

# **APPENDIX A**

1931

DISTRICT 26 ADDITION Jay Lutz Section 2 Twp. 23 Range 4 Ewm. Block Tract or Lot 64 20028 S.C. 116 B

PERMIT No. DATE

Fee Owner Cesare Traverso Esq Address of Property Architect Condition of Exterior Interior Foundation Floor Plan: Good Accept. Poor

USE Vacant ROOF CONSTRUCTION Frame Lam Mill Construction Rein. Concrete No. Trusses Wood Steel ROOFING MATERIAL Tar and Gravel Or. Or. FLOOR FINISHES Fir Maple Oak 2' x 6" T&G Lino. 3' x 6" T&G Cement Terrazzo Raceolith Tile Title Lino. Tile Total

TYPE OF CONSTRUCTION Frame Single Double Ordinary Masonry Mill Construction Class A Rein. Con. Stru. Steel and Con. Tile Brick Con. Rein. Con. Good Med. Cheap

REPRODUCTION COST Factor Make Up Factor Plus or Minus Dimensions S. F. Area Factor Cos



FOUNDATION Mud Sills Post and Pier Brick Concrete File

BASEMENT Full Sub-Basement Size Garage No. Cars Floors Plastered Service Rooms

PLUMBING No. Fixtures Toilets Tubs, Leg or Pem. Basins, Ped. Sinks Urinals Showers (Tub) (Stall) Laundry Trays H. W. Tank Fl. Drains Sprink. Sys. No. Hds.

HEATING Stove Pipeless Furnace Gravity H. A. Air Cool. Fan Arrola I-Pipe Steam 2-Pipe St. or Vapor Hot Water Oil Burner Coal Stoker

WIRING Knob & Tube Flex Cable Conduit Power Wiring Range Wiring No. Outlets

ELEVATORS Pass. Freight Auto. Elev. Hyd.

EXTERIOR WALL CONSTR. INTERIOR WALLS GAS STATIONS C. H. GROUND TOTAL EXTERIOR FACING INTERIOR TRIM SERVICE BUILDING TANKS, ETC., LIST DOCKS AND PIERS FLOOR CONSTRUCTION

Date built lists 1931. Fee Owner listed as Cesare Traverso. Heat source not listed.

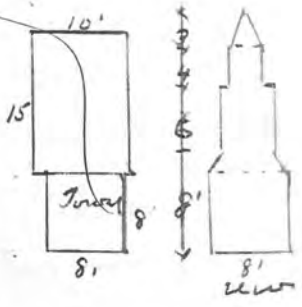


Table with columns: Other Buildings, Construction, Floor, Roof, Stories, Dimensions, S. F. Area, Factor, Value, % Dep., Deprec., Net Value



CO  
CODE No.

3 ADDRESS -- PROPERTY  
4 FEE OWNER  
5 ARCHITECT

CONT. PURCHASER  
CONTRACTOR

ORIG. COST \$  
6 BUILDING  
T.VERN  
1 Story  
3 Rooms  
INTERIOR  
3 Ceiled - Cedar

BASEMENT  
None  
FOUNDATION  
Concrete  
ROOF  
Shingles

STORE FRONTS  
Plain Glass  
Wood Sash  
EXTERIOR  
Stucco on Wire

EXTRA FEATURES None  
CONSTRUCTION Double-Medium  
MISCELLANEOUS  
7 CONDITION: EXTERIOR Fair INTERIOR Fair FOUND. Fair  
8 MAIN SUPPORT COLUMN x FOOTING Concrete SPAN FT.  
9 FIRST FLOOR JOIST 2x6 - 24 INCH CENTERS BRIDGEES  
10 BUILDING Finished  
11 GROSS INCOME \$ EXPENSE \$ NET INCOME \$  
12 DEPRECIATION: COND. 20 % OBSLSE. % ECON. SUIT. % TOTAL %  
YEAR BUILT 1931 REMODELED  
EFFECTIVE AGE 7 YEARS FUTURE LIFE 28 YEARS  
DIMENSIONS 20x36, 12x26 SQUARE FT. AREA CUBIC FT.

FLOORS  
3 Fir  
FIRE PLACE  
1 Rock-Face (Immitation)  
PLUMBING 4-Fixtures;  
1 Toilet, 1 Basin, 1 Sink  
1 H.W. Tank (average)  
TILE WORK  
None  
WIRING  
HEATING Stove  
ELEVATORS None  
CEILING -- HEIGHT 1st. Fl. 10'



IMPROVEMENT VALUE  
MAIN BUILDING \$ 1040  
OTHER BUILDINGS \$ 80  
TOTAL \$ 1120  
ASSESSED VALUE 50% \$ 560  
DATE 1/1/38  
LAND INFORMATION  
1. SIZE x  
2. STREET -- ROAD  
3. SIDEWALK  
4. LANDSCAPING  
5. TREND VALUE \$  
6. USE  
7. DISTRICT

Tax Recored Dated 1938.  
Note on Picture says  
"Burned"  
No date on photo.

SECTION 3

TWP 23

RANGE 4

beg on W ln of old Pac Hwy (extn of E Marginal Way) at  
a pt N 16°47'30" W 1155.44' from S ln of Sec. 4 th S  
85° 16' W to E ln of State rd #1 th Nly alg E ln  
ad Rd to pt of inter with W line of Pac Hwy th Sly alg  
Wly ln to pt of beg. (3-23-4)

2573 3-23-4 64

Baap on Wly mgn of E Marginal Way N 17°  
20' W 1155.44' frm S Sec ln th S 84°43'  
30" W 30.68' to Tprob th N 17°20' W 243.  
58' th N 82°24'36" W 31' th S 18°27' W

267.74' th N 84°43'30" E 188.83' to  
Tprob

TAX LOT No. 64

PARCEL No.

LOT No.

BLOCK No.













(K)

1-22-47

F-20028

3-23-4

T.L. 64

10810 Pac. Hi-Way

Bldg  
#2

1945

	LEADS	ROAD	SCHOOL	WATER	FIRE	TOTAL ACREAGE	TIMBER	IMPROVED	UNIMPROVED
1945									
1946									
1947									
1948									
1949									
1950									
1951									
1952									
1953									
1954									
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2016									
2017									
2018									
2019									
2020									
2021									
2022									
2023									
2024									
2025									

YEAR	LAND	ELIG.	TOTAL	BY	DATE	REASON	FEE OWNER	DATE
1945		2500		JL	2/44	Omitted on 1944 rolls		



1946

ADDITION 1A X 201

Twp. 23 Range 4 Ewm. 64 Block

7L (64)

Legal on back

DATE

1-26-46 10810 Pacific Highway So.

Fee Owner

Condition of Exterior NEW Interior 9 Foundation 9

USE APARTMENTS

No. Stories 1  
 No. Stores 18  
 No. Rooms  
 Basement  
 No. Offices  
 No. Apartments  
 1 rm.  2 rm.  3 rm.  
 4 rm.  5 rm.  6 rm.

ROOF CONSTRUCTION

Frame Lam   
 Mill Construction  
 Rein. Concrete  
 No. Trusses  
 Wood  Steel

FLOOR FINISHES

Fir  Maple  
 Oak  2" x 6" T&G  
 Lino.  3" x 6" T&G  
 Cement  
 Terrazzo  
 Raecolith  
 Tile

Baths  Fl.  Walls  
 Sq. Ft. Floors  
 Sq. Ft. Walls  
 Lin. Ft. Dr. Bds.  
 Sq. Ft. Floors  
 Sq. Ft. Walls  
 Lin. Ft. Dr. Bds.  
 Kit's.  Fl.  Walls

No. Fixtures  
 Toilets  
 Tubs, Leg or Pem.  
 Basins, Ped.  
 Sinks  
 Urinals  
 Showers (Feb) (Stall)  
 Laundry Trays  
 H. W. Tank Fl. Drains   
 Sprink. Sys. No. Hds.

ROOFING MATERIAL

Tar and Gravel  
 Asphalt Shingles

TYPE OF CONSTRUCTION

Frame  
 Single  Double  
 Ordinary Masonry  
 Mill Construction  
 Class A Rein. Con.  
 Stru. Steel and Con.  
 Tile  Brick  
 Con.  Rein. Con.  
 Good  Med.  Cheap

Date Built 1946-47  Finished  Unfinished  Remodeled  
 Effective Age 7 Years Future Life        Years  
 Dep. For Cond.        Dep. For Ob.        Dep. For Es.        Total       

HEATING

Stove  
 Pipeless Furnace  
 Gravity H. A.  
 Air Cond., Fan  
 Arcola  
 I-Pipe Steam  
 2-Pipe St. or Vapor  
 Hot Water  
 Oil Burner  
 Coal Stoker

FOUNDATION

Mud Sills  
 Post and Pier  
 Brick  
 Concrete  
 Pile

BASEMENT

Full  %  
 Sub-Basement  
 Size 10 x 10  
 Garage  No. Cars  
 ONE Floors  
 Plastered  
 Living Rooms  
 Service Rooms



Other Buildings	\$
Total	\$
Assessed Value 50%	\$
Sup. Building A. V.	\$
Total	\$

This 1946/47 records shows an oil burner for heat for the apartments.

EXTERIOR WALL CONSTR.

Single  Double   
 2" x 4" Stud Walls  
 2" x 6" Stud Walls  
 Brick Walls  
 Brick With Pilasters  
 Concrete Walls  
 Con. With Pilasters  
 Tile Walls  
 Rein. Con. Skel.  
 Filler Walls  
 Laminated Walls

INTERIOR WALLS

Stud and Plaster  
 Lam.  Plastered  
 Ply Wood  
 Ceiled  
 Plaster Board 3/8"  
 Painted  
 Stain  Varnish  
 Kalsomine  
 Whitewashed  
 Unfinished

GAS STATIONS

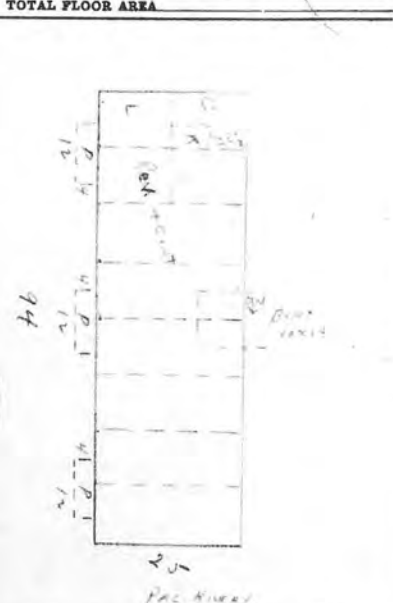
Frame  
 Metal  
 Masonry  
 Plastered or Ceiled  
 Floors

C. H.

S. 15.  
16  
17  
18  
19  
20  
21  
22

GROUND FLOOR AREA 2350

TOTAL FLOOR AREA



EXTERIOR FACING

Siding  Shingles  
 Shakes  Stucco  
 Brick Veneer 3/4 x 9  
 Cedar Kind  
 Stone  Cast S.  
 Terra Cotta  
 Struct. Glass  
 Trim

INTERIOR TRIM

Fir  
 Mah.  Oak  
 Metal  
 wood Doors  
 wood Windows  
 Stained  
 Varnished  
 Painted  
 Unfinished

SERVICE BUILDING

Frame  
 Metal  
 Masonry  
 Plastered or Ceiled  
 Floors

TANKS, ETC., LIST

Hoists: Elect.        Hyd.       

DOCKS AND PIERS

Treated Piles and Timbers  
 Untreated  
 Treated Piles only  
 Average Length  
 Paved

FLOOR CONSTRUCTION

Joint Con. Size 2 x 10  
 O. C. 16" In Bridg.   
 Mill Construction  
 Rein. Con.

Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value
Garage											

4500



1955

TL 64-5  
Legal on back

30130-  
PERMIT NO.  
126118  
DATE  
6/3/55

ADDITION TAX LOT  
Section X 3 Twp. 22 Range 4 Ewm. Block Lot or Tract  
Tax Lot 64  
Address 10650 Pac Hwy SO.

Fee Owner STANDARD OIL Co. Architect  
Condition of Exterior 6 Interior 6 Foundation 6 Floor Plan: Good

USE	ROOF CONSTRUCTION	FLOOR FINISHES	Tile	Plumbing
1 No. Stories	X Frame Lam	Fir	<input type="checkbox"/> Tile	5 No. Fixtures
3 No. Stores	Mill Construction	Oak 2"x6" T&G	<input type="checkbox"/> Lino.	2 Toilets
1 No. Rooms	Rein. Concrete	Lino. 3"x6" T&G	Sq. Ft. Floors	2 Tube, Log or Pem.
1 Basement	No. Trusses	X Conert	Sq. Ft. Walls	2 Basins, Pod.
No. Offices	Wood <input type="checkbox"/> Steel	Terrazzo	Lin. Ft. Dr. Bds.	Sinks
No. Apartments	Roofing Material	Raccolith	Sq. Ft. Floors	1 Urinals
1 rm. <input type="checkbox"/> 2 rm. <input type="checkbox"/> 3 rm. <input type="checkbox"/>	Tar and Gravel	Tile	Sq. Ft. Walls	1 Showers (Tub) (Stall)
4 rm. <input type="checkbox"/> 5 rm. <input type="checkbox"/> 6 rm. <input type="checkbox"/>	Or. Bu.	Or.	Lin. Ft. Dr. Bds.	Laundry Trays
			Kit's <input type="checkbox"/> Fl. <input type="checkbox"/> Walls	H. W. Tank Fl. Drains <input type="checkbox"/>
				Sprink. Sys. No. <input type="checkbox"/> Hds.

TYPE OF CONSTRUCTION  
 Frame  Single  Double  
 Ordinary Masonry   
 Mill Construction  
 Class A Rein. Con.  
 Stru. Steel and Con  
 Tile  Brick  
 Con.  Rein. Con.  
 Good Med. Cheap

FOUNDATION  
 Mud Sills  
 Post and Pier  
 Brick  
 Concrete   
 Pile



REPRODUCTION COST

Year	Assessed Value
1955	100,000

BASEMENT NONE

Full	Sub-Basement	Size	Garage	No. Cars
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	

Plastered  
 Living Rooms  
 Service Rooms

TAN

Material	Quantity	Unit	Value
1 5500			
1 5000			
1 2000			
1 1000			

Record states built in 1955.  
 Photo Date 7-6-1956.

EXTERIOR WALL CONST.	INTERIOR WALLS	C. H.	GROUND FLOOR AREA
Single <input type="checkbox"/> Double <input type="checkbox"/>	Stud and Plaster		848
2" x 4" Stud Walls	Lam. <input type="checkbox"/> Plastered		TOTAL FLOOR AREA
2" x 6" Stud Walls	Plywood		
Brick Walls	Ceiled	12	
Brick with Pilasters	Plaster Board	2	
X Concrete Walls	X Painted CONC-BLK	3	
Con. with Pilasters	Stain <input type="checkbox"/> Varnish	4	
Tile Walls	Kalsomine	5	
Rein. Con. Skel.	Whitewashed	6	
Filler Walls	Unfinished	7	
Laminated Walls		8	
EXTERIOR FACING	INTERIOR TRIM		
Siding <input type="checkbox"/> Shingles	X Fir	10	
Shakes <input type="checkbox"/> Stucco	Mah. <input type="checkbox"/> Oak	11	
Brick Veneer	Metal	12	
X CONC-BLK	X METAL Doors	13	
Stone <input type="checkbox"/> Cast S.	X WOOD Windows	14	
Terra Cotta	Stained	15	
Struct. Glass	Varnished	16	
Trim	Painted	17	
FLOOR CONSTRUCTION	Unfinished	18	
Joint Con. Size		19	
O.C. <input type="checkbox"/> In Bridg. <input type="checkbox"/>		20	
Mill Construction		21	
X Reip. Con.		22	

Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value
Garage NONE											



1941 & 1956

DISTRICT 26 ADDITION Jay Lot 20028 Section 9 Twp. 23 Range 4 Ewm. Block Tract or Lot 64 Sheet 16 A

DATE No date on the sheet, but the photo is dated as 1-10-41. There is a note on the photo that states the pumps and building were torn down.

Fee Owner \_\_\_\_\_ Address of Property Pacific Highway Architect \_\_\_\_\_

Condition of Exterior Good Interior Good Foundation Good Floor Plan: Good Accept: \_\_\_\_\_ Poor \_\_\_\_\_

USE	ROOF CONSTRUCTION	FLOOR FINISHES	Tile	PLUMBING
1 No. Stories	<input checked="" type="checkbox"/> Frame Lam <input type="checkbox"/>	Fir <input type="checkbox"/> Maple	Baths <input type="checkbox"/> Fl. <input type="checkbox"/> Walls	6 No. Fixtures
1 No. Rooms	Mill Construction	Oak <input type="checkbox"/> 2" x 6" T&G	Sq. Ft. Floors	2 Toilets
Basement	Rein. Concrete	Lino. <input type="checkbox"/> 3" x 6" T&G	Sq. Ft. Walls	Tubs, Leg or Pem.
No. Offices	No. Trusses	<input checked="" type="checkbox"/> Cement	Lin. Ft. Dr. Bds.	2 Basins, Ped.
No. Apartments	Wood <input type="checkbox"/> Steel	Terrazzo	Sq. Ft. Floors	1 Sinks DF
1 rm. <input type="checkbox"/> 2 rm. <input type="checkbox"/> 3 rm.	<b>ROOFING MATERIAL</b>	Raeocolith	Sq. Ft. Walls	1 Urinals
4 rm. <input type="checkbox"/> 5 rm. <input type="checkbox"/> 6 rm.	<input checked="" type="checkbox"/> Tar and Gravel	Tile	Lin. Ft. Dr. Bds.	Showers (Tub) (Stall)
	Or. _____	Or. _____	Kits. <input type="checkbox"/> Fl. <input type="checkbox"/> Walls	Laundry Trays

**TYPE OF CONSTRUCTION**

Frame  Single  Double

Ordinary Masonry

Mill Construction

Class A Rein. Con.

Stru. Steel and Con.

Tile  Brick

Con.  Rein. Con.

Good \_\_\_\_\_ Med. \_\_\_\_\_ Cheap \_\_\_\_\_

**REPRODUCTION COST Factor Make Up**

Factor	Plus or Minus	Dimensions	S. F. Area	Factor	Cost
720	Shell	12 x 29	348	69	269
280	Tanks	10 x 13	130		
300	Camp	12 x 18	216		



**HEATING**

Stove

Pipeless Furnace

Gravity H. A.

Air Cond. Fan

Arcola

1-Pipe Steam

2-Pipe St. or Vapor

Hot Water

Oil Burner

Coal Stoker

**WIRING**

Knobs & Tube

Flex Cable

Conduit

Power Wiring

Range Wiring

10 No. Outlets

**ELEVATORS**

Pass.  Freight

Auto.  Elec.

Man.  Hyd.

Man.  Man.

Standard Station, date on photo list 1-10-41.

EXTERIOR WALL CONSTR.	INTERIOR WALLS	GAS STATIONS	C. H.	GROUND FLOOR AREA 478
<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double	Stud and Plaster	<input checked="" type="checkbox"/> Frame	S.B.	
<input checked="" type="checkbox"/> 2" x 4" Stud Walls	Lam. <input type="checkbox"/> Plastered	Metal	11	
2" x 6" Stud Walls	<input checked="" type="checkbox"/> Ply Wood	Masonry	12	
Brick Walls	<input checked="" type="checkbox"/> Ceiled	Plastered or Ceiled	13	
Brick With Pilasters	Plaster Board	Floors	14	
Concrete Walls	Painted	<b>SERVICE BUILDING</b>	15	
Con. With Pilasters	Stain <input type="checkbox"/> Varnish	<input checked="" type="checkbox"/> Frame	16	
Tile Walls	Kalsomine	Metal	17	
Rein. Con. Skel.		Masonry	18	
Fill		Plastered or Ceiled	19	
Laminated Walls		Floors <u>Con</u>	20	
<b>EXTERIOR FACING</b>		<b>TANKS, ETC., LIST</b>	21	
<input checked="" type="checkbox"/> Siding		1 1000 Gal	22	
Shakes <input type="checkbox"/>		2 500		
Brick Veneer		3 3000 Right		
Stone <input type="checkbox"/>		4 1000 Left		
Terra Cotta		5 1000 Right		
Struct. Glass		6 1000 Left		
		7 Hoists: Elect. <input checked="" type="checkbox"/> Hyd.		
		<b>DOCKS AND PIERS</b>		
		Treated Piles and Timbers		
		Untreated		
		Treated Piles only		
		Average Length		
		Paved		
<b>FLOOR CONSTRUCTION</b>				
Joist Con. Size <u>2x6</u>				
O. C. _____ In Bridge				
Mill Construction				
Rein. Con.				
Other Buildings	Construction	Floor	Roof	
Office	Concrete	Concrete	Asph	
Garage				

Writing not clear, but can see 1-1,000 and 2-500 gallon tanks listed. Assume they are USTs as ASTs are not seen in picture. Besides 1 hoist, not sure what the rest of it is?





1961

PETITION FOR TAX EXEMPTION  
ON BUILDINGS  
BURNED, TORN DOWN OR DESTROYED

STATE OF WASHINGTON )  
County of King ) S S

*Checked  
11/25/62  
Simpson  
washed  
a/jk*

Jack + Theo. Traverso being first duly sworn, on oath deposes  
Name of Affiant  
and says:

That he is the owner of certain real estate described, as

323-U - Tx Lot 60 - 10810 Pac. Highway S  
(legal description of property)

that the following building Apartment  
(description of building destroyed)

situated thereon was ~~burned~~, torn down or ~~destroyed~~ on Dec 1961  
that affiant hereby requests that said building be removed from  
the tax rolls.

Subscribed to this 1 day of 24-62 at Seattle, Washington

L.R. Hennings  
Affiant  
*Attorney for Traverso  
Brothers*

Rudy

The apartment building torn down in 1961. Base on the aerial photos, this must have been the the most southern building on the property. The 10810 Pac-Hwy is an old address, same tax parcel.

ADDITION Section 3 Twp 23 Range 4 Evm. Block 645 Lot or Tract \_\_\_\_\_  
 PERMIT NO. 3986 Tax Lot \_\_\_\_\_  
 DATE 1-3-63 Address 10805 East Magnolia Way  
 Fee Owner STANDARD OIL CO Architect \_\_\_\_\_ Contractor \_\_\_\_\_  
 Condition of Exterior A Interior A Foundation 3 Floor Plan: Good Accept. Good

USE SERVICE STAGES	ROOF CONSTRUCTION	FLOOR FINISHES	Tile	Lino.	PLUMBING
No. Stories: 1	Frame Lam. <input type="checkbox"/>	Fir <input type="checkbox"/> Maple <input type="checkbox"/>	Baths: <u>7</u> Fl. <input type="checkbox"/> Walls <input type="checkbox"/>		No. Fixtures: <u>7</u>
No. Stores: <u>2</u>	Mill Construction	Oak <input type="checkbox"/> 2"x8" T&G	Sq. Ft. <u>LAV</u> Floors		Toilets: <u>2</u>
No. Rooms: <u>1</u>	Rein. Concrete	Lino. <input type="checkbox"/> 2"x8" T&G	Sq. Ft. <u>LAV</u> Walls		Tub, Leg or Pem.: <u>2</u>
Basement: <u>1</u>	No. Trusses	Cement	Lin. Ft. _____ Dr. Bds.		Basins, Ped.: <u>1</u>
No. Offices: <u>1</u>	Wood <input type="checkbox"/> Steel <input type="checkbox"/>	Terraaso	Sq. Ft. _____ Floors		Sinks: <u>1</u>
No. Apartments: 1 rm. <input type="checkbox"/> 2 rm. <input type="checkbox"/> 3 rm. <input type="checkbox"/>	ROOFING MATERIAL	Rascolith	Sq. Ft. _____ Walls		Urinals: <u>1</u>
4 rm. <input type="checkbox"/> 5 rm. <input type="checkbox"/> 6 rm. <input type="checkbox"/>	Tar and Gravel	Tile	Lin. Ft. _____ Dr. Bds.		Showers (Tub) (Stall): _____
	Or _____	Or _____	Kit's <input type="checkbox"/> Fl. <input type="checkbox"/> Walls <input type="checkbox"/>		Laundry Trays: _____

TYPE OF CONSTRUCTION  
 Metal  
 Single  Double  
 Ordinary Masonry  
 Mill Construction  
 Class A Rein. Con.  
 Stru. Steel and Con.  
 Tile  Brick  
 Con.  Rein. Con.  
 Good  Med.  Cheap

Date Built: 1965 Rehabilitated 1963 1963 Remodeled  
 Effective Age: \_\_\_\_\_ Years Future Life: \_\_\_\_\_ Years  
 Dep. for Cond.: \_\_\_\_\_ Dep. for Ob.: \_\_\_\_\_ Dep. for Ea.: \_\_\_\_\_ Total: \_\_\_\_\_



FOUNDATION  
 Mud Sills  
 Post and Pier  
 Brick  
 Concrete  
 Pile

BASEMENT  
 Full  %  
 Sub-Basement  
 Size: 157

BASEMENT (continued)  
 Full  %   
 Sub-Basement   
 Size: 157

EXTERIOR WALL CONST.  
 Single  Double  
 2" x 4" Stud Walls  
 2" x 8" Stud Walls  
 Brick Walls  
 Brick with Pilasters  
 Concrete Walls  
 Con. with Pilasters  
 Rein. Con. Skel.  
 Filler Walls  
 Laminated Walls

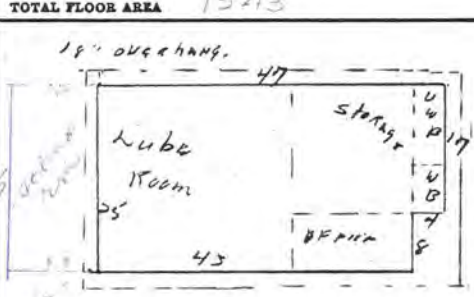
EXTERIOR FACING  
 Siding  Shingles  
 Shakes  Stucco  
 Brick  Concrete  Metal  
 Kind \_\_\_\_\_  
 Stone  Cast S.  
 Terra Cotta  
 Struc. Glass  
 Trim

FLOOR CONSTRUCTION  
 Joint Con. Size: \_\_\_\_\_  
 O.C.  In Bridge   
 Mill Construction  
 Rein. Con.

INTERIOR WALLS  
 Stud and Plaster  
 Lam.  Plastered  
 Plywood  
 Ceiled  
 Plaster Board  
 Painted  
 Stain  Varnish  
 Kalsomine  
 Whitewashed  
 Unfinished  
 metal

INTERIOR TRIM  
 Fir  Oak  
 Mah.  Oak  
 Metal  
 Doors  Windows  
 Stained  
 Varnished  
 Painted  
 Unfinished

GROUND FLOOR AREA: 1143  
 TOTAL FLOOR AREA: 1513



Other Buildings	Construction	Floor	Roof	Stories
Garage				



HEATING  
 Stove  
 Pipeloss Furnace  
 Gravity H. A.  
 Air Cond., Fan H.F.A.  
 Suspended Gas. Hot Water  
 Steam Heat  
 Hot Water  
 Oil Burner

ASSESSOR Value  
857 4650.367  
100 8050 Jan 63  
47 3450 BH 510  
71 17900

Tanks listed under photo.

Pump Island (East)

Pump Island (West)



9064-0

ASSESSOR'S FORM NO 250-2

FOLIO NO 20029

ASSESSOR'S ACCT NO 032304-9064-8  
SERVICE STATION

GRADE	Steel-6wd	USE CODE	62-5	STORY	STORIES	1-12'
YEAR BUILT	1955	CONDITION	AVG	STATISTICS	PERIMETER	178
EFFECTIVE AD	25/35	NO OF UNITS			SQUARE FEET	1600
STORY HGT	ADDITIONS		FLAT ITEMS		BUILDING CALCULATIONS	
BSMT.	SF @		PLUMBING		STORIES	1-1
1 ST	SF @				BASE	39.75
2 ND	SF @				HGT FAC.	
3 RD	SF @				AREA FAC.	
4 TH	SF @				STY FAC.	
5 TH	SF @				ADJ. FAC.	
6 TH	SF @				ADJ. BASE	
7 TH	SF @				BSMT	
8 TH	SF @				FLOOR	
9 TH	SF @				ROOF	
10 TH	SF @				CEIL	
11 TH	SF @				PART	
					HEAT	
					AIR COND	
					LIGHTS	
					SPRINK	
					TOTAL	
					STORIES	
						1600 SF @ 39.75 63600

	AREA OR QUANTITY	UNIT COST	REPLACE COST	FF. AGE	DEPR NET	TOTAL VALUE	FLAT ITEMS
CONC PAVING	42500	1.80	76500	25/35	.21	16006	SUB-TOTAL 63600
B.T. PAVING	20300	.65	13084	"	.21	2748	ADDITIONS 15680
4 LIGHT POLES	4	345	1380	"	.21	290	TOTAL 79280
LIGHT FIXTURES	5	120	600	"	.21	126	COST FACTOR 1.22
U.G TANK 500 GAL	1	675	675	"	.21	142	TOTAL REPLACEMENT COST \$ 96722
" " 2000 GAL	1	1600	1600	"	.21	336	PHYSICAL DEPRECIATION (NET) 25/35 X .45
" " 5000 GAL	1	3150	3150	"	.21	661	TOTAL PHYSICAL VALUE \$ 43525
" " 7000 GAL	1	4200	4200	"	.21	882	GOOD OR SAME GOOD (NET) A.I.S X
TANK PIPING	4	650	2600	"	.21	546	FINAL APPRAISED VALUE \$ 52101
PUMP PIPING	12	400	4800	"	.21	1008	PERCENT COMPLETE (NET) X
TOTAL ACCESSORY BUILDINGS & OTHER IMPROVEMENTS							PARTIAL VALUE \$
AIR + WATER	4	275	1100	"	.21	231	
						TOTAL = 8576	

UST understood to be associated with the 1963 remodeled station.

**INCOME APPROACH**

ACTUAL ECONOMIC

ANNUAL POTENTIAL GROSS \_\_\_\_\_

LESS VAC & CREDIT LOSS \_\_\_\_\_

ANNUAL EFFECTIVE GROSS \_\_\_\_\_

LESS EXPENSES \_\_\_\_\_

ANNUAL NET INCOME \_\_\_\_\_

INT RATE TAX RATE LAND RATE \_\_\_\_\_

LESS LAND INCOME \_\_\_\_\_

LAND VALUE LAND RATE \_\_\_\_\_

NET INCOME TO BUILDING \_\_\_\_\_

- BLDG RATE: \_\_\_\_\_

INT RATE TAX RATE RECAPTURE RATE BUILDING RATE \_\_\_\_\_

BUILDING VALUE \_\_\_\_\_

PERSONAL PROP VALUE \_\_\_\_\_

LAND VALUE \_\_\_\_\_

INDIC TOTAL PROPERTY VALUE \_\_\_\_\_

INCOME APPROACH #1 #2

3. COST APPROACH OR RCN \_\_\_\_\_

4. MKT #1: GRM X GROSS \_\_\_\_\_

5. MKT #2: NO UNITS X \$ PER UNIT \_\_\_\_\_

6. MKT #3: AREA X \$ PER SQ. FT. \_\_\_\_\_

SELECTED VALUE: LAND \_\_\_\_\_

APPRaiser \_\_\_\_\_ BLD'G \_\_\_\_\_

DATE \_\_\_\_\_ TOTAL \_\_\_\_\_

**SALES**

SUBJECT	PARCEL	E #	AMOUNT	DATE	LOCATION	NOTES



See note below! Station relocated to original location...remodeled.  
No tanks mentioned, only pump islands.

Station moved back from original location  
& Remodeled 8/43 JWW

CANOPY MTL 2-27 X 32 C-6  
-MTL-FC 6X28' LTR  
LTS STD 2-T-2 FIRT  
" " T FIRT  
PUMP IS 4-3' X 2'  
4250 #  
ASPHT. P.P. 20130 # 10/29/91/10/2

P# 1C3736- P.U. 91000 - Raised existing canopy. No chg in AU  
41 X BB



35-3-5 W/ways 55 100% 9064-80  
 - 64-5

ADDITION  
 Section 3 Twp 23 Range 4 Ewn. Block 64 Lot or Tract

PERMIT NO. 3986

DATE 7-3-63

Address 10805 EAST MARGINAL  
 Standard Oil Co. of Calif.  
 Property Tax Div. 64-S  
 225 Bush St. San Francisco 20, Calif.

Fee Owner STANDARD OIL CO Architect  
 Condition of Exterior M Interior M Foundation A Floor

USE SERVICE STATION  
 No. Stories  
 No. Stores  
 No. Rooms  
 Basement  
 No. Offices  
 No. Apartments  
 1 rm. 3 rm. 3 rm.  
 4 rm. 5 rm. 6 rm.

ROOF CONSTRUCTION  
 Frame Lam.   
 Mill Construction  
 Rein. Concrete  
 No. Trusses  
 Wood  Steel

FLOOR FINISHES  
 Fir  Ma   
 Oak   
 Lino.  5"  
 Cement  
 Terrazo  
 Raceolith  
 Tile

2573 3-23-4 64-S  
 Baap on Wly mgn of E Marginal Way N 17°  
 20' W 1155.44' frm S Sec 1n th S 84°43'  
 30' W 30.68' to Tprob th N 17°20' W 243.  
 58' th N 82°24'36" W 31' th S 18°27' W  
 267.74' th N 84°43'30" E 188.83' to  
 Tprob

Traverso Jessie Mae  
 3516 S. 146th  
 Seattle, Wa 98168

TYPE OF CONSTRUCTION  
 Frame  Metal  
 Single  Double  
 Ordinary Masonry  
 Mill Construction  
 Class A Rein. Con.  
 Stru. Steel and Con.  
 Tile  Brick  
 Con.  Rein. C

ROOFING MATERIAL  
 Tar and Gravel  
 Or

032304 9064  
 Und 1/3 int in folg Baap on Wly mgn of E  
 Marginal Way N 17-20-00 W 1155.44 ft fr  
 S Sec 1n th S 84-43-30 W 30.68 ft to tprob  
 th N 17-20-00 W 243.58 ft th N 82-24-36

W 31 ft th S 18-27-00 W 267.74 ft th N 84-  
 43-30 E 188.83 ft to tprob



FOUNDATION  
 Mud Sills  
 Post and Pier  
 Brick  
 Concrete  
 Pile

BASEMENT  
 Full  %  
 Sub-Basement  
 Size  
 Garage  No. C  
 Plastered  
 Living Rooms  
 Service Rooms

List the property with a 4 plex and station

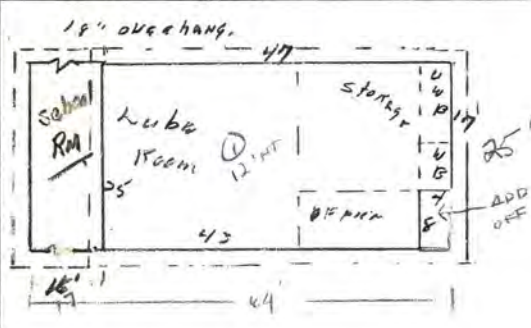
Handwritten notes:  
 2 - 4 plex  
 4 - 4 plex  
 5 - 4 plex  
 2 - 4 plex  
 2 - 4 plex

EXTERIOR WALL CONST.  
 Single  Double  
 2" x 4" Stud Walls  
 2" x 6" Stud Walls  
 Brick Walls  
 Brick with Pilasters  
 Concrete Walls  
 Con. with Pilasters  
 Rein. Con. Skel.  
 Filler Walls  
 Laminated Walls

INTERIOR WALLS  
 Stud and Plaster  
 Lam.  Plastered  
 Plywood  
 Ceiled  
 Plaster Board  
 Painted  
 Stain  Varnish  
 Kalsomine  
 Whitewashed  
 Unfinished  
 Metal

C. H.  
 B  
 1 8-10  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9  
 10  
 11  
 12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22

GROUND FLOOR AREA 1445  
 TOTAL FLOOR AREA 1543  
 1600



EXTERIOR FACING  
 Siding  Shingles  
 Shakes  Stucco  
 Beis-Veneer metal  
 Kind  
 Stone  Cast S.  
 Terra Cotta  
 Struc. Glass  
 Trim

INTERIOR TRIM  
 Fir  
 Mah.  Oak  
 Metal  
 Metal Doors  
 Metal Windows  
 Stained  
 Varnished  
 Painted  
 Unfinished

FLOOR CONSTRUCTION  
 Joist Con. Size  
 O.C. In Bridg.   
 Mill Construction  
 Rein. Con.

Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value
Garage											



55-3-5 W/100 4/4/73

ADDITION  
 Section 3 Twp 23 Range 4 Ewn. Block 6  
 PERMIT NO. 3986  
 DATE 1-3-63  
 Address 10805 E. Marginal Way  
 FOR REFERENCE ONLY

Fee Owner STANDARD OIL CO. Architect Contractor  
 Condition of Exterior Interior Foundation Floor Plan: Good Accept Good

USE SERVICE STAGES  
 ROOF CONSTRUCTION: Frame Lam., Mill Construction, Rein. Concrete, No. Trusses, Wood, Steel  
 FLOOR FINISHERS: Fir, Maple, Oak, 2"x8" T&G, Lino., 3"x2" T&G, Cement, Terrazo, Rascolith, Tile  
 PLUMBING: No. Fixtures, Toilets, Tub, Leg or Pen., Basins, Ped., Sinks, Urinals, Showers (Tub) (Stall), Laundry Trays, H. W. Tank Fl. Drains, Sprink. Sys. No. Hds.  
 HEATING: 100% F.H.A., Stove, Pipeless Furnace, Gravity H. A., Air Cond., Fan, Suspended, Steam Heat, Hot Water, Oil Burner

Remodeled in 1963

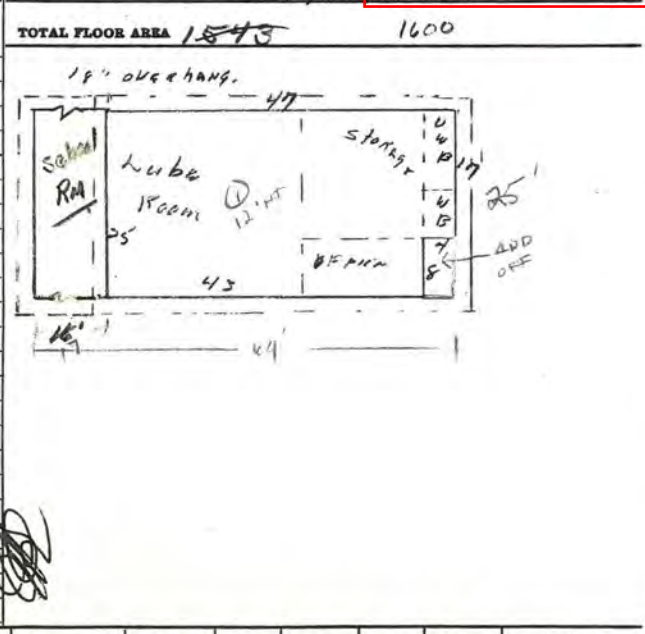
TYPE OF CONSTRUCTION  
 Metal, Single, Double, Ordinary Masonry, Mill Construction, Class A Rein. Con., Stru. Steel and Con., Tile, Brick, Con. Rein. C.  
 FOUNDATION: Mud Sills, Post and Pier, Brick, Concrete, Pile  
 BASEMENT: Full, Sub-Basement, Size, Garage, Plastered, Living Rooms, Service Rooms



DATE BU EFFECTI. DEP-CO  
 YEAR Assessed Value  
 1957 4650-36100  
 1961 8050-36100  
 1962 8950-61566  
 2-100000  
 5-100000  
 2-100000  
 2-100000

EXTERIOR WALL CONST.: Single, Double, 2" x 4" Stud Walls, 2" x 6" Stud Walls, Brick Walls, Brick with Pilasters, Concrete Walls, Con. with Pilasters, Rein. Con. Skel., Laminated Walls  
 INTERIOR WALLS: Stud and Plaster, Lam., Plywood, Ceiled, Plaster Board, Painted, Stain, Kalsomine, Whitewashed, Unfinished, Laminated Walls  
 EXTERIOR FACING: Siding, Shingles, Shakes, Stucco, Brick, Concrete, Stone, Cast S., Terra Cotta, Struc. Glass  
 INTERIOR TRIM: Fir, Mah., Metal, Metal Doors, Metal Windows, Stained, Varnished, Painted, Unfinished  
 FLOOR CONSTRUCTION: Joint Con. Size, O.C., In Bridg., Mill Construction, Rein. Con.

TOTAL OTHER BUILDINGS	
TOTAL - VALUE FULL	8950
ASSESSED VAL. 50%	



Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value
Garage											



55-3-51 W11111  
1/14/71

FOLIO 20029  
20130  
PERMIT NO.  
3986  
DATE  
1-3-63

ADDITION  
Section 3 Twp 23 Range 4 Ewn. Block 6  
FOR REFERENCE ONLY  
Address 10805 EAST MARGINAL WAY

Fee Owner STANDARD O  
Condition of Exterior Inte  
USE SERVICE STATION ROOF  
No. Stories  
No. Stores  
No. Rooms  
Basement  
No. Offices  
No. Apartments  
1 rm. 2 rm. 3 rm.  
4 rm. 5 rm. 6 rm. Or.

TYPE OF CONSTRUCTION  
Metal  
Single Double  
Ordinary Masonry  
Mill Construction  
Class A Rein. Con.  
Stru. Steel and Con.  
Tile Brick  
Co. Rein. C  
Good Med. Cheap

FOUNDATION  
Mud Sills  
Post and Pier  
Brick  
Concrete  
Pile

BASEMENT  
Full %  
Sub-Basement  
Size  
Garage No. C  
Plastered  
Living Rooms  
Service Rooms



PLUMBING  
No. Fixtures  
Toilets  
Tub, Leg or Pem.  
Basins, Ped.  
Sinks  
Urinals  
Showers (Tub) (Stall)  
Laundry Trays  
H. W. Tank Fl. Drains  
Sprink. Sys. No. Hds.  
HEATING 100% F.H.A.

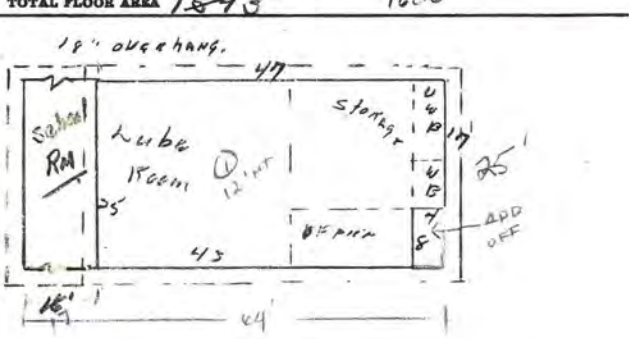
Stove  
Pipeless Furnace  
Gravity H. A.  
Air Cond., Fan H.F.A.  
Suspended Hot Water  
Steam Heat  
Hot Water  
Oil Burner

Year	Assessed Value
1951	4650 561 H.A.
1956	8050 24063
1962	8950 815 66

4 plex and station

2 - compact  
4 - pipes  
5 - hot water  
2 - pump  
2 - pump

EXTERIOR WALL CONST.		INTERIOR WALLS		C. H.	GROUND FLOOR AREA	
Single Double	2" x 4" Stud Walls	Stud and Plaster	Lam. Plastered			1442
2" x 6" Stud Walls	Brick Walls	Plywood	Ceiled	B 8-10		1600
Brick with Pilasters	Concrete Walls	Plaster Board	Painted			
Con. with Pilasters	Rein. Con. Skel.	Painted	Stain Varnish			
Metal	Rein. Con. Skel.	Stain	Kalsomine			
Rein. Con. Skel.	Rein. Con. Skel.	Whitewashed	Whitewashed			
Filler Walls	Laminated Walls	Unfinished	Unfinished			
		metal	metal			
EXTERIOR FACING		INTERIOR TRIM		TOTAL FLOOR AREA		
Siding Shingles	Shakes Stucco	Fir	Mah. Oak	1548 1600		
Brick Masonry	Kind	Metal	Metal	18" overhang		
Stone Cast S.	Stone Cast S.	metal	metal	16' 11" 47'		
Terra Cotta	Struc. Glass	metal	metal	12' 11" 25'		
	Trim	metal	metal	43'		
FLOOR CONSTRUCTION				16' 11" 44'		
Joint Con. Size	In Bridg.			16' 11" 44'		
O.C.	Mill Construction			25'		
	Basin. Con.			ADD OFF		



Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprac.	Net Value
Garage											



55-3-5 W/125  
1/4/71

FOLIO 20029  
20130  
PERMIT NO. 3986  
DATE 1-3-63

ADDITION  
Section 3 Twp 23 Range 4 Ewm. Block 16  
Tax Lot  
Address 10805 East Marginal Way

Fee Owner STANDARD O  
Condition of Exterior Inte

USE SERVICE STAGES  
ROOF  
No. Stories  
No. Stores  
No. Rooms  
Basement  
No. Offices  
No. Apartments  
1 rm. 2 rm. 3 rm.  
4 rm. 5 rm. 6 rm. Or

TYPE OF CONSTRUCTION  
Roofing Metal  
Single Double  
Ordinary Masonry  
Mill Construction  
Class A Rein. Con.  
Stru. Steel and Con.  
Tile Brick  
Coa. Rein. (DEP-COI)  
Good Med. Cheap

FOUNDATION  
Mud Sills  
Post and Pier  
Brick  
Concrete  
Pile

BASEMENT  
Full %  
Sub-Basement  
Size  
Garage No. C  
Plastered  
Living Rooms  
Service Rooms



Good  
PLUMBING  
No. Fixtures  
Toilets  
Tub, Leg or Pem.  
Basins, Ped.  
Sinks  
Urinals  
Showers (Tub) (Stall)  
Laundry Trays  
H. W. Tank Fl. Drains  
Sprink. Sys. No. Hds.  
HEATING 100% F.H.A.

Stove  
Pipeloss Furnace  
Gravity H. A.  
Air Cond., Fan  
Suspended Gas, Hot Water  
Steam Heat  
Hot Water  
Oil Burner

Year	Assessed Value
1957	4650 5670
1960	8050 8000
1962	8950 8150

2  
4  
5  
2  
2

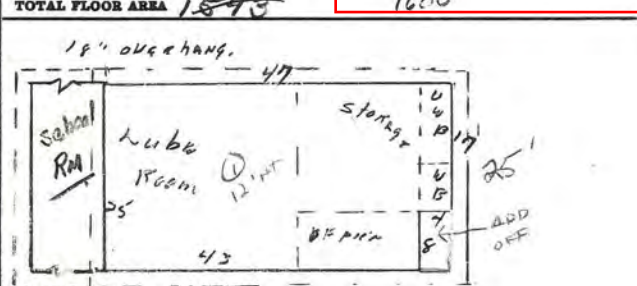
TOTAL OTHER BUILDINGS  
TOTAL-VALUE FULL  
ASSESSED VAL. 50%  
8960

EXTERIOR WALL CONST.  
Single Double  
2" x 4" Stud Walls  
2" x 6" Stud Walls  
Brick Walls  
Brick with Pilasters  
Concrete Walls  
Con. with Pilasters  
Rein. Con. Skel.  
Filler Walls  
Laminated Walls

INTERIOR WALLS  
Stud and Plaster  
Lam. Plastered  
Plywood  
Ceiled  
Plaster Board  
Painted  
Stain Varnish  
Kalsomine  
Whitewashed  
Unfinished  
Metal

C. H.  
B  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

GROUND FLOOR AREA 1548 1600  
TOTAL FLOOR AREA 1548 1600



EXTERIOR FINISH  
Siding Shingles  
Shakes Stucco  
Beide-Veneer metal  
Kind  
Stone Cast S.  
Terra Cotta  
Struc. Glass  
Trim

INTERIOR TRIM  
Fir  
Mah. Oak  
Metal  
Metal Doors  
Metal Windows  
Stained  
Varnished  
Painted  
Unfinished

FLOOR CONSTRUCTION  
Joint Con. Size  
O.C. In Bridg.  
Mill Construction  
Rein. Con.

Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value
Garage											



55-2-5 W/100 1/2/51

FOLIO 200-1  
 20130  
 PERMIT NO. 3986  
 DATE 1-3-63

ADDITION  
 Section 3 Twp 23 Range 4 Ewm. Block 6  
 Address 10805 East Marginal Way

EDR REFERENCE ONLY

Fee Owner STANDARD A  
 Condition of Exterior 86

USE SERVICE STATION B

No. Stories  
 No. Rooms  
 Basement  
 No. Offices  
 No. Apartments  
 1 rm. 2 rm. 3 rm.  
 4 rm. 5 rm. 6 rm. Or

TYPE OF CONSTRUCTION

Frame Metal  
 Single Double  
 Ordinary Masonry  
 Mill Construction  
 Class A Rein. Con.  
 Stru. Steel and Con.  
 Title Brick  
 Con. Rein. C

Date  
 Effect  
 Dep.

FOUNDATION

Mud Sills  
 Post and Pier  
 Brick  
 Concrete  
 Pile

BASEMENT

Full %  
 Sub-Basement  
 Size  
 Garage No. Cars  
 Plastered  
 Living Rooms  
 Service Rooms

EXTERIOR WALL CONST.

Single Double  
 2" x 4" Stud Walls  
 2" x 6" Stud Walls  
 Brick Walls  
 Brick with Pilasters  
 Concrete Walls  
 Con. with Pilasters  
 Rein. Con. Skel.  
 Laminated Walls

EXTERIOR FACING

Siding Shingles  
 Shakes Stucco  
 Brick Veneer Metal  
 Stone Cast S.  
 Terra Cotta  
 Struc. Glass

FLOOR CONSTRUCTION

Joint Con. Size  
 O.C. In Bridg.  
 Mill Construction  
 Rein. Con.

DEP.-OBS.	DIMENSIONS	SQ. FT. AREA	FACTOR	COST
	25' x 63'	1143	5.58	6344
	27' x 32' x 2	1728	2.00	3456
	Roof x 0.4	285	.75	213
	Mix & C.			5733
	13' x 100'	2340	.10	2340
	18' x 100'	1868	.25	767
	16' x 25'	400	4.00	1600
				17847

1963, 1965 Add  
 FINISHED YEARS  
 UNFINISHED FUTURE LIFE YEARS  
 REMODELED  
 ECON.-DEP. TOTAL

Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprac.	Net Value

Good

PLUMBING

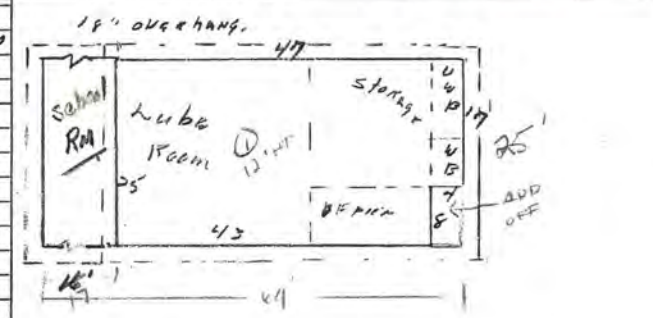
No. Fixtures  
 Toilets  
 Tub, Leg or Pem.  
 Basins, Ped.  
 Sinks  
 Urinals  
 Showers (Tub) (Stall)  
 Laundry Trays  
 H. W. Tank Fl. Drains  
 Sprink. Sys. No. Hds.

HEATING 100% F.H.A.

Stove  
 Pipeless Furnace  
 Gravity H. A.  
 Air Cond., Fan  
 Suspended Gr. Hot Water  
 Steam Heat  
 Hot Water  
 Oil Burner

Year	Assessed Value
1951	4650-5610
1952	5050-5063
1962	8950-81566

Addition in 1965, 16x25, N  
 Note of "ADD OFF" below...? Office addition?





55-2-5 W/1/4/71

5

FOLIO 20029

ADDITION

20130

Section 3 Twp 23 Range 4 Ewm. Block 16

PERMIT NO.

3986

FOR RECORD Tax Lot

DATE

1-3-63

Fee Owner STAND

Condition of Exterior

USE SERVICE STG.

- No. Stories
- No. Rooms
- Basement
- No. Offices
- No. Apartments
- 1 rm. 2 rm.
- 4 rm. 5 rm.

TYPE OF CONSTRUCTION

- Frame Metal
- Single Double
- Ordinary Masonry
- Mill Construction
- Class A Rein. Con.
- Stru. Steel and Con.
- Tile Brick
- Con. Rein. Con.

FOUNDATION

- Mud Sills
- Post and Pier
- Brick
- Concrete
- Pile

BASEMENT

- Full %
- Sub-Basement
- Size
- Garage No. Cars
- Floor
- Plastered
- Living Rooms
- Service Rooms

EXTERIOR WALL CONST.

- Single Double
- 2" x 4" Stud Walls
- 2" x 6" Stud Walls
- Brick Walls
- Brick with Pilasters
- Concrete Walls
- Con. with Pilasters
- Rein. Con. Skel.
- Filler Walls
- Laminated Walls

EXTERIOR FINISH

- Siding Shingles
- Shakes Stucco
- Bevel Siding Metal
- Kind
- Stones Cast S.
- Terra Cotta
- Struc. Glass
- Trim

FLOOR CONSTRUCTION

- Joint Con. Size
- O.C. In Bridg.
- Mill Construction
- Rein. Con.

REPRODUCTION COST Factor Make-Up

Factor	Plus or Minus	Dimensions	S. F. Area	Factor	Cost
5.25		25.47	1143	5.55	6344
302	MORTAR	27.32	1124	2.11	3456
5.55	MASON	APPROX	225	754	169
	Misc				3133
978	CARBON	1347	23,800	1.0	2380
250	529st	CONC	1868	.25	767
400	2 A.W.				
358	1 Hoist	P. 35,000 - 1963			
1800	TANKS				
	153				
	3133				
Total					86249
Less Depreciation					
Total Value (Full)					
Assessed Valuation 50%					58100

TANKS, ETC., LIST

Size	Material	Notes
12' x 10' x 1-2000	1-2000	
5' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	
4' x 4' x 1-2000	1-2000	

ELEVATORS

Material	Notes
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	

DOCKS AND PIERS

Material	Notes
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	

WIRING

Material	Notes
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	
1-2000	

The "Tanks" section is shown on this one, but it is unreadable.

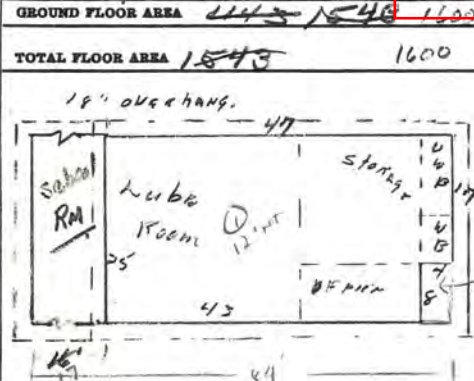
PLUMBING

- No. Fixtures
- Toilets
- Tub, Leg or Pem.
- Basins, Ped.
- Sinks
- Urinals
- Showers (Tub) (Stall)
- Laundry Trays
- H. W. Tank Fl. Drains
- Sprink. Sys. No. Hds.

HEATING

- Stove
- Pipeless Furnace
- Gravity H. A.
- Air Cond., Fan
- Suspended Cur. Hot Water
- Steam Heat
- Hot Water
- Oil Burner

Year	Assessed Value
1951	4650 - 5670
1952	5050 - 5000
1953	8950 - 8100



Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value
Garage											





ASSESSOR'S FORM NO. 250-2  
**SERVICE STATION**

FOLIO NO. 20029

ASSESSOR'S ACCT NO. 032304-9064-8

GRADE	<u>S/AI?</u>	USE CODE	<u>6/5</u>	STORY	1-
YEAR BUILT	<u>1955/74</u>	CONDITION		STATISTICS	PERIMETER
EFFECTIVE AGE		NO. OF UNITS		SQUARE FEET	<u>1600</u>
STORY	ADDITIONS		FLAT ITEMS		BUILDING CALCULATIONS
BSMT.	SF @		PLUMBING	STORIES	1-
1 ST.	SF @			BASE	<u>35.75</u>
2 ND.	SF @			HGT. FAC.	
3 RD.	SF @			AREA FAC.	
4 TH.	SF @			STY. FAC.	
5 TH.	SF @			ADJ. FAC.	
6 TH.	SF @			ADJ. BASE	
7 TH.	SF @			BSMT.	
8 TH.	SF @			FLOOR	
9 TH.	SF @			ROOF	
10 TH.	SF @			CEIL.	
11 TH.	SF @			PART.	
				HEAT	
				AIR COND.	



5190

AL	<u>35.75</u>		
STORIES			
	<u>1600</u>	SF @ <u>35.75</u>	<u>57200</u>
		SF @	
		SF @	
		SF @	
		SF @	
FLAT ITEMS			
TOTAL			
REPLACEMENT COST			\$ <u>57200</u>
DEPRECIATION (NET)	<u>35%</u>		X <u>65</u>
PHYSICAL VALUE			\$ <u>37180</u>
OR FUNCT. OBSOL. (NET)			X
APPRAISED VALUE			
PERCENT COMPLETE (NET)			
RESIDUAL VALUE			

May 1986, station removed.

INCOME APPROACH	ACTUAL	ECONOMIC
ANNUAL POTENTIAL GROSS		
LESS VAC. & CREDIT LOSS		
ANNUAL EFFECTIVE GROSS		
LESS EXPENSES		
ANNUAL NET INCOME		
INT. RATE TAX RATE LAND RATE		
LESS LAND INCOME		
LAND VALUE LAND RATE		
NET INCOME TO BUILDING		
BLDG RATE		
INT. RATE TAX RATE RECAPTURE RATE BUILDING RATE		
BUILDING VALUE		
PERSONAL PROP VALUE		
LAND VALUE		
INDIC TOTAL PROPERTY VALUE		
INCOME APPROACH #1		#2
3. COST APPROACH OR RCN		<u>52523</u>
4. MKT #1: GRM X GROSS		
5. MKT #2: NO. UNITS X \$ PER UNIT		
6. MKT #3: AREA X \$ PER SQ. FT.		
SELECTED VALUE: LAND		<u>167200</u>
APPRaiser: <u>SPR</u>		<u>52500</u>
DATE: <u>5/9/84</u>		TOTAL: <u>219700*</u>

COMMENTS

Chesson - 5/16/84 Station Removed  
12/84 - tubed

\*previous value 30000 #5 = 212900

Land includes .0 Acre & main 226  
Total land = 27879 @ #6 = 167200

SALES	PARCEL	E #	AMOUNT	DATE	LOCATION	NOTES
SUBJECT						
SUBJECT						
COMP						
COMP						

ASSESSOR'S ACCT NO <sup>9064.0</sup> 132304 - 9664-8

1-					
1600					
BUILDING CALCULATIONS					
RIES	1-				
E	35.75				
FAC.					
A FAC.					
FAC.					
FAC.					
BASE					
HT.					
OR					
F					
T					
T					
COND.					
LIGHTS					
SPRINK.					
TOTAL	35.75				
STORIES					
	1600	sf @	35.75		57200
		sf @			

Cherison									
total	1792	40	900	17292	x	.25	4283		
3 pump tank	210	4	903	903	x	.25	225		
Auto fluid tank	20	2500	5000	5000	x	.25	1250		
TOTAL									
AREA OR QUANTITY	4250	UNIT COST	REPLACE COST	FFF. AGE	DEPR NET	TOTAL VALUE			
Cherison	4250	1.35	5737		.25	1434			
Appraisal	20000	.65	13000			3200			
Auto Tank	4	375	1500			375			
Flare Tank	5	90	450			112			
500 gal u/g tank	1	975	975			243			
2000 "	1		1825			456			
5000 "	1		3780			925			
7000 "	1		4500			1125			
Pipe & Tanks	4	275	1100			225			
P. P. Pumps	12	450	5400			1850			
TOTAL ACCESSORY BUILDINGS & OTHER IMPROVEMENTS						15943			

List 1 500-gallon "u/g" tank, (1) 2,000-gallon, (1) 5,000-gallon, and (1) 7,000-gallon tanks, piping, and (12) pumps matches the 1963 tax sheets.

INCOME APPROACH		ACTUAL	ECONOMIC
ANNUAL POTENTIAL GROSS			
LESS VAC. & CREDIT LOSS			
ANNUAL EFFECTIVE GROSS			
LESS EXPENSES			
ANNUAL NET INCOME			
INT. RATE	TAX RATE	LAND RATE	
LESS LAND INCOME			
LAND VALUE	LAND RATE		
NET INCOME TO BUILDING			
+ BLDG RATE			
INT. RATE	TAX RATE	RECAPTURE RATE	BUILDING RATE
BUILDING VALUE			
PERSONAL PROP VALUE			
LAND VALUE			
INDIC TOTAL PROPERTY VALUE			
INCOME APPROACH	# 1		# 2
3. COST APPROACH OR RCN		52523	
4. MKT # 1:	GRN	X	GROSS
5. MKT # 2:	NO. UNITS	X	PER UNIT
6. MKT # 3:	AREA	X	PER SQ. FT.
SELECTED VALUE:	LAND	167200	
APPRaiser	BLD'S	52500	
DATE	TOTAL	219700	

COMMENTS

Cherison. 5/16/84 Station Removed  
12184 - fuel

\*previous value 30000 #5 = 212900

Land includes .0 acre & mini 226  
Total land = 27879 @ #6 = 167200

SALES	PARCEL	E #	AMOUNT	DATE	LOCATION	NOTES
SUBJECT						
SUBJECT						
COMP						
COMP						



TAXPAYER'S CLAIM FOR REDUCTION OF ASSESSMENTS ON DESTROYED REAL OR PERSONAL PROPERTY RCW 36.21.080, Chapter 84.70

86 0170 MAY 05 1986 344-7304 420 200 29

NOTICE: This claim for reduction of assessments shall be filed with the King County Assessor, 708 King County Admin. Bldg., Seattle, WA 98104-2384, Phone 206-344-4091.

This is to notify you that I hereby claim relief under the provisions of RCW 36.21.080 and Ch. 84.70 RCW and petition for adjustment in the applicable assessment or tax roll.

TAXPAYER Chevron USA, Inc Telephone
ADDRESS P.O. Box 111 SAN FRANCISCO, CA 94125 PARCEL NO. 14032304-9064-83
Legal Description of Property: 14032304-9064-83

Description of Property Destroyed Service Station all facilities were removed 12/31/84
Date of destruction 12/31/84 Cause Out of Business
Date signed May 4, 1986 Taxpayer Chevron USA, Inc T. J. Swanson

ASSESSOR'S USE ONLY
CLAIM [checked] Qualifies
Does not Qualify, Because,

DETERMINATION OF REDUCTION IN VALUE

Table with 6 rows: 1. Full market value of property prior to destruction \$ 52,500; 2. Full market value of remaining property \$ 0; 3. Total amount of loss \$ 52,500; 4. Amount of loss x 12 \$ 4375; 5. Number of months remaining in year from date of destruction x 12; 6. Amount of destruction \$ 52,500

I hereby certify my determination of the amount of destruction for the year 85 is as shown on line 6.
Deputy Assessor tubell 5/18/86
Mailing Date 5-28-86

NOTICE TO TAXPAYER: If you disagree with the assessor's determination, you may appeal by filling in below and filing, within thirty (30) days of the mailing date indicated, a copy of this form with the King County Board of Appeals/Equalization 510 King Co. Administration Bldg., Seattle, Wa. 98104.

I disagree with the assessor's determination and hereby request a hearing with the Board of Appeals/Equalization. Amount of reduction according to my determination is \$ (Attach your calculations)
Date Taxpayer

ORDER OF THE KING COUNTY BOARD OF APPEALS/EQUALIZATION

It is hereby ordered that the amount of reduction for the year 19\_\_ shall be: \$
The finance director shall make the necessary adjustments in the tax rolls to effectuate this order.
Date Land From Land To Improvements Improvements
Clerk of Board

# **APPENDIX B**



**NOTES AND COMMENTS:**

- PURPOSE OF SURVEY:** THE PURPOSE OF THIS SURVEY WAS TO DEVELOP A TOPOGRAPHIC MAP OF THE SUBJECT PROPERTY FOR USE AS A PLANNING AND DESIGN BASE BY OTHERS.
- HORIZONTAL DATUM:** THE OVERALL HORIZONTAL DATUM FOR THIS PROJECT IS NAD 83/2011, WASHINGTON COORDINATE SYSTEM, NORTH ZONE, BASED ON GPS MEASUREMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.
- VERTICAL DATUM:** THE VERTICAL DATUM FOR THIS SURVEY IS NAVD 88, BASED ON GPS MEASUREMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.
- FIELD SURVEY METHODOLOGY:** FIELD MEASUREMENTS FOR THIS SURVEY WERE PERFORMED USING A 5-SECOND OR BETTER ELECTRONIC TOTAL STATION.
- INSTRUMENT CALIBRATION:** ALL MEASURING INSTRUMENTS EMPLOYED IN THIS SURVEY HAVE BEEN MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- THIS MAP GRAPHICALLY REPRESENTS** CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY ONLY, WHICH WAS PERFORMED DURING OCTOBER OF 2016.
- THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT NAMED HEREON. ITS USE DOES NOT EXTEND TO ANY UNNAMED PERSON OR PERSONS WITHOUT THE EXPRESS RECERTIFICATION BY THIS SURVEYOR NAMING SUCH PARTY.**
- FOR YOUR INFORMATION:** 0.0833 FEET = 1 INCH ON THE GROUND
- KING COUNTY TAX PARCEL NUMBER:** 0323049064
- PARCEL AREA:** 33,302 ± SQ. FT. (0.76 ACRES)
- THE UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM A COMBINATION OF:** 1.) THE FIELD SURVEYED LOCATION OF VISIBLE SURFACE UTILITY STRUCTURES SUCH AS MANHOLE LIDS, GRATES, GAS AND WATER VALVE LIDS, ETC. ... 2.) MAPPING OF EXISTING PAINT MARKS OR MARKERS PLACED BY AN UNDERGROUND UTILITY LOCATOR SERVICE, AND 3.) AS-BUILT RECORDS AND MAPS OBTAINED FROM A VARIETY OF SOURCES. WE MAKE NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, NOR THAT THEY ARE IN THE EXACT LOCATION SHOWN.
- UTILITY INVERT ELEVATIONS AND PIPE / FLOW LINE DIAMETERS SHOWN HEREON ARE BASED ON OBSERVATIONS FROM THE TOP OF THE UTILITY STRUCTURE AND ARE APPROXIMATE ONLY. FOR SAFETY REASONS NO PHYSICAL ENTRY INTO THE UTILITY STRUCTURE WAS PERFORMED DURING THE COURSE OF THIS SURVEY.**
- THE PROPERTY AND PUBLIC RIGHT-OF-WAY LINES SHOWN HEREON WERE CALCULATED USING A COMBINATION OF A) FOUND STREET CENTERLINE MONUMENTS; B) THE PROPERTY LEGAL DESCRIPTION; C) THE KING COUNTY ASSESSOR MAP; D) RECORDS OF SURVEYS. NO PROPERTY CORNERS HAVE BEEN SET NOR HAS AN OFFICIAL RECORD OF SURVEY BEEN FILED BY PLS, INC.**
- FOR CLARITY PURPOSES WE HAVE USED GRAPHIC SYMBOLS TO REPRESENT SOME FEATURES ON THIS MAP, SUCH AS UTILITIES, TREES AND FENCES. THE DEFAULT SIZE OF THOSE SYMBOLS MAY NOT REFLECT THE TRUE SIZE OF THE FEATURE THAT WAS MAPPED.**

**LEGAL DESCRIPTION:**

(PER STATUTORY WARRANTY DEED, CITY OF TUKWILA RECORDING NO. 199604180862)  
 PORTIONS OF GOVERNMENT LOT 10, SECTION 4, TOWNSHIP 23 NORTH, RANGE 4 EAST, W.M., IN KING COUNTY, WASHINGTON AND OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 3 OF SAID TOWNSHIP AND RANGE LYING BETWEEN THE WESTERLY MARGIN OF EAST MARGINAL WAY AND THE EASTERLY MARGIN OF PACIFIC HIGHWAY SOUTH, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WESTERLY MARGIN OF EAST MARGINAL WAY, SAID POINT BEING NORTH 17°20'00" WEST 1155.44 FEET MEASURED ALONG SAID MARGIN, FROM THE SOUTH LINE OF SAID SECTION 3, THENCE SOUTH 84°43'40" WEST ALONG SAID MARGIN 30.68 FEET TO THE TRUE POINT OF BEGINNING OF THESE DESCRIPTIONS,

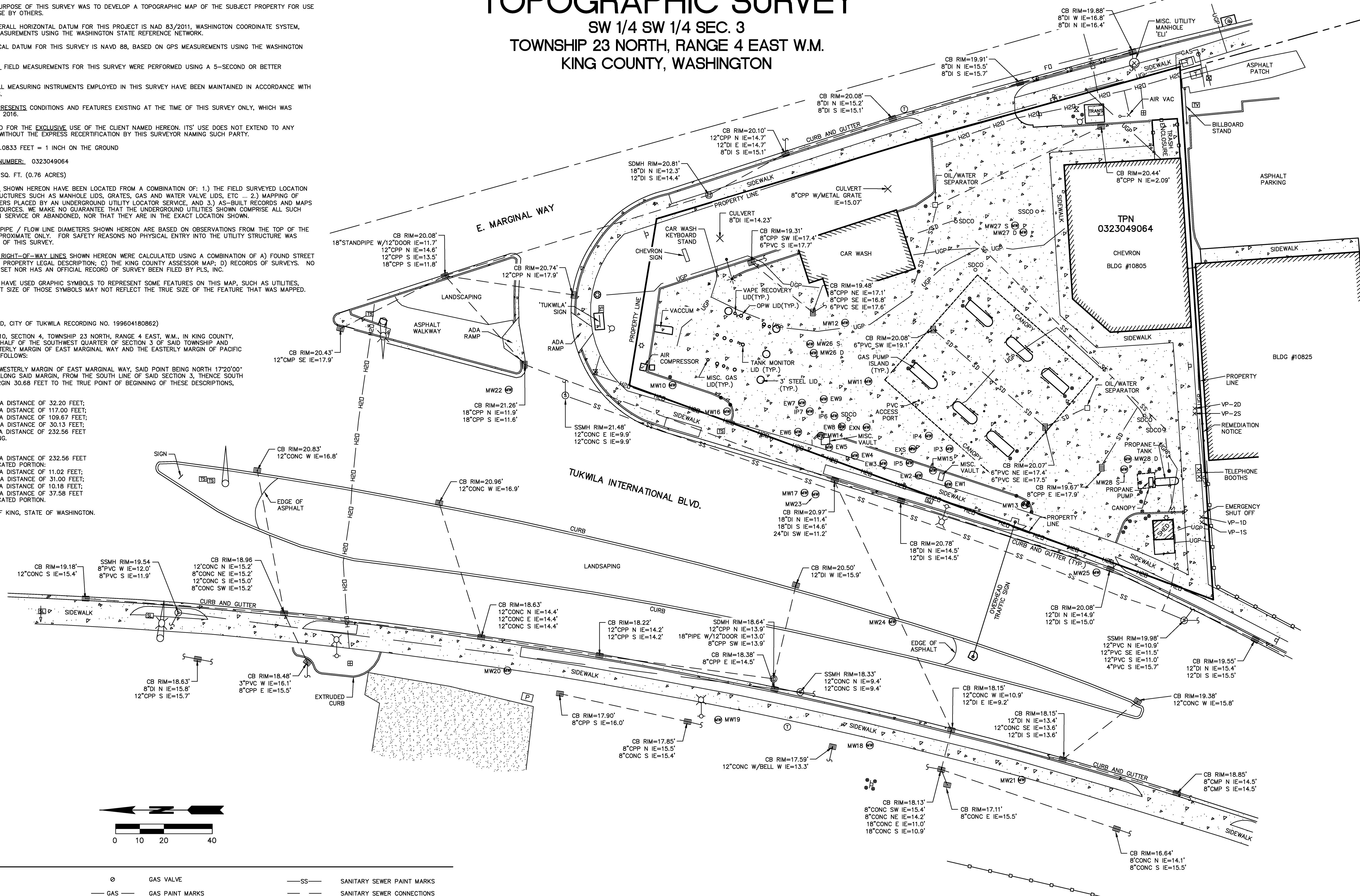
VACATED PORTION:  
 THENCE NORTH 84°43'30" EAST, A DISTANCE OF 32.20 FEET;  
 THENCE NORTH 17°20'00" WEST, A DISTANCE OF 117.00 FEET;  
 THENCE NORTH 19°30'00" WEST, A DISTANCE OF 109.67 FEET;  
 THENCE NORTH 84°24'38" WEST, A DISTANCE OF 30.13 FEET;  
 THENCE SOUTH 17°20'00" EAST, A DISTANCE OF 232.56 FEET TO THE TRUE POINT OF BEGINNING.

DEDICATED PORTION:  
 THENCE NORTH 17°20'00" WEST, A DISTANCE OF 232.56 FEET TO THE BEGINNING OF THE DEDICATED PORTION;  
 THENCE NORTH 17°20'00" WEST, A DISTANCE OF 11.02 FEET;  
 THENCE NORTH 84°24'38" WEST, A DISTANCE OF 31.00 FEET;  
 THENCE SOUTH 18°27'00" WEST, A DISTANCE OF 10.18 FEET;  
 THENCE SOUTH 84°24'38" EAST, A DISTANCE OF 37.58 FEET TO THE BEGINNING OF THE DEDICATED PORTION.

ALL SITUATED IN THE COUNTY OF KING, STATE OF WASHINGTON.

# TOPOGRAPHIC SURVEY

SW 1/4 SW 1/4 SEC. 3  
 TOWNSHIP 23 NORTH, RANGE 4 EAST W.M.  
 KING COUNTY, WASHINGTON



**LEGEND:**

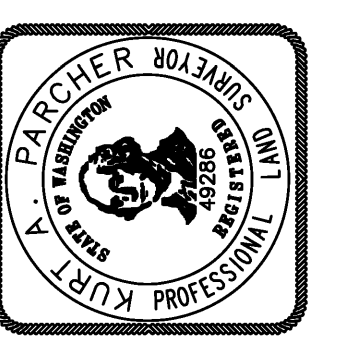
●	BOLLARD	⊗	GAS VALVE	—SS—	SANITARY SEWER PAINT MARKS
—○—	FENCE	—GAS—	GAS PAINT MARKS	—	SANITARY SEWER CONNECTIONS
—	HANDRAIL	⊗	FIRE HYDRANT	—SSCO—	SANITARY SEWER CLEAN OUT
⊙	GATE POST	⊗	IRRIGATION CONTROL VALVE	⊙	SANITARY SEWER MANHOLE (SSMH)
⊙	WOOD SIGN	⊕	BLOW OFF VALVE	—SD—	STORM PAINT MARKS
⊙	POWER MANHOLE	⊕	WATER METER	—	STORM CONNECTIONS
☆	LUMINAIRE	⊕	WATER VALVE	⊕	CATCH BASIN (CB)
⊕	UTILITY POLE WITH LIGHT	—H2O—	WATER PAINT MARKS	⊕SDCO	STORM DRAIN CLEAN OUT
⊕	TRANSFORMER	⊕	CONCRETE SURFACE	⊕	STORM DRAIN MANHOLE (SDMH)
⊕	POWER VAULT	⊕	GRAVEL SURFACE	⊕	MONITORING WELL
⊕	STREET LIGHT POLE	⊕	PEDESTRIAN SIGNAL POLE	IE	INVERT ELEVATION
⊕	STREET LIGHT HAND HOLE	⊕	TRAFFIC SIGNAL POLE	CPP	CORRUGATED PLASTIC PIPE
—UGP—	UNDERGROUND POWER PAINT MARKS	⊕	TRAFFIC SIGNAL POLE W/LIGHT	DI	DUCTILE IRON PIPE
⊕	CATV HANDHOLE	⊕	TRAFFIC SIGNAL HAND HOLD (TSHH)	OMP	CORRUGATED METAL PIPE
⊕	TELEPHONE MANHOLE			PVC	PLASTIC PIPE
—FO—	FIBER OPTIC PAINT MARKS			CONC	CONCRETE PIPE

**MONITOR WELL TABLE**

MONITOR WELL	NORTHING	EASTING	N. RIM ELEV	PVC ELEV	MONITOR WELL	NORTHING	EASTING	N. RIM ELEV	PVC ELEV	MONITOR WELL	NORTHING	EASTING	N. RIM ELEV	PVC ELEV
EW1	188051.00	1280092.85	21.26	20.99	EX N	188084.84	1280116.43	20.86	20.38	MW12	188093.74	1280159.68	19.74	19.36
EW2	188063.26	1280096.52	21.44	21.22	EX S	188065.80	1280107.44	20.81	19.92	MW13	188019.32	1280084.33	20.70	20.13
EW3	188077.91	1280101.48	21.21	20.86	IP3	188050.49	1280107.58	20.62	20.28	MW14	188103.77	1280112.97	21.22	20.94
EW4	188089.68	1280104.74	21.24	20.87	IP4	188059.07	1280112.91	20.63	20.49	MW15	188057.34	1280098.60	20.99	20.52
EW5	188100.38	1280108.22	21.09	20.88	IP5	188067.02	1280101.71	21.33	21.08	MW16	188142.65	1280123.00	21.50	21.19
EW6	188113.23	1280114.55	21.13	20.89	IP6	188098.22	1280121.21	20.82	20.26	MW17	188110.58	1280089.33	21.35	20.89
EW7	188111.61	1280126.59	20.87	20.54	IP7	188108.34	1280123.06	20.90	20.31	MW18	188083.51	1279984.81	18.58	18.22
EW8	188095.08	1280116.75	20.90	20.65	MW10	188165.19	1280133.95	21.60	21.06	MW19	188146.31	1279995.31	18.37	18.04
EW9	188102.55	1280128.12	20.75	20.44	MW11	188084.11	1280135.49	20.43	19.99	MW20	188233.60	1280015.74	19.08	18.71
										MW21	188020.62	1279970.46	18.58	18.22
										MW22	188233.04	1280132.00	21.40	21.14
										MW23	188105.98	1280088.73	21.32	20.86
										MW24	188074.13	1280035.93	20.61	20.26
										MW25	187989.65	1280056.33	20.19	19.78
										MW26 D	188106.75	1280147.20	20.12	19.69
										MW26 S	188108.22	1280150.90	19.98	19.48
										MW27 D	188019.91	1280197.17	20.18	19.53
										MW27 S	188023.37	1280199.94	20.12	19.76
										MW28 D	187976.64	1280103.30	19.85	19.45
										MW28 S	187978.19	1280099.01	19.82	19.34

**PLS, Inc.**  
 Professional Land Surveyors  
 1595 NW Gilman Boulevard #15  
 Issaquah, Washington 98027  
 (425) 313-9378 (fax) 313-9379

G-LOGICS, INC  
 40 2ND AVENUE SE  
 ISSAQUAH, WA 98027



**REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	12/29/2016	10 ADDITIONAL MONITOR WELLS	BPM

**TOPOGRAPHIC SURVEY**  
 CLIENT: G-LOGICS, INC.

**DRAWN BY:** BPM  
**CHECKED BY:** KAP  
**SCALE:** 1" = 20'  
**DATE:** NOV 30, 2016  
**JOB NO:** 16150  
**DRAWING NAME:** 16150 TOPO.DWG  
**SHEET 1 of 1**

# **APPENDIX C**

**Available on Compact Disk**



# **APPENDIX D**

**Available on Compact Disk**

# **APPENDIX E**



# Unified Soil Classification System (USCS)

PRIMARY DIVISIONS			SYMBOL	DESCRIPTIONS
<b>COARSE GRAINED SOILS</b>  Sands & Gravels, Over 50% retained on #200 sieve	<b>GRAVELS</b>  Over 50% of coarse material retained on #4 sieve	<b>CLEAN GRAVEL</b>  Less than 5% passing #200 sieve	GW	Well graded gravel, many different particle sizes, little or no fines
		<b>GRAVEL WITH FINES</b>	GP	Poorly graded, few different particle sizes, little or no fines
			GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	<b>SAND</b>  Over 50% of coarse material passed #4 sieve	<b>CLEAN SANDS</b>  Less than 5% passing #200 sieve	SW	Well graded gravel, many different particle sizes, little or no fines
			SP	Poorly graded, few different particle sizes, little or no fines
		<b>SAND WITH FINES</b>	SM	Silty gravels, gravel-sand-silt mixtures
			SC	Clayey gravels, gravel-sand-clay mixtures
<b>FINE GRAINED SOILS</b>  Silts & Clays, Over 50% passing the #200 sieve	<b>SILTS AND CLAYS</b>  Liquid limit is less than 50 %		ML	Inorganic silts, slight to no plasticity
			CL	Inorganic clays, low to moderate plasticity
			OL	Organic silts and clays of low plasticity
	<b>SILTS AND CLAYS</b>  Liquid limit is more than 50 %		MH	Inorganic silts, moderate to high plasticity
			CH	Inorganic clays, high plasticity, fat clays
			OH	Organic silts and clays of high plasticity
<b>Highly Organic Soils</b>			PT	Peat and other highly organic soils

## Soil Samples



Disturbed, bag, bulk, or grab sample



Standard penetration split spoon sample



Cuttings



Continuous-Core Sample

## Field Measurements



Water Level Observed During Drilling

PID

Photoionization Detector

ppmv

Parts Per Million by Volume



End of Boring (E.O.B)

**Note:** Blows per foot is the number of blows used to drive a split-spoon (2" OD) sampler through the last 12 inches of an 18-inch sampling attempt. One blow is a 30-inch fall of a 140-pound hammer.

**Note:** The line separating strata on the logs represents approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of the strata between exploration locations. Logs represent the soil section observed at the exploration location on the date of exploration only.

ExplorationLogLegend.pub

*g-logics*

**Exploration Log Legend**

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		8" Concrete Surface Boring advanced with air knife.				
0-3'		Brown, silty sand with rounded gravel and cobbles, slightly moist.			0	
3'-8.5'	SVE-1-5	Brown silty sand with gravel, slightly moist.		SM		
8.5'-9'	SVE-1-9	As above, gray discoloration and strong petroleum odor. E.O.B. at 9 feet		▽	88	
10						
15						
20						
25						
30						

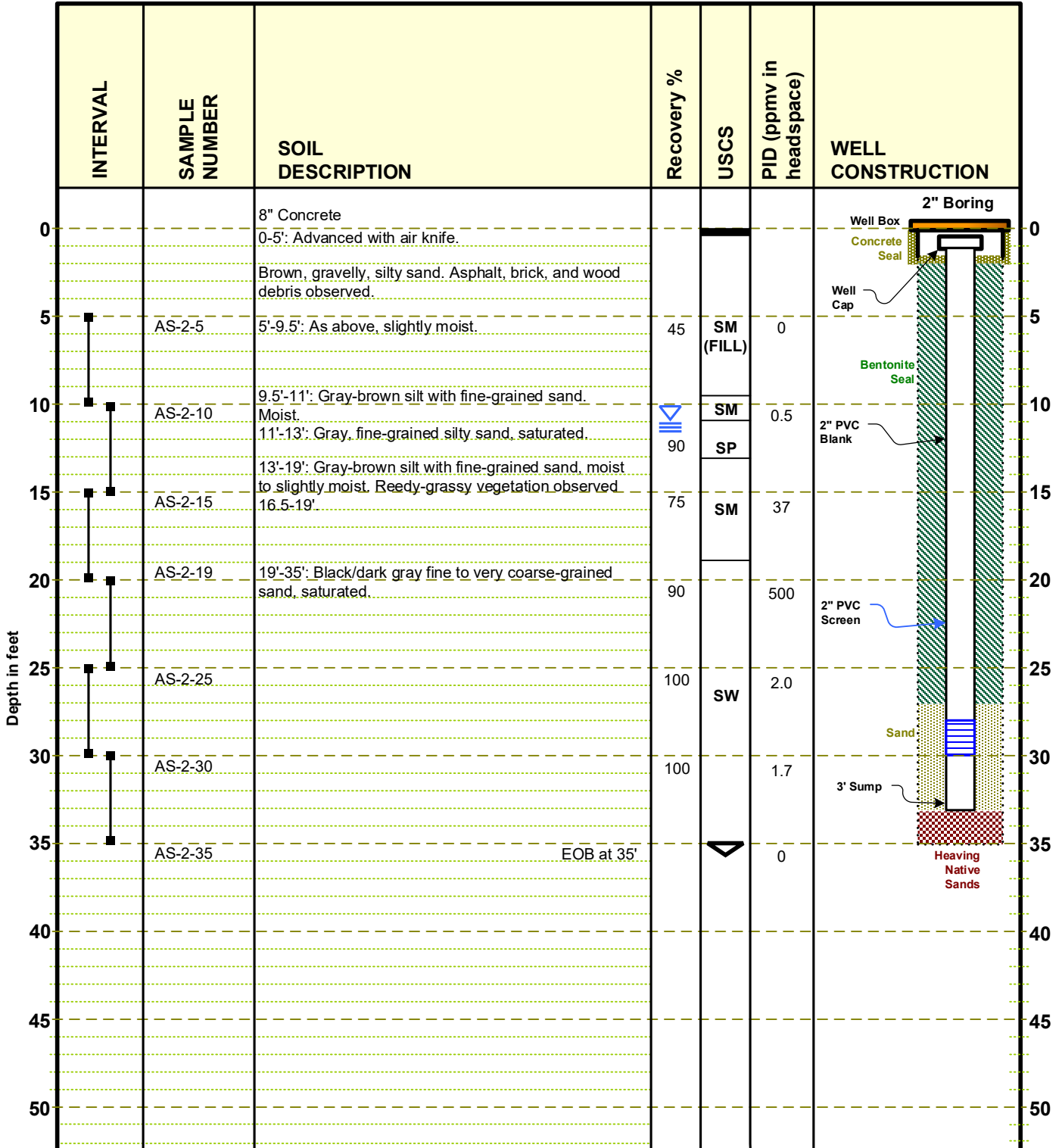
Drilling Method: Air Knife	Date: 4/11/2019	Other Information: 4"-diameter soil-vapor extraction well.
Drilling Company: ESN	Weather: Cool, Overcast, Windy	
Boring Diameter: Eight Inches	Page <u>1</u> of <u>1</u>	
Logged By: Zak Wall		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 Pacific Hwy S**  
**Tukwila, WA**

**SVE-1**





Drilling Method: Direct Push	Date: 4/10/2019
Drilling Company: ESN	Weather: Overcast, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	

**Other Information:**  
 Due to heaving sand, well was set at a depth of 33 feet below the ground surface.  
 Boring advanced with 2" direct push, then over-drilled with 5" auger.

	<b>Boring/Well Log</b> <b>Boeing Field Chevron</b> <b>10805 Pacific Hwy S</b> <b>Tukwila, WA</b>	<b>AS-2</b>
---	---	-------------

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		8" Concrete Surface 0-5': Advanced with air knife.				
5		See boring log for AS-2 for soil information.				
10		Groundwater at 11'	▽			
15		E.O.B. at 16 feet		▽		
20						
25						
30						

Drilling Method: Direct-Push	Date: 4/10/2019	Other Information:
Drilling Company: ESN	Weather: Cool, Overcast, Windy	
Boring Diameter: Four Inches	Page <u>1</u> of <u>1</u>	
Logged By: Zak Wall		

	<b>Boring/Well Log</b> <b>Boeing Field Chevron</b> <b>10805 Pacific Hwy S</b> <b>Tukwila, WA</b>	<b>AS-1</b>
--	---	-------------



INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		8" Concrete Surface				
0-5'		Advanced with air knife. Brown, silty sand with rounded gravel, slightly moist.			0	
5	TW-1-5	5'-9': Brown, medium to coarse-grained silty sand with trace rounded gravel, moist.	40	SM	0	
10	TW-1-9	Wet at 9' <span style="float: right;">E.O.B. at 9 feet</span>		▽		
15						
20						
25						
30						

Drilling Method: Direct-Push	Date: 4/11/2019	Other Information:
Drilling Company: ESN	Weather: Cool, Overcast, Windy	
Boring Diameter: Two Inches	Page <u>1</u> of <u>1</u>	
Logged By: Zak Wall		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 Pacific Hwy S**  
**Tukwila, WA**

**TW-1**

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		8" Concrete Surface				<p>2" Boring</p> <p>Well Box</p> <p>Well Cap</p> <p>Concrete Seal</p> <p>2" PVC Blank</p> <p>Bentonite Seal</p> <p>10/20 Sand</p> <p>2" PVC Screen</p>
0-5'		Advanced with air knife. Brown, silty sand with rounded gravel, slightly moist. Angular concrete debris throughout.				
5'	TW-2-5	8" PVC pipe obstructing hole at 4 feet. Moved 2 feet north.		SM	0	
5'-9'		As above, poor recovery.	<5		0	
10		E.O.B. at 9 feet				
15						
20						
25						
30						

Drilling Method: Direct-Push	Date: 4/11/2019	Other Information:
Drilling Company: ESN	Weather: Cool, Overcast, Windy	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 Pacific Hwy S**  
**Tukwila, WA**

**TW-2**



INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		8" Concrete Surface				
0-5'		Advanced with air knife. Brown, silty sand with rounded gravel, slightly moist.			2.1	
5'	TW-3-5	8"-thick layer of weak concrete encountered at 2.5'		SM		
5'-9'		Gravelly, very silty, medium-grained sand, very moist.	50		151	
10'	TW-3-9	E.O.B. at 9 feet				
15'						
20'						
25'						
30'						

Drilling Method: Direct-Push	Date: 4/11/2019	Other Information:
Drilling Company: ESN	Weather: Cool, Overcast, Windy	
Boring Diameter: Two Inches	Page <u>1</u> of <u>1</u>	
Logged By: Zak Wall		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 Pacific Hwy S**  
**Tukwila, WA**

**TW-3**

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in heads pace)	WELL CONSTRUCTION
0		Surface: Topsoil				2" Boring Backfilled with Bentonite
0-5'		0-5.5': Well-graded SILTY GRAVEL with sand (Fill); brown, moist.	10	GM		
5-9.5'		5.5-9.5': SILTY SAND; fine grain; dark-gray, moist.	80	SM	0.0	
9.5-12'	GLB-1-1025 16-10	9.5-12': Well-graded SAND; medium to coarse grain; dark-gray, moist.		SW		
12-13'		12-13': SILT with clay; brown-gray, wet.		ML		
13-14'	GLB-1-1025 16-13.5	13-14': Well-graded SAND; medium to coarse grain; dark-gray, wet.	100	SW	0.0	
14-16'		14-16': SILT; gray-brown, moist, some organics.			0.0	
16-17'		16-17': Organic matter	100	ML		
17-19'		17-19': SILT; gray-brown, moist, some organics.				
19-19.5'	GLB-1-1025 16-20	19-19.5': SILT with sand; fine grain; dark-gray, wet.			0.0	
19.5-30'		19.5-30': Well-graded SAND; medium to coarse grain; dark-gray, wet.	100	SW		
25'	GLB-1-1025 16-25				0.0	
30'	GLB-1-1025 16-30		100		0.0	

Drilling Method: Direct-Push	Date: 10/25/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-1</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in heads pace)	WELL CONSTRUCTION
0		Surface: Topsoil				2" Boring Backfilled with Bentonite
0-4.5'		Well-graded SILTY GRAVEL with sand (Fill); gray-brown, wet.	25	GM		
4.5-5'		SILT with sand; gray, wet.		ML		
5-6.5'		SILT with sand and gravel (slough); wet.				
6.5-7'		SILTY SAND; medium to coarse grain; gray.		SM	0.0	
7-8.5'		Well-graded SAND; medium to coarse grain; dark-gray, moist.	80	SW		
8.5-10'	GLB-2-1025 16-10	SILTY SAND; fine grain; dark-gray, moist, stiff.	100	SM	0.0	
10-12'		SILTY SAND; medium grain; gray-brown, wet.			0.0	
12-13.5'		SILT with clay and sand; wet.				
13.5-19.5'	GLB-2-1025 16-15	SILT with clay; gray-brown, moist, some organics.				
15-16'		Wet lens @ 16'	90	ML		
16-19.5'						
19.5-30'	GLB-2-1025 16-20	Well-graded SAND; medium to coarse grain; dark-gray, wet. 2" thick silt lens with organics @ 22.5'; dark-gray.	100		0.1	
20-25'	GLB-2-1025 16-25			SW	0.0	
25-30'	GLB-2-1025 16-30		100		0.0	
30		E.O.B. at 30 feet				

Drilling Method: Direct-Push	Date: 10/25/2016
Drilling Company: ESN Northwest	Weather: Cloudy, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	

Other Information:


	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>GLB-2</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Landscape gravel				2" Boring Backfilled with Bentonite
0-6'		Well-graded SILTY GRAVEL with sand (Fill); brown, moist, loose.	20	GM	0.0	
5		6-8.5': SILT with sand; gray, wet.	60	ML	0.0	
8.5-12.5'	GLB-3-20161025-10	SILTY SAND; medium to coarse grain; dark-gray, wet.		SM	0.0	
12.5-15'		SILT; trace sand; gray, moist, few organics.	100		0.0	
15		Wet lens @ 14-14.5"			0.0	
15-19'		SILT; trace sand; gray-brown, no odor, moist, some organics.	80	ML	0.0	
20		19-20': Well-graded SAND; medium to coarse grain; dark-gray, wet.			0.4	
20-25'	GLB-3-20161025-20	Well-graded SAND; medium to coarse grain; dark-gray, petroleum odor, wet.	100		2.1	
25		25-30': Well-graded SAND; medium to coarse grain; dark-gray to black, petroleum odor, wet.		SW	3.4	
30		30-35': Same as above, no petroleum odor.	100		0.3 0.0	
Depth in feet		E.O.B. at 35 feet				

Drilling Method: Direct-Push	Date: 10/25/2016
Drilling Company: ESN Northwest	Weather: Cloudy, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	

Other Information:

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>GLB-3</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Landscape gravel				2" Boring Backfilled with Bentonite
0-6.5'		Well-graded SILTY GRAVEL with sand (Fill); brown, no odor, moist.	60	GM	0.0	
6.5-9.5'		SILTY SAND; fine grain; gray, moist.	80	SM		
9.5-10.5'	GLB-4-102516-10	SILT with sand; gray, wet.	100	ML	0.0	
10.5-14.5'		SILTY SAND; fine grain, gray, wet.	100	SM	0.0	
14.5-15'	GLB-4-102516-15	SILT; trace fine grain sand; gray-green, no odor, moist.		ML	0.0	
15-16'		SILTY SAND; fine grain; gray, wet.		SM		
16-17'		SILT with sand; brown.		ML	0.0	
17-20'		SILTY SAND; fine grain; gray, wet.		SM		
20-35'	GLB-4-102516-20 GLB-4-102516-21	Well-graded SAND; medium to coarse grain; dark-gray, petroleum odor, strongest at 27.5', wet.	100		1.1	
	GLB-4-102516-25			SP	.0	
	GLB-4-102516-30 GLB-4-102516-35		100		1.0	
					0.0 0.0	
30	Depth in feet		E.O.B. at 35 feet			30

Drilling Method: Direct-Push	Date: 10/25/2016
Drilling Company: ESN Northwest	Weather: Cloudy, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	


Other Information:

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>GLB-4</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete Air Knife to 6'				2" Boring Backfilled with Bentonite
0-5'	GLB-5-102416-3	Well-graded SILTY GRAVEL with sand (Fill); brown, no odor, moist.	40	GM	0.0	
5-8'		SILTY SAND; fine grain; brown, no odor, moist.	80	SM	0.1	
8-9'	GLB-5-9	Well-graded SAND; medium grain; brown to dark-gray, moist.		SW	0.1	
10-13'	GLB-5-12	SILTY SAND; fine grain; gray-brown, wet.	90	SM	0.2	
13-14.5'		SILT; gray-brown, moist, some organics.				
@14.5'		SILT with sand; wet.				
15-18.5'	GLB-5-15	SILT with clay; brown-gray, moist, some organics.	80	ML	0.2	
18.5-25'	GLB-5-20	Well-graded SAND; medium to coarse grain; dark-gray, wet.			0.2	
25'	GLB-5-25		100	SW	0.2	
		E.O.B. at 25 feet				

Drilling Method: Direct-Push	Date: 10/27/2016
Drilling Company: ESN Northwest	Weather: Overcast, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	

Other Information:

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>GLB-5</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Asphalt Air Knife to 6'				2" Boring Backfilled with Bentonite
0-5'	GLB-6-102416-3	Well-graded SILTY GRAVEL with sand (Fill); brown, moist.	40	GM	0.0	
5-7'		SILTY SAND; fine grain; brown, no odor, moist.		SM	0.1	
7-8'	GLB-6-8	Well-graded SAND; medium grain; brown-gray, no odor, moist.	70		0.2	
10-11.5'	GLB-6-10	Well-graded SAND; medium to coarse grain; dark-gray, no odor, wet.	80	SW	35.4	
11.5-12'		SILTY SAND; fine grain; gray, wet.		SM		
12-16'		SILT with sand; gray, wet, some organics.				
16-18.5'	GLB-6-15	SILT with clay; brown-gray, grading to dark-gray sand @19'.	80	ML	0.3	
19-30'	GLB-6-20	Well-graded SAND; medium to coarse grain; dark-gray, no odor, wet.			0.2	
25-26'	GLB-6-25			SW	0.1	
30	GLB-6-30				0.0	

Drilling Method: Direct-Push	Date: 10/27/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Overcast, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		



**Boring**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Seattle, Washington**

**GLB-6**

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Asphalt Air Knife to 6'				2" Boring Backfilled with Bentonite
0-6'	GLB-7-102416-3	Well-graded SILTY GRAVEL with sand (Fill); brown, moist.		GM	0.0	
6-20'		No recovery, pushing a rock.	0			
10			0			
15			0			
20	GLB-7-102616-20 GLB-7-102616-22	Well-graded SAND; medium to coarse grain; dark-gray, petroleum odor, wet.	60	SW	12.2 23.8	
25					3.5 3.5	
30	GLB-7-102616-30 GLB-7-102616-35		100		1.9 0.0	
Depth in feet		E.O.B. at 35 feet				

Drilling Method: Direct-Push	Date: 10/26/2016
Drilling Company: ESN Northwest	Weather: Rain, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	


Other Information:

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>GLB-7</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 8" Air Knife to 6'				2" Boring Backfilled with Bentonite
	GLB-8-20161021-3	0-4.5': Well-graded SILTY GRAVEL with sand (Fill); brown, moist.		GM	0.0	
5	GLB-8-20161021-6	4.5-5.5': SILT with sand; brown, moist.		ML	0.0	
		5.5-10': SILTY SAND; brown, moist.	50	SM		
		10-13': SILTY SAND; medium grain; dark-gray, wet.				
10	GLB-8-20161024-11		90		0.1	
		13-18': SILT with sand; brown, moist, some wood and organics.		ML	0.0	
15	GLB-8-20161024-15		90	SM	0.1	
	GLB-8-20161024-18	18-19': SILTY SAND; gray.				
20		19-25': Well-graded SAND; medium to coarse grain; dark-gray, wet.	100	SW		
25	GLB-8-20161024-25				0.0	
		E.O.B. at 25 feet				
30	Depth in feet					

Drilling Method: Direct-Push	Date: 10/24/2016
Drilling Company: ESN Northwest	Weather: Overcast, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	

Other Information:

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>GLB-8</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Asphalt Air Knife to 6'				2" Boring Backfilled with Bentonite
0-6'	GLB-9-102416-3	Well-graded SILTY GRAVEL with sand (Fill); brown, wet.		GM	0.0	
5		Poor recovery; same as above	10		0.0	
10	GLB-9-102616-10	Poor recovery; same as above	20		0.0	
15		Poor recovery; same as above	0			
20		20-35': Well-graded SAND; medium to coarse grain; dark-gray, petroleum odor, wet.	100			
20-23'	GLB-9-102616-23			SW	25.6	
23-25'	GLB-9-102616-25				8.2	
25-30'	GLB-9-102616-30 GLB-9-102616-35		100		0.1 0.0	
30		E.O.B. at 35 feet				

Drilling Method: Direct-Push	Date: 10/26/2016
Drilling Company: ESN Northwest	Weather: Rain, Cool
Boring Diameter: Two Inches	Page 1 of 1
Logged By: Zak Wall	

Other Information:



**Boring**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Seattle, Washington**

**GLB-9**

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 7" Air Knife to 6'				2" Boring Backfilled with Bentonite
	GLB-10-20161021-3	0-6': Well-graded SILTY GRAVEL with sand (Fill); brown, moist.		GM	0.0	
5		6-7': Well-graded SAND with silt; medium to coarse grain; brown, wet.	▽	SW	0.0	
		7-9.5': SILT; brown-gray, moist.		ML		
		9.5-10': Well-graded SAND; medium to coarse grain; dark-gray, wet.		SW	0.0	
10	GLB-10-20161024-12	10-12.5': Well-graded SAND; medium grain; brown, wet.		ML	0.0	
		12.5-14.5': SILT; gray, no odor, moist.		SM		
		14.5-15': SILTY SAND; dark-gray, wet.		ML		
15		15-18': SILT; brown-gray, slight petroleum odor, moist, some wood.				
	GLB-10-20161024-20	18-25': Well-graded SAND; medium to coarse grain; dark-gray, slight petroleum odor @20', wet.			SW	
20						
	GLB-10-20161024-25	25-30': Well-graded SAND; medium to coarse grain; dark-gray to black, no odor, wet.				0.0
25						
30	GLB-10-20161024-30				0.0	


Depth in feet E.O.B. at 30 feet

Drilling Method: Direct-Push	Date: 10/24/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Partly Cloudy, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring Boeing Field Chevron 10805 East Marginal Way South Seattle, Washington</b>	<b>GLB-10</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Aspault/Concrete; 7" Air Knife to 6'				2" Boring Backfilled with Bentonite
0-5'	GLB-11-1024 16-3	Well-graded SILTY GRAVEL with sand (Fill); brown, moist.	50	GM	0.0	
5-12'	GLB-11-1026 16-7	Well-graded SAND with silt; fine to medium grain; brown, moist to wet @7.5'.	70	SW	0.2	
12-14'		Laminated SILT with sand (moist) and SILTY SAND (wet); fine grain; gray.	100	ML/ SM		
14-17.5'	GLB-11-1026 16-15	SILT with sand; brown-gray, some organics.			0.0	
17.5-18.5'	GLB-11-1026 16-18	SILTY SAND; fine grain; gray, wet.		ML	0.0	
18.5-30'		Well-graded SAND; medium to coarse grain; dark-gray, wet.		SM	0.0	
	GLB-11-1026 16-23		100	SW	0.0	
					0.0	
	GLB-11-1026 16-30		100		0.0	
30	Depth in feet		E.O.B. at 30 feet			30


Drilling Method: Direct-Push	Date: 10/26/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Rain, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-11</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				2" Boring Backfilled with Bentonite
		4"-3': SAND with concrete debris.		GM	0.0	
	GLB-12-20161021-3	3-4.5': GRAVELY SAND with silt; gray, moist.		GP	0.0	
		4.5': PEA GRAVEL				
5	GLB-12-20161021-6	5.5': Wood and concrete debris; slight petroleum odor.		ML		
		6-8': SILT with sand; gray.	25			
		8-10': GRAVELY SAND; coarse grain; globes of silt; gray, petroleum odor.		SM	9.5	
10	GLB-12-20161024-10	10-14': SILTY SAND; fine grain; wet.		SM		
			90			
	GLB-12-20161024-14	14-18': SILT with sand; brown-gray, odor, moist, some wood.		ML	0.3	
15			100			
	GLB-12-20161024-18	18-30': Well-graded SAND; medium to coarse grain; dark-gray, no odor, wet.			0.2	
20			0	SW		
	GLB-12-20161024-25				0.1	
25			100			
30	GLB-12-20161024-30	E.O.B. at 30 feet			0.0	

Drilling Method: Direct-Push	Date: 10/24/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Overcast, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-12</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 6" Air Knife to 3'				2" Boring Backfilled with Bentonite
	GLB-13-20161021-3	6"-3': Angular GRAVEL with sand (Fill); medium grain; brown, no odor, some debris.		GW		
		3-3.5': SILT; few sand; brown.		ML	0.0	
5	GLB-13-20161021-6	3.5-7': SILTY SAND; fine grain; brown, no odor, moist.			0.0	
		7-12': SILTY SAND; medium grain; brown-gray, moist to wet @10'.	75	SM	0.0	
10	GLB-13-102516-11				0.1	
		12-16': SILT; gray-brown, moist, some organics. @13': Layer of SAND ; fine grain; wet.	100			
	GLB-13-102516-15	16-17.5': SILTY with sand; gray, no odor, wet.		ML	0.3	
15					0.2	
	GLB-13-102516-20	17.5-30': Well-graded SAND; medium to coarse grain; dark-gray, wet.	100	SW	0.1	
20						
	GLB-13-102516-25				0.0	
25						
	GLB-13-102516-30	E.O.B. at 30 feet	100		0.0	
30	Depth in feet					

Drilling Method: Direct-Push	Date: 10/25/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Overcast, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-13</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 6" Air Knife to 6'				2" Boring Backfilled with Bentonite
		6"-2.5': Angular GRAVEL with cobbles and sand (Fill).		GW		
	GLB-14-20161024-3	2.5-10': SILTY SAND; fine to medium grain; brown, no odor, moist.			0.0	
5	GLB-14-20161024-6				0.0	
			75	SM		
	GLB-14-20161024-10	10-12.5': SILTY SAND; medium to coarse grain; wet.			0.0	
10	GLB-14-20161024-12.5	12.5-14.5': SILT with sand; gray-brown, moist.			0.0	
		14.5-17': SILT with sand; gray, moist.		ML		
	GLB-14-20161024-17	17-35': Well-graded SAND; medium to coarse grain; dark-gray, strong petroleum odor 17-20', slight odor at 21' (decreasing with depth), wet.	100		250	
20	GLB-14-20161024-22		90	SW	2.8	
	GLB-14-20161024-25				0.0	
25			60			
30	GLB-14-20161024-30	E.O.B. at 35 feet			0.0	

Drilling Method: Direct-Push	Date: 10/24/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Overcast, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		




**Boring**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Seattle, Washington**

**GLB-14**




INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 8" Air Knife to 6'				2" Boring Backfilled with Bentonite
		8"-2': Well-graded GRAVELY SAND with cobbles (Fill).	60	SW		
5	GLB-14-20161024-5	2-9': SILTY SAND with gravel; fine to medium grain sand; brown, no odor, moist.				
			80	SM	0.0	
10	GLB-15-20161024-9	9-12': Well-graded SAND; fine to medium grain; dark-gray, strong petroleum, odor moist to wet @ 10'.			25	
				SW		
	GLB-15-20161024-12	12-14': SILT with sand; gray, wet.	100	ML	7.8	
15		14-16': Well-graded SAND; fine to medium grain; dark-gray, wet.			30	
		16-18': SILT with clay and sand; brown, moist.	100	ML		
	GLB-15-20161024-18	18-30': Well-graded SAND; medium to coarse grain; dark-gray, wet.			68.7	
20						
			100	SW	21.0	
25	GLB-15-20161024-25				3.1	
			100			
30	GLB-15-20161024-30	E.O.B. at 30 feet			0.1	

Drilling Method: Direct-Push	Date: 10/24/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Overcast, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring Boeing Field Chevron 10805 East Marginal Way South Seattle, Washington</b>	<b>GLB-15</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Asphalt Air Knife to 6'				2" Boring Backfilled with Bentonite
	GLB-16-20161024-3				0.0	
5	GLB-16-20161024-6	5-12': SILTY SAND; fine to medium grain; brown, no odor, moist to wet @ 9'.	80	SM	0.0	
	GLB-16-20161024-9				0.0	
10	GLB-16-20161024-12	12-13.5': SILT with sand; gray-orange(oxidized), moist.	100	ML	0.0	
		13.5-14.5': SILTY SAND; fine grain; gray, wet.		SM		
		14.5-15': SAND; medium grain; dark-gray, wet.		SP		
15	GLB-16-20161024-16 GLB-FD-20161024-1	15-17.5': SILT with sand; brown, slight petroleum odor, moist, some wood.	100	ML	17.2	
	GLB-16-20161024-20	17.5-25': Well-graded SAND; medium to coarse grain; dark-gray, wet.			20.3	
20			90	SW		
25	GLB-16-20161024-25	E.O.B. at 25 feet			0.0	
30	Depth in feet					

Drilling Method: Direct-Push	Date: 10/24/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Overcast, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Zak Wall		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-16</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete: 6" Air Knife to 6'				2" Boring Backfilled with Bentonite
5	GLB-17-5	6"-10.5': SILTY SAND; fine grain; brown, no odor, moist.	30	SM	0.0	
10	GLB-17-10	Wet @ 10'. 10.5-13': Laminated SILT with clay, CLAY with silt, and SILT with sand; fine grain; gray, no odor, wet, some organics (11-11.5').	65	ML/CL	0.0	
15	GLB-17-15	13-15.5': SILTY SAND; fine grain; dark-gray, no odor, wet.	75	SM	0.0	
20	GLB-17-18	15.5-17.5': SILT with clay; gray-brown, no odor, wet, some organics.	100	ML	0.0	
25	GLB-17-23	17.5-30': Well-graded SAND; fine to medium grain turning medium to coarse grain with depth; dark-gray, no odor, wet.	100	SW	0.0	
30	GLB-17-28	E.O.B. at 30 feet	100		0.0	

Drilling Method: Direct-Push	Date: 11/21/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Cloudy, Cold	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-17</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete: 12" Air Knife to 6'				2" Boring Backfilled with Bentonite
		1-3': Well-graded SILTY GRAVEL with sand (Fill); gray, no odor, moist.	50	GM		
		3-12.5': SILTY SAND; fine grain; gray, no odor, moist.				
5	GLB-18-5				13.3	
			30	SM		
10	GLB-18-10	Wet @ 10'.			22.5	
		12.5-16.5': Laminated SILT with clay and CLAY with silt; brown-gray, no odor, moist, some organics.	80	ML/CL	17.3	
15	GLB-18-14					
		16.5-35': Well-graded SAND few silt; fine to medium grain turning medium to coarse grain with depth; dark-gray, petroleum odor (16.5-30'), wet.	100		20.5	
20	GLB-18-22					
			100	SW	18.5	
25						
			100			
30	GLB-18-30 GLB-18-35	Slight petroleum odor @ 35'.	100		33.9 16.9	

Depth in feet E.O.B. at 35 feet


Drilling Method: Direct-Push	Date: 11/18/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLB-18</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete: 18" Air Knife to 6'				2" Boring Backfilled with Bentonite
0-5		18"-5': Well-graded SILTY GRAVEL with sand (Fill); gray, no odor, moist, brick debris.	5	GM		
5	GLB-19-5	5-6': SILTY SAND; fine grain; gray, no odor, moist. 6-10': No Recovery. Wet @ 6'.	25	SM ?	4.7	
10	GLB-19-10	10-11': Well-graded SAND with silt; fine grain; dark-gray, no odor, wet. 11-13': Laminated SILT with sand (moist) and SILTY SAND (wet); fine grain; gray. 13-15.5': Well-graded SAND with silt; fine grain; dark-gray, petroleum odor, wet.	75	SW ML/ SM SW	26.3	
15	GLB-19-15				5.7	
15-20	GLB-19-16	15.5-18': Laminated SILT with clay and CLAY with silt; brown-gray, no odor, moist, some organics..	75	ML/ CL	16.5	
20	GLB-19-18				35.8	
20-25		18-30': Well-graded SAND; fine to medium grain turning medium to coarse grain with depth; dark-gray, petroleum odor decreasing with depth, wet.	100	SW		
25	GLB-19-25				38.4	
30	GLB-19-30		100		12.8	

Depth in feet E.O.B. at 30 feet

Drilling Method: Direct-Push	Date: 11/18/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Two Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring Boeing Field Chevron 10805 East Marginal Way South Seattle, Washington</b>	<b>GLB-19</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete				
0-6'		Well-graded SILTY GRAVEL with sand (Fill); brown, no odor, moist.	70	GM		
6-7.5'		SILTY SAND; fine grain; brown-gray, no odor, moist.	50	SM		
7.5-10'		No recovery.		?		
10-11'	MW-22-11	SILTY SAND; fine grain; brown-gray, no odor, wet.	90	SM		
11-13'		SILTY SAND; fine grain; gray, no odor, wet.		ML		
13-14'		SILT; gray-brown, moist, some organics. E.O.B. at 14 feet				
15						
20						
25						
30						

Drilling Method: Direct-Push	Date: 11/17/2016	Other Information: DOE Tag BJR-939 Sch. 80, 10 slot screen 11/18/16: H2O @ 10' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: 3.5 Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-22</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete				
0-5'		Well-graded SILTY GRAVEL with sand (Fill); brown, no odor, moist.	75	GM	0.0	
5-15'		No recovery.	0	?		
10			5			
15-18'	MW-23-16	Laminated SILT with sand and SILTY SAND; fine grain; gray, petroleum odor @17', wet.	100	ML/SM	0.0	
18-19.5'		Laminated SILT with clay and CLAY with silt; brown, petroleum odor, wet, some organics.		ML/CL		
19.5-20'	MW-23-20	Well-graded SAND; fine to medium grain; dark-gray, petroleum odor, wet.		SW	74.0	
		E.O.B. at 20 feet				
20						
25						
30						

Drilling Method: Direct-Push/HSA	Date: 11/17/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	DOE Tag BJR-940
Boring Diameter: Eight Inches	Page 1 of 1	Sch. 40, 10 slot screen
Logged By: Karis Vandehey		11/18/16: H2O @ 10.5' prior to development.

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-23</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Landscape Gravel (6") over Asphalt (6")				
1-7'		Well-graded SILTY GRAVEL with sand (Fill); brown, no odor, moist.	60	GM	0.0	
7-10'		No recovery.	30	?	0.0	
10-12'		Laminated CLAY with silt and SILT with sand; fine grain; gray, no odor, moist to wet.	75	ML/CL	0.0	
12-14'	MW-24-12	No recovery.				
		E.O.B. at 14 feet				
15						
20						
25						
30						

Drilling Method: Direct-Push	Date: 11/21/2016	Other Information: DOE Tag BJR-907 Sch. 80, 10 slot screen 11/21/16: H2O @ 12.5' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: 3.5 Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-24</b>
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PROJECT/PROJECT NO: <b>Boeing Field Chevron</b>	DRILLING DATE: <b>1/11/2018</b>	LOGGED BY: <b>ZW</b>
DRILLING CONTRACTOR: <b>ESN / Bravo</b>	BORING DIAMETER: <b>2"</b>	WEATHER: <b>Rain</b>
BORING/WELL ID: <b>MW-24D</b>	DRILLING METHOD: <b>Direct Push</b>	TOTAL DEPTH: <b>25'</b>
LOCATION: <b>Tukwila, Washington</b>		

NOTES:

PID baseline between 10 and 13

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0							0 Flush mounted 8" cover Concrete Seal
5	SILTY SAND with gravel, medium grained.	SM	50		10		
10	SILTY SAND, very fine grained, dark gray, moist to wet.		80		12	MW-24D-10'	10
15	CLAYEY SILT with fine sand, dark gray-green, moist.	ML	25		10		15 1" PVC Blank Bentonite Seal
20	SILTY SAND, very fine grained, dark gray-green, wet.	SM	80		13	MW-24D-20'	20 Sand Pack
25	SAND, medium to coarse grained, black, wet, slight petroleum odor.	SW	100		27	MW-24D-25'	25 1" O.D. Well Screen
30							30 Boring Terminated at 25 ft

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete				
1-4'		Well-graded SILTY GRAVEL with sand (Fill); brown, no odor, moist.	60	GM		
4-7'		Well-graded SAND with silt; fine to medium grain; brown, no odor, moist to wet @6.5'.		SM		
7-10'		No recovery.	75	?		
10-12'	MW-25-11	Laminated SILT with sand (moist) and SILTY SAND (wet); fine grain; brown and oxidized 10-10.5' then gray, no odor.	60	ML/SM	5.2	
12-14'		No recovery.				
		E.O.B. at 14 feet				
15						
20						
25						
30						

Drilling Method: Direct-Push	Date: 11/18/2016	Other Information: DOE Tag BJR-936 Sch. 80, 10 slot screen 11/21/16: H2O @ 10' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: 3.5 Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-25</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				<p>4.5" Boring</p> <p>10" Well Box</p> <p>Well Cap</p> <p>Concrete Seal</p> <p>Bentonite Seal</p> <p>2" PVC Blank</p> <p>2" PVC Screen</p> <p>Sand</p> <p>2" PVC Plug</p>
5		No samples collected. See MW-26D for soil information.				
10			▽			
15		E.O.B. at 12 feet		▽		
20						
25						
30						

30 Depth in feet

Drilling Method: Direct Push	Date: 11/21/2016	Other Information: DOE Tag BJR-906 Sch. 40, 10 slot screen 11/21/16: H2O @ 9' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: 4.5 Inches	Page <u>1</u> of <u>1</u>	
Logged By: Karis Vandehey		

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<p><b>MW-26S</b></p>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				<p>8" Boring</p> <p>10" Well Box</p> <p>Well Cap</p> <p>Concrete Seal</p> <p>Bentonite Seal</p> <p>2" PVC Blank</p> <p>2" PVC Screen</p> <p>Sand</p> <p>2" PVC Plug</p> <p>Casing</p>
5	MW-26D-5	5-10': SILTY SAND with gravel; fine-coarse grain; gray, no odor, moist to wet @ 8'.	75	SM	0.0	
10	MW-26D-10	10-11': SILTY SAND; fine grain; gray, slight odor, wet. 11-15': SILT with clay and sand; brown-gray, no odor, moist, some organics. 15-16.5': SILTY SAND; medium-coarse grain; gray, slight odor, wet.	80	ML	0.0	
15	MW-Z-16 MW-26D-16.5	16.5-30': Well-graded SAND; fine to medium grain turning medium to coarse grain with depth; dark-gray, no odor, wet.	45	SM	0.0	
20	MW-26D-20		80	SW	0.0	
25	MW-26D-25				0.0	
30	MW-26D-30	E.O.B. at 30 feet	100		0.0	

Drilling Method: Direct-Push/HSA	Date: 11/17/2016	Other Information: DOE Tag BJR-938 Sch. 40, 10 slot screen 11/21/16: H2O @ 12' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Eight Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-26D</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				<p>8" Boring</p> <p>10" Well Box</p> <p>Well Cap</p> <p>Concrete Seal</p> <p>Bentonite Seal</p> <p>2" PVC Blank</p> <p>2" PVC Screen</p> <p>Sand</p> <p>2" PVC Plug</p>
5		No samples collected. See MW-27D for soil information.				
10						
15						
20						
25						
30		E.O.B. at 12 feet				

Drilling Method: HSA	Date: 11/21/2016	Other Information: DOE Tag BJR-902 Sch. 40, 10 slot screen 11/21/16: H2O @ 8.5' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Eight Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>MW-27S</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				
6"-7'		GRAVELY SAND; medium-coarse grain; brown-gray, no odor, moist.		SW		
5	MW-27D-5	7-7.5': SILTY SAND; fine grain; brown (oxidized), no odor, wet. No recovery.	50	SM	0.0	
10	MW-27D-10	10-11': SILTY SAND; fine grain; dark-gray, no odor, wet. 11-12.5': Laminated SILT with clay and CLAY with silt; brown-gray, no odor, moist, some organics.	60	ML/CL	0.0	
15	MW-27D-15	12.5-14': Laminated SILT with sand and CLAY with silt; gray, no odor, wet. 14-30': Well-graded SAND; fine to medium grain turning medium to coarse grain with depth; dark-gray, no odor, wet.	20		0.0	
20	MW-27D-20 MW-V		75	SW	0.0	
25	MW-27D-25		75		0.0	
30	MW-27D-30	E.O.B. at 30 feet			0.0	

Drilling Method: Direct-Push/HSA	Date: 11/21/2016	Other Information: DOE Tag BJR-901 Sch. 40, 10 slot screen 11/21/16: H2O @ 13' prior to development.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Eight Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-27D</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				<p>4.5" Boring</p> <p>10" Well Box</p> <p>Well Cap</p> <p>Concrete Seal</p> <p>Bentonite Seal</p> <p>2" PVC Blank</p> <p>Sand</p> <p>2" PVC Screen</p> <p>2" PVC Plug</p>
5		No samples collected. See MW-28D for soil information.				
10		E.O.B. at 12 feet				
15						
20						
25						
30						

Drilling Method: Direct Push	Date: 11/18/2016	Other Information: DOE Tag BJR-935 Sch. 40, 10 slot screen 11/18/16: H2O @ 9'.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: 4.5 Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<p><b>Boring</b>  <b>Boeing Field Chevron</b>  <b>10805 East Marginal Way South</b>  <b>Seattle, Washington</b></p>	<b>MW-28S</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete; 4" Air Knife to 6'				
4"-7"		SILTY SAND; fine grain; brown, no odor, moist.	25		0.7	
5	MW-28D-5	Wet 6-6.5'; oxidized lens (1" thick) at approx. 6.5'	35	SM	0.7	
7-10'		No recovery.		?		
10	MW-278-10	10-11': Laminated SILT with clay and CLAY with silt; gray, no odor, moist to wet. @ 11': SILTY SAND; fine grain; dark-gray (oxidized).	25	ML/CL SM	3.9	
11-15'		No recovery.		?		
15	MW-28D-15	15-15.5': CLAY with silt; gray-brown, no odor, moist, some organics.	40	CL	2.9	
20	MW-28D-20 MW-Y	15.5-30': Well-graded SAND; fine to medium grain turning medium to coarse grain with depth; dark-gray, no odor, wet.	100	SW	7.5	
25			100			
30	MW-28D-30	E.O.B. at 30 feet			3.7	

Drilling Method: Direct-Push/HSA	Date: 11/18/2016	Other Information: DOE Tag BJR-937 Sch. 40, 10 slot screen 11/18/16: H2O @ 13'.
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: Eight Inches	Page 1 of 1	
Logged By: Karis Vandehey		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>MW-28D</b>
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PROJECT/PROJECT NO: <b>Boeing Field Chevron</b>	DRILLING DATE: <b>1/11/2018</b>	LOGGED BY: <b>ZW</b>
DRILLING CONTRACTOR: <b>ESN / Bravo</b>	BORING DIAMETER: <b>2"</b>	WEATHER: <b>Rain</b>
BORING/WELL ID: <b>MW-29S</b>	DRILLING METHOD: <b>Direct Push</b>	TOTAL DEPTH: <b>15'</b>
LOCATION: <b>Tukwila, Washington</b>		

NOTES:  
Air-Knifed to 10.5'

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0							0 Flush mounted 8" cover Concrete Seal
0 - 5	SILTY SAND with gravel, brown.	SM	0				Bentonite Seal
5 - 10	SAND, fine grained, dark gray-black, wet, slight petroleum odor.	SP	0				5 1" PVC Blank
10 - 15	SILT with organics, gray-brown, slightly moist.	ML	75			MW-29S-10'	10 1" O.D. Well Screen Sand Pack
15 - 30	SILT with organics, gray-brown, dry.					MW-29S-15'	15 Boring Terminated at 15 ft
20							20
25							25
30							30



PROJECT/PROJECT NO: <b>Boeing Field Chevron</b>	DRILLING DATE: <b>1/11/2018</b>	LOGGED BY: <b>ZW</b>
DRILLING CONTRACTOR: <b>ESN / Bravo</b>	BORING DIAMETER: <b>2"</b>	WEATHER: <b>Cloudy</b>
BORING/WELL ID: <b>MW-29D</b>	DRILLING METHOD: <b>Direct Push</b>	TOTAL DEPTH: <b>25'</b>
LOCATION: <b>Tukwila, Washington</b>		

NOTES:  
Air-knifed to 5'. PID baseline between 10 and 13 ppmv

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0							0 Flush mounted 8" cover Concrete Seal
0 - 5	SILTY SAND with cobbles and debris (asphalt), Air-Knifed.		0				
5		SM	30				5
5 - 10	SILTY SAND , fine to medium grained, dark brown, slightly moist.					MW-29D-10	
10			0				15
10 - 15							1" PVC Blank Bentonite Seal
15			0				15
15 - 20	No recovery						
20			0				20 Sand Pack
20 - 25							1" O.D. Well Screen
25							25 Boring Terminated at 25 ft
30							30





PROJECT/PROJECT NO: <b>Boeing Field Chevron</b>	DRILLING DATE: <b>1/11/2018</b>	LOGGED BY: <b>ZW</b>	
	DRILLING CONTRACTOR: <b>ESN / Bravo</b>	BORING DIAMETER: <b>2"</b>	WEATHER: <b>Rain</b>
BORING/WELL ID: <b>MW-30</b>	DRILLING METHOD: <b>Direct Push</b>	TOTAL DEPTH: <b>25'</b>	DEPTH TO WATER: <b>10'</b>
LOCATION: <b>Tukwila, Washington</b>			

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0							0 Flush mounted 8" cover Concrete Seal
5	SILTY SAND with gravel and brick, brown, medium grained.	SM	50		0.6		5
10	SILTY SAND, very fine to fine grained, moist to wet.		50		0.5	MW-30-10'	10
15	SILT with organics, slightly moist.	ML	100		0.6	MW-30-15'	15
20	SILTY SAND, fine to medium grained, dark gray, wet.	SM			9.4	MW-30-20'	20
25	SILT with clay, brown-gray.	ML	100				25
30	SAND, fine grained, increasing coarse grained with depth, black, slight petroleum odor.	SW			7	MW-30-25'	30

INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete, Airknife to 6'				
0-7.5	GLVP-1-102416-3	Well-graded SILTY GRAVEL with sand (Fill); brown, moist.		GM	0.0	
7.5-10	GLVP-1-102516-7				0.0	
10		E.O.B. at 7 feet				
15						
20						
25						
30						

Depth in feet

Drilling Method: Airknife, Hand Auger	Date: 10/25/2016	Other Information:
Drilling Company: ESN Northwest	Weather: Cloudy, Cool	
Boring Diameter: 4 inches	Page <u>1</u> of <u>1</u>	
Logged By: Zak Wall		

	<b>Boring</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Seattle, Washington</b>	<b>GLVP-1</b>
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INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0		Surface: Concrete, Airknife to 5'				
0-5	GLVP-2-102416-3	0-5': Well-graded SILTY SAND and GRAVEL with sand (Fill); brown, moist.			0.0	
5-9.5	GLVP-2-102516-7.5	5'-9.5': Gray-brown SILTY SAND, fine-to-medium-grained, moist.		SM	0.0	
9.5-10		9.5'-10': Dark gray coarse-grained SAND with SILT, saturated.		SP		
10		E.O.B. at 10 feet				
15						
20						
25						
30						

Drilling Method: Airknife, Hand Auger		Date: 10/25/2016	Other Information:
Drilling Company: ESN Northwest		Weather: Cloudy, Cool	
Boring Diameter: 4 inches		Page <u>1</u> of <u>1</u>	
Logged By: Zak Wall			

	<b>Boring Boeing Field Chevron 10805 East Marginal Way South Seattle, Washington</b>	<b>GLVP-2</b>
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BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Roots and landscaping debris in cuttings		SM		
2			Dark gray, slightly silty sand				
3		EW-1-5	No Odor	100			
3							
2		EW-1-10	Slight Odor	100			
2							
2							
10			Wet at 13 feet				
		EW-1-15	Silt layer, dark gray at 14 to 14.5 feet	100	ML		
15							
6		EW-1-20	Coarse wet black sand	100	SP		
4			No Odor				
8							
20							
3		EW-1-24	Coarse black sand				
4			No Odor				
5			End of Boring at 24.5 feet	100			
25							
30							

Drilling Method: HSA	Date: 3/17/08
Drilling Company: Cascade Drilling	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: R. Roberts	

Other Information:  
300 LB hammer, 3 inch sampler



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-1**



BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			No samples to 9 feet		SM		
1 1 1		EW-2-10	Dark brown, silty fine sand No Odor	100			
1 1 3		EW-2-14	Silt	100	ML		
3 3 1		EW-2-20	Wet black sand Slight Odor	100	SP		
4 9 12		EW-2-24	Coarse black sand End of Boring at 24.5 feet No Odor	100			

Drilling Method: HSA	Date: 3/17/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-2**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			No samples to 9 feet		SM		
1	2	EW-3-10	Dark brown, silty fine sand	100			
2	2						
2	2	EW-3-15	Clayey silt	100	ML		
2	2						
4	5	EW-3-20	Coarse wet black sand	100	SP		
5	6						
			Odor at 18 to 20 feet				
			No Odor at 20.5 to 23 feet				
			End of Boring at 23 feet				
30							

Drilling Method: HSA	Date: 3/17/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-3**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			No samples to 9 feet		SM		
3		EW-4-10	Light brown sand (with wood fragments) No Odor	100			
3		EW-4-15	Black silty sand (with wood fragments) No Silt layer, No Odor	100			
3					SP		
4		EW-4-20	Coarse black sand	100			
6			End of Boring at 23 feet				
12							
20							
25							
30							

Drilling Method: HSA	Date: 3/17/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-4**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Sand, gravel and cobbles in cuttings		SM		
5							
10		EW-5-10	Cobbles and sand with asphalt (Fill) No Odor	5			
15	3 2 2	EW-5-15	Silt Dark Gray-Black wet Sand	100	ML		
20	3 9 13	EW-5-20	Dark Gray-Black wet Sand Moderate Odor	100	SP		
25	3 3 2	EW-5-23	End of Boring at 23 feet	90			
30	Depth in feet						

Drilling Method: HSA	Date: 3/17/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-5**



BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			6 inch concrete		SM		
			Dark gray silty sand in cuttings				
1							
1		EW-6-10	Dark gray silty fine sand	100			
1			Slight Odor				
1			Silty clay		ML		
2		EW-6-15	Dark gray silty fine sand	100			
3			Slight Odor				
3			Silty clay				
6		EW-6-20	Coarse black sand	100	SP		
10			Gas Odor				
8			Same as above				
10		EW-6-24	Same as above	90			
12			End of Boring at 24.5 feet				
25							
30							

Drilling Method: HSA	Date: 3/18/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-6**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			6 inch concrete				
			Dark gray sand with gravel and cobbles in cuttings		SM		
6							
6							
6							
8							
10	6 6	EW-7-10	Dark gray gravely sand	70			
			No Odor				
15	2 2						
					ML		
15	2 2	EW-7-15	Clayey silt	100			
			Dark gray silty fine sand		SP		
20	4 5						
20	5 6	EW-7-20	Wet, coarse, dark gray sand	100			
			Odor				
25	5 6						
25	13	EW-7-25	End of Boring at 25.5 feet	100			
			No Odor				
30							

Drilling Method: HSA	Date: 3/18/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-7**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Sand, gravel, cobbles in cuttings		SM		
5							
10	50/6	EW-8-10	Dark gray gravelly sand with cobble in sample No Odor	30			
15	3/3/3	EW-8-15	Dark gray gravelly sand with odor at 14.5 feet Sandy silt, brown, with organics	100	ML		
20	3/4/5	EW-8-20	Dark gray, wet coarse sand Odor at 19 feet	100			
25	3/4/4	EW-8-25	Same as above No Odor at 25 feet	100			
30	Depth in feet						

Drilling Method: HSA	Date: 3/18/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-8**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			6 inch concrete				
			Sand, gravel, cobbles in cuttings		SM		
5							
11 9 8		EW-9-10	Wet gray gravelly sand	100			
			Gray sandy silt and fine sand				
2 2 2		EW-9-15	Peaty brown silt	80	ML		
20 5 5		EW-9-20	Black coarse sand, odor 15.5 to 20 feet	90	SP		
25 5 6 6		EW-9-25	End of Boring at 25.5 feet	100			
30							

Drilling Method: HSA	Date: 3/18/08	Other Information:
Drilling Company: Cascade Drilling	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**EW-9**



BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		<p>8" Dia. Seal 2" Dia. Boring</p> <p>Well Box Locking Well Cap</p> <p>Bentonite Seal</p> <p>2" SS Blank</p> <p>10/20 Sand</p> <p>2" 0.020 Slot SS Well Screen</p>
5			Silty Sand				
10			Moderate Odor, Wet				
15			Silt with organics		ML		
20			Coarse wet black sand Strong Odor	100	SP		
25			Coarse black sand				
30			End of Boring at 26 feet No Odor				

Drilling Method: HSA	Date: 4/19/06
Drilling Company: NW Probe	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

Other Information:  
Soils logged by Urban Redevelopment



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**IP-3**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		
5			Silty Sand				
10			Strong Odor, Wet				
15			Silt with organics		ML		
20			Coarse wet black sand	100	SP	3480	
25			Coarse black sand			530	
30			End of Boring at 24 feet				
			No Odor				

Drilling Method: HSA	Date: 4/19/06
Drilling Company: NW Probe	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

Other Information:  
Soils logged by Urban Redevelopment



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**IP-4**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		8" Dia. Seal 2" Dia. Boring Well Box Locking Well Cap
5			Silty Sand				Bentonite Seal
10			Moderate Odor, Wet				2" SS Blank
15			Silt with organics		ML		10/20 Sand
20			Strong Odor 19-22 feet Coarse wet black sand	100	SP	5000	2" 0.020 Slot SS Well Screen
25			End of Boring at 26 feet No Odor			286	
30	Depth in feet						

Drilling Method: HSA	Date: 4/26/06
Drilling Company: NW Probe	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

Other Information:  
Soils logged by Urban Redevelopment



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**IP-5**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		
5			Gravelly Fill				
10							
15			Silt with organics		ML		
20			Coarse wet black sand	100	SP		
25			End of Boring at 24 feet				
30							

Drilling Method: HSA	Date: 8/4/06
Drilling Company: Cascade	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

Other Information:  
Soils logged by Urban Redevelopment



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**IP-6**



BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		
6							
7			Black Sand with Gravel			7.5	
6							
2			Peaty Clay Silt		CL	4.1	
2					ML		
6						1500	
13			Strong Odor 18 to 19 feet	100	SP	3000	
13						390	
			Coarse wet black sand			300	
		IP7-22				5	
			End of Boring at 24.5 feet				
25							
30							

Drilling Method: HSA	Date: 8/4/06	Other Information:
Drilling Company: Cascade	Weather: Overcast, Rain	
Boring Diameter: 8-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**IP-7**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Asphalt				
5			Old asphalt layer at 3 feet				
10			Vacuum extract to 10.5 feet by APS Water at 10 feet				
15		MW 18-15	Light brown wet silt Dark gray wet silt (grades to clayey silt)	100	ML	0.0	
15			No Odor		CL		
20		MW 18-20	Wet dark gray sand	100	SP	0.0	
20			End of Boring at 20 feet				
25							
30							

Drilling Method: Probe, Vacuum	Date: 4/16/2008	Other Information:
Drilling Company: NW Probe, APS	Weather: Overcast, Rain	
Boring Diameter: 8-inches, 2-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**MW-18**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Asphalt				<p>8" Dia. Seal 2" Dia. Boring</p> <p>Well Box Locking Well Cap Concrete Seal Bentonite Seal</p> <p>1" PVC Blank 10/20 Sand 1" 0.020 Slot PVC Well Screen</p>
			Old asphalt layer at 2 feet				
5			Vacuum extract to 10.5 feet by APS				
			Light gray silt and clay		ML	0.0	
15		MW 19-15	Wet black sand	100	SP	0.0	
		MW 19-20	End of Boring at 20 feet	100			
20							
25							
30							

Drilling Method: Probe, Vacuum	Date: 4/16/2008	Other Information:
Drilling Company: NW Probe, APS	Weather: Overcast, Rain	
Boring Diameter: 8-inches, 2-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**MW-19**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Asphalt				<p>8" Dia. Seal 2" Dia. Boring</p> <p>Well Box Locking Well Cap Concrete Seal Bentonite Seal 1" PVC Blank 10/20 Sand 1" 0.020 Slot PVC Well Screen</p>
			Old asphalt layer at 2 feet				
5			Vacuum extract to 10.5 feet by APS				
10			Silt with wood fibers		ML	0.0	
15		MW 20-16	No Odor	25			
			Fine black/gray sand at 15.5 feet		SP	0.0	
			Coarse Black Sand with wood fragments				
20		MW 20-20	No Odor	100			
			End of Boring at 20 feet				
25							
30							

Drilling Method: Probe, Vacuum	Date: 4/16/2008	Other Information:
Drilling Company: NW Probe, APS	Weather: Overcast, Rain	
Boring Diameter: 8-inches, 2-inches	Page 1 of 1	
Logged By: R. Roberts		



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**MW-20**



BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0			Asphalt				
			Old asphalt layer at 3 feet				
5			Clay at 8 feet				
			Vacuum extract to 9.5 feet by APS				
10			Wet gray silt	100	ML		
			Grades to silty clay				
			Gray clay		CL		
15		MW 21-17	Gray clay			0.0	
			Wet black sand	100	SP	0.0	
20		MW 21-20					
		No sample	End of Boring at 22 feet				
25							
30							

Drilling Method: Probe, Vacuum	Date: 4/16/2008
Drilling Company: NW Probe, APS	Weather: Overcast, Rain
Boring Diameter: 8-inches, 2-inches	Page 1 of 1
Logged By: R. Roberts	

Other Information:  
 Well casing is at a slight angle due to non-vertical pothole from 0 to 10 feet. Therefore, groundwater depth measurements may be inaccurate.



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**MW-21**

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0							No Well
					SM		
5			Silty Sand				
			No Odors				
10						0	
15			Silt with organics		ML		
20			Coarse wet black sand	100	SP	65	
			Slight Odor				
25			Coarse black sand			0	
			End of Boring at 24 feet				
			No Odor				
30							

Drilling Method: HSA	Date: 4/18/06
Drilling Company: NW Probe	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

Other Information:  
Soils logged by Urban Redevelopment



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

P-1

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0							No Well
					SM		
5			Silty Sand				
			No Odors				
10						0	
15			Silt with organics		ML		
						3000	
20			Coarse wet black sand		SP	1800	
			Strong Odor 18 to 22 feet			960	
			End of Boring at 24 feet				
			Less Odor				
25							
30							

Drilling Method: HSA	Date: 4/18/06
Drilling Company: NW Probe	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

Other Information:  
Soils logged by Urban Redevelopment




**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

P-2

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		No Well
5			Silty Sand No Odors				
10						0	
15			Silt with organics		ML		
20			Coarse wet black sand Strong Odor 19 to 22 feet		SP	5000	
25			End of Boring at 24 feet Less Odor		▼	286	
30							

Drilling Method: HSA		Date: 4/18/06	Other Information: Soils logged by Urban Redevelopment
Drilling Company: NW Probe		Weather: Overcast, Rain	
Boring Diameter: 8-inches		Page 1 of 1	
Logged By: J. Funderburk			

	<b>Boring/Well Log</b> <b>Boeing Field Chevron</b> <b>10805 East Marginal Way South</b> <b>Tukwila, WA</b>	<b>P-5</b>
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BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
0					SM		No Well
5			Silty Sand No Odors				
10						0	
15			Silt with organics		ML		
20			Coarse wet black sand Strong Odor 18 to 22 feet		SP	4000	
25			End of Boring at 24 feet Less Odor			40	
30							

Drilling Method: HSA	Date: 4/18/06
Drilling Company: NW Probe	Weather: Overcast, Rain
Boring Diameter: 8-inches	Page 1 of 1
Logged By: J. Funderburk	

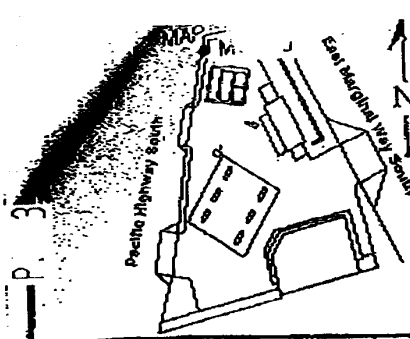
Other Information:  
Soils logged by Urban Redevelopment



**Boring/Well Log**  
**Boeing Field Chevron**  
**10805 East Marginal Way South**  
**Tukwila, WA**

**P-8**

No. 1966  
 2006-8:51AM Northwest Regional Office



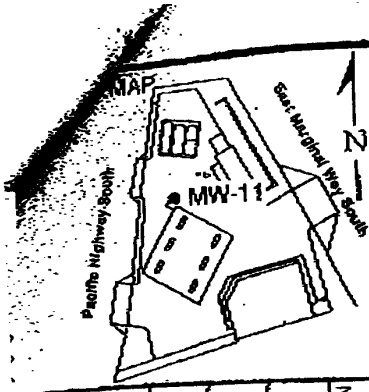
**PACIFIC ENVIRONMENTAL GROUP, INC.**  
 PROJECT NO. 520-132.1B  
 LOGGED BY: MM  
 DRILLER: HAYES  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: SPLIT SPOON  
 CASING TYPE: SCH 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 10x 20 SAND

CLIENT: CHEVRON  
 DATE DRILLED: 9/3/97  
 LOCATION: E Marginal Way S, Tukwila  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 21.5'  
 WELL DIAMETER: 2"  
 WELL DEPTH: 20'  
 CASING STICKUP: NA

WELL NO.: MW-10  
 PAGE 1 OF 1

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2		[Hatched pattern]	SC	PLANTER: bark surface.
				4		[Hatched pattern]		
	Mst	2	8	6		[Hatched pattern]		CLAYEY SAND: very dark brown; 30% fines; very fine sand; trace organics; loose; no hydrocarbon odor.
				8		[Hatched pattern]		
				10		[Dotted pattern]	SP	
	Wt	5	5	*12		[Hatched pattern]	CH	SAND: very dark brown; trace fines; fine sand; loose no hydrocarbon odor.
				14		[Hatched pattern]		CLAY: dark olive gray; high plasticity; abundant organics; trace iron oxide staining; firm; no hydrocarbon odor.
				16		[Hatched pattern]		
				18		[Dotted pattern]	SP	
	Wt	0	49	20		[Dotted pattern]		SAND: very dark gray; 5% fines; very fine to fine sand; dense; no hydrocarbon odor.
				22		[Dotted pattern]		
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

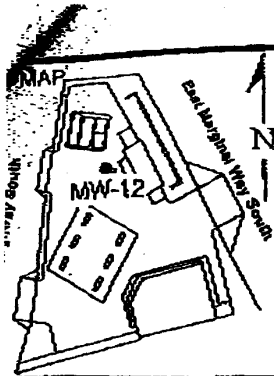
BOTTOM OF BORING AT 21.5'



**PACIFIC ENVIRONMENTAL GROUP, INC.** WELL NO.: MW-11  
 PAGE 1 OF 1

PROJECT NO. 520-132.1B CLIENT: CHEVRON  
 LOGGED BY: MM DATE DRILLED: 9/3/97  
 DRILLER: HAYES LOCATION: E Marginal Way S, Tukwila  
 DRILLING METHOD: HSA HOLE DIAMETER: 8"  
 SAMPLING METHOD: SPLIT SPOON HOLE DEPTH: 21.5'  
 CASING TYPE: SCH 40 PVC WELL DIAMETER: 2"  
 SLOT SIZE: 0.020" WELL DEPTH: 20'  
 GRAVEL PACK: 10x 20 SAND CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT BENTONITE SAND	Dp	0	11	2		SP	CONCRETE: surface
	Wt		>50	4			SAND: dark grayish brown; trace fines; very fine to fine sand; 5% gravel; medium dense; no hydrocarbon odor.
	Wt	0	41	20			@ 11.5': no sample recovery; gravel. @ 13': no sample recovery.  @ 20.0': as above; black; 5% fines; fine sand; dense; no hydrocarbon odor.
				22			BOTTOM OF BORING AT 21.5'
				24			
				26			
				28			
				30			
				32			
				34			
				36			
				38			
				40			
				42			
				44			



**PACIFIC ENVIRONMENTAL GROUP, INC.**

WELL NO.: MW-12  
PAGE 1 OF 1

PROJECT NO. 520-132.1B  
LOGGED BY: MM  
DRILLER: HAYES  
DRILLING METHOD: HSA  
SAMPLING METHOD: SPLIT SPOON  
CASING TYPE: SCH 40 PVC  
SLOT SIZE: 0.020"  
GRAVEL PACK: 10x 20 SAND

CLIENT: CHEVRON  
DATE DRILLED: 9/3/97  
LOCATION: E Marginal Way S, Tukwila  
HOLE DIAMETER: 8"  
HOLE DEPTH: 21.5'  
WELL DIAMETER: 2"  
WELL DEPTH: 20'  
CASING STICKUP: NA

DEPTH (FEET)	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
0				0		SM	CONCRETE: surface
2				2		SM	SILTY SAND: dark brown; 30% fines; very fine sand; loose; gravel and cobbles above 4 feet; no hydrocarbon odor.
4			8	4	*	SM	
6	Dp	0		6	*	SM	
8				8		SM	
10	Wt	0	6	10	*	SM	@ 9.0': as above; black; 10% fines; very fine sand; loose; no hydrocarbon odor.
12				12		CL	
14				14		CH	CLAY: gray; moderate to high plasticity; abundant organics; firm; no hydrocarbon odor.
16	Wt	0	3	16		CH	@ 16.0': as above.
18				18		CH	
20	Wt	0	41	20		SP	SAND: black; trace fines; very fine to fine sand; trace coarse sand; dense; no hydrocarbon odor.
22				22		SP	
24				24		SP	
26				26		SP	
28				28		SP	
30				30		SP	
32				32		SP	
34				34		SP	
36				36		SP	
38				38		SP	
40				40		SP	
42				42		SP	

BOTTOM OF BORING AT 21.5'



# BORING LOG B1/MW13

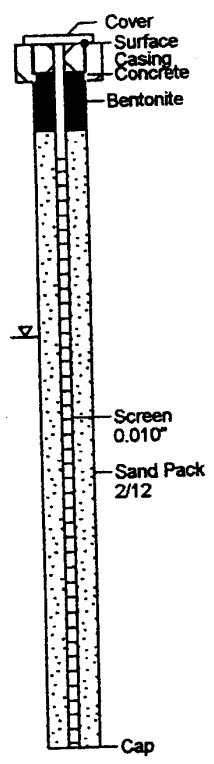
(Page 1 of 1)

Date Drilled: : 07/16/04  
 Drilling Co.: : Cascade Drilling, Inc.  
 Drilling Method: : Hollow stem auger  
 Sampling Method: : 140lb Split spoon  
 Borehole Diameter: : 8"  
 Casing Diameter: : 2"  
 Location N-S :  
 Location E-W :  
 Total Depth: : 24'  
 First GW Depth: : 10'

Project No.: : 31200  
 Site: : Boeing Field Chevron, Seattle, WA  
 Logged By: : John H. McCortide  
 Reviewed By: : John K. Meyer, R.G., L.H.G.  
 Signature: : \_\_\_\_\_

Depth (ft)	Blow Count	OVM/PIID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION
						<input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Sampled Interval <input type="checkbox"/> Described Sample <input type="checkbox"/> Preserved Sample	<input checked="" type="checkbox"/> After Completion <input type="checkbox"/> During Drilling 07/16/04	
0								Cleared by air knife to 8 feet by Cascade
5	50/4	320	<input checked="" type="checkbox"/>		SP			SAND: Poorly Graded, fine- to medium-grained, brown, moist, with rounded gravel
10	11/14	20	<input checked="" type="checkbox"/>					CLAYEY-SILT: gray to brown, very wet, with some fine-grained sand
15	6/12	20	<input checked="" type="checkbox"/>		SM/ML			CLAYEY-SILT: gray to brown, wet, with organics
20	22/50	0	<input checked="" type="checkbox"/>					CLAYEY-SILT: gray to brown, saturated, with fine-grained sand
25					SW			SAND: Well Graded, very fine- to coarse-grained, gray, saturated

Well: MW13  
 Elev.: \_\_\_\_\_



10-18-2004 F:\91200-Boeing Field Chevron\91200B1\MW13.bor



ENVIRONMENTAL SOLUTIONS, INC.

# BORING LOG B2/MW14

(Page 1 of 1)

31200  
 : Boeing Field Chevron, Seattle, WA  
 : John H. McCorkle  
 : John K. Meyer, R.G., L.H.G.

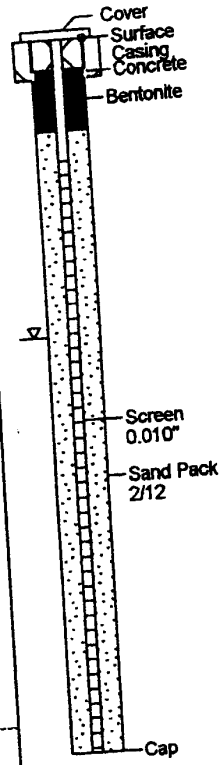
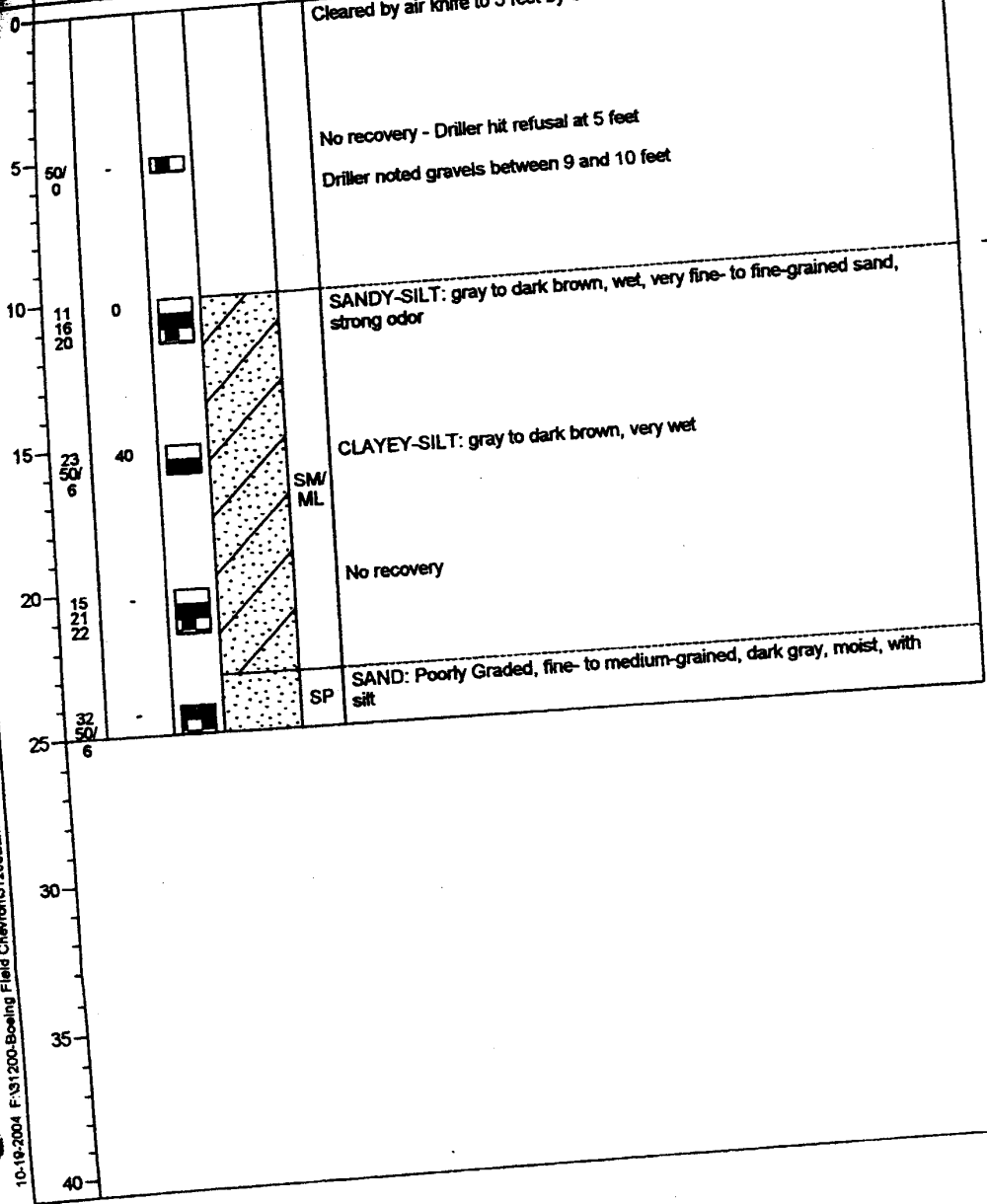
Date Drilled: : 07/16/04  
 Drilling Co.: : Cascade Drilling, Inc.  
 Drilling Method: : Hollow stem auger  
 Sampling Method: : 140lb Split spoon  
 Borehole Diameter: : 8"  
 Casing Diameter: : 2"  
 Location N-S :  
 Location E-W :  
 Total Depth: : 24'  
 First GW Depth: : 10'

Blow Count	OVMPID (ppmv)	Sample	Column	USCS	DESCRIPTION
------------	---------------	--------	--------	------	-------------

Sample Condition  
 No Recovery  
 Sampled Interval  
 Described Sample  
 Preserved Sample

Water Levels  
 ▽ After Completion  
 ▽ During Drilling 07/16/04

Well: MW14  
 Elev.:



10-19-2004 F:\31200-Boeing Field Chevron\31200B2\MW14.bor



# BORING LOG B1/MW15

(Page 1 of 1)

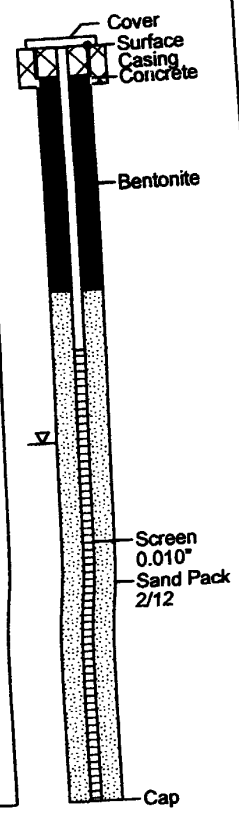
Date Drilled: : 08/26/05  
 Drilling Co.: : Cascade Drilling, Inc.  
 Drilling Method: : 6" Hollow stem auger  
 Sampling Method: : 18" SS/140lb hammer  
 Borehole Diameter: : 10"  
 Casing Diameter: : 2"  
 Location N-S : Mid central west planter  
 Location E-W :  
 Total Depth: : 25'  
 First GW Depth: : 13'

Project No.: : 31200  
 Site: : Boeing Field Chevron, Seattle, WA  
 Logged By: : John H. McCorkle  
 Reviewed By: : Heather K. Vick, R.G., L.H.G.  
 Signature: \_\_\_\_\_

Depth (ft)	Blow Count	OVM/PIID (ppmv)	Sample	Column	USCS	DESCRIPTION	Sample Condition		Water Levels	
							No Recovery	Sampled Interval	Described Sample	Preserved Sample

0						Cleared by air knife to 4 feet by Cascade				
27.2	1 2				SP	SAND, poorly graded, brown to gray; very fine- to fine-grained with silt; moist				
0.7	NNN				SP	SAND, poorly graded; brown to gray; very fine- to fine-grained, with silt and some gravel; wet				
12.6	2 2				SP	SAND, poorly graded, brown to gray, with silt and clay; saturated				
7.9	3 4 7				SP	SAND, poorly graded, dark gray, very fine-grained with silt and some organics (wood debris); wet				
-	2 8				SP	SAND, poorly graded, dark gray; very fine- to medium-grained; with silt, saturated				

Well: MW15  
 Elev.: \_\_\_\_\_



12-28-2005 F:\31200-Boeing Field Chevron\31200B2\MW15.bor



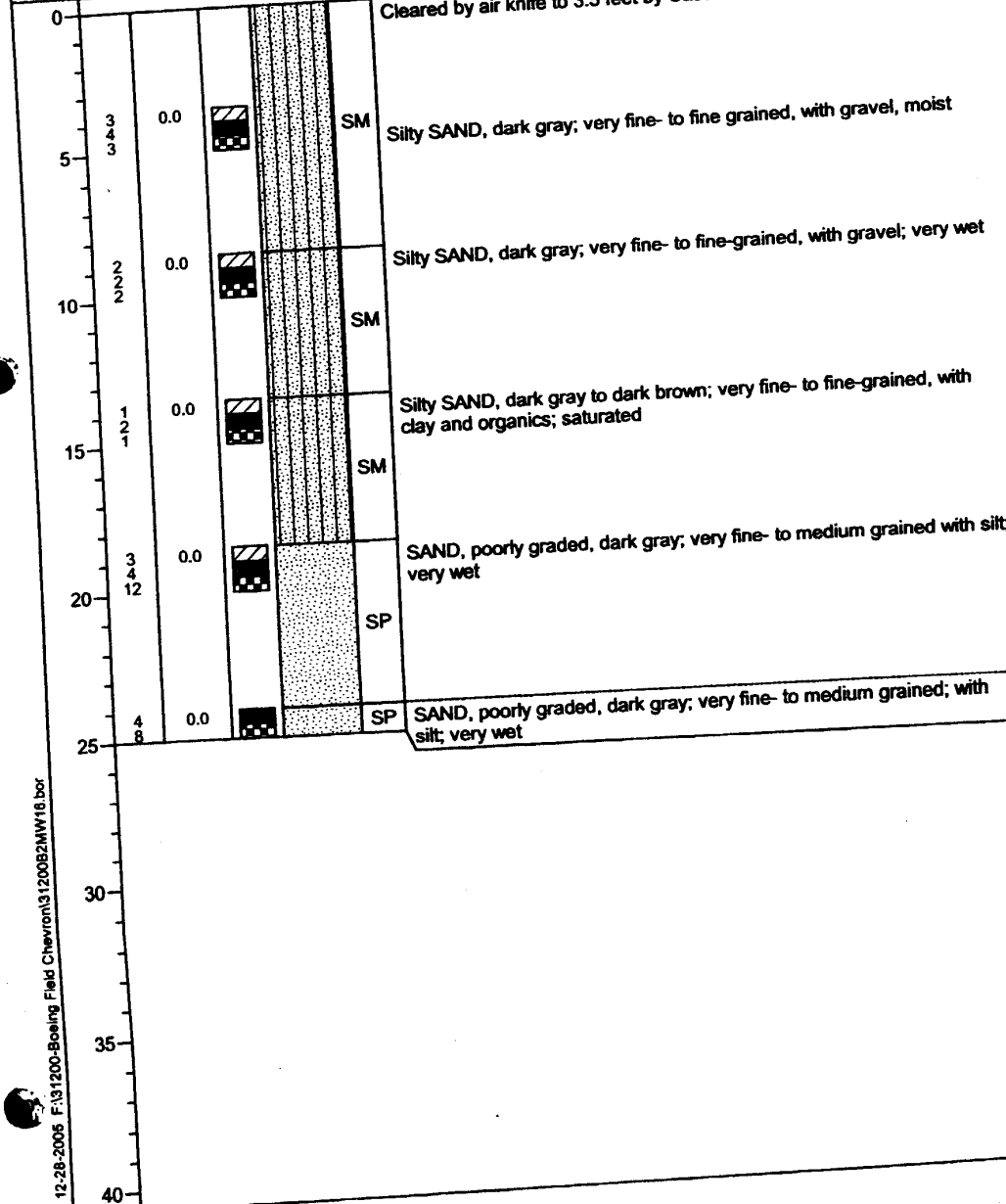
# BORING LOG B2/MW16

(Page 1 of 1)

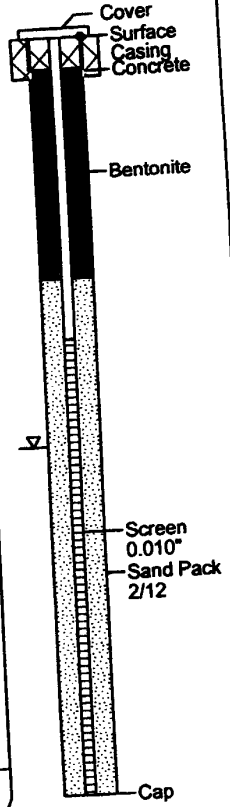
Date Drilled: : 08/26/05  
 Drilling Co.: : Cascade Drilling, Inc.  
 Drilling Method: : 6" Hollow stem auger  
 Sampling Method: : 18" SS/140lb hammer  
 Borehole Diameter: : 10"  
 Casing Diameter: : 2"  
 Location N-S : Side of NW planter  
 Location E-W :  
 Total Depth: : 25'  
 First GW Depth: : 13.5'

Project No.: : 31200  
 Site: : Boeing Field Chevron, Seattle, WA  
 Logged By: : John H. McCorkle  
 Reviewed By: : Heather K. Vick, R.G., L.H.G.  
 Signature: :

Depth (ft)	Blow Count	OVM/PIID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						No Recovery Sampled Interval Described Sample Preserved Sample	After Completion During Drilling 08/26/05



Well: MW16  
 Elev.:



12-25-2006 F:\31200-Boeing Field Chevron\31200B2MW16.bor



# BORING LOG B12/MW17

(Page 1 of 1)

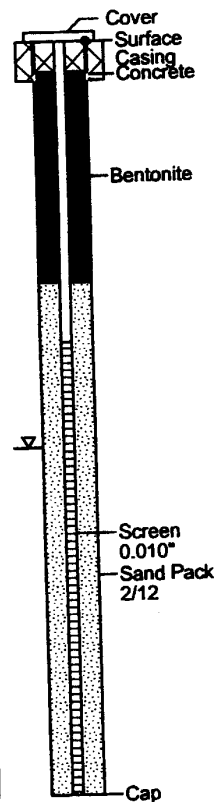
Date Drilled: : 08/26/05  
 Drilling Co.: : Cascade Drilling, Inc.  
 Drilling Method: : 6" Hollow stem auger  
 Sampling Method: : 18" SS/140lb hammer  
 Borehole Diameter: : 10"  
 Casing Diameter: : 2"  
 Location N-S : Side of NW planter  
 Location E-W :  
 Total Depth: : 25'  
 First GW Depth: : 13.5'

Project No.: : 31200  
 Site: : Boeing Field Chevron, Seattle, WA  
 Logged By: : John H. McCorkle  
 Reviewed By: : Heather K. Vick, R.G., L.H.G.  
 Signature: :

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels
						No Recovery Sampled Interval Described Sample Preserved Sample	After Completion During Drilling 08/26/05
DESCRIPTION							

0						Cleared by air knife to 8.5 feet by Cascade
5					SP	Cuttings: SAND, poorly graded, light brown, fine- to coarse-grained, with gravel; moist
10	3 5	0.0			SP	SAND, light brown; very fine- to fine-grained, moist
15	2 2 2	0.0			ML	SILT, light brown, with sand and clay; wet
20	5 6 8	4.4			SP	SAND, poorly graded, dark gray; very fine- to medium grained with silt; saturated
25	11 12	-			SP	SAND, poorly graded, dark gray; very fine- to coarse-grained; with silt; saturated
30						
35						
40						

Well: MW17  
 Elev.:



