

Appendix A

Field Documentation

EVERETT PFAS SI

5/23/22

SIM CREEK NRS, ARLINGTON, WA

OBJECTIVE: PFAS INVESTIGATION, UTILITY LOCATE
MOBILIZATION

WEATHER: 57F, CLOUDY, 5MPH NW

PERSONNEL: MATT MORE, BETH DAVIS,
MATT STEINCAMP, JORDAN PERRY LEMMON
ROBERT WALKOWAIK, HANS HARPER

0800 BETH, MATT M, MATT S, BOB, AND HANS
ARRIVE AT NAVSTA EVERETT PASS - ID
INTRODUCTIONS, GET DBIDS

0840 DRIVE TO NRS SIM CREEK TO MEET
JORDAN AT BG.

0935 ARRIVE, SAFETY BRIEF. TRACE SEWER
LINES

1025 MATT M ARRIVES

1030 BOB, HANS DONE. DEMOB FROM SITE

1045 JACOBS TEAM REGROUPS AT LOUNGE
TO TALK THROUGH PLAN FOR THE WEEK.
CASCADE REPORTED MORE DELAYS WITH
FIG; WILL NOT BE MOBILIZING TOMORROW

1120 DRIVE TO EACH SITE

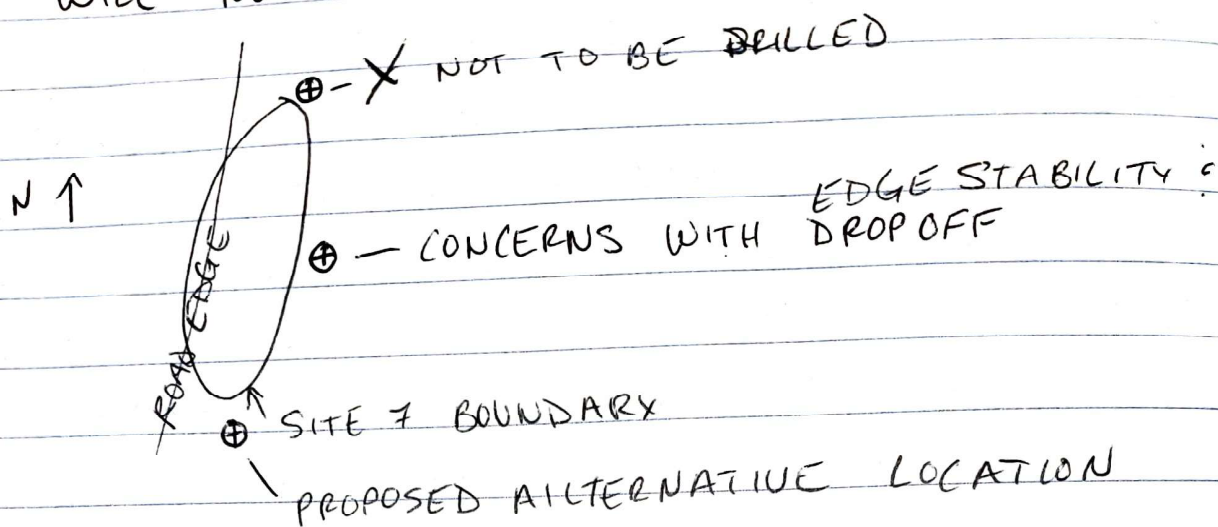
1205 AT SITE 4, WE WANT TO PUT WELLS IN
ROAD DUE TO UTILITIES ON BOTH SHOULDERS.
NEED TO CLEAR WITH BASE - GET TRAFFIC
PLAN FROM JACOBS ENGINEERS.

