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International Specialists in the Environment

Job Number

John Day Vapor. Ind.

GEO Log Book

TDD: 15-05-0004

E & E Job Number 1004530.0004.111.02

Telephone Code Number

Site Name John day Vapor response

City/State Johnday, oregon

TDD 15-05-0004

PAN

SSID

Start / Finish Date 5/28/15 / 6/7/15

Book 1 of 1

E & E Emergency Response Center: (716) 684-8940
E & E Corporate Center: (716) 684-8060
MEDTOX Hotline: (501) 370-8263
E & E Safety Director (Home): (716) 655-1260

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1002: Set up on BH01 Adjacent to Triangle oil
1' off of Asphalt
Initial PID reading — VOC = ∅, LEL = ∅
1026: Begin drilling
1029: Remove 0-4' core 75% rec
0-3' - well graded gravel (GW); gravel: 60%, Sand 20%, Silt 20%; gvl: >4cm - 2mm, R; Sand: F to C, A-SA; Silt: moist grayish brown
3-3.5' - gravel (GW) - gravel: 85%, A, >4cm - 2mm; Sand: 15%, Angular to SA, C-m
PID = ∅
1036: When drilling 4-8' water line struck, Johnday (JD) PUD on site while drilling, apprised of situation, E&E drilling in location cleared by JD PUD
1045: PUD takes water sample to test for chlorine to determine which water line was hit so they knew which one to turn off, will then use vac truck to excavate to repair line
1115: PUD onsite w/ vac truck
1130: Move to next boring location BH02
1136: Begin set up on BH02 on southside of USDA building near handicap parking spot
Initial PID = VOC = ∅, LEL = ∅
~~1132~~ 1144: Remove 0-4' core > 5% recovery
0-3' - Silty Gravel (GM); gvl 50% R-SR, 2mm - 5cm; Silt: DK brown, moist, trace Sand F-m, A-SA
No FID/PID
3-3.2 - cutting shoe = well graded gravel (gw)
gravel: same as above, Sand same as above, no silt
1152: Remove 4-8' - 25% rec
4-5' - gravel (gw) 2mm - >4cm, R-SR; Silt: Trace, Dry, lt. brown, no PID

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1155: Screen bore @ 12' bgs, no PID

1156: Remove 8-12' core - 25% rec, very Easy drilling
7-8' well graded sand (SW) Sand: C-F, Predom F-M, A-SA; gravel: 2mm - 1cm, R, 15%; Silt: brown, moist 5%

* at ~~8'~~ 12' cutting shoe looked saturated, will drill an additional 4' to ~~12'~~ 16' bgs to confirm ground water

1211: ~~8-12'~~ ~~12-16'~~ core = 25% rec
Sand (SW) - Same as above PID = Ø
Bore hole screened, Peak PID = 2360 ppb

1230: Set well screen from ~~8-12'~~ 12-16' bgs
WL = 9.86' bgs
Collect water sample ==> 3 40ml unpreserved
4 40ml preserved
4 1L Ambers

1300: WL = 9.85' bgs
1323: WL = 9.85' bgs
1403: Collect BH02GW

1501: Set up on BH03, North side of USDA building
1507: Begin drilling, will drill to 8' bgs then open core sampler to collect core from 8-12' bgs
1518: Remove 8-12' core - 30% rec
10.5-11.5 - Silty gravel (gm) gravel: 7cm - 2mm, R-SR, Silt: brown, saturated
11.5-12' - Silty Sand (SM) Sand: M-C, A SA, Silt: brown, Saturated, organics present (roots) no PID
* Bore hole screened after pipe removed
Peak PID = 320ppb
1526: Set well screen from 8-12' bgs
WL = 8.41' bgs
1539: WL = 8.47' bgs

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1539: WL = 8.47' bgs

1610: Collect BH03GW

3 40ml unpreserved

4 40ml preserved

6 1L Amber

* Sample collected at ≈ .5 L/min w/ End of tubing set at approx 9' bgs, no water qual. parameters collected, well allowed to purged until water visualy clear

late Entery: Sample BH02GW collected at ≈ .5 L/min w/ End of Sample tube at 9' bgs (same procedure as BH03GW)

* Both BH02 + BH03 Abandonded w/ bentonite grout from TD to ground surface, at BH02 ≈ 1' cement plug placed at ground surface to repair Asphalt parking lot, grout pumped from bottom to ~~top~~ TOP of BH.

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0710: Set up on BH01 ≈ 10' SE of original BH, JD RD cleared borehole w/ VAC truck down to 4' then filled w/ clean crushed gravel

0739: Remove 4-8' core ~75%

Screen cutting shoe, VOC peak at 41000 ppb

4-6.8' Silt (ML) Brown, moist, trace gravel, VOC peaked at 4100

6.8-7.2' gravel w/ silt (GM) VOC peak at 20000 ppb

0747: Remove 8-12'

at borehole VOC = 75000 ppb

cutting shoe = 440 ppm

End of core = 657 ppm (11.8' bgs)

8-12 - Silty gravel (GM) - Same as above

11' bgs - VOC = 40,000 ppm

0804: Remove 12-16' -

BH screened at ~~29500~~ 29500 ppb

Cutting shoe at 175 ppm

0811: 13' VOC = 938 ppm

15' VOC = 39360 ppb

12-15 - Silty sand (SM) Sand: Fine, A-SA, moist, Dk gray

15-16 - Silty gravel; gvl: A-1cm-2mm; silt: as above

0820: Collect BH01SB13

Collected from 13-13.5' bgs, collected after speaking w/ PM

0826: Remove 16-20' core (Refusal at 18' bgs)

