | Rock Core   |
| Cli        | 244           |                 | US AC          |                  | on.com                           |   |             | Sheet 4 of 4  |       | Type: Sonic              |           | Stee       | 1          |       | Sonic                      | Sonic<br>4" |
|            | ent:<br>ject: |                 | Fort De        |                  | CHI                              |   |             | Drilling Co.: Glacier Drilling Drill Rig: Geoprobe 8140 LS  |       | Size: 6"<br>SPT: Hammer- |           | 6"<br>NA   |            | Fal   | 4'<br> 1 - NA              | 4"          |
|            |               | Jumber:         | AC001          |                  | SHL                              |   |             | Drill Method: Geophole 8140 LS  Roto-sonic  | ,     | SP1. Hammer-             |           |            |            |       | l Details                  |             |
|            | cation        |                 | Former         |                  | Devens                           |   |             | Foreman: Mark Schock  |       | Well Type:               |           | Overl      |            |       | Diameter:                  | 2"          |
| Lot        | Junion        | •               | Sheple         |                  |                                  |   |             | SCI Inspector: PJV & JAG  |       | Well Head:               |           | lush       |            |       | Casing:                    | PVC         |
|            |               |                 | Sample         |                  |                                  |   |             | Start Date: 4/16/2013   |       | Latitude:                | •         | 14011      |            |       | Surface Elev:              | 1,0         |
|            |               |                 |                |                  |                                  | g (                                     | <u>e</u>    | Completion Date: 4/18/2013  |       | Longitude:               |           |            |            | -     | Casing Elev:               |             |
|            | Œ.            | Pen./Rec. (in.) | Interval (Ft.) | :                | Rock coring<br>time<br>minsec/1' | Field Testing<br>PID (ppmv)             | Water Table | Completion Date. 4/16/2015  |       | Longitude.               |           |            |            | -     | Casing Liev.               |             |
| Depth      | Sample ID     | 1./R            | erva           | SPT -<br>Blow/6" | Rock corin<br>time<br>minsec/1'  | Id T                                    | ter         |   |       | Stratum                  | į         | Te         | st B       | orir  | ng/ Monitor                | ing Well    |
| De         | Sar           | Per             | I              | SP               | E E E                            | Fie                                     | Mã          | Sample Description  |       | Change (ft.)             | Not       | <u> </u>   |            |       | Constructio                | n           |
| 76         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| 70         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| 78         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       | #2 Morie Sand              | 73' - 86'   |
| /8         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| 80         |               |                 |                |                  |                                  |   |             | CD 12.05.000 56.0 1   |       |                          | 1         |            |            |       | 2" Schedule 40             | DVC         |
| 80         | S-11          | 60/60           | 80-85          | NA               | NA                               | NA                                      |             | GP-13-05-080 = 56.8 ppb<br>Light olive brown (2.5Y 5/3), wet-saturated, fine to mediun                      | ım    |                          | 2         |            |            |       | Wellscreen - 0.            |             |
|            |               |                 |                |                  |                                  |   |             | SAND, with lenses of reddish brown (5YR 4/4) sands  |       |                          |           |            |            |       | 75' - 85'                  |             |
| 82         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| 02         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          | 1         |            |            |       |                            |             |
| 84         |               |                 |                |                  |                                  |   |             | GP-13-05-084 = $96.5$ ppb<br>Gray (2.5Y 5/1), damp, fine to medium SAND, some coars                         |       | TILL                     | 2         |            |            |       |                            |             |
| 04         |               |                 |                |                  |                                  |   |             | sand, some silt, little sub-angular fine gravel, trace sub-ang  |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             | coarse gravel. Rock frags, pulverized rock and pucks (TILI  |       |                          | ]         |            |            |       |                            |             |
| 86         | R-1           | 84/84           | 85-92          | NA               | NA                               | NA                                      |             | Bedrock @ 85' Sonic core 85' - 92'  |       |                          |           |            |            |       | #2 Morie Sand              | 95' 96'     |
| 80         |               |                 |                |                  |                                  |   |             | $\Sigma$ of sticks = 43"  |       |                          | 3         | ***        | ***        | ***   | #2 Mone Sand               | 85 - 80     |
|            |               |                 |                |                  |                                  |   |             | RQD = 51%   |       |                          | 4         | ▩          | ₩          | ₩     |                            |             |
| 88         |               |                 |                |                  |                                  |   |             | Igneous rock, coarse grained granodiorite, dark gray (NO3   | .,    |                          |           |            |            | ₩     | Grout 86' - 92'            |             |
| 00         |               |                 |                |                  |                                  |   |             | matrix with white (N9) to very light gray (N8) grains, (Aye   |       | BEDROCK                  |           | <b>***</b> | ₩          | ₩     |                            |             |
|            |               |                 |                |                  |                                  |   |             | Granodiorite)   |       |                          |           | ₩          | ₩          | ₩     |                            |             |
| 90         |               |                 |                |                  |                                  |   |             |   |       |                          |           | <b>***</b> | <b>***</b> | ₩     |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            | ₩          | ₩     |                            |             |
|            |               |                 |                |                  |                                  | *************************************** |             |   |       |                          |           | ₩          | ₩          | ₩     |                            |             |
| 92         |               |                 |                |                  |                                  |   |             | BORING END @ 92'  |       |                          |           | ▩          | ₩          | ₩     |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          | 1         | ~~         | ~~         | •     |                            |             |
|            |               |                 |                |                  |                                  |   | -           |   |       |                          |           |            |            |       |                            |             |
| 94         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                | -                |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| 96         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| 98         |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   | -           |   |       |                          |           |            |            |       |                            |             |
|            |               |                 |                |                  |                                  |   |             |   |       |                          |           |            |            |       |                            |             |
| Note       | es:           |                 |                |                  |                                  |   |             | le collection bag technique used with roto-sonic drilling   |       | Key:                     |           |            | ξ.         | Cem   |                            |             |
|            |               |                 |                |                  | ation for c                      |   |             | making distinction between natural and mechanical breaks  | :     | Bedrock<br>Steel Casing  | ₩         | 1          | 111        |       | l Cuttings/Nativ<br>tonite | e Soils     |
|            |               |                 | -              |                  | m of stick                       |   |             | making distinction octween natural and incending of these   |       | Grout                    | <b>**</b> |            | ##         | Sano  |                            |             |
|            |               | 4) Bedro        | _              |                  |                                  |   |             | alled 4/18/13.  |       | Open bedrock             | ~~        | •          | Ë          | Scre  | en                         |             |
| D or       | narks:        | 5)              | igation 1:-    | ac ropra         | cant conse                       | vimeta b                                | un 4        | aries between soil types and the transition may be gradual.   | Wot   | ar laval randinos        |           | mple       | lad o      | Rise  | er                         |             |
| Ken        | KIKS.         |                 |                |                  |                                  |   |             | groundwater may occur due to factors other than those pres  |       |                          |           |            |            |       |                            |             |
|            |               | 2) Field        | testing val    | ues repre        | esent total                      | volatile o                              | organ       | ic vapors (referenced to an isobutylene standard) measured  |       |                          |           |            |            |       | h                          |             |
|            |               |                 | -              |                  |                                  |   |             | Ev lamp and set to a reference factor of 0.53 (benzene).  e NR=No Recovery bgs=below ground surface ags=abo | ove a | round surface            |           |            |            |       |                            |             |

| 7             | 1777            | Sove                                    | reign          | Cons          | ulting                                  | Inc.                        |             | Boring/Well ID   |          |          |                     | D     | rilling                  | g Method Details                       |   |
|---------------|-----------------|---|----------------|---------------|---|-----------------------------|-------------|--|----------|----------|---------------------|-------|--------------------------|--|---|
| TOTAL SECTION |                 |   | Science        | e. Servic     | e. Solutio                              | ns                          |             | SHM-13-06  |          |          | Bit                 |       | Casing                   | g Soil Sampler Rock Core               |   |
|               |                 |   |                |               | on.com                                  | 1                           |             | Sheet 1 of 3   |          | Type:    | Sonic               |       | Steel                    | Sonic Sonic                            |   |
| Clie          |                 |   | US AC          |               | ~                                       |                             |             | Drilling Co.: Glacier Drilli   |          | Size:    | 6"                  |       | 6"                       | 4' 4"                                  |   |
|               | ject:           | T1                                      | Fort Do        | evens -       | SHL                                     |                             |             | Drill Rig: Geoprobe 8140   |          | SPT:     | Hammer              |       | NA                       | Fall - NA                              | _ |
|               | ject N<br>ation | lumber:                                 | Former         | · Fort F      | Ovono                                   |                             |             | Drill Method: Roto-sonic<br>Foreman: Mark School   |          | W        | ell Type:           |       | l <b>onito</b><br>Overbi | oring Well Details ourden Diameter: 2" |   |
