APPENDIX B

Boring Logs from PRDI

Coarse-Grained Soils - More than 50%[1] Retained on No. 200 Sieve	Gravels - More than 50%[1] of Coarse Fraction Retained on No. 4 Sieve	≤5% Fines	GW	Well-graded GRAVEL Well-graded GRAVEL WITH SAND
			GP	Poorly-graded GRAVEL Poorly-graded GRAVEL WITH SAND
		≥15% Fines	GM	SILTY GRAVEL SILTY GRAVEL WITH SAND
			GC	CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
	Sands - 50%[1] or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines	SW	Well-graded SAND Well-graded SAND WITH GRAVEL
			SP	Poorly-graded SAND Poorly-graded SAND WITH GRAVEL
		≥15% Fines	SM	SILTY SAND SILTY SAND WITH GRAVEL
			SC	CLAYEY SAND CLAYEY SAND WITH GRAVEL
Fine-Grained Soils - 50%[1] or More Passes No. 200 Sieve	Silts and Clays Liquid Limit Less than 50%		ML	SILT SANDY or GRAVELLY SILT SILT WITH SAND SILT WITH GRAVEL
			CL	LEAN CLAY SANDY or GRAVELLY LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL
			OL	ORGANIC SILT SANDY or GRAVELLY ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL
	Silts and Clays Liquid Limit 50% or More		MH	ELASTIC SILT SANDY or GRAVELLY ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL
			CH	FAT CLAY SANDY or GRAVELLY FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL
			OH	ORGANIC CLAY SANDY or GRAVELLY ORGANIC CLAY ORGANIC CLAY WITH SAND ORGANIC CLAY WITH GRAVEL
Highly Organic Soils			PT	PEAT and other mostly organic soils

"WITH SILT" or "WITH CLAY" means 5 to 15% silt and clay, denoted by a "-" in the group name; e.g., SP-SM • "SILTY" or "CLAYEY" means >15% silt and clay • "WITH SAND" or "WITH GRAVEL" means 15 to 30% sand and gravel. • "SANDY" or "GRAVELLY" means >30% sand and gravel. • "Well-graded" means approximately equal amounts of fine to coarse grain sizes • "Poorly graded" means unequal amounts of grain sizes • Group names separated by "/" means soil contains layers of the two soil types; e.g., SM/ML.

Soils were described and identified in the field in general accordance with the methods described in ASTM D2488. Where indicated in the log, soils were classified using ASTM D2487 or other laboratory tests as appropriate. Refer to the report accompanying these exploration logs for details.

1. Estimated or measured percentage by dry weight
2. (SPT) Standard Penetration Test (ASTM D1586)
3. Determined by SPT, DCPT (ASTM STP399) or other field methods. See report text for details.

GEOTECHNICAL LAB TESTS

MC	=	Natural Moisture Content
PS	=	Particle Size Distribution
FC	=	Fines Content (% < 0.075 mm)
GH	=	Hydrometer Test
AL	=	Atterberg Limits
C	=	Consolidation Test
Str	=	Strength Test
OC	=	Organic Content (% Loss by Ignition)
Comp	=	Proctor Test
K	=	Hydraulic Conductivity Test
SG	=	Specific Gravity Test

CHEMICAL LAB TESTS

Organic Chemicals

BTEX	=	Benzene, Toluene, Ethylbenzene, Xylenes
TPH-Dx	=	Diesel and Oil-Range Petroleum Hydrocarbons
TPH-G	=	Gasoline-Range Petroleum Hydrocarbons
VOCs	=	Volatile Organic Compounds
SVOCs	=	Semi-Volatile Organic Compounds
PAHs	=	Polycyclic Aromatic Hydrocarbon Compounds
PCBs	=	Polychlorinated Biphenyls

Metals

RCRA8	=	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, (d = dissolved, t = total)
MTCA5	=	As, Cd, Cr, Hg, Pb (d = dissolved, t = total)
PP-13	=	Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn (d=dissolved, t=total)

FIELD TESTS

PID	=	Photoionization Detector
Sheen	=	Oil Sheen Test
SPT[2]	=	Standard Penetration Test
NSPT	=	Non-Standard Penetration Test
DCPT	=	Dynamic Cone Penetration Test