BH screened at 64608 ppb

Cutting shoe at 46500 ppb

End of liner at 888 ppm, very strong petrol like odor

VOCs

0830 Collect BH01SB16

Collected from 15.5-16' bgs

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0855: WL = 12.83' bgs slowly rising
0859: 12.40'
0901: 12.28'
0905: 12.13'

0910: Begin pumping at ≈ .5 L/min
noticable sheen on water, water slightly turbid
0940: Collect BH01GW
3 40 mL unpreserved
4 40 mL Preserved
6 1L Ambers
0956: pack geoprobe, will load grout plant to abandon hole
1031: Begin to abandon BH01 w/ bentonite grout from TD to ground surface
1055: BH01 Abandonded, set up on BH04 located at First Choice (1st Choice) Auto body
will drill to 8' w/ close shoe then from 8-12' w/ open shoe
~~6959~~ 1059: Begin drilling
1109: Remove 8-12' core ≈ ~~25% rec~~ 50% rec
BH Screened - voc = 1330 ppm
End of cutting shoe - voc = 64000 ppb
End of core - 100 ppm voc
Silty gravel (gm) - gvl: R, 3cm-2mm; silt: brown, saturated
1118: wellscreen set at 8-12' bgs
Casing stick up = 3.88'
WL = 12.10' toc - 3.88' = 8.22' bgs
1127: Screening borehole
voc = 1200 ppm, LEL = 60.16%
1134: WL = 11.99' toc - 3.88 = 8.11' bgs
1140: Begin pumping at BH04 ≈ .5 L/min
1216: Collect BH04GW
3 40 mL voa unpreserved, 4 40 mL voa Preserved, 6 1L Ambers

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Sample collected at ≈ .5 L/min w/ End of tubing at ≈ 7.5' bgs

1222: Set up to abandon B4104 w/ Bentonite from TD to ground surface

1313: B4104 abandonded, grout pumped from bottom of BH to top.

1354: Set up on B4105 N of skeins near manhole cover across street from library, Down greident of manhole cover, will ~~drill~~ core from 8-12'

1358: Begin drilling

1405: Remove 8-12' core

BH = 5700 ppb vec

Cutting sheet = Ø voc

End of core = Ø voc

8-11' - gravelly silt gravel: Angular, 1cm-7mm; silt: brown moist trace, no sign of water, will push screen to 16'

— Refusal at 15'

1410: no water present, ~~will move over~~

1425: water in screen wl 10.68' bgs

1430: WL = 10.68' bgs

1446: B4105 not producing gw, will recharge, though very slow, Pumps dry as soon as water is pumped to surface, will move 3' East at attempt to collect gw

1533: Gw reached

WL = 9.93' bgs

1538: WL = 9.94' bgs

1548: Screen set from 12-16'

1617: Collect B4105 (gw)

3 40 mL unpreserved 4 40 mL voa preserved 6 1L Amber

Sample collected at ≈ .5 L/min, water slightly turbid

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1630: begin abandoning BH05 w/ bentonite grout pumped from TD to surface

1703: grout pump Pluged, attempt to clear, only 1 boring abandoned, 1 remaining

1746: pump cleared

1815: 2nd boring ~~cleared~~ abandoned, contact Am to see if he wants a 4th boring, he does not, will decon drill pipe

1852: Decon compleat

5/29/15

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0730: Meeting

0830: JF + AJ view additional boring locations

0920: Build Samplers inform ose that will begin drilling in 1/2 hour

0953: set up on BH06, will drill 0-4', core 4-8'

1010: Lance w/ pud indicate we are ok to drill at BH06, begin drilling

1010: Remove 4-8' core - 25% rec
well graded gravel (GW) JUI: 3cm-2mm, R; Snd: C-F, A-SA,
Silt: Damp, Dk brown
x Soil Core advance Easily, no sign of water will advance to 12' bgs

1022: Drill Rod advances Easily, Falling by its self
Remove 8-12' core
Screen BH w/ TVA Fid = 6969 ppm *noticable petrol
PID = 478 ppm like smell
20% rec - lith same as above, saturated, Sand to coarse
no PID/FID in core sample

1036: BH caved no WL

1039: Screen BH - Fid = 7019 ppm

1052: Screen set 8-17' bgs Stick up = 3.85'
WL = 13.75' TOC - 3.85
WL = 9.9' Bgs ≈ 2' water in bore hole

1101: Begin pumping water turbid
tubing set at 10.5' bgs

1130: Collect BH06GW
6 1L Ambers, 740mL VOA (3 pre 4 unpre)

1243: BH06 abandonded w/ bentonite grout from top to bottom

1300: will move to BH08, BH07 located over water line will have to relocate

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1319: Set up on BH08 at [redacted] (b) (6)

1323: Begin drilling, Drill to 8', core 8-12', collect soil if Avaiable

1330: Remove 8-12' core -20% rec

Screen BH Pid = 28.41 ppm

FID = ∅

8-12' gravel (GW) 2mm to >5cm, R; Snd: 20%, C, A

Silt: trace, 5%

Drilling Fairly Easy

[redacted] (b) (6) that canyon creek Flowed through this approx location Prior to dredging

1348: Well Screen Set 8-12' bgs

Stick up = 4.06'

WL = 12.57' toc - 4.06 = 8.51' bgs

1358: Begin purging BH08 End of tubing set 8.5' bgs

1428: Collect BH08GW

6 1L Ambers, 4 Pre voa (40mL), 3 unpreserved 40mL

1436: Begin Abandoning BH08 w/ bentonite grout TD to surface

1455: BH08 Abandonded

1530: Mark additional boring locations For locates

1630: Set up on BH10 at 5th + Brent

1649: Remove 4-8' core 25% rec

FID = 1.14 ppm PID = ∅ ~~in BH~~ in End of liner

No FID/Pid in BH

Well graded gvl (GW) gvl 70% snd 20% Silt 10%; gvl: >5 cm -2mm, snd: C-F Predom C, A; silt brown moist