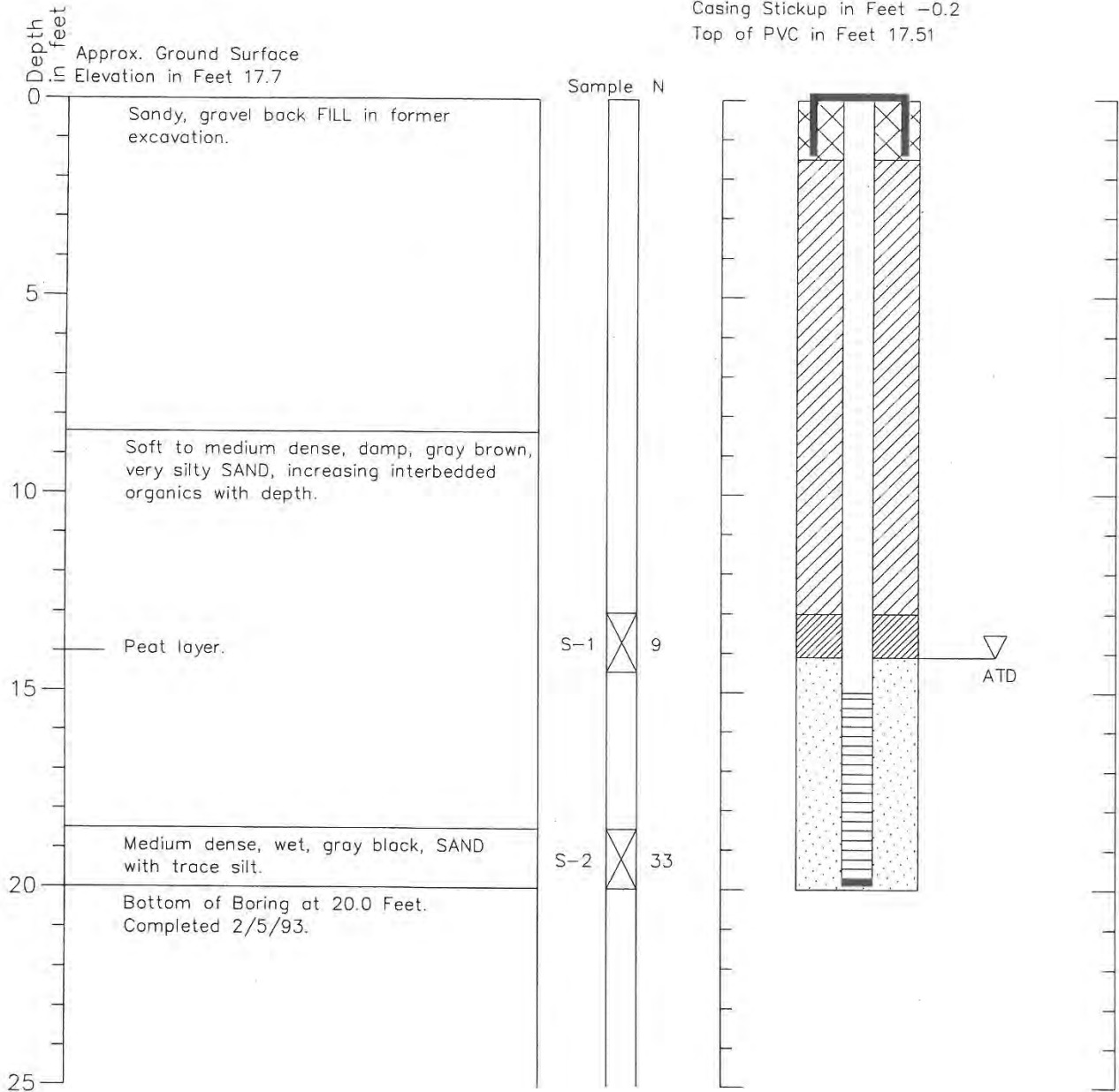
12-28-2005 F:\31200-Boeing Field Chevron\31200B2\MW17 bor

# Boring Log and Construction Data for Monitoring Well MW-2R

## Geologic Log

## Monitoring Well Design

Casing Stickup in Feet -0.2  
Top of PVC in Feet 17.51



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

**HARTCROWSER**  
J-3076-01 2/93

Figure A-2

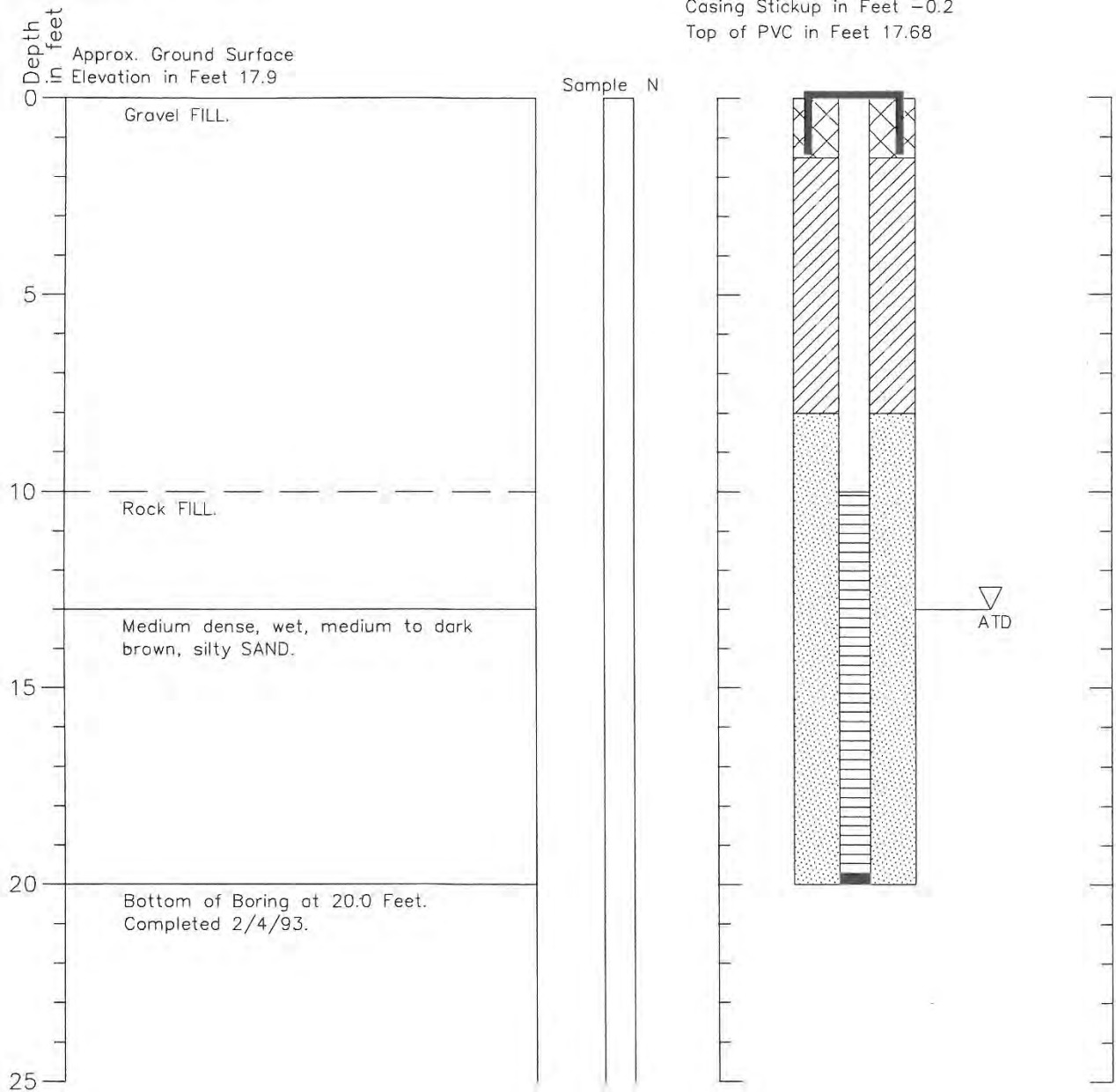


# Boring Log and Construction Data for Monitoring Well MW-3R

## Geologic Log

## Monitoring Well Design

Casing Stickup in Feet -0.2  
Top of PVC in Feet 17.68



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

**HARTCROWSER**  
J-3076-01 2/93

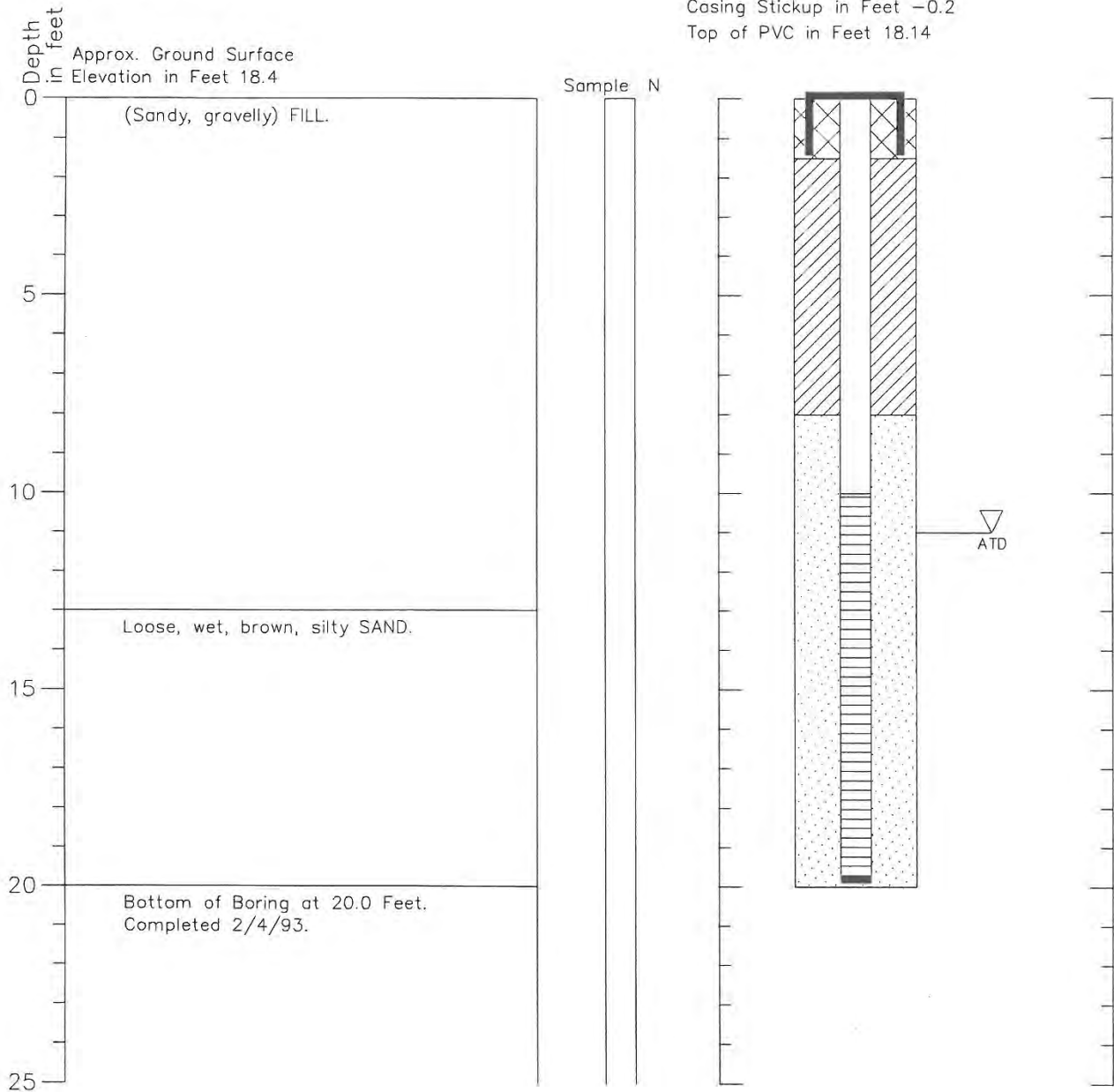
Figure A-3

# Boring Log and Construction Data for Monitoring Well MW-4R

## Geologic Log

## Monitoring Well Design

Casing Stickup in Feet -0.2  
Top of PVC in Feet 18.14



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

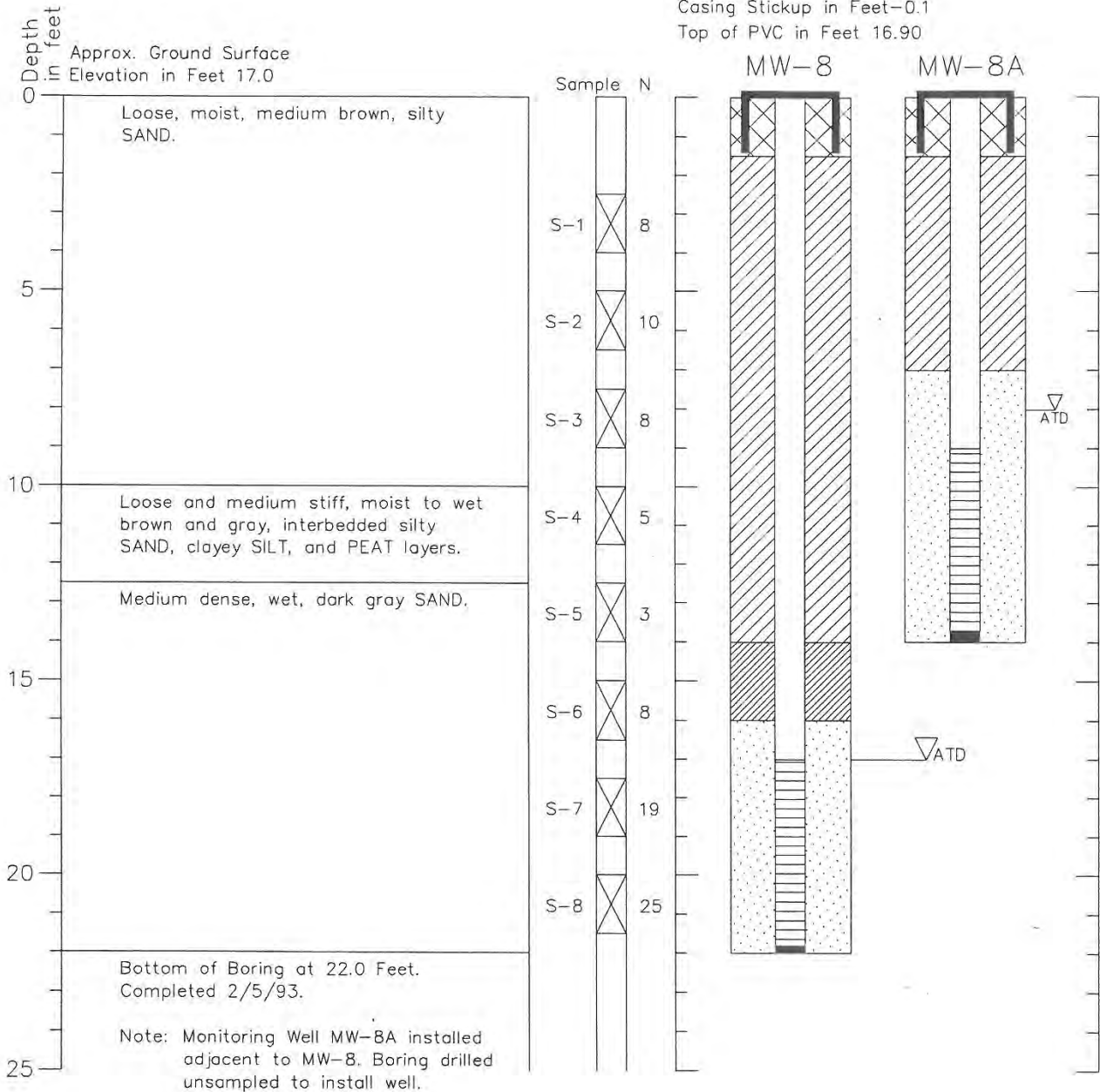
**HARTCROWSER**  
J-3076-01 2/93

Figure A-4

# Boring Log and Construction Data for Monitoring Well MW-8 and MW-8A

## Geologic Log

## Monitoring Well Design



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

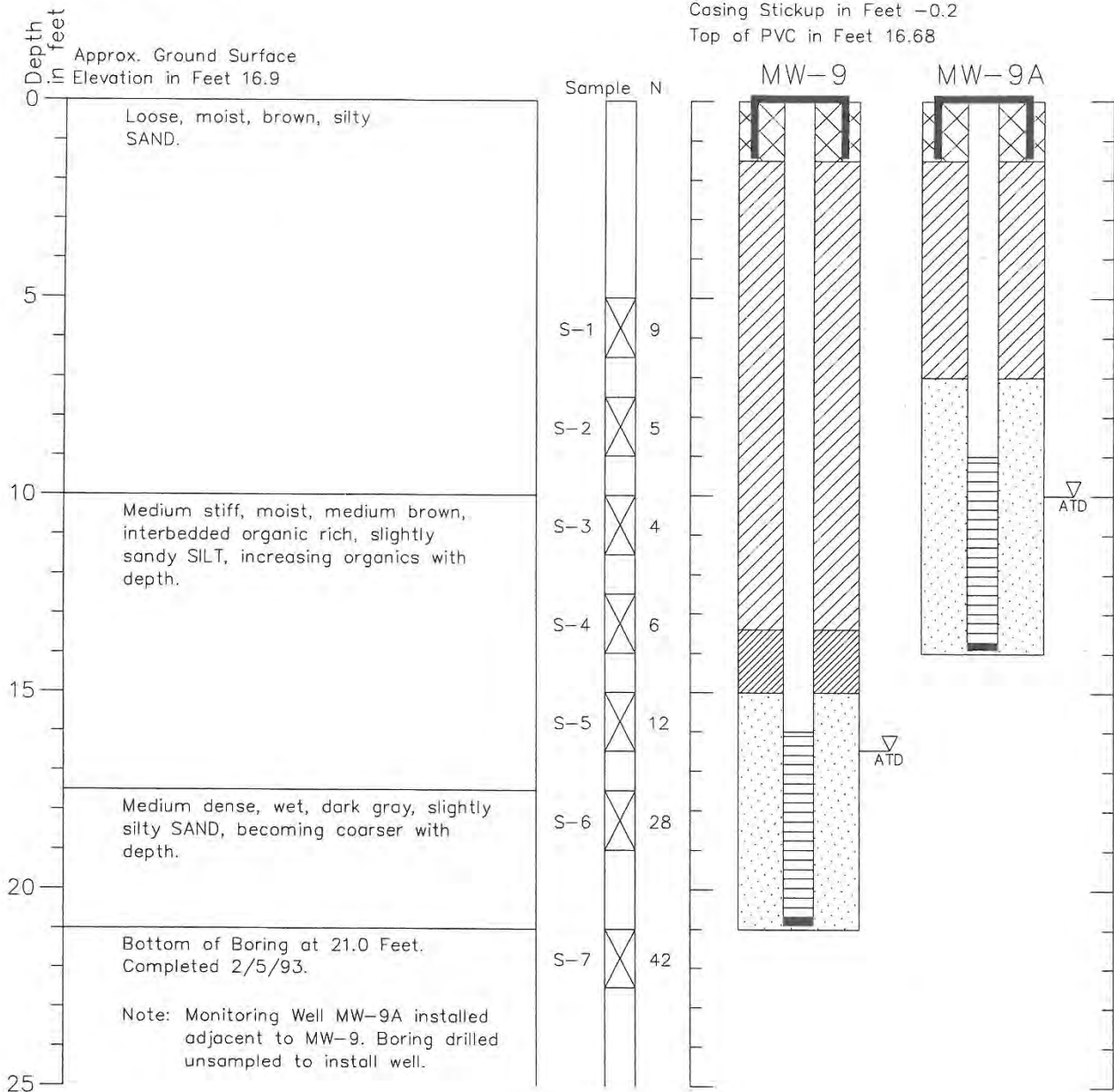
**HARTCROWSER**  
J-3076-01 2/93

Figure A-5

# Boring Log and Construction Data for Monitoring Well MW-9 and MW-9A

## Geologic Log

## Monitoring Well Design



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

**HARTCROWSER**  
J-3067-01 2/93

Figure A-6

Elevation reference: *100.00 feet* Well completed: *07 June 1990*  
 Ground surface elevation: *101.83 feet* Casing elevation: *101.44 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER	AS-BUILT DESIGN		TESTING
0	Surface: bare ground.						Flush-mounted steel monument		
	Medium dense, wet, brown, silt and fine SAND, with some gravel and trace organics.		S-1	14	3		Ground surface		
							Top of casing		
							Concrete		
							Bentonite seal		
5							Casing (Schedule-40 4-inch I.D. PVC)		
	Dense, moist, dark brown, fine SAND, with some silt and trace to some gravel. (sample spoon on rock; blow counts probably not representative)		S-2	47	4		#2/12 graded sand pack		8015 8020
10							Screen (4-inch I.D. PVC with 0.02-inch slots)		8015 8020
	Loose, wet to saturated; increasing silt content.		S-3	5	3	6/27/90	Threaded end cap		
15									
	Medium stiff, saturated, tannish-gray, fine, sandy SILT with trace sand laminae and some organics (peaty).		S-4	7	3				
20	Boring terminated at approximately 20.0 feet.								
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▼ Static groundwater level 6/27/90 27 June 1990.



RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
 Geotechnical & Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 07 June 1990

Drilling completed: 07 June 1990

Logged by: TJP



Elevation reference: 100.00 feet Well completed: 07 June 1990  
 Ground surface elevation: 100.84 feet Casing elevation: 100.52 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER	AS-BUILT DESIGN		TESTING
0	Asphalt and base course						Flush-mounted steel monument		
	Moist, brown, GRAVEL with some fine sand and silt (fill).						Ground surface		
							Top of casing		
							Concrete		
	Medium dense, wet, brown, silty fine SAND, with some gravel.		S-1	18	3		Bentonite seal		
5							Casing (Schedule-40 4-inch I.D. PVC)		
	Loose, moist, dark gray, silty, fine SAND, with some fine sand laminae; petroleum hydrocarbon-like odor.		S-2	7	6		#2/12 graded sand pack		8015 8020
10						▼ 6/27/90	Screen (4-inch I.D. PVC with 0.02-inch slots)		8015 8020
	Loose, saturated, dark gray, silty, fine SAND, interbedded with firm, saturated, dark gray, fine sandy SILT, with some organics (peaty).		S-3	5	6		Threaded end cap		
15									
	Loose, saturated, dark gray, silty, fine SAND.		S-4	19	4				
20	Boring terminated at approximately 20.0 feet.								
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▼ Static groundwater level 27 June 1990



RITTERHOUSE-SEMAN & ASSOCIATES, INC.  
 Geotechnical & Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 07 June 1990

Drilling completed: 07 June 1990

Logged by: TJP

PROJECT Name EAST MARGINAL WAY CHEVRON W.O. W 6774 WELL NO. B-3/MW-3

Elevation reference: 100.00 feet Well completed: 07 June 1990  
 Ground surface elevation: 101.65 feet Casing elevation: 101.44 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER	AS-BUILT DESIGN		TESTING
							Diagram Labels	Values	
0	Surface: Bare ground						Flush-mounted steel monument		
	Medium dense, moist, dark brown, silty, fine SAND; petroleum hydrocarbon-like odor.		S-1	13	4		Ground surface	8015 8020	
5	Medium stiff to stiff, moist, blue-gray, fine sandy SILT; petroleum hydrocarbon-like odor.						Top of casing		
							Concrete		
							Bentonite seal		
							Casing (Schedule-40 4-inch I.D. PVC)		
	Loose, moist, dark gray, silty, fine SAND, slight petroleum hydrocarbon-like odor.		S-2	7	6		#2/12 graded sand pack		
10								8015 8020	
	Soft, wet to saturated, dark gray, fine, sandy SILT with some organics (peaty); interbedded with very loose, dark gray, silty fine SAND.		S-3	4	4		Screen (4-inch I.D. PVC with 0.02-inch slots)		
15								8015 8020	
	Becomes stiff; silt beds become lammish-gray.		S-4	9	4		Threaded end cap		
20	Boring terminated at approximately 20.0 feet.								
25									
30									

LEGEND

2-inch O.D. split-spoon sample

Static groundwater level 6/27/90 27 June 1990



RITTENHOUSE-ZEMAN & ASSOCIATES, INC. Geotechnical & Environmental Consultants 1400 140th Ave NE Bellevue, Washington 98005

Drilling started: 07 June 1990

Drilling completed: 07 June 1990

Logged by: TJP

Elevation reference: 100.00 feet Well completed: 07 June 1990  
 Ground surface elevation: 101.36 feet Casing elevation: 101.03 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER	AS-BUILT DESIGN		TESTING
0	Asphalt and base course.						Flush-mounted steel monument		
							Ground surface		
							Top of casing		
	Medium dense, moist, greenish-tan, silty, fine SAND with gravel.		S-1	13	352		Concrete		8015 8020
							Bentonite seal		
5	Loose, moist, dark gray, silty, fine SAND; petroleum hydrocarbon-like odor.		S-2	9	28		Casing (Schedule-40 4-inch I.D. PVC)		8015 8020
							#2/12 graded sand pack		
10						6/27/90	Screen (4-inch I.D. PVC with 0.02-inch slots)		
	becomes very loose with fine sandy SILT interbeds		S-3	2	6		Threaded end cap		
15	Boring terminated at approximately 15 feet.								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

Static groundwater level 27 June 1990



RITTENHOUSE-ZEMAN & ASSOCIATES INC.  
 Geotechnical & Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 07 June 1990

Drilling completed: 07 June 1990

Logged by: TJP

Elevation reference: 100.00 feet		Well completed:					AS-BUILT DESIGN	TESTING
Ground surface elevation:		Casing elevation:						
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER		
0	Asphalt						No Well Installed	
	Cobble at 1 1/2 feet							
	Medium dense, moist, dark gray, silty, fine SAND with gravel.	I	S-1	20	5			
5							8015 8020	
	decreasing silt content.							
		I	S-2	11	4			
10							8015 8020	
	Loose, wet to saturated, dark gray, silty, fine SAND, interbedded with fine sandy SILT laminae; with some organics (peaty).	I	S-3	7	4	▼ ATD		
15	Boring terminated at approximately 14 feet.							
20								
25								
30								

LEGEND

I 2-inch O.D. split-spoon sample

▼ ATD Observed groundwater level at time of drilling



RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants  
1400 140th Ave NE  
Bellevue, Washington 98005

Drilling started: 07 June 1990

Drilling completed: 07 June 1990

Logged by: TJP

Elevation reference: 100.00 feet Well completed: 07 June 1990							AS-BUILT DESIGN	TESTING	
Ground surface elevation: 101.55 feet Casing elevation: 101.07 feet									
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER			
0	Asphalt and base course.								
4	Very dense, moist, yellowish-brown, silty, fine SAND with gravel.		S-1	73	4				
9	Medium dense, moist, dark brown, silty, fine SAND.		S-2	19	5			8015 8020	
14	Loose, wet to saturated, dark gray-brown, silty fine SAND with some fine sandy SILT laminae and some organics (peaty).		S-3	5	5	6/27/90		8015 8020	
15	Boring terminated at approximately 15 feet.								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▼ Static groundwater level 6/27/90 27 June 1990



RITTENHOUSE-ZEDAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants  
1400 140th Ave NE  
Bellevue, Washington 98005

Drilling started: 07 June 1990

Drilling completed: 07 June 1990

Logged by: TJP



Elevation reference: 100.00 feet		Well completed:					AS-BUILT DESIGN		TESTING
Ground surface elevation:		Casing elevation:					No Well Installed		
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER			
0	Asphalt and base course.								
	Dense, wet, yellowish-brown, silty, fine SAND with gravel.		S-1	32	4				
5									
	Loose, wet, dark brownish-gray, silty, fine SAND; trace rust mottling.		S-2	6	7		8015 8020		
10									
	Medium stiff, saturated, dark gray, fine sandy SILT; with organics (peaty).		S-3	5	13	ATD	8015 8020		
15	Boring terminated at approximately 14 feet.								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▽ ATD Observed groundwater level (ATD = at time of drilling)



RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants  
1400 140th Ave NE  
Bellevue, Washington 98005

Drilling started: 08 June 1990

Drilling completed: 08 June 1990

Logged by: TJP

Elevation reference: 100.00 feet		Well completed:					AS-BUILT DESIGN		TESTING
Ground surface elevation:		Casing elevation:					No Well Installed.		
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER			
0	Asphalt								
	Moist, dark brown, silty, fine SAND and gravel with some cobbles (Fill)								
5	Medium dense, moist, dark green, silty, fine SAND with gravel and petroleum hydrocarbon-like odor observed.		S-1	14	884		8015 8020		
	Firm to stiff, wet, dark greenish-gray, fine, sandy SILT with petroleum hydrocarbon-like odor.		S-2	13	6000+		8015 8020		
10	Medium dense, moist, dark gray, silty, fine sand with petroleum hydrocarbon like odor.								
	Fine, sandy SILT, interbedded with some organics (peaty).		S-3	12	23	▼ ATD			
15	Boring terminated at approximately 14 feet.								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▼ Observed groundwater level (ATD = at time of drilling)



RITTEHOUSE-ZEMAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants  
1400 140th Ave NE  
Bellevue, Washington 98005

Drilling started: 08 June 1990

Drilling completed: 08 June 1990

Logged by: TJP

Elevation reference: 100.00 feet		Well completed:					AS-BUILT DESIGN		TESTING
Ground surface elevation:		Casing elevation:					No Well Installed.		
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER			
0	Surface, bare ground								
	Moist, dark brown, silty, fine SAND with gravel; and some cobbles (Fill)								
	Loose, wet, tan, silty, fine SAND with gravel and some organics; slight hydrocarbon-like odor.		S-1	5	549				
5	Loose, moist, dark gray, silty, fine SAND; trace gravel; slight hydrocarbon-like odor.								
	Decreasing silt content with petroleum hydrocarbon-like odor.		S-2	9	4000+		8015 8020		
10									
	Medium dense, wet to saturated, dark gray, silty, fine SAND interbedded with fine, sandy SILT with some organics (peaty)		S-3	15	18	ATD	8015 8020		
15	Boring terminated at approximately 14 feet.								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▽/ATD Observed groundwater level (ATD = at time of drilling)



RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants  
1400 140th Ave NE  
Bellevue, Washington 98005

Drilling started: 08 June 1990

Drilling completed: 08 June 1990

Logged by: TJP

Elevation reference: 100.00 feet		Well completed:					AS-BUILT DESIGN		TESTING
Ground surface elevation:		Casing elevation:							
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HEAD SPACE	GROUND WATER	No Well Installed.		
0	Surface: bare ground. Moist, brown, silty, fine SAND with gravel and some cobbles (Fill)								
5	Very dense, moist, dark brown, silty, fine SAND with gravel. (cobble at 3 feet; blow count probably not representative of soil)		S-1	50/6"	4				
10	Medium dense, moist, dark gray, silty fine SAND with petroleum hydrocarbon like odor.		S-2	17	5000+		8015 8020		
15	Medium stiff, saturated, dark gray, fine, sandy SILT with some organics; some silty fine SAND interbeds. Becomes grayish-tan.		S-3	5	211	ATD	8015 8020		
15	Boring terminated at approximately 14 feet.								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

▽<sub>ATD</sub> Observed groundwater level (ATD = at time of drilling)



RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants  
1400 140th Ave NE  
Bellevue, Washington 98005

Drilling started: 08 June 1990


Drilling completed: 08 June 1990

Logged by: TJP

Elevation reference: 100.00 feet Ground surface elevation:		Casing elevation:					AS-BUILT DESIGN		TESTING
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HNu READING	GROUND WATER			
0	<i>Asphalt</i>							No well installed	
	<i>Medium dense, moist, dark brown, silty, fine SAND; with some gravel (fill).</i>		<i>S-1</i>	<i>19</i>	<i>1</i>				
5	<i>Loose, moist, dark brownist-gray, silty, fine SAND.</i>								
	<i>decreasing silt content.</i>		<i>S-2</i>	<i>7</i>	<i>0</i>			8015 8020	
10									
	<i>Very loose, saturated, dark brownish-gray, silty, fine SAND.</i>		<i>S-3</i>	<i>1</i>	<i>&lt;1</i>			8015 8020	
15	<i>Boring terminated at approximately 14 feet.</i>								
20									
25									
30									

LEGEND

I 2-inch O.D. split-spoon sample

 Observed groundwater level (ATD = at time of drilling)



**RZA**  
 RITTENHOUSE-ZEMAN &  
 ASSOCIATES, INC.  
 Geotechnical &  
 Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 26 July 1990


Drilling completed: 26 July 1990


Logged by: AJS



Elevation reference: 100.00 feet Ground surface elevation:		Casing elevation:					AS-BUILT DESIGN		TESTING
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HN <sub>L</sub> READING	GROUND WATER			
0	<i>Asphalt</i>							No well installed	
	<i>Medium dense, moist, black, silty, fine SAND; with some organics and gravel (fill).</i>		<i>S-1</i>	<i>21</i>	<i>5</i>				
5	<i>Very loose to loose, moist, brownish-gray, silty, fine SAND, interbedded with dark brownish-gray, fine SAND; with some silt.</i>		<i>S-2</i>	<i>7</i>	<i>0</i>				
10	<i>becomes saturated with organics (peaty).</i>		<i>S-3</i>	<i>6</i>	<i>&lt;1</i>			8015 8020	
15	<i>Boring terminated at approximately 14 feet.</i>								
20									
25									
30								Well completed:	

LEGEND

 2-inch O.D. split-spoon sample

 Observed groundwater level (ATD = at time of drilling)




**RZA**  
 RITTENHOUSE-ZEMAN &  
 ASSOCIATES, INC.  
 Geotechnical &  
 Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005


Drilling started: *26 July 1990*


Drilling completed: *26 July 1990*

Logged by: *AJS*

Elevation reference: 100.00 feet Ground surface elevation:		Casing elevation:		AS-BUILT DESIGN			TESTING
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HNu READING	GROUND WATER	
0	<i>Asphalt</i>						
							<i>No well installed</i>
	<i>Medium dense, moist, grayish-brown, fine SAND; with some gravel, silt, and red brick (fill).</i>		<i>S-1</i>	<i>17</i>	<i>2</i>		
5							
	<i>Loose, moist, dark brownist-gray, fine SAND; with some silt.</i>		<i>S-2</i>	<i>8</i>	<i>2</i>		<i>8015 8020</i>
10							
	<i>Loose, moist, dark brown, fine SAND.</i>						
							
	<i>Loose, saturated, brownish-gray, silty, fine SAND; with organic layers.</i>		<i>S-3</i>	<i>1</i>	<i>&lt;1</i>		<i>8015 8020</i>
15	<i>Boring terminated at approximately 14 feet.</i>						
20							
25							
30							<i>Well completed:</i>

LEGEND

 2-inch O.D. split-spoon sample

 Observed groundwater level (ATD = at time of drilling)



**RZA**  
 RITTERHOUSE-ZEMAN &  
 ASSOCIATES, INC.  
 Geotechnical &  
 Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 26 July 1990

Drilling completed: 26 July 1990

Logged by: AJS

Elevation reference: 100.00 feet  
 Ground surface elevation: 101.31 feet Casing elevation: 100.91 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HNU READING	GROUND WATER	AS-BUILT DESIGN		TESTING
0	Asphalt						Flush-mounted steel monument		
							Ground surface		
							Top of casing		
							Concrete		
							Bentonite seal		
5	Medium dense, moist, brown, fine SAND; with some gravel. Petroleum hydrocarbon-like odor was noted in drill cuttings.		S-1	20	1		Casing (Schedule-40 4-inch I.D. PVC)		
							Select sand filler pack	8015 8020	
10	Loose, moist, brown, fine SAND; with some silt.		S-2	6	4		Screen (4-inch I.D. PVC with 0.020-inch slots)	8015 8020	
						7/26/90			
15	Very loose to loose, moist, dark brownish-gray, silty, fine SAND, interbedded with dark gray, fine SAND; with some silt. No petroleum hydrocarbon-like odor.		S-3	1	2				
20	Very loose to medium dense, saturated, brownish-gray, silty, fine SAND; with layers of organics (peat).		S-4	19	<1		Threaded end cap		
20	Boring terminated at approximately 20 feet.								
25									
30									

Well completed: 26 July 1990

LEGEND

I 2-inch O.D. split-spoon sample

Static groundwater level 7/26/90 26 July 1990



RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
 Geotechnical & Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 26 July 1990

Drilling completed: 26 July 1990

Logged by: AJS

Elevation reference: 100.00 feet  
 Ground surface elevation: 101.12 feet Casing elevation: 100.86 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HN <sub>u</sub> READING	GROUND WATER	AS-BUILT DESIGN		TESTING
0	Asphalt						Flush-mounted steel monument		
							Ground surface		
							Top of casing		
							Concrete		
							Bentonite seal		
	Medium dense, moist, brown, fine SAND; with some gravel.		S-1	17	0				
							Casing (Schedule-40 4-inch I.D. PVC)		
5	Loose to medium dense, moist, dark brown, silty, fine SAND.								
	decreasing silt content		S-2	10	0		Select sand filler pack	8015 8020	
10	Very loose, saturated, brownish-gray to brown, silty, fine SAND; with organics.		S-3	2	0	7/26/90	Screen (4-inch I.D. PVC with 0.020-inch slots)	8015 8020	
	decreasing silt content								
15									
	Medium dense, saturated, dark gray, fine SAND; with some silt, organics (roots).		S-4	28	<1				
							Threaded end cap		
20	Boring terminated at approximately 20 feet.								
25									
30									

Well completed: 26 July 1990

LEGEND

I 2-inch O.D. split-spoon sample

Static groundwater level 7/26/90 26 July 1990



RITTENHOUSE-ZEMAN & ASSOCIATES, INC. Geotechnical & Environmental Consultants 1400 140th Ave NE Bellevue, Washington 98005

Drilling started: 26 July 1990


Drilling completed: 26 July 1990

Logged by: AJS

Elevation reference: 100.00 feet Ground surface elevation:		Casing elevation:					AS-BUILT DESIGN	TESTING
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HM <sup>u</sup> READING	GROUND WATER		
0	<i>Asphalt</i>						No well installed	
5	<i>Medium dense, moist, greenish-gray, fine SAND; with some gravel and silt (fill) with petroleum hydrocarbon-like odor.</i>		<i>S-1</i>	<i>12</i>	<i>2</i>			
10	<i>Loose, moist, dark gray, fine SAND; with some silt, interbedded with dark gray, fine SAND with petroleum hydrocarbon-like odor.</i>		<i>S-2</i>	<i>10</i>	<i>2</i>			
15	<i>Loose, saturated, brownish-gray, silty, fine SAND; with organic layers.</i>		<i>S-3</i>	<i>1</i>	<i>0</i>		Note : sample S-3 had a cesspool-like odor	
15	<i>Boring terminated at approximately 14 feet.</i>							
20								
25								
30							Well completed:	

LEGEND

I 2-inch O.D. split-spoon sample

 Observed groundwater level at time of drilling



**RITTEHOUSE-ZEMAN & ASSOCIATES, INC.**  
 Geotechnical & Environmental Consultants  
 1400 140th Ave NE  
 Bellevue, Washington 98005

Drilling started: 26 July 1990

Drilling completed: 26 July 1990

Logged by: *AJS*



# **APPENDIX F**

## **APPENDIX F**

### **FIELD EXPLORATION METHODS**

G-Logics performed subsurface soil and groundwater sampling during the assessment conducted on the subject property. The sampling activities were conducted in general accordance with Ecology's guidelines and regulations.

#### **Underground Utility Clearance**

Before conducting the subsurface exploration, G-Logics contacted a service that notifies public utilities of proposed subsurface investigations. Additionally, on-site private utilities were located by a private locating company to identify on-site utilities as well as specific areas of concern. Consequently, the below-grade utility locations were identified by marking their inferred location on the ground surface. This information was used to aid in identifying sampling locations.

#### **Quality Assurance Quality Control**

Quality Assurance/Quality Control (QA/QC) for the presented scope of work included generally accepted procedures for sample collection, storage, tracking, and documentation. All sampling equipment was washed and rinsed before the collection of the samples. All samples were labeled with a sample number, date, time, and sampler name, and were stored in an ice chest containing frozen "blue ice". Appropriate chain-of-custody documentation was completed.

#### **General**

G-Logics developed a health and safety plan for this project before the start of fieldwork.

#### **Direct Push Soil Sampling**

A probe subcontractor (ESN Northwest Probe and Drilling, Olympia, WA) performed the probe drilling at this site. The direct-push probe used for this work consisted of a 2-inch Macrocore sampler, in lengths of five feet. Continuous soil samples were obtained by driving/pushing this sampler, containing an acrylic liner, to the sampling depth. At

numerous boring location, the first 5-6 feet of soils were removed using air-knife methods (see attached boring logs). After reaching the required depth, the sampler was retrieved and opened. The collected soils contained within the acrylic liner were removed and placed into laboratory-provided glass jars. Samples were collected from the soil core using an Easy Draw Syringe and Powerstop Handle. The soil plug was then extruded into a laboratory-supplied 40 ml VOA Vial containing methanol preservative. New liners were used for each sampling attempt.

Collected soil samples were evaluated for evidence of contamination by visible discoloration of the soil sample or VOCs detected by the PID. A portion of each soil sample was placed into a plastic zip-lock bag, and the vapors were drawn through the PID for qualitative screening of VOCs. The vapor readings were documented on the attached boring logs. A new plastic bag was used each time a sample was screened.

The soils were then observed and categorized for grain-size, color, moisture, odor, staining, sheen, and any other indications of contamination. This information was recorded on field boring logs (attached). Samples were collected where indications of contamination were observed or from where contamination would likely be present (i.e. at the groundwater interface).

Upon completion of each soil boring the resulting hole was either backfilled with bentonite and the ground surface restored to match original or a monitoring well was installed. All soil cuttings were collected and placed into a waste drum for proper disposal (determined by analytical results).

Collected samples were labeled with a sample number, date, time, and sampler's name and stored in an ice chest containing frozen "blue ice". Chain-of-custody procedures were followed to document sample handling.

### **Groundwater Monitoring Well Construction, Strataprobe Methods**

Select soil borings, completed as groundwater monitoring wells, were constructed in the following manner (see attached boring logs):

- To construct the well, 4- inch steal probe casing was driven to the desire depth for the well to be completed.
- The well casing materials consisted of 1-inch or 2-inch, diameter, flush-threaded, schedule 40 PVC pipe.

- The screened interval of the well casing was perforated with 0.010-inch factory-cut slots.
- The annular seal of the well consisted of granulated bentonite.
- All PVC casing materials were factory-cleaned before installation.
- The bottom of the well casing was sealed with a threaded cap. Blank (non-slotted) riser casing was used to extend the well from the top of the screened interval to ground surface. The length of the screened interval is identified on the boring logs.
- Well construction was accomplished by lowering the well casing into the open probe casing. The probe casing was then withdrawn from the boring and the resulting annular space was backfilled with clean 10/20 silica sand and granulated bentonite to the depth shown on the boring logs.
- The well casing was sealed at the ground surface with a watertight expansion cap or PVC slip cap.
- A tamper-resistant steel cover was set over the well, flush to the ground surface. The cover was grouted in place with concrete.
- A reference point was marked on the top of the PVC well casing for consistent groundwater depth measurements.
- An Ecology well identification tag was placed inside the well box.

### **Groundwater Monitoring Well Construction, Hollow-Stem Auger Methods**

Select soil borings, completed as groundwater monitoring wells, were constructed in the following manner (see attached boring logs):

- The well casing materials consisted of 2-inch-diameter, flush-threaded, schedule 40 PVC pipe.
- The screened interval of the well casing was perforated with 0.010-inch factory-cut slots.
- The filter pack for the well consisted of clean, 10/20 silica sand.
- The annular seal of the well consisted of granulated bentonite.
- All PVC casing materials were cleaned at the factory before installation.
- The bottom of the well casing was sealed with a threaded sediment cup. Blank (non-slotted) riser casing was used to extend the well from the top of the screened interval to ground surface. The length of the screened interval is identified on the boring logs.

- Well construction was accomplished by lowering the casing, into the completed boring, through the inside of the hollow-stem augers. The augers were withdrawn from the boring about three feet, and the resulting annular space around the well screen was backfilled with sand (poured through the top of the hollow-stem augers). This process was repeated until the filter pack was installed to about two feet above the top of the screened interval. The augers were completely withdrawn from the boring, and the annular space around the blank riser was backfilled with granulated bentonite to the depth shown on the boring logs.
- The well casing was sealed at the ground surface with a watertight expansion cap or PVC slip cap.
- A tamper-resistant steel cover was set over the well, flush to the ground surface. The cover was grouted in place with concrete.
- A reference point was marked on the top of the PVC well casing for consistent groundwater depth measurements.
- An Ecology well identification tag was placed inside the well box.

### **Well Development**

After monitoring well construction and prior to purging the wells for sampling, the wells were developed. Over pumping, or removing water from the well at a rapid rate, was the devolvement technique used. An in-well Whale “Mini” 12DVC Purge Pump” was lowered to near the bottom of the well screen, and connected to a 12-volt power source. A swab/surge development technique also was also used. This movement was created by both lifting and lowering the pump, and by periodically turning the pump off and allowing the suspended water column to rapidly flow back down into the well. Well development continued until the initially turbid water turned nearly clear. This process was repeated until approximately 15-25 gallons of groundwater had been removed.

### **Water Level Measurements in Wells**

Water level measurements were referenced to the top of the well casing. The static water level was measured in each monitoring well using a conductivity type, water level probe (Keck Model 1213, Flat Tape Water Level Meter). The conductivity probe on the water level meter was lowered into the well until the instrument detected water. The tape on the probe was used to obtain a depth-to-water measurement, from the reference point, to within 0.01 feet.



## **Measurement of LNAPL Thickness in Wells**

In monitoring wells where LNAPL was present, the thickness of the LNAPL was measured using an interface probe (Solinst Mini Interface Meter). The static water level measurement was first attempted in the monitoring well. When the interface probe reached LNAPL, a solid beep from the instrument sounded and continued as the probe passed through it. The probe was slowly lowered past the LNAPL until the constant beep stopped and an intermittent beeping occurred (indicating the probe is in water). The measurement to static water level was then recorded. The probe was then slowly pulled up from the static water level by pinching the measuring tape at the reference point. The tape was then pulled through the LNAPL until the solid beep was silenced and a thickness measurement was obtained from the tape at the reference point (depth to static water level subtracted by depth to LNAPL). Since passing the probe through LNAPL can coat the probe (thereby providing unreliable measurements), the thickness measurement was repeated multiple times until a confident field reading was obtained. The thickness was then recorded with a precision of 0.01 feet. If a constant beep occurred but no measurable thickness was present, the LNAPL thickness is considered as either trace amount, or considered to be a sheen.

## **Monitoring Well Sampling, Peristaltic Pump Method**

A G-Logics employee sampled groundwater wells in accordance with the following protocol:

- Prior to sampling, monitoring wells were purged using a peristaltic pump and low-flow procedures.
- The height of the water column within the well was calculated by subtracting the depth to water from the total depth of the well.
- Polyethylene tubing was lowered into the water column to a depth of one third to one half the height of the water column for purging and sampling.
- The flow was adjusted as necessary to prevent the groundwater level from dropping more than 10 percent.
- Field parameters were measured using a multi-parameter meter (YSI ProDSS) in purged ground water as it discharged through a flow-through cell.
- Field parameters were periodically measured (e.g., every five minutes) and recorded during well purging.
- Upon stabilization, the flow through cell was removed and groundwater samples were collected.

- The contract laboratory prepared the sample containers to conform to EPA-recommended preservation techniques for the analytes of concern.
- Groundwater samples were collected with a peristaltic pump. Sample containers were open only as long as necessary to collect the samples.
- Sample bottles were labeled with a sample number, date, time, and G-Logics employee's name and were stored in an ice chest containing frozen “blue ice”. Chain-of-custody procedures were followed to document sample handling.
- All purge water was collected and placed into waste drums for proper disposal (determined by analytical results).
- Dedicated tubing was used at each sampling location.

### **Stormwater and Catch-basin Solid Sampling**

A G-Logics employee sampled surface water as discussed in Section 4.2.2 of the approved workplan, stormwater and catch basin solids sampling was attempted. The EPA’s Industrial Stormwater Sampling Guide also was referenced for sampling protocols.

- The collection of Stormwater was attempted within 24-hours of a significant rain event. The Collection of catch-basin solids was attempted with 72-hours after the same rain event that the stormwater was collected.
- Stormwater and catch-basin solids samples were collected by attaching stainless steel sampling cup to the end of an extension pole. To collect stormwater, a sample bottle was placed inside the cup, then lowered into the catch basin beneath the upstream outfall pipe to collect stormwater directly from the upstream source water. Sample containers were open only as long as necessary to collect the samples.
- To collect solids, the sample cup was washed and rinsed before each sampling was attempted. The cup was then lowered into the catch basins where attempts to collect solids were made. Attempts to collect catch basin solids samples were made from several discrete locations in the catch basin (from each corner and the center of the catch basin).
- Sample bottles were labeled with a sample number, date, time, and sampler's name and stored in an ice chest containing frozen “blue ice”. Chain-of-custody procedures were followed to document sample handling.

# **APPENDIX G**

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. BAB 423 (EW-1)

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

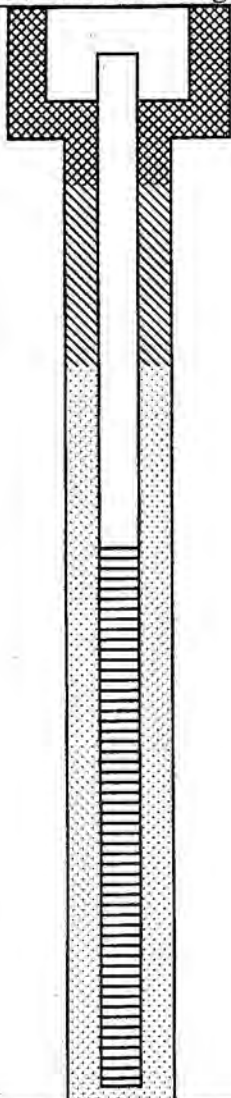
Work/Decommission Start Date 12/8/16

If trainee, licensed driller's Signature and License Number:

Chris Harnden 2508

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flash vault

REMOVED MONUMENT:  YES /  NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES /  NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

well was overdrilled to 27 feet with 8-inch auger, PVC removed, backfilled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. BAB-424 (EW-2)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee  
Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

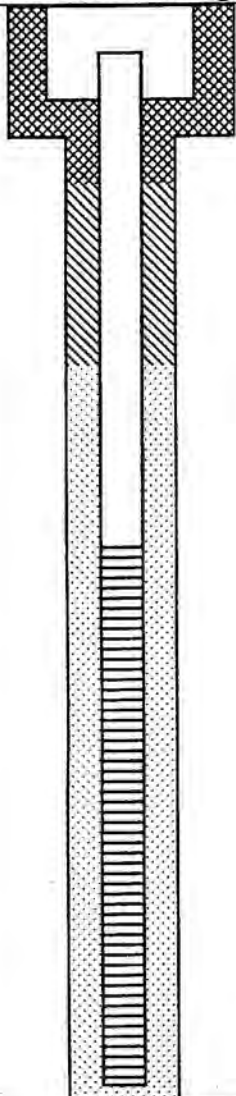
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT: YES/NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT: YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled with 8-inch auger, PVC removed, backfilled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. BAB 425 (EW-3)

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Tax Parcel No. 0323049064

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

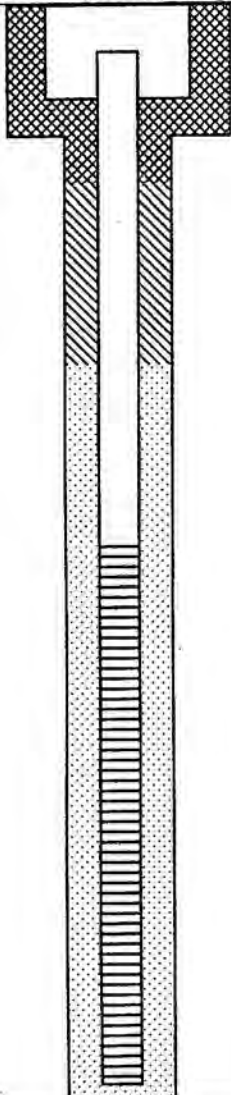
Work/Decommission Start Date 12/8/16

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT: YES/NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT: YES/NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

well was overdrilled with 8-inch auger to 24 feet, PVC removed, back filled bottom up.

RECEIVED

JAN 09 2017

DEPT OF ECOLOGY  
NWRO - WR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R673548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. BAB 426 (EW-4)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee  
Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

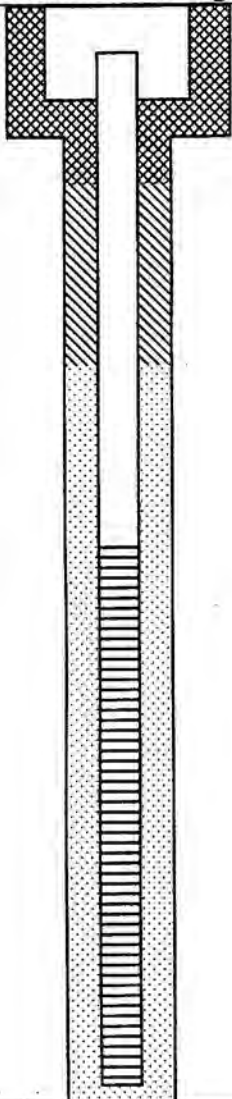
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled with 8" auger to 24" PVC removed, backfilled bottom up.

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JAN 09 2017

DEPT OF ECOLOGY  
NWRO - WR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. EW-5 (BAB 427)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

If trainee, licensed driller's Signature and License Number:

Anna Haradin 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

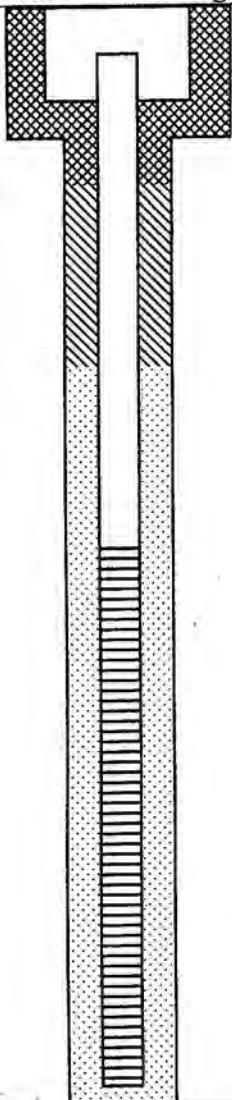
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled with 8" auger, PVC removed, backfilled bottom up. Overdrilled to 24'.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. BAB428 (EW-6)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

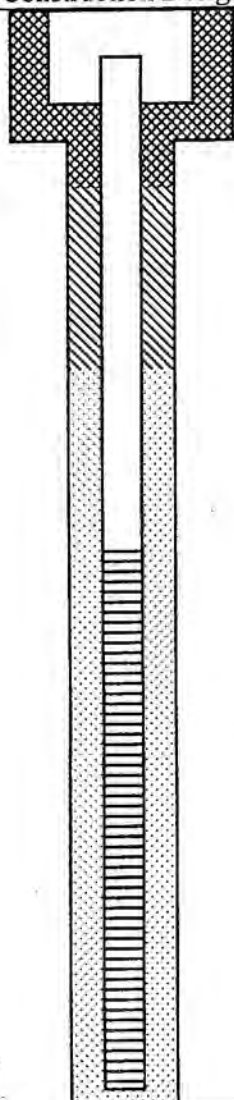
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

*Well was overdrilled with 8-inch auger, PVC removed, backfilled bottom up.*

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

Construction

Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. BAB 429 (EW-7)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

If trainee, licensed driller's Signature and License Number:

Anna Hamden 2508

Type of Well ("x" in box)

Resource Protection

Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

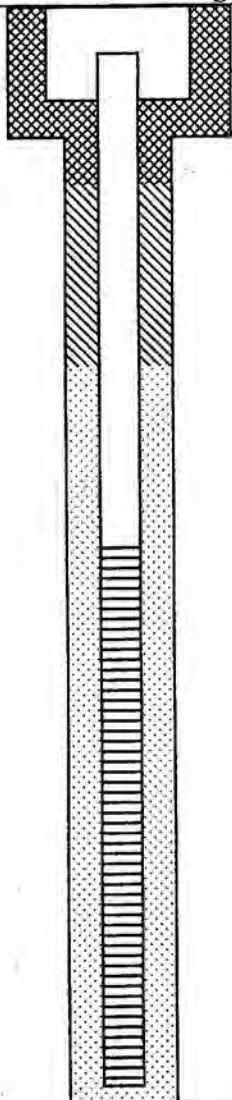
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled to 23 feet with 8-inch auger, PVC removed, backfilled bottom up.