| Loc           | ation           | •                                       | Sheple         |               |   |                             |             | SCI Inspector: PJV   | K        |          | ell Head:           |       |                          | mount Casing: PVC                      |   |
|               |                 | ,                                       | Sample         |               |   |                             |             | Start Date: 5/22/2013  |          |          | atitude:            |       |                          | Surface Elev:                          |   |
|               |                 |   |                | :             | ٠.                                      |                             |             | Completion Date: 5/22/2013   |          |          | ongitude:           |       |                          | Casing Elev:                           |   |
|               | Q               | j.                                      | Ft.)           | 9/wc          | ing<br>sec/1                            | ting<br>nv)                 | able        | 6,22,2015  |          |          | ongreace.           |       |                          |  |   |
| ч             | ple I           | Rec                                     | val            | ĕ.            | min g                                   | Tes<br>(ppn                 | ır Ta       |  |          | S        | tratum              | es    | Tes                      | st Boring/ Monitoring Well             | _ |
| Depth         | Sample ID       | Pen./Rec. (in.)                         | Interval (Ft.) | SPT - Blow/6' | Rock coring<br>time minsec/1            | Field Testing<br>PID (ppmv) | Water Table | Sample Description   |          |          | ange (ft.)          | Notes | 100                      | Construction                           |   |
|               | S-1             | 60/48                                   | 0-5            | NA            | NA                                      | NA                          |             | Dark olive brown (2.5Y 3/3), dry, fine to medium SA  |          |          | 8 ( 17)             | 1     |                          |  | _ |
|               |                 |   |                |               | *************************************** |                             |             | silt, little coarse sand, little sub-rounded to sub-angul  |          |          |                     |       | 1111                     | Cement 0 - 1'                          |   |
| 2             |                 |   |                |               |   |                             |             | gravel, trace sub-rounded to sub-angular coarse gravel<br>sub-rounded to sub-angular cobbles (FILL)            | i, trace |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
| 4             |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               | 6.2             | 120/60                                  | 5.15           | NI A          | NT A                                    | NT A                        |             | 0.1211 Garage and the second   |          |          |                     |       |                          |  |   |
| 6             | S-2             | 120/60                                  | 5-15           | NA            | NA                                      | NA                          |             | 0-12" Same as above  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | 12"-17" - Dark yellowish brown (10YR 4/4), damp, fi  | ine      |          | SAND                |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | SAND   |          |          |                     |       |                          |  |   |
| 8             |                 |   |                |               |   |                             |             | 17"-31" - Very dark brown (10YR 2/2), damp, fine SA  | AND and  |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | SILT, trace medium to coarse sand, trace fine gravel.  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | materials  |          |          |                     |       |                          | 2ll Calcadala 40 DVC Diagra            |   |
| 10            |                 |   |                |               |   |                             |             | 31"-38" - Yellowish brown (10YR 5/6), moist, fine S.   | AND      |          |                     |       |                          | 2" Schedule 40 PVC Riser<br>0' - 36'   |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | 2011 (011 Oliver and Law (2.5 V. (16) and int. Star CANID  |          |          |                     |       |                          | Deilling Continue II 211               |   |
| 12            |                 |   |                |               |   |                             |             | 38"-60" - Olive yellow (2.5Y 6/6), moist, fine SAND  |          |          |                     |       |                          | Drilling Cuttings 1' - 31'             |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
| 14            |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               | S-3             | 120/40                                  | 15-25          | NA            | NA                                      | NA                          |             | 0-15" Slump materials from above   |          |          |                     |       |                          |  |   |
| 16            | 3-3             | 120/40                                  | 13-23          | INA           | INA                                     | INA                         |             | 0-13 Stump materials from above  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | 15"-40" - Light olive brown (2.5Y 5/4), moist to wet,<br>SAND, some coarse sand, little fine sand, little sub- |          |          |                     |       |                          |  |   |
| 18            |                 |   |                |               |   |                             | <u></u>     | fine gravel, trace sub-rounded coarse gravel   | _        |          | SAND                |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          | 2" Schedule 40 PVC Riser               |   |
|               |                 | *************************************** |                |               | *************************************** |                             |             |  |          |          |                     |       |                          | 0' - 36'                               |   |
| 20            |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | GP-13-06-020 = 1.0  ppb  |          |          |                     | 2     |                          | Drilling Cuttings 1' - 31'             |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
| 22            |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
| 24            |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             |  |          |          |                     |       |                          |  |   |
| Note          | es:             | 1) Recov                                | erv values     | are skew      | ved due to                              | the soil s                  | amp         | e collection bag technique used with roto-sonic drilling   | ng       | Key:     |                     |       | 7111                     | Cement                                 | _ |
|               |                 |   |                |               | ation for c                             |                             | •           | and will total some diffinition  | 0        |          | Bedroc              | k 🔆   | 8                        | Drill Cuttings/Native Soils            |   |
|               |                 |   | -              |               |   |                             |             | making distinction between natural and mechanical br   | reaks    |          | Steel Casin         | ٠,    | ָן וְ                    | Bentonite                              |   |
|               |                 |   | _              |               | m of stick<br>5/22/13.                  |                             |             | alled 5/22/13.   |          | (        | Grou<br>Open bedroc | سممر  |                          | Sand<br>Screen                         |   |
|               |                 | 5)                                      | e gi           |               |   |                             |             |  |          | L        |                     | Ĺ     |                          | Riser                                  |   |
| Rem           | arks:           |   |                |               |   |                             |             | ries between soil types and the transition may be grad   |          |          |                     |       |                          |  |   |
|               |                 |   |                |               |   |                             |             | groundwater may occur due to factors other than those<br>c vapors (referenced to an isobutylene standard) meas |          |          |                     |       |                          |  |   |
|               |                 |   | _              | -             |   |                             | -           | Ev lamp and set to a reference factor of 0.53 (benzene)  |          | roads    | . r 01 a SC         |       | JU11 34                  |  |   |
|               |                 |   |                |               |   |                             |             | NR=No Recovery bgs=below ground surface ags  |          | ground s | surface             |       |                          |  |   |

|           |   | Sove             | reign          | Cons          | ulting                       | Inc.                        |             | Boring/Well ID   |            |                         | D     | rilling M | Iethod Details                    |             |
|-----------|---|------------------|----------------|---------------|------------------------------|-----------------------------|-------------|--|------------|-------------------------|-------|-----------|-----------------------------------|-------------|
| and and a | Marie Constitution of the |                  | Science        | . Servic      | e. Solutio                   | ns                          |             | SHM-13-06  |            | Bit                     | ,     | Casing    | Soil Sampler                      | Rock Core   |
| -         | 1111  |                  |                |               | on.com                       | 1                           |             | Sheet 2 of 3   | Type:      | Sonic                   |       | Steel     | Sonic                             | Sonic       |
|           | ent:  |                  | US AC          |               | CLIT                         |                             |             | Drilling Co.: Glacier Drilling   | Size:      | 6"                      |       | 6"        | 4'                                | 4"          |
|           | ject:   | Jumber:          | Fort De        | evens -       | SHL                          |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic   | SPT:       | Hammer-                 | M     | NA        | Fall - NA                         |             |
|           | cation  |                  | Former         | Fort F        | )evens                       |                             |             | Foreman: Roto-solic  Mark Schock   | w          | ell Type:               |       | Overburg  | 0                                 | 2"          |
| Loc       | Junon   | •                | Shepley        |               |                              |                             |             | SCI Inspector: PJV   |            | ell Head:               |       | lush mo   |                                   | PVC         |
|           |   | ,                | Sample         |               |                              |                             |             | Start Date: 5/22/2013  | L          | atitude:                |       |           | Surface Elev:                     |             |
|           |   |                  |                | F_            |                              |                             |             | Completion Date: 5/22/2013   |            | ongitude:               |       |           | Casing Elev:                      |             |
|           | Ð   |                  | Interval (Ft.) | 9/wo          | ing<br>sec/]                 | sting<br>nv)                | Water Table | •  |            |                         |       |           | _                                 |             |
| æ         | ple ]   | Rec              | -val           | Ē.            | E CO                         | I Te<br>(ppi                | er T        |  | St         | tratum                  | se    | Test l    | Boring/ Monitor                   | ing Well    |
| Depth     | Sample ID   | Pen./Rec. (in.)  | Inte           | SPT - Blow/6' | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv) | Wat         | Sample Description   | Cha        | inge (ft.)              | Notes |           | Construction                      | _           |
|           | S-4   | 120/95           | 25-35          | NA            | NA                           | NA                          |             | Olive brown (2.5Y 4/3), wet to sat, medium SAND, some fine   |            |                         |       |           |                                   |             |
| 26        |   |                  |                |               |                              |                             |             | sand, little coarse sand, trace sub-rounded fine gravel  |            |                         |       |           |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