1655: Remove 8-12' core

FID = 1.15 ppm at borehole

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1659: Remove 8-12' core

BH – FID = .56 ppm

8-11' – lith same as above

11-11.5' – Same as above, saturated

11.5-12' – Sand (SW), F-C, Predom F-m, A, DK Reddish Brown

1716: Set screen 8-12' bgs Stick up = 4.00 feet

WL = 14.37' TOC – 4.00'

WL = 10.37' bgs

1726: Begin pumping @ .5 L/min

tubing set at 10.5' bgs

1748: Collect BH10GW

6 1L ambers 7 VOC 40 mL 3 ~~pre~~ unpre ~~pre~~ 4 pre

1753: Begin ABandoning BH10 TD to surface w/ bentonite grout.

1838: BH10 ABandoned.

5/30/15

not used

5/31/15 Johnday Vap Int 15-05-0004

900: Meeting
0830: Decon
0930: AJ & JF Remark Location on Brent Stret (BH07) to other side of street
1000: Set up on BH09 located at Library N End of Parking Lot
- will Drill to 8' core 8-12' bgs
1018: Begin drilling
Initial PID = ∅
1021: Hammer on geoprobe not working will need to be recharged AJ begins repairs
1050: Resume drilling
Remove 8-12'
at Borehole voc = ~~102.47 ppm~~ - 110 ppm
at Cutting Shoe =
at End of liner = voc = ∅
1105 Remove 8-12' core 50% rec
Pid = Peak of 37000 bpb 10-12' bgs
10-12: Sand Fine grading to coarse, Saturated, SA, Trace to no Silt.
1111: Collect BH09SB12 Collected from 10-12' bgs
3 CH1 1 2oz Direct from core
1117: Place Screen From 8-12' bgs
WL = 14.25 TOC, Stick up = ~~4.7~~ 3.7'
WL = 10.55' Bgs
1129: Screen BH — VOC = 312.34 ppm
LEL = 5%
1132: Begin purging BH09
End of tubing Set at ~~10.75' bgs~~ 11' bgs
1201: Collect BH09GW
6 1L ambers 7 40mL (3 unpreserved, 4 preserved)
Water Clear, no odor

[signature] 6/1/15

5/31/15 John Day Vap Int. 15-05-0004

1205: Begin to Abandon BH09 w/ bentonite grout from TD to surface

1220: Finish Abandoning BH09

1240: Drop off samples at lab truck

1320: Set up on BH11 at Elk Horn parking lot will drill to 8', core 8-12' bgs

1327: Begin drilling

1329: Screen borehole 0-4', no PID } pipe in bore hole

1334: Screen BH 0-8', no PID }

1338: Remove 8-12' core

Screen BH = VOC = Ø LEL = Ø

Cutting Shoe = VOC = Ø LEL = Ø

End of liner = VOC = Ø LEL = Ø

10-12' Sand (SW) C-F (Predom F-med) A-SA DK brown

1348: Collect BH11SB12

3 CM2, 1 202, collected from 10-12' bgs

* Soil core screened w/ PID prior to collection no detection VOC or LEL

1353: Screen SET b/t 8 + 12' bgs

Stick up = 3.9'

WL = 14.62' TOC - 3.9'

WL = 10.72' BGS

1403: Begin purging BH11

End of tubing set at 11.5' bgs

1433: Collect BH11GW

6 1L Amber 7 40 mL VOA (3 unpreserved 4 preserved)

Sample clear, no odor collected at .5 L/min flow rate

1440: Begin to Abandon BH11

1520: Finish Abandoning BH11, bentonite grout from TD to approx 9" bgs, cement 9" bgs to surface

1545: Drop off samples at lab truck

[signature] 6/1/15

5/31/15 John day Nat. Int. 15-05-0004

1600: Decon

1630: Finish decon. Move to lab truck

5/31/15

6/1/15 John Day Vap Inc. 15-05-0004

- Place temp screens in boring by ~~A~~ F infront of A oil office & USDA Building
- Focus on 2 borings by triangle the boring by Mailboxes
- collect Soil Samples IF Soil Available
  6 Prepreserved, 1 non (40 mLVA) 4 Ambers

0700: at command post to discuss days plans

0915: Begin set up BH 12 in Front of Triangle oil ≈ 18' from Fog line. Lance w/ PUD indicated that this location did not need to be pot holed.

0927: Lance w/ PUD asked to Screen water box adjacent to BH12 Location
PID = Ø LEL = Ø

0940: Contact PM to request new PID Readings Steady Climing, Even After Fresh Air cal, no Fluxuation in Readings as Seen before.

0946: New PID Arrives, Initial Screening = Ø VOC, Ø LEL

0947: Begin drilling

0950: Screen BH 0-8' VOC = Ø LEL = Ø
Remove 4-8' core cutting shoe = no PID
End of Liner = no PID
20% rec, no sign of water, will advance additional 4' to 12'

1000: Remove 8-12' core
Screen BH - VOC = Ø LEL = Ø ; Re screen - VOC = 30,000 ppb
Screen cutting shoe - no PID
Screen End of liner = 786 ppm
Screen 10-12' bgs 76,000 ppb to 866 ppm
50% rec well graded gvl w/ silt
gvl R-A 3cm-2mm, Snd F-M trace Coarse, A-SA,
Silt: brown to Dk gray, Saturated
↳ brown at 10' to Dk gray at 12', highest VOC Readings correspond w/ Dk gray material, Strong Petrol like Smell, will collect Soil Sample