RECEIVED

JAN 09 2017

DEPT OF ECOLOGY  
NWRO - WR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

Construction

Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. BAB 430 (EW-8)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Amie Harnden 2508

Type of Well ("x" in box)

Resource Protection

Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

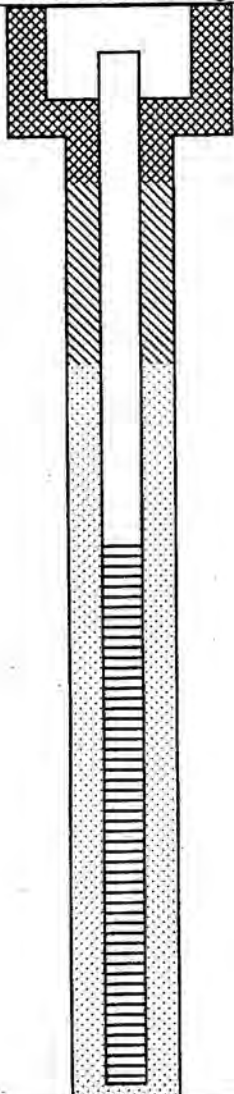
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled with 8-inch auger, PVC removed, back filled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT warrant the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R073548

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. BAB 434 (EW-9)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

If trainee, licensed driller's Signature and License Number:

Amin Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

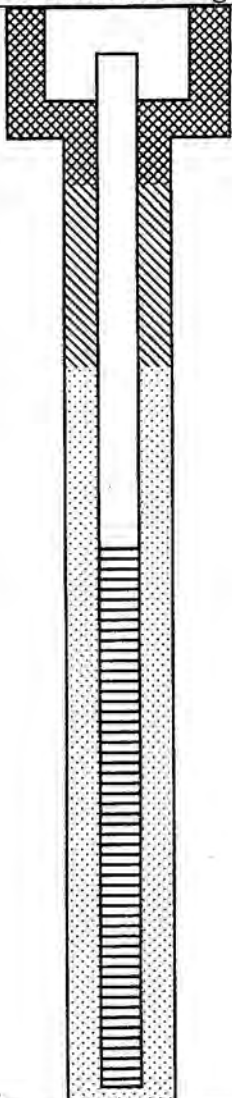
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush vault

REMOVED MONUMENT: YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 23'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT: YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

well was overdrilled with 8" auger, pvc removed, back filled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

R036366

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. N/A (MW-10)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee  
Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

If trainee, licensed driller's Signature and License Number:

Chris Harnden 2508

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

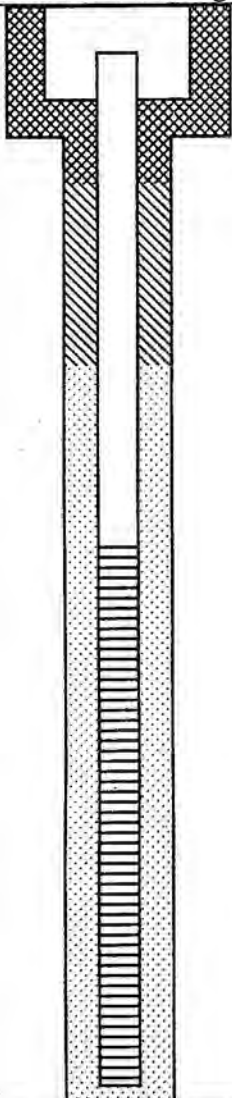
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 20'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

*Well was over drilled with 8-inch auger to 20 feet, PVC removed, back filled bottom up.*

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

Construction

Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R 036366

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. N/A (MW-11)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well ("x" in box)

Resource Protection

Geotech Soil Boring

Property Owner Sandhu Raibir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

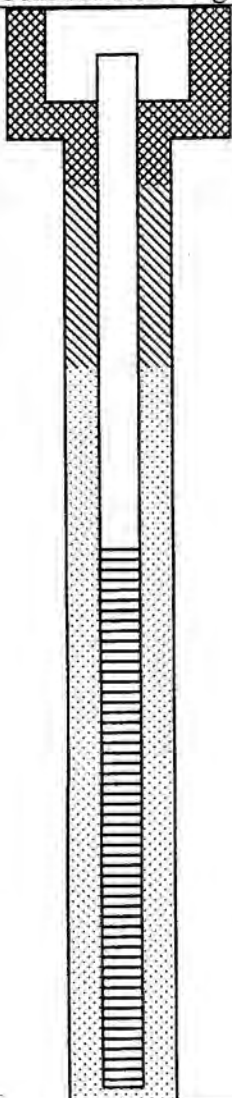
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 20'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

*& well was overdrilled to 20' with 8-inch auger, PVC removed, backfilled bottom up.*

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R036366

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. N/A (MW-12)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

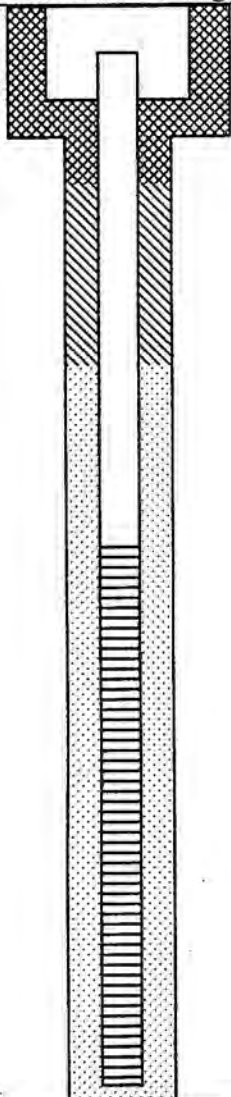
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 20'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

well was overdrilled to 20 feet with 8-inch auger, PVC removed, back filled bottom up.

**RECEIVED**  
**JAN 09 2017**  
 DEPT OF ECOLOGY  
 NWRO - WR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

R066307

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. AKN 782 (MW-13)

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Tax Parcel No. 0323049064

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer /Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

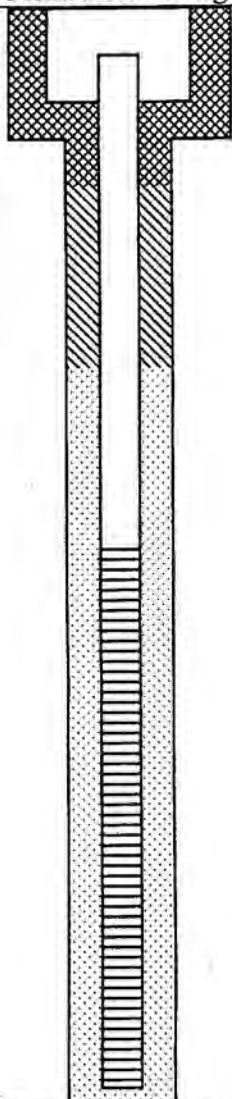
Work/Decommission Start Date 12/8/16

If trainee, licensed driller's Signature and License Number:

Amir Harnden 2508

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 24'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled with 8-inch auger to 24 feet, PVC removed, backfilled bottom up.

RECEIVED

JAN 09 2017

DEPT OF ECOLOGY  
NWRO - WR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

Construction

Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R066307

Consulting Firm

Unique Ecology Well IDTag No. AKN783 (MW-14)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Quinn Harnden 2508

Type of Well ("x" in box)

Resource Protection

Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

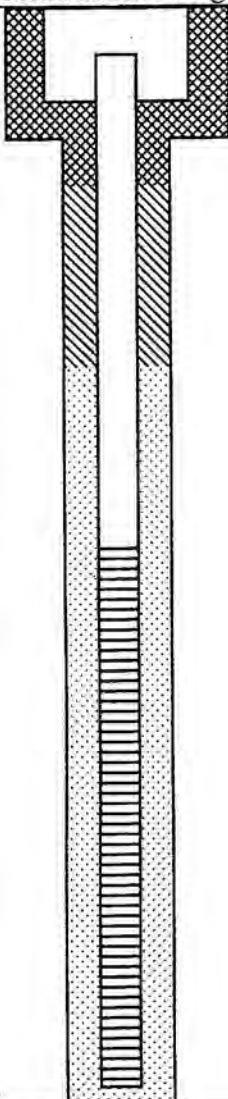
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 24'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled to 25 feet with 8-inch auger, PVC removed, backfilled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R066693

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. APM 449 (MW-15)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee Licensed Driller's Signature and License Number:

Olivia Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

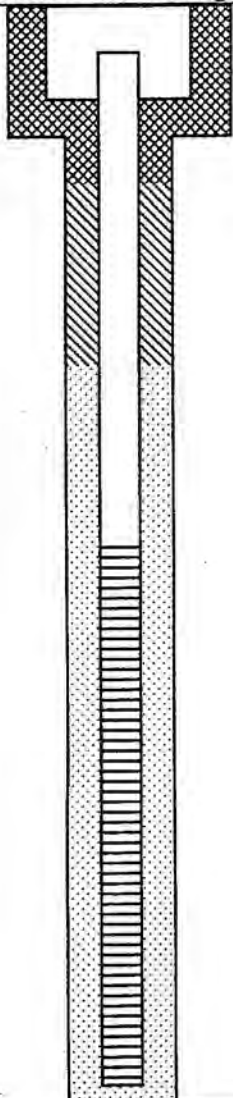
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 25'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled to 25 feet with 8 inch auger, PVC removed, backfilled bottom up

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

RO66693

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. APM-450 (MW-16)

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

Tax Parcel No. 0323049064

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

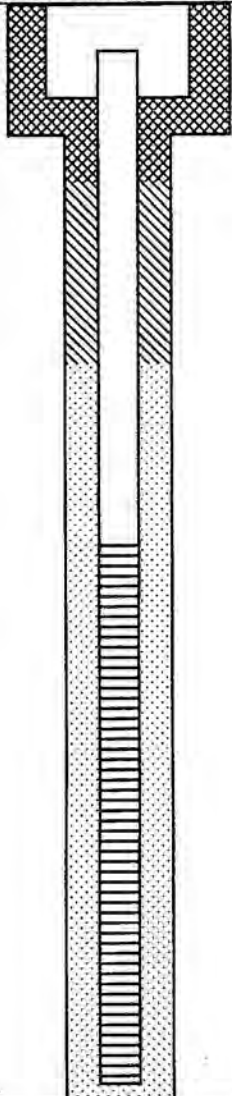
Work/Decommission Start Date 12/8/16

If trainee, licensed driller's Signature and License Number:

David Harnden 2508

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 25'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

Well was overdrilled with 8-inch auger to 25 feet, PVC removed, backfilled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

R067255

Consulting Firm \_\_\_\_\_

Unique Ecology Well IDTag No. AKT 104 (mw-17)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

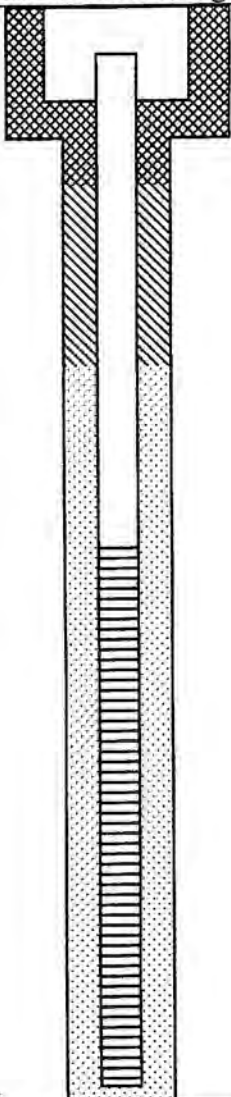
Tax Parcel No. 0323049064

Cased or Uncased Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flash

REMOVED MONUMENT:  YES  NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 25'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES /  NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

well was overdrilled to 25 feet with 8-inch auger, PVC removed, backfilled bottom up.

**RECEIVED**

**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number: \_\_\_\_\_

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. N/A EX-N

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Olivia Harnden 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

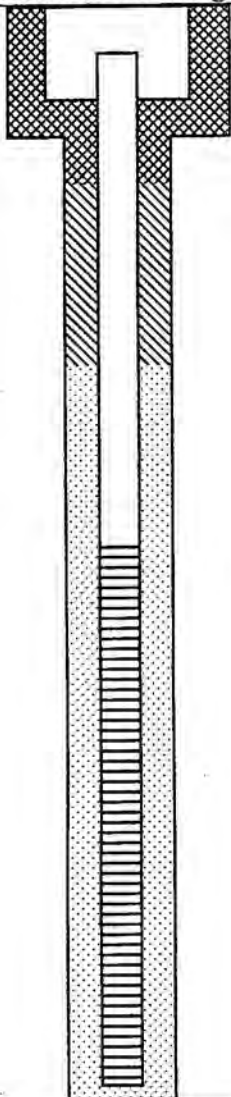
Tax Parcel No. 0323049064

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush (12-inch)

REMOVED MONUMENT:  YES / NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 14'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT:  YES / NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

well was pressure grouted bottom up. There was no casing, screened/preferated entire length.

RECEIVED

JAN 09 2017

DEPT OF ECOLOGY  
NWRO - WR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return to the Department of Ecology

# RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE39497

SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in box)

- Construction
- Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

Consulting Firm \_\_\_\_\_

Unique Ecology Well ID Tag No. N/A (EX-5)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee

Name (Print Last, First Name) Pickering, Cole

Driller/Engineer/Trainee Signature Cole Pickering

Driller or Trainee License No. 3216

Trainee, licensed driller's Signature and License Number:

Amira Harnda 2508

Type of Well ("x" in box)

- Resource Protection
- Geotech Soil Boring

Property Owner Sandhu Rajbir

Site Address 10805 International Tukwila Blvd

City Tukwila County King

Location SE1/4-1/4 SE1/4 Sec 04 Twn 23 R 04

EWM  or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Min \_\_\_\_\_ Sec \_\_\_\_\_

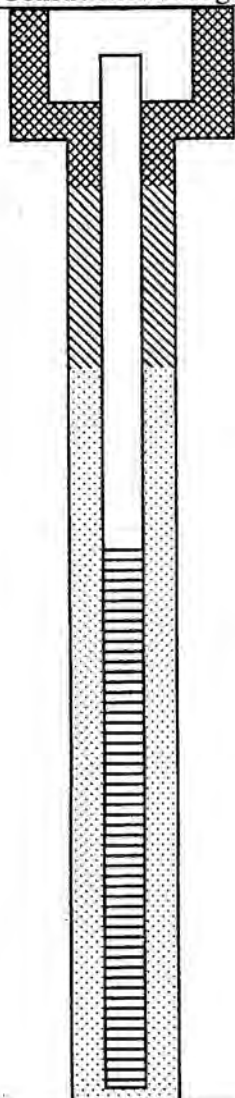
Tax Parcel No. 0323049064

Cased or Uncased Diameter 4" Static Level \_\_\_\_\_

Work/Decommission Start Date 12/8/16

Work/Decommission Completed Date 12/14/16

### Construction Design



### Well Data

MONUMENT TYPE:

flush (12-inch)

REMOVED MONUMENT: YES/NO

PVC BLANK: \_\_\_\_\_

SCREEN: \_\_\_\_\_

WELL DEPTH: 15'

### Formation Description

FORMATION NOT OBSERVED - WELL WAS DECOMMISSIONED

REMOVED MONUMENT: YES/NO

WELL WAS CHIPPED/GROUTED IN PLACE

ALL CASING WAS REMOVED AND BACKFILLED BOTTOM UP

**RECEIVED**

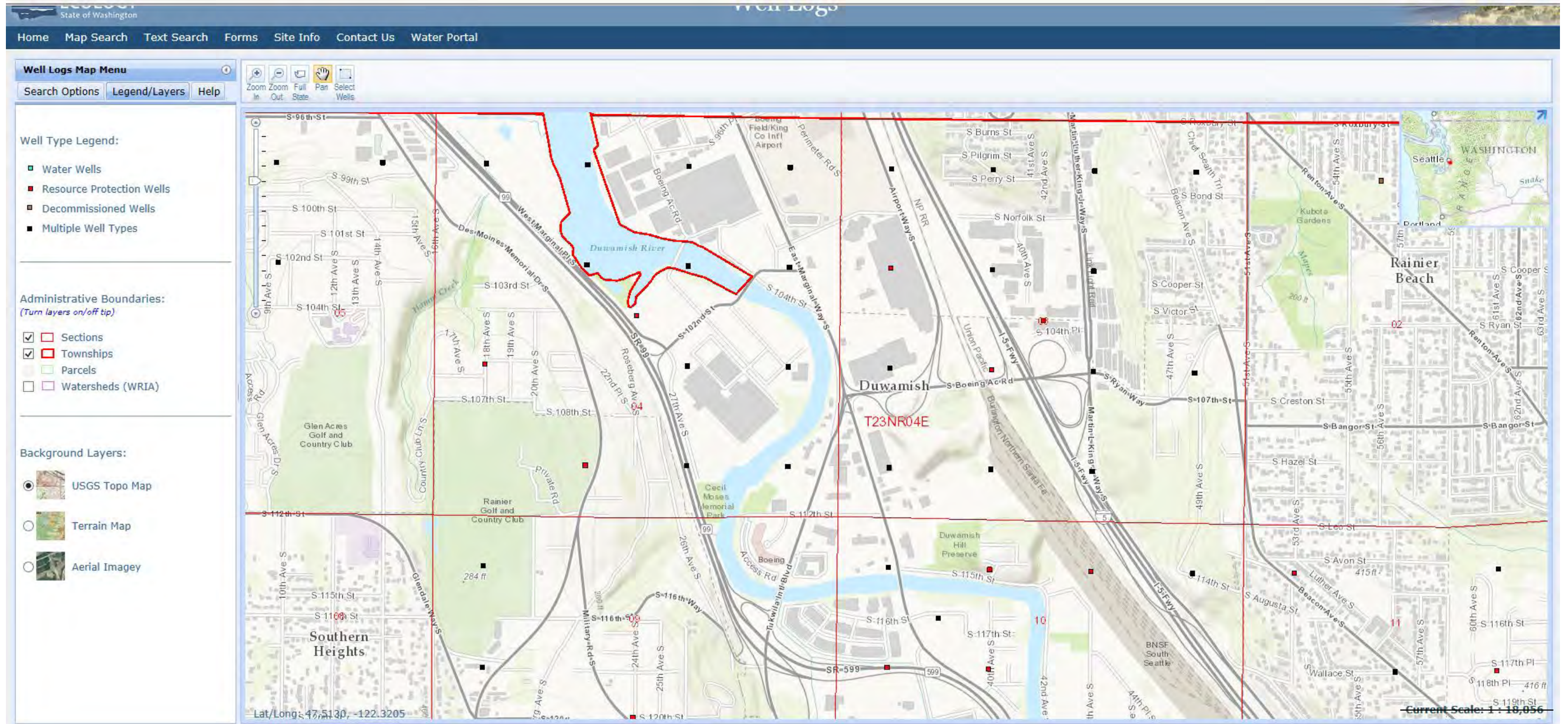
**JAN 09 2017**

**DEPT OF ECOLOGY  
NWRO - WR**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

# **APPENDIX H**





# **APPENDIX I**

**Available on Compact Disk**



# **APPENDIX J**

## **Appendix J**

### **Storm Drain Video File Review**

#### **Boeing Field Chevron**

#### **10805 East Marginal Way South**

#### **Tukwila, Washington**

##### **1. E Marginal Way Chevron Station**

- Spider webs and debris at 0', end of video.

##### **2. SS3 Storm Drain on Pacific HWY S. Looking S**

- Debris and sediment at 0'
- Plant debris (leaf litter) at 16'
- Camera partially blocked by debris for the duration of video
- No cracks observed, walls and ceiling dry.

##### **3. Storm Drain S3 Marginal Way N Heading S**

- Plant debris blocking storm drain at 0'0"
- Sediment coating walls of drain
- Drain is damp beginning at -2'2"

##### **4. Clean out MH5**

- Junction between two pipes at 7"
- Water from 1'2" to 2'9"
- Thin layer of sediment along the sides of the entire pipe
- End of the cable at 34'10".

##### **5. Clean out South of Pump Stations**

- Spider webs and plant debris at 0'
- Garbage and plant debris blocking camera at 13'7" and 17'
- The Pipe is damp from 59;' to 70' and water is present from 98' to 105'
- Debris hanging from top of pipe at 118'
- Rocks present at 125'
- End of drain at car wash separator at 126'
- Thin layer of sediment is present along bottom and sides of entire drain

##### **6. Clean out Southwest of Car Wash**

- Spider webs and plant debris from 0'to 8'

- Saturated sediment buildup in front of camera at 8'
- Unable to see through debris past 8'

#### **7. Pump Stations N Storm Drain**

- Saturated sediment at 0' to 6'2"
- Water from 2'11 to 6'
- Plant debris at 6'2"
- Water and plant debris at 48'
- Thick sediment, debris (garbage), and plant debris at 52' to 63'
- End of line at 63'.

#### **8. Pump Stations S Storm Drain**

- Survey was not completed

#### **9. S2 E Marginal Way Heading N**

- Plant debris and sediment along entire drain
- Spider webs from 6' to 12'
- Plant debris blocking camera at 22'
- Garbage at 55'

#### **10. S2 E Marginal Way Heading S**

- Pile of sediment and plant debris at 0'
- Thick layer of sediment and plant debris until 32'
- Debris (garbage) at 2', 13'6" and 49'9"
- Spider webs at 32'
- Large pile of debris blocking camera at 50'.

#### **11. S3 E Marginal Way Heading N**

- Spider webs at 0'
- Thin layer of sediment along entire drain
- Small pile of sediment at 8'
- Saturated sediment from 34' to 37'
- Plant debris at 45' 6"
- Large pile of plant debris at 46'
- End of line at 46'

### **12. S3 E Marginal Way Heading S**

- Thick layer of sediment along entire drain with some plant debris
- Debris (garbage) at 24', 28'4", and 48'6"
- End of line 52'9".

### **13. S4 E Marginal Way Heading N**

- Spider webs at 3'
- Water in drain from 15' 23'.

### **14. E Sewer S of Carwash**

- Water in drain at 0'
- Sediment, water and plant debris from 8' to 25'
- Large pile of debris at 25'

### **15. Sewer S of Carwash SE**

- Debris and water at 0'
- Thin layer of sediment along bottom of entire drain
- Spider webs at 33'
- Pile of debris (garbage) from 68'8" to 76'

### **16. Sewer S of Carwash SE**

- Video not available

### **17. Southern Storm Drain E Marginal Way N**

- Plant debris at 0'
- Thin layer of sediment along bottom of entire pipe
- Thick layer of debris and sediment from 16' to 50'

### **18. Southern Storm Drain Pacific Hwy S**

- Plant debris at 0'
- Debris at 2'
- Thick layer of sediment along bottom of drain from 2' through 45'

### **19. SS2 Pacific Hwy S Heading South**

- Debris at 4'
- Layer of sediment along bottom of entire drain

**20. SS2 Pacific Hwy S Heading North**

- Drain filled with water at -1'.

**21. SS3 Pacific Hwy S Heading South**

- Survey was not completed

**22. Storm Drain Carwash Entrance**

- Survey was not completed

**23. Storm Drain Carwash Entrance West**

- Drain filled mostly by water

**24. Storm Drain S of Pump Stations**

- Spider webs, debris and sediment at 2'
- Thin layer of sediment beginning at 6', becomes thick at 12'
- Junction between two drains at 30'
- Debris at 37'

**25. Settling Tanks Inside Car Wash**

- Soap (suds) at -3'

**26. Storm Drain NW of Carwash Heading NE**

- Debris and water at blocking camera at 8'

**27. Storm Drain NW of Carwash Heading S**

- Spider webs from 2" to 4'
- Water at 6'
- Debris at 37'



# **APPENDIX K**

**Available on Compact Disk**

# **APPENDIX L**



# Voluntary Cleanup Program

## Washington State Department of Ecology Toxics Cleanup Program

### TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

**Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.**

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to [www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm](http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm).

#### Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Boeing Field Chevron

Facility/Site Address: 10805 E Marginal Way S, Tukwila, WA

Facility/Site No: 2551

VCP Project No.:

#### Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Zackary Wall

Title: Project Geologist

Organization: G-Logics, Inc.

Mailing address: 40 2<sup>nd</sup> Ave SE

City: Issaquah

State: WA

Zip code: 98027

Phone: 425-391-6874

Fax: 425-313-3074

E-mail: zackaryw@g-logics.com

### Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

#### A. Exclusion from further evaluation.

**1. Does the Site qualify for an exclusion from further evaluation?**

- Yes *If you answered "YES," then answer **Question 2**.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

**2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.**

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,\* at least 15 feet below the surface.
- All soil contamination is, or will be,\* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,\* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

\* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

# "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

## B. Simplified evaluation.

### 1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

### 2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

### 3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

### 4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

### 5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

#### Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

#### Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

#### Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.



**C. Site-specific evaluation.** A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

**1. Was there a problem?** See WAC 173-340-7493(2).

- Yes    *If you answered "YES," then answer **Question 2** below.*
- No    *If you answered "NO," then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
  - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

**2. What did you do to resolve the problem?** See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

**3. If you conducted further site-specific evaluations, what methods did you use?**

*Check all that apply. See WAC 173-340-7493(3).*

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

**4. What was the result of those evaluations?**

- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

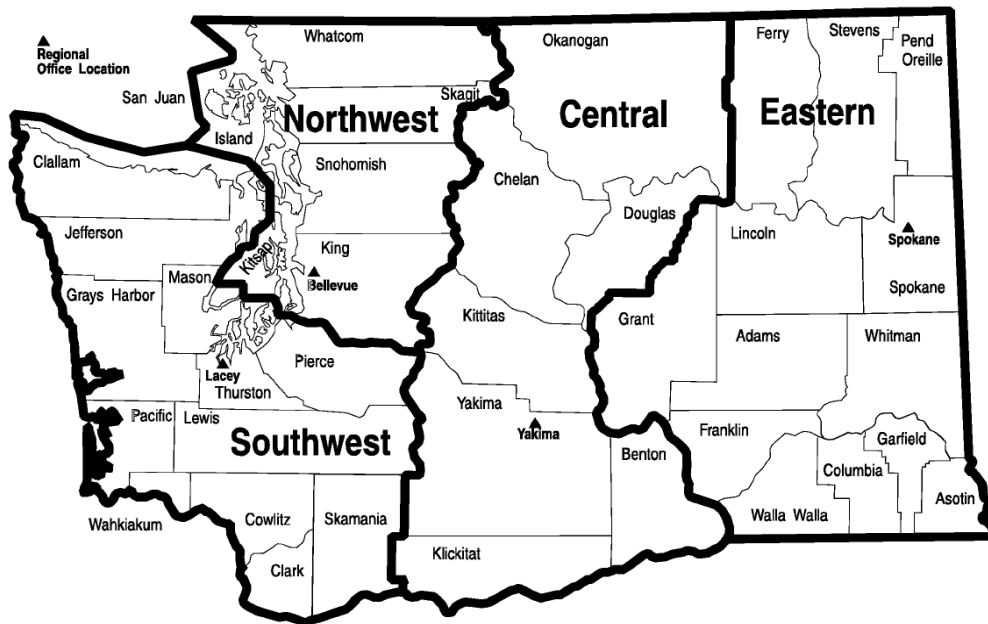
**5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?**

- Yes    If so, please identify the Ecology staff who approved those steps:
- No

## Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

<p><b>Northwest Region:</b>          Attn: VCP Coordinator          3190 160<sup>th</sup> Ave. SE          Bellevue, WA 98008-5452</p>	<p><b>Central Region:</b>          Attn: VCP Coordinator          1250 West Alder St.          Union Gap, WA 98903-0009</p>
<p><b>Southwest Region:</b>          Attn: VCP Coordinator          P.O. Box 47775          Olympia, WA 98504-7775</p>	<p><b>Eastern Region:</b>          Attn: VCP Coordinator          N. 4601 Monroe          Spokane WA 99205-1295</p>



# **APPENDIX M**

<b>Well Number:</b> MW-10		<b>Project Name:</b>	
Project Number: 410-10	Date: 12/12	Weather: Cool, Sprinkles	
Development / Purge Method:	Well Screen Interval: 9.5 to 18.5	Tidally Influenced?	
Logged By:	Water Depth Start: 10.94	Field Comments: Sampled From 14'	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1126	1129	1132	1135	1140			
Water Level	11.34	11.90	12.11	12.20	12.33			
pH	6.13	6.11	6.05	6.06	6.06			
Conductivity	0.490	0.488	0.489	0.490	0.488			
Temperature	13.04	13.11	13.38	13.56	13.54			
ORP	-93	-94	-99	-105	-106			
Turbidity	0.3	0.6	0.7	0.0	0.0			
Color	clr							
Dissolved Oxygen	1.1	0.9	0.0	0.0	0.0			
Purge Volume	0.25 gal	0.5 gal	0.7	1.0	1.5			

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated Tubing

Water Level Start: 10.94

Sampling Method: Per. Pump

Filter Type: Not Filtered

Sample Number: MW-10, 1200, 12/12

Water Level Finish: \_\_\_\_\_

Field comments: Sampled @ Dropping Tide



<b>Well Number:</b> MW-11		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-410-K	<b>Date:</b> 11/26/16	<b>Weather:</b>	
<b>Development / Purge Method:</b> P-Pump	<b>Well Screen Interval:</b> 8 to 20	<b>Tidally Influenced?</b> YES GOING OUT	
<b>Logged By:</b> KLAUS	<b>Water Depth Start:</b> 9.42	<b>Field Comments:</b> SEE TUBE @ 11.5 MOVED TO 12.5 MOVED TO 13.5 @ TIME OF SAMPLING	
<b>Purge Water Disposal Method:</b> DRUM	<b>Water Depth Finish:</b>	<b>Well Conditions:</b> OK Not OK	
<b>Purge Water Disposal Volume:</b> 1.75 GAL	<b>Balls Dry? Yes No What Volume?</b> N/A	<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

HAD PUMP SEE AS SLOW AS IT WOULD GO

Time	1404	1407	1410	1413	1416	1419	1422	1425	1428
Water Level	10.25	10.34	10.43	10.53	10.70	10.90	11.11	11.33	11.50
pH	6.40	6.39	6.39	6.39	6.38	6.38	6.38	6.38	6.38
Conductivity	0.776	0.777	0.777	0.778	0.777	0.768	0.767	0.769	0.771
Temperature	14.19	14.14	14.13	14.15	14.19	14.15	14.13	14.12	14.13
ORP	-62	-65	-67	-68	-70	-77	-73	-74	-75
Turbidity	7.7	4.6	7.0	4.6	5.0	7.5	6.2	6.4	6.4
Color	CLEAR								
Dissolved Oxygen	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purge Volume	1.5 GAL	1.75 GAL		1.6 GAL			1.25 GAL		1.5 GAL

**Well Sampling Information (complete if well is sampled)**

Decon Method: ALLOMAX

Water Level Start: 9.42

Sampling Method: P. Pump

Filter Type: 45 MIC

Sample Number: MW-11

Water Level Finish: 12.5 AFTER PUMP OFF WATER SLOWLY RISES UP

Field comments: TO 10.41 IN A 15-20 MIN





<b>Well Number:</b> MW-12		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-410-K	<b>Date:</b> 11/26/16	<b>Weather:</b> PARTLY CLOUDY COOL	
<b>Development / Purge Method:</b> P. Pump	<b>Well Screen Interval:</b> 8 to 18	<b>Tidally Influenced?</b>	
<b>Logged By:</b> KALIS	<b>Water Depth Start:</b> 7.79	<b>Field Comments:</b> SET TABLE @ 10.5 AT TIME OF SAMPLING	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b> 7.91 (15-20 min AFTER PUMP OFF)	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b> N/A	<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)** 1 1/2 Pump on Low

Time	1528	1531	1534	1537	1540	1543	1546	1549	1552	1555
Water Level	8.41	8.49	8.55	8.61	8.64	8.68	8.71	8.74	8.76	8.79
pH	6.03	6.02	6.02	6.03	6.03	6.03	6.03	6.08	6.06	6.08
Conductivity	0.377	0.381	0.382	0.383	0.385	0.386	0.386	3.97	3.89	3.90
Temperature	14.10	14.27	14.38	14.44	14.51	14.54	14.58	14.63	14.65	14.68
ORP	85	75	68	66	64	61	54	35	24	22
Turbidity	41.1	21.8	13.6	9.9	9.2	8.0	7.1	6.3	6.5	6.9
Color	CLEAR									
Dissolved Oxygen	2.06	1.85	0.91	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Purge Volume	2.075 Gal		1.06 Gal	1.25 Gal			2.175 Gal	2.6 Gal	2.25	2.50

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 7.79  
Sampling Method: ~~JAT~~ P. Pump  
Filter Type: 45m

Sample Number: MW-12  
Water Level Finish: 7.91  
Field comments: \_\_\_\_\_



Well Number: MW13

Project Name: BFC

Project Number: 410-K

Date: 11/29/16

Weather: Cloudy

Development / Purge Method: PERISTALTIC Pump

Well Screen Interval: 4 to 24

Tidally Influenced? YES Groundwater

Logged By: KAMS

Water Depth Start: 12.22

Field Comments: SET TURE @ = 2' BELOW H<sub>2</sub>O SURFACE

Purge Water Disposal Method: Drain

Water Depth Finish: 12.43

Purge Water Disposal Volume: ~5 Gal

Bails Dry? Yes No What Volume? N/A

Well Conditions:  OK  Not OK

Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	8:24	8:28	8:31	8:34	8:38	8:41	8:44	8:48	8:51	8:54
Water Level	12.29	12.28	12.29	12.30	12.31	12.31	12.32	12.32	12.33	12.33
pH	6.63	6.63	6.62	6.61	6.61	6.60	6.59	6.60	6.60	6.59
Conductivity <sup>MS/cm</sup>	.562	.549	.512	.462	.418	.407	.399	.392	.381	.373
Temperature	16.00	16.12	15.79	15.63	15.43	15.22	15.30	15.26	15.07	15.09
ORP /mv	32	23	12	2	-9	-15	-21	-24	-30	-34
Turbidity NTU	350	244	300	196	80	12	5	4.5	4.1	3.7
Color	Clear									
Dissolved Oxygen <sup>mg/L</sup>	2.70	2.31	2.06	1.93	1.84	1.83	1.75	1.71	1.69	1.63
Purge Volume	0.5 gal	1 gal	1.5 gal	2.0 gal	2.5	-3.0 gal	3.5	4.0	4.5	5

Well Sampling Information (complete if well is sampled)

Decon Method: Alcon

Sample Number: MW 13

Water Level Start: 12.29

Water Level Finish: 12.43

Sampling Method: P Pump

Field comments:

Filter Type: 45 micron

g-logics

1st FIELD DUP

<b>Well Number:</b> MW-14/MW-A		<b>Project Name:</b> BFC	
<b>Project Number:</b> 410-K	<b>Date:</b> 9/1/29/16	<b>Weather:</b> CLOUDY COLD	
<b>Development / Purge Method:</b> PARASTATIC	<b>Well Screen Interval:</b> 4 to 24	<b>Tidally Influenced?</b> YES GOING OUT	
<b>Logged By:</b> KACEE	<b>Water Depth Start:</b> 13.38	<b>Field Comments:</b> TUBE SET @ 15.5	
<b>Purge Water Disposal Method:</b> DRUM	<b>Water Depth Finish:</b> 13.69		
<b>Purge Water Disposal Volume:</b> 3.75 GAL	<b>Bails Dry?</b> Yes No What Volume? N/A	<b>Well Conditions:</b> OK <input checked="" type="radio"/> (Not OK) MONUMENT PAD BROKEN BEING RECOMMENDED	
		<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1023	1026	1029	1032	1035	1038	1041	1044	1047	1050
Water Level	13.55	13.57	13.58	13.60	13.64	13.64	13.65	13.68	13.69	13.72
pH	6.36	6.42	6.42	6.42	6.42	6.44	6.44	6.44	6.43	6.44
Conductivity <sup>ms/cm</sup>	0.718	0.712	0.708	0.704	0.703	0.700	0.699	0.695	0.691	0.688
Temperature °C	13.51	14.16	14.51	14.70	14.82	14.95	14.93	14.88	14.88	14.90
ORP <sub>ORP<sub>mV</sub></sub>	-105	-116	-122	-125	-128	-129	-131	-132	-133	-133
Turbidity <sub>NTU</sub>	43.1	38.3	33.0	23.7	14.0	8.5	3.5	2.8	2.8	1.7
Color	CLEAR									
Dissolved Oxygen <sub>mg/L</sub>	3.15	1.45	0.51	0.03	0.00	0.05	0.00	0.00	0.00	0.00
Purge Volume	2.5 GAL	2.75 GAL	2.1 GAL	2.125	2.125	2.15	2.25	2.25	2.5	2.75

**Well Sampling Information (complete if well is sampled)**

Decon Method: ALCONOX

Water Level Start: 13.38

Sampling Method: PARASTATIC

Filter Type: .45 MICRON

Sample Number: MW-14

Water Level Finish: 13.69

Field comments: \_\_\_\_\_



Well Number: MW-16

Project Name: BFC

Project Number: 410-1K	Date: 11/29/16	Weather: Cloudy Cold
Development / Purge Method:	Well Screen Interval: 9.5 to 24.5	Tidally Influenced? YES
Logged By: KAVES	Water Depth Start: 13.62 13.54	Field Comments: TUBE SET @ 15.5' CONCRETE IN
Purge Water Disposal Method: DAM	Water Depth Finish:	
Purge Water Disposal Volume: 25 GAL	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	1221	1224	1227	1230	1233	1236	1239	1242	1245	1248
Water Level	13.69	13.65	13.63	13.62	13.60	13.60	13.60	13.60	13.60	13.60
pH	6.40	6.42	6.43	6.44	6.45	6.48	6.48	6.50	6.49	6.21
Conductivity	.001	.001	.001	.001	.001	.001	.001	.001	0.497	0.497
Temperature	10.76	10.78	10.80	10.84	10.87	10.91	10.96	11.00	13.55	14.05
ORP	373	367	359	351	344	338	332	325	-36	-42
Turbidity	114	114	114	114	115	115	115	115	10.1	9.9
Color	CLEAR									
Dissolved Oxygen	19.52	19.08	19.04	19.01	18.99	18.98	18.95		0.25	0.00
Purge Volume	~2.75 gal	~1 gal	~1.25	~1.75 gal	~2 GAL	~2.5 GAL	~3 GAL	~3.25	~3.5	~3.75

NO FLOW CELL HOOK UP ←      ↑ FLOW CELL →

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: 13.54  
 Sampling Method: P. Pump  
 Filter Type: .45 microns

Sample Number: MW-16  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-16 cont.		<b>Project Name:</b> BFC	
Project Number: 410-K	Date: 11/29/16	Weather:	
Development / Purge Method:	Well Screen Interval: 9.5 to 24.5	Tidally Influenced? YES	
Logged By: KAMC	Water Depth Start: 13.54	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	12.51	12.54	12.57				
Water Level	13.60	13.60	13.59				
pH	6.21	6.21	6.20				
Conductivity	0.498	0.497	0.493				
Temperature	14.22	14.33	14.40				
ORP	-51	-54	-57				
Turbidity	5.5	1.3	0.0				
Color	CLEAR	→					
Dissolved Oxygen	0.00	0.00	0.00				
Purge Volume	2.4 gal	2.25	2.5 gal				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 13.54  
Sampling Method: P Pump  
Filter Type: 45 micron

Sample Number: \_\_\_\_\_  
Water Level Finish: 13.35  
Field comments: \_\_\_\_\_





Well Number: MW-17

Project Name:

Project Number: 01-410-12	Date: 12/6/16	Weather: Sunny / Cool
Development / Purge Method: Parasoltik	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	12:23	12:26	12:30	12:33	12:36	12:39	12:42	12:45
Water Level	<del>10.64</del> 13.06	12.78	12.74	12.71	12.71	12.70	12.71	12.73
pH	6.86	6.77	6.75	6.74	6.74	6.74	6.74	6.74
Conductivity	0.569	0.569	0.569	0.568	0.569	0.569	0.568	0.567
Temperature	13.74	14.25	14.24	14.34	14.35	14.39	14.50	14.57
Salinity ORP	-8	-7	-6	-5	<del>10</del> -5	-5	-5	-6
Turbidity	207	118	54.6	43.2	<del>4</del> 36.7	28.1	20.8	22.0
Color	Clr/Rusty Bac	Clr	" "	" "	" "	" "	" "	" "
Dissolved Oxygen in	0.07	0.12	0.10	0.11	0.11	0.11	0.08	0.05
Purge Volume	~1 gal	~1.5	~1.5	~2	~2	~2	~2	~2.5

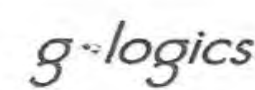
Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_ Sample Number: \_\_\_\_\_

Water Level Start: \_\_\_\_\_ Water Level Finish: \_\_\_\_\_

Sampling Method: \_\_\_\_\_ Field comments: \_\_\_\_\_

Filter Type: \_\_\_\_\_



<b>Well Number:</b> MW-18		<b>Project Name:</b> BFC	
Project Number: 410-K	Date: 11/30/76	Weather: <del>COLD</del> COLD	
Development / Purge Method: P. Pump	Well Screen Interval: 11 to 16'	Tidally Influenced? ?	
Logged By: K. V. S.	Water Depth Start: 7.88	Field Comments: SET TUB @ 12'	
Purge Water Disposal Method: DRAIN	Water Depth Finish:		
Purge Water Disposal Volume: 1.25	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1051	1054	1057	1100	1103	1106		
Water Level	—	—	—	—	—	—		
pH	6.23	6.18	6.19	6.19	6.18	6.18		
Conductivity	0.591	0.571	0.569	0.566	0.563	0.563		
Temperature	12.85	14.06	14.09	14.09	14.25	14.28		
ORP	2	23	32	36	40	41		
Turbidity	45.6	6.6	3.2	13.0	1.2	0.0		
Color	CLEAN							
Dissolved Oxygen	8.47	3.30	1.25	0.44	0.00	0.00		
Purge Volume	1.5	2.75		2.16 gal		1.25 gal		

**Well Sampling Information (complete if well is sampled)**

Decon Method: ALLOW

Water Level Start: 7.88

Sampling Method: \_\_\_\_\_

Filter Type: 45 micron

Sample Number: MW-18

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-19		<b>Project Name:</b>	
Project Number: 410-1C	Date: 11/30/16	Weather: CLOUDY COLD	
Development / Purge Method: P. Pump	Well Screen Interval: 15 to 20	Tidally Influenced?	
Logged By: KANDS	Water Depth Start: 10.21	Field Comments: SET TURF @ 15.5	
Purge Water Disposal Method: Drain	Water Depth Finish: 11.50		
Purge Water Disposal Volume: ~1.75	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1148	1151	1154	1157	1200	1203	1206	1209
Water Level	←—————→							
pH	6.30	6.32	6.33	6.33	6.32	6.32	6.32	6.33
Conductivity	0.665	0.663	0.663	0.659	0.657	0.655	0.655	0.653
Temperature	11.30	11.69	12.02	12.30	12.47	12.58	12.64	12.77
ORP	-26	-37	-44	-48	-51	-53	-53	-55
Turbidity	123	649	31.3	14.0	11.5	9.6	9.8	8.2
Color	CLEAR	←—————→						
Dissolved Oxygen	4.89	3.00	0.89	0.00	0.00	0.00	0.00	0.00
Purge Volume	2.5	~.75	~.75	~1 gal		1.25		1.50

**Well Sampling Information (complete if well is sampled)**

Decon Method: ~~P. Pump~~ Allowax  
Water Level Start: 10.21  
Sampling Method: P. Pump  
Filter Type: 4/5 MIC. FILTER

Sample Number: MW-19  
Water Level Finish: 11.50  
Field comments:



Well Number: MW-20

Project Name: BFC

Project Number: 412-K

Date: 11-30-16

Weather: cold, windy, overcast

Development / Purge Method: Pump

Well Screen Interval: 15 to 20

Tidally Influenced?

Logged By: JW

Water Depth Start: 11.43

Field Comments:

Sampled From 16'

Purge Water Disposal Method:

Water Depth Finish:

Purge Water Disposal Volume:

Bails Dry? Yes No What Volume?

Well Conditions:  OK  Not OK

Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	1145	1148	1151	1154	1157	1200		
Water Level	11.43							
pH	6.66	6.65	6.63	6.63	6.62	6.62		
Conductivity	0.582	0.561	0.516	0.507	0.502	0.497		
Temperature	13.98	14.25	14.54	14.59	14.66	14.72		
ORP	-36	-43	-56	-58	-60	-63		
Turbidity	452	249	93.3	29.1	17.7	13.0		
Color								
Dissolved Oxygen	2.70	2.24	1.83	1.77	1.71	1.69		
Purge Volume	1	1.25	1.5	1.75	2.0	2.25		

Well Sampling Information (complete if well is sampled)

Decon Method:

Dedicated Tubing

Sample Number:

MW-20

Water Level Start:

11.43

Water Level Finish:

Sampling Method:

Peristaltic

Field comments:

Filter Type:

In-line Quize Filter  
0.45 µm

g-logics

287 787 6008  
 0.2 755 0548 4

<b>Well Number:</b> MW-21		<b>Project Name:</b>	
Project Number: 01-0410-K	Date: 11-30-16	Weather: cool-cold, windy, overcast	
Development / Purge Method: Peri Pump	Well Screen Interval: 17 to 22	Tidally influenced? Yes	
Logged By: ZW	Water Depth Start: 11.44	Field Comments: Sampled From 16'	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1043	1046	1049	1052	1055	1058		
Water Level	11.44							
pH	6.62	6.62	6.62	6.61	6.61	6.61		
Conductivity	0.675	0.677	0.680	0.681	0.680	0.680		
Temperature	11.36	11.49	11.55	11.91	12.09	12.19		
ORP	-26	-29	-39	-49	-55	-57		
Turbidity	36.1	35.1	42.7	32.0	10.1	6.4		
Color								
Dissolved Oxygen	2.55	2.46	2.26	2.11	2.04	1.98		
Purge Volume	1	1.5	1.75	2.0	2.5	2.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated Tubing

Water Level Start: 11.44

Sampling Method: Peristaltic

Filter Type: \_\_\_\_\_

Sample Number: MW-21

Water Level Finish: 12.00

Field comments: \_\_\_\_\_





<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: MW-22	Date: 12/6/16	Weather: Clear/Cool	
Development / Purge Method: 01-410-K	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By: JT	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	13:30	13:33	13:36	13:39	13:42	13:45	—	13:51
Water Level	9.97							
pH	7.17	7.17	7.17	7.13	7.11	7.09		
Conductivity	0.448	0.416	0.380	0.360	0.347	0.342		
Temperature	14.13	14.77	15.38	15.59	15.70	15.75		
ORP	-19	-50	-68	-74	-78	-79		
Turbidity	13.4	11.9	9.4	7.0	5.1	3.6		
Color	Clr	Clr	Clr	Clr	Clr	Clr		
Dissolved Oxygen	8.36	8.22	7.83	7.44	4.10	3.11		
Purge Volume								

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
Water Level Finish: \_\_\_\_\_  
Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-23/MWC		<b>Project Name:</b>	
Project Number: 01-410-K	Date: 12/6	Weather:	
Development / Purge Method: Per. Pump	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

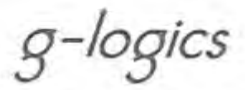
Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1102	1110	1115					
Water Level	10.3	10.3	10.3					
pH	6.82	6.78	6.76					
Conductivity	0.607	0.605	0.599					
Temperature	13.35	13.70	14.22					
ORP	24	12	14					
Turbidity	4.6	3.1	3.4					
Color	Clr							
Dissolved Oxygen	8.19	7.42	7.19					
Purge Volume	1 gal	2.0	2.5					

**Well Sampling Information (complete if well is sampled)**

Decon Method: _____	Sample Number: _____
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	



<b>Well Number:</b> MW-24		<b>Project Name:</b>	
Project Number: 410-K	Date: 12/6/16	Weather: Sunny, Cold	
Development / Purge Method:	Well Screen Interval: 8.65 to 13.65	Tidally Influenced? No	
Logged By:	Water Depth Start: 10.34	Field Comments: well pumps dry	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? <input checked="" type="radio"/> Yes <input type="radio"/> No What Volume? 0.4 Gal	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	8:30	8:40	8:43	8:46	8:50	8:55		
Water Level	10.34	11.34						
pH		8.27	7.97	7.56	7.46	7.33		
Conductivity		0.897	0.885	0.874	0.872	0.876		
Temperature		7.16	7.23	7.52	7.55	7.54		
ORP		-86	-87	-83	-82	-83		
Turbidity		106	98.5	84.8	80.2	75.0		
Color	clr	clr						
Dissolved Oxygen		0.95	0.94	0.99	1.01	0.99		
Purge Volume		0.2 Gal	0.4	0.5	0.6	0.7		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_ Sample Number: \_\_\_\_\_

Water Level Start: \_\_\_\_\_ Water Level Finish: \_\_\_\_\_

Sampling Method: \_\_\_\_\_ Field comments: \_\_\_\_\_

Filter Type: \_\_\_\_\_



Well Number: MW-25

Project Name:

Project Number:	Date: 12/6/16	Weather:
Development / Purge Method:	Well Screen Interval: 9 to 14	Tidally influenced?
Logged By:	Water Depth Start: 894	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	951	954	957	1000	1005			
Water Level	894							
pH	7.23	7.02	6.96	6.84	6.84			
Conductivity	0.393	0.380	0.378	0.374	0.378			
Temperature	10.93	12.12	12.46	12.69	12.61			
ORP	35	59	65	81	81			
Turbidity	61.0	42.2	40.5	15.1	14.7			
Color								
Dissolved Oxygen	2.89	2.15	1.99	1.43	1.40			
Purge Volume	0.2	0.3	0.4	0.6	0.8			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_ Sample Number: \_\_\_\_\_

Water Level Start: \_\_\_\_\_ Water Level Finish: \_\_\_\_\_

Sampling Method: \_\_\_\_\_ Field comments: \_\_\_\_\_

Filter Type: \_\_\_\_\_



<b>Well Number:</b> MW-26D		<b>Project Name:</b> BFC	
<b>Project Number:</b> 410-K	<b>Date:</b> 11/30/16	<b>Weather:</b> Cloudy Cold	
<b>Development / Purge Method:</b> P. Pump	<b>Well Screen Interval:</b> 19' to 23'	<b>Tidally Influenced?</b> YES	
<b>Logged By:</b> LAMES	<b>Water Depth Start:</b> 12.29	<b>Field Comments:</b> SET TURE @ 218"	
<b>Purge Water Disposal Method:</b> PUMP	<b>Water Depth Finish:</b> 12.19	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No <b>What Volume?</b> N/A	<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1302	1305	1308	1311	1314	1317	1320	1323	1326	1329
Water Level	12.33	12.33	12.34	12.34	12.33	12.32	12.32	12.31	12.31	12.31
pH	6.75	6.72	6.65	6.57	6.50	6.46	6.42	6.39	6.38	6.36
Conductivity <i>ms/cm</i>	0.851	0.819	0.734	0.653	0.594	0.562	0.533	0.515	0.505	0.491
Temperature °C	13.30	13.87	13.99	14.01	14.01	14.02	14.01	14.00	14.00	14.07
ORP	-81	-93	-91	-82	-75	-71	-66	-65	-64	-61
Turbidity <i>NTU</i>	71.2	36.1	25.2	16.5	12.6	10.6	8.9	7.3	6.6	5.6
Color	CLEAR									
Dissolved Oxygen <i>mg/L</i>	3.58	0.59	0.02	0.0	0.00	0.00	0.00	0.00	0.00	0.00
Purge Volume	4.75		~1.5gal	= 2Gal	2.5gal	2.75gal	3gal	3.5gal	4gal	4.5

**Well Sampling Information (complete if well is sampled)**

Decon Method: ALCONOX

Water Level Start: 12.29

Sampling Method: P. Pump

Filter Type: 45 MICRONS

Sample Number: MW-26D

Water Level Finish: 12.19

Field comments: \_\_\_\_\_

*g-logics*



<b>Well Number:</b> MW-26D cont.		<b>Project Name:</b> BFC	
Project Number: 410K	Date: 11/30/16	Weather:	
Development / Purge Method:	Well Screen Interval: 18 to 23'	Tidally Influenced?	
Logged By: KAMES	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1332	1335	1338				
Water Level	12.31	12.31	12.31				
pH	6.36	6.34	6.34				
Conductivity	0.484	0.478	0.470				
Temperature	14.02	14.02	14.01				
ORP	-61	-60	-60				
Turbidity	5.5	4.8	5.0				
Color	CLEAR						
Dissolved Oxygen	0.00	0.00	0.00				
Purge Volume	24.5	25	25.5				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
Water Level Finish: \_\_\_\_\_  
Field comments: \_\_\_\_\_



Well Number: MW-26

Project Name:

Project Number: 01-0410-K

Date: 11-30-16

Weather: calm, windy, overcast

Development / Purge Method:

Well Screen Interval: 7 to 12

Tidally Influenced? no

Logged By:

Water Depth Start: 8.02

Field Comments: Sampled From 10'

Purge Water Disposal Method:

Water Depth Finish:

Purge Water Disposal Volume:

Bails Dry? Yes No What Volume?