1230 BREAK FOR LUNCH

1300 CONTINUE CHECKING SITES

* 1215 LATE ENTRY. MATT M STATES EASTERN MOST
WELL AT SITE 5 WILL NOT BE DRILLED

1345 ASSESS DRILLING LOCATIONS AT SITE 7
MATT M STATES NORTHERN-MOST LOCATION
WILL NOT BE DRILLED.



MATT M TO TAKE CONCERNS ABOUT THIS
SITE BACK TO THE TEAM TO RETHINK
APPROACH PRIOR TO DRILLING

1400 RETURN TO LODGE

1545 ALL PERSONNEL OFF SITE

Beth Davis 5/23/22

NAUSTA EVERETT PFAS S1

5/24/22

NRS JIM CREEK, ARLINGTON, WA

OBJECTIVE: BEGIN SURFACE SOIL SAMPLING,
ARCHAEOLOGY SHOVEL TESTING

WEATHER: 50-60F, CLOUDY, SMPH WIND

PERSONNEL: BETH DAVIS, MATT M, JORDAN PEERY-
LEMON, MATT STEINCAMP
JOSEPH LINDELL

0800 ARRIVE ON SITE WITH MATTS.

0810 JORDAN ON SITE

0815 MATT M ON SITE. SAFETY BRIEF

0830 DECON TROWEL & DIGGING EQUIPMENT

0845 COLLECT NRSJC-B6-SS02-000H FROM 0-0.5'

MATT S SIFT SOILS FOR ARCH MONITORING

0900 JORDAN OFF SITE TO PICK UP SUPPLIES &
BOTTLEWARE.

1000 JOSEPH FROM APS ON SITE

1015 CHECK ^{NEW} S6-MW09 LOCATION FOR UTILITIES, LOC. OK.

1020 CHECK PROPOSED LOCATIONS FOR S4-MW14
AND S4-MW15. NO UTILITIES IN ROAD

1035 JOSEPH OFF SITE. BETH & MATT M RETURN
TO B6-MW02 TO CHECK ON MATT S

1104 COLLECT NRSJC-S1-SS06-000H FROM 0-0.5' RGS

1123 NRSJC-S1-SS05-000H

1131 NRSJC-S1-SS07-000H

1200 COLLECT NRSJC-S1-SS20-000H

EXTRA SS PER TASK MANAGER MATT M.

1210 BREAK FOR LUNCH

1351 COLLECT NRSJC-S1-SB20-0203

1352 NRSJC-S1-SB20P-0203

5/24/22

1402 COLLECT NRSJC-~~6~~-FBOI-052422

SAP SAYS 1 FB PER INVESTIGATION AREA
PER WEEK. PER MATT M., INTERPRET
INVESTIGATION AREA TO BE JIM CREEK/
EVERETT / PACIFIC BEACH.

1448 COLLECT NRSJC-S6-SS09-000H-
NRSJC-S6-SS09-000H-MS
NRSJC-S6-SS09-000H-MSD

1528 COLLECT NRSJC-S6-~~SS10~~-000H

1539 COLLECT NRSJC-S6-SS08-000H

1604 ~~1539~~⁸⁰ COLLECT NRSJC-S7-SS13-000H

1611 NRSJC-EB01-052422

1620 DONE SAMPLING FOR THE DAY

1720 ALL PERSONNEL OFF SITE

Beth Davis

5/24/22

NAUSTA EVERETT PFAF S1

5/25/22

NRS JIM CREEK, ARLINGTON, WA

OBJECTIVE: CONTINUE SURFACE SOIL SAMPLING AND
ARCHAEOLOGICAL SHOVEL TESTING

WEATHER: 52-66 F, CLOUDS, LIGHT RAIN, 10 MPH SE

PERSONNEL BETH JAVIS, MATT MOORE,

JORDAN PERRY-LEMON, MATT STEINCAMP

0800 ARRIVE ON SITE

0830 SAFETY BRIEF : DISCUSS PLAN FOR TODAY

0935 ARRIVE AT S5 FOR SAMPLING : SHOVEL TESTS

1007 COLLECT NRSJC-S5-SS16-000H

1048 COLLECT NRSJC-S5-SB21-0203

1100 BACK AT VEHICLES. WILL MOVE MS/MSD

SAMPLES FROM MW17 TO ~~MW18~~RD MW19

BECAUSE MW17 WILL NOT BE DRILLED/INSTALLED

1115 COLLECT NRSJC-S5-SS19-000H

NRSJC-S5-SS19-000H-MS

NRSJC-S5-SS19-000H-MSD

1143 COLLECT NRSJC-S5-SS18-000H

1200 BREAK FOR LUNCH

1300 YORICK WAHIAUS ON SITE. BETH, JORDAN,

MATT M RETURN TO S7 TO COMPLETE

SHOVEL TESTING AT MW18

1340 MOVE TO S6-MW10

1420 YORICK : MATT M JOIN THE CREW AT S6

1510 TEAM MOVES TO S7

1600 YORICK OFF SITE

1625 SHOVEL TEST S7-MW13 CLEAR. SEE

MATT S LOGS FOR ALL SHOVEL TEST
NOTES

5/25/22

1630 TEAM MARKS/RECORDS S7 ALTERNATIVE
LOCATIONS

1645 ALL PERSONNEL OFFSITE

Beth Davis

5/25/22

NAUSTIA EVERETT PFAS SI

5/26/22

NRS JIM CREEK, ARLINGTON, WA

WEATHER SOF, CLOUDY, SMPH

OBJECTIVE: PACK COOLER TO SHIP SAMPLES TO LAB

ORGANIZE EQUIPMENT FOR NEXT WEEK

PERSONNEL: BETH DAVIS, MATT MOORE,

MATT STEINCAMP, JORDAN PEERY-LEMON

0900 ARRIVE ON SITE, SAFETY BRIEF → TRAFFIC

0945 PACK SAMPLE COOLER.

1020 MATT M COORDINATES STORAGE SPACE TO
LEAVE EQUIPMENT. ORGANIZE SUPPLIES: TOOLS

1030 MEET DH ENVIRONMENTAL AT IDW STAGING
AREA. 2 PERSONNEL TO TIGHTEN COVERS
ON ROLL OFF BINS, INCREASE HEIGHT OF
SECONDARY CONTAINMENT FOR TOTES:
PLACE STRAW WATTLE AROUND STORM-
WATER DRAIN.