6/1/15

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[1010: Collect BH12SB12]

3 CWI + 1 2oz voc, Collected from 11.5-12' bgs

3 CWI + 1 2oz gx

1026: Begin purge at BH12

Screen set from 8-12' bgs, WL not collected prior to beginning purge

End of tubing at 10.5' bgs, noticeable sheen on water purging from bore hole

[1053: Collect BH12(Gw)]

6 40 mL voa preserved, 1 unpreserved

4 1L Ambers

Sample collected at .5 ml/min after water was visually clear

1057: WL = 14.07' TOC stick up = 3.82'

WL = 10.25' bgs

Will leave screen in bore hole over night, will pack bentonite to seal pipe into borehole

1124: Set up on BH13 up graident of triangel oil across street from car wash

Initial screening = ø voc, ø LEL, ~~will drill 0-8', core 8-12'~~

will drill 0-4, core 4-8 + 8-12, boring location cleared w/ vac truck by PID

1132: Begin drilling

1137: ~~Screen~~ Remove 4-8' core, hard drilling last foot from 7-8'

Screen end of liner - voc = ø

Screen liner - voc = ø

BH not screened due to new fill placed by PID caving in

4-8' silty gravel (Gm) gravel: basalt weak (decomposed, Angular

Silt, Dry, brown

no PID

[1144: Collect BH13SB08] collected from 6-8' bgs

3 CWI, 1 2oz VOC, 3 CWI, 1 2oz GX

6/1/15

6/1/15 John Day VAP Int. 15-05-0004

1159: Remove 8-12' core 100% rec
Screen Borehole, no PID
liner stuck Pipe, End of cutting Shoe Dry, no
Sign of water at 12' bgs, will attempt to drive
Screen past 12' bgs in Effort to Find water
1211: Refusal at 12' bgs
Placed well Screen From 8-12' will let set to see if water
enters borehole
1217: Place water level indicator in borehole, no water, Bore hole
Abandonded w/ bentonite chips TD to 2' bgs, natural/crushed
Rock 2' bgs to Surface,
1238: Remove Stuck liner From 8-12' core, Sample beat into
bowl,
→ Collect BH135B12 6 CNI 2 2oz Jar
Dry Silty gravel
1250: Speak w/ Mike B. will contact Lance w/ PUD to see about
moving borehole w/ in Cleared Box
1310: Speak w/ both Lane + Monty w/ PUD, they show
where Should be ok to drill on N Side of cleared box
1320: Inform EPA of Plan
1330-1400: Lunch
1400: Set up on BH14 at Corner of 4th + Brent adjacent
to mail boxes, Approx 10' From River bank
will drill to 8', core 8-12'
1405: Begin drilling
1413: Remove ~~8-4~~ 8-12' core
Screen borehole VOC = 43500 ppb
LEL = Ø
Screen Soil in core VOC = Ø, LEL = Ø
30% rec - Silty gravel - 3cm - 2mm (Predom "pea sized. Silt: brown
Saturated.

6/1/15

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1430: Collect BH14SB12 From 11.5-12' bgs

6 CNI 2 2°2

WL = ~~14.83~~ TOC, 14.65' toc

Stickup = 3.95'

WL = ~~10.88~~ bgs 10.70' Bgs

1446 Screen set From 8-12' bgs

~~1246~~: Begin purging BH14, ~~Bu~~ pumped dry

1450: Pull well Screen, will Drill additional 4'

1502: Remove 12-16' core, no pid

Screen BH no pid

50% rec Sand (SW) C-F, A-SA, Trace gvl ≤1cm-2mm SA

SR, trace silt, Saturated

will not collect soil sample per EPA (Don)

1515: well Screen Set 10-14' bgs

Screen borehole - no pid

1520: WL = 12.14' TOC - Stick up = 1.45'

1521: WL = 12.03' TOC

1322 11.97' TOC = 10.52' bgs

1325 11.88 TOC = 10.43' bgs

1330 11.77 TOC = 10.32' bgs

1335 11.70 TOC = 10.25

1340: Begin pumping BH14, Pumping water bottom of tube at 12' bgs, well ~~Rund~~ Runs dry, move tube to 14' bgs pumping water

1555: well dry, will pull screen + Push to 16' bgs

1602: Begin pumping Bottom of tube at 16' bgs

1626: Collect BH14 GW

Collected at .5 L/min 4 1L Ambers, 7 40mm voa

will leave Screen in borehole w/ grout seal

1639: mobe back to BH13 to try another location

6/1/15

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1648: Set up on BH13 to attemp to reach tw 2nd time
Set up approx. 12' North of original boring location on location cleared / oked by both lance + Monty with PUD.

Will not collect soil per Don w/EPA Eet, will push screen to 16' (attempt to)

1706: Screen pushed to ~~16'~~ Approx 14' bgs, Refusal at 14' bgs inserted Rods to push screen out of casing, no water on rods, will allow to set to see if any water enters borehole

1721: inspect Rods Dry, no water, screen pulled from hole + Filled w/ bentonite powder

~~Hole~~ 1728: Finished at BH13, will Decon Rod / Pipe + build samplers for tomorrow

1819: Compleat Decon, mobe to command post to clean geoprobe

Bore holes Remaining
- In Front of USDA building
- Upgraident of BH05
- BH07
- (b) (6) [redacted]

} - All cleared

2nd + Alley (by Church)
1239: WL = 12.56' TOC = 8.76' Bgs
Stick up = 3.8

6/1/15

Not used

6/2/15 John Deere Vap Int. 15-05-0004

0700: Arrive at command Post

0745: Arrive at BH15 East side (Front side) of USDA Building

Will Drill 0-4', Core 4-8, 8-12' bgs

0805: begin drilling

0814: Remove 4-8' core 20% rec gravel

No soil to collect, No soil sample will be collected

0826: Remove 8-12' core

Screen Borehole VOC = 958 ppb

Cutting Shoe = ∅

End of liner = 120 ppb

Screen liner = ∅

25% rec gravel ~~w/ silt~~ 10 - 11.5 SW

~~10%~~ 75% silty gravel 11.5 - 12'

0842: Collect BH15SB12 From 11.5-12' bgs

6 VOA 2 2oz Jar

0854: Set well screen From 8-12' bgs

Stickup = 3.95'

WL = 13.53' TOC = 9.88' bgs, End of tubing Set at 11' bgs

0856: begin purging at BH15

0924: Collect BH15GW

Collected at .5 L/min, 4 1L Ambers, 6 VOA Pre, 1 VOA non-Pre

0930: X well screen left in borehole w/ bentonite packed around

Pipe & Asphalt For seal

1013: Setup on BH16 Adjacent to River North of BH14 on

Brent Street b/t 4th & 5th

1021: Begin Drilling

Easy drilling

1023: Remove 4-8' core 25% rec

No PID at bore hole

No PID at End of Liner

No PID in Soil

well graded gravel (GW) 90% R-SR >4cm - 2mm, silt Brown, trace

6/2/15

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Sand - Coarse, A-SR

- Possably Fill behind Rip Rap along Canyon Creek

1031: Remove 8-12' core

PID = Ø ppm at borehole

1036: Remove 8-12' core 60% rec

No PID in soils

Silty gravel (Gm) gvl: >4cm, R-SR; Silt: moist, brown, trace coarse sand 8-11.5'

11.5-12 - Some Saturated

Saturated Soils at ~~12'~~ 11.5' bgs, will drill/core 4 additional Feet

1054: Remove 12-16' core 50% rec

PID = Ø at borehole

PID = Ø at End of liner

PID = Ø in Core

Silty gravel (Gm) As above, Saturated

Will Set Screen From ~~8'~~ 12-16' bgs, little water

Will Pull Screen & inspect

1124: Install new screen

1132: New screen installed at 17' bgs

WL = 13.73' TOC

2.80' = Stickup

WL = 10.93' Bgs

1140: Begin ~~collect~~ purging at BH16 Bottom of tubing set at 16 bgs

1217: Collect BH16 (Gw)

7 40mm VOA, 4 2L Amber

X Will leave screen in ground w/ bentonite seal b/t bh & life

1230 - 1300 Lunch

1300 - Set up on BH07 ~~relocated~~ b/t 4th & 3rd on Brent

Will drill 0-4' core 4-12' bgs

6/2/15

6/2/15 Johnday vap int 15-05-0004

1315: Remove 8-12' core
BH Screened w/ PID, VOC = Ø
End of cutting shoe VOC = Ø
End of liner, VOC = Ø
10% rec bottom .5' saturated will collect sample
1328 - Collect BH07SB12 From 11.5-12' bgs
6 cnl, 2 2oz Jar

will Drill additional 4' to 16' bgs
1334: Push to 16' bgs, Easy drilling, no hammer needed
1338: Remove 12-16' core 10% rec
BH screened - VOC = Ø
End of cutting shoe - VOC = Ø
End of liner - VOC = Ø
Soil core = Ø
Will not collect soil sample per EPA, begin placing screen
1348: Screen set at 16' bgs 12-16' bgs)
1351: WL = 14.49' TOC
Stickup = 378' WL = 10.62' bgs
1355: Begin pumping
tube set at 12' bgs (on top of screen
Flow rate = .5 L/min
1429: Collect BH07GW
7 40mL (~~3 pre~~ 6 Pre, 1 un Pre, 4 1L ambers
1443: Finished at BH07, will Drop off samples at Command post to drop off samples & pick up grout pump.
1625: Finish Abandoning BH07, move to decon
1729: Finish Decon, Set up on BH17, South of manhole & BH05 by ≈ 4', west of sewer line by ≈ 1.5-2', Across
(b) (6) [redacted]
1736 PM contacts Geoprobe Crew, he would like us to hold off on Drilling BH17, will Mobe back to command post
[signature] 6/2/15

not used

6/3/15 John day reprint 15-05-0004

0730 Arrive at command post

0800: Dump Decon Water & Fill tank w/ Clean water at City wastewater treatment plant

0850: Set up on BH17

Will drill 0-4, Core 4-8, 8-12

0903: Remove 4-8' core 50% rec

Screen BH - 93 ppm

cutting shoe ∅

End of Liner - 58 ~~ppb~~ PPM

6-8 Silt, (ML) brown, moist stiff, trace gvl present

0916: Collect BH17SB08 collected From 7.5-8' bgs

0920: Remove 8-12' core → 50% rec

BH = 17360 ppb

End of liner = ∅ 10-11.5 silty gravel (GM) gvl: Angular

Soils in core - ∅ 3cm-2mm, sand: A, C-M, silt brown

0930: Collect BH17SB12 moist

Collected From ~~10-10.5' bgs~~ 10-11' bgs

11.5-11.8 - Silt (ML) moist soft brown

11.8-12' - Sand (SW) - C-M, A-SA, Silt Same as above

0939: Remove 12-16' core 75% Recovery

BH = 20000 ppb (likely From above)

Soils in core = ∅ pid

Will not collect soil sample

12-13' - Same as above

13-~~16~~15' well graded gravel (GW) 60% gravel; Angular, 3cm-2mm sand; C-M, A-SA; silt: 10%, Saturated, brown

15-16' Silty 30% sand (SM) sand Fine, A, silt, brown, moist trace gravel Angular 2mm-1cm