Well Conditions: OK Not OK

Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	1248	1302	1305	1308	1311	1314	1317	
Water Level	8.02	8.17	8.18	8.20	8.18	8.18	8.09	
pH		6.73	6.69	6.67	6.64	6.63	6.6	
Conductivity		0.370	0.377	0.384	0.387	0.387	0.388	
Temperature		14.89	15.29	15.37	15.31	15.28	15.27	
ORP		-29	-37	-39	-39	-39	-36	
Turbidity		36.1	26.4	17.9	7.3	4.5	2.0	
Color		clr						
Dissolved Oxygen		2.92	2.14	1.98	1.83	1.79	1.69	
Purge Volume		1	1.2	1.5	1.75	2.0	2.25	

Well Sampling Information (complete if well is sampled)

Decon Method:

Dedicated Tubing

Sample Number:

MW-26

Water Level Start:

8.09

Water Level Finish:

8.09

Sampling Method:

Peristaltic

Field comments:

Filter Type:



<b>Well Number:</b> 27D		<b>Project Name:</b> BFC	
Project Number: 410	Date: 11/28/16	Weather: Partly Cloudy	
Development / Purge Method:	Well Screen Interval: 14.5 to 21.5	Tidally Influenced? Yes	
Logged By:	Water Depth Start: 11.58	Field Comments:	
Purge Water Disposal Method: Down	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

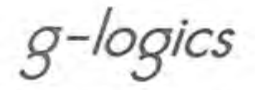
**Well Development / Purging (circle one)**

Time	15:06	15:10	15:13	15:16	15:19	15:22	15:25	
Water Level	11.55	11.53	11.51	11.51	11.50	11.48	11:48	
pH	6.43	6.43	6.49	6.50	6.51	6.51	6.51	
Conductivity <sup>ms/cm</sup>	.706	.688	.642	.605	.559	.552	.532	
Temperature °C	14.68	14.68	14.82	14.86	14.92	14.89	14.89	
ORP mv	.40	.43	.48	.53	.56	.57	.58	
Turbidity NTU	98.0	85.6	57.9	43.5	34.0	27.1	23.8	
Color	6 lew	-----						
Dissolved Oxygen <sup>mg/L</sup>	2.03	1.95	1.82	1.75	1.68	1.63	1.59	
Purge Volume	1 gal	1.25 gal	1.5 gal	1.75 gal	2.0 gal	2.5 gal	3.0 gal	

**Well Sampling Information (complete if well is sampled)**

Decon Method: Alconp  
Water Level Start: 11.58  
Sampling Method: P. Pump  
Filter Type: .45 micron

Sample Number: MW 27D  
Water Level Finish: 11.48  
Field comments: Sampled @ 1530



<b>Well Number:</b> MW-27S		<b>Project Name:</b>	
<b>Project Number:</b> 410-1C	<b>Date:</b> 11/29/16	<b>Weather:</b> PARTLY CLOUDY COOL	
<b>Development / Purge Method:</b> PARASTATIC	<b>Well Screen Interval:</b> 7' to 12'	<b>Tidally Influenced?</b>	
<b>Logged By:</b> KAREE	<b>Water Depth Start:</b> 8.25	<b>Field Comments:</b> SET TUB @ 10'	
<b>Purge Water Disposal Method:</b> 55 GAL DRUM	<b>Water Depth Finish:</b> 8.25		
<b>Purge Water Disposal Volume:</b> 1.256m	<b>Bails Dry? Yes No What Volume?</b> N/A	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

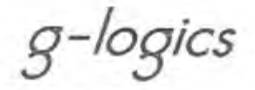
**Well Development / Purging (circle one)**

Time	1510	1513	1516	1519	1522	1525	1528	1531	1534	1540
Water Level	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
pH	6.15	6.18	6.18	6.18	6.22	6.22	6.21	6.21	6.21	6.21
Conductivity <sup>ms/cm</sup>	1.17	1.17	1.16	1.15	1.15	1.14	1.14	1.13	1.13	1.11
Temperature °C	13.96	14.10	14.15	14.21	14.29	14.33	14.38	14.42	14.44	14.44
ORP <sub>ORPmv</sub>	142	141	140	139	137	136	135	133	133	129
Turbidity <sub>NTU</sub>	0.3	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Color	CLEAN									
Dissolved Oxygen <sub>mg/L</sub>	3.90	3.65	3.37	3.29	3.13	3.22	3.01	2.97	2.97	2.98
Purge Volume	0.25			0.56gal			0.756gal			1.256gal

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 8.25  
Sampling Method: PARASTATIC  
Filter Type: \_\_\_\_\_

Sample Number: MW-27S  
Water Level Finish: 8.25  
Field comments: \_\_\_\_\_



MMW-

<b>Well Number:</b> 28-D		<b>Project Name:</b> BFC	
Project Number: 410-R	Date: 11/28/16	Weather: Cloudy	
Development / Purge Method: Parisian	Well Screen Interval: 18 to 23	Tidally Influenced? YES (INCOMING)	
Logged By: KANE	Water Depth Start: <del>12.00</del> 12.08	Field Comments: 23 12 11 17.50 SET TUBING	
Purge Water Disposal Method: 556AL Pump	Water Depth Finish: 12.00		
Purge Water Disposal Volume: 239AL	Bails Dry? Yes <input type="radio"/> No <input checked="" type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
Explain:			

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

* Time	12:24	12:28	12:31	12:34	12:37	12:40	12:43	12:46	12:49	12:53
* Water Level	12.05	12.06	12.4	12.05	12.04	12.04	12.02	12.02	12.02	12.00
* pH	6.56	6.51	6.48	6.47	6.47	6.46	6.46	6.46	6.45	6.45
* Conductivity $\mu\text{S/cm}$	0.213	0.196	0.198	0.200	0.204	0.203	0.205	0.208	0.214	0.218
* Temperature $^{\circ}\text{C}$	14.63	15.06	15.09	15.07	15.04	15.04	15.02	15.06	15.06	15.07
* ORP $\text{ORP}_{\text{mv}}$	-71	-70	-70	-70	-71	-72	-72	-74	-74	-75
* Turbidity $\text{ntu}$	42.5	40.2	30.2	22.2	16.5	8.3	4.8	1.6	0.7	0.0
Color	CLEAR	SAME								
* Dissolved Oxygen $\text{mg/L}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purge Volume	20.25	20.5	20.75	21.9AL	21.25	21.57AL	21.75	22.9AL	2.25	2.5

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: 12.08

Sampling Method: PARISIAN PUMP

Filter Type: \_\_\_\_\_

Sample Number: MMW-28D

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_





MW-

**Well Number:** 285 **Project Name:**

Project Number: 410-K	Date: 11/28/14	Weather: CLOUDY
Development / Purge Method: PERISTALTIC PUMP	Well Screen Interval: 5' to 12'	Tidally Influenced? NO
Logged By: KARIS	Water Depth Start: 8.22	Field Comments: SET TUB @ 10'
Purge Water Disposal Method: 55 GAL DEUM	Water Depth Finish: 8.76	
Purge Water Disposal Volume: 2.25 GAL	Bails Dry? Yes <input type="radio"/> No <input checked="" type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1317	1320	1323	1326	1329	1332	1335	
Water Level	8.22	8.22	8.26	8.26	8.26	8.26	8.26	
pH	6.32	6.29	6.26	6.26	6.26	6.26	6.26	
Conductivity <sup>MS/cm</sup>	0.708	0.705	0.694	0.690	0.689	0.689	0.690	
Temperature °C	15.15	15.16	15.27	15.41	15.41	15.42	15.42	
ORP <sub>ORP mV</sub>	116	118	120	122	123	125	128	
Turbidity NTU	3.2	2.5	1.7	1.0	0.5	0.1	0.0	
Color	CLEAN	—————→						
Dissolved Oxygen	5.09	4.61	4.82	4.85	4.90	4.81	4.32	
Purge Volume	~ 1.25 gal		1.5 gal		1.25 gal		~ 2 gal	

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: 8.15

Sampling Method: PERISTALTIC

Filter Type: \_\_\_\_\_

Sample Number: MW285

Water Level Finish: 8.14

Field comments: \_\_\_\_\_



<b>Well Number:</b> IP-4		<b>Project Name:</b> RFC	
Project Number: 410-K	Date: 11/20/16	Weather:	
Development / Purge Method: P. Pump	Well Screen Interval: 8' to 16'	Tidally Influenced?	
Logged By: K. J. S.	Water Depth Start: 9.87	Field Comments: SET TURBID = 13'	
Purge Water Disposal Method: Pump	Water Depth Finish: 10.10'	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
Purge Water Disposal Volume: 22.5	Bails Dry? Yes No What Volume?	Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	0900	0902	0906	0909	0912	0915	0918	0921
Water Level	10.36	10.39	10.41	10.43	10.45	10.45	10.46	10.50
pH	6.39	6.41	6.43	6.45	6.43	6.41	6.40	6.42
Conductivity <sup>ms/cm</sup>	1.18	1.19	1.19	1.20	1.22	1.23	1.24	1.25
Temperature	12.36	12.83°C	12.94	13.16	13.15	13.16	13.21	13.24
ORP	-130	-134	-132	-140	-142	-144	-144	-146
Turbidity	55.3	49.0	33.1	23.5	18.3	17.2	14.9	14.9
Color	CLEAR	→						
Dissolved Oxygen	1.28	0.45	0.18	0.00	0.00	0.00	0.00	0.00
Purge Volume	~ .5 gal	~ 2.75 gal	~ 1 gal	~ 1.25		~ 1.50	~ 1.75	~ 2.0 gal

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 9.87  
Sampling Method: P. Pump  
Filter Type: 45 micron

Sample Number: IP-4  
Water Level Finish: 10.10  
Field comments: \_\_\_\_\_



<b>Well Number:</b> IP-5		<b>Project Name:</b>	
Project Number: 0410-K	Date: 11/30/16	Weather: Cool Windy overcast	
Development / Purge Method: Per. Pump	Well Screen Interval: 18 to 24	Tidally Influenced? <input checked="" type="checkbox"/> Y	
Logged By: J.W.	Water Depth Start: 12.92	Field Comments: Sampled from 18'	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	845	855	900	903	906	910		
Water Level	12.92	12.95	13.00	12.98	12.99	13.00		
pH		6.56	6.51	6.49	6.50	6.49		
Conductivity ms/cm		0.629	0.620	0.596	0.582	0.576		
Temperature		11.08	12.30	12.33	12.43	12.48		
ORP /mV		16	-35	-36	-43	-47		
Turbidity NTU		24.5	40.7	36.8	16.2	6.3		
Color		CU						
Dissolved Oxygen %		3.28	2.29	2.23	2.08	1.99		
Purge Volume		1 Gal	1.5 Gal	1.25 gal	2 gal	2.25 gal		

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicator Tubing

Water Level Start: 13.00

Sampling Method: Peristaltic

Filter Type: \_\_\_\_\_

Sample Number: IP-5

Water Level Finish: 13.00

Field comments: \_\_\_\_\_

*Field Dup MW-13*



**Daily Field Notes**

**Project Name:** \_\_\_\_\_

Project Number: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Date: \_\_\_\_\_

Weather: \_\_\_\_\_

Started: \_\_\_\_\_

Other Information: \_\_\_\_\_

Completed: \_\_\_\_\_

**Diary**

3/23 Test water level indicators

MW-28D	12 ft	cool solvent	8:45
	11.76 ft	(yellow)	
MW-28S	6.66		8:50
MW-27D	11.94		9:00
27S	7.23		9:01
26D	12.24		9:05
26S	6.92		9:06
MW-25	7.38		9:08
MW-24	8.73		9:12
MW-21	12.67		9:15
MW-18	6.96		9:18
MW-19	10.31		9:25
IP-3	12.96		9:30
IP-4 W	8.01		9:35
IP-5	<del>13.8</del> (big burp)		9:50
MW-23	8.63		10:00
MW-22	8.92		10:10
IP-7	(big burp)		10:20
MW-20	11.89 (burp)		10:15



IP-7 15.12 depth to H<sub>2</sub>O  
 12.30 depth to prod

Approved: \_\_\_\_\_

Signed: \_\_\_\_\_

g-logics

BFC

<b>Well Number:</b> MW-265		<b>Project Name:</b>	
Project Number: 410-K	Date: 3/24	Weather: SUN	
Development / Purge Method:	Well Screen Interval: 7 to 12	Tidally Influenced?	
Logged By:	Water Depth Start: 6.81	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1137	1145	1155	1205	1210		
Water Level	6.81	6.95	6.96	6.98	6.98		
pH		6.20	6.14	6.14	6.13		
Conductivity		0.244	0.245	0.246	0.248		
Temperature		10.06	10.08	10.04	10.05		
ORP		106	110	108	108		
Turbidity		5.7	2.2	1.3	0.6		
Color							
Dissolved Oxygen		0/0	0/0	0/0	0/0		
Purge Volume	0	1.2	2.0	3.0	3.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-265-03242017 @ 1215  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





<b>Well Number:</b> MW-25		<b>Project Name:</b> BFC	
Project Number: 01-0410-K	Date: 3/23	Weather: Sunny	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced? <input checked="" type="checkbox"/>	
Logged By: ZW	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 7.75 (Red Solinst)		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	935	940	945	950	955			
Water Level	<del>8.93</del>							
pH	8.73	7.72	7.62	7.43	7.36			
Conductivity	0.489	0.474						
Temperature	10.67	11.22	11.30	11.55	11.61			
ORP	103	117	125	128	130			
Turbidity	<del>88.8</del>	112	<del>125</del> 69.9	62.8	59.5			
Color	CU							
Dissolved Oxygen <sup>mg/L</sup> / <sub>%</sub>	0/0	%	%	%	%			
Purge Volume	1 Gal	1.5	1.75	2.0	2.25			

**Well Sampling Information (complete if well is sampled)**

Decon Method: _____	Sample Number: _____
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	

② 1000



Low tide @ 9.30

<b>Well Number:</b> MW-23		<b>Project Name:</b> BFC	
Project Number: 410-K	Date: 3/23	Weather: Partly Cloudy	
Development / Purge Method: Per.	Well Screen Interval: 5.5 to 15.5	Tidally Influenced? Yes	
Logged By: ZU	Water Depth Start: 9.0 Red Solinst	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1045	1050	1055	1100	1105			
Water Level	9.00	9.00	8.73	8.94	8.95			
pH	6.33	6.35	6.39	6.40	6.43			
Conductivity	0.658	0.658	0.660	0.660	0.658			
Temperature	11.71	11.73	11.70	11.66	11.66			
ORP	169	166	160	155	152			
Turbidity	∅	∅	0.4	∅	∅			
Color	clr	clr	clr	clr	clr			
Dissolved Oxygen	0/0	0/0	0/0	0/0	0/0			
Purge Volume	1.5	2.0	2.5	3.0	3.5	<del>4.0</del>	<del>4.5</del>	<del>5.0</del>

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-23-2017<sup>323</sup> ✓ 1100  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



**Well Number:****Project Name:**

Project Number: 1103-A	Date: 3/23	Weather: Cloudy, 50F
Development / Purge Method: Peristaltic	Well Screen Interval: 7 to 14	Tidally Influenced? <input checked="" type="checkbox"/>
Logged By: JI	Water Depth Start: 8.98	Field Comments:
Purge Water Disposal Method: Drum	Water Depth Finish:	
Purge Water Disposal Volume: 1.2	Balls Dry? Yes No What Volume?	Well Conditions: <input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1115	1120	1125	1130	1135	1140		
Water Level	<del>7.30</del> 7.30	—	—	—	—	—		
pH	7.30	7.01	6.93	6.91	6.90	6.88		
Conductivity	0.45	0.518	0.545	0.566	0.578	0.551		
Temperature	11.88	12.57	12.50	12.85	12.87	12.88		
ORP	61	11	9	6	5	5		
Turbidity	14.7	16.9	7.7	4.7	2.9	3.8		
Color	Clr	Clr	Clr	Clr	Clr	Clr		
Dissolved Oxygen	0.00	0.13 mg/L	0.13	0.08	0.11	0.05		
Purge Volume (gallons)	0.2	0.2	0.2	0.2	0.2	0.2		

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated Tubing  
 Water Level Start: 8.98  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-22  
 Water Level Finish: \_\_\_\_\_  
 Field comments: Samples collected @ ~~1150~~ 1150

*g-logics*

Well Number: MW-24

Project Name:

Project Number:	Date: 3/23	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: 8.65 to 13.65	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? <input checked="" type="radio"/> Yes <input type="radio"/> No What Volume? 1/2 Gallon	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.663 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	1143	1148	1200				
Water Level							
pH	6.44	6.53	6.53				
Conductivity	1.32	1.26	1.29				
Temperature	11.99	12.17	12.16				
ORP	24	3	Ø				
Turbidity	30	77.1	79.3				
Color	clr/gray	clr	clr				
Dissolved Oxygen	0%	0%	0%				
Purge Volume	0.5	0.75	1.25				

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-24-5232017 @ 1200  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date: 3/23	Weather: Cloudy, Sunny 55°F	
Development / Purge Method:	Well Screen Interval: 15 to 20	Tidally Influenced? Y	
Logged By:	Water Depth Start: 11.53	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1240	1245	1250	1255	1300	1305	1310	
Water Level	11.53	—	—	—	—	—	—	11.31
pH	6.75	6.66	6.63	6.62	6.61	6.61	6.61	
Conductivity	0.515	0.499	0.474	0.457	0.444	0.438	0.432	
Temperature	14.64	14.70	14.81	14.90	15.02	15.05	15.10	
ORP	-42	-51	-54	-57	-59	-60	-62	
Turbidity	79.3	22.2	11.8	9.1	3.9	1.4	0.4	
Color	Clr	Clr	Clr	Clr	Clr	Clr	Clr	
Dissolved Oxygen	0.79	0.73	1.24	1.37	1.36	1.34	2.00	
Purge Volume gal	0.123	0.123	0.123	0.123	0.123	0.123	0.123	

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 11.53  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: MW-20  
Water Level Finish: 11.31  
Field comments: Sampled w/ B15





<b>Well Number:</b> IP-3		<b>Project Name:</b>	
Project Number: 01-410-K	Date: 3/23	Weather: Sunny	
Development / Purge Method: Per	Well Screen Interval: 18 to 24	Tidally Influenced? Yes	
Logged By: ZW	Water Depth Start: 12.8	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.663 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1319	1325	1330	1335	1340			
Water Level	12.8	12.8	12.8	12.78	12.78			
pH	6.35	6.25	6.23	6.22	6.21			
Conductivity	0.527	0.504	0.479	0.424	0.420			
Temperature	14.11	14.20	14.24	14.29	14.29			
ORP	13	8	5	2	2			
Turbidity	7.7	1.9	0.8	Ø	Ø			
Color	clr	clr	clr	clr	clr			
Dissolved Oxygen	0/0	0/0	0/0	0/0	0/0			
Purge Volume	0.5	1.0	1.5	2.0	2.5			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: IP-3-3232017 @ 1400  
Water Level Finish: 12.78  
Field comments: \_\_\_\_\_



<b>Well Number:</b> 1		<b>Project Name:</b>	
Project Number: 01-0410-K	Date: 3/23	Weather:	
Development / Purge Method:	Well Screen Interval: 15- to 20	Tidally Influenced?	
Logged By:	Water Depth Start: 9.4 <del>9.4</del> 9.7	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:	Well Conditions: OK Not OK	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1355	1400	1405	1410	1415	1420		
Water Level	9.43	-	-	-				
pH	6.62	6.63	6.63	6.63	6.63	6.63		
Conductivity	0.499	0.505	0.509	0.513	0.509	0.508		
Temperature	18.09	17.99	17.84	17.73	17.79	17.81		
ORP	-8	-2	-8	-13	-16	-17		
Turbidity	15.5	10.9	6.3	1.6	0.0	0.0		
Color	Clr	Clr	Clr	Clr	Clr	Clr		
Dissolved Oxygen	1.29	0.15	0.00	0.00	0.0	0.0		
Purge Volume	0.2	0.2	0.2	0.2	0.2	0.2		

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated tubing

Water Level Start: 9.97

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-19

Water Level Finish: 9.88

Field comments: Sampled @ 1425

*g-logics*

Field Dup \*

<b>Well Number:</b> IP-5		<b>Project Name:</b> BFC	
Project Number: 410-K	Date: 3/23	Weather: Sunny	
Development / Purge Method: Per	Well Screen Interval: 18 to 24	Tidally Influenced? Y	
Logged By: ZW	Water Depth Start: 13.46	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1400	1405	1410	1415	1420	1425	1430	1435	1440
Water Level	13.46	13.44	13.61	13.50	13.50	13.48			
pH	6.14	6.13	6.13	6.16	6.16	6.17			
Conductivity	0.614	0.616	0.616	0.601	0.563	0.510			
Temperature	14.3	14.36	14.41	14.42	14.47	14.52			
ORP	17	17	16	12	9	7			
Turbidity	15.8	13.1	13.1	8.7	8.2	6.2			
Color	clr	clr	clr	clr	clr	clr			
Dissolved Oxygen	0/0	0/0	0/0	0/0	0/0	0/0			
Purge Volume	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: IP-5-3232017 @ 1440  
Water Level Finish: FD-1 (FD-1-3232017)  
Field comments: \_\_\_\_\_

*g-logics*

Well Number: IP-4

Project Name: BFC

Project Number:	Date: <u>3/20</u>	Weather:
Development / Purge Method:	Well Screen Interval: <u>8</u> to <u>16</u>	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume In Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	<u>1520</u>	<u>1525</u>	<u>1530</u>	<u>1535</u>	<u>1540</u>	<u>1545</u>		
Water Level								
pH	<u>6.50</u>	<u>6.50</u>	<u>6.50</u>	<u>6.53</u>	<u>6.54</u>	<u>6.56</u>		
Conductivity	<u>0.952</u>	<u>0.959</u>	<u>0.977</u>	<u>0.996</u>	<u>1.00</u>	<u>1.01</u>		
Temperature	<u>13.50</u>	<u>13.40</u>	<u>13.44</u>	<u>13.42</u>	<u>13.41</u>	<u>13.51</u>		
ORP	<u>-10</u>	<u>-14</u>	<u>-25</u>	<u>-33</u>	<u>-38</u>	<u>-40</u>		
Turbidity	<u>18.9</u>	<u>15.9</u>	<u>13.3</u>	<u>12.3</u>	<u>11.5</u>	<u>10.0</u>		
Color	<u>clr + silty</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>		
Dissolved Oxygen	<u>0/0</u>	<u>0/0</u>	<u>0/0</u>	<u>0/0</u>	<u>0/0</u>	<u>0/0</u>		
Purge Volume	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>	<u>3.0</u>	<u>3.5</u>		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-4-3232017 @ 1530

Water Level Finish: \_\_\_\_\_  
 Field comments: Initially very turbid, cleared up @ 1.0 gal

*g-logics*

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 0410-K	Date: 3/23/17	Weather: Sunny, pty cloudy SS	
Development / Purge Method:	Well Screen Interval: 11 to 16	Tidally Influenced? Y?	
Logged By: JT	Water Depth Start: 6.94	Field Comments:	
Purge Water Disposal Method: Drum	Water Depth Finish: 7.13		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.663 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	15 <del>20</del> 20	1525	1530	1535	1540		
Water Level	6.94	-	-		-		
pH	6.66	6.60	6.58	6.56	6.56		
Conductivity	0.516	0.513	0.510	0.509	0.509		
Temperature	13.47	13.20	13.06	13.09	13.07		
ORP	105	99	97	97	97		
Turbidity	0.6	0.0	0.0	0.0	0.0		
Color	Clr	Clr	Clr	Cl✓	Clr		
Dissolved Oxygen	0.0	0.0	0.0	0.0	0.0		
Purge Volume	0.123	0.123	0.123	0.123	0.3		

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated Tubing

Water Level Start: 6.94

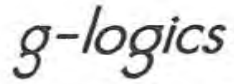
Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-18

Water Level Finish: Sampled @ 1545

Field comments: H<sub>2</sub>O @ 7.13





<b>Well Number:</b> MW-21		<b>Project Name:</b> 8FC	
<b>Project Number:</b> 410-K	<b>Date:</b> 3/23	<b>Weather:</b>	
<b>Development / Purge Method:</b> Pori	<b>Well Screen Interval:</b> 15 to 70	<b>Tidally influenced?</b>	
<b>Logged By:</b> JS	<b>Water Depth Start:</b> 11.79	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b> 12.34		
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.663 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1620	1625	1630	1635	1640			
Water Level	11.79	-	-	-				
pH	6.56	6.58	6.58	6.58	6.58			
Conductivity	0.519	0.562	0.585	0.607	0.610			
Temperature	18.08	16.95	16.24	15.91	15.89			
ORP	-38	-54	-59	-65	-67			
Turbidity	1.0	4.9	2.0	Ø	Ø			
Color	clr	clr	clr	clr	clr			
Dissolved Oxygen <sup>mg/L</sup>	1.45	2.1	2.18	2.17	2.16			
Purge Volume	0.2	0.2	0.75	1.2	1.5			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 11.79  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: MW-21-3232017 @ 1645  
Water Level Finish: 12.34  
Field comments: \_\_\_\_\_



BFC

<b>Well Number:</b> MW-28D		<b>Project Name:</b>	
<b>Project Number:</b> 410-K	<b>Date:</b> 3/24	<b>Weather:</b> Rain, Cool	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 18 to 23	<b>Tidally Influenced?</b> Y	
<b>Logged By:</b>	<b>Water Depth Start:</b> 11.82 Red Schist	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	9:16	9:21	9:26	9:34	9:40	9:50	10:00	
Water Level	11.82		12.9	11.92	11.95	12.0	12.0	
pH		6.42	6.37	6.32	6.30	6.28	6.28	
Conductivity		0.143	0.152	0.164	0.17	0.168	0.125	
Temperature		13.78	14.12	14.17	14.07	14.11	14.00	
ORP		118	85	66	53	47	41	
Turbidity		39	32	31	11.3	4.2	0.9	
Color								
Dissolved Oxygen		0/0	0/0	0/0	0/0	0/0	0/0	
Purge Volume	0	.5	1.0	1.75	2.5	3.5	4.5	

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-28D-3242017 @ 1000  
 Water Level Finish: FD-2-3242017  
 Field comments: \_\_\_\_\_



**Well Number:****Project Name:**

Project Number:

Date:

3/29

Weather:

Development / Purge Method:

Well Screen Interval: 14.5 to 21.5

Tidally Influenced?

Logged By:

Water Depth Start: 11.72

Field Comments:

Purge Water Disposal Method:

Water Depth Finish: 11.87

Purge Water Disposal Volume:

Balls Dry? Yes No What Volume?

Well Conditions:  OK  Not OK

Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	920	925	930	935	940	945	950	955	1000
Water Level	11.72	-	-	-	-	-	-	-	-
pH	6.59	6.60	6.63	6.65	6.66	6.65	6.65	6.65	6.65
Conductivity	0.848	0.764	0.672	0.526	0.438	0.431	0.375	0.345	0.372
Temperature	10.89	12.19	12.86	13.16	13.31	13.38	13.45	13.48	13.51
ORP	-28	-48	-51	-51	-49	-48	-46	-45	-46
Turbidity	11.6	17.4	16.3	17.7	8.7	7.4	7.0	6.5	6.2
Color	CL	CL	CL	CL	CL	CL	CL	CL	CL
Dissolved Oxygen	4.40	3.41	2.67	2.42	1.96	1.68	1.39	1.38	1.30
Purge Volume	0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

**Well Sampling Information (complete if well is sampled)**

Decon Method:

Dedicated Tubing

Sample Number:

MW-27D

Water Level Start:

11.72

Water Level Finish:

Samples collected @ 1005

Field comments:

Sampling Method:

Filter Type:

g-logics

**Well Number:****Project Name:**

Project Number: <u>0410-K</u>	Date:	Weather:
Development / Purge Method:	Well Screen Interval: <u>7</u> to <u>12</u>	Tidally Influenced?
Logged By: <u>JT</u>	Water Depth Start: <u>7.23</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: <u>7.31</u>	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1030	1035	1040	1045	1050			
Water Level	7.23	-	-	-	-			
pH	6.71	6.74	6.73	6.73	6.73			
Conductivity	0.972	0.925	0.919	0.941	0.875			
Temperature	11.74	11.74	11.75	11.77	11.79			
ORP	73	113	132	144	152			
Turbidity	2.1	0.4	0.0	0.0	0.0			
Color	CL	CL	CL	CL	CL			
Dissolved Oxygen	1.46	0.80	0.64	0.46	0.37			
Purge Volume	0.4	0.4	0.4	0.4	0.4			

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated Tubing

Water Level Start: 7.23

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-275

Water Level Finish: 7.31

Field comments: Samples collected @ 1055

*g-logics*

3FC

<b>Well Number:</b> MW-285		<b>Project Name:</b>	
<b>Project Number:</b> 410-K	<b>Date:</b> 3/24	<b>Weather:</b>	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 5 to 12	<b>Tidally Influenced?</b>	
<b>Logged By:</b>	<b>Water Depth Start:</b> 6.8 Red Solinst	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>	<b>Well Conditions:</b> OK Not OK	
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b>	<b>Explain:</b>	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

x.7 = 3.4

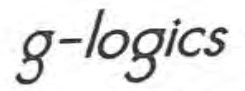
**Well Development / Purging (circle one)**

Time	1040	1048	1055	1100	1110			
Water Level	6.80	6.95	6.93	6.77	6.98			
pH		6.38	6.35	6.38	6.42			
Conductivity		0.514	0.511	0.507	0.506			
Temperature		12.01	12.02	12.04	12.06			
ORP		83	87	92	93			
Turbidity		0	0	0	0			
Color								
Dissolved Oxygen		0/0	0/0	0/0	0			
Purge Volume		1.0	1.8	2.5	3.5			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-285-3242017 @ 1115  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date:	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start: 12.32	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	11:28/30	1135	1140	1145	1150	1155		
Water Level	12.32	-	-	-	-	-		
pH	6.99	6.90	6.80	6.74	6.68	6.65		
Conductivity	0.542	0.526	0.489	0.466	0.477	0.436		
Temperature	13.31	13.51	13.63	13.73	13.77	13.82		
ORP	76	44	29	24	21	19		
Turbidity	28.1	77.4	32.9	22.8	22.3	12.0		
Color	Clr	Clr	Clr	Clr	Clr	Clr		
Dissolved Oxygen	0.76	0.15	0.01	0.0	0.0	0.00		
Purge Volume	0.45	0.45	0.45	0.45	0.45	0.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 12.32  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: MW-26D  
Water Level Finish: 12.31  
Field comments: Sampled @ 1200

*g-logics*

MW-18

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 410-2	Date: 7/27	Weather: MW-18	
Development / Purge Method:	Well Screen Interval: 11 to 16	Tidally Influenced?	
Logged By: 201	Water Depth Start: 9.00	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**  $7 \times 0.041$   
 $= 28 \times 8 = 224 \text{ gal}$

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1115	1125	1130	1135			
Water Level (ft)	9.00	—	—	—			
pH	6.65	6.32	6.29	6.29			
Conductivity (mS/cm)	472.0	447.8	442.1	435.4			
Temperature (F)	16.2	16.5	16.9	16.8			
ORP (mV)	-35	-29.7	-34.1	-40.4			
Turbidity (NTUs)	10.2	2.7	3.0	0.4			
Dissolved Oxygen (mg/L,%)	2.00	1.14	0.78	0.82			
Color	24	21	24	21			
Purge Volume	0	.75	0.89	1.25			

**Well Sampling Information (complete if well is sampled)**

Decon Method: _____	Sample Number: MW-18-7272017 @ 1200
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	



MW-19      BFE

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 410-2	Date: 7/23	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start: 10.17 10.7 (10.3)	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 11.94		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)** 10 X 0.041

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

1.4 x 3 1.2 gals

Time	9:20	9:45	9:55				
Water Level (ft)	10.08	—	—				
pH	6.30	6.33	6.33				
Conductivity (mS/cm)	558	558	558				
Temperature (F)	15.4	15.4	15.5				
ORP (mV)	-48.1	-53.4	-59.4				
Turbidity (NTUs)	30.0	10.3	12.3				
Dissolved Oxygen (mg/L, %)	1.01	0.98	0.92				
Color	30						
Purge Volume	0.5	1.00	1.5				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-19-7272017 @ 1000

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



114-20

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 4012	Date: 7/27	Weather: overcast	
Development / Purge Method:	Well Screen Interval: 15 to 20	Tidally Influenced? High Tide	
Logged By: J.A.	Water Depth Start: 12.05	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

8 x 0.041  
= 0.3 x 3 = 1 gal

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	836	845	855	900			
Water Level (ft)	12.05	-					
pH	6.37	6.33	6.38	6.25			
Conductivity (mS/cm)	414.0	406.3	381.1	380.1			
Temperature (F)	15.0	14.8	15.1	15.0			
ORP (mV)	-94.2	-99.7	-101.4	-100.2			
Turbidity (NTUs)	27.3	48.0	12.4	12.7			
Dissolved Oxygen (mg/L,%)	1.11	1.00	0.97	0.97			
Color	clr	clr	clr	clr			
Purge Volume	0.5	0.75	1.00	1.25			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: 114-20-7272017 @ 900  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



MW-21

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 410-K	Date: 7/27	Weather: Overcast	
Development / Purge Method:	Well Screen Interval: 17 to 22	Tidally Influenced? Yes	
Logged By: BW	Water Depth Start: 15.3	Field Comments: Falling Tide	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**  $7 \times 0.041 = 0.287 \times 3 = 0.861$

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1224	1234	1240	1245	1250		
Water Level (ft)	15.3	—	—	—	—		
pH	6.58	6.27	6.23	6.28	6.29		
Conductivity (mS/cm)	454.5	549	562	575	576		
Temperature (F)	16.0	15.4	16.0	16.1	16.1		
ORP (mV)	-15.3	-88.5	-92.1	-99.3	-100.7		
Turbidity (NTUs)	0.0	0.6	0.8	0.2	0.6		
Dissolved Oxygen (mg/L, %)	1.86	0.73	0.91	0.87	0.86		
Color	clr	clr	clr	clr	clr		
Purge Volume	0	0.25	1.00	1.25	1.4		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-21-7272017 @ 1300  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





9' of tubing to get to edge - island

<b>Well Number:</b> Mw-22		<b>Project Name:</b> BFC	
<b>Project Number:</b> 6410-K	<b>Date:</b> 7/16/17	<b>Weather:</b> Sunny	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 7 to 14	<b>Tidally Influenced?</b> Y	
<b>Logged By:</b> TI	<b>Water Depth Start:</b> 10.48'	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b> Drum	<b>Water Depth Finish:</b>	Sampled @ 12'	
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1210	1215	1220	1225	1230	1235	1240	
Water Level (ft)	10.48	-	-	-	-	-	-	-
pH	6.86	6.91	6.91	6.91	6.91	6.90	6.90	
Conductivity (mS/cm)	0.548	0.539	0.536	0.546	0.547	0.541	0.550	
Temperature (F)	22.53	19.52	18.95	18.60	18.83	18.59	19.60	
ORP (mV)	169	116	87	67	58	51	41	
Turbidity (NTUs)	16.7	10.5	0.0	1.2	0.0	0.0	0.0	
Dissolved Oxygen (mg/L,%)	0.82	0.75	0.73	0.93	0.99	1.08	0.90	
Color	CU	CU	CU	CU	CU	CU	CU	
Purge Volume	0.2	0.4	0.6	0.8	1.0	1.2	1.4	

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated  
 Water Level Start: 10.48  
 Sampling Method: Low Flow  
 Filter Type: /

Sample Number: Mw-22-~~7262017~~ 7262017  
 Water Level Finish: 10.80  
 Field comments: Sampled @ 1245



MU-23

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 410-K	Date: 7/26	Weather: Sunny	
Development / Purge Method:	Well Screen Interval: 5.5 to 15.5	Tidally Influenced?	
Logged By: ZL	Water Depth Start: 10.56	Field Comments: Monument Full of water	
Purge Water Disposal Method: Decon	Water Depth Finish: 11.49		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		Explain:	

**Well Development / Purging (circle one)**

5 x 0.163 = 1.00

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1130	1135	1145	1155	1200		
Water Level (ft)	11.19	11.30	11.43	11.56	11.70		
pH	6.17	6.22	6.24	6.25	6.28		
Conductivity (mS/cm)	527	527	526	527	528		
Temperature (F)	18.7	18.6	18.8	18.6	18.6		
ORP (mV)	-18.6	-25.7	-31.3	-40.2	-48.1		
Turbidity (NTUs)	-5.7	-1.2	7.2	17.7	24.8		
Dissolved Oxygen (mg/L,%)	1.08	0.78	0.89	0.84	0.80		
Color	21r	21r	21r	21r	21r		
Purge Volume	2	2.5	3.0	3.5	3.75		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-23-7262017 @ 1200  
 Water Level Finish: 11.49  
 Field comments: \_\_\_\_\_



MLW-24

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: <u>810-L</u>	Date: <u>7/27</u>	Weather:	
Development / Purge Method:	Well Screen Interval: <u>8.65</u> to <u>13.65</u>	Tidally Influenced?	
Logged By:	Water Depth Start: <u>10.87</u>	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? <input checked="" type="radio"/> Yes <input type="radio"/> No What Volume? <u>0.12 gal</u>	Well Conditions: <input type="checkbox"/> OK <input type="checkbox"/> Not OK	
		Explain:	

**Well Development / Purging (circle one)** 3 x 0.041  
 $= 0.12 \times 3 = 0.36$

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

$0.041 \times 3 \times 10 = 1.23$

Time	<u>1340</u>	<u>1345</u>	<u>1350</u>	<u>1408</u>				
Water Level (ft)	<u>10.87</u>	<u>12.50</u>	<u>12.30</u>	<u>11.28</u>				
pH								
Conductivity (mS/cm)								
Temperature (F)								
ORP (mV)	<u>N/A</u>	<u>N/A</u>						
Turbidity (NTUs)	<u>N/A</u>	<u>N/A</u>						
Dissolved Oxygen (mg/L,%)								
Color								
Purge Volume	<u>Pumped Dry</u>	<u>Pumped Dry</u>	<u>Not Pumped</u>					

**Well Sampling Information (complete if well is sampled)**

40 sec per 0.1 ft

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-25		<b>Project Name:</b>	
Project Number: 0110-K	Date: 7/26/17	Weather: Sunny	
Development / Purge Method:	Well Screen Interval: 9 to 14	Tidally Influenced? Y	
Logged By: JI	Water Depth Start: 9.31	Field Comments: <del>Sampled</del> 11.5"	
Purge Water Disposal Method: Drum	Water Depth Finish: 9.48		
Purge Water Disposal Volume: Peri	Bails Dry? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1020	1025	1030	1035	1040	1045	1050	
Water Level (ft)	9.31	-	-	-	-	-	-	
pH	6.54	6.61	6.66	6.68	6.69	6.70	6.72	
Conductivity (mS/cm)	0.522	0.421	0.417	0.419	0.410	0.418	0.414	
Temperature (F)	17.20 C	15.19	15.24	15.17	15.19	15.20	15.17	
ORP (mV)	194	155	154	155	156	159	161	
Turbidity (NTUs)	97.1	40.6	11.3	3.2	3.0	2.4	3.8	
Dissolved Oxygen (mg/L,%)	2.50/	0.70	1.29	4.17	4.47	4.18	4.14	
Color	Clr	Clr	Clr	Clr	Clr	Clr	Clr	
Purge Volume	0.7143	0.76	0.9	0.9	1.2	1.5	1.8	

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated

Water Level Start: 9.31

Sampling Method: Low-flow

Filter Type: ✓

Sample Number: MW-25-~~0110-K~~ 722017

Water Level Finish: 9.48

Field comments: Collected @ 1100



<b>Well Number:</b> MW-265		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-0410K	<b>Date:</b> 2/27/17	<b>Weather:</b> Cloudy	
<b>Development / Purge Method:</b> Peri	<b>Well Screen Interval:</b> 7 to 12	<b>Tidally Influenced?</b> N	
<b>Logged By:</b> JI	<b>Water Depth Start:</b> 8.99	<b>Field Comments:</b> Sampled @ 11:5'	
<b>Purge Water Disposal Method:</b> Drum	<b>Water Depth Finish:</b> 9.80		
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.563 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	940	945	950	955	1000	1005	1010	
Water Level (ft)	8.99	-	-	-	-	-	-	
pH	6.58	6.63	6.67	6.66	6.70	6.70	6.70	
Conductivity (mS/cm)	0.369	0.365	0.357	0.347	0.345	0.342	0.341	
Temperature (F)	17.90	17.19	17.04	17.05	17.06	17.09	17.09	
ORP (mV)	21	-5	-19	-29	-31	-34	-36	
Turbidity (NTUs)	7.43	29.4	12.3	10.5	5.2	4.5	3.8	
Dissolved Oxygen (mg/L, %)	2.00	0.33	0.0	0.0	0.0	0.0	0.0	
Color	CU	CU	CU	CU	CU	CU	CU	
Purge Volume	0.2	0.4	0.6	0.9	1.0	1.2	1.4	

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** Dedicated

**Water Level Start:** 8.99

**Sampling Method:** Low Flow

**Filter Type:** \_\_\_\_\_

**Sample Number:** MW-265-7272017

**Water Level Finish:** 9.80

**Field comments:** Collected @ 10:15





<b>Well Number:</b> MW-260		<b>Project Name:</b> 0410-K BFC	
<b>Project Number:</b> 0410-K	<b>Date:</b> 7/27/17	<b>Weather:</b> Cloudy	
<b>Development / Purge Method:</b> Peri	<b>Well Screen Interval:</b> 18 to 23	<b>Tidally Influenced?</b> <input checked="" type="checkbox"/>	
<b>Logged By:</b> JT	<b>Water Depth Start:</b> 13.38'	<b>Field Comments:</b> Sample @ 19'	
<b>Purge Water Disposal Method:</b> Drum	<b>Water Depth Finish:</b> 13.32'		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	840	845	850	855	900	905	910	915
Water Level (ft)	13.38	-	-	-	-	-	-	
pH	6.79	6.76	6.77	6.77	6.76	6.74	6.72	6.72
Conductivity (mS/cm)	0.400	0.405	0.406	0.405	0.401	0.397	0.390	0.39
Temperature (F)	15.53	14.51	14.42	14.35	14.26	14.21	14.12	14.14
ORP (mV)	84	24	16	13	10	8	5	3
Turbidity (NTUs)	5.0	4.1	4.5	4.4	3.8	3.4	2.1	2.1
Dissolved Oxygen (mg/L, %)	3.30	0.30	0.03	0.0	0.0	0.0	0.0	0.0
Color	CL	CL	CL	CL	CL	CL	CL	CL
Purge Volume	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated

Water Level Start: 13.38'

Sampling Method: Low flow

Filter Type: \_\_\_\_\_

Sample Number: MW-260-012 72717

Water Level Finish: 13.32'

Field comments: Collected @ 920



MW-275

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: <u>2102</u>	Date: <u>7/26</u>	Weather: <u>Cloudy 46°</u>	
Development / Purge Method:	Well Screen Interval: <u>7</u> to <u>12</u>	Tidally Influenced?	
Logged By: <u>ZW</u>	Water Depth Start: <u>9.08</u>	Field Comments:	
Purge Water Disposal Method: <u>Drum</u>	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

$3' \times 0.163 \text{ gal} = 0.5 \text{ gal water column}$

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1256	105	115	125			
Water Level (ft)	7.16	9.22	9.22	9.23			
pH	6.28	6.27	6.28	6.26			
Conductivity (mS/cm)	1149	1127	1107	1076			
Temperature (F)	18.9	19.9	19.8	19.5			
ORP (mV)	-32.8	-38.8	-44.2	-48.5			
Turbidity (NTUs)	9.7	6.3	7.0	2.9			
Dissolved Oxygen (mg/L,%)	1.52	1.29	1.20	1.09			
Color	010	010	010	010			
Purge Volume	0.5	1.0	1.25	1.5			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-275-7262017  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



MW-27D

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: 410-R	Date: 7/26	Weather:	
Development / Purge Method:	Well Screen Interval: 14.5 to 21.5	Tidally Influenced? RISING TIDE	
Logged By:	Water Depth Start: 15.35	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Well Development / Purging (circle one)  $6 \times 0.163 = 1$

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1355	1414	1420	1425				
Water Level (ft)	15.35	15.40	—	15.43				
pH	6.17	6.15	6.15	6.16				
Conductivity (mS/cm)	482.6	465.6	437.7	431.0				
Temperature (F)	17.2	17.1	17.2	17.3				
ORP (mV)	-100.7	-103.7	-107.6	-108.4				
Turbidity (NTUs)	33.7	161.2	315.0	33.1				
Dissolved Oxygen (mg/L, %)	0.95	0.85	0.78	0.78				
Color	<1r	0.1r	<1r	0.1r				
Purge Volume	1	2	2.5	3				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-28D-7262017  
 Water Level Finish: 15.43 after purge 15.45 after sample  
 Field comments: (F) 1-7262017

g-logics

Well Number: MW-285

Project Name:

Project Number: 01-0410-K	Date: 7/26/17	Weather: Sunny
Development / Purge Method: Peri	Well Screen Interval: 7 to 12	Tidally Influenced? <input checked="" type="checkbox"/> NO
Logged By: JT	Water Depth Start: 8.54	Field Comments:
Purge Water Disposal Method: Drum	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="checkbox"/> OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1355	1400	1405	1410	1415	1420	1425	1430
Water Level (ft)	8.54	-	-	-	-	-	-	-
pH	6.88	6.80	6.77	6.74	6.73	6.72	6.72	6.77
Conductivity (mS/cm)	0.544	0.558	0.554	0.538	0.534	0.534	0.535	0.532
Temperature (F)	22.21	20.36	19.71	19.36	19.13	18.96	18.80	18.70
ORP (mV)	152	165	170	174	176	177	178	180
Turbidity (NTUs)	0.0	0.0	5.8	21.1	23.0	17.8	12.5	5.5
Dissolved Oxygen (mg/L,%)	2.75	2.01	1.80	1.74	1.71	1.72	1.81	1.68
Color	CU	CU	CU	CU	CU	CU	CU	CU
Purge Volume	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6

Well Sampling Information (complete if well is sampled)

Decon Method: Dedicated

Water Level Start: 8.54

Sampling Method: Low Flow

Filter Type: \_\_\_\_\_

Sample Number: MW-285-7262017 + QC VOL

Water Level Finish: 8.60

Field comments: Collected @ 1435



<b>Well Number:</b> MW-28D		<b>Project Name:</b>	
Project Number: 01-0410K	Date: 7/26/17	Weather: Sunny	
Development / Purge Method: Peri	Well Screen Interval: 18 to 23	Tidally Influenced? Y	
Logged By: JT	Water Depth Start: 15.26	Field Comments: Sampled @ 20.5'	
Purge Water Disposal Method: Drum	Water Depth Finish:	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1515	1520	1525	1530	1535	1540	1545	
Water Level (ft)	15.26	—	—	—	—	—		
pH	6.75	6.74	6.69	6.67	6.68	6.67	6.65	
Conductivity (mS/cm)	0.198	0.208	0.205	0.206	0.207	0.209	0.210	
Temperature (F)	19.11	15.40	15.07	14.96	14.91	14.87	14.85	
ORP (mV)	-62	-32	-34	-39	-40	-41	-41	
Turbidity (NTUs)	2.6	0.0	0.0	0.0	0.0	0.0	0.0	
Dissolved Oxygen (mg/L, %)	1.19	0.17	0.0	0.0	0.0	0.0	0.0	
Color	CL	CL	CL	CL	CL	CL	CL	
Purge Volume	0.2	0.4	0.6	0.8	1.0	1.2	1.4	

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated

Water Level Start: 15.26

Sampling Method: Low Flow

Filter Type: ✓

Sample Number: MW-28D-7262017

Water Level Finish: \_\_\_\_\_

Field comments: Sampled & Collected @ 1550





<b>Well Number:</b> IP3		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-0410-K	<b>Date:</b> 1/27/17	<b>Weather:</b> Cloudy	
<b>Development / Purge Method:</b> Peri	<b>Well Screen Interval:</b> 18 to 24	<b>Tidally Influenced?</b> Y	
<b>Logged By:</b> JT	<b>Water Depth Start:</b> 15.01	<b>Field Comments:</b> Sampled @ 19'	
<b>Purge Water Disposal Method:</b> Drum	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1235	1240	1245	1250	1255	1300	1303	1306
Water Level (ft)	15.01	<del>14.84</del>	-	-	-	-	-	-
pH	6.63	6.64	6.64	6.64	6.63	6.63	6.62	6.63
Conductivity (mS/cm)	0.522	0.525	0.520	0.506	0.482	0.474	0.460	0.457
Temperature (F)	15.14	14.80	14.57	14.43	14.51	14.43	14.46	14.46
ORP (mV)	22	-18	-32	-35	-38	-40	-40	-41
Turbidity (NTUs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L,%)	1.92	0.12	0.0	0.0	0.0	0.0	0.0	0.0
Color	CI✓	CI✓	CI✓	CI✓	CI✓	CI✓	CI✓	CI✓
Purge Volume	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** Ded

**Water Level Start:** 15.01

**Sampling Method:** Low Flow

**Filter Type:**

**Sample Number:** IP3-7272017

**Water Level Finish:**

**Field comments:** Collected @ 1310



<b>Well Number:</b> 1P4		<b>Project Name:</b> BFC	
Project Number: 010410-K	Date:	Weather: Cloudy	
Development / Purge Method: Peri	Well Screen Interval: 8 to 16	Tidally Influenced? N	
Logged By: JT	Water Depth Start: 9.94'	Field Comments: Sampled @ 13'	
Purge Water Disposal Method: Drum	Water Depth Finish: 10.07'		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1335	1340	1345	1350	1355	1400	1405	1407
Water Level (ft)	9.94	-	-	-	-	-	-	-
pH	6.44	6.44	6.45	6.47	6.49	6.50	6.51	6.51
Conductivity (mS/cm)	1282	1287	1283	1280	1285	1283	1294	1295
Temperature (F)	16.3	16.2	16.2	16.2	16.3	16.8	16.9	17.0
ORP (mV)	-118.5	-128.5	-135.1	-139.9	-144.4	-148.0	-148.7	-149.0
Turbidity (NTUs)	6.8	8.1	10.5	15.8	15.1	15.3	6.9	5.8
Dissolved Oxygen (mg/L,%)	1.56	1.15	0.95	0.86	0.81	0.78	0.76	0.76
Color	Clr	Clr	Clr	Clr	Clr	Clr	Clr	Clr
Purge Volume	0.2	0.4	0.6	0.6	0.8	1.0	1.2	1.4

**Well Sampling Information (complete if well is sampled)**

Decon Method: Dedicated

Water Level Start: 9.94'

Sampling Method: Low Flow

Filter Type: \_\_\_\_\_

Sample Number: 1P4-7272017

Water Level Finish: \_\_\_\_\_

Field comments: collected @ 1410



<b>Well Number:</b> 1P5		<b>Project Name:</b> BFC	
<b>Project Number:</b> 0410-K	<b>Date:</b> 7/27/17	<b>Weather:</b> Cloudy	
<b>Development / Purge Method:</b> Per	<b>Well Screen Interval:</b> 19 to 24	<b>Tidally Influenced?</b>	
<b>Logged By:</b> JT	<b>Water Depth Start:</b> 13.76'	<b>Field Comments:</b> Sampled @ 19'	
<b>Purge Water Disposal Method:</b> Drum	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1055	1100	1105	1110	1115	1120	1125	
Water Level (ft)	13.76	-	-	-	-	-	-	
pH	6.58	6.60	6.60	6.60	6.60	6.60	6.60	
Conductivity (mS/cm)	0.541	0.542	0.517	0.506	0.490	0.474	0.449	
Temperature (F)	15.31	14.45	14.38	14.36	14.38	14.36	14.36	
ORP (mV)	-3	-25	-30	-33	-34	-35	-35	
Turbidity (NTUs)	3.6	4.2	7.8	7.2	6.6	6.9	4.7	
Dissolved Oxygen (mg/L,%)	1.09	0.0	0.0	0.0	0.0	0.0	0.0	
Color	CL	CL	CL	CL	CL	CL	CL	
Purge Volume	0.2	0.4	0.6	0.8	1.0	1.2	1.4	

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** Dedicated

**Water Level Start:** 13.76

**Sampling Method:** Low Flow

**Filter Type:** \_\_\_\_\_

**Sample Number:** 1P5-7272017 + FD2-72717

**Water Level Finish:** 13.75

**Field comments:** Collected @ 1130

\* obvious sheen & strong odor on purge H<sub>2</sub>O

<b>Groundwater Depths</b>	<b>Project Name:</b> BFC
Project Number: 61-410-1C	Page 1 of 1
Date: 10/5/17	Weather:
Started:	Other Information: SOLIDEST H <sub>2</sub> O LEVEL INDICATOR
Completed:	

Well	Depth *	Time	Notes
MW-285	9.51	0921	MEASURED ON N. SIDE of PVC
MW-281P	14.34	0920	
MW-275	9.70	0927	
MW-270	14.40	0928	
MW-265	9.60	0925	
MW-260	14.66	0924	
IP-3	15.33	0933	
IP-4	10.77	0934	
IP-5	16.17	0936	
MW-280	14.52	0939	
MW-24	11.69	0930	
MW-25	10.33	0959	
MW-23	11.08	1103	
MW-22	11.16	1246	
MW-18	9.80	0921	
MW-19	13.58	0923	
MW-20	14.16	0925	
MW-21	14.20	0920	

\* From Top of PVC

Approved: \_\_\_\_\_

Signed: \_\_\_\_\_

*g-logics*



<b>Well Number:</b> MW-25		<b>Project Name:</b> BFC	
Project Number: 01-410-K	Date: 10/5/17	Weather: Sunny, 100's	
Development / Purge Method: PERISTALTIC	Well Screen Interval: 9 to 14	Tidally Influenced? No	
Logged By: KANES	Water Depth Start: 10.33 (0959)	Field Comments: SET TO LOWEST PUMP SPEED	
Purge Water Disposal Method: DAMN	Water Depth Finish: 10.40 (1053)	SET TUBE 2 12' BELOW TOC	
Purge Water Disposal Volume: 1.5 GAL	Bails Dry? Yes <input type="radio"/> No <input checked="" type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK	
		Explain:	

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1009	1014	1019	1024	1029	1034		
Water Level FT	—	—	—	—	—	—		
pH	1	6.44	6.40	6.39	6.38	6.30		
Conductivity (ms/cm)	.372	0.375	0.373	0.372	0.372	0.372		
Temperature (°C)	16.9	16.8	17.0	16.9	17.0	17.0		
Salinity ORP(mv)	156.0	148.9	148.0	149.1	147.3	145.0		
Turbidity	—	—	—	—	—	—		
Color	CLEAR	—————→						
Dissolved Oxygen in	7.86	7.33	0.67	0.51	0.51	0.48		
Purge Volume	0.25 GAL	0.5	0.75	1	1.25	1.50		

mg/L

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: PERISTALTIC

Filter Type: NONE

Sample Number: MW-25-1052017

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_

15' of TUBE





<b>Well Number:</b> MW-23		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-410-K	<b>Date:</b> 10/5/17	<b>Weather:</b> Sunny 60's	
<b>Development / Purge Method:</b> PERISTALTIC	<b>Well Screen Interval:</b> 5.5 to 15.5	<b>Tidally Influenced?</b> ?	
<b>Logged By:</b> KV	<b>Water Depth Start:</b> 11.08' (1103)	<b>Field Comments:</b> PUMP SET AT LOWEST SPEED - H2O PROPPING	
<b>Purge Water Disposal Method:</b> Dawn	<b>Water Depth Finish:</b> 12.60 (1235) RESERVE	<b>SET TUBE = 13.0 BELOW (TDC)</b>	
<b>Purge Water Disposal Volume:</b> 1.75 GAL	<b>Bails Dry?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No <b>What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
<b>Explain:</b>			

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1115	1120	1127	1135	1142	1150	1157	
Water Level (ft)	11.55	11.93	12.30	12.54	12.72	12.92	12.98	
pH	6.53	6.53	6.48	6.51	6.50	6.49	6.47	
Conductivity (mS/cm)	0.476	0.462	0.462	0.461	0.462	0.463	0.462	
Temperature (F) (°C)	19.7	19.8	19.7	19.3	19.2	19.3	19.3	
ORP (mV)	37.3	8.0	5.9	12.8	12.9	13.0	15.0	
Turbidity (NTUs)	—	—	—	—	—	—	—	
Dissolved Oxygen (mg/L) (%)	0.74	0.24	0.66	0.22	0.22	0.50	0.69	
Color	CLEAR	—————→						
Purge Volume	0.25	0.50	0.75	1.0	1.25	1.50	1.75	

→ TURNED BACK ON  
 ↓ MONITOR TURNED OFF  
 (TU)

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: PERISTALTIC  
 Filter Type: MWFE

Sample Number: MW-23-1052017  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_

16' TUBE



Well Number: <u>MW-22</u>		Project Name: <u>BFC</u>	
Project Number: <u>01-0410-K</u>	Date: <u>10/5/17</u>	Weather: <u>60°-70° Sunny</u>	
Development / Purge Method: <u>PERISTALTIC</u>	Well Screen Interval: <u>7</u> to <u>14</u>	Tidally Influenced? <u>NO</u>	
Logged By: <u>KANIS</u>	Water Depth Start: <u>11.16 (1246)</u>	Field Comments: <u>SET TO LOWEST SPEED - 15 MIN SCREEN WATER FLOW</u>	
Purge Water Disposal Method: <u>DRUM</u>	Water Depth Finish:	<u>26" TUBES SET @ 3 BOTTOM OF SCREEN</u>	
Purge Water Disposal Volume: <u>0.75</u>	Bails Dry? <input checked="" type="radio"/> Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>12.58</u>	<u>1310</u>	<u>1318</u>				
Water Level (ft)	<u>—</u>	<u>—</u>	<u>—</u>				
pH	<u>6.53</u>	<u>6.51</u>	<u>6.51</u>				
Conductivity (mS/cm)	<u>0.534</u>	<u>0.530</u>	<u>0.529</u>				
Temperature (F) °C	<u>19.7</u>	<u>19.5</u>	<u>19.6</u>				
ORP (mV)	<u>12.5</u>	<u>-20.1</u>	<u>-23.9</u>				
Turbidity (NTUs)	<u>—</u>	<u>—</u>	<u>—</u>				
Dissolved Oxygen (mg/L, %)	<u>2.09</u>	<u>2.58</u>	<u>2.63</u>				
Color	<u>CLEAR</u>	<u>—</u>	<u>—</u>				
Purge Volume	<u>&lt;0.25</u>	<u>0.564</u>	<u>0.75</u>				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: PERISTALTIC  
Filter Type: NONE

Sample Number: MW-22-1052017  
Water Level Finish: \_\_\_\_\_  
Field comments: \_\_\_\_\_

*26' TUBES*



<b>Well Number:</b> MW-21		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-410-1C	<b>Date:</b> 10/5/17	<b>Weather:</b> Sunny 70's	
<b>Development / Purge Method:</b> PERISTALTIC	<b>Well Screen Interval:</b> 17 to 22	<b>Tidally Influenced?</b>	
<b>Logged By:</b> KIANIS	<b>Water Depth Start:</b> 13.65 (1450)	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b> 17 Run	<b>Water Depth Finish:</b> 12.2 (1544)		
<b>Purge Water Disposal Volume:</b> 2.56 m	<b>Balls Dry?</b> Yes No What Volume?	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b> SET TUBE TO ~18' BELOW TOL	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1503	1508	1518	1523				
Water Level (ft)	—	—	—	—				
pH	6.35	6.37	6.40	6.40				
Conductivity (mS/cm)	0.465	0.464	0.461	0.460				
Temperature (F) °C	16.0	16.0	15.9	15.9				
ORP (mV)	-82.4	-93.3	-100.9	-103.1				
Turbidity (NTUs)	—	—	—	—				
Dissolved Oxygen (mg/L, %)	0.51	0.22	0.12	0.11				
Color	CLEAN →							
Purge Volume	0.5	1	2	2.5				

**Well Sampling Information (complete if well is sampled)**

<b>Decon Method:</b> _____	<b>Sample Number:</b> MW-21-1052017
<b>Water Level Start:</b> _____	<b>Water Level Finish:</b> _____
<b>Sampling Method:</b> PERISTALTIC	<b>Field comments:</b> _____
<b>Filter Type:</b> NONE	



Well Number: MW-27-D

Project Name: BFC

Project Number: 01-0410-K-T17	Date: 10/4/17	Weather: Sunny - 70's
Development / Purge Method: PERISTALTIC	Well Screen Interval: 14.5 to 21.5	Tidally Influenced? YES
Logged By: KARTS	Water Depth Start: 15.39 (1145)	Field Comments: WASTE LEVEL RISE WITH TIDE SET TUBE @ 18.5' BELOW TDI 7 PC
Purge Water Disposal Method: PUMP	Water Depth Finish: 15.10 (1344)	
Purge Water Disposal Volume: 56 GAL	Bails Dry? Yes <input checked="" type="radio"/> No <input type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	1226	1236	1246	1256	1306	1316		
Water Level FT	15.44	15.44	15.40	15.40	15.39	15.35		
pH	6.63	6.62	6.62	6.55	6.59	6.59		
Conductivity $ms/cm$	0.556	0.504	0.478	0.439	0.412	0.377		
Temperature (C)	16.35	15.93	15.85	15.74	15.64	15.61		
Salinity ORP (MV)	33	-27	-38	-42	-48	-12		
Turbidity (NTU)	0.0	0.0	0.0	0.0	0.0	0.0		
Color	CLEAR	—————→						
Dissolved Oxygen in $mg/L$	0.0	0.0	0.0	0.0	0.0	0.0		
Purge Volume GAL	0.5	1.25	2.0	2.75	3.75	5.0		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: 15.44

Sampling Method: PERISTALTIC

Filter Type: NONE

FIELD PUP (MW-A)

Sample Number: MW-27D-1042017

Water Level Finish: 15.35

Field comments: \_\_\_\_\_



1/1



Well Number: MW-275

Project Name: BOEING FIELD CHEV.

Project Number: 01-0410-K TASK#17	Date: 10/4/17	Weather: Sunny -70°
Development / Purge Method: PERISTALTIC	Well Screen Interval: 7' to 12'	Tidally Influenced? ?
Logged By: HARS	Water Depth Start: 9.68 (10.20)	Field Comments: SET TUBE @ 11' BELOW TOP OF PVC
Purge Water Disposal Method: PUMP	Water Depth Finish: 9.72 (10.35)	
Purge Water Disposal Volume: ≈ 3.5 GAL	Bails Dry? Yes <input checked="" type="radio"/> No <input type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Well Development / Purging (circle one)

Time	10:43	10:48	10:53	10:58	11:08	11:13	11:18	11:23
Water Level (FT)	9.94	9.97	9.97	9.98	10.00	10.02	10.03	10.03
pH	7.16	6.72	6.61	6.55	6.52	6.50	6.50	6.50
Conductivity $ms/cm$	1.10	1.07	1.07	1.07	1.06	1.06	1.07	1.07
Temperature (C)	16.52	17.11	17.36	17.52	18.33	18.43	18.47	18.50
<del>Salinity</del> ORP (mV)	155	156	154	153	149	147	145	143
Turbidity (NTUS)	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Color	CLEAR	—————→						
Dissolved Oxygen in		0.43	0.08	0.00	0.00	0.00	0.0	0.00
Purge Volume GAL	0.50	0.75	1.00	1.25	2.00	2.50	2.75	3.00

Mg/L

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: 9.94

Sampling Method: PERISTALTIC

Filter Type: NO

Sample Number: MW-275-104214

Water Level Finish: 10.03

Field comments: \_\_\_\_\_



151



Well Number: DP-4

Project Name: BFC

Project Number: <u>01-410-K T-17</u>	Date: <u>10/4/17</u>	Weather:
Development / Purge Method: <u>PERASTATIC</u>	Well Screen Interval: <u>8</u> to <u>16</u>	Tidally Influenced? <u>NO?</u>
Logged By: <u>KAMES</u>	Water Depth Start: <u>10.75 (623)</u>	Field Comments: <u>PUMPING DOWN @ LOWEST FLOW RATE FOR 15 min</u>
Purge Water Disposal Method: <u>Pump</u>	Water Depth Finish: <u>12.80 (1734)</u>	<u>SET TUBE @ ± 13' BELOW TOC</u>
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	1645	1650	1655	1700	1705	1710	1715	1720
Water Level Ft.	11.30	11.73	12.13	12.41	13.61	12.82	13.03	13.18
pH	6.57	6.56	6.56	6.57	6.59	6.59	6.60	6.60
Conductivity ms/cm	1.09	1.07	1.04	1.03	1.01	1.00	0.98	0.98
Temperature (°C)	16.6	16.7	16.6	16.6	16.6	16.5	14.5	16.5
Safinity ORP (mV)	-133.9	-137.1	-137.1	-134.0	-127.1	-122.4	-117.5	-118.9
Turbidity	—	—	—	—	—	—	—	—
Color	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	—	—	—
Dissolved Oxygen in mg/l	0.27	0.20	0.19	0.20	0.37	0.86	0.72	0.70
Purge Volume	0.5 gal	1 gal	1.5	2.0	2.5	3.0	3.5	4.0

↑ POWERED DOWN + BACK UP

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_ Sample Number: \_\_\_\_\_

Water Level Start: \_\_\_\_\_ Water Level Finish: \_\_\_\_\_

Sampling Method: \_\_\_\_\_ Field comments: \_\_\_\_\_

Filter Type: \_\_\_\_\_



Well Number: IP-3

Project Name: BFC

Project Number: <u>D1-B410-K T-17</u>	Date: <u>10/4/17</u>	Weather: <u>SUNNY + 70s</u>
Development / Purge Method:	Well Screen Interval: <u>18'</u> to <u>24'</u>	Tidally Influenced? <u>YES</u>
Logged By: <u>KARES</u>	Water Depth Start: <u>15.32 (1506)</u>	Field Comments: <u>SET TABLE @ 219.5' BELOW TOP OF CASING</u> <u>WATER RESERVE W/TAPE</u>
Purge Water Disposal Method: <u>PUMP</u>	Water Depth Finish: <u>14.82 (1601)</u>	
Purge Water Disposal Volume: <u>24 GAL</u>	Bails Dry? Yes <input type="radio"/> No <input checked="" type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

**Well Development / Purging (circle one)**

Time	<u>1515</u>	<u>1522</u>	<u>1527</u>	<u>1532</u>	<u>1537</u>	<u>1542</u>	<u>1547</u>	
Water Level Ft	<u>1526</u>	<u>15.22</u>	<u>15.16</u>	<u>15.09</u>	<u>15.06</u>	<u>15.01</u>	<u>14.96</u>	
pH	<u>6.20</u>	<u>6.32</u>	<u>6.34</u>	<u>6.33</u>	<u>6.34</u>	<u>6.34</u>	<u>6.35</u>	
Conductivity <u>ms/cm</u>	<u>0.429</u>	<u>0.393</u>	<u>0.369</u>	<u>0.348</u>	<u>0.332</u>	<u>0.318</u>	<u>0.307</u>	
Temperature (C)	<u>14.8</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.7</u>	<u>14.6</u>	<u>14.6</u>	
<del>Salinity</del> ORP (mv)	<u>-83.8</u>	<u>-90.9</u>	<u>-93.7</u>	<u>-95.0</u>	<u>-96.4</u>	<u>-96.7</u>	<u>-98.1</u>	
Turbidity <u>NTU</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
Color	<u>CLEAR</u>	<u>CLEAR</u>	—————→—————→—————→—————→					
<u>mg/L</u> Dissolved Oxygen in	<u>0.32</u>	<u>0.29</u>	<u>0.26</u>	<u>0.18</u>	<u>0.12</u>	<u>0.10</u>	<u>0.07</u>	
Purge Volume	<u>1gal</u>	<u>1.5gal</u>	<u>2.0gal</u>	<u>2.5</u>	<u>3.0</u>	<u>3.5</u>	<u>4gal</u>	

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: 15.26

Sampling Method: PERISTALTIC

Filter Type: NONE

Sample Number: IP-3-1042017

Water Level Finish: 14.96

Field comments: \_\_\_\_\_



Well Number: MW-28D

Project Name: BFC

Project Number: <u>410-K</u>	Date: <u>10/4/17</u>	Weather: <u>Sunny, Calm</u>
Development / Purge Method:	Well Screen Interval: <u>18</u> to <u>23</u>	Tidally Influenced? <u>yes</u>
Logged By:	Water Depth Start: <u>15.44</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>1230</u>	<u>1238</u>	<u>1246</u>	<u>1255</u>	<u>1300</u>		
Water Level (ft)	<u>15.44</u>			<u>15.37</u>	<u>15.34</u>		
pH	<u>6.47</u>	<u>6.46</u>	<u>6.45</u>	<u>6.45</u>	<u>6.45</u>		
Conductivity (mS/cm)	<u>0.232</u>	<u>0.234</u>	<u>0.234</u>	<u>0.233</u>	<u>0.231</u>		
Temperature (F)	<u>15.20</u>	<u>15.18</u>	<u>15.18</u>	<u>15.19</u>	<u>15.19</u>		
ORP (mV)	<u>-37</u>	<u>-36</u>	<u>-47</u>	<u>-50</u>	<u>-53</u>		
Turbidity (NTUs)	<u>Ø</u>	<u>Ø</u>	<u>Ø</u>	<u>Ø</u>	<u>Ø</u>		
Dissolved Oxygen (mg/L, %)	<u>0.0 / 0.1</u>	<u>0 / 0</u>	<u>Ø / Ø</u>	<u>Ø / Ø</u>	<u>Ø / Ø</u>		
Color	<u>clr</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>		
Purge Volume	<u>1.5</u>	<u>1</u>	<u>1.5</u>	<u>2.0</u>	<u>2.25</u>		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-28D-1042017 @ 1300

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



Well Number: MW-285

Project Name: BFC

Project Number: 410-1K	Date: 10/4/17	Weather: Sunny, Calm
Development / Purge Method:	Well Screen Interval: 5 to 11.5	Tidally Influenced? No
Logged By: ZW	Water Depth Start: 9.51	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? <input checked="" type="radio"/> Yes <input type="radio"/> No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1325	1332	1340	1354	1400			
Water Level (ft)	9.51	9.98		11.2	10.01			
pH	6.35	6.36	6.38	6.39	6.40			
Conductivity (mS/cm)	0.471	0.492	0.502	0.499	0.502			
Temperature (F)	17.74	17.64	17.95	17.72	17.80			
ORP (mV)	15	22	37	50	57			
Turbidity (NTUs)	0.3	0	0	0	0			
Dissolved Oxygen (mg/L,%)	3.13/34.8	4.29/46.3	4.06/44.1	3.94/42.7	3.90/42.4			
Color								
Purge Volume	0.25	0.5	0.8	1.2	1.5			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-285-1042017 @ 1330

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-26D		<b>Project Name:</b> BFC	
<b>Project Number:</b> 410-K	<b>Date:</b> 10/4/17	<b>Weather:</b> Sunny	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 18 to 23	<b>Tidally Influenced?</b> Yes	
<b>Logged By:</b> ZW	<b>Water Depth Start:</b> 15.74	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b> 15.93		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry?</b> Yes <input checked="" type="radio"/> No <input type="radio"/> What Volume?	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1100	1110	1115	1120				
Water Level (ft)	15.95	15.90	15.93	15.93				
pH	6.44	6.45	6.44	6.41				
Conductivity (mS/cm)	0.553	0.536	0.535	0.527				
Temperature (F)	15.07	15.16	15.16	15.15				
ORP (mV)	-12	-12	-11	-10				
Turbidity (NTUs)	4.6	4.6	3.8	0				
Dissolved Oxygen (mg/L,%)	0/0	0/0	0/0	0/0				
Color	clr	clr	clr	clr				
Purge Volume	.5	1.0	1.5	2.0				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-26D-1042017 @ 1130  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





Well Number: MW-265

Project Name: BFC

Project Number: 410-K	Date: 10/4/17	Weather: Sunny
Development / Purge Method:	Well Screen Interval: 7 to 12	Tidally Influenced? No
Logged By: ZW	Water Depth Start: 9.57	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes <input type="radio"/> No <input checked="" type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	950	955	959	1005	1010		
Water Level (ft)	9.57	10.65	11.4	11.45	11.30		
pH	6.18	6.16	6.28	6.31	6.15		
Conductivity (mS/cm)	0.436	0.448	0.445	0.421	0.438		
Temperature (F)	17.06	16.39	17.87	18.75	17.67		
ORP (mV)	-74	-61	-72	-72	-55		
Turbidity (NTUs)	171	111	0.0	0.0	69.7		
Dissolved Oxygen (mg/L, %)	1.43/15.1	1.17/12.6	0.83/5.8	0.25/2.8	0.57/6.0		
Color	clr	clr	Ylw	Clr	clr		
Purge Volume	.5	0.75	1.2	1.5	2.0		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-265-<sup>104</sup>~~100~~2017  
 Water Level Finish: \_\_\_\_\_  
 Field comments: Sampled @ 1030



Well Number: IP-5

Project Name:

Project Number: <u>410-K</u>	Date: <u>10/4/17</u>	Weather:
Development / Purge Method:	Well Screen Interval: <u>18</u> to <u>24</u>	Tidally Influenced?
Logged By: <u>ZW</u>	Water Depth Start: <u>16.17</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>1500</u>	<u>1506</u>	<u>1515</u>	<u>1521</u>	<u>1538</u>			
Water Level (ft)	<u>16.17</u>		<u>16.05</u>	<u>15.9</u>				
pH	<u>7.83</u>	<u>7.70</u>	<u>6.51</u>	<u>6.03</u>	<u>5.88</u>			
Conductivity (mS/cm)	<u>0.446</u>	<u>0.438</u>	<u>0.439</u>	<u>0.408</u>	<u>0.362</u>			
Temperature (F)	<u>10.2</u>	<u>10.1</u>	<u>9.8</u>	<u>9.4</u>	<u>9.5</u>			
ORP (mV)	<u>-74.7</u>	<u>-75.6</u>	<u>-66.1</u>	<u>-56.9</u>	<u>-50.1</u>			
Turbidity (NTUs)								
Dissolved Oxygen (mg/L)	<u>17.49</u>	<u>16.69</u>	<u>0.89</u>	<u>0.59</u>	<u>0.37</u>			
Color	<u>clr</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>	<u>clr</u>			
Purge Volume	<u>.25 gal</u>	<u>0.5 gal</u>	<u>0.75</u>	<u>1.0</u>	<u>2.0</u>			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: IP-5-1042017 @ 1530

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



Well Number: MW-20

Project Name:

Project Number: 410-K	Date: 10/4	Weather: Sunny, Calm
Development / Purge Method:	Well Screen Interval: 15 to 20	Tidally Influenced? <input checked="" type="checkbox"/>
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Well Development / Purging (circle one)

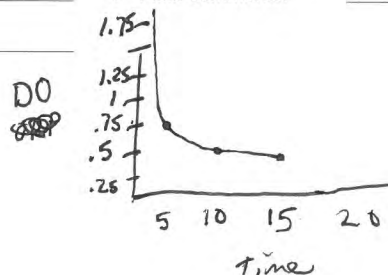
Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1651	1658	1702	1707	1715			
Water Level (ft)								
pH	6.57	6.25	6.15	6.05	6.04			
Conductivity (mS/cm)	0.426	0.336	0.320	0.304	0.299			
Temperature (F)	10.7	10.3	10.3	10.2	10.2			
ORP (mV)	-45.4	-48.2	-37.4	-28.5	-26.2			
Turbidity (NTUs)								
Dissolved Oxygen (mg/L, %)	3.23	0.73	0.55	0.43	0.38			
Color	clr	clr	clr	clr	clr			
Purge Volume	0.25	0.7	1.6	1.25	1.5			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-20-1042017 @ 1730  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



g-logics

Well Number: MW-19

Project Name:

Project Number: 410-K	Date: 10/5	Weather: Sunny, Calm
Development / Purge Method:	Well Screen Interval: 15 to 20	Tidally Influenced? Y
Logged By:	Water Depth Start: 13.58	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? <input checked="" type="radio"/> Yes No What Volume? 0.5 gal	Well Conditions: <input checked="" type="radio"/> OK Not OK
	Casing Vol: 3/4 in well	Explain:

Well Development / Purging (circle one) 6.4 ft x .0625 ft Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

	Pumped Dry		Dry		Dry		
Time	1304	1312		1319	1320	1330	1335
Water Level (ft)			PUMP				
pH	6.95	6.60	OFF	6.62	Pump off	6.58	
Conductivity (mS/cm)	0.413	0.419	5 min.	0.398	10 min	0.406	
Temperature (F)	10.5	10.7		10.3		11.0	
ORP (mV)	-27	-55.1		-22.4		-18.9	
Turbidity (NTUs)							
Dissolved Oxygen (mg/L,%)	3.62	8.69		5.10		5.47	
Color							
Purge Volume	0.2	0.5		0.60		0.75	

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: MW-19-1052017 @ 1325  
Water Level Finish: \_\_\_\_\_  
Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-18		<b>Project Name:</b> BFC	
<b>Project Number:</b> 410-K	<b>Date:</b> 10/5/17	<b>Weather:</b> Sunny/Warm	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 11 to 16	<b>Tidally Influenced?</b> N	
<b>Logged By:</b>	<b>Water Depth Start:</b> 9.80	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
	6' water column 3/4" = 0.139	<b>Explain:</b>	

**Well Development / Purging (circle one)**

3 casings Vol. = 0.417  
Pumped

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1437	1445 Dry	1455	1457 Dry	1508	1510 Dry
Water Level (ft)						
pH	7.10	6.62	6.52		6.49	
Conductivity (mS/cm)	0.268	0.263	Pump off	Pump off		Pump
Temperature (F)	12.6	12.4	10 min	12.4	10 min	12.5
ORP (mV)	67.1	48.9		42.2		43.1
Turbidity (NTUs)						
Dissolved Oxygen (mg/L,%)	1.61	4.20		1.75		2.39
Color	clr	clr				
Purge Volume	.25	0.40		0.75		0.85

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-18-1052017 @ 1500  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





1445 DUP-1450

Well Number: IP-3

Project Name: BFC

Project Number: <u>01-0410-M</u>	Date: <u>1/12/18</u>	Weather:
Development / Purge Method:	Well Screen Interval: <u>18</u> to <u>24</u>	Tidally Influenced?
Logged By:	Water Depth Start: <u>12.01'</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: <u>12.04'</u>	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input type="checkbox"/> OK <input type="checkbox"/> Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>2:15</u>	<u>2:20</u>	<u>2:25</u>	<u>2:30</u>	<u>2:35</u>	<u>2:40</u>		
Water Level (ft)	<u>12.01'</u>	<u>12.04'</u>	<u>12.04'</u>	<u>12.04'</u>	<u>12.04'</u>	<u>12.04'</u>		
pH	<u>6.60</u>	<u>6.48</u>	<u>6.44</u>	<u>6.44</u>	<u>6.93</u>	<u>6.42</u>		
Conductivity (mS/cm)	<u>429.2</u>	<u>468.7</u>	<u>447.9</u>	<u>420.3</u>	<u>396.7</u>	<u>373.6</u>		
Temperature (F)	<u>14.2</u>	<u>14.2</u>	<u>14.1</u>	<u>14.1</u>	<u>14.2</u>	<u>14.2</u>		
ORP (mV)	<u>-36.5</u>	<u>-60.1</u>	<u>-78.8</u>	<u>-81.8</u>	<u>-83.8</u>	<u>-85.0</u>		
Turbidity (NTUs)								
Dissolved Oxygen (mg/L, %)	<u>2.80, 24.4</u>	<u>1.17, 10.9</u>	<u>0.38, 4.0</u>	<u>0.28, 2.4</u>	<u>0.23, 1.9</u>	<u>0.22, 1.9</u>		
Color								
Purge Volume								

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



1355

Well Number: 1P-4

Project Name: BFC

Project Number: 01-D910-M	Date: 1/12/18	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: 8 to 16	Tidally Influenced? Yes
Logged By:	Water Depth Start: 9.23	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 9.49	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	13 <sup>00</sup>	13 <sup>05</sup>	13 <sup>00</sup>	13 <sup>05</sup>	13 <sup>40</sup>	13 <sup>45</sup>	13 <sup>50</sup>
Water Level (ft)	9.23	9.44	9.48	9.49	9.49'	9.49	9.49
pH	6.64	6.67	6.67	6.68	6.68	6.68	6.68
Conductivity (mS/cm)	1183	1188	1181	1178	1181	1180	1177
Temperature (F)	14.0	13.7	13.8	13.8	13.9	13.9	13.8
ORP (mV)	-120.4	-162.2	-165.2	-166.5	-167.2	-167.3	-165.0
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	3.41, 29.8	0.52, 4.8	0.35, 3.3	0.26, 2.4	0.25, 2.3	0.21, 1.9	0.20, 3.0
Color							
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_

g-logics

Well Number: IP-5

Project Name: \_\_\_\_\_

Project Number: <u>410-11</u>	Date: <u>11/21/18</u>	Weather: <u>cool, cloudy</u>
Development / Purge Method: <u>Permeable</u>	Well Screen Interval: <u>18</u> to <u>24</u>	Tidally Influenced? <u>Y</u>
Logged By: <u>ZJ</u>	Water Depth Start: <u>13.42</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK
		Explain: <u>monument full of rain runoff</u>

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>1030</u>	<u>1035</u>	<u>1040</u>	<u>1045</u>	<u>1050</u>		
Water Level (ft)	<u>13.42</u>	<u>13.51</u>		<u>13.49</u>			
pH	<u>6.46</u>	<u>6.46</u>	<u>6.46</u>	<u>6.46</u>	<u>6.46</u>		
Conductivity (mS/cm)	<u>0.471</u>	<u>0.448</u>	<u>0.433</u>	<u>0.406</u>	<u>0.391</u>		
Temperature (F)	<u>13.81</u>	<u>13.95</u>	<u>13.98</u>	<u>14.04</u>	<u>14.06</u>		
ORP (mV)	<u>-17.9</u>	<u>-28.4</u>	<u>-44.6</u>	<u>-27.0</u>	<u>-49.7</u>		
Turbidity (NTUs) <sup>10<sup>3</sup> g/L</sup>	<u>0.303</u>	<u>0.290</u>	<u>0.280</u>	<u>0.263</u>	<u>0.253</u>		
Dissolved Oxygen (mg/L, %)	<u>12.3 / 1.27</u>	<u>9.8 / 0.90</u>	<u>2.8 / 0.28</u>	<u>4.3 / 0.45</u>	<u>2.7 / 0.27</u>		
Color	<u>CU</u>	<u>CU</u>	<u>CU</u>	<u>CU</u>	<u>CU</u>		
Purge Volume	<u>1</u>		<u>1</u>		<u>2</u>		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: IP-5 @ 1100

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



12<sup>23</sup>

Well Number: NW-18

Project Name: \_\_\_\_\_

Project Number: <u>01-0410-M</u>	Date: <u>1/16/18</u>	Weather: <u>Sunny</u>
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: <u>7.79</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	11:50	11:55	12:00	12:05	12:10	12:15	12:20
Water Level (ft)	<u>7.79</u>						<u>7.74</u>
pH	<u>6.65</u>	<u>6.41</u>	<u>6.41</u>	<u>6.40</u>	<u>6.40</u>	<u>6.40</u>	<u>6.40</u>
Conductivity (mS/cm)	<u>439.6</u>	<u>479.5</u>	<u>480.9</u>	<u>479.6</u>	<u>478.2</u>	<u>476.8</u>	<u>472.6</u>
Temperature (F)	<u>14.0</u>	<u>14.0</u>	<u>14.0</u>	<u>14.0</u>	<u>14.1</u>	<u>14.0</u>	<u>14.0</u>
ORP (mV)	<u>26.5</u>	<u>47.4</u>	<u>47.1</u>	<u>48.3</u>	<u>46.1</u>	<u>48.4</u>	<u>47.4</u>
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	<u>0.00, 53.8</u>	<u>1.33, 12.1</u>	<u>0.90, 4.1</u>	<u>0.78, 7.2</u>	<u>0.76, 7.0</u>	<u>0.72, 6.7</u>	<u>0.72, 6.8</u>
Color							
Purge Volume							<u>~ 3gal</u>

FLOW METER  
TURNED OFF

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



1125

Well Number: MW-21 Project Name: BEC

Project Number: <u>01-0410-M</u>	Date: <u>11/6/18</u>	Weather: <u>Sunny</u>
Development / Purge Method:	Well Screen Interval: _____ to <u>21</u>	Tidally Influenced? <u>YES</u>
Logged By:	Water Depth Start: <u>11.80</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: <u>11.98</u>	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	10:50	10:55	<del>11:00</del> 11:00	11:05	11:10	11:15	11:20
Water Level (ft)	11.80						11.98
pH	7.12	6.40	6.43	6.44	6.45	6.45	6.45
Conductivity (mS/cm)	315.4	444.1	453.7	<del>456.0</del> 453.9	453.9	454.7	455.3
Temperature (F)	15.0	15.1	15.1	14.9	14.8	14.7	14.8
ORP (mV)	84.1	-69.5	-75.8	-71.2	-66.2	-62.0	-87.9
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	8.15, 68.1	0.9, 8.4	0.45, 4.6	0.32, 3.4	0.34, 2.9	0.28, 2.8	0.26, 2.8
Color							
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: _____	Sample Number: _____
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	





Well Number: MW-22

Project Name: BFC

Project Number: 01-0410-1M	Date: 1/12/18	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: 7 to 14	Tidally Influenced?
Logged By:	Water Depth Start: 9.56	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 10.62	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons.

Time	10:20	10:25	10:30	10:35	10:40	10:45	10:50
Water Level (ft)	9.56	10.24	10.68	10.55	10.60	10.60	10.62
pH	6.86	6.80	6.82	6.82	6.82	6.82	6.81
Conductivity (mS/cm)	264.4	215.5	210.3	207.9	210.1	210.5	211.3
Temperature (F)	14.7	14.7	14.6	14.6	14.6	14.6	14.6
ORP (mV)	240.5	5.0	-15.5	-18.9	-22.0	-25.4	-28.7
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	1.27, 4.7	1.33, 12.5	1.31, 12.3	0.97, 9.3	0.95, 9.0	0.89, 8.3	0.86, 7.9
Color							
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



Well Number: MW-23

Project Name: BFC

Project Number: 01-0410-M	Date: 1/12/18	Weather: Cool, cloudy
Development / Purge Method: Peris	Well Screen Interval: 5.5 to 15.5	Tidally Influenced? No
Logged By: ZW	Water Depth Start: 9.38 @ 913	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes <input type="radio"/> No <input checked="" type="radio"/> What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain: <i>Revised + Filled w/ Rain runoff</i>

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons  
*Reduced rate*

Time	920	925	930	935	940	945	950	
Water Level (ft)	9.38		9.50		9.50			
pH	6.39	6.47	6.48	6.49	6.49	6.49	6.49	
Conductivity (mS/cm)	0.476	0.478	0.481	0.483	0.484	0.482	0.482	
Temperature (F) °C	12.94	13.12	13.03	12.91	12.84	12.78	12.76	
ORP (mV)	227.5	210.0	201.6	193.9	188.1	176.1	172.2	
Turbidity (NTUs) <sup>TSS</sup> <sub>g/l</sub>	0.32	0.310	0.313	0.314	0.315	0.313	0.313	
Dissolved Oxygen (mg/L, %)	11.5 / 11.7	48.1 / 5.08	41.5 / 4.74	24.9 / 2.68	16.3 / 1.72	15.1 / 1.72	10.1 / 1.05	
Color	clr	<15	clr	clr	clr	clr	clr	
Purge Volume	1/2 gal		1 gal		1.5 gal		3 gal	

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: Peris  
 Filter Type: N/A

Sample Number: MW-23 @ 945  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



Well Number: MW-24D

Project Name: BFC

Project Number: 410-M	Date: 7/12	Weather: cool, showers
Development / Purge Method: Peristaltic	Well Screen Interval: 20 to 25	Tidally Influenced? Yes
Logged By: ZW	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK Not OK
		Explain:

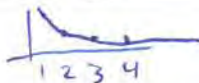
## Well Development / Purging (circle one)

Developed By Peristaltic Pump, 5 gallons

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1200	1206	1210	1215	1220	1225		
Water Level (ft)		12.20		12.20		12.08		
pH	6.61	6.62	6.61	6.60	6.60			
Conductivity (mS/cm)	0.402	0.425	0.414	0.409	0.410			
Temperature (F)	14.76	14.77	14.77	14.78	14.77			
ORP (mV)	-24.1	-77.7	-80.2	-80.6	-81.0			
Turbidity (NTUs) <sup>TDS</sup> 8/L	0.325	0.342	0.334	0.330	0.330			
Dissolved Oxygen (mg/L, %)	7.8 / 0.78	6.1 / 0.62	5.9 / 0.60	7.1 / 0.70	7.0 / 0.70			
Color	clr	clr						
Purge Volume		1.0		1 1/2				

## Well Sampling Information (complete if well is sampled)



Decon Method: Dedicated Tubing  
 Water Level Start: 12.08  
 Sampling Method:  
 Filter Type:

Sample Number: MW-24D @ 1230  
 Water Level Finish:  
 Field comments: # BKX671

g-logics

Well Number: MW-24 | Project Name: BFC

Project Number:	Date: <u>1/11/18</u>	Weather:
Development / Purge Method:	Well Screen Interval: <u>3.65</u> to <u>13.65</u>	Tidally Influenced?
Logged By:	Water Depth Start: <u>8.89</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: <u>11.99</u>	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>11:50</u>	<u>11:55</u>	<u>12:00</u>	<u>12:05</u>	<u>12:10</u>	<u>12:15</u>	<u>12:20</u>
Water Level (ft)	<u>8.89</u>	<u>10.50</u>	<u>11.12</u>	<u>11.80</u>	<u>11.89</u>	<u>11.97</u>	<u>11.99</u>
pH	<u>6.48</u>	<u>6.35</u>	<u>6.40</u>	<u>6.39</u>	<u>6.45</u>	<u>6.50</u>	<u>6.50</u>
Conductivity (mS/cm) <u>sc</u>	<u>654.3</u>	<u>684.9</u>	<u>681.1</u>	<u>668</u>	<u>668.9</u>	<u>680</u>	<u>684.2</u>
Temperature (F)	<u>11.9</u>	<u>12.6</u>	<u>10.5</u>	<u>12.2</u>	<u>11.4</u>	<u>11.6</u>	<u>11.6</u>
ORP (mV)	<u>24.2</u>	<u>-12.5</u>	<u>-10.7</u>	<u>8.4</u>	<u>4.1</u>	<u>3.1</u>	<u>2.8</u>
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	<u>5.38, 41.2</u>	<u>1.45, 12.9</u>	<u>2.64, 23.3</u>	<u>2.35, 21.0</u>	<u>4.19, 38.9</u>	<u>4.96, 46.9</u>	<u>4.98, 47.1</u>
Color	<u>0.180</u>						
Purge Volume							

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



*G-logics*

Well Number: MW-25

Project Name: BFC

Project Number: 01-0910-M	Date: 1/12/18	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: 9 to 14	Tidally Influenced? YES
Logged By:	Water Depth Start: 8.32	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 4.52	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

FLOW METER TURNED OFF

Time	9:10	9:15	9:20	9:25	9:30	9:35	9:40	
Water Level (ft)	8.32	9.80	9.63	9.58	9.51	9.51	9.52	
pH	7.10	6.40	6.38	6.38	6.38	6.38	6.36	
Conductivity (mS/cm)	329.3	331.4	331.4	331.7	331.1	331.1	331.5	
Temperature (F)	13.6	14.2	14.1	14.1	14.1	14.1	14.2	
ORP (mV)	146.1	22.4	50.4	73.0	85.6	98.0	123.5	
Turbidity (NTUs)								
Dissolved Oxygen (mg/L, %)	5.04, 46.0	3.72, 35.0	3.53, 33.2	3.53, 33.0	3.42, 32.1	3.44, 32.2	3.51, 33.1	
Color								
Purge Volume								

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_





Well Number: MW-260

Project Name:

Project Number:	Date: 1/11/18	Weather:
Development / Purge Method:	Well Screen Interval: 18 to 23	Tidally Influenced?
Logged By:	Water Depth Start: 11.46	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 11.38	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	2:00	2:05	2:10	2:15	2:20	2:25	2:30
Water Level (ft)	11.46	11.38	11.38	11.38	11.38	11.38	11.38
pH	6.57	6.51	6.46	6.42	6.41	6.41	6.40
Conductivity (mS/cm)	370.8	342.1	322.3	32.4	308.4	307.1	304.8
Temperature (F)	14.8	14.7	14.2	14.3	14.3	14.3	14.3
ORP (mV)	-12.8	-55	-64.9	-68.1	-76.2	-79.2	-75.0
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	1.85, 17.4	0.50, 4.8	0.41, 4.1	0.36, 3.3	0.27, 2.3	0.22, 2.2	0.22, 2.2
Color							
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_

*M*

*g-logics*

Well Number: MW-265

Project Name:

Project Number:	Date: 1/11/18	Weather:
Development / Purge Method:	Well Screen Interval: 9 to 12	Tidally Influenced?
Logged By:	Water Depth Start: 7.27	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 7.39	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1:10	1:15	1:20	1:25	1:30	1:35	1:40
Water Level (ft)	7.27	7.38	7.39	7.39	7.39	7.39	7.39
pH	6.84	6.41	6.34	6.33	6.31	6.31	6.31
Conductivity (mS/cm)	284.5	277.4	268.1	266.6	266.0	266.5	267.6
Temperature (F)	12.0°C	11.6	11.4	11.4	11.5	11.5	11.6
ORP (mV)	21.4	18.2	19.2	13.5	0.5	-6.5	-9.6
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	8.40, 10.2	2.23, 20.1	2.21, 14.2	1.95, 17.6	1.96, 17.7	1.99, 17.4	1.82, 16.5
Color							
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



27-D  
1435 DUB  
1430

Well Number: MW-27-D

Project Name: BFC

Project Number: 01-0410-M	Date: 1/16/18	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: 12.04	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	13 <sup>50</sup>	13 <sup>55</sup>	14 <sup>00</sup>	14 <sup>05</sup>	14 <sup>10</sup>	14 <sup>15</sup>	14 <sup>20</sup>	
Water Level (ft)	12.04	12.06	12.06	12.06	12.06	12.06	12.06	
pH	6.64	6.89	6.36	6.36	6.36	6.36	6.36	
Conductivity (mS/cm)	448.4	440.4	434.6	416.6	390.7	366.0	346.2	
Temperature (F)	14.5	14.9	14.9	15.0	14.9	14.9	14.9	
ORP (mV)	30.0	-49.9	-61.7	-67.5	-70.0	-70.7	-71.0	
Turbidity (NTUs)								
Dissolved Oxygen (mg/L, %)	3.68, 31.8	0.75, 7.1	0.44, 4.2	0.28, 2.7	0.26, 2.1	0.23, 2.2	0.21, 1.9	
Color								
Purge Volume								

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_

DUB?

g-logics

1550

Well Number: MW-27-S		Project Name: BIC	
Project Number: 01-0410-M	Date: 1/16/18	Weather: Sunny	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start: 8.05	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 8.24		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	13 <sup>00</sup>	13 <sup>05</sup>	13 <sup>10</sup>	13 <sup>15</sup>	13 <sup>20</sup>	13 <sup>25</sup>
Water Level (ft)	8.05	8.21	8.23	8.24	8.24	8.24
pH	6.77	6.58	6.56	6.54	6.55	6.54
Conductivity (mS/cm)	986	991	963	939	924	898
Temperature (F)	13.3	13.4	13.4	13.4	13.3	13.3
ORP (mV)	350.7	199.0	148.8	127.7	121.5	116.7
Turbidity (NTUs)						
Dissolved Oxygen (mg/L, %)	9.12, 77.4	4.59, 42.2	3.87, 35.9	3.73, 34.3	3.69, 34.2	3.25, 30.6
Color						
Purge Volume						

Well Sampling Information (complete if well is sampled)

Decon Method: _____	Sample Number: _____
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	



Well Number: MW-28 D

Project Name:

Project Number: 01-0410-M	Date: 1/11/18	Weather: Rain
Development / Purge Method:	Well Screen Interval: 18 to 23	Tidally Influenced? YES
Logged By:	Water Depth Start: 12.29	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 12.17	
Purge Water Disposal Volume: 3gal	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Flow Meter Turned off

Time	9:20	9:25	9:30	9:35	9:40	9:45	9:50
Water Level (ft)	12.29'	12.26'	12.22'	12.22'	12.20'	12.18'	12.17'
pH	6.68	6.48	6.47	6.46	6.46	6.46	6.45
Conductivity (mS/cm) <i>sp</i>	172.2	172.4	171.2	170.9	171.6	170.7	172.7
Temperature <i>EC</i>	14.4	14.4	14.3	14.4	14.5	14.4	14.2
ORP (mV)	-70.0	-74.8	-77.5	-78.0	-79.4	-78.3	-76.8
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	1.2, 10.5	0.52, 5.0	0.34, 3.0	0.26, 2.5	0.24, 2.4	0.23, 2.3	0.24, 2.3
Color	Clear	Clear	Clear	Clear			
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_

g-logics



Well Number: MW-285

Project Name: BFC

Project Number:	Date: 11/11/18	Weather: Rain
Development / Purge Method:	Well Screen Interval: 5 to 12	Tidally Influenced?
Logged By:	Water Depth Start: 7.91	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 8.06	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	10:30	10:35	10:40	10:45	10:50	10:55	11:00
Water Level (ft)	7.91'	8.06'	8.06'	8.06'	8.06'	8.06'	8.06'
pH	6.55	6.6'	6.60	6.60	6.60	6.60	6.60
Conductivity (mS/cm) <i>spe</i>	447.0	445.2	442.3	444.9	447.7	448.7	451.3
Temperature (F)	13.7	13.4	13.6	13.7	13.5	13.7	13.6
ORP (mV)	<del>66.4</del> 66.4	72.9	78.0	80.8	82.0	83.7	83.9
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	5.79, 54.3 + 5.25, 49.9   4.85, 45.3   4.43, 41.8   4.33, 40.8   4.24, 39.5   4.15, 39.1						
Color	clear	" "					
Purge Volume							

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



Well Number: MW-295

Project Name:

Project Number:	Date: 1/16/16	Weather: Sunny Cool
Development / Purge Method:	Well Screen Interval: 10 to 15	Tidally Influenced?
Logged By:	Water Depth Start: 9.71 9.78 (V16)	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1230	1240	1245	1250	1255	1300	1305
Water Level (ft)	9.78						
pH	6.71	6.79	6.81	6.83	6.86	6.85	6.86
Conductivity (mS/cm)	0.482	0.545	0.549	0.546	0.543	0.542	0.542
Temperature (F)	12.27	11.94	11.97	11.99	11.95	11.97	11.96
ORP (mV)	153.5	73.3	38.8	21.5	5.8	4.2	1.0
<del>Turbidity (NTUs)</del> TDS g/L	0.472	0.472	0.475	0.473	0.472	0.472	0.472
Dissolved Oxygen (mg/L, %)	119.3/12.58	48.7/5.22	38.4/4.09	33.5/3.60	26.6/2.84	25.4/2.72	22.9/2.46
Color	sl. turbid	clear	clr	clr	clr	clr	clr
Purge Volume	3 gal	4 gal	4.25	4.5	5.0	5.25	5.5

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-295 @ 1300  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



Well Number: MW-29D

Project Name: BFC

Project Number: 410-41	Date: 1/10/18	Weather: Cool, overcast
Development / Purge Method:	Well Screen Interval: 20 to 25	Tidally Influenced? Yes
Logged By: ZH	Water Depth Start: 17.92	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: <input checked="" type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1:50	1:55	2:00	2:05	2:10	2:15		
Water Level (ft)								
pH	6.51	6.40	6.43	6.37	6.41	6.38		
Conductivity (mS/cm)	0.241	0.242	0.242	0.248	0.24	0.242		
Temperature (F)	13.72	13.84	13.85	13.78	13.78	13.72		
ORP (mV)	375	376	375	373	372	371		
Turbidity (NTUs)	0.200	0.200	0.200	0.200	0.200	0.200		
Dissolved Oxygen (mg/L, %)	3.3/3.2%	3.2/3.0%	3.1/0.9%	3.0/0.9%	3.0/0.9%	3.0/0.9%		
Color	1.40-2	1.40-2	1.40-2	1.40-2	1.40-2	1.40-2		
Purge Volume	4.0 gal	3.5	3.0	2.5	2.0	1.5		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-29D @ 1:15  
 Water Level Finish: \_\_\_\_\_  
 Field comments: GC Volume



12:30  
sample

Well Number: MW-30

Project Name: BFC

Project Number: 01-0410-M	Date: 1/14/18	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: 13.09	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 13.10	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

BKX-693

Time	12 <sup>10</sup>	12 <sup>15</sup>	12 <sup>20</sup>	12 <sup>25</sup>	12 <sup>30</sup>	12 <sup>35</sup>	12 <sup>40</sup>
Water Level (ft)	13.09'	13.13'	13.10'	13.10'	13.10'		
pH	6.62	6.60	6.60	6.60	6.60		
Conductivity (mS/cm)	437.4	440.0	439.3	438.9	438.6		
Temperature (F)	14.4	14.5	14.5	14.4			
ORP (mV)	-80.1	-124.0	-140.3	-153.7	-163.4		
Turbidity (NTUs)							
Dissolved Oxygen (mg/L, %)	<del>0.21, 2.1</del>	0.63, 5.5	0.39, 3.4	0.24, 2.9	0.24, 2.3		
Color	2.66, 23.1	<del>0.05</del> CLEAR					
Purge Volume	CLEAR						

Well Sampling Information (complete if well is sampled)

Decon Method: _____	Sample Number: _____
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	



<b>Well Number:</b> MW-295		<b>Project Name:</b> BFC	
Project Number: 01-0410-M	Date: 5/29/18	Weather: Cloudy	
Development / Purge Method:	Well Screen Interval: 10 to 15	Tidally Influenced?	
Logged By: Haley Carder	Water Depth Start: 11.01	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

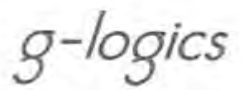
**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1015	1020	1025	1030	1035			
Water Level (ft)	11.01	10.96	10.95	10.97	10.97			
pH	6.55	6.49	6.50	6.51	6.52			
Conductivity (mS/cm)	0.380	0.380	0.385	0.396	0.400			
Temperature (F)	14.39	14.32	14.21	14.27	14.32			
ORP (mV)	42.8	39.3	35.3	35.6	36.6			
Turbidity (NTUs)	-	-	-	-	-			
Dissolved Oxygen (mg/L, %)	9.1, 86.4	2.49, 24.10	9.0, 88	0.56, 5.4	0.38, 3.7			
Color	clr	clr	clr	clr	clr			
Purge Volume	0.25	0.75	1.25	1.75	2.25			

**Well Sampling Information (complete if well is sampled)**

Decon Method: _____	Sample Number: MW-295 10 <sup>40</sup>
Water Level Start: 11.01'	Water Level Finish: 10.97'
Sampling Method: _____	Field comments: _____
Filter Type: _____	





Well Number: MW-29D

Project Name: BFC

Project Number: 01-0910-M	Date: 5/29/18	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: 20 to 25	Tidally Influenced?
Logged By: Haley Carter	Water Depth Start: <del>16.0</del> 16.12	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 16.51	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	9:00	9:25	9:50	9:55	9:40	9:45		
Water Level (ft)	16.12	16.28	16.31	16.40	16.45	16.51		
pH	6.39	6.36	6.38	6.37	6.37	6.36		
Conductivity (mS/cm)	0.355	0.357	0.353	0.346	0.342	0.341		
Temperature (F)	14.14	14.14	14.27	14.29	14.33	14.30		
ORP (mV)	126.5	79.0	66.0	46.8	39.0	33.7		
Turbidity (NTUs)	-	-	-	-	-	-		
Dissolved Oxygen (mg/L, %)	4.32, 43.2	4.62, 44.8	1.63, 15.6	0.91, 8.8	0.66, 6.4	0.57, 5.5		
Color	Clear	Clear	clr	clr	clr	clr		
Purge Volume	0.5	0.75	1	1.25	1.75	2.25		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: 16.12

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-29D 9:50

Water Level Finish: 16.51

Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-18		<b>Project Name:</b> BFC	
<b>Project Number:</b> 01-0410-M	<b>Date:</b> 5/25	<b>Weather:</b> cloudy warm	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to _____	<b>Tidally influenced?</b> No	
<b>Logged By:</b> ZW	<b>Water Depth Start:</b> 8.62	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <b>What Volume?</b>	<b>Well Conditions:</b> <input checked="" type="radio"/> OK <input type="radio"/> Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1200	1205	1210	1215	1220			
Water Level (ft)	8.62							
pH	6.66	6.63	6.57	6.53	6.53			
Conductivity (mS/cm)	0.385	0.385	0.378	0.374	0.373			
Temperature (F)	15.65	14.53	14.24	14.44	14.53			
ORP (mV)	141.9	128.9	127.5	118.5	114.9			
Turbidity (NTUs)	—	—	—	—	—			
Dissolved Oxygen (mg/L.%)	8.64	8.53	7.78	6.92	6.92			
Color	clr	clr	clr	clr	clr			
Purge Volume	0.25	1.00	1.1	1.2	1.3			

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** \_\_\_\_\_

**Water Level Start:** 8.62

**Sampling Method:** peristaltic

**Filter Type:** N/A / Lab

**Sample Number:** \_\_\_\_\_

**Water Level Finish:** MW-18 @ 1220

**Field comments:** \_\_\_\_\_



Well Number: MW-21

Project Name: BFC

Project Number:	Date: 5/25/2018	Weather: Sun, Warm, C/M
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: 14.04	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1300	1305	1310	1315	1320			
Water Level (ft)	14.04	<del>14.04</del>						
pH	6.57	6.60	6.64	6.64	6.64			
Conductivity (mS/cm)	0.400	0.423	0.428	0.423	0.423			
Temperature (F)	15.41	15.66	15.63	15.42	15.61			
ORP (mV)	-39.6	-56.6	-62.6	-63.9	-69.5			
Turbidity (NTUs)	—	—						
Dissolved Oxygen (mg/L, %)	0.84	2.21	1.37	1.40	1.46			
Color	clr	clr						
Purge Volume	0.25	0.4	0.6	1.0	1.2			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-21 @ 1320

Water Level Finish: \_\_\_\_\_

Field comments: QA/QC Vol



1 VoA      QC + 7  
 1 Amber HCl  
 1 Amber  
 1 Poly    1 Poly HNO<sub>3</sub>

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number: MW-23	Date: 5/25/18	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally influenced?	
Logged By: ZJ	Water Depth Start: 10.04	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:	Well Conditions: OK    Not OK	
Purge Water Disposal Volume:	Bails Dry? Yes No    What Volume?	Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1000	1005	1010	1015	1020	1025		
Water Level (ft)								
pH	6.41	6.41	6.40	6.43	6.42	6.44		
Conductivity (mS/cm)	0.351	0.331	0.330	0.33	0.330	0.330		
Temperature (F)	14.77	14.85	14.91	14.98	15.06	15.08		
ORP (mV)	100.4	87.9	86.7	81.9	78.8	77.9		
Turbidity (NTUs)	—	—	—	—	—	—		
Dissolved Oxygen (mg/L, %)	3.30	2.71	2.62	2.43	2.32	2.26		
Color	clr	clr	clr	clr	clr	clr		
Purge Volume	1.5	2	2.5	3.0	3.5	4.0		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: MW-23      (2) 1025  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-24D		<b>Project Name:</b> Boeing Field Chevron	
Project Number: 01-0410-M	Date: 5/25/16	Weather: Cloudy	
Development / Purge Method:	Well Screen Interval: 20 to 23	Tidally influenced?	
Logged By: HC	Water Depth Start: 15.56 1120	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 15.51 1150		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1125	1130	1135	1140	1145	1150		
Water Level (ft)	15.59	15.57	15.56	15.54	15.51	15.51		
pH	6.55	6.54	6.55	6.53	6.53	6.53		
Conductivity (mS/cm)	0.642	0.631	0.605	0.572	0.553	0.548		
Temperature (°C)	15.16	15.36	15.40	15.24	15.30	15.14		
ORP (mV)	24.3	-69.3	-74.0	-71.5	-70.1	-69.7		
Turbidity (NTUs)	—	—	—	—				
Dissolved Oxygen (mg/L, %)	9.48, 90.5	2.17, 21.7	1.53, 15.3	1.16, 11.6	1.00, 10.0	0.94, 9.4		
Color	Clear	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0.2	0.4	0.75	1	1.25	1.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: 15.56  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: MW 24D 1155  
Water Level Finish: 15.51  
Field comments: \_\_\_\_\_





<b>Well Number:</b> MW-30		<b>Project Name:</b> Boeing Field	
Project Number: 01-0410-M	Date: 5/25/18	Weather: Cloudy	
Development / Purge Method:	Well Screen Interval: 20 to 25	Tidally Influenced?	
Logged By: HC	Water Depth Start: 16.89' 1005	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 16.94		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

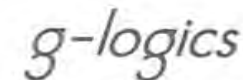
Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	10 <sup>10</sup>	10 <sup>15</sup>	10 <sup>20</sup>	10 <sup>25</sup>	10 <sup>30</sup>	10 <sup>35</sup>	10 <sup>40</sup>
Water Level (ft)	16.95'	16.94	16.94	16.94	16.94	16.94	16.94
pH	6.48	6.43	6.52	6.54	6.54	6.55	6.55
Conductivity (mS/cm)	0.578	0.579	0.571	0.567	0.557	0.550	0.549
Temperature (°C)	14.54	14.68	14.71	14.66	14.65	14.71	14.65
ORP (mV)	106.2	33.8	-32.1	-42.1	-50.1	-57.7	-62.5
Turbidity (NTUs)	<del>0.28</del> -	-	-	-	-	-	-
Dissolved Oxygen (mg/L.%)	7.39, 14.98, 33, 82.2	4.65, 45.5	4.12, 40.2	8.59, 35.3	2.78, 21.4	2.34, 22.9	
Color	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Purge Volume	0.25	0.75	1.25	1.75	2.25	2.75	3.25

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: 16.89'  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-30 10<sup>40</sup>  
 Water Level Finish: 16.94  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW27D		<b>Project Name:</b> Boeing Field Chav.	
Project Number:	Date: 5/25/18	Weather: Sunny	
Development / Purge Method:	Well Screen Interval: 14.5 to 21.5	Tidally Influenced?	
Logged By:	Water Depth Start: 13.98 105	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 13.90		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	2:00	2:05	2:10	2:15	2:20	2:25		
Water Level (ft)	14.08	13.98	13.96	13.95	13.91	13.90		
pH	6.38	6.33	6.32	6.32	6.27	6.36		
Conductivity (mS/cm)	0.523	0.497	0.479	0.468	0.453	0.428		
Temperature (F)	15.67	15.25	15.40	15.50	15.30	15.26		
ORP (mV)	-4.5	-31.4	-34.0	-34.3	-31.7	-24.6		
Turbidity (NTUs)	—	—	—	—				
Dissolved Oxygen (mg/L, %)	3.36, 33.6	1.24, 12.4	0.95, 9.5	0.82, 8.2	0.49, 4.9	0.49, 4.9		
Color	clear	clear	clear	clear	clear	clear		
Purge Volume	0.2	0.6	1	1.4	1.75	2		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: 13.98  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-27D  
 Water Level Finish: 13.90  
 Field comments: \_\_\_\_\_



Well Number: MW-275

Project Name: BFC

Project Number:	Date: 5/25	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By: ZW	Water Depth Start: 8.27	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1425	1430	1435	1440	1445	1450	1455	
Water Level (ft)	8.27	8						
pH	6.55	6.53	6.56	6.56	6.55	6.57	6.55	
Conductivity (mS/cm)	0.792	0.782	0.783	0.779	0.757	0.754	0.748	
Temperature (F)	16.20	16.32	16.26	16.22	16.10	16.07	16.16	
ORP (mV)	69.7	71.6	76.9	78.7	83.5	84.9	88.4	
Turbidity (NTUs)	—	—	—	—				
Dissolved Oxygen (mg/L.%)	42.53	5.92	4.38	3.82	3.13	2.70	2.60	
Color	clr	clr						
Purge Volume	.5	0.75	1.25	1.75	2.25	2.75	3.25	

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-275 @ 1450

Water Level Finish: QA AMBER

Field comments: \_\_\_\_\_





<b>Well Number:</b> IP-3		<b>Project Name:</b>	
<b>Project Number:</b> 410-M	<b>Date:</b> 5/29/18	<b>Weather:</b>	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to _____	<b>Tidally Influenced?</b> Y	
<b>Logged By:</b> ZW	<b>Water Depth Start:</b> 14.55	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Balls Dry?</b> Yes No What Volume?	<b>Well Conditions:</b> <input checked="" type="radio"/> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	9:10	9:15	9:20	9:25	9:30	9:35		
Water Level (ft)	14.55							
pH	6.62	6.55	6.55	6.55	6.55	6.55		
Conductivity (mS/cm)	0.450	0.430	0.404	0.387	0.371	0.361		
Temperature (F)	14.12	14.17	14.22	14.20	14.22	14.22		
ORP (mV)	-33.7	-51.4	-57.5	-58.3	-57.6	-56.9		
Turbidity (NTUs)	—	—	—	—	—			
Dissolved Oxygen (mg/L,%)	13.11	6.00	3.53	2.79	2.27	1.94		
Color	clr	clr	clr	clr	clr	clr		
Purge Volume	0.25	0.75	1.25	2.00	2.75	3.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-3 @ 930  
 Water Level Finish: \_\_\_\_\_  
 Field comments: QA/QC Vol.  
 MW-B Field Dup

*g-logics*

Well Number: IP-4

Project Name: BFC

Project Number:	Date: <u>5/29</u>	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: <u>9.65</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1110	1115	1120	1125	1130	1135	1140	
Water Level (ft)	9.65							
pH	6.72	6.83	6.78	6.83	6.85	6.87	6.87	
Conductivity (mS/cm)	0.732	0.714	0.708	0.705	0.703	0.704	0.704	
Temperature (F)	13.93	13.68	13.71	13.67	13.70	13.73	13.74	
ORP (mV)	-82.4	-108.3	-100.4	-94.2	-104.9	-106.9	-106.2	
Turbidity (NTUs)	—	—	—	—				
Dissolved Oxygen (mg/L,%)	0.69	1.83	1.20	1.52	1.86	1.84	1.80	
Color	clr	clr	clr	clr	clr	clr	clr	
Purge Volume	0.5	1.0	2.0	2.5	3.25	4.25	5.00	

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

Sample Number: IP-4 @ 11:45  
Water Level Finish: \_\_\_\_\_  
Field comments: \_\_\_\_\_

*g-logics*



Well Number: 1P-5

Project Name: BFC

Project Number:	Date: 5/29/18	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: 18 to 29	Tidally Influenced?
Logged By:	Water Depth Start: 16.82	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 17.1	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1115	1120	1125	1130	1135	1140		
Water Level (ft)	16.82	16.85	16.88	16.93	16.97	17.1		
pH	6.27	6.24	6.28	6.30	6.30	6.30		
Conductivity (mS/cm)	0.494	0.490	0.483	0.444	0.428	0.414		
Temperature (F)	15.33	14.54	14.51	14.51	14.61	14.47		
ORP (mV)	69.0	659.0	38.3	26.5	21.0	18.5		
Turbidity (NTUs)	-	-	-	-	-	-		
Dissolved Oxygen (mg/L, %)	6.50, 63.0	2.22, 21.5	0.91, 8.9	0.54, 5.3	0.47, 4.7	0.45, 4.4		
Color	clr	clr	clr	clr	clr	clr		
Purge Volume	0.3	0.75	1.2	1.6	2	2.25		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: 16.82  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: A 1P-5  
 Water Level Finish: 17.1  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> IP-7		<b>Project Name:</b>	
Project Number: 01-0410-N	Date: 6/7/18	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time								
Water Level (ft)								
pH								
Conductivity (mS/cm)								
Temperature (F)								
ORP (mV)								
Turbidity (NTUs)								
Dissolved Oxygen (mg/L, %)								
Color								
Purge Volume								

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-7 @ 9:00  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_

Product: 14.76 - 15.2  
 ~ 6"

*g-logics*

Well Number: MW-18

Project Name: BFC

Project Number:	Date: 8/23/18	Weather:
Development / Purge Method:	Well Screen Interval: 11 to 16	Tidally Influenced? <input checked="" type="checkbox"/>
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? <input checked="" type="radio"/> Yes <input type="radio"/> No What Volume?	Well Conditions: <input checked="" type="checkbox"/> OK <input type="checkbox"/> Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Pumped Dry ~1/L

Time	1245	1250	1255	1300				
Water Level (ft)								
pH	6.30	6.17						
Conductivity (mS/cm)	0.696	0.663						
Temperature (F)	19.16	19.5						
ORP (mV)	50	61						
Turbidity (NTUs)	1.7	1.1						
Dissolved Oxygen (mg/L, %)	∅	∅						
Color TDS	0.456	0.425						
Purge Volume	1L	2L						

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-18 @ 1300

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_

g-logics

<b>Well Number:</b> MCW-19		<b>Project Name:</b> BFR	
<b>Project Number:</b>	<b>Date:</b> 8/23/18	<b>Weather:</b> Sunny	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to _____	<b>Tidally Influenced?</b>	
<b>Logged By:</b> HC	<b>Water Depth Start:</b> 15.52	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1310	1315	1320	1325	1330			
Water Level (ft)	15.52							
pH	6.12	pond water						
Conductivity (mS/cm)	0.445	dry						
Temperature (F)	19.06							
ORP (mV)	5							
Turbidity (NTUs)	5.1							
Dissolved Oxygen (mg/L, %)	6.3							
Color	low							
Purge Volume	0.81							

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** \_\_\_\_\_

**Water Level Start:** 15.52

**Sampling Method:** \_\_\_\_\_

**Filter Type:** \_\_\_\_\_

**Sample Number:** \_\_\_\_\_

**Water Level Finish:** \_\_\_\_\_

**Field comments:** 1335



<b>Well Number:</b> MW-20		<b>Project Name:</b> BFC	
<b>Project Number:</b>	<b>Date:</b> 8/23/18	<b>Weather:</b> Partly Cloudy	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 15 to 20	<b>Tidally Influenced?</b>	
<b>Logged By:</b> HC	<b>Water Depth Start:</b> 15.76	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	12:30	12:35	12:40	12:45	12:50			
Water Level (ft)	15.76	-	-	-	-			
pH	5.86	6.30	6.40	6.36	6.19			
Conductivity (mS/cm)	0.631	0.523	0.522	0.484	0.460			
Temperature (F)	16.92	16.16	16.09	16.02	16.15.91			
ORP (mV)	-53	-85	-91	-88	-80			
Turbidity (NTUs)	12.4	22.0	7.2	9.8	5.9			
Dissolved Oxygen (mg/L, %)	0.60	0.08	0.00	0.00	0.00			
Color	Clear	Clear	Clear	Clear	Clear			
Purge Volume	0	0.3	0.6	0.9	1.2			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: 15.76

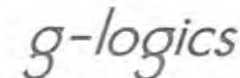
Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: 15.39

Field comments: 1300





<b>Well Number:</b> MW-21		<b>Project Name:</b> BFC	
<b>Project Number:</b>	<b>Date:</b> 8/23/18	<b>Weather:</b> Sunny	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to _____	<b>Tidally Influenced?</b> Yes	
<b>Logged By:</b>	<b>Water Depth Start:</b> 14.56	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1355	1400	1405	1410	1415	1420		
Water Level (ft)	14.56	-	-	-	-	-		
pH	5.86	6.31	6.39	6.42	6.44	6.44		
Conductivity (mS/cm)	0.470	0.486	0.484	0.483	0.484	0.483		
Temperature (F)	17.95	16.83	15.62	15.54	15.60	15.58		
ORP (mV)	-46	-95	-104	-108	-110	-112		
Turbidity (NTUs)	4.7	1.7	1.9	1.6	1.4	2.2		
Dissolved Oxygen (mg/L, %)	0.16	0.00	0.00	0.00	0.00	0.00		
Color	Clear	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0	0.25	0.5	0.75	1	1.25		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: 14.56

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: 1

Field comments: 1430



<b>Well Number:</b> MW-22		<b>Project Name:</b> BFC	
<b>Project Number:</b>	<b>Date:</b> 8/23/18	<b>Weather:</b> Partly Cloudy	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to _____	<b>Tidally Influenced?</b> Yes	
<b>Logged By:</b> HC	<b>Water Depth Start:</b> 11.06	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1130	1135	1140	1145	1150		
Water Level (ft)	11.06	13.04	13.21	13.22	13.22		
pH	6.15	6.23	6.11	6.09	6.11		
Conductivity (mS/cm)	0.548	0.527	0.526	0.527	0.527		
Temperature (F)	20.29	18.06	18.21	18.32	18.52		
ORP (mV)	67	-24	-43	-45	-47		
Turbidity (NTUs)	22.5	50.0	<del>26</del> 13.4	40.2	4.2		
Dissolved Oxygen (mg/L, %)	1.03	2.43	2.35	2.32	2.27		
Color	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0	0.1	0.2	0.3	0.4		

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** \_\_\_\_\_

**Water Level Start:** 11.06

**Sampling Method:** \_\_\_\_\_

**Filter Type:** \_\_\_\_\_

**Sample Number:** MW-22

**Water Level Finish:** 13.22

**Field comments:** 1200



Well Number: MW-23

Project Name: BFC

Project Number:	Date: 8/23/18	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: 10.73	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	10 <sup>35</sup>	10 <sup>40</sup>	10 <sup>45</sup>	10 <sup>50</sup>	10 <sup>55</sup>			
Water Level (ft)	10.73	11.21	11.56	11.77	12.26			
pH	6.07	5.97	6.01	6.04	6.00			
Conductivity (mS/cm)	0.564	0.571	0.574	0.576	0.574			
Temperature (F)	18.21	18.99	19.37	19.43	19.37			
ORP (mV)	128	78	42	319	12			
Turbidity (NTUs)	15.2	10.6	3.7	2.6	3.3			
Dissolved Oxygen (mg/L.%)	0.76	0.10	0.01	0.00	0.00			
Color	Rusty then clear	clear	clear	clear	clear			
Purge Volume	0	0.3	0.6	0.9	1.2			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: 10.73

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-23 1100

Water Level Finish: 12.26

Field comments: \_\_\_\_\_





<b>Well Number:</b> 240		<b>Project Name:</b> BFC	
Project Number:	Date: 8/23	Weather:	
Development / Purge Method:	Well Screen Interval: 20 to 25	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1030	1035	1040	1045				
Water Level (ft)								
pH	6.51	6.32	6.22	6.17				
Conductivity (mS/cm)	1.25	1.19	1.13	1.10				
Temperature (F)	15.27	15.06	14.96	15.07				
ORP (mV)	-100	-95	-94	-92				
Turbidity (NTUs)	1.3	0.8	0.9	1.4				
Dissolved Oxygen (mg/L, %)	0	0.00	0	0				
Color								
Purge Volume	0			1.5				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: ML-240 @ 1100  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-25		<b>Project Name:</b> BFC	
Project Number:	Date: 8/23/18	Weather: Cloudy	
Development / Purge Method:	Well Screen Interval: 9 to 14	Tidally Influenced? <input checked="" type="checkbox"/>	
Logged By: HC	Water Depth Start: 9.93	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	9:40	9:45	9:50	9:55	9:10:00	10:05		
Water Level (ft)	9.93	11.79	11.67	11.84	11.95	11.07		
pH	7.15	6.04	6.06	6.10	6.13	6.12		
Conductivity (mS/cm)	0.397	0.576	0.374	0.573	0.373	0.372		
Temperature (F)	16.65	16.55	16.40	16.40	16.28	16.35		
ORP (mV)	208	204	145	186	177	172		
Turbidity (NTUs)	4.8	3.2	3.6	2.7	2.5	3.3		
Dissolved Oxygen (mg/L, %)	7.46	3.80	4.04	3.59	3.11	1.20		
Color	clear	clear	clear	clear	clear	clear		
Purge Volume	0	0.2	0.5	0.8	1.1	1.4		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: 9.93

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-25

Water Level Finish: 11.97

Field comments: QA/QC 10'





**Well Number:** 265 **Project Name:** BFO

Project Number:	Date: 8/24/18	Weather: Cloudy
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start: 8.84	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1:33	1:40	1:45	1:50	1:55	12:00		
Water Level (ft)	8.84	10.00	10.55	<del>10.85</del> 10.85	11.31	11.47		
pH	5.06	6.48	6.48	6.47	6.46	6.47		
Conductivity (mS/cm)	0.344	0.328	0.326	0.329	0.328	0.289		
Temperature (F)	18.83	19.71	19.59	19.25	19.23	19.28		
ORP (mV)	-16	-32	-28	-31	-29	-31		
Turbidity (NTUs)	18.3	250	11.8	4.3	5.9	8.4		
Dissolved Oxygen (mg/L, %)	0.65	0.07	0.00	0.17	0.11	1.80		
Color	clear	clear	clear	clear	clear	clear		
Purge Volume	0.3	0.6	0.9	1.2	1.5	1.8		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: 7  
 Field comments: 12:10



Well Number: 261D Project Name: B-2

Project Number:	Date: <u>5/24/18</u>	Weather: <u>Partly Cloudy</u>
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced? <u>Yes</u>
Logged By:	Water Depth Start: <u>15.95</u>	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>1050</u>	<u>1055</u>	<u>1100</u>	<u>1105</u>	<u>1110</u>	<u>1115</u>		
Water Level (ft)	<u>15.95</u>	<u>16.03</u>	<u>16.06</u>	<u>16.08</u>	<u>16.09</u>	<u>16.10</u>		
pH	<u>6.02</u>	<u>6.53</u>	<u>6.60</u>	<u>6.65</u>	<u>6.60</u>	<u>6.42</u>		
Conductivity (mS/cm)	<u>0.389</u>	<u>0.393</u>	<u>0.391</u>	<u>0.384</u>	<u>0.377</u>	<u>0.369</u>		
Temperature (F)	<u>16.98</u>	<u>16.60</u>	<u>16.37</u>	<u>16.13</u>	<u>16.02</u>	<u>15.91</u>		
ORP (mV)	<u>-15</u>	<u>-23</u>	<u>-31</u>	<u>-34</u>	<u>-33</u>	<u>-26</u>		
Turbidity (NTUs)	<u>7.0</u>	<u>4.5</u>	<u>3.6</u>	<u>3.3</u>	<u>2.9</u>	<u>3.1</u>		
Dissolved Oxygen (mg/L,%)	<u>0.65</u>	<u>0.24</u>	<u>0.06</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>		
Color	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>		
Purge Volume	<u>0</u>	<u>0.25</u>	<u>0.5</u>	<u>0.75</u>	<u>1</u>	<u>1.25</u>		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_ Sample Number: \_\_\_\_\_

Water Level Start: \_\_\_\_\_ Water Level Finish: \_\_\_\_\_

Sampling Method: \_\_\_\_\_ Field comments: \_\_\_\_\_ 1120

Filter Type: \_\_\_\_\_



<b>Well Number:</b> 2705		<b>Project Name:</b> RFO	
<b>Project Number:</b>	<b>Date:</b> 8/23/18	<b>Weather:</b> Sunny	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 7 to 12	<b>Tidally Influenced?</b>	
<b>Logged By:</b>	<b>Water Depth Start:</b> 7.48	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

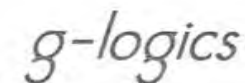
Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1450	1455	1500	1505	1510	1515		
Water Level (ft)	7.48	7.63	7.66	7.66	7.65	7.66		
pH	5.43	6.54	6.57	6.57	6.54	6.54		
Conductivity (mS/cm)	0.360	0.336	0.332	0.307	0.308	0.297		
Temperature (F)	22.14	20.70	20.74	20.21	19.63	19.70		
ORP (mV)	37	45	54	65	70	76		
Turbidity (NTUs)	3.3	0.4	0.4	0.3	0.2	0.2		
Dissolved Oxygen (mg/L, %)	0.90	1.37	1.27	1.25	1.25	1.21		
Color	Clear	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0	0.3	0.6	0.9	1.2	1.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: 7.48  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: 1  
 Field comments: 1520





<b>Well Number:</b> MW-27D		<b>Project Name:</b> BFC	
<b>Project Number:</b>	<b>Date:</b> 8/24/18	<b>Weather:</b> Partly Cloudy	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to 2'	<b>Tidally Influenced?</b> <input checked="" type="checkbox"/>	
<b>Logged By:</b>	<b>Water Depth Start:</b> 15.06	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	10:00	10:05	10:10	10:15	10:20	10:25		
Water Level (ft)	15.06	15.20	15.24	15.30	<del>15.32</del> 15.32	15.35		
pH	6.75	6.53	6.53	6.53	6.38	6.12		
Conductivity (mS/cm)	0.491	0.486	0.488	0.474	0.461	0.458		
Temperature (F)	14.63	15.21	15.48	15.53	15.66	15.70		
ORP (mV)	-83	-94	-97	-97	-86	-78		
Turbidity (NTUs)	10.7	17.1	6.5	5.3	4.9	5.4		
Dissolved Oxygen (mg/L, %)	0.88	0.23	0.08	0.04	0.00	0.00		
Color	Clear	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0	0.2	0.4	0.6	0.8	1.		

**Well Sampling Information (complete if well is sampled)**

**Decon Method:** \_\_\_\_\_

**Water Level Start:** 15.06'

**Sampling Method:** \_\_\_\_\_

**Filter Type:** \_\_\_\_\_

**Sample Number:** \_\_\_\_\_

**Water Level Finish:** 15.35'

**Field comments:** 1030



Well Number: 285

Project Name:

Project Number:	Date:	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1440	1445	1450	1455	1500			
Water Level (ft)								
pH	6.09	6.10	6.31	6.29	6.14			
Conductivity (mS/cm)	0.751	0.731	0.745	0.746	0.728			
Temperature (F)	19.93	19.95	19.77	19.36	19.29			
ORP (mV)	73	101	108	113	115			
Turbidity (NTUs)	0.1	0.6	0.5	0.6	1.2			
Dissolved Oxygen (mg/L, %)	0	∅	∅	∅	∅			
Color TDS (g/L)	0.480	0.465	0.479	0.479	0.474			
Purge Volume	∅				2.5			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-285 @ 1500

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_





<b>Well Number:</b> MW-28D		<b>Project Name:</b>	
Project Number:	Date: 8/23/2018	Weather:	
Development / Purge Method:	Well Screen Interval: 18 to 23	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1400	1405	1410	1415	1420			
Water Level (ft)								
pH	6.08	5.99	5.94	5.96	5.96			
Conductivity (mS/cm)	0.322	0.331	0.332	0.332	0.338			
Temperature (F)	18.26	17.67	17.25	17.43	17.28			
ORP (mV)	-75	-52	-38	-31	-29			
Turbidity (NTUs)	1.3	1.3	0.9	0.6	0.5			
Dissolved Oxygen (mg/L, %)	<del>X</del>	<del>Ø</del>	<del>Ø</del>	<del>Ø</del>	<del>Ø</del>			
Color TDS(g/L)	0.211	0.215	0.220	0.219	0.220			
Purge Volume	0	0.5	1	1.5	2.0			

**Well Sampling Information (complete if well is sampled)**

Decon Method: _____	Sample Number: MW-28D @ 1420
Water Level Start: _____	Water Level Finish: _____
Sampling Method: _____	Field comments: _____
Filter Type: _____	



<b>Well Number:</b> MW-295		<b>Project Name:</b> RFC	
<b>Project Number:</b> 01-0410-M	<b>Date:</b> 8/24/2018	<b>Weather:</b>	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 10 to 15	<b>Tidally Influenced?</b>	
<b>Logged By:</b>	<b>Water Depth Start:</b>	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>What Volume?</b> 1 Gallon		
		<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1315	1320	1325	1330	1335			
Water Level (ft)								
pH	6.06	6.11	6.13	6.13	6.13			
Conductivity (mS/cm)	0.571	0.555	0.553	0.555	0.554			
Temperature (F)	19.85	20.09	20.07	19.46	19.97			
ORP (mV)	21	12	9	4	3			
Turbidity (NTUs)	1.1	1.0	0.7	0.7	0.6			
Dissolved Oxygen (mg/L, %)	∅	∅	∅	∅	∅			
Color	0.366	0.355	0.354	0.355	0.354			
Purge Volume	1/2 gal	1 gal	1 1/4 gal	1.5 gal	1.75 gal			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-295 @ 1330  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-2910		<b>Project Name:</b>	
Project Number:	Date: 8/29/18	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start: 18.25	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	12:35	12:40	12:45	12:50	12:55		
Water Level (ft)	18.25	-		-	-		
pH	6.28	6.46	6.52	6.52	6.51		
Conductivity (mS/cm)	0.276	0.283	0.270	0.269	0.268		
Temperature (F)	18.99	18.81	17.36	15.86	15.50		
ORP (mV)	6	-37	-51	-54	-56		
Turbidity (NTUs)	22.2	13.0	5.8	3.3	2.3		
Dissolved Oxygen (mg/L,%)	0.38	0.07	0.00	0.00	0.00		
Color	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0.0	0.25	0.5	0.75	1.0		

**Well Sampling Information (complete if well is sampled)**

Decon Method: _____	Sample Number: _____
Water Level Start: 18.25	Water Level Finish: _____
Sampling Method: _____	Field comments: <del>18.25</del> 13.10
Filter Type: _____	

DUP 2  
13.15



<b>Well Number:</b> MW-30		<b>Project Name:</b>	
Project Number:	Date: 8-23	Weather:	
Development / Purge Method:	Well Screen Interval: 23 to 25	Tidally Influenced? 1	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1115	1120	1125	1130				
Water Level (ft)								
pH	6.21	6.20	6.19	6.17				
Conductivity (mS/cm)	0.865	0.838	0.813	0.792				
Temperature (F)	14.71	14.58	15.36	16.04				
ORP (mV)	-55	-60	-59	-54				
Turbidity (NTUs)	2.2	0.8	2.3	4.7				
Dissolved Oxygen (mg/L, %)	Ø	Ø	Ø	Ø				
Color	TDS	0.536	0.519	0.509				
Purge Volume	Ø			1.5				

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-30 @ 1145  
 Water Level Finish: EOB GABC  
 Field comments: \_\_\_\_\_



Well Number: IP-3

Project Name: BFC

Project Number:	Date: <u>8/24/18</u>	Weather:
Development / Purge Method:	Well Screen Interval: <u>18</u> to <u>23</u>	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	<u>1009</u>	<u>1015</u>	<u>1020</u>	<u>1030</u>	<del>1040</del> <u>1035</u>			
Water Level (ft)								
pH	<u>6.05</u>	<u>5.97</u>	<u>5.97</u>	<u>5.97</u>	<u>5.97</u>			
Conductivity (mS/cm)	<u>0.982</u>	<u>1.01</u>	<u>0.979</u>	<u>0.955</u>	<u>0.948</u>			
Temperature (F)	<u>14.72</u>	<u>14.86</u>	<u>14.92</u>	<u>14.97</u>	<u>14.99</u>			
ORP (mV)	<u>-47</u>	<u>-59</u>	<u>-66</u>	<u>-64</u>	<u>-63</u>			
Turbidity (NTUs)	<u>1.4</u>	<u>1.1</u>	<u>1.0</u>	<u>1.1</u>	<u>1.1</u>			
Dissolved Oxygen (mg/L, %)	<u>∅</u>	<u>∅</u>	<u>∅</u>	<u>∅</u>	<u>∅</u>			
Color <u>TDS (g/L)</u>	<del>0.629</del>	<u>0.647</u>	<u>0.626</u>	<u>0.611</u>	<u>0.606</u>			
Purge Volume	<u>1L</u>	<u>2L</u>	<u>1Gal</u>	<u>2 gal</u>	<u>2.5 gal</u>			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-3 @ 1045 Dup MW-A  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





<b>Well Number:</b> IP-4		<b>Project Name:</b> SFC	
<b>Project Number:</b> 410-M	<b>Date:</b> 8/24/18	<b>Weather:</b>	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> _____ to _____	<b>Tidally Influenced?</b>	
<b>Logged By:</b>	<b>Water Depth Start:</b> 10.00	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1120	1125	1130	1135	1140			
Water Level (ft)	10.00							
pH	6.24	6.25	6.26	6.27	6.27			
Conductivity (mS/cm)	1.33	1.31	1.29	1.28	1.27			
Temperature (F)	16.67	16.95	16.98	16.97	16.97			
ORP (mV)	-100	-111	-112	-114	-114			
Turbidity (NTUs)	10.3	9.8	9.3	6.3	6.4			
Dissolved Oxygen (mg/L, %)	Ø	Ø	Ø	Ø	Ø			
Color	0.850	0.840	0.827	0.816	0.814			
Purge Volume	1/2 gal	3/4 gal	1.2 gal	1.75 gal	2.0 gal			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-4 @ 1145  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> IP-5		<b>Project Name:</b> BFC	
Project Number: 410-M	Date: 8/24/18	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1200	1205	1210	1215	1220	1225		
Water Level (ft)								
pH	5.98	5.94	5.94	5.93	5.94	5.94		
Conductivity (mS/cm)	0.990	0.987	0.987	0.975	0.964	0.923		
Temperature (F)	15.47	15.22	15.17	14.98	14.90	14.88		
ORP (mV)	-43	-45	-46	-47	-47	-45		
Turbidity (NTUs)	1.3	1.0	1.4	1.2	0.8	1.5		
Dissolved Oxygen (mg/L, %)	0.0	0	0	0	0	0		
Color	0.624	0.633	0.631	0.621	0.617	0.590		
Purge Volume	1L	2L	3L	3.5L	5L	6.5L		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
Water Level Start: \_\_\_\_\_  
Sampling Method: \_\_\_\_\_  
Filter Type: \_\_\_\_\_

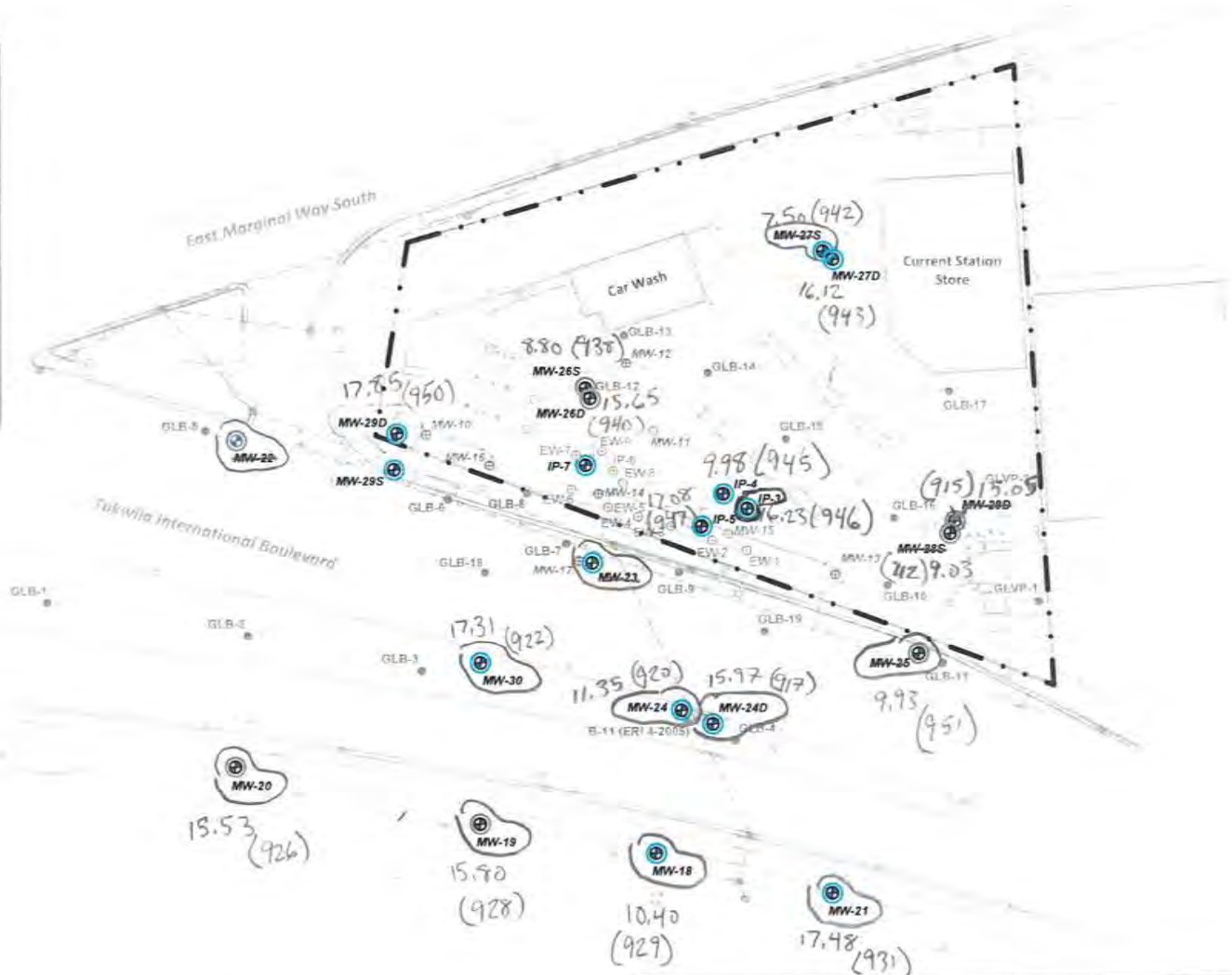
Sample Number: IP-5 @ 1230  
Water Level Finish: \_\_\_\_\_  
Field comments: \_\_\_\_\_





**Legend**

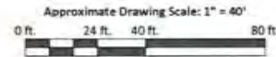
-  **MW-22** Proposed Quarterly Monitoring Well Sampling Location (Q1, Q2, Q3, & Q4, 2018)
-  **MW-22** Proposed Quarterly Monitoring Well Sampling Location (To be sampled Q3 & Q4 only, 2018)
-  **EW-5** Historical Site Exploration Location
-  **GLB-5** Soil Boring (2016)
-  Property Boundary
-  Current UST Location (Approximate)
-  Approximate Utility Trench Locations (Adjacent to Property)



Project File: 01-0410-M-F1 Updated Well Sampling.vsd



Note: This figure contains information in color. Black & white photocopies may not be suitable for review.



**Planned Quarterly Groundwater Sample Locations**  
 Boeing Field Chevron  
 10805 East Marginal Way South  
 Tukwila, Washington

Figure  
 1

Mapping References: PLS Survey 2016, G-Logics Field Measurements, Previous Site Report Figures.

Well Number: MW-18

Project Name: BFC

Project Number:	Date: 11/27/18	Weather: Rainy
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1455							
Water Level (ft)								
pH	6.38							
Conductivity (mS/cm)	0.379							
Temperature (F)	15.39							
ORP (mV)	166							
Turbidity (NTUs)	10.1							
Dissolved Oxygen (mg/L, %)	4.97							
Color	clear							
Purge Volume								

DRY

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





Well Number: MW-19

Project Name: EFC

Project Number: 01-0410-M	Date: 11/27/18	Weather: cloudy
Development / Purge Method:	Well Screen Interval: 15 to 20	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1400	1405	1410	1415	1420	1425		
Water Level (ft)	10.38'	-	-	-	-	11.17'		
pH	6.55	6.40	6.42	6.44	6.45	6.51		
Conductivity (mS/cm)	0.495	0.549	0.572	0.561	0.570	0.576		
Temperature (F)	15.82	15.84	15.80	15.84	15.84	15.78		
ORP (mV)	113	135	113	93	88	79		
Turbidity (NTUs)	97.9	11.2	13.9	23.5	16.9	9.9		
Dissolved Oxygen (mg/L,%)	3.43	0.36	0.01	0.19	0.01	0.00		
Color	clear	clear	clear	clear	clear	clear		
Purge Volume	0	0.3	0.6	0.9	1.2	1.5		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-19 1425  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_





<b>Well Number:</b> MW-20		<b>Project Name:</b> BHP	
Project Number: 01-0410-M	Date: 11/27/18	Weather: Cloudy	
Development / Purge Method:	Well Screen Interval: 15 to 20	Tidally Influenced? <input checked="" type="checkbox"/>	
Logged By: HC	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	13 <sup>10</sup>	13 <sup>15</sup>	13 <sup>20</sup>	13 <sup>25</sup>	13 <sup>30</sup>			
Water Level (ft)	11.57	-	-	-	-11.71			
pH	6.45	6.43	6.43	6.42	6.42			
Conductivity (mS/cm)	0.533	0.502	0.487	0.472	0.464			
Temperature (F)	15.93	15.88	15.87	15.84	15.82			
ORP (mV)	-78	-70	-65	-62	-61			
Turbidity (NTUs)	73.5	31.6	12.2	7.00	6.0			
Dissolved Oxygen (mg/L.%)	1.24	0.28	0.00	0.00	0.00			
Color	Clear	Clear	Clear	Clear	Clear			
Purge Volume	0.0	0.3	0.6	0.9	1.2			MFA

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-20 1340  
 Water Level Finish: 11.71  
 Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-21		<b>Project Name:</b> BEC	
Project Number: 01-0410-M	Date: 11/28/18	Weather: Rain	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By: AC	Water Depth Start: 8.59	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish: 8.99		
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	830	835	840	845	850			
Water Level (ft)	9.59	-	-	-	-			
pH	6.34	6.37	6.45	6.46	6.46			
Conductivity (mS/cm)	0.556	0.575	0.592	0.600	0.603			
Temperature (F)	12.29	12.70	12.95	12.88	13.31			
ORP (mV)	110	82	58	50	46			
Turbidity (NTUs)	17.6	14.7	8.0	5.0	4.2			
Dissolved Oxygen (mg/L, %)	0.38	0.13	0.06	0.01	0.01			
Color	clear	clear	clear	clear	clear			
Purge Volume <i>gal</i>	0.1	0.4	0.7	1.0	1.3			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-21 855  
 Water Level Finish: 8.99  
 Field comments: \_\_\_\_\_



Well Number: MW-22

Project Name: BFC

Project Number: 01-0410-M	Date: 11/27/18	Weather: Sunny
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By: HC	Water Depth Start: 10 11.98	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1035	1040	1045	1050	1055	1100		
Water Level (ft)	11.98	11.56	12.30	12.79	12.31	12.51		
pH	6.71	6.64	6.65	6.67	6.70	6.72		
Conductivity (mS/cm)	0.301	0.293	0.283	0.282	0.275	0.275		
Temperature (F) C	16.25	16.50	16.61	16.84	16.83	16.88		
ORP (mV)	154	94	74	64	58	55		
Turbidity (NTUs)	75.4	33.1	59.1	8.3	1.9	0.6		
Dissolved Oxygen (mg/L,%)	0.58	2.70	2.56	2.24	2.13	1.99		
Color	clear	clear	clear	clear	clear	clear		
Purge Volume	0	0.2	0.4	0.6	0.8	1.0		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: 11.98  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-22 1105  
 Water Level Finish: 12.51  
 Field comments: \_\_\_\_\_





Well Number: MW-23

Project Name:

Project Number:	Date: 11/27	Weather:
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1030	1035	1040	1045	1050			
Water Level (ft)	10.49							
pH	6.59	6.57	6.58	6.60	6.60			
Conductivity (mS/cm)	0.558	0.565	0.568	0.568	0.572			
Temperature (F)	14.76	15.15	15.05	15.01	14.87			
ORP (mV)	66	52	47	46	46			
Turbidity (NTUs)	25.3	15.7	11.2	11.2	11.7			
Dissolved Oxygen (mg/L.%)	2.25	2.66	0.25	0.12	0.00			
Color	CU	CU	CU	CU	CU			
Purge Volume	0.9	0.7	0.9	1.1	1.3			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-23 (5) 1050

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



Well Number: MW-24D

Project Name:

Project Number:	Date: 11/27	Weather: Sunny, Cir
Development / Purge Method:	Well Screen Interval: 20 to 25	Tidally Influenced? Y
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1130	1135	1140	1145	1150	1200		
Water Level (ft)	12.2							
pH	6.67	6.70	6.72	6.73	6.74	6.74		
Conductivity (mS/cm)	0.644	0.643	0.644	0.644	0.642	0.640		
Temperature (F)	14.54	14.49	14.52	14.52	14.52	14.53		
ORP (mV)	-73	-81	-84	-85	-88	-89		
Turbidity (NTUs)	11.5	8.3	6.0	5.9	6.74	6.74		
Dissolved Oxygen (mg/L.%)	9.45	2.72	1.14	0.82	0	0		
Color	clr	clr	clr	clr	clr	clr		
Purge Volume	.5	1.00	1.5	2.0	2.25	2.35		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-24D @ 1200 MARC 8260  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_  
 For dx





Well Number: MW-24

Project Name:

Project Number:	Date: 11/27	Weather:
Development / Purge Method:	Well Screen Interval: 8.65 to 13.65	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? <input checked="" type="radio"/> Yes <input type="radio"/> No What Volume? 2.5 gal	Well Conditions: <input type="radio"/> OK <input type="radio"/> Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

(Dry)

Time	1230	1242	1300				
Water Level (ft)							
pH	6.35	6.34					
Conductivity (mS/cm)	0.557	0.556					
Temperature (F)	15.15	15.12	DUMPED NY				
ORP (mV)	105	110					
Turbidity (NTUs)	31.2	28.0					
Dissolved Oxygen (mg/L, %)	3.22	1.87					
Color	28	11					
Purge Volume	0.25	0.75					

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-24 @ 1300

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



Well Number: MW-25

Project Name:

Project Number:	Date: 11/27	Weather:
Development / Purge Method:	Well Screen Interval: 9 to 14	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	922	930	935	945	950	1000		
Water Level (ft)	9.6							
pH	7.47	6.62	6.55	6.51	6.51	6.51		
Conductivity (mS/cm)	0.389	0.259	0.353	0.347	0.347	0.347		
Temperature (F)	13.75	14.97	15.18	15.1	15.16	15.15		
ORP (mV)	144	151	146	143	142	142		
Turbidity (NTUs)	162	84.8	39.6	12.7	16.1	12.6		
Dissolved Oxygen (mg/L, %)	11.9% 1.97L	2.78	1.3	0.48	0.42	0.30		
Color	clr	clr	clr	clr	clr	clr		
Purge Volume	0.25 gal	0.5	0.7	1.1	1.3	1.5		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-25 @ 1000

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-26D		<b>Project Name:</b> BFC	
Project Number: 01-0410-M	Date: 11/28/18	Weather: Rain	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally Influenced?	
Logged By: HC	Water Depth Start: 12.20'	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	925	930	935	940	945			
Water Level (ft)	12.20'	12.15	12.11	12.08'	12.05'			
pH	6.54	6.40	6.42	6.42	6.41			
Conductivity (mS/cm)	0.434	0.424	0.412	0.401	0.398			
Temperature (F)	12.92	14.45	14.57	14.62	14.65			
ORP (mV)	103	135	125	122	121			
Turbidity (NTUs)	10.7	3.6	3.0	1.6	2.5			
Dissolved Oxygen (mg/L.%)	0.74	0.00	0.00	0.00	0.00			
Color	clear	clear	clear	clear	clear			
Purge Volume	0	0.3	0.6	0.9	1.2			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

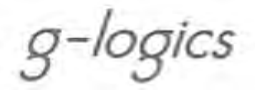
Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-26D 950

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



**Well Number:** MW-265 **Project Name:**

Project Number:	Date: 11/28/16	Weather:
Development / Purge Method:	Well Screen Interval: 7 to 12	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

**Well Development / Purging (circle one)**

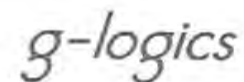
Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	10 <sup>05</sup>	10 <sup>10</sup>	10 <sup>15</sup>	10 <sup>20</sup>	10 <sup>25</sup>			
Water Level (ft)	7.99	8.14	8.15	8.16	8.16			
pH	6.60	6.32	6.34	6.36	6.37			
Conductivity (mS/cm)	0.514	0.467	0.457	0.456	0.458			
Temperature (F)	12.96	15.32	15.41	15.46	15.51			
ORP (mV)	115	183	195	204	210			
Turbidity (NTUs)	27.1	9.6	8.1	7.4	5.6			
Dissolved Oxygen (mg/L, %)	1.42	1.16	1.20	1.23	1.20			
Color	clear	clear	clear	clear	clear			
Purge Volume	0	0.25	0.5	0.75	1.0			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-265 10:30  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



MW-27D

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date: 1/28	Weather:	
Development / Purge Method:	Well Screen Interval: _____ to _____	Tidally influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1020	1025	1030	1035	1040	1045		
Water Level (ft)								
pH	6.37	6.38	6.38	6.42	6.44	6.44		
Conductivity (mS/cm)	0.258	0.255	0.255	0.238	0.226	0.223		
Temperature (F)	13.97	14.00	14.00	14.10	14.06	14.07		
ORP (mV)	12	10	10	-1	-2	-3		
Turbidity (NTUs)	24.2	22.2	22.2	9.9	9.1	8.8		
Dissolved Oxygen (mg/L.%)	0.15	Ø	Ø	Ø	Ø	Ø		
Color TDS, µL	0.11	0.166	0.166	0.153	0.147	0.145		
Purge Volume	1	1.5	2.0	2.5	3.0	3.5		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-27D @ 1045

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_





MW-275

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date: 11/28	Weather:	
Development / Purge Method:	Well Screen Interval: 7 to 12	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

$3 \times 0.163 = 0.48 \times 3 = 1.5 \text{ gallons (3 casings)}$

Time	1100	1105	1110	1115	1120	1125	1130
Water Level (ft)							
pH	6.39	6.44	6.44	6.48	6.50	6.52	6.52
Conductivity (mS/cm)	0.245	0.246	0.246	0.252	0.254	0.250	0.251
Temperature (F)	14.96	15.14	15.16	15.22	15.26	15.28	15.30
ORP (mV)	49	63	65	82	92	99	101
Turbidity (NTUs)	14.3	17.6	20.2	22.2	16.9	16.1	15.2
Dissolved Oxygen (mg/L,%)	∅	∅	∅	∅	∅	∅	∅
Color	0.159	0.160	0.160	0.164	0.165	0.163	0.163
Purge Volume	0.25	0.5	1.0	1.25	2.0	2.5	2.75

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-275 @ 1145  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



Well Number: MW-28D

Project Name:

Project Number:	Date: 11/27/18	Weather:
Development / Purge Method:	Well Screen Interval: 18 to 23	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1350	1355	1400	1405	1410	1415	1420	
Water Level (ft)								
pH	6.53	6.52	6.51	6.51	6.49	6.50	6.50	
Conductivity (mS/cm)	0.167	0.167	0.166	0.166	0.167	0.166	0.166	
Temperature (F)	14.29	14.31	14.29	14.27	14.27	14.25	14.25	
ORP (mV)	7	7	-2	-3	-5	-6	-7	
Turbidity (NTUs)	7.5	7.2	9.3	11.3	8.7	7.8	6.0	
Dissolved Oxygen (mg/L, %)	1.58	6.7	Ø	Ø	Ø	Ø	Ø	
Color	clr							
Purge Volume		.5	0.75	1.5	2.0	2.5	3.0	

$12\frac{1}{2} = 31.25'$   
 $A = \pi r^2$   
 $V = A h = 31.25^2 \cdot 29$   
 $= 2,712.29$

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-28D @ 1400

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_



<b>Well Number:</b> MW-285		<b>Project Name:</b>	
<b>Project Number:</b>	<b>Date:</b> 11/27	<b>Weather:</b>	
<b>Development / Purge Method:</b>	<b>Well Screen Interval:</b> 7 to 12	<b>Tidally Influenced?</b>	
<b>Logged By:</b>	<b>Water Depth Start:</b>	<b>Field Comments:</b>	
<b>Purge Water Disposal Method:</b>	<b>Water Depth Finish:</b>		
<b>Purge Water Disposal Volume:</b>	<b>Bails Dry? Yes No What Volume?</b>	<b>Well Conditions:</b> OK Not OK	
		<b>Explain:</b>	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1441	1450	1455	1500	1505	1510		
Water Level (ft)								
pH	6.40	6.52	6.50	6.49	6.49	6.49		
Conductivity (mS/cm)	0.518	0.515	0.517	0.522	0.521	0.525		
Temperature (F)	15.56	14.88	15.06	15.22	15.28	15.34		
ORP (mV)	75	106	117	122	128	131		
Turbidity (NTUs)	10.2	4.3	2.1	2.0	2.0	2.0		
Dissolved Oxygen (mg/L,%)	6.11	1.81	1.6%	1.42	1.25	1.31		
Color	clr	clr	clr	clr	clr	clr		
Purge Volume	0.5	1.0	1.5	2.0	2.5	3.0		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-285 @ 1500  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



MW-29D

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date: 11/28	Weather:	
Development / Purge Method:	Well Screen Interval: 17 to 22	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	925	930	935	940	945			
Water Level (ft)								
pH	6.43	6.46	6.44	6.44	6.42			
Conductivity (mS/cm)	0.267	0.262	0.260	0.260	0.259			
Temperature (F)	13.46	13.42	13.43	13.45	13.43			
ORP (mV)	13	9	8	6	4			
Turbidity (NTUs)	31.2	30.7	24.8	23.3	15.0			
Dissolved Oxygen (mg/L %)	Ø	Ø	Ø	Ø	Ø			
Color	TDS 3/L	0.170	0.167	0.167	0.167			
Purge Volume	1	1.5	2.0	2.5	3.0			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: MW-29D (3) 9:45  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



MW-295

BFC

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date: 11/28	Weather: Cool, Partly Cloudy	
Development / Purge Method:	Well Screen Interval: 7 to 12	Tidally Influenced? N	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	845	850	855	900	905		
Water Level (ft)							
pH	6.61	6.54	6.50	6.50	6.49		
Conductivity (mS/cm)	0.385	0.386	0.388	0.387	0.387		
Temperature (F)	13.66	13.60	13.95	13.88	13.89		
ORP (mV)	35	19	19	14	14		
Turbidity (NTUs)	147	68	36	33	27.7		
Dissolved Oxygen (mg/L.%)	7.80	3.30	1.02	0.73	0.56		
Color	015	015	015	015	015		
Purge Volume	0.25	0.5	1.75	2.0	2.25		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-295 @ 915

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_





Well Number: MW-30

Project Name: BFC

Project Number: 01-0410-M	Date: 11/27/19	Weather:
Development / Purge Method:	Well Screen Interval: 20 to 25	Tidally Influenced? YES
Logged By: HC	Water Depth Start: 13.19	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 13.27	
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1145	1150	1155	1200	1205	1210		
Water Level (ft)	13.19	13.23	13.23	13.25	13.26	13.27		
pH	6.51	6.53	6.56	6.57	6.58	6.58		
Conductivity (mS/cm)	0.586	0.587	0.580	0.575	0.570	0.579		
Temperature (F)	15.94	16.08	16.44	16.63	16.70	15.41		
ORP (mV)	63	45	42	39	37	33		
Turbidity (NTUs)	8.3	14.5	18.5	29.5	20.5	28.8		
Dissolved Oxygen (mg/L,%)	0.61	0.64	0.63	0.51	0.50	0.23		
Color	clear	clear	clear	clear	clear	clear		
Purge Volume	0	0.2	0.5	0.8	1.1	1.4		

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: MW-30 1210

Water Level Finish: 13.27

Field comments: \_\_\_\_\_

Dup 1215

g-logics

<b>Well Number:</b> IP-3		<b>Project Name:</b> BFC	
Project Number: 01-0410-M	Date: 11/28/18	Weather:	
Development / Purge Method:	Well Screen Interval: 18 to 24	Tidally Influenced?	
Logged By:	Water Depth Start: 12.45'	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1100	1105	1110	1115	1120		
Water Level (ft)	12.45	12.44	12.44	12.44	12.43		
pH	6.31	6.26	6.31	6.35	6.36		
Conductivity (mS/cm)	0.493	0.492	0.491	0.492	0.476		
Temperature (F)	14.03	14.45	14.48	14.45	14.41		
ORP (mV)	-166	-97	-79	-72	-68		
Turbidity (NTUs)	101	45.2	29.1	<del>15.9</del> 15.9	18.4		
Dissolved Oxygen (mg/L,%)	0.38	0.00	0.00	0.00	0.00		
Color	Clear	Clear	Clear	Clear	Clear		
Purge Volume	0	0.25	0.5	0.75	1.0		

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-3 1125  
 Water Level Finish: DUP-1 1135  
 Field comments: \_\_\_\_\_



IP-4

<b>Well Number:</b>		<b>Project Name:</b>	
Project Number:	Date: 11/28	Weather:	
Development / Purge Method:	Well Screen Interval: 8 to 16	Tidally Influenced?	
Logged By:	Water Depth Start:	Field Comments:	
Purge Water Disposal Method:	Water Depth Finish:		
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK	
		Explain:	

**Well Development / Purging (circle one)**

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
 Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Ex. 7 = 4.3  
 x 3 = 12

Time	1200	1205	1210	1215	1220			
Water Level (ft)	6.46	6.55	6.61	6.64	6.66			
pH								
Conductivity (mS/cm)	0.720	0.721	0.719	0.720	0.722			
Temperature (F)	14.71	14.84	14.81	14.83	14.87			
ORP (mV)	-59	-72	-79	-83	-86			
Turbidity (NTUs)	56.1	66.8	64.4	61.7	53.7			
Dissolved Oxygen (mg/L,%)	0	0	0	0				
Color	0.461	0.461	0.460	0.461	0.722			
Purge Volume	1	1.5	2.0	2.5	3.0			

**Well Sampling Information (complete if well is sampled)**

Decon Method: \_\_\_\_\_  
 Water Level Start: \_\_\_\_\_  
 Sampling Method: \_\_\_\_\_  
 Filter Type: \_\_\_\_\_

Sample Number: IP-4 @ 1230  
 Water Level Finish: \_\_\_\_\_  
 Field comments: \_\_\_\_\_



Well Number: 1P-5

Project Name: BFC

Project Number: 01-0410-M	Date: 11/28/16	Weather:
Development / Purge Method:	Well Screen Interval: 18 to 24	Tidally influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Well Development / Purging (circle one)

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft  
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1205	1210	1215	1220	1230			
Water Level (ft)	13.20	—	—	—	13.28			
pH	6.20	6.26	6.29	6.30	6.31			
Conductivity (mS/cm)	0.561	0.562	0.560	0.534	0.510			
Temperature (F)	12.78	13.29	13.43	13.49	13.51			
ORP (mV)	145	93	87	82	80			
Turbidity (NTUs)	38.9	7.9	5.9	7.1	6.8			
Dissolved Oxygen (mg/L,%)	<del>0.11</del> 0.11	0.00	0.00	0.00	0.00			
Color	clear	clear	clear	clear	clear			
Purge Volume	0	0.3	0.6	0.9	1.2			

Well Sampling Information (complete if well is sampled)

Decon Method: \_\_\_\_\_

Water Level Start: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Filter Type: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Water Level Finish: \_\_\_\_\_

Field comments: \_\_\_\_\_





Well	IV	TIME	TAG#	Notes:
AS-1	9.60	1230	BLC-452	Developed Clear @ 3 Gal
AS-2	15.03	1232	BLC-451	Clear From Start, Developed 5 G Before Starting Purge Log

AS-2 Purge Log					Sample	Time
Temp	14.5 °C	14.5	14.5	14.5		
DO	0.95 mg/L	0.98	0.29	0.24		
Cond.	239 $\frac{mS}{cm}$	249	252.8	254.5	AS-2	1315
PH	6.68 PH	6.37	6.34	6.34		
ORP	59.7 mV	33.7	26.8	20.6		
Time	1250	1300	1310	1315		1320
	5 gal	5.5	6.0	6.5		7.0

AS-1 Purge Log					Sample	Time
Temp	13.1	* NO FURTHER MEASUREMENTS *				
DO	0.40	RECHARGED			AS-1	1415
Cond	589	SAMPLED				
PH	6.49					
ORP	71.1					
Time	1400	1410	1415	1420		1430
	3 gal					

\* Pumped Dry @ 1409, 3.5 Gal, 16.1'

1419, Level @ 15.75'

AS-1  
 $\phi = 1632 \text{ gal/ft} \times 6 \text{ gal} = 1 \text{ gallon casing volume}$