APPENDIX K GROUNDWATER ELEVATION FIGURES 2009 THROUGH 2014

Project No. 0091535.00
Date: 10/28/09
Drawn By: R.Olson
CAD File: G:\0091535\0091535-05.dwg

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- Property Line
- 10.31 — Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 23–26 March 2009.
- * — Datum Not Used for Contouring
- NS — Not Sampled
- 10.5 — Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction

San. Sewer Easement
Property Boundary Line
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load–out Silos
Paved
Parking
Deed line
Exit
Maintenance Building
Existing Office
Approximate Location of Existing DSI Storm Outfall
Property Boundary Line
Exist Conc [55' x 500'
EXISTING DITCH
Existing Storm Outfall
Existing Transfer Tower
Line of Mean High Water (El 7.82 NAVD88)
Bay
10,000 Ton –
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU 48" Storm Sewer Outfall Discharge Location
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance

MW–16 11.71
MW–5S 11.55
MW–4S 11.72
MW–7S 11.60
MW–6S 11.52
MW–1S 11.20
MW–1D
MW–17 11.32
MW–10 10.77
MW–2D
MW–12 11.08
MW–11 10.85
MW–2S 10.60
MW–13 10.52
MW–22 10.68
MW–21 10.18
MW–23 10.31
MW–14 10.29
MW–19 9.80
MW–18 10.24*
MW–20 9.25
MW–24 8.91
MW–25 NS
MW–3D
MW–26 8.61
MW–3S 8.91
MW–27 5.04

11.5
11.0
10.5
10.0
9.5
9.0
8.0
7.0
6.0
5.0

N
0 50 100
FEET

Figure 2-8
Shallow Groundwater Contour Map
23 March 2009
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 10/09

Project No. 0091535.04
Date: 10/28/09
Drawn By: R.Olson
CAD File: G:\0091535\04\009153504-01.dwg

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- Property Line
- 9.3 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 25 June 2009.
- * Datum Not Used for Contouring
- NS Not Sampled
- 9.5 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction

San. Sewer Easement
Property Boundary Line
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Exit
Deed line
Paved
Parking
Maintenance Building
Existing Office
Approximate Location of Existing DSI Storm Outfall
Property Boundary Line
Exist Conc [55' x 500'
EXISTING DITCH
Existing Storm Outfall
Existing Transfer Tower
Line of Mean High Water (El 7.82 NAVD88)
Bay
10,000 Ton -
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
Former City of Seattle SPU 48" Storm Sewer Outfall Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
City of Seattle Storm Outfall Easement

MW-16 9.72
MW-4S 9.72
MW-5S 9.49
MW-7S 9.69
MW-6S 9.60
MW-1D
MW-1S 9.17
MW-17 9.71
MW-10 9.02
MW-11 9.15
MW-2D
MW-12 9.53
MW-2S 9.03
MW-13 9.28
MW-22 9.67
MW-23 9.62
MW-21 9.44
MW-14 9.30
MW-19 9.09
MW-18 8.50
MW-20 8.71
MW-24 8.37
MW-25 NS
MW-3D
MW-3S 8.40
MW-26 8.13
MW-27 5.32

9.50
9.25
9.00
8.75
8.50
8.75
8.50
8.00
7.00
6.00

N

0 50 100
FEET

Figure 2-9
Shallow Groundwater Contour Map
25 June 2009
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 10/09

Project No. 0091535.08
Date: 12/08/09
Drawn By: R.Olson
CAD File: G:\0091535\08\0091535308-01.dwg

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- Property Line
- 8.11 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 7 October 2009.
- * Datum Not Used for Contouring
- NS Not Sampled
- 8.0 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction

San. Sewer Easement
Property Boundary Line
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Exit
Deed line
Paved
Parking
Maintenance Building
Existing Office
Approximate Location of Existing DSI Storm Outfall
Property Boundary Line
Exist Conc [55' x 500'
EXISTING DITCH
Existing Storm Outfall
Existing Transfer Tower
Line of Mean High Water (El 7.82 NAVD88)
10,000 Ton -
Bay
WEST MARGINAL WAY
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
Former City of Seattle SPU 48" Storm Sewer Outfall Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
City of Seattle Storm Outfall Easement

MW-16 8.98
MW-4S 8.95
MW-5S 8.71
MW-7S 8.86
MW-6S 8.77
MW-17 8.82
MW-1S 8.32
MW-1D 6.0*
MW-10 8.18
MW-11 8.29
MW-2D 5.72*
MW-2S 6.01
MW-12 8.56
MW-13 8.31
MW-14 8.31
MW-22 8.75
MW-23 8.59
MW-21 8.47
MW-19 8.11
MW-18 7.49
MW-20 7.62
MW-24 7.28
MW-25 NS
MW-3S 7.42
MW-3D 5.3
MW-26 7.17
MW-27 4.46

8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50

N

0 50 100
FEET

Figure 1
Shallow Groundwater Contour Map
7 October 2009
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 12/09

Project No. 0091535.08
Date: 03/12/10
Drawn By: R.Olson
CAD File: G:\0091535\08\0091535-08-02.dwg

LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- Property Line
- Sewer Line
- 8.11 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 28 January 2010.
- * Datum Not Used for Contouring
- NS Not Sampled
- 8.0 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction

San. Sewer Easement
Property Boundary Line
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Exit
Deed line
Paved
Parking
Maintenance Building
Load-out Silos
Existing Office
Approximate Location of Existing DSI Storm Outfall
Property Boundary Line
Exist Conc [55' x 500'
EXISTING DITCH
DOCK
7.75 (09:52)
4.92 (11:57)
Existing Storm Outfall
Existing Transfer Tower
MW-16 12.16
MW-4S 12.17
MW-5S 11.85
MW-7S 12.03
MW-6S 11.90
MW-1S 11.45
MW-1D 6.68*
MW-10 11.19
MW-17 11.84
MW-11 11.87
MW-2D 8.75*
MW-12 11.57
MW-2S 11.01
MW-22 11.40
MW-13 11.33
Line of Mean High Water (El 7.82 NAVD88)
Bay
10,000 Ton -
MW-23 11.07
MW-21 10.97
MW-14 10.98
MW-19 10.58
Property Boundary Line
Former City of Seattle SPU 48" Storm Sewer Outfall Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing Aggregates
MW-20 10.09
MW-18 9.80
MW-24 9.73
MW-3D 7.02*
MW-26 9.48
MW-25 NS
MW-3S 9.78
MW-27 6.43
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
12.00
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
N
0 50 100
FEET

Figure 1
Shallow Groundwater Contour Map
28 January 2010
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/10

Project No. 0112489.02
Date: 06/02/10
Drawn By: R.Olson
CAD File: G:\0112489\02\011248902-01.dwg

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- Property Line
- Sewer Line
- 9.81 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 26 April 2010.
- * Datum Not Used for Contouring
- NS Not Sampled
- 9.0 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction

San. Sewer Easement
Property Boundary Line
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Exit
Deed line
Paved
Parking
Maintenance Building
Load-out Silos
Existing Office
Approximate Location of Existing DSI Storm Outfall
Property Boundary Line
Exist Conc [55' x 500'
DOCK
3.05 (07:21)
DRY (10:21)
Existing Storm Outfall
Existing Transfer Tower
EXISTING DITCH
EXISTING DITCH
Line of Mean High Water (El 7.82 NAVD88)
Bay
10,000 Ton -
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
Former City of Seattle SPU 48" Storm Sewer Outfall Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
City of Seattle Storm Outfall Easement

MW-16 11.61
MW-4S 11.64
MW-5S 11.38
MW-7S 11.52
MW-6S 11.39
MW-17 11.34
MW-1D 4.73*
MW-1S 10.85
MW-10 10.69
MW-11 10.75
MW-2D 3.47*
MW-2S 10.48
MW-12 11.01
MW-22 10.83
MW-13 10.50
MW-14 10.33
MW-23 10.38
MW-21 10.27
MW-19 9.81
MW-24 8.71
MW-20 9.02
MW-18 8.83
MW-3D 3.36*
MW-26 8.40
MW-3S 8.73
MW-25
MW-27 4.77

11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00

N
0 50 100
FEET

Figure 1
Shallow Groundwater Contour Map
26 April 2010
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 06/10

Project No. 0112489.02
Date: 08/27/10
Drawn By: R.Olson
CAD File: G:\0112489\02\01248902-02.dwg

LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- Property Line
- Sewer Line
- 9.03 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 5 August 2010.
- * Datum Not Used for Contouring
- NS Not Sampled
- 9.0 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction

San. Sewer Easement
Property Boundary Line
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Exit
Deed line
Paved
Parking
Maintenance Building
Existing Office
Approximate Location of Existing DSI Storm Outfall
Property Boundary Line
Exist Conc [55' x 500'
EXISTING DITCH
DOCK
DRY (08:37)
3.33 (11:20)
Existing Storm Outfall
Existing Transfer Tower
Line of Mean High Water (El 7.82 NAVD88)
Bay
10,000 Ton
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU 48" Storm Sewer Outfall Discharge Location
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance

MW-16 9.33
MW-4S 9.32
MW-5S 12.11*
MW-7S 9.29
MW-6S 9.21
MW-17 9.31
MW-1S 8.80
MW-1D 1.30
MW-10 8.70
MW-11 8.85
MW-2D 1.60
MW-2S 8.70
MW-12 9.13
MW-22 9.03
MW-21 9.03
MW-23 9.20
MW-13 8.91
MW-14 8.93
MW-19 8.67
MW-20 8.05
MW-18 7.89
MW-24 7.74
MW-25 NS
MW-3D 8.57
MW-3S 7.82
MW-26 7.47
MW-27 4.25

9.25 9.00 8.75 8.50 8.25 8.00 7.75 7.50 7.00 6.50 6.00 5.50 5.00 4.50

N
0 50 100
FEET

Figure 3
Shallow Groundwater Contour Map
5 August 2010
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/10

Project No. 0112489.02
Date: 12/10/10
Drawn By: R.Olson
CAD File: G:\0112489\02\011248902-03.dwg

San. Sewer Easement
Property Boundary Line
ELECTRIC SHOP
WOOD SHOP
SHED
SHED
STORAGE
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
SHED
SHED
PAINT MIXING SHED
Former DSI Dry Dock
Former DSI Floating Dock
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
SAND BLAST SHED
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
EXISTING DITCH
DOCK
9.75 (07:59)
6.31 (11:30)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
Former City of Seattle SPU Stormwater Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement

MW-16 12.98
MW-4S 12.93
MW-5S 12.44
MW-1D 7.09
MW-1S 11.87
MW-7S 12.19
MW-6S 11.75
MW-10 13.00*
MW-17 11.19
MW-11 NM
MW-2D 7.12
MW-12 10.59
MW-2S 11.02
MW-22 9.83
MW-13 10.12
MW-21 9.15
MW-14 9.34
MW-23 9.20
MW-19 8.76
MW-20 8.16
MW-18 10.60*
MW-24 7.83
MW-3D 6.28
MW-26 7.67
MW-27 5.66
MW-25 NM
MW-3S 7.85

12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0

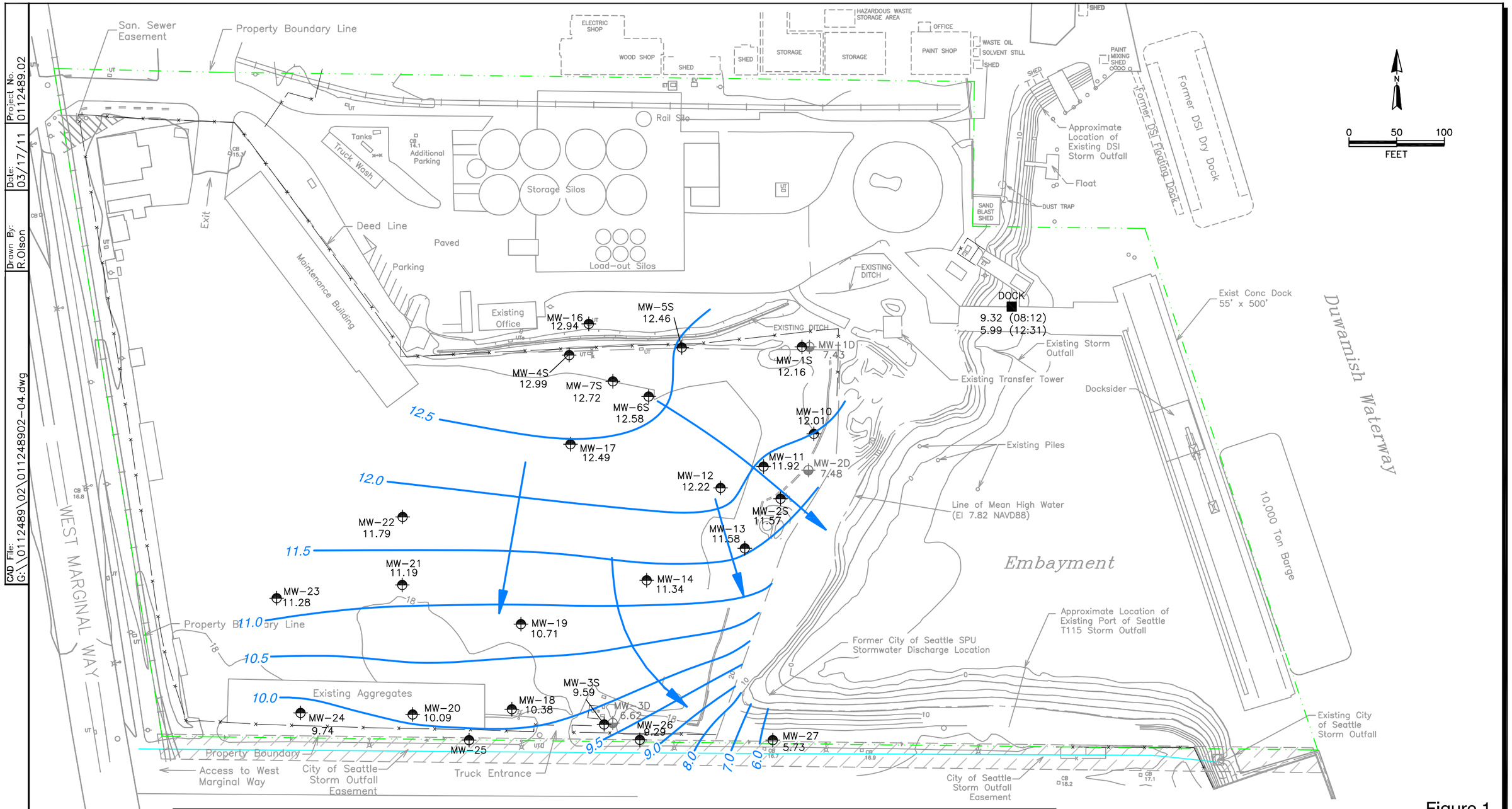
0 50 100 FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 11.75 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 25 October 2010.
- * Datum Not Used for Contouring
- NM Not Measured
- 11.5 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction
- Property Line
- Sewer Line

Figure 1
Shallow Groundwater Contour Map
25 October 2010
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 12/10

Project No. 0112489.02
Date: 03/17/11
Drawn By: R.Olson
CAD File: G:\0112489\02\0112489020104.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 11.58 Ground Water Elevation, Feet Above Mean Sea Level. Data Collected 26 January 2011.
- * Datum Not Used for Contouring
- NM Not Measured
- 11.5 Equal Lines of Ground Water Elevations; Dashed Where Inferred
- Approximate Ground Water Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Contour Map
26 January 2011
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/11

Project No. 0112489.02
Date: 08/12/11
Drawn By: R.Olson
CAD File: G:\0112489\02\011248902-05.dwg

San. Sewer Easement
Property Boundary Line
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
Former DSI Floating Dock
Former DSI Dry Dock
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
SAND BLAST SHED
Exit
Deed Line
Paved
Parking
Maintenance Building
Existing Office
EXISTING DITCH
DOCK
4.47 (07:40)
5.66 (12:45)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
Former City of Seattle SPU Stormwater Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement

MW-16 12.05
MW-5S 11.41
MW-1D 5.38
MW-1S 10.86
MW-4S 12.01
MW-7S 11.66
MW-6S 11.45
MW-10 10.64
MW-17 11.51
MW-11 10.78
MW-2D 5.44
MW-12 11.09
MW-2S 10.55
MW-22 11.09
MW-13 10.67
MW-14 10.59
MW-21 10.59
MW-23 10.74
MW-19 10.13
MW-24 9.20
MW-20 9.51
MW-18 9.26
MW-3S 9.11
MW-3D 5.81
MW-26 8.80
MW-27 5.45
MW-25 NM

12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5

0 50 100
FEET
N

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring)
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 11.58 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 April 2011
- NM Not Measured
- 11.5 Inferred Groundwater Isoelevation Contours
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Contour Map
25 April 2011
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/11

Project No. 0128296.02
Date: 08/04/11
Drawn By: R.Olson
CAD File: G:\\0128296\02\012829602-01.dwg

San. Sewer Easement
Property Boundary Line
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
Former DSI Floating Dock
Former DSI Dry Dock
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
SAND BLAST SHED
Exit
Deed Line
Paved
Parking
Maintenance Building
Existing Office
EXISTING DITCH
DOCK
DRY (<1.20) (08:14)
8.27 (16:38)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
WEST MARGINAL WAY
Property Boundary Line
Existing Aggregates
Former City of Seattle SPU Stormwater Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing City of Seattle Storm Outfall
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement

MW-16 9.65
MW-4S 9.64
MW-5S 9.40
MW-1S 9.06
MW-1D 3.71
MW-7S 9.59
MW-6S 9.51
MW-10 8.94
MW-17 9.62
MW-11 9.11
MW-2D 2.64
MW-12 9.42
MW-2S 8.94
MW-22 9.61
MW-13 9.18
MW-14 9.20
MW-23 9.51
MW-21 9.34
MW-19 8.95
MW-24 8.21
MW-20 8.53
MW-18 8.25
MW-3S 8.11
MW-3D 3.76
MW-26 .86
MW-27 5.32
MW-25 NM

9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5

N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring)
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- 9.51 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 14 July 2011
- NM Not Measured
- DRY Duwamish River Water Surface Elevation is Below the Land Surface Elevation at the Dock Measuring Point (i.e., 1.20 Feet Above Mean Sea Level)
- 9.5 Inferred Groundwater Isoelevation Contours
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Contour Map
14 July 2011
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/11

Project No. 0112489.02
Date: 11/2/11
Drawn By: R.Olson
CAD File: G:_0112489\02\011248902-06.dwg

San. Sewer Easement
Property Boundary Line
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
Former DSI Floating Dock
Former DSI Dry Dock
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
SAND BLAST SHED
Exit
Deed Line
Paved
Parking
Maintenance Building
Existing Office
EXISTING DITCH
DOCK
9.42 (07:24)
5.22 (10:50)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Existing Aggregates
Truck Entrance
Property Boundary Line

MW-16 9.27
MW-5S 8.99
MW-4S 9.25
MW-7S 9.14
MW-6S 9.00
MW-1D 6.39
MW-1S 8.68
MW-10 8.63
MW-17 9.06
MW-11 8.68
MW-2D 6.39
MW-12 8.87
MW-2S 8.57
MW-13 8.58
MW-22 8.96
MW-21 8.58
MW-23 8.72
MW-14 8.45
MW-19 8.20
MW-24 7.45
MW-20 7.82
MW-18 7.50
MW-3S 7.34
MW-3D 5.55
MW-26 7.09
MW-25 NM
MW-27 4.46

9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5

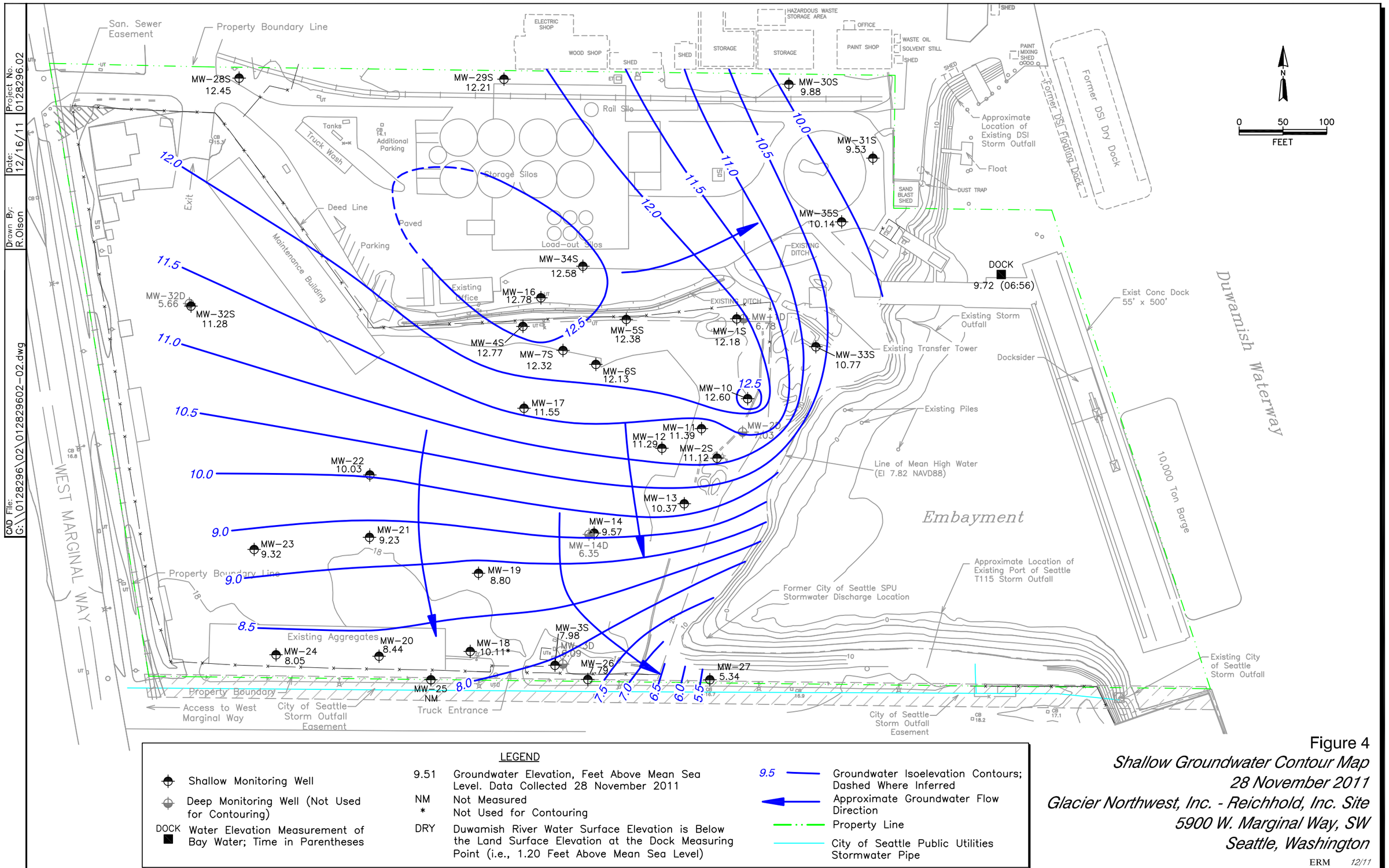
0 50 100 FEET
N

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring)
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- 9.00 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 28 October 2011
- NM Not Measured
- 9.0 Inferred Groundwater Isoelevation Contours
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Contour Map
28 October 2011
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 11/11

Project No. 0128296.02
Date: 12/16/11
Drawn By: R.Olson
CAD File: G:\0128296\02\012829602-02.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well (Not Used for Contouring)
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 9.51 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 28 November 2011
- NM Not Measured
- * Not Used for Contouring
- DRY Duwamish River Water Surface Elevation is Below the Land Surface Elevation at the Dock Measuring Point (i.e., 1.20 Feet Above Mean Sea Level)
- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 4
Shallow Groundwater Contour Map
28 November 2011
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 12/11

Project No. 0155129.30
Date: 03/22/12
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129-01.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 13.19
MW-29S NM
MW-30S 10.59
MW-31S 10.02
MW-35S 10.51
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Exit
Deed Line
Paved
Parking
Maintenance Building
Load-out Silos
MW-34S 13.08
Existing Office
MW-16 13.40
MW-32D 5.70
MW-32S 12.27
MW-4S 13.36
MW-5S 12.94
MW-1S 12.59
MW-1D 6.55
MW-7S 12.99
MW-6S 12.87
MW-33S 11.10
EXISTING DITCH
HAZARDOUS WASTE STORAGE AREA
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
DOCK
8.47 (08:33)
3.12 (13:17)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
MW-17 12.43
MW-10 11.69
MW-11 12.39
MW-12 12.33
MW-2D 6.64
MW-2S 12.02
MW-22 11.19
MW-14 10.89
MW-13 11.46
MW-14D 6.73
MW-21 10.55
MW-23 10.70
MW-19 10.09
Property Boundary Line
Existing Aggregates
MW-18 11.66*
MW-3S 9.18
MW-3D 6.69
MW-24 9.26
MW-20 9.66
MW-25 NM
MW-26 9.01
MW-27 6.19
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
Former City of Seattle SPU Stormwater Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
N
0 50 100
FEET

LEGEND

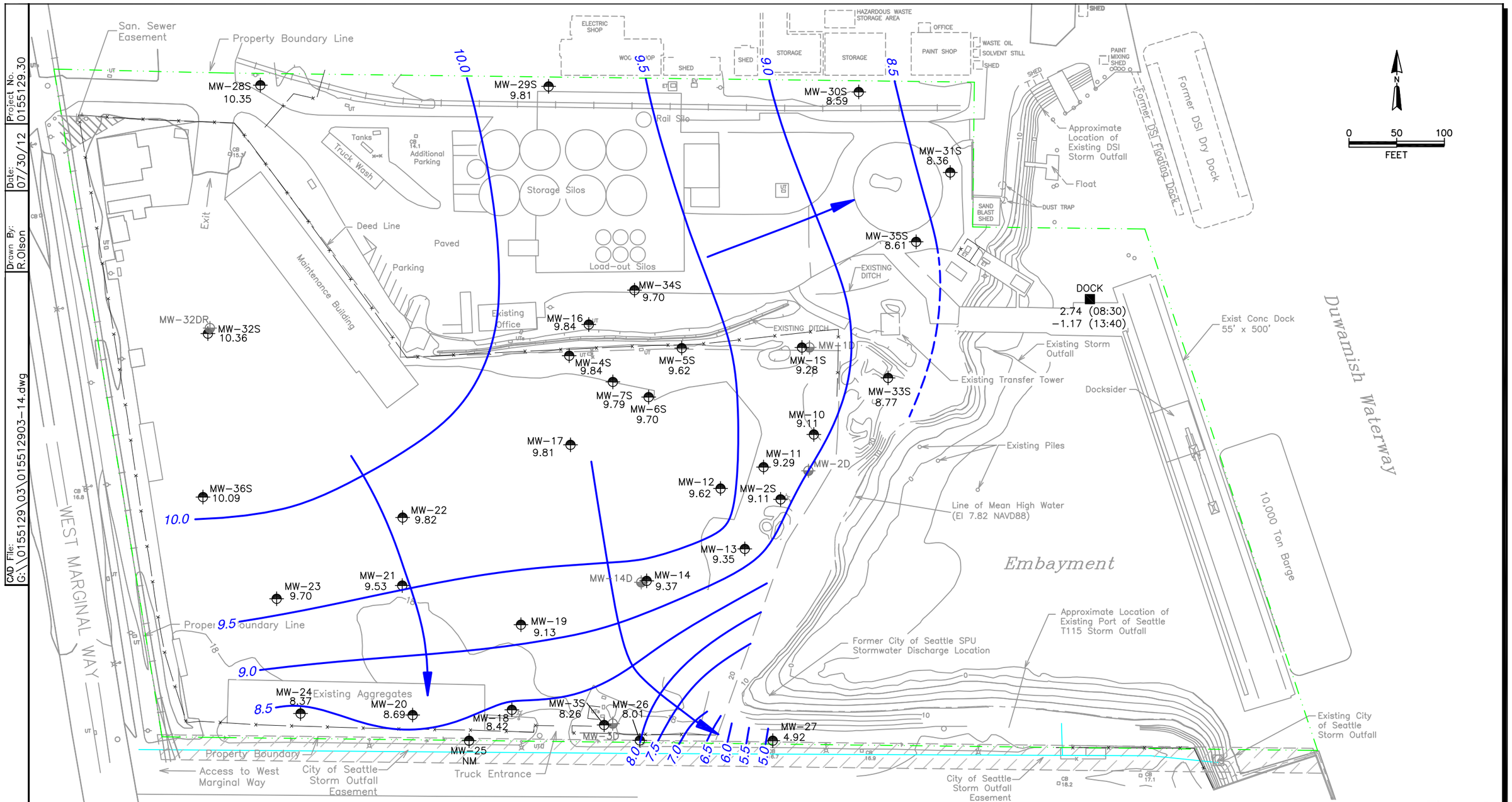
- Shallow Monitoring Well
- Deep Monitoring Well (Datum Not Used for Contouring)
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- 9.18 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 January 2012
- NM Not Measured
- * Datum Not Used for Contouring

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Shallow Groundwater Elevation Map
25 January 2012
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/12

Project No. 0155129.30
Date: 07/30/12
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129031512903-14.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 9.53 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 19 July 2012
- NM Not Measured
- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

Figure 3
Shallow Groundwater Elevation Map
19 July 2012
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 07/12

Project No. 0155129.30
Date: 07/30/12
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129030-15.dwg

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
MW-31S
MW-35S
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
MW-34S
Exit
Deed Line
Paved
Parking
Maintenance Building
Existing Office
MW-16
MW-4S
MW-5S
MW-6S
MW-7S
MW-1S
MW-1D
3.52
MW-32DR
4.93
MW-32S
MW-36S
MW-22
MW-17
MW-12
MW-2S
MW-1
MW-2D
2.78
MW-33S
MW-21
MW-23
MW-14
MW-14D
4.47
MW-13
MW-19
MW-24 Existing Aggregates
MW-20
MW-18
MW-3S
MW-3D
3.99
MW-25
MW-26
MW-27
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
EXISTING DITCH
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
DOCK
2.74 (08:30)
−1.17 (13:40)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Water Elevation Measurement of Bay Water; Time in Parentheses
- 4.47 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 19 July 2012
- Horizontal Datum: Washington State Plane World Geodetic System, 1984.
- Vertical Datum: North American Vertical Datum, 1988.
- 4.4 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 4
Deep Groundwater Elevation Map
19 July 2012 (First Reading)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 07/12

Project No. 0155129.30
Date: 07/30/12
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129O3-16.dwg

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
Former DSI Floating Dock
Former DSI Dry Dock
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
SAND BLAST SHED
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
MW-31S
MW-35S
Exit
Deed Line
Paved
Parking
Maintenance Building
Load-out Silos
MW-34S
EXISTING DITCH
DOCK
2.74 (08:30)
-1.17 (13:40)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Existing City of Seattle Storm Outfall
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
City of Seattle Storm Outfall Easement
Existing Ditch
MW-32S
MW-32DR
3.39
MW-16
MW-1S
MW-1D
2.08
MW-4S
MW-5S
MW-6S
MW-7S
MW-33S
MW-10
MW-17
MW-11
MW-2D
2.41
MW-12
MW-2S
MW-36S
MW-22
MW-13
MW-14D
2.90
MW-14
MW-21
MW-23
MW-19
Property Boundary Line
MW-24 Existing Aggregates
MW-20
MW-18
MW-3S
MW-3D
3.47
MW-25
MW-27
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
MW-26
WEST MARGINAL WAY
3.4
3.2
3.0
2.8
2.6
2.4
2.2
N
0 50 100
FEET

LEGEND

Shallow Monitoring Well
Deep Monitoring Well
DOCK Water Elevation Measurement of Bay Water; Time in Parentheses

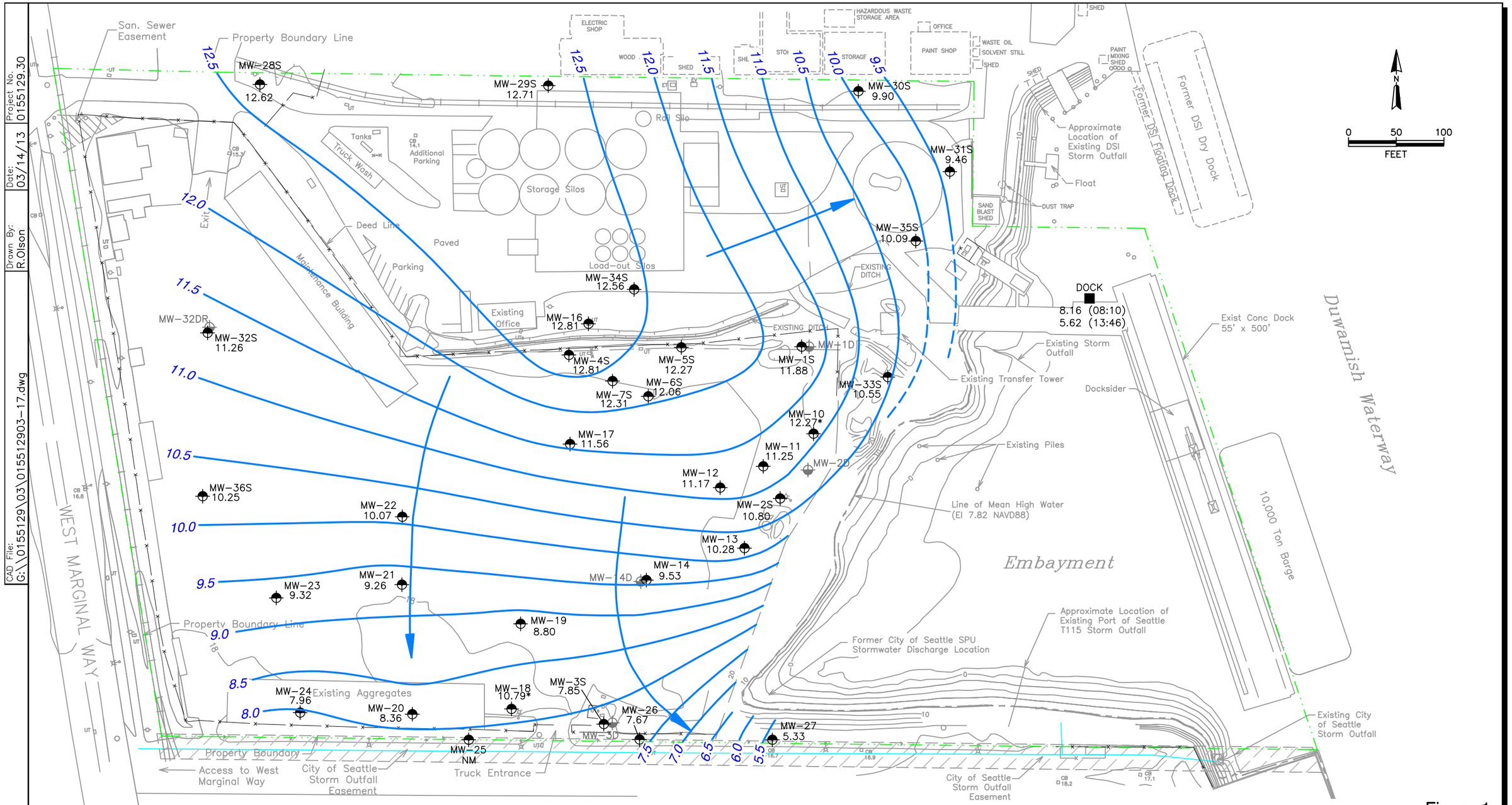
2.90 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 19 July 2012

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

3.0 Groundwater Isoelevation Contours; Dashed Where Inferred
Approximate Groundwater Flow Direction
Property Line
City of Seattle Public Utilities Stormwater Pipe

Figure 5
Deep Groundwater Elevation Map
19 July 2012 (Second Reading)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 07/12

Project No. 0155129.30
Date: 03/14/13
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129-17.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- Shallow Wells Were Measured Between 09:10 and 13:15

- 9.53 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 5 November 2012
- NM Not Measured
- * Not Used For Contouring; Data Point Anomalous

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
5 November 2012
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/13

Project No. 0155129.30
Date: 03/14/13
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129-19.dwg

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
MW-31S
MW-35S
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
EXISTING DITCH
DOCK
8.16 (08:10)
5.62 (13:46)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
Property Boundary Line
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
MW-24 Existing Aggregates
MW-32DR 4.77
MW-32S
MW-1D 6.02
MW-2D 6.14
MW-3D 5.47
MW-14D 5.53
MW-1S
MW-2S
MW-3S
MW-4S
MW-5S
MW-6S
MW-7S
MW-10
MW-11
MW-12
MW-13
MW-14
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
MW-22
MW-23
MW-25
MW-26
MW-27
MW-33S
MW-34S
MW-36S
4.80
4.90
5.00
5.10
5.20
5.30
5.40
5.50
5.60
5.70
5.80
5.90
6.00
6.10
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 5.47 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 5 November 2012
- First Measurement – Deep wells were measured between 08:23 and 08:57 during flood tide.
- Horizontal Datum: Washington State Plane World Geodetic System, 1984.
- Vertical Datum: North American Vertical Datum, 1988.
- 5.50 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
5 November 2012 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/13

Project No. 0155129.30
Date: 03/14/13
Drawn By: R.Olson
CAD File: G:\0155129\03\0155129903-18.dwg

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
Former DSI Dry Dock
Former DSI Floating Dock
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
SAND BLAST SHED
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
MW-34S
MW-31S
MW-35S
Exit
Deed Line
Paved
Parking
Maintenance Building
Existing Office
EXISTING DITCH
MW-32DR
5.93
MW-32S
MW-16
MW-4S
MW-5S
MW-6S
MW-7S
MW-1D
6.11
MW-33S
5.95
6.00
6.05
6.10
DOCK
8.16 (08:10)
5.62 (13:46)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
MW-17
MW-11
MW-2D
6.01
MW-12
MW-2S
MW-36S
MW-22
MW-14
MW-13
MW-14D
5.91
MW-21
MW-23
MW-19
Line of Mean High Water (El 7.82 NAVD88)
Embayment
Duwamish Waterway
10,000 Ton Barge
WEST MARGINAL WAY
Property Boundary Line
MW-24
Existing Aggregates
MW-20
MW-18
MW-3S
MW-3D
5.91
MW-25
MW-26
MW-27
Former City of Seattle SPU Stormwater Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing City of Seattle Storm Outfall
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 5.93 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 5 November 2012
- Second Measurement – Deep wells were measured between 13:24 and 13:41 at end of flood tide nearing slack tide.
- Horizontal Datum: Washington State Plane World Geodetic System, 1984.
- Vertical Datum: North American Vertical Datum, 1988.
- 5.95 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
5 November 2012 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/13

Project No. 0185447.3
Date: 05/15/13
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-01.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 11.81
MW-29S 11.21
MW-30S 9.31
MW-31S 8.78
MW-35S 9.21
MW-34S 11.45
MW-32DR
MW-32S 11.86
MW-16 11.70
MW-4S 11.60
MW-5S 11.30
MW-6S 11.34
MW-7S 11.47
MW-1S 10.71
MW-1D
MW-33S 9.79
MW-10 10.58
MW-11 10.74
MW-2D
MW-12 11.04
MW-2S 10.55
MW-13 10.65
MW-14 10.60
MW-14D
MW-17 11.39
MW-36S 11.61
MW-22 11.22
MW-23 11.03
MW-21 10.78
MW-19 10.25
MW-18 9.45
MW-3S 9.19
MW-3D
MW-26 8.92
MW-27 5.34
MW-24 9.58
MW-20 9.85
MW-25 NM
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
EXISTING DITCH
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
DOCK
+7.76 (08:11)
+9.37 (13:40)
Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
10,000 Ton Barge
Duwamish Waterway
Embayment
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- 9.45 Groundwater Elevation
- NM Not Measured

+7.76 Feet Relative to MLLW (Mean Lower Low Water)

Shallow wells were measured on 22 January 2013 between 09:12 and 12:46.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
22 January 2013
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 05/13

Project No. 0185447.3
Date: 05/31/13
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-03.dwg

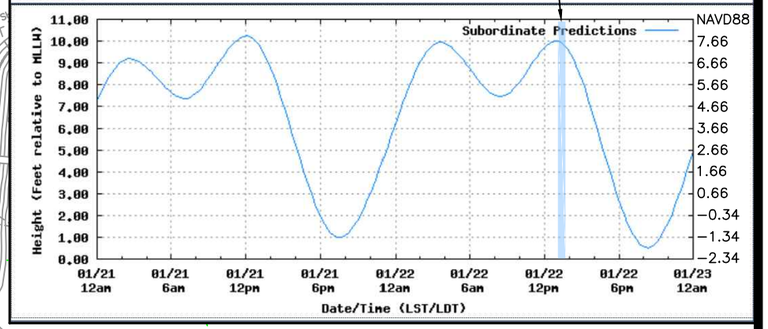
Duwamish Waterway, Eighth Ave. South, WA StationId: 9447029

Referenced to Station: SEATTLE (Madison St.), Elliott Bay (9447130)
Height offset in feet (low:*0.95 high: * 0.97) Time offset in mins (low:11 high: 10)

Daily Tide Prediction in **Feet**
Time Zone: **LST/LDT**
Datum: **MLLW**

2013/01/21 - 2013/01/22

Time Interval of Deep Well Measurements



TIME	NAVD88	MLLW
08:11	5.42	7.76
13:40	7.03	9.37

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Duwamish River – Vertical Datum NAVD88 and MLLW (Mean Lower Low Water)
- 5.93 Groundwater Elevation (NAVD88)

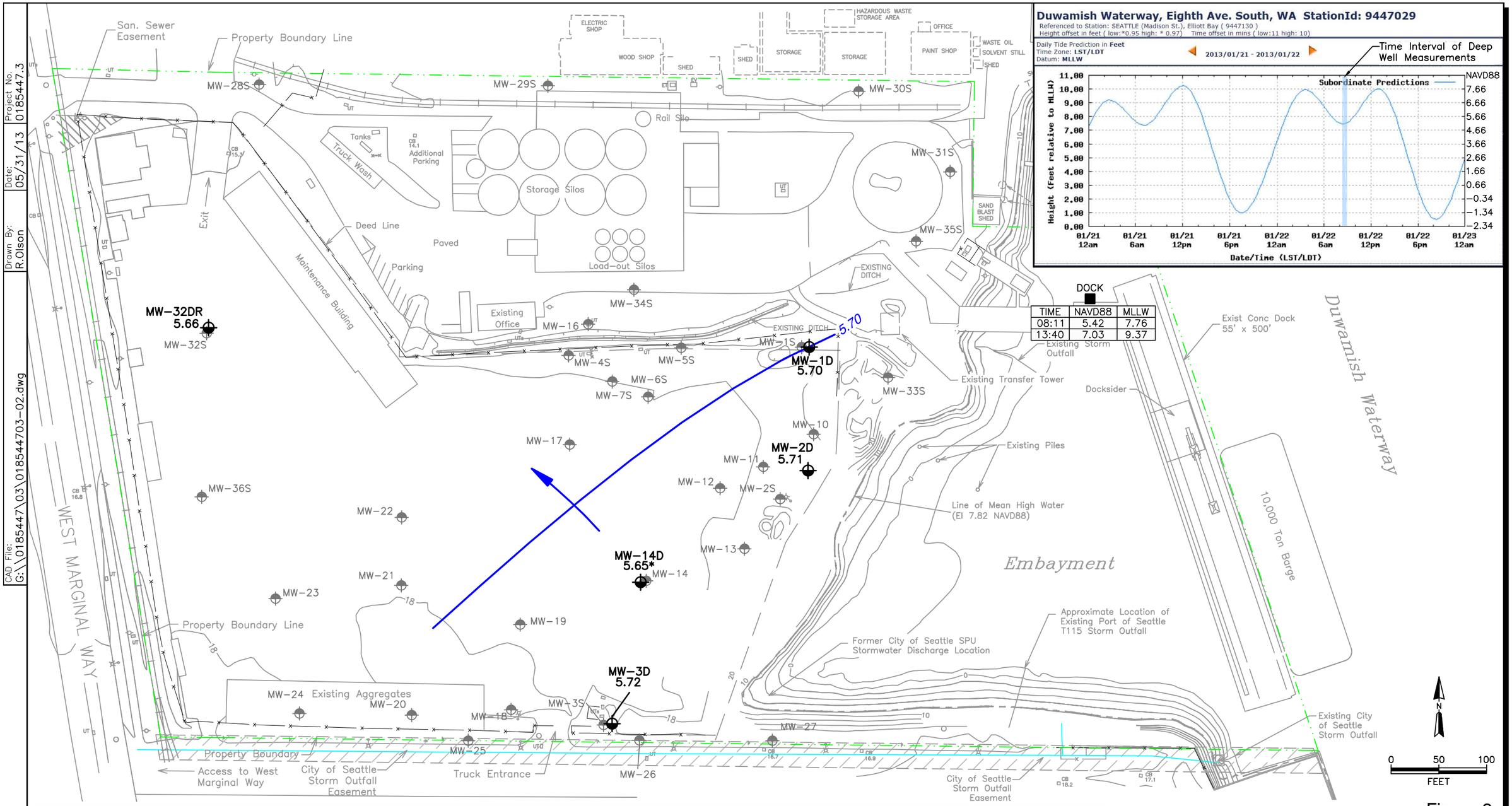
First Measurement – Deep wells were measured on 22 January 2013 between 13:21 and 13:36.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988 (NAVD88).
Note: Contours are snapshots of a transient condition at time of measurement and do not represent either a long-term condition nor a representation of the net flow direction in the deep aquifer at the site (which would be expected to be toward the Duwamish). Tidal lag is observed in deep wells at the site.

- 5.95 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
22 January 2013 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 05/13

Project No. 0185447.3
Date: 05/31/13
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-02.dwg



Duwamish Waterway, Eighth Ave. South, WA StationId: 9447029

Referenced to Station: SEATTLE (Madison St.), Elliott Bay (9447130)
Height offset in feet (low:*0.95 high: * 0.97) Time offset in mins (low:11 high: 10)

Daily Tide Prediction in **Feet**
Time Zone: **LST/LDT**
Datum: **MLLW**

2013/01/21 - 2013/01/22

TIME	NAVD88	MLLW
08:11	5.42	7.76
13:40	7.03	9.37

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Duwamish River – Vertical Datum NAVD88 and MLLW (Mean Lower Low Water)
- 5.70 Groundwater Elevation (NAVD88)
- 5.65* Anomalous Data; Not Used For Contouring

First Measurement – Deep wells were measured on 22 January 2013 between 08:21 and 08:54.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988 (NAVD88).
Note: Contours are snapshots of a transient condition at time of measurement and do not represent either a long-term condition nor a representation of the net flow direction in the deep aquifer at the site (which would be expected to be toward the Duwamish). Tidal lag is observed in deep wells at the site.

- 5.70 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
22 January 2013 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 05/13

Project No. 0185447.3
Date: 09/10/13
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-08.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 11.22
MW-29S 10.72
MW-30S 8.99
MW-31S 8.71
MW-35S 9.11
MW-34S 11.08
MW-32DR
MW-32S 11.34
MW-36S 11.06
MW-16 11.67
MW-4S 11.93
MW-5S 9.86*
MW-6S 11.05
MW-7S 11.35
MW-1D
MW-1S 10.22
MW-33S 9.52
MW-17 11.25
MW-10 10.06
MW-11 10.25
MW-2D
MW-12 10.63
MW-2S 10.05
MW-22 10.88
MW-13 10.24
MW-14 10.23
MW-14D
MW-21 10.39
MW-23 10.55
MW-19 9.90
MW-3S 8.83
MW-18 9.06
MW-24 9.11
MW-20 9.39
MW-26 8.52
MW-3D
MW-27 4.49
MW-25 NM

11.0
10.5
10.0
9.5
9.0
11.5
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5

Rail Silo
Storage Silos
Load-out Silos
Tanks
Truck Wash
Additional Parking
Deed Line
Paved
Parking
Maintenance Building
Existing Office
Exit
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
EXISTING DITCH
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
DOCK

TIME	NAVD88	MLLW
08:00	0.27	2.61
11:48	1.31	3.65
15:59	7.57	9.91

Exist Conc Dock 55' x 500'
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement

N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- MLLW Mean Lower Low Water

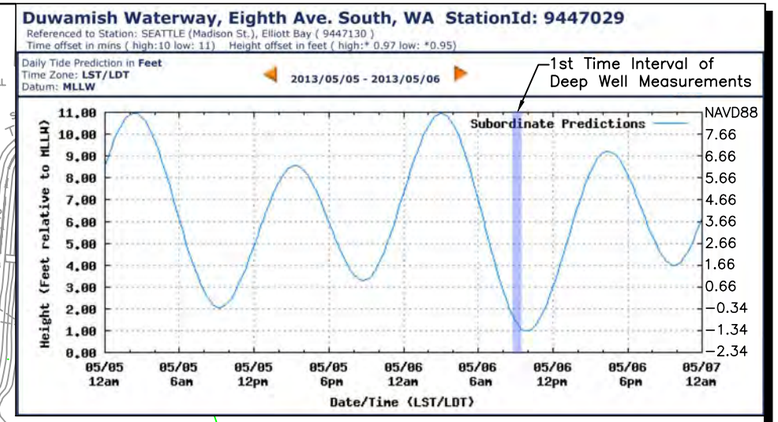
9.39 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 6 May 2013
NM Not Measured
* Not Used for Contouring

Shallow wells were measured between 09:12 and 12:46.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
6 May 2013
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 09/13

Project No. 0185447.3
Date: 09/10/13
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-09.dwg



TIME	NAVD88	MLLW
08:00	0.27	2.61
11:48	1.31	3.65
15:59	7.57	9.91

DOCK

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- MLLW Mean Lower Low Water
- 4.77 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 6 May 2013

First Measurement – Deep wells were measured between 09:01 and 09:29 during ebb tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

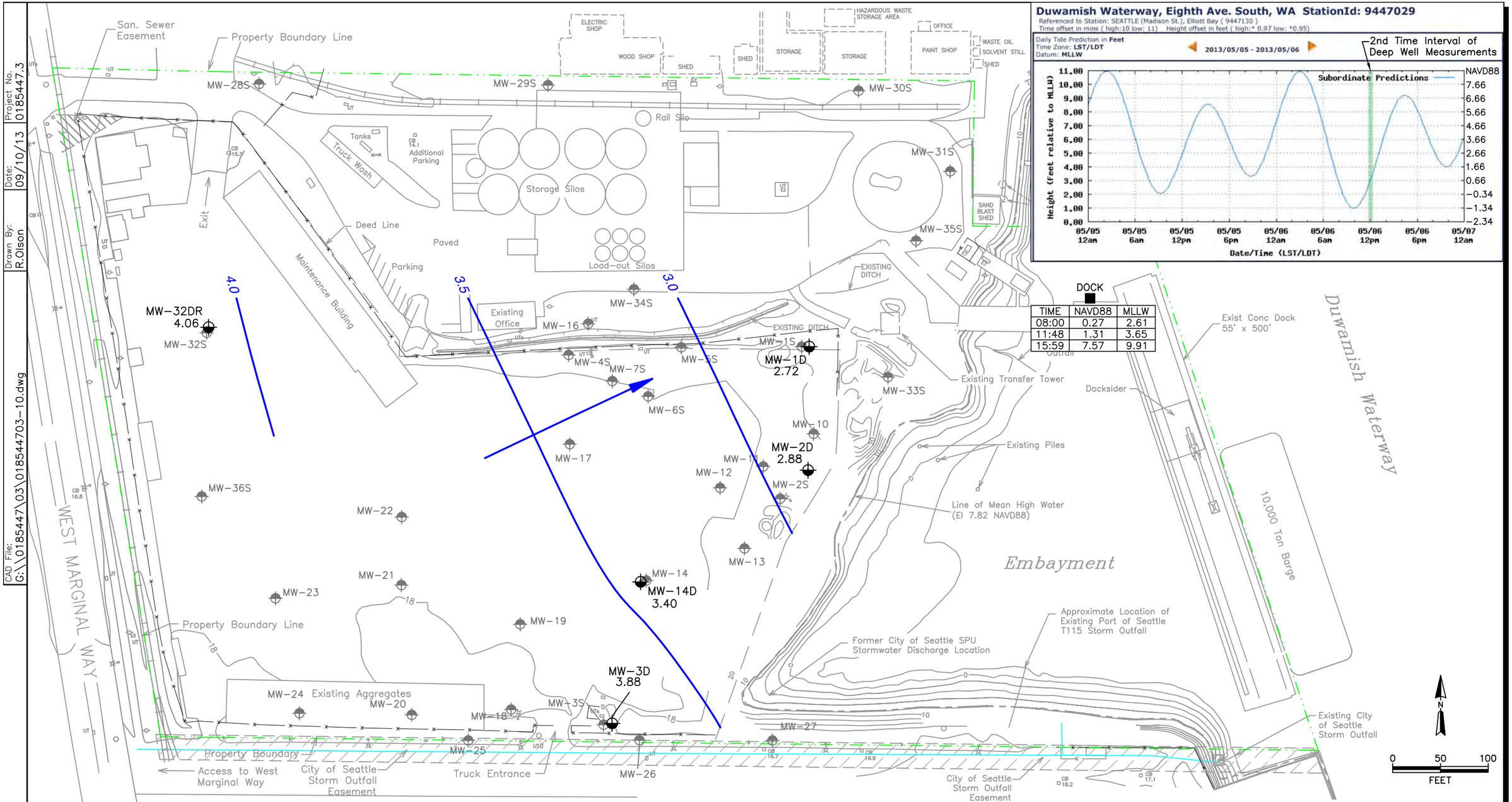
- 4.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2

Deep Groundwater Elevation Map
6 May 2013 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 09/13

Project No. 0185447.3
Date: 09/10/13
Drawn By: R.Olson
CAD File: G:_0185447\03\0185447703-10.dwg



TIME	NAVD88	MLLW
08:00	0.27	2.61
11:48	1.31	3.65
15:59	7.57	9.91

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- MLLW Mean Lower Low Water
- 3.40 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 6 May 2013

Second Measurement – Deep wells were measured between 11:53 and 12:15 during flood tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

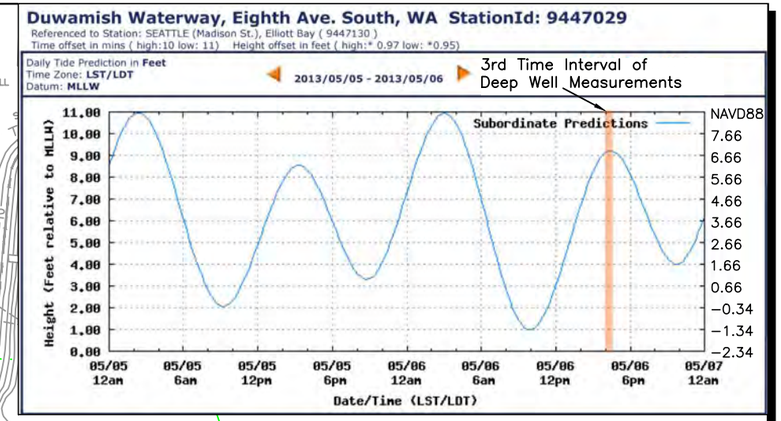
- 3.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3

Deep Groundwater Elevation Map
6 May 2013 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 09/13

Project No. 0185447.3
Date: 09/10/13
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-11.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Water Elevation Measurement of Bay Water; Time in Parentheses
- MLLW Mean Lower Low Water
- 5.40 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 6 May 2013

Second Measurement – Deep wells were measured between 16:03 and 16:26 during slack tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

- 5.4 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 4

Deep Groundwater Elevation Map
6 May 2013 (Third Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 09/13

Project No. 0185447.3
Date: 02/14/14
Drawn By: R.Olson
CAD File: G:\0185447\03\0185447703-12.dwg

MW-28S 11.55
MW-29S 10.86
MW-30S 8.66
MW-31S 8.48
MW-35S 8.88
MW-34S 10.91
MW-32DR
MW-32S 10.18
MW-16 11.67
MW-5S 11.53
MW-4S 12.19*
MW-1S 9.59
MW-1D
MW-33S 9.07
MW-7S 11.23
MW-6S 10.86
MW-17 10.61
MW-10 11.14*
MW-2D
MW-11 NM
MW-12 9.76
MW-2S 9.48
MW-36S 9.99
MW-22 10.04
MW-13 9.90
MW-14D
MW-14 9.24
MW-21 9.56
MW-23 9.61
MW-19 9.17
MW-18 11.84*
MW-24 8.44
MW-20 8.85
MW-3S 8.01
MW-3D
MW-26 7.78
MW-25 NM
MW-27 5.14

11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5

WEST MARGINAL WAY

WOOD SHOP
STORAGE
STORAGE
PAINT SHOP
WASTE OIL
SOLVENT STILL
SHED
PAINT MIXING SHED
SAND BLAST SHED
Former DSI Floating Dock
Former DSI Dry Dock
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Deed Line
Paved
Parking
Exit
Maintenance Building
Existing Office
EXISTING DITCH
Existing Transfer Tower
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Embayment
Duwamish Waterway
DOCK
Exist Conc Dock 55' x 500'
Docksider
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
Property Boundary Line
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance

RIVER ELEVATION		
TIME	NAVD88	MLLW
08:22	9.86	12.20
13:50	4.74	7.08
16:25	7.43	9.77

N
0 50 100
FEET

LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water

9.61 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 7 November 2013
NM Not Measured
* Not Used for Contouring (See Note for Explanation)
Shallow wells were measured between 08:55 and 13:39.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
MLLW Mean Lower Low Water

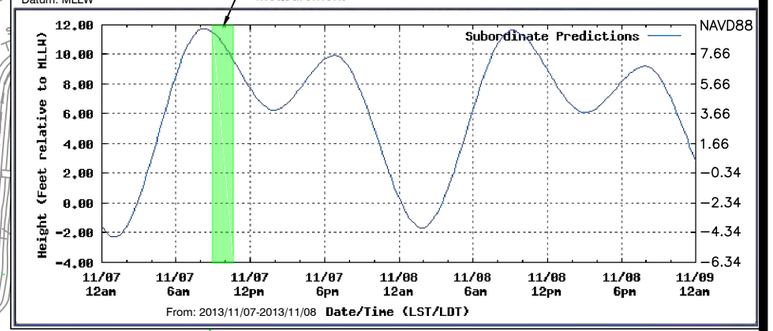
- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Note: Three monitoring wells (MW-4S, MW-10, and MW-18) were not used in contouring. On the day the groundwater gradient monitoring occurred, approximately 0.93 inches of rain were received. The groundwater elevations in the three excluded wells are viewed as temporary and not representative of seasonal conditions.

Figure 1
Shallow Groundwater Elevation Map
7 November 2013
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 02/14

Project No. 0185447.3
Date: 01/24/14
Drawn By: R.Olson
CAD File: G:_0185447\03\0185447703-13.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.095)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
08:22	9.86	12.20
13:50	4.74	7.08
16:25	7.43	9.77

MW-32DR 5.85
MW-1D 7.09
MW-2D 7.11
MW-14D 6.34
MW-3D 6.12

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

6.34 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 7 November 2013

First Measurement – Deep wells were measured between 08:53 and 10:33 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
MLLW Mean Lower Low Water

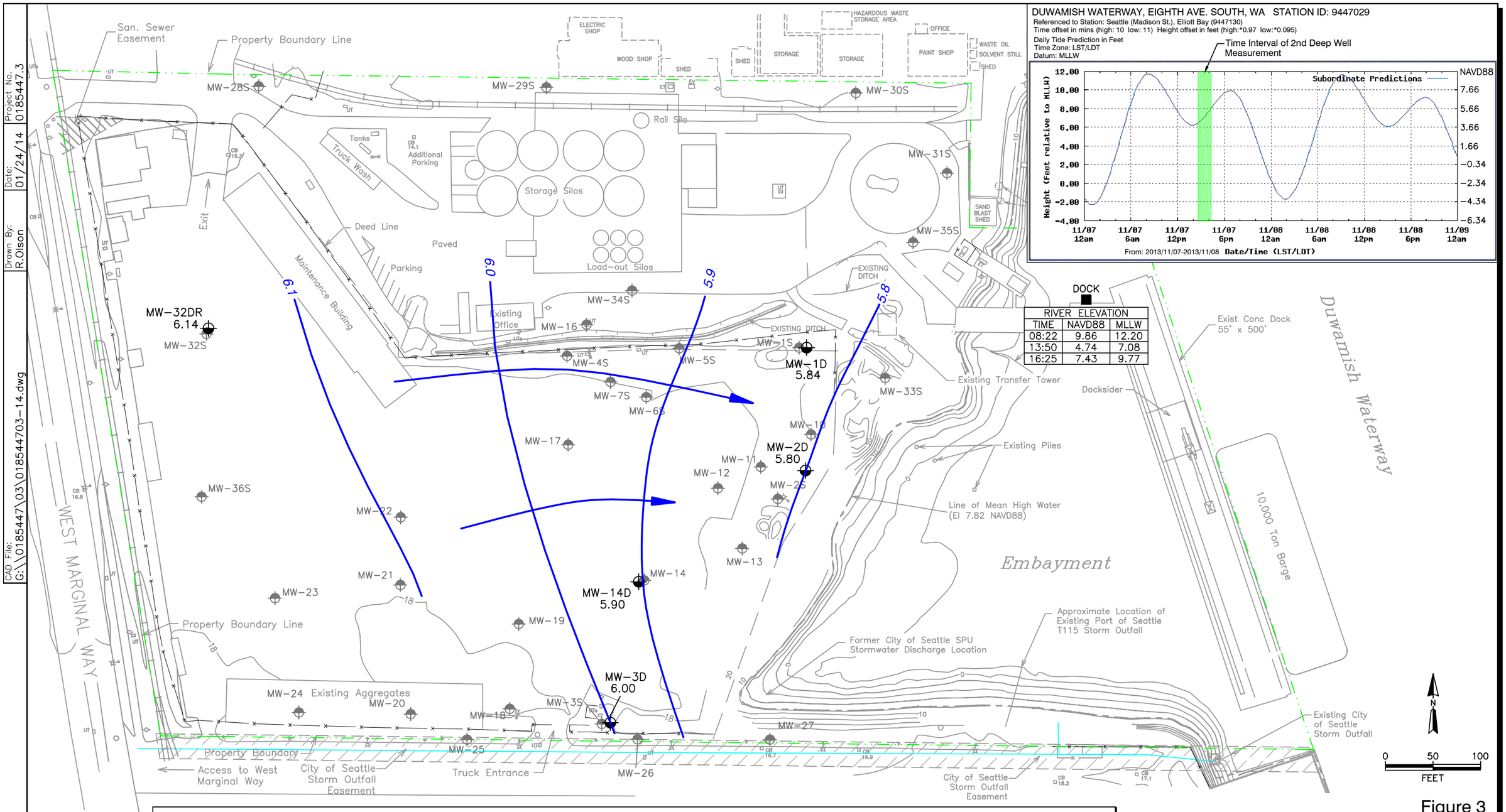
- 6.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

0 50 100 FEET

Figure 2
Deep Groundwater Elevation Map
7 November 2013 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 01/14

Project No. 0185447.3
Date: 01/24/14
Drawn By: R.Olson
CAD File: G:_0185447\03\0185447703-14.dwg



DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.095)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW

LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

5.90 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 7 November 2013

First Measurement – Deep wells were measured between 14:34 and 16:14 during low tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
MLLW Mean Lower Low Water

- 5.9 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
7 November 2013 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 01/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:_0232280\03\0232280003-01.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 11.77
MW-29S 11.23
MW-30S 9.43
MW-31S 9.15
MW-31D
MW-35S 9.70
MW-35D
MW-34S 11.93
MW-16 12.13
MW-38D
MW-32DR
MW-32S 11.40
MW-4S 12.29
MW-5S 11.75
MW-1D
MW-1S 11.20
MW-33S 10.23
MW-7S 11.94
MW-6S 11.74
MW-17 11.63
MW-10 11.33
MW-2D
MW-11 10.99
MW-12 11.17
MW-2S 10.83
MW-36S 10.88
MW-22 10.79
MW-43S 10.77
MW-43D
MW-13 10.62
MW-14D
MW-14 10.37
MW-23 10.35
MW-21 10.27
MW-19 9.82
MW-45S 9.97
MW-45D
MW-18 9.07
MW-3S 8.76
MW-24 9.03
MW-20 9.42
MW-20D
MW-26 8.51
MW-3D
MW-27 5.45
MW-25 NM

11.5
11.0
10.5
10.0
9.5
12.0
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5

Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
EXISTING DITCH
ELECTRIC SHOP
WOOD SHOP
SHED
TORAGE
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
Former DSI Floating Dock
Former DSI Dry Dock
DOCK

RIVER ELEVATION		
TIME	NAVD88	MLLW
07:20	11.17	13.51
12:18	2.43	4.77
16:17	4.15	6.49

Exist Conc Dock 55' x 500'
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
10,000 Ton Barge
Duwamish Waterway
Embayment
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY

N
0 50 100
FEET

LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

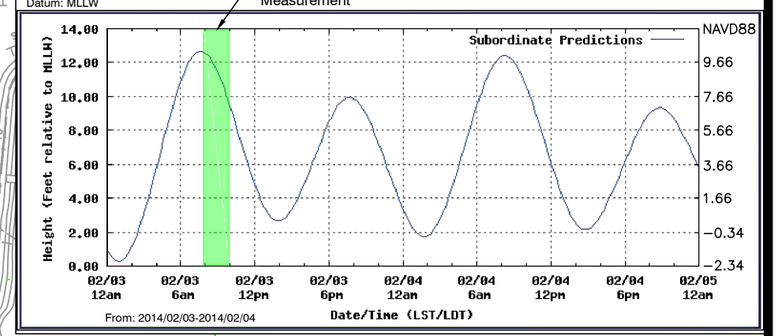
9.82 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 4 February 2014
NM Not Measured
Shallow wells were measured between 7:70 and 9:56.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
4 February 2014
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-02.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.095)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
07:20	11.17	13.51
12:18	2.43	4.77
16:17	4.15	6.49

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
SAND BLAST SHED
MW-31S
MW-31D 8.21
MW-35S
MW-35D 7.68
EXISTING DITCH
MW-32DR 6.03
MW-32S
MW-38D 6.36
MW-34S
MW-16
MW-4S
MW-5S
MW-1S
MW-1D 7.16
MW-7S
MW-6S
MW-33S
Existing Transfer Tower
DOCK
Exist Conc Dock 55' x 500'
Docksider
Duwamish Waterway
MW-17
MW-10
MW-2D 7.11
MW-11
MW-12
MW-2S
Existing Piles
MW-36S
MW-22
MW-43S
MW-43D 6.23
MW-13
Line of Mean High Water (El 7.82 NAVD88)
Embayment
10,000 Ton Barge
MW-21
MW-14D 6.37
MW-14
MW-23
MW-19
MW-45S
MW-45D 6.33
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
WEST MARGINAL WAY
Property Boundary Line
MW-24 Existing Aggregates
MW-20D 5.94
MW-20
MW-18
MW-3S
MW-3D 6.18
MW-25
MW-26
MW-27
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
Existing City of Seattle Storm Outfall
6.0
6.5
7.0
7.5
8.0
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

6.18 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 3 February 2014

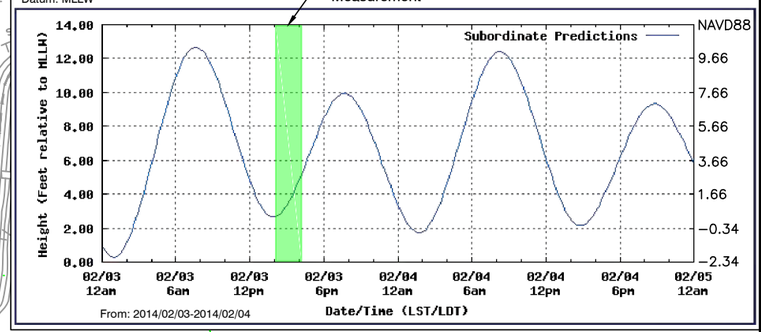
First Measurement – Deep wells were measured between 07:50 and 09:56 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
3 February 2014 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-03.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.095)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
07:20	11.17	13.51
12:18	2.43	4.77
16:17	4.15	6.49

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
MW-31S
MW-31D 2.15
SAND BLAST SHED
Exit
Deed Line
Paved
Parking
Maintenance Building
Load-out Silos
MW-34S
MW-35S
MW-35D 2.50
EXISTING DITCH
Existing Office
MW-38D 4.00
MW-16
MW-32DR 4.59
MW-32S
MW-4S
MW-5S
MW-1S
MW-1D 2.97
MW-7S
MW-6S
MW-33S
Existing Transfer Tower
DOCK
Exist Conc Dock 55' x 500'
Docksider
Duwamish Waterway
MW-17
MW-10
Existing Piles
MW-11
MW-2D 2.86
MW-2S
MW-12
MW-36S
MW-22
MW-43D 4.07
MW-43S
Line of Mean High Water (El 7.82 NAVD88)
MW-13
Embayment
MW-21
MW-14
MW-14D 3.81
MW-23
MW-19
MW-45S
MW-45D 3.59
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
WEST MARGINAL WAY
Property Boundary Line
MW-24 Existing Aggregates
MW-20
MW-20D 4.53
MW-3D 4.29
MW-3S
MW-18
MW-27
MW-25
MW-26
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
Existing City of Seattle Storm Outfall
10,000 Ton Barge
2.5
3.0
3.5
4.0
4.5
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water
- 5.90 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 3 February 2014

First Measurement – Deep wells were measured between 14:09 and 16:15 during low tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 5.9 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
3 February 2014 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-08.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 11.79
MW-29S 11.28
MW-30S 9.57
MW-31S 9.10
MW-31D
MW-35S 9.48
MW-35D
MW-34S 11.72
MW-32DR
MW-32S 11.74
MW-16 11.87
MW-38D
MW-4S 11.82
MW-5S 11.50
MW-1S 10.85
MW-1D
MW-33S 7.92
MW-7S 11.66
MW-6S 11.55
MW-17 11.54
MW-10 10.69
MW-11 10.76
MW-2D
MW-12 11.16
MW-2S 10.55
MW-36S 11.79
MW-22 11.11
MW-43D
MW-43S 10.92
MW-13 10.59
MW-14 10.61
MW-14D
MW-21 10.64
MW-23 10.80
MW-19 10.16
MW-45S 10.07
MW-45D
MW-18 9.35
MW-20 9.69
MW-20D
MW-24 9.38
MW-3S 9.14
MW-26 8.86
MW-25 NM
MW-27 5.27
Tanks
Truck Wash
Additional Parking
Fuel Silo
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
EXISTING DITCH
ELECTRIC SHOP
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
DOCK
RIVER ELEVATION

TIME	NAVD88	MLLW
07:13	8.33	10.67
11:39	−0.05	2.29
16:30	1.37	3.71

Exist Conc Dock 55' x 500'
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
10,000 Ton Barge
Duwamish Waterway
Embayment
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
Existing Aggregates
Property Boundary Line
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
N
0 50 100
FEET

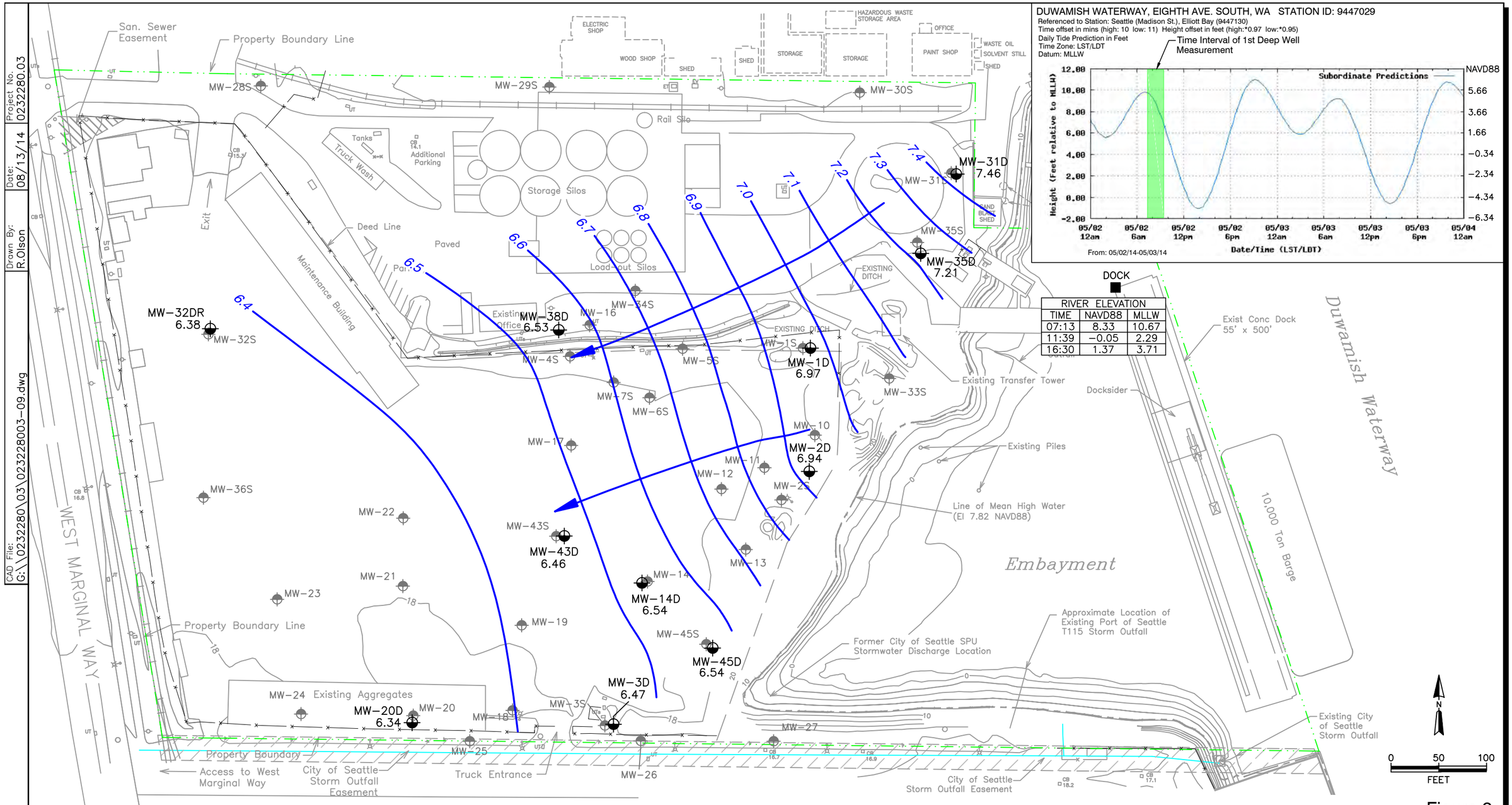
LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

9.69 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 2 May 2014
NM Not Measured
Shallow wells were measured between 07:23 and 09:28.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
2 May 2014
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 08/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-09.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

6.97 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 2 May 2014

First Measurement – Deep wells were measured between 07:21 and 09:26 during high tide.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.

Vertical Datum: North American Vertical Datum, 1988.

Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

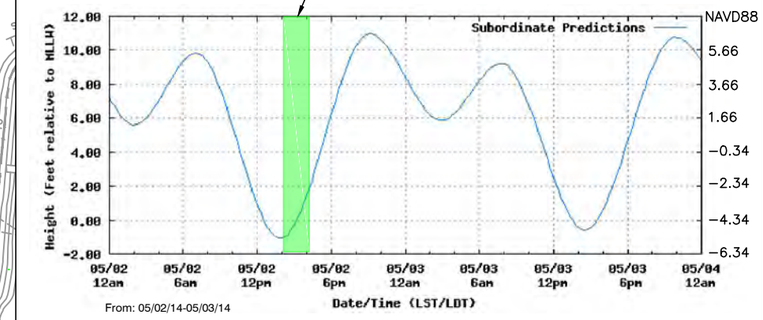
Figure 2

Deep Groundwater Elevation Map
2 May 2014 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 08/14

Project No. 0232280.03
Date: 08/11/14
Drawn By: R.Olson
CAD File: G:\0232280\03\0232280003-10.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



From: 05/02/14-05/03/14

RIVER ELEVATION		
TIME	NAVD88	MLLW
07:13	8.33	10.67
11:39	−0.05	2.29
16:30	1.37	3.71

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

1.09 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 2 May 2014

First Measurement – Deep wells were measured between 14:08 and 16:13 during low tide.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

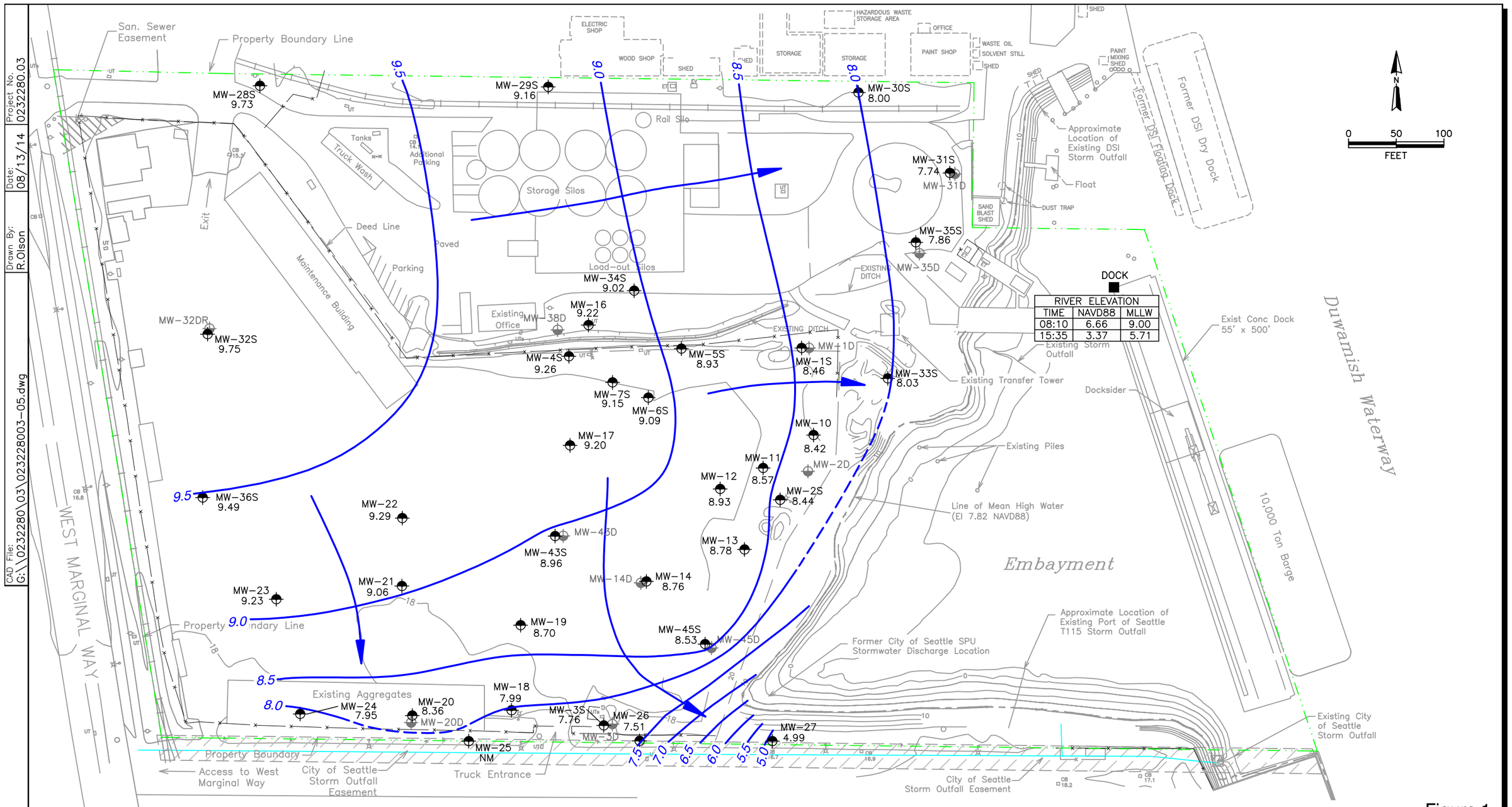
- 1.0 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

0 50 100 FEET

Figure 3
Deep Groundwater Elevation Map
2 May 2014 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 08/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-05.dwg



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water

9.06 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 31 July 2014

NM Not Measured

Shallow wells were measured between 8:45 and 10;49.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

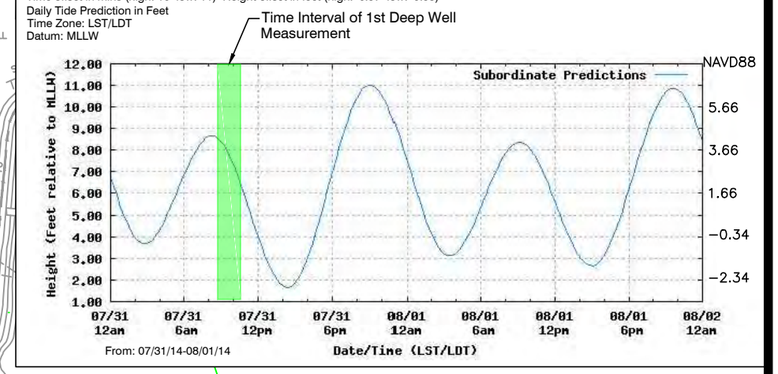
- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
31 July 2014
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 08/14

Project No. 0232280.03
Date: 08/11/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-06.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
08:10	6.66	9.00
15:35	3.37	5.71

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

6.18 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 31 July 2014

First Measurement – Deep wells were measured between 08:45 and 10:45 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

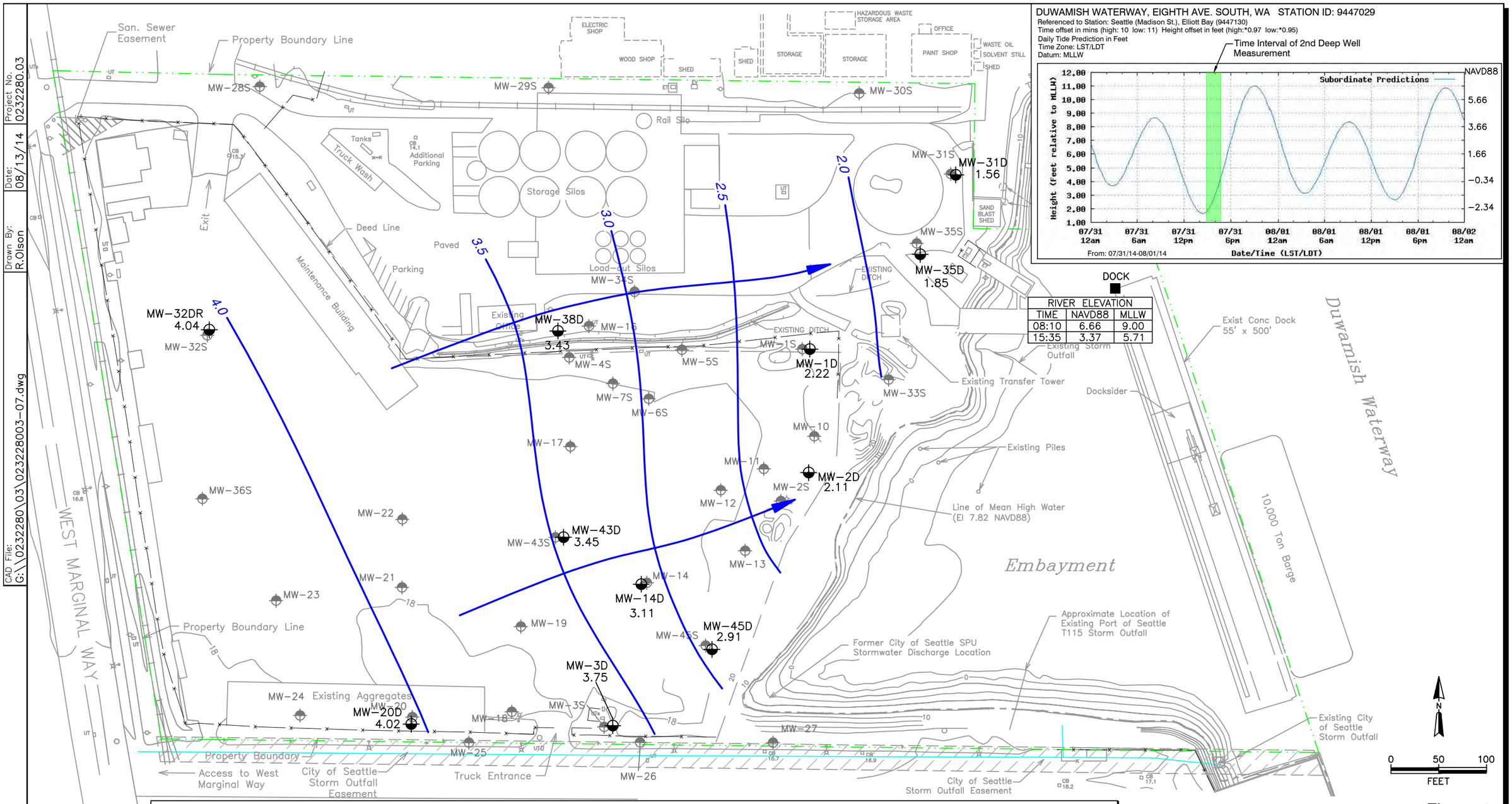
- 6.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

0 50 100
FEET

Figure 2
Deep Groundwater Elevation Map
31 July 2014 (First Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 08/14

Project No. 0232280.03
Date: 08/13/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-07.dwg



DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW

RIVER ELEVATION		
TIME	NAVD88	MLLW
08:10	6.66	9.00
15:35	3.37	5.71

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water

5.90 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 31 July 2014

First Measurement – Deep wells were measured between 14:53 and 16:43 during low tide.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 5.9 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
31 July 2014 (Second Measurement)
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 08/14

Project No. 0232280.03
Date: 01/07/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-11.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 12.19
MW-29S 12.24
MW-30S 9.84
MW-31S 9.34
MW-31D
MW-35S 10.09
MW-35D
MW-32DR
MW-32S 10.53
MW-34S 12.51
MW-16 12.86
MW-38D
MW-4S 12.89
MW-5S 12.47
MW-7S 12.56
MW-6S 12.45
MW-1S 12.35
MW-1D
MW-33S 10.90
MW-17 12.16
MW-12 11.96
MW-11 11.99
MW-10 12.77*
MW-2D
MW-2S 11.69
MW-36S 11.01
MW-22 11.15
MW-43D
MW-43S 10.26
MW-14 10.75
MW-14D
MW-13 10.94
MW-21 10.47
MW-23 10.49
MW-19 10.10
MW-45S 10.28
MW-45D
MW-18 10.99*
MW-24 9.24
MW-20 9.64
MW-20D
MW-3S 9.09
MW-3D
MW-26 8.85
MW-27 5.51
MW-25 NM

12.0
11.5
11.0
10.5
10.0
9.5
12.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0

Tanks
Truck Wash
Additional Parking
Rail Siio
Storage Silos
Load-out Silos
Lead Line
Paved
Parking
Maintenance Building
Existing Office
Existing Aggregates
Exit
Property Boundary Line
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Float
Approximate Location of Existing DSI Storm Outfall
Former DSI Floating Dock
Former DSI Dry Dock
EXISTING DITCH
DOCK
RIVER ELEVATION

TIME	NAVD88	MLLW
06:50	9.69	12.03
14:47	7.00	9.34

Exist Conc Dock 55' x 500'
Existing Storm Outfall
Existing Transfer Tower
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement

N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 9.64 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 24 November 2014

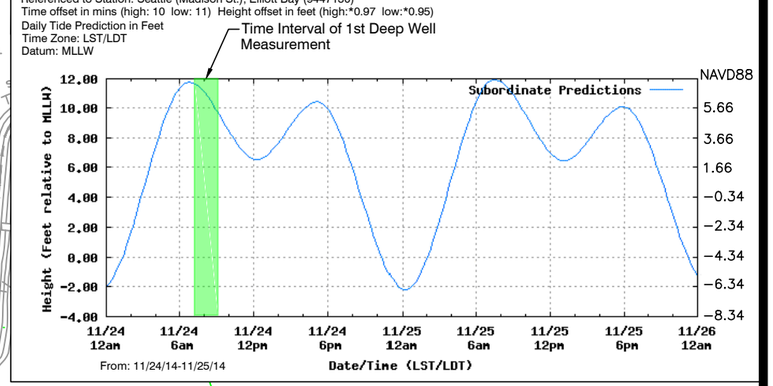
* Not Used for Contouring
NM Not Measured
Shallow wells were measured between 07:15 and 09:09.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
24 November 2014
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 01/15

Project No. 0232280.03
Date: 01/07/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-12.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
06:50	9.69	12.03
14:47	7.00	9.34

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 6.27 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 24 November 2014

NM Not Measured

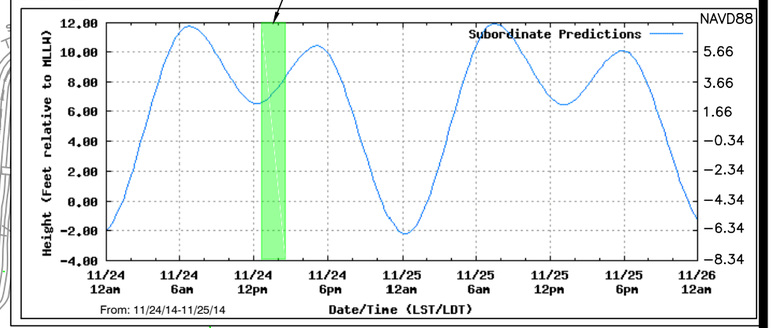
First Measurement – Deep wells were measured between 07:13 and 09:09 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.2 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
24 November 2014 (First Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 01/15

Project No. 0232280.03
Date: 11/24/14
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-13.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
06:50	9.69	12.03
14:47	7.00	9.34

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water

5.76 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 24 November 2014

First Measurement – Deep wells were measured between 12:40 and 14:35 during low tide.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 5.7 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

0 50 100 FEET

Figure 3
Deep Groundwater Elevation Map
24 November 2014 (Second Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington

ERM 12/14

Project No. 0232280.03
Date: 03/23/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-14.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 11.64
MW-29S 11.15
MW-30S 9.56
MW-31S 9.13
MW-31D
MW-35S 9.42
MW-35D
MW-32DR
MW-32S 11.74
MW-34S 11.45
MW-16 11.95
MW-38D
MW-4S 11.56
MW-5S 11.28
MW-7S 11.43
MW-6S 11.32
MW-1S 10.68
MW-1D
MW-33S 9.82
MW-17 11.39
MW-10 10.56
MW-11 10.67
MW-12 11.04
MW-2D
MW-2S 10.53
MW-36S 11.55
MW-22 11.26
MW-43D
MW-43S 10.96
MW-13 10.65
MW-14 10.64
MW-14D
MW-23 11.06
MW-21 10.91
MW-19 10.40
MW-45S 10.17
MW-45D
MW-24 9.71
MW-20 10.18
MW-20D
MW-18 9.69
MW-3S 9.36
MW-3D
MW-26 9.08
MW-25 NM
MW-27 5.05

11.5
11.0
10.5
10.0
9.5
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5

Tanks
Truck Wash
Additional Parking
Rail Silo
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
Existing Office
EXISTING DITCH
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY

ELECTRIC SHOP
WOOD SHOP
SHED
GARAGE
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Approximate Location of Existing DSI Storm Outfall
Float
Former DSI Floating Dock
Former DSI Dry Dock
DOCK
Existing Storm Outfall
Existing Transfer Tower
Existing Piles
Docksider
Exist Conc Dock 55' x 500'
10,000 Ton Barge
Line of Mean High Water (El 7.82 NAVD88)
Embayment
Duwamish Waterway
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement

RIVER ELEVATION		
TIME	NAVD88	MLLW
08:05	7.27	9.61
16:59	1.86	4.20

N
0 50 100
FEET

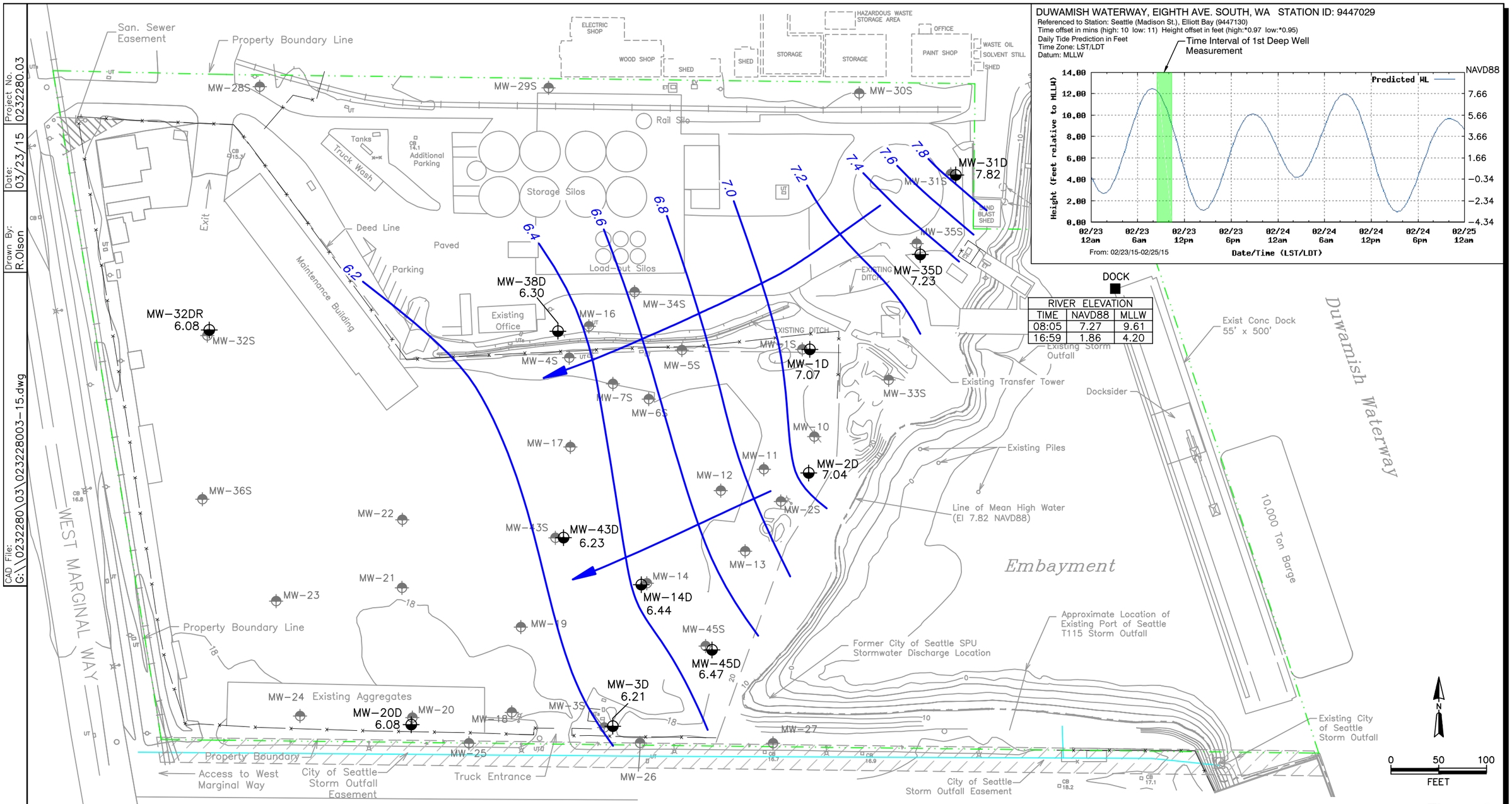
LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water
- 9.56 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 23 February 2015

NM Not Measured
Shallow wells were measured between 10:56 and 14:48.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
23 February 2015
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/15

Project No. 0232280.03
Date: 03/23/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-15.dwg



RIVER ELEVATION		
TIME	NAVD88	MLLW
08:05	7.27	9.61
16:59	1.86	4.20

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 6.21 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 23 February 2015

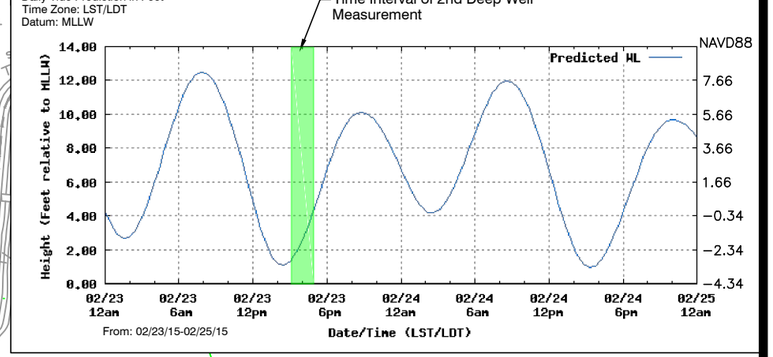
First Measurement – Deep wells were measured between 08:31 and 10:23 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.2 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
23 February 2015 (First Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 03/15

Project No. 0232280.03
Date: 03/23/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-16.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
08:05	7.27	9.61
16:59	1.86	4.20

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water

5.76 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 23 February 2015

First Measurement – Deep wells were measured between 15:08 and 16:56 during low tide.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 5.7 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
23 February 2015 (Second Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington

ERM 03/15

Project No. 0232280.03
Date: 07/07/15
Drawn By: R.Olson
CAD File: G:\0232280\03\0232280003-17.dwg

San. Sewer Easement
Property Boundary Line
MW-28S 9.43
MW-29S 9.85
MW-30S 8.58
MW-31S 6.27
MW-31D
MW-35S 8.43
MW-35D
MW-32DR
MW-32S 10.47
MW-36S 10.24
MW-34S 9.76
MW-16 9.93
MW-38D
MW-4S 9.93
MW-7S 9.86
MW-5S 9.68
MW-6S 9.76
MW-1S 9.28
MW-1D
MW-33S 8.77
MW-17 9.90
MW-10 9.21
MW-11 9.34
MW-12 9.70
MW-2D
MW-2S 9.25
MW-22 9.96
MW-43D
MW-43S 9.72
MW-13 9.48
MW-14 9.51
MW-14D
MW-23 9.88
MW-21 9.70
MW-19 9.29
MW-45S 9.22
MW-45D
MW-18 8.72
MW-3S 8.45
MW-20 9.07
MW-20D
MW-24 8.70
MW-26 8.22
MW-3D
MW-25 NM
MW-27 5.71

9.5
10.0
9.0
8.5
8.0
7.5
7.0
6.5
6.0

Tanks
Truck Wash
Additional Parking
Storage Silos
Rail Silo
Load-out Silos
Deed Line
Paved
Parking
Maintenance Building
Existing Office
Exit
Existing Aggregates
Property Boundary Line
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
WEST MARGINAL WAY
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
EXISTING DITCH
Former DSI Floating Dock
Former DSI Dry Dock
Approximate Location of Existing DSI Storm Outfall
Float
DUST TRAP
DOCK
RIVER ELEVATION

TIME	NAVD88	MLLW
07:11	8.41	6.07
14:00	0.85	−1.49

Existing Storm Outfall
Existing Transfer Tower
Docksider
Exist Conc Dock 55' x 500'
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
Duwamish Waterway
Embayment
10,000 Ton Barge
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Existing City of Seattle Storm Outfall
City of Seattle Storm Outfall Easement

N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water
- 9.96 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 21 May 2015

NM Not Measured

Shallow wells were measured between 07:41 and 12:58.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

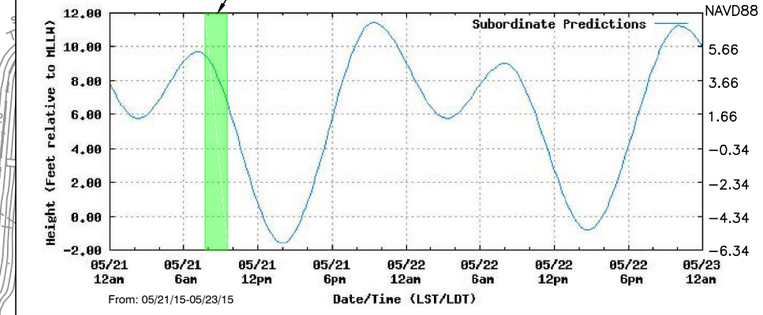
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
21 May 2015
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 07/15

Project No. 0232280.03
Date: 07/07/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-18.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
07:11	8.41	6.07
14:00	0.85	−1.49

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Exit
Deed Line
Parking
Maintenance Building
Existing Office
MW-31D 7.51
MW-31S
SAND BLAST SHED
MW-35S
MW-35D 7.18
EXISTING DITCH
DOCK
MW-38D 6.42
MW-32DR 6.25
MW-32S
MW-34S
MW-16
MW-4S
MW-5S
MW-1S
MW-1D 6.92
MW-33S
MW-7S
MW-6S
Existing Storm Outfall
Existing Transfer Tower
Exist Conc Dock 55' x 500'
Docksider
Duwamish Waterway
MW-17
MW-10
MW-11
MW-2D 6.91
MW-12
MW-2S
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
MW-36S
MW-22
MW-43S
MW-43D 6.34
MW-13
Embayment
MW-21
MW-14
MW-14D 6.49
MW-23
MW-19
MW-45S
MW-45D 6.46
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
MW-3D 6.37
MW-24 Existing Aggregates
MW-20D 6.23
MW-20
MW-18
MW-3S
MW-27
MW-25
MW-26
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
Existing City of Seattle Storm Outfall
WEST MARGINAL WAY
10,000 Ton Barge
6.4
6.6
6.8
7.0
7.2
7.4
N
0 50 100
FEET

LEGEND

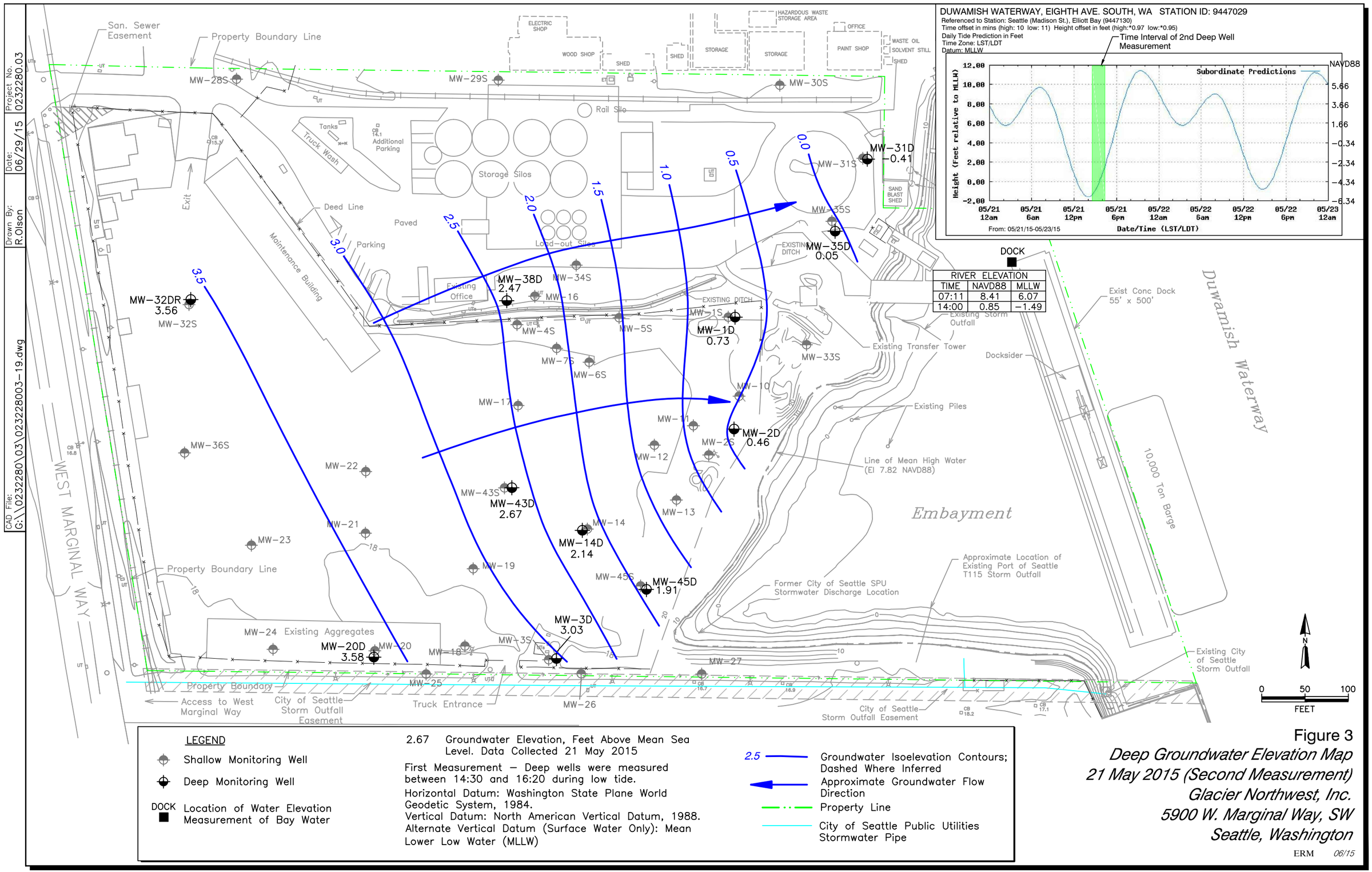
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 6.49 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 21 May 2015

First Measurement – Deep wells were measured between 07:41 and 09:31 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.4 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
21 May 2015 (First Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 07/15

Project No. 0232280.03
Date: 06/29/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-19.dwg



RIVER ELEVATION

TIME	NAVD88	MLLW
07:11	8.41	6.07
14:00	0.85	−1.49

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 2.67 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 21 May 2015
- First Measurement – Deep wells were measured between 14:30 and 16:20 during low tide.
- Horizontal Datum: Washington State Plane World Geodetic System, 1984.
- Vertical Datum: North American Vertical Datum, 1988.
- Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)
- 2.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
21 May 2015 (Second Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington

ERM 06/15

Project No. 0232280.03
Date: 09/17/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-20.dwg

San. Sewer Easement
Property Boundary Line
WEST MARGINAL WAY
Duwamish Waterway
Embayment
Rail Spur
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Maintenance Building
Exit
Existing Office
Existing Aggregates
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
PAINT MIXING SHED
SAND BLAST SHED
DUST TRAP
Former DSI Floating Dock
Former DSI Dry Dock
Approximate Location of Existing DSI Storm Outfall
Float
EXISTING DITCH
DOCK
Existing Storm Outfall
Existing Transfer Tower
Exist Conc Dock 55' x 500'
Docksider
Existing Piles
Line of Mean High Water (El 7.82 NAVD88)
10,000 Ton Barge
Former City of Seattle SPU Stormwater Discharge Location
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Existing City of Seattle Storm Outfall

RIVER ELEVATION		
TIME	NAVD88	MLLW
10:31	0.97	−1.37
15:58	7.74	5.40

MW-28S 9.54
MW-29S 8.97
MW-30S 7.70
MW-31S 7.40
MW-31D
MW-35S 7.50
MW-35D
MW-32DR
MW-32S 9.34
MW-38D
MW-16 8.97
MW-34S 6.73*
MW-4S 9.00
MW-5S 8.58
MW-7S 8.74
MW-6S 8.70
MW-1S 8.14
MW-1D
MW-33S 7.61
MW-17 8.89
MW-10 8.10
MW-11 8.21
MW-2D
MW-2S 8.13
MW-12 8.53
MW-36S 9.04
MW-22 8.91
MW-43D
MW-43S 8.64
MW-13 8.31
MW-14 8.37
MW-14D
MW-23 8.81
MW-21 8.67
MW-19 8.30
MW-45S 8.12
MW-45D
MW-18 7.75
MW-3S 7.51
MW-24 7.71
MW-20 8.08
MW-20D
MW-25 NM
MW-3D
MW-26 7.23
MW-27 4.47

9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5

0 50 100 FEET
N

LEGEND
- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 9.54 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 August 2015

NM Not Measured
* Not Used For Contouring

Shallow wells were measured between 11:15 and 17:48.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

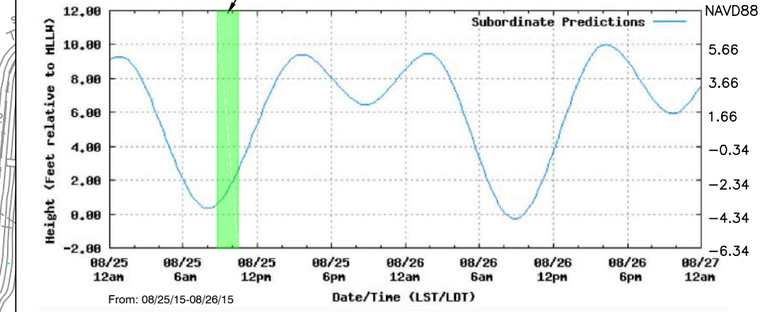
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
25 August 2015
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 09/15

Project No. 0232280.03
Date: 09/17/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-21.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



From: 08/25/15-08/26/15

RIVER ELEVATION		
TIME	NAVD88	MLLW
10:31	0.97	-1.37
15:58	7.74	5.40

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
MW-31D 0.54
MW-31S
SAND BLAST SHED
MW-35S
MW-35D 0.90
EXISTING DITCH
DOCK
Exit
Deed Line
Paved
Parking
Maintenance Building
MW-38D 3.82*
Existing Office
MW-34S
MW-16
MW-32DR 3.90
MW-32S
MW-4S
MW-5S
MW-21S
MW-1D 1.42
MW-7S
MW-6S
MW-33S
Existing Transfer Tower
Existing Storm Outfall
Exist Conc Dock 55' x 500'
Docksider
Duwamish Waterway
MW-17
MW-10
MW-11
MW-2D 1.29
MW-12
Existing Piles
MW-36S
MW-22
MW-43S
MW-43D 2.93
MW-2S
Line of Mean High Water (El 7.82 NAVD88)
MW-13
MW-21
MW-14
MW-14D 2.49
Embayment
MW-23
MW-19
MW-45S
MW-45D 2.33
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
MW-3D 3.20
MW-3S
MW-24 Existing Aggregates
MW-20D 3.66
MW-20
MW-18
MW-27
MW-25
MW-26
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
Existing City of Seattle Storm Outfall
10,000 Ton Barge
WEST MARGINAL WAY
1.0
1.5
2.0
2.5
3.0
3.5
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water
- 3.20 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 August 2015

* Not Used For Contouring Because Measurement Not Collected Within Tidal Period

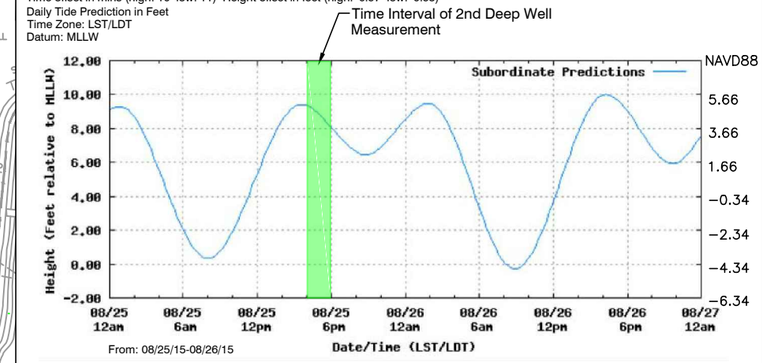
First Measurement – Deep wells were measured between 08:45 and 10:27 during low tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 3.0 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
25 August 2015 (First Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington
ERM 09/15

Project No. 0232280.03
Date: 09/17/15
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-22.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



From: 08/25/15-08/26/15

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Paved
Parking
Deed Line
Exit
Maintenance Building
MW-31D 6.70
MW-31S
SAND BLAST SHED
MW-35S
MW-35D 6.40
EXISTING DITCH
DOCK
MW-34S
MW-38D 5.61*
MW-16
MW-32DR 5.44
MW-32S
MW-4S
MW-5S
MW-7S
MW-6S
MW-1S
MW-1D 6.08
MW-33S
Existing Storm Outfall
Existing Transfer Tower
Docksider
Exist Conc Dock 55' x 500'
Duwamish Waterway
MW-10
MW-17
Existing Piles
MW-11
MW-2D 6.08
MW-2S
MW-12
MW-36S
MW-22
Line of Mean High Water (El 7.82 NAVD88)
MW-43S
MW-43D 5.53
MW-13
Embayment
MW-21
MW-14
MW-14D 5.60
MW-23
MW-19
Property Boundary Line
MW-45S
MW-45D 5.63
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
MW-3D 5.52
MW-24 Existing Aggregates
MW-20D 5.46
MW-20
MW-18
MW-3S
MW-27
Existing City of Seattle Storm Outfall
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
MW-25
Truck Entrance
MW-26
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
6.60
6.40
6.20
6.00
5.80
5.60
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water
- * Not Used For Contouring Because Measurement Not Collected Within Tidal Period

6.08 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 August 2015

First Measurement – Deep wells were measured between 16:02 and 17:55 during high tide.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.00 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
25 August 2015 (Second Measurement)
Glacier Northwest, Inc.
5900 W. Marginal Way, SW
Seattle, Washington

ERM 09/15

Project No. 0232280.03
Date: 02/01/16
Drawn By: R.Olson
CAD File: G:\0232280\03\0232280003-26.dwg

RIVER ELEVATION		
TIME	NAVD88	MLLW
07:30	5.81	3.47
15:29	6.70	2.34

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK — Location of Water Elevation Measurement of Bay Water
- 9.35 — Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 5 January 2016

NM Not Measured

Shallow wells were measured between 09:00 and 12:25.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

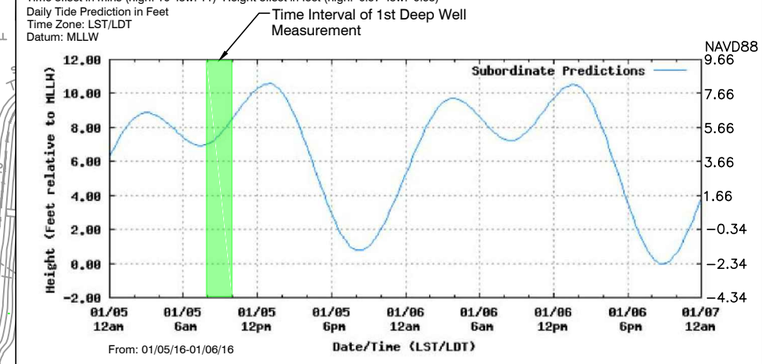
- 9.5 — Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1
Shallow Groundwater Elevation Map
5 January 2016
5900 West Marginal Way Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 02/16

Project No. 0232280.03
Date: 02/01/16
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-27.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
07:30	5.81	3.47
15:29	6.70	2.34

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Exit
Deed Line
Paved
Parking
Maintenance Building
Load-out Silos
MW-34S
MW-31D 6.18
MW-31S
SAND BLAST SHED
MW-35S
MW-35D 6.20
EXISTING DITCH
DOCK
MW-38D 6.31
Existing Office
MW-16
MW-32DR 6.39
MW-32S
MW-4S
MW-5S
MW-21S
MW-1D 6.24
MW-7S
MW-6S
MW-33S
Existing Transfer Tower
Existing Storm Outfall
Exist Conc Dock 55' x 500'
Docksider
Duwamish Waterway
MW-10
MW-17
Existing Piles
MW-2D 6.27
MW-12
MW-11
MW-2S
MW-36S
MW-22
MW-43S
MW-43D 6.35
MW-13
Line of Mean High Water (El 7.82 NAVD88)
Embayment
MW-21
MW-14
MW-14D 6.31
MW-23
MW-19
MW-45S
MW-45D 6.24
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
10,000 Ton Barge
Property Boundary Line
MW-20
MW-24 Existing Aggregates
MW-18
MW-39
MW-3D 6.40
MW-20D 6.45
MW-25
MW-26
MW-27
Existing City of Seattle Storm Outfall
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
WEST MARGINAL WAY
6.20
6.25
6.30
6.35
6.40
6.45
N
0 50 100
FEET

LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK Location of Water Elevation Measurement of Bay Water
- 6.20 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 5 January 2016

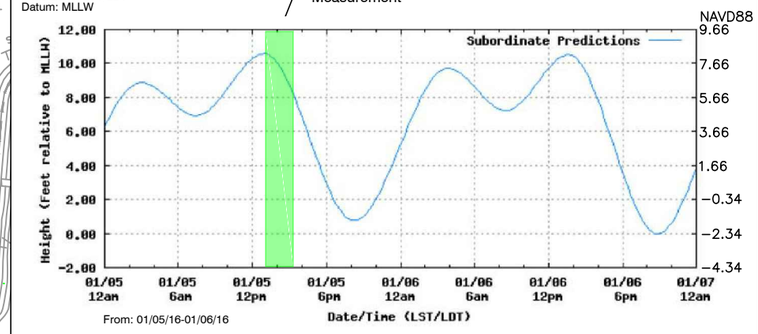
First Measurement – Deep wells were measured between 07:55 and 09:58 during low tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 6.20 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2
Deep Groundwater Elevation Map
5 January 2016 (First Measurement)
5900 West Marginal Way Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 02/16

Project No. 0232280.03
Date: 02/01/16
Drawn By: R.Olson
CAD File: G:\0232280\03\023228003-28.dwg

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Daily Tide Prediction in Feet
Time Zone: LST/LDT
Datum: MLLW



RIVER ELEVATION		
TIME	NAVD88	MLLW
07:30	5.81	3.47
15:29	6.70	2.34

San. Sewer Easement
Property Boundary Line
MW-28S
MW-29S
MW-30S
ELECTRIC SHOP
WOOD SHOP
SHED
STORAGE
HAZARDOUS WASTE STORAGE AREA
OFFICE
PAINT SHOP
WASTE OIL
SOLVENT STILL
Rail Silo
Tanks
Truck Wash
Additional Parking
Storage Silos
Load-out Silos
Deed Line
Paved
Parking
Maintenance Building
Exit
MW-31D 8.19
MW-31S
SAND BLAST SHED
MW-35S
MW-35D 8.00
EXISTING DITCH
DOCK
MW-34S
MW-38D 7.35
Existing Office
MW-16
MW-32DR 7.17
MW-32S
MW-4S
MW-5S
MW-1S
MW-1D 7.81
MW-7S
MW-6S
MW-33S
Existing Storm Outfall
Existing Transfer Tower
Exist Conc Dock 55' x 500'
Docksider
Duwamish Waterway
MW-17
MW-10
MW-2D 7.85
MW-2S
Existing Piles
MW-36S
MW-22
MW-43D 7.27
MW-43S
MW-12
MW-13
Line of Mean High Water (El 7.82 NAVD88)
MW-21
MW-23
MW-14
MW-14D 7.43
Embayment
10,000 Ton Barge
MW-19
MW-45S
MW-45D 7.47
Approximate Location of Existing Port of Seattle T115 Storm Outfall
Former City of Seattle SPU Stormwater Discharge Location
Property Boundary Line
MW-24 Existing Aggregates
MW-20D 7.17
MW-20
MW-18
MW-3S
MW-3D 7.33
MW-27
MW-25
MW-26
Property Boundary
Access to West Marginal Way
City of Seattle Storm Outfall Easement
Truck Entrance
City of Seattle Storm Outfall Easement
Existing City of Seattle Storm Outfall
WEST MARGINAL WAY
7.20
7.30
7.40
7.50
7.60
7.70
7.80
7.90
8.00
8.10
N
0 50 100
FEET

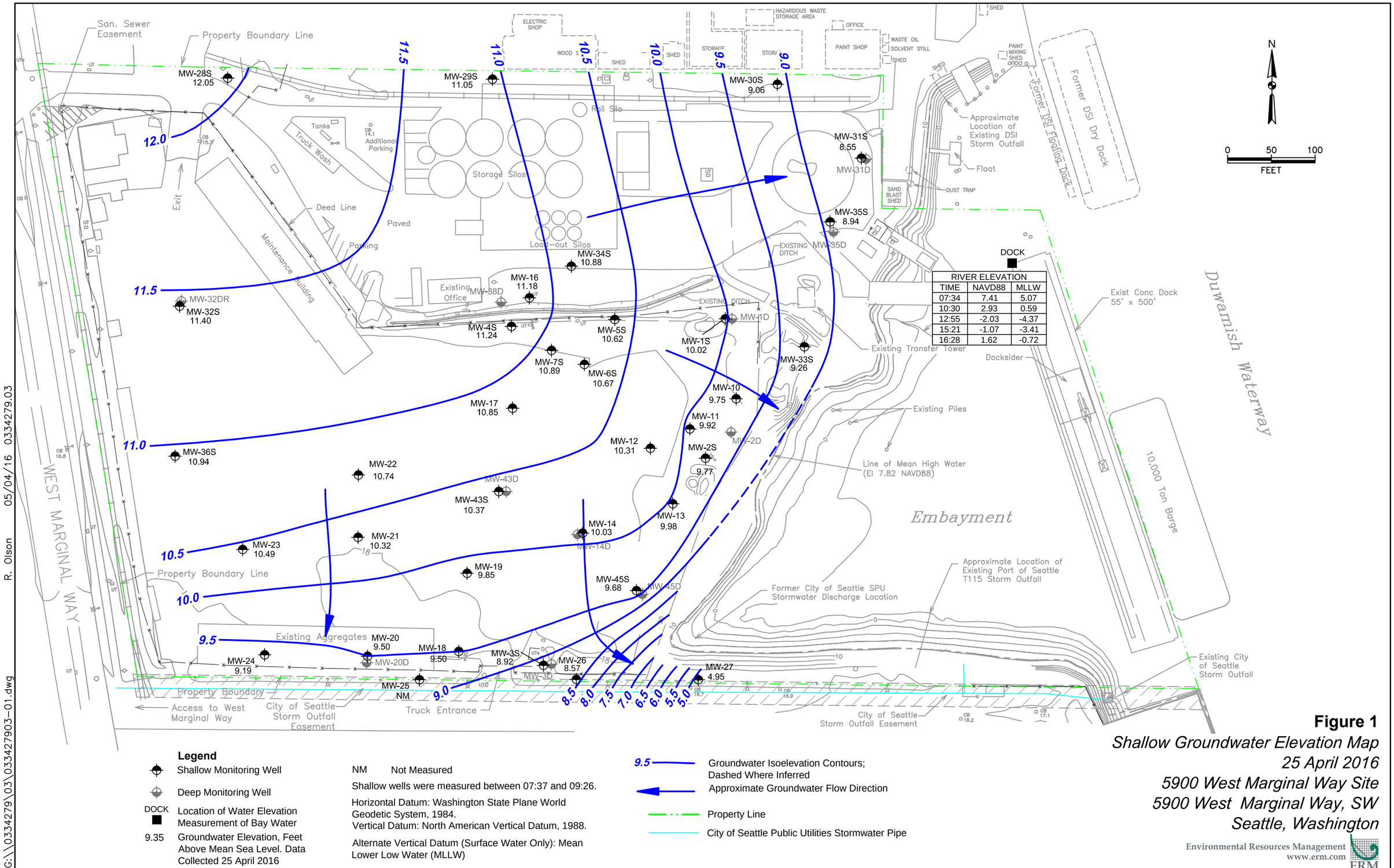
LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 7.81 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 5 January 2016

First Measurement – Deep wells were measured between 13:05 and 15:19 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 7.80 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3
Deep Groundwater Elevation Map
5 January 2016 (Second Measurement)
5900 West Marginal Way Site
5900 W. Marginal Way, SW
Seattle, Washington
ERM 02/16



Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 9.35 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 April 2016

NM Not Measured

Shallow wells were measured between 07:37 and 09:26.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1

Shallow Groundwater Elevation Map
25 April 2016
5900 West Marginal Way Site
5900 West Marginal Way, SW
Seattle, Washington

Environmental Resources Management
www.erm.com

G:\0334279\03\033427903-01.dwg 05/04/16 R. Olson

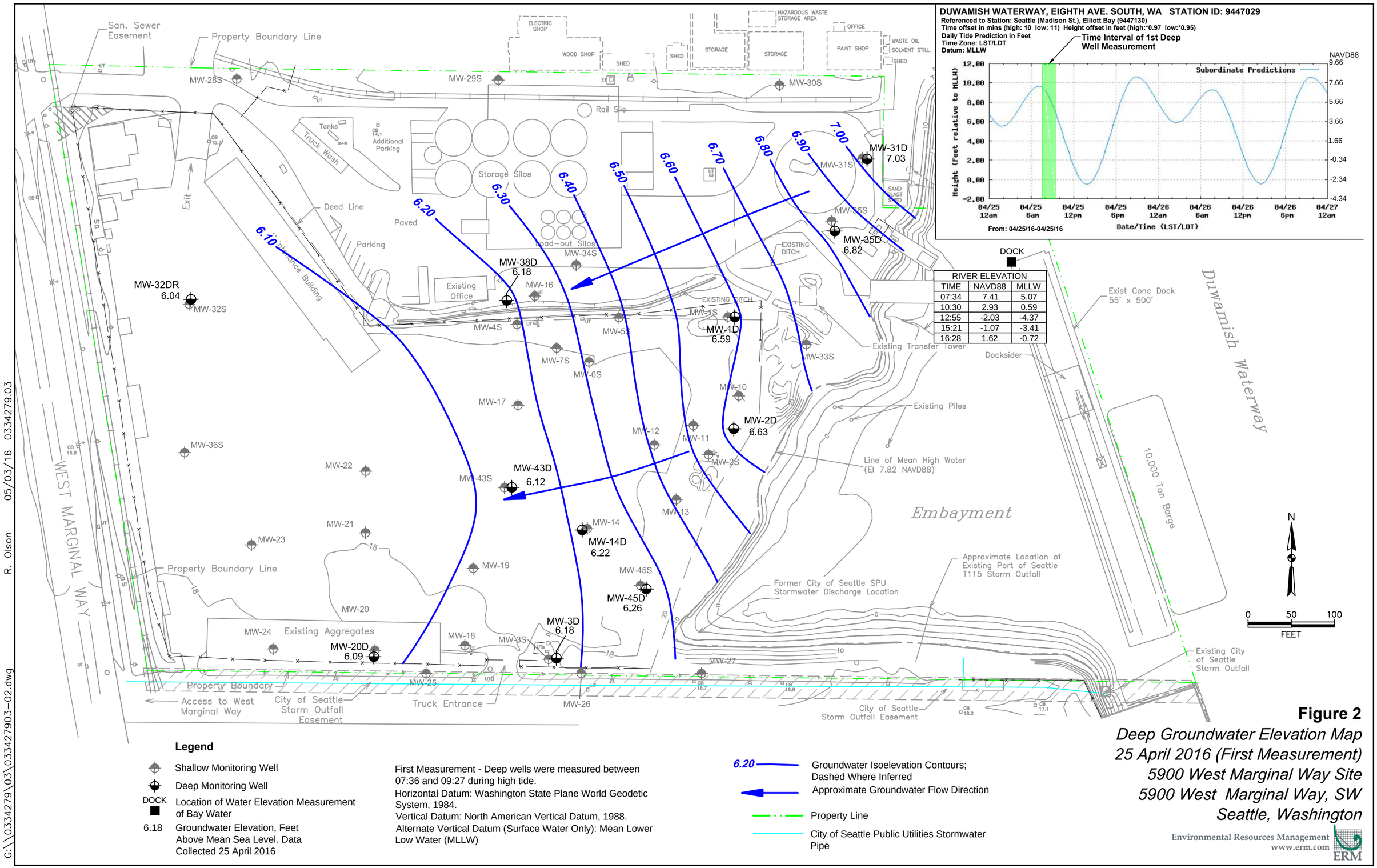
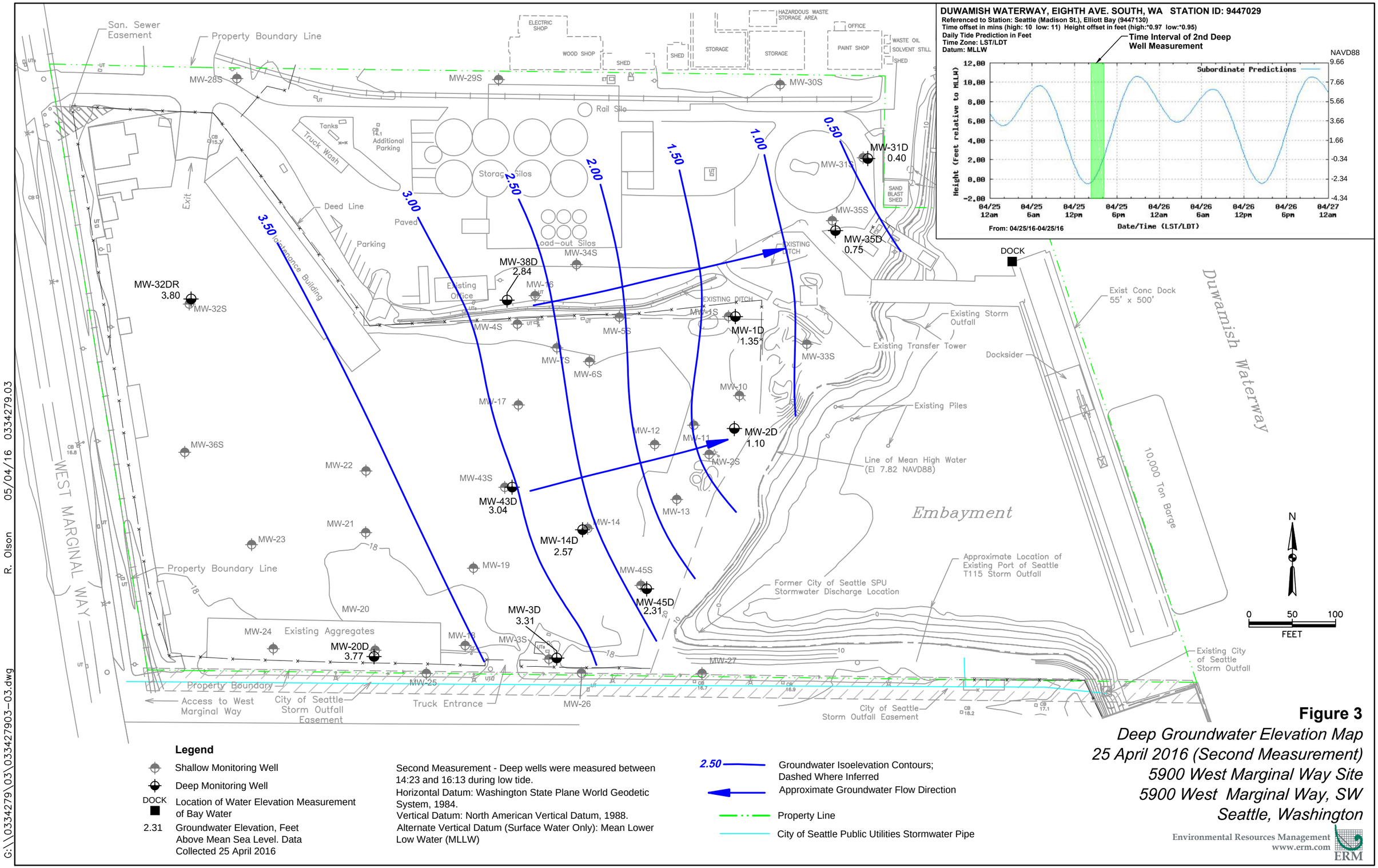


Figure 2

Deep Groundwater Elevation Map
25 April 2016 (First Measurement)
5900 West Marginal Way Site
5900 West Marginal Way, SW
Seattle, Washington

Environmental Resources Management
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G:\0334279\03\033427903-03.dwg R. Olson 05/04/16 0334279.03

Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK — Location of Water Elevation Measurement of Bay Water
- 2.31 — Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 25 April 2016

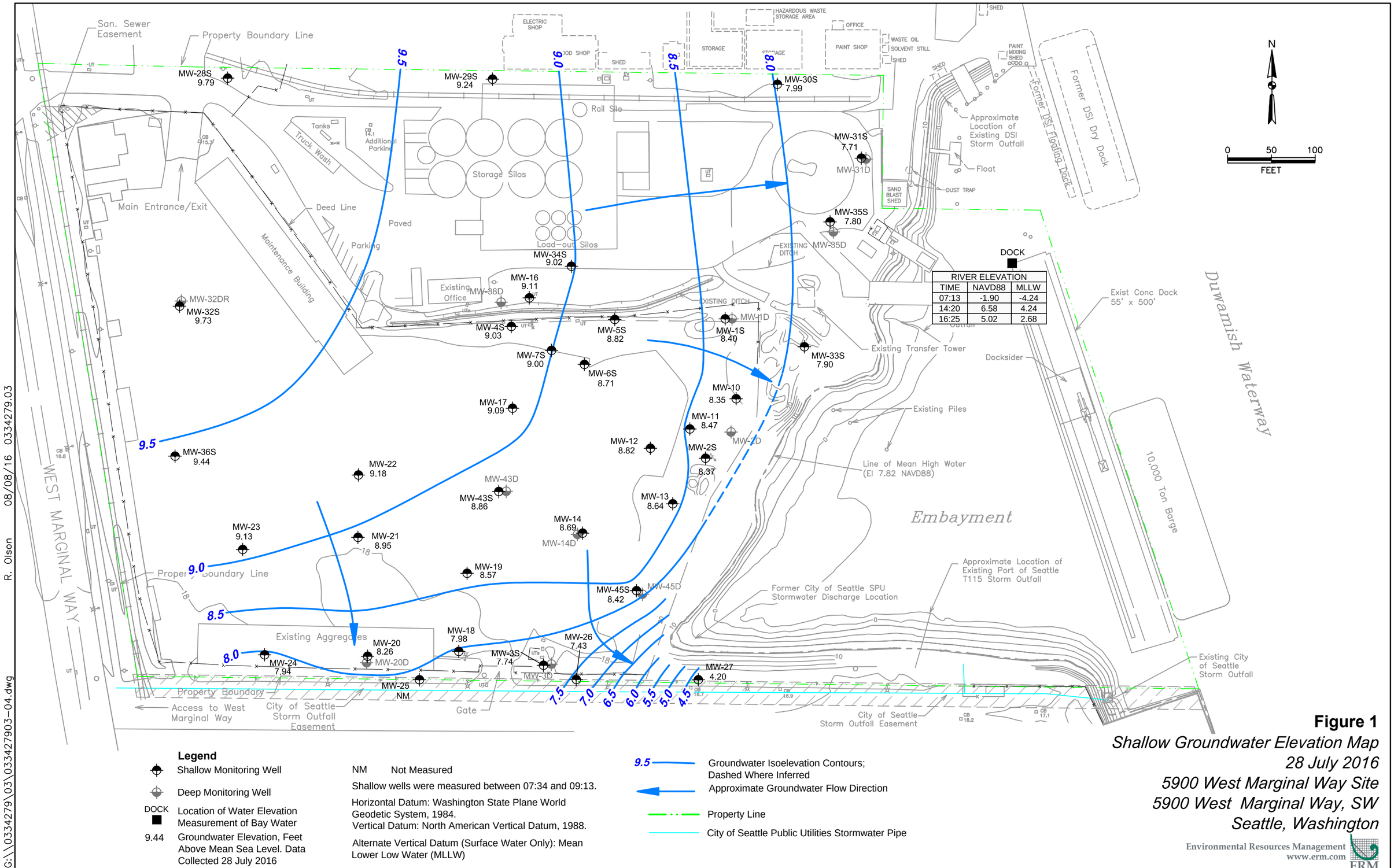
Second Measurement - Deep wells were measured between 14:23 and 16:13 during low tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 2.50 — Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3

Deep Groundwater Elevation Map
25 April 2016 (Second Measurement)
5900 West Marginal Way Site
5900 West Marginal Way, SW
Seattle, Washington

Environmental Resources Management
www.erm.com



RIVER ELEVATION		
TIME	NAVD88	MLLW
07:13	-1.90	-4.24
14:20	6.58	4.24
16:25	5.02	2.68

Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 9.44 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 28 July 2016

NM Not Measured

Shallow wells were measured between 07:34 and 09:13.

Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.

Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

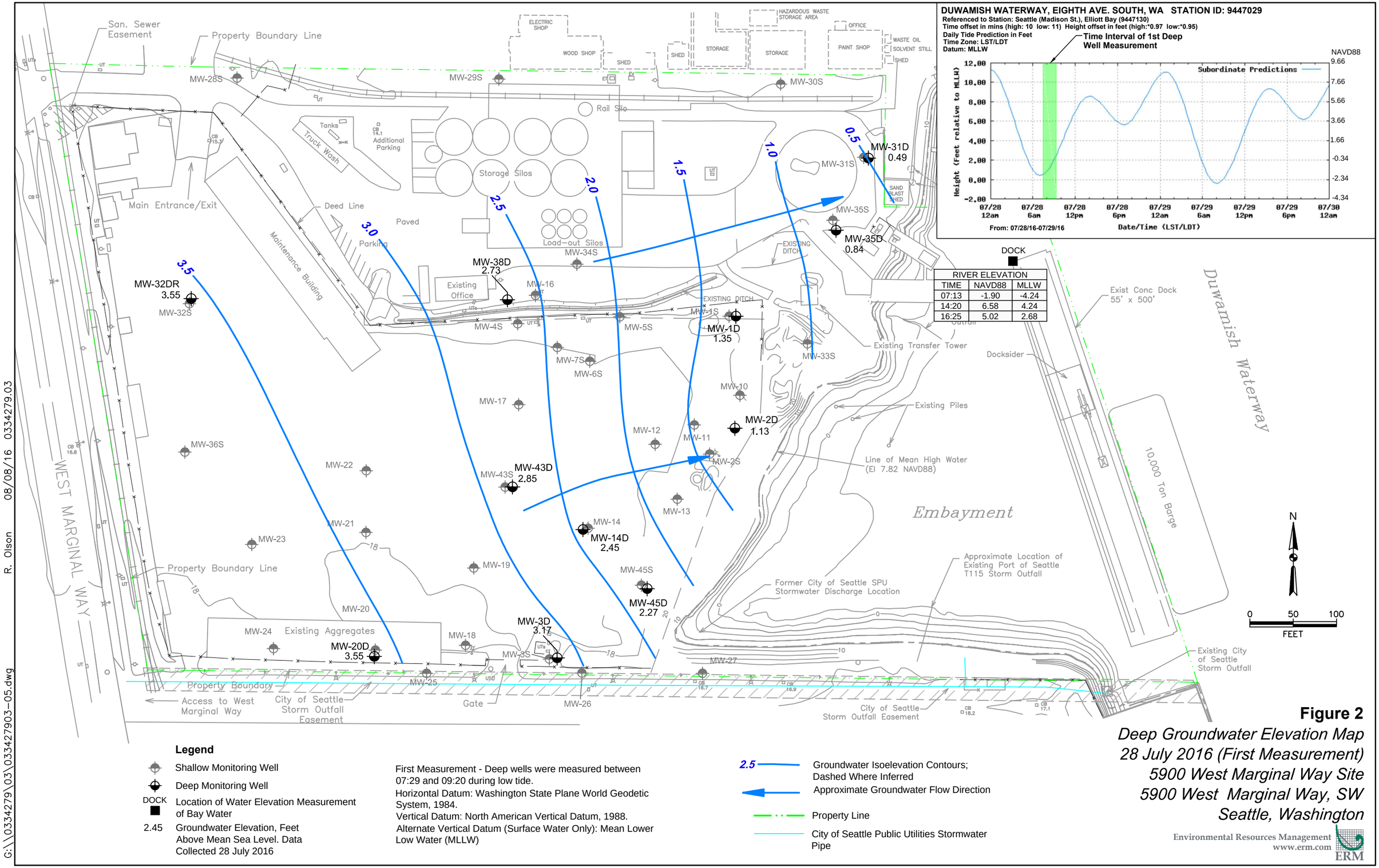
- 9.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 1

Shallow Groundwater Elevation Map
28 July 2016
5900 West Marginal Way Site
5900 West Marginal Way, SW
Seattle, Washington

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Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK ■ Location of Water Elevation Measurement of Bay Water
- 2.45 Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 28 July 2016

First Measurement - Deep wells were measured between 07:29 and 09:20 during low tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

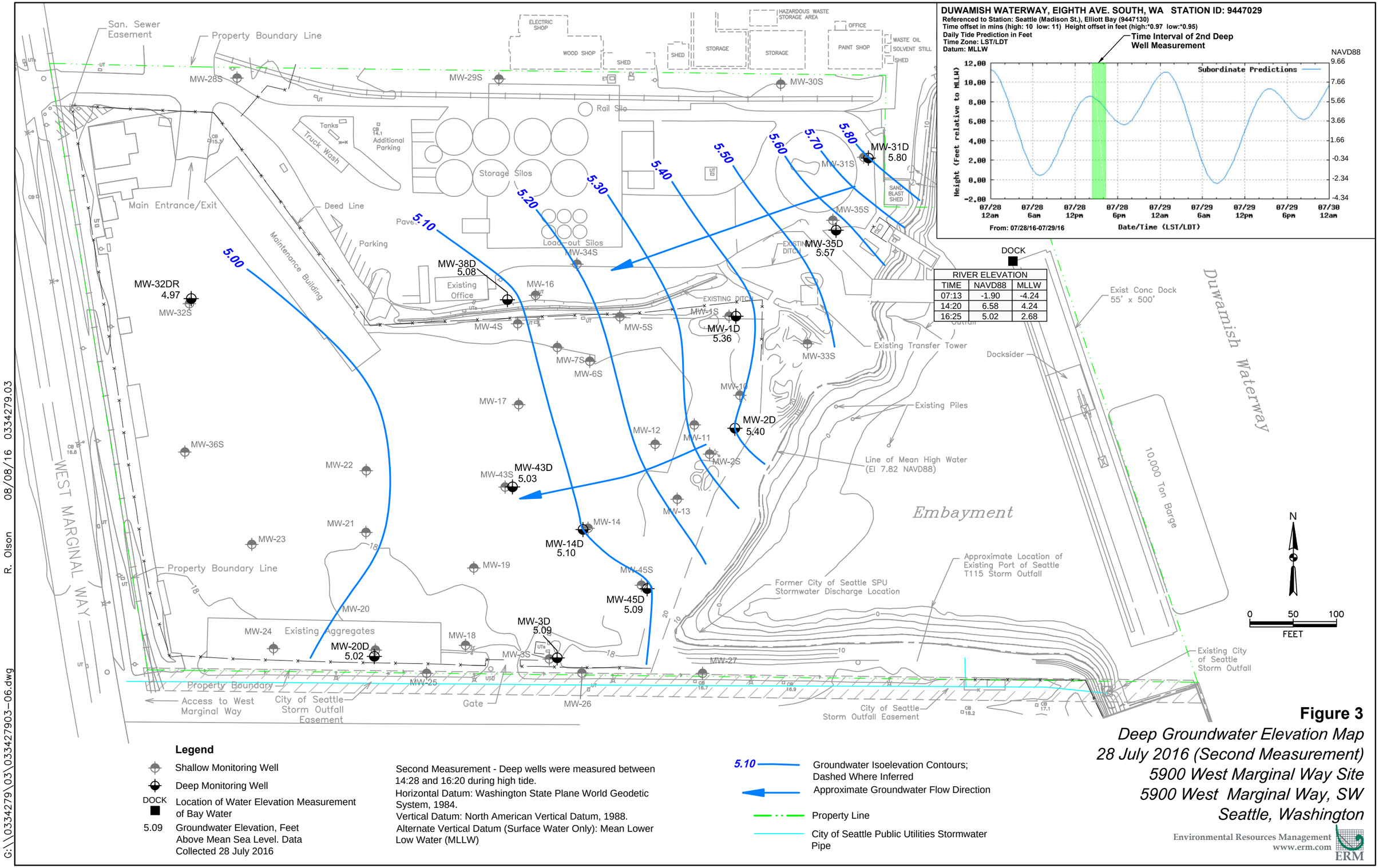
- 2.5 Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 2

Deep Groundwater Elevation Map
28 July 2016 (First Measurement)
5900 West Marginal Way Site
5900 West Marginal Way, SW
Seattle, Washington

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G:\0334279\03\033427903-05.dwg 08/08/16 0334279.03 R. Olson



G:\0334279\03\033427903-06.dwg R. Olson 08/08/16 0334279.03

Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- DOCK — Location of Water Elevation Measurement of Bay Water
- 5.09 — Groundwater Elevation, Feet Above Mean Sea Level. Data Collected 28 July 2016

Second Measurement - Deep wells were measured between 14:28 and 16:20 during high tide.
Horizontal Datum: Washington State Plane World Geodetic System, 1984.
Vertical Datum: North American Vertical Datum, 1988.
Alternate Vertical Datum (Surface Water Only): Mean Lower Low Water (MLLW)

- 5.10 — Groundwater Isoelevation Contours; Dashed Where Inferred
- Approximate Groundwater Flow Direction
- Property Line
- City of Seattle Public Utilities Stormwater Pipe

Figure 3

Deep Groundwater Elevation Map
28 July 2016 (Second Measurement)
5900 West Marginal Way Site
5900 West Marginal Way, SW
Seattle, Washington

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M:\Projects\Glacier\NW_Reichhold_Seattle\mxds\Q12017_GW_Report\Fig1 Shallow GW.mxd Created By: Mike Appel Date: 10/2/2019 Project: 0334279



Legend

- Shallow Groundwater Monitoring Well
- Deep Groundwater Monitoring Well
- Tidal Still Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour
- Property Boundary

Notes: Groundwater elevations measured in feet
January 17, 2017.
Groundwater contours elevations measured in feet.
NM = Not Measured

Source: King County: 3/23/2012, 0.25 ft per pixel NAD 1983 StatePlane Washington North FIPS 4601 Feet

Figure 1
Q1 2017 Groundwater Elevations - Shallow Monitoring Wells
5900 West Marginal Way Site
Seattle, Washington

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N

MW-31D
8.72

MW-35D
8.29

MW-32DR
6.72

MW-38D
6.07

MW-1D
7.86

MW-2D
7.95

MW-43D
7.03

MW-14D
7.31

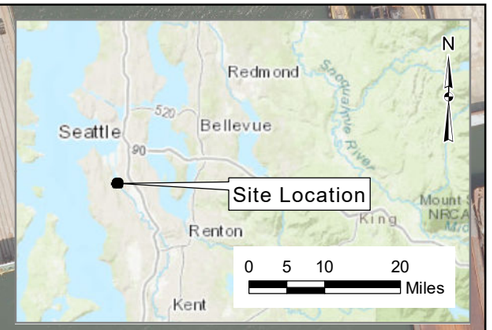
MW-45D
7.41

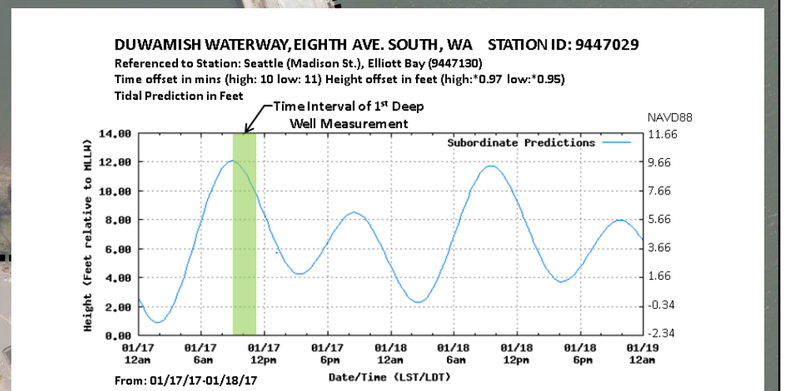
MW-3D
7.10

MW-20D
6.77

6.5
7.0
7.5
8.0
8.5

River Elevations
Time | Elevation
9:03 | 10.54 ft
14:42 | 3.17 ft
17:45 | 5.22 ft





0 50 100 200
Feet

Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Tidal Still Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Property Boundary

Source: King County: 3/23/2012, 0.25 ft per pixel NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes: Groundwater elevations measured in feet during high tide, January 17, 2017.
Groundwater elevation contours measured in feet.

Figure 2
Q1 2017 Groundwater Elevations - Deep Monitoring Wells, First Measurement
5900 West Marginal Way Site
Seattle, Washington

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M:\Projects\GlacierNW_Reichhold_Seattle\mxds\Q12017_GW_Report\Fig3 Deep GW SecondMeasure.mxd Created By: Mike Appel Date: 10/2/2019 Project: 0334279

Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Tidal Still Well
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Property Boundary

Notes: Groundwater elevations measured in feet during low tide, January 17, 2017.
Groundwater Elevation Contours measured in feet.
NM = Not Measured

Source: King County: 3/23/2012, 0.25 ft per pixel NAD 1983 StatePlane Washington North FIPS 4601 Feet

Figure 3
Q1 2017 Groundwater Elevations - Deep Monitoring Wells, Second Measurement
5900 West Marginal Way Site
Seattle, Washington

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M:\Projects\GlacierNW_Reichhold_Seattle\mxds\Q32017_GW_Report\Fig1 Shallow GW.mxd Created By: Mike Appel Date: 9/25/2017 Project: 0334279



Legend

- Shallow Groundwater Monitoring Well
- Deep Groundwater Monitoring Well
- Stilling Well
- Groundwater Flow Direction
- Inferred Groundwater Elevation Contour
- Groundwater Elevation Contour
- Property Boundary

Notes: Groundwater elevations measured in feet August 24, 2017.
Groundwater contours elevations measured in feet.
NM = Not Measured

Source: King County: 3/23/2012, 0.25 ft per pixel NAD 1983 StatePlane Washington North FIPS 4601 Feet

Figure 1
Shallow Groundwater Elevation Map
24 August 2017
5900 West Marginal Way Site
Seattle, Washington

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Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Stilling Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Property Boundary

Notes: Groundwater elevations measured in feet during high tide, August 24, 2017.
Groundwater elevation contours measured in feet.
NM = Not Measured

Source: King County: 3/23/2012, 0.25 ft per pixel NAD 1983 StatePlane Washington North FIPS 4601 Feet

Figure 2
Deep Groundwater Elevation Map
24 August 2017 (First Measurement)
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
www.erm.com

Project: 0334279
Date: 9/25/2017
Created By: Mike Appel
M:\Projects\GlacierNW_Reichhold_Seattle\mxds\Q32017_GW_Report\Fig3 Deep GW SecondMeasure.mxd

N

MW-32DR
3.92

MW-38D
3.15

MW-31D
0.86

MW-35D
1.19

MW-1D
1.71

MW-2D
1.45

MW-43D
3.25

MW-14D
2.80

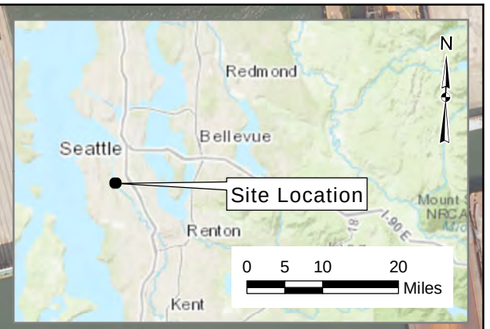
MW-45D
2.55

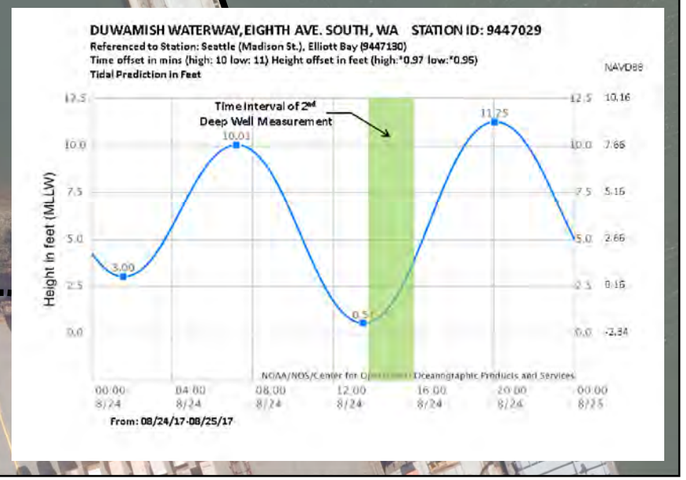
MW-20D
3.90

MW-3D
3.49

3.0
1.5
1.0
1.5
2.0
2.5
3.5
4.0

River Elevations
Time | Elevation
7:36 | 8.47 ft
11:32 | 0.63 ft
16:13 | 3.12 ft





0 50 100 200
Feet

Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Stilling Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Property Boundary

Source: King County: 3/23/2012, 0.25 ft per pixel NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes: Groundwater elevations measured in feet during low tide, August 24, 2017.
Groundwater Elevation Contours measured in feet.
NM = Not Measured

Figure 3
Deep Groundwater Elevation Map
24 August 2017 (Second Measurement)
5900 West Marginal Way Site
Seattle, Washington

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ERM

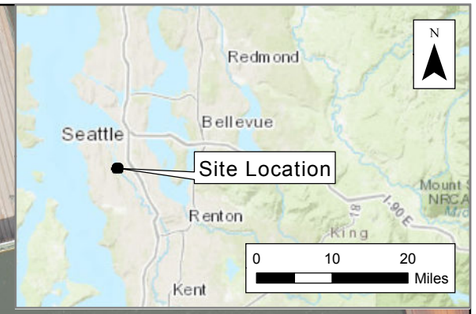
DRAWN BY: GIS

N

MW-28S 12.60
MW-29S 12.25
MW-30S 11.13
MW-31S 10.18
MW-35S 10.48
MW-34S 12.63
MW-16S 12.77
MW-32S 12.27
MW-4S 12.72
MW-5S 12.45
MW-1S 12.14
MW-7S 12.49
MW-6S 12.40
MW-33S 10.71
MW-10S 11.69
MW-17S 12.37
MW-12S 12.03
MW-11S 11.78
MW-2S 11.54
MW-36S 11.92
MW-22S 11.74
MW-43S 11.77
MW-13S 11.07
MW-14S 11.44
MW-21S 11.32
MW-23S 11.42
MW-19S 10.93
MW-45S 10.92
MW-20S 10.58
MW-24S 10.20
MW-18S 10.30
MW-3S 9.99
MW-26S 9.62
MW-27S 5.84

12.5
12.0
12.0
11.5
11.0
11.0
10.5
10.5
10.0
9.5
9.0
8.0
7.0

River Elevations
Time | Elevation
10:35 | 6.75 ft
13:20 | 4.61 ft



0 100 200 Feet

Legend

- Shallow Groundwater Monitoring Well
- Deep Groundwater Monitoring Well
- Stilling Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour
- Property Boundary

Notes: Groundwater elevations measured in feet
January 4, 2018.
Groundwater contours elevations measured in feet.

Figure 1
Shallow Groundwater Elevation Map
04 January 2018
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
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ERM

Source: Esri - World Topoographic Map; NAD 1983 StatePlane Washington North FIPS 4601 Feet

M:\Projects\GlacierNW_Reichhold_Seattle\mxds\Q12018_GW_Report\Fig1 Shallow GW.mxd REVISED 03/12/2018 SCALE: 1:1,200 when printed at 11x17

DRAWN BY: Kara Batdorff

M:\Projects\GlacierNW_Reichhold_Seattle\mxds\Q12018_GW_Report\Fig2 Deep GW FirstMeasure.mxd REVISED: 03/12/2018, SCALE: 1:1,290 when printed at 11x17

N

MW-32DR
6.12

MW-38D
6.49

MW-1D
7.33

MW-31D
8.38

MW-35D
7.89

MW-2D
7.36

MW-43D
6.41

MW-14D
6.57

MW-45D
6.61

MW-20D
6.18

MW-3D
6.38

6.25
6.50
6.75
7.00
7.25
7.50
7.75
8.00
8.25

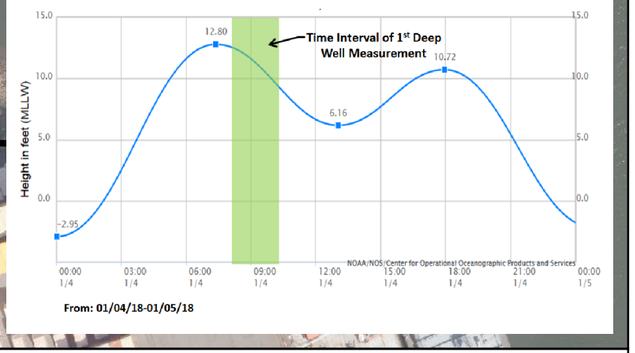
River Elevations
Time | Elevation
10:35 | 6.75 ft
13:20 | 4.61 ft

0 100 200 Feet

N

Redmond
Bellevue
Seattle
Site Location
Renton
Kent
King
Mount Rainier NRCA
0 10 20 Miles

DUWAMISH WATERWAY, EIGHTH AVE. SOUTH, WA STATION ID: 9447029
Referenced to Station: Seattle (Madison St.), Elliott Bay (9447130)
Time offset in mins (high: 10 low: 11) Height offset in feet (high:*0.97 low:*0.95)
Tidal Prediction in Feet



From: 01/04/18-01/05/18

Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Stilling Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Property Boundary

Notes: Groundwater elevations measured in feet during high tide, January 4, 2018.
Groundwater elevation contours measured in feet.

Figure 2
Deep Groundwater Elevation Map
04 January 2018 (First Measurement)
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
www.erm.com
ERM

Source: Esri - World Topoographic Map; NAD 1983 StatePlane Washington North FIPS 4601 Feet

DRAWN BY: Kara Batdorff

M:\Projects\Glacier\NW_Reichhold_Seattle\mxds\Q12018_GW_Report\Fig3 Deep GW SecondMeasure.mxd REVISED: 03/12/2018, SCALE: 1:1,287 when printed at 11x17



Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Stilling Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Property Boundary

Notes: Groundwater elevations measured in feet during low tide, January 4, 2018.
Groundwater elevation contours measured in feet.

Figure 3
Deep Groundwater Elevation Map
04 January 2018 (Second Measurement)
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
www.erm.com

Source: Esri - World Topoographic Map; NAD 1983 StatePlane Washington North FIPS 4601 Feet

APPENDIX L TERRESTRIAL ECOLOGICAL EVALUATION SUPPORTING INFORMATION



Photograph: 1	Property boundary along W. Marginal Way, looking at West Duwamish Greenbelt.



Photograph: 2	Gravel fill substrate in vegetated area of site.



Photograph: 3	Butterfly bush and Scotch broom.



Photograph: 4	English ivy, fence between vegetated area along shore and site.



Photograph: 5	Main vegetated area along embankment.



Photograph: 6	Bird nests.

Terrestrial Ecological Evaluation Process - Primary Exclusions

Documentation Form

Exclusion #	Exclusion Detail	Yes or No?	Are Institutional Controls Required If The Exclusion Applies?
1	Will soil contamination be located at least 6 feet beneath the ground surface and less than 15 feet?	Yes / No	Yes
	Will soil contamination located at least 15 feet beneath the ground surface?	Yes / No	No
	Will soil contamination located below the conditional point of compliance?	Yes / No	Yes
2	Will soil contamination be covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed?	Yes / No	Yes
3	Is there less than 1.5 acres of contiguous undeveloped land on the site, or within 500 feet of any area of the site affected by hazardous substances **other than** those listed in the table of Hazardous Substances of Concern? And Is there less than 0.25 acres of contiguous undeveloped land on or within 500 feet of any area of the site affected by hazardous substances **listed in** the table of Hazardous Substances of Concern?	Yes / No Yes / No	Other factors determine
4	Are concentrations of hazardous substances in the soil less than or equal to natural background concentrations of those substances at the point of compliance	Yes / No	No

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

Terrestrial Ecological Evaluation Process- Simplified or Site-Specific Evaluation?

Documentation Form

	Terrestrial Concern	Response (Circle One)
*1	Is the site is located on or directly adjacent to an area where management or land use plans will maintain or restore native or semi-native vegetation?	**Yes / No**
*2a	Is the site used by a threatened or endangered species?	**Yes / No**
*2b	Is the site used by a wildlife species classified by the state department of fish and wildlife as a "priority species" or "species of concern" under Title 77 RCW?	**Yes / No**
*2c	Is the site used by a plant species classified by the Washington state department of Natural Resources natural heritage program as "endangered," "threatened," or "sensitive" under Title 79 RCW.	**Yes / No**
*3	Is the site (area where the contamination is located) located on a property that contains at least ten acres of native vegetation within 500 feet of the area where the contamination is located?	**Yes / No**
4	Has the department determined that the site may present a risk to significant wildlife populations?	**Yes / No**

*1 This includes for example, green-belts, protected wetlands, forestlands, locally designated environmentally sensitive areas, open space areas managed for wildlife, and some parks or outdoor recreation areas. This does not include park areas used for intensive sport activities such as baseball or football.

*2a What are the threatened or endangered species in Washington state?

*2b Which plant species are classified as threatened, endangered, or sensitive? Where can I find out more information about this topic?

*2c For plants, "used" means that a plant species grows at the site or has been found growing at the site. For animals, "used" means that individuals of a species have been observed to live, feed or breed at the site.

*3 For this analysis, do not include native vegetation beyond the property boundary.

The following sources shall be used in making this determination: Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, and L.C. Hitchcock, C.L. Hitchcock, J.W. Thompson and A. Cronquist, 1955-1969, Vascular Plants of the Pacific Northwest(5 volumes). Areas planted with native species for ornamental or landscaping purposes shall not be considered to be native vegetation. [WAC 173-340-7491(2)(c)(i)]

(Here's a link to the Seattle Public Library and the Washington State Library to borrow a copy of Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, or you may purchase it through your favorite bookseller. Here's an additional link to a useful online Field Guide to Selected Rare Plants of Washington developed by the Washington State Department of Natural Resources' Natural Heritage Program (WNHP) and the Spokane District of the U.S.D.I. Bureau of Land Management (BLM) which contains fact sheets for 139 vascular plant species and one lichen species.

Here is an aid to calculating area and an aerial photo depicting a site, its 500 foot boundary and several labeled circles identifying various areas for reference in judging the area of native vegetation within the 500 foot radius.

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493] [Index of Tables]

[TEE Home]

Table 749-1

Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).	
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.	
Area (acres) / Points 0.25 or less / 4 0.5 / 5 1.0 / 6 1.5 / 7 2.0 / 8 2.5 / 9 3.0 / 10 3.5 / 11 4.0 or more / 12	6
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	3
3)[a] Enter a score in the box to the right for the habitat quality of the site, using the following rating system[b]. High=1, Intermediate=2, Low=3	3
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.[c]	1
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	1
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	8

Notes for Table 749-1

[a] It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

[b] **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

> **Low:** Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-successional native plant communities present; relatively high species diversity; used by an uncommon or rare species; priority habitat (as defined by the Washington Department of fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

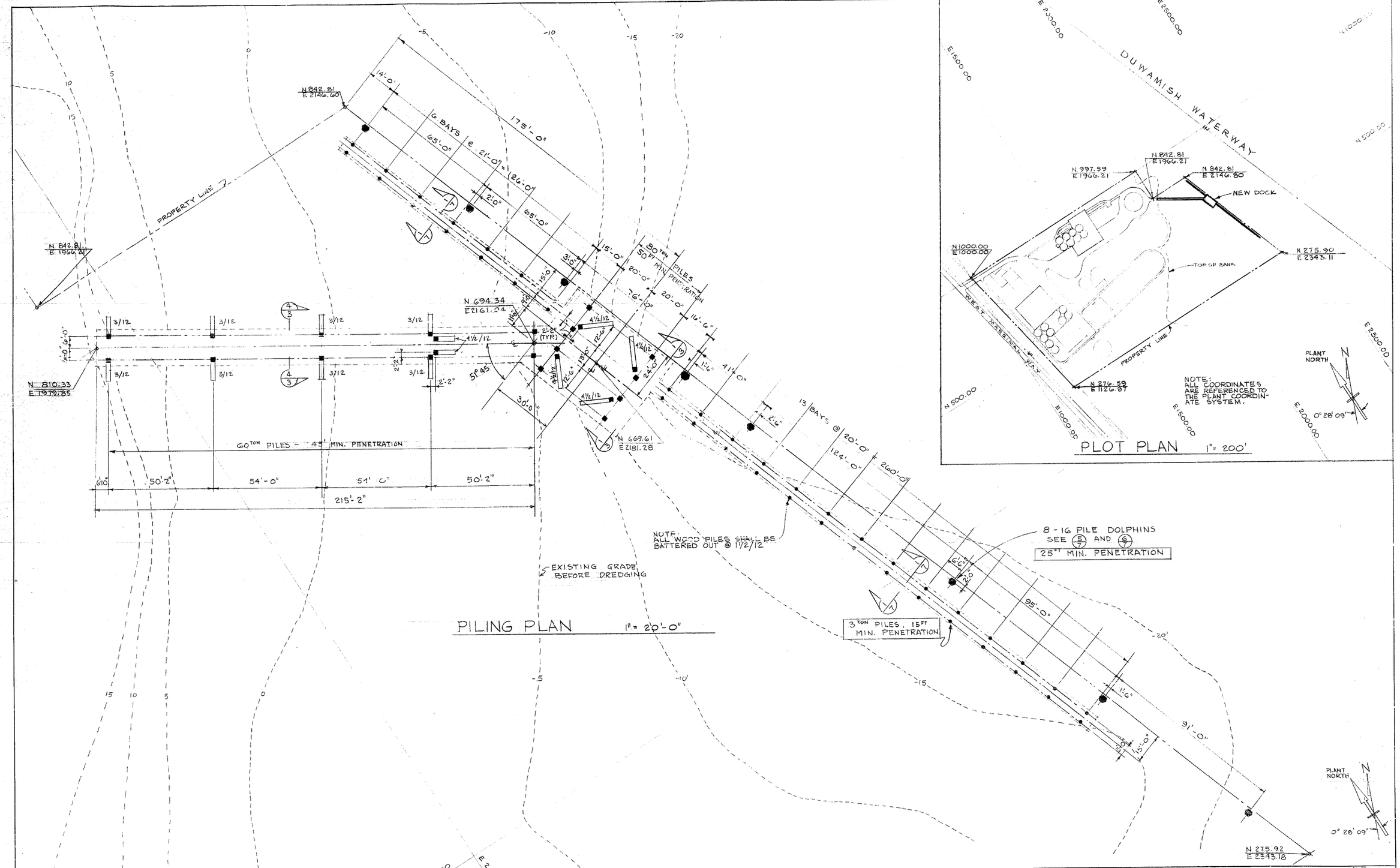
[c] Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use b mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

[Area Calculation Aid] [Aerial Photo with Area Designations] [TEE Table 749-1] [Index of Tables]

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

APPENDIX M PORT OF SEATTLE ENGINEERING ARCHIVES 1967



PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
PLOT PLAN, PILING PLAN

DATE 11 MAY 67
DRAWN STATE
CHECKED KONZEN
FILE NO. 6701
SHEET NO. 1 OF 7

WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

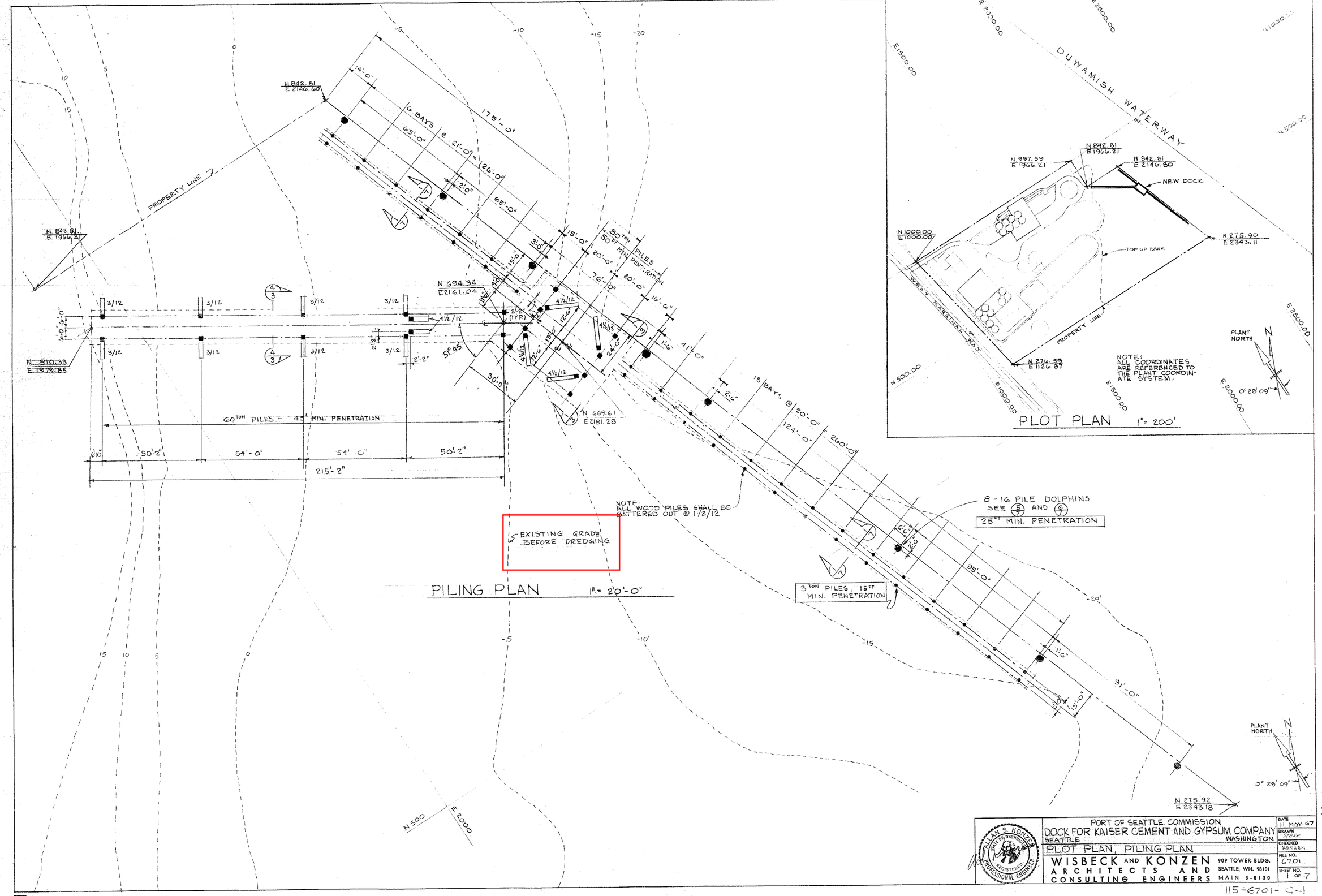
ALLAN S. KONZEN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

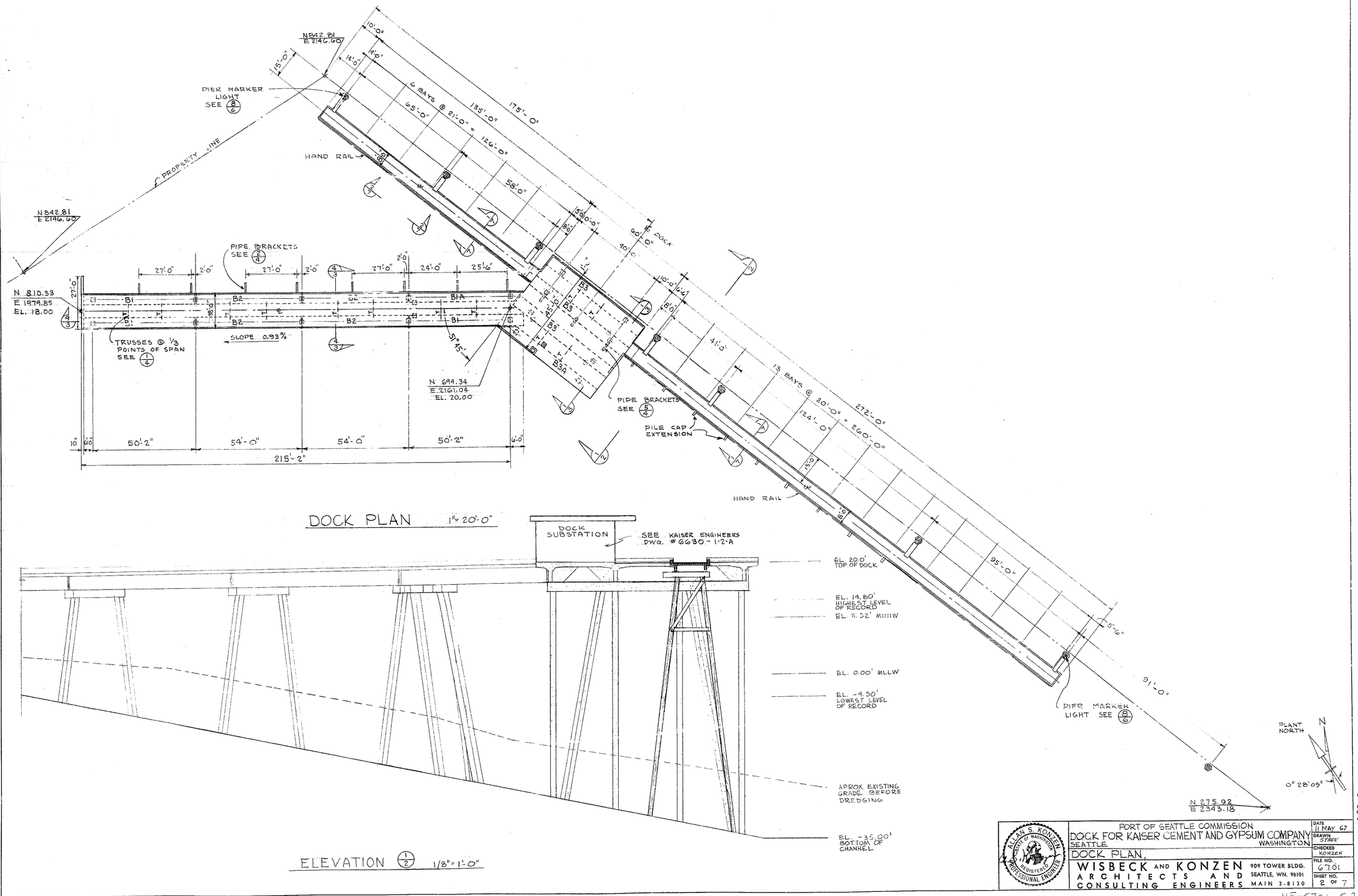
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115-6701-C-1

KEUFFEL & ESSER CO.

NOTE: If the microfilmed document is less clear than this


PROPERTY LINE
N 842.81
E 2146.60
14'-0"
6 BAYS @ 21'-0" = 126'-0"
175'-0"
65'-0"
2'-0"
65'-0"
15'-0"
3'-0"
80'-0"
76'-10"
20'-0"
16'-6"
1'-6"
41'-0"
2'-6"
13 BAYS @ 20'-0"
124'-0"
260'-0"
80 TON
50 FT MIN PENETRATION
PILES
N 694.34
E 2161.24
2½" (TYP)
4½/12
4½/12
4½/12



DOCK PLAN 1" = 20'-0"

ELEVATION (1/2) 1/8" = 1'-0"

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
DOCK PLAN,

ALLAN S. KONZEN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

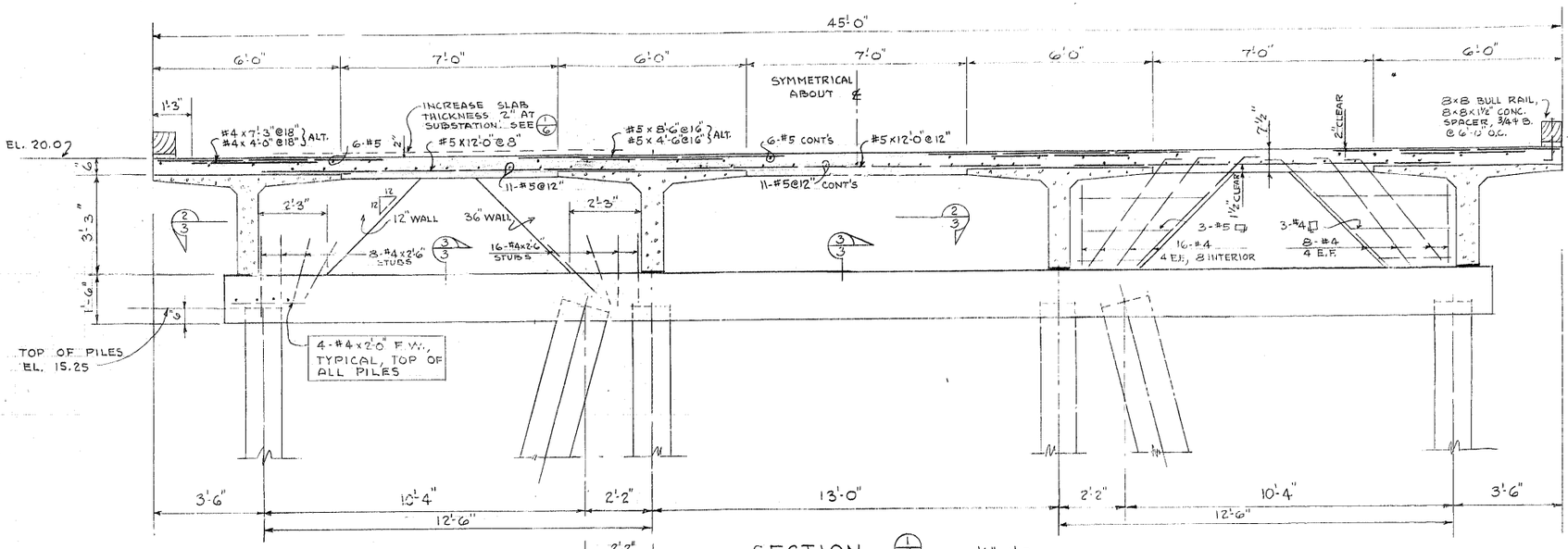
WISBECK AND KONZEN
ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

DATE	11 MAY 67
DRAWN	STARK
CHECKED	KONZEN
FILE NO.	6701
SHEET NO.	2 OF 7

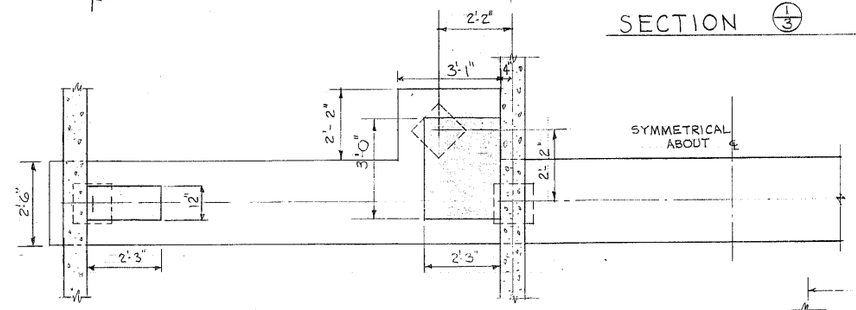
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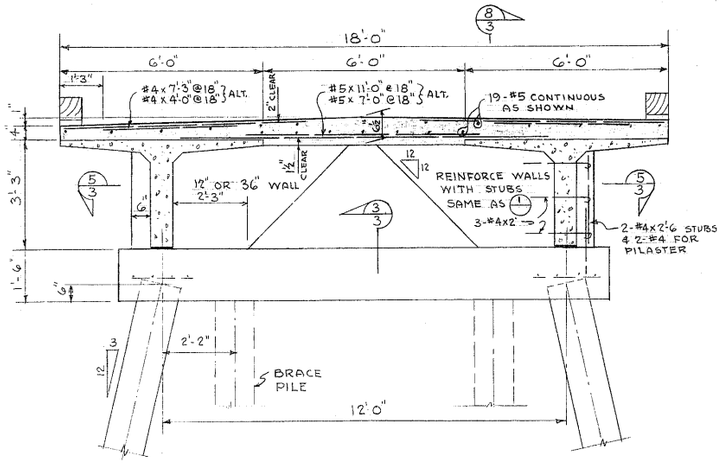
KRUPPEL & KEISER CO.