0955: Place screen From 12-16'

Stickup = 2.30

0959: WL = 16.28' TOC = 13.98' bgs

1003: WL = 16' TOC = 13.7' bgs

1007: WL = 15.75' TOC = 13.45' bgs

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Will Sample

1024: Begin pumping

* Speak w/ Don (ERT) will collect Soil sample at First PID Hit + Second at non pid hit at depth to Bracket contamination

1102: continue to collect sample, pumping very slow

1108: Collect BH17GW

collected at < .5 L/min w/ End of tubing Set at 15.5' bgs

1110: Will leave Screen in the borehole per DEQ

1129: Set up on BH18 North of USDA building on 6th Ave b/t Brent + canyon 18' off of Road in gravel parking lot

1139: Remove 4-8' core 10% rec

well graded gravel (GW)

PID at DH = Ø ppm

PID at End of cutting Shoe = Ø

Soils in liner = Ø

no Soil to collect

1145: ~~collect~~ Remove 8-12' core Ø Recovery

Very Easy drilling, not using hammer, Pushing material out of way of Sample tube

1153: Set Screen to 8-12' bgs

Stick up = 3.98

WL = 13.40 - 3.98 = 9.42' Bgs

WL = 12.89 - = 8.91' bgs

1200: Begin pumping at BH18

1225: Collect BH18GW

Collected at .5 L/min w/ tubing Set at 11' bgs

4 1L Ambers, 7 40mL

1326: Set up on BH19 corner of 6th + Brent ≈ 50' East of intersection

1330: Begin Drilling

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6/3/15 John day vrp. int 15-05-0004

1334: Remove 4-8' core 40% recovery
Screen BH rec = ∅
Cutting Shoe = ∅
End of liner = ∅
Soils in liner = ∅
4-6 - Silty gravel; gvl >52mm R-SR, silt, Brown, moist
6-8 - well graded sand: - C-F predom c-m, A-SA, gvl 1cm-2mm-A-SA, silt: trace Dk brown Damp
very Easy drilling. no hammer needed after 6'
1346: Remove 8-12' core 4% rec
No PID readings in BH, cuttingshoe, or Soils in liner.
8-10 - Same as above
10-12 - same as above w/ ↑ coarse sand + Fine gravel
Will not Collect Soil Samples from this location due to no Pid readings / detections on pid
1352: Set Screen at 8-12' bgs
WL: 13.56' TOC - 4' Stickup
WL = 9.56' Bgs
1400: Begin pumping
1430: Collect BH19 GW Collected at .5 L/min w/ tubing a 11' bgs
1435: Begin Abandoning BH18 + BH19, no Screen will be left in borings
1620 Finished Abandoning BH18 + BH19 Set up on BH20 on 5th b/t Canyon + Brant at alley N side of ~~Brant~~ 5th East Side of alley,
Drill to 4', core 4-12'
1634: Remove 4-8' core
No Pid Detections (voc)
25% rec well graded gravel; gvl >5cm R-SR; Sand: C-F - Predom c-m, A - 20%; Silt: 10% Dry grayish brown
No Soil, will not Collect Soil sample
↳ no Pid.

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1643: Remove 8-12'

Screen Borehole PID VOC = Ø H_2S = 3ppm

Cuttings Sheet VOC = Ø

End of ~~cut~~ liner = H_2S = 15ppm CO 11 ppm

Will not collect soil sample Due to no PID Hits/detections, & not Enough Soil.

Will Set well screen from 8-12' bgs as in BH10 (nearest borehole)

1703: Screen Set

Will Collect BH20GW as MS/MSD For DX, GX, VOC, Finger printing,

1710: Begin pumping

1805: Collect BH20GW MS/MSD

4 Ambers DX

12 40mL VOC / GX (6 Each)

2 ambers Finger Printing

3 40 mL Finger printing

1 un-Preserved 40 mL (Hapsite)

~~1806~~ 1806: Begin Abandoning BH20

1837: Finish Abandoning BH20

1850: Arrive back at CP

KJK 6/4/15

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0700 - arrive at CP

0745 - Begin Decon

0820: - Finish Decon Begin set up on BH21 on Alley b/t Brent & Canyon at 2nd South side of ~~Brent~~ 2nd

0838: Begin drilling

Drill 0-4', core 4-8', 8-12'

0844: Remove 4-8' core

BH Screen = 2640 ppb VOC

1.6 PPM H_2S

End of liner = 2140 ppb VOC

No Recovery, very Easy drilling

0850: Remove 8-12' core

BH Screen = Ø VOC

End of liner = 130 ppb

≈ 6" Recovery - well graded gravel (GW) gvl > 5cm - 2mm, R-SR, Sand

L-F, Predom L, A-SA, Silt trace ≈ 5%, saturated

0904. Set Screen From 8-12' bgs

Stick up = 4.08'

WL = 11.4' TOC WL = 7.32' bgs

0915: Begin pumping at .5 L/min w/ tubing set at 8' bgs

0937: Collect BH21 (GW) Water is clear no odor

4 1L Ambers

9 40 mL VOA (Preserved) 1 40mL VOA non-Preserved

0940: Abandon BH21

1026: Finish Abandoning BH21

1058: Set up on BH22 in Alley South of 4th

1105: Begin drilling

1106: Remove 4-8'

Screen BH = 40100 PPb

Screen End of liner & soils in liner. VOC = Ø

& No H_2S

10% rec well graded gravel (GW), gravel: > 5cm. R-SR. ~~& Angular~~

Sand: L-F (Predom L-M) A-SA, Silt: gray damp

6/4/15

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1113: Remove 8-12'
BH = 83100 ppb - detection likey coming from above,
Soils in core = ∅ will collect 0-4' core after water sample