| 28        |   |                  |                |               |                              |                             |             |  |            |                         |       |           | 2" Schedule 40                    | DVC Piggr   |
| 28        |   |                  |                |               |                              |                             |             |  |            |                         |       |           | 0' - 36'                          | PVC Risei   |
|           |   |                  |                |               |                              |                             |             |  |            | CAND                    |       |           |                                   |             |
| 30        |   |                  |                |               |                              |                             |             |  |            | SAND                    |       |           | Drilling Cutting                  | gs 1' - 31' |
|           |   |                  |                |               |                              |                             |             | GP-13-06-030 = 244 ppb   |            |                         | 2     |           |                                   | J           |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
| 32        |   |                  |                |               |                              |                             |             |  |            |                         |       | Ш         |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       | Ш         | Bentonite 31' -                   | 2.4!        |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           | Bentonite 31 -                    | 34          |
| 34        |   |                  |                |               |                              |                             |             |  |            |                         |       | Ш         |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
|           | S-5   | 120/96           | 35-45          | NA            | NA                           | NA                          |             | Olive gray (5Y 5/2), wet to sat, fine SAND, little medium  |            |                         |       |           |                                   |             |
| 36        |   |                  |                |               |                              |                             |             | sand, trace coarse sand  |            |                         |       | -         |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
| 20        |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
| 38        |   |                  |                |               |                              |                             |             |  |            |                         |       | -         | - [1] [1]                         |             |
|           |   |                  |                |               |                              |                             |             |  |            | SAND                    |       |           |                                   |             |
| 40        |   |                  |                |               |                              |                             |             |  |            |                         |       |           | <del>-</del>                      |             |
|           |   |                  |                |               |                              |                             |             | GP-13-06-040 = 3,380 ppb   |            |                         | 2     |           |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           | #2 Morie Sand                     | 34' - 46'   |
| 42        |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       | -         |                                   |             |
| 44        |   |                  |                |               |                              |                             |             |  |            |                         |       |           | 2" Schedule 40<br>Wellscreen - 0. |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           | 36' - 46'                         | U1" SIOT    |
|           | S-6   | 144/100          | 45-57          | NA            | NA                           | NA                          |             | Olive gray (5Y 5/2), wet to sat, fine SAND, little medium  |            |                         |       |           |                                   |             |
| 46        |   |                  |                |               |                              |                             |             | sand, trace coarse sand Bottom has trace fine to coarse gravel, trace cobbles  |            | SAND                    |       |           |                                   |             |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
| 48        |   |                  |                |               |                              |                             |             |  |            |                         |       |           |                                   |             |
| 10        |   |                  |                |               |                              |                             |             |  |            |                         |       |           | Drilling Cutting                  | gs/Native   |
|           |   |                  |                |               |                              |                             |             |  |            |                         |       |           | Soils and #2 M<br>46' - 57'       | orie Sand   |
|           |   |                  |                |               |                              |                             |             | GP-13-06-050 = 1,650 ppb   |            |                         | 2     |           | 40 - 3/                           |             |
| Note      | es:   |                  | -              |               |                              |                             |             | le collection bag technique used with roto-sonic drilling  | Key:       | ъ                       | 200   |           | Cement                            | 0.1         |
|           |   |                  |                | -             | ation for o                  |                             |             | making distinction between natural and mechanical breaks   |            | Bedrock<br>Steel Casing | 888   |           | Drill Cuttings/Nativ<br>Bentonite | e Soils     |
|           |   |                  | -              |               | m of stick                   |                             |             | alconorm occitori natatai and inconament oreass  |            | Grout                   | ***   | <b>!</b>  | Sand                              |             |
|           |   |                  | ck hole gr     | outed on      | 5/22/13.                     | PVC well                    | inst        | alled 5/22/13.   | C          | pen bedrock             | :     | F         | Screen                            |             |
| Ren       | narks:  | 5)<br>1) Stratif | ication lin    | es repres     | sent appro                   | ximate bo                   | und         | aries between soil types and the transition may be gradual. Wa   | ter level  | readings wer            | e co  | mpleted   | Riser                             |             |
|           |   | times and        | l under co     | nditions      | stated. F                    | luctuation                  | s of        | groundwater may occur due to factors other than those present  | at the tir | ne measurem             | ents  | were ma   | ide.                              |             |
|           |   |                  | _              |               |                              |                             | _           | ic vapors (referenced to an isobutylene standard) measured in the Ev lamp and set to a reference factor of 0.53 (benzene). | ne heads   | pace of a sea           | ied s | soil samp | ole with                          |             |
|           |   |                  | •              |               |                              |                             |             | e NR=No Recovery bgs=below ground surface ags=above  | ground s   | urface                  |       |           |                                   |             |

| Par security | Secretary of the Secret | Sove            | reign                   |               | U                             |                             |             | Boring/We   |                           |                |                        |                      | _           |       | thod D              |                     |             |
|--------------|--|-----------------|-------------------------|---------------|-------------------------------|-----------------------------|-------------|---|---------------------------|----------------|------------------------|----------------------|-------------|-------|---------------------|---------------------|-------------|
| and the same | A COLUMN TO SERVICE AND A COLU |                 |                         |               | e. Solutio                    |                             |             | SHM-13-   |                           | T.             | Bit                    |                      | Casing      | 3     |                     | Sampler             | Rock Core   |
| Clie         | ent:   |                 | US AC                   |               | on.com                        |                             |             | Sheet 3 of Drilling Co.:  | Glacier Drilling          | Type:<br>Size: | Sonic<br>6"            |                      | Steel<br>6" |       | S                   | onic<br>4'          | Sonic<br>4" |
|              | ject:  |                 | Fort De                 |               | SHL                           |                             |             |   | eoprobe 8140 LS           | SPT:           | Hammer-                |                      | NA          |       | Fall -              | NA                  | 7           |
|              |  | Jumber:         | AC001                   |               |                               |                             |             | Drill Method:   | Roto-sonic                |                |                        | M                    |             | ring  | Well D              |                     |             |
| Loc          | cation   | :               | Former                  | Fort I        | Devens                        |                             |             | Foreman:  | Mark Schock               | We             | ll Type:               | (                    | Overbu      | urdei | n I                 | Diameter:           | 2"          |
|              |  |                 | Shepley                 | y Hill I      | andfill                       |                             |             | SCI Inspector:  | PJV                       | We             | ll Head:               | F                    | lush r      | nour  | nt                  | Casing:             | PVC         |
|              |  | ,               | Sample                  | Inforn        | nation                        |                             |             | Start Date:   | 5/22/2013                 | La             | titude:                |                      |             |       | Su                  | rface Elev:         |             |
|              |  | 3               | _                       |               | -                             | b0                          |             | Completion Date:  | 5/22/2013                 | Loi            | ngitude:               |                      |             |       | Са                  | sing Elev:          |             |
|              | Œ  | Pen./Rec. (in.) | Interval (Ft.)          | low/          | ring<br>1sec/                 | sting<br>mv)                | Water Table |   |                           |                |                        |                      |             |       |                     |                     |             |
| th           | ple  | /Rec            | rval                    | B             | k co                          | d Te                        | er T        |   |                           | Sti            | ratum                  | tes                  | Tes         | t Be  | oring/              | Monitor             | ring Well   |
| Depth        | Sample ID  | Pen.            | ln të                   | SPT - Blow/6' | Rock coring<br>time minsec/1' | Field Testing<br>PID (ppmv) | Wat         | Sample Descr  | ription                   |                | nge (ft.)              | Notes                |             |       | _                   | nstructio           | _           |
|              |  |                 |                         |               | T                             |                             |             |   |                           |                | 8- (/                  |                      | IIII        |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 52           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 32           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     | illing Cuttir       | ngs/Native  |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       | Soi                 | ils and #2 N        | -           |
| - 1          |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       | 46'                 | - 57'               |             |
| 54           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 56           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              | R-1  | 65/65           | 57-62.5                 | NA            | NA                            | NA                          |             | Bedrock @ 57' Sonic core 57' - 62.5'  |                           |                |                        | 2                    | Ш           | Ш     | ₩                   |                     |             |
| 58           |  |                 |                         |               |                               |                             |             | GP-13-06-058 = 85.0 ppb   |                           |                |                        |                      |             | Ш     | ##                  |                     |             |
|              |  |                 |                         |               |                               |                             |             | $\Sigma$ of sticks = 0"<br>RQD = 0%   |                           | BEI            | DROCK                  | 3                    |             |       | Be                  | ntonite 57' -       | - 62.5'     |
|              |  |                 |                         |               |                               |                             |             | Igneous rock, coarse grained granodi  | orite, dark gray (NO3)    | 52.            | onoen.                 | 4                    | ₩           | Ш     | #1                  | inointe 57          | 02.0        |
| 60           |  |                 |                         |               |                               |                             |             | matrix with white (N9) to very light  | gray (N8) grains, (Ayer   |                |                        |                      |             |       | ▦                   |                     |             |
|              |  |                 |                         |               |                               |                             |             | Granodiorite) Fe staining apparent approx 58' - 60'   | some Es staining also et  |                |                        |                      | Ш           | Ш     | ▦                   |                     |             |
|              |  |                 |                         |               |                               |                             |             | 62.5'. Vertical to high angle fracturing  |                           |                |                        |                      |             | Ш     | ▦                   |                     |             |
| 62           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      | Ш           | Ш     | ##                  |                     |             |
|              |  |                 |                         |               |                               |                             |             | BORING END (  | 0 62.5'                   |                |                        |                      | Ш           | Щ     | ##                  |                     |             |
|              | ***************************************  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 64           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 66           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 68           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 70           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| , ,          |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 72           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 12           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| 74           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| /4           |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             |   |                           |                |                        |                      |             |       |                     |                     |             |
| Note         | es:  |                 |                         |               |                               |                             |             | le collection bag technique used with   | roto-sonic drilling       | Key:           | D 1 1                  | 000                  |             | ,,,   | Cement              |                     | 0-11        |
|              |  |                 | rofile sam<br>% mavbe s | -             |                               |                             |             | making distinction between natural a  | nd mechanical breaks      | S              | Bedrock<br>teel Casing | ⋘                    | Î           |       | Drill Ci<br>Bentoni | uttings/Nati<br>ite | ve Soils    |
|              |  |                 | resulting i             |               |                               |                             |             | g and the first of the control of the contro | moonamour oround          |                | Grout                  | ***                  |             | щ,    | Sand                |                     |             |
|              |  |                 | _                       |               |                               |                             |             | alled 5/22/13.  |                           | OI             | en bedrock             | <del>نمسر</del><br>ا | <u> </u>    |       | Screen              |                     |             |
| D            | narks:   | 5)              | iontine 1:              | .00 mar :-    | ont                           | vimat - 1                   | 3           | aries between soil types and the transi   | tion may be smaller 1 . W | or 1000-1      | andir as               |                      |             |       | Riser               |                     |             |
| Kem          | KI KS.   |                 |                         | -             |                               |                             |             | groundwater may occur due to factors  |                           |                | -                      |                      | -           |       |                     |                     |             |
|              |  |                 |                         |               |                               |                             |             | ic vapors (referenced to an isobutylen  | -                         |                |                        |                      |             |       |                     |                     |             |
|              |  | a Ion Sci       | ence photo              | oionizati     | on detecto                    | or with a 1                 | 0.6         | Ev lamp and set to a reference factor of  | of 0.53 (benzene).        |                |                        |                      |             |       |                     |                     |             |
|              |  | <u>▼</u> = App  | roximate v              | vater tab     | le NA=1                       | Not Appli                   | cabl        | e NR=No Recovery bgs=below gr   | ound surface ags=above g  | round su       | rface                  |                      |             |       |                     |                     |             |

| The second |           | Sover<br>16 Che<br>Foxbor | stnut S<br>ough, N | treet,<br>MA 0: | Suit<br>2035            | e 520  |            |             | Boring/Well ID: SHM-13-07  | Sh                     | eet   | 1 of2                        |
|------------|-----------|---------------------------|--------------------|-----------------|-------------------------|--------|------------|-------------|--|------------------------|-------|------------------------------|
|            | ent:      | Army (                    | Corps of           | Engi            | neers                   |        |            |             | Drilling Co.: Glacier Drilling   | Casing                 | g     | Sampler                      |
|            |           | SHL<br>Number:            | A C001             | വാഗ             |                         |        |            |             | Drill Rig: Geoprobe 8040<br>Drill Method: Direct Push                      | Type: PVC<br>Size: 2"  |       | NA<br>NA                     |
|            |           | number.<br>: NIA          | ACOUL              | .02C            |                         |        |            |             | Foreman: Barry   | Size: 2 Hamme          | er    | NA                           |
| Loc        | Julion    |                           |                    |                 |                         |        |            |             | SCI Inspector: Carolyn Hardt   | Pneuma                 |       |                              |
|            |           | S                         | ample I            | nfori           | matic                   | n      |            |             | Start Date: 10/28/13   | Casing                 | Ele   | evation:                     |
|            |           | $\widehat{}$              |                    |                 |                         |        |            | •           | Completion Date: 10/28/13  | Surface                |       |                              |
|            | 8         | Pen./Rec. (in.)           | Interval (Ft.)     |                 |                         |        | nv)        | Sample Type | •  | Well                   | hea   | d Type:                      |
| th         | Sample ID | /Rec                      | rval               |                 | .9/s^                   |        | PID (ppmv) | ble         |  | Stratum                | sea   | Test Boring/ Monitoring Well |
| Depth      | Sam       | Pen.                      | Inte               |                 | Blows/6"                |        | E ,        | San         | Sample Description   | Change (ft.)           | Notes | Construction                 |
|            |           |                           |                    |                 |                         |        |            |             | No samples collected during monitoring well installation.                  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 2          |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 4          |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| ·          |           |                           |                    |                 |                         | 1      |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 6          |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 0          |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 8          |           |                           |                    |                 |                         |        |            |             |  |                        |       | 2" Schedule 40 PVC Riser     |
| 0          |           |                           |                    |                 |                         |        |            |             |  |                        |       | 0-27'                        |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 10         |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 10         |           |                           |                    |                 |                         | _      |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 12         |           |                           |                    |                 |                         |        |            |             |  |                        |       | #2 Morie Sand 0'-25'         |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 14         |           |                           |                    |                 |                         | -      |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 16         |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 18         |           |                           |                    |                 | +                       | +      |            |             |  | 1                      |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  | 1                      |       |                              |
| 20         |           |                           |                    |                 | +                       | +      |            |             |  | 1                      |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  | 1                      |       |                              |
| 22         |           |                           |                    |                 |                         | _      |            |             |  |                        |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  | 1                      |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| 24         |           |                           | ļ                  |                 | $\downarrow \downarrow$ |        |            |             |  | 1                      |       |                              |
|            |           |                           |                    |                 |                         |        |            |             |  |                        |       |                              |
| Note       | es:       | 1)                        |                    |                 | 1                       |        |            |             |  |                        | Key   | y: Cement                    |
|            |           | 2)                        |                    |                 |                         |        |            |             |  |                        |       | Grout                        |
|            |           | 3)<br>4)                  |                    |                 |                         |        |            |             |  |                        |       | Bentonite Sand               |
| Ren        | narks:    |                           | ication lin        | es repr         | esent a                 | approx | imate bo   | oun         | daries between soil types and the transition may be gradual. Wa            | nter level readings ha | ve b  |                              |
|            |           | times and                 | l under co         | ndtions         | s state                 | d. Flu | ctuation   | s of        | groundwater may occur due to factors other than those present              | at the time measurer   | nent  | s were made.                 |
|            |           |                           | _                  | -               |                         |        |            | _           | anic vapors (referenced to an isobutylene standard) measured in            | the headspace of a s   | ealed | I soil sample with           |
|            |           | -                         |                    |                 |                         |        | -          |             | 000) equipped with a 10.6 Ev lamp. ite or "GS" for a discrete grab sample. |                        |       |                              |
|            |           | ,r                        |                    |                 |                         |        |            |             | · O · · · · · · · · · · · · ·  |                        |       |                              |

| anni. |           | 16 Che<br>Foxbor                      | stnut S<br>ough, N                    | treet,<br>MA 02                | Suite<br>2035                    | ng Inc<br>520                      | •                       | Boring/Well ID: SHM-13-07   |                       | eet2 of2                                    |
|-------|-----------|---------------------------------------|---------------------------------------|--------------------------------|----------------------------------|------------------------------------|-------------------------|---|-----------------------|---|
|       | ent:      | Army (                                | Corps of                              | Engi                           | neers                            |                                    |                         | Drilling Co.: Glacier Drilling  | Casing                |   |
|       |           | SHL<br>Number:                        | A C001                                | വാഗ                            |                                  |                                    |                         | Drill Rig: Geoprobe 8040<br>Drill Method: Direct Push   | Type: PVC<br>Size: 2" | NA<br>NA                                    |
|       |           | : NIA                                 | AC001.                                | .02C                           |                                  |                                    |                         | Foreman: Barry  | Size: 2<br>Hamme      |   |
| Loc   | ation     | . 11111                               |                                       |                                |                                  |                                    |                         | SCI Inspector: Carolyn Hardt  | Pneuma                |   |
|       |           | S                                     | ample I                               | nfori                          | matio                            | n                                  |                         | Start Date: 10/28/13  | Casing                | Elevation:                                  |
|       |           |                                       | _                                     |                                |                                  |                                    |                         | Completion Date: 10/28/13   |                       | Elevation:                                  |
|       | Q         | j.                                    | Ft.                                   |                                |                                  | av)                                | Ŋ                       | 200 10 200 10 20 10   |                       | head Type:                                  |
| ų     | ple I     | Rec                                   | val                                   |                                | .9/s.                            | ıdd)                               | ple 7                   |   |                       |   |
| Depth | Sample ID | Pen./Rec. (in.)                       | Interval (Ft.)                        |                                | Blows/6"                         | PID (ppmv)                         | Sample Type             | Sample Description  | Change (ft.)          | Test Boring/ Monitoring Well Construction   |
|       |           |                                       |                                       |                                | ĪΤ                               |                                    | <u> </u>                | No samples collected during monitoring well installation.   |                       | Н Н   |
| 26    |           |                                       |                                       |                                |                                  |                                    | -                       |   |                       | Bentonite 25-26                             |
| 30    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       | #2 Morie Sand 26'-37'                       |
| 32    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
|       |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 34    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       | 2" Schedule 40 PVC Well screen - 0.01" slot |
| 36    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       | 27'-37'                                     |
| 38    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 10    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 40    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 42    |           |                                       |                                       |                                |                                  |                                    | _                       |   |                       |   |
| 44    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 10    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 46    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| 48    |           |                                       |                                       |                                |                                  |                                    |                         |   |                       |   |
| Note  | es:       | 1)<br>2)<br>3)<br>4)                  |                                       |                                |                                  | 1                                  | <u> </u>                |   | <u>l</u>              | Key: Cement Grout Bentonite Sand            |
| Rem   | arks:     | Stratift times and    Field taphotoio | under co<br>esting valu<br>nization d | ndtions<br>ues rep<br>letector | s stated.<br>resent t<br>r (Minn | Fluctuation otal volatilie Ray, Mo | ons o<br>e org<br>del 2 | daries between soil types and the transition may be gradual. Was f groundwater may occur due to factors other than those present anic vapors (referenced to an isobutylene standard) measured in 000) equipped with a 10.6 Ev lamp. ite or "GS" for a discrete grab sample. | at the time measurer  | ve been completed at nents were made.       |

| N     |               | Sover                                  | reign (        | Cons      | ulting                       | Inc.                        |             | Boring/Well ID   |             |              | D     | rilling | Metho       | d Details                  |             |
|-------|---------------|--|----------------|-----------|------------------------------|-----------------------------|-------------|--|-------------|--------------|-------|---------|-------------|----------------------------|-------------|
|       |               |  | Science        | e. Servic | e. Solutio                   | ons                         |             | SHM-13-08  |             | Bit          |       | Casing  | 5           | Soil Sampler               | Rock Core   |
|       |               |  |                |           | on.com                       | 1                           |             | Sheet 1 of 4   | Type:       | Sonic        |       | Steel   |             | Sonic                      | Sonic       |
|       | ent:          |  | US AC          |           |                              |                             |             | Drilling Co.: Glacier Drilling   | Size:       | 6"           |       | 6"      |             | 4'                         | 4"          |
|       | ject:         |  | Fort De        |           | SHL                          |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic   | SPT:        | Hammer-      |       | NA .    |             | all - NA                   |             |
|       | gect reaction | Number:                                | Former         |           | )evens                       |                             |             | Drill Method: Roto-sonic Foreman: Mark Schock  | Wel         | l Type:      |       | Overbu  | _           | ell Details Diameter:      | 2"          |
| Loc   | ation         |  | Sheple         |           |                              |                             |             | SCI Inspector: PJV   |             | l Head:      |       | Flush m |             | Casing:                    | PVC         |
|       |               |  | Sample         |           |                              |                             |             | Start Date: 5/29/2013  | Lat         | itude:       |       |         |             | Surface Elev:              |             |
|       |               | •                                      | _              | F.        | -1                           |                             |             | Completion Date: 5/29/2013   |             | gitude:      |       |         |             | Casing Elev:               |             |
|       | <b>a</b>      | i).                                    | (Ft.           | - Blow/6  | ring<br>isec/                | sting<br>nv)                | able        | •  |             |              |       |         |             | Ü                          |             |
| гÞ    | ple ]         | /Rec                                   | rval           | . B       | k col                        | I Te                        | Water Table |  | Str         | atum         | se    | Test    | Bori        | ng/ Monitor                | ing Well    |
| Depth | Sample ID     | Pen./Rec. (in.)                        | Interval (Ft.) | SPT       | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv) | Wat         | Sample Description   | Chan        | ge (ft.)     | Notes |         |             | Construction               | _           |
|       | S-1           | VAC                                    | 0-10           | NA        | NA                           | NA                          |             | VAC clear to 10' due to proximity to utilities.  |             |              | 1     |         |             |                            |             |
|       |               |  |                |           |                              |                             |             | Road fill materials for majority of length, old road way at  |             |              |       |         |             | Cement 0 - 1'              |             |
| 2     |               |  |                |           |                              |                             |             | approx 5'.   |             |              |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             | Dark brown (10YR 3/3), dry, fine to medium SAND, some  |             |              |       |         |             | •                          |             |
|       |               |  |                |           |                              |                             |             | coarse sand, little sub-rounded fine gravel, little sub-rounded coarse gravel  |             |              |       |         |             | 1                          |             |
| 4     |               |  |                |           |                              |                             |             | g  |             |              |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 1                          |             |
| 6     |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
|       |               |  |                |           |                              |                             |             |  |             | ND &<br>AVEL |       |         |             |                            |             |
|       |               |  |                |           |                              |                             |             |  | Orc.        | TTTL         |       |         |             | 1                          |             |
| 8     |               |  |                |           |                              |                             |             |  |             |              |       |         |             | •                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 2" Schedule 40             | PVC Riser   |
| 10    | S-2           | 120/60                                 | 10-20          | NA        | NA                           | NA                          |             | 0-12" - Dark brown (10YR 3/3), dry, medium to coarse SAND  |             |              |       |         |             | 0' - 55'                   |             |
|       | 52            | 120/00                                 | 10 20          | 1171      | 1171                         | 1171                        |             | and sub-rounded fine GRAVEL, some sub-rounded coarse   |             |              |       |         |             |                            |             |
| 10    |               |  |                |           |                              |                             |             | gravel, little fine sand   |             |              |       |         |             | Drilling Cuttin            | gs 1' - 50' |
| 12    |               |  |                |           |                              |                             |             |  | SA          | AND          |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
| 14    |               |  |                |           |                              |                             |             | 12"-60" - Light olive brown (2.5Y 5/3), damp, fine to medium SAND, some coarse sand, little sub-rounded fine gravel      |             |              |       |         |             | 1                          |             |
| 17    |               |  |                |           |                              |                             |             | 571(D), some coarse said, little sub-rounded line graver   |             |              |       |         |             |                            |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
| 16    |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
| 18    |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 2" Schedule 40<br>0' - 55' | PVC Riser   |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             | 0 - 33                     |             |
| 20    | 0.2           | 100/100                                | 20.20          | 3         |                              |                             |             | 0  | _           | AND          |       |         |             | <b>1</b>                   | 11 501      |
|       | S-3           | 120/120                                | 20-30          | NA        | NA                           | NA                          |             | Olive brown (2.5Y 4/3), moist to wet, fine to medium SAND, little coarse sand, trace sub-rounded fine gravel             | SA          | AND          |       |         |             | Drilling Cuttin            | gs 1' - 50' |
|       |               |  |                |           |                              |                             |             | ,  |             |              |       |         |             | 1                          |             |
| 22    |               |  |                |           |                              |                             | ▼           |  |             |              |       |         |             | 1                          |             |
|       |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
| 24    |               |  |                |           |                              |                             |             |  |             |              |       |         |             |                            |             |
| 24    |               |  |                |           |                              |                             |             |  |             |              |       | 1       |             | 1                          |             |
|       |               | <u> </u>                               | <u> </u>       | L         | <u>L</u>                     | <u> </u>                    |             | GP-13-08-025 = 1.7 ppb   |             |              | 2     |         | 1           | 1                          |             |
| Note  | es:           |  |                |           | wed due to<br>ation for o    |                             |             | e collection bag technique used with roto-sonic drilling   | Key:        | Bedrock      | ,     |         |             | nent<br>ll Cuttings/Nativ  | e Soils     |
|       |               | -                                      |                |           |                              |                             |             | naking distinction between natural and mechanical breaks   | St          | teel Casing  | Ľ     |         | •           | ntonite                    |             |
|       |               |  | _              |           | n of sticks                  |                             |             | 11. 15/00/12   | _           | Grout        | Ð     |         | San         |                            |             |
|       |               | <ul><li>4) Bedroo</li><li>5)</li></ul> | ck hole gr     | outed on  | 5/29/13.                     | PVC well                    | ınst        | lled 5/29/13.  | Op          | en bedrock   | İ     | -       | Scr<br>Rise |                            |             |
| Rem   | arks:         |  | ication lin    | es repres | ent appro                    | ximate bo                   | unda        | ries between soil types and the transition may be gradual. Water   | r level rea | dings were   | con   | npleted | _           | •                          |             |
|       |               |  |                |           |                              |                             |             | roundwater may occur due to factors other than those present a   |             |              |       |         |             | h                          |             |
|       |               |  | _              | -         |                              |                             | -           | c vapors (referenced to an isobutylene standard) measured in the v lamp and set to a reference factor of 0.53 (benzene). | e neauspa   | ce or a seal | icu S | on sam  | pie Will    | 11                         |             |
|       |               |  | -              |           |                              |                             |             | NR=No Recovery bgs=below ground surface ags=above g  | round surf  | face         |       |         |             |                            |             |

| 7     |             | Sove            | reign          | Cons          | ulting                        | Inc.                        |             | Boring/Well ID   |                          | Ι          | Prilling          | Method Details                     |             |
|-------|-------------|-----------------|----------------|---------------|-------------------------------|-----------------------------|-------------|--|--------------------------|------------|-------------------|------------------------------------|-------------|
|       |             |                 | Science        | e. Servic     | e. Solutio                    | ons                         |             | SHM-13-08  | Bit                      |            | Casing            | Soil Sampler                       | Rock Core   |
|       | 3313        |                 | <u>ww</u> \    | N.SOVC        | on.com                        | <u>1</u>                    |             | Sheet 2 of 4   | Type: Sonic              |            | Steel             | Sonic                              | Sonic       |
|       | ent:        |                 | US AC          |               |                               |                             |             | Drilling Co.: Glacier Drilling   | Size: 6"                 |            | 6"                | 4'                                 | 4"          |
|       | ject:       |                 | Fort De        |               | SHL                           |                             |             | Drill Rig: Geoprobe 8140 LS  | SPT: Hamme               |            | NA                | Fall - NA                          |             |
|       | ject Nation | lumber:         | Former         |               | lovone                        |                             |             | Drill Method: Roto-sonic Foreman: Mark Schock  | Wall Trans.              | N          |                   | ring Well Details  arden Diameter: | 2"          |
| LUC   | auon        | •               | Sheple         |               |                               |                             |             | SCI Inspector: PJV   | Well Type:<br>Well Head: |            | Overbu<br>Flush n |                                    | PVC         |
|       |             |                 | Sample         |               |                               |                             |             | Start Date: 5/29/2013  | Latitude:                |            | 1 10311 11        | Surface Elev:                      | 1,40        |
|       |             |                 | - Junipre      | -             |                               |                             |             | Completion Date: 5/29/2013   | Longitude:               |            |                   | Surface Elev:                      |             |
|       | 0           | Ĩ.              | Ft.)           | .9/м          | ing<br>sec/1                  | ting<br>rv)                 | ple         | Completion Date. 3/27/2013   | Longitude.               |            |                   | Casing Liev.                       |             |
| ,     | le II       | Rec.            | val (          | ·Blo          | CO.                           | Tesi                        | r Ta        |  | Stratum                  | S          | Toct              | Boring/ Monitori                   | na Wall     |
| Depth | Sample ID   | Pen./Rec. (in.) | Interval (Ft.) | SPT - Blow/6' | Rock coring<br>time minsec/1' | Field Testing<br>PID (ppmv) | Water Table | Sample Description   | Change (ft.)             | Notes      | Test              | Construction                       | _           |
| I     | <b>9</b> 2  |                 |                | <u> </u>      |                               |                             | ŕ           | Sample Description   | Change (it.)             |            |                   | N                                  | ш           |
| 26    |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   | <i>N</i>                           |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
| 28    |             |                 |                |               |                               |                             |             |  |                          |            |                   | 2" Schedule 40<br>0' - 55'         | PVC Riser   |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
| 30    |             |                 |                |               |                               |                             |             |  | SAND                     |            |                   | Drilling Cutting                   | re 1' - 50' |
| 30    | S-4         | 120/120         | 30-40          | NA            | NA                            | NA                          |             | Olive brown (2.5Y 4/3), wet to sat, fine to medium SAND,   |                          |            |                   | Drining Cutting                    | ;51 = 50    |
|       |             |                 |                |               |                               |                             |             | little coarse sand, trace sub-rounded fine gravel  |                          |            |                   |                                    |             |
| 32    |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
| 34    |             |                 |                |               |                               |                             |             |  |                          |            |                   | $\mathcal{N}$                      |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             | GP-13-08-035 = 1.5 ppb   |                          | 2          |                   | <i>N</i>                           |             |
| 36    |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
| 20    |             |                 |                |               |                               |                             |             |  |                          |            |                   | <i>[</i> 3]                        |             |
| 38    |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  | SAND                     |            |                   |                                    |             |
| 40    |             |                 |                |               |                               |                             |             |  |                          |            |                   | 2" Schedule 40<br>0' - 55'         | PVC Riser   |
|       | S-5         | 120/102         | 40-50          | NA            | NA                            | NA                          |             | Olive brown (2.5Y 4/3), sat, fine to medium SAND, little   |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             | coarse sand, trace sub-rounded fine gravel   |                          |            |                   | Drilling Cutting                   | re 1' - 50' |
| 42    |             |                 |                |               |                               |                             |             |  |                          |            |                   | N Drinning Culture                 | ,51 50      |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   | <i>N</i>                           |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
| 44    |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   | $\mathcal{O}$                      |             |
|       |             |                 |                |               |                               |                             |             | GP-13-08-045 = 1.9  ppb  |                          | 2          |                   |                                    |             |
| 46    |             |                 |                |               |                               |                             |             |  | SAND                     |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   | //                                 |             |
| 48    |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   | $\mathcal{O}$                      |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
|       |             |                 |                |               |                               |                             |             |  |                          |            |                   |                                    |             |
| Note  | es:         |                 |                |               |                               |                             |             | e collection bag technique used with roto-sonic drilling   | Key:                     | ъ <b>Д</b> |                   | Cement                             | a Soile     |
|       |             |                 |                |               |                               | dissolved .<br>sonic met    |             | making distinction between natural and mechanical breaks   | Bedroo<br>Steel Casir    | ~          | 7 F               | Drill Cuttings/Nativ Bentonite     | 50118       |
|       |             | difficult 1     | esulting in    | n low sur     | n of stick:                   | s (Σ) value                 | es          | -  | Gro                      | ut 🕹       | 8 🛭               | Sand                               |             |
|       |             | 4) Bedro        | ck hole gr     | outed on      | 5/29/13.                      | PVC well                    | inst        | illed 5/29/13.   | Open bedroo              | ck         | į F               | Screen<br>Riser                    |             |
| Rem   | arks:       |                 | ication lin    | es repres     | ent appro                     | ximate bo                   | unda        | ries between soil types and the transition may be gradual. Wat   | er level readings we     | re co      | mpleted           |                                    |             |
|       |             |                 |                |               |                               |                             |             | roundwater may occur due to factors other than those present a   |                          |            |                   |                                    |             |
|       |             |                 | _              | -             |                               |                             | -           | c vapors (referenced to an isobutylene standard) measured in the lamp and set to a reference factor of 0.53 (benzene). | ic neauspace of a se     | aica       | son sam           | іріє witti                         |             |
|       |             | <u>▼</u> = Appi | roximate v     | water tab     | le NA=l                       | Not Applie                  | cable       | NR=No Recovery bgs=below ground surface ags=above  | ground surface           |            |                   |                                    |             |

| T     |                   | Sover                | eign (         | Cons       | ulting                       | Inc.                        |             | Boring/Well ID  |                |                        | D     | rilling Mo                    | ethod Details                     |           |
|-------|-------------------|----------------------|----------------|------------|------------------------------|-----------------------------|-------------|---|----------------|------------------------|-------|-------------------------------|-----------------------------------|-----------|
|       |                   |                      | Science        | . Servic   | e. Solutio                   | ons                         |             | SHM-13-08   |                | Bit                    | (     | Casing                        | Soil Sampler                      | Rock Core |
|       | 1010              |                      |                |            | on.com                       | 1                           |             | Sheet 3 of 4  | Type:          | Sonic                  |       | Steel                         | Sonic                             | Sonic     |
|       | ent:              |                      | US AC          |            |                              |                             |             | Drilling Co.: Glacier Drilling  | Size:          | 6"                     |       | 6"                            | 4'                                | 4"        |
|       | oject:            |                      | Fort De        | vens -     | SHL                          |                             |             | Drill Rig: Geoprobe 8140 LS Drill Method: Roto-sonic  | SPT:           | Hammer-                |       | NA ·                          | Fall - NA                         |           |
|       | oject r<br>cation | Number:              | Former         | Fort D     | evens                        |                             |             | Drill Method: Roto-sonic Foreman: Mark Schock   | Wel            | l Type:                |       | <b>onitoring</b><br>Overburde | well Details  n Diameter:         | 2"        |
| LU    | cation            |                      | Shepley        |            |                              |                             |             | SCI Inspector: PJV  |                | l Head:                |       | Flush mou                     |                                   | PVC       |
|       |                   |                      | Sample         |            |                              |                             |             | Start Date: 5/29/2013   | Lat            | itude:                 |       |                               | _ Surface Elev:                   |           |
|       |                   |                      |                | :          |                              |                             |             | Completion Date: 5/29/2013  |                | gitude:                |       |                               | _ Casing Elev:                    |           |
|       | Q                 | Ą                    | (Ft.)          | 9/wc       | ing<br>sec/                  | iting<br>av)                | able        |   |                | 8                      |       |                               |                                   |           |
| .h    | ple I             | Rec                  | val            | - Blow/6'  | E CO.                        | I Tes<br>(ppr               | er T        |   | Str            | atum                   | es    | Test B                        | oring/ Monitor                    | ing Well  |
| Depth | Sample ID         | Pen./Rec. (in.)      | Interval (Ft.) | SPT        | Rock coring<br>time minsec/1 | Field Testing<br>PID (ppmv) | Water Table | Sample Description  |                | ge (ft.)               | Notes |                               | Constructio                       | _         |
| _     | S-6               | 120/120              | 50-60          | NA         | NA                           | NA                          |             | Sumpre Description  |                | ge (100)               |       | П                             |                                   |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       | $\blacksquare$                | Bentonite 50' -                   | 53'       |
| 52    |                   |                      |                |            |                              |                             |             | Top 5' - Yellowish red (5YR 4/6), sat, fine to medium SAND, little coarse sand, trace sub-rounded fine gravel |                |                        |       | Н                             | #                                 |           |
| -     |                   |                      |                |            |                              |                             |             | mile course saile, trace say founded this grave.  |                |                        |       | H                             | -                                 |           |
|       |                   |                      |                |            |                              |                             |             |   | SA             | AND                    |       |                               | Ħ                                 |           |
| 54    |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               |                                   |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               |                                   |           |
|       |                   |                      |                |            |                              |                             |             | CD 12 00 055 200 mgl  |                |                        | 2     | _                             | 2" Schedule 40<br>0' - 55'        | PVC Riser |
| 56    |                   |                      |                |            |                              |                             |             | GP-13-08-055 = 288  ppb   |                |                        | 2     | . —                           | 0 - 55                            |           |
|       |                   |                      |                |            |                              |                             |             | Bot 5' - Olive gray (5Y 5/2), sat, fine to medium SAND, little  |                |                        |       |                               |                                   |           |
|       |                   |                      |                |            |                              |                             |             | coarse sand, trace sub-rounded fine gravel  |                |                        |       | ·-                            |                                   |           |
| 58    |                   |                      |                |            |                              |                             |             |   |                |                        |       | -                             |                                   |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               |                                   |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               | #2 Morie Sand                     | 53' 65'   |
| 60    |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               | , we work band                    | 33 - 03   |
|       | S-7               | 132/102              | 60-71          | NA         | NA                           | NA                          |             | Olive gray (5Y 5/2), sat, fine to medium SAND, little coarse  |                |                        |       |                               | [44]                              |           |
|       |                   |                      |                |            |                              |                             |             | sand, trace sub-rounded fine gravel, occasional sub-rounded coarse gravel and cobbles at bottom               |                |                        |       |                               |                                   |           |
| 62    |                   |                      |                |            |                              |                             |             | course graver and coopies at bottom   |                |                        |       |                               | -:-                               |           |
|       |                   |                      |                |            |                              |                             |             |   | SA             | AND                    |       |                               |                                   |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       | · —                           | 2" Schedule 40                    | PVC       |
| 64    |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               | Wellscreen - 0.                   |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               | 55' - 65'                         |           |
|       |                   |                      |                |            |                              |                             |             | GP-13-08-065 = 1,080  ppb   |                |                        | 2     | 110                           |                                   |           |
| 66    |                   |                      |                |            |                              |                             |             | , 11  |                |                        |       |                               | N                                 |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               |                                   |           |
|       |                   |                      |                |            |                              |                             |             | Driller noted materials seemed to increase in density in the 68'  |                |                        |       |                               | Drilling Cutting                  | gs/Native |
| 68    |                   |                      |                |            |                              |                             |             | range.  |                |                        |       |                               | Soils and #2 M                    | orie Sand |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       | 11/1                          | 65' - 71'                         |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               | $\Theta$                          |           |