COMPONENT DEFINITIONS

Descriptive Term		*Size Range and Sieve Number*
Boulders	=	Larger than 12 inches
Cobbles	=	3 inches to 12 inches
Coarse Gravel	=	3 inches to 3/4 inches
Fine Gravel	=	3/4 inches to No. 4 (4.75 mm)
Coarse Sand	=	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	=	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	=	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	=	Smaller than No. 200 (0.075 mm)

ESTIMATED[1] PERCENTAGE

% by Weight		*Modifier*	*% by Weight*		*Modifier*
<1	=	Subtrace	15 to 25	=	Little
1 to <5	=	Trace	30 to 45	=	Some
5 to 10	=	Few	>50	=	Mostly

MOISTURE CONTENT

Dry	=	Absence of moisture, dusty, dry to the touch
Slightly Moist	=	Perceptible moisture
Moist	=	Damp but no visible water
Very Moist	=	Water visible but not free draining
Wet	=	Visible free water, usually from below water table

RELATIVE DENSITY

Non-Cohesive or Coarse-Grained Soils

Density[3]		*SPT*[2] *Blows/Foot*	*Penetration with 1/2" Diameter Rod*
Very Loose	=	0 to 4	≥ 2'
Loose	=	5 to 10	1' to 2'
Medium Dense	=	11 to 30	3" to 1'
Dense	=	31 to 50	1" to 3"
Very Dense	=	> 50	< 1"

CONSISTENCY

Cohesive or Fine-Grained Soils

Consistency[3]		*SPT*[2] *Blows/Foot*	*Manual Test*
Very Soft	=	0 to 1	Penetrated >1" easily by thumb. Extrudes between thumb & fingers.
Soft	=	2 to 4	Penetrated 1/4" to 1" easily by thumb. Easily molded.
Medium Stiff	=	5 to 8	Penetrated >1/4" with effort by thumb. Molded with strong pressure.
Stiff	=	9 to 15	Indented ~1/4" with effort by thumb.
Very Stiff	=	16 to 30	Indented easily by thumbnail.
Hard	=	> 30	Indented with difficulty by thumbnail.

GEOLOGIC CONTACTS

Observed and Distinct ——— Observed and Gradual ——— Inferred - - - -

Aspect CONSULTING

Exploration Log Key

Al Path: Q:_ACAD Standards\FIELD REFERENCE\MASTERS\Exploration Log Key-2018.ai // user: jinman // last saved: 12/31/2018

Aspect CONSULTING	Harris Ave Shipyard Cleanup PRDI - 210195		Geotechnical Exploration Log	
	Project Address & Site Specific Location 201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2		*Coordinates (Lat,Lon WGS84)* 48.7209, -122.5151 (est)	*Exploration Number* **AB-01**
Contractor Cascade Drilling	*Equipment* TSI 150CC Sonic Rig	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 15.5' (est)	
Operator Charles Winland	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/26/2022	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 11' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							SILTY SAND WITH GRAVEL (SM); loose, moist, brown to gray; fine to coarse sand; fine to coarse, subrounded to subangular gravel.	0
1	14	Backfilled with hydrated bentonite chips.							1
2	13							Becomes brown yellow with subtrace shell and wood fragments.	2
3	12		S1	▲	7 7 8	AB-01-2.5-4.0		SILTY SAND (SM); medium dense, moist, gray; mottled brown and orange; fine sand; little fine, subrounded gravel.	3
4	11								4
5	10		S2	▲	0 0 1	AB-01-5.0-6.5			5
6	9							SAND WITH GRAVEL (SW); very loose, moist, brown; fine to coarse sand; fine to coarse, subrounded gravel.	6
7	8	Blow counts likely overstated due to presence of gravel.							7
8	7		S3	▲	21 21 19	AB-01-7.5-8.0		SAND WITH GRAVEL (SP); dense, moist, gray; fine sand; fine, subrounded gravel.	8
9	6								9
10	5								10
11	4	▽ 4/26/2022						Mottled brown and orange.	11
12	3							SILTY SAND WITH GRAVEL (SM); very loose, wet, brown; fine to coarse sand; fine, subrounded gravel.	12
13	2		S4	▲	1 1 2	AB-01-12.5-13.0			13
14	1							Bottom of exploration at 14 ft. bgs.	14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-01
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINTWPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Harris Ave Shipyard Cleanup PRDI - 210195

Geotechnical Exploration Log

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2	48.7209, -122.5151 (est)	**AB-02**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)
Cascade Drilling	TSI 150CC Sonic Rig	Autohammer; 140 lb hammer; 30" drop	15.4' (est)