8-12 - Same as above 25% rec
will Set well Screen at 8-12' bgs
1122 WL = 13.45' Toe = 9.3' bgs
Stickup = 4.15
1128: Begin pumping at .5L/min tube Set at 9' bgs
1154: Collect BH22GW
10 4mL, 4 1 Lamber
Will Core 0-4 to Screen Soils
1203 Remove 0-4'
BH Screen = 68.1 ppm voc
Screen Soils = ∅ ~~ppm~~
50% rec well graded gravel 1-2' Crushed gravel Road base,
~~1-2'~~ 1 Angular, Snd F-C, Silt, Brownish gray moist, 60% gvl 20% snd 20% silt
2-4' Same, Rounded gravel
1239: Finish Abandoning BH22, Drop off Samples at Trailer.
1300: lunch
1330: Set up on BH23 in alley adjacent to Library
1338: Screen Borehole 0-4'
VOC = 41200 ppb
1345: Screen Borehole 4-8' bgs
VOC = 35700 ppb
H_2S = 2.7 ppm
LEL = 3% (possible Fauls Positive)
Screen Soils in core voc = ∅
20% recovery. well graded gravel - Same as BH22
1356: Remove 8-12' core
Screen BH voc = 9180 ~~ppm~~ ppb
End of liner = ∅ voc
Soils in liner = ∅

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50% recovery

well graded sand (SW) sand - coarse to fine, predom c-med.

m-SR gravel: 2cm-2mm, R-SR, silt trace, brown, moist.

1412: collect BH23SB12 MS/MSD

Collected From 10-12' bgs

9 (N) GX + 12oz

9 (N) VOC + 1 2oz

1420: move off hole to decon. Prior to moving to boring location at Snaffel bit Rest. ~~BH#~~ BH24

1500: Arrive at Snaffel bit (BH24), begin set up

1510: Begin drilling

1515: Remove ~~8~~ 4-8' core

Screen borehole VOC = 2310 ~~ppm~~ ppb

LEL = 4%

Screen soils VOC = Ø

LEL = Ø

Silt w/ gravel, silt (med) moist, brown silt, gravel, trace upto 4cm R-SR

1530 Remove 8-12'

Screen borehole w/ TVA-1000

PID = 30ppm, FID = 4-5ppm

~~will collect soil sample~~

Screen BH w/ multi RAE PID VOC = 110ppb

1540: Collect ~~BH24SB12~~ BH24SB0P

Collected From ~~2-4' bgs~~ 2' bgs

6 (N) 2 2oz Jar

1552: Remove 8-12' core 75% Rec

WX Bedrock w/ silt, moist

DEQ + EPA noted Septic like odor

FID 3-9 ppm (TVA 1000), no detections on multi. RAE

will collect sample

1600: collect BH24SB12 collected from 10-11' bgs

6/4/15

6/4/15

1606 John day vap int 15-05-0004

owner of snaffle bit Informed Don w/ EPA that Former drain field / Septic system was located at N End of building. Cleanout still visiable adjacent to power pole location of leach lines unknown

1617: attempt to advance from 12', not able. Refusal at 12' bgs

1626: no water collected from borehole, will move over ≈ 6' North gravel area and attempt to set a temp well screen in morning. will grout / chip BH24

1640: ~~collect~~ Finish Abandoning BH24

1657: Set well screen at 8-12' bgs in BH23

Stick up = 4.27'

WL = 14.67 = 10.4' bgs

1708: Begin pumping w/ hose at 11' bgs .5 L/min

1728: collect BH23GW

to 40ml, 4 1L Ambers

6/4/15

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0700 at CP, begin sample processing

0925: Arrive at Shaffle bit to place Temp well point ≈ 10' North of BH24, will drive screen point sampler into collect water sample, then place ODEQ PVC screen into borehole and leave in place.

1045: Set screen 12-16' bgs

Bent 2 screens attempting to place screen

WL = 17.25' TOC stickup = 4.10'

WL = 13.15 bgs

Begin pumping, pumping very slow, pumped dry once, will allow to recharge + collect sample, will only collect VOC + Gx aloquants after discussion w/ EPA + ODEQ

1126: Collect BH24(GW)

Collected VOC + Gx only due to low flow / lack of water

1203: Finish Abandoning BH24 well point, no Temp PVC screen left in borehole per ODEQ

Set up on BH25 at high school parking lot

1208: Begin drilling

1213: Remove 4-8' core 15% rec

Screen BH w/ PID - VOC = ∅

H_2S = 3.3 ppm

soils in core - VOC = ∅

4-8 Silty gravel - gvl > 5cm, R, Snd: Fine to coarse, Predom. F, Silt Damp brown 50% gvl 30% snd 20% silt

1219: Remove 8-12' core

Screen BH - VOC = ∅

H_2S = 3.4

Soils in core = ∅ VOC

8-10 - Same as above saturated

10-12 Sand (SW) C-F predom Me-C, A-SA; Silt: 15% brown saturated

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1234: Set Screen From 8-12' bgs

1305: well would not produce water, will push screen to 16' (12'-16' bgs)

1319: well producing water

1339: Collect BH25GW

4 1L Ambers to 40 mL VOC

Will instal PVC Casing For deq

1423: unable to set PVC screen, Don B will speak w/ osc To inform him that we will be leaving EPA Equipment in ground. ✱ will leave Screen & Pipe in the ground.