| 70    |                   |                      |                |            |                              |                             |             |   |                |                        |       | 111                           | $\sim$                            |           |
|       |                   |                      |                |            |                              |                             |             |   |                |                        |       |                               |                                   |           |
|       | R-1               | 66/65                | 71-76.5        | NA         | NA                           | NA                          |             | GP-13-08-071 = 20.6 ppb   |                |                        | 2     | ììì                           | <del>lil</del> l                  |           |
| 72    |                   |                      |                |            |                              |                             |             | Bedrock @ 71' Sonic core 71' - 76.5'  | DED            | DOCK                   | 1     | ш                             | I                                 |           |
|       |                   |                      |                |            |                              |                             |             | $\Sigma$ of sticks = 0"<br>RQD = 0%   | DEL            | ROCK                   | 4     |                               | Bentonite 71' -                   | 76.5'     |
|       |                   |                      |                |            |                              |                             |             | Igneous rock, coarse grained granodiorite, dark gray (NO3)  |                |                        |       | Н                             |                                   |           |
| 74    |                   |                      |                |            |                              |                             |             | matrix with white (N9) to very light gray (N8) grains, (Ayer  |                |                        |       | ш                             | <b>甘</b>                          |           |
|       |                   |                      |                |            |                              |                             |             | Granodiorite)   |                |                        |       | ₩                             | H                                 |           |
| Note  | es:               |                      | -              |            |                              |                             | -           | e collection bag technique used with roto-sonic drilling  | Key:           | n :                    |       |                               | Cement                            | a         |
|       |                   | 2) GW pr<br>3) ROD 9 | -              | -          |                              |                             |             | making distinction between natural and mechanical breaks  | Q <sub>1</sub> | Bedrock<br>teel Casing | Ċ     | 7                             | Drill Cuttings/Nativ<br>Bentonite | e Soils   |
|       |                   | difficult r          |                |            |                              |                             |             | maxing distinction octaven natural and international oreaks   | 3              | Grout                  | Ø     | 333                           | Sand                              |           |
|       |                   | 4) Bedroo            | _              |            |                              |                             |             | lled 5/29/13.   | Ope            | en bedrock             |       |                               | Screen                            |           |
| Ran   | narks:            | 5)<br>1) Stratifi    | cation lin     | oc repres  | ent appro                    | vimate bo                   | unde        | ries between soil types and the transition may be gradual. Wate   | er level rec   | dinge wara             | com   | inleted at                    | Riser                             |           |
| NUII  | nai KS:           |                      |                | -          |                              |                             |             | roundwater may occur due to factors other than those present a  |                | -                      |       | -                             | e.                                |           |
|       |                   |                      |                |            |                              |                             |             | c vapors (referenced to an isobutylene standard) measured in the  |                |                        |       |                               |                                   |           |
|       |                   |                      | -              |            |                              |                             |             | v lamp and set to a reference factor of 0.53 (benzene).   |                | c                      |       |                               |                                   |           |
|       |                   | <u>▼</u> = Appr      | oximate v      | vater tabl | e NA=1                       | งot Applic                  | cable       | NR=No Recovery bgs=below ground surface ags=above g   | ground surf    | race                   |       |                               |                                   |           |

| 09   |   | Sovereign Consulting Inc.  |                    |                  |                                  |                             |             | Boring/Well ID   |  |                         | Drilling Method Details |                |                                   |           |  |
|--|---|--|--------------------|------------------|----------------------------------|-----------------------------|-------------|--|--|-------------------------|-------------------------|----------------|-----------------------------------|-----------|--|
| Science. Service. Solutions  |   |  |                    |                  | e. Solutio                       | ns                          |             | SHM-13-08  |  |                         | Bit                     | Casing         | Soil Sampler                      | Rock Core |  |
| www.sovcon.com   |   |  |                    |                  | on.com                           | <u>]</u>                    |             |  | t 4 of 4   | Type:                   | Sonic                   | Steel          | Sonic                             | Sonic     |  |
|  |   |  |                    |                  |                                  |                             |             | Drilling Co.:  | Glacier Drilling<br>Geoprobe 8140 LS               | Size:                   | 6"                      | 6"             | 4'                                | 4"        |  |
| Project: Fort Devens - SHL Project Number: AC001   |   |  |                    |                  |                                  |                             |             | Drill Rig:<br>Drill Method:                              | SPT: Hammer- NA Fall - NA  Monitoring Well Details |                         |                         |                |                                   |           |  |
| Location: Former Fort Devens   |   |  |                    |                  |                                  |                             |             | Foreman:   | Roto-sonic<br>Mark Schock                          | Wel                     | l Type:                 | Overburder     |                                   | 2"        |  |
|  |   |  |                    |                  |                                  |                             |             | SCI Inspector:   | PJV  |                         | l Head:                 | Flush mour     |                                   | PVC       |  |
|  |   | ,  | Sample Information |                  |                                  |                             |             | Start Date:  | 5/29/2013  |                         | titude:                 |                | Surface Elev:                     |           |  |
|  |   |  |                    |                  |                                  |                             | əle         | Completion Date:   | 5/29/2013  |                         | gitude:                 |                | Casing Elev:                      |           |  |
|  | Sample ID   | Pen./Rec. (in.   | Interval (Ft.)     | 9                | Rock coring<br>time<br>minsec/1' | Festi                       | Water Table | r  |  |                         | 6                       |                |                                   |           |  |
| Depth  |   |  |                    | SPT -<br>Blow/6" |                                  | Field Testing<br>PID (ppmv) |             | C1- 1  | ample Description                                  | Stratum<br>Change (ft.) | Test Bori               | oring/ Monitor | ing/ Monitoring Well              |           |  |
| D  | Š   | <u> </u>   |                    | <u> </u>         | <u> </u>                         | Fig                         | >           | Sample   | Description  | Cnan                    | ige (It.)               |                | Constructio                       | n         |  |
| 76   |   |  |                    |                  |                                  |                             |             | DODING   | END @ 76 51  | BED                     | DROCK                   |                | Bentonite 71' -                   | 76.5'     |  |
|  |   |  |                    |                  |                                  |                             |             | BURING   | END @ 76.5'  | 1                       |                         | 1              |                                   |           |  |
| 70   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 78   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 80   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 82   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 84   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| ٠.   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 86   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 00   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 88   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 90   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 92   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 94   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             | 1           |  |  |                         |                         |                |                                   |           |  |
| 96   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| 98   |   |  |                    |                  |                                  |                             | 1           |  |  |                         |                         |                |                                   |           |  |
| 90   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             | l           |  |  |                         |                         |                |                                   |           |  |
|  |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| Vote   | es:   |  |                    |                  |                                  |                             |             | le collection bag technique used                         | d with roto-sonic drilling                         | Key:                    | Rodro al-               |                | Cement                            | a Soile   |  |
|  |   | <ul><li>2) GW profile sampling location for dissolved As</li><li>3) RQD % maybe skewed low due to sonic method</li></ul> |                    |                  |                                  |                             |             | making distinction between natural and mechanical breaks |  | St                      | Bedrock<br>teel Casing  |                | Drill Cuttings/Nativ<br>Bentonite | e 30lis   |  |
|  |   | difficult resulting in low sum of sticks ( $\Sigma$ ) values<br>4) Bedrock hole grouted on 5/29/13. PVC well ins         |                    |                  |                                  |                             |             | ·  |  |                         | Grout                   | 2.             | Sand                              |           |  |
|  |   | <ul><li>4) Bedro</li><li>5)</li></ul>  | ck hole gr         | outed on         | 5/29/13. ]                       | PVC well                    | ınst        | alled 5/29/13.   |  | Ope                     | en bedrock              |                | Screen Riser                      |           |  |
| Remarks: 1) Stratification lines represent approximate boundaries between soil types and the transition may be gradual. Water level readings were completed at   |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
| times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.  2) Field testing values represent total volatile organic vapors (referenced to an isobutylene standard) measured in the headspace of a sealed soil sample with |   |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |
|  | a Ion Science photoionization detector with a 10.6 Ev lamp and set to a reference factor of 0.53 (benzene).  V= Approximate water table. NA=Not Applicable. NR=No Recovery, bgs=below ground surface, ags=above ground surface. |  |                    |                  |                                  |                             |             |  |  |                         |                         |                |                                   |           |  |