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Charles Winland	Sonic	4/26/2022	NA	10' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							SAND WITH GRAVEL (SW); loose, moist, brown; fine to coarse sand; fine to coarse, subangular to subrounded gravel.	0
1	14	Backfilled with hydrated bentonite chips.						GRAVEL WITH SAND (GW); loose, moist, gray; fine to coarse sand; fine to coarse, subangular to subrounded gravel.	1
2	13							SAND WITH GRAVEL (SW); loose, moist, brown; fine to coarse sand; fine to coarse, subangular to subrounded gravel.	2
3	12		S-1	▲	6 5 4	AB-02-2.5-4.0			3
4	11					AB-02-4.0-5.0		SILTY SAND WITH GRAVEL (SM); loose, moist, brown; fine to coarse sand; fine to coarse, subangular to subrounded gravel; trace shell fragments.	4
5	10		S-2		2 2 2			GRAVEL WITH SAND (GW); very loose, moist, gray; fine to coarse sand; fine to coarse, subrounded gravel.	5
6	9			▲		AB-02-6.0-7.5		CLAYEY SAND WITH GRAVEL (SC); very loose, moist, gray; fine to coarse sand; fine, subrounded gravel; trace shell fragments.	6
7	8								7
8	7		S-3	▲	3 5 9			SILTY GRAVEL (GM); medium dense, wet, brown; fine to coarse sand, coarse, subrounded gravel.	8
9	6								9
10	5	▽ 4/26/2022						Becomes wet and mottled brown and orange.	10
11	4					AB-02-11.0-12.0		SILTY SAND WITH GRAVEL (SM); medium dense, wet, gray; fine to coarse sand; fine to coarse, subrounded gravel; trace wood fragments.	11
12	3								12
13	2							Bottom of exploration at 12.5 ft. bgs.	13
14	1								14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◩ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢——⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-02

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINTWPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Aspect CONSULTING	Harris Ave Shipyard Cleanup PRDI - 210195		Geotechnical Exploration Log	
	Project Address & Site Specific Location 201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2		*Coordinates (Lat,Lon WGS84)* 48.7208, -122.5153 (est)	*Exploration Number* **AB-03**
Contractor Cascade Drilling	*Equipment* TSI 150CC Sonic Rig	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 15.1' (est)	
Operator Charles Winland	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/26/2022	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							SAND WITH GRAVEL (SW); loose, moist, brown; fine to coarse sand; fine to coarse, subangular to subrounded gravel.	0
1	14	Backfilled with hydrate bentonite chips.							1
2	13							SAND WITH GRAVEL (SP); loose, moist, gray to brown; fine sand; fine, subangular to subrounded gravel; trace shell fragments; creosote odor.	2
3	12		S1	▲	5 5 5	AB-03-2.5-4.0		SILTY SAND WITH GRAVEL (SM); very loose to loose, moist, gray; low plasticity; fine sand; fine to coarse, subangular to subrounded gravel.	3
4	11								4
5	10				0 2 2	AB-03-5.0-6.5 AB-D-2		Mottled brown and orange.	5
6	9		S2	▲					6
7	8	Blow counts likely overstated due to presence of gravel.			8 16 18	AB-03-7.5-8.5		Trace wood and rootlets; black staining.	7
8	7		S3	▲					8
9	6							Mottled brown and orange.	9
10	5							Few rootlets.	10
11	4					AB-03-11.0-12.5			11
12	3								12
13	2		S4	▲	0 0 2				13
14	1							Bottom of exploration at 14 ft. bgs.	14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-03
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINTWPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Aspect CONSULTING	Harris Ave Shipyard Cleanup PRDI - 210195		Geotechnical Exploration Log	
	Project Address & Site Specific Location 201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2		*Coordinates (Lat,Lon WGS84)* 48.7209, -122.5154 (est)	*Exploration Number* **AB-04**
Contractor Cascade Drilling	*Equipment* TSI 150CC Sonic Rig	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 15' (est)	
Operator Charles Winland	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/25/2022	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 9' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							SILTY GRAVEL WITH SAND (GM); medium dense, moist, gray; fine to coarse sand; fine to coarse, subangular gravel.	0
1	14	Backfilled with hydrated bentonite chips.						2-inches SAND (SP); very loose, moist, light brown; fine sand.	1
2	13	Blow counts likely overstated due to presence of gravel.	S1	▲	50/6"	AB-04-2.5-3.0		SILTY SAND WITH GRAVEL (SM); very dense, moist, black; fine to coarse sand; fine to coarse, subangular to subrounded gravel; with lumber debris; slight creosote odor.	2
3	12							GRAVEL WITH SAND (GP); medium dense, moist, gray; fine to coarse sand; fine to coarse, subangular gravel.	3
4	11								4
5	10		S2		14 15 20	AB-04-5.0-6.5		SAND WITH GRAVEL (SW); medium dense to dense, moist, gray to brown; fine to coarse sand; fine to coarse, subrounded gravel.	5
6	9			▲					6
7	8								7
8	7		S3	▲	3 8 8	AB-04-7.5-9.0			8
9	6	▽ 4/25/2022						Becomes wet.	9
10	5							CLAYEY GRAVEL WITH SAND (GC); medium dense, wet, light brown mottled orange; fine to coarse sand; fine to coarse, subrounded gravel.	10
11	4								11
12	3								12
13	2		S4	▲	2 3 2	AB-04-12.5-14.0		CLAY WITH GRAVEL (CL); medium stiff, wet, gray; medium plasticity; fine sand; fine, subrounded gravel.	13
14	1							2-inches CLAYEY SAND WITH GRAVEL (GC).	14
								Bottom of exploration at 14 ft. bgs.	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◩ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-04
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINTWPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Harris Ave Shipyard Cleanup PRDI - 210195