~~1420~~ 1440: Don w/ EPA informs Geoprobe crew that osc is ok w/ leaving EPA Equipment in borehole, will

1602: Attempt to get geoprobe into back yard of house on alley, (b) (6) [redacted] truck would not fit through gate, tried to back in and go in Front First no success, Boring will not be drilled. (b) (6) [redacted]

(b) (6) [redacted]

1608: [redacted] Drill 0-4, core 4-8, 8-12, will collect soil if Enough recovery

1617: Remove 4-8' core

Screen BH - VOC = ∅, H_2S = 3.0 ppm

End of cutting shoe = ∅ (VOC)

End of liner = ∅ (VOC)

10% Recovery, gravel > 5cm, R-SR, no Fines, Dry

1630 Remove 8-12' core

Screen BH - VOC = ∅, H_2S = 3.0

Screen End of liner - VOC = ∅

Screen Soils in core - VOC = ∅

50% rec well graded gravel w/ silt (GW/GM) gvl 60% > 5cm - 2mm, R, sndi, F-C (Predom M-F), A-SA, silt; Moist, brown

↳ 20% ↳ 20%

1643: Collect BH26SB12 Collected from 10-12' bgs

[signature] 6/5/15

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~~1647~~ 1647: Remove 8-12' core

Screen BH - VOC = Ø, H_2S = 2.3 ppm

End of liner - VOC = Ø

Cutting shoe - VOC = Ø

Soil in liner - VOC = Ø

10% rec - Same as above, saturated.

will set screen 12-16' bgs

stick up = 3.9'

WL = 16.29' TOC = 12.39' Bgs

1811: Collect BH26GW

~~Sp~~ Tube set at 13' bgs <5 L/min Flow Rate due to slow recharge

* will leave screen & pipe in ground

6/5/15

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0854 Set up out BH12 (in Front of BH12)

WL = 9.9' bgs

tubing set at 11.8' bgs w .5 L/min Flow Rate

0917: collect BH12(gw)

Begin Abandoning BH12 w/ bentonite grout From TD to Surface

1000 Finish Abandoning BH12

1118: GPS Boring location BH 25 - 44.40535931 N
- 118.94841682 W

Screen BH25:

TVA-1000 Fid - 0.42 ppm

Pid - 1000 ppm slowly climing.

1128 ~~1130~~ 1132 multi RaE Pid - VOC = Ø

LEL = 4 %

1132 multi RaE Pid - VOC = Ø

LEL = Ø

1138: Screen Man Hole IN OF Sraffle bit MH-26

TVA-1000 Fid = ~~3.36 ppm~~ 4.3 ppm *

Pid = 17.08 ppm

multi RaE Pid - ~~490 ppb VOC~~ 720 ppb VOC

0% LEL

* Fid will detect methane (calibrated to methane)

1254: Set up to grout / Abandon BH23

1314: Finish grouting / Abandoning BH23

GPS BH23 44.40947233 N, 118.95246223 W

BH22 44.40982711 N, 118.95280170 W

BH09 44.40972282 N, 118.95237002 W

BH05 44.40989461 N, 118.95205768 W

BH17 ~~44.0~~ 44.40985859, 118.95205790 W

BH11 44.40920009 118.95045574

BH02 44.40820231, 118.95051538

BH15 44.40857535 118.95036086

BH03 44.40820847, 118.95096521

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BH18 44.40839972, 118.95105162
BH19 44.40826388, 118.95138702
BH10 44.40874826, 118.95228220
BH16 44.40906221, 118.95266952
BH14 44.40991106, 118.95350341
BH07 44.41045281, 118.95374955
BH08 44.41187090, 118.95340221
BH06 44.41002992, 118.95284087
BH26 44.41023142, 118.95270788
BH20 44.40899149, 118.95183852
BH21 44.41342767, 118.95338058

1527: Arrive at BH25 at high school to screen BH w/ TVA-1000, multiRAE Pro

multiRAE Pro - SB 7020 (Re calibrated 0900) } both units Fresh Air
- SB 7057 (Re calibrated 1500) } caled at bore hole

TVA-1000 - 297674 } Both units calibrated 1500 and Fresh Air caled
- A5920 } at borehole

TVA-1000	A5920	297674	multiRAE	SB7020	SB7057 ~~SB7050~~
~~1334~~	FID - 2.2 ppm	Ø ppm	1334 (at opening)	VOC - 330 ppb	1110 ppb
1337:	PID - 2.74 ppm	16.76 ppm		LEL - ~~19%~~ 5%	0% lel
				H_2S - Ø	3.4 ppm
1546	FID Ø	.25 ppm	1542	VOC - Ø	~~756 ppb~~
	PID 0.11 ppm	0.12 ppm		LEL - 4%	Ø
				H_2S - —	3.2 ppm
					820 ppb

1551: Arrive at manhole N. of Sheffel bit

TVA1000	A5920	297674	multiRAE	SB7020	SB7057
1554 FID	0.07 ppm	0.44 ppm	1554	VOC Ø	
PID	Ø	0.03 ppm		LEL Ø	
				H_2S —	
1600 FID	Ø	0.43 ppm		VOC Ø	
PID	Ø	0.03 ppm		LEL Ø	
				H_2S —	

6/6/15

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GPS BH25 - 44.40677092, 118.94866330
BH13 - 44.40777253, 118.94962313
BH01 - 44.40806597, 118.94995773
BH12 - 44.40835180, 118.95029103
1730 BH04 - 44.40871704, 118.95088411
~~1630~~: Decon / Prep for demobe
1800: Finish Decon, Pm informs Geoprobe crew that ODEQ needs to have Temp wells pulled + grouted. will abandon both wells by canyon creek
1900: Finish Abandoning wells by creek, End of day

6/6/15

6/7/15 John day vap int. 15-05-0004

~~0700~~ 0730: Load grout pump to Finish abandoning remaing Temp well points

1100: Finish Temp well Abandonet + Decon.

mobe to camond Poste

End of Log book
6/7/15