1130 MATT STEINCAMP OFF SITE.

1145 DH OFF SITE

1215 ALL PERSONNEL OFFSITE.

BETH TO FEDEX TO SHIP COOLER

Beth Davis

5/26/22

NAUSTA EVERETT PFAS SI

NRS Jim Creek, Arlington, WA

Weather - Sunny. Slightly cloudy, mid/high 60's.

Objective - Give Greg tour, have drillers help hand auger to 5 feet & set up any equip they have

PERSONNEL - Jordan Perry-Lemon, Greg Warren.

Cascade - (Taggart Knutson, Anthony Kiss)

11:00 Jordan & Greg on site to look over site.

13:00 Cascades helpers on site to hand auger.

Safety tailgate discussed Pinned Points, slips trips, Bio hazards

1315 started hand ~~auger~~ augering at Building 6.

BG-MW02 hand augered to 4.5 feet before refusal.

1425 moved to Site 1. MW06 hand augered to 5.3 feet

MW07 hit water at 4.4 BGS. MW05 water at 4.7 BGS,

Dug to 5.4.

1515 moved to Site 6, MW09 - 3.5 feet refusal, at native river rocks.

1600 ITEDD BACK UP TO LAYDOWN AREA.

1615 DRILL CREW OFF SITE. G. WARREN & J. LEMON PERRY

CALL M MOORE & GIVE UPDATE. WAIT FOR

JANE WIEGAND TO APPEAR ON SITE

1655 OFF SITE

M
J
5/31/22

5/31/22

NAVSTA EVERETT PFAS SI 6/1/22
JIM CREEK. ALLINGTON, WA

WX - SUNNY/HIGH CLOUDS 60: - 70s.

OBJECTIVE: DRILL MW-01 @ BUILDING 6.

PERSONNEL: G. WARREN, J. PERRY LEMON, J. WIEGAND (J. HOBBS)
TAGGART KNUTSON, ANTHONY KISS, JOE

0745 ON SITE. POWRA - HAND TOOL; CUTS, PINCH POINTS,
DRILLING HAZARDS, SKID STEER HAZARDS.

JANE W. CONDUCTS ARCHEOLOGICAL TRAINING;

WHAT TO LOOK FOR IN CUTTINGS, HOW TO REPORT

G. WARREN; & JPL - BOOST UP NOISE METER,

- MATT CALLED JPL 0946; DISCUSS YORICK ON SITE.

MIDDAY.

- TAGGART TALKS TO CASCADE DRILLER - SHOULD BE
ON SITE JUST AFTER 10:00.

1045 JOE w/ CASCADE ON SITE OFF LOAD.

GEOR. JOE ASKED ABOUT CUTTINGS;
DON'T HAVE IT YET.

- OFFLOAD SAND/HOLE PLUG.

- SETTING UP GEOR AT MW #1, BLDG 6.

12:30 YORICK ON SITE. DISCUSS PROJECT, SETUP.

13:10 DRILL SAFETY MEETING.

1435 Cutting brought ASPHALT w/ COOKIE CUTTER, 3x2" thick

1450 hand clearing to 5 feet

1510 COLLECT SOIL SAMPLE FROM BOTTOM
OFF SUBBASE/TOP OF NATIVE; DREDGED CLAYEY

SAND & GRAVEL. 1 8 OZ JAR (~18"). PUT ON ICE.

NR SJC-B6-SB01-0102

1620 DRILL TO 10', SECURE SITE.

1700 OFF SITE

 6/1/22

NAUSTIA EVERETT PFAS SI

6/2/22

NLS Jim Creek, Arlington, WA

Weather - Sunny 60s - 70s Cloudy Potential thunder storms

Objective - Continue drilling at B6-MW01

Personel - Jpeery-lemon, Cwarren, Twiegand (Jacobs)

Taggart Knuston, Anthony Kiss, Joe Staloch (Cascade

0745 Jacobs Staff on site getting organized.

Cascade Onsite at laydown getting equip ready

0800 Safety meeting discussed Sunscreen, car protection, traffic.

0845 Started drilling at MW01 (Cont. from 10')

1150 hit 50', going to pull 10' of casing to see where water comes in.

1155 (29'-30') took sample 4 MS/MSD

NLS water @ 32' Bgs.

Samples - NLSJC-B6-SB01-2930

NLSJC-B6-SB01-2930-MS

NLSJC-B6-SB01-2930-MSD

1215 Taking break for lunch

1230 SEND TEXT TO TECHNICAL TEAM; SUGGEST WELL SCREEN 30'-40'; DTW = 31.5' bgs & STEADY.

1300 START CONSTRUCTION BLDG 6, MW-01

SCREEN 29-39 (some stuff in hole bottom).

- Pour 2/12 SAND (5 #50 BAGS) TO 27' bgs
- POUR MEDIUM HOLE PLUG (120/4) TO 25' bgs
- FILL REMAINING ANNULUS w/ HOLE PLUG

1400 - WHEN DRILLER PULLED CASING, IT PULLED UP

THE PVC/SCREEN. PULL IT OUT, & RE-DRILL DOWN TO 40' & RE-SET WELL.