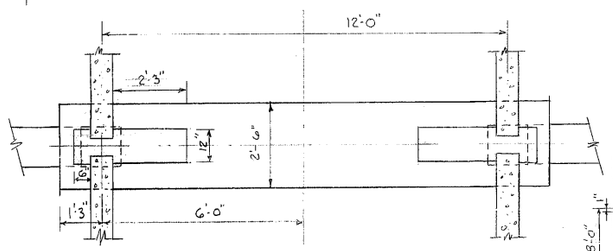
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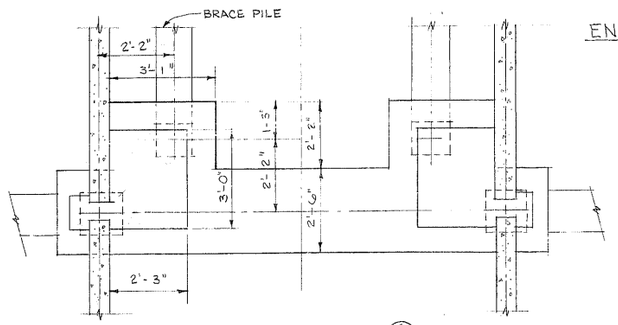
PLAN VIEW (2/3) ½" = 1'-0"



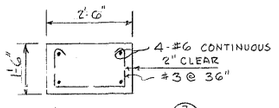
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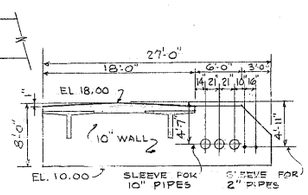
PLAN VIEW (5/3) ½" = 1'-0"



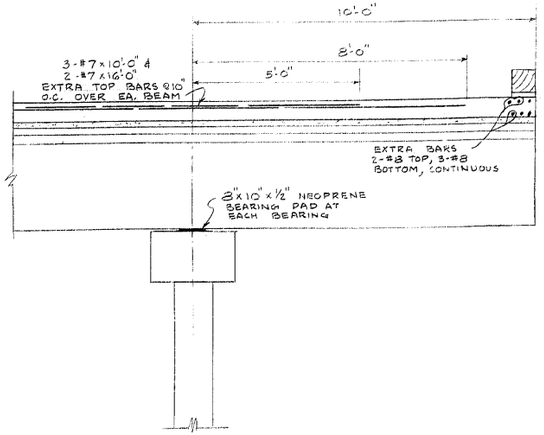
PLAN VIEW (6/3) ½" = 1'-0"
(VIEW AT BRACE PILE BENT)



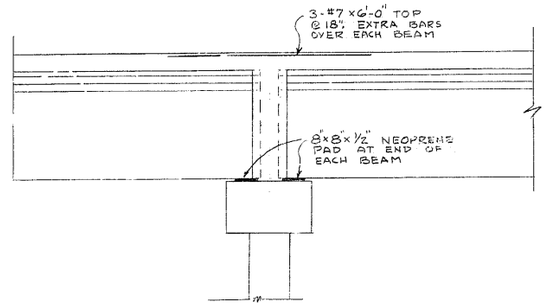
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TYPICAL CAP BEAM



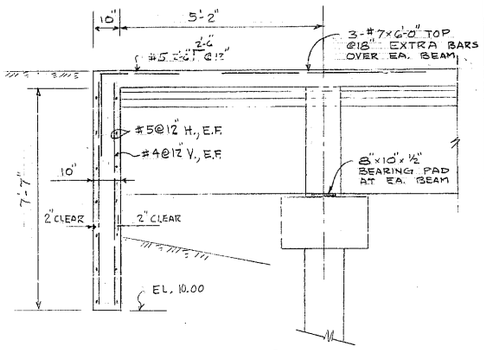
END WALL ELEVATION (10/3) ⅛" = 1'-0"



SECTION (7/3) ½" = 1'-0"



SECTION (8/3) ½" = 1'-0"



SECTION (9/3) ½" = 1'-0"

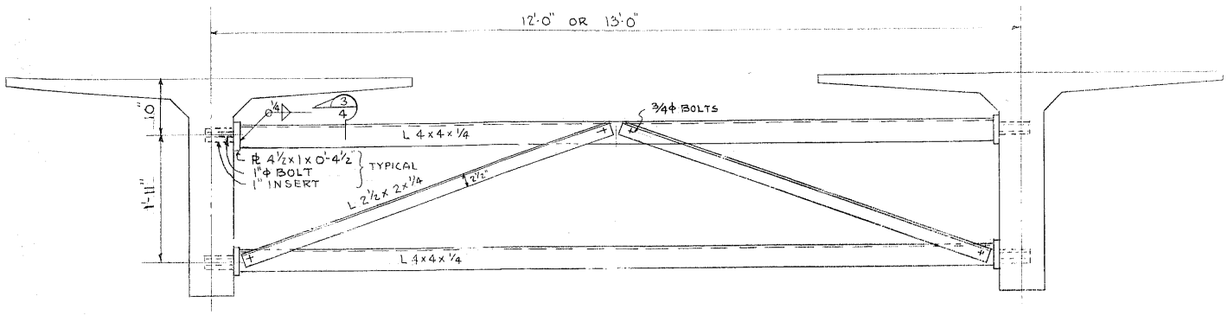
PORT OF SEATTLE COMMISSION DOCK FOR KAISER CEMENT AND GYPSUM COMPANY SEATTLE WASHINGTON CONCRETE DOCK DETAILS	DATE 11 MAY 57 DRAWN Stuck CHECKED KONZEN FILE NO. 6701 SHEET NO. 3 OF 7
WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS — 909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130	

ALLAN S. KONZEN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

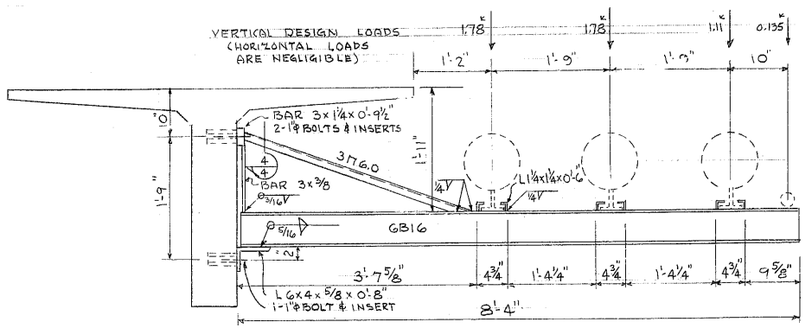
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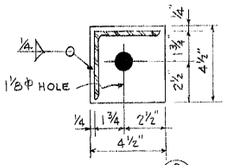
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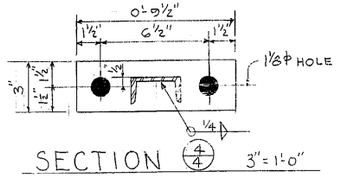
STIFFENING TRUSS (1/4) 1" = 1'-0"



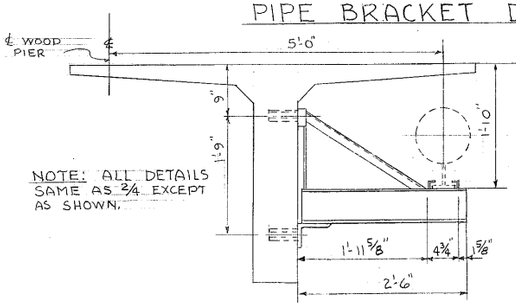
PIPE BRACKET DETAIL (2/4) 1" = 1'-0"



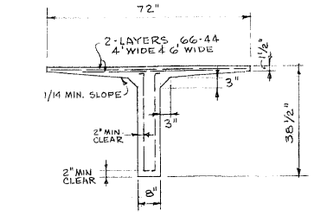
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SECTION (4/4) 3" = 1'-0"

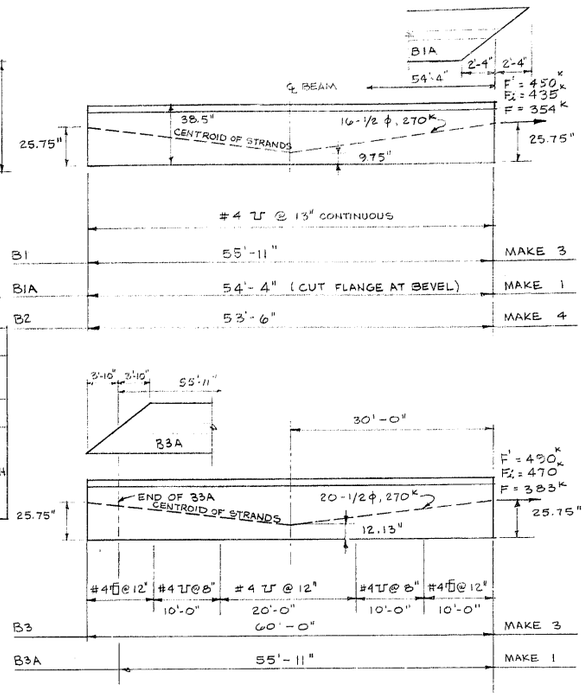


PIPE BRACKET DETAIL (5/4) 1" = 1'-0"



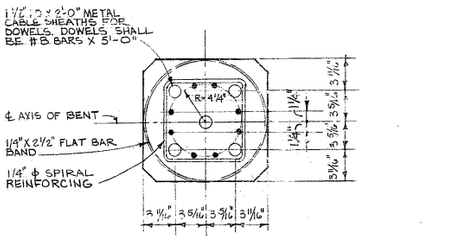
SECTION (6/4) 1/2" = 1'-0"

TEE BEAM DATA
A = 486" I = 73,444" ^{4} y_b = 25.73"
S_T = 5750" ^{3} S_B = 2860" ^{3}
f'_c = 6 ^{k}/$_{in}$" f'_{ci} = 4,8 ^{k}/$_{in}$"
STRANDS SHALL BE 1/2" ϕ, 7 WIRE PRESTRESSED CONCRETE STRAND HAVING A MIN. BREAKING STRENGTH OF 270 ^{k}/$_{in}$" AND AREA OF .153"

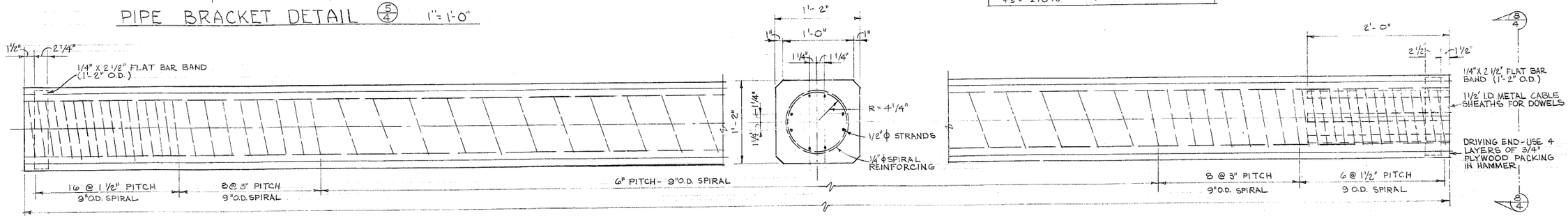


TEE BEAM

CONCRETE PILE DATA	
SIZE	14" SQUARE
SECTION AREA	194 IN^2
WEIGHT	202 #/FT.
SECTION MODULUS	445 IN^3
CONCRETE COMP. STRENGTH	f'_c = 6 ^{k}/$_{in}$", f'_{ci} = 3.5 ^{k}/$_{in}$"
TENSIONING UNITS	8-1/2 STRANDS
PRESTRESS FORCE BEFORE RELEASE	266 K = F'
DESIGN PRESTRESS FORCE	223 K = F
PRESTRESS IN CONCRETE	1145 PSI.
DESIGN CAPACITY	100 TONS
STRANDS SHALL BE 7-WIRE, 1/2ϕ, A=.153" f'_s = 270 ^{k}/$_{in}$"	



CONCRETE PILE TOP (A/4) 1 1/2" = 1'-0"



CONCRETE PILE DETAIL (7/1) 1 1/2" = 1'-0"

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
BEAM, TRUSS, BRACKET & PILE DETAILS

ALLAN S. KONZEN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

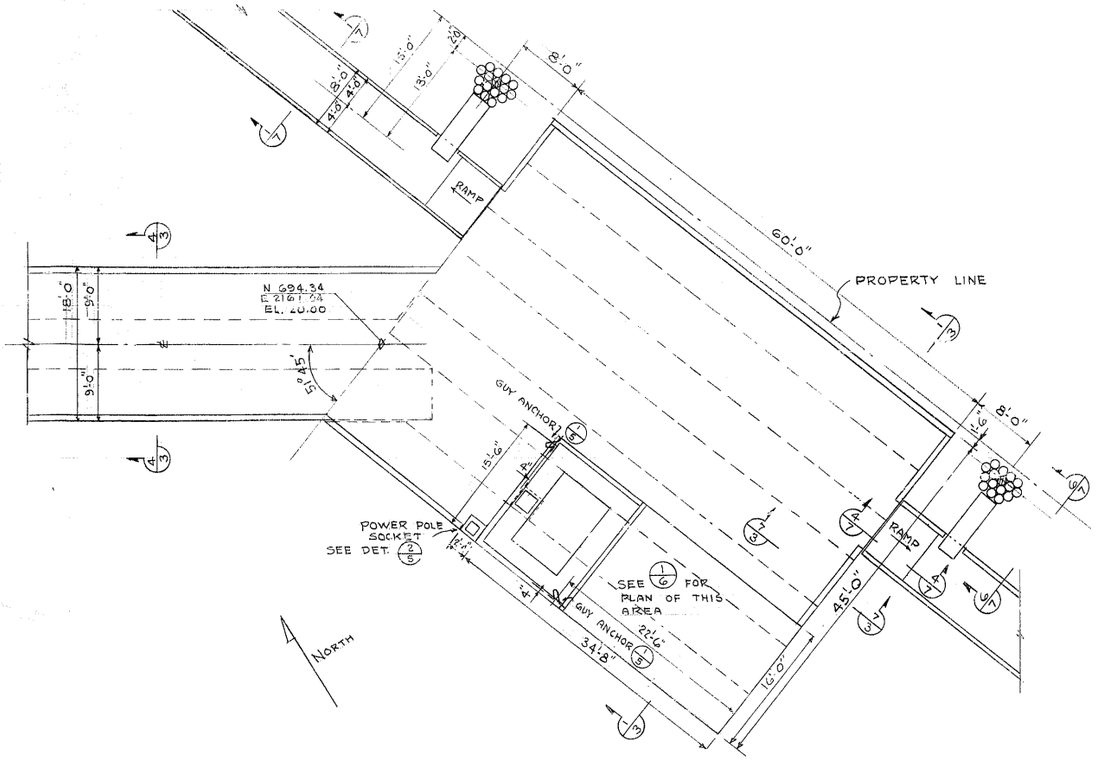
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909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

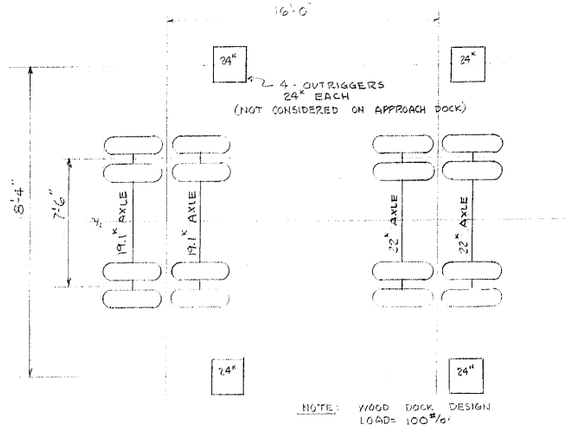
DATE 11 MAY. 67
DRAWN STARK
CHECKED KONZEN
FILE NO. 6701
SHEET NO. 4 OF 7

250-4

115-6701-C-4

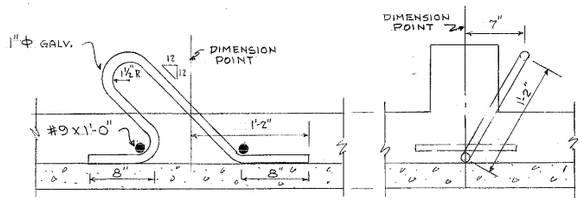
KRUPPEL & BROCH CO.



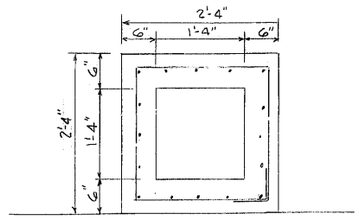


DESIGN LOAD
35 TON MOBILE CRANE

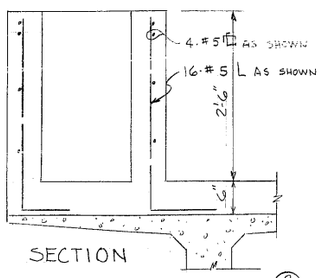
PARTIAL DOCK PLAN 1/8" = 1'-0"



GUY ANCHOR DETAIL (1/5)



PLAN



SECTION

POLE SOCKET DETAIL (2/5) 1"=1'-0"

GENERAL NOTES

1 PILING LOADS. MAXIMUM DESIGN LOAD ON WOOD PILES IS 3 TONS; ON CONCRETE PILES, 80 TONS.

2 WOOD PILING SHALL BE CLASS B, WITH 12# CREOSOTE TREATMENT, AND SHALL COMPLY WITH SECTION 3.28.07(2) OF THE S.B.C.

3. LUMBER SHALL BE CONSTRUCTION GRADE DOUGLAS FIR. ALL LUMBER SHALL BE TREATED WITH AN 8# CREOSOTE EXCEPT HAND RAIL, BULL RAILS, AND DECKING WHICH SHALL BE PRESSURE TREATED WITH A 5% PENTA SOLUTION.

4. STRUCTURAL STEEL SHALL CONFORM TO A-36, DESIGN STRESS = 17.5 ksi. UNSUPERVISED CONSTRUCTION

5. FIELD CONCRETE SHALL BE SUPERVISED, f'_c 3750 #/s", WITH NOT LESS THAN 6½ SACKS OF CEMENT PER YARD AND NOT MORE THAN 5 GALLONS OF WATER PER SACK. CONCRETE IS DESIGNED BY ULTIMATE STRENGTH METHOD.

6. REINFORCING STEEL SHALL BE HIGH STRENGTH STEEL WITH A YIELD STRENGTH OF 60 ksi CONFORMING TO ASTM A-432. MILL REPORTS SHALL BE SUBMITTED TO THE SEATTLE BUILDING DEPARTMENT AND THE ENGINEER PRIOR TO PLACING.

7 INSERTS IN PRESTRESSED BEAMS SHALL BE "RICHMOND" E.L.S OR EQUAL INSERT HAVING TESTED ULTIMATE SHEAR AND TENSION STRENGTHS OF 5# AND 20K RESPECTIVELY.

8. NEOPRENE BEARING PADS SHALL HAVE A 70 HARDNESS

9. PRECAST CONCRETE SHOP DRAWINGS ARE TO BE APPROVED BY THE ENGINEER AND THEN BY THE S.B.D. PRIOR TO FABRICATION.

250-5

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
PARTIAL DOCK PLAN & DETAILS & NOTES

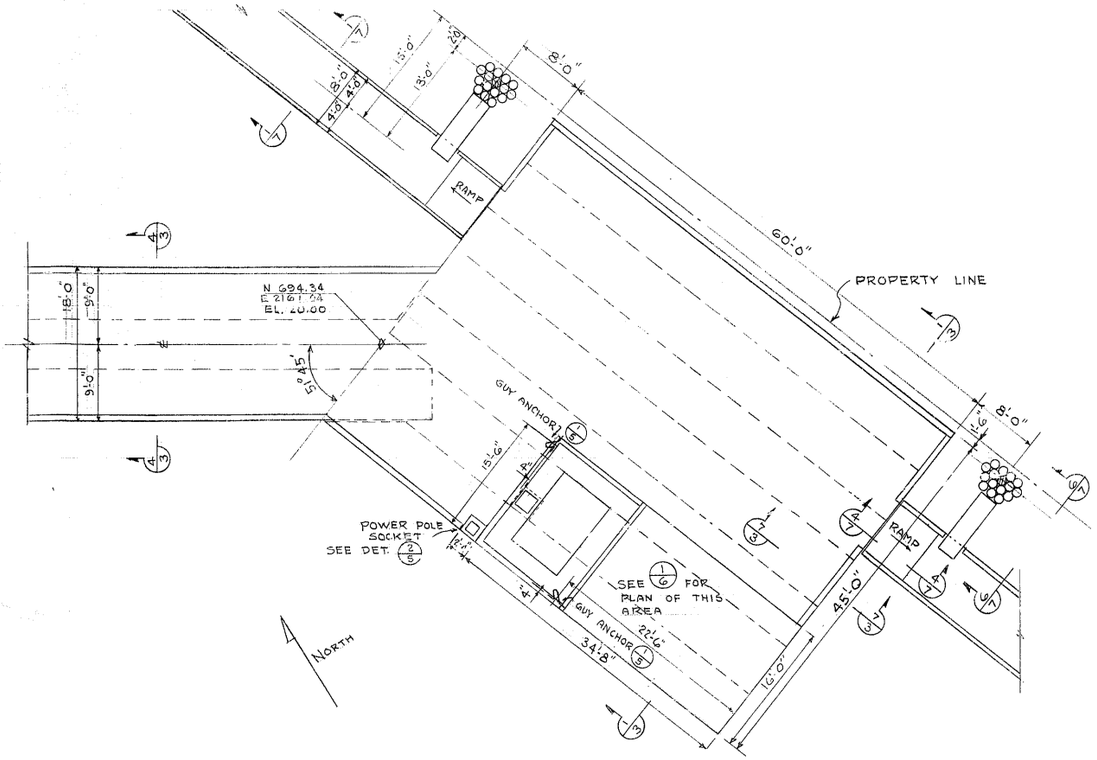
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DRAWN	KONZEN
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FILE NO.	C701
SHEET NO.	5 OF 7

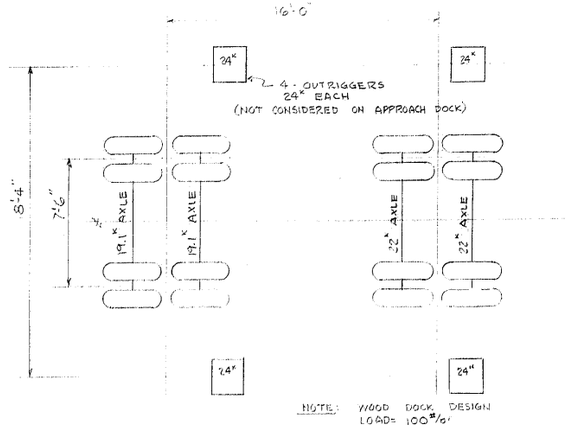
WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

ALLAN S. KONZEN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

KE KEUFFEL & ESSER CO.

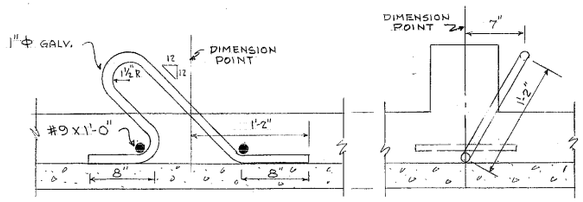
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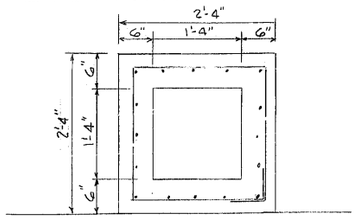


DESIGN LOAD
35 TON MOBILE CRANE

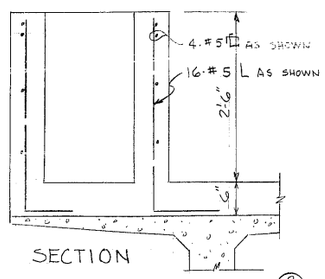
PARTIAL DOCK PLAN 1/8" = 1'-0"



GUY ANCHOR DETAIL 1/5



PLAN



SECTION

POLE SOCKET DETAIL 2/5 1"=1'-0"

GENERAL NOTES

1 PILING LOADS. MAXIMUM DESIGN LOAD ON WOOD PILES IS 3 TONS; ON CONCRETE PILES, 80 TONS.

2 WOOD PILING SHALL BE CLASS B, WITH 12# CREOSOTE TREATMENT, AND SHALL COMPLY WITH SECTION 3.28.07(2) OF THE S.B.C.

3. LUMBER SHALL BE CONSTRUCTION GRADE DOUGLAS FIR. ALL LUMBER SHALL BE TREATED WITH AN 8# CREOSOTE EXCEPT HAND RAIL, BULL RAILS, AND DECKING WHICH SHALL BE PRESSURE TREATED WITH A 5% PENTA SOLUTION.

4. STRUCTURAL STEEL SHALL CONFORM TO A-36. DESIGN STRESS = 17.5 ksi. UNSUPERVISED CONSTRUCTION

5. FIELD CONCRETE SHALL BE SUPERVISED, f'_c 3750 #/s", WITH NOT LESS THAN 6½ SACKS OF CEMENT PER YARD AND NOT MORE THAN 5 GALLONS OF WATER PER SACK. CONCRETE IS DESIGNED BY ULTIMATE STRENGTH METHOD.

6. REINFORCING STEEL SHALL BE HIGH STRENGTH STEEL WITH A YIELD STRENGTH OF 60 ksi CONFORMING TO ASTM A-432. MILL REPORTS SHALL BE SUBMITTED TO THE SEATTLE BUILDING DEPARTMENT AND THE ENGINEER PRIOR TO PLACING.

7 INSERTS IN PRESTRESSED BEAMS SHALL BE "RICHMOND" E.L.S OR EQUAL INSERT HAVING TESTED ULTIMATE SHEAR AND TENSION STRENGTHS OF 5# AND 20K RESPECTIVELY.

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ALLAN S. KONZEN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
PARTIAL DOCK PLAN & DETAILS & NOTES

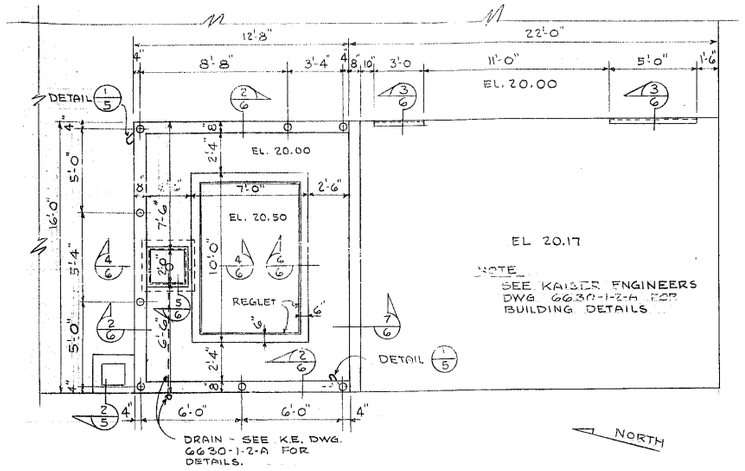
WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

DATE	17 MAY 67
DRAWN	KONZEN
CHECKED	
FILE NO.	C701
SHEET NO.	5 OF 7

250-5

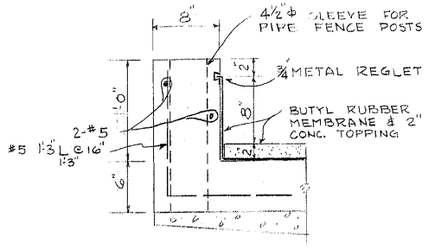
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KE KEUFFEL & ESSER CO.

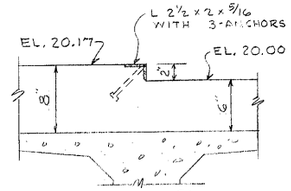


PART PLAN AT DOCK SUBSTATION (1/6)

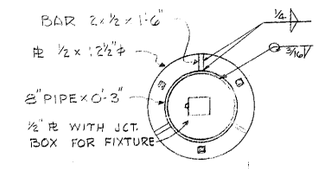
1/4" = 1'-0"

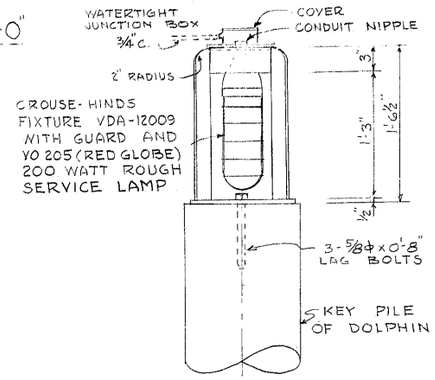


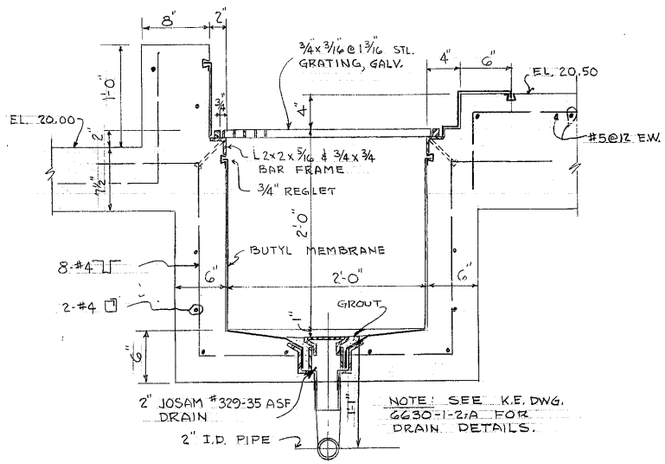
CURB SECTION (2/6) 1½"-1'-0"



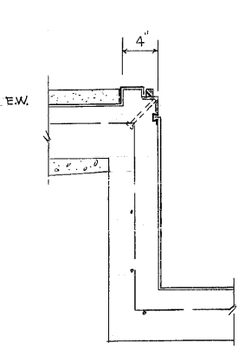
SECTION (3/6) 1½=1'-0"



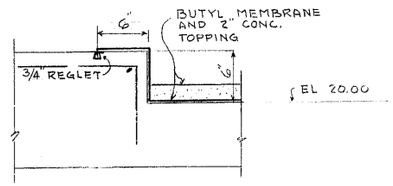




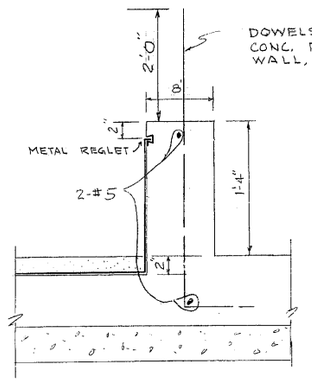
SECTION (4/6) 1½=1'-0"



SECTION (5/6) 1½=1'-0"



SECTION (6/6) 1½"=1'-0"



SECTION (7/6) 1½"=1'-0"

PIER MARKER LIGHT DETAIL (8/6)

1½" = 1'-0"

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
PLAN AT DOCK SUBSTATION & DETAILS

WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

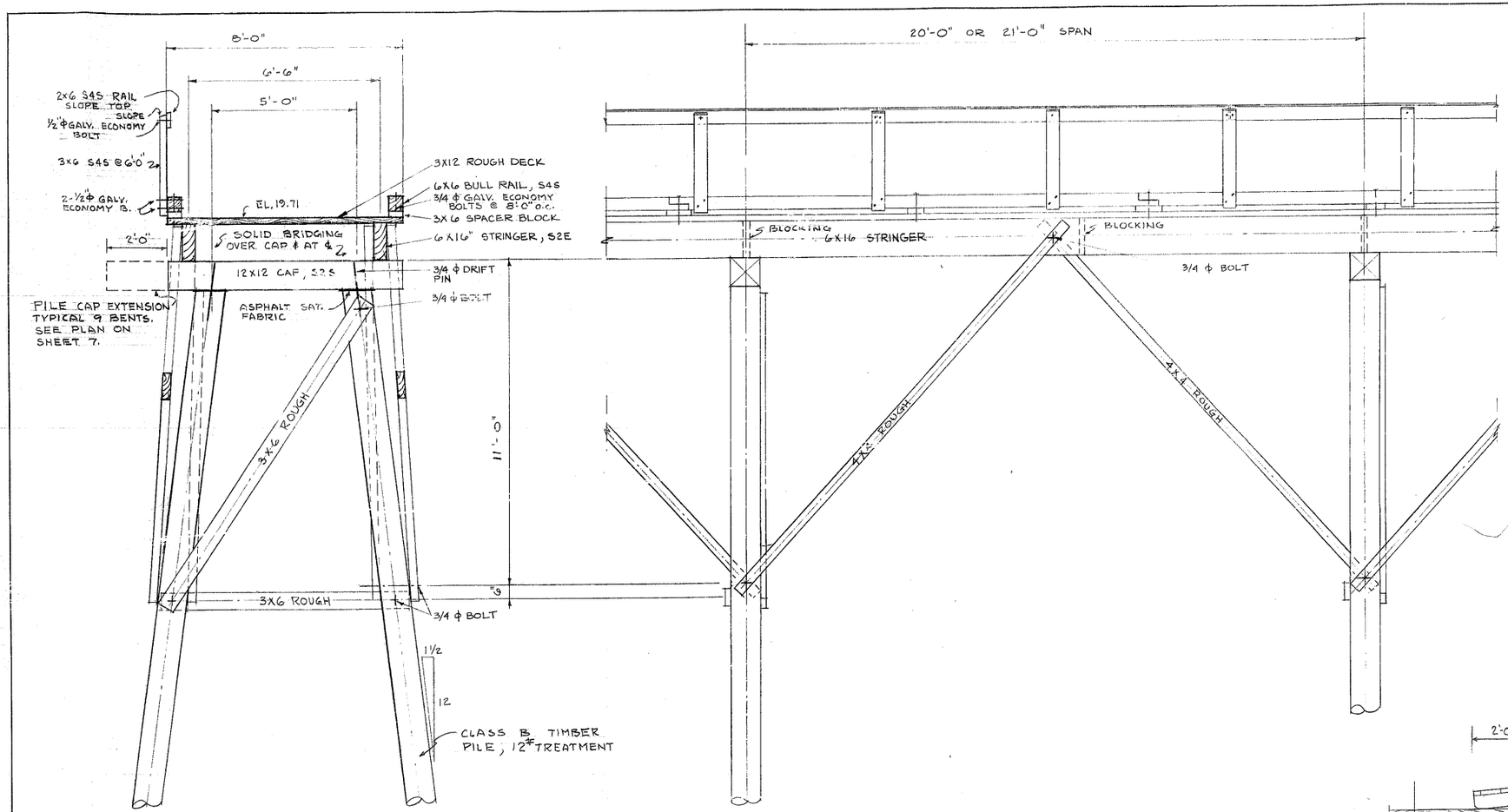
ALLAN S. KONZEN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

DATE 11 MAY 57
DRAWN KONZEN
CHECKED
FILE NO. 6701
SHEET NO. 6 OF 7

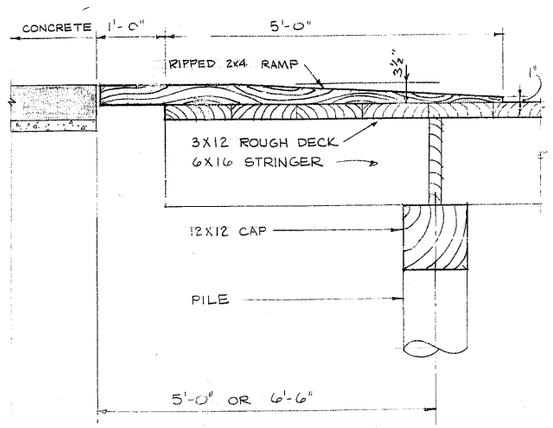
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KEUFFEL & ESSER CO.

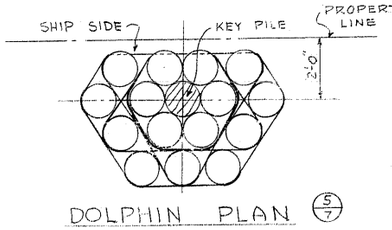


SECTION ① 1/2" = 1'-0"

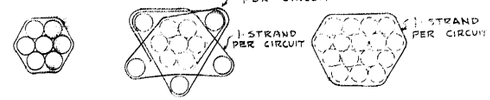


ELEVATION ② 1/2" = 1'-0"

SECTION ④ 1" = 1'-0"

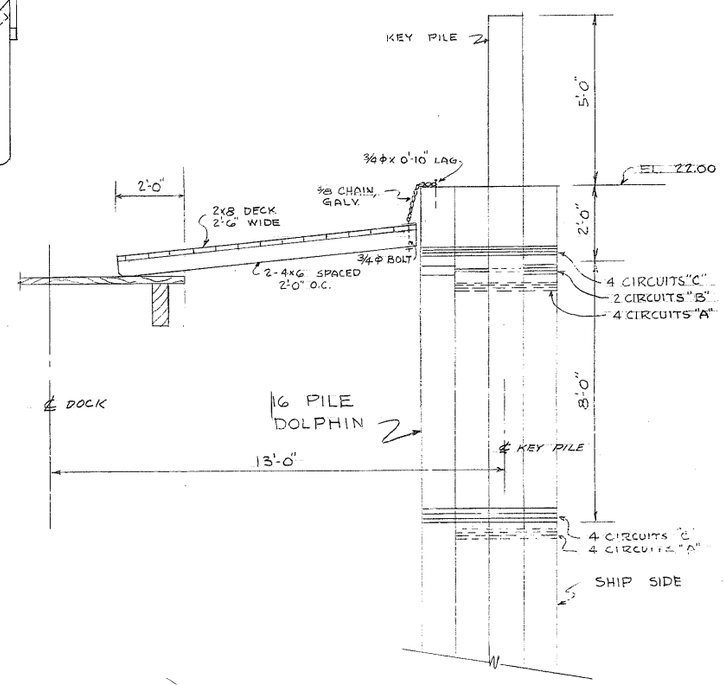


DOLPHIN PLAN ⑤/⑦



WIRE ROPE CIRCUITS

5/8" WIRE ROPE



ELEVATION ⑥/⑦ ½" = 1'-0"

ALLAN S. KONZEN REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
WOOD DOCK DETAILS

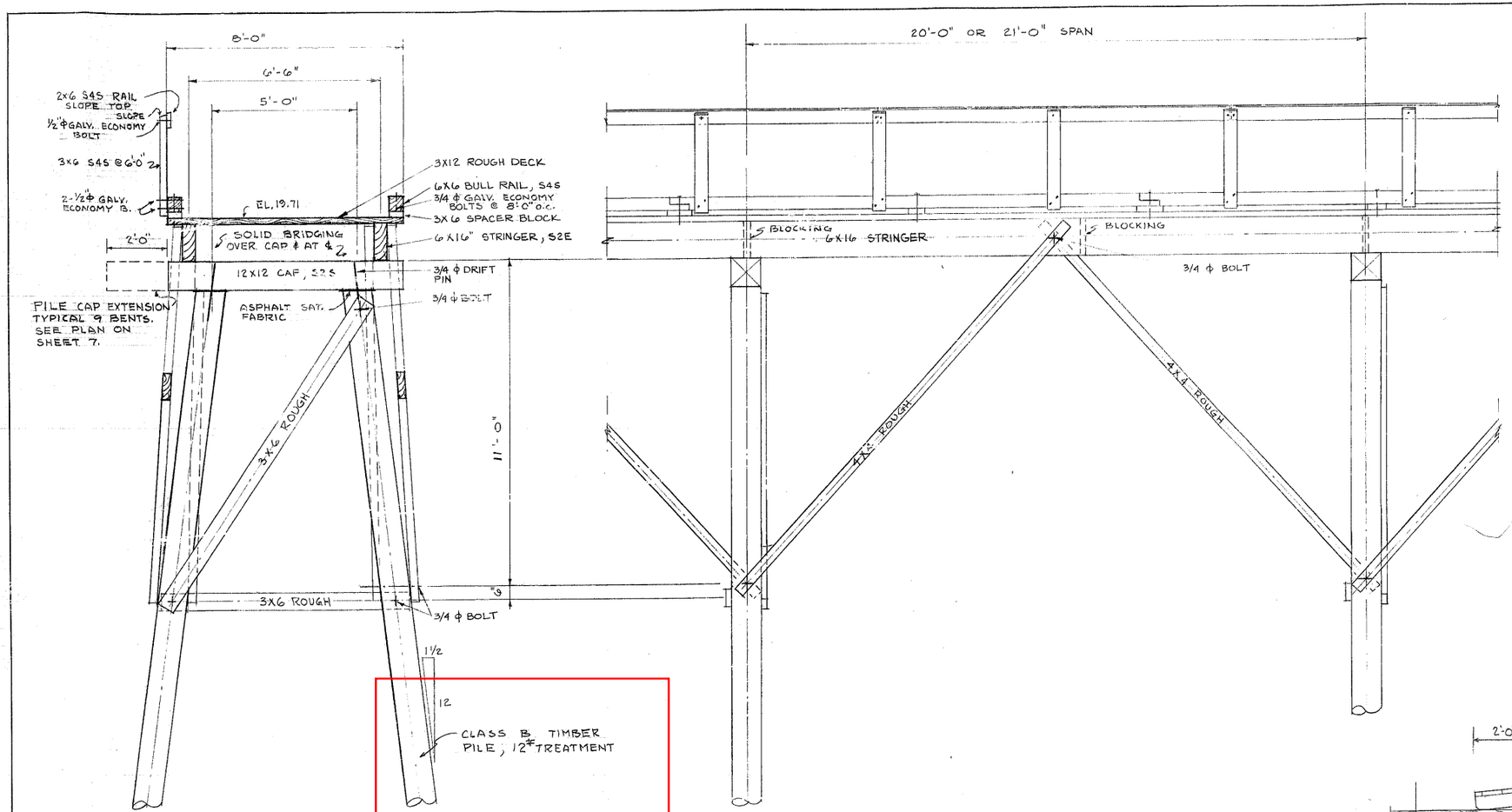
WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

DATE 11 MAY 67
DRAWN JStark
CHECKED KONZEN
FILE NO. 6701
SHEET NO. 7 OF 7

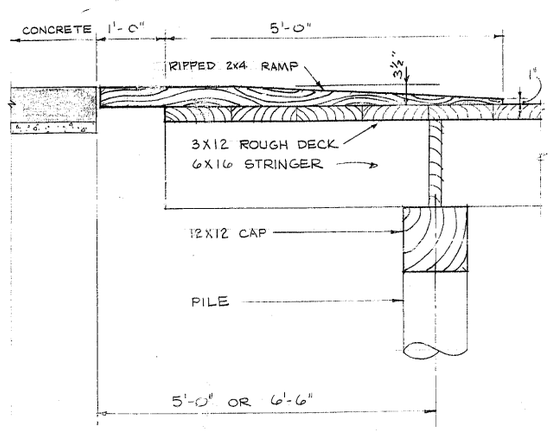
250-7

KEUFFEL & ESSER CO.

115-6701-C-7

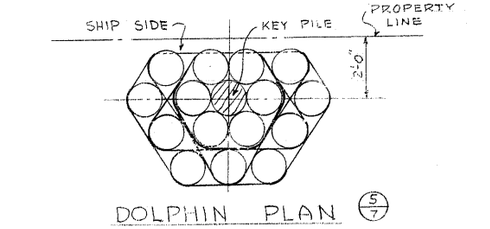


SECTION ① 1/2" = 1'-0"

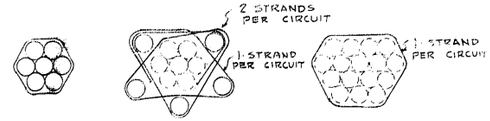


ELEVATION ② 1/2" = 1'-0"

SECTION ④ 1" = 1'-0"

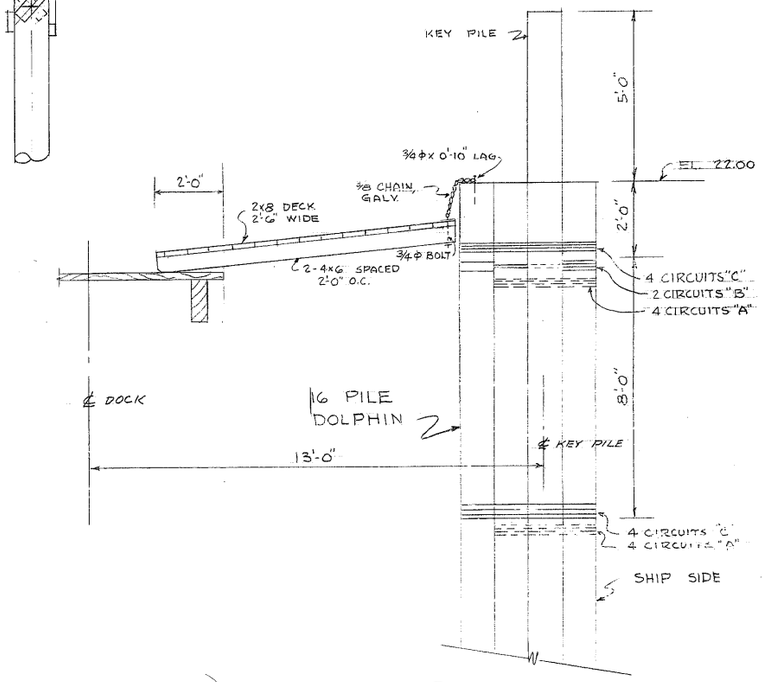


DOLPHIN PLAN ⑤/⑦



WIRE ROPE CIRCUITS

5/8" WIRE ROPE



ELEVATION ⑥/⑦ ½" = 1'-0"

PORT OF SEATTLE COMMISSION
DOCK FOR KAISER CEMENT AND GYPSUM COMPANY
SEATTLE WASHINGTON
WOOD DOCK DETAILS

WISBECK AND KONZEN ARCHITECTS AND CONSULTING ENGINEERS
909 TOWER BLDG. SEATTLE, WN. 98101 MAIN 3-8130

ALLAN S. KONZEN STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

DATE 11 MAY 67
DRAWN JWK
CHECKED KONZEN
FILE NO. 6701
SHEET NO. 7 OF 7

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115-6701-C-7

KEUFFEL & ESSER CO.

APPENDIX N SAMPLE METHOD SUMMARY TABLES

Table N-1
Soil Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information						Analytical Group/ Analytical Method	Metals							Butyltins	Volatile Organic Compounds
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	EPA200.8	SM3500 CR-D	EPA SW6010B	EPA SW6010C	EPA SW6020	EPA SW7196A	EPA SW7471A	Krone1989	EPA SW8260C
Unsaturated Soil															
GP-34	GP-34-0-2	N		9/6/2012	0-2	Shallow Fill	X			X					
GP-37	GP-37-0-2	N		9/10/2012	0-2	Shallow Fill	X								
GP-41	GP-41-0-0.16	N		9/4/2012	0-0.16	Shallow Fill	X								
GP-47	GP-47-0-0.25	N		9/5/2012	0-0.25	Shallow Fill	X	X		X			X	X	
GP-48	GP-48-0-0.5	N		9/4/2012	0-0.5	Shallow Fill	X			X					
GP-52	GP-52-3.5-5.5	N		10/9/2013	3.5-5.5	Shallow Fill	X								
GP-56	DUP-083012-1	FD	GP-56-3.3-3.75	8/30/2012	3.3-3.75	Shallow Fill	X	X		X			X		
GP-56	GP-56-3.3-3.75	N		8/30/2012	3.3-3.75	Shallow Fill	X	X		X			X		
GP-57	GP-57-1.5-3.5	N		8/31/2012	1.5-3.5	Shallow Fill	X	X		X			X		
GP-57	GP-57-4-6.25	N		10/10/2012	4-6.25	Dredged Fill	X	X		X			X		
GP-57	GP-57-6.25-6.8	N		10/10/2012	6.25-6.8	Dredged Fill	X	X		X			X		
GP-58	GP-58-1.75-3.75	N		8/31/2012	1.75-3.75	Shallow Fill	X	X		X			X		
GP-58	GP-58-4.25-6.25	N		10/8/2012	4.25-6.25	Dredged Fill	X			X		X	X		
GP-59	GP-59-2.3-3.9	N		8/31/2012	2.3-3.9	Shallow Fill	X	X		X			X		
GP-59	GP-59-4.25-6.25	N		10/10/2012	4.25-6.25	Dredged Fill	X	X		X			X		
GP-62	GP-62-0-2	N		9/5/2012	0-2	Shallow Fill	X			X				X	
GP-62	GP-62-1	N		9/5/2012	1-1	Shallow Fill									X
GP-64	GP-64-0-2	N		9/5/2012	0-2	Shallow Fill									
GP-64	GP-64-1	N		9/5/2012	1-1	Shallow Fill									
GP-67	GP-67-3.0-4.8	N		10/7/2013	3-4.8	Shallow Fill	X			X					
GP-69	GP-69-0-2	N		10/7/2013	0-2	Shallow Fill		X							
GP-73	GP-73-4.0-5.8	N		10/8/2013	4-5.8	Shallow Fill	X			X					
GP-75	DUP-100113-1	FD	GP-75-4.0	10/1/2013	4-4	Dredged Fill									X
GP-75	GP-75-0-2.0	N		10/1/2013	0-2	Shallow Fill									
GP-75	GP-75-4.0	N		10/1/2013	4-4	Dredged Fill									X
MW-23D	DUP-090412-1	FD	MW-23D-2.75-5.25	9/4/2012	2.75-5.25	Dredged Fill	X			X			X		
MW-23D	MW-23D-2.75-5.25	N		9/4/2012	2.75-5.25	Dredged Fill	X			X			X		
MW-30S	DUP-110811-2	FD	MW-30S-0-2	11/8/2011	0-2	Shallow Fill			X		X				
MW-30S	MW-30S-0-2	N		11/8/2011	0-2	Shallow Fill		X	X		X			X	
MW-31S	DUP-110811-3	FD	MW-31S-1-2	11/8/2011	1-2	Shallow Fill								X	
MW-31S	MW-31S-1-2	N		11/8/2011	1-2	Shallow Fill			X		X			X	
MW-33S	MW-33S-.7-1.3	N		11/10/2011	0.7-1.3	Shallow Fill			X		X				
MW-33S	MW-33S-1.3	N		11/10/2011	1.3-1.3	Shallow Fill									X
MW-35S	DUP-110911-2	FD	MW-35S-1.3-3.3	11/9/2011	1.3-3.3	Shallow Fill									
MW-35S	MW-35S-1.3-3.3	N		11/9/2011	1.3-3.3	Shallow Fill			X		X				
MW-35S	MW-35S-1.7	N		11/9/2011	1.7-1.7	Shallow Fill									
MW-36S	DUP-022212	FD	MW-36S-4.8-6	2/22/2012	4.8-6	Shallow Fill			X		X				
MW-36S	MW-36S-2.8-4.8	N		2/22/2012	2.8-4.8	Shallow Fill			X		X				
MW-36S	MW-36S-4.8-6	N		2/22/2012	4.8-6	Dredged Fill			X		X				
MW-43S	MW-43S-3.3-4.5	N		1/20/2014	3.3-4.5	Shallow Fill	X			X		X			
MW-45D	DUP-100713-1	FD	MW-45D-4.2-6.2	10/7/2013	4.2-6.2	Dredged Fill	X			X					
MW-45D	MW-45D-2.3-4.2	N		10/7/2013	2.3-4.2	Shallow Fill	X	X		X					
MW-45D	MW-45D-4.2-6.2	N		10/7/2013	4.2-6.2	Dredged Fill	X			X					
TB-01B	TB-01B-0.8-2.4	N		1/14/2014	0.8-2.4	Shallow Fill	X			X					
TB-02B	TB-02B-0.5-2.5	N		1/13/2014	0.5-2.5	Shallow Fill	X			X					
TB-04A	TB-04A-0.5-1.25	N		1/13/2014	0.5-1.25	Shallow Fill	X			X					
TB-05B	TB-05B-2.4-5	N		1/15/2014	2.4-5	Shallow Fill	X			X					
TB-06A	TB-06A-1.5	N		1/14/2014	1.5-1.5	Shallow Fill	X			X		X			
TB-06A	TB-06A-5-6	N		1/14/2014	5-6	Shallow Fill	X			X		X			
TB-06C	TB-06C-1.25-4.6	N		1/14/2014	1.25-4.6		X			X					
TB-06E	TB-06E-3.4-5	N		1/15/2014	3.4-5	Shallow Fill	X			X					
TB-07	TB-07-0-1	N		1/24/2014	0-1	Shallow Fill	X			X					

Table N-1
Soil Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information						Analytical Group/ Analytical Method	Metals							Butyltins	Volatile Organic Compounds
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	EPA200.8	SM3500 CR-D	EPA SW6010B	EPA SW6010C	EPA SW6020	EPA SW7196A	EPA SW7471A	Krone1989	EPA SW8260C
Saturated Soil															
GP-26	DUP101012-3	FD	GP-26-5.1-7.1	10/10/2012	5.1-7.1	Dredged Fill	X	X		X			X		
GP-26	GP-26-3.1-3.5	N		9/7/2012	3.1-3.5	Shallow Fill	X	X		X					
GP-26	GP-26-4-5.1	N		9/7/2012	4-5.1	Dredged Fill	X	X		X					
GP-26	GP-26-5.1-7.1	N		10/10/2012	5.1-7.1	Dredged Fill	X	X		X			X		
GP-26	GP-26-9.1-10.3	N		10/10/2012	9.1-10.3	Top Silt	X	X		X			X		
GP-27	DUP101112-1	FD	GP-27-4.3-6.3	10/11/2012	4.3-6.3	Dredged Fill	X			X			X	X	
GP-27	DUP101112-1A	FD	GP-27-5.3	10/11/2012	5.3-5.3	Dredged Fill									X
GP-27	GP-27-0-2	N		9/7/2012	0-2	Shallow Fill	X			X				X	
GP-27	GP-27-2.3-4.3	N		9/7/2012	2.3-4.3	Dredged Fill	X			X				X	
GP-27	GP-27-4.3-6.3	N		10/11/2012	4.3-6.3	Dredged Fill	X			X			X	X	
GP-27	GP-27-5.3	N		10/11/2012	5.3-5.3	Dredged Fill									X
GP-27	GP-27-6.3-8.3	N		10/11/2012	6.3-8.3	Top Silt	X			X			X	X	
GP-27	GP-27-7.3	N		10/11/2012	7.3-7.3	Top Silt									X
GP-28	DUP101112-2	FD	GP-28-4.1-6.1	10/11/2012	4.1-6.1	Dredged Fill	X			X			X	X	
GP-28	DUP101112-2A	FD	GP-28-5.1	10/11/2012	5.1-5.1	Dredged Fill									X
GP-28	DUP101112-3	FD	GP-28-6.1-8.3	10/11/2012	6.1-8.3	Top Silt	X			X			X	X	
GP-28	DUP101112-3A	FD	GP-28-7.1	10/11/2012	7.1-7.1	Top Silt									X
GP-28	GP-28-0-2	N		9/7/2012	0-2	Shallow Fill	X			X				X	
GP-28	GP-28-1	N		9/7/2012	1-1	Shallow Fill									
GP-28	GP-28-2-4	N		9/7/2012	2-4	Dredged Fill	X			X				X	
GP-28	GP-28-3	N		9/7/2012	3-3	Dredged Fill									
GP-28	GP-28-4.1-6.1	N		10/11/2012	4.1-6.1	Dredged Fill	X			X			X	X	
GP-28	GP-28-5.1	N		10/11/2012	5.1-5.1	Dredged Fill									X
GP-28	GP-28-6.1-8.3	N		10/11/2012	6.1-8.3	Top Silt	X			X			X	X	
GP-28	GP-28-7.1	N		10/11/2012	7.1-7.1	Top Silt									X
GP-29	GP-29-10	N		10/9/2012	10-10	Shallow Fill									X
GP-29	GP-29-2.9-4.9	N		10/9/2012	2.9-4.9	Shallow Fill	X			X			X		
GP-29	GP-29-3.9	N		10/9/2012	3.9-3.9	Shallow Fill									X
GP-29	GP-29-4.9-6.9	N		10/9/2012	4.9-6.9	Dredged Fill	X			X			X		
GP-29	GP-29-5.9	N		10/9/2012	5.9-5.9	Dredged Fill									X
GP-29	GP-29-6.9-8.9	N		10/9/2012	6.9-8.9	Dredged Fill	X			X			X		
GP-29	GP-29-7.9	N		10/9/2012	7.9-7.9	Dredged Fill									X
GP-29	GP-29-8.9-11.2	N		10/9/2012	8.9-11.2	Dredged Fill	X			X			X		
GP-30	GP-30-3.3-5.3	N		9/7/2012	3.3-5.3	Dredged Fill	X			X					
GP-30	GP-30-5.3-6.6	N		9/7/2012	5.3-6.6	Dredged Fill	X			X					
GP-30	GP-30-7-9	N		10/9/2012	7-9	Top Silt	X			X			X		
GP-31	DUP-090612-2	FD	GP-31-3-5	9/6/2012	3-5	Dredged Fill	X	X		X					
GP-31	GP-31-3-5	N		9/6/2012	3-5	Shallow Fill	X	X		X					
GP-31	GP-31-5.9-7.9	N		10/11/2012	5.9-7.9	Dredged Fill	X			X			X		
GP-31	GP-31-5-5.9	N		9/6/2012	5-5.9	Dredged Fill	X	X		X					
GP-31	GP-31-7.9-9.9	N		10/11/2012	7.9-9.9	Top Silt	X			X			X		
GP-32	GP-32-0.25-2.25	N		9/10/2012	0.25-2.25	Shallow Fill	X			X					
GP-32	GP-32-4.1-6.1	N		9/10/2012	4.1-6.1	Shallow Fill	X			X					
GP-32	GP-32-6.1-8.1	N		10/11/2012	6.1-8.1	Dredged Fill	X			X		X	X		
GP-32	GP-32-8.1-9.1	N		10/11/2012	8.1-9.1	Top Silt	X			X		X	X		
GP-33	GP-33-3.25-5.25	N		9/6/2012	3.25-5.25	Dredged Fill	X			X					
GP-33	GP-33-5.25-5.9	N		9/6/2012	5.25-5.9	Dredged Fill	X			X					
GP-33	GP-33-5.9-8.3	N		10/10/2012	5.9-8.3	Dredged Fill	X			X			X		
GP-34	DUP101012-1	FD	GP-34-6.4-8.4	10/10/2012	6.4-8.4	Dredged Fill	X			X			X		
GP-34	GP-34-3.25-4.4	N		9/6/2012	3.25-4.4	Shallow Fill	X			X					
GP-34	GP-34-4.4-6.4	N		9/6/2012	4.4-6.4	Dredged Fill	X			X					
GP-34	GP-34-6.4-8.4	N		10/10/2012	6.4-8.4	Dredged Fill	X			X			X		
GP-34	GP-34-8.4-9.4	N		10/10/2012	8.4-9.4	Top Silt	X			X			X		
GP-35	DUP-100813-1	FD	GP-35-3.5-5.5	10/8/2013	3.5-5.5	Dredged Fill									
GP-35	GP-35-11.25-12.25	N		10/8/2013	11.25-12.25	Top Silt	X			X					
GP-35	GP-35-3.5-5.5	N		10/8/2013	3.5-5.5	Dredged Fill				X					
GP-36	GP-36-10	N		10/8/2012	10-10	Dredged Fill									X
GP-36	GP-36-11.5	N		10/8/2012	11.5-11.5	Top Silt									X
GP-36	GP-36-11-12	N		10/8/2012	11-12	Top Silt	X			X			X		
GP-36	GP-36-2.6	N		8/30/2012	2.6-2.6	Shallow Fill									
GP-36	GP-36-2.6-4.6	N		8/30/2012	2.6-4.6	Shallow Fill	X								
GP-36	GP-36-7-9	N		10/8/2012	7-9	Dredged Fill	X			X			X		
GP-36	GP-36-8	N		10/8/2012	8-8	Dredged Fill									X
GP-36	GP-36-9-11	N		10/8/2012	9-11	Dredged Fill	X			X			X		
GP-37	GP-37-4.4-6.4	N		9/10/2012	4.4-6.4	Dredged Fill	X								
GP-37	GP-37-7-9	N		10/8/2012	7-9	Dredged Fill	X			X			X		

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Sample Information						Analytical Group/ Analytical Method	Metals							Butyltins	Volatile Organic Compounds
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	EPA200.8	SM3500 CR-D	EPA SW6010B	EPA SW6010C	EPA SW6020	EPA SW7196A	EPA SW7471A	Krone1989	EPA SW8260C
Saturated Soil															
GP-37	GP-37-9-10	N		10/8/2012	9-10	Top Silt	X			X			X		
GP-38	GP-38-2.7-4.7	N		9/10/2012	2.7-4.7	Dredged Fill	X								
GP-38	GP-38-5-7	N		9/10/2012	5-7	Dredged Fill	X								
GP-38	GP-38-7-9	N		10/9/2012	7-9	Dredged Fill	X			X			X		
GP-38	GP-38-9-11	N		10/9/2012	9-11	Top Silt	X			X			X		
GP-39	GP-39-10.5-11.5	N		10/8/2012	10.5-11.5	Top Silt	X			X			X		
GP-39	GP-39-11	N		10/8/2012	11-11	Top Silt									X
GP-39	GP-39-2.5-4.5	N		8/30/2012	2.5-4.5	Shallow Fill	X	X		X					
GP-39	GP-39-4.5-6.5	N		10/8/2012	4.5-6.5	Dredged Fill	X			X			X		
GP-39	GP-39-5.5	N		10/8/2012	5.5-5.5	Dredged Fill									X
GP-39	GP-39-6.5-8.5	N		10/8/2012	6.5-8.5	Dredged Fill	X			X			X		
GP-39	GP-39-7.5	N		10/8/2012	7.5-7.5	Dredged Fill									X
GP-40	GP-40-11.3-12.3	N		10/8/2013	11.3-12.3	Top Silt	X			X					
GP-40	GP-40-3.5-5.5	N		10/8/2013	3.5-5.5	Dredged Fill									
GP-42	GP-42-12.5-13.5	N		10/9/2013	12.5-13.5	Top Silt	X			X					
GP-42	GP-42-20-22	N		1/22/2014	20-22	Lower Sand	X			X					
GP-42	GP-42-6.75-8.75	N		10/9/2013	6.75-8.75	Dredged Fill									
GP-43	GP-43-11.1-12.1	N		10/10/2013	11.1-12.1	Top Silt	X			X					
GP-43	GP-43-3.0-5.0	N		10/10/2013	3-5	Shallow Fill	X			X					
GP-43	GP-43-6.4-8.4	N		10/10/2013	6.4-8.4	Dredged Fill	X			X					
GP-44	GP-44-10	N		10/9/2012	10-10	Dredged Fill									X
GP-44	GP-44-2-4.8	N		9/4/2012	2-4.8	Dredged Fill	X								
GP-44	GP-44-4.8-6.8	N		10/9/2012	4.8-6.8	Dredged Fill	X			X			X		
GP-44	GP-44-5.8	N		10/9/2012	5.8-5.8	Top Silt									X
GP-44	GP-44-6.8-8.8	N		10/9/2012	6.8-8.8	Dredged Fill	X			X			X		
GP-44	GP-44-7.8	N		10/9/2012	7.8-7.8	Dredged Fill									X
GP-44	GP-44-8.8-11.1	N		10/9/2012	8.8-11.1	Dredged Fill	X			X			X		
GP-45	GP-45-2-4.25	N		9/4/2012	2-4.25	Shallow Fill	X								
GP-45	GP-45-4.5-6.5	N		10/9/2012	4.5-6.5	Dredged Fill	X			X			X		
GP-45	GP-45-5.5	N		10/9/2012	5.5-5.5	Dredged Fill									X
GP-45	GP-45-6.5-8.5	N		10/9/2012	6.5-8.5	Dredged Fill	X			X			X		
GP-45	GP-45-7.5	N		10/9/2012	7.5-7.5	Dredged Fill									X
GP-45	GP-45-8.5-9.5	N		10/9/2012	8.5-9.5	Dredged Fill	X			X			X		
GP-45	GP-45-9	N		10/9/2012	9-9	Dredged Fill									X
GP-46	GP-46-2.5-4.2	N		8/31/2012	2.5-4.2	Shallow Fill	X								
GP-46	GP-46-5.2-7.2	N		10/9/2012	5.2-7.2	Dredged Fill	X			X			X		
GP-46	GP-46-6.2	N		10/9/2012	6.2-6.2	Dredged Fill									X
GP-46	GP-46-7.2-8.7	N		10/9/2012	7.2-8.7	Top Silt	X			X			X		
GP-46	GP-46-8	N		10/9/2012	8-8	Top Silt									X
GP-49	GP-49-11.75-12.75	N		10/4/2013	11.75-12.75	Top Silt	X			X					
GP-49	GP-49-3.5-5.5	N		10/4/2013	3.5-5.5	Shallow Fill	X			X					
GP-49	GP-49-6.0-8.0	N		10/4/2013	6-8	Dredged Fill	X			X					
GP-50	DUP-090712-1	FD	GP-50-3-5.9	9/7/2012	3-5.9	Dredged Fill	X			X					
GP-50	GP-50-0-2	N		9/7/2012	0-2	Shallow Fill	X			X					
GP-50	GP-50-1	N		9/7/2012	1-1	Shallow Fill									
GP-50	GP-50-3	N		9/7/2012	3-3	Shallow Fill									
GP-50	GP-50-3-5.9	N		9/7/2012	3-5.9	Dredged Fill	X			X					
GP-50	GP-50-5.9-7	N		10/11/2012	5.9-7	Dredged Fill	X			X			X		
GP-50	GP-50-6.9	N		10/11/2012	6.9-6.9	Dredged Fill									X
GP-50	GP-50-7.25	N		10/11/2012	7.25-7.25	Dredged Fill									X
GP-50	GP-50-7-7.75	N		10/11/2012	7-7.75	Dredged Fill	X			X			X		
GP-51	GP-51-11.9-12.9	N		10/9/2013	11.9-12.9	Top Silt	X			X					
GP-51	GP-51-17.4-19.4	N		1/22/2014	17.4-19.4		X			X					
GP-51	GP-51-24.4-26.4	N		1/22/2014	24.4-26.4	Lower Sand	X			X					
GP-51	GP-51-4.3-6.3	N		10/9/2013	4.3-6.3	Shallow Fill	X			X					
GP-51	GP-51-8.6-10.6	N		10/9/2013	8.6-10.6	Dredged Fill	X			X					
GP-52	GP-52-12.1-13.1	N		10/9/2013	12.1-13.1	Top Silt	X			X					
GP-52	GP-52-7.1-9.1	N		10/9/2013	7.1-9.1	Dredged Fill	X			X					
GP-53	GP-53-3-5	N		9/10/2012	3-5	Dredged Fill	X			X					
GP-53	GP-53-4	N		9/10/2012	4-4	Dredged Fill									X
GP-53	GP-53-5	N		9/10/2012	5-5	Dredged Fill									X
GP-53	GP-53-5.3-7.3	N		10/10/2012	5.3-7.3	Dredged Fill	X			X			X		
GP-53	GP-53-5-5.3	N		9/10/2012	5-5.3	Dredged Fill	X			X					
GP-53	GP-53-6.3	N		10/10/2012	6.3-6.3	Dredged Fill									X
GP-53	GP-53-7.3-9.3	N		10/10/2012	7.3-9.3	Top Silt	X			X			X		
GP-53	GP-53-8.3	N		10/10/2012	8.3-8.3	Top Silt									X

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Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	EPA200.8	SM3500 CR-D	EPA SW6010B	EPA SW6010C	EPA SW6020	EPA SW7196A	EPA SW7471A	Krone1989	EPA SW8260C
Saturated Soil															
GP-54	DUP-100913-1	FD	GP-54-4.1-6.1	10/9/2013	4.1-6.1	Dredged Fill	X			X					
GP-54	GP-54-1.5-3.0	N		10/9/2013	1.5-3	Shallow Fill									
GP-54	GP-54-10.9-11.9	N		10/9/2013	10.9-11.9	Top Silt	X			X					
GP-54	GP-54-4.1-6.1	N		10/9/2013	4.1-6.1	Dredged Fill	X			X					
GP-55	DUP100812-1	FD	GP-55-8.4-10.4	10/8/2012	8.4-10.4	Top Silt	X			X			X		
GP-55	GP-55-2.5-4	N		8/31/2012	2.5-4	Shallow Fill	X			X					
GP-55	GP-55-4.4-6.4	N		10/8/2012	4.4-6.4	Dredged Fill	X			X			X		
GP-55	GP-55-6.4-8.4	N		10/8/2012	6.4-8.4	Dredged Fill	X			X			X		
GP-55	GP-55-8.4-10.4	N		10/8/2012	8.4-10.4	Top Silt	X			X			X		
GP-56	GP-56-4.2-5.2	N		10/10/2012	4.2-5.2	Shallow Fill	X	X		X			X		
GP-56	GP-56-5.2-7.2	N		10/10/2012	5.2-7.2	Dredged Fill	X	X		X			X		
GP-56	GP-56-7.2-9.5	N		10/10/2012	7.2-9.5	Top Silt	X	X		X			X		
GP-57	GP-57-10.8-12	N		10/10/2012	10.8-12	Top Silt	X	X		X			X		
GP-57	GP-57-8.8-10.8	N		10/10/2012	8.8-10.8	Dredged Fill	X	X		X			X		
GP-58	GP-58-8.25-10.5	N		10/8/2012	8.25-10.5	Dredged Fill	X			X		X	X		
GP-59	GP-59-10.25-11.5	N		10/10/2012	10.25-11.5	Top Silt	X	X		X			X		
GP-59	GP-59-8.25-10.25	N		10/10/2012	8.25-10.25	Dredged Fill	X	X		X			X		
GP-60	GP-60-4.5-5.0	N		10/1/2013	4.5-5	Dredged Fill	X			X		X			
GP-60	GP-60-8.8-9.8	N		10/4/2013	8.8-9.8	Top Silt	X			X		X			
GP-61	DUP-090612-1	FD	GP-61-2.5-4.5	9/6/2012	2.5-4.5	Dredged Fill	X			X				X	
GP-61	GP-61-0-2	N		9/6/2012	0-2	Shallow Fill	X			X				X	
GP-61	GP-61-2.5-4.5	N		9/6/2012	2.5-4.5	Dredged Fill	X			X				X	
GP-61	GP-61-4.5-7.5	N		10/12/2012	4.5-7.5	Dredged Fill	X			X			X	X	
GP-61	GP-61-6	N		10/12/2012	6-6	Dredged Fill									X
GP-61	GP-61-7.5-8.5	N		10/12/2012	7.5-8.5	Top Silt	X			X			X	X	
GP-61	GP-61-8	N		10/12/2012	8-8	Top Silt									X
GP-62	DUP101212-1	FD	GP-62-5-6.7	10/12/2012	5-6.7	Dredged Fill	X			X			X		
GP-62	DUP101212-1A	FD	GP-62-5.8	10/12/2012	5.8-5.8	Dredged Fill									X
GP-62	DUP101212-2	FD	GP-62-6.7-7.7	10/12/2012	6.7-7.7	Top Silt	X			X			X		
GP-62	DUP101212-2A	FD	GP-62-7.2	10/12/2012	7.2-7.2	Top Silt									X
GP-62	GP-62-3-5	N		9/5/2012	3-5	Dredged Fill	X			X				X	
GP-62	GP-62-4	N		9/5/2012	4-4	Dredged Fill									X
GP-62	GP-62-5.8	N		10/12/2012	5.8-5.8	Dredged Fill									X
GP-62	GP-62-5-6.7	N		10/12/2012	5-6.7	Dredged Fill	X			X			X		
GP-62	GP-62-6.7-7.7	N		10/12/2012	6.7-7.7	Top Silt	X			X			X		
GP-62	GP-62-7.2	N		10/12/2012	7.2-7.2	Top Silt									X
GP-63	DUP101212-3	FD	GP-63-4-6	10/12/2012	4-6	Shallow Fill		X							
GP-63	DUP101212-3A	FD	GP-63-5	10/12/2012	5-5	Shallow Fill									X
GP-63	GP-63-4-6	N		10/12/2012	4-6	Shallow Fill		X							
GP-63	GP-63-5	N		10/12/2012	5-5	Shallow Fill									X
GP-63	GP-63-6-8	N		10/12/2012	6-8	Shallow Fill		X							
GP-63	GP-63-7	N		10/12/2012	7-7	Shallow Fill									X
GP-63	GP-63-8.5	N		10/12/2012	8.5-8.5	Shallow Fill									X
GP-63	GP-63-8-9	N		10/12/2012	8-9	Shallow Fill		X							
GP-64	GP-64-3.3	N		9/5/2012	3.3-3.3	Shallow Fill									
GP-64	GP-64-3.3-4.3	N		9/5/2012	3.3-4.3	Dredged Fill									
GP-64	GP-64-4.3-6	N		10/12/2012	4.3-6	Dredged Fill								X	
GP-64	GP-64-5.1	N		10/12/2012	5.1-5.1	Dredged Fill									X
GP-64	GP-64-6.5	N		10/12/2012	6.5-6.5	Top Silt									X
GP-64	GP-64-6-7	N		10/12/2012	6-7	Top Silt								X	
GP-65	GP-65-1.5-3.5	N		9/5/2012	1.5-3.5	Shallow Fill									
GP-65	GP-65-2	N		9/5/2012	2-2	Shallow Fill									
GP-65	GP-65-4-6	N		10/12/2012	4-6	Dredged Fill									
GP-65	GP-65-5	N		10/12/2012	5-5	Dredged Fill									X
GP-65	GP-65-6.5	N		10/12/2012	6.5-6.5	Dredged Fill									X
GP-65	GP-65-6-7	N		10/12/2012	6-7	Top Silt									
GP-66	GP-66-0.6-2.6	N		9/10/2012	0.6-2.6	Shallow Fill	X			X					
GP-66	GP-66-3.75-5.75	N		9/10/2012	3.75-5.75	Dredged Fill	X			X					
GP-66	GP-66-5.75-7.75	N		10/11/2012	5.75-7.75	Dredged Fill	X			X		X	X	X	
GP-66	GP-66-7.75-8.4	N		10/11/2012	7.75-7.75	Top Silt	X			X		X	X	X	
GP-67	GP-67-10-11	N		10/7/2013	10-11	Top Silt	X			X					
GP-67	GP-67-4.8-6.8	N		10/7/2013	4.8-6.8	Dredged Fill	X			X					
GP-68	DUP-012314-1	FD	GP-68-4-6	1/23/2014	4-6	Dredged Fill	X			X		X			
GP-68	GP-68-4-6	N		1/23/2014	4-6	Dredged Fill	X			X		X			
GP-68	GP-68-9.4-10.4	N		1/23/2014	9.4-10.4	Top Silt	X			X		X			
GP-69	DUP-100713-2	FD	GP-69-12.6-13.6	10/7/2013	12.6-13.6	Top Silt	X			X		X			

Table N-1
Soil Analytical Method Summary
5900 West Marginal Way Site
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Sample Information						Analytical Group/ Analytical Method	Metals							Butyltins	Volatile Organic Compounds
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	EPA200.8	SM3500 CR-D	EPA SW6010B	EPA SW6010C	EPA SW6020	EPA SW7196A	EPA SW7471A	Krone1989	EPA SW8260C
Saturated Soil															
GP-69	GP-69-12.6-13.6	N		10/7/2013	12.6-13.6	Top Silt	X			X		X			
GP-69	GP-69-20-22	N		1/20/2014	20-22	Lower Sand	X			X		X			
GP-69	GP-69-7.6-9.6	N		10/7/2013	7.6-9.6	Dredged Fill	X			X		X			
GP-70	DUP-100913-2	FD	GP-70-6.1-8.1	10/9/2013	6.1-8.1	Dredged Fill	X			X		X			
GP-70	GP-70-10.8-11.8	N		10/9/2013	10.8-11.8	Top Silt	X			X		X			
GP-70	GP-70-3.0-5.0	N		10/9/2013	3-5	Shallow Fill	X			X					
GP-70	GP-70-6.1-8.1	N		10/9/2013	6.1-8.1	Dredged Fill	X			X		X			
GP-71	DUP012214-1	FD	GP-71-15-17	1/22/2014	15-17	Lower Sand	X			X		X			
GP-71	GP-71-10.6-11.6	N		10/8/2013	10.6-11.6	Top Silt	X			X		X			
GP-71	GP-71-15-17	N		1/22/2014	15-17	Lower Sand	X			X		X			
GP-71	GP-71-2.25-4	N		10/8/2013	2.25-4	Shallow Fill				X					
GP-71	GP-71-7.1-9.1	N		10/8/2013	7.1-9.1	Dredged Fill				X					
GP-72	GP-72-2.0-4.0	N		10/1/2013	2-4	Dredged Fill	X			X					
GP-72	GP-72-8.2-9.2	N		10/8/2013	8.2-9.2	Top Silt	X			X					
GP-73	DUP-100813-2	FD	GP-73-11.5-12.5	10/8/2013	11.5-12.5	Top Silt	X			X					
GP-73	GP-73-11.5-12.5	N		10/8/2013	11.5-12.5	Top Silt	X			X					
GP-73	GP-73-5.8-7.8	N		10/8/2013	5.8-7.8	Dredged Fill	X			X					
GP-74	GP-74-11.9-13.9	N		1/22/2014	11.9-13.9										
GP-74	GP-74-17.7-19.7	N		1/22/2014	17.7-19.7	Lower Sand						X			
GP-74	GP-74-3.0-4.0	N		10/8/2013	3-4	Shallow Fill	X			X					
GP-74	GP-74-4.0-5.0	N		10/8/2013	4-5	Dredged Fill	X			X					
GP-74	GP-74-7.6-8.6	N		10/10/2013	7.6-8.6	Top Silt	X	X		X					
GP-75	GP-75-4.0-6.0	N		10/1/2013	4-6	Dredged Fill	X			X		X			
GP-75	GP-75-8.5-9.5	N		10/4/2013	8.5-9.5	Top Silt	X			X		X			
MW-14D	DUP-111411-1	FD	MW-14D-3-6	11/14/2011	3-6	Dredged Fill									
MW-14D	MW-14D-3-6	N		11/14/2011	3-6	Dredged Fill			X		X		X		
MW-14D	MW-14D-6.5-7.5	N		11/14/2011	6.5-7.5	Dredged Fill			X		X		X		
MW-20D	MW-20D-12-13	N		10/8/2013	12-13	Top Silt	X			X					
MW-20D	MW-20D-22.5-24.5	N		1/17/2014	22.5-24.5	Lower Sand	X			X					
MW-20D	MW-20D-6.6-8.6	N		10/8/2013	6.6-8.6	Dredged Fill	X			X					
MW-28S	DUP-110811-4	FD	MW-28S-1-2	11/8/2011	1-2	Shallow Fill									
MW-28S	MW-28S-1-2	N		11/8/2011	1-2	Shallow Fill			X		X			X	
MW-28S	MW-28S-3.5-4	N		11/8/2011	3.5-4	Dredged Fill			X		X			X	

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Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Metals							Butyltins	Volatile Organic Compounds
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	EPA200.8	SM3500 CR-D	EPA SW6010B	EPA SW6010C	EPA SW6020	EPA SW7196A	EPA SW7471A	Krone1989	EPA SW8260C
Saturated Soil															
MW-29S	DUP-110811-1	FD	MW-29S-0-2	11/8/2011	0-2	Shallow Fill									
MW-29S	MW-29S-0-2	N		11/8/2011	0-2	Shallow Fill			X		X			X	
MW-29S	MW-29S-3-3.5	N		11/8/2011	3-3.5	Shallow Fill			X		X			X	
MW-30S	MW-30S-2.8	N		11/8/2011	2.8-2.8	Dredged Fill									
MW-30S	MW-30S-3-3.5	N		11/8/2011	3-3.5	Dredged Fill		X	X		X			X	
MW-31D	MW31D-19-20	N		1/22/2014	19-20	Lower Sand	X			X		X			
MW-31D	MW-31D-5.0-7.0	N		10/10/2013	5-7	Dredged Fill	X			X					
MW-31D	MW-31D-8.25-9.25	N		10/10/2013	8.25-9.25	Top Silt	X			X		X			
MW-31S	MW-31S-5-6	N		11/8/2011	5-6	Dredged Fill			X		X			X	
MW-32D	DUP-110911-1	FD	MW-32D-1.6-3.6	11/9/2011	1.6-3.6	Shallow Fill			X		X				
MW-32D	MW-32D-1.6-3.6	N		11/9/2011	1.6-3.6	Shallow Fill			X		X				
MW-32D	MW-32D-5-7	N		11/11/2011	5-7	Dredged Fill			X		X				
MW-32S	MW-32S-1.7-4	N		11/8/2011	1.7-4	Shallow Fill			X		X				
MW-32S	MW-32S-5-7	N		11/11/2011	5-7	Dredged Fill			X		X				
MW-32S	MW-32S-7	N		11/11/2011	7-7	Dredged Fill									
MW-33S	MW-33S-4-7	N		11/14/2011	4-7	Dredged Fill			X		X				
MW-33S	MW-33S-5.5	N		11/14/2011	5.5-5.5	Dredged Fill									X
MW-34S	DUP-110911-3	FD	MW-34S-3.8-4.2	11/9/2011	3.8-4.2	Dredged Fill									X
MW-34S	MW-34S-1.3-3.2	N		11/9/2011	1.3-3.2	Shallow Fill			X		X				
MW-34S	MW-34S-3	N		11/9/2011	3-3	Shallow Fill									X
MW-34S	MW-34S-3.8-4.2	N		11/9/2011	3.8-4.2	Dredged Fill			X		X				X
MW-35D	MW-35D-19.3-20	N		1/23/2014	19.3-20	Lower Sand	X			X		X			
MW-35D	MW-35D-3.25-4.25	N		10/1/2013	3.25-4.25	Shallow Fill									
MW-35D	MW-35D-4.25-5.5	N		10/1/2013	4.25-5.5	Dredged Fill	X			X					
MW-35D	MW-35D-7.0	N		10/10/2013	7-7	Dredged Fill									X
MW-35D	MW-35D-8.5-9.5	N		10/10/2013	8.5-9.5	Top Silt	X	X		X					
MW-35S	MW-35S-5.7-6.3	N		11/9/2011	5.7-6.3	Dredged Fill			X		X				
MW-35S	MW-35S-6.3	N		11/9/2011	6.3-6.3	Dredged Fill									
MW-38D	MW-38D-0.83-2.0	N		10/2/2013	0.83-2	Dredged Fill	X			X		X			
MW-38D	MW-38D-2.0	N		10/7/2013	2-2	Dredged Fill									
MW-38D	MW-38D-8.5-9.5	N		10/7/2013	8.5-9.5	Top Silt	X			X		X			
MW-43D	MW-43D-11.25-12.25	N		10/10/2013	11.25-12.25	Top Silt	X			X					
MW-43D	MW-43D-14.5-16.5	N		1/21/2014	14.5-16.5		X			X					
MW-43D	MW-43D-19.3-21.3	N		1/21/2014	19.3-21.3	Lower Sand	X			X					
MW-43D	MW-43D-5.25-6.75	N		10/10/2013	5.25-6.7	Shallow Fill	X			X					
MW-43D	MW-43D-6.9	N		10/10/2013	6.9-6.9	Dredged Fill									X
MW-43D	MW-43D-7.25-9.25	N		10/10/2013	7.25-9.25	Dredged Fill	X			X					
MW-45D	DUP 011714-1	FD	MW-45D-17.3-19.3	1/17/2014	17.3-19.3	Lower Sand	X			X		X			
MW-45D	MW-45D-12.5-13.0	N		1/16/2014	12.5-13	Top Silt	X			X		X			X
MW-45D	MW-45D-17.3-19.3	N		1/17/2014	17.3-19.3	Lower Sand	X			X		X			
MW-45D	MW-45D-9.5-10.5	N		10/7/2013	9.5-10.5	Top Silt	X			X		X			
SIIE-01	SIIE-01-080814	N		8/8/2014	2-2		X			X		X			
SIIE-02	SIIE-02-080814	N		8/8/2014	2-2		X			X		X			
SIIE-03	SIIE-03-080814	N		8/8/2014	2-2		X			X		X			
SIIE-04	SIIE-04-080814	N		8/8/2014	2-2		X			X		X			
SIIE-05	SIIE-05-080814	N		8/8/2014	2-2										
SIIE-06	SIIE-06-081214	N		8/12/2014	2-2		X			X		X			
TB-01B	TB-01B-5-6.9	N		1/14/2014	5-6.9	Dredged Fill	X			X					
TB-01B	TB-01B-6.9-7.9	N		1/14/2014	6.9-7.9	Top Silt	X			X					
TB-02B	DUP011314-1	FD	TB-02B-9.5-10.5	1/13/2014	9.5-10.5	Top Silt	X			X					
TB-02B	TB-02B-8-9.5	N		1/13/2014	8-9.5	Dredged Fill	X			X					
TB-02B	TB-02B-9.5-10.5	N		1/13/2014	9.5-10.5	Top Silt	X			X					
TB-03D	TB-03D-12.6-13.6	N		1/13/2014	12.6-13.6	Top Silt	X			X					
TB-03D	TB-03D-4.25-7	N		1/13/2014	4.25-7	Shallow Fill	X			X					
TB-03D	TB-03D-7-9	N		1/13/2014	7-9	Dredged Fill	X			X					
TB-04A	TB-04A-1.25-3	N		1/13/2014	1.25-3	Dredged Fill	X			X					
TB-04A	TB-04A-7.1-8.1	N		1/13/2014	7.1-8.1	Top Silt	X			X					
TB-05B	DUP011514-2	FD	TB-05B-13.6-15.6	1/15/2014	13.6-15.6	Dredged Fill	X			X					
TB-05B	TB-05B-13.6-15.6	N		1/15/2014	13.6-15.6	Dredged Fill	X			X					
TB-05B	TB-05B-18.2-19.2	N		1/15/2014	18.2-19.2	Top Silt	X			X					
TB-06B	DUP011414-1	FD	TB-06B-6-11	1/14/2014	6-11	Shallow Fill									X
TB-06B	TB-06B-6-11	N		1/14/2014	6-11	Shallow Fill									X
TB-06E	DUP011514-1	FD	TB-06E-8.8-10.6	1/15/2014	8.8-10.6	Dredged Fill						X			
TB-06E	TB-06E-8.8-10.6	N		1/15/2014	8.8-10.6	Dredged Fill	X			X		X			
TB-06F	TB-06F-14-16	N		1/24/2014	14-16	Dredged Fill	X			X		X			
TB-06F	TB-06F-20-22	N		1/24/2014	20-22		X			X					

Table N-1
Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082	EPA SW8082A
Unsaturated Soil													
GP-34	GP-34-0-2	N		9/6/2012	0-2	Shallow Fill			X				
GP-37	GP-37-0-2	N		9/10/2012	0-2	Shallow Fill							X
GP-41	GP-41-0-0.16	N		9/4/2012	0-0.16	Shallow Fill							
GP-47	GP-47-0-0.25	N		9/5/2012	0-0.25	Shallow Fill			X				
GP-48	GP-48-0-0.5	N		9/4/2012	0-0.5	Shallow Fill			X				
GP-52	GP-52-3.5-5.5	N		10/9/2013	3.5-5.5	Shallow Fill							
GP-56	DUP-083012-1	FD	GP-56-3.3-3.75	8/30/2012	3.3-3.75	Shallow Fill			X				
GP-56	GP-56-3.3-3.75	N		8/30/2012	3.3-3.75	Shallow Fill			X				
GP-57	GP-57-1.5-3.5	N		8/31/2012	1.5-3.5	Shallow Fill							
GP-57	GP-57-4-6.25	N		10/10/2012	4-6.25	Dredged Fill							
GP-57	GP-57-6.25-6.8	N		10/10/2012	6.25-6.8	Dredged Fill							
GP-58	GP-58-1.75-3.75	N		8/31/2012	1.75-3.75	Shallow Fill			X				
GP-58	GP-58-4.25-6.25	N		10/8/2012	4.25-6.25	Dredged Fill			X	X			
GP-59	GP-59-2.3-3.9	N		8/31/2012	2.3-3.9	Shallow Fill			X				
GP-59	GP-59-4.25-6.25	N		10/10/2012	4.25-6.25	Dredged Fill			X	X			
GP-62	GP-62-0-2	N		9/5/2012	0-2	Shallow Fill			X				
GP-62	GP-62-1	N		9/5/2012	1-1	Shallow Fill							
GP-64	GP-64-0-2	N		9/5/2012	0-2	Shallow Fill	X						
GP-64	GP-64-1	N		9/5/2012	1-1	Shallow Fill		X					
GP-67	GP-67-3.0-4.8	N		10/7/2013	3-4.8	Shallow Fill							
GP-69	GP-69-0-2	N		10/7/2013	0-2	Shallow Fill							
GP-73	GP-73-4.0-5.8	N		10/8/2013	4-5.8	Shallow Fill							
GP-75	DUP-100113-1	FD	GP-75-4.0	10/1/2013	4-4	Dredged Fill							
GP-75	GP-75-0-2.0	N		10/1/2013	0-2	Shallow Fill	X			X			
GP-75	GP-75-4.0	N		10/1/2013	4-4	Dredged Fill	X	X					
MW-23D	DUP-090412-1	FD	MW-23D-2.75-5.25	9/4/2012	2.75-5.25	Dredged Fill							
MW-23D	MW-23D-2.75-5.25	N		9/4/2012	2.75-5.25	Dredged Fill							
MW-30S	DUP-110811-2	FD	MW-30S-0-2	11/8/2011	0-2	Shallow Fill							
MW-30S	MW-30S-0-2	N		11/8/2011	0-2	Shallow Fill			X				
MW-31S	DUP-110811-3	FD	MW-31S-1-2	11/8/2011	1-2	Shallow Fill							
MW-31S	MW-31S-1-2	N		11/8/2011	1-2	Shallow Fill			X	X		X	
MW-33S	MW-33S-.7-1.3	N		11/10/2011	0.7-1.3	Shallow Fill			X				
MW-33S	MW-33S-1.3	N		11/10/2011	1.3-1.3	Shallow Fill							
MW-35S	DUP-110911-2	FD	MW-35S-1.3-3.3	11/9/2011	1.3-3.3	Shallow Fill			X				
MW-35S	MW-35S-1.3-3.3	N		11/9/2011	1.3-3.3	Shallow Fill	X		X				
MW-35S	MW-35S-1.7	N		11/9/2011	1.7-1.7	Shallow Fill		X					
MW-36S	DUP-022212	FD	MW-36S-4.8-6	2/22/2012	4.8-6	Shallow Fill							
MW-36S	MW-36S-2.8-4.8	N		2/22/2012	2.8-4.8	Shallow Fill							
MW-36S	MW-36S-4.8-6	N		2/22/2012	4.8-6	Dredged Fill							
MW-43S	MW-43S-3.3-4.5	N		1/20/2014	3.3-4.5	Shallow Fill	X						
MW-45D	DUP-100713-1	FD	MW-45D-4.2-6.2	10/7/2013	4.2-6.2	Dredged Fill			X		X		
MW-45D	MW-45D-2.3-4.2	N		10/7/2013	2.3-4.2	Shallow Fill							
MW-45D	MW-45D-4.2-6.2	N		10/7/2013	4.2-6.2	Dredged Fill			X		X		
TB-01B	TB-01B-0.8-2.4	N		1/14/2014	0.8-2.4	Shallow Fill			X		X		
TB-02B	TB-02B-0.5-2.5	N		1/13/2014	0.5-2.5	Shallow Fill			X		X		X
TB-04A	TB-04A-0.5-1.25	N		1/13/2014	0.5-1.25	Shallow Fill			X		X		
TB-05B	TB-05B-2.4-5	N		1/15/2014	2.4-5	Shallow Fill			X		X		X
TB-06A	TB-06A-1.5	N		1/14/2014	1.5-1.5	Shallow Fill							
TB-06A	TB-06A-5-6	N		1/14/2014	5-6	Shallow Fill							
TB-06C	TB-06C-1.25-4.6	N		1/14/2014	1.25-4.6								
TB-06E	TB-06E-3.4-5	N		1/15/2014	3.4-5	Shallow Fill			X		X		X
TB-07	TB-07-0-1	N		1/24/2014	0-1	Shallow Fill			X		X		X