Geotechnical Exploration Log

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2	48.7208, -122.5155 (est)	**AB-05**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)
Cascade Drilling	TSI 150CC Sonic Rig	Autohammer; 140 lb hammer; 30" drop	15.1' (est)

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Charles Winland	Sonic	4/25/2022	NA	12' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							GRAVEL WITH SILT (GP-GM); medium dense, moist, grayfew fine sand; fine to coarse, subangular gravel.	0
1	14	Backfilled with hydrated bentonite chips.						SAND WITH GRAVEL (SW); medium dense, moist, brown; fine to coarse sand; fine to coarse, sub angular gravel.	1
2	13							SILTY SAND (SM); medium dense, moist, dark brown; fine to coarse sand; trace fine to coarse, sub angular gravel.	2
3	12		S1	▲	10 9 8	AB-05-2.5-4.0		SILTY GRAVEL WITH SAND (GM); medium dense, moist, brown; fine to coarse sand; fine to coarse, subrounded to subangular gravel.	3
4	11							SAND WITH SILT AND GRAVEL (SW-SM); medium dense, moist, brown; fine to coarse sand; fine to coarse, subangular gravel; trace shell fragments.	4
5	10		S2		13 10 9	AB-05-5.0-6.5 AB-D-1			5
6	9			▲					6
7	8					AB-05-6.5-7.5			7
8	7		S3	▲	1 1 1			Becomes very loose.	8
9	6								9
10	5								10
11	4							Trace wood fragments.	11
12	3	▽ 4/25/2022						CLAYEY GRAVEL WITH SAND (GC); very loose to loose, wet, gray; low plasticity; fine to coarse sand; fine to coarse, subrounded gravel.	12
13	2		S4	▲	5 4 2	AB-05-12.5-13.0		CLAY WITH GRAVEL (CL); medium stiff, wet, gray; low plasticity; fine to coarse sand; fine to coarse, subrounded gravel.	13
14	1							Bottom of exploration at 14 ft. bgs.	14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-05
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINT\WPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Harris Ave Shipyard Cleanup PRDI - 210195

Geotechnical Exploration Log

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2	48.7210, -122.5153 (est)	**AB-06**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)
Cascade Drilling	TSI 150CC Sonic Rig	Autohammer; 140 lb hammer; 30" drop	15.1' (est)

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Charles Winland	Sonic	4/25/2022	NA	11' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							SILTY GRAVEL WITH SAND (GM); loose to medium dense, moist, brown to gray; fine to coarse sand; fine to coarse, subrounded gravel.	0
1	14	Backfilled with hydrated bentonite chips.							1
2	13							2-inches SAND (SP); very loose, moistm light brown; find sand.	2
3	12		S1	▲	11 6 9	AB-06-2.5-4.0			3
4	11					AB-06-4.0-5.0			4
5	10		S2		3 3 4			Trace lumber debris with slight creosote odor; few shell fragments.	5
6	9			▲				Mottled brown and orange.	6
7	8								7
8	7		S3	▲	3 2 5	AB-06-7.5-9.0			8
9	6								9
10	5							CLAYEY SAND WITH GRAVEL (SC); loose, moist to wet, gray; fine to coarse sand; fine to coarse, subrounded gravel.	10
11	4	▽ 4/25/2022							11
12	3	No recovery.				AB-06-11.5-12.5			12
13	2		S4	▲	0 0 0				13
14	1							Bottom of exploration at 14 ft. bgs.	14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◩ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-06

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINTWPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Harris Ave Shipyard Cleanup PRDI - 210195

Geotechnical Exploration Log

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2	48.7209, -122.5154 (est)	**AB-07**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)
Cascade Drilling	TSI 150CC Sonic Rig	Autohammer; 140 lb hammer; 30" drop	14.8' (est)

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Charles Winland	Sonic	4/25/2022	NA	10' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	14							SILTY GRAVEL WITH SAND (GM); loose to medium dense, moist, brown; fine to coarse sand; fine to coarse, subangular to subrounded gravel.	0
1	13	Backfilled with hydrated bentonite chips.						2-inches SAND (SP); very loose, moist, light brown; fine sand.	1
2	12		S1	▲	5 5 5	AB-07-2.5-4.0		SILTY SAND WITH GRAVEL (SM); medium dense, moist, brown; fine to coarse sand; fine to coarse, subrounded gravel.	2
3	11							SAND WITH GRAVEL (SW); dense, moist, light brown; fine to coarse sand; fine to coarse, subrounded gravel; few shell fragments.	3
4	10		S2	▲	13 15 16	AB-07-5.0-6.5			4
5	9							SILTY SAND WITH GRAVEL (SM); loose, moist, brown to gray; fine to coarse sand; fine to coarse, subrounded gravel.	5
6	8		S3	▲	11 5 3	AB-07-7.5-8.0			6
7	7								7
8	6							Becomes wet.	8
9	5	▽ 4/25/2022							9
10	4							CLAYEY GRAVEL WITH SAND (GC); loose, very moist, gray; fine to coarse sand; fine to coarse, subrounded gravel.	10
11	3		S4	▲	5 3 2	AB-07-12.5-14.0		CLAYEY SAND WITH GRAVEL (SC); loose, moist, gray; fine sand; fine, subrounded gravel.	11
12	2								12
13	1							Bottom of exploration at 14 ft. bgs.	13
14	0								14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-07

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINTWPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Aspect CONSULTING	Harris Ave Shipyard Cleanup PRDI - 210195		Geotechnical Exploration Log	
	Project Address & Site Specific Location 201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2		*Coordinates (Lat,Lon WGS84)* 48.7209, -122.5155 (est)	*Exploration Number* **AB-08**
Contractor Cascade Drilling	*Equipment* TSI 150CC Sonic Rig	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 14.8' (est)	
Operator Charles Winland	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/25/2022	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 9.5' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	14							GRAVEL WITH SILT AND SAND (GW-GM); medium dense, moist, gray to brown; fine to coarse sand; fine to coarse, subrounded to angular gravel. Becomes well graded and brown.	0
1	13	Backfilled with hydrated bentonite chips.							1
2	12		S1	▲	14 21 22	AB-08-2.5-4.0		SILTY SAND WITH GRAVEL (SM); dense, moist, brown; fine to coarse sand; coarse, subangular gravel.	2
3	11							SILTY GRAVEL WITH SAND (GM); very loose to medium dense, moist, gray to brown; fine to coarse sand; fine to coarse, subrounded gravel.	3
4	10								4
5	9		S2	▲	20 10 13	AB-08-5.0-6.5		3-inches SILT WITH SAND (ML).	5
6	8								6
7	7		S3	▲	9 9 8	AB-08-7.5-9.0			7
8	6								8
9	5	▽ 4/25/2022						Becomes wet.	9
10	4								10
11	3					AB-08-11.5-12.5			11
12	2							SILTY SAND WITH GRAVEL (SM); very loose, wet, gray brown with orange mottle; fine sand; fine, subrounded gravel.	12
13	1		S4	▲	1 0 1				13
14	0							Bottom of exploration at 14 ft. bgs.	14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢—⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-08
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINT\WPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Aspect CONSULTING	Harris Ave Shipyard Cleanup PRDI - 210195		Geotechnical Exploration Log	
	Project Address & Site Specific Location 201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2		*Coordinates (Lat,Lon WGS84)* 48.7210, -122.5151 (est)	*Exploration Number* **AB-09**
Contractor Cascade Drilling	*Equipment* TSI 150CC Sonic Rig	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 15.1' (est)	
Operator Charles Winland	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/26/2022	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 10' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0	15							GRAVEL WITH SILT (GP-GM); medium dense, moist, gray; few fine sand; fine to coarse, subangular gravel.	0
1	14	Backfilled with hydrated bentonite chips.						GRAVEL WITH SAND (GW); loose to medium dense, moist, brown; fine to coarse sand; fine to coarse, subrounded to subangular gravel. 4-inches black SILTY SAND (SM).	1
2	13							Wood, nails, rags, and miscellaneous debris.	2
3	12		S1	▲	10 8 6	AB-09-2.5-4.0			3
4	11							4-inches of black SILTY SAND (SM); lumber debris and nails.	4
5	10							SILTY SAND WITH GRAVEL (SM); medium dense, moist to very moist, brown to gray; fine to coarse sand; fine to coarse, subrounded gravel.	5
6	9		S2	▲	7 7 5	AB-09-5.0-6.5			6
7	8							Mottled brown and orange.	7
8	7		S3	▲	6 8 11	AB-09-7.5-9.0		Becomes gray with trace wood fragments.	8
9	6								9
10	5	▽ 4/26/2022						Becomes wet.	10
11	4					AB-09-11-12.5			11
12	3								12
13	2							Bottom of exploration at 12.5 ft. bgs.	13
14	1								14

Legend

Sample Type
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢——⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-09
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINT\WPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023

Harris Ave Shipyard Cleanup PRDI - 210195

Geotechnical Exploration Log

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
201 Harris Ave, Bellingham, WA 98225, Cleanup Area 2	48.7210, -122.5155 (est)	**AB-10**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	
Cascade Drilling	TSI 150CC Sonic Rig	Autohammer; 140 lb hammer; 30" drop	15' (est)	
Operator	**Exploration Method(s)**	**Work Start/Completion Dates**	**Top of Casing Elev. (NAVD88)**	**Depth to Water (Below GS)**
Charles Winland	Sonic	4/25/2022	NA	9' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Blows/foot ▲ Water Content (%)● 0 10 20 30 40 50	Blows/6"	Tests	Material Type	Description	Depth (ft)
0								GRAVEL WITH SILT (GP-GM); medium dense, moist, gray; few fine sand; fine to coarse, subangular gravel.	0
1	14							SILTY SAND WITH GRAVEL (SM); medium dense, moist, brown; fine to coarse sand; fine to coarse, subrounded gravel.	1
2	13	Backfilled with hydrated bentonite chips.							2
3	12		S1	▲	10 7 6	AB-10-2.5-4.0		SILTY GRAVEL WITH SAND (GM); medium dense, moist, gray; fine sand; fine to coarse, sub angular gravel.	3
								SILTY SAND WITH GRAVEL (SM); medium dense, moist, gray; fine sand; fine, subrounded gravel.	
4	11								4
						AB-10-4.5-5.0		SILT WITH SAND (ML); soft, moist to very moist, light brown with orange mottle; non plastic to low pasticity; fine sand; trace fine, subangular to subrounded gravel.	
5	10		S2		1 1 2			Traces of wood, gravel, and mottling noted throughout ML layer.	5
6	9			▲					6
7	8					AB-10-7.0-7.5		SILT (ML); soft, very moist, light brown; trace fine sand; trace fine, subrounded gravel; trace lumber derbis.	7
8	7		S3	▲	1 1 2	AB-10-7.5-9.0			8
9	6	▽ 4/25/2022						GRAVEL WITH SAND (GW); very loose, wet, brown to gray; fine to coarse sand; fine to coarse, subrounded gravel.	9
10	5								10
11	4								11
12	3								12
13	2								13
14	1							Bottom of exploration at 14 ft. bgs.	14

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID
- ◪ Split Barrel 2" X 1.375" (SPT)

Plastic Limit ⊢⊣ Liquid Limit

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: JRG
Approved by: MVDA/SG

Exploration Log AB-10
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\BISERVER1.ASPECT.LOCAL\PROJECTS\GINT\WPROJECTS\210195 - PORT OF BHAM - HARRIS AVE SHIPYARD.GPJ February 6, 2023