1700 GET WELL RE-CONSTRUCTED CLEAN UP

1730 OFF SITE

[Signature] 6/2/22

NAVSTA EVERETT PFAS SI 6/3/22

NRS JIM CREEK, ARLINGTON, WA

WEATHER SSS RAIN →

OBJECTIVE: INSTALL CASE @ MW-01, MOVE TO MW-02.

PERSONNEL: G. WARREN / J. REXYLOMA / J. WIEGAND (JACOBY)
J. STROCH, T. KNUSTON, A. KISS (CASCADE)

0745 ON SITE. RAINING SSS. POWRA - FRIDAY
WORK SAFELY.

0830 START CONSTRUCTING MONUMENT, MOVE

DRILL EQUIPMENT TO BLDG 6; MW-02

0858 CALL MAT DISCUSS PLAN, TRANSITION
TO NEW STAFF, COC, TRIBAL VISIT,

0930 SETTING UP AT MW-02.

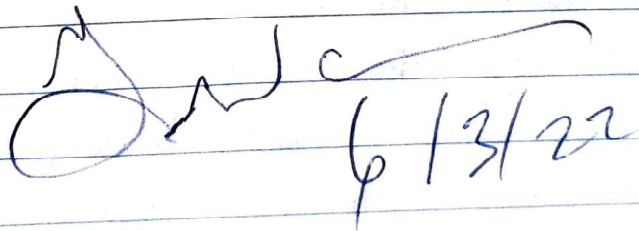
1100 START DRILLING @ MW-02.

1300 COLLECT SOIL SAMPLE ~ WATER TABLE
NRSTC-B6-SB02-3637

1330 HIT TARGET DEPTH OF SOIL BGS.

SECURE SITE. WILL MEASURE SWL
ON MONDAY.

1430 OFF SITE


6/3/22

New Crew:

NAUSTA EVERETT.

6/6/22

NPS JIM CREEK: ARLINGTON, WA

WEATHER: Mostly Cloudy, 50's, Calm Winds

OBJECTIVE: Well completion at BOB MW-02, Decon

PERSONNEL: Ilka Dinkelman, Dennis Ballam, Aaron Vogt, Greg Warren, Jane Wiegand [Jacobs]; Joe Staloch, ~~DBZ~~ Anthony Kiss, Taggart Knuston [Cascade]

Visitor: Yorick Wahaus / NAVFAC

8:30 Meet team at Parking area in front of Building 6 (Fire Station). Dennis Ballam and Yorick Wahause on site for site walk and progress check. Greg Warren to check DTW at BOB MW-02 to confirm Static WLE and determine Well Specifications.

8:50 Message from Aaron Vogt. Successfully Badged. Arriving on site ~45 min.

8:55 Introductions. Team members (new arrivals) & drillers. Discuss objectives. Set well, decon tooling from MW-01 to MW-02. Dump hopper. Set up at BOB-MW-03.

0930 Aaron Vogt on site. Greg Warren leads HSE Briefing. Discuss Site Safety. Traffic and recreational campers. Noise monitoring. Slips-Trips-Falls. Rig Safety.

0950 Mobilize to Laydown-Staging area to pick up materials and equipment for Sampling. Aaron & Ilka sign site documents APP/SSHP and AHA/JHA's.

Jane Wiegand Arrives on-site @ 09:40

June 6, 2022

10:30 Calibrate Multi-Rae # C102715 Fresh Air: (PASS)

Multi-Gas : OXY: 18% LEL: 50%
(PASS) CO: 50 ppm H₂S: 10.2 ppm

Isobutylene: (PASS) VOC: 100.0 ppm

Multi Gas

Isobutylene

Lot # 2-101-788

Lot # 2-111-20

exp. 04/2025

exp. 05/2024

10:50 Return to B6 location at MW-02.

Aaron Vogt to remain behind to oversee
monitor well installation. Dennis Ballam/PM,
Yorick Wahaus, Greg Warren and Ilka
Dinkelman to mobilize to various locations &
tour Site.

13:10 Group went to all proposed MW-locations
at Building 1 (2 by creek and 1 on hill)
Site 6 (3 locations in Coyote Campground)
Site 7 (2-3 locations 1 moved off
slope area third location proposed).
Site 4 (3 locations) and Site 5 (2 locations)
Site 4 & Site 5 need approval / Gate
Site 6 Need key to access chain-link gate.
Return to B6 MW-02. Drillers complete
Setting well and mobilize to B6 MW-03

13:45 Greg Warren departs Site.

14:10 Yorick Wahaus Departs Site.

14:25 Drillers return from decon area.

Complete Set up and prepare for drilling

14:50 Begin cutting asphalt. (6.0" thickness)
Some suspended dust (visible dust)

NRS Jim Creek
Arlington, Wa

June 7, 2022

Personnel On Site: Ilka D. Dinkelman, Aaron Vogt, Jane Wiegand >
Jacobs Staff; Joe Staloch, Anthony Kiss, &
Taggart Knuston > Cascade Drilling

Weather: Sunny, Clear Skies, Calm, 50's-60's

Objective: Begin drilling at B6 MW-03.

0800 Arrive On-Site. Meet with team. Aaron Vogt/SSHO leads daily Safety Meeting. Discuss traffic Safety (look both ways) at location B6 MW-03 also general safe practices. FTL discuss objectives and daily target goals.

0820 Perform Rig Inspection & Warm up equipment. Taggart Knuston to pick up additional flush-mount well housing for completions.

0900 Begin drilling activities at B6 MW-03

0925 Pull core Sample from 4.5-10.0' bgs.

Hand augered on ~~5-7~~ 6-7-22 to 4.5' below asphalt.

0940 Core Sample from 10.0-18.0' bgs. Driller to put tooling back down hole for last 2.0' 18.0-20.0' bgs.

0955 Pull Core Sample from 18.0-20.0' bgs

1015 Repair Spindle Bolts on Drill head.

1135 Complete Repair.

1140 Drillers Break for Lunch

1205 Return to Rig Area.

June 7, 22

- 1210 Resume Drilling at B6 MW-03
Drive Casing (6.0"). Perform Clean Out.
- 1240 Check Noise Monitoring Equipment (Need Batteries!). Missing Part "Windshield."
- 1245 Call Matt Moore - Note: Phone number in Project Instructions for Matt Moore (650) 823-4947 is for Eric Cutler.
- 1250 Contact Matt Moore - Will need new wind guard/wind sock for Casella Noise Monitor for next location (Site 6).
Casella Noise Monitor was ordered from Pine Environmental #R197577. Contact at Pine [Larry (425) 305-8915].
Will ship to Aaron Vogt Hotel.
- 1345 Complete Clean Out
- 1400 Pull core sample. From 20-28' bgs. lost sample. Only recovered 28-30' bgs.
2.0' recovery. Bag melted during core sample collection due to hot core barrel. Cool down with water.
Spoke to drillers about water used. Water brought to site from yard outside of Portland, OR. Concern may be not PFAS tested.
- 1430 Contact Matt Moore RE: Source water used by drillers. Need to use water tested on site.
Use water from hydrant located by laydown area/north of 1DW.

June
~~May~~ 7, 22

1500 Matt Moore to discuss water issue
with Zane from Cascade Drilling
Confirm with driller water from
Clackamas River ; Milwaukie, OR

1510 Receive text from Matt Moore. Confirm
Drillers to dump water into drain
next to roll-off. Rinse tank 3 times
with Site water (confirm PFAS clean)
from hydrant. Use for all decon or
water required at Site.

Drillers pull core from 30-40.0' bgs

1525 Pull core from 40-50' bgs. Need
to pull back on casing to allow
water to come up casing. Grey Clay
at bottom of hole from ~39.0'
Will allow for recharge overnight.

④ 1540 Complete daily activities. Secure Site
④ 1545 Depart Site.

→ 1645 Collected Sample

NRSJC-B6-SB03-2930

Alka W. Dinkelman
6-07-2022

NRS Jim Creek
Arlington, WA

June 8, 2022

Personnel On-Site: Ilka Dinkelmann, Aaron Vogt,
Jane Wiegand > Jacobs Staff; Joe Staloch,
Anthony Kiss, Taggart Knuston > Cascade.

Weather: Partly Cloudy, Calm, 50's-60's

Objective: Set Well at B6 Mw-03 Mobilize
to location B6 Mw-04.

7:50 Arrive on Site. Cascade crew member
Taggart Knuston not on Site. Will arrive
later. Could not be reached in a.m.
by Joe Staloch.

8:10 Aaron Vogt leads HSE Meeting. Discuss
ergonomics, repetitive motion. Discuss
specific smoking areas at B4, B6, B13.
No smoking in wooded / Forested Areas.

0830 Complete HSE. Cascade to perform
Rig Inspection and warm up.

0845 Aaron Vogt check Static Water Level = 31.25'
Begin for Setting Well.

0900 Taggart Knuston on Site. Set well per
talk with Peter Lawson on 5-7-2022
Discussed depth to water ~ 29-30'
and Grey Fat Clay layer ~ 39' bgs
Will set screen above clay - Confining
Layer

Screen 28.5-38.5' Sand to ~26.5'
and chips (3/8" bentonite) to

June 8, 2022

~ 3.0' bgs. Concrete from 3.0' to asphalt.
Will add color (black) to match asphalt.

~~1100~~ 1100 Complete setting well. Prepare to set housing (flush mount).

1130 Move tooling to decon. Use new water.
Mobilize Rig to location B6 MW-04.

1135 Contact Matt Moore RE: Taggart Knuston.
Complaining sore wrist due to hand auger
at MW-03 on 6-7-22. Matt to speak
with Zane of Cascade. Taggart not to Auger.
Aaron Vogt currently with Drillers at
1DW for decon and pump secondary
containment. Rainwater collecting. Will
pump to tote. (labeled Rainwater).
Prepares Waste Management Drawing.
Location of Totes & Roll-offs.

1245 Drillers Break for Lunch

1315 Return to MW-04 for set up. Joe Staloch
will prepare Rig for cutting asphalt.
Anthony & Taggart to complete Decon
and well completion at MW-03.

1350 Cut Asphalt to ~6.0" bgs.

1415 Begin Hand Auger

1445 Collect Sample from below asphalt
and road base at ~2.0-3.0' bgs.
Use decon hand auger to collect sample
from sidewall in first native.

Sample ID: NRSTC-B6-SS04-000H

Note: Collected 2.0-3.0' bgs.

1530 Complete Hand Auger. Prepare for drilling activities at Blc MW-04

1545 Pull core 5.0-10.0' bgs

1610 Pull core 10.0-19.0' bgs. Will go back down-hole to collect 19.0-20.0

1615 Pull core sample 19.0-20.0' bgs.

1730 Pull core sample 20.0-30.0' bgs. Will not cut open last sample (20.0-30.0') due to time. Will leave sealed and cover all core with Visqueen to keep dry overnight. Possible rains expected.

1735 Secure Site. Clean up area

1750 Depart Site for day.

Note: Air Knife to arrive 6-13-2022 per Matt Moore; Cascade.

John D. Dunkelmeier
6-8-2022

NRSJC - (Jim Creek)
Arlington, WA

June 9, 2022

Personnel On-Site: Ilka Dinkelman, Aaron Vogt,
Jane Wiegand > Jacobs; Joe Staloch, Anthony
Kiss, Taggart Knuston > Cascade Drilling

Weather: Rain, 100% Cloudy, 50's. Calm Winds

Objective: Complete drilling activities at B6 MW-04
Set Well. Mobilize to Site 6 MW-10.

0750: Arrive on Site at Lodge Area Parking.

Rain. Wet conditions. Aaron Vogt to be
delayed. Return for PID (charging).

Will have meeting indoors due to rain.

0825 Aaron on Site. Perform HSEQ. Discuss Rain,
Slick conditions. Slow and safe.

0850 Cascade to Perform Rig Inspections: Warm up.

0900 Pick up Field Blank bottles. Also temp
blank for shipping. Confirm SAP for
Field Blank Samples.

0905 Speak with G. Warren RE: FB Sample.
Not specified in previous notes.

0910 Contact Matt Moore RE: FB requirements.
Will confirm with Juan Aearon/GNU
Project Chemist. Will comm. required
Frequency and QC requirements.

1000 Collect Field Blank Sample at Building 6
[NRSJC-B6-FB01-060922]

1030 Pull Core Sample from 30-40' bgs.

1055 Contact Peter Lawson RE: Core and

6-9-22

Samples. Lost Sample from 30-36.0' bgs. Not sure where water is located. Sample recovered 36.0-40.0' and wet. Since not sure of DTW could collect Sample 29.0-30.0. But there is lithologic change (clayey gravel) from ~26-28 and could collect sample at lith change. Per discussion, will collect both samples since capillary fringe (GW Interface) not known.

11:10 Collect Sample

NRSTC-B6-SB04-2728

11:15 Collect Sample

NRSTC-B6-SB04-2930

11:20 Measure Depth to water = 31.20' bgs

11:30 Prepare materials to set well

Screen 30.0-40.0' bgs.

12:50 Complete Setting well

Screen 30.0-40.0' bgs

Sand to ~28.0' bgs

Bentonite to ~3.0' bgs

Mobilize with Joe Staloch to Site 6.0 to assess well locations at Coyote Camp.

13:15 Return to MW-04 at B6

13:20 Return from Lunch. Begin preparations for well completion activities and Mobilization to MW-10.

13:35 Jane Wiegand off site to Ship Samples Prepared CDC. To send with Samples.

6-9-22

- 1330 Receive Confirmation from Matt Moore
RE: FB. Collection One blank per Site
(per location) per week. Request
additional Field Blank sampling materials
from lab. Will ship with coolers.
- 1420 Complete well at B6 MW-04. Add color
to concrete.
- 1430 Sample Shipped Priority ON per
call with Jane Wiegand and Matt Moore.
will arrive at lab before 8:00 am.
Tracking ID # 2741 5528 0043 Fed Ex
- 1510 Complete Concrete Cover at B6 MW-04
and cone off - Allow to dry.
- 1515 Mobilize Rig to Site 6. Aaron to
oversee Decon and set up.
- 1430 Speak with Aaron Vogt. Rig May be at
angle. Discuss other options
- Install Flush Mount
 - Cut into Road (side cut) to flatten
area for Rig.
- Will contact Loren Kaehn and Matt Moore.
- 1450 Dump $\frac{3}{4}$ yard³ from hopper into Roll-off
Continue mobilization to S6 MW-10.
- 1620 Aaron Confirm must keep current location.
Perform background noise at MW-10
Weighted avg $\sim 53-55$ dBA at Creek.
- 1650 Clean up and secure area.
- 1715 Depart Site

[Signature]
6-09-2022

NRS Jim Creek
Arlington, WA

June 10, 2022

Personnel On-Site: Ilka Dinkelman, Aaron Vogt,
Jane Wiegand > Jacobs: Joe Straloch,
Anthony Kiss, Taggart Knuston > Cascade

Weather: Cloudy - Mostly Cloudy, Calm, 50's-60's

Objective: Begin drilling Site 6 MW-10.

Depart site by 11:30 [DOT requirements]

0800 Meet at Lodge Parking area. Aaron leads HSEQ. Discuss Noise. Per e-mail cannot cut into hill-side. No flush mount Slick-Muddy conditions from previous Rains. If cannot drill MW-10 safely need to re-locate. Driller will confirm.

0830 Call with field team (Jacobs) and Matt Moore. Address MW-10 Site 6 [Coyote camp] Safety. Will not drill at location if cannot set up on slope.

0850 Mobilize to MW-10 S6 area.

Setup. Unload Materials.

~~0930~~ 0940 Begin Hand Auger

1020 Complete Hand Auger

1030 Balance Rig on Slope. Not approve of current Rig position. Need additional materials to safely place Rig. Discuss with Drillers. Send Aaron for materials.

1040 Aaron to mobilize to acquire more stabilizing materials. Suggest contact

Staff from DPW (Building 13).

1120 Aaron returns with various materials for rig stabilization 4"x4", 6"x6" & 6"x8" to secure/place near jack.

1135 Mast up, Level Rig. Aaron Vogt set up equipment for noise monitoring.

- ensure 50' distance

- Record weighted average up/down slope.

1140 Begin drilling activities at Site 6 (Coyote Campground) MW-10 along access road.

1150 Pull core 5.0-10.0' bgs

1205 Pull sample core 10.0-20.0' bgs

1210 Aaron Vogt recorded multiple noise readings around drilling area. High weighted average recorded = 84.1 dbA. Not exceeded 89 dbA.

Not exceeded Max Peak 92 dbA. Will call Matt Moore to discuss current recorded values. Will continue to monitor. If value exceeds (> 92 dbA) will stop work.

1220 Aaron departs. Jane Wiegand to perform noise monitoring.

1240 Pull Core 20.0-30.0' bgs.

1320 Contact Peter Lawson. To set well from 14.0-24.0' bgs. Measured DTW = 14.95'

1350 Drive casing to 25.0' bgs and perform clean-out

1400 Clean out complete. Will set well on Monday June 13, 2022

14:15 Drillers depart Site

14:30 Jane Wiegand Depart Site

15:10 Contact Matt More. Lock chain gate. Confirm end of day activities and secure Site

1530 Complete transfer of equipment and materials at Staging area.

1535 I. Dinkelman and Aaron Vogt depart Site. To complete setting well next week. Jordan to replace Aaron as SSHO on 6-13-2022.

~~Y. Dinkelman~~
~~6-10-2022~~

NRS - Jim Creek
Arlington, WA

June 13, 2022

Personnel On-Site: Ilka D. Dinkelman, Jordan Peery-Lemon,
Jane Wiegand > Jacobs; Joe Straloch, Anthony
Kiss, Taggart Knuston > Cascade Drilling

Weather: Rain, Cloudy, Wet, Calm Winds, Cool 50's.

Objective: Set well at S6 MW-10 mobilize Rig
and drill at location MW-08 along Jim Creek.

8:30 Meet at Lodge Parking area. Jane Wiegand
to be delayed due to traffic (eta ~9:00 am).

0845 Jordan Peery-Lemon (SSTO) Leads HSEQ
Briefing. Discuss Pinch Points, Heavy Lifting,
Slip Conditions (Muddy), Slip-Trip-Falls.

0900 Complete Brief.

0905 Contact Matt Moore RE: Bollards and
shallow wells (near/along Jim Creek).

0925 Mobilize to Dept. Public Works for access
to Site 6. Chain gate locked. Can dummy
lock until wells complete in area.

0935 Arrive at Coyote Camp. Begin Rig warm
up and inspection.

0945 Measure Static water level. ~17.35' from
top of outer casing. Measure 2.25' stick-up.
DTW = 15.10' bgs.

0950 Tag bottom of borehole ~25.3' bgs.

Set well Screen 14-24' bgs.

#2/12 Sand 12.0' [6-50 lb. bags]

3/8" Bentonite 12.0'-3.0' bgs. [4-50 lb. bags]

+12 Bags Cement & 2 bags sand in Riser

- 1000 Unload materials from vehicle. Tick on
toke was spotted. Killed. Let all team
members know to be aware. Will order
tick gators.
- 1015 Begin setting well.
- 1045 Jordan to call Matt Moore to inquire
about setting Flush Mount at S6 MW-10
location. would install one bollard along
tree-line to locate well.
- 1105 Jordan spoke with Matt Moore. Will
keep original plan set monument with
three Bollards at S6 MW-10.
- 1130 Complete setting well (sand & bentonite)
begin preparations for setting bollards
and monument. Begin preparations for
relocating Rig to S6 MW-08.
- 1310 Drillers break for lunch.
- 1340 Resume activities of well completion
setting bollards. Use rig to drill
3.0' for bollards.
- 1630 Complete setting up at S6 MW-08.
- 1710 Complete bollards and monument (riser)
Clean up and secure site
- 1715 Drillers off site.
- 1720 "Dummy" lock gate [OK with DPW]
- 1725 Depart Site.

John W. Dinkler
6-13-2022

NRS Jim Creek
Arlington, WA

June 14, 2022

Personnel On Site: Ilka Dinkelman, Jordan

Peery Lemon, Jane Wiegand > Jacobs / CHAM.

Joe Staloch, Anthony Kiss, Taggart Knuston > Cascade

Weather: Rain, Cloudy, Calm Winds, 50's. Cool

Objective: Begin drilling activities at MW-08 (S6)
set well.

0750 Arrive on Site at Lodge Parking area. Jordan leads HSEQ. Discuss general Safety, e.g. PPE, pinch points, heavy lifting, Focus on tick. Spotted on equipment on 6-13-22. Ordered Safety materials (gators & repellent). Spot check daily.

0815 Complete daily Safety Briefing. Contact Matt Moore prior to mobilization to Site 6 (no Service) discuss well completion at MW-10 and MW-08. Meet to focus on aesthetics more at MW-09 given location and proximity to campers. Also discuss possible shallow water zone and need for variance. Verbal ok?

0830 Complete call. Meet with team at S6. Prepare for drilling activities. Set up area. Talk to Joe about traffic rated flush mounts for Site 4. Conditions for Site 6 and completion request (e.g. concrete form/Pad) at MW-09 in campground along road.

Also speak with Joe. RE: No liner below rig. Cannot lift sufficiently and vegetation roots are not allowing for placement below rig. Perform extra diligent inspection on hoses and keep eye out for leaks.

Drillers cleared some vegetation around MW-08 to set up rig safely and to have space for materials / tooling.

0905 Begin drilling at MW-08.

0945 Pull core sample. Slow drilling due to Rocks / Boulders down-hole. 5.0'-10.0' bgs.

0950 Speak with driller. Water visible from borehole (ground surface) to ~4.5'-4.75' bgs. was not visible or encountered during air-lift activities. Also discussed variance.

Require minimum 1.0' sand.

1025 Casing push to 15.0' bgs. Clean out after sample collected.

1130 Pull Core from 10.0'-20.0' bgs.

~7.5' recovery due to wet lithology.

Sloughing in borehole.

1150 Complete clean out. Open hole to 15.0' bgs. Measure DTW ~ 6.25' bgs and rising.

1210 Break for lunch. Will contact Matt Moore RE: S6 MW-08 well.

Proposed completion.

Screen 4' 14.0' bgs, Sand to 2.5' bgs

Bentonite chips ($3/8''$ to $1.0'$) Concrete 0.5-1.0 to 4.0" above ground (use form).

12:15 Contact Matt Moore. Confirm well construction.

Discuss some vegetative clearance.

No trees $> 3.0'' \phi$ and $> 13.0'$ height.

Currently mostly shrub and branches removed for safety. @ ~~B6~~ S6 MW-08.

1245 Complete call. Contact Peter Lawson.

Currently not available. Confirm with Matt Moore OK to proceed.

1255 Return to MW-08 location at S6 Coyote Campground.

1300 Measure depth to water $\sim 5.20'$ bgs.

Still rising. Will set well as planned.

Driller thinks 1.5' seal with more

concrete better, so will agree to specs.

that 1.5' of sand, bentonite chips and cement will be used.

1310 Begin setting well at ~~B6~~ S6 MW-08

1355 Confirmed with Matt Moore for sample

collection. During air knife activities borehole was dry. Drilling measured DTW $\sim 4.5'$ initial cone sample 4.5-10.0' bgs.

Top of cone sample wet. Supersaturated.

May also be pulverized rock that is wet.

based on observations during air knifing and shallow water table. Approved to collect/submit sample to lab.

@ NRS JC S6 SB08-0405 Discard 6/15/22

- 1410 Complete addition of Bentonite to ~1.0' bgs.
Allow to hydrate. Will drill holes for
Monuments / Bollards awaiting hydration.
Don't want to set well riser during
"swell." / expansion of bentonite.
- 1420 Walk with Anthony to next location
(S6 MW-09). Determine best location
for staging materials. Ponding occurring
in area. See Staloch to determine
best placement of Rig.
- 1450 Jordan Check DTW S6 MW-10 = 14.40' bgs
Move Rig, equipment and materials
around the S6 MW-09 area.
Set up in preparation of drilling.
Three holes placed for Bollards.
- 1700 Set up progressing will finish well
completion at S6 MW-08 on 6-15
and begin drilling at S6 MW-09.
Secure Site and Clean area.
"Dummy Lock" Chain. Depart Site.
- 1720 Speak with Pete Lawson RE: Shallow
wells. Do not place screen above
4.0' this includes locations where
D.T.W. may be more shallow.
- 1740 Speak with Matt Moore RE: Call
with Pete Lawson as follow-up.
End daily activities.

Alkan O. Oinker
6-14-2022