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Sample Information						Analytical Group/ Analytical Method	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082	EPA SW8082A
Saturated Soil													
GP-26	DUP101012-3	FD	GP-26-5.1-7.1	10/10/2012	5.1-7.1	Dredged Fill			X	X			
GP-26	GP-26-3.1-3.5	N		9/7/2012	3.1-3.5	Shallow Fill			X				
GP-26	GP-26-4-5.1	N		9/7/2012	4-5.1	Dredged Fill			X				
GP-26	GP-26-5.1-7.1	N		10/10/2012	5.1-7.1	Dredged Fill			X	X			
GP-26	GP-26-9.1-10.3	N		10/10/2012	9.1-10.3	Top Silt			X	X			
GP-27	DUP101112-1	FD	GP-27-4.3-6.3	10/11/2012	4.3-6.3	Dredged Fill	X		X	X			X
GP-27	DUP101112-1A	FD	GP-27-5.3	10/11/2012	5.3-5.3	Dredged Fill		X					
GP-27	GP-27-0-2	N		9/7/2012	0-2	Shallow Fill	X		X				
GP-27	GP-27-2.3-4.3	N		9/7/2012	2.3-4.3	Dredged Fill	X		X				
GP-27	GP-27-4.3-6.3	N		10/11/2012	4.3-6.3	Dredged Fill	X		X	X			X
GP-27	GP-27-5.3	N		10/11/2012	5.3-5.3	Dredged Fill		X					
GP-27	GP-27-6.3-8.3	N		10/11/2012	6.3-8.3	Top Silt	X		X	X			X
GP-27	GP-27-7.3	N		10/11/2012	7.3-7.3	Top Silt		X					
GP-28	DUP101112-2	FD	GP-28-4.1-6.1	10/11/2012	4.1-6.1	Dredged Fill	X		X	X			X
GP-28	DUP101112-2A	FD	GP-28-5.1	10/11/2012	5.1-5.1	Dredged Fill		X					
GP-28	DUP101112-3	FD	GP-28-6.1-8.3	10/11/2012	6.1-8.3	Top Silt	X		X	X			X
GP-28	DUP101112-3A	FD	GP-28-7.1	10/11/2012	7.1-7.1	Top Silt		X					
GP-28	GP-28-0-2	N		9/7/2012	0-2	Shallow Fill	X		X				
GP-28	GP-28-1	N		9/7/2012	1-1	Shallow Fill		X					
GP-28	GP-28-2-4	N		9/7/2012	2-4	Dredged Fill	X		X				
GP-28	GP-28-3	N		9/7/2012	3-3	Dredged Fill		X					
GP-28	GP-28-4.1-6.1	N		10/11/2012	4.1-6.1	Dredged Fill	X		X	X			X
GP-28	GP-28-5.1	N		10/11/2012	5.1-5.1	Dredged Fill		X					
GP-28	GP-28-6.1-8.3	N		10/11/2012	6.1-8.3	Top Silt	X		X	X			X
GP-28	GP-28-7.1	N		10/11/2012	7.1-7.1	Top Silt		X					
GP-29	GP-29-10	N		10/9/2012	10-10	Shallow Fill		X					
GP-29	GP-29-2.9-4.9	N		10/9/2012	2.9-4.9	Shallow Fill	X		X	X			
GP-29	GP-29-3.9	N		10/9/2012	3.9-3.9	Shallow Fill		X					
GP-29	GP-29-4.9-6.9	N		10/9/2012	4.9-6.9	Dredged Fill	X		X	X			
GP-29	GP-29-5.9	N		10/9/2012	5.9-5.9	Dredged Fill		X					
GP-29	GP-29-6.9-8.9	N		10/9/2012	6.9-8.9	Dredged Fill	X		X	X			
GP-29	GP-29-7.9	N		10/9/2012	7.9-7.9	Dredged Fill		X					
GP-29	GP-29-8.9-11.2	N		10/9/2012	8.9-11.2	Dredged Fill	X		X	X			
GP-30	GP-30-3.3-5.3	N		9/7/2012	3.3-5.3	Dredged Fill			X				
GP-30	GP-30-5.3-6.6	N		9/7/2012	5.3-6.6	Dredged Fill			X				
GP-30	GP-30-7-9	N		10/9/2012	7-9	Top Silt			X	X			
GP-31	DUP-090612-2	FD	GP-31-3-5	9/6/2012	3-5	Dredged Fill	X		X				
GP-31	GP-31-3-5	N		9/6/2012	3-5	Shallow Fill	X		X				
GP-31	GP-31-5.9-7.9	N		10/11/2012	5.9-7.9	Dredged Fill			X	X			X
GP-31	GP-31-5-5.9	N		9/6/2012	5-5.9	Dredged Fill	X		X				
GP-31	GP-31-7.9-9.9	N		10/11/2012	7.9-9.9	Top Silt			X	X			X
GP-32	GP-32-0.25-2.25	N		9/10/2012	0.25-2.25	Shallow Fill			X				X
GP-32	GP-32-4.1-6.1	N		9/10/2012	4.1-6.1	Shallow Fill			X				X
GP-32	GP-32-6.1-8.1	N		10/11/2012	6.1-8.1	Dredged Fill			X	X			X
GP-32	GP-32-8.1-9.1	N		10/11/2012	8.1-9.1	Top Silt			X	X			X
GP-33	GP-33-3.25-5.25	N		9/6/2012	3.25-5.25	Dredged Fill	X		X				
GP-33	GP-33-5.25-5.9	N		9/6/2012	5.25-5.9	Dredged Fill	X		X				
GP-33	GP-33-5.9-8.3	N		10/10/2012	5.9-8.3	Dredged Fill			X	X			X
GP-34	DUP101012-1	FD	GP-34-6.4-8.4	10/10/2012	6.4-8.4	Dredged Fill			X	X			X
GP-34	GP-34-3.25-4.4	N		9/6/2012	3.25-4.4	Shallow Fill			X				
GP-34	GP-34-4.4-6.4	N		9/6/2012	4.4-6.4	Dredged Fill			X				
GP-34	GP-34-6.4-8.4	N		10/10/2012	6.4-8.4	Dredged Fill			X	X			X
GP-34	GP-34-8.4-9.4	N		10/10/2012	8.4-9.4	Top Silt			X	X			X
GP-35	DUP-100813-1	FD	GP-35-3.5-5.5	10/8/2013	3.5-5.5	Dredged Fill			X	X	X		
GP-35	GP-35-11.25-12.25	N		10/8/2013	11.25-12.25	Top Silt			X	X	X		
GP-35	GP-35-3.5-5.5	N		10/8/2013	3.5-5.5	Dredged Fill			X	X	X		
GP-36	GP-36-10	N		10/8/2012	10-10	Dredged Fill		X					
GP-36	GP-36-11.5	N		10/8/2012	11.5-11.5	Top Silt		X					
GP-36	GP-36-11-12	N		10/8/2012	11-12	Top Silt	X		X	X			
GP-36	GP-36-2.6	N		8/30/2012	2.6-2.6	Shallow Fill		X					
GP-36	GP-36-2.6-4.6	N		8/30/2012	2.6-4.6	Shallow Fill	X		X				
GP-36	GP-36-7-9	N		10/8/2012	7-9	Dredged Fill	X		X	X			
GP-36	GP-36-8	N		10/8/2012	8-8	Dredged Fill		X					
GP-36	GP-36-9-11	N		10/8/2012	9-11	Dredged Fill	X		X	X			
GP-37	GP-37-4.4-6.4	N		9/10/2012	4.4-6.4	Dredged Fill							X
GP-37	GP-37-7-9	N		10/8/2012	7-9	Dredged Fill							X

Table N-1
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Sample Information						Analytical Group/ Analytical Method	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082	EPA SW8082A
Saturated Soil													
GP-37	GP-37-9-10	N		10/8/2012	9-10	Top Silt							X
GP-38	GP-38-2.7-4.7	N		9/10/2012	2.7-4.7	Dredged Fill							X
GP-38	GP-38-5-7	N		9/10/2012	5-7	Dredged Fill							X
GP-38	GP-38-7-9	N		10/9/2012	7-9	Dredged Fill							X
GP-38	GP-38-9-11	N		10/9/2012	9-11	Top Silt							X
GP-39	GP-39-10.5-11.5	N		10/8/2012	10.5-11.5	Top Silt			X	X			X
GP-39	GP-39-11	N		10/8/2012	11-11	Top Silt							
GP-39	GP-39-2.5-4.5	N		8/30/2012	2.5-4.5	Shallow Fill							X
GP-39	GP-39-4.5-6.5	N		10/8/2012	4.5-6.5	Dredged Fill			X	X			X
GP-39	GP-39-5.5	N		10/8/2012	5.5-5.5	Dredged Fill							
GP-39	GP-39-6.5-8.5	N		10/8/2012	6.5-8.5	Dredged Fill			X	X			X
GP-39	GP-39-7.5	N		10/8/2012	7.5-7.5	Dredged Fill							
GP-40	GP-40-11.3-12.3	N		10/8/2013	11.3-12.3	Top Silt			X	X	X		
GP-40	GP-40-3.5-5.5	N		10/8/2013	3.5-5.5	Dredged Fill			X	X	X		
GP-42	GP-42-12.5-13.5	N		10/9/2013	12.5-13.5	Top Silt			X		X		
GP-42	GP-42-20-22	N		1/22/2014	20-22	Lower Sand							
GP-42	GP-42-6.75-8.75	N		10/9/2013	6.75-8.75	Dredged Fill			X		X		
GP-43	GP-43-11.1-12.1	N		10/10/2013	11.1-12.1	Top Silt			X		X		
GP-43	GP-43-3.0-5.0	N		10/10/2013	3-5	Shallow Fill					X		
GP-43	GP-43-6.4-8.4	N		10/10/2013	6.4-8.4	Dredged Fill			X		X		
GP-44	GP-44-10	N		10/9/2012	10-10	Dredged Fill		X					
GP-44	GP-44-2-4.8	N		9/4/2012	2-4.8	Dredged Fill			X				
GP-44	GP-44-4.8-6.8	N		10/9/2012	4.8-6.8	Dredged Fill	X		X	X			
GP-44	GP-44-5.8	N		10/9/2012	5.8-5.8	Top Silt		X					
GP-44	GP-44-6.8-8.8	N		10/9/2012	6.8-8.8	Dredged Fill	X		X	X			
GP-44	GP-44-7.8	N		10/9/2012	7.8-7.8	Dredged Fill		X					
GP-44	GP-44-8.8-11.1	N		10/9/2012	8.8-11.1	Dredged Fill	X		X	X			
GP-45	GP-45-2-4.25	N		9/4/2012	2-4.25	Shallow Fill			X				
GP-45	GP-45-4.5-6.5	N		10/9/2012	4.5-6.5	Dredged Fill	X		X	X			
GP-45	GP-45-5.5	N		10/9/2012	5.5-5.5	Dredged Fill		X					
GP-45	GP-45-6.5-8.5	N		10/9/2012	6.5-8.5	Dredged Fill	X		X	X			
GP-45	GP-45-7.5	N		10/9/2012	7.5-7.5	Dredged Fill		X					
GP-45	GP-45-8.5-9.5	N		10/9/2012	8.5-9.5	Dredged Fill	X		X	X			
GP-45	GP-45-9	N		10/9/2012	9-9	Dredged Fill		X					
GP-46	GP-46-2.5-4.2	N		8/31/2012	2.5-4.2	Shallow Fill			X				
GP-46	GP-46-5.2-7.2	N		10/9/2012	5.2-7.2	Dredged Fill	X		X	X			
GP-46	GP-46-6.2	N		10/9/2012	6.2-6.2	Dredged Fill		X					
GP-46	GP-46-7.2-8.7	N		10/9/2012	7.2-8.7	Top Silt	X		X	X			
GP-46	GP-46-8	N		10/9/2012	8-8	Top Silt		X					
GP-49	GP-49-11.75-12.75	N		10/4/2013	11.75-12.75	Top Silt					X		
GP-49	GP-49-3.5-5.5	N		10/4/2013	3.5-5.5	Shallow Fill			X	X	X		
GP-49	GP-49-6.0-8.0	N		10/4/2013	6-8	Dredged Fill					X		
GP-50	DUP-090712-1	FD	GP-50-3-5.9	9/7/2012	3-5.9	Dredged Fill	X		X				X
GP-50	GP-50-0-2	N		9/7/2012	0-2	Shallow Fill	X		X				X
GP-50	GP-50-1	N		9/7/2012	1-1	Shallow Fill		X					
GP-50	GP-50-3	N		9/7/2012	3-3	Shallow Fill		X					
GP-50	GP-50-3-5.9	N		9/7/2012	3-5.9	Dredged Fill	X		X				X
GP-50	GP-50-5.9-7	N		10/11/2012	5.9-7	Dredged Fill	X		X	X			X
GP-50	GP-50-6.9	N		10/11/2012	6.9-6.9	Dredged Fill		X					
GP-50	GP-50-7.25	N		10/11/2012	7.25-7.25	Dredged Fill		X					
GP-50	GP-50-7-7.75	N		10/11/2012	7-7.75	Dredged Fill	X		X	X			X
GP-51	GP-51-11.9-12.9	N		10/9/2013	11.9-12.9	Top Silt			X		X		
GP-51	GP-51-17.4-19.4	N		1/22/2014	17.4-19.4								
GP-51	GP-51-24.4-26.4	N		1/22/2014	24.4-26.4	Lower Sand							
GP-51	GP-51-4.3-6.3	N		10/9/2013	4.3-6.3	Shallow Fill							
GP-51	GP-51-8.6-10.6	N		10/9/2013	8.6-10.6	Dredged Fill			X		X		
GP-52	GP-52-12.1-13.1	N		10/9/2013	12.1-13.1	Top Silt			X		X		
GP-52	GP-52-7.1-9.1	N		10/9/2013	7.1-9.1	Dredged Fill			X		X		
GP-53	GP-53-3-5	N		9/10/2012	3-5	Dredged Fill	X		X	X			
GP-53	GP-53-4	N		9/10/2012	4-4	Dredged Fill		X					
GP-53	GP-53-5	N		9/10/2012	5-5	Dredged Fill		X					
GP-53	GP-53-5.3-7.3	N		10/10/2012	5.3-7.3	Dredged Fill	X		X	X			
GP-53	GP-53-5-5.3	N		9/10/2012	5-5.3	Dredged Fill	X		X	X			
GP-53	GP-53-6.3	N		10/10/2012	6.3-6.3	Dredged Fill		X					
GP-53	GP-53-7.3-9.3	N		10/10/2012	7.3-9.3	Top Silt	X		X	X			
GP-53	GP-53-8.3	N		10/10/2012	8.3-8.3	Top Silt		X					

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Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082	EPA SW8082A
Saturated Soil													
GP-54	DUP-100913-1	FD	GP-54-4.1-6.1	10/9/2013	4.1-6.1	Dredged Fill			X		X		
GP-54	GP-54-1.5-3.0	N		10/9/2013	1.5-3	Shallow Fill					X		
GP-54	GP-54-10.9-11.9	N		10/9/2013	10.9-11.9	Top Silt							
GP-54	GP-54-4.1-6.1	N		10/9/2013	4.1-6.1	Dredged Fill			X		X		
GP-55	DUP100812-1	FD	GP-55-8.4-10.4	10/8/2012	8.4-10.4	Top Silt			X	X			
GP-55	GP-55-2.5-4	N		8/31/2012	2.5-4	Shallow Fill			X				
GP-55	GP-55-4.4-6.4	N		10/8/2012	4.4-6.4	Dredged Fill			X	X			
GP-55	GP-55-6.4-8.4	N		10/8/2012	6.4-8.4	Dredged Fill			X	X			
GP-55	GP-55-8.4-10.4	N		10/8/2012	8.4-10.4	Top Silt			X	X			
GP-56	GP-56-4.2-5.2	N		10/10/2012	4.2-5.2	Shallow Fill			X	X			
GP-56	GP-56-5.2-7.2	N		10/10/2012	5.2-7.2	Dredged Fill			X	X			
GP-56	GP-56-7.2-9.5	N		10/10/2012	7.2-9.5	Top Silt			X	X			
GP-57	GP-57-10.8-12	N		10/10/2012	10.8-12	Top Silt							
GP-57	GP-57-8.8-10.8	N		10/10/2012	8.8-10.8	Dredged Fill							
GP-58	GP-58-8.25-10.5	N		10/8/2012	8.25-10.5	Dredged Fill			X	X			
GP-59	GP-59-10.25-11.5	N		10/10/2012	10.25-11.5	Top Silt			X	X			
GP-59	GP-59-8.25-10.25	N		10/10/2012	8.25-10.25	Dredged Fill			X	X			
GP-60	GP-60-4.5-5.0	N		10/1/2013	4.5-5	Dredged Fill			X	X	X		
GP-60	GP-60-8.8-9.8	N		10/4/2013	8.8-9.8	Top Silt					X		
GP-61	DUP-090612-1	FD	GP-61-2.5-4.5	9/6/2012	2.5-4.5	Dredged Fill			X				
GP-61	GP-61-0-2	N		9/6/2012	0-2	Shallow Fill			X				
GP-61	GP-61-2.5-4.5	N		9/6/2012	2.5-4.5	Dredged Fill			X				
GP-61	GP-61-4.5-7.5	N		10/12/2012	4.5-7.5	Dredged Fill	X		X	X			X
GP-61	GP-61-6	N		10/12/2012	6-6	Dredged Fill		X					
GP-61	GP-61-7.5-8.5	N		10/12/2012	7.5-8.5	Top Silt	X		X	X			X
GP-61	GP-61-8	N		10/12/2012	8-8	Top Silt		X					
GP-62	DUP101212-1	FD	GP-62-5-6.7	10/12/2012	5-6.7	Dredged Fill			X	X			X
GP-62	DUP101212-1A	FD	GP-62-5.8	10/12/2012	5.8-5.8	Dredged Fill							
GP-62	DUP101212-2	FD	GP-62-6.7-7.7	10/12/2012	6.7-7.7	Top Silt			X	X			X
GP-62	DUP101212-2A	FD	GP-62-7.2	10/12/2012	7.2-7.2	Top Silt							
GP-62	GP-62-3-5	N		9/5/2012	3-5	Dredged Fill			X				
GP-62	GP-62-4	N		9/5/2012	4-4	Dredged Fill							
GP-62	GP-62-5.8	N		10/12/2012	5.8-5.8	Dredged Fill							
GP-62	GP-62-5-6.7	N		10/12/2012	5-6.7	Dredged Fill			X	X			X
GP-62	GP-62-6.7-7.7	N		10/12/2012	6.7-7.7	Top Silt			X	X			X
GP-62	GP-62-7.2	N		10/12/2012	7.2-7.2	Top Silt							
GP-63	DUP101212-3	FD	GP-63-4-6	10/12/2012	4-6	Shallow Fill	X		X	X			
GP-63	DUP101212-3A	FD	GP-63-5	10/12/2012	5-5	Shallow Fill		X					
GP-63	GP-63-4-6	N		10/12/2012	4-6	Shallow Fill	X		X	X			
GP-63	GP-63-5	N		10/12/2012	5-5	Shallow Fill		X					
GP-63	GP-63-6-8	N		10/12/2012	6-8	Shallow Fill	X		X	X			
GP-63	GP-63-7	N		10/12/2012	7-7	Shallow Fill		X					
GP-63	GP-63-8.5	N		10/12/2012	8.5-8.5	Shallow Fill		X					
GP-63	GP-63-8-9	N		10/12/2012	8-9	Shallow Fill	X		X	X			
GP-64	GP-64-3.3	N		9/5/2012	3.3-3.3	Shallow Fill		X					
GP-64	GP-64-3.3-4.3	N		9/5/2012	3.3-4.3	Dredged Fill	X						
GP-64	GP-64-4.3-6	N		10/12/2012	4.3-6	Dredged Fill	X		X	X			
GP-64	GP-64-5.1	N		10/12/2012	5.1-5.1	Dredged Fill		X					
GP-64	GP-64-6.5	N		10/12/2012	6.5-6.5	Top Silt		X					
GP-64	GP-64-6-7	N		10/12/2012	6-7	Top Silt	X		X	X			
GP-65	GP-65-1.5-3.5	N		9/5/2012	1.5-3.5	Shallow Fill	X						
GP-65	GP-65-2	N		9/5/2012	2-2	Shallow Fill		X					
GP-65	GP-65-4-6	N		10/12/2012	4-6	Dredged Fill	X		X	X			
GP-65	GP-65-5	N		10/12/2012	5-5	Dredged Fill		X					
GP-65	GP-65-6.5	N		10/12/2012	6.5-6.5	Dredged Fill		X					
GP-65	GP-65-6-7	N		10/12/2012	6-7	Top Silt	X		X	X			
GP-66	GP-66-0.6-2.6	N		9/10/2012	0.6-2.6	Shallow Fill			X				
GP-66	GP-66-3.75-5.75	N		9/10/2012	3.75-5.75	Dredged Fill			X				
GP-66	GP-66-5.75-7.75	N		10/11/2012	5.75-7.75	Dredged Fill			X	X			
GP-66	GP-66-7.75-8.4	N		10/11/2012	7.75-7.75	Top Silt			X	X			
GP-67	GP-67-10-11	N		10/7/2013	10-11	Top Silt			X		X		X
GP-67	GP-67-4.8-6.8	N		10/7/2013	4.8-6.8	Dredged Fill			X		X		
GP-68	DUP-012314-1	FD	GP-68-4-6	1/23/2014	4-6	Dredged Fill			X	X	X		
GP-68	GP-68-4-6	N		1/23/2014	4-6	Dredged Fill			X	X	X		
GP-68	GP-68-9.4-10.4	N		1/23/2014	9.4-10.4	Top Silt					X		
GP-69	DUP-100713-2	FD	GP-69-12.6-13.6	10/7/2013	12.6-13.6	Top Silt			X		X		

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Sample Information						Analytical Group/ Analytical Method	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082	EPA SW8082A
Saturated Soil													
GP-69	GP-69-12.6-13.6	N		10/7/2013	12.6-13.6	Top Silt			X		X		
GP-69	GP-69-20-22	N		1/20/2014	20-22	Lower Sand							
GP-69	GP-69-7.6-9.6	N		10/7/2013	7.6-9.6	Dredged Fill			X		X		X
GP-70	DUP-100913-2	FD	GP-70-6.1-8.1	10/9/2013	6.1-8.1	Dredged Fill			X	X	X		
GP-70	GP-70-10.8-11.8	N		10/9/2013	10.8-11.8	Top Silt			X	X	X		
GP-70	GP-70-3.0-5.0	N		10/9/2013	3-5	Shallow Fill					X		
GP-70	GP-70-6.1-8.1	N		10/9/2013	6.1-8.1	Dredged Fill			X	X	X		
GP-71	DUP012214-1	FD	GP-71-15-17	1/22/2014	15-17	Lower Sand							
GP-71	GP-71-10.6-11.6	N		10/8/2013	10.6-11.6	Top Silt			X	X	X		
GP-71	GP-71-15-17	N		1/22/2014	15-17	Lower Sand							
GP-71	GP-71-2.25-4	N		10/8/2013	2.25-4	Shallow Fill					X		
GP-71	GP-71-7.1-9.1	N		10/8/2013	7.1-9.1	Dredged Fill			X	X	X		
GP-72	GP-72-2.0-4.0	N		10/1/2013	2-4	Dredged Fill			X		X		X
GP-72	GP-72-8.2-9.2	N		10/8/2013	8.2-9.2	Top Silt			X		X		X
GP-73	DUP-100813-2	FD	GP-73-11.5-12.5	10/8/2013	11.5-12.5	Top Silt			X		X		
GP-73	GP-73-11.5-12.5	N		10/8/2013	11.5-12.5	Top Silt			X		X		
GP-73	GP-73-5.8-7.8	N		10/8/2013	5.8-7.8	Dredged Fill			X		X		
GP-74	GP-74-11.9-13.9	N		1/22/2014	11.9-13.9						X		
GP-74	GP-74-17.7-19.7	N		1/22/2014	17.7-19.7	Lower Sand							
GP-74	GP-74-3.0-4.0	N		10/8/2013	3-4	Shallow Fill					X		
GP-74	GP-74-4.0-5.0	N		10/8/2013	4-5	Dredged Fill			X	X	X		
GP-74	GP-74-7.6-8.6	N		10/10/2013	7.6-8.6	Top Silt			X	X	X		
GP-75	GP-75-4.0-6.0	N		10/1/2013	4-6	Dredged Fill			X		X		
GP-75	GP-75-8.5-9.5	N		10/4/2013	8.5-9.5	Top Silt	X			X			
MW-14D	DUP-111411-1	FD	MW-14D-3-6	11/14/2011	3-6	Dredged Fill			X	X			
MW-14D	MW-14D-3-6	N		11/14/2011	3-6	Dredged Fill			X	X			
MW-14D	MW-14D-6.5-7.5	N		11/14/2011	6.5-7.5	Dredged Fill			X	X			
MW-20D	MW-20D-12-13	N		10/8/2013	12-13	Top Silt							
MW-20D	MW-20D-22.5-24.5	N		1/17/2014	22.5-24.5	Lower Sand							
MW-20D	MW-20D-6.6-8.6	N		10/8/2013	6.6-8.6	Dredged Fill			X		X		
MW-28S	DUP-110811-4	FD	MW-28S-1-2	11/8/2011	1-2	Shallow Fill							
MW-28S	MW-28S-1-2	N		11/8/2011	1-2	Shallow Fill			X	X			
MW-28S	MW-28S-3.5-4	N		11/8/2011	3.5-4	Dredged Fill			X	X			

Table N-1
Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082	EPA SW8082A
Saturated Soil													
MW-29S	DUP-110811-1	FD	MW-29S-0-2	11/8/2011	0-2	Shallow Fill						X	
MW-29S	MW-29S-0-2	N		11/8/2011	0-2	Shallow Fill			X			X	
MW-29S	MW-29S-3-3.5	N		11/8/2011	3-3.5	Shallow Fill			X			X	
MW-30S	MW-30S-2.8	N		11/8/2011	2.8-2.8	Dredged Fill	X	X					
MW-30S	MW-30S-3-3.5	N		11/8/2011	3-3.5	Dredged Fill			X				
MW-31D	MW31D-19-20	N		1/22/2014	19-20	Lower Sand							
MW-31D	MW-31D-5.0-7.0	N		10/10/2013	5-7	Dredged Fill			X	X	X		
MW-31D	MW-31D-8.25-9.25	N		10/10/2013	8.25-9.25	Top Silt			X		X		
MW-31S	MW-31S-5-6	N		11/8/2011	5-6	Dredged Fill			X	X		X	
MW-32D	DUP-110911-1	FD	MW-32D-1.6-3.6	11/9/2011	1.6-3.6	Shallow Fill							
MW-32D	MW-32D-1.6-3.6	N		11/9/2011	1.6-3.6	Shallow Fill			X				
MW-32D	MW-32D-5-7	N		11/11/2011	5-7	Dredged Fill			X				
MW-32S	MW-32S-1.7-4	N		11/8/2011	1.7-4	Shallow Fill			X	X			
MW-32S	MW-32S-5-7	N		11/11/2011	5-7	Dredged Fill			X	X			
MW-32S	MW-32S-7	N		11/11/2011	7-7	Dredged Fill		X					
MW-33S	MW-33S-4-7	N		11/14/2011	4-7	Dredged Fill			X				
MW-33S	MW-33S-5.5	N		11/14/2011	5.5-5.5	Dredged Fill							
MW-34S	DUP-110911-3	FD	MW-34S-3.8-4.2	11/9/2011	3.8-4.2	Dredged Fill	X	X					
MW-34S	MW-34S-1.3-3.2	N		11/9/2011	1.3-3.2	Shallow Fill	X		X	X			
MW-34S	MW-34S-3	N		11/9/2011	3-3	Shallow Fill		X					
MW-34S	MW-34S-3.8-4.2	N		11/9/2011	3.8-4.2	Dredged Fill	X	X	X	X			
MW-35D	MW-35D-19.3-20	N		1/23/2014	19.3-20	Lower Sand							
MW-35D	MW-35D-3.25-4.25	N		10/1/2013	3.25-4.25	Shallow Fill					X		
MW-35D	MW-35D-4.25-5.5	N		10/1/2013	4.25-5.5	Dredged Fill			X		X		
MW-35D	MW-35D-7.0	N		10/10/2013	7-7	Dredged Fill	X	X					
MW-35D	MW-35D-8.5-9.5	N		10/10/2013	8.5-9.5	Top Silt			X		X		
MW-35S	MW-35S-5.7-6.3	N		11/9/2011	5.7-6.3	Dredged Fill	X		X				
MW-35S	MW-35S-6.3	N		11/9/2011	6.3-6.3	Dredged Fill		X					
MW-38D	MW-38D-0.83-2.0	N		10/2/2013	0.83-2	Dredged Fill			X	X	X		
MW-38D	MW-38D-2.0	N		10/7/2013	2-2	Dredged Fill							
MW-38D	MW-38D-8.5-9.5	N		10/7/2013	8.5-9.5	Top Silt			X	X	X		
MW-43D	MW-43D-11.25-12.25	N		10/10/2013	11.25-12.25	Top Silt			X	X	X		
MW-43D	MW-43D-14.5-16.5	N		1/21/2014	14.5-16.5								
MW-43D	MW-43D-19.3-21.3	N		1/21/2014	19.3-21.3	Lower Sand							
MW-43D	MW-43D-5.25-6.75	N		10/10/2013	5.25-6.7	Shallow Fill	X						
MW-43D	MW-43D-6.9	N		10/10/2013	6.9-6.9	Dredged Fill	X	X					
MW-43D	MW-43D-7.25-9.25	N		10/10/2013	7.25-9.25	Dredged Fill			X	X	X		
MW-45D	DUP 011714-1	FD	MW-45D-17.3-19.3	1/17/2014	17.3-19.3	Lower Sand							
MW-45D	MW-45D-12.5-13.0	N		1/16/2014	12.5-13	Top Silt			X	X	X		
MW-45D	MW-45D-17.3-19.3	N		1/17/2014	17.3-19.3	Lower Sand							
MW-45D	MW-45D-9.5-10.5	N		10/7/2013	9.5-10.5	Top Silt			X		X		X
SIIE-01	SIIE-01-080814	N		8/8/2014	2-2								
SIIE-02	SIIE-02-080814	N		8/8/2014	2-2								
SIIE-03	SIIE-03-080814	N		8/8/2014	2-2								
SIIE-04	SIIE-04-080814	N		8/8/2014	2-2								
SIIE-05	SIIE-05-080814	N		8/8/2014	2-2								
SIIE-06	SIIE-06-081214	N		8/12/2014	2-2								
TB-01B	TB-01B-5-6.9	N		1/14/2014	5-6.9	Dredged Fill			X		X		X
TB-01B	TB-01B-6.9-7.9	N		1/14/2014	6.9-7.9	Top Silt			X		X		X
TB-02B	DUP011314-1	FD	TB-02B-9.5-10.5	1/13/2014	9.5-10.5	Top Silt			X		X		X
TB-02B	TB-02B-8-9.5	N		1/13/2014	8-9.5	Dredged Fill			X		X		X
TB-02B	TB-02B-9.5-10.5	N		1/13/2014	9.5-10.5	Top Silt			X		X		X
TB-03D	TB-03D-12.6-13.6	N		1/13/2014	12.6-13.6	Top Silt			X		X		X
TB-03D	TB-03D-4.25-7	N		1/13/2014	4.25-7	Shallow Fill			X		X		X
TB-03D	TB-03D-7-9	N		1/13/2014	7-9	Dredged Fill			X		X		X
TB-04A	TB-04A-1.25-3	N		1/13/2014	1.25-3	Dredged Fill			X		X		X
TB-04A	TB-04A-7.1-8.1	N		1/13/2014	7.1-8.1	Top Silt			X		X		X
TB-05B	DUP011514-2	FD	TB-05B-13.6-15.6	1/15/2014	13.6-15.6	Dredged Fill			X		X		X
TB-05B	TB-05B-13.6-15.6	N		1/15/2014	13.6-15.6	Dredged Fill			X		X		X
TB-05B	TB-05B-18.2-19.2	N		1/15/2014	18.2-19.2	Top Silt			X		X		X
TB-06B	DUP011414-1	FD	TB-06B-6-11	1/14/2014	6-11	Shallow Fill							
TB-06B	TB-06B-6-11	N		1/14/2014	6-11	Shallow Fill							
TB-06E	DUP011514-1	FD	TB-06E-8.8-10.6	1/15/2014	8.8-10.6	Dredged Fill							
TB-06E	TB-06E-8.8-10.6	N		1/15/2014	8.8-10.6	Dredged Fill			X		X		X
TB-06F	TB-06F-14-16	N		1/24/2014	14-16	Dredged Fill			X		X		X
TB-06F	TB-06F-20-22	N		1/24/2014	20-22						X		X

Table N-1
Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Dioxins and Furans	Grain Size	Other						
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	AXYS MLA-017R20	PSEP	D2216	EPA160.3	EPA350.1	Plumb,1981	SM2540B	SM2540G	EPA SW9045
Unsaturated Soil															
GP-34	GP-34-0-2	N		9/6/2012	0-2	Shallow Fill					X		X		
GP-37	GP-37-0-2	N		9/10/2012	0-2	Shallow Fill									
GP-41	GP-41-0-0.16	N		9/4/2012	0-0.16	Shallow Fill									
GP-47	GP-47-0-0.25	N		9/5/2012	0-0.25	Shallow Fill							X		
GP-48	GP-48-0-0.5	N		9/4/2012	0-0.5	Shallow Fill									
GP-52	GP-52-3.5-5.5	N		10/9/2013	3.5-5.5	Shallow Fill									
GP-56	DUP-083012-1	FD	GP-56-3.3-3.75	8/30/2012	3.3-3.75	Shallow Fill							X		
GP-56	GP-56-3.3-3.75	N		8/30/2012	3.3-3.75	Shallow Fill							X		
GP-57	GP-57-1.5-3.5	N		8/31/2012	1.5-3.5	Shallow Fill							X		
GP-57	GP-57-4-6.25	N		10/10/2012	4-6.25	Dredged Fill							X		X
GP-57	GP-57-6.25-6.8	N		10/10/2012	6.25-6.8	Dredged Fill							X		X
GP-58	GP-58-1.75-3.75	N		8/31/2012	1.75-3.75	Shallow Fill							X		
GP-58	GP-58-4.25-6.25	N		10/8/2012	4.25-6.25	Dredged Fill							X		X
GP-59	GP-59-2.3-3.9	N		8/31/2012	2.3-3.9	Shallow Fill							X		
GP-59	GP-59-4.25-6.25	N		10/10/2012	4.25-6.25	Dredged Fill							X		X
GP-62	GP-62-0-2	N		9/5/2012	0-2	Shallow Fill					X		X		
GP-62	GP-62-1	N		9/5/2012	1-1	Shallow Fill									
GP-64	GP-64-0-2	N		9/5/2012	0-2	Shallow Fill									
GP-64	GP-64-1	N		9/5/2012	1-1	Shallow Fill									
GP-67	GP-67-3.0-4.8	N		10/7/2013	3-4.8	Shallow Fill									
GP-69	GP-69-0-2	N		10/7/2013	0-2	Shallow Fill								X	
GP-73	GP-73-4.0-5.8	N		10/8/2013	4-5.8	Shallow Fill									
GP-75	DUP-100113-1	FD	GP-75-4.0	10/1/2013	4-4	Dredged Fill									
GP-75	GP-75-0-2.0	N		10/1/2013	0-2	Shallow Fill									
GP-75	GP-75-4.0	N		10/1/2013	4-4	Dredged Fill									
MW-23D	DUP-090412-1	FD	MW-23D-2.75-5.25	9/4/2012	2.75-5.25	Dredged Fill									
MW-23D	MW-23D-2.75-5.25	N		9/4/2012	2.75-5.25	Dredged Fill									
MW-30S	DUP-110811-2	FD	MW-30S-0-2	11/8/2011	0-2	Shallow Fill									
MW-30S	MW-30S-0-2	N		11/8/2011	0-2	Shallow Fill				X	X				
MW-31S	DUP-110811-3	FD	MW-31S-1-2	11/8/2011	1-2	Shallow Fill									
MW-31S	MW-31S-1-2	N		11/8/2011	1-2	Shallow Fill				X	X				
MW-33S	MW-33S-.7-1.3	N		11/10/2011	0.7-1.3	Shallow Fill									
MW-33S	MW-33S-1.3	N		11/10/2011	1.3-1.3	Shallow Fill									
MW-35S	DUP-110911-2	FD	MW-35S-1.3-3.3	11/9/2011	1.3-3.3	Shallow Fill				X	X				
MW-35S	MW-35S-1.3-3.3	N		11/9/2011	1.3-3.3	Shallow Fill				X	X				
MW-35S	MW-35S-1.7	N		11/9/2011	1.7-1.7	Shallow Fill									
MW-36S	DUP-022212	FD	MW-36S-4.8-6	2/22/2012	4.8-6	Shallow Fill									
MW-36S	MW-36S-2.8-4.8	N		2/22/2012	2.8-4.8	Shallow Fill									
MW-36S	MW-36S-4.8-6	N		2/22/2012	4.8-6	Dredged Fill									
MW-43S	MW-43S-3.3-4.5	N		1/20/2014	3.3-4.5	Shallow Fill								X	
MW-45D	DUP-100713-1	FD	MW-45D-4.2-6.2	10/7/2013	4.2-6.2	Dredged Fill									
MW-45D	MW-45D-2.3-4.2	N		10/7/2013	2.3-4.2	Shallow Fill	X							X	
MW-45D	MW-45D-4.2-6.2	N		10/7/2013	4.2-6.2	Dredged Fill	X								
TB-01B	TB-01B-0.8-2.4	N		1/14/2014	0.8-2.4	Shallow Fill	X	X				X		X	
TB-02B	TB-02B-0.5-2.5	N		1/13/2014	0.5-2.5	Shallow Fill	X	X				X		X	
TB-04A	TB-04A-0.5-1.25	N		1/13/2014	0.5-1.25	Shallow Fill	X	X				X		X	
TB-05B	TB-05B-2.4-5	N		1/15/2014	2.4-5	Shallow Fill	X	X				X		X	
TB-06A	TB-06A-1.5	N		1/14/2014	1.5-1.5	Shallow Fill								X	
TB-06A	TB-06A-5-6	N		1/14/2014	5-6	Shallow Fill								X	
TB-06C	TB-06C-1.25-4.6	N		1/14/2014	1.25-4.6		X								
TB-06E	TB-06E-3.4-5	N		1/15/2014	3.4-5	Shallow Fill	X	X				X		X	
TB-07	TB-07-0-1	N		1/24/2014	0-1	Shallow Fill	X	X				X		X	

Table N-1
Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Dioxins and Furans	Grain Size	Other						
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	AXYS MLA-017R20	PSEP	D2216	EPA160.3	EPA350.1	Plumb,1981	SM2540B	SM2540G	EPA SW9045
Saturated Soil															
GP-26	DUP101012-3	FD	GP-26-5.1-7.1	10/10/2012	5.1-7.1	Dredged Fill							X		X
GP-26	GP-26-3.1-3.5	N		9/7/2012	3.1-3.5	Shallow Fill							X		
GP-26	GP-26-4-5.1	N		9/7/2012	4-5.1	Dredged Fill							X		
GP-26	GP-26-5.1-7.1	N		10/10/2012	5.1-7.1	Dredged Fill							X		X
GP-26	GP-26-9.1-10.3	N		10/10/2012	9.1-10.3	Top Silt							X		X
GP-27	DUP101112-1	FD	GP-27-4.3-6.3	10/11/2012	4.3-6.3	Dredged Fill									X
GP-27	DUP101112-1A	FD	GP-27-5.3	10/11/2012	5.3-5.3	Dredged Fill									
GP-27	GP-27-0-2	N		9/7/2012	0-2	Shallow Fill					X		X		
GP-27	GP-27-2.3-4.3	N		9/7/2012	2.3-4.3	Dredged Fill					X		X		
GP-27	GP-27-4.3-6.3	N		10/11/2012	4.3-6.3	Dredged Fill									X
GP-27	GP-27-5.3	N		10/11/2012	5.3-5.3	Dredged Fill									
GP-27	GP-27-6.3-8.3	N		10/11/2012	6.3-8.3	Top Silt									X
GP-27	GP-27-7.3	N		10/11/2012	7.3-7.3	Top Silt									
GP-28	DUP101112-2	FD	GP-28-4.1-6.1	10/11/2012	4.1-6.1	Dredged Fill									X
GP-28	DUP101112-2A	FD	GP-28-5.1	10/11/2012	5.1-5.1	Dredged Fill									
GP-28	DUP101112-3	FD	GP-28-6.1-8.3	10/11/2012	6.1-8.3	Top Silt									X
GP-28	DUP101112-3A	FD	GP-28-7.1	10/11/2012	7.1-7.1	Top Silt									
GP-28	GP-28-0-2	N		9/7/2012	0-2	Shallow Fill					X		X		
GP-28	GP-28-1	N		9/7/2012	1-1	Shallow Fill									
GP-28	GP-28-2-4	N		9/7/2012	2-4	Dredged Fill					X		X		
GP-28	GP-28-3	N		9/7/2012	3-3	Dredged Fill									
GP-28	GP-28-4.1-6.1	N		10/11/2012	4.1-6.1	Dredged Fill									X
GP-28	GP-28-5.1	N		10/11/2012	5.1-5.1	Dredged Fill									
GP-28	GP-28-6.1-8.3	N		10/11/2012	6.1-8.3	Top Silt									X
GP-28	GP-28-7.1	N		10/11/2012	7.1-7.1	Top Silt									
GP-29	GP-29-10	N		10/9/2012	10-10	Shallow Fill									
GP-29	GP-29-2.9-4.9	N		10/9/2012	2.9-4.9	Shallow Fill	X								X
GP-29	GP-29-3.9	N		10/9/2012	3.9-3.9	Shallow Fill									
GP-29	GP-29-4.9-6.9	N		10/9/2012	4.9-6.9	Dredged Fill	X								X
GP-29	GP-29-5.9	N		10/9/2012	5.9-5.9	Dredged Fill									
GP-29	GP-29-6.9-8.9	N		10/9/2012	6.9-8.9	Dredged Fill	X								X
GP-29	GP-29-7.9	N		10/9/2012	7.9-7.9	Dredged Fill									
GP-29	GP-29-8.9-11.2	N		10/9/2012	8.9-11.2	Dredged Fill	X								X
GP-30	GP-30-3.3-5.3	N		9/7/2012	3.3-5.3	Dredged Fill					X		X		
GP-30	GP-30-5.3-6.6	N		9/7/2012	5.3-6.6	Dredged Fill					X		X		
GP-30	GP-30-7-9	N		10/9/2012	7-9	Top Silt	X								X
GP-31	DUP-090612-2	FD	GP-31-3-5	9/6/2012	3-5	Dredged Fill					X		X		
GP-31	GP-31-3-5	N		9/6/2012	3-5	Shallow Fill					X		X		
GP-31	GP-31-5.9-7.9	N		10/11/2012	5.9-7.9	Dredged Fill									X
GP-31	GP-31-5-5.9	N		9/6/2012	5-5.9	Dredged Fill					X		X		
GP-31	GP-31-7.9-9.9	N		10/11/2012	7.9-9.9	Top Silt									X
GP-32	GP-32-0.25-2.25	N		9/10/2012	0.25-2.25	Shallow Fill					X		X		
GP-32	GP-32-4.1-6.1	N		9/10/2012	4.1-6.1	Shallow Fill					X		X		
GP-32	GP-32-6.1-8.1	N		10/11/2012	6.1-8.1	Dredged Fill							X		X
GP-32	GP-32-8.1-9.1	N		10/11/2012	8.1-9.1	Top Silt							X		X
GP-33	GP-33-3.25-5.25	N		9/6/2012	3.25-5.25	Dredged Fill					X		X		
GP-33	GP-33-5.25-5.9	N		9/6/2012	5.25-5.9	Dredged Fill					X		X		
GP-33	GP-33-5.9-8.3	N		10/10/2012	5.9-8.3	Dredged Fill									X
GP-34	DUP101012-1	FD	GP-34-6.4-8.4	10/10/2012	6.4-8.4	Dredged Fill	X								X
GP-34	GP-34-3.25-4.4	N		9/6/2012	3.25-4.4	Shallow Fill					X		X		
GP-34	GP-34-4.4-6.4	N		9/6/2012	4.4-6.4	Dredged Fill					X		X		
GP-34	GP-34-6.4-8.4	N		10/10/2012	6.4-8.4	Dredged Fill	X								X
GP-34	GP-34-8.4-9.4	N		10/10/2012	8.4-9.4	Top Silt	X								X
GP-35	DUP-100813-1	FD	GP-35-3.5-5.5	10/8/2013	3.5-5.5	Dredged Fill	X								
GP-35	GP-35-11.25-12.25	N		10/8/2013	11.25-12.25	Top Silt	X								
GP-35	GP-35-3.5-5.5	N		10/8/2013	3.5-5.5	Dredged Fill	X								
GP-36	GP-36-10	N		10/8/2012	10-10	Dredged Fill									
GP-36	GP-36-11.5	N		10/8/2012	11.5-11.5	Top Silt									
GP-36	GP-36-11-12	N		10/8/2012	11-12	Top Silt									X
GP-36	GP-36-2.6	N		8/30/2012	2.6-2.6	Shallow Fill									
GP-36	GP-36-2.6-4.6	N		8/30/2012	2.6-4.6	Shallow Fill									
GP-36	GP-36-7-9	N		10/8/2012	7-9	Dredged Fill									X
GP-36	GP-36-8	N		10/8/2012	8-8	Dredged Fill									
GP-36	GP-36-9-11	N		10/8/2012	9-11	Dredged Fill									X
GP-37	GP-37-4.4-6.4	N		9/10/2012	4.4-6.4	Dredged Fill									
GP-37	GP-37-7-9	N		10/8/2012	7-9	Dredged Fill									X

Table N-1
Soil Analytical Method Summary
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Sample Information						Analytical Group/ Analytical Method	Dioxins and Furans	Grain Size	Other						
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	AXYS MLA-017R20	PSEP	D2216	EPA160.3	EPA350.1	Plumb,1981	SM2540B	SM2540G	EPA SW9045
Saturated Soil															
GP-37	GP-37-9-10	N		10/8/2012	9-10	Top Silt									X
GP-38	GP-38-2.7-4.7	N		9/10/2012	2.7-4.7	Dredged Fill									
GP-38	GP-38-5-7	N		9/10/2012	5-7	Dredged Fill									
GP-38	GP-38-7-9	N		10/9/2012	7-9	Dredged Fill									X
GP-38	GP-38-9-11	N		10/9/2012	9-11	Top Silt									X
GP-39	GP-39-10.5-11.5	N		10/8/2012	10.5-11.5	Top Silt									X
GP-39	GP-39-11	N		10/8/2012	11-11	Top Silt									
GP-39	GP-39-2.5-4.5	N		8/30/2012	2.5-4.5	Shallow Fill							X		
GP-39	GP-39-4.5-6.5	N		10/8/2012	4.5-6.5	Dredged Fill									X
GP-39	GP-39-5.5	N		10/8/2012	5.5-5.5	Dredged Fill									
GP-39	GP-39-6.5-8.5	N		10/8/2012	6.5-8.5	Dredged Fill									X
GP-39	GP-39-7.5	N		10/8/2012	7.5-7.5	Dredged Fill									
GP-40	GP-40-11.3-12.3	N		10/8/2013	11.3-12.3	Top Silt	X								
GP-40	GP-40-3.5-5.5	N		10/8/2013	3.5-5.5	Dredged Fill	X								
GP-42	GP-42-12.5-13.5	N		10/9/2013	12.5-13.5	Top Silt									
GP-42	GP-42-20-22	N		1/22/2014	20-22	Lower Sand									
GP-42	GP-42-6.75-8.75	N		10/9/2013	6.75-8.75	Dredged Fill									
GP-43	GP-43-11.1-12.1	N		10/10/2013	11.1-12.1	Top Silt									
GP-43	GP-43-3.0-5.0	N		10/10/2013	3-5	Shallow Fill	X								
GP-43	GP-43-6.4-8.4	N		10/10/2013	6.4-8.4	Dredged Fill	X								
GP-44	GP-44-10	N		10/9/2012	10-10	Dredged Fill									
GP-44	GP-44-2-4.8	N		9/4/2012	2-4.8	Dredged Fill									
GP-44	GP-44-4.8-6.8	N		10/9/2012	4.8-6.8	Dredged Fill	X								X
GP-44	GP-44-5.8	N		10/9/2012	5.8-5.8	Top Silt									
GP-44	GP-44-6.8-8.8	N		10/9/2012	6.8-8.8	Dredged Fill	X								X
GP-44	GP-44-7.8	N		10/9/2012	7.8-7.8	Dredged Fill									
GP-44	GP-44-8.8-11.1	N		10/9/2012	8.8-11.1	Dredged Fill	X								X
GP-45	GP-45-2-4.25	N		9/4/2012	2-4.25	Shallow Fill									
GP-45	GP-45-4.5-6.5	N		10/9/2012	4.5-6.5	Dredged Fill	X								X
GP-45	GP-45-5.5	N		10/9/2012	5.5-5.5	Dredged Fill									
GP-45	GP-45-6.5-8.5	N		10/9/2012	6.5-8.5	Dredged Fill	X								X
GP-45	GP-45-7.5	N		10/9/2012	7.5-7.5	Dredged Fill									
GP-45	GP-45-8.5-9.5	N		10/9/2012	8.5-9.5	Dredged Fill	X								X
GP-45	GP-45-9	N		10/9/2012	9-9	Dredged Fill									
GP-46	GP-46-2.5-4.2	N		8/31/2012	2.5-4.2	Shallow Fill									
GP-46	GP-46-5.2-7.2	N		10/9/2012	5.2-7.2	Dredged Fill	X								X
GP-46	GP-46-6.2	N		10/9/2012	6.2-6.2	Dredged Fill									
GP-46	GP-46-7.2-8.7	N		10/9/2012	7.2-8.7	Top Silt	X								X
GP-46	GP-46-8	N		10/9/2012	8-8	Top Silt									
GP-49	GP-49-11.75-12.75	N		10/4/2013	11.75-12.75	Top Silt	X								
GP-49	GP-49-3.5-5.5	N		10/4/2013	3.5-5.5	Shallow Fill	X								
GP-49	GP-49-6.0-8.0	N		10/4/2013	6-8	Dredged Fill	X								
GP-50	DUP-090712-1	FD	GP-50-3-5.9	9/7/2012	3-5.9	Dredged Fill									
GP-50	GP-50-0-2	N		9/7/2012	0-2	Shallow Fill									
GP-50	GP-50-1	N		9/7/2012	1-1	Shallow Fill									
GP-50	GP-50-3	N		9/7/2012	3-3	Shallow Fill									
GP-50	GP-50-3-5.9	N		9/7/2012	3-5.9	Dredged Fill									
GP-50	GP-50-5.9-7	N		10/11/2012	5.9-7	Dredged Fill									X
GP-50	GP-50-6.9	N		10/11/2012	6.9-6.9	Dredged Fill									
GP-50	GP-50-7.25	N		10/11/2012	7.25-7.25	Dredged Fill									
GP-50	GP-50-7-7.75	N		10/11/2012	7-7.75	Dredged Fill									X
GP-51	GP-51-11.9-12.9	N		10/9/2013	11.9-12.9	Top Silt									
GP-51	GP-51-17.4-19.4	N		1/22/2014	17.4-19.4										
GP-51	GP-51-24.4-26.4	N		1/22/2014	24.4-26.4	Lower Sand									
GP-51	GP-51-4.3-6.3	N		10/9/2013	4.3-6.3	Shallow Fill	X								
GP-51	GP-51-8.6-10.6	N		10/9/2013	8.6-10.6	Dredged Fill									
GP-52	GP-52-12.1-13.1	N		10/9/2013	12.1-13.1	Top Silt									
GP-52	GP-52-7.1-9.1	N		10/9/2013	7.1-9.1	Dredged Fill									
GP-53	GP-53-3-5	N		9/10/2012	3-5	Dredged Fill									
GP-53	GP-53-4	N		9/10/2012	4-4	Dredged Fill									
GP-53	GP-53-5	N		9/10/2012	5-5	Dredged Fill									
GP-53	GP-53-5.3-7.3	N		10/10/2012	5.3-7.3	Dredged Fill									X
GP-53	GP-53-5-5.3	N		9/10/2012	5-5.3	Dredged Fill									
GP-53	GP-53-6.3	N		10/10/2012	6.3-6.3	Dredged Fill									
GP-53	GP-53-7.3-9.3	N		10/10/2012	7.3-9.3	Top Silt									X
GP-53	GP-53-8.3	N		10/10/2012	8.3-8.3	Top Silt									

Table N-1
Soil Analytical Method Summary
5900 West Marginal Way Site
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Sample Information						Analytical Group/ Analytical Method	Dioxins and Furans	Grain Size	Other						
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	AXYS MLA-017R20	PSEP	D2216	EPA160.3	EPA350.1	Plumb,1981	SM2540B	SM2540G	EPA SW9045
Saturated Soil															
GP-54	DUP-100913-1	FD	GP-54-4.1-6.1	10/9/2013	4.1-6.1	Dredged Fill									
GP-54	GP-54-1.5-3.0	N		10/9/2013	1.5-3	Shallow Fill									
GP-54	GP-54-10.9-11.9	N		10/9/2013	10.9-11.9	Top Silt									
GP-54	GP-54-4.1-6.1	N		10/9/2013	4.1-6.1	Dredged Fill									
GP-55	DUP100812-1	FD	GP-55-8.4-10.4	10/8/2012	8.4-10.4	Top Silt	X								X
GP-55	GP-55-2.5-4	N		8/31/2012	2.5-4	Shallow Fill	X								
GP-55	GP-55-4.4-6.4	N		10/8/2012	4.4-6.4	Dredged Fill	X								
GP-55	GP-55-6.4-8.4	N		10/8/2012	6.4-8.4	Dredged Fill	X								
GP-55	GP-55-8.4-10.4	N		10/8/2012	8.4-10.4	Top Silt	X								X
GP-56	GP-56-4.2-5.2	N		10/10/2012	4.2-5.2	Shallow Fill							X		X
GP-56	GP-56-5.2-7.2	N		10/10/2012	5.2-7.2	Dredged Fill							X		X
GP-56	GP-56-7.2-9.5	N		10/10/2012	7.2-9.5	Top Silt							X		X
GP-57	GP-57-10.8-12	N		10/10/2012	10.8-12	Top Silt							X		X
GP-57	GP-57-8.8-10.8	N		10/10/2012	8.8-10.8	Dredged Fill							X		X
GP-58	GP-58-8.25-10.5	N		10/8/2012	8.25-10.5	Dredged Fill							X		X
GP-59	GP-59-10.25-11.5	N		10/10/2012	10.25-11.5	Top Silt							X		X
GP-59	GP-59-8.25-10.25	N		10/10/2012	8.25-10.25	Dredged Fill							X		X
GP-60	GP-60-4.5-5.0	N		10/1/2013	4.5-5	Dredged Fill							X		
GP-60	GP-60-8.8-9.8	N		10/4/2013	8.8-9.8	Top Silt							X		
GP-61	DUP-090612-1	FD	GP-61-2.5-4.5	9/6/2012	2.5-4.5	Dredged Fill					X		X		
GP-61	GP-61-0-2	N		9/6/2012	0-2	Shallow Fill					X		X		
GP-61	GP-61-2.5-4.5	N		9/6/2012	2.5-4.5	Dredged Fill					X		X		
GP-61	GP-61-4.5-7.5	N		10/12/2012	4.5-7.5	Dredged Fill									X
GP-61	GP-61-6	N		10/12/2012	6-6	Dredged Fill									
GP-61	GP-61-7.5-8.5	N		10/12/2012	7.5-8.5	Top Silt									X
GP-61	GP-61-8	N		10/12/2012	8-8	Top Silt									
GP-62	DUP101212-1	FD	GP-62-5-6.7	10/12/2012	5-6.7	Dredged Fill									X
GP-62	DUP101212-1A	FD	GP-62-5.8	10/12/2012	5.8-5.8	Dredged Fill									
GP-62	DUP101212-2	FD	GP-62-6.7-7.7	10/12/2012	6.7-7.7	Top Silt									X
GP-62	DUP101212-2A	FD	GP-62-7.2	10/12/2012	7.2-7.2	Top Silt									
GP-62	GP-62-3-5	N		9/5/2012	3-5	Dredged Fill					X		X		
GP-62	GP-62-4	N		9/5/2012	4-4	Dredged Fill									
GP-62	GP-62-5.8	N		10/12/2012	5.8-5.8	Dredged Fill									
GP-62	GP-62-5-6.7	N		10/12/2012	5-6.7	Dredged Fill									X
GP-62	GP-62-6.7-7.7	N		10/12/2012	6.7-7.7	Top Silt									X
GP-62	GP-62-7.2	N		10/12/2012	7.2-7.2	Top Silt									
GP-63	DUP101212-3	FD	GP-63-4-6	10/12/2012	4-6	Shallow Fill							X		X
GP-63	DUP101212-3A	FD	GP-63-5	10/12/2012	5-5	Shallow Fill									
GP-63	GP-63-4-6	N		10/12/2012	4-6	Shallow Fill							X		X
GP-63	GP-63-5	N		10/12/2012	5-5	Shallow Fill									
GP-63	GP-63-6-8	N		10/12/2012	6-8	Shallow Fill							X		X
GP-63	GP-63-7	N		10/12/2012	7-7	Shallow Fill									
GP-63	GP-63-8.5	N		10/12/2012	8.5-8.5	Shallow Fill									
GP-63	GP-63-8-9	N		10/12/2012	8-9	Shallow Fill							X		X
GP-64	GP-64-3.3	N		9/5/2012	3.3-3.3	Shallow Fill									
GP-64	GP-64-3.3-4.3	N		9/5/2012	3.3-4.3	Dredged Fill									
GP-64	GP-64-4.3-6	N		10/12/2012	4.3-6	Dredged Fill									X
GP-64	GP-64-5.1	N		10/12/2012	5.1-5.1	Dredged Fill									
GP-64	GP-64-6.5	N		10/12/2012	6.5-6.5	Top Silt									
GP-64	GP-64-6-7	N		10/12/2012	6-7	Top Silt									X
GP-65	GP-65-1.5-3.5	N		9/5/2012	1.5-3.5	Shallow Fill									
GP-65	GP-65-2	N		9/5/2012	2-2	Shallow Fill									
GP-65	GP-65-4-6	N		10/12/2012	4-6	Dredged Fill									
GP-65	GP-65-5	N		10/12/2012	5-5	Dredged Fill									
GP-65	GP-65-6.5	N		10/12/2012	6.5-6.5	Dredged Fill									
GP-65	GP-65-6-7	N		10/12/2012	6-7	Top Silt									X
GP-66	GP-66-0.6-2.6	N		9/10/2012	0.6-2.6	Shallow Fill					X		X		
GP-66	GP-66-3.75-5.75	N		9/10/2012	3.75-5.75	Dredged Fill					X		X		
GP-66	GP-66-5.75-7.75	N		10/11/2012	5.75-7.75	Dredged Fill							X		X
GP-66	GP-66-7.75-8.4	N		10/11/2012	7.75-7.75	Top Silt							X		X
GP-67	GP-67-10-11	N		10/7/2013	10-11	Top Silt									
GP-67	GP-67-4.8-6.8	N		10/7/2013	4.8-6.8	Dredged Fill	X								
GP-68	DUP-012314-1	FD	GP-68-4-6	1/23/2014	4-6	Dredged Fill								X	
GP-68	GP-68-4-6	N		1/23/2014	4-6	Dredged Fill								X	
GP-68	GP-68-9.4-10.4	N		1/23/2014	9.4-10.4	Top Silt								X	
GP-69	DUP-100713-2	FD	GP-69-12.6-13.6	10/7/2013	12.6-13.6	Top Silt							X		

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Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	AXYS MLA-017R20	PSEP	D2216	EPA160.3	EPA350.1	Plumb,1981	SM2540B	SM2540G	EPA SW9045
Saturated Soil															
GP-69	GP-69-12.6-13.6	N		10/7/2013	12.6-13.6	Top Silt	X						X		
GP-69	GP-69-20-22	N		1/20/2014	20-22	Lower Sand								X	
GP-69	GP-69-7.6-9.6	N		10/7/2013	7.6-9.6	Dredged Fill	X						X		
GP-70	DUP-100913-2	FD	GP-70-6.1-8.1	10/9/2013	6.1-8.1	Dredged Fill							X		
GP-70	GP-70-10.8-11.8	N		10/9/2013	10.8-11.8	Top Silt							X		
GP-70	GP-70-3.0-5.0	N		10/9/2013	3-5	Shallow Fill									
GP-70	GP-70-6.1-8.1	N		10/9/2013	6.1-8.1	Dredged Fill	X						X		
GP-71	DUP012214-1	FD	GP-71-15-17	1/22/2014	15-17	Lower Sand								X	
GP-71	GP-71-10.6-11.6	N		10/8/2013	10.6-11.6	Top Silt							X		
GP-71	GP-71-15-17	N		1/22/2014	15-17	Lower Sand								X	
GP-71	GP-71-2.25-4	N		10/8/2013	2.25-4	Shallow Fill									
GP-71	GP-71-7.1-9.1	N		10/8/2013	7.1-9.1	Dredged Fill	X								
GP-72	GP-72-2.0-4.0	N		10/1/2013	2-4	Dredged Fill	X								
GP-72	GP-72-8.2-9.2	N		10/8/2013	8.2-9.2	Top Silt	X								
GP-73	DUP-100813-2	FD	GP-73-11.5-12.5	10/8/2013	11.5-12.5	Top Silt									
GP-73	GP-73-11.5-12.5	N		10/8/2013	11.5-12.5	Top Silt									
GP-73	GP-73-5.8-7.8	N		10/8/2013	5.8-7.8	Dredged Fill	X								
GP-74	GP-74-11.9-13.9	N		1/22/2014	11.9-13.9										
GP-74	GP-74-17.7-19.7	N		1/22/2014	17.7-19.7	Lower Sand								X	
GP-74	GP-74-3.0-4.0	N		10/8/2013	3-4	Shallow Fill	X								
GP-74	GP-74-4.0-5.0	N		10/8/2013	4-5	Dredged Fill	X								
GP-74	GP-74-7.6-8.6	N		10/10/2013	7.6-8.6	Top Silt	X						X	X	
GP-75	GP-75-4.0-6.0	N		10/1/2013	4-6	Dredged Fill							X		
GP-75	GP-75-8.5-9.5	N		10/4/2013	8.5-9.5	Top Silt							X		
MW-14D	DUP-111411-1	FD	MW-14D-3-6	11/14/2011	3-6	Dredged Fill									
MW-14D	MW-14D-3-6	N		11/14/2011	3-6	Dredged Fill									
MW-14D	MW-14D-6.5-7.5	N		11/14/2011	6.5-7.5	Dredged Fill									
MW-20D	MW-20D-12-13	N		10/8/2013	12-13	Top Silt									
MW-20D	MW-20D-22.5-24.5	N		1/17/2014	22.5-24.5	Lower Sand									
MW-20D	MW-20D-6.6-8.6	N		10/8/2013	6.6-8.6	Dredged Fill									
MW-28S	DUP-110811-4	FD	MW-28S-1-2	11/8/2011	1-2	Shallow Fill				X	X				
MW-28S	MW-28S-1-2	N		11/8/2011	1-2	Shallow Fill				X	X				
MW-28S	MW-28S-3.5-4	N		11/8/2011	3.5-4	Dredged Fill				X	X				

Table N-1
Soil Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information						Analytical Group/ Analytical Method	Dioxins and Furans	Grain Size	Other						
Location	Sample ID	Sample Type	Parent Sample ID	Date	Depth (feet bgs)	Geologic Unit	AXYS MLA-017R20	PSEP	D2216	EPA160.3	EPA350.1	Plumb,1981	SM2540B	SM2540G	EPA SW9045
Saturated Soil															
MW-29S	DUP-110811-1	FD	MW-29S-0-2	11/8/2011	0-2	Shallow Fill									
MW-29S	MW-29S-0-2	N		11/8/2011	0-2	Shallow Fill				X	X				
MW-29S	MW-29S-3-3.5	N		11/8/2011	3-3.5	Shallow Fill				X	X				
MW-30S	MW-30S-2.8	N		11/8/2011	2.8-2.8	Dredged Fill									
MW-30S	MW-30S-3-3.5	N		11/8/2011	3-3.5	Dredged Fill				X	X				
MW-31D	MW31D-19-20	N		1/22/2014	19-20	Lower Sand		X				X		X	
MW-31D	MW-31D-5.0-7.0	N		10/10/2013	5-7	Dredged Fill									
MW-31D	MW-31D-8.25-9.25	N		10/10/2013	8.25-9.25	Top Silt		X				X	X		
MW-31S	MW-31S-5-6	N		11/8/2011	5-6	Dredged Fill				X	X				
MW-32D	DUP-110911-1	FD	MW-32D-1.6-3.6	11/9/2011	1.6-3.6	Shallow Fill									
MW-32D	MW-32D-1.6-3.6	N		11/9/2011	1.6-3.6	Shallow Fill									
MW-32D	MW-32D-5-7	N		11/11/2011	5-7	Dredged Fill									
MW-32S	MW-32S-1.7-4	N		11/8/2011	1.7-4	Shallow Fill									
MW-32S	MW-32S-5-7	N		11/11/2011	5-7	Dredged Fill									
MW-32S	MW-32S-7	N		11/11/2011	7-7	Dredged Fill									
MW-33S	MW-33S-4-7	N		11/14/2011	4-7	Dredged Fill									
MW-33S	MW-33S-5.5	N		11/14/2011	5.5-5.5	Dredged Fill									
MW-34S	DUP-110911-3	FD	MW-34S-3.8-4.2	11/9/2011	3.8-4.2	Dredged Fill									
MW-34S	MW-34S-1.3-3.2	N		11/9/2011	1.3-3.2	Shallow Fill				X	X				
MW-34S	MW-34S-3	N		11/9/2011	3-3	Shallow Fill									
MW-34S	MW-34S-3.8-4.2	N		11/9/2011	3.8-4.2	Dredged Fill	X			X	X				
MW-35D	MW-35D-19.3-20	N		1/23/2014	19.3-20	Lower Sand		X				X		X	
MW-35D	MW-35D-3.25-4.25	N		10/1/2013	3.25-4.25	Shallow Fill									
MW-35D	MW-35D-4.25-5.5	N		10/1/2013	4.25-5.5	Dredged Fill									
MW-35D	MW-35D-7.0	N		10/10/2013	7-7	Dredged Fill									
MW-35D	MW-35D-8.5-9.5	N		10/10/2013	8.5-9.5	Top Silt		X				X	X	X	
MW-35S	MW-35S-5.7-6.3	N		11/9/2011	5.7-6.3	Dredged Fill				X	X				
MW-35S	MW-35S-6.3	N		11/9/2011	6.3-6.3	Dredged Fill									
MW-38D	MW-38D-0.83-2.0	N		10/2/2013	0.83-2	Dredged Fill	X							X	
MW-38D	MW-38D-2.0	N		10/7/2013	2-2	Dredged Fill		X				X	X		
MW-38D	MW-38D-8.5-9.5	N		10/7/2013	8.5-9.5	Top Silt	X	X				X	X		
MW-43D	MW-43D-11.25-12.25	N		10/10/2013	11.25-12.25	Top Silt									
MW-43D	MW-43D-14.5-16.5	N		1/21/2014	14.5-16.5										
MW-43D	MW-43D-19.3-21.3	N		1/21/2014	19.3-21.3	Lower Sand									
MW-43D	MW-43D-5.25-6.75	N		10/10/2013	5.25-6.7	Shallow Fill									
MW-43D	MW-43D-6.9	N		10/10/2013	6.9-6.9	Dredged Fill									
MW-43D	MW-43D-7.25-9.25	N		10/10/2013	7.25-9.25	Dredged Fill	X								
MW-45D	DUP 011714-1	FD	MW-45D-17.3-19.3	1/17/2014	17.3-19.3	Lower Sand								X	
MW-45D	MW-45D-12.5-13.0	N		1/16/2014	12.5-13	Top Silt								X	
MW-45D	MW-45D-17.3-19.3	N		1/17/2014	17.3-19.3	Lower Sand		X				X		X	
MW-45D	MW-45D-9.5-10.5	N		10/7/2013	9.5-10.5	Top Silt		X				X	X		
SIIE-01	SIIE-01-080814	N		8/8/2014	2-2		X					X		X	
SIIE-02	SIIE-02-080814	N		8/8/2014	2-2		X					X		X	
SIIE-03	SIIE-03-080814	N		8/8/2014	2-2		X					X		X	
SIIE-04	SIIE-04-080814	N		8/8/2014	2-2									X	
SIIE-05	SIIE-05-080814	N		8/8/2014	2-2		X					X		X	
SIIE-06	SIIE-06-081214	N		8/12/2014	2-2		X					X		X	
TB-01B	TB-01B-5-6.9	N		1/14/2014	5-6.9	Dredged Fill	X	X				X		X	
TB-01B	TB-01B-6.9-7.9	N		1/14/2014	6.9-7.9	Top Silt	X	X				X		X	
TB-02B	DUP011314-1	FD	TB-02B-9.5-10.5	1/13/2014	9.5-10.5	Top Silt	X								
TB-02B	TB-02B-8-9.5	N		1/13/2014	8-9.5	Dredged Fill	X	X				X		X	
TB-02B	TB-02B-9.5-10.5	N		1/13/2014	9.5-10.5	Top Silt	X	X				X		X	
TB-03D	TB-03D-12.6-13.6	N		1/13/2014	12.6-13.6	Top Silt	X	X				X		X	
TB-03D	TB-03D-4.25-7	N		1/13/2014	4.25-7	Shallow Fill	X	X				X		X	
TB-03D	TB-03D-7-9	N		1/13/2014	7-9	Dredged Fill	X	X				X		X	
TB-04A	TB-04A-1.25-3	N		1/13/2014	1.25-3	Dredged Fill	X	X				X		X	
TB-04A	TB-04A-7.1-8.1	N		1/13/2014	7.1-8.1	Top Silt	X	X				X		X	
TB-05B	DUP011514-2	FD	TB-05B-13.6-15.6	1/15/2014	13.6-15.6	Dredged Fill	X								
TB-05B	TB-05B-13.6-15.6	N		1/15/2014	13.6-15.6	Dredged Fill	X	X				X		X	
TB-05B	TB-05B-18.2-19.2	N		1/15/2014	18.2-19.2	Top Silt	X	X				X		X	
TB-06B	DUP011414-1	FD	TB-06B-6-11	1/14/2014	6-11	Shallow Fill									
TB-06B	TB-06B-6-11	N		1/14/2014	6-11	Shallow Fill									
TB-06E	DUP011514-1	FD	TB-06E-8.8-10.6	1/15/2014	8.8-10.6	Dredged Fill								X	
TB-06E	TB-06E-8.8-10.6	N		1/15/2014	8.8-10.6	Dredged Fill	X	X				X		X	
TB-06F	TB-06F-14-16	N		1/24/2014	14-16	Dredged Fill	X	X	X			X		X	
TB-06F	TB-06F-20-22	N		1/24/2014	20-22		X								

Table N-1
Soil Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Notes:
AXYS MLA-017 = USEPA Method 1613B
bgs = below ground surface
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
GP = Direct Push Boring
Gx = gasoline-range TPH
ID = identification
MW = Monitoring Well
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
S, D designation following well identification number indicates shallow or deep monitoring well.
SIIE = Samples are anthropogenic solids, sampled during a soil excavation
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
TB = top of riverbank boring
TPH = total petroleum hydrocarbons

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method	Metals												
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-10S	MW-10-032409	N		3/24/2009	X	X								X			
MW-10S	MW-10-042611	N		4/26/2011			X										
MW-10S	MW-10-042712	N		4/27/2012											X		
MW-10S	MW-10-042810	N		4/28/2010							X			X			
MW-10S	MW-10-102610	N		10/25/2010							X			X			
MW-10S	MW-10-112911	N		11/29/2011										X			
MW-11S	MW-11-032509	N		3/25/2009		X					X			X			
MW-11S	MW-11-042811	N		4/28/2011			X										
MW-11S	MW-11-043010	N		4/30/2010							X			X			
MW-11S	MW-11-050112	N		5/1/2012											X		
MW-11S	MW-11-102810	N		10/28/2010							X			X			
MW-11S	MW-11-120111	N		12/1/2011										X			
MW-12S	MW-12-032509	N		3/25/2009		X					X			X			
MW-12S	MW-12-042811	N		4/28/2011			X										
MW-12S	MW-12-043010	N		4/30/2010							X			X			
MW-12S	MW-12-050112	N		5/1/2012											X		
MW-12S	MW-12-102810	N		10/28/2010							X			X			
MW-12S	MW-12-120111	N		12/1/2011										X			
MW-12S	MW-12S-030314	N		3/3/2014				X									
MW-12S	MW-12S-033015	N		3/30/2015					X								
MW-12S	MW-12S-082514	N		8/25/2014					X								
MW-12S	MW-12S-083115	N		8/31/2015					X								
MW-13S	DUP-033015-02	FD	MW-13S-033015	3/30/2015													
MW-13S	DUP-043012-1	FD	MW-13-043012	4/30/2012													
MW-13S	DUP-112911-3	FD	MW-13-112911	11/29/2011													
MW-13S	MW-13-032409	N		3/24/2009	X	X					X			X			
MW-13S	MW-13-042611	N		4/26/2011			X										
MW-13S	MW-13-042810	N		4/28/2010							X			X			
MW-13S	MW-13-043012	N		4/30/2012											X		
MW-13S	MW-13-060210	N		6/2/2010													
MW-13S	MW-13-060210-S	N		6/2/2010													
MW-13S	MW-13-071411	N		7/14/2011													
MW-13S	MW-13-071411R	N		7/14/2011													
MW-13S	MW-13-102610	N		10/25/2010							X			X			
MW-13S	MW-13-112911	N		11/29/2011										X			
MW-13S	MW-13S-030714	N		3/7/2014													
MW-13S	MW-13S-033015	N		3/30/2015													
MW-13S	MW-13S-082514	N		8/25/2014													
MW-13S	MW-13S-083115	N		8/31/2015													
MW-14D	MW-14D-030714	N		3/7/2014			X						X				
MW-14D	MW-14D-040315	N		4/3/2015			X						X				
MW-14D	MW-14D-043012	N		4/30/2012									X		X		
MW-14D	MW-14D-082914	N		8/29/2014			X						X				
MW-14D	MW-14D-090315	N		9/3/2015			X						X				
MW-14D	MW-14D-120211	N		12/2/2011								X		X			
MW-14S	DUP-030714-1	FD	MW-14S-030714	3/7/2014			X	X					X				
MW-14S	DUP032509	FD	MW-14-032509	3/25/2009	X	X											
MW-14S	DUP-040315-01	FD	MW-14S-040315	4/3/2015			X		X				X				
MW-14S	DUP042711-2	FD	MW-14-042711	4/27/2011			X										
MW-14S	DUP-042910	FD	MW-14-042910	4/29/2010										X			
MW-14S	DUP-082914-01	FD	MW-14S-082914	8/29/2014			X		X				X				
MW-14S	DUP-090315-04	FD	MW-14S-090315	9/3/2015			X		X				X				
MW-14S	DUP-102710-B	FD	MW-14-102710	10/27/2010										X			
MW-14S	DUP-120211-1	FD	MW-14-120211	12/2/2011										X			
MW-14S	MW-14-032509	N		3/25/2009	X	X					X			X			
MW-14S	MW-14-042711	N		4/27/2011			X										
MW-14S	MW-14-042910	N		4/29/2010							X			X			
MW-14S	MW-14-043012	N		4/30/2012											X		
MW-14S	MW-14-071411	N		7/14/2011			X										
MW-14S	MW-14-071411R	N		7/14/2011							X						
MW-14S	MW-14-102710	N		10/27/2010							X			X			
MW-14S	MW-14-120211	N		12/2/2011								X		X			

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method	Metals													
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-14S	MW-14S-030714	N		3/7/2014			X	X					X				
MW-14S	MW-14S-040315	N		4/3/2015			X		X				X				
MW-14S	MW-14S-082914	N		8/29/2014			X		X				X				
MW-14S	MW-14S-090315	N		9/3/2015			X		X				X				
MW-16S	MW-16-032609	N		3/26/2009		X					X			X			
MW-16S	MW-16-042811	N		4/28/2011			X										
MW-16S	MW-16-042910	N		4/29/2010							X			X			
MW-16S	MW-16-043012	N		4/30/2012											X		
MW-16S	MW-16-102710	N		10/27/2010							X			X			
MW-16S	MW-16-120611	N		12/6/2011										X			
MW-17S	DUP-030414-1	FD	MW-17S-030414P	3/4/2014			X						X				
MW-17S	MW-17-032309	N		3/23/2009	X	X					X			X			
MW-17S	MW-17-042511	N		4/25/2011			X										
MW-17S	MW-17-042512	N		4/25/2012											X		
MW-17S	MW-17-042710	N		4/27/2010							X			X			
MW-17S	MW-17-102510	N		10/25/2010							X			X			
MW-17S	MW-17-112811	N		11/28/2011										X			
MW-17S	MW-17S-030414	N		3/4/2014													
MW-17S	MW-17S-030414P	N		3/4/2014			X						X				
MW-17S	MW-17S-033115-NF	N		3/31/2015													
MW-17S	MW-17S-033115-P	N		3/31/2015			X						X				
MW-17S	MW-17S-082614-NF	N		8/26/2014													
MW-17S	MW-17S-082614-P	N		8/26/2014			X						X				
MW-17S	MW-17S-090115-NF	N		9/1/2015													
MW-17S	MW-17S-090115-P	N		9/1/2015			X						X				
MW-18S	DUP-113011-2	FD	MW-18-113011	11/30/2011								X		X			X
MW-18S	MW-18-032609	N		3/26/2009		X					X			X			
MW-18S	MW-18-042612	N		4/26/2012											X		X
MW-18S	MW-18-042711	N		4/27/2011			X										X
MW-18S	MW-18-042910	N		4/29/2010							X			X			
MW-18S	MW-18-102710	N		10/27/2010							X			X			
MW-18S	MW-18-113011	N		11/30/2011								X		X			X
MW-18S	MW-18S-031014	N		3/10/2014													
MW-18S	MW-18S-033115	N		3/31/2015													
MW-18S	MW-18S-082614	N		8/26/2014													
MW-18S	MW-18S-090115	N		9/1/2015													
MW-19S	MW-19-032609	N		3/26/2009	X	X					X			X			
MW-19S	MW-19-042811	N		4/28/2011			X										
MW-19S	MW-19-043010	N		4/30/2010							X			X			
MW-19S	MW-19-050112	N		5/1/2012											X		
MW-19S	MW-19-102810	N		10/28/2010							X			X			
MW-19S	MW-19-120111	N		12/1/2011										X			
MW-19S	MW-19S-030514	N		3/5/2014			X						X				
MW-19S	MW-19S-033015	N		3/30/2015			X						X				
MW-19S	MW-19S-082514	N		8/25/2014			X						X				
MW-19S	MW-19S-083115	N		8/31/2015			X						X				
MW-1D	DUP-082614-01	N		8/26/2014					X								
MW-1D	MW-01D-032309	N		3/23/2009	X	X								X			

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method	Metals													
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-1D	MW-01D-042710	N		4/27/2010										X			
MW-1D	MW-01D-102710	N		10/27/2010										X			
MW-1D	MW-1D-031414	N		3/14/2014			X	X					X				
MW-1D	MW-1D-033115	N		3/31/2015			X		X				X				
MW-1D	MW-1D-042511	N		4/25/2011			X										
MW-1D	MW-1D-042512	N		4/25/2012											X		
MW-1D	MW-1D-082614	N		8/26/2014			X		X				X				
MW-1D	MW-1D-090215	N		9/2/2015			X		X				X				
MW-1D	MW-1D-112911	N		11/29/2011										X			
MW-1S	DUP032309	FD	MW-01S-032309	3/23/2009	X	X								X			
MW-1S	DUP042511-1	FD	MW-1S-042511	4/25/2011			X			X							
MW-1S	DUP-042710	FD	MW-01S-042710	4/27/2010										X			
MW-1S	DUP-102710	FD	MW-01S-102710	10/27/2010										X			
MW-1S	DUP-112911-1	FD	MW-1S-112911	11/29/2011										X			
MW-1S	MW-01S-032309	N		3/23/2009	X	X					X			X			
MW-1S	MW-01S-042710	N		4/27/2010							X			X			
MW-1S	MW-01S-102710	N		10/27/2010							X			X			
MW-1S	MW-1S-031414	N		3/14/2014			X	X					X				
MW-1S	MW-1S-033115-NP	N		3/31/2015													
MW-1S	MW-1S-033115-P	N		3/31/2015			X		X				X				
MW-1S	MW-1S-042511	N		4/25/2011			X			X							
MW-1S	MW-1S-042512	N		4/25/2012											X	X	
MW-1S	MW-1S-082614-NP	N		8/26/2014													
MW-1S	MW-1S-082614-P	N		8/26/2014			X		X				X				
MW-1S	MW-1S-090215-NP	N		9/2/2015													
MW-1S	MW-1S-090215-P	N		9/2/2015			X		X				X				
MW-1S	MW-1S-112911	N		11/29/2011								X		X		X	
MW-20D	MW-20D-031214	N		3/12/2014			X						X				
MW-20D	MW-20D-040215	N		4/2/2015			X						X				
MW-20D	MW-20D-082814	N		8/28/2014			X						X				
MW-20D	MW-20D-090115	N		9/1/2015			X						X				
MW-20S	DUP-042612-2	FD	MW-20-042612	4/26/2012											X		
MW-20S	MW-20-032609	N		3/26/2009		X					X			X			
MW-20S	MW-20-042612	N		4/26/2012											X		X
MW-20S	MW-20-042711	N		4/27/2011			X										X
MW-20S	MW-20-042810	N		4/28/2010							X			X			
MW-20S	MW-20-102510	N		10/25/2010							X			X			
MW-20S	MW-20-113011	N		11/30/2011								X		X			X
MW-20S	MW-20S-031214	N		3/12/2014			X						X				
MW-20S	MW-20S-040215	N		4/2/2015			X						X				
MW-20S	MW-20S-082814	N		8/28/2014			X						X				

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
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Sample Information				Analytical Group/ Analytical Method	Metals													
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-20S	MW-20S-090115	N		9/1/2015			X						X				
MW-21S	DUP032409	FD	MW-21-032409	3/24/2009		X											
MW-21S	DUP-042612-1	FD	MW-21-042612	4/26/2012											X		
MW-21S	DUP042711-1	FD	MW-21-042711	4/27/2011			X										
MW-21S	DUP-042810	FD	MW-21-042810	4/28/2010										X			
MW-21S	DUP-102610	FD	MW-21-102610	10/26/2010										X			
MW-21S	DUP-113011-1	FD	MW-21-113011	11/30/2011										X			
MW-21S	MW-21-032409	N		3/24/2009		X					X			X			
MW-21S	MW-21-042612	N		4/26/2012											X		
MW-21S	MW-21-042711	N		4/27/2011			X										
MW-21S	MW-21-042810	N		4/28/2010							X			X			
MW-21S	MW-21-102610	N		10/26/2010							X			X			
MW-21S	MW-21-113011	N		11/30/2011										X			
MW-21S	MW-21S-030514	N		3/5/2014			X						X				
MW-21S	MW-21S-033015	N		3/30/2015			X						X				
MW-21S	MW-21S-082614	N		8/26/2014			X						X				
MW-21S	MW-21S-090115	N		9/1/2015			X						X				
MW-22S	MW-22-032409	N		3/24/2009		X					X			X			
MW-22S	MW-22-042512	N		4/25/2012											X		
MW-22S	MW-22-042611	N		4/26/2011			X										
MW-22S	MW-22-042810	N		4/28/2010							X			X			
MW-22S	MW-22-102610	N		10/25/2010							X			X			
MW-22S	MW-22-112811	N		11/28/2011										X			
MW-22S	MW-22S-040115-NF	N		4/1/2015													
MW-22S	MW-22S-040115-P	N		4/1/2015													
MW-22S	MW-22S-082714-NF	N		8/27/2014													
MW-22S	MW-22S-082714-P	N		8/27/2014													
MW-22S	MW-22S-090315-NF	N		9/3/2015													
MW-22S	MW-22S-090315-P	N		9/3/2015													
MW-23S	MW-23-032409	N		3/24/2009		X					X			X			
MW-23S	MW-23-042512	N		4/25/2012											X		
MW-23S	MW-23-042711	N		4/27/2011			X										
MW-23S	MW-23-042810	N		4/28/2010							X			X			
MW-23S	MW-23-102610	N		10/26/2010							X			X			
MW-23S	MW-23-112811	N		11/28/2011										X			
MW-24S	MW-24-032509	N		3/25/2009		X					X			X			
MW-24S	MW-24-042512	N		4/25/2012											X		X
MW-24S	MW-24-042711	N		4/27/2011			X										X
MW-24S	MW-24-042810	N		4/28/2010							X			X			
MW-24S	MW-24-102610	N		10/25/2010							X			X			
MW-24S	MW-24-113011	N		11/30/2011								X		X			X

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Groundwater Analytical Method Summary
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Sample Information				Analytical Group/ Analytical Method	Metals												
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-26S	MW-26-032609	N		3/26/2009	X	X					X			X			
MW-26S	MW-26-042811	N		4/28/2011			X										X
MW-26S	MW-26-042910	N		4/29/2010							X			X			
MW-26S	MW-26-043012	N		4/30/2012											X		X
MW-26S	MW-26-102710	N		10/27/2010							X			X			
MW-26S	MW-26-120111	N		12/1/2011								X		X			X
MW-26S	MW-26S-031114	N		3/11/2014			X	X					X				
MW-26S	MW-26S-032614	N		3/26/2014													
MW-26S	MW-26S-040115-NP	N		4/1/2015													
MW-26S	MW-26S-040115-P	N		4/1/2015			X		X				X				
MW-26S	MW-26S-082514-NP	N		8/25/2014													
MW-26S	MW-26S-082514-P	N		8/25/2014			X		X				X				
MW-26S	MW-26S-090215-NP	N		9/2/2015													
MW-26S	MW-26S-090215-P	N		9/2/2015			X		X				X				
MW-27S	DUP-040215-01	FD	MW-27S-040215-NP	4/2/2015													
MW-27S	MW-27-032609	N		3/26/2009	X	X					X			X			
MW-27S	MW-27-042811	N		4/28/2011			X										X
MW-27S	MW-27-042910	N		4/29/2010							X			X			
MW-27S	MW-27-043012	N		4/30/2012											X		X
MW-27S	MW-27-102710	N		10/27/2010							X			X			
MW-27S	MW-27-120111	N		12/1/2011								X		X			X
MW-27S	MW-27S-040215-NP	N		4/2/2015													
MW-27S	MW-27S-040215-P	N		4/2/2015													
MW-27S	MW-27S-082814-NP	N		8/28/2014													
MW-27S	MW-27S-082814-P	N		8/28/2014													
MW-27S	MW-27S-090215-NP	N		9/2/2015													
MW-27S	MW-27S-090215-P	N		9/2/2015													
MW-28S	DUP-120211-2	FD	MW-28S-120211	12/2/2011													
MW-28S	MW-28S-050112	N		5/1/2012									X		X		X
MW-28S	MW-28S-120211	N		12/2/2011								X		X			X
MW-29S	DUP-031314-1	FD	MW-29S-031314	3/13/2014													
MW-29S	DUP-120211-3	FD	MW-29S-120211	12/2/2011										X			
MW-29S	MW-29S-031314	N		3/13/2014													
MW-29S	MW-29S-031314P	N		3/13/2014													
MW-29S	MW-29S-050212	N		5/2/2012			X						X		X		X
MW-29S	MW-29S-120211	N		12/2/2011								X		X			X
MW-2D	MW-02D-032409	N		3/24/2009	X	X								X			
MW-2D	MW-02D-042710	N		4/27/2010										X			
MW-2D	MW-02D-102710	N		10/27/2010										X			
MW-2D	MW-2D-031314	N		3/13/2014													
MW-2D	MW-2D-031314 P	N		3/13/2014			X						X				
MW-2D	MW-2D-040215-NP	N		4/2/2015													
MW-2D	MW-2D-040215-P	N		4/2/2015			X						X				
MW-2D	MW-2D-042611	N		4/26/2011			X										
MW-2D	MW-2D-042612	N		4/26/2012											X		
MW-2D	MW-2D-082714-NP	N		8/27/2014													
MW-2D	MW-2D-082714-P	N		8/27/2014			X						X				
MW-2D	MW-2D-083115-NP	N		8/31/2015													
MW-2D	MW-2D-083115-P	N		8/31/2015			X						X				
MW-2D	MW-2D-113011	N		11/30/2011										X			
MW-2S	MW-02S-032409	N		3/24/2009	X	X					X			X			
MW-2S	MW-02S-042710	N		4/27/2010							X			X			
MW-2S	MW-02S-102710	N		10/27/2010							X			X			
MW-2S	MW-2S-030514	N		3/5/2014													
MW-2S	MW-2S-030514P	N		3/5/2014													
MW-2S	MW-2S-032614	N		3/26/2014													
MW-2S	MW-2S-032614P	N		3/26/2014			X						X				
MW-2S	MW-2S-040115-NP	N		4/1/2015													
MW-2S	MW-2S-040115-P	N		4/1/2015			X						X				
MW-2S	MW-2S-042611	N		4/26/2011			X										
MW-2S	MW-2S-042612	N		4/26/2012											X		
MW-2S	MW-2S-082714-NP	N		8/27/2014													
MW-2S	MW-2S-082714-P	N		8/27/2014			X						X				
MW-2S	MW-2S-083115-NP	N		8/31/2015													
MW-2S	MW-2S-083115-P	N		8/31/2015			X						X				
MW-2S	MW-2S-113011	N		11/30/2011										X			

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
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Sample Information				Analytical Group/ Analytical Method	Metals													
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-30S	DUP-031014-1	FD	MW-30S-031014	3/10/2014				X									
MW-30S	DUP-040115-01	FD	MW-30S-040115	4/1/2015					X								
MW-30S	DUP-090315-03	FD	MW-30S-090315	9/3/2015					X								
MW-30S	DUP-120511-1	FD	MW-30S-120511	12/5/2011													
MW-30S	MW-30S-031014	N		3/10/2014				X									
MW-30S	MW-30S-040115	N		4/1/2015					X								
MW-30S	MW-30S-050212	N		5/2/2012			X						X		X		X
MW-30S	MW-30S-082614	N		8/26/2014					X								
MW-30S	MW-30S-090315	N		9/3/2015					X								
MW-30S	MW-30S-120511	N		12/5/2011								X		X			X
MW-31D	MW-31D-031214	N		3/12/2014			X	X					X				
MW-31D	MW-31D-040215	N		4/2/2015			X		X				X				
MW-31D	MW-31D-082814	N		8/28/2014			X		X				X				
MW-31D	MW-31D-090315	N		9/3/2015			X		X				X				
MW-31S	DUP-050212-1	FD	MW-31S-050212	5/2/2012											X	X	X
MW-31S	DUP-120511-2	FD	MW-31S-120511	12/5/2011								X		X			
MW-31S	MW-31S-031214	N		3/12/2014			X	X					X				
MW-31S	MW-31S-040215	N		4/2/2015			X		X				X				
MW-31S	MW-31S-050212	N		5/2/2012			X						X		X	X	X
MW-31S	MW-31S-082814	N		8/28/2014			X		X				X				
MW-31S	MW-31S-090315	N		9/3/2015			X		X				X				
MW-31S	MW-31S-120511	N		12/5/2011								X		X		X	X
MW-32DR	MW-32DR-050112	N		5/1/2012									X		X		
MW-32S	MW-32S-050112	N		5/1/2012									X		X		
MW-32S	MW-32S-120611	N		12/6/2011								X		X			
MW-33S	DUP-033115-P-01	FD	MW-33S-033115-P	3/31/2015			X						X				
MW-33S	DUP-082614-03	FD	MW-33S-082614-P	8/26/2014			X						X				
MW-33S	DUP-082614-2	FD	MW-33S-082614-NP	8/26/2014													
MW-33S	DUP-090115-01	FD	MW-33S-090115-NP	9/1/2015													
MW-33S	DUP-090115-02	FD	MW-33S-090115-P	9/1/2015			X						X				
MW-33S	DUP-120511-3	FD	MW-33S-120511	12/5/2011													
MW-33S	MW-33S-030614	N		3/6/2014			X						X				
MW-33S	MW-33S-033115-NP	N		3/31/2015													
MW-33S	MW-33S-033115-P	N		3/31/2015			X						X				
MW-33S	MW-33S-050212	N		5/2/2012									X		X		
MW-33S	MW-33S-082614-NP	N		8/26/2014													
MW-33S	MW-33S-082614-P	N		8/26/2014			X						X				
MW-33S	MW-33S-090115-NP	N		9/1/2015													
MW-33S	MW-33S-090115-P	N		9/1/2015			X						X				
MW-33S	MW-33S-120511	N		12/5/2011								X		X			
MW-34S	DUP-120611-1	FD	MW-34S-120611	12/6/2011												X	
MW-34S	MW-34S-030714	N		3/7/2014				X									
MW-34S	MW-34S-040115	N		4/1/2015					X								
MW-34S	MW-34S-050312	N		5/3/2012									X		X	X	
MW-34S	MW-34S-082714	N		8/27/2014					X								
MW-34S	MW-34S-090215	N		9/2/2015					X								
MW-34S	MW-34S-120611	N		12/6/2011								X		X		X	
MW-35D	MW-35D-030614	N		3/6/2014			X	X					X				
MW-35D	MW-35D-032614	N		3/26/2014													
MW-35D	MW-35D-040115-NP	N		4/1/2015													
MW-35D	MW-35D-040115-P	N		4/1/2015			X		X				X				
MW-35D	MW-35D-082714-NP	N		8/27/2014													
MW-35D	MW-35D-082714-P	N		8/27/2014			X		X				X				
MW-35D	MW-35D-083115-NP	N		8/31/2015													
MW-35D	MW-35D-083115-P	N		8/31/2015			X		X				X				
MW-35S	DUP-083115-01	FD	MW-35S-083115-P	8/31/2015													
MW-35S	MW-35S-030614	N		3/6/2014			X	X					X				
MW-35S	MW-35S-040215-NP	N		4/2/2015													
MW-35S	MW-35S-040215-P	N		4/2/2015			X		X				X				
MW-35S	MW-35S-050312	N		5/3/2012									X		X		
MW-35S	MW-35S-082714-NP	N		8/27/2014													
MW-35S	MW-35S-082714-P	N		8/27/2014			X		X				X				
MW-35S	MW-35S-083115-NP	N		8/31/2015													
MW-35S	MW-35S-083115-P	N		8/31/2015			X		X				X				
MW-35S	MW-35S-120611	N		12/6/2011								X		X			
MW-36S	DUP-050312-1	FD	MW-36S-050312	5/3/2012											X		

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
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Sample Information				Analytical Group/ Analytical Method	Metals													
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-36S	MW-36S-050312	N		5/3/2012									X		X		
MW-38D	MW-38D-031414	N		3/14/2014			X	X					X				
MW-38D	MW-38D-040315	N		4/3/2015			X		X				X				
MW-38D	MW-38D-082914	N		8/29/2014			X		X				X				
MW-38D	MW-38D-090215	N		9/2/2015			X		X				X				
MW-3D	MW-03D-031014	N		3/10/2014			X	X					X				
MW-3D	MW-03D-032309	N		3/23/2009	X	X								X			
MW-3D	MW-03D-042810	N		4/28/2010										X			
MW-3D	MW-03D-102810	N		10/28/2010										X			
MW-3D	MW-3D-033015-NP	N		3/30/2015													
MW-3D	MW-3D-033015-P	N		3/30/2015			X		X				X				
MW-3D	MW-3D-042711	N		4/27/2011			X										
MW-3D	MW-3D-042712	N		4/27/2012											X		
MW-3D	MW-3D-082814-NP	N		8/28/2014													
MW-3D	MW-3D-082814-P	N		8/28/2014			X		X				X				
MW-3D	MW-3D-090215-NP	N		9/2/2015													
MW-3D	MW-3D-090215-P	N		9/2/2015			X		X				X				
MW-3D	MW-3D-120111	N		12/1/2011								X		X			
MW-3S	DUP042711-3	FD	MW-3S-042711	4/27/2011			X										X
MW-3S	MW-03S-031014	N		3/10/2014			X	X					X				
MW-3S	MW-03S-032309	N		3/23/2009	X	X					X			X			
MW-3S	MW-03S-042810	N		4/28/2010							X			X			
MW-3S	MW-03S-102810	N		10/28/2010							X			X			
MW-3S	MW-3S-033015	N		3/30/2015			X		X				X				
MW-3S	MW-3S-042711	N		4/27/2011			X										X
MW-3S	MW-3S-042712	N		4/27/2012											X		X
MW-3S	MW-3S-082514	N		8/25/2014			X		X				X				
MW-3S	MW-3S-090215	N		9/2/2015			X		X				X				
MW-3S	MW-3S-102810	N		10/28/2010													
MW-3S	MW-3S-120111	N		12/1/2011								X		X			X
MW-43D	MW-43D-030414	N		3/4/2014			X						X				
MW-43D	MW-43D-033015	N		3/30/2015			X						X				
MW-43D	MW-43D-082514	N		8/25/2014			X						X				
MW-43D	MW-43D-090315	N		9/3/2015			X						X				
MW-43S	DUP-030414-2	FD	MW-43S-030414	3/4/2014			X						X				
MW-43S	DUP-033015-01	FD	MW-43S-033015-P	3/30/2015			X						X				
MW-43S	DUP-082514-01	FD	MW-43S-082514-NP	8/25/2014													
MW-43S	DUP-082514-02	FD	MW-43S-082514-P	8/25/2014			X						X				
MW-43S	DUP-090315-01	FD	MW-43S-090315-NP	9/3/2015													
MW-43S	DUP-090315-02	FD	MW-43S-090315-P	9/3/2015			X						X				
MW-43S	MW-43S-030414	N		3/4/2014			X						X				
MW-43S	MW-43S-033015-NP	N		3/30/2015													
MW-43S	MW-43S-033015-P	N		3/30/2015			X						X				
MW-43S	MW-43S-082514-NP	N		8/25/2014													
MW-43S	MW-43S-082514-P	N		8/25/2014			X						X				
MW-43S	MW-43S-090315-NP	N		9/3/2015													
MW-43S	MW-43S-090315-P	N		9/3/2015			X						X				
MW-45D	MW-45D-031114	N		3/11/2014			X						X				
MW-45D	MW-45D-032614	N		3/26/2014													
MW-45D	MW-45D-033115-NP	N		3/31/2015													
MW-45D	MW-45D-033115-P	N		3/31/2015			X						X				
MW-45D	MW-45D-082614-NP	N		8/26/2014													
MW-45D	MW-45D-082614-P	N		8/26/2014			X						X				
MW-45D	MW-45D-090115-NP	N		9/1/2015													
MW-45D	MW-45D-090115-P	N		9/1/2015			X						X				
MW-45S	MW-45S-031114	N		3/11/2014			X						X				
MW-45S	MW-45S-033115-NP	N		3/31/2015													
MW-45S	MW-45S-033115-P	N		3/31/2015			X						X				
MW-45S	MW-45S-082614-NP	N		8/26/2014													
MW-45S	MW-45S-082614-P	N		8/26/2014									X				
MW-45S	MW-45S-090115-NP	N		9/1/2015													
MW-45S	MW-45S-090115-P	N		9/1/2015			X						X				
MW-4S	DUP-042512-1	FD	MW-4S-042512	4/25/2012													
MW-4S	DUP-112811-1	FD	MW-04S-112811	11/28/2011													
MW-4S	MW-04S-032509	N		3/25/2009		X					X			X			
MW-4S	MW-04S-042611	N		4/26/2011			X										

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Groundwater Analytical Method Summary
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Sample Information				Analytical Group/ Analytical Method	Metals												
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	EPA1638	EPA200.8	SM3500 CR-D	SM3500-CRB-2011	SM3500D	SW6010	SW6010B	SW6010C	SW6020	SW6020A	SW7196A	SW7470A
MW-4S	MW-04S-042710	N		4/27/2010							X			X			
MW-4S	MW-04S-060210	N		6/2/2010													
MW-4S	MW-04S-060210-S	N		6/2/2010													
MW-4S	MW-04S-071411	N		7/14/2011													
MW-4S	MW-04S-071411R	N		7/14/2011													
MW-4S	MW-04S-102510	N		10/25/2010							X			X			
MW-4S	MW-04S-112811	N		11/28/2011										X			
MW-4S	MW-4S-030314	N		3/3/2014			X	X					X				
MW-4S	MW-4S-040115	N		4/1/2015			X		X				X				
MW-4S	MW-4S-042512	N		4/25/2012											X		
MW-4S	MW-4S-082814	N		8/28/2014			X		X				X				
MW-4S	MW-4S-090215	N		9/2/2015			X		X				X				
MW-4S	MW-4S-102510	N		10/25/2010													
MW-5S	MW-05S-032509	N		3/25/2009		X					X			X			
MW-5S	MW-05S-042910	N		4/29/2010							X			X			
MW-5S	MW-05S-102710	N		10/27/2010							X			X			
MW-5S	MW-5S-030314	N		3/3/2014			X	X					X				
MW-5S	MW-5S-033015	N		3/30/2015			X		X				X				
MW-5S	MW-5S-042811	N		4/28/2011			X										
MW-5S	MW-5S-050112	N		5/1/2012											X		
MW-5S	MW-5S-082514	N		8/25/2014			X		X				X				
MW-5S	MW-5S-083115	N		8/31/2015			X		X				X				
MW-5S	MW-5S-120111	N		12/1/2011										X			
MW-6S	MW-06S-032509	N		3/25/2009		X					X			X			
MW-6S	MW-06S-042910	N		4/29/2010							X			X			
MW-6S	MW-06S-102710	N		10/27/2010							X			X			
MW-6S	MW-6S-042612	N		4/26/2012											X		
MW-6S	MW-6S-042711	N		4/27/2011			X										
MW-6S	MW-6S-102710	N		10/27/2010													
MW-6S	MW-6S-113011	N		11/30/2011										X			
MW-7S	DUP-042712-1	FD	MW-7S-042712	4/27/2012													
MW-7S	DUP-112911-2	FD	MW-7S-112911	11/29/2011													
MW-7S	MW-07S-032509	N		3/25/2009		X					X			X			
MW-7S	MW-07S-042611	N		4/26/2011			X										
MW-7S	MW-07S-042710	N		4/27/2010							X			X			
MW-7S	MW-07S-060210	N		6/2/2010													
MW-7S	MW-07S-060210-S	N		6/2/2010													
MW-7S	MW-07S-071411	N		7/14/2011													
MW-7S	MW-07S-071411R	N		7/14/2011													
MW-7S	MW-07S-102510	N		10/25/2010							X			X			
MW-7S	MW-7S-042712	N		4/27/2012											X		
MW-7S	MW-7S-102510	N		10/25/2010													
MW-7S	MW-7S-112911	N		11/29/2011										X			

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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-10S	MW-10-032409	N		3/24/2009	X					X					X	X		
MW-10S	MW-10-042611	N		4/26/2011							X							
MW-10S	MW-10-042712	N		4/27/2012							X		X					X
MW-10S	MW-10-042810	N		4/28/2010						X				X		X		
MW-10S	MW-10-102610	N		10/25/2010						X				X		X		
MW-10S	MW-10-112911	N		11/29/2011							X							X
MW-11S	MW-11-032509	N		3/25/2009						X						X		
MW-11S	MW-11-042811	N		4/28/2011							X							
MW-11S	MW-11-043010	N		4/30/2010						X						X		
MW-11S	MW-11-050112	N		5/1/2012							X		X					
MW-11S	MW-11-102810	N		10/28/2010						X						X		
MW-11S	MW-11-120111	N		12/1/2011							X							
MW-12S	MW-12-032509	N		3/25/2009						X						X		
MW-12S	MW-12-042811	N		4/28/2011							X							
MW-12S	MW-12-043010	N		4/30/2010						X						X		
MW-12S	MW-12-050112	N		5/1/2012							X		X					
MW-12S	MW-12-102810	N		10/28/2010						X						X		
MW-12S	MW-12-120111	N		12/1/2011							X							
MW-12S	MW-12S-030314	N		3/3/2014							X	X	X					
MW-12S	MW-12S-033015	N		3/30/2015							X	X	X					
MW-12S	MW-12S-082514	N		8/25/2014							X	X	X					
MW-12S	MW-12S-083115	N		8/31/2015							X	X	X					
MW-13S	DUP-033015-02	FD	MW-13S-033015	3/30/2015							X		X					
MW-13S	DUP-043012-1	FD	MW-13-043012	4/30/2012							X		X					
MW-13S	DUP-112911-3	FD	MW-13-112911	11/29/2011							X							
MW-13S	MW-13-032409	N		3/24/2009	X					X					X	X		
MW-13S	MW-13-042611	N		4/26/2011							X							
MW-13S	MW-13-042810	N		4/28/2010						X				X		X		
MW-13S	MW-13-043012	N		4/30/2012			X				X		X					X
MW-13S	MW-13-060210	N		6/2/2010						X								
MW-13S	MW-13-060210-S	N		6/2/2010						X								
MW-13S	MW-13-071411	N		7/14/2011							X							
MW-13S	MW-13-071411R	N		7/14/2011							X							
MW-13S	MW-13-102610	N		10/25/2010						X				X		X		
MW-13S	MW-13-112911	N		11/29/2011			X				X							X
MW-13S	MW-13S-030714	N		3/7/2014							X		X					
MW-13S	MW-13S-033015	N		3/30/2015							X		X					
MW-13S	MW-13S-082514	N		8/25/2014							X		X					
MW-13S	MW-13S-083115	N		8/31/2015							X		X					
MW-14D	MW-14D-030714	N		3/7/2014														
MW-14D	MW-14D-040315	N		4/3/2015														
MW-14D	MW-14D-043012	N		4/30/2012							X	X	X			X		
MW-14D	MW-14D-082914	N		8/29/2014														
MW-14D	MW-14D-090315	N		9/3/2015														
MW-14D	MW-14D-120211	N		12/2/2011							X	X				X		
MW-14S	DUP-030714-1	FD	MW-14S-030714	3/7/2014							X		X					
MW-14S	DUP032509	FD	MW-14-032509	3/25/2009	X					X								
MW-14S	DUP-040315-01	FD	MW-14S-040315	4/3/2015							X		X					
MW-14S	DUP042711-2	FD	MW-14-042711	4/27/2011							X							
MW-14S	DUP-042910	FD	MW-14-042910	4/29/2010						X								
MW-14S	DUP-082914-01	FD	MW-14S-082914	8/29/2014							X		X					
MW-14S	DUP-090315-04	FD	MW-14S-090315	9/3/2015							X		X					
MW-14S	DUP-102710-B	FD	MW-14-102710	10/27/2010						X								
MW-14S	DUP-120211-1	FD	MW-14-120211	12/2/2011														
MW-14S	MW-14-032509	N		3/25/2009	X					X						X		
MW-14S	MW-14-042711	N		4/27/2011							X							
MW-14S	MW-14-042910	N		4/29/2010						X						X		
MW-14S	MW-14-043012	N		4/30/2012							X		X					
MW-14S	MW-14-071411	N		7/14/2011														
MW-14S	MW-14-071411R	N		7/14/2011														
MW-14S	MW-14-102710	N		10/27/2010						X						X		
MW-14S	MW-14-120211	N		12/2/2011							X							

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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-14S	MW-14S-030714	N		3/7/2014							X		X					
MW-14S	MW-14S-040315	N		4/3/2015							X		X					
MW-14S	MW-14S-082914	N		8/29/2014							X		X					
MW-14S	MW-14S-090315	N		9/3/2015							X		X					
MW-16S	MW-16-032609	N		3/26/2009						X						X		
MW-16S	MW-16-042811	N		4/28/2011							X							
MW-16S	MW-16-042910	N		4/29/2010						X						X		
MW-16S	MW-16-043012	N		4/30/2012			X				X		X					
MW-16S	MW-16-102710	N		10/27/2010						X						X		
MW-16S	MW-16-120611	N		12/6/2011			X				X							
MW-17S	DUP-030414-1	FD	MW-17S-030414P	3/4/2014			X				X		X					X
MW-17S	MW-17-032309	N		3/23/2009	X					X					X	X		
MW-17S	MW-17-042511	N		4/25/2011							X							
MW-17S	MW-17-042512	N		4/25/2012							X		X					
MW-17S	MW-17-042710	N		4/27/2010						X				X		X		
MW-17S	MW-17-102510	N		10/25/2010						X				X				
MW-17S	MW-17-112811	N		11/28/2011							X							
MW-17S	MW-17S-030414	N		3/4/2014														X
MW-17S	MW-17S-030414P	N		3/4/2014			X				X		X					X
MW-17S	MW-17S-033115-NF	N		3/31/2015														X
MW-17S	MW-17S-033115-P	N		3/31/2015							X		X					X
MW-17S	MW-17S-082614-NF	N		8/26/2014														X
MW-17S	MW-17S-082614-P	N		8/26/2014							X		X					X
MW-17S	MW-17S-090115-NF	N		9/1/2015														X
MW-17S	MW-17S-090115-P	N		9/1/2015							X		X					X
MW-18S	DUP-113011-2	FD	MW-18-113011	11/30/2011														
MW-18S	MW-18-032609	N		3/26/2009						X						X		
MW-18S	MW-18-042612	N		4/26/2012							X		X					
MW-18S	MW-18-042711	N		4/27/2011							X							
MW-18S	MW-18-042910	N		4/29/2010						X						X		
MW-18S	MW-18-102710	N		10/27/2010						X						X		
MW-18S	MW-18-113011	N		11/30/2011							X							
MW-18S	MW-18S-031014	N		3/10/2014							X		X					
MW-18S	MW-18S-033115	N		3/31/2015							X		X					
MW-18S	MW-18S-082614	N		8/26/2014							X		X					
MW-18S	MW-18S-090115	N		9/1/2015							X		X					
MW-19S	MW-19-032609	N		3/26/2009	X					X						X		
MW-19S	MW-19-042811	N		4/28/2011							X							
MW-19S	MW-19-043010	N		4/30/2010						X						X		
MW-19S	MW-19-050112	N		5/1/2012							X		X					
MW-19S	MW-19-102810	N		10/28/2010						X						X		
MW-19S	MW-19-120111	N		12/1/2011							X							
MW-19S	MW-19S-030514	N		3/5/2014							X		X					
MW-19S	MW-19S-033015	N		3/30/2015							X		X					
MW-19S	MW-19S-082514	N		8/25/2014							X		X					
MW-19S	MW-19S-083115	N		8/31/2015							X		X					
MW-1D	DUP-082614-01	N		8/26/2014														
MW-1D	MW-01D-032309	N		3/23/2009	X					X					X			

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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-1D	MW-01D-042710	N		4/27/2010						X				X				
MW-1D	MW-01D-102710	N		10/27/2010						X				X				
MW-1D	MW-1D-031414	N		3/14/2014							X		X					
MW-1D	MW-1D-033115	N		3/31/2015							X		X					
MW-1D	MW-1D-042511	N		4/25/2011							X							
MW-1D	MW-1D-042512	N		4/25/2012							X		X					
MW-1D	MW-1D-082614	N		8/26/2014							X		X					
MW-1D	MW-1D-090215	N		9/2/2015							X		X					
MW-1D	MW-1D-112911	N		11/29/2011							X							
MW-1S	DUP032309	FD	MW-01S-032309	3/23/2009	X					X								
MW-1S	DUP042511-1	FD	MW-1S-042511	4/25/2011				X	X		X							
MW-1S	DUP-042710	FD	MW-01S-042710	4/27/2010						X								
MW-1S	DUP-102710	FD	MW-01S-102710	10/27/2010						X								
MW-1S	DUP-112911-1	FD	MW-1S-112911	11/29/2011														
MW-1S	MW-01S-032309	N		3/23/2009	X					X					X	X		
MW-1S	MW-01S-042710	N		4/27/2010						X				X		X		
MW-1S	MW-01S-102710	N		10/27/2010						X				X		X		
MW-1S	MW-1S-031414	N		3/14/2014							X		X					
MW-1S	MW-1S-033115-NP	N		3/31/2015														X
MW-1S	MW-1S-033115-P	N		3/31/2015							X		X					
MW-1S	MW-1S-042511	N		4/25/2011				X	X		X							
MW-1S	MW-1S-042512	N		4/25/2012				X	X		X		X					
MW-1S	MW-1S-082614-NP	N		8/26/2014														X
MW-1S	MW-1S-082614-P	N		8/26/2014							X		X					
MW-1S	MW-1S-090215-NP	N		9/2/2015														X
MW-1S	MW-1S-090215-P	N		9/2/2015							X		X					
MW-1S	MW-1S-112911	N		11/29/2011				X	X		X							
MW-20D	MW-20D-031214	N		3/12/2014														
MW-20D	MW-20D-040215	N		4/2/2015														
MW-20D	MW-20D-082814	N		8/28/2014														
MW-20D	MW-20D-090115	N		9/1/2015														
MW-20S	DUP-042612-2	FD	MW-20-042612	4/26/2012														
MW-20S	MW-20-032609	N		3/26/2009						X						X		
MW-20S	MW-20-042612	N		4/26/2012							X		X					
MW-20S	MW-20-042711	N		4/27/2011							X							
MW-20S	MW-20-042810	N		4/28/2010						X						X		
MW-20S	MW-20-102510	N		10/25/2010						X						X		
MW-20S	MW-20-113011	N		11/30/2011							X							
MW-20S	MW-20S-031214	N		3/12/2014														
MW-20S	MW-20S-040215	N		4/2/2015														
MW-20S	MW-20S-082814	N		8/28/2014														

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Groundwater Analytical Method Summary
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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-20S	MW-20S-090115	N		9/1/2015														
MW-21S	DUP032409	FD	MW-21-032409	3/24/2009						X								
MW-21S	DUP-042612-1	FD	MW-21-042612	4/26/2012														
MW-21S	DUP042711-1	FD	MW-21-042711	4/27/2011							X							
MW-21S	DUP-042810	FD	MW-21-042810	4/28/2010						X								
MW-21S	DUP-102610	FD	MW-21-102610	10/26/2010						X								
MW-21S	DUP-113011-1	FD	MW-21-113011	11/30/2011														
MW-21S	MW-21-032409	N		3/24/2009						X						X		
MW-21S	MW-21-042612	N		4/26/2012							X		X					
MW-21S	MW-21-042711	N		4/27/2011							X							
MW-21S	MW-21-042810	N		4/28/2010						X						X		
MW-21S	MW-21-102610	N		10/26/2010						X						X		
MW-21S	MW-21-113011	N		11/30/2011							X							
MW-21S	MW-21S-030514	N		3/5/2014														
MW-21S	MW-21S-033015	N		3/30/2015														
MW-21S	MW-21S-082614	N		8/26/2014														
MW-21S	MW-21S-090115	N		9/1/2015														
MW-22S	MW-22-032409	N		3/24/2009						X						X		
MW-22S	MW-22-042512	N		4/25/2012							X		X					
MW-22S	MW-22-042611	N		4/26/2011							X							
MW-22S	MW-22-042810	N		4/28/2010						X						X		
MW-22S	MW-22-102610	N		10/25/2010						X						X		
MW-22S	MW-22-112811	N		11/28/2011							X							
MW-22S	MW-22S-040115-NF	N		4/1/2015														X
MW-22S	MW-22S-040115-P	N		4/1/2015														
MW-22S	MW-22S-082714-NF	N		8/27/2014														X
MW-22S	MW-22S-082714-P	N		8/27/2014														
MW-22S	MW-22S-090315-NF	N		9/3/2015														X
MW-22S	MW-22S-090315-P	N		9/3/2015														
MW-23S	MW-23-032409	N		3/24/2009						X						X		
MW-23S	MW-23-042512	N		4/25/2012							X		X					
MW-23S	MW-23-042711	N		4/27/2011							X							
MW-23S	MW-23-042810	N		4/28/2010						X						X		
MW-23S	MW-23-102610	N		10/26/2010						X						X		
MW-23S	MW-23-112811	N		11/28/2011							X							
MW-24S	MW-24-032509	N		3/25/2009						X						X		
MW-24S	MW-24-042512	N		4/25/2012							X		X					
MW-24S	MW-24-042711	N		4/27/2011							X							
MW-24S	MW-24-042810	N		4/28/2010						X						X		
MW-24S	MW-24-102610	N		10/25/2010						X						X		
MW-24S	MW-24-113011	N		11/30/2011							X							

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-26S	MW-26-032609	N		3/26/2009	X					X						X		
MW-26S	MW-26-042811	N		4/28/2011							X							
MW-26S	MW-26-042910	N		4/29/2010						X						X		
MW-26S	MW-26-043012	N		4/30/2012							X		X					
MW-26S	MW-26-102710	N		10/27/2010						X						X		
MW-26S	MW-26-120111	N		12/1/2011							X							
MW-26S	MW-26S-031114	N		3/11/2014							X		X					
MW-26S	MW-26S-032614	N		3/26/2014														X
MW-26S	MW-26S-040115-NP	N		4/1/2015														X
MW-26S	MW-26S-040115-P	N		4/1/2015							X		X					
MW-26S	MW-26S-082514-NP	N		8/25/2014														X
MW-26S	MW-26S-082514-P	N		8/25/2014							X		X					
MW-26S	MW-26S-090215-NP	N		9/2/2015														X
MW-26S	MW-26S-090215-P	N		9/2/2015							X		X					
MW-27S	DUP-040215-01	FD	MW-27S-040215-NP	4/2/2015													X	X
MW-27S	MW-27-032609	N		3/26/2009	X					X						X		
MW-27S	MW-27-042811	N		4/28/2011							X							
MW-27S	MW-27-042910	N		4/29/2010						X						X		
MW-27S	MW-27-043012	N		4/30/2012							X		X					
MW-27S	MW-27-102710	N		10/27/2010						X						X		
MW-27S	MW-27-120111	N		12/1/2011							X							
MW-27S	MW-27S-040215-NP	N		4/2/2015													X	X
MW-27S	MW-27S-040215-P	N		4/2/2015														
MW-27S	MW-27S-082814-NP	N		8/28/2014													X	X
MW-27S	MW-27S-082814-P	N		8/28/2014														
MW-27S	MW-27S-090215-NP	N		9/2/2015													X	X
MW-27S	MW-27S-090215-P	N		9/2/2015														
MW-28S	DUP-120211-2	FD	MW-28S-120211	12/2/2011			X											
MW-28S	MW-28S-050112	N		5/1/2012		X	X	X	X		X	X	X					
MW-28S	MW-28S-120211	N		12/2/2011		X	X	X	X		X	X				X		
MW-29S	DUP-031314-1	FD	MW-29S-031314	3/13/2014													X	
MW-29S	DUP-120211-3	FD	MW-29S-120211	12/2/2011							X	X						
MW-29S	MW-29S-031314	N		3/13/2014													X	
MW-29S	MW-29S-031314P	N		3/13/2014													X	
MW-29S	MW-29S-050212	N		5/2/2012		X	X	X	X		X	X	X					
MW-29S	MW-29S-120211	N		12/2/2011		X	X	X	X		X	X				X		
MW-2D	MW-02D-032409	N		3/24/2009	X					X					X			
MW-2D	MW-02D-042710	N		4/27/2010						X				X				
MW-2D	MW-02D-102710	N		10/27/2010						X				X				
MW-2D	MW-2D-031314	N		3/13/2014														X
MW-2D	MW-2D-031314 P	N		3/13/2014							X	X	X					X
MW-2D	MW-2D-040215-NP	N		4/2/2015														X
MW-2D	MW-2D-040215-P	N		4/2/2015							X	X	X					X
MW-2D	MW-2D-042611	N		4/26/2011							X							
MW-2D	MW-2D-042612	N		4/26/2012							X		X					
MW-2D	MW-2D-082714-NP	N		8/27/2014														X
MW-2D	MW-2D-082714-P	N		8/27/2014							X	X	X					X
MW-2D	MW-2D-083115-NP	N		8/31/2015														X
MW-2D	MW-2D-083115-P	N		8/31/2015							X	X	X					X
MW-2D	MW-2D-113011	N		11/30/2011							X							
MW-2S	MW-02S-032409	N		3/24/2009	X					X					X	X		
MW-2S	MW-02S-042710	N		4/27/2010						X				X		X		
MW-2S	MW-02S-102710	N		10/27/2010						X				X		X		
MW-2S	MW-2S-030514	N		3/5/2014														X
MW-2S	MW-2S-030514P	N		3/5/2014														X
MW-2S	MW-2S-032614	N		3/26/2014														X
MW-2S	MW-2S-032614P	N		3/26/2014							X		X					X
MW-2S	MW-2S-040115-NP	N		4/1/2015														X
MW-2S	MW-2S-040115-P	N		4/1/2015							X		X					X
MW-2S	MW-2S-042611	N		4/26/2011							X							
MW-2S	MW-2S-042612	N		4/26/2012							X		X					
MW-2S	MW-2S-082714-NP	N		8/27/2014														X
MW-2S	MW-2S-082714-P	N		8/27/2014							X		X					X
MW-2S	MW-2S-083115-NP	N		8/31/2015														X
MW-2S	MW-2S-083115-P	N		8/31/2015							X		X					X
MW-2S	MW-2S-113011	N		11/30/2011							X							

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Groundwater Analytical Method Summary
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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-30S	DUP-031014-1	FD	MW-30S-031014	3/10/2014														
MW-30S	DUP-040115-01	FD	MW-30S-040115	4/1/2015														
MW-30S	DUP-090315-03	FD	MW-30S-090315	9/3/2015														
MW-30S	DUP-120511-1	FD	MW-30S-120511	12/5/2011		X		X										
MW-30S	MW-30S-031014	N		3/10/2014														
MW-30S	MW-30S-040115	N		4/1/2015														
MW-30S	MW-30S-050212	N		5/2/2012		X	X	X	X		X	X	X					
MW-30S	MW-30S-082614	N		8/26/2014														
MW-30S	MW-30S-090315	N		9/3/2015														
MW-30S	MW-30S-120511	N		12/5/2011		X	X	X	X		X	X				X		
MW-31D	MW-31D-031214	N		3/12/2014							X	X	X					
MW-31D	MW-31D-040215	N		4/2/2015							X	X	X					
MW-31D	MW-31D-082814	N		8/28/2014							X	X	X					
MW-31D	MW-31D-090315	N		9/3/2015							X	X	X					
MW-31S	DUP-050212-1	FD	MW-31S-050212	5/2/2012		X	X	X	X		X	X	X					
MW-31S	DUP-120511-2	FD	MW-31S-120511	12/5/2011					X									
MW-31S	MW-31S-031214	N		3/12/2014							X	X	X					
MW-31S	MW-31S-040215	N		4/2/2015							X	X	X					
MW-31S	MW-31S-050212	N		5/2/2012		X	X	X	X		X	X	X					
MW-31S	MW-31S-082814	N		8/28/2014							X	X	X					
MW-31S	MW-31S-090315	N		9/3/2015							X	X	X					
MW-31S	MW-31S-120511	N		12/5/2011		X	X	X	X		X	X				X		
MW-32DR	MW-32DR-050112	N		5/1/2012							X	X	X					
MW-32S	MW-32S-050112	N		5/1/2012							X	X	X					
MW-32S	MW-32S-120611	N		12/6/2011							X	X				X		
MW-33S	DUP-033115-P-01	FD	MW-33S-033115-P	3/31/2015							X		X					
MW-33S	DUP-082614-03	FD	MW-33S-082614-P	8/26/2014							X		X					
MW-33S	DUP-082614-2	FD	MW-33S-082614-NP	8/26/2014													X	X
MW-33S	DUP-090115-01	FD	MW-33S-090115-NP	9/1/2015													X	X
MW-33S	DUP-090115-02	FD	MW-33S-090115-P	9/1/2015							X		X					
MW-33S	DUP-120511-3	FD	MW-33S-120511	12/5/2011							X	X						
MW-33S	MW-33S-030614	N		3/6/2014							X		X					X
MW-33S	MW-33S-033115-NP	N		3/31/2015													X	X
MW-33S	MW-33S-033115-P	N		3/31/2015							X		X					
MW-33S	MW-33S-050212	N		5/2/2012							X	X	X			X		
MW-33S	MW-33S-082614-NP	N		8/26/2014													X	X
MW-33S	MW-33S-082614-P	N		8/26/2014							X		X					
MW-33S	MW-33S-090115-NP	N		9/1/2015													X	X
MW-33S	MW-33S-090115-P	N		9/1/2015							X		X					
MW-33S	MW-33S-120511	N		12/5/2011							X	X				X		
MW-34S	DUP-120611-1	FD	MW-34S-120611	12/6/2011														
MW-34S	MW-34S-030714	N		3/7/2014			X				X		X					
MW-34S	MW-34S-040115	N		4/1/2015							X		X					
MW-34S	MW-34S-050312	N		5/3/2012							X	X	X			X		
MW-34S	MW-34S-082714	N		8/27/2014							X		X					
MW-34S	MW-34S-090215	N		9/2/2015							X		X					
MW-34S	MW-34S-120611	N		12/6/2011							X	X				X		
MW-35D	MW-35D-030614	N		3/6/2014							X		X					
MW-35D	MW-35D-032614	N		3/26/2014														X
MW-35D	MW-35D-040115-NP	N		4/1/2015														X
MW-35D	MW-35D-040115-P	N		4/1/2015							X		X					
MW-35D	MW-35D-082714-NP	N		8/27/2014														X
MW-35D	MW-35D-082714-P	N		8/27/2014							X		X					
MW-35D	MW-35D-083115-NP	N		8/31/2015														X
MW-35D	MW-35D-083115-P	N		8/31/2015							X		X					
MW-35S	DUP-083115-01	FD	MW-35S-083115-P	8/31/2015							X		X					
MW-35S	MW-35S-030614	N		3/6/2014							X		X					X
MW-35S	MW-35S-040215-NP	N		4/2/2015														X
MW-35S	MW-35S-040215-P	N		4/2/2015							X		X					
MW-35S	MW-35S-050312	N		5/3/2012				X	X		X	X	X			X		
MW-35S	MW-35S-082714-NP	N		8/27/2014														X
MW-35S	MW-35S-082714-P	N		8/27/2014							X		X					
MW-35S	MW-35S-083115-NP	N		8/31/2015														X
MW-35S	MW-35S-083115-P	N		8/31/2015							X		X					
MW-35S	MW-35S-120611	N		12/6/2011				X	X		X	X				X		
MW-36S	DUP-050312-1	FD	MW-36S-050312	5/3/2012														

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Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-36S	MW-36S-050312	N		5/3/2012												X		
MW-38D	MW-38D-031414	N		3/14/2014							X	X	X					
MW-38D	MW-38D-040315	N		4/3/2015							X	X	X					
MW-38D	MW-38D-082914	N		8/29/2014							X	X	X					
MW-38D	MW-38D-090215	N		9/2/2015							X	X	X					
MW-3D	MW-03D-031014	N		3/10/2014							X		X					X
MW-3D	MW-03D-032309	N		3/23/2009	X					X					X			
MW-3D	MW-03D-042810	N		4/28/2010						X				X				
MW-3D	MW-03D-102810	N		10/28/2010						X				X				
MW-3D	MW-3D-033015-NP	N		3/30/2015														X
MW-3D	MW-3D-033015-P	N		3/30/2015							X		X					
MW-3D	MW-3D-042711	N		4/27/2011							X							
MW-3D	MW-3D-042712	N		4/27/2012							X		X					
MW-3D	MW-3D-082814-NP	N		8/28/2014														X
MW-3D	MW-3D-082814-P	N		8/28/2014							X		X					
MW-3D	MW-3D-090215-NP	N		9/2/2015														X
MW-3D	MW-3D-090215-P	N		9/2/2015							X		X					
MW-3D	MW-3D-120111	N		12/1/2011							X							
MW-3S	DUP042711-3	FD	MW-3S-042711	4/27/2011														
MW-3S	MW-03S-031014	N		3/10/2014							X		X					
MW-3S	MW-03S-032309	N		3/23/2009	X					X					X	X		
MW-3S	MW-03S-042810	N		4/28/2010						X				X		X		
MW-3S	MW-03S-102810	N		10/28/2010						X				X				
MW-3S	MW-3S-033015	N		3/30/2015							X		X					
MW-3S	MW-3S-042711	N		4/27/2011							X							
MW-3S	MW-3S-042712	N		4/27/2012							X		X					
MW-3S	MW-3S-082514	N		8/25/2014							X		X					
MW-3S	MW-3S-090215	N		9/2/2015							X		X					
MW-3S	MW-3S-102810	N		10/28/2010												X		
MW-3S	MW-3S-120111	N		12/1/2011							X							
MW-43D	MW-43D-030414	N		3/4/2014							X	X	X					
MW-43D	MW-43D-033015	N		3/30/2015							X	X	X					
MW-43D	MW-43D-082514	N		8/25/2014							X	X	X					
MW-43D	MW-43D-090315	N		9/3/2015							X	X	X					
MW-43S	DUP-030414-2	FD	MW-43S-030414	3/4/2014							X	X	X					X
MW-43S	DUP-033015-01	FD	MW-43S-033015-P	3/30/2015							X	X	X					X
MW-43S	DUP-082514-01	FD	MW-43S-082514-NP	8/25/2014														X
MW-43S	DUP-082514-02	FD	MW-43S-082514-P	8/25/2014							X	X	X					
MW-43S	DUP-090315-01	FD	MW-43S-090315-NP	9/3/2015														X
MW-43S	DUP-090315-02	FD	MW-43S-090315-P	9/3/2015							X	X	X					
MW-43S	MW-43S-030414	N		3/4/2014							X	X	X					X
MW-43S	MW-43S-033015-NP	N		3/30/2015														X
MW-43S	MW-43S-033015-P	N		3/30/2015							X	X	X					
MW-43S	MW-43S-082514-NP	N		8/25/2014														X
MW-43S	MW-43S-082514-P	N		8/25/2014							X	X	X					
MW-43S	MW-43S-090315-NP	N		9/3/2015														X
MW-43S	MW-43S-090315-P	N		9/3/2015							X	X	X					
MW-45D	MW-45D-031114	N		3/11/2014							X		X					
MW-45D	MW-45D-032614	N		3/26/2014														X
MW-45D	MW-45D-033115-NP	N		3/31/2015														X
MW-45D	MW-45D-033115-P	N		3/31/2015							X		X					
MW-45D	MW-45D-082614-NP	N		8/26/2014														X
MW-45D	MW-45D-082614-P	N		8/26/2014							X		X					
MW-45D	MW-45D-090115-NP	N		9/1/2015														X
MW-45D	MW-45D-090115-P	N		9/1/2015							X		X					
MW-45S	MW-45S-031114	N		3/11/2014							X		X					X
MW-45S	MW-45S-033115-NP	N		3/31/2015													X	X
MW-45S	MW-45S-033115-P	N		3/31/2015							X		X					
MW-45S	MW-45S-082614-NP	N		8/26/2014													X	X
MW-45S	MW-45S-082614-P	N		8/26/2014							X		X					
MW-45S	MW-45S-090115-NP	N		9/1/2015													X	X
MW-45S	MW-45S-090115-P	N		9/1/2015							X		X					
MW-4S	DUP-042512-1	FD	MW-4S-042512	4/25/2012							X		X					
MW-4S	DUP-112811-1	FD	MW-04S-112811	11/28/2011							X							
MW-4S	MW-04S-032509	N		3/25/2009						X					X	X		
MW-4S	MW-04S-042611	N		4/26/2011							X							

Table N-2
Groundwater Analytical Method Summary
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Sample Information				Analytical Group/ Analytical Method		Butyltins	Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds			Phenols	Carbonyls		Total Organic Halides	PCBs	Dioxins and Furans
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	Krone1989	SW8260C	NWTPH-Dx	NWTPH-Gx	SW8270	SW8270D	SW8270D-SIM	SW8041	SW8315	SW8315A	SW9020	SW8082A	AXYS MLA-017R20
MW-4S	MW-04S-042710	N		4/27/2010						X				X		X		
MW-4S	MW-04S-060210	N		6/2/2010						X								
MW-4S	MW-04S-060210-S	N		6/2/2010						X								
MW-4S	MW-04S-071411	N		7/14/2011							X							
MW-4S	MW-04S-071411R	N		7/14/2011							X							
MW-4S	MW-04S-102510	N		10/25/2010						X								
MW-4S	MW-04S-112811	N		11/28/2011			X				X							
MW-4S	MW-4S-030314	N		3/3/2014							X	X	X					
MW-4S	MW-4S-040115	N		4/1/2015							X	X	X					
MW-4S	MW-4S-042512	N		4/25/2012			X				X		X					
MW-4S	MW-4S-082814	N		8/28/2014							X	X	X					
MW-4S	MW-4S-090215	N		9/2/2015							X	X	X					
MW-4S	MW-4S-102510	N		10/25/2010										X				
MW-5S	MW-05S-032509	N		3/25/2009						X						X		
MW-5S	MW-05S-042910	N		4/29/2010						X						X		
MW-5S	MW-05S-102710	N		10/27/2010						X						X		
MW-5S	MW-5S-030314	N		3/3/2014							X		X					
MW-5S	MW-5S-033015	N		3/30/2015							X		X					
MW-5S	MW-5S-042811	N		4/28/2011							X							
MW-5S	MW-5S-050112	N		5/1/2012							X		X					
MW-5S	MW-5S-082514	N		8/25/2014							X		X					
MW-5S	MW-5S-083115	N		8/31/2015							X		X					
MW-5S	MW-5S-120111	N		12/1/2011							X							
MW-6S	MW-06S-032509	N		3/25/2009						X						X		
MW-6S	MW-06S-042910	N		4/29/2010						X						X		
MW-6S	MW-06S-102710	N		10/27/2010						X								
MW-6S	MW-6S-042612	N		4/26/2012							X		X					
MW-6S	MW-6S-042711	N		4/27/2011							X							
MW-6S	MW-6S-102710	N		10/27/2010												X		
MW-6S	MW-6S-113011	N		11/30/2011							X							
MW-7S	DUP-042712-1	FD	MW-7S-042712	4/27/2012							X		X					X
MW-7S	DUP-112911-2	FD	MW-7S-112911	11/29/2011							X							X
MW-7S	MW-07S-032509	N		3/25/2009						X					X	X		
MW-7S	MW-07S-042611	N		4/26/2011							X							
MW-7S	MW-07S-042710	N		4/27/2010						X				X		X		
MW-7S	MW-07S-060210	N		6/2/2010						X								
MW-7S	MW-07S-060210-S	N		6/2/2010						X								
MW-7S	MW-07S-071411	N		7/14/2011							X							
MW-7S	MW-07S-071411R	N		7/14/2011							X							
MW-7S	MW-07S-102510	N		10/25/2010						X								
MW-7S	MW-7S-042712	N		4/27/2012							X		X					X
MW-7S	MW-7S-102510	N		10/25/2010										X				
MW-7S	MW-7S-112911	N		11/29/2011							X							X

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																			
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-10S	MW-10-032409	N		3/24/2009	X				X		X	X	X		X									X	
MW-10S	MW-10-042611	N		4/26/2011							X				X										
MW-10S	MW-10-042712	N		4/27/2012											X					X					
MW-10S	MW-10-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-10S	MW-10-102610	N		10/25/2010								X			X		X	X		X		X	X		
MW-10S	MW-10-112911	N		11/29/2011											X					X					
MW-11S	MW-11-032509	N		3/25/2009					X		X	X	X		X									X	
MW-11S	MW-11-042811	N		4/28/2011											X										
MW-11S	MW-11-043010	N		4/30/2010								X			X		X	X		X	X			X	
MW-11S	MW-11-050112	N		5/1/2012											X										
MW-11S	MW-11-102810	N		10/28/2010								X			X		X	X		X		X	X		
MW-11S	MW-11-120111	N		12/1/2011											X										
MW-12S	MW-12-032509	N		3/25/2009					X		X	X	X		X									X	
MW-12S	MW-12-042811	N		4/28/2011											X										
MW-12S	MW-12-043010	N		4/30/2010								X			X		X	X		X	X			X	
MW-12S	MW-12-050112	N		5/1/2012											X										
MW-12S	MW-12-102810	N		10/28/2010								X			X		X	X		X		X	X		
MW-12S	MW-12-120111	N		12/1/2011											X										
MW-12S	MW-12S-030314	N		3/3/2014		X				X					X				X						
MW-12S	MW-12S-033015	N		3/30/2015		X				X					X				X						
MW-12S	MW-12S-082514	N		8/25/2014		X				X					X				X						
MW-12S	MW-12S-083115	N		8/31/2015		X				X					X				X						
MW-13S	DUP-033015-02	FD	MW-13S-033015	3/30/2015																					
MW-13S	DUP-043012-1	FD	MW-13-043012	4/30/2012																					
MW-13S	DUP-112911-3	FD	MW-13-112911	11/29/2011																					
MW-13S	MW-13-032409	N		3/24/2009	X				X		X	X	X		X									X	
MW-13S	MW-13-042611	N		4/26/2011							X				X										
MW-13S	MW-13-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-13S	MW-13-043012	N		4/30/2012											X					X					
MW-13S	MW-13-060210	N		6/2/2010											X										
MW-13S	MW-13-060210-S	N		6/2/2010																					
MW-13S	MW-13-071411	N		7/14/2011											X										
MW-13S	MW-13-071411R	N		7/14/2011																					
MW-13S	MW-13-102610	N		10/25/2010								X			X		X	X		X		X	X		
MW-13S	MW-13-112911	N		11/29/2011											X					X					
MW-13S	MW-13S-030714	N		3/7/2014		X				X					X				X						
MW-13S	MW-13S-033015	N		3/30/2015		X				X					X				X						
MW-13S	MW-13S-082514	N		8/25/2014		X				X					X				X						
MW-13S	MW-13S-083115	N		8/31/2015		X				X					X				X						
MW-14D	MW-14D-030714	N		3/7/2014		X		X		X		X			X	X			X	X				X	
MW-14D	MW-14D-040315	N		4/3/2015		X	X			X		X			X	X			X	X				X	
MW-14D	MW-14D-043012	N		4/30/2012								X			X		X			X		X			X
MW-14D	MW-14D-082914	N		8/29/2014		X		X		X		X			X	X			X	X		X		X	
MW-14D	MW-14D-090315	N		9/3/2015		X	X			X		X			X	X			X	X				X	
MW-14D	MW-14D-120211	N		12/2/2011								X			X		X			X		X			X
MW-14S	DUP-030714-1	FD	MW-14S-030714	3/7/2014																					
MW-14S	DUP032509	FD	MW-14-032509	3/25/2009	X																				
MW-14S	DUP-040315-01	FD	MW-14S-040315	4/3/2015																					
MW-14S	DUP042711-2	FD	MW-14-042711	4/27/2011																					
MW-14S	DUP-042910	FD	MW-14-042910	4/29/2010																					
MW-14S	DUP-082914-01	FD	MW-14S-082914	8/29/2014																					
MW-14S	DUP-090315-04	FD	MW-14S-090315	9/3/2015																					
MW-14S	DUP-102710-B	FD	MW-14-102710	10/27/2010																					
MW-14S	DUP-120211-1	FD	MW-14-120211	12/2/2011																					
MW-14S	MW-14-032509	N		3/25/2009	X				X		X	X	X		X									X	
MW-14S	MW-14-042711	N		4/27/2011											X										
MW-14S	MW-14-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-14S	MW-14-043012	N		4/30/2012											X										
MW-14S	MW-14-071411	N		7/14/2011											X										
MW-14S	MW-14-071411R	N		7/14/2011																					
MW-14S	MW-14-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-14S	MW-14-120211	N		12/2/2011											X										

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
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Sample Information				Analytical Group/ Analytical Method		Other																			
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-14S	MW-14S-030714	N		3/7/2014		X		X		X		X			X	X			X	X				X	
MW-14S	MW-14S-040315	N		4/3/2015		X	X			X		X			X	X			X	X				X	
MW-14S	MW-14S-082914	N		8/29/2014		X		X		X		X			X	X			X	X				X	
MW-14S	MW-14S-090315	N		9/3/2015		X	X			X		X			X	X			X	X				X	
MW-16S	MW-16-032609	N		3/26/2009					X		X	X	X		X									X	
MW-16S	MW-16-042811	N		4/28/2011											X										
MW-16S	MW-16-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-16S	MW-16-043012	N		4/30/2012											X										
MW-16S	MW-16-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-16S	MW-16-120611	N		12/6/2011											X										
MW-17S	DUP-030414-1	FD	MW-17S-030414P	3/4/2014																					
MW-17S	MW-17-032309	N		3/23/2009	X				X		X	X	X		X									X	
MW-17S	MW-17-042511	N		4/25/2011											X										
MW-17S	MW-17-042512	N		4/25/2012											X										
MW-17S	MW-17-042710	N		4/27/2010								X			X		X	X		X	X			X	
MW-17S	MW-17-102510	N		10/25/2010								X			X		X	X		X		X	X		
MW-17S	MW-17-112811	N		11/28/2011											X										
MW-17S	MW-17S-030414	N		3/4/2014																					
MW-17S	MW-17S-030414P	N		3/4/2014		X				X					X				X	X					
MW-17S	MW-17S-033115-NF	N		3/31/2015																X					
MW-17S	MW-17S-033115-P	N		3/31/2015		X				X					X				X	X					
MW-17S	MW-17S-082614-NF	N		8/26/2014																X					
MW-17S	MW-17S-082614-P	N		8/26/2014		X				X					X				X	X					
MW-17S	MW-17S-090115-NF	N		9/1/2015																X					
MW-17S	MW-17S-090115-P	N		9/1/2015		X				X					X				X	X					
MW-17S	MW-17S-090115-NF	N		9/1/2015																X					
MW-17S	MW-17S-090115-P	N		9/1/2015		X				X					X				X	X					
MW-18S	DUP-113011-2	FD	MW-18-113011	11/30/2011																					
MW-18S	MW-18-032609	N		3/26/2009					X		X	X	X		X									X	
MW-18S	MW-18-042612	N		4/26/2012											X										
MW-18S	MW-18-042711	N		4/27/2011											X										
MW-18S	MW-18-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-18S	MW-18-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-18S	MW-18-113011	N		11/30/2011											X										
MW-18S	MW-18S-031014	N		3/10/2014		X				X					X				X						
MW-18S	MW-18S-033115	N		3/31/2015		X				X					X				X						
MW-18S	MW-18S-082614	N		8/26/2014		X				X					X				X						
MW-18S	MW-18S-090115	N		9/1/2015		X				X					X				X						
MW-19S	MW-19-032609	N		3/26/2009	X				X		X	X	X		X									X	
MW-19S	MW-19-042811	N		4/28/2011											X										
MW-19S	MW-19-043010	N		4/30/2010								X			X		X	X		X	X			X	
MW-19S	MW-19-050112	N		5/1/2012											X										
MW-19S	MW-19-102810	N		10/28/2010								X			X		X	X		X		X	X		
MW-19S	MW-19-120111	N		12/1/2011											X										
MW-19S	MW-19S-030514	N		3/5/2014		X				X					X				X						
MW-19S	MW-19S-033015	N		3/30/2015		X				X					X				X						
MW-19S	MW-19S-082514	N		8/25/2014		X				X					X				X						
MW-19S	MW-19S-083115	N		8/31/2015		X				X					X				X						
MW-1D	DUP-082614-01	N		8/26/2014																					
MW-1D	MW-01D-032309	N		3/23/2009	X						X				X										

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																		
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-1D	MW-01D-042710	N		4/27/2010											X					X					
MW-1D	MW-01D-102710	N		10/27/2010											X					X					
MW-1D	MW-1D-031414	N		3/14/2014		X		X		X		X			X	X			X	X				X	
MW-1D	MW-1D-033115	N		3/31/2015		X	X			X		X			X	X			X	X				X	
MW-1D	MW-1D-042511	N		4/25/2011											X										
MW-1D	MW-1D-042512	N		4/25/2012											X										
MW-1D	MW-1D-082614	N		8/26/2014		X		X		X		X			X	X			X	X				X	
MW-1D	MW-1D-090215	N		9/2/2015		X	X			X		X			X	X			X	X				X	
MW-1D	MW-1D-112911	N		11/29/2011											X										
MW-1S	DUP032309	FD	MW-01S-032309	3/23/2009	X																				
MW-1S	DUP042511-1	FD	MW-1S-042511	4/25/2011																					
MW-1S	DUP-042710	FD	MW-01S-042710	4/27/2010																					
MW-1S	DUP-102710	FD	MW-01S-102710	10/27/2010																					
MW-1S	DUP-112911-1	FD	MW-1S-112911	11/29/2011																					
MW-1S	MW-01S-032309	N		3/23/2009	X				X		X	X	X		X									X	
MW-1S	MW-01S-042710	N		4/27/2010								X			X		X	X		X	X			X	
MW-1S	MW-01S-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-1S	MW-1S-031414	N		3/14/2014		X		X		X		X			X	X			X	X				X	
MW-1S	MW-1S-033115-NP	N		3/31/2015																X					
MW-1S	MW-1S-033115-P	N		3/31/2015		X	X			X		X			X	X			X	X				X	
MW-1S	MW-1S-042511	N		4/25/2011											X										
MW-1S	MW-1S-042512	N		4/25/2012											X										
MW-1S	MW-1S-082614-NP	N		8/26/2014																X					
MW-1S	MW-1S-082614-P	N		8/26/2014		X		X		X		X			X	X			X	X				X	
MW-1S	MW-1S-090215-NP	N		9/2/2015																X					
MW-1S	MW-1S-090215-P	N		9/2/2015		X	X			X		X			X	X			X	X				X	
MW-1S	MW-1S-112911	N		11/29/2011											X										
MW-20D	MW-20D-031214	N		3/12/2014		X		X		X		X			X	X			X	X				X	
MW-20D	MW-20D-040215	N		4/2/2015		X	X			X		X			X	X			X	X				X	
MW-20D	MW-20D-082814	N		8/28/2014		X		X		X		X			X	X			X	X				X	
MW-20D	MW-20D-090115	N		9/1/2015		X	X			X		X			X	X			X	X				X	
MW-20S	DUP-042612-2	FD	MW-20-042612	4/26/2012																					
MW-20S	MW-20-032609	N		3/26/2009					X		X	X	X		X									X	
MW-20S	MW-20-042612	N		4/26/2012											X										
MW-20S	MW-20-042711	N		4/27/2011											X										
MW-20S	MW-20-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-20S	MW-20-102510	N		10/25/2010								X			X		X	X		X		X	X		
MW-20S	MW-20-113011	N		11/30/2011											X										
MW-20S	MW-20S-031214	N		3/12/2014		X		X		X		X			X	X			X	X				X	
MW-20S	MW-20S-040215	N		4/2/2015		X	X			X		X			X	X			X	X				X	
MW-20S	MW-20S-082814	N		8/28/2014		X		X		X		X			X	X			X	X				X	

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																			
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-20S	MW-20S-090115	N		9/1/2015		X	X			X		X			X	X			X	X				X	
MW-21S	DUP032409	FD	MW-21-032409	3/24/2009																					
MW-21S	DUP-042612-1	FD	MW-21-042612	4/26/2012																					
MW-21S	DUP042711-1	FD	MW-21-042711	4/27/2011																					
MW-21S	DUP-042810	FD	MW-21-042810	4/28/2010																					
MW-21S	DUP-102610	FD	MW-21-102610	10/26/2010																					
MW-21S	DUP-113011-1	FD	MW-21-113011	11/30/2011																					
MW-21S	MW-21-032409	N		3/24/2009					X		X	X	X		X									X	
MW-21S	MW-21-042612	N		4/26/2012											X										
MW-21S	MW-21-042711	N		4/27/2011											X										
MW-21S	MW-21-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-21S	MW-21-102610	N		10/26/2010								X			X		X	X		X		X	X		
MW-21S	MW-21-113011	N		11/30/2011											X										
MW-21S	MW-21S-030514	N		3/5/2014		X				X					X				X						
MW-21S	MW-21S-033015	N		3/30/2015		X				X					X				X						
MW-21S	MW-21S-082614	N		8/26/2014		X				X					X				X						
MW-21S	MW-21S-090115	N		9/1/2015		X				X					X				X						
MW-22S	MW-22-032409	N		3/24/2009					X		X	X	X		X									X	
MW-22S	MW-22-042512	N		4/25/2012											X										
MW-22S	MW-22-042611	N		4/26/2011											X										
MW-22S	MW-22-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-22S	MW-22-102610	N		10/25/2010								X			X		X	X		X		X	X		
MW-22S	MW-22-112811	N		11/28/2011											X										
MW-22S	MW-22S-040115-NF	N		4/1/2015																X					
MW-22S	MW-22S-040115-P	N		4/1/2015		X				X					X				X	X					
MW-22S	MW-22S-082714-NF	N		8/27/2014																X					
MW-22S	MW-22S-082714-P	N		8/27/2014		X				X					X				X						
MW-22S	MW-22S-090315-NF	N		9/3/2015																X					
MW-22S	MW-22S-090315-P	N		9/3/2015		X				X					X				X	X					
MW-23S	MW-23-032409	N		3/24/2009					X		X	X	X		X									X	
MW-23S	MW-23-042512	N		4/25/2012											X										
MW-23S	MW-23-042711	N		4/27/2011											X										
MW-23S	MW-23-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-23S	MW-23-102610	N		10/26/2010								X			X		X	X		X		X	X		
MW-23S	MW-23-112811	N		11/28/2011											X										
MW-24S	MW-24-032509	N		3/25/2009					X		X	X	X		X									X	
MW-24S	MW-24-042512	N		4/25/2012											X										
MW-24S	MW-24-042711	N		4/27/2011											X										
MW-24S	MW-24-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-24S	MW-24-102610	N		10/25/2010								X			X		X	X		X		X	X		
MW-24S	MW-24-113011	N		11/30/2011											X										

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																			
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-26S	MW-26-032609	N		3/26/2009	X				X		X	X	X		X									X	
MW-26S	MW-26-042811	N		4/28/2011											X										
MW-26S	MW-26-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-26S	MW-26-043012	N		4/30/2012											X										
MW-26S	MW-26-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-26S	MW-26-120111	N		12/1/2011											X										
MW-26S	MW-26S-031114	N		3/11/2014		X				X					X				X						
MW-26S	MW-26S-032614	N		3/26/2014																X					
MW-26S	MW-26S-040115-NP	N		4/1/2015																X					
MW-26S	MW-26S-040115-P	N		4/1/2015		X				X					X				X	X					
MW-26S	MW-26S-082514-NP	N		8/25/2014																X					
MW-26S	MW-26S-082514-P	N		8/25/2014		X				X					X				X	X					
MW-26S	MW-26S-090215-NP	N		9/2/2015																X					
MW-26S	MW-26S-090215-P	N		9/2/2015		X				X					X				X	X					
MW-27S	DUP-040215-01	FD	MW-27S-040215-NP	4/2/2015																					
MW-27S	MW-27-032609	N		3/26/2009	X				X		X	X	X		X									X	
MW-27S	MW-27-042811	N		4/28/2011											X										
MW-27S	MW-27-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-27S	MW-27-043012	N		4/30/2012											X										
MW-27S	MW-27-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-27S	MW-27-120111	N		12/1/2011											X										
MW-27S	MW-27S-040215-NP	N		4/2/2015																X					
MW-27S	MW-27S-040215-P	N		4/2/2015		X				X					X				X	X					
MW-27S	MW-27S-082814-NP	N		8/28/2014																X					
MW-27S	MW-27S-082814-P	N		8/28/2014		X				X					X				X	X					
MW-27S	MW-27S-090215-NP	N		9/2/2015																X					
MW-27S	MW-27S-090215-P	N		9/2/2015		X				X					X				X						
MW-28S	DUP-120211-2	FD	MW-28S-120211	12/2/2011																					
MW-28S	MW-28S-050112	N		5/1/2012								X		X	X		X			X		X			X
MW-28S	MW-28S-120211	N		12/2/2011								X		X	X		X			X		X			X
MW-29S	DUP-031314-1	FD	MW-29S-031314	3/13/2014																					
MW-29S	DUP-120211-3	FD	MW-29S-120211	12/2/2011																					
MW-29S	MW-29S-031314	N		3/13/2014																					
MW-29S	MW-29S-031314P	N		3/13/2014		X				X					X				X						
MW-29S	MW-29S-050212	N		5/2/2012								X		X	X		X			X		X			X
MW-29S	MW-29S-120211	N		12/2/2011								X		X	X		X			X		X			X
MW-2D	MW-02D-032409	N		3/24/2009	X						X				X										
MW-2D	MW-02D-042710	N		4/27/2010											X					X					
MW-2D	MW-02D-102710	N		10/27/2010											X					X					
MW-2D	MW-2D-031314	N		3/13/2014																					
MW-2D	MW-2D-031314 P	N		3/13/2014		X		X		X		X			X	X			X	X				X	
MW-2D	MW-2D-040215-NP	N		4/2/2015																X					
MW-2D	MW-2D-040215-P	N		4/2/2015		X	X			X		X			X	X			X	X				X	
MW-2D	MW-2D-042611	N		4/26/2011											X										
MW-2D	MW-2D-042612	N		4/26/2012											X										
MW-2D	MW-2D-082714-NP	N		8/27/2014																X					
MW-2D	MW-2D-082714-P	N		8/27/2014		X		X		X		X			X	X			X	X				X	
MW-2D	MW-2D-083115-NP	N		8/31/2015																X					
MW-2D	MW-2D-083115-P	N		8/31/2015		X	X			X		X			X	X			X	X				X	
MW-2D	MW-2D-113011	N		11/30/2011											X										
MW-2S	MW-02S-032409	N		3/24/2009	X				X		X	X	X		X									X	
MW-2S	MW-02S-042710	N		4/27/2010								X			X		X	X		X	X			X	
MW-2S	MW-02S-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-2S	MW-2S-030514	N		3/5/2014																					
MW-2S	MW-2S-030514P	N		3/5/2014											X										
MW-2S	MW-2S-032614	N		3/26/2014											X										
MW-2S	MW-2S-032614P	N		3/26/2014		X		X		X		X				X			X	X				X	
MW-2S	MW-2S-040115-NP	N		4/1/2015																X					
MW-2S	MW-2S-040115-P	N		4/1/2015		X	X			X		X			X	X			X	X				X	
MW-2S	MW-2S-042611	N		4/26/2011											X										
MW-2S	MW-2S-042612	N		4/26/2012											X										
MW-2S	MW-2S-082714-NP	N		8/27/2014																X					
MW-2S	MW-2S-082714-P	N		8/27/2014		X		X		X		X			X	X			X	X				X	
MW-2S	MW-2S-083115-NP	N		8/31/2015																X					
MW-2S	MW-2S-083115-P	N		8/31/2015		X	X			X		X			X	X			X	X				X	
MW-2S	MW-2S-113011	N		11/30/2011											X										

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																		
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-30S	DUP-031014-1	FD	MW-30S-031014	3/10/2014																					
MW-30S	DUP-040115-01	FD	MW-30S-040115	4/1/2015																					
MW-30S	DUP-090315-03	FD	MW-30S-090315	9/3/2015																					
MW-30S	DUP-120511-1	FD	MW-30S-120511	12/5/2011																					
MW-30S	MW-30S-031014	N		3/10/2014		X				X					X				X						
MW-30S	MW-30S-040115	N		4/1/2015		X				X					X				X						
MW-30S	MW-30S-050212	N		5/2/2012								X		X	X		X			X		X			X
MW-30S	MW-30S-082614	N		8/26/2014		X				X					X				X						
MW-30S	MW-30S-090315	N		9/3/2015		X				X					X				X						
MW-30S	MW-30S-120511	N		12/5/2011								X		X	X		X			X		X			X
MW-31D	MW-31D-031214	N		3/12/2014		X		X		X		X			X	X			X	X				X	
MW-31D	MW-31D-040215	N		4/2/2015		X	X			X		X			X	X			X	X				X	
MW-31D	MW-31D-082814	N		8/28/2014		X		X		X		X			X	X			X	X				X	
MW-31D	MW-31D-090315	N		9/3/2015		X	X			X		X			X	X			X	X				X	
MW-31S	DUP-050212-1	FD	MW-31S-050212	5/2/2012										X											
MW-31S	DUP-120511-2	FD	MW-31S-120511	12/5/2011																					
MW-31S	MW-31S-031214	N		3/12/2014		X		X		X		X			X	X			X	X				X	
MW-31S	MW-31S-040215	N		4/2/2015		X	X			X		X			X	X			X	X				X	
MW-31S	MW-31S-050212	N		5/2/2012								X		X	X		X			X		X			X
MW-31S	MW-31S-082814	N		8/28/2014		X		X		X		X			X	X			X	X				X	
MW-31S	MW-31S-090315	N		9/3/2015		X	X			X		X			X	X			X	X				X	
MW-31S	MW-31S-120511	N		12/5/2011								X		X	X		X			X		X			X
MW-32DR	MW-32DR-050112	N		5/1/2012								X			X		X			X		X			X
MW-32S	MW-32S-050112	N		5/1/2012								X			X		X			X		X			X
MW-32S	MW-32S-120611	N		12/6/2011								X			X		X			X		X			X
MW-33S	DUP-033115-P-01	FD	MW-33S-033115-P	3/31/2015																					
MW-33S	DUP-082614-03	FD	MW-33S-082614-P	8/26/2014																					
MW-33S	DUP-082614-2	FD	MW-33S-082614-NP	8/26/2014																					
MW-33S	DUP-090115-01	FD	MW-33S-090115-NP	9/1/2015																					
MW-33S	DUP-090115-02	FD	MW-33S-090115-P	9/1/2015																					
MW-33S	DUP-120511-3	FD	MW-33S-120511	12/5/2011																					
MW-33S	MW-33S-030614	N		3/6/2014		X		X		X		X			X	X			X	X				X	
MW-33S	MW-33S-033115-NP	N		3/31/2015																X					
MW-33S	MW-33S-033115-P	N		3/31/2015		X	X			X		X			X	X			X	X				X	
MW-33S	MW-33S-050212	N		5/2/2012								X			X		X			X		X			X
MW-33S	MW-33S-082614-NP	N		8/26/2014																X					
MW-33S	MW-33S-082614-P	N		8/26/2014		X		X		X		X			X	X			X	X				X	
MW-33S	MW-33S-090115-NP	N		9/1/2015																X					
MW-33S	MW-33S-090115-P	N		9/1/2015		X	X			X		X			X	X			X	X				X	
MW-33S	MW-33S-120511	N		12/5/2011								X			X		X			X		X			X
MW-34S	DUP-120611-1	FD	MW-34S-120611	12/6/2011										X											
MW-34S	MW-34S-030714	N		3/7/2014		X				X					X				X						
MW-34S	MW-34S-040115	N		4/1/2015		X				X					X				X						
MW-34S	MW-34S-050312	N		5/3/2012								X		X	X		X			X		X			X
MW-34S	MW-34S-082714	N		8/27/2014		X				X					X				X						
MW-34S	MW-34S-090215	N		9/2/2015		X				X					X				X						
MW-34S	MW-34S-120611	N		12/6/2011								X		X	X		X			X		X			X
MW-35D	MW-35D-030614	N		3/6/2014		X		X		X		X			X	X			X	X				X	
MW-35D	MW-35D-032614	N		3/26/2014																X					
MW-35D	MW-35D-040115-NP	N		4/1/2015																X					
MW-35D	MW-35D-040115-P	N		4/1/2015		X	X			X		X			X	X			X	X				X	
MW-35D	MW-35D-082714-NP	N		8/27/2014																X					
MW-35D	MW-35D-082714-P	N		8/27/2014		X		X		X		X			X	X			X	X				X	
MW-35D	MW-35D-083115-NP	N		8/31/2015																X					
MW-35D	MW-35D-083115-P	N		8/31/2015		X	X			X		X			X	X			X	X				X	
MW-35S	DUP-083115-01	FD	MW-35S-083115-P	8/31/2015																					
MW-35S	MW-35S-030614	N		3/6/2014		X		X		X		X			X	X			X	X				X	
MW-35S	MW-35S-040215-NP	N		4/2/2015																X					
MW-35S	MW-35S-040215-P	N		4/2/2015		X	X			X		X			X	X			X	X				X	
MW-35S	MW-35S-050312	N		5/3/2012								X		X	X		X			X		X			X
MW-35S	MW-35S-082714-NP	N		8/27/2014																X					
MW-35S	MW-35S-082714-P	N		8/27/2014		X		X		X		X			X	X			X	X				X	
MW-35S	MW-35S-083115-NP	N		8/31/2015																X					
MW-35S	MW-35S-083115-P	N		8/31/2015		X	X			X		X			X	X			X	X				X	
MW-35S	MW-35S-120611	N		12/6/2011								X		X	X		X			X		X			X
MW-36S	DUP-050312-1	FD	MW-36S-050312	5/3/2012																					

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																				
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-36S	MW-36S-050312	N		5/3/2012								X			X		X			X		X			X
MW-38D	MW-38D-031414	N		3/14/2014		X		X		X		X			X	X			X	X				X	
MW-38D	MW-38D-040315	N		4/3/2015		X	X			X		X			X	X			X	X				X	
MW-38D	MW-38D-082914	N		8/29/2014		X		X		X		X			X	X			X	X				X	
MW-38D	MW-38D-090215	N		9/2/2015		X	X			X		X			X	X			X	X				X	
MW-3D	MW-03D-031014	N		3/10/2014		X		X		X		X			X	X			X	X				X	
MW-3D	MW-03D-032309	N		3/23/2009	X						X				X										
MW-3D	MW-03D-042810	N		4/28/2010											X					X					
MW-3D	MW-03D-102810	N		10/28/2010											X					X					
MW-3D	MW-3D-033015-NP	N		3/30/2015																X					
MW-3D	MW-3D-033015-P	N		3/30/2015		X	X			X		X			X	X			X	X				X	
MW-3D	MW-3D-042711	N		4/27/2011											X										
MW-3D	MW-3D-042712	N		4/27/2012											X										
MW-3D	MW-3D-082814-NP	N		8/28/2014																X					
MW-3D	MW-3D-082814-P	N		8/28/2014		X		X		X		X			X	X			X	X				X	
MW-3D	MW-3D-090215-NP	N		9/2/2015																X					
MW-3D	MW-3D-090215-P	N		9/2/2015		X	X			X		X			X	X			X	X				X	
MW-3D	MW-3D-120111	N		12/1/2011											X										
MW-3S	DUP042711-3	FD	MW-3S-042711	4/27/2011																					
MW-3S	MW-03S-031014	N		3/10/2014		X		X		X		X			X	X			X	X				X	
MW-3S	MW-03S-032309	N		3/23/2009	X				X		X	X	X		X									X	
MW-3S	MW-03S-042810	N		4/28/2010								X			X		X	X		X	X			X	
MW-3S	MW-03S-102810	N		10/28/2010								X			X		X	X		X		X	X		
MW-3S	MW-3S-033015	N		3/30/2015		X	X			X		X			X	X			X	X				X	
MW-3S	MW-3S-042711	N		4/27/2011											X										
MW-3S	MW-3S-042712	N		4/27/2012											X										
MW-3S	MW-3S-082514	N		8/25/2014		X		X		X		X			X	X			X	X				X	
MW-3S	MW-3S-090215	N		9/2/2015		X	X			X		X			X	X			X	X				X	
MW-3S	MW-3S-102810	N		10/28/2010																					
MW-3S	MW-3S-120111	N		12/1/2011											X										
MW-43D	MW-43D-030414	N		3/4/2014		X		X		X		X			X	X			X	X				X	
MW-43D	MW-43D-033015	N		3/30/2015		X	X			X		X			X	X			X	X				X	
MW-43D	MW-43D-082514	N		8/25/2014		X		X		X		X			X	X			X	X				X	
MW-43D	MW-43D-090315	N		9/3/2015		X	X			X		X			X	X			X	X				X	
MW-43S	DUP-030414-2	FD	MW-43S-030414	3/4/2014																					
MW-43S	DUP-033015-01	FD	MW-43S-033015-P	3/30/2015																					
MW-43S	DUP-082514-01	FD	MW-43S-082514-NP	8/25/2014																					
MW-43S	DUP-082514-02	FD	MW-43S-082514-P	8/25/2014																					
MW-43S	DUP-090315-01	FD	MW-43S-090315-NP	9/3/2015																					
MW-43S	DUP-090315-02	FD	MW-43S-090315-P	9/3/2015																					
MW-43S	MW-43S-030414	N		3/4/2014		X		X		X		X			X	X			X	X				X	
MW-43S	MW-43S-033015-NP	N		3/30/2015																X					
MW-43S	MW-43S-033015-P	N		3/30/2015		X	X			X		X			X	X			X	X				X	
MW-43S	MW-43S-082514-NP	N		8/25/2014																X					
MW-43S	MW-43S-082514-P	N		8/25/2014		X		X		X		X			X	X			X	X				X	
MW-43S	MW-43S-090315-NP	N		9/3/2015																X					
MW-43S	MW-43S-090315-P	N		9/3/2015		X	X			X		X			X	X			X	X				X	
MW-45D	MW-45D-031114	N		3/11/2014		X		X		X		X			X	X			X	X				X	
MW-45D	MW-45D-032614	N		3/26/2014																X					
MW-45D	MW-45D-033115-NP	N		3/31/2015																X					
MW-45D	MW-45D-033115-P	N		3/31/2015		X	X			X		X			X	X			X	X				X	
MW-45D	MW-45D-082614-NP	N		8/26/2014																X					
MW-45D	MW-45D-082614-P	N		8/26/2014		X		X		X		X			X	X			X	X				X	
MW-45D	MW-45D-090115-NP	N		9/1/2015																X					
MW-45D	MW-45D-090115-P	N		9/1/2015		X	X			X		X			X	X			X	X				X	
MW-45S	MW-45S-031114	N		3/11/2014		X		X		X		X			X	X			X	X				X	
MW-45S	MW-45S-033115-NP	N		3/31/2015																X					
MW-45S	MW-45S-033115-P	N		3/31/2015		X	X			X		X			X	X			X	X				X	
MW-45S	MW-45S-082614-NP	N		8/26/2014																X					
MW-45S	MW-45S-082614-P	N		8/26/2014		X		X		X		X			X	X			X	X				X	
MW-45S	MW-45S-090115-NP	N		9/1/2015																X					
MW-45S	MW-45S-090115-P	N		9/1/2015		X	X			X		X			X	X			X	X				X	
MW-4S	DUP-042512-1	FD	MW-4S-042512	4/25/2012																					
MW-4S	DUP-112811-1	FD	MW-04S-112811	11/28/2011																					
MW-4S	MW-04S-032509	N		3/25/2009					X		X	X	X		X									X	
MW-4S	MW-04S-042611	N		4/26/2011											X										

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information				Analytical Group/ Analytical Method		Other																			
Location	Sample ID	Sample Type	Parent Sample ID	Date	EPA1632	E120.1	E365.2	EPA 365.2	EPA130.2	EPA150.1	EPA160.2	EPA300	EPA310.1	EPA350.1	FIELD	SM2320	SM2320B	SM2340B	SM2520B	SM2540D	SM4500	SM4500 P-E	SM5310C	SW9060	SW9060 M
MW-4S	MW-04S-042710	N		4/27/2010								X			X		X	X		X	X			X	
MW-4S	MW-04S-060210	N		6/2/2010											X										
MW-4S	MW-04S-060210-S	N		6/2/2010																					
MW-4S	MW-04S-071411	N		7/14/2011											X										
MW-4S	MW-04S-071411R	N		7/14/2011																					
MW-4S	MW-04S-102510	N		10/25/2010								X			X		X	X		X		X	X		
MW-4S	MW-04S-112811	N		11/28/2011											X										
MW-4S	MW-4S-030314	N		3/3/2014		X				X					X				X						
MW-4S	MW-4S-040115	N		4/1/2015		X				X					X				X						
MW-4S	MW-4S-042512	N		4/25/2012											X										
MW-4S	MW-4S-082814	N		8/28/2014		X				X					X				X						
MW-4S	MW-4S-090215	N		9/2/2015		X				X					X				X						
MW-4S	MW-4S-102510	N		10/25/2010																					
MW-5S	MW-05S-032509	N		3/25/2009					X		X	X	X		X									X	
MW-5S	MW-05S-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-5S	MW-05S-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-5S	MW-5S-030314	N		3/3/2014		X				X					X				X						
MW-5S	MW-5S-033015	N		3/30/2015		X				X					X				X						
MW-5S	MW-5S-042811	N		4/28/2011											X										
MW-5S	MW-5S-050112	N		5/1/2012											X										
MW-5S	MW-5S-082514	N		8/25/2014		X				X					X				X						
MW-5S	MW-5S-083115	N		8/31/2015		X				X					X				X						
MW-5S	MW-5S-120111	N		12/1/2011											X										
MW-6S	MW-06S-032509	N		3/25/2009					X		X	X	X		X									X	
MW-6S	MW-06S-042910	N		4/29/2010								X			X		X	X		X	X			X	
MW-6S	MW-06S-102710	N		10/27/2010								X			X		X	X		X		X	X		
MW-6S	MW-6S-042612	N		4/26/2012											X										
MW-6S	MW-6S-042711	N		4/27/2011											X										
MW-6S	MW-6S-102710	N		10/27/2010																					
MW-6S	MW-6S-113011	N		11/30/2011											X										
MW-7S	DUP-042712-1	FD	MW-7S-042712	4/27/2012																					
MW-7S	DUP-112911-2	FD	MW-7S-112911	11/29/2011																					
MW-7S	MW-07S-032509	N		3/25/2009					X		X	X	X		X									X	
MW-7S	MW-07S-042611	N		4/26/2011							X				X										
MW-7S	MW-07S-042710	N		4/27/2010								X			X		X	X		X	X			X	
MW-7S	MW-07S-060210	N		6/2/2010											X										
MW-7S	MW-07S-060210-S	N		6/2/2010																					
MW-7S	MW-07S-071411	N		7/14/2011											X										
MW-7S	MW-07S-071411R	N		7/14/2011																					
MW-7S	MW-07S-102510	N		10/25/2010								X			X		X	X		X		X	X		
MW-7S	MW-7S-042712	N		4/27/2012											X					X					
MW-7S	MW-7S-102510	N		10/25/2010																					
MW-7S	MW-7S-112911	N		11/29/2011											X					X					

Table N-2
Groundwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Notes:
AXYS MLA-017 = USEPA Method 1613B
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
MW = Monitoring Well
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
S, D designation following well identification number indicates shallow or deep monitoring well.
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
TPH = total petroleum hydrocarbons

Table N-3
Stormwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information					Analytical Group/ Analytical Method	Metals		Volatile Organic Compounds	Total Petroleum Hydrocarbons		Semivolatile Organic Compounds	
Location	Sample ID	Sample Type	Parent Sample ID	Date	Sample Method	EPA200.8	EPA SW7470A	EPA SW8260C	NWTPH-Dx	NWTPH-Gx	EPA SW8270D	EPA SW8270D-SIM
STW-01	STW-01-103012	N		10/30/2012	Grab	X	X	X	X	X	X	X
STW-01	DUP103012-1	FD	STW-01-103012	10/30/2012	Grab	X	X	X	X	X	X	X
STW-01	STW-01-121412	N		12/14/2012	Grab	X	X	X	X	X	X	X
STW-01	DUP121412-1	FD	STW-01-121412	12/14/2012	Grab	X	X	X	X	X	X	X
STW-01	STW-01-010913	N		1/9/2013	Grab	X	X	X	X	X	X	X
STW-01	DUP-010913	FD	STW-01-010913	1/9/2013	Grab	X	X	X	X	X	X	X
STW-01	STW-01-040813	N		4/8/2013	Grab	X	X	X	X	X	X	X
STW-01	DUP-040813	FD	STW-01-040813	4/8/2013	Grab	X	X	X	X	X	X	X

Notes:
AXYS MLA-017 = USEPA Method 1613B
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
STW = Stormwater Sample Location
TPH = total petroleum hydrocarbons

Table N-3
Stormwater Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information					Analytical Group/ Analytical Method	Polychlorinated Biphenyls	Dioxins and Furans	Other			
Location	Sample ID	Sample Type	Parent Sample ID	Date	Sample Method	EPA SW8082A	AXYS MLA-017R20	FIELD	EPA150.1	SM2540D	EPA SW9040C
STW-01	STW-01-103012	N		10/30/2012	Grab	X	X	X			X
STW-01	DUP103012-1	FD	STW-01-103012	10/30/2012	Grab	X	X				
STW-01	STW-01-121412	N		12/14/2012	Grab	X	X	X	X		
STW-01	DUP121412-1	FD	STW-01-121412	12/14/2012	Grab	X	X				
STW-01	STW-01-010913	N		1/9/2013	Grab	X	X		X		
STW-01	DUP-010913	FD	STW-01-010913	1/9/2013	Grab	X	X				
STW-01	STW-01-040813	N		4/8/2013	Grab	X	X		X	X	
STW-01	DUP-040813	FD	STW-01-040813	4/8/2013	Grab	X	X			X	

Notes:
AXYS MLA-017 = USEPA Method 1613B
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
STW = Stormwater Sample Location
TPH = total petroleum hydrocarbons

Table N-4
Catch Basin Solids Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information						Analytical Group/ Analytical Method	Metals			Total Petroleum Hydrocarbons
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Method	EPA200.8	EPA SW6010C	EPA SW7471A	NWTPH-Dx
CB-01	CB-01	N		9/4/2012	Fall12Stormwater	Grab	X	X	X	X
SWD-01	SWD-01	N		9/4/2012	Fall12Stormwater	Grab	X	X	X	
SWD-02	SWD-02	N		9/4/2012	Fall12Stormwater	Grab	X	X	X	X
TANK-01	DUP090412	FD	TANK-01	9/4/2012	Fall12Stormwater	Grab	X	X	X	
TANK-01	TANK-01	N		9/4/2012	Fall12Stormwater	Grab	X	X	X	
SWP-01	SWP-01-080414	N		8/4/2014	SWP Abandonment 2014	Grab	X	X		
SWP-02	DUP-080614-1	FD	SWP-02-080614	8/6/2014	SWP Abandonment 2014	Grab	X	X		
SWP-02	SWP-02-080614	N		8/6/2014	SWP Abandonment 2014	Grab	X	X		

Notes:
AXYS MLA-017 = USEPA Method 1613B
CB = catch basin
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
SWD = stormwater ditch
SWP = stormwater pipe
TANK = tank solids
TPH = total petroleum hydrocarbons

Table N-4
Catch Basin Solids Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information						Analytical Group/ Analytical Method	Semivolatile Organic Compounds		Phenols	Polychlorinated Biphenyls	Dioxins and Furans	Grain Size
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Method	EPA SW8270D	EPA SW8270D-SIM	EPA SW8041	EPA SW8082A	AXYS MLA-017R20	PSEP
CB-01	CB-01	N		9/4/2012	Fall12Stormwater	Grab	X	X		X	X	X
SWD-01	SWD-01	N		9/4/2012	Fall12Stormwater	Grab	X	X		X	X	X
SWD-02	SWD-02	N		9/4/2012	Fall12Stormwater	Grab	X	X		X	X	X
TANK-01	DUP090412	FD	TANK-01	9/4/2012	Fall12Stormwater	Grab	X	X		X	X	X
TANK-01	TANK-01	N		9/4/2012	Fall12Stormwater	Grab	X	X		X	X	X
SWP-01	SWP-01-080414	N		8/4/2014	SWP Abandonment 2014	Grab	X		X	X	X	X
SWP-02	DUP-080614-1	FD	SWP-02-080614	8/6/2014	SWP Abandonment 2014	Grab	X			X	X	
SWP-02	SWP-02-080614	N		8/6/2014	SWP Abandonment 2014	Grab	X		X	X	X	X

Notes:
AXYS MLA-017 = USEPA Method 1613B
CB = catch basin
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
SWD = stormwater ditch
SWP = stormwater pipe
TANK = tank solids
TPH = total petroleum hydrocarbons

Table N-4
Catch Basin Solids Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information						Analytical Group/ Analytical Method	Other				
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Method	Plumb,1981	SM2540B	SM2540G	SW9045	SW9060M
CB-01	CB-01	N		9/4/2012	Fall12Stormwater	Grab		X		X	X
SWD-01	SWD-01	N		9/4/2012	Fall12Stormwater	Grab		X		X	X
SWD-02	SWD-02	N		9/4/2012	Fall12Stormwater	Grab		X		X	X
TANK-01	DUP090412	FD	TANK-01	9/4/2012	Fall12Stormwater	Grab		X		X	X
TANK-01	TANK-01	N		9/4/2012	Fall12Stormwater	Grab		X		X	X
SWP-01	SWP-01-080414	N		8/4/2014	SWP Abandonment 2014	Grab	X		X		
SWP-02	DUP-080614-1	FD	SWP-02-080614	8/6/2014	SWP Abandonment 2014	Grab					
SWP-02	SWP-02-080614	N		8/6/2014	SWP Abandonment 2014	Grab	X		X		

Notes:
AXYS MLA-017 = USEPA Method 1613B
CB = catch basin
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
SWD = stormwater ditch
SWP = stormwater pipe
TANK = tank solids
TPH = total petroleum hydrocarbons

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information							Analytical Group/ Analytical Method	Metals				Butyltins
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Depth	Sample Method	EPA200.8	EPA SW6010C	EPA SW6020A	EPA SW7471A	Krone1989
SED-SC-01	DUP-053012-4	FD	SED-SC-01-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-01	SED-SC-01-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-01	SED-SC-01-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-02	SED-SC-02-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-02	SED-SC-02-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-02	SED-SC-02-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-02	SED-SC-02-8-10-05	N		5/29/2012	Sed2012Archive	8-10 ft	VC					
SED-SC-03	DUP-053012-3	FD	SED-SC-03-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-03	SED-SC-03-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-03	SED-SC-03-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-03	SED-SC-03-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC	X	X		X	
SED-SC-03	SED-SC-03-6-8-053	N		5/30/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-04	SED-SC-04-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-04	SED-SC-04-1-2-053	N		5/30/2012	Sed2012Archive	1-2 ft	VC					
SED-SC-04	SED-SC-04-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-04	SED-SC-04-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-04	SED-SC-04-6-7.1-05	N		5/30/2012	Sed2012	6-7.1 ft	VC		X	X	X	X
SED-SC-05	DUP-060112-2	FD	SED-SC-05-4-6-060112	6/1/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-05	SED-SC-05-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-05	SED-SC-05-2-4-060	N		6/1/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-05	SED-SC-05-4-6-060	N		6/1/2012	Sed2012Archive	4-6 ft	VC	X	X		X	
SED-SC-05	SED-SC-05-6-8-060	N		6/1/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-06	SED-SC-06-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-06	SED-SC-06-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-06	SED-SC-06-4-6-052	N		5/29/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-06	SED-SC-06-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-06	SED-SC-06-8-10-05	N		5/29/2012	Sed2012Archive	8-10 ft	VC					
SED-SC-07	SED-SC-07-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-07	SED-SC-07-1-2-053	N		5/30/2012	Sed2012Archive	1-2 ft	VC					
SED-SC-07	SED-SC-07-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-07	SED-SC-07-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-07	SED-SC-07-6-8-053	N		5/30/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-07	SED-SC-07-8-10-05	N		5/30/2012	Sed2012Archive	8-10 ft	VC					
SED-SC-08	DUP-053012-2	FD	SED-SC-08-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-08	SED-SC-08-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-08	SED-SC-08-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-08	SED-SC-08-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-08	SED-SC-08-6-8-053	N		5/30/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-08	SED-SC-08-8-10-05	N		5/30/2012	Sed2012Archive	8-10 ft	VC					
SED-SC-09	SED-SC-09-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-09	SED-SC-09-1-2-052	N		5/29/2012	Sed2012Archive	1-2 ft	VC					
SED-SC-09	SED-SC-09-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X	X	X

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information							Analytical Group/ Analytical Method	Metals				Butyltins
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Depth	Sample Method	EPA200.8	EPA SW6010C	EPA SW6020A	EPA SW7471A	Krone1989
SED-SC-09	SED-SC-09-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-13	SED-SC-13-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-13	SED-SC-13-2-4-053	N		5/31/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-13	SED-SC-13-4-6-053	N		5/31/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-13	SED-SC-13-6-7-053	N		5/31/2012	Sed2012	6-7 ft	VC		X	X	X	X
SED-SC-14	DUP-052912-1	N		5/29/2012	Sed2012	1-2 ft	VC					
SED-SC-14	DUP-052912-2	FD	SED-SC-14-6-8-052912	5/29/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-14	SED-SC-14-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-14	SED-SC-14-1-2-052	N		5/29/2012	Sed2012Archive	1-2 ft	VC					
SED-SC-14	SED-SC-14-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-14	SED-SC-14-4-6-052	N		5/29/2012	Sed2012Archive	4-6 ft	VC					
SED-SC-14	SED-SC-14-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SC-15	SED-SC-15-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-15	SED-SC-15-2-4-053	N		5/31/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-16	DUP-053112-2	FD	SED-SC-16-2-3.5-053112	5/31/2012	Sed2012	2-3.5 ft	VC		X	X	X	X
SED-SC-16	SED-SC-16-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-16	SED-SC-16-2-3.5-05	N		5/31/2012	Sed2012	2-3.5 ft	VC		X	X	X	X
SED-SC-17	DUP-053012-5	FD	SED-SC-17-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC					
SED-SC-17	SED-SC-17-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-17	SED-SC-17-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X	X	X
SED-SC-17	SED-SC-17-4-5-053	N		5/30/2012	Sed2012Archive	4-5 ft	VC					
SED-SC-18	SED-SC-18-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-18	SED-SC-18-2-2.25-0	N		6/1/2012	Sed2012	2-2.25 ft	VC		X	X	X	X
SED-SC-20	SED-SC-20-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC		X	X	X	X
SED-SC-20	SED-SC-20-2-2.5-06	N		6/1/2012	Sed2012	2-2.5 ft	VC		X	X	X	X
SED-SC-21	SED-SC-21-0-1-052	N		5/25/2012	Sed2012	0-1 ft	VV		X	X	X	X
SED-SC-21	SED-SC-21-2-4-052	N		5/25/2012	Sed2012	2-4 ft	VV		X	X	X	X
SED-SC-21	SED-SC-21-6-8-052	N		5/25/2012	Sed2012	6-8 ft	VC		X	X	X	X
SED-SS-01	SED-SS-01-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-02	SED-SS-02-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-03	SED-SS-03-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-04	SED-SS-04-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-05	SED-SS-05-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-06	DUP-052312-1	FD	SED-SS-06-052312	5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-06	SED-SS-06-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-07	SED-SS-07-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-08	DUP-052212-1	FD	SED-SS-08-052212	5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-08	SED-SS-08-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-09	SED-SS-09-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-10	SED-SS-10-052412	N		5/24/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-11	DUP-052512-1	FD	SED-SS-11-052512	5/25/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-11	SED-SS-11-052512	N		5/25/2012	Sed2012	0-10 cm	VC		X	X	X	X
SED-SS-12	SED-SS-12-052412	N		5/24/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-13	SED-SS-13-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-14	SED-SS-14-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-15	SED-SS-15-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-16	SED-SS-16-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-17	SED-SS-17-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-18	SED-SS-18-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-19	SED-SS-19-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X
SED-SS-22	SED-SS-22-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X	X	X

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information							Analytical Group/ Analytical Method	Semivolatile Organic Compounds		Dioxins and Furans	Polychlorinated Biphenyls		Grain Size
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Depth	Sample Method	EPA SW8270D	EPA SW8270D-SIM	AXYS MLA-017R20	EPA SW8082	EPA SW8082A	PSEP
SED-SC-01	DUP-053012-4	FD	SED-SC-01-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-01	SED-SC-01-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-01	SED-SC-01-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-02	SED-SC-02-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-02	SED-SC-02-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-02	SED-SC-02-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-02	SED-SC-02-8-10-05	N		5/29/2012	Sed2012Archive	8-10 ft	VC			X		X	
SED-SC-03	DUP-053012-3	FD	SED-SC-03-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-03	SED-SC-03-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-03	SED-SC-03-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-03	SED-SC-03-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC		X	X		X	
SED-SC-03	SED-SC-03-6-8-053	N		5/30/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-04	SED-SC-04-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-04	SED-SC-04-1-2-053	N		5/30/2012	Sed2012Archive	1-2 ft	VC			X		X	
SED-SC-04	SED-SC-04-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-04	SED-SC-04-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC		X				
SED-SC-04	SED-SC-04-6-7.1-05	N		5/30/2012	Sed2012	6-7.1 ft	VC	X	X	X	X		X
SED-SC-05	DUP-060112-2	FD	SED-SC-05-4-6-060112	6/1/2012	Sed2012Archive	4-6 ft	VC			X			
SED-SC-05	SED-SC-05-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-05	SED-SC-05-2-4-060	N		6/1/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-05	SED-SC-05-4-6-060	N		6/1/2012	Sed2012Archive	4-6 ft	VC		X	X		X	
SED-SC-05	SED-SC-05-6-8-060	N		6/1/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-06	SED-SC-06-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-06	SED-SC-06-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-06	SED-SC-06-4-6-052	N		5/29/2012	Sed2012Archive	4-6 ft	VC		X				
SED-SC-06	SED-SC-06-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-06	SED-SC-06-8-10-05	N		5/29/2012	Sed2012Archive	8-10 ft	VC		X	X		X	
SED-SC-07	SED-SC-07-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-07	SED-SC-07-1-2-053	N		5/30/2012	Sed2012Archive	1-2 ft	VC					X	
SED-SC-07	SED-SC-07-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-07	SED-SC-07-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC					X	
SED-SC-07	SED-SC-07-6-8-053	N		5/30/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-07	SED-SC-07-8-10-05	N		5/30/2012	Sed2012Archive	8-10 ft	VC			X			
SED-SC-08	DUP-053012-2	FD	SED-SC-08-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-08	SED-SC-08-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-08	SED-SC-08-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-08	SED-SC-08-4-6-053	N		5/30/2012	Sed2012Archive	4-6 ft	VC					X	
SED-SC-08	SED-SC-08-6-8-053	N		5/30/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-08	SED-SC-08-8-10-05	N		5/30/2012	Sed2012Archive	8-10 ft	VC			X			
SED-SC-09	SED-SC-09-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-09	SED-SC-09-1-2-052	N		5/29/2012	Sed2012Archive	1-2 ft	VC					X	
SED-SC-09	SED-SC-09-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC	X	X	X	X		X

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information							Analytical Group/ Analytical Method	Semivolatile Organic Compounds		Dioxins and Furans	Polychlorinated Biphenyls		Grain Size
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Depth	Sample Method	EPA SW8270D	EPA SW8270D-SIM	AXYS MLA-017R20	EPA SW8082	EPA SW8082A	PSEP
SED-SC-09	SED-SC-09-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-13	SED-SC-13-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-13	SED-SC-13-2-4-053	N		5/31/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-13	SED-SC-13-4-6-053	N		5/31/2012	Sed2012Archive	4-6 ft	VC			X		X	
SED-SC-13	SED-SC-13-6-7-053	N		5/31/2012	Sed2012	6-7 ft	VC	X	X	X	X		X
SED-SC-14	DUP-052912-1	N		5/29/2012	Sed2012	1-2 ft	VC			X			
SED-SC-14	DUP-052912-2	FD	SED-SC-14-6-8-052912	5/29/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-14	SED-SC-14-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-14	SED-SC-14-1-2-052	N		5/29/2012	Sed2012Archive	1-2 ft	VC					X	
SED-SC-14	SED-SC-14-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-14	SED-SC-14-4-6-052	N		5/29/2012	Sed2012Archive	4-6 ft	VC		X	X			
SED-SC-14	SED-SC-14-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SC-15	SED-SC-15-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-15	SED-SC-15-2-4-053	N		5/31/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-16	DUP-053112-2	FD	SED-SC-16-2-3.5-053112	5/31/2012	Sed2012	2-3.5 ft	VC	X	X	X	X		X
SED-SC-16	SED-SC-16-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-16	SED-SC-16-2-3.5-05	N		5/31/2012	Sed2012	2-3.5 ft	VC	X	X	X	X		X
SED-SC-17	DUP-053012-5	FD	SED-SC-17-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC			X			
SED-SC-17	SED-SC-17-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-17	SED-SC-17-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC	X	X	X	X		X
SED-SC-17	SED-SC-17-4-5-053	N		5/30/2012	Sed2012Archive	4-5 ft	VC	X	X	X			
SED-SC-18	SED-SC-18-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-18	SED-SC-18-2-2.25-0	N		6/1/2012	Sed2012	2-2.25 ft	VC	X	X	X	X		X
SED-SC-20	SED-SC-20-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC	X	X	X	X		X
SED-SC-20	SED-SC-20-2-2.5-06	N		6/1/2012	Sed2012	2-2.5 ft	VC	X	X	X	X		X
SED-SC-21	SED-SC-21-0-1-052	N		5/25/2012	Sed2012	0-1 ft	VV	X	X	X	X		X
SED-SC-21	SED-SC-21-2-4-052	N		5/25/2012	Sed2012	2-4 ft	VV	X	X	X	X		X
SED-SC-21	SED-SC-21-6-8-052	N		5/25/2012	Sed2012	6-8 ft	VC	X	X	X	X		X
SED-SS-01	SED-SS-01-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-02	SED-SS-02-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-03	SED-SS-03-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-04	SED-SS-04-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-05	SED-SS-05-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-06	DUP-052312-1	FD	SED-SS-06-052312	5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-06	SED-SS-06-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-07	SED-SS-07-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-08	DUP-052212-1	FD	SED-SS-08-052212	5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-08	SED-SS-08-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-09	SED-SS-09-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-10	SED-SS-10-052412	N		5/24/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-11	DUP-052512-1	FD	SED-SS-11-052512	5/25/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-11	SED-SS-11-052512	N		5/25/2012	Sed2012	0-10 cm	VC	X	X	X	X		X
SED-SS-12	SED-SS-12-052412	N		5/24/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-13	SED-SS-13-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-14	SED-SS-14-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-15	SED-SS-15-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-16	SED-SS-16-052212	N		5/22/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-17	SED-SS-17-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-18	SED-SS-18-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-19	SED-SS-19-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X
SED-SS-22	SED-SS-22-052312	N		5/23/2012	Sed2012	0-10 cm	VV	X	X	X	X		X

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information							Analytical Group/ Analytical Method	Other		
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Depth	Sample Method	Plumb,1981	SM2540B	EPA SW9060M
SED-SC-01	DUP-053012-4	FD	SED-SC-01-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-01	SED-SC-01-0-1-053(	N		5/30/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-01	SED-SC-01-2-4-053(	N		5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-02	SED-SC-02-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-02	SED-SC-02-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-02	SED-SC-02-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-02	SED-SC-02-8-10-05	N		5/29/2012	Sed2012Archive	8-10 ft	VC	X	X	
SED-SC-03	DUP-053012-3	FD	SED-SC-03-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-03	SED-SC-03-0-1-053(	N		5/30/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-03	SED-SC-03-2-4-053(	N		5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-03	SED-SC-03-4-6-053(	N		5/30/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-03	SED-SC-03-6-8-053(	N		5/30/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-04	SED-SC-04-0-1-053(	N		5/30/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-04	SED-SC-04-1-2-053(	N		5/30/2012	Sed2012Archive	1-2 ft	VC	X	X	
SED-SC-04	SED-SC-04-2-4-053(	N		5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-04	SED-SC-04-4-6-053(	N		5/30/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-04	SED-SC-04-6-7.1-05	N		5/30/2012	Sed2012	6-7.1 ft	VC		X	X
SED-SC-05	DUP-060112-2	FD	SED-SC-05-4-6-060112	6/1/2012	Sed2012Archive	4-6 ft	VC			
SED-SC-05	SED-SC-05-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-05	SED-SC-05-2-4-060	N		6/1/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-05	SED-SC-05-4-6-060	N		6/1/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-05	SED-SC-05-6-8-060	N		6/1/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-06	SED-SC-06-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-06	SED-SC-06-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-06	SED-SC-06-4-6-052	N		5/29/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-06	SED-SC-06-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-06	SED-SC-06-8-10-05	N		5/29/2012	Sed2012Archive	8-10 ft	VC	X	X	
SED-SC-07	SED-SC-07-0-1-053(	N		5/30/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-07	SED-SC-07-1-2-053(	N		5/30/2012	Sed2012Archive	1-2 ft	VC	X	X	
SED-SC-07	SED-SC-07-2-4-053(	N		5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-07	SED-SC-07-4-6-053(	N		5/30/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-07	SED-SC-07-6-8-053(	N		5/30/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-07	SED-SC-07-8-10-05	N		5/30/2012	Sed2012Archive	8-10 ft	VC			
SED-SC-08	DUP-053012-2	FD	SED-SC-08-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-08	SED-SC-08-0-1-053(	N		5/30/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-08	SED-SC-08-2-4-053(	N		5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-08	SED-SC-08-4-6-053(	N		5/30/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-08	SED-SC-08-6-8-053(	N		5/30/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-08	SED-SC-08-8-10-05	N		5/30/2012	Sed2012Archive	8-10 ft	VC			
SED-SC-09	SED-SC-09-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-09	SED-SC-09-1-2-052	N		5/29/2012	Sed2012Archive	1-2 ft	VC	X	X	
SED-SC-09	SED-SC-09-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Sample Information							Analytical Group/ Analytical Method	Other		
Location	Sample ID	Sample Type	Parent Sample ID	Date	Task Code	Sample Depth	Sample Method	Plumb,1981	SM2540B	EPA SW9060M
SED-SC-09	SED-SC-09-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-13	SED-SC-13-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-13	SED-SC-13-2-4-053	N		5/31/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-13	SED-SC-13-4-6-053	N		5/31/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-13	SED-SC-13-6-7-053	N		5/31/2012	Sed2012	6-7 ft	VC		X	X
SED-SC-14	DUP-052912-1	N		5/29/2012	Sed2012	1-2 ft	VC			
SED-SC-14	DUP-052912-2	FD	SED-SC-14-6-8-052912	5/29/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-14	SED-SC-14-0-1-052	N		5/29/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-14	SED-SC-14-1-2-052	N		5/29/2012	Sed2012Archive	1-2 ft	VC	X	X	
SED-SC-14	SED-SC-14-2-4-052	N		5/29/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-14	SED-SC-14-4-6-052	N		5/29/2012	Sed2012Archive	4-6 ft	VC	X	X	
SED-SC-14	SED-SC-14-6-8-052	N		5/29/2012	Sed2012	6-8 ft	VC		X	X
SED-SC-15	SED-SC-15-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-15	SED-SC-15-2-4-053	N		5/31/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-16	DUP-053112-2	FD	SED-SC-16-2-3.5-053112	5/31/2012	Sed2012	2-3.5 ft	VC		X	X
SED-SC-16	SED-SC-16-0-1-053	N		5/31/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-16	SED-SC-16-2-3.5-05	N		5/31/2012	Sed2012	2-3.5 ft	VC		X	X
SED-SC-17	DUP-053012-5	FD	SED-SC-17-2-4-053012	5/30/2012	Sed2012	2-4 ft	VC			
SED-SC-17	SED-SC-17-0-1-053	N		5/30/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-17	SED-SC-17-2-4-053	N		5/30/2012	Sed2012	2-4 ft	VC		X	X
SED-SC-17	SED-SC-17-4-5-053	N		5/30/2012	Sed2012Archive	4-5 ft	VC	X	X	
SED-SC-18	SED-SC-18-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-18	SED-SC-18-2-2.25-0	N		6/1/2012	Sed2012	2-2.25 ft	VC		X	X
SED-SC-20	SED-SC-20-0-1-060	N		6/1/2012	Sed2012	0-1 ft	VC		X	X
SED-SC-20	SED-SC-20-2-2.5-06	N		6/1/2012	Sed2012	2-2.5 ft	VC		X	X
SED-SC-21	SED-SC-21-0-1-052	N		5/25/2012	Sed2012	0-1 ft	VV		X	X
SED-SC-21	SED-SC-21-2-4-052	N		5/25/2012	Sed2012	2-4 ft	VV		X	X
SED-SC-21	SED-SC-21-6-8-052	N		5/25/2012	Sed2012	6-8 ft	VC		X	X
SED-SS-01	SED-SS-01-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-02	SED-SS-02-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-03	SED-SS-03-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-04	SED-SS-04-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-05	SED-SS-05-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-06	DUP-052312-1	FD	SED-SS-06-052312	5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-06	SED-SS-06-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-07	SED-SS-07-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-08	DUP-052212-1	FD	SED-SS-08-052212	5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-08	SED-SS-08-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-09	SED-SS-09-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-10	SED-SS-10-052412	N		5/24/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-11	DUP-052512-1	FD	SED-SS-11-052512	5/25/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-11	SED-SS-11-052512	N		5/25/2012	Sed2012	0-10 cm	VC		X	X
SED-SS-12	SED-SS-12-052412	N		5/24/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-13	SED-SS-13-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-14	SED-SS-14-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-15	SED-SS-15-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-16	SED-SS-16-052212	N		5/22/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-17	SED-SS-17-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-18	SED-SS-18-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-19	SED-SS-19-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X
SED-SS-22	SED-SS-22-052312	N		5/23/2012	Sed2012	0-10 cm	VV		X	X

Table N-5
Sediment Analytical Method Summary
5900 West Marginal Way Site
Seattle, Washington

Notes:
AXYS MLA-017 = USEPA Method 1613B
DUP = field duplicate sample
Dx = diesel-range TPH
EPA = United States Environmental Protection Agency
FD = field duplicate
Gx = gasoline-range TPH
ID = identification
N = normal sample
NWTPH = Ecology Method Northwest Total Petroleum Hydrocarbons
PSEP = Puget Sound Estuary Protocols
SC = sediment core sample
SED = sediment sample
SIM = Selective Ion Method for polycyclic aromatic hydrocarbons (See Appendix D - QAPP Table D-1 for analytes selected for SIM Analyses).
SM = Standard Method
SS = surface sediment sample
TPH = total petroleum hydrocarbons

APPENDIX O BOREHOLE LOGS AND MONITORING WELL CONSTRUCTION LOGS

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MW-14D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/14/11
GROUND ELEVATION 16.94 feet **HOLE SIZE** 15/8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 10.25" & 4.25" Hollow Stem Augers
▽ **AT TIME OF DRILLING** 7.50 ft TOC/ Elev 9.44 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 3 feet bgs. Step down drilling method. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0					GP		POORLY GRADED GRAVEL (GP): gravel with dark brown fines, gravel is 1 to 2 inches in diameter, subangular, poorly-graded, moist. (0.8 – 16.2)	Flush-mount well box with locking cap
							Gray, cemented, concrete debris. (3.0 – 13.9)	Portland cement grout
2.5					SP		POORLY GRADED SAND (SP): black fine to medium sand, trace silt, trace woody debris, poorly-graded. (3.8 – 13.1)	
					ML		SILT (ML): reddish-brown silt, slight odor, moist. (4.0 – 12.9)	
	MW-14D-3-6	67	6-14-19 (33)	10.70/0.19			POORLY GRADED SAND (SP): black fine to medium sand, trace silt, trace woody debris, poorly-graded.	
5.0		100	5-5-5 (10)	4.45/1.31				
	MW-14D-6.5-7.5	100	5-7-6 (13)	56.1/0.21				
7.5		100	4-9-10 (19)	6.55/0.24	SP		▽ Black medium sand, trace subrounded gravel, interbedded clay lenses, poorly-graded, wet.	
		100	4-5-5 (10)				As above except saturated. Water pouring out of sampler.	2-inch Schedule 40 PVC
10.0		100	3-2-2 (4)	6.61/0.54				Bentonite chip seal
							(11.8 – 5.1)	
12.5		100	3-3-3 (6)		ML		SILT (ML): Medium brown silt, root debris, stiff, organic odor. As above except dark brown, woody debris, laminated.	
		100	3-3-3 (6)				As above except gray.	
15.0								

(Continued Next Page)

REICHHOLD-GLACIER WELL LOGS - GINT STD US.GDT - 6/19/12 11:41 - G:\GINT BORING LOGS\REICHHOLD GLACIER\REICHHOLD GLACIER_CCG REV.GPJ

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MW-14D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/14/11
GROUND ELEVATION 16.94 feet **HOLE SIZE** 15/8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" & 10.25" Hollow Stem Augers
▽ **AT TIME OF DRILLING** 7.50 ft / Elev 9.44 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 3 feet bgs. Step down drilling method. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
15.0		100	2-2-3 (5)		ML		SILT (ML): Medium brown silt, root debris, stiff, organic odor. *(continued)*	
							17.0 -0.1	
17.5		100	1-2-3 (5)		SM		SILTY SAND (SM): dark gray to black silty fine sand, poorly-graded.	
							18.0 -1.1	
					ML		18.3 SILT (ML): dark gray silt. -1.4	
		100	1-2-4 (6)		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black medium sand with silt, poorly-graded.	
							19.5 -2.6	
20.0		100	1-1-5 (6)		SP		POORLY GRADED SAND (SP): black fine to medium sand, poorly-graded.	10/20 Colorado silica sand filter pack
		100	2-3-4 (7)					2-inch 0.010" Slotted screen schedule 40 PVC
22.5							22.5 -5.6	
		100			SM		23.0 SILTY SAND (SM): black silty fine sand, organic woody debris, poorly-graded. -6.1	
					SP		POORLY GRADED SAND (SP): black fine to medium sand, poorly-graded.	
							24.3 Lens of fine sand -7.4	End cap
							24.5 -7.6	

Bottom of borehole at 24.5 feet.

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MW-28S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/8/11 **COMPLETED** 11/10/11
GROUND ELEVATION 14.71 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 4.60 ft TOC/ Elev 10.11 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4.5 feet bgs. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							Concrete.	Flush-mount well box with locking cap
				2.21/0.21			1.0 / 13.8	Portland cement grout
	MW-28S-1-2			1.88/0.21	GP		POORLY GRADED GRAVEL WITH SAND (GP): gravel with fine to medium sand, gravel is up to 2.5-inches in diameter, subangular, moist. Fill material. 2.0 / 12.7	2-inch Schedule 40 PVC
2.5					ML		SILT (ML): grayish tan silt, moist.	Bentonite chip seal
				3.05/0.23			3.3 / 11.5	
	MW-28S-3.5-4				SP		POORLY GRADED SAND (SP): dark brown fine to medium sand, poorly-graded, loose, moist.	
5.0		33	4-5-6 (11)				▽ As above except with silt.	10/20 Colorado silica sand filter pack
		83	3-3-3 (6)				As above except wet.	2-inch 0.010" Slotted screen schedule 40 PVC
7.5		100	1-2-1 (3)				8.8 / 6.0	
					ML		9.0 SILT (ML): black silt, stiff, wet. 5.7	End cap
							Bottom of borehole at 9.0 feet.	

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MW-29S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/8/11 **COMPLETED** 11/11/11
GROUND ELEVATION 13.73 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 9.73 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4 feet bgs. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							0.2 Grass. 13.6	Flush-mount well box with locking cap
				0.95/4.28	GP		0.7 POORLY GRADED GRAVEL WITH SILT AND SAND (GP): gravel with dark brown fine sand, some roots, poorly-graded, subangular, moist. 13.0	Portland cement grout
	MW-29S-0-2			3.56/1.08	SP		0.8 12.9	
				1.07/3.61	GP			
				1.10/3.47			1.8 POORLY GRADED SAND (SP): tan to dark brown fine to medium sand with gravel and concrete debris, poorly -graded, moist. 12.0	2-inch Schedule 40 PVC
2.5				3.1/4.3	SM			Bentonite chip seal
				3.70/7.31	ML		2.6 POORLY GRADED GRAVEL (GP): gravel with dark brown silty fine sand, gravel is up to 2.25-inches in diameter, subangular, some roots, poorly-graded, moist. 11.1	
	MW-29S-3-3.5			7.13/6.03	SP-SM		3.2 10.5	
				7.0/6.46			4.0 SILTY SAND (SM): tan fine sand, trace gravel, silt, poorly-graded, moist. As above except black, trace roots, 6-inch asphalt fragment. 9.7	
5.0		100	5-7-8 (15)	0.01/5.51			SILT (ML): gray silt, stiff, moist.	
		100	7-7-5 (12)	0.02/5.44	SP		POORLY GRADED SAND WITH SILT (SP-SM): black medium sand with interbedded silt lenses, trace gravel, poorly-graded, moist. Silt is gray, stiff, moist. POORLY GRADED SAND (SP): black fine to medium sand, poorly-graded, loose, moist. As above except with trace gravel.	10/20 Colorado silica sand filter pack 2-inch 0.010" Slotted screen schedule 40 PVC
7.5		100	3-2-3 (5)	0.01/5.63			8.4 5.3	
		100	1-1	0.01/7.34	ML		SILT (ML): black silt. As above except with roots and organic odor. 9.5 4.2	End cap

Bottom of borehole at 9.5 feet.

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MW-30S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/8/11 **COMPLETED** 11/14/11
GROUND ELEVATION 12.63 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 4.17 ft TOC/ Elev 8.46 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4 feet bgs. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0				0.14/4.12			0.2 Grass. 12.5	Flush-mount well box with locking cap
				0.18/4.60	SM		0.5 SILTY SAND (SM): dark brown silty fine sand, trace subangular gravel, roots, poorly-graded. 12.1	Portland cement grout
	MW-30S-0-2			0.13/5.88	ML		As above except light brown. SILT (ML): mottled; gray, white, and brown silt, trace gravel, black charcoal fragments, slight hydrocarbon odor.	2-inch Schedule 40 PVC
				0.58/2.90				Bentonite chip seal
2.5				6.98/0.51			Black, hard substance at 16 inches below ground surface. 2.8 9.9	
				2.76/0.48	SP		3.0 As above tan, black, and white mottled silt, very stiff, dry. 9.6	
	MW-30S-2.8						As above except with roots.	
	MW-30-3-3.5			7.9/3.19	SP		POORLY GRADED SAND (SP): black fine sand (or charcoal fragments?), poorly-graded, very hard, slight petroleum odor. 4.1 8.5	
							POORLY GRADED SAND (SP): black fine to medium sand, poorly-graded, moist.	10/20 Colorado silica sand filter pack
5.0		67	3-4-4 (8)		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black fine to medium sand with silt, poorly-graded, moist. Sand fines downward.	2-inch 0.010" Slotted screen schedule 40 PVC
		100	2-1-1 (2)				6.5 6.1	
					ML		SILT (ML): black silt with organic matter (roots) and organic odor. 7.0 5.6	End cap
							Bottom of borehole at 7.0 feet.	

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MW-31S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/8/11 **COMPLETED** 11/10/11
GROUND ELEVATION 14.53 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 6.42 ft TOC/ Elev 8.11 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 6.0 feet bgs. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							Concrete. 0.7 / 13.8	Flush-mount well box with locking cap; Portland cement grout
	MW-31S-1-2			1.77/0.24	GP		POORLY GRADED GRAVEL (GP): gravel with fines, gravel is subrounded, poorly-graded, moist. Fill material. As above except with tan medium sand.	2-inch Schedule 40 PVC; Bentonite chip seal
2.5				1.69/0.05			As above except with medium to coarse sand. 3.3 / 11.2	
				52/1.09	ML		SILT (ML): dark gray silt, moist. 4.4 / 10.1	
5.0	MW-31S-5-6			0.30/8.77	SP		POORLY-GRADED SAND (SP): reddish brown fine to medium sand, poorly-graded, moist. ▽ Changes to dark brown medium to fine sand, poorly-graded loose, wet.	10/20 Colorado silica sand filter pack; 2-inch 0.010" Slotted screen schedule 40 PVC
		85	2-4-4 (8)				7.5 / 7.0	
7.5		100	3-2-1 (3)		SP-SM		POORLY GRADED SANDY SILT (SP-SM): dark brown fine sand with silt. 9.0 / 5.5	
							Bottom of borehole at 9.0 feet.	End cap

REICHHOLD-GLACIER WELL LOGS - GINT STD US.GDT - 6/19/12 11:41 - G:\GINT BORING LOGS\REICHHOLD GLACIER\REICHHOLD GLACIER_CCG REV.GPJ

ERM
1218 3rd Avenue, Suite 1412
Seattle, WA 98101
Telephone: 425 462-8591

MW-32D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/11/11
GROUND ELEVATION 15.82 feet **HOLE SIZE** 15/8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 10.25" & 4.25" Hollow Stem Augers
▽ **AT TIME OF DRILLING** 10.00 ft TOC/ Elev 5.82 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Well abandoned on 2/22/12 & replaced by MW-32DR. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0				Background FID/PID = 0.01/12.15 ppm.			Concrete slab. 0.6 / 15.2	Flush-mount well box with locking cap
				0.09/16.28			Concrete debris. Wet from water under slab. 1.6 / 14.2	
2.5	MW-32D-1.6-3.6			0.06/26.11 0.05/8.68	SM SP-SM		SILTY SAND (SM): gray silty fine sand, occasional gravel, poorly-graded, subangular, moist. 2.5 / 13.3 As above, more silt than fine sand, gray, dry. POORLY GRADED SAND WITH SILT (SP-SM): dark brown medium sand with silt, poorly-graded. 3.6 / 12.2	Portland cement grout
				0.51/7.03 6.10/5.62			As above except grades to fine sand with interbedded silt lenses.	
5.0		100	5-10-7 (17)	0.24/2.18	ML		SILT (ML): dark gray silt. 4.7 / 11.1	
	MW-32D-5-7	100	6-11-10 (21)	0.17/1.99	SP		POORLY-GRADED SAND (SP): black fine to medium sand with trace silt, poorly-graded, moist. 8.0 / 7.8	
7.5		100	6-9-6 (15)	0.72/1.41				
		100	2-3-2 (5)	0.32/1.45	SM		SILTY SAND (SM): black silty fine sand, poorly-graded.	
10.0		100	1-2-1 (3)	0.27/1.18			▽ As above except wet.	2-inch Schedule 40 PVC
				0.39/0.83			11.4 / 4.4	Bentonite chip seal
12.5		100	2-2-3 (5)		ML		SILT (ML): dark brown silt, trace organics, moist.	
		100	1-2-1 (3)	0.04/19.85			As above except with organic odor.	
15.0								

(Continued Next Page)

REICHHOLD-GLACIER WELL LOGS - GINT STD US.GDT - 6/19/12 11:42 - G:\GINT BORING LOGS\REICHHOLD GLACIER\REICHHOLD GLACIER_CCG REV.GPJ

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Seattle, WA 98101
Telephone: 425 462-8591

MW-32D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/11/11
GROUND ELEVATION 15.82 feet **HOLE SIZE** 15/8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" & 10.25" Hollow Stem Augers
▽ **AT TIME OF DRILLING** 10.00 ft / Elev 5.82 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Well abandoned on 2/22/12 & replaced by MW-32DR. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
15.0					ML		15.5 0.3	
		100	4-4-3 (7)	0.11/24.82	SM		SILTY SAND (SM): black silty fine sand, poorly-graded.	
17.5		100	5-5-3 (8)	0.02/17.52				
				25.82/0.11			18.5 -2.7 Grades to medium sand with silt.	
		100	3-3-3 (6)		SP		POORLY GRADED SAND (SP): black fine to medium sand, poorly-graded, wet.	
20.0		100	2-2-2 (4)				As above, wet.	
22.5		100	6-6-13 (19)				Large woody debris.	
							23.0 -7.2	
		100	15-39-41 (80)		ML		23.3 -7.4 SILT (ML): dark brown silt, trace organics.	
					SP		POORLY GRADED SAND (SP): black medium to coarse sand, poorly-graded. Gravel is subangular to subrounded and slightly polished.	
25.0		100			SM		24.5 -8.7 SILTY SAND (SM): dark brown fine to medium sand with silt, some coarse sand, trace gravel, organic debris, poorly-graded. 25.0 -9.2	

Bottom of borehole at 25.0 feet.

10/20 Colorado silica sand filter pack
2-inch 0.010" Slotted screen schedule 40 PVC

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MW-32DR

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 2/21/12 **COMPLETED** 2/22/12
GROUND ELEVATION 15.35 feet **HOLE SIZE** 8/4 inch
CONTRACTOR Major Drilling (Pacific, WA)
GROUND WATER LEVELS:
EQUIPMENT Sonic: 8 inch/4 inch
▽ **AT TIME OF DRILLING** 10.71 ft TOC/ Elev 4.64 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Replacement well for MW-32D. Elevation NAVD88. FID calibration error.

DEPTH (ft)	SAMPLE IDENTIFICATION	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		WELL DIAGRAM
0					0.6 Concrete slab.	14.8	Flush-mount well box with locking cap
					Concrete debris. Wet from water under the slab.		Portland cement grout
					2.3	13.1	
			SM		SILTY SAND (SM): gray silty find sand, trace organic matter, wet. Slight organic odor.		
		22.4			4.0	11.4	
5			ML		SILT (ML): gray silt with organics (roots).		
		29.85			6.0	9.4	
			SM		SILTY SAND (SM): dark gray silty fine sand.		
					8.0	7.4	
			SP		POORLY GRADED SAND (SP): dark gray medium sand.		
10					10.5 ▽	4.9	
					SILT (ML): dark gray silt with organic debris.		2-inch Schedule 40 PVC
							Bentonite chip seal
15			ML				
20							
					POORLY GRADED SAND (SP): dark gray fine to medium sand.		10/20 Colorado silica sand filter pack
			SP				
					As above, grades to medium-coarse sand with occasional sub-rounded gravel.		2-inch 0.010" Slotted screen schedule 40 PVC
25							
					26.0	-10.7	End cap
					Bottom of borehole at 26.0 feet.		

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MW-32S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/8/11 **COMPLETED** 11/11/11
GROUND ELEVATION 15.81 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 1.67 ft TOC / Elev 14.14 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4 feet bgs. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							0.6 Concrete. 15.2	Flush-mount well box with locking cap; Portland cement grout
							1.7 ▽ Concrete debris with some fines. Top 2 inches is wet from water accumulated under the concrete slab. 14.1	
2.5	MW-32S-1.7-4			19.68/0.05	ML		SILT (ML): dark gray silt, wet. Water coming into borehole from interface between concrete debris and silt layer. As above except with trace gravel. 4.0 11.8	2-inch Schedule 40 PVC; Bentonite chip seal
5.0	MW-32S-5-7	67	6-8-8 (16)	3.52/0.08	SP		POORLY GRADED SAND (SP): dark gray fine to medium sand, poorly-graded, loose, moist.	
		78	4-4-5 (9)	0.06/1.15 0.10/1.18			▼ As above except wet.	
7.5	MW-32S-7	100	4-7-7 (14)	0.13/1.19			8.0 7.8	10/20 Colorado silica sand filter pack; 2-inch 0.010" Slotted screen schedule 40 PVC
				0.50/1.69	SP-SM		8.5 POORLY GRADED SAND WITH SILT (SP-SM): fine sand with silt, poorly-graded. 7.3	
10.0		100	3-2-2 (4)		SP		POORLY GRADED SAND (SP): dark gray fine to medium sand, poorly-graded, loose, moist. 11.0 4.8	
		100	1-2-1 (3)		ML		11.5 SILT (ML): dark gray silt, trace roots, trace organic odor. 4.3	End cap

Bottom of borehole at 11.5 feet.

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MW-33S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/14/11
GROUND ELEVATION 15.72 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 7.00 ft TOC/ Elev 8.72 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4 feet bgs. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0								
	MW-33S-.7-1.3			0.01/4.05			POORLY GRADED GRAVEL (GP): gravel with dark brown fines, gravel is 1 to 2 inches in diameter, subangular to angular, poorly-graded.	Flush-mount well box with locking cap
	MW-33S-1.3			0.01/4.34	GP		As above, fine to medium sand, gravel is 2-inches in diameter, subrounded. Concrete fragment at 16 inches below ground surface.	Portland cement grout
2.5				0.01/4.36			Concrete fragment at 26 inches below ground surface.	2-inch Schedule 40 PVC
					SM		2.7 — SILTY FINE SAND (SM): dark gray silty fine sand, trace 4-inch cobbles, poorly-graded, moist. 3-inch concrete fragment at 40 inches below ground surface.	Bentonite chip seal
				4.31/0.02			4.3 — Woody debris at 4 feet below ground surface.	13.0
				0.01/10.51			11.5	
5.0		100	7-9-9 (18)				POORLY GRADED SAND (SP): black fine to medium sand, loose, poorly-graded, moist.	
	MW-33S-4-7 MW-33S-5.5							
		100	5-7-7 (14)				As above except trace roots.	
7.5				0.01/8.89			▽ As above except trace silt, saturated.	10/20 Colorado silica sand filter pack
		100	6-6-4 (10)		SP			2-inch 0.010" Slotted screen schedule 40 PVC
		100	3-2-2 (4)				As above except wet.	
10.0							As above except with gravel.	
		100	2-1				11.0	4.7
					CL-ML		11.5 — CLAY WITH SILT (CL-ML): light brown to gray clay with silt, with wood and roots, stiff.	End cap
								4.2

Bottom of borehole at 11.5 feet.

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MW-34S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/10/11
GROUND ELEVATION 14.45 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 4.25 ft TOC/ Elev 10.20 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4 feet bgs. Background FID/PID = 0.02/1.46 ppm. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0				0.02/4.35			0.2 Grass. 14.3	Flush-mount well box with locking cap; Portland cement grout
					SM		0.8 SANDY SILT (SM): silty fine sand with concrete debris, poorly-graded. 13.7	
				0.02/3.51	GP		POORLY GRADED GRAVEL (GP): gravel with fine to coarse sand, gravel is angular, up to 1-inch in diameter, poorly-graded, angular, moist. As above except with medium sand, gravel is rounded and up to 2-inch diameter.	2-inch Schedule 40 PVC; Bentonite chip seal
2.5	MW-34S-1.3-3.2							
				0.02/3.24			2.7 11.8	
	MW-34S-3			0.02/3.24			3.0 COBBLES: approximately 5-inch diameter basalt cobbles, reddish brown fine sand with silt. Fill material. 11.5	
				0.03/3.29	SM		3.3 11.2	
	MW-34S-3.8-4.2						SANDY SILT (SM): dark brown silty fine sand, trace gravel up to 2.5-inches in diameter, poorly-graded, loose, slightly moist.	
5.0		72	4-7-6 (13)				SILT (ML): dark gray silt with occasional gravel up to 1 inch in diameter. 5-inch cobble at 46 inches below ground surface. Wet at 4.25 feet below ground surface.	
		100	4-4-4 (8)		ML		As above, except no gravel present. As above except loose.	10/20 Colorado silica sand filter pack; 2-inch 0.010" Slotted screen schedule 40 PVC
7.5		100	4-3-3 (6)				As above except trace angular gravel.	
10.0		100	1-1-1 (2)				10.0 4.5	
					SM		10.5 SANDY SILT (SM): very dark brown, fine sand and silt, organic root fragments, stiff, slight organic odor, wet. 4.0	End cap

Bottom of borehole at 10.5 feet.

REICHHOLD-GLACIER WELL LOGS - GINT STD US.GDT - 6/19/12 11:42 - G:\GINT BORING LOGS\REICHHOLD GLACIER\REICHHOLD GLACIER_CCG REV.GPJ

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Seattle, WA 98101
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MW-35S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 11/9/11 **COMPLETED** 11/10/11
GROUND ELEVATION 14.45 feet **HOLE SIZE** 8.25 inch
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT 4.25" Hollow Stem Auger
▽ **AT TIME OF DRILLING** 6.25 ft TOC/ Elev 8.20 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Air knife to 4 feet bgs. Background FID/PID = 0.05/1.89 ppm. Elevation NAVD88.

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	BLOW COUNTS (N VALUE)	FID/PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							Concrete slab. 0.6	Flush-mount well box with locking cap; Portland cement grout
				0.2/8.8	GP		POORLY GRADED GRAVEL (GP): gravel with fine to medium sand, concrete debris, poorly-graded, subrounded. Fill material. 13.9	
	MW-35S-1.7							2-inch Schedule 40 PVC; Bentonite chip seal
2.5	MW-35S-1.3-3.3			0.02/30.02 0.02/22.31			As above except with some coarse grained sand. 3.3	
				0.02/3.72	ML		SILT (ML): dark gray silt, moist. 11.2	
				9.63/0.10			4.4 ▼	
5.0							POORLY GRADED SAND (SP): reddish brown fine to medium sand, poorly-graded, moist. 10.1	
	MW-35S-5.7-6.3	80	2-5-6 (11)				As above except dark brown with trace gravel and silt, wet. ▽	10/20 Colorado silica sand filter pack; 2-inch 0.010" Slotted screen schedule 40 PVC
	MW-35S-6.3				SP			
7.5		100	4-5-3 (8)				As above. Gravel are up to 1 inch in diameter. 9.0	
		100	1-2-1 (3)		ML		SILT (ML): dark brown silt, trace root debris, dense, organic odor, wet. 5.5	
10.0							10.0 4.5	End cap

Bottom of borehole at 10.0 feet.

REICHHOLD-GLACIER WELL LOGS - GINT STD US.GDT - 6/19/12 11:43 - G:\GINT BORING LOGS\REICHHOLD GLACIER\REICHHOLD GLACIER_CCG REV.GPJ

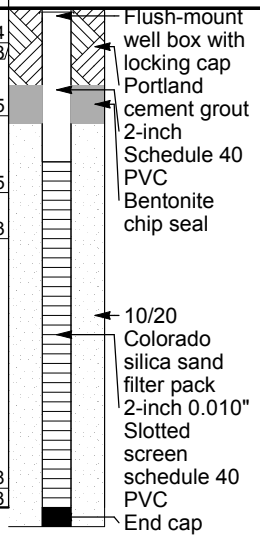
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Seattle, WA 98101
Telephone: 425 462-8591

MW-36S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 128296
PROJECT LOCATION Seattle, Washington
DATE STARTED 2/21/12 **COMPLETED** 2/22/12
GROUND ELEVATION 17.3 feet **HOLE SIZE** 4 in.
CONTRACTOR Major Drilling (Pacific, WA)
GROUND WATER LEVELS:
EQUIPMENT Sonic; 4 inch
▽ **AT TIME OF DRILLING** 5.50 ft TOC / Elev 11.80 ft
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
NOTES Elevation NAVD88. FID calibration error.

DEPTH (ft)	SAMPLE IDENTIFICATION	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						
		2.91			0.9 Concrete.	16.4
			SM		1.0 SILTY SAND (SM): dark brown silty-fine sand with trace angular gravel. Wet from water underneath the concrete slab, slight organic odor.	16.3
		2.39			2.8 Gray, cemented, concrete debris.	14.5
	MW-36S-2.8-4.8	2.54	SP		POORLY GRADED SAND (SP): red/brown fine sand with trace silt and occasional sub-angular gravel.	
5					4.8	12.5
	MW-36S-4.8-6.0	2.35	SM		▽ SILTY SAND (SM): gray silty-fine sand. Wet at ~5.5 feet bgs. 6.0	11.3
			SP		POORLY GRADE SAND (SP): gray fine to medium sand with silt. As above, grades to medium sand.	
10					As above, grades to fine-medium sand. 12.5	4.8
			ML		13.0 SILTY (ML): mottled brown/gray silt with organic material.	4.3

Bottom of borehole at 13.0 feet.



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GP-35

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 10/8/13
GROUND ELEVATION 16.77 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 11.77 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (coarse, 10YR 2/2) with fine to coarse sand. Dense, dry.		
2.5						
				3.5	13.3	
		SP		POORLY-GRADED SAND (SP): Black (GLEY1 2.5/N) fine SAND interbedded with lenses of gray / brown sand and occasional gravel (subrounded, 0.25 to 0.75"). Loose, moist.		
				4.4	12.4	
	GP-35-3.5-5.5	ML		4.5 SILT (ML): Gray (2.5Y 3/1) SILT lens.	12.3	
5.0				▽ As above, black silty fine SAND. Wet at 5.0 feet bgs.		1.7
				Medium sand grains observed at 6.5 feet bgs.		
7.5		SP				0.4
10.0						2
	GP-35-11.25-12.25			11.8	5.0	
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 3/2) with interbedded black organic material. Low plasticity, moist.		
				13.0	3.8	

Bottom of borehole at 13.0 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 2/2/15 17:40 - F:\PROJECTS\232280 - R-G 2014 SITE REMEDIATION PROJECT\PH 06 - UPLANDS SOIL SAMPLING\DRAFT BORING LOGS\GINT DRAFT\RG BORING LOGS.GPJ

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Telephone: 425-462-8591

GP-40

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 10/8/13
GROUND ELEVATION 16.64 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 11.64 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (angular) with fine to medium sand. Dense, dry.		
2.5						
				3.5	13.1	
	GP-40-3.5-5.5	SM		SILTY SAND (SM): Black silty fine SAND (5Y 2/1).		
5.0				▽		
				5.8	10.8	
		ML		SILT (ML): Small lens of dark gray SILT (2.5Y 3/1). Dry, low plasticity.		
				6.3	10.4	2.4
		SM		As above, black silty fine SAND.		
7.5						2.6
				Wet between 9.0 to 13.0 feet bgs.		
10.0						2.4
	GP-35-11.3-12.3			11.8	4.8	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 3/2) with organics (roots). Stiff, wet.		
12.5				13.0	3.6	

Bottom of borehole at 13.0 feet.

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GP-41

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/4/12 **COMPLETED** 9/4/12
GROUND ELEVATION 16.02 feet **HOLE SIZE** 6 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Jack Hammer/Slam Bar
AT TIME OF DRILLING ---
LOGGED BY M. Crandell **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Refusal called by vac crew
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0	GP-41-0-0.16	GP		POORLY-GRADED GRAVEL (GP): Gray (2.5Y 6/1) sandy fine subangular to subrounded GRAVEL with rock flour. Sand is coarse.		1.4
0.7					15.4	
				Fused concrete clasts.		1.3
2.0					14.0	
				Bottom of borehole at 2.0 feet.		2

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GP-42

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/9/13 **COMPLETED** 1/22/14
GROUND ELEVATION 17.37 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 7.50 ft / Elev 9.87 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Hand auger to 3 feet bgs and direct push to 14 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY GRADED GRAVEL (GP): GRAVEL (angular, <1.1", 10YR 4/2) with fine to coarse sand. Dense, moist to dry.		
2.5						
				3.0	14.4	
				No recovery from 3.0 to 3.6 feet bgs.		
				3.6	13.8	
		ML		SILT (ML): Gray SILT (2.5Y 3/1). Stiff, dry.		
				4.1	13.3	
	GP-42-3.6-5.6	SP		POORLY-GRADED SAND (SP): Dark grayish to brown fine SAND (2.5YR 3/2). Loose, dry.		
5.0						
				5.9	11.5	
		ML		SILT (ML): Brown SILT.		6.7
				6.8 Grading to black clayey SILT (5Y 2.5/1) at 6.5 - 6.75 feet bgs.	10.6	
7.5	GP-42-6.75-8.75	SP		POORLY-GRADED SAND (SP): Black fine SAND (5Y 2.5/1) with trace red sand grains. Loose, wet. ▽ Sand grades from fine to medium at 7.5 feet bgs. Wet at 7.5 feet bgs.		2.5
10.0						
				11.4	6.0	
		ML		SILT (ML): Silty black SAND (10YR 2/1) with no red sand grains observed. Loose, wet.		2
12.5	GP-42-12.5-13.5					
				13.0	4.4	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 3/2) with organics (roots).		0
15.0						

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GP-42

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/9/13 **COMPLETED** 1/22/14
GROUND ELEVATION 17.37 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 7.50 ft / Elev 9.87 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Hand auger to 3 feet bgs and direct push to 14 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0						
				LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 3/2) with organics (roots). *(continued)*		
	GP-42-15.5-17.5					0
17.5		OL				
						0.1
				Interbedded lenses of fine black SAND from 18.9 to 19.4 feet bgs.		
				Becomes silty at 19.4 feet bgs.		
20.0				20.0	-2.6	
				POORLY-GRADED SAND (SP): Black fine SAND (10YR 2/1) with occasional red grains and trace shell fragments. Loose, wet.		0
	GP-42-20-22					
22.5		SP		Grades to fine - medium SAND with occasional coarse grains and gravel (subrounded, 0.25") at 22.1 feet bgs. Saturated, loose. Trace red sand grains observed.		0
				Recovered piece of small wood debris at 24.5 feet bgs.		0
25.0				25.0	-7.6	

Bottom of borehole at 25.0 feet.

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GP-43

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 10/10/13
GROUND ELEVATION 16.43 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 3.00 ft / Elev 13.43 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (subrounded, <1.5", 2.5Y 4/2) with fine to coarse sand. Dense, moist.		
2.5						
				3.0 ▽	13.4	
		SP		POORLY-GRADED SAND (SP): Dark gray fine SAND (GLEY1 2.5/5GY) with gravel (subangular, 0.5 - 2"). Loose, dry.		
				3.4	13.0	
	GP-43-3.0-5.0	SP-SM		POORLY-GRADED SAND WITH SILT (SP - SM): Dark black (5Y 2.5/1) silty fine SAND (charcoal like). Loose, dry. Trace pieces of dark brown sawdust at 3.8 feet bgs.		
				4.8	11.6	
5.0		ML		SILT (ML): Gray / brown SILT. Dense, dry. Brown silty fine sand (10YR 3/2) from 5.1 to 6.1 feet bgs. Loose, moist.		0.3
				6.4	Grades to brown SILT at 6.1 feet bgs. Dense, moist. 10.0	
		SP		POORLY-GRADED SAND (SP): Black fine SAND with trace red sand grains. Loose, wet.		
7.5	GP-43-6.4-8.4			Lens of brown clayey SILT (2.5Y 3/2) at 6.9 feet bgs.		0.1
10.0				Medium sand grains from 10.5 to 11.0 feet bgs.		
				11.5	4.9	
	GP-43-11.1-12.1	OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown clayey SILT (7.5YR 4/4) with organics (roots, yellow root hairs). Stiff, moist with natural decay odor.		
12.5						
				13.0	3.4	

Bottom of borehole at 13.0 feet.

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GP-47

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/5/12 **COMPLETED** 9/5/12
GROUND ELEVATION 17.13 feet **HOLE SIZE** 6 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Jack Hammer/Slam Bar
AT TIME OF DRILLING ---
LOGGED BY M. Crandell **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Refusal called by vac crew
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
	GP-47-0-0.25	SP		POORLY-GRADED SAND (SP): Dark gray (10YR 4/1) gravelly med-coarse SAND. Very stiff, very slightly moist. Gravel is angular and fine (fused concrete)	16.6	3.4
0.5				Bottom of borehole at 0.5 feet.		1.9

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GP-48

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/4/12 **COMPLETED** 9/4/12
GROUND ELEVATION 16.77 feet **HOLE SIZE** 6 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Jack Hammer/Slam Bar
AT TIME OF DRILLING ---
LOGGED BY M. Crandell **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Refusal called by vac crew
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		SP		0.4 POORLY-GRADED SAND (SP): Light gray (10YR 7/1) gravelly med-coarse SAND. Very stiff, dry. Gravel is angular and fine (fused concrete)	16.4	0.2
		GP		1.0 POORLY-GRADED GRAVEL (GP): Dark grayish brown angular fine GRAVEL, trace fine sand.	15.8	1
				1.5 Very hard fused concrete debris.	15.3	
				Bottom of borehole at 1.5 feet.		0.5

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GP-49

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/4/13 **COMPLETED** 10/4/13
GROUND ELEVATION 16.53 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 11.53 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY-GRADED GRAVEL (GP): Brown to gray GRAVEL (crushed concrete, GLEY1 7/N) with fine to medium sand. Very dense, dry.		
2.5						
					3.5	13.0
	GP-49-3.5-5.5	SP		POORLY-GRADED SAND (SP): Black fine SAND (10YR 2/1) with occasional gravel (subrounded, 0.25 - 1"). Dry, loose. Clast of brick at 4.0 ft bgs.		
5.0				▽		
				Course grains of sand at 6.2 feet bgs.		2
					6.8	9.7
	GP-49-6.0-8.0	ML		SILT (ML): Black SILT (10YR 2/1) lens from 6.8 to 7.4 feet bgs. Stiff, moist.		
7.5					7.4	9.1
		SP		Black fine SAND continues as above.		
					8.0	8.5
		ML		SILT (ML): Black SILT (10YR 2/1) lens from 8.0 to 8.5 feet bgs. Stiff, moist.		1.8
					8.5	8.0
		SP		POORLY-GRADED SAND (SP): Black fine SAND with occasional gravel (subrounded, 0.25 - 1"). Dry, loose.		
10.0						1.6
					12.2	4.3
	GP-49-11.75-12.75			Sand grades finer at 12.0 feet bgs.		
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark brown silty CLAY (7.5YR 3/1) with organics (roots). Stiff, moist.		
					13.0	3.5

Bottom of borehole at 13.0 feet.

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GP-51

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/9/13 **COMPLETED** 1/22/14
GROUND ELEVATION 17.31 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 7.00 ft / Elev 10.31 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Hand auger to 3 feet bgs and direct push to 14 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY GRADED GRAVEL (GP): GRAVEL (coarse, <1", 10YR 4/2) with brown fine to medium sand. Dense, dry.		
2.5						
				3.0	14.3	
				No recovery from 3.0 - 3.5 feet bgs.		
				3.5	13.8	
		GP		POORLY GRADED GRAVEL (GP): Gray GRAVEL (0.75 - 2", GLEY1 5/N) with a matrix of gray fine sand. Very dense, moist.		
				4.3	13.0	
5.0		SM		SILTY SAND (SM): Black silty fine SAND (10YR 2/1) with gravel (angular, 0.75"). Dense, dry.		
	GP-51-4.3-6.3			5.3	12.0	
		SP		Black silty fine SAND (charcoal?) at 5.15 feet bgs. POORLY-GRADED SAND (SP): Brown fine SAND (2.5Y 3/2). Loose, dry.		1.4
				Gray silt (5Y 3/1) lens with interbedded orange / brown layer from 6.5 to 6.6 feet bgs. Loose, dry.		
7.5				7.3 Brown silt lens from 7.0 to 7.1 feet bgs. Loose, moist.	10.0	
		ML		SILT (ML): Brown SILT. Loose, moist.		
				8.0	9.3	
				No recovery from 8.0 to 8.6 feet bgs.		1.4
				8.6	8.7	
10.0	GP-51-8.6-10.6	SP		POORLY-GRADED SAND (SP): Black fine to medium SAND (5Y 2/1). Wet, loose.		1.3
12.5	GP-51-11.9-12.9			Sand becomes silty at 12.0 feet bgs.		
				12.4	4.9	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown, dark silty CLAY with organics (roots). Moist, stiff, and exhibits black mottling.		
				14.0	3.3	
				No recovery from 14.0 to 15.0 feet bgs.		0
15.0				15.0	2.3	

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GP-51

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/9/13 **COMPLETED** 1/22/14
GROUND ELEVATION 17.31 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 7.00 ft / Elev 10.31 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Hand auger to 3 feet bgs and direct push to 14 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0						
		SM		SILTY SAND (SM): Brown silty SAND with interbedded clay. Dense, dry.		0
17.5	GP-51-17.4-18.4					0
				18.9	-1.6	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Grades to dark brown silty SAND (2.5YR 3/2) with interbedded small lenses of brown clay (less clay, more silt).		0.4
20.0						
22.5						0
				24.4	-7.1	0
		SP		POORLY-GRADED SAND (SP): Black fine SAND (5Y 2/1) with occasional medium and trace red sand grains. Wet, loose.		
25.0	GP-51-24.4-26.4			Saturated with occasional white shell fragments at 26.0 feet bgs.		0.4
27.5						0.1
				28.0	-10.7	

Bottom of borehole at 28.0 feet.

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GP-52

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/9/13 **COMPLETED** 10/9/13
GROUND ELEVATION 17.55 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 8.50 ft / Elev 9.05 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (coarse, <1", 10YR 3/2) with fine to coarse sand. Dense, dry.		
2.5						
				3.0	14.6	
				No recovery from 3.0 to 3.5 feet bgs.		
				3.5	14.1	
		SM		SILTY SAND (SM): Dark gray silty fine SAND (5Y 3/1).		
	GP-52-3.5-5.5			Small interbedded lens of dark brown sawdust at 4.25 feet bgs.		
				4.6	13.0	
		OL		Small lens of dark brown sawdust at 4.6 feet bgs.		
5.0				5.0	12.6	
				LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark gray silty CLAY. Stiff, dry.		
		SP-SM		POORLY-GRADED SAND WITH SILT (SP - SM): Black silty fine SAND.		0.6
				7.1	10.5	
				Black silt (10YR 2/1) lens from 6.9 to 7.1 feet bgs.		
7.5		SP		POORLY-GRADED SAND (SP): Black fine to medium SAND (10YR 2/1) with trace red sand grains. Loose, dry, and trace root hairs observed.		
				8.0	9.6	
	GP-52-7.1-9.1			No recovery from 8.0 to 8.8 feet.		
				▽		
				8.8	8.8	
		SP		POORLY-GRADED SAND (SP): Black fine SAND with trace red sand grains. Loose, wet.		0.3
10.0						
				Grades to a silty sand with no trace red sand grains at 11.25 feet bgs.		
						0.2
12.5				12.5	5.1	
	GP-52-12.1-13.1			LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 3/2) with organics (roots) and brown mottling.		
		OL				
				14.0	3.6	
				Bottom of borehole at 14.0 feet.		

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Seattle, Washington 98101
Telephone: 425-462-8591

GP-54

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 10/9/13
GROUND ELEVATION 13.92 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 2.50 ft / Elev 11.42 ft bgs
LOGGED BY M. Crandell **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY-GRADED GRAVEL (GP): Medium sandy GRAVEL (angular). Stiff, slightly moist.		
				2.0	11.9	
2.5	GP-54-1.5-3	ML		SILT (ML): Silty fine SAND (2.5Y 3/2) with fine subrounded gravel and trace coarse sand grains. ▽ Moist, loose. Sand becomes fine to coarse at 2.5 feet bgs.		0
				3.0 Wet at 2.5 feet bgs.	10.9	
				No recovery from 3.0 to 3.6 feet bgs.		
				3.6	10.3	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL - ML): Very dark gray silty CLAY (GLEY1 3/N). Moist, stiff.		
				4.1	9.8	
		SM		SILTY SAND (SM): Black fine SAND (10YR 2/1) with trace silt. Loose, moist to wet.		2.1
5.0	GP-54-4.1-6.1					1.1
7.5						1
10.0				Grades to a silty black sand (10YR 2/1) at 10.0 feet. Loose, wet.		1.1
	GP-54-10.9-11.9			11.4	2.5	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY with organics (roots).		
				12.0	1.9	

Bottom of borehole at 12.0 feet.

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GP-60

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/1/13 **COMPLETED** 10/4/13
GROUND ELEVATION 14.55 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 10.55 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				Concrete from 0.0 to 0.8 feet bgs.		
				0.8	13.8	
		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (subangular to angular, <0.25 - 2", 2.5Y 4/3) with fine to medium light brown sand. Loose, moist.		0
2.5				3.0	11.6	
	GP-60-3.0-4.5	SM		SILTY SAND (SM): Dark brown silty fine SAND (2.5Y 3/1) with fine gravel (<0.25 - 0.5"). Loose, moist.		
				4.0 ▽ Grades to trace coarse sand grains and small clumps of silt at 3.75 feet bgs.	10.6	
		ML		SILT (ML): Gray SILT (GLEY1 3/N). Stiff, moist.		0
				4.5 Wet at 4.0 feet bgs.	10.1	
5.0	GP-60-4.5-5.0	SP		POORLY-GRADED SAND: Black fine to medium SAND (5Y 2.5/1) with trace red sand grains. Wet, loose.		1.2
7.5				Occasional sub-rounded (0.25") gravel at 8.0 feet bgs.		1.2
	GP-60-8.8-9.8			9.2	5.4	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark brown silty CLAY (7.5YR 3/1) with organics (roots) and a natural organic decay odor. Stiff, moist.		
10.0				10.0	4.6	

Bottom of borehole at 10.0 feet.

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GP-67

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/7/13 **COMPLETED** 10/7/13
GROUND ELEVATION 16.63 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 12.63 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (2.5Y 4/2) with fine to medium brown to gray sand. Dense, moist.		0.8
2.5				Grades to gray angular gravel (0.5 - 1") at 2.2 feet bgs.		
				3.0	13.6	
	GP-67-3.0-4.8			Black silty fine charcoal (10YR 2/1) with clasts of charcoal. Wet, stiff. ▽		0.5
				Grades to gray bentonite like material (5Y 6/1) at 4.4 to 4.6 feet bgs.		
				4.8 Grades to dark reddish brown sawdust (2.5YR 2.5/3) at 4.6 to 4.8 feet bgs.	11.8	
5.0				SILTY SAND (SM): Black silty fine SAND (2.5Y 3/1). Loose.		
	GP-67-4.8-6.8	SM				1.3
				7.0	9.6	
7.5				POORLY-GRADED SAND (SP): Fine to medium SAND. Wet, loose.		0.4
		SP				
10.0						
	GP-67-10-11			10.5	6.1	0.5
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (5Y 3/2) with organics (roots). Stiff, wet.		0.6
				12.0	4.6	

Bottom of borehole at 12.0 feet.

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GP-68

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/23/14 **COMPLETED** 1/23/14
GROUND ELEVATION 14.35 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 10.35 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Air knife / vacuum clear to 4 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GM		SILTY GRAVEL (GM): Brown GRAVEL (10YR 5/2) with fines. Dense, moist.		0
2.5				3.0	11.4	
		GP		POORLY-GRADED GRAVEL (GP): Subangular quarry spalls (to 0.41 feet).		
				4.0 ▽	10.4	
		SP		POORLY-GRADED SAND (SP): Black fine SAND (2.5YR 4/1) with occasional medium sand grains. Wet, loose.		0
5.0	GP-68-4-6					
						0
7.5						0
				9.4	5.0	
10.0	GP-68-9.4-10.4	OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown and black (lenses) silty CLAY (10YR 4/2) with organics (roots and organic odor). Stiff, wet.		0
				12.0	2.4	
				Bottom of borehole at 12.0 feet.		0.1

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GP-69

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/17/13 **COMPLETED** 1/20/14
GROUND ELEVATION 16.89 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 9.50 ft / Elev 7.39 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 15 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
	GP-69-0-2	GP		POORLY GRADED GRAVEL (GP): Very dark gray GRAVEL (2.5Y 4/2) with silty fine sand and organics (roots).		
				1.5	15.4	
		SP-SM		POORLY GRADED SAND WITH SILT (SP - SM): Silty fine SAND with coarse gravel (0.25 - 1").		
				Small lens of red brown sawdust (10YR 3/4) at 1.9 feet bgs.		0.4
2.5				Grades to angular gravel clasts at 2.5 feet bgs.		
5.0				5.0	11.9	
				No recovery from 5.0 to 6.5 feet bgs.		0.7
				6.5	10.4	
		SP-SM		POORLY GRADED SAND WITH SILT (SP - SM): Silty fine SAND with coarse gravel (0.25 - 1"). Large 2" gravel recovered at 6.75 feet bgs.		
7.5				Smaller lens of dark red to brown sawdust at 7.25 feet bgs.	9.3	
	GP-69-7.6-9.6	SM		SILTY SAND (SM): Black fine to medium SAND (10YR 2/1). Loose, moist to wet.		
				▽		1.5
10.0						
12.5				12.5	4.4	
	GP-69-12.6-13.6	ML		SILT (ML): Dark gray SILT (2.5YR 3/1). Wet, loose.		
				13.2	3.7	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 3/2) with black organics (roots). Moist, stiff.		1.7
15.0						

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CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/17/13 **COMPLETED** 1/20/14
GROUND ELEVATION 16.89 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 9.50 ft / Elev 7.39 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 15 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0						
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 3/2) with black organics (roots). Moist, stiff. *(continued)*		0
17.5						
	GP-69-18-19					0
				Increased silt content, grades to silty clay with more silt content at 19.0 feet bgs. Dark brown SILT, grades to silty fine sand at 20 feet bgs. Stiff, wet.		
20.0				20.0	-3.1	
	GP-69-20-22	SM		SILTY SAND (SM): Silty fine SAND (10YR 3/1) with occasional medium grains. Saturated, stiff.		0
				Dark brown silt (10YR 4/3) lens at 22.0 feet bgs.		0
22.5				22.8	-5.9	
		SP		POORLY-GRADED SAND (SP): Fine to medium SAND with occasional coarse sand grains and shell fragments.		0
				Small dark brown silt lens (0.1 - 0.2") at 24.5 feet bgs.		
25.0				25.0	-8.1	
				Bottom of borehole at 25.0 feet.		0

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GP-70

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/9/13 **COMPLETED** 10/9/13
GROUND ELEVATION 16.38 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 5.50 ft / Elev 10.88 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY-GRADED GRAVEL (GP): Coarse GRAVEL (1",2.5Y 4/2) with brown fine to medium sand. Dense, dry.		
2.5						
	GP-70-3.0-5.0	SM		SILTY SAND (SM): Black silty fine SAND (10YR 2/1). Loose, dry.		
				Trace amounts of red to brown sawdust observed at 3.6 feet bgs.		
				Grades to a brown silty fine sand (2.5Y 3/2) at 4.125 feet bgs. Stiff, moist.		
5.0				▽		0.5
				POORLY-GRADED SAND (SP): Black fine to medium SAND (2.5Y 2.5/1) with occasional coarse grains and trace red sand grains.		0.3
	GP-70-6.1-8.1					
7.5		SP		Grades finer at 8.0 feet bgs.		
10.0						
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Light brown clayey SILT (10YR 5/3) with organics (roots).		0.5
		SP		Continued poorly graded sand as above.		
	GP-70-10.8-11.8					
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 3/2) with trace silt and organics (roots). Stiff, moist.		
				Bottom of borehole at 13.0 feet.		

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GP-71

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 1/22/14
GROUND ELEVATION 15.7 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 10.70 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push on track to 13 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY GRADED GRAVEL (GP): GRAVEL (fine to coarse, 10YR 4/2) with fine-medium brown sand. Very dense, dry.		
				Grades to gray gravel at 2.25 feet bgs. Dense, dry.		
				2.3	13.5	
2.5	GP-71-2.25-4.0	SP-SM		POORLY GRADED SAND WITH SILT (SP - SM): Brown fine to medium SAND (GLEY1 2.5/N) with gravel (subrounded, <1"). Gray silt at 2.4 feet bgs. Dry, stiff, and no odor. Grades to black silty fine sand at 3 feet bgs. Charcoal like material observed.		
				4.0	11.7	
				No recovery from 4.0 to 5.0 feet bgs. Brick recovered at 5.0 feet bgs.		
5.0				5.0 ▽	10.7	
		ML		SILT (ML): Dark gray SILT (2.5Y 4/1) with small brick fragments. No odor. Wet at 5.0 feet bgs.		
				5.8	10.0	
		SP		POORLY-GRADED SAND (SP): Brown fine to coarse SAND (10YR 3/2). As above with angular gravel (up to 1.5") from 5.9 to 6 feet bgs. Observed a silty fine material with powder texture.		1.7
				6.5	9.2	
		SP-SM		POORLY GRADED SAND WITH SILT (SP - SM): Black / gray silty fine SAND (5Y 3/1). Large brick clast between 6.6 and 6.8 feet bgs.		
				7.1	8.6	
7.5	GP-71-7.1-9.1	SP		POORLY-GRADED SAND (SP): Black fine to medium SAND (7.5R 2.5/1). Loose, wet.		
10.0						2.1
				11.2	4.5	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 4/2) with organics (roots, natural decay odor). Low plasticity.		
12.5	GP-71-12.1-14.1					0
15.0				15.0	0.7	

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GP-71

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 1/22/14
GROUND ELEVATION 15.7 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 10.70 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push on track to 13 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0				Grades to silty clay (7.5YR 2/1) at 14.8 feet bgs.		
	GP-71-15-17 / DUP 012214-1	SP-SM		POORLY GRADED SAND WITH SILT (SP - SM): Black fine SAND (7.5YR 2/1) with trace silt. Loose, wet.		0
17.5						0
				19.3	-3.6	
		SP		POORLY-GRADED SAND (SP): Black fine to medium SAND (7.5YR 2/1) with occasional coarse grains. Loose, wet.		
20.0				20.0	-4.3	
				Bottom of borehole at 20.0 feet.		0

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GP-72

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 10/8/13
GROUND ELEVATION 14.26 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 9.26 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SM		0.3 SILTY SAND (SM): Brown silty fine SAND (2.5Y 4/2) with fine to coarse gravel (angular, <2"). Loose, moist.	14.0	
		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (angular, 1.5 - 2.25") with silty fine brown sand. Loose, moist. Fill material.		
				2.0	12.3	
2.5	GP-72-2.0-4.0	SP-SM		POORLY-GRADED SAND WITH SILT (SP - SM): Dark gray / brown with red grains silty fine SAND (7.5 3/1) with trace fine gravel (0.25 - 0.5") and organic material (roots). Subangular, wet, loose.		0
				Slightly coarser fine SAND (2.5 3/1) with silt at 4.0 feet bgs.		0
5.0				▽ Wet at 5.0 feet bgs.		
7.5						0
	GP-72-8.2-9.2			8.6	5.7	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Very dark gray silty clay with organics (roots). Low plasticity.		
10.0				10.0	4.3	

Bottom of borehole at 10.0 feet.

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GP-73

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 10/8/13
GROUND ELEVATION 17.08 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 7.50 ft / Elev 9.58 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				POORLY-GRADED GRAVEL (GP): GRAVEL (10YR 4/2) crushed concrete with gray / brown fine sand. Very dense, dry.		
2.5	GP-73-4.0-5.8	GP				
				4.0	13.1	
		SP		POORLY-GRADED SAND (SP): Brown fine SAND (10YR 3/2). Loose, dry.		
5.0						1.4
				Grades to black fine to medium sand at 5.8 feet bgs. Loose, moist to wet.		
				6.4	10.7	
		ML		6.6 SILT (ML): Small lens of dark gray SILT (10YR 2/1). Moist, stiff.	10.5	
	GP-73-5.8-7.8			POORLY-GRADED SAND (SP): Brown fine to medium SAND. Loose, dry.		
7.5				▽ Wet at 7.5 feet bgs.		1
		SP				
10.0						1.1
						0.6
	GP-73-11.5-12.5 / DUP 100813-2			12.1	5.0	
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown CLAY (10YR 4/2) with occasional black organics interbedded (roots). Low plasticity, moist.		
				13.0	4.1	

Bottom of borehole at 13.0 feet.

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ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-74

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/22/14
GROUND ELEVATION 14.42 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 7.50 ft / Elev 6.92 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Hand auger to 3 feet bgs and direct push on track to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				Concrete slab.		
				0.8	13.7	
		GP		POORLY-GRADED GRAVEL (GP): Medium sandy GRAVEL. Stiff, slighty moist.		
2.5				Grades to medium to coarse sandy gravel at 2.0 feet bgs. Stiff, slightly moist.		
				3.0	11.4	
	GP-74-3.0-4.0	SP-SM		POORLY GRADED SAND WITH SILT (SP - SM): Silty fine SAND (very dark grayish brown) with trace fine angular gravel. Coarse, moist.		0
				4.0	10.4	
	GP-74-4.0-5.0	SP		POORLY-GRADED SAND (SP): Fine to medium SAND (7.5Y 3/2) with occasional coarse and reddish sand grains. Saturated.		
5.0						0.3
7.5				▽ Wet at 7.5 feet bgs.		0.2
	GP-74-7.6-8.6			8.1	6.3	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY with organics (roots). Stiff, moist.		
10.0				10.0	4.4	
				No recovery from 10.0 to 11.0 feet bgs.		0
				11.0	3.4	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 4/2) with organics (roots). Stiff, wet.		
12.5	GP-74-11.9-13.9					0
15.0						0

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CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/22/14
GROUND ELEVATION 14.42 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 7.50 ft / Elev 6.92 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Hand auger to 3 feet bgs and direct push on track to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0						
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 4/2) with organics (roots). Stiff, wet. *(continued)*		0
17.5				17.7	-3.3	
	GP-74-17.7-19.7	SP		POORLY-GRADED SAND (SP): Black fine to medium SAND (7.5YR 2/1) with coarse grains. Loose, wet.		0
				As above with subrounded gravel (.25 - 2") at 19.3 feet bgs.		
20.0				20.0	-5.6	0

Bottom of borehole at 20.0 feet.

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GP-75

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/1/13 **COMPLETED** 10/4/13
GROUND ELEVATION 14.83 feet **HOLE SIZE** 3.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 10.83 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0	GP-75-0.0-2.0	SP-SM		POORLY-GRADED SAND WITH SILT (SP - SM): Brown fine silty SAND (10YR 5/2) with subrounded / subangular gravel and trace organics. Moist, loose.		0
2.5				2.5	12.3	0
		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (<3", 10YR 3/1) with gray to brown silty fine sand. Loose, moist.		
				3.3	11.5	0
		ML		SILT (ML): Gray silty CLAY (10YR 5/2) with gravel (subrounded, <0.25"). Large cobble at 3.5 to 4.0 feet bgs.		0
				▽ Grades to dark gray with slight TPH odor and strong chemical odor (skunky). Sheen observed on gravel cobbles (2.25 - 3"). Wet at 4 feet bgs.		52.4
5.0	GP-75-4.0-6.0					61
				5.5	9.3	
		SP		POORLY-GRADED SAND (SP): Black fine SAND (2.5Y 3/1) with trace silt and trace red sand grains. Wet, loose, and a TPH odor. Grades to black fine SAND with trace coarse grains at 6.0 feet bgs. Slight sulfur odor with sheen observed in the saturated soil. Loose, wet.		15.5
7.5						
	GP-75-8.5-9.5					1.5
				9.1	5.8	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark gray silty CLAY (2.5Y 5/1) with organics (roots). Stiff, wet.		
				9.6	5.2	

Bottom of borehole at 9.6 feet.

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MW-20D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 1/17/14
GROUND ELEVATION 17.55 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 9.50 ft / Elev 8.05 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 13 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (angular to subrounded) with brown (2.5Y 4/2) silty fine sand.			Flush-mount well box with locking cap
	MW-20D-1-3						
				2.3	15.3		
2.5		SM		SILTY SAND (SM): Brown (10YR 4/3) silty fine SAND with occasional gravel (subrounded, <1"). Dense, dry.			Portland cement grout
				2.8	14.8		
		ML		SILT (ML): Gray SILT. Dry, low plasticity.		2.6	
				3.3	14.3		
		SM		SILTY SAND (SM): Black silty fine SAND.			
				Gray crushed rock at 4.3 feet bgs.			
5.0							2-inch Schedule 40 PVC
				5.6	12.0		
		SP		POORLY-GRADED SAND (SP): Brown / black (10YR 2/1), fine to medium SAND. Loose, dry.		1.6	
				6.6	11.0		
		CL		LOW PLASTICITY CLAY (CL): Black CLAY (GLEY2 4/10BG). Stiff, low plasticity.			
				7.3	10.3		
7.5	MW-20D-6.6-8.6	SP		POORLY-GRADED SAND (SP): Black fine SAND. Wet, loose.			
				▽ Wet at 9.5 feet bgs.		1.1	
10.0							
12.5	MW-20D-12-13			12.6	5.0	1.5	
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Black silty CLAY (10YR 4/1) with organic debris (wood, grass). Wet, stiff.			Bentonite Chip Seal
						0	
15.0							

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MW-20D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/8/13 **COMPLETED** 1/17/14
GROUND ELEVATION 17.55 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 9.50 ft / Elev 8.05 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 13 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
15.0				LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Black silty CLAY (10YR 4/1) with organic debris (wood, grass). Wet, stiff. *(continued)*		0	
17.5	MW-20D-16.5-18.5					0	
		OL		Grades to brown SILT (10YR 4/3) at 19 feet bgs. Loose, saturated.			
20.0						0.4	
22.5				22.5	-5.0	0.4	
	MW-20D-22.5-24.5			POORLY-GRADED SAND (SP): Black fine SAND (10YR 3/1) with occasional medium sand grains and trace red sand grains. Loose, wet to saturated.		0.2	10/20 Colorado Silica Sand
25.0							
		SP				0	0.010-inch Slotted Well Screen
27.5				Grades to medium black sand with trace red sand grains at 28.3 feet bgs.		0.5	End cap
30.0				30.0	-12.5	0	

Bottom of borehole at 30.0 feet.

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MW-23D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/4/12 **COMPLETED** 9/4/12
GROUND ELEVATION **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Hand Auger
AT TIME OF DRILLING ---
LOGGED BY M. Crandell **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)
0.0				Light brownish gray (10YR 6/2) fused concrete.	
			0.5		
		GP		POORLY-GRADED GRAVEL (GP): Dark grayish brown (10YR 4/2) fine sandy subangular to subrounded fine GRAVEL, trace silt. Very stiff, slightly moist.	
			1.8		
		SP		POORLY-GRADED SAND (SP): Black (2.5Y 2.5/1) fine-medium SAND with gravel and root fragments. Gravel is angular-subangular. Loose, slightly moist.	
2.5			2.8		
		SP-SM		POORLY-GRADED SAND WITH SILT (SP-SM): Black (2.5Y 2.5/1) medium silty SAND, trace coarse sand and gravel. Loose, slightly moist.	
				Increased amount of silt from 4.0 to 4.25 feet bgs.	
5.0			5.0	More moist, less silt at 4.75 feet bgs.	

Bottom of borehole at 5.0 feet.

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MW-31D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/22/14
GROUND ELEVATION 14.52 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 5.00 ft / Elev 9.52 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0				Concrete slab from 0 to 0.8 feet.			Flush-mount well box with locking cap
				0.8	13.7		
		SP		POORLY-GRADED SAND (SP): Gravelly, dark brown, medium to coarse SAND. Stiff, moist.			Portland cement grout
2.5							
				3.0	11.5		
	MW-31D-3-5	SM		SILTY SAND (SM): Black (10YR 3/1) silty fine SAND with occasional gravel (subangular). Loose, moist with a chemical / sweet odor.		0.5	
5.0				5.0 ▽	9.5		
				No recovery from 5.0 to 5.4 feet. Wet at 5.0 feet bgs.		0.2	
				5.4	9.1		
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark gray / brown silty CLAY. Wet, stiff.			
	MW-31D-5.0-7.0			5.8	8.7		
				POORLY-GRADED SAND (SP): Reddish brown (7.5YR 3/2), fine to medium SAND. Loose, wet.			
				Fine to medium sand, black color with trace red grains at 6.75 feet bgs.			2-inch Schedule 40 PVC
7.5		SP		Grades to silty fine sand at 7.5 feet bgs.		0.2	
	MW-31D-8.25-9.25			8.8	5.8		
				LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown (10YR 4/2) clay with organics, root hairs, black mottling. Moist, stiff.		0.6	
10.0				Grades to brown CLAY with silt and organics at 11.5 feet bgs. Wet, saturated.		0	Bentonite Chip Seal
		OL				0	
12.5	MW-31D-12.9-14.9			Wet, loose / stiff.		0	
15.0							

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MW-31D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/22/14
GROUND ELEVATION 14.52 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 9.52 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
15.0							
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown (10YR 4/2) clay with organics, root hairs, black mottling. Moist, stiff. *(continued)*		0	
17.5				Saturated from 15.0 - 20.0 feet bgs.		0	
				19.0	-4.5		
20.0	MW-31D-19-20	SP		POORLY-GRADED SAND (SP): Black medium coarse SAND with trace red sand grains and shell fragments. Occasional gravel (subrounded, <1"). Loose, wet. 20.0	-5.5	0	
				No recovery from 20.0 - 23.0 feet bgs (saturated).			
22.5				23.0	-8.5		10/20 Colorado Silica Sand
		SP		POORLY-GRADED SAND (SP): Black medium coarse SAND with trace red sand grains and shell fragments. Occasional gravel (subrounded, <1"). Loose, wet.		0	0.010-inch Slotted Well Screen
25.0				26.0	-11.5	0	End cap

Bottom of borehole at 26.0 feet.

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MW-35D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/23/14
GROUND ELEVATION 14.45 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 9.45 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (subangular, 1.5 - 2", 2.5YR 4/2) with silty fine sand. Loose, moist. Pieces of rebar and brick observed in the gravel.			Flush-mount well box with locking cap
2.5				Grades to GRAVEL (subrounded, 0.7 - 1.1", 10YR 4/3) with brown fine to medium sand. Loose, moist.			Portland cement grout
				3.3	11.2	0	2-inch Schedule 40 PVC
	MW-35D-3.25-4.25	ML		SILT (ML): Gray SILT (GLEY1 5/10Y) with brown (5Y 4/6) motteling. Stiff, moist.			
				4.3	10.2	0	
5.0	MW-35D-4.25-5.5	SP		POORLY-GRADED SAND (SP): Brown / reddish, fine to medium SAND (7.5Y 3/2) and occasional gravel (coarse to subrounded, <1"). ▽ Loose, moist.		0	
				5.5	9.0		
				No recovery from 5.5 to 6.0 feet bgs.		0.2	
				6.0	8.5		
		SP		POORLY-GRADED SAND (SP): Fine black SAND (10YR 2/1). Wet, loose.			
7.5	MW-35D-7.0-7.5 Archive, VOC			Sweet chemical odor in the saturated portion of the boring from 5.5 to 7.5 feet bgs.		0.3	
						0.3	
	MW-35D-8.5-9.5			9.0	5.5		
10.0		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 4/2) with organics (root hairs, roots). Moist, stiff, and a chemical / sweet odor.		0.1	Bentonite Chip Seal
				11.7	2.8		
		SM		SILTY SAND (SM): Black silty fine SAND with wood debris. Wet.		0.3	
12.5				12.4	2.1		
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY with interbedded lenses of silty fine black sand (organics, wood debris). Stiff, saturated. Wood debris at 13.2 feet bgs. Wood debris at 13.5 feet bgs.			
	MW-35D-13.2-15.2					0	
15.0							

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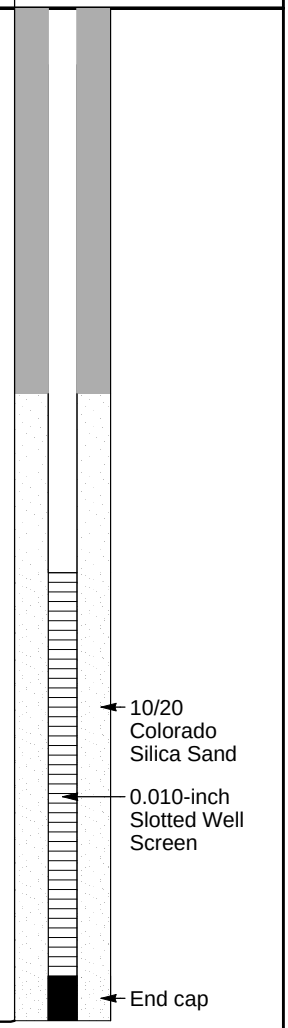
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MW-35D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/23/14
GROUND ELEVATION 14.45 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 9.45 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
15.0							
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY with interbedded lenses of silty fine black sand (organics, wood debris). Stiff, saturated. *(continued)* Transition at depth of 15 feet bgs to more silt than clay. Softer silt (2.5Y 4/2) with interbedded lenses of clay.		0.4	
17.5				Transitions to brown silty clay at 18.2 feet bgs. Wet, saturated.		0.1	
				19.3	-4.9		
		SP		POORLY-GRADED SAND (SP): Black medium to coarse SAND (2.5Y 2.5/1) with shell fragments and occasional gravel (subrounded, 0.25"). Loose, wet.			
20.0	MW-35D-19.7-20			20.0	-5.6	0.1	
				No recovery from 20.0 to 23.0 feet bgs.			
22.5							
				23.0	-8.6		
		SP		POORLY-GRADED SAND (SP): Black medium to coarse SAND (10YR 2/1) with occasional red sand grains. Loose, moist to wet.			
				Grades finer to fine - medium black sand. Loose, wet.		0	
25.0							
				26.3	-11.9	0.5	



Bottom of borehole at 26.3 feet.

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ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

MW-38D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/7/13 **COMPLETED** 1/23/14
GROUND ELEVATION 14.21 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 1.50 ft / Elev 12.71 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0							
	MW-38D-0-2.0	SM		SILTY SAND (SM): Black silty fine SAND (10YR 2/1) with trace gravel (subrounded, <0.25 - 1") and organics from 0.0 to 0.5 feet. Loose, moist. Transition from 0.5 to 0.9 feet to dark black silty fine sand (2.5 4/1). Loose, moist. ▽ Black silty fine SAND (10YR 2/1) with occasional coarse and red sand grains with subrounded gravel (<0.25 - 0.5"). Saturated. Wet at 1.5 feet bgs.		0.4 0.2	Flush-mount well box with locking cap Portland cement grout
2.5				2.8	11.4	0.4	2-inch Schedule 40 PVC
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark brown CLAY (2.5Y 3/1). Stiff, moist.			
				4.2	10.0		
5.0	MW-38D-8.5-9.5	SM		SILTY SAND (SM): Black silty fine SAND with occasional coarse and red sand grains with subrounded gravel (<0.25 - 0.5"). Saturated.			
7.5				8.9	5.3		
10.0				LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark brown CLAY (2.5 3/2) with organics (roots). Moist, low plasticity.		0	Bentonite Chip Seal
12.5	MW-38D-12.2-14.2	OL		Brown CLAY with silt and organics (roots) from 11.0 to 12.1 feet bgs. Wet, loose / stiff.		0.3	
15.0						0.1	

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MW-38D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/7/13 **COMPLETED** 1/23/14
GROUND ELEVATION 14.21 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 1.50 ft / Elev 12.71 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES Direct push to 10 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
15.0							
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Dark brown CLAY (2.5 3/2) with organics (roots). Moist, low plasticity. *(continued)*		0	
17.5				17.5	-3.3		
	MW-38D-17.5-19.5	SP		POORLY-GRADED SAND (SP): Black fine to medium SAND with occasional course grains. Loose, wet.		0	
				Small light brown SILT lens with organics (roots) at 18.6 feet bgs.			
20.0				Small SILT lense as above at 19.8 feet bgs.		0	
							10/20 Colorado Silica Sand
22.5						0.7	
				Brown silt lenses interbedded with dark black fine sand from 23.0 to 23.3 feet bgs. Wood debris recovered at 23.3 feet bgs.			0.010-inch Slotted Well Screen
				Grades to black medium to coarse SAND with subrounded gravel (0.25 - 0.5") and shell fragments at 24.0 feet bgs.		0.1	End cap
25.0				25.0	-10.8		

Bottom of borehole at 25.0 feet.

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MW-43D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/21/14
GROUND ELEVATION 17.03 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 7.50 ft / Elev 9.53 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES 2nd attempt.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0		GM		SILTY GRAVEL (GM): GRAVEL (angular to subrounded, <2", 2.5Y 4/2) with fine to coarse brown sand. Dense, moist.			Flush-mount well box with locking cap
				Gray crushed concrete (GLEY1 5/N), concrete flour. Dense, dry.			Portland cement grout
2.5				3.0	14.0	0	
		SM		SILTY SAND (SM): Black silty fine SAND (7.5YR 4/4) with subrounded gravel (0.25 - 2") (Carbon?). Dense, dry.			
				4.0	13.0	0	
				Dark red to brown sawdust (10YR 4/4) with tar, or machine oil odor. Moist, loose.			
5.0				Black pieces of charcoal at contact between red and tan sawdust.		2.7	2-inch Schedule 40 PVC
	MW-43D-5.25-6.75			Changes to slight tan color with TPH odor at 5.8 feet bgs.		2.4	
				6.6	10.4		
	MW-43D-6.9	SP		POORLY-GRADED SAND (SP): Black fine SAND (2.5Y 2/1) with trace silt. Loose, dry.		7.4	
7.5				7.5 Wood debris at 7.5 feet bgs.	9.5		
	MW-43D-7.25-9.25			No recovery from 7.5 to 9 feet bgs. Wet at 7.5 feet bgs.			
				9.0	8.0		
		SP		POORLY-GRADED SAND (SP): Black fine SAND with trace silt. Loose, moist. Slight odor and wood debris at 9.4 feet bgs.		11.3	
10.0				10.4	6.6	123.5	
		SM		SILTY SAND (SM): Black fine to medium SAND with occasional course grains. Loose, wet.			Bentonite Chip Seal
	MW-43D-11.25-12.25			11.7	5.3		
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (2.5Y 4/2) grading to clayey silt with organics (root hairs, wood, organic decay odor). Black interbedded lenses of organics.		0.3	
						0.4	
15.0							

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MW-43D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/10/13 **COMPLETED** 1/21/14
GROUND ELEVATION 17.03 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 7.50 ft / Elev 9.53 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES 2nd attempt.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
15.0	MW-43D-14.5-16.5	OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (2.5Y 4/2) grading to clayey silt with organics (root hairs, wood, organic decay odor). Black interbedded lenses of organics. *(continued)*		0	
17.5				Lens of black silty fine SAND at 16.4 feet bgs. Loose, wet.		0	
				Interbedded black silty SAND (2.5Y 4/2) and brown CLAY (2.5Y 2.5/1) at 17.4 feet bgs.			
				19.3	-2.3		
20.0	MW-43D-19.3-21.3	SP		POORLY-GRADED SAND (SP): Black fine SAND (2.5Y 2/1) with occasional medium grains and wood debris.		0	10/20 Colorado Silica Sand
				Grades to fine - medium SAND at 20.0 feet bgs. Loose, wet.			
22.5				Wood and wood pieces recovered from 22.0 to 22.8 feet bgs.		0	
				Grades to fine to medium SAND with occasional coarse sand grains. Saturated.			0.010-inch Slotted Well Screen
25.0				Wood piece at 24.5 feet bgs.		0	
				25.0	-8.0		
				No recovery between 25.0 to 26.3 feet bgs.			End cap
				26.3	-9.3		

Bottom of borehole at 26.3 feet.

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MW-43S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/20/14 **COMPLETED** 1/20/14
GROUND ELEVATION 17.12 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 7.50 ft / Elev 9.62 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (subrounded to subangular, 2.5Y 4/2) with fine to coarse brown sand. Dense, moist.		0	Flush-mount well box with locking cap; Portland cement grout
2.5				Gray crushed concrete (GLEY1 5/N) at 2.3 feet bgs. Dense, moist.		0	2-inch Schedule 40 PVC
				3.3	13.8		
	MW-43S-3.3-4.5	SM		SILTY SAND (SM): Black silty fine SAND (10YR 4/3) with gravel and a slight chemical odor. Very dense, moist.		0	Bentonite Chip Seal
5.0				Red brown sawdust with TPH like odor at 4.5 feet bgs.		0	
				Sawdust becomes tan colored at 6.0 feet bgs.		0	0.010-inch Slotted Well Screen
				7.3	9.8		
7.5		SP		▽ POORLY-GRADED SAND (SP): Black fine SAND (10YR 4/3) with trace silt. Loose, wet to moist. Wet at 7.5 feet bgs.		0	10/20 Colorado Silica Sand
10.0						0	
				11.7	5.4		
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown clayey SILT (7.5YR 4/4) with organics (roots) and a natural decay odor. Stiff, moist.		0	End cap
				13.0	4.1		
				Bottom of borehole at 13.0 feet.		0	

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MW-45D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/7/13 **COMPLETED** 1/17/14
GROUND ELEVATION 16.69 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 4.50 ft / Elev 12.19 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES 1st attempt, refusal on wood with direct push.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
0.0		GM		SILTY GRAVEL (GM): GRAVEL (10YR 3/2) with fine to medium brown sand. Gravel is subrounded/angular (0.25 to 1.5"). Loose, moist.			Flush-mount well box with locking cap
				2.0	14.7		Portland cement grout
2.5		GP		POORLY GRADED GRAVEL (GP): Gray crushed concrete (GLEY1 5/N). Very dense, dry.		0.3	
	MW-45D-2.3-4.2			3.1	13.6		
				Red brown sawdust (7.5YR 3/2) with slight TPH odor.		1.4	
				4.6 ▽ Darker brown colored sawdust at 4.4 feet bgs.	12.1		
5.0	MW-45D-4.2-6.2	SM		SILTY SAND (SM): Gray / black silty fine SAND (10YR 4/3). Loose, moist.		0.8	
				Grades slightly coarser to a fine sand at 6.4 feet bgs.			2-inch Schedule 40 PVC
7.5						0.2	
				Root hairs observed at 8.5 feet bgs.			
				9.8	6.9		
10.0	MW-45D-9.5-10.5	ML		SILT (SM): Gray SILT lens at 9.8 feet bgs.		0	Bentonite Chip Seal
				11.5	5.2		
12.5	MW-45D-12.5-13.0	CL		LOW PLASTICITY CLAY (CL): Brown silty CLAY (10YR 4/1) with organics (wood debris, root hairs). Contact with aquitard at 11.5 feet bgs. Lens of gray / black fine sand from 12.0 to 12.6 feet bgs. Loose, moist, odorless.		0	
15.0						0	

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MW-45D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 10/7/13 **COMPLETED** 1/17/14
GROUND ELEVATION 16.69 feet **HOLE SIZE** 6/8 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 4.50 ft / Elev 12.19 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES 1st attempt, refusal on wood with direct push.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)	WELL DIAGRAM
15.0		CL		LOW PLASTICITY CLAY (CL): Brown silty CLAY (10YR 4/1) with organics (wood debris, root hairs). Contact with aquitard at 11.5 feet bgs. *(continued)*		0	
				17.3	-0.6		
17.5	MW-45D-17.3-19.3			POORLY-GRADED SAND (SP): Black fine SAND (10YR 4/3) with trace medium sand grains. Moist, loose.		0	10/20 Colorado Silica Sand
20.0		SP		Grades to medium black sand with trace red sand grains at 21 feet bgs. Loose, wet.		0	0.010-inch Slotted Well Screen
22.5				Lens of black fine sand (10YR 4/3) at 23.4 to 23.7 feet bgs. Grades to medium black sand with occasional coarse sand grains, trace red sand grains, shell fragments, and occasional gravel (~0.5", subrounded) at 23.7 feet.		0	End cap
25.0				25.0	-8.3	0	

Bottom of borehole at 25.0 feet.

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MW-45S

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/16/14 **COMPLETED** 1/16/14
GROUND ELEVATION 16.67 feet **HOLE SIZE** 6 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
AT TIME OF DRILLING 8.00 ft / Elev 8.67 ft bgs (In casing.)
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GM		SILTY GRAVEL (GP): GRAVEL (subrounded, <1.5", 10YR 3/2) with brown fine to medium sand. Loose, moist.		
2.5				Gray crushed concrete (5Y 6/2). Very dense.		0
				3.1	13.6	
				Red brown sawdust (7.5YR 4/6) from 3.1 to 3.8 feet bgs with slight odor.		
				Tan colored sawdust at 3.8 feet bgs.		
				4.3 Sawdust mixed with clasts of black silty fine sand & gray soft material from 3.8 to 4.3 feet bgs. Slight TPH odor within black silty sand.	12.4	0
5.0				POORLY-GRADED SAND (SP): Black silty fine SAND (10YR 4/3). Loose, moist.		0
7.5		SP		Grades coarser to medium sand grains from 7.5 to 9.0 feet bgs.		
				▽ Wet at 8.0 feet bgs.		0
10.0				10.0	6.7	
				No recovery from 10.0 - 11.0 feet bgs.		0.1
				11.0	5.7	
12.5		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 3/2) and organics (root hairs, grass, & wood debris). Moist, stiff.		0.5
				13.0	3.7	
		SM		SILTY SAND (SM): Interbedded with lenses of dark gray silty fine SAND (2.5YR 3/1).		
				14.0	2.7	0

Bottom of borehole at 14.0 feet.

WELL DIAGRAM
- Flush-mount well box with locking cap
- 2-inch Schedule 40 PVC
- Portland cement grout
- Bentonite Chip Seal
- 10/20 Colorado Silica Sand
- 0.010-inch Slotted Well Screen
- End cap

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TB-01A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/14/14 **COMPLETED** 1/14/14
GROUND ELEVATION 12.68 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		SILTY SAND (SM): Black / tan silty fine SAND with organics (root hairs) and gravel (subangular, 0.5 - 1"). Loose, moist.		0
					1.3	11.4	
			GM		SILTY GRAVEL (GM): GRAVEL (subrounded, 0.25 to 1") with fine to coarse black sand. Loose, moist.		
2.5		71					
					4.5 Refusal at 4.5 feet bgs.	8.2	

Bottom of borehole at 4.5 feet.

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TB-01B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/14/14 **COMPLETED** 1/14/14
GROUND ELEVATION 12.9 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 7.90 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		SILTY SAND (SM): Black / tan silty fine SAND (2.5Y 2.5/1) with organics (root hairs, 0-0.4 ft) and gravel (subangular, <0.25 - 0.5"). Loose, moist.		
					1.1 Black silty sand lens at 0.75 to 0.85 feet bgs.	11.8	
	TB-01B-0.8-2.4		GM		SILTY GRAVEL (GM): GRAVEL (subrounded, 0.25 to 1", 10YR 2/1) with fine to coarse black sand. Loose, moist.		
2.5		50					2.2
5.0					5.0 ▽	7.9	
	TB-01B-5.0-6.9		SM		SILTY SAND (SM): Dark brown silty fine SAND (10YR 3/2) with occasional gravel (subrounded, <1"). Saturated, loose.		2.3
					Piece of wood at 6.1 feet bgs.		
					7.3 Gray silt lens at 7.1 to 7.3 feet bgs.	5.6	1
7.5	TB-01B-6.9-7.9	100	OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (7.5YR 4/2) with organics (root hairs). Wet, stiff.		0
10.0					10.0	2.9	1.1

Bottom of borehole at 10.0 feet.

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TB-02A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 12.72 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)
0.0					SILTY SAND (SM): Black silty fine SAND (7.5YR 2.5/1) with organics (leaves, twigs).	
					Dark brown silty fine sand (10YR 2/2) with trace crushed concrete and brick clasts from 0.5 to 5 feet bgs. Subrounded gravel (0.25 - 0.5"), moist.	
2.5		90	SM			
5.0				5.0		7.7
					POORLY-GRADED GRAVEL (GP): GRAVEL (subrounded to subangular, <0.1 to 3") with fine to medium sand. Wet.	
7.5		34				
10.0			GP		Grades to dark gray gravel (10YR 2/1) with fine to medium sand and shell fragments. Wet.	
12.5		17				
15.0				15.0		-2.3

Bottom of borehole at 15.0 feet.

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TB-02B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 13.09 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.00 ft / Elev 7.09 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0							
			SM		SILTY SAND (SM): Black silty fine SAND with organics (leaves, twigs, white worm, root hairs) and gravel (angular, 2"). Loose, moist. Grades to brown silty fine sand with occasional gravel (0.25", subrounded) from 0.5 to 1.4 feet bgs.		
	TB-02B-0.5-2.5				1.4	11.7	
			GP		POORLY-GRADED GRAVEL (GP): Dark brown / gray GRAVEL (<3 to 4", 10YR 2/2) with fine to medium sand. Brown / red wood chunk at 1.6 feet bgs and trace brick clasts (0.25").		0
2.5		60					
							0
5.0					5.0	8.1	
			SP		POORLY-GRADED SAND (SP): Brown fine to medium SAND. Wet, loose.		0
7.5		100			Grades to black medium sand (10YR 2/1) with trace shell and brick fragments. Wet, loose.		0
	TB-02B-8.0-9.5						
10.0	TB-02B-9.5-10.5				10.0	3.1	
					No recovery from 10.0 to 10.5 feet bgs.		0
					10.5	2.6	
			CL		LOW PLASTICITY CLAY (CL): Black / brown interbedded silty CLAY (stiff, 2.5YR 3/2) with trace fine sand.		
12.5		90			Brown silty sand lens (loose) at 11.9 to 12.0 feet bgs.		
							0
15.0					15.0	-1.9	

Bottom of borehole at 15.0 feet.

(Continued Next Page)

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TB-02B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 13.09 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.00 ft / Elev 7.09 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)

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TB-03A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 16.78 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)
0.0					
				No recovery from 0 to 0.5 feet bgs. Refusal on concrete.	
0.5					16.3

Bottom of borehole at 0.5 feet.

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TB-03B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 16.8 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)
0.0			No recovery from 0 to 0.5 feet bgs. Refusal on concrete.	
0.5				16.3

Bottom of borehole at 0.5 feet.

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TB-03C

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 16.57 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			0.3 SILTY SAND (SM): Black silty fine SAND (7.5YR 2.5/1) with organics (leaves, twigs, root hairs).	16.2	
			POORLY-GRADED GRAVEL (GP): GRAVEL (0.25 to 1.5", subrounded, 10YR 3/2), gray brown. Moist.		
			Grades to gray angular crushed concrete (10YR 6/2) with fine to medium brown sand.		0
			2.0	14.6	0

Bottom of borehole at 2.0 feet.

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TB-03D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 16.95 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		POORLY-GRADED GRAVEL (GP): GRAVEL (rounded, subangular, <1.75", 10YR 3/2) with fine to medium brown sand.	16.4	
				0.6 Crushed concrete (Portland concrete, 10YR 6/2).		0
2.5						0
				4.3	12.7	
		SM		SILTY SAND (SM): Brown silty fine SAND (10YR 2/2) with occasional gravel (<0.25") and smaller brick clasts. Moist, loose.		
5.0	TB-03D-4.5-7.0					0
				Grades to black silty fine sand (10YR 2/1) at 5.7 feet bgs.		
				6.4 Grades to brown silty fine sand at 6.3 feet bgs.	10.6	
		SP		POORLY-GRADED SAND (SP): Gray / brown fine to medium SAND. Wet, loose.		
				7.0	10.0	
7.5		SM		SILTY SAND (SM): Dark gray silty fine SAND (2.5Y 3/1). Wet, loose.		0
	TB-03D-7.0-9.0					
						0
10.0						
						0
				Grades coarser to fine to medium sand at 11.5 feet bgs.		
12.5						
	TB-03D-12.6-13.6			13.1	3.9	0
		OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY (10YR 3/2) with organics (root hairs).		
15.0				15.0	2.0	

Bottom of borehole at 15.0 feet.

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TB-04A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/13/14 **COMPLETED** 1/13/14
GROUND ELEVATION 13.09 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 9.09 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		SILTY SAND (SM): Black silty fine SAND (7.5YR 2.5/1) with organics (leaves, twigs, root hairs, wood). Moist, loose.	12.6	
			SP		0.5 POORLY-GRADED SAND (SP): Brown fine to medium SAND (10YR 2/2) with organics (roots). Moist, loose.	11.8	
	TB-04A-0.5-1.25				1.3 SILTY SAND (SM): Brown silty fine SAND (7.5YR 2/2). Moist, loose.		
2.5	TB-04A-1.25-3.0				Grades slightly coarser at 2.3 feet bgs.		0
			SM		▽		
5.0		100			Saturated from 5.0 to 7.6 feet bgs.		0
7.5	TB-04A-7.1-8.1				7.6	5.5	0
			CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): Brown silty CLAY (2.5YR 3/2) with organics (root hairs), organic odor, and occasional wood clasts. Wet / moist, stiff.		
10.0					10.0	3.1	0

Bottom of borehole at 10.0 feet.

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TB-05A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/15/14 **COMPLETED** 1/15/14
GROUND ELEVATION 17.12 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 13.80 ft / Elev 3.32 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0					No recovery from 0.0 to 1.5 feet bgs.		
					1.5	15.6	
			SM		SILTY SAND (SM): Black silty fine SAND with organics (root balls). Moist, loose.		
2.5		60			Grades to light brown silty fine sand with roots and occasional gravel (2.3 - 3.1").		2.5
					3.1	14.0	
			GM		SILTY GRAVEL (GM): GRAVEL (10YR 2/1) with black silty fine sand. Red resin / plastic shards recovered at 3.2 feet bgs.		
					3.9	13.2	
			SM		SILTY SAND (SM): Black silty fine SAND.		
5.0					5.0	12.1	
					No recovery from 5.0 to 7.6 feet bgs.		1.5
7.5		46			7.6	9.5	
			GP		POORLY-GRADED GRAVEL (GP): Gray GRAVEL (GLAY1 5/N) with crushed concrete. Dense, moist.		0
					9.0	8.1	
					POORLY-GRADED SAND (SP): Brown fine SAND (7.5YR 3/2) with trace medium grains and gravel (0.25 - 1"). Brick clasts (0.5") from 9.5 to 9.8 feet bgs.		
10.0			SP				2.3
12.5					12.7	4.4	
			GM		SILTY GRAVEL (GM): GRAVEL (10YR 2/1) with black fine to coarse sand. Loose, moist.		7.3
					▽ Wet at 13.8 feet bgs.		
					14.3	2.8	
15.0			SM		SILTY SAND (SM): Dark black silty fine SAND (10YR 3/2). Wet, loose.		

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TB-05A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/15/14 **COMPLETED** 1/15/14
GROUND ELEVATION 17.12 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 13.80 ft / Elev 3.32 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0					SILTY SAND (SM): Dark black silty fine SAND (10YR 3/2). Wet, loose. *(continued)*		7
17.5		92	SM				2.3
						18.8 -1.7	
			OL		LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Black to brown clayey SILT (7.5YR 2/1) with organics (wood debris, sticks, twigs) and a natural decay odor.		
20.0						20.0 -2.9	
					Lens of interbedded medium to coarse sand at 19.5 and 19.9 feet bgs. Loose, moist.		2.7
					Bottom of borehole at 20.0 feet.		

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TB-05B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/15/14 **COMPLETED** 1/15/14
GROUND ELEVATION 17.07 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 11.00 ft / Elev 6.07 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES GW between 10 to 12 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0					No recovery from 0.0 to 1.5 feet.		
					1.5	15.6	
2.5	TB-05B-2.4-5.0 / DUP-11514-2	66	SM		SILTY SAND (SM): Black silty fine SAND (10YR 2/1) with organics (roots) and gravel (subangular, <0.25 - 1.5"). Moist, loose.		3.7
					Small red resin / plastic clasts recovered at 3.2 feet bgs.		
5.0					Grades to interbedded black silty fine sand with clasts from 4.6 to 5 feet bgs. Recovered cobble (10YR 2/1) and resin pieces at 4.5 feet bgs. Brick clasts at 4.7 feet bgs.		2.2
					5.7	11.4	
					No recovery from 5.7 to 7.0 feet bgs.		
					7.0	10.1	
7.5		60	SM		SILTY SAND (SM): Brown silty fine SAND (10YR 3/2) with occasional medium grains and gravel (subangular, <0.25 - 2"). Dry, loose.		1.1
					9.5	7.6	
10.0			SP		10.0 POORLY-GRADED SAND (SP): Black to dark brown fine to coarse SAND with gravel. Moist, loose.	7.1	
					No recovery from 10.0 to 12.0 feet bgs.		2.5
					▽		
					12.0	5.1	
12.5		60	GM		SILTY GRAVEL (GM): Dark brown GRAVEL (subangular to subrounded, <0.25 - 2") with medium to coarse sand.		4.1
					13.6 Transitions to fine to medium black sand with occasional gravel at 13.3 feet bgs.	3.5	
	TB-05B-13.6-15.6 / MS MSD		SP		POORLY-GRADED SAND (SP): Black fine to medium SAND with trace red grains and occasional gravel. Wet.		
15.0					Light yellow / brown organics (woody debris) with a sulfur odor recovered at 14.3 and 14.8 feet bgs.		
					14.8	2.3	

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TB-05B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/15/14 **COMPLETED** 1/15/14
GROUND ELEVATION 17.07 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 11.00 ft / Elev 6.07 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES GW between 10 to 12 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0			SM		SILTY SAND (SM): Black fine SAND with trace silt and trace organics (grass, wood). *(continued)*		1.8
					Grades to black silty SAND at 16.7 feet bgs. Wet, loose.		
17.5		92	SM				2.7
	TB-05B-18.2-19.2				18.7	-1.6	
			OL		19.1 LOW PLASTICITY ORGANIC SILT OR CLAY (OL): Brown silty CLAY with organics (roots). Stiff.	-2.0	
					19.5 Lens of fine sand / silty clay interbedded from 19.1 to 19.5 feet bgs.	-2.4	
20.0			SP		20.0 POORLY-GRADED SAND (SP): Black fine to medium SAND with occasional gravel (subrounded, 0.5").	-2.9	2.3

Bottom of borehole at 20.0 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 2/2/15 17:40 - F:\PROJECTS\232280 - R-G 2014 SITE REMEDIATION PROJECT\PH 06 - UPLANDS SOIL SAMPLING\DRAFT BORING LOGS\GINT DRAFT\RG BORING LOGS.GPJ

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TB-06A

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/14/14 **COMPLETED** 1/14/14
GROUND ELEVATION 17.32 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		0.3 SILTY SAND (SM): Black silty fine SAND (10YR 2/1) with gravel (subrounded to subangular, <0.25 - 1.25") and organics (roots, leaves). Moist, loose.	17.0	
			GP		POORLY-GRADED GRAVEL (GP): GRAVEL with brown (10YR 3/2) fine to coarse sand. Moist, loose. 1.0	16.3	
					1.5 Gray concrete (10YR 6/2) and concrete flour from 1.0 to 1.5 feet. Dense, dry.	15.8	
2.5		66	SM		SILTY SAND (SM): Brown silty fine SAND (10YR 3/2) with occasional gravel (<0.25 - 1.25"). (Small clast with red paint? - Not brick.) Grades to increased silt content at 2.25 to 2.75 feet bgs. 3.0	14.3	0
5.0			SP		POORLY-GRADED SAND (SP): Brown fine SAND (7.5YR 3/2) with trace silt. Loose, moist.		1
	TB-06A-5-6	50			6.0	11.3	

Bottom of borehole at 6.0 feet.

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Telephone: 425-462-8591

TB-06B

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/14/14 **COMPLETED** 1/14/14
GROUND ELEVATION 17.46 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		0.4 SILTY SAND (SM): Black silty fine SAND (10YR 2/1) with organics (roots, leaves).	17.1	
			SP		POORLY-GRADED SAND (SP): Brown fine to coarse SAND (10YR 3/2) with gravel (0.25< - 1.5"). Moist.		
					1.4 Wood piece recovered at 1.15 to 1.25 feet bgs.	16.1	
			SM		SILTY SAND (SM): Brown silty fine SAND (7.5YR 3/2) with gravel (subangular to subrounded, <0.25 - 2"). Dense, moist.		
2.5		65					1.7
					3.0	14.5	
			SP		3.3 POORLY-GRADED SAND (SP): Brown / tan fine SAND with trace silt and occasional gravel (subrounded, 0.25 - 1.5"). Loose, moist.	14.2	
					No recovery from 3.3 to 5.0 feet bgs.		
5.0					5.0	12.5	
		100	SM		SILTY SAND (SM): Black / tan silty fine sand (10YR 2/1 to 10YR 6/4) with gravel (subrounded, 0.25< - 1.5").		0
					Grades to black silty fine SAND (10YR 2/1) with trace gravel (subangular) and sluff from upper interval at 6.0 feet bgs. Unidentified chemical odor.		
7.5							2.2
	TB-06B-6-11	58					
10.0							2.4
					11.0 Blue / gray silt (moist) at 11.0 feet bgs.	6.5	2.4
					Unidentified chemical odor at 11.0 feet bgs.		
					Bottom of borehole at 11.0 feet.		

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TB-06C

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/14/14 **COMPLETED** 1/14/14
GROUND ELEVATION 17.22 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		0.3 SILTY SAND (SM): Black silty fine SAND (2.5Y 2.5/1) with organics (twigs, leaves) and gravel. Moist.	17.0	
			GM		SILTY GRAVEL (GM): Brown fine to coarse SAND (2.5Y 3/3) with gravel (subangular, 0.25< - 1.0"). Moist, dense.		
					1.3 Transitions to black color at 0.75 feet bgs.	16.0	
			SP		POORLY-GRADED SAND (SP): Brown fine SAND with trace silt and occasional gravel (subrounded, 0.25< - 1.0").		
2.5	TB-06C-1.25-4.6	100			Trace red / brown sawdust (2.5YR 2.5/2) lens at 2.1 feet bgs.		0.5
					3.9	13.3	
			SM		SILTY SAND (SM): Black / brown silty fine SAND with occasional gravel (subrounded, 0.25< - 1").		
					4.6	12.6	
5.0			GP		POORLY-GRADED GRAVEL (GP): Light gray crushed concrete Dense, dry.		
					5.3	12.0	1.8
			SM		SILTY SAND (SM): Gray / brown silty SAND (10YR 3/2) with interbedded lens of red / brown sawdust. No odors.		
7.5		100					0.6
10.0					10.0	7.2	
		100	GP		POORLY-GRADED GRAVEL (GP): Light gray crushed concrete.		2
					11.0 Refusal at 11.0 feet bgs.	6.2	

Bottom of borehole at 11.0 feet.

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TB-06D

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/15/14 **COMPLETED** 1/15/14
GROUND ELEVATION 17.47 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0					No recovery from 0 to 1.7 feet bgs.		
					1.7	15.8	
		50	SM		SILTY SAND (SM): Black silty fine SAND (7.5YR 2.5/1) with organics (twigs, roots) and gravel (subangular, <1"). Loose, moist.		0.9
2.5			GP		2.3 POORLY-GRADED GRAVEL (GP): Gray crushed concrete (7.5YR 5/1). Dense, dry.	15.2	
					3.0 Lens of bright red paint within crushed concrete from 2.8 to 2.9 feet bgs.	14.5	
			SM		SILTY SAND (SM): Brown fine SAND (7.5YR 3/2) with trace silt and occasional gravel (subrounded, <0.5"). Loose, moist.		1.4
5.0		38					0.2
					Grades to brown fine sand with black gravel (subangular, <1") at 6.6 feet bgs.		
					7.1	10.4	
7.5			GP		POORLY-GRADED GRAVEL (GP): Black GRAVEL (<1"). Small lens of crushed concrete with brown fine sand (2.5Y 4/3) from 7.3 to 7.5 feet bgs. Loose, moist.		
					8.1	9.4	0.5
			SM		SILTY SAND (SM): Black / brown silty fine SAND (2.5Y 5/2) with gravel (subangular, 0.25< - 1"). Loose, moist.		0.4
10.0		28					
					Crushed concrete and gravel recovered from 11.0 to 11.8 feet bgs. Dense, dry.		
					11.8	5.7	
			SP		12.0 POORLY-GRADED SAND (SP): Black fine to coarse SAND (7.5YR 2.5/1) with gravel (subangular, <0.25 - 1"). Loose, dry.	5.5	0.3

Bottom of borehole at 12.0 feet.

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TB-06E

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/15/14 **COMPLETED** 1/15/14
GROUND ELEVATION 17.22 feet **HOLE SIZE** 2.25 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 10.00 ft / Elev 7.22 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0			SM		SILTY SAND (SM): Black silty fine SAND (7.5YR 3/2) with organics (twigs, wood) and gravel (subrounded to subangular, 0.25< - 0.5"). Loose, moist.		
					2.3	14.9	
2.5		60	GM		SILTY GRAVEL (GM): GRAVEL (angular, <1") with brown fine to coarse sand (7.5YR 3/2).		1.6
					2.8	14.4	
			GP		POORLY-GRADED GRAVEL (GP): Gray crushed concrete (1 - 1.5", 7.5YR 5/1). Dense, dry.		
					3.4	13.8	
	TB-06E-3.4-5.0		SM		SILTY SAND (SM): Brown fine SAND (7.5YR 3/2) with trace silt and occasional gravel (subrounded, <0.5"). Trace red paint observed at contact with sand. Loose, moist.		
5.0					Grades to dark brown / black silty fine sand with organics (roots) at 4.5 feet bgs. Loose, moist.		
					Small lens of silty clay sand (white color) 4.65 to 4.7 feet.		1.5
					Large piece of 1 inch gravel recovered at 4.8 feet.		
					Small lens of silty clay sand (white color) from 6.4 to 7.0 feet.		
7.5		70			Dark brown silty fine sand (10YR 3/3) with occasional gravel (subrounded, 0.25 - 0.5"). Moist, loose.		2.1
					7.9	9.3	
					Crushed concrete recovered at 7.9 feet bgs.		
					8.8	8.4	
			SM		SILTY SAND (SM): Black / brown silty sand (2.5Y 5/2) with gravel (<1.5").		
					Red sawdust lens with no odor at 9.5 to 9.7 feet bgs.		
10.0	TB-06E-8.8-10.6				10.0 ▽	7.2	
			SP		POORLY-GRADED SAND (SP): Dark brown fine to medium SAND with trace red sand grains and large subrounded gravel. Loose, dry.		1.6
		100			10.6	6.6	
					Small lens of silty clay at 10.2 feet bgs.		
					11.0	6.2	
					Grades to crushed concrete at 10.6 feet bgs.		
					Bottom of borehole at 11.0 feet.		

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TB-06F

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/24/14 **COMPLETED** 1/24/14
GROUND ELEVATION 17.45 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 14.00 ft / Elev 3.45 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0					No recovery from 0 to 1.5 feet bgs.		
					1.5	16.0	
			SM		SILTY SAND (SM): Brown silty fine SAND (10YR 2/1) with gravel (subangular, <2.25"). Moist, dense. Black silty fine sand (10YR 3/2) with organics (roots) and gravel (subangular, <1") at 1.8 feet bgs. Loose, moist.		
2.5		68			2.8 Dark red, granular material observed within sand at 1.9 feet bgs.	14.7	0
					Gray crushed concrete with gravel (subangular, <2", 10YR 7/1). Dense, dry.		
					3.4	14.1	
			SP		POORLY-GRADED SAND (SP): Brown fine SAND (7.5YR 3/3) with trace silt and gravel (subrounded, <0.25 - 2"). Moist, loose. Red paint like material observed from 3.4 to 3.6 feet bgs.		
5.0					5.0	12.5	0
		0			No recovery from 5.0 to 6.0 feet bgs.		
					6.0	11.5	
			SP		POORLY-GRADED SAND (SP): Brown fine to medium SAND (7.5YR 3/2) with gravel and organics (twigs, roots). Moist, loose.		
7.5							0.5
					Grades to black / brown fine sand (10YR 6/4) with gravel from at 8.1 feet bgs. Moist, loose.		
					Brick clast (1") recovered at 9.1 feet bgs. Interbedded lenses of red / brown sawdust observed from 9.1 to 10.0 feet bgs.		0
10.0					10.0	7.5	
			SM		SILTY SAND (SM): Dark gray silty fine SAND (5Y 3/1) with gravel (subrounded, <0.25 - 2.25"). Loose, moist.		
					11.5	6.0	0
			GP		POORLY-GRADED GRAVEL (GP): White to dark gray concrete (GLEY1 8/N). Very dense, dry.		
12.5							0
					14.0 ▽	3.5	
			SM		SILTY SAND (SM): Black silty fine SAND (2.5Y 2.5/1) with gravel. Saturated, loose. Driller noted softer lithology at 14.0 feet bgs.		
15.0							

(Continued Next Page)

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TB-06F

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/24/14 **COMPLETED** 1/24/14
GROUND ELEVATION 17.45 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
EQUIPMENT Sonic
▽ **AT TIME OF DRILLING** 14.00 ft / Elev 3.45 ft bgs
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
15.0	TB-06F-14-16				SILTY SAND (SM): Black silty fine SAND (2.5Y 2.5/1) with gravel. Saturated, loose. *(continued)* Grades to silty fine sand with concrete clasts at 15.5 feet bgs. Saturated.		0
17.5			SM		Grades to black silty fine sand with trace amounts of black / brown clay observed at 19.0 feet bgs. Saturated, loose.		0
20.0	TB-06F-20-22						0
					21.5	-4.1	
22.5			SP		POORLY-GRADED SAND (SP): Black fine to medium SAND (10YR 2/1) with occasional coarse grains, white shell fragements, and trace gravel (subrounded, <1").		0
					24.5	-7.1	0
25.0			SM		25.0 SILTY SAND (SM): Black silty fine SAND with interbedded gravel and interbedded fine to medium sand. Loose, moist.	-7.6	

Bottom of borehole at 25.0 feet.

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TB-07

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. Reichhold, Inc. Site
PROJECT NUMBER 0232280.06
PROJECT LOCATION Seattle, Washington
DATE STARTED 1/24/14 **COMPLETED** 1/24/14
GROUND ELEVATION 14.7 feet **HOLE SIZE** 4 inches
CONTRACTOR
GROUND WATER LEVELS:
EQUIPMENT Hand Auger
AT TIME OF DRILLING ---
LOGGED BY C. Gorman **CHECKED BY** M. Mendes
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
	TB-07-0-1	SM		SILTY SAND (SM): Black silty fine SAND with gravel (subangular, <2") and organics (roots). Loose, moist.		0
1.0				Increased content gravel at 0.7 feet bgs.	13.7	

Bottom of borehole at 1.0 feet.

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GP-76

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/14/19 **COMPLETED** 5/17/19
GROUND ELEVATION 15.07 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 5.00 ft / Elev 10.07 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 6.5 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0			GP		0.3 Gray angular coarse GRAVEL. Dry, very hard.	14.8	
			SW		1.5 Dark brown fine-coarse SAND, trace silt and angular fine gravel. Moist, loose.	13.6	1.7
	GP-76-1-3		SM		2.0 Dark brown fine-coarse silty medium SAND. Silt is in clumps, mottled orange/brown.	13.1	1.7
			ML		Medium brownish-gray sandy SILT. Sand is fine. Dry, slightly stiff.		2
					Silt is mottled medium brown and orange, trace clay at 2.5 feet bgs. Moist.		2.4
					Silt is brown at 3.5 feet bgs.		1.8
					4.5	10.6	3.6
5	GP-76-4.25-6.25		SP		▽ Dark brown fine-medium SAND. Sand contains trace red and white grains. Moist, loose.		3.1
		100			With trace coarse sand, wet at 5 feet bgs.		2.9
							3
							2.5
							4.2
					9.0	6.1	2
			ML		9.8 Black sandy SILT. Sand is fine. Wet, slightly stiff.	5.3	2.3
10			SM		Black silty SAND, trace organic debris. Sand is fine. Wet, slightly stiff.		3
	GP-76-10.2-11.2				10.8	4.3	3.2
		100	OL		Brownish/reddish gray low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.		4.1
							4.7
					13.0	2.1	4.3
					Bottom of borehole at 13.0 feet.		5.1

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GP-77

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/14/19 **COMPLETED** 5/17/19
GROUND ELEVATION 16.29 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 6.00 ft / Elev 10.29 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 7 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0					11.5 inch concrete slab.	15.3	4.7
			GP		Brownish gray angular coarse GRAVEL with medium sand, trace silt. Moist, stiff. Road base.	13.5	5.1
			ML		Metallic gray clayey SILT. Dry, stiff.	12.8	4.75
	GP-77-2.75-4.75		SP		Very dark gray fine-medium SAND. Sand contains trace red and white grains. Moist, loose.		5.1
5							4.4
	GP-77-5-7						3.7
					▽ Wet at 6 feet bgs.		2.7
		100					2.9
							5.6
							5.2
							5.1
							5.3
10					Grades down to fine sand at 9 feet bgs.		4.5
							5.8
	GP-77-10.5-11.5						5.3
		100	OL		Very dark grayish black low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.	3.3	3
							5
					Bottom of borehole at 13.0 feet.		4.2

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GP-78

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/14/19 **COMPLETED** 5/17/19
GROUND ELEVATION 13.22 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 9.22 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 8 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0			ML		1.0 Dark brown sandy SILT with subrounded fine gravel and organic debris (roots and leaves). Sand is fine. Moist, loose.	12.2	
	GP-78-1-2.5		SM		2.5 Brown silty fine SAND with organic debris (roots). Slighty moist, loose. With mottled orange/brown silt clumps at 1.5 feet bgs.	10.7	
			ML		3.0 Metallic medium gray SILT with fine-medium sand. Moist, slightly stiff.	10.2	
	GP-78-3-5		SP		▽ Brown fine-medium SAND. Sand contains trace red and white grains. Moist, loose. Wet at 4 feet bgs.		1.8
5							1.3
		100					2.2
							2.4
10					9.8	3.5	2.6
			SM		11.0 Black silty fine SAND, trace natural organic debris (sticks). Wet, slightly stiff.	2.2	3.1
	GP-78-10.5-11.5	100	OL		Brownish black low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.		3.6
					13.0	0.2	4.1
					Bottom of borehole at 13.0 feet.		3.3

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GP-79

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/15/19 **COMPLETED** 5/17/19
GROUND ELEVATION 16.03 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 5.50 ft / Elev 10.53 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 7 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0					0.5 6.5 inch concrete slab.	15.5	3.9
			GP		Dark gray sandy angular fine GRAVEL with trace coarse angular gravel. Sand is medium.		3.5
					2.0 Slightly moist, very hard.	14.0	4.9
	GP-79-2-4		ML		3.0 Medium brown SILT, trace dark orange mottling and red brick-like coarse sand-sized clasts. Dry, stiff.	13.0	3.4
			SP		4.0 Dark brown medium SAND with red and white grains. Slightly moist, loose.	12.0	4.7
			SM		4.5 2 inch mottled orange and gray SILT lens at 3.5 feet bgs.	11.5	4.6
5			ML		5.0	11.0	4.9
	GP-79-5-7				▽ Dark brown silty fine SAND. Slightly moist, slightly stiff.		3.2
					Black SILT, trace fine sand and clay. Very moist, stiff.		3.8
		100	SP		Black fine-medium SAND. Sand contains trace red and white grains. Moist, loose. Wet at 5.5 feet bgs.		5.7
							4
							3.6
							3.6
							3.7
					9.5	6.5	1
10					Black silty fine SAND with natural wood debris. Wet, moderately stiff.		0.9
			SM				0.5
		100					0.7
	GP-79-11.5-12.5				12.0	4.0	
			OL		13.0 Very dark brown low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.	3.0	1
					Bottom of borehole at 13.0 feet.		1

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GP-80

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/14/19 **COMPLETED** 5/17/19
GROUND ELEVATION 17.54 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 5.75 ft / Elev 11.79 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 7 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0			GP		Gray angular fine GRAVEL with fine-coarse sand. Dry, very stiff.		6.3
					1.5	16.0	5.2
	GP-80-1.5-3.5		SP		Medium brown fine-medium SAND with subangular gravel and red brick debris. Moist, loose.		5
					With subrounded coarse gravel at 2.5 feet bgs.		6
							6.6
5	GP-80-4-5.5						4
							5.5
							6.4
					6.0 ▽ Wet at 5.5 feet bgs.	11.5	6.2
			ML		6.5 Reddish brown sandy SILT. Sand is fine. Wet, slightly stiff.	11.0	5.4
		100			Brown medium-coarse SAND with silt clumps and trace fine sand. Moist, loose.		3.7
					Color change to very dark gray at 7 feet bgs.		4.3
			SP		With mottled orange/brown silt clumps from 8 to 8.5 feet bgs		3.4
10							3.8
							0.6
							0.2
							0.7
		100			12.0	5.5	0.7
			ML		Black sandy SILT with clay. Sand is fine. Wet, moderately stiff.		0.2
	GP-80-13-14				13.5 Fining downwards sequence from 11 to 13.5 feet bgs. Appears naturally deposited.	4.0	0.5
			OL		13.7 Chunk of natural wood debris.	3.8	
					14.0	3.5	2.8
					Black low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.		

Bottom of borehole at 14.0 feet.

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GP-81

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/15/19 **COMPLETED** 5/23/19
GROUND ELEVATION 13.75 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 4.50 ft / Elev 9.25 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 6.75 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0							
			SP		Brown fine SAND with subrounded fine gravel and organic debris (grass, grassroots), trace silt. Dry, loose.		5.6
	GP-81-1.5-3.5				Sand is medium at 1 foot bgs.		0.7
					Very angular clast of course gravel at 1.5 feet with natural wood debris.		1.1
					1 inch by 0.5 inch clast of angular gray possible plastic/resin-like material at 2 feet bgs.		1.3
					No organic debris at 3 feet bgs.		1.2
					Color change to grayish-brown at 3.5 feet bgs.		1.1
5					▽ Black fine-medium SAND. Sand contains trace red and white grains. Moist, loose.		1.2
	GP-81-5-6.5	100			Wet at 4.5 feet bgs, with 3" long subrounded cobble.		1
							0.7
							0
							1
							0.2
							0
							0
10	GP-81-9-10	100			9.5	4.3	0
			OL		Dark grayish brown low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.		0
					11.0	2.8	
					Bottom of borehole at 11.0 feet.		0.3

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GP-82

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/15/19 **COMPLETED** 5/17/19
GROUND ELEVATION 14.52 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
▽ **AT TIME OF DRILLING** 6.00 ft / Elev 8.52 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Hand augered to 8 feet bgs.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0					10 inch concrete slab. 0.8	13.7	
			SW		Brown gravelly fine-coarse SAND, trace silt. Gravel is subrounded-subangular, fine-coarse. Dry, loose. 3.0	11.5	1.2
5	GP-82-3-5		SP		Black fine-medium SAND with silt and subrounded-subangular fine gravel. Slightly moist, loose.		1
					With red brick-like clasts at 3.5 feet bgs.		5.1
					Steely-gray 2 inch silt lens at 4.5 feet bgs.		6.6
	GP-82-5-7	100			▽ Black fine-medium SAND. Sand contains trace red and white grains. Moist, loose. Wet, with scaly/greasy sheen on groundwater within borehole and coarse sand-sized white clasts of unknown material at 6 feet bgs.		2.5
							4.9
							5
							6.6
							9.6
							70
							4.2
	GP-82-8.5-9.5				9.0	5.5	0.7
10			OL		10.0 Very dark brown low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.	4.5	2.5
							0.4

Bottom of borehole at 10.0 feet.

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GP-83

CLIENT Glacier Northwest, Inc.
PROJECT NAME 5900 West Marginal Way Site
PROJECT NUMBER 0401356
PROJECT LOCATION 5900 West Marginal Way SW, Seattle, WA
DATE STARTED 5/17/19 **COMPLETED** 5/17/19
GROUND ELEVATION 17.34 feet **HOLE SIZE** 3
CONTRACTOR Cascade
GROUND WATER LEVELS:
EQUIPMENT Hand Auger/Direct Push
AT TIME OF DRILLING 7.50 ft / Elev 9.84 ft
LOGGED BY M. Crandell **CHECKED BY** D. Edwards
AT END OF DRILLING ---
NOTES Drilled from ground surface.
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0					Gray fused concrete rubble/debris. Dry, very stiff.		
					3.3	14.1	
	GP-83-3.25-4	100	SP		Dark reddish brown fine-medium SAND with silt. Slightly moist, loose.		4.1
5	GP-83-4-6				Black fine-medium SAND. Sand contains trace red and white grains. Moist, loose at 4 feet bgs.		3.9
					6.5	10.8	2.6
			GP		6.8 3 inch lens of angular fine gravel at 6.5 feet bgs.	10.5	4.9
		100			Dark reddish brown fine-medium SAND with silt. Slightly moist, loose. Wet at 7.5 feet bgs.		6.4
10			SP				6.3
							6.4
							5.3
	GP-83-11.7-12.7	100			12.2	5.1	5.9
			OL		Dark grayish brown low plasticity organic SILT/CLAY, with natural organic decay odor and natural organic debris. Wet, stiff.		4.8
					14.0	3.3	3.6
					Bottom of borehole at 14.0 feet.		

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GP-26

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/7/12 **COMPLETED** 10/10/12
GROUND ELEVATION 14.06 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.10 ft / Elev 8.96 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.1 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				8" concrete slab	13.4	
				0.7		
		GP		POORLY GRADED GRAVEL WITH SAND (GP): dark gray (10YR4/1) coarse-sandy subrounded to angular gravel, trace fine sand, trace silt. Road base material.		1.1
				1.5	12.6	
		SP		POORLY GRADED SAND (SP): gravelly coarse sand, trace fine sand, trace silt.		2.8
2.5						3.4
						3.8
				3.1	11.0	
		SM		SILTY SAND (SM): (2.5Y 2.5/1) black silty fine sand with subrounded to subangular fine gravel, moist, loose.		3.5
				3.5	10.6	
				No recovery		4.1
				4.0	10.1	
				SILTY SAND (SM): black silty medium sand, trace fine subrounded gravel, moist, loose.		4.4
						3.6
5.0				▽ Wet at 5.1 feet bgs.		3.8
	GP-26-5.1-7.1					4.2
		ML		6.8	7.3	
				SILT (ML): very thin interbedded silt layer.		
				SILTY SAND (SM): black silty medium sand, trace fine subrounded gravel, moist, loose.		2.7
7.5						
	GP-26-7.1-9.1	SM				2.2
						2.1
				9.6	4.5	
	GP-26-9.1-10.3			1.5 inch piece of natural wood debris at 9.5 feet bgs.		
10.0				10.1	4.0	
				LOW PLASTICITY SILTY CLAY (CL-ML): mottled black and dark brown silty clay with roots/organics, wet, stiff, organic odor.		3.1
		CL-ML				3.7
						4.1
12.5				12.5	1.6	

Bottom of borehole at 12.5 feet.

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GP-27

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/7/12 **COMPLETED** 10/11/12
GROUND ELEVATION 13.24 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 4.33 ft / Elev 8.91 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.3 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				Elevation (ft)	
		SM		SILTY SAND (SM): brown (10YR5/3) silty fine sand, trace coarse sand grains, trace fine angular gravel, with roots/wood debris, dry, loose.	0.9
				0.9 — 12.3	1.9
	GP-27-0-2			POORLY GRADED SAND WITH SILT (SP-SM): very dark grayish brown (10YR3/2), fine-medium sand with silt. 1/2 inch clast of brick-like material at 11".	1.6
				As above, with trace fine angular gravel at 1.7 feet bgs.	2.3
2.5					4.9
	GP-27-2.3-4.3			Slight TPH-like odor at 2.5 feet.	5.6
				Same as above except sand is fine-medium grained with trace wood fragments and no gravel below 2.8 feet bgs. TPH-like odor less strong at 3.25 feet.	4.8
					3.3
		SP-SM		▽ Wet at 4.33 feet bgs. No wood fragments below 4.5 feet.	3.8
5.0					
	GP-27-4.3-6.3 / GP-27-5.3				0.6
					0.1
				Slight sheen on ground water in core tube at 6.7 feet bgs.	
7.5	GP-27-6.3-8.3 / GP-27-7.3				0
				7.9 — 5.3	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark grayish brown (10YR4/2) silty clay with roots/organics, wet, stiff.	0.3
				9.3 — 3.9	0.5
				Bottom of borehole at 9.3 feet.	

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GP-28

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/7/12 **COMPLETED** 10/11/12
GROUND ELEVATION 13.67 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 4.00 ft / Elev 9.67 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SM		SILTY SAND (SM): brown (10YR5/3) silty fine sand, trace coarse sand grains, trace angular fine gravel, with grass roots, dry, loose.		1.6
0.9				2 asphalt clasts in borehole, 2-3 inches in size at 0.6 feet bgs.	12.8	
	GP-28-0-2			POORLY GRADED SAND (SP): dark brown (10YR3/3) fine-medium sand, trace silt, trace sub-rounded to sub-angular fine gravel and trace silty clay clumps, with roots/organics, dry, loose.		2.6
				Moist at 1.75 feet bgs.		2.7
				Slightly sweet/chemical-like odor at 2 feet bgs.		5.5
2.5				Color change to black (2.5Y2.5/1), no roots/organics below 2.5 feet bgs.		3.4
	GP-28-2-4					3.4
				No noticable odor at 3.5 feet bgs.		2.9
▽				Wet at 4 feet bgs.		4.1
		SP		2.5"-long fibrous wood fragments, trace subrounded gravel at 4.1 feet bgs.		
5.0	GP-28-4.1-6.1 / GP-28-5.1					2.1
						1.9
	GP-28-7.1 / GP-28-6.1-8.3					1.6
7.5		ML		Interbedded brown silt layer at 7.5 feet bgs.		
8.1					5.6	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark brown silty clay with roots/organics, slight organic odor, wet, stiff.		2
9.1					4.6	1.5
				Bottom of borehole at 9.1 feet.		

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GP-29

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/7/12 **COMPLETED** 10/9/12
GROUND ELEVATION 14.29 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.00 ft / Elev 8.29 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				7" concrete slab.		
				0.6	13.7	1.8
		SP		POORLY GRADED SAND (SP): brown (10YR4/1) gravelly medium-coarse grained sand, dry, loose. Road base material.		
2.5				Soil is slightly moist.		2.6
				2.7	11.6	
	GP-29-3.1			Angular cobbles to 5". (Quarry spalls)		1.3
	GP-29-2.9-4.9			4.0	10.3	
		GP-GC		POORLY GRADED GRAVEL WITH CLAY (GP-GC): very dark greenish gray (GLEY3/10Y) gravelly clay, slightly moist, stiff.		
				4.5	9.8	
		SP		POORLY GRADED SAND (SP): black medium sand with trace fine sub-rounded to sub-angular gravel, slightly moist, loose.		
5.0				5.0	9.3	0.9
				No gravel, sand is fine-medium grained at 5 feet bgs. Otherwise, same as above.		
	GP-29-5.9			▽ Wet at 6 feet bgs.		
7.5						0.7
	GP-29-6.9-8.9					
	GP-29-7.9	SP				1.2
						1.1
10.0						
	GP-29-10					2.1
				11.0	3.3	
				LOW PLASTICITY SILTY CLAY (CL-ML): dark gray (5Y4/1) silty clay, wet, moderately stiff.		0.9
		CL-ML		Color change to dark brown (10YR3/3), with roots/organics, very stiff, with slight organic odor at 11.4 feet bgs. Otherwise same as above.		
12.5						0.7
				13.0	1.3	1.1
				Bottom of borehole at 13.0 feet.		

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GP-30

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/7/12 **COMPLETED** 10/9/12
GROUND ELEVATION 14.49 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.60 ft / Elev 7.89 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 6.6 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				Elevation (ft)	
				8" concrete slab.	0.8
				0.7 13.8	
				POORLY GRADED SAND (SP): medium-coarse gravelly sand, trace silt, slightly moist, loose.	0.6
		SP			0.6
2.5					0.9
					1.1
				3.3 11.2	2.1
	GP-30-3.3-5.3			SILTY SAND (SM): dark brown (10YR3/3) silty fine sand, trace coarse sand, moist, loose.	2.9
				Sand is medium grained at 3.75 feet bgs, otherwise same as above.	
5.0					3.4
					1.9
	GP-30-5.3-6.6	SM			2
				▽ Wet at 6.6 feet bgs.	1.5
7.5					
	GP-30-7-9				1.6
				8.8 5.7	1.9
				LOW PLASTICITY SILTY CLAY (CL-ML): very dark brown silty clay, with roots/organics, wet, stiff.	
10.0					2
		CL-ML			
					1.2
				12.0 2.5	1.4
				Bottom of borehole at 12.0 feet.	

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Seattle, Washington 98101
Telephone: 425-462-8591

GP-31

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/6/12 **COMPLETED** 10/11/12
GROUND ELEVATION 14.37 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.90 ft / Elev 8.47 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.9 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		GP		POORLY GRADED GRAVEL WITH SAND (GP): gray (2.5Y5/1) sandy fine angular gravel, with rock flour, dry, very stiff. Sand is medium grained.	13.9	3.6
				0.5		2.7
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): dark grayish brown (10YR4/2), fine-coarse sand with subangular gravel, trace sub-rounded cobbles, moderately stiff. Increased frequency of gravel at 1 foot bgs.		4.3
						4.3
2.5				No cobbles below 2 feet bgs.		4
				2.9	11.5	
	GP-31-3-5	SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black (2.5Y2.5/1) silty fine-medium sand, slightly moist, loose, with strong TPH-like odor.		81.6
						89.1
				No odor below 4 feet bgs.		18.6
5.0						7
	GP-31-5-5.9					5
						57.9
				▽ Wet at 5.9 feet bgs.		5.6
	GP-31-5.9-7.9					
7.5						6.4
						5.2
	GP-31-7.9-9.9					
						0.7
				9.6	4.8	
10.0		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark brown (7.5YR3/2), silty clay with roots/organics, organic odor.		1.2
				10.9	3.5	
				Bottom of borehole at 10.9 feet.		

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GP-32

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/10/12 **COMPLETED** 10/11/12
GROUND ELEVATION 14.12 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.10 ft / Elev 8.02 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 6.1 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				0.3 3 inches asphalt.	13.9	
		SM		SILTY SAND (SM): dark brown (7.5YR3/2) silty fine sand with orange-brown mottled clay clumps, with fine angular gravel, trace roots/organics.		1.3
				1.0	13.1	
	GP-32-0.25-2.25	ML		SILT (ML): black fine sandy silt, loose.		2.2
				3 inch clast of concrete at 1.6 feet bgs.		4.3
2.5						3.2
				3.0	11.1	2.9
		SM		SILTY SAND (SM): silty fine sand.		2.4
						1.9
				One 0.5" clast of brick and one 1.5" clast of refractory brick at 4.1 feet bgs.		3.2
5.0						2.1
						2.3
						2.8
				▽ Wet at 6.1 feet bgs.		3.1
	GP-32-6.1-8.1					0.2
7.5						
	GP-32-8.1-9.1					0.7
				8.9	5.2	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): mottled very dark gray (7.5YR3/1) with black silty clay with roots/organics, organic odor.		0.8
						0.4
10.0						
				11.1	3.0	0.3

Bottom of borehole at 11.1 feet.

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GP-33

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/6/12 **COMPLETED** 10/10/12
GROUND ELEVATION 14.49 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.9 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				8" concrete slab.		
				0.7	13.8	
		GP		POORLY GRADED GRAVEL WITH SAND (GP): very dark gray (10YR3/1) medium-coarse sandy sub-angular gravel, trace fine sand, slightly moist, stiff.	13.5	1.3
				1.0		
				POORLY GRADED SAND (SP): gravelly medium-coarse sand. Otherwise, same as above.		4.8
				Trace coarse sand grains at 2'.		2.6
2.5						3.6
						4.1
	GP-33-3.25-5.25			Color change to black (2.5Y2.5/1), sand is fine-medium, trace coarse sand, trace sub-rounded fine-coarse gravel, with 3.5" cobble, with silt clumps, slight TPH-like odor, loose at 3.25 feet bgs.		11.8
				No gravel, no silt clumps, sand is medium-grained at 4.5 feet.		8
5.0						5.2
	GP-33-5.25-5.9	SP				4.7
				Wet at 5.9 feet bgs.		4
	GP-33-5.9-8.3					3.2
7.5						3.1
						2.1
				9.5	5.0	
10.0		CL-ML		SILT (ML): mottled brown (7.5YR4/3) and black silt with roots/organics, slight organic odor.		2.1
				10.9	3.6	
				Bottom of borehole at 10.9 feet.		

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GP-34

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/6/12 **COMPLETED** 10/10/12
GROUND ELEVATION 14.7 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.40 ft / Elev 8.30 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 6.4 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): brown (10YR5/2) fine silty sand with sub-rounded to sub-angular gravel, trace coarse sand grains, with organic/root debris, dry, loose.		0.8 0.9 2.2 3.6
				2.3	12.4	2.7
2.5				2.6 6.5" subangular cobble at 2.6 feet bgs.	12.1	
				No recovery from 2.6 to 3.25 feet bgs.		
				3.3	11.5	72.1
		ML		LOW PLASTICITY SILTY CLAY (CL-ML): black (7.5YR2.5/1) silty clay, trace fine sand, strong TPH-like odor and unidentified chemical odor.		85.7
				4.1	10.6	76
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): very dark gray (2.5Y3/1) silty fine-medium sand with clay clumps, moist, loose. TPH-like and unidentified chemical odor less strong at 4.1 feet.		9.9
5.0						8.7 9.5
			▽	Wet at 6.4 feet bgs.		8
		SP-SM		No odors, no clay clumps below 6.5 feet bgs.		
7.5	GP-34-6.4-8.4					6.2
	GP-34-8.4-9.4					5.4
				9.3	5.4	4.2
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark brown (7.5YR2.5/2) silty clay with roots/organics, wet, stiff, slight organic odor.		
10.0						3.1
				11.4	3.3	2.8
				Bottom of borehole at 11.4 feet.		

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GP-36

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/30/12 **COMPLETED** 10/8/12
GROUND ELEVATION 16.24 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING ---
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.6 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		GP		POORLY GRADED GRAVEL (GP): dark yellowish brown (10YR 4/4) angular-subangular gravel with fine-medium sand, with roots/organics to 0.6 feet bgs, slightly moist.		
2.5						72.1
				2.6	13.6	
	GP-36-2.6	SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black silty fine sand, trace sub-rounded gravel, dry, loose, slight TPH-like odor.		
				3.2	13.0	
	GP-36-2.6-4.6	SM		SILTY SAND (SM): Very dark grayish brown silty sand.		48.2
						18
				4.5	11.7	4.6
5.0		ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark gray silty clay, slighty moist, moderately stiff.		
				7.0	9.2	
7.5				POORLY GRADED SAND WITH SILT (SP-SM): black (2.5Y2.5/1) silty fine sand, trace fine sub-angular gravel, loose. Wet at 7.5 feet bgs.		43.7
	GP-36-7-9 GP-36-8			Sand is medium grained at 8 feet bgs.		0.7
		SP-SM		Sand is fine grained at 8.5 feet bgs.		
10.0	GP-36-9-11 GP-36-10					0.9
	GP-36-11-12 GP-36-11.5			11.7	4.5	1.4
		CL-ML		12.0 LOW PLASTICITY SILTY CLAY (CL-ML): black silty clay, wet, stiff, slight organic odor.	4.2	2
				Bottom of borehole at 12.0 feet.		

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GP-37

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/10/12 **COMPLETED** 10/8/12
GROUND ELEVATION 16.13 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.40 ft / Elev 9.73 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 7 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				Elevation (ft)	
	GP-37-0-2	ML		SILT (ML): dark brown (7.5YR3/2) silty clay with fine angular gravel, with organic debris, with piece of fiberglass, dry, loose.	0.8
				Color change to dark grayish brown (10YR4/2) at 0.5 feet bgs.	2
					1.9
2.5					2.5
				Color change to brown (10YR4/3) at 2.2 feet bgs.	1.8
					1.9
				Slightly moist at 3.4 feet bgs.	1.9
					1.7
5.0				4.9 / 11.2	
	GP-37-4.4-6.4	SP		POORLY GRADED SAND (SP): very dark brown fine sand with silt, with mottled grey-orange clay clumps.	0.7
					1.1
				▽ No clay clumps, sand is medium grained at 6 feet bgs.	1.3
				Wet at 6.4 feet bgs.	1.2
7.5					1.4
	GP-37-7-9				11.5
	GP-37-9-10			9.5 / 6.6	5.5
10.0		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): black (5YR2.5/1) silty clay, with organics/roots, wet, stiff, slight organic odor.	5.8
					6.1
				12.0 / 4.1	4.9
				Bottom of borehole at 12.0 feet.	

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GP-38

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/10/12 **COMPLETED** 10/9/12
GROUND ELEVATION 16.1 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 7.00 ft / Elev 9.10 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 7 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				12" Concrete slab.		
					15.1	
		SM		SILTY SAND (SM): dark gray (7.5YR4/1) silty medium sand with fine sub-rounded gravel, moist, slightly loose.		1
						0.4
2.5					13.4	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): very dark grayish brown (10YR3/2), fine-medium silty sand with fine gravel, trace coarse sand, with organics, dry, loose.		0.6
						1.2
				Sand is fine grained, higher percentage of silt, soil is more moist at 3.8 feet bgs. Otherwise, same as above.		1.5
						1.4
5.0				With brownish clay clumps at 4.75 feet bgs.		1.5
				No clay clumps at 5.2 feet bgs.		1.6
				Sand is fine-medium grained at 5.67 feet bgs.		1.3
						1.6
				▽ Wet at 7 feet bgs.		1.6
7.5						1
	GP-38-7-9					2.8
						1.7
10.0	GP-38-9-11					4.4
					5.6	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark grayish brown (2.5Y3/2) silty clay with roots/organics, wet, stiff, slight organic odor.		5
					4.1	5.5

Bottom of borehole at 12.0 feet.

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GP-39

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/30/12 **COMPLETED** 10/8/12
GROUND ELEVATION 16.08 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING 7.00 ft / Elev 9.08 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.5 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SP		0.3 POORLY GRADED SAND (SP): olive brown (2.5Y4/3) gravelly medium sand, trace silt, with root debris, dry, loose.	15.8	1.5
		GP		POORLY GRADED GRAVEL (GP): gray gravel with fine-medium sand, very stiff.		
				1.9	14.2	
				Concrete slab with rebar.		
2.5				2.5	13.6	4.8
	GP-39-2.5-4.5			Black (GLEY12.5/N) fine-medium grained material, trace sub-rounded gravel, slightly shiny/iridescent. Material appears to be charcoal.		5.8
				4.0	12.1	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black (5YR2.5/1) silty fine sand, trace sub-rounded gravel, dry, loose.		5
				4.5	11.6	
5.0				SILTY SAND (SM): dark brown (10YR3/3) fine silty sand.		4.5
	GP-39-4.5-6.5 GP-39-5.5	SM		Color change to very dark gray at 5.5 feet bgs.		5.5
				6.5	9.6	
		CL		6.8 LOW PLASTICITY CLAY (CL): black silty clay.	9.3	6.7
				POORLY GRADED SAND (SP): very dark gray medium sand, trace coarse sand. Wet at 7 feet bgs.		
7.5	GP-39-6.5-8.5 GP-39-7.5					11.6
		SP				
	GP-39-8.5-10.5 GP-39-9.5					11.8
10.0						
	GP-39-10.5-11.5 GP-39-11			11.2	4.9	5.9
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark grayish brown (2.5Y3/2) silty clay with roots/organics, moist, stiff, slight organic odor.		
12.5						13.5
				13.0	3.1	
				Bottom of borehole at 13.0 feet.		

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GP-44

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/4/12 **COMPLETED** 10/9/12
GROUND ELEVATION 15.9 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 7.50 ft / Elev 8.40 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.2 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SP		POORLY GRADED SAND (SP): light brownish gray (10YR6/2) Gravelly fine-medium sand, trace coarse sand, trace silt, with organic root debris, dry, loose. Gravel is sub-angular to sub-rounded.	15.2	1.3
0.7				Solidified crushed concrete debris, very hard.	14.9	
1.0		SP		POORLY GRADED SAND (SP): gray (2.5Y6/1) fine-medium sand with sub-rounded to sub-angular fine gravel, trace coarse sand, trace silt, dry, loose.		2.1
2.0					13.9	0.8
2.1		GP		POORLY GRADED GRAVEL WITH SAND (GP): coarse-sandy sub-rounded to sub-angular fine gravel.	13.8	2.5
2.5				POORLY GRADED SAND WITH SILT (SP-SM): black (2.5Y2.5/1) silty fine sand with sub-rounded to sub-angular fine gravel, trace coarse sand, moist, loose. Color change to black (2.5Y2.5/2) at 2.7 feet bgs. No gravel below 3 feet bgs.		3
	GP-44-2-4.8	SP-SM				2.9
						1.2
						2.5
5.0				One piece dark reddish brown (2.5YR2.5/3) wood debris, slight organic odor at 4.8 feet bgs.		3.2
	GP-44-4.8-6.8 / GP-44-5.8					
6.3					9.7	0.8
6.5		CL		LOW PLASTICITY CLAY (CL): silty clay.	9.4	
				POORLY GRADED SAND WITH SILT (SP-SM): black (2.5Y2.5/1) silty fine sand with sub-rounded to sub-angular fine gravel, trace coarse sand, moist, loose.		0.8
7.5				▽ Wet at 7.5 feet bgs.		
	GP-44-6.8-8.8 / GP-44-7.8	SP-SM				0.7
						0.9
10.0	GP-44-8.8-11.1					0.9
10.8					5.1	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark brown silt with clay, with roots/organics, wet, stiff, slight organic odor.		0.8
12.5						1.3
13.0					2.9	2.3

Bottom of borehole at 13.0 feet.

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GP-45

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/4/12 **COMPLETED** 10/9/12
GROUND ELEVATION 15.56 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 7.00 ft / Elev 8.56 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.8 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				Elevation (ft)	
		GP		POORLY GRADED GRAVEL WITH SAND (GP): gray (2.5Y5/1) medium-sandy sub-angular to sub-roudned fine gravel, trace coarse sand, with roots/organics, dry.	0.6
				Very stiff at 1 foot bgs.	0.5
2.0				13.6	
2.5	GP-45-2-4.25	SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black (GLEY12.5/N) silty fine sand, trace sub-rounded fine gravel, with whitish clasts/clumps of unidentified material that crumble to silty almost clay-like grain size, slightly moist, loose. No whitish clasts/clumps, no gravel below 2.75 feet bgs.	0.8 0.8 3.3
				~3 inch length of weathered leather-like material and reddish wood clasts at 3.5 feet bgs. One clast of yellowish-white concrete-like material with one facet that appears to be saw-cut. Marine-like odor. Trace sub-rounded fine gravel at 4.3 feet bgs. Clasts of reddish-orange plastic-like material that appear to have been partially melted and re-solidified at 4.5 feet bgs.	3.1 3.4 2.7 1
5.0	GP-45-5.5				
				▽ Wet at 7 feet bgs.	0.1
7.5	GP-45-6.5-8.5 GP-45-7.5				0.2
	GP-45-8.5-9.5 GP-45-9				0.3
9.5		CL-ML		6.1	
				LOW PLASTICITY SILTY CLAY (CL-ML): very dark grayish brown (10YR3/2) silty clay with roots/organics.	0.4
				Bottom of borehole at 9.5 feet.	

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GP-46

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/31/12 **COMPLETED** 10/9/12
GROUND ELEVATION 15.34 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 6.90 ft / Elev 8.44 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.2 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		GP		0.3 POORLY GRADED GRAVEL WITH SAND (GP): brown (7.5YR3/1) sandy sub-angular to sub-rounded fine gravel with organic debris, dry, loose. Sand is fine grained.	15.1	1.1
				Fused concrete clasts, very hard.		0.6
2.5				2.5	12.8	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): dark brown (10YR3/3) fine sand with silt, trace sub-rounded gravel, with organic root material, dry, loose.		4.3
				Unidentified charcoal-like clasts to 1.5" at 3 feet bgs.		3.5
						4.4
				Color change to dark gray (10YR4/1) at 4.2 feet bgs.		4.3
						3.7
5.0				Color change to very dark grayish brown (10YR3/2), increased percentage of silt at 5 feet bgs.		3.9
				5.8	9.5	
		CL		6.0 LOW PLASTICITY CLAY (CL): brown silty clay.	9.3	1.9
	GP-46-5.2-7.2 GP-46-6.2			POORLY GRADED SAND (SP): medium-coarse sand with subangular fine gravel.		
				▽ Wet at 6.9 feet bgs.		2.1
7.5		SP		Soil is wet, sand is fine-medium at 7.25 feet bgs. Gravel decreases in frequency down to the silt layer.		
	GP-46-7.2-8.7 GP-46-8					1.9
				8.5	6.8	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark brown silty clay with roots/organics.		2.6
10.0				10.2	5.1	2.2

Bottom of borehole at 10.2 feet.

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GP-50

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/7/12 **COMPLETED** 10/11/12
GROUND ELEVATION 14.26 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING 5.90 ft / Elev 8.36 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.9 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SP		POORLY GRADED SAND (SP): very dark grayish brown (10YR3/2) silty fine-medium sand, trace coarse sand, trace 3" sub-rounded cobbles, with organic material, dry, loose.		2.3
	GP-50-1			1.0	13.3	2.1
				Angular cobbles to 8". Quarry spalls.		
				1.5	12.8	
				Black (2.5Y2.5/1) fine-grained charcoal-like material, dry, loose. Charcoal-like material crumbles to clay-like grain size.		3.8
				1.8	12.4	
2.5		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM) dark gray (10YR4/1) silty fine sand, trace reddish wood debris, trace charcoal-like material, trace clay clumps, dry, loose.		2.1
				3.3	11.0	4
		ML		SILT (ML): very dark gray (2.5Y3/1) sandy silt with clay clumps, slightly moist. Sand is fine grained.		
				3.7	10.6	4.9
				SAND WITH SILT (SM): silty medium sand with slightly sweet unidentified chemical odor.		4
5.0						3.1
		SM		▽ Wet at 5.9 feet bgs.		3.5
	GP-50-5.9-7					0.3
	GP-50-6.9					
7.5	GP-50-7.25 GP-50-7-7.75					0.3
				7.8	6.5	
				LOW PLASTICITY SILTY CLAY (CL-ML): mottled dark brown and black silty clay with roots/bark/organic matter, wet, stiff.		1.5
		ML				0.9
10.0						14
				10.9	3.4	1.7
				Bottom of borehole at 10.9 feet.		

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GP-53

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/10/12 **COMPLETED** 10/10/12
GROUND ELEVATION 13.99 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.25 ft / Elev 8.74 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.3 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				8.75" concrete slab.		0.2
				0.7	13.3	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): very dark grayish brown (2.5Y3/2) silty medium-coarse sand with sub-rounded fine gravel, with silt, slightly moist, loose. Road base material.		1.2
				2.1	11.9	
2.5				Sub-angular cobbles to 5". Quarry spalls.		0.2
				3.0	11.0	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black (2.5Y2.5/1) silty fine-medium sand, trace fine gravel, slightly moist, loose, marine-like odor.		2.1
	GP-53-4					2.6
				No gravel below 4.6 feet bgs.		2.1
5.0	GP-53-5			▽ Wet at 5.25 feet bgs.		3.6
						3.8
	GP-53-5.3-7.3 GP-53-6.3					0.4
7.5						4.2
	GP-53-7.3-9.3 GP-53-8.3					5.3
				9.1	4.9	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): mottled brown and black silty clay with roots/organics, with organic odor.		6.2
10.0				10.3	3.7	4.1
				Bottom of borehole at 10.3 feet.		

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GP-55

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/31/12 **COMPLETED** 10/8/12
GROUND ELEVATION 15.75 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 8.50 ft / Elev 7.25 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.4 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SP		0.2 POORLY GRADED SAND (SP): medium-coarse sand, trace fine sub-angular gravel, trace silt, trace organic debris, dry, loose.	15.6	1.6
		GP		POORLY GRADED GRAVEL (GP): grayish brown (10YR5/2) sandy fine sub-angular gravel, dry, loose. Sand is medium grained.		1.3
				2.0	13.8	
		SM		SILTY SAND (SM): dark gray (2.5Y4/1) sandy silt, trace sub-angular gravel, slightly moist, loose. Sand is fine grained.		4.5
2.5				2.5	13.3	
	GP-55-2.5-4			Black fine-medium grained charcoal-like material, dry, loose. Material makes crinkly sound against ziplock bag.		4.5 4.6 4.8
				4.0	11.8	
	GP-55-4-4.4	SM		SILTY SAND (SM): very dark gray (7.5YR3/1) fine silty sand, slightly moist, loose.		5.1
5.0	GP-55-4.4-6.4					1.1
				5.6	10.2	
		CL		6.0 LOW PLASTICITY CLAY (CL): very dark gray clay, slightly moist, stiff.	9.8	
		SP		POORLY GRADED SAND (SP): fine-medium sand, slightly moist, loose.		1.8
7.5	GP-55-6.4-8.4					1.2
	GP-55-8.4-10.4			▽ Wet at 8.5 feet bgs.		5
10.0				10.3	5.5	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark grayish brown (10YR4/2) silty clay with roots/organics, moist, stiff, slight organic odor.		1.5
12.5				13.0	2.8	3.2

Bottom of borehole at 13.0 feet.

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GP-56

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/30/12 **COMPLETED** 10/10/12
GROUND ELEVATION 16.37 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING 7.00 ft / Elev 9.37 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.2 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		SM		SILTY SAND (SM): brown (10YR5/3) silty fine sand with sub-angular fine-coarse gravel, with roots/organic matter, dry, loose.		1.4
				What appears to be a ~6 inch broken rubber gasket at 1 foot bgs.		17.9
2.5						0.6
				Color change to dark gray at 2.5 feet bgs.		
				3.3	13.1	
	GP-56-3.3-3.75			Color change to black (GLEY12.5/N) at 3.3 feet bgs.		3.1
	GP-56-3.75-4.2			Reddish-orange plastic/resin-type vesicular clast at 3.5 feet bgs.		
	GP-56-4.2-5.2			Reddish brown fine-grained fibrous material. Appears to be sawdust/wood debris.		11.5
5.0						
				5.2	11.2	
				Trace clumps of bentonite at 5 feet bgs.		10.1
	GP-56-5.2-7.2			SILTY SAND (SM): black silty fine sand, slightly moist, slightly stiff.		8.2
		SM		▽ Wet at 7 feet bgs.		7.2
7.5						
	GP-56-7.2-9.5					8.1
				9.2	7.2	8.1
				LOW PLASTICITY SILTY CLAY (CL-ML): very dark brown (7.5YR2.5/3) silty clay with roots/organics, slight organic odor.		
10.0						7.2
		CL-ML				5.1
12.5						4.1
				13.2	3.2	3.1
				Bottom of borehole at 13.2 feet.		

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GP-57

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/31/12 **COMPLETED** 10/10/12
GROUND ELEVATION 17.18 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 8.50 ft / Elev 8.68 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				Solidified crushed concrete debris, very stiff.		0.9
				1.0	16.2	
		SP		POORLY GRADED SAND (SP): brown (5YR4/1) silty fine sand with coarse sand, slightly moist, loose. With silt, with trace fine subrounded gravel at 1.5 feet bgs. Otherwise, same as above.		2.7
						3.1
2.5	GP-57-1.5-3.5			2.5	14.7	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): grayish brown (5YR4/2) fine sand, trace silt, trace coarse sand, trace fine sub-rounded gravel, slightly moist, loose.		2.9
				3.0	14.2	
				Sub-rounded 4" cobble at 2.5 feet bgs.		3.9
				POORLY GRADED SAND WITH SILT (SP-SM): greenish black (GLEY12.5/10Y) silty fine sand, trace medium sand, trace fine sub-angular gravel, slightly moist, loose. Color change to medium brown (5YR3/2), trace roots/organics at 3.5 feet bgs.		3.2
5.0	GP-57-4-6.5	SP-SM				4.1
				6.3	10.9	3.7
	GP-57-6.5-6.8	ML		SILT (ML): dark grayish brown silty clay, moist, stiff.		
				6.8	10.4	
7.5	GP-57-6.8-8.8	SP		POORLY GRADED SAND (SP): very dark gray medium sand, trace coarse sand, moist, loose.		2.8
				Sand grades to medium grained, no coarse sand at 8 feet bgs.		3
				▽ Wet at 8.5 feet bgs.		
10.0	GP-57-8.8-10.8					2.1
						2.8
				11.0	6.2	
	GP-57-10.8-12	CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark brown, silty clay, with roots/organics, slight organic odor.		3.1
12.5						4.1
				13.0	4.2	5

Bottom of borehole at 13.0 feet.

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GP-58

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/31/12 **COMPLETED** 10/8/12
GROUND ELEVATION 17.27 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 7.75 ft / Elev 9.52 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.25 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SP		0.3 POORLY GRADED SAND (SP): brown (7.5YR5/2) fine-medium sand, trace coarse sand, trace sub-rounded gravel, trace silt, with roots/organic debris.	17.0	1.2
				Fused concrete clasts, very hard.		
		SM		1.3 SILTY SAND (SM): very dark gray (7.5YR3/1) silty fine sand.	16.0	0.8
				1.8 Reddish brown (2.5YR4/3) saw dust/wood debris.	15.5	1.6
2.5	GP-58-1.75-3.75			Color change to yellowish brown (10YR5/2), TPH-like odor at 2.5 feet bgs.		5.1 7 7.2
				3.8	13.5	12.5 12
		SM		SILTY SAND (SM): black (5YR2.5/1) silty fine sand, trace wood chip pieces to 2.5 inches, slight TPH-like odor, moist, loose. Clast of treated wood, appears to have ~0.25 inch pyrite crystals at 4.25 feet bgs.		1.9
5.0	GP-58-4.25-6.25					8.5
						4.2
	GP-58-6.25-8.25			Clast of untreated wood at 6.75 feet bgs.		3.7
7.5				▽ Wet at 7.75 feet bgs.		7.1
	GP-58-8.25-10.5					7.8
10.0						4
				11.3	6.0	2.8
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): black silty clay with roots/organics, slight organic odor.		
12.5				12.5	4.8	5.8
				Bottom of borehole at 12.5 feet.		

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GP-59

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 8/31/12 **COMPLETED** 10/10/12
GROUND ELEVATION 16.92 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 8.50 ft / Elev 8.42 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.25 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		SP		POORLY GRADED SAND (SP): brown (10YR5/3) fine-medium sand with silt, trace coarse sand, trace sub-angular fine gravel, dry, loose.		0.4
				Color change to dark gray (7.5YR4/1) at 1 foot bgs.		1.2
				2.3	14.7	2.2
2.5	GP-59-2.3-3.9	SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): black (5Y2.5/1) silty fine sand, trace sub-angular fine gravel, trace organic material, dry, loose. Sand is medium, trace silt, trace coarse sand at 2.8 feet bgs.		4.5
						0.9
				3.9	13.0	3
				Dark reddish brown (2.5YR3/3) sawdust-like material with black (10YR2/1) fine sand.		3.1
5.0	GP-59-4.25-6.25			5.0	11.9	
		SM		SILTY SAND (SM): very dark gray (7.5YR3/1) silty fine sand with wood debris, moist, loose.		3.7
						4.2
7.5	GP-59-6.25-8.25			Sand grades to fine-medium at 7 feet bgs.		5.1
				▽ Wet at 8.5 feet bgs.		6
	GP-59-8.25-10.25					4.1
10.0						1.7
	GP-59-10.25-11.5			Color change to dark brown, increased percentage of silt, with thick grass/hay-like organic material at 10.25 feet bgs. With yellowish flake-like debris (paint chips?) at 10.5 feet bgs.		0.8
				11.3	5.7	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): brown (7.5YR4/3) silty clay with roots/organics and organic odor.		1.2
12.5				13.0	3.9	
				Bottom of borehole at 13.0 feet.		1.4

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/1/13 15:43 - F:\PROJECTS\155129 - REICHHOLD-GLACIER SITE REMEDIATION (2012)\PH 11 - UPLANDS SOIL SAMPLING\DRAFT GINT LOGS\REICHHOLD GLACIER.GPJ

ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-61

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/6/12 **COMPLETED** 10/12/12
GROUND ELEVATION 13.27 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING 4.50 ft / Elev 8.77 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.5 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0				0.2 Grassroots to 2"	13.1	
	GP-61-0-2	SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): grayish brown (10YR5/2) silty fine-medium sand, trace sub-angular fine gravel, with roots/organics, dry, loose.		1.8
				With trace coarse sand grains at 1.1 feet bgs.		2.3
				Color change to very dark gray (7.5YR3/1), no gravel, no roots/organics at 1.5 feet bgs.		3.8
				Trace subrounded gravel at 2 feet bgs.		4
2.5						4.1
	GP-61-2.5-4.5					4
						4.6
						4.4
				▽ Wet at 4.5 feet bgs.		4.1
5.0						3.8
	GP-61-4.5-7.5					
	GP-61-6					1.6
7.5						1.3
	GP-61-7.5-8.5			8.0	5.3	
	GP-61-8	CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark gray (10YR3/1) silty clay with roots/organics, wet, stiff, organic-like odor.		1.8
				9.5	3.8	1.2

Bottom of borehole at 9.5 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/1/13 15:43 - F:\PROJECTS\155129 - REICHHOLD-GLACIER SITE REMEDIATION (2012)\PH 11 - UPLANDS SOIL SAMPLING\DRAFT GINT LOGS\REICHHOLD GLACIER.GPJ

ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-62

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/5/12 **COMPLETED** 10/12/12
GROUND ELEVATION 13.09 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 4.90 ft / Elev 8.19 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.9 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
	GP-62-1	SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): brown (10Y5/3) silty fine sand, trace coarse sand, trace sub-angular to sub-rounded gravel, with organic roots, dry, loose.		1.5
						1.2
				Color change to dark grayish brown (10YR4/2), with mottled orange/brown clay clumps at 1.5 feet bgs.		3.5
				Sand is predominantly medium grained at 2 feet bgs.		1.5
2.5				Color change to very dark gray (10YR3/1) at 2.5 feet bgs.		1.6
				Slightly moist, no clay clumps at 3 feet bgs.		2.2
				Moist, trace reddish orange sand grains at 3.5 feet bgs.		1.9
						2.1
						2.5
5.0				▽ Wet at 4.9 feet bgs.		2.2
	GP-62-5-6.7 GP-62-5.8					2.1
						2.1
	GP-62-6.7-7.7 GP-62-7.2			7.2	5.9	4.1
7.5		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark gray (7.5YR4/2) silty clay with roots/organics, wet, stiff, organic odor.		
						3.2
						2.1
10.0				10.0	3.1	
				Bottom of borehole at 10.0 feet.		2.1

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/1/13 15:43 - F:\PROJECTS\155129 - REICHHOLD-GLACIER SITE REMEDIATION (2012)\PH 11 - UPLANDS SOIL SAMPLING\DRAFT GINT LOGS\REICHHOLD GLACIER.GPJ

ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-63

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/6/12 **COMPLETED** 10/12/12
GROUND ELEVATION 14.65 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING 4.00 ft / Elev 10.65 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): gray (2.5Y6/1) gravelly fine-medium sand with silt, trace coarse sand, dry, loose.		1.7
0.8					13.8	
		GP		POORLY GRADED GRAVEL (GP): gravel, trace medium sand, trace rock flour, sub-rounded to sub-angular, dry, loose.		2.2
						1.4
2.5						
						1.2
						1.2
				▽ Wet at 4 feet bgs.		1.2
						0.4
5.0	GP-63-4-6 GP-63-5					1.6
						1.8
	GP-63-6-8 GP-63-7					1.6
7.5						
	GP-63-8-9 GP-63-8.5					1.3
9.0					5.7	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark brown silty clay with roots/organics, wet, stiff, organic odor.		1.5
10.0						3.1
11.0					3.7	
				Bottom of borehole at 11.0 feet.		

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/1/13 15:43 - F:\PROJECTS\155129 - REICHHOLD-GLACIER SITE REMEDIATION (2012)\PH 11 - UPLANDS SOIL SAMPLING\DRAFT GINT LOGS\REICHHOLD GLACIER.GPJ

ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-64

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/5/12 **COMPLETED** 10/12/12
GROUND ELEVATION 12.72 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
AT TIME OF DRILLING 4.40 ft / Elev 8.32 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 4.3 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): very dark grayish brown (10YR3/2) silty fine-medium sand with sub-angular gravel, trace coarse sand grains, with organic matter, dry, loose.		1.6
						0.6
						2.7
				Color change to dark gray (10YR4/1) at 2 feet bgs.		2.8
2.5				Color change to very dark gray (10YR3/1) at 2.5 feet bgs.		1
						2.9
				Moist at 3.5 feet bgs.		3.4
						3.5
				▽ Wet at 4.4 feet bgs.		
5.0	GP-64-4.3-6 GP-64-5.1					3.2
						2.1
	GP-64-6-7 GP-64-6.5		6.5		6.2	
		CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): dark brown mottled with black silty clay with roots/organics, organic odor.		3.2
7.5						4.1
			9.3		3.4	5.2
				Bottom of borehole at 9.3 feet.		1.2

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/1/13 15:43 - F:\PROJECTS\155129 - REICHHOLD-GLACIER SITE REMEDIATION (2012)\PH 11 - UPLANDS SOIL SAMPLING\DRAFT GINT LOGS\REICHHOLD GLACIER.GPJ

ERM-West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-65

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/5/12 **COMPLETED** 10/12/12
GROUND ELEVATION 13.25 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 3.50 ft / Elev 9.75 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 3.5 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		GP		POORLY GRADED GRAVEL (GP): dark brown (10YR3/3) sandy fine to coarse gravel with angular to sub-angular cobbles to 4.5 inches, with root debris, dry, loose. Sand is fine-medium grained. Railroad ballast material.		1.7
						2
				1.5	11.8	
		SP-SM		POORLY GRADED SAND WITH SILT (SP-SM): very dark grayish brown (10YR3/2) silty fine-medium sand, trace sub-rounded to sub-angular gravel, slightly moist, loose.		2.5
				2.1	11.2	
		CL		2.2 LOW PLASTICITY CLAY (CL): silty clay, trace fine sand, moist, stiff.	11.1	3.1
2.5		ML		SILT (ML): black (2.5Y/2.5/1) sandy silt, trace coarse sand, moist, loose. Sand is fine grained.		2.9
						2.6
				▽ Wet 3.5 feet bgs.		1.7
				4.1	9.2	
		SM		SAND WITH SILT (SM): black silty fine-medium sand, trace coarse sand grains, wet, moderately stiff.		1.5
5.0	GP-65-4-6 GP-65-5					1.1
				6.5	6.8	1.1
	GP-65-6-7 GP-65-6.5	CL-ML		LOW PLASTICITY SILTY CLAY (CL-ML): very dark brown silty clay with roots/organics, wet, stiff.		1.2
7.5						1
				9.0	4.3	1

Bottom of borehole at 9.0 feet.

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1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
Telephone: 425-462-8591

GP-66

CLIENT Glacier Northwest, Inc. and Reichhold, Inc.
PROJECT NAME Glacier Northwest, Inc. - Reichhold, Inc. Site
PROJECT NUMBER 0155129.11
PROJECT LOCATION Seattle, Washington
DATE STARTED 9/10/12 **COMPLETED** 10/11/12
GROUND ELEVATION 14.03 feet **HOLE SIZE** 4 inches
CONTRACTOR Cascade Drilling Inc. (Woodinville, WA)
GROUND WATER LEVELS:
EQUIPMENT Direct Push
▽ **AT TIME OF DRILLING** 5.75 ft / Elev 8.28 ft
LOGGED BY M. Crandell **CHECKED BY** M. Crandell
AT END OF DRILLING ---
NOTES Hand auger/air knife to 5.9 feet bgs
AFTER DRILLING ---

DEPTH (ft)	SAMPLE IDENTIFICATION	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (ft)	PID (ppm)
0.0						
		SM		SILTY SAND (SM): dark brown (7.5YR3/2) silty fine-medium sand with sub-angular to sub-rounded fine gravel, slightly moist, loose.		1.1
				With mottled orange/brown clay clumps at 1 foot bgs.		4.5
				Two subrounded cobbles to 4 inches at 1.5 feet bgs.		4.5
				Clast of angular asphalt 2.5 inches long at 1.75 feet bgs.		
2.5				Color change to brown (7.5YR4/2), trace fibrous untreated wood fragments ~0.25 inches long, with clumps of brownish gray clay at 2 feet bgs.		4.1
			2.6		11.5	
			2.9	Angular 5 inch long clast of cinder block material at 2.5 feet bgs.		2.7
				Concrete clasts 5-8 inches in length at 2.6 feet bgs.	11.1	
				No recovery.		2.8
		SM		SILTY SAND (SM): dark brown (7.5YR3/2), fine-medium sand, with silt, with orange/brown clay clumps, trace coarse sand, moist.		2.9
			4.0		10.0	
				POORLY GRADED SAND (SP): black (7.5YR2.5/1) fine-medium sand, trace coarse sand, trace silt.		2.7
						2.7
5.0						2.1
				▽ Wet at 5.75 feet bgs.		2.1
		SP				0.1
	GP-66-5.75-7.75					
						0.1
7.5						
	GP-66-7.75-8.4		8.2		5.8	0.1
				LOW PLASTICITY SILTY CLAY (CL-ML): silty clay with roots/organics, wet, stiff, organic odor.		
		CL-ML				0.4
10.0						
						0.4
			10.8		3.3	0.9

Bottom of borehole at 10.8 feet.

GENERAL BH / TP / WELL - GINT STD US.GDT - 3/1/13 15:43 - F:\PROJECTS\155129 - REICHHOLD-GLACIER SITE REMEDIATION (2012)\PH 11 - UPLANDS SOIL SAMPLING\DRAFT GINT LOGS\REICHHOLD GLACIER.GPJ

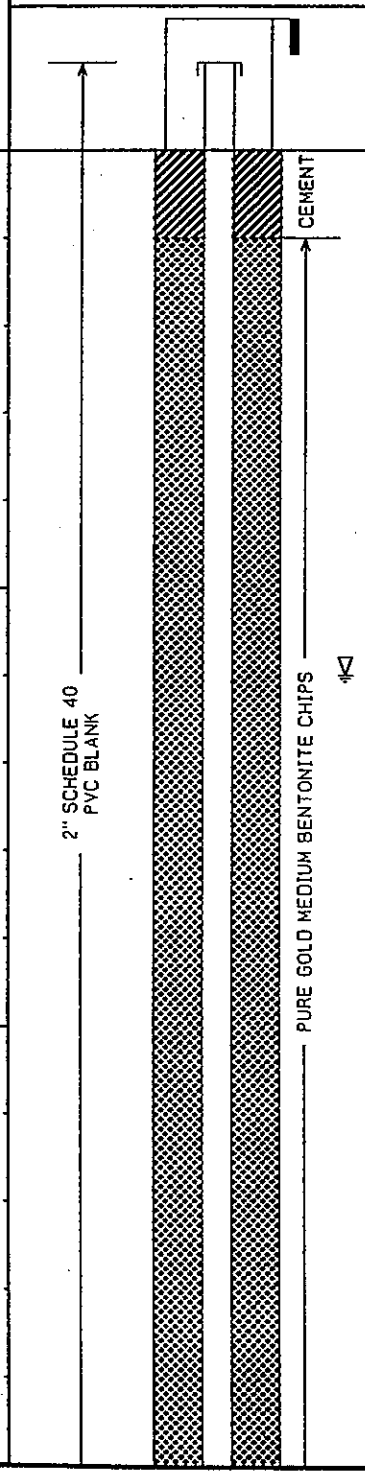
Monitoring Well Logs

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-1D

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of first pilot plant		DRILLING CO.: Cascade Drilling
START DATE: 12/06/95 TIME: 0820	BORING ID: 8"	DRILLER: S. Krueyer
COMPLETION DATE: 12/06/95 TIME: 0910	TOTAL DEPTH: 26.5'	RIG TYPE: CME
WATER LEVEL DURING DRILLING: 6' bgs	PVC STICK-UP: 2.18'	METHOD: HSA
SURFACE ELEV.: 5.6' MSL	MP ELEV.: 7.76' TOC PVC	LOGGED BY: A. Como



DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete; some black sand					
5	SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; moist to wet at 6'	SS		15 17 18		
				SS		8 9 9		
	ML		SILT: Slightly clayey; grey with some brown; organic material; low to medium plasticity; moist to wet					
10				SS		3 4 4		
			12.5' – grades to silt (less clay); some black sand on tip of sampler	SS		6 10 10		
15	SW							

REMARKS: SS = Split Spoon

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BORING/WELL INSTALLATION LOG

Monitoring Well MW-1D

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Suite 207
Seattle, WA 98134
(206) 624-9349

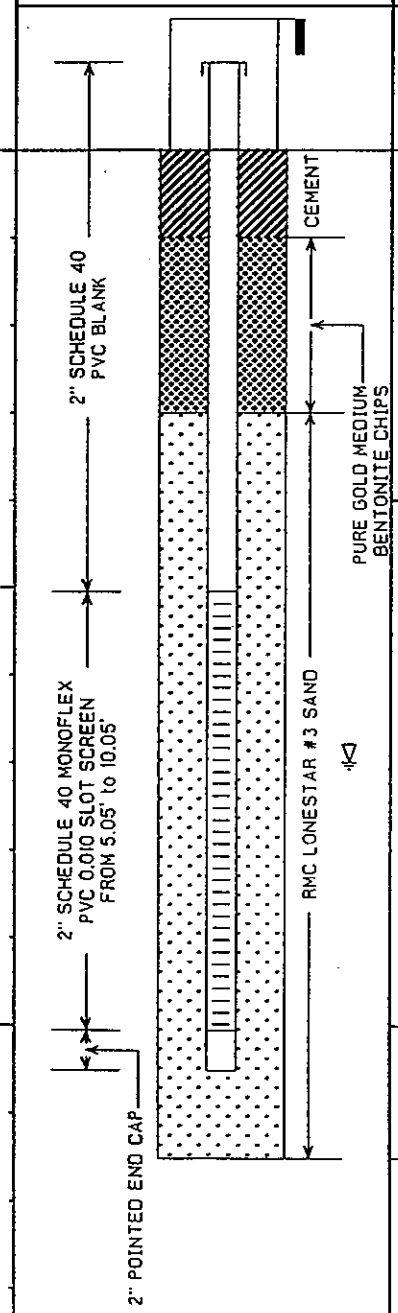
DEPTH (in feet)	WELL CONSTRUCTION	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
	2" SCHEDULE 40 PVC BLANK	SW		SAND: Fine to medium grained; well graded; black; some fine gravel; moist to wet	SS		8 5 9		
	2" SCHEDULE 40 MONOFLEX PVC 0.010 SLOT SCREEN FROM 17.55' to 22.55'				SS		12 14 15		
20	RMC LONESTAR #3 SAND			20' – grades to fine to coarse sand with fine gravel	SS		12 15 16		
					SS		10 12 14		
25	2" POINTED END CAP			25' – becomes wet	SS		12 15 18		
				Total Depth = 26.5 ft.					
30									

REMARKS: SS = Split Spoon

BORING/WELL INSTALLATION LOG
Monitoring Well MW-2S

RETEC
1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold			CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former impoundment area			DRILLING CO.: Cascade Drilling
START DATE: 12/06/95 TIME: 1135	BORING ID: 8"		DRILLER: S. Krueyer
COMPLETION DATE: 12/06/95 TIME: 1210	TOTAL DEPTH: 11.5'		RIG TYPE: CME
WATER LEVEL DURING DRILLING: 7' bgs	PVC STICK-UP: 1.92'		METHOD: HSA
SURFACE ELEV.: 6.1' MSL	MP ELEV.: 8.02' TOC PVC		LOGGED BY: A. Como



DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete					
5	SP		SAND: Fine grained; poorly graded; black with some reddish brown grains; dry to moist;	SS		13 13 15		
			7' – becomes moist to wet	SS		9 11 15		
				SS		7 9 11		
10	CL		SILTY CLAY: Brown to grey; low to medium plasticity; organic material; moist	SS		9 11 13		
			Total Depth = 11.5 ft.					
15								

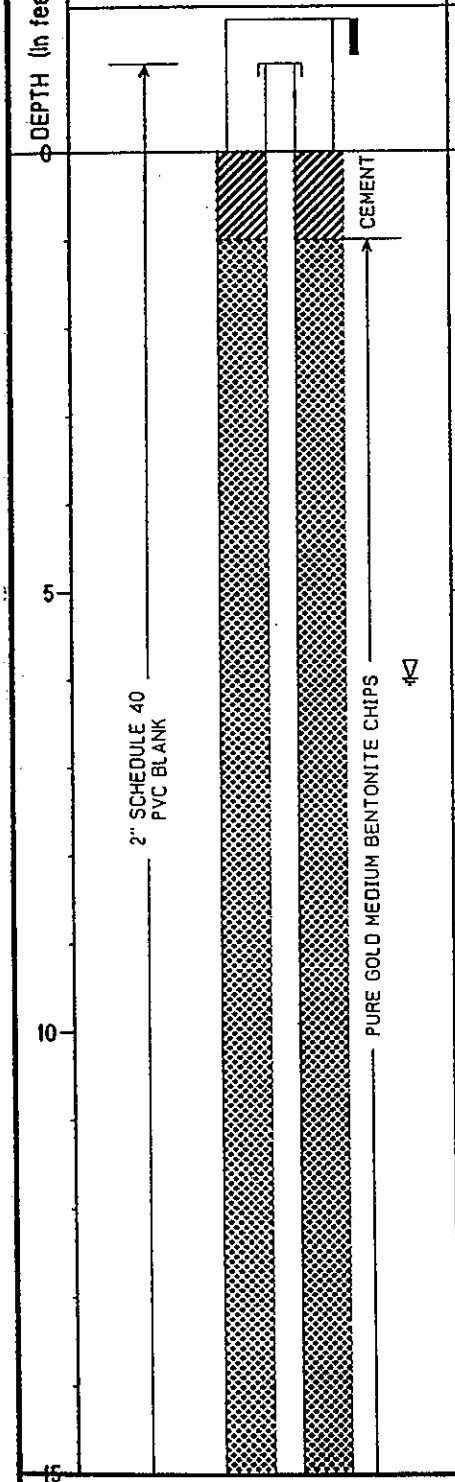
REMARKS: SS = Split Spoon
■ = Analytical Sample

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BORING/WELL INSTALLATION LOG
Monitoring Well MW-2D

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former impoundment area		DRILLING CO.: Cascade Drilling
START DATE: 12/06/95 TIME: 1030	BORING ID: 8"	DRILLER: S. Krueyer
COMPLETION DATE: 12/06/95 TIME: 1100	TOTAL DEPTH: 24'	RIG TYPE: CME
WATER LEVEL DURING DRILLING: 6' bgs	PVC STICK-UP: 1.76'	METHOD: HSA
SURFACE ELEV.: 6.3' MSL	MP ELEV.: 8.06' TOC PVC	LOGGED BY: A. Como



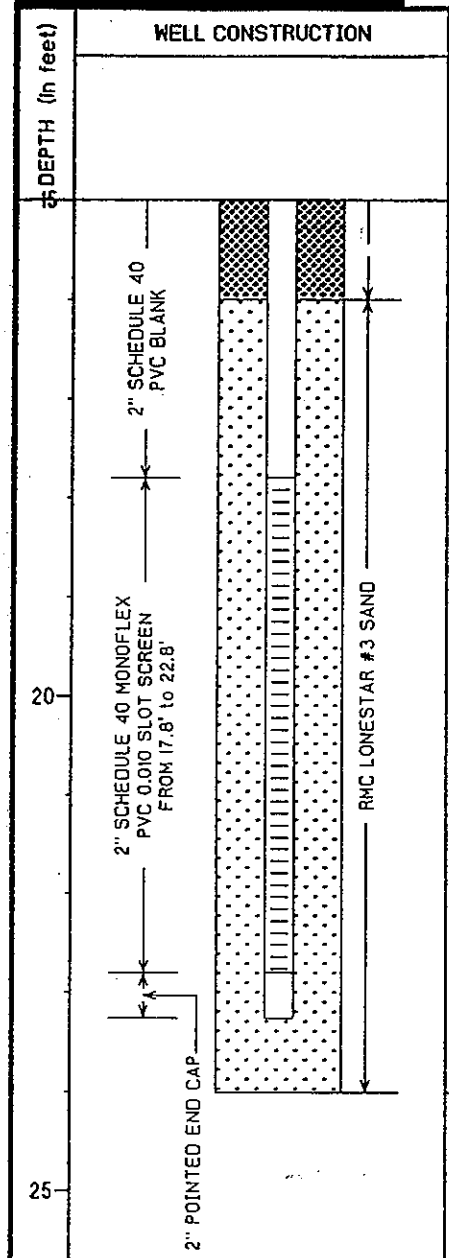
DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete; sawdust at 4'					
5	SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; moist to wet at 6'	SS		22 24 26		
	SP		SAND: Fine grained; poorly graded; black with some reddish brown grains; wet	SS		22 12 13		
10	CL		SILTY CLAY: Some organic material; low to medium plasticity; moist	SS		6 6 6		
	SP		SAND: Fine grained; poorly graded; grey to black; moist to wet	SS		8 15 16		
15	ML							

REMARKS: SS = Split Spoon
■ = Analytical Sample

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BORING/WELL INSTALLATION LOG
Monitoring Well MW-2D

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349



SOIL DESCRIPTION	U.S.C.S.	LITHOLOGY	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
SILT: Grey; moist to wet	ML		SS		10 15 16		
SAND: Fine to medium grained; well graded; black with some reddish brown grains; wet	SW		SS		18 20 22		
			SS		20 21 22		
			SS		15 17 18		
Total Depth = 24 ft.							

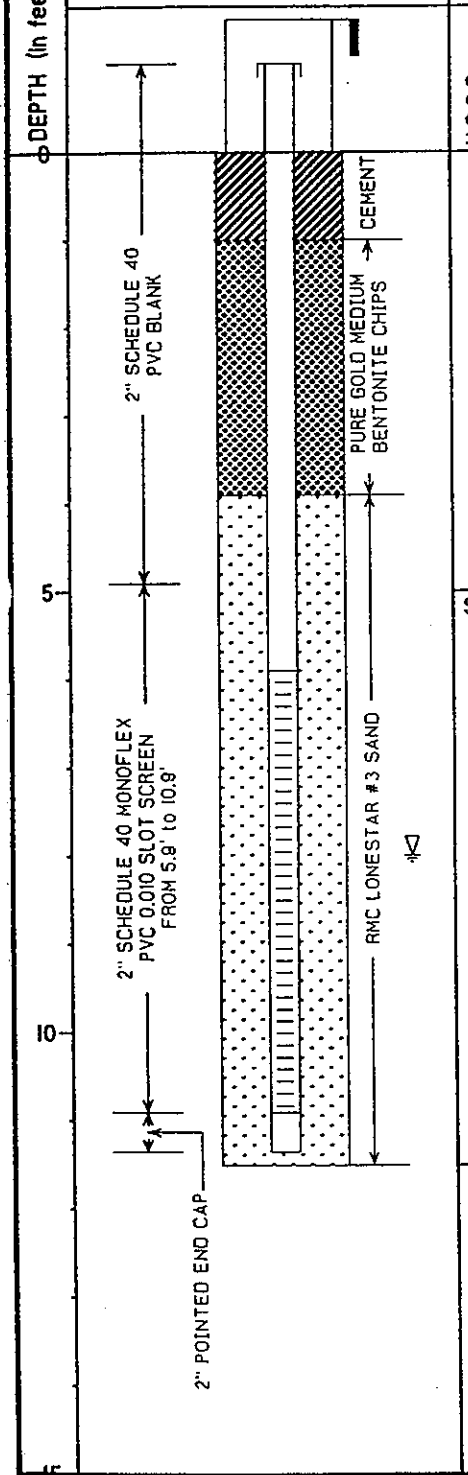
REMARKS: SS = Split Spoon
■ = Analytical Sample

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BORING/WELL INSTALLATION LOG
Monitoring Well MW-3S

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold	
LOCATION: Seattle, WA Southern property boundary		DRILLING CO.: Cascade Drilling	
START DATE: 12/06/95 TIME: 1615	BORING ID: 8"	DRILLER: S. Krueyer	
COMPLETION DATE: 12/06/95 TIME: 1625	TOTAL DEPTH: 11.5'	RIG TYPE: CME	
WATER LEVEL DURING DRILLING: 8' bgs	PVC STICK-UP: 2.19'	METHOD: HSA	
SURFACE ELEV.: 8' MSL	MP ELEV.: 10.19' TOC PVC	LOGGED BY: A. Como	



DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete; sawdust at 3-5'					
5	SP		SAND: Fine grained; poorly graded; black with some reddish brown grains; dry	SS		12 15 16		
			8' – becomes moist to wet	SS		12 15 17		
10				SS		12 14 17		
			Total Depth = 11.5 ft.					
15								

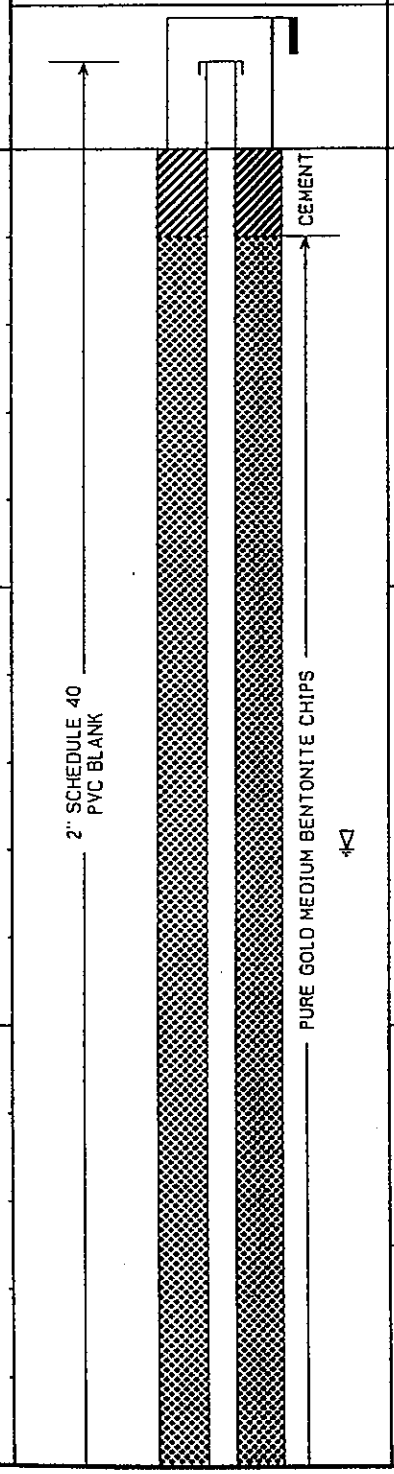
REMARKS: SS = Split Spoon

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-3D

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Southern property boundary		DRILLING CO.: Cascade Drilling
START DATE: 12/06/95 TIME: 1430	BORING ID: 8"	DRILLER: S. Krueyer
COMPLETION DATE: 12/06/95 TIME: 1500	TOTAL DEPTH: 25.5'	RIG TYPE: CME
WATER LEVEL DURING DRILLING: 8' bgs	PVC STICK-UP: 2.19'	METHOD: HSA
SURFACE ELEV.: 7.9' MSL	MP ELEV.: 10.09' TOC PVC	LOGGED BY: A. Como



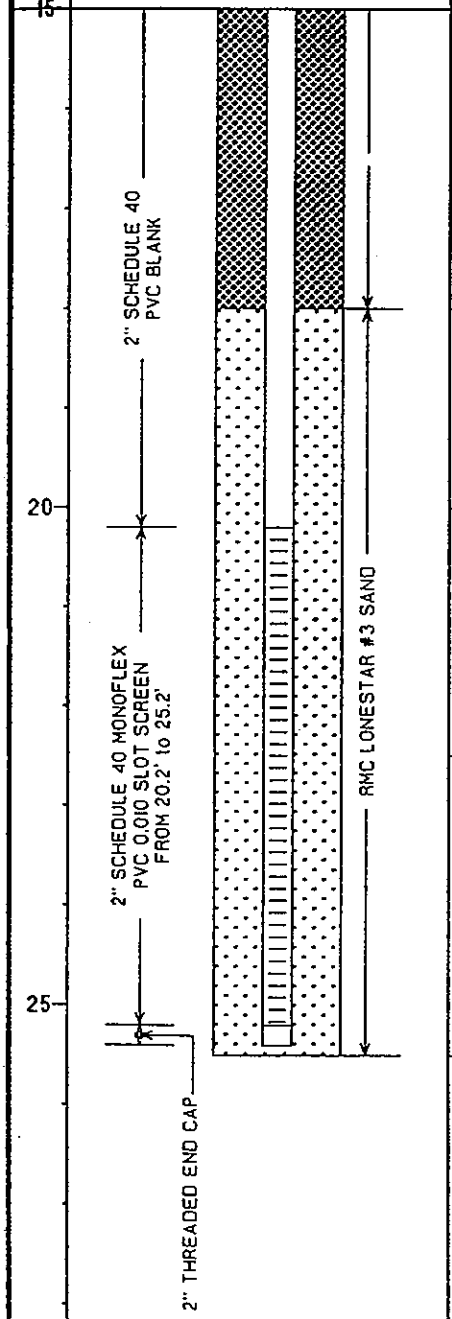
DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete; sawdust at 3-5'					
5	SP		SAND: Fine grained; poorly graded; black with some reddish brown grains; dry	SS		12 15 16		
				SS		12 15 17		
			8' - becomes moist to wet					
10	SP SW		SAND: Fine to medium grained; poorly to well graded; black; wet	SS		12 14 17		
	ML		CLAYEY SILT: Grey to brown; no to low plasticity; organic material; dry to moist	SS		4 7 7		
15								

REMARKS: SS = Split Spoon

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-3D

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349



DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0	ML			SS		7 8 8		
			17.5' – becomes less clayey	SS		7 8 8		
	SP		SAND: Fine grained; poorly graded; black with some reddish brown grains; moist to wet					
20	SP SM		SAND WITH SILT: Fine grained sand with some interbedded silt; poorly graded; black with some reddish brown grains; wet	SS		13 15 16		
	SW		SAND: Fine to medium grained with some coarse sand; well graded; black with some reddish brown grains; few pieces of fine gravel; wet	SS		12 15 17		
25			Total Depth = 25.5 ft.					
30								

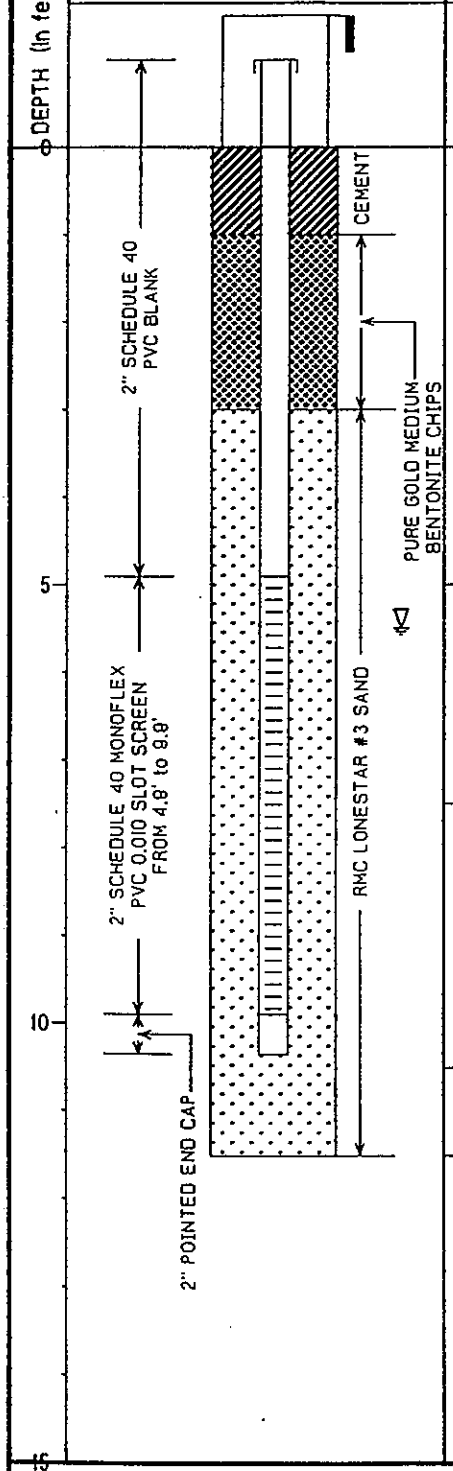
REMARKS: SS = Split Spoon

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-4S

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of former tank farm #1		DRILLING CO.: Cascade Drilling
START DATE: 12/06/95 TIME: 1250	BORING ID: 8"	DRILLER: S. Krueyer
COMPLETION DATE: 12/06/95 TIME: 1305	TOTAL DEPTH: 11.5'	RIG TYPE: CME
WATER LEVEL DURING DRILLING: 5.5' bgs	PVC STICK-UP: 2.52'	METHOD: HSA
SURFACE ELEV.: 6.9' MSL	MP ELEV.: 9.42' TOC PVC	LOGGED BY: A. Como



DEPTH (ft)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete					
5	SP		SAND: Fine grained; poorly graded; thin grey silt layer at 6"; black with some reddish brown grains; moist to wet at 5.5'	SS		12 15 18		
	SP SW		SAND: Fine to medium grained; poorly to well graded; black with some reddish brown grains; wet	SS		10 12 15		
10	ML		SILT: Slightly clayey; brown to grey; no to low plasticity; organic material; dry to moist	SS		12 12 15		
			Total Depth = 11.5 ft.					
15								

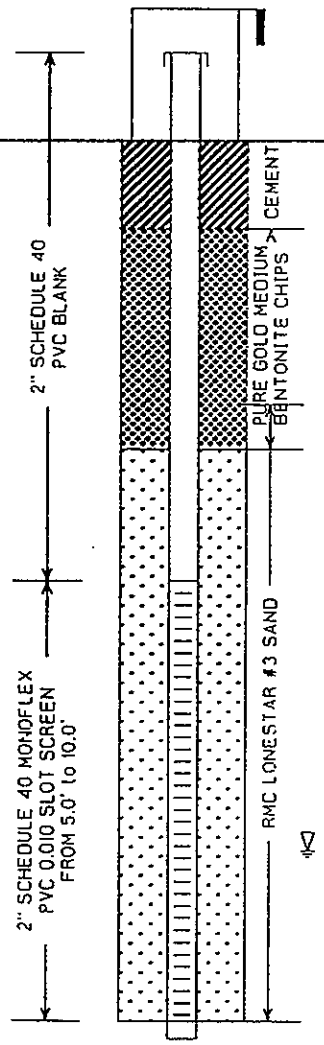
REMARKS: SS = Split Spoon
■ = Analytical Sample

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-5S

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of former tank farm #1		DRILLING CO.: Cascade Drilling
START DATE: 04/10/96 TIME: 0930	BORING ID: 8"	DRILLER: Brent
COMPLETION DATE: 04/10/96 TIME: 1000	TOTAL DEPTH: 10.0'	RIG TYPE: CME 55
WATER LEVEL DURING DRILLING: 8.07' bgs	PVC STICK-UP: '	METHOD: HSA
SURFACE ELEV.: 'MSL	MP ELEV.: 'TOC PVC	LOGGED BY: G. Sega



DEPTH (in feet)	WELL CONSTRUCTION	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0				FILL: Grey gravel; pieces of concrete; dry					
5		GW		SANDY GRAVEL: With roots and grass; tan to brown; dry	SS			50	
		SP		SAND: Medium grained; poorly sorted; dark brown with some reddish brown grains; dry to moist					
				7.5' – becomes wet Total Depth = 10.0 ft.	SS			100	
10									
15									

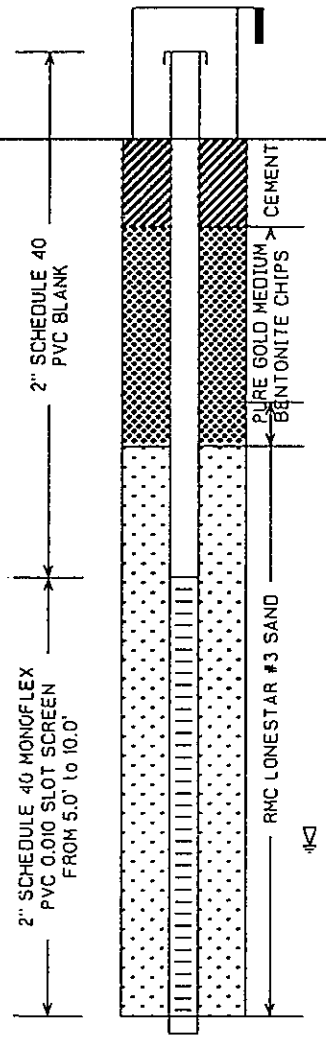
REMARKS: SS = Split Spoon
■ = Analytical Sample

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-6S

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of former tank farm #1		DRILLING CO.: Cascade Drilling
START DATE: 04/10/96 TIME: 0830	BORING ID: 8"	DRILLER: Brent
COMPLETION DATE: 04/10/96 TIME: 0900	TOTAL DEPTH: 10.0'	RIG TYPE: CME 55
WATER LEVEL DURING DRILLING: 8.07' bgs	PVC STICK-UP: '	METHOD: HSA
SURFACE ELEV.: 'MSL	MP ELEV.: 'TOC PVC	LOGGED BY: G. Sega



DEPTH (in feet)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete; dry					
5	GW		SANDY GRAVEL: With roots and grass; tan to brown; dry	SS			60	
	SP		SAND: Medium grained; poorly sorted; dark brown with some reddish brown grains; dry to moist					
10			7.5' – becomes wet Total Depth = 10.0 ft.	SS			100	
15								

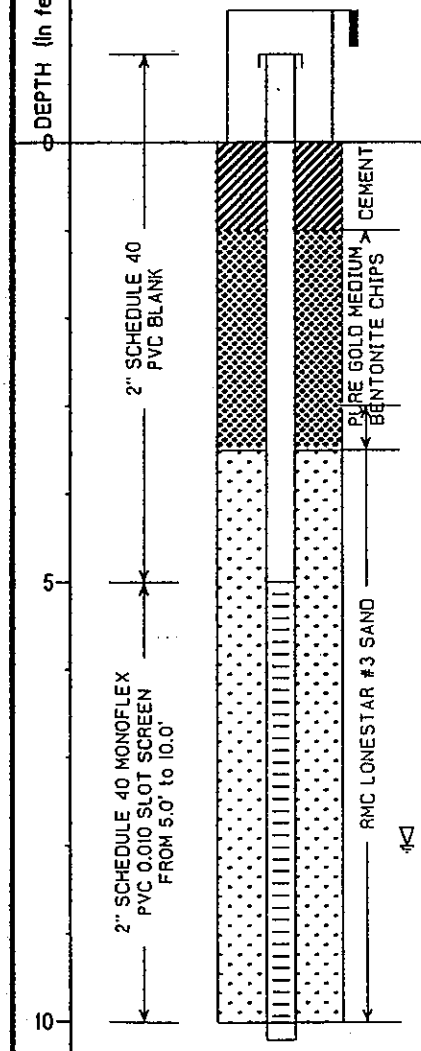
REMARKS: SS = Split Spoon
■ = Analytical Sample

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-7S

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold			CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of former tank farm #1			DRILLING CO.: Cascade Drilling
START DATE: 04/10/96 TIME: 0900	BORING ID: 8"		DRILLER: Brent
COMPLETION DATE: 04/10/96 TIME: 0930	TOTAL DEPTH: 10.0'		RIG TYPE: CME 55
WATER LEVEL DURING DRILLING: 8.0' bgs	PVC STICK-UP: '		METHOD: HSA
SURFACE ELEV.: 'MSL	MP ELEV.: 'TOC PVC		LOGGED BY: G. Sega



U.S.C.S.	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
	FILL: Grey gravel; pieces of concrete; dry					
GW	SANDY GRAVEL: With roots and grass; tan to brown; dry	SS			60	
SP	SAND: Medium grained; poorly sorted; dark brown with some reddish brown grains; dry to moist					
	7.5' – becomes wet Total Depth = 10.0 ft.	SS			100	

REMARKS: SS = Split Spoon
■ = Analytical Sample

TEST PIT LOG
TP-1

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former tank farm #2		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1150	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1250	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; large pieces of concrete
5						SP		SAND: Fine grained; poorly graded; dark brown to black; dry
						SW		SAND: Fine to medium grained; well graded; black; moist with water seepage at 7'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 7'

RETEC

TEST PIT LOG
TP-2

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former tank farm #1		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1320	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1425	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; concrete; water seepage through gravels at 1'
						SP		SAND: Fine grained; poorly graded; black; dry
						ML		SILT: Some fine sand; dark grey; dry to moist
5						SP		SAND: Fine to medium grained; poorly graded; black with some reddish brown grains; moist
						SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; moist to wet; water at 6.5'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 6.5'

TEST PIT LOG
TP-3

RETEC
1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of former tank farm #1		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 0845	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 0935	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; dry to moist
						SP		SAND: Fine grained with some gravel; poorly graded; brown to black; dry to moist
5						SM		SILTY SAND: Fine grained interbeds; grey; moist; thin brownish wet zone at 5'
						SP		SAND: Fine grained; poorly graded; brown to black; moist to wet
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 5'

TEST PIT LOG
TP-4

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former phenate process area		CONTRACTOR: Lone Star (on-site)
START DATE: 12/1/95 TIME: 1245	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 12/1/95 TIME: 1305	TEST PIT DEPTH: 4'	RIG TYPE: Komatsu PL80
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 12/1/95	N. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0		■						TOPSOIL: Fine to medium sand with silt; dark brown to black; dry
						SP		SAND: Fine grained; poorly graded; dark brown to black; dry; water seepage at 4'
								Test pit completed at 4 ft.
5								
10								

REMARKS: ■ Analytical sample
Groundwater depth - 4'

RETEC

TEST PIT LOG
TP-5

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former phenate process area		CONTRACTOR: Lone Star (on-site)
START DATE: 12/1/95 TIME: 1310	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 12/1/95 TIME: 1325	TEST PIT DEPTH: 4'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 12/1/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								TOPSOIL: Fine to medium sand with silt and some gravel; organic material; few large pieces of concrete; dry
						SP		SAND: Fine grained; poorly graded; dark brown to black; moist; water encountered at 4'
								Test pit completed at 4 ft.
5								
10								

REMARKS: ■ Analytical sample
Groundwater depth - 4'

RETEC

TEST PIT LOG
TP-6

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former Northern ditch area		CONTRACTOR: Lone Star (on-site)
START DATE: 12/1/95 TIME: 1335	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 12/1/95 TIME: 1400	TEST PIT DEPTH: 4'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 12/1/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0		■						TOPSOIL: Fine to medium sand with silt and some gravel; organic material; dark brown; dry
						SP		SAND: Fine grained black material (carbon?); thin grey fine sand/silt at 2.8-3'; dry to moist
						SW		SAND: Fine to coarse grained with some fine gravel; well graded; dark brown; moist to wet; water encountered at 4'
								Test pit completed at 4 ft.
5								
10								

REMARKS: Black material from 1'-3' appears to outline former ditch in Northern section of site
■ Analytical sample
Groundwater depth - 4'

TEST PIT LOG
TP-7

RETEC
1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former septic tank		CONTRACTOR: Lone Star (on-site)
START DATE: 12/1/95 TIME: 1410	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 12/1/95 TIME: 1430	TEST PIT DEPTH: 3'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 12/1/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								TOPSOIL: Silt with some sand and small gravel; organic material; brown to dark brown; dry; becomes moist at 2'
						SW		SAND: Fine to medium grained; well graded; black; moist to wet; water encountered at 3'
								Test pit completed at 3 ft.
5								
10								

REMARKS: ■ Analytical sample
Groundwater depth - 3'

TEST PIT LOG
TP-8

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold			CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Northeast corner of first pilot plant			CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 0940		TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1015		TEST PIT DEPTH: 8'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: '		SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95		N. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; concrete; dry to moist
		■				SP		SAND: Fine grained with some gravel; poorly graded; black; moist; water seepage at 2'
						SP		SAND: Fine grained; poorly graded; grey to brown with some iron staining; moist
5						SW		SAND: Fine to medium grained; well graded; grey to black with some reddish brown grains; moist; thin grey fine sand/silt zone at 5.5'; water encountered at 6'
								Test pit completed at 6 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 6'

TEST PIT LOG
TP-9

REMEDIATION TECHNOLOGIES, INC.
1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Southwest corner of first PCP pilot plant		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1020	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1100	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: 6'	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	N. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; pieces of brick; dry to moist
						SP		SAND: Fine grained; poorly graded; black carbon material; water seepage at 2.5'
5						SP		SAND: Fine grained; poorly graded; grey to brown; fine grey sand/silt zone at 5.5' (sampled)
						SW		SAND: Fine to medium grained; well graded; grey to black with some reddish brown grains; moist to wet; water encountered at 6.5'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 6'

RETEC

TEST PIT LOG
TP-10

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA North end of former impoundment area		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1105	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1140	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: 7'	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; pieces of concrete
						SP		SAND: Fine grained; poorly graded; some gravel and degraded concrete; dark grey to black; dry to moist 4.5' - dark reddish brown rubber-like material; 0.2 to 0.5' thick
5						SW		SAND: Fine to medium grained; well graded; grey to black with some reddish brown grains; moist to wet; water encountered at 7'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 7'

RETEC

TEST PIT LOG
TP-11

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former impoundment area		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1430	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1455	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: 7'	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; pieces of concrete; some water seepage from gravel
						SP		SAND: Fine grained; poorly graded; dark brown to black with some discontinuous reddish brown sawdust; dry
5						SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; moist to wet; water encountered at 7'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 7'

RETEC

TEST PIT LOG
TP-12

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former impoundment area		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1500	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1525	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL80
WATER LEVEL DURING DRILLING: 7'	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel
						SP		SAND: Fine grained; poorly graded; some silt; dark grey to black with some reddish brown sawdust at 3-4'; dry
5						SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; moist to wet; water encountered at 7'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 7'

RETEC

TEST PIT LOG
TP-13

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former Southern ditch		CONTRACTOR: Lone Star (on-site)
START DATE: 11/30/95 TIME: 1530	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 11/30/95 TIME: 1600	TEST PIT DEPTH: 7'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: 7'	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 11/30/95	N. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; pieces of concrete
								FILL: Fine grained sand; some small gravel; poorly graded; dark grey to black with some reddish brown sawdust; dry
5						SP		SAND: Fine grained; poorly graded; black; dry to moist
						SW		SAND: Fine to medium grained; well graded; black; moist; water encountered at 7'
								Test pit completed at 7 ft.
10								

REMARKS: ■ Analytical sample
Groundwater depth - 7'

TEST PIT LOG
TP-14

RETEC
1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Relchhold		CLIENT: Lone Star/Relchhold
LOCATION: Seattle, WA Former Southern ditch		CONTRACTOR: Lone Star (on-site)
START DATE: 12/1/95 TIME: 0835	TEST PIT ID:	OPERATOR:
COMPLETION DATE: 12/1/95 TIME: 1135	TEST PIT DEPTH: 8'	RIG TYPE: Komatsu PL60
WATER LEVEL DURING DRILLING: 7.5'	SURFACE ELEV.: ' (MSL)	METHOD:
DATE MEASURED: 12/1/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; large pieces of concrete
								FILL: Fine sandy material (carbon?); black; dry
5						SP		SAND: Fine grained; poorly graded; thin grey sand/silt layer at 3.8'; dark grey to black; dry; becomes moist at 6'
						SW		SAND: Fine to medium grained; well graded; dark grey to black with some reddish brown grains; moist to wet; water encountered at 7.5'
10								Test pit completed at 8 ft.

REMARKS: ■ Analytical sample
Groundwater depth - 7.5'

RETEC

BORING LOG
GP-1

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Northern former tank farm #1		DRILLING CO.: WCEC
START DATE: 12/04/95 TIME: 1220	BORING ID: 2"	DRILLER: Jerry Eide
COMPLETION DATE: 12/04/95 TIME: 1315	BORING DEPTH: 12'	RIG TYPE:
WATER LEVEL DURING DRILLING: 4'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								CONCRETE:
								FILL: Gravel; sand; grey to brown; moist
						SP		SAND: Fine grained; poorly graded; black; moist; becomes wet at 4'
5	CS					SW		SAND: Fine to medium grained; well graded; black; moist to wet
	CS							
10						SM		SILTY SAND: Fine grained; poorly graded; wet
						ML		SILT: With some sand, clay, and organic material (roots); very dark grey; medium plasticity
								Total Depth = 12 ft.
15								

REMARKS: ∎ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 4'

RETEC

BORING LOG
GP-2

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Western end of second pilot plant		DRILLING CO.: HCEC
START DATE: 12/04/95 TIME: 0900	BORING ID: 2"	DRILLER: Jerry Eide
COMPLETION DATE: 12/05/95 TIME: 0920	BORING DEPTH: 14'	RIG TYPE:
WATER LEVEL DURING DRILLING: 4'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								CONCRETE:
								FILL: Gravel; sand; brown to grey
						SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; dry; becomes wet at 4'
	CS							
5								
	CS							
10								
	CS							
						SM		SANDY SILT: Gray; wet
						ML		CLAYEY SILT: With some fine sand; organic material (roots); brown to grey; moist
15								Total Depth = 14 ft.

REMARKS: ∎ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth = 4'

RETEC

BORING LOG
GP-3

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Northern end of second pilot plant		DRILLING CO.: WCEC
START DATE: 12/04/95 TIME: 1115	BORING ID: 2"	DRILLER: Jerry Eide
COMPLETION DATE: 12/04/95 TIME: 1215	BORING DEPTH: 16'	RIG TYPE:
WATER LEVEL DURING DRILLING: 4'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								CONCRETE:
								FILL: Gravel; sand; brown to grey
	CS					SW		SAND: Fine to medium grained; well graded; grey to black with some brown silt; dry to moist; becomes wet at 4'
5								
	CS							
10								
	CS					SM		SILTY SAND: Fine grained; organic material (roots etc.); wet
						SW		SAND: Fine to medium grained; well graded; black; wet
15						ML		SANDY SILT: With some clay and organic material (roots, wood); very dark grey; medium plasticity; moist to wet
								Total Depth = 16 ft.
20								

REMARKS:
■ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 4'

RETEC

BORING LOG
GP-4

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Eastern end of second pilot plant		DRILLING CO.: NCEC
START DATE: 12/04/95 TIME: 1000	BORING ID: 2"	DRILLER: Jerry Eide
COMPLETION DATE: 12/04/95 TIME: 1100	BORING DEPTH: 16'	RIG TYPE:
WATER LEVEL DURING DRILLING: 4'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								CONCRETE:
								FILL: Gravel; sand; grey to brown
						ML		SILT: With some clay and gravel; greenish grey; dry
	CS					SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; dry to moist; becomes wet at 4'
5								
	CS							
10								
	CS					SM		SILTY SAND: Black; wet
						SP		SAND: Fine grained; poorly graded; black
15								
						ML		SANDY SILT With some clay and organic material (roots etc.); very dark grey; wet
								Total Depth = 16 ft.
20								

REMARKS: Hole backfilled with fine granular bentonite
■ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 4'

RETEC

BORING LOG
GP-5

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Southeast corner of second pilot plant		DRILLING CO.: NCEC
START DATE: 12/04/95 TIME: 1430	BORING ID: 2"	DRILLER: Jerry Elde
COMPLETION DATE: 12/04/95 TIME: 1505	BORING DEPTH: 12'	RIG TYPE:
WATER LEVEL DURING DRILLING: 4'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								TOPSOIL: Grass; organic material
								FILL: Fine to medium sand; gravel; dry
						SP		SAND: Fine to medium grained; poorly graded; dark brown to black with some reddish brown grains; some small gravel; thin sandy silt at 2.5"; dry
	CS					SW		SAND: Fine to medium grained; well graded; dark brown with some reddish brown grains; wet
5								
						SP		SAND: Fine to medium grained; poorly graded; black with some reddish brown grains; wet
	CS							
10						SM		SILTY SAND: Fine grained; black with some reddish brown grains; wet
								Total Depth = 12 ft.
15								

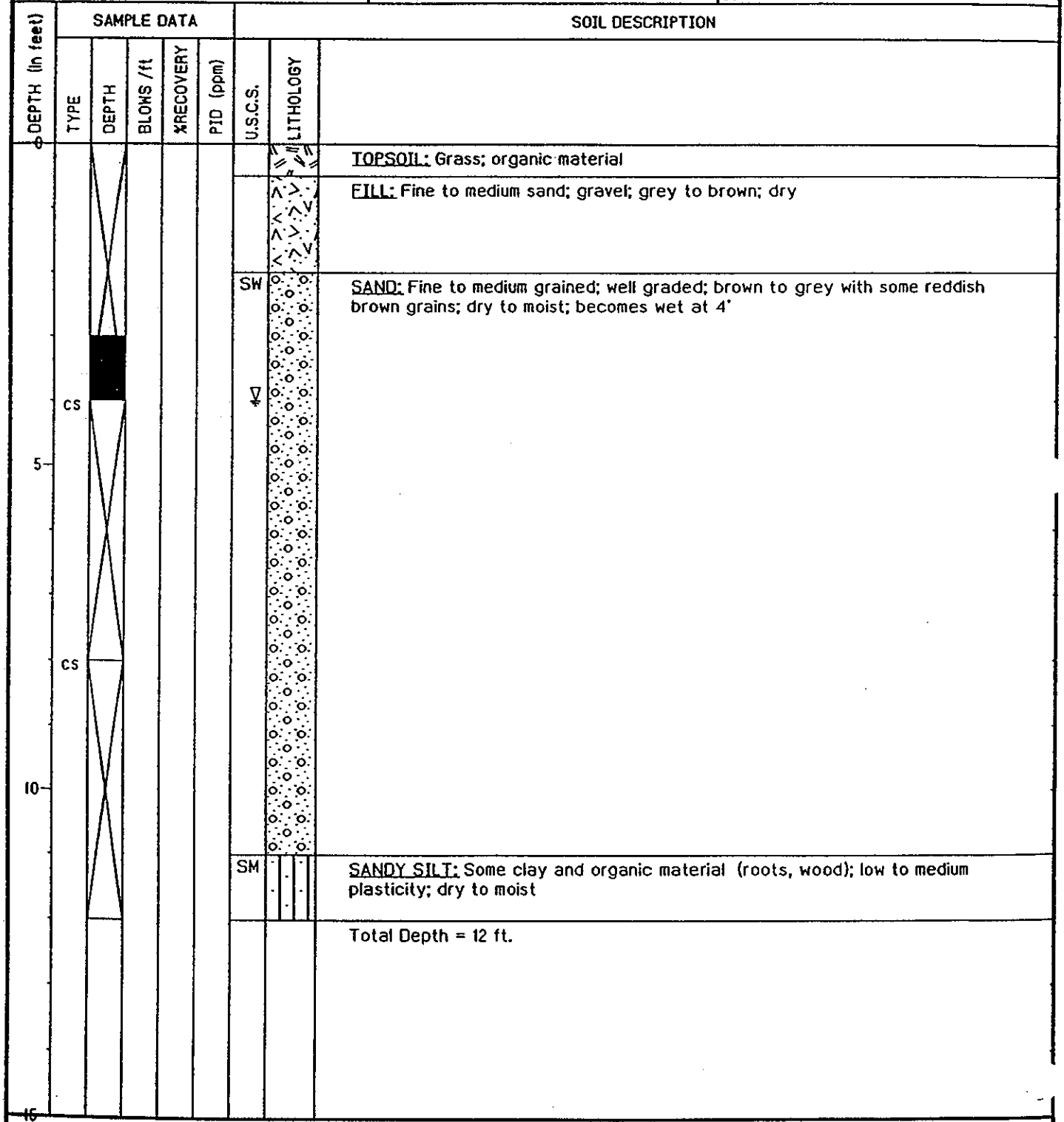
REMARKS: ■ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 4'

RETEC

BORING LOG
GP-6

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA Former southern ditch in North area		DRILLING CO.: NCEC
START DATE: 12/04/95 TIME: 1335	BORING ID: 2"	DRILLER: Jerry Elde
COMPLETION DATE: 12/04/95 TIME: 1420	BORING DEPTH: 12'	RIG TYPE:
WATER LEVEL DURING DRILLING: 4'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:	LOGGED BY: A. Como



REMARKS: ■ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 4'

RETEC

BORING LOG
GP-7

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold			CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA In Test Pit TP-11 (former impoundment area)			DRILLING CO.: WCEC
START DATE: 12/04/95 TIME: 1525	BORING ID: 2"		DRILLER: Jerry Eide
COMPLETION DATE: 12/04/95 TIME: 1630	BORING DEPTH: 16'		RIG TYPE:
WATER LEVEL DURING DRILLING: 6'	SURFACE ELEV.: ' (MSL)		METHOD: Geoprobe
DATE MEASURED: 12/04/95	M. P. ELEVATION:		LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; pieces of concrete; some water seepage from gravel
						SP		SAND: Fine grained; poorly graded; dark brown to black with some discontinuous reddish brown sawdust; dry
5	CS					SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; wet
10	CS							
	CS							
15						SM		SANDY SILT: Some clay; dark grey; moist
								Total Depth = 16 ft.
20								

REMARKS: GP-7 located in TP-11. 2" diameter auger to 6', then start sampling.
First 6' logged from test pit log.
■ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 6'

REMEDIATION TECHNOLOGIES, INC.
OFFICES NATIONWIDE

RETEC

BORING LOG
GP-8

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold		CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA In Test Pit TP-1 (former tank farm #2)		DRILLING CO.: NCEC
START DATE: 12/05/95 TIME: 1025	BORING ID: 2"	DRILLER: Jerry Elde
COMPLETION DATE: 12/05/95 TIME: 1100	BORING DEPTH: 10'	RIG TYPE:
WATER LEVEL DURING DRILLING: 7'	SURFACE ELEV.: ' (MSL)	METHOD: Geoprobe
DATE MEASURED: 12/05/95	M. P. ELEVATION:	LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; large pieces of concrete
5						SP		SAND: Fine grained; poorly graded; dark brown to black; dry
						SW		SAND: Fine to medium grained; well graded; black; moist
								Driller noted change in resistance at 10'; feels like silt contact encountered elsewhere
10								Total Depth = 10 ft.
15								

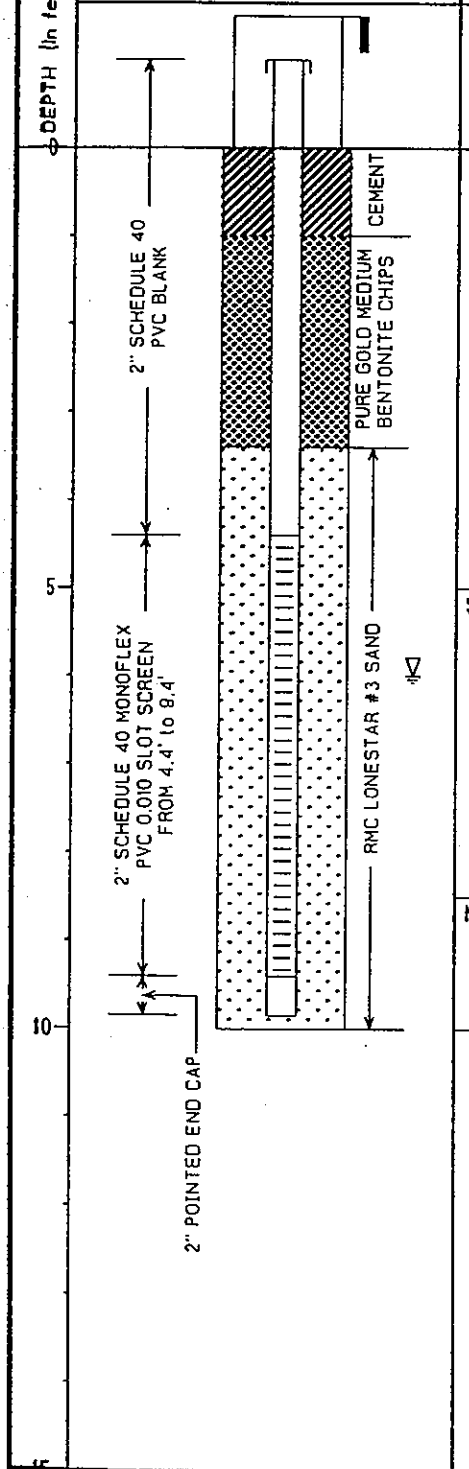
REMARKS: GP-8 located in TP-1. Boring logged from test pit log.
Groundwater depth - 7'

RETEC

BORING/WELL INSTALLATION LOG
Monitoring Well MW-1S

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold			CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA East of first pilot plant			DRILLING CO.: Cascade Drilling
START DATE: 12/06/95 TIME: 0945	BORING ID: 8"		DRILLER: S. Krueyer
COMPLETION DATE: 12/06/95 TIME: 0950	TOTAL DEPTH: 10'		RIG TYPE: CME
WATER LEVEL DURING DRILLING: 6' bgs	PVC STICK-UP: 2.49'		METHOD: HSA
SURFACE ELEV.: 5.8' MSL	MP ELEV.: 8.29' TOC PVC		LOGGED BY: A. Como



DEPTH (ft)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION	SAMPLE DATA: TYPE	DEPTH	BLOWS/ft	%RECOVERY	PID (ppm)
0			FILL: Grey gravel; pieces of concrete; some black sand					
5	SW		SAND: Fine to medium grained; well graded; black with some reddish brown grains; moist to wet at 6'	SS		15 17 18		
				SS		8 9 9		
	ML		SILT: Slightly clayey; grey with some brown; organic material; low to medium plasticity; moist to wet					
10			Total Depth = 10 ft.					
15								

REMARKS: SS = Split Spoon

BORING LOG
GP-9

RETEC
1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-2137-220 Lone Star/Reichhold			CLIENT: Lone Star/Reichhold
LOCATION: Seattle, WA In Test Pit TP-13 (former Southern ditch)			DRILLING CO.: WCEC
START DATE: 12/05/95 TIME: 0935	BORING ID: 2"		DRILLER: Jerry Elde
COMPLETION DATE: 12/05/95 TIME: 1020	BORING DEPTH: 12'		RIG TYPE:
WATER LEVEL DURING DRILLING: 7'	SURFACE ELEV.: ' (MSL)		METHOD: Geoprobe
DATE MEASURED: 12/05/95	M. P. ELEVATION:		LOGGED BY: A. Como

DEPTH (in feet)	SAMPLE DATA: TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY	SOIL DESCRIPTION
0								FILL: Gravel; pieces of concrete;
						SP		SAND: Fine grained; some small gravel; poorly graded; dark grey to black with some discontinuous reddish sawdust; dry
5						SW		SAND: Fine to medium grained; well graded; black; moist
	CS							
10						ML		CLAYEY SILT: Some organic material (roots); brown to grey; moist
								Total Depth = 12 ft.
15								

REMARKS: GP-8 located in TP-13. 2" diameter auger to 8', then start sampling.
First 8' logged from test pit log.
■ Analytical sample
CS = 2" x 4' Core sample
Groundwater depth - 7'

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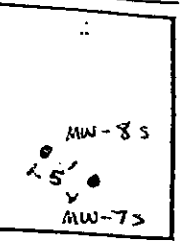
FLUOR DANIEL GTI

Well No.: MW-8S

Page 1 of 1

Project: Reichold / Lone Star
Location: 5900 W Marginal Way S, Seattle WA
Project No.: 020600355 Date: 8/4/97
Elevation: Well Depth: 11'
Expl. Depth: 11' Hole Dia.: 8"
Casing: Dia.: 2" Length: 3' Type: SCH 40 PVC
Screen: Dia.: 2" Length: 8' Slot Size: 0.020"
Drilling Co.: Cascade Driller: Brian Gese Logged by: SAH
Drilling Meth.: HSA CME-75 Sampling Meth.: split spoon.
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen | ____

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							Start drlg @ 10:50. Gravel surface gravel
			X			GM	
			X				No sample due to rock
		26	80			SM	Lt brown - lt gray SAND, some silt, trace gravel (dry, no odor)
		5/6					
		25	100				Dk brown to black fine homogenous SAND trace red grains. (dry, no odor)
		5/6					
5		46	100				
		5/6					
		35					
		33	100				
		29			1158		
		17					Encountered water
		20	100			SP	Increasing red grains
		20					
		17					
		20	100				
		25					
10		11					
		19	100				Brown SILT and clay, high organic content (damp, no odor)
		21					
						ML	End of borehole @ 11:20 Install MW screen 3-11' bg. Sand 2-11' bg. Chip 1-2' bg.

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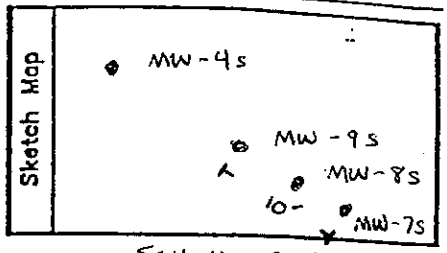
FLUOR DANIEL GTI

Well No.: MW-9s

Page 1 of 1

Project: Reichold / Lone Star
Location: 5900. W. Marginal Way S
Project No.: 020600355 Data: 8/4/97
Elevation: Well Depth: 11'
Expl. Depth: 11' Hole Dia.: 8"
Casing: Dia.: 2" Length: 3' Type: SCH 40 PVC
Screen: Dia.: 2" Length: 8' Slot Size: 0.020"
Drilling Co.: Cascade Driller: Brian Gose Logged by: SAH
Drilling Meth.: HSA CME-75 Sampling Meth.: split spoon
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							NO SAMPLING. ESTIMATED LITHOLOGIES BASED ON MW-8S
						SM	BROWN SILTY-SAND AND GRAVEL
5						SP	BLACK SAND
10						ML	CLAYEY-SILT

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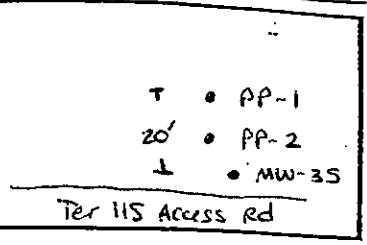
FLUOR DANIEL GTI

Well No.: PP-1

Page 1 of 1

Project: Reichold / Lone Star
Location: 5900. W Meridian Way S
Project No.: 020600355 Date: 8/4/97
Elevation: Well Depth: 11'
Expl. Depth: 11' Hole Dia.: 8"
Casing: Dia.: 2" Length: 6' Type: SCH 40 PVC
Screen: Dia.: 2" Length: 5' Slot Size: 0.020"
Drilling Co.: Cascade Driller: Brian Gose Logged by: SAH
Drilling Meth.: HSA CME-55 Sampling Meth.: ~~5~~ none
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen | ____

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							No sampling. Lithologies based on PP-2
						SM	SILTY-SAND and gravel
5							Black sand
						SP	
						▽	
10							

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3 soil drums
1 decon water drum

FLUOR DANIEL GTI

Well No.: PP-2

Page 1 of 1

Project: Reichold / Lone Star
Location: 5900 W. Marginal Way S. Seattle WA
Project No.: 020600355 Date: 8/4/97
Elevation: Well Depth: 11'
Expl. Depth: 11.5' Hole Dia.: 8"
Casing: Dia.: 2" Length: 6' Type: SCH 40 PVC
Screen: Dia.: 2" Length: 5' Slot Size: 0.020"
Drilling Co.: Cascade Driller: Brian ~~Smith~~ Gore Logged by: Steve Hartman
Drilling Meth.: HSA CME-55 Sampling Meth.: split spoon
Notes:

Sketch Map: 10' TO PP-2 ~40 MW-3S; Terminal 115 access rd

Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Uthology
0		X X 100/4 X 27 50 X 26 17 14	X 10 30 100				Start drlg @ 8:35. Gravel surface. Dark brown ~~gravel~~, ~~sand~~, ~~and silt~~ SM to gray fine-med SAND, and silt, trace gravel Dark brown ~~silt~~ SILT high organic content ML (moist, no odor) fibrous habit grades tan, little fine sand
5		14 M 26 29 20 50/6 27 28 30 X X 11 19 25	100 100 100 X 100				Black fine homogenous SAND, trace red and white fine grains SP (dry, no odor) increasing red grains Encounter water @ 910 End boring (920). Install MW for push-pull testing. Screen 6-11'. Sand 5-11'.
10							

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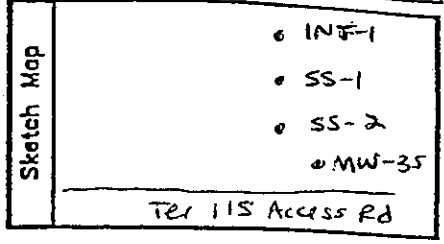
FLUOR DANIEL GTI

Well No.: INJ-1

Page 1 of 1

Project: Lone Star / Reichold
Location: 5900 W. Marginal Way S Seattle WA
Project No.: 020600355 Date: 8/4/97
Elevation: Well Depth: ~~5'~~ 5'
Expl. Depth: 5' Hole Dia.: 10"
Casing: Dia.: 4" Length: 3' Type: SCH 40 PVC
Screen: Dia.: 4" Length: 2' Slot Size: 0.020"
Drilling Co.: Cascade Driller: Brian Gose Logged by: SAH
Drilling Meth.: HSA CME-75 Sampling Meth. none
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							No samples. Lithologies based on SS-2.
						SM	SILTY-SAND and gravel
						SP	Black fine grain SAND
5							

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FLUOR DANIEL GTI

Well No.: MW-10

Page 1 of 1

Project: Reichhold

Location: 5900 W. Marginal Way S., Seattle

Project No.: 020600335 Date: 10/13/98

Elevation: Well Depth: 10 ft.

Expl. Depth: 11.5 ft. Hole Dia.: 8"

Casing: Dia.: 2" Length: 3 ft. Type:

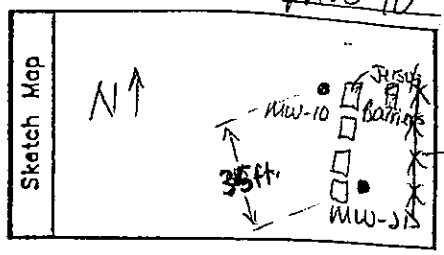
Screen: Dia.: 2" Length: 7 ft. Slot Size:

Drilling Co.: Cascade Driller: Scott Krueger Logged by: C. Kilday

Drilling Meth.: auger Sampling Meth.: 1.5 ft. sampler w/ 1.0 ft. sample

Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							
1	box, conc, bent						
2							
3	sand						
4							
5		MW-10 -5-5.5	100	32 50/6"		SP	m-c SAND, trace silt gray/black (damp, ~~loose~~ dense, slight odor)
6							
7							
8							
9							
10		MW-10 -10-10.5	100	10 13 13		CL	brown ~~f SAND and~~ SILTY CLAY, trace ~~very~~ f. sand (damp, ~~tight~~ very stiff, no noticeable ~~odor~~)

set well bottom @ 10 ft. bg.

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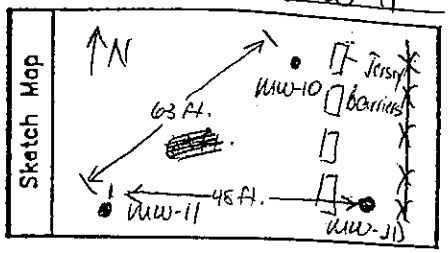
FLUOR DANIEL GTI

Well No.: MW-11

Page 1 of 1

Project: Reichhold
Location: 5900 W. Marginal Way S, Seattle
Project No.: 020600335
Date: 10/13/98
Elevation:
Well Depth: 10 ft.
Expl. Depth: 11.5 ft.
Hole Dia.: 8"
Casing: Dia.: 2" Length: 7ft. Type:
Screen: Dia.: 2" Length: 3ft. Slot Size:
Drilling Co.: Cascade Driller: Scott Kruger Logged by: C. Kilday
Drilling Meth.: auger Sampling Meth.: 1.5 ft. sampler w/1.0 ft. sample
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	Well Pack, Conc., Bent., Slotted PVC						
1							
2							
3							
4							
5		MW-11 -5.5-6.5	100	33 50/6"		SP→	4" gray/black M-C SAND, trace silt (damp, dense, sl. odor)
6						SM→	4" brown SILTY SAND (damp, dense, slight odor)
7						SP→	4" gray/brown M-C SAND, trace silt (damp, dense, sl. odor)
8							
9							~~Brown SILTY CLAY, trace fine sand~~
10		MW-11 -10-10.5	100	9 12 12		CL	Brown SILTY CLAY, trace very fine sand (damp, ~~very~~ stiff, no noticeable odor) (roots in 1st 4")
							Silt well bottom @ 10ft. bg

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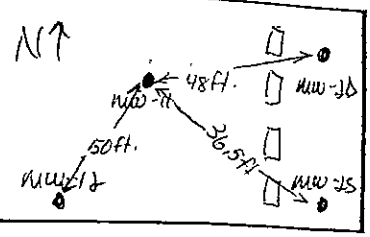
FLUOR DANIEL GTI

Well No.: MW-12

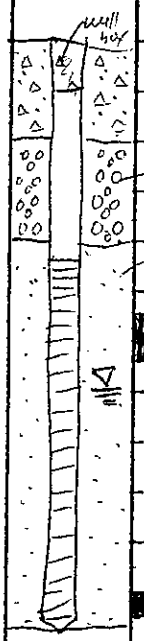
Page 1 of 1

Project: Leichhold
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335 Date: 10/13/98
Elevation: Well Depth: 11.5 ft.
Expl. Depth: 11.5 ft. Hole Dia.: 8"
Casing: Dia.: 2" Length: 4.5 ft. blank Type:
Screen: Dia.: 2" Length: 7 ft. screen Slot Size:
Drilling Co.: Cascade Driller: Scott Krueger Logged by: C. Kilday
Drilling Meth.: auger Sampling Meth.: 1.5 ft. sampler w/ 1 ft. sample
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							
1							
2							
3		Bent.					
4							
5		sand		35			
6		MW-12 5.5-6.5	100	50/6"		SP	gray/black m-c SAND, trace silt (damp, dense, no odor)
7							
8							
9							
10				13			10-11 ft. gray/black m-c SAND, trace silt
11		MW-12 11-11.5	100	13 15			11-11.5 ft. brown SILTY ~~SAND~~ CLAY, trace v.f. sand
Bow 12						CL	(damp, ~~stiff~~, no odor)

set well bottom at 11.5 ft.
6" into clay

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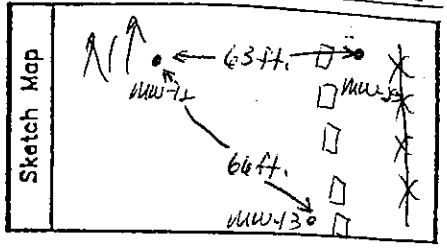
FLUOR DANIEL GTI

Well No.: MW-13

Page 1 of 1

Project: Reichhold
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335 Date: 10/13/98
Elevation: Well Depth: 11.5 ft.
Expl. Depth: 11.5 Hole Dia.: 8"
Casing: Dia.: 2" Length: 4.5 ft.
Screen: Dia.: 2" Length: 7 ft.
Drilling Co.: Cascade Driller: Scott Krueger
Drilling Meth.: Auger Sampling Meth.: 1.5 ft. sampler w/1 ft. sample
Notes:

Sketch Map



Type:
Slot Size:
Logged by: C. Kilday

Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	well box						
1							
2							
3							
4							
5				8			
6		MW-13 -5.5-6.5	100	9		SM	black f-m SAND, some silt (damp, dense, no odor)
7				9			
8							
9							
10				13		SP	10-11ft. gray/black m-c SAND, trace silt
11		MW-13 -11-11.5	100	8			11-11.5 ft. brown SILTY CLAY, trace v.f. sand
12				8		CL	(damp, stiff, no odor)

Set well bottom at 11.5 ft.

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FLUOR DANIEL GTI

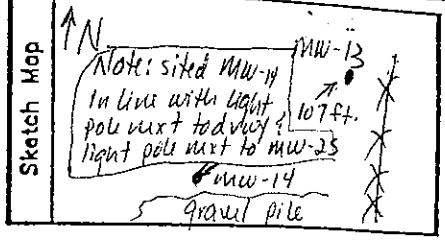
Well No.: MW-14

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Project: Reichhold
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335
Elevation:
Expl. Depth: 11.5
Casing: Dia.: 2" Length: 4ft.
Screen: Dia.: 2" Length: 7ft.
Drilling Co.: Cascade Driller: Scott Kruger
Drilling Meth.: auger Sampling Meth.: 1.5ft. sampler w/ 1ft. sample
Notes:

Date: 10/13/98
Well Depth: 11.0ft.
Hole Dia.: 8"
Type:
Slot Size:
Logged by: C. Kitchen

Sketch Map

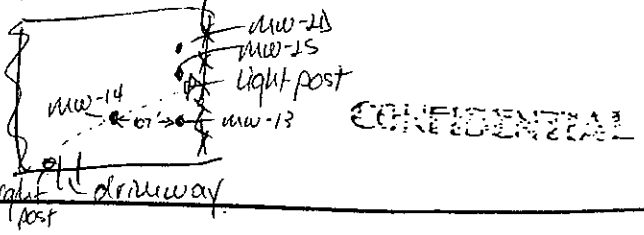


Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	well box; concrete; bent.						
1							
2	blank PVC						
3							
4	sand						
5		MW-14 -5.5-6.5	100	18 33 35		SP	gray/black m-c SAND, trace silt (damp, dense, no odor) 1" layer of brown SILTY CLAY @ 6ft bg
6							
7							
8							
9							
10				8			10.5-11 same gray/black SAND, trace silt (wet, loose, no odor)
11		MW-14 -10.5-11.5	100	8 8		SP	11-11.5 brown SILTY CLAY, trace v.f. sand (wet, med. stiff, no odor) (roots)
12						CL	set bottom of well @ 11.0 feet

Note: location of MW-14

located 107 ft. SW of MW-13 in line of sight between light post next to MW-25 and light post next to driveway entrance



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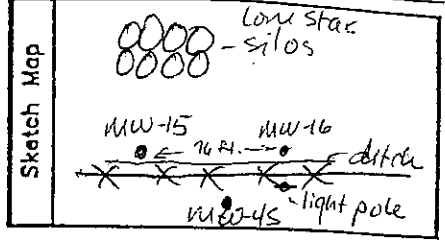
FLUOR DANIEL GTI

Well No.: MW-15

Page 1 of 1

Project: Fairchild
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335 Date: 10/13/98
Elevation: Well Depth: 10 ft.
Expl. Depth: 11.5 ft. Hole Dia.: 8"
Casing: Dia.: 2" Length: 3 ft. Type:
Screen: Dia.: 2" Length: 7 ft. Slot Size:
Drilling Co.: Cascade Driller: Scott Kruger Logged by: C. Kilday
Drilling Meth.: auger Sampling Meth.: 1.5 ft. sampler w/ 1 ft. sample
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	well box, concrete						
1	Bent						
2							
3	sand, top of screen						
4							
5				17			gray/black m-C SAND, trace silt (damp, medium dense, no odor)
6		MW-15 -5.5-6.5	100	23		SP	
7				25			
8							
9							
10				5			brown SILTY CLAY, [redacted] (wet, medium stiff, organic odor, roots)
11		MW-15 10.5-11.5	100	7			
12				8			Silt well bottom at 10 ft. bg

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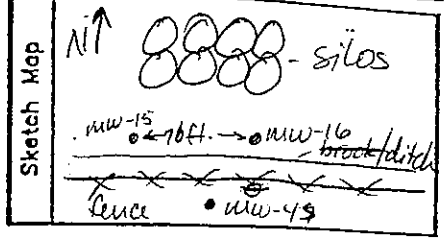
FLUOR DANIEL GTI

Well No.: MW-16

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Project: Reichhold
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335 Date: 10/13/98
Elevation: Well Depth: 10 ft.
Expl. Depth: 11.5 ft. Hole Dia.: 8"
Casing: Dia.: 2" Length: 3 ft. Type:
Screen: Dia.: 2" Length: 7 ft. Slot Size:
Drilling Co.: Cascade Driller: Scott Kruger Logged by: C. Kilday
Drilling Meth.: auger Sampling Meth.: 1.5 ft. sampler w/ 1 ft. sample
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	Well box; Blank PVC; 00 sand						
1							
2							
3							
4							
5				11			
6		MW-16 -5.5-6.5	100	13		SP	Gray/black M-C SAND, trace silt (wet, mod. dense, no odor)
7				13			
8							
9							
10				4			
11		MW-16 -10.5-11.5	100	5		CL	brown SILTY CLAY, with black organic matter/roots (wet, mod. stiff, ~~no~~ organic odor)
12				6			

Set well bottom @ 10 ft. bg.

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FLUOR DANIEL GTI

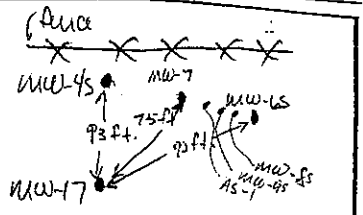
Well No.: MW-17

Page 1 of 1

Project: Reichhold
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335
Elevation:
Expl. Depth: 11.5 ft.
Casing: Dia.: 2" Length: 4.5 ft. Type:
Screen: Dia.: 2" Length: 7ft. Slot Size:
Drilling Co.: Cascade Driller: Scott Krueger Logged by: C. Kilday
Drilling Meth.: auger Sampling Meth.: 1.5 ft. sampler w/ 1 ft. sample
Notes:

Date: 10/14/98
Well Depth: 11.5 ft.
Hole Dia.: ~~8~~ 8"

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	well box, concrete						
1							
2							
3	bent.						
4	top of sand, top of screen						
5				33			4" gray/black f-m SAND and SILT (dry, ~~very stiff~~ mod. dense, no odor)
6			100	50/3"		SM	4" f SAND and SILT (dry, ~~very stiff~~ mod. dense, no odor)
7						SP	4" gray/black, m-c SAND, some silt (dry, very dense, no odor)
8							
9							
10				28			
11			100	13		SP	same gray/black m-c SAND, trace silt (wet, med. dense, no odor)
12				13		CL	tip of spoon had brown SILTY CLAY, trace v.f. sand
							Bottom of well @ 11.5' bg

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FLUOR DANIEL GTI

Well No.: MW-18

Page 1 of 1

Project: Reichhold
Location: 5900 W. Marginal Way So., Seattle
Project No.: 020610335 Date: 10/14/98
Elevation: Well Depth: 13 ft.
Expl. Depth: 13 ft. Hole Dia.: 8"
Casing: Dia.: 2" Length: 3 ft. Type:
Screen: Dia.: 2" Length: 10 ft. Slot Size:
Drilling Co.: Cascade Driller: Scott Krueger Logged by: C. Kilday
Drilling Meth.: Auger Sampling Meth.: 1.5 ft. sampler w/ 1 ft. sample
Notes:

Sketch Map: N; 22 ft. N of outer curb; MW-18; 95 ft.; MW-35; MW-36; driveway

Key: Concrete; Bentonite; Native Backfill; Sand/Gravel Pack; Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0	well box; concrete						
1	1.5 ft. bent.						
2	top of sand						
3	top of screen						
4							
5							
6		MW-18 -5.5-6.5	100	21, 24, 29		SM	gray/black f-M SAND & SILT (dry, med. dense, no odor)
7							
8							
9							
10						SP	gray/black M-C SAND, some silt (wet, med. dense, no odor)
11		no sample	100	15, 12, 10			
12		MW-18 -12-13	100	10, 8, 8		CL	brown SILTY CLAY, trace v.f. sand (wet, stiff, no odor)
13							slt well bottom @ 13 ft.

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FLUOR DANIEL GTI

Well No.: MW-19

Page 1 of 1

Project: Reichhold

Location: 5900 W. Marginal Way So., Seattle

Project No.: 020600335 Date: 10/14/98

Elevation: Well Depth: 13 ft.

Expl. Depth: 13 ft. Hole Dia.: 8"

Casing: Dia.: 2" Length: 3 ft. Type:

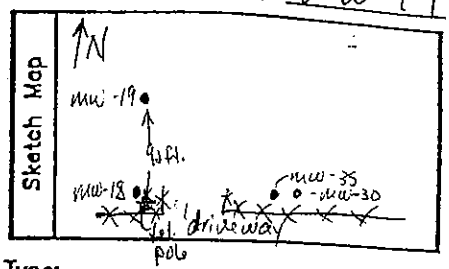
Screen: Dia.: 2" Length: 10 ft. Slot Size:

Drilling Co.: Cascade Driller: Scott Kruger Logged by: C. Kilday

Drilling Meth.: Auger Sampling Meth.: 1.5 ft. sampler w/ 1 ft. sample

Notes:

Sketch Map



Key: Concrete Bentonite Native Backfill Sand/Gravel Pack Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							
1							
2							
3							
4							
5							
6		MW-19 -5-6.5	100	7 7 8		SM	gray/black f-m SAND & SILT (dry, ~~mud dense~~ loose, no odor)
7							
8							
9							
10						SP	gray/black m-c SAND, trace silt (wet, mud. dense, no odor)
11			100	14 16 16			
12		MW-19 12-13	100	22 24 27		CL	brown SILTY CLAY, trace v.f. sand (wet, very stiff, no odor)
13							set well bottom @ 13 ft.

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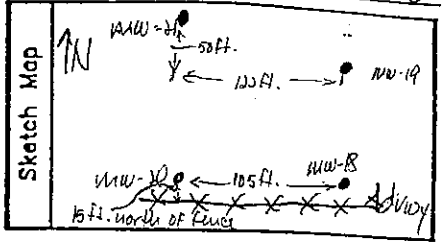
FLUOR DANIEL GTI

Well No.: MW-20

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Project: Reichhold
Location: 5900 W. Marginal Ways, Seattle
Project No.: 020600335
Date: 10/14/98
Elevation:
Well Depth: 13 ft.
Expl. Depth: 13 ft.
Hole Dia.: 8"
Casing: Dia.: 2" Length: 3 ft.
Screen: Dia.: 2" Length: 10 ft. Type: Slot Size:
Drilling Co.: Cascade Driller: Scott Krueger Logged by: C. Kilday
Drilling Meth.: Auger Sampling Meth.: 1.5 ft. sampler w/1 ft. sample
Notes:

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0							
1							
2							
3							
4							
5				32			
6		MW-20 -5.5-6.5		50/6"		SM	gray/black f-M SAND & SILT (dry, dense, no odor)
7							
8							
9						SP	
10				16			
11				16			gray/black M-C SAND, some silt (wet, med. dense, no odor)
12				15			
13		MW-20 -12-13		11			same as above
				10			
				7		CL	brown SILTY CLAY, trace v.f. sand at tip of spoon
							Silt well bottom at 13 feet bg

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FLUOR DANIEL GTI

Well No.: MW-21

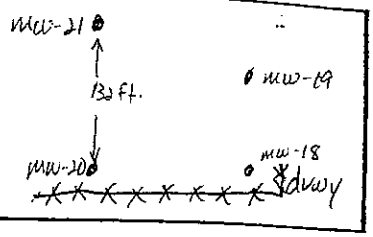
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Project: Reichhold
Location: 5900 W. Marginal Way S., Seattle
Project No.: 020600335
Elevation:
Expl. Depth: 13 feet
Casing: Dia.: 2" Length: 3 ft.
Screen: Dia.: 2" Length: 10 ft.
Drilling Co.: Cascade Drilling Meth.: Auger
Notes:

Date: 10/14/98
Well Depth: 13 ft.
Hole Dia.: 8"
Driller: Scott Kruger
Sampling Meth.: 1.5 ft. sampler w/1 ft. sample

Type:
Slot Size:
Logged by: C. Kilday

Sketch Map



Key: Concrete | Bentonite | Native Backfill | Sand/Gravel Pack | Well Screen

Depth (feet)	Well Construction	Sample No.	% Rec.	Blows/ Density	PID Rdg. (ppm)	Depth (feet)	Soils/Lithology
0–13	well box; 2" PVC riser; 10 ft. screen	MW-21 5.5-6.5	~~100~~ 60	20/6"			gray/black f SAND & SILT, some coarse gravel, brick fragments observed (Fill) (dry, very dense, no odor)
10–11			100	17 15 15		SP	gray/black m-C SANDS, some silt (wet, med. dense, no odor)
12–13		MW-21 12-13	100	7 7 6		CL	brown SILTY CLAY, trace fine sand
							Set well bottom @ 13 feet bg.

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LOG OF EXPLORATORY BORING

PROJECT NAME	**Reichhold/Lonestar Site**	BORING NO.	**MW-22**
LOCATION	**5900 West Marginal Way, Seattle, Washington**	PAGE	**1 of 1**
DRILLED BY	**Cascade Drilling, Inc.**	TOC ELEVATION	**16.73**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**15.0'**
LOGGED BY	**Jeff Newschwander/Katlin Hanson**	DATE COMPLETED	**7/22/03**

SAMPLE NUMBER	PID (In ppm)	BLOWS PER 6 INCHES	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
	0	70						**0 to 5.25 feet: SILTY GRAVEL (GM)**, grayish brown (10YR 5/2), fine (20%), medium (60%), coarse (20%), dry, dense, no odor.
1	0	27 50		5				**5.25 to 10.0 feet: POORLY GRADED SAND (SP)**, very dark gray (10YR 3/1), fine (5%), medium (85%), coarse (10%), damp, medium dense, no odor.
2	0		▽					@ approximately 7.75 feet bgs: saturated.
	0	16 17 21		10				**10.0 to 13.0 feet: POORLY GRADED SAND (SP)**, black (10YR 2/1), fine (5%), medium (85%), coarse (10%), damp, medium dense, no odor.
3	0	2 2 3						**13.0 to 15.0 feet: SILT (ML)**, dark grayish brown (10YR 4/2), damp, soft, medium plasticity, no odor.
				15				Total depth = 15.0 feet.
				20				**WELL COMPLETION DETAILS** 0 to 5.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC casing. 5.0 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and 2-inch-diameter threaded end cap. 0 to 3.0 feet: Concrete. 3.0 to 4.0 feet: Bentonite chips hydrated with potable water. 4.0 to 15.0 feet: #2/12 Monterey sand.
				25				

REMARKS

Samples submitted to laboratory for analysis: 1. MW-22-5-5.5', 2. MW-22-8-8.5', 3. MW-22-13-13.5'.

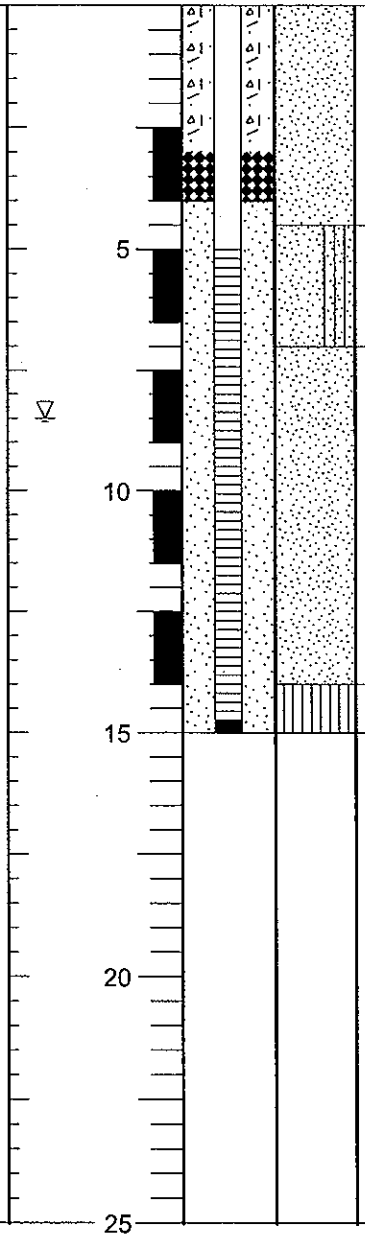
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REICH.gds:2.10/10/03.REICH...20600335

LOG OF EXPLORATORY BORING

PROJECT NAME	**Reichhold/Lonestar Site**	BORING NO.	**MW-23**
LOCATION	**5900 West Marginal Way, Seattle, Washington**	PAGE	**1 of 1**
DRILLED BY	**Cascade Drilling, Inc.**	TOC ELEVATION	**16.30**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**15.0'**
LOGGED BY	**Jeff Newschwander/Katlin Hanson**	DATE COMPLETED	**7/22/03**

SAMPLE NUMBER	PID (in ppm)	BLOWS PER 6 INCHES
	0	10
		8
		6
1	0	4
		3
		11
2	0	6
		9
		12
	0	6
		7
		8
3	0	2
		3
		4



0 to 4.5 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (10%), medium (85%), coarse (5%), dry, loose, no odor.

@ 3.0 feet bgs: 2-inch lens of SANDY SILT (ML).

4.5 to 7.0 feet: POORLY GRADED SAND/SILTY SAND (SP/SM), very dark grayish brown (10YR 3/2), fine (25%), medium (75%), damp, medium dense, no odor.

@ 6.0 feet bgs: 2-inch lens of SANDY SILT (ML).

7.0 to 14.0 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (10%), medium (85%), coarse (5%), dry, medium dense, no odor.

@ 8.5 feet bgs: saturated.

@ 11.5 feet: 1-inch lens of SANDY SILT (ML).

14.0 to 15.0 feet: SILT (ML), very dark gray (10YR 3/1), damp, soft, medium plasticity, some organic material, no odor.*

Total depth = 15.0 feet.

WELL COMPLETION DETAILS

0 to 5.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC casing.

5.0 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and 2-inch-diameter threaded end cap.

0 to 3.0 feet: Concrete.

3.0 to 4.0 feet: Bentonite chips hydrated with potable water.

4.0 to 15.0 feet: #2/12 Monterey sand.

REMARKS

Samples submitted to laboratory for analysis: 1. MW-23-5-5.5', 2. MW-23-8-8.5', 3. MW-23-13-13.5'.

* = strong methane-like odor from well; dissipated quickly.

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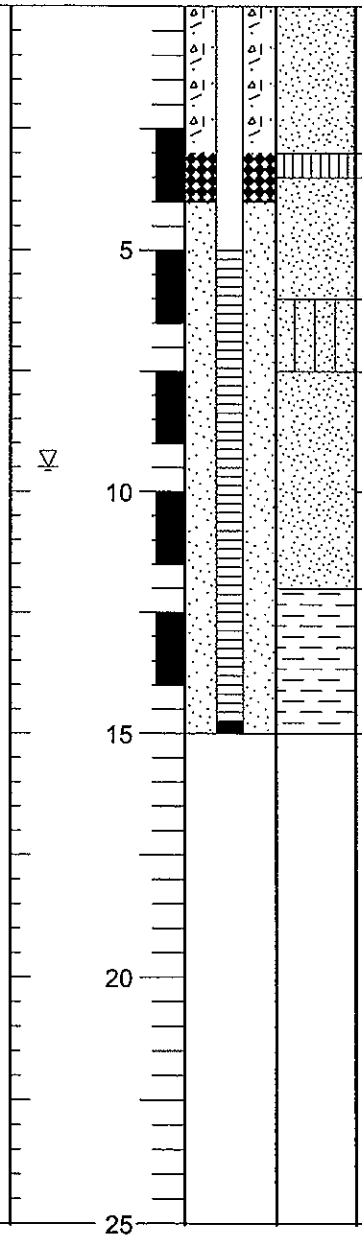
Shaw E & I, Inc.

REICH.gds:3.10/13/03.REICH...20600335

LOG OF EXPLORATORY BORING

PROJECT NAME	**Reichhold/Lonestar Site**	BORING NO.	**MW-24**
LOCATION	**5900 West Marginal Way, Seattle, Washington**	PAGE	**1 of 1**
DRILLED BY	**Cascade Drilling, Inc.**	TOC ELEVATION	**16.28**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**15.0'**
LOGGED BY	**Jeff Newschwander/Katlin Hanson**	DATE COMPLETED	**7/22/03**

SAMPLE NUMBER	PID (in ppm)	BLOWS PER 6 INCHES
1	0	6 11 16
	0	11 11 11
2	0	7 8 8
	0	11 8 10
3	0	3 3 3



0 to 3.0 feet: POORLY GRADED SAND (SP), very dark grayish brown (10YR 3/2), fine (5%), medium (80%), coarse (15%), dry, loose, no odor.

3.0 to 3.5 feet: 6-inch lens of SANDY SILT (ML), very dark gray (10YR 3/1), no odor.

3.5 to 6.0 feet: POORLY GRADED SAND (SP), very dark grayish brown (10YR 3/2), fine (5%), medium (95%), dry, medium dense, no odor.

6.0 to 7.5 feet: SILTY SAND (SM), very dark grayish brown (10YR 3/2), silt (20%), fine (30%), medium (50%), damp, loose, no odor.

7.5 to 10.0 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (5%), medium (95%), dry, loose, no odor.

@ 8.0 feet bgs: 2-inch lens of SANDY SILT (ML).

@ 9.5 feet bgs: saturated.

10.0 to 12.0 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (5%), medium (95%), damp, loose, no odor.

12.0 to 15.0 feet: ORGANIC SILT (OL), very dark gray (10YR 3/1), damp, soft, medium plasticity, some organic material, no odor.

Total depth = 15.0 feet.

WELL COMPLETION DETAILS

0 to 5.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC casing.

5.0 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and 2-inch-diameter threaded end cap.

0 to 3.0 feet: Concrete.

3.0 to 4.0 feet: Bentonite chips hydrated with potable water.

4.0 to 15.0 feet: #2/12 Monterey sand.

REMARKS

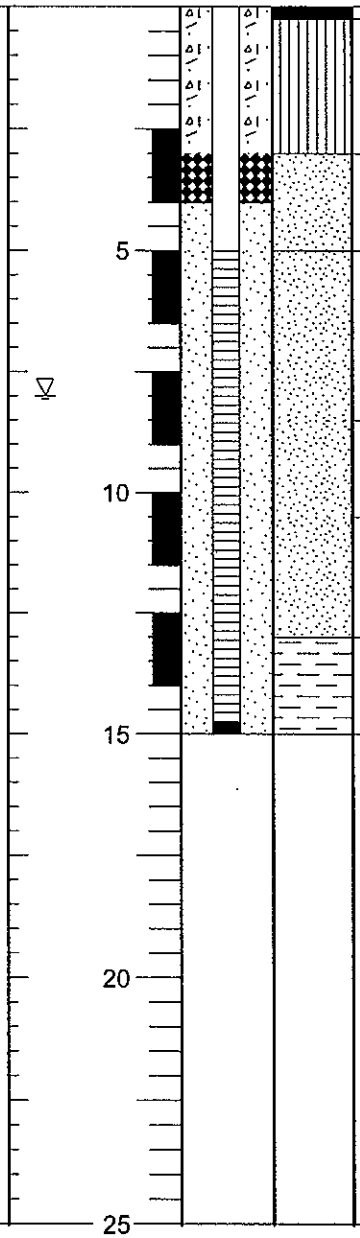
Samples submitted to laboratory for analysis: 1. MW-24-3.5-4', 2. MW-24-8.5-9', 3. MW-24-13-13.5'.

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LOG OF EXPLORATORY BORING

PROJECT NAME	**Reichhold/Lonestar Site**	BORING NO.	**MW-25**
LOCATION	**5900 West Marginal Way, Seattle, Washington**	PAGE	**1 of 1**
DRILLED BY	**Cascade Drilling, Inc.**	TOC ELEVATION	**17.21**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**15.0'**
LOGGED BY	**Jeff Newschwander/Katlin Hanson**	DATE COMPLETED	**7/22/03**

SAMPLE NUMBER	PID (in ppm)	BLOWS PER 6 INCHES
1	0	11 11 10
	0	6 6 7
2	0	7 8 9
	0	6 9 6
3	0	3 3 2



0 to 0.25 foot: ASPHALT

0.25 to 3.0 feet: SANDY SILT (ML), brown (10YR 4/3), dry, stiff, low plasticity, no odor.

3.0 to 5.0 feet: POORLY GRADED SAND (SP), grayish brown (10YR 3/2), fine (5%), medium (90%), coarse (5%), damp, medium dense, no odor.

5.0 to 8.5 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (5%), medium (90%), coarse (5%), damp, loose, no odor.

@ 8.0 feet bgs: saturated.

8.5 to 10.5 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (5%), medium (90%), coarse (5%), damp to wet, loose, no odor.

10.5 to 13.0 feet: POORLY GRADED SAND (SP), very dark gray (10YR 3/1), fine (5%), medium (90%), coarse (5%), damp, loose, no odor.

13.0 to 15.0 feet: ORGANIC SILT (OL), very dark brown (10YR 2/2), damp, soft, low plasticity, some wood debris and peat-like organic material, no odor.

Total depth = 15.0 feet.

WELL COMPLETION DETAILS

0 to 5.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC casing.

5.0 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and 2-inch-diameter threaded end cap.

0 to 3.0 feet: Concrete.

3.0 to 4.0 feet: Bentonite chips hydrated with potable water.

4.0 to 15.0 feet: #2/12 Monterey sand.

REMARKS

Samples submitted to laboratory for analysis: 1. MW-25-3.5-4', 2. MW-25-8-8.5', 3. MW-25-13-13.5'.

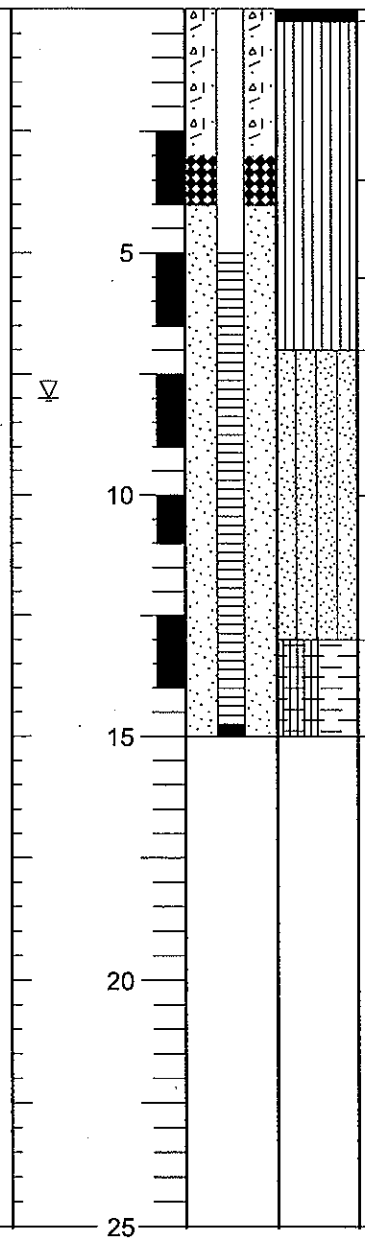
Shaw™

Shaw E & I, Inc.

LOG OF EXPLORATORY BORING

PROJECT NAME	**Reichhold/Lonestar Site**	BORING NO.	**MW-26**
LOCATION	**5900 West Marginal Way, Seattle, Washington**	PAGE	**1 of 1**
DRILLED BY	**Cascade Drilling, Inc.**	TOC ELEVATION	**16.60**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**15.0'**
LOGGED BY	**Jeff Newschwander/Katlin Hanson**	DATE COMPLETED	**7/22/03**

SAMPLE NUMBER	PID (in ppm)	BLOWS PER 6 INCHES
	0	11
		9
		8
1	0	3
		4
		5
2	0	3
		4
		5
3	0	3
		3
		4
4	0	3
		3
		3



0 to 0.25 foot: ASPHALT

0.25 to 3.5 feet: SANDY SILT (ML), brown (10YR 4/3), silts (70%), fine (20%), coarse (10%), dry, firm, little organic material, no odor.

3.5 to 5.5 feet: SILT (ML), black (Gley 2.5N), silt (60%), fine sand (20%), organic material (20%), dry, firm, no odor.

5.5 to 7.0 feet: SILT (ML), black (Gley 2.5N), silt (60%), fine sand (20%), organic material (20%), dry, firm, no odor.

7.0 to 10.0 feet: SILTY SAND (SM), very dark gray (Gley 3/N), silt (30%), fine (60%), coarse (10%), damp, very loose, no odor.
@ 8.0 feet bgs: saturated.

10.0 to 13.0 feet: SILTY SAND (SM), very dark gray (10YR 3/1), silt (45%), fine (50%), coarse (5%), damp, very loose, no odor.

13.0 to 15.0 feet: SILT WITH ORGANIC SOIL (ML/OL), very dark gray (10YR 3/1), clay (5%), silt (70%), organic material (25%), soft, damp, no odor.

Total depth = 15.0 feet.

WELL COMPLETION DETAILS

0 to 5.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC casing.

5.0 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and 2-inch-diameter threaded end cap.

0 to 3.0 feet: Concrete.
3.0 to 4.0 feet: Bentonite chips hydrated with potable water.
4.0 to 15.0 feet: #2/12 Monterey sand.

REMARKS

Samples submitted to laboratory for analysis: 1. MW-26-5.5-6', 2. MW-26-8-8.5', 3. MW-26-10.5-11', 4. MW-26-13-13.5'.

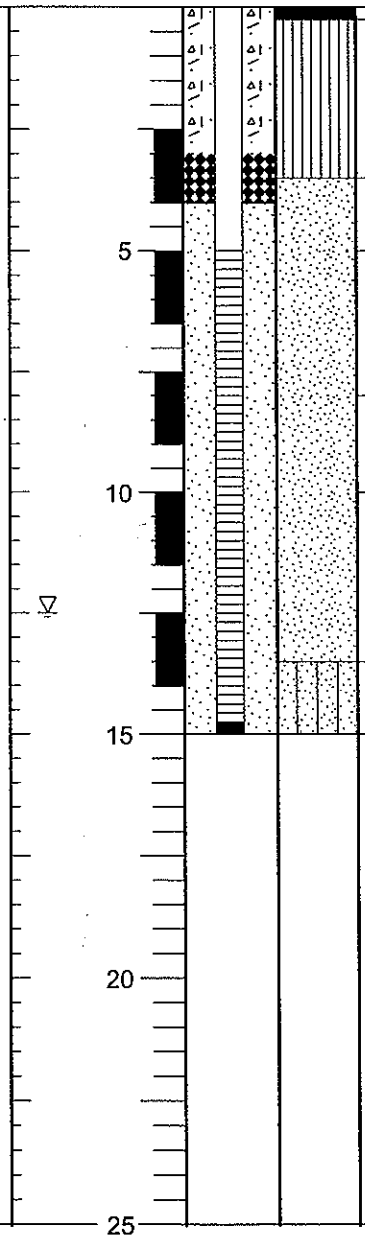
Shaw™
Shaw E & I, Inc.

REICH.gds:4.10/13/03.REICH...20600335

LOG OF EXPLORATORY BORING

PROJECT NAME	**Reichhold/Lonestar Site**	BORING NO.	**MW-27**
LOCATION	**5900 West Marginal Way, Seattle, Washington**	PAGE	**1 of 1**
DRILLED BY	**Cascade Drilling, Inc.**	TOC ELEVATION	**16.66**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**15.0'**
LOGGED BY	**Jeff Newschwander/Katlin Hanson**	DATE COMPLETED	**7/22/03**

SAMPLE NUMBER	PID (in ppm)	BLOWS PER 6 INCHES
	0	7
		8
		9
1	0	10
		14
		20
2	0	6
		18
		20
3	0	12
		12
		12
4	0	3
		3
		4



0 to 0.25 foot: ASPHALT

0.25 to 3.5 feet: SANDY SILT (ML), very dark brown (10YR 2/2), silts (75%), fine (20%), coarse (5%), dry, loose, no odor.

3.5 to 5.0 feet: POORLY GRADED SAND (SP), very dark grayish brown (10YR 3/2), fine (5%), medium (95%), dry, loose, no odor.

5.0 to 8.0 feet: POORLY GRADED SAND (SP), very dark grayish brown (10YR 3/2), fine (5%), medium (90%), coarse (5%), dry, medium dense, no odor.

8.0 to 10.0 feet: POORLY GRADED SAND (SP), brown (10YR 4/3), fine (5%), medium (90%), coarse (5%), damp, medium dense, no odor.

10.0 to 13.5 feet: POORLY GRADED SAND (SP), brown (10YR 4/3), fine (5%), medium (90%), coarse (5%), damp, medium dense, no odor.

@ 12.5 feet bgs: saturated.

13.5 to 15.0 feet: SILTY SAND (SM), very dark brown (10YR 2/2), fine (30%), medium (70%), damp, loose, no odor.

Total depth = 15.0 feet.

WELL COMPLETION DETAILS

0 to 5.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC casing.

5.0 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and 2-inch-diameter threaded end cap.

0 to 3.0 feet: Concrete.

3.0 to 4.0 feet: Bentonite chips hydrated with potable water.

4.0 to 15.0 feet: #2/12 Monterey sand.

REMARKS

Samples submitted to laboratory for analysis: 1. MW-27-5.5-6', 2. MW-27-8-8.5', 3. MW-27-10.5-11', 4. MW-27-13-13.5'.

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Shaw E & I, Inc.

REICH.gds:2.10/10/03.REICH...20600335

APPENDIX P GROUND PENETRATING RADAR SURVEY REPORT

Memorandum

Environmental Resources Management

1218 3rd Avenue
Suite 1412
Seattle, WA 98101
(425) 462-8591
(425) 455-3573 (fax)

To: Donna Ortiz De Anaya/Washington Department of Ecology

From: Michael Mendes, PG/ERM-West, Inc.
Erik Ipsen, PE/ERM-West, Inc.

cc: Ron Timm/Washington Department of Ecology
John J. Oldham/Reichhold
Scott Isaacson/Glacier Northwest
Pete Stoltz/Glacier Northwest
Carolyn Kossik/CH2M HILL

Date: 29 November 2012

Subject: Ground Penetrating Radar Results Memorandum
Glacier Northwest, Inc. – Reichhold, Inc. Site
Seattle, Washington

ERM-West, Inc. (ERM) has prepared this *Ground Penetrating Radar Results Memorandum* on behalf of Glacier Northwest, Inc. and Reichhold, Inc., (Glacier-Reichhold) for the Glacier-Reichhold site located at 5900 West Marginal Way SW, Seattle, Washington (the "site"). Figure 1 provides a site location map. This memorandum presents the ground penetrating radar (GPR) objectives, scope, and results of the GPR survey.

The GPR survey described in this memorandum was conducted in accordance with the *Final Remedial Investigation and Feasibility Study Work Plan*, dated August 2012, prepared by the Washington Department of Ecology (Ecology). The standard operating procedure (SOP) for the GPR survey (*SOP K: Conducting Ground Penetrating Radar Surveys*), was submitted to Ecology on 19 September 2012 and is included herein as Attachment A.

GROUND PENETRATING RADAR SURVEY OBJECTIVES AND COMPLETED SITE ACTIVITIES

Historical site maps as well as air photos, taken at various times and dating back to 1936, show the location and configuration of ditches in the northern, central, and southern portions of the site. The objective of the GPR survey was to augment current knowledge of the location and configuration of these drainage ditches, and adjust the locations where samples from soil borings and the riverbanks are collected in proximity to the historical drainage ditches, if appropriate. Figure 2 shows completed GPR transects and locations where soil borings and river bank sampling were planned.

On Thursday, 20 September 2012, GeoPotential of Portland, Oregon conducted a geophysical GPR survey at the site under the supervision of ERM. Consistent with the Work Plan prepared by Ecology, the GPR survey consisted of surveying multiple transects perpendicular to the location of the suspected historical drainage ditch locations. In addition, several east/west trending transects were completed as a safety precaution to screen for utilities prior to soil sample collection.

The geophysical report of findings (GPR Report) prepared by GeoPotential is included herein as Attachment B. Thirty-two GPR profiles were completed at the site at the locations shown on Figure 2 and in the GPR Report (pages 7 and 8; Attachment B).

The site was traversed using a MALA Ramac GPR with a 500 MHz antenna and a Trimble Global Positioning System (GPS) with differential correction. Test transects were conducted using a 500 MHz antenna to evaluate for both depth of penetration and resolution for the soil conditions at the site. The 500 MHz GPR antenna was selected for the survey because it achieved target penetration depths (i.e., 3 to 6 feet below ground surface) corresponding to the industrially active zone and provided higher resolution than the 250 MHz antenna. Conceptual Subsurface Model figures depicting the estimated industrially active zone are attached hereto as Attachment C.

A field evaluation of the GPR files was conducted following completion of each transect to assess the potential presence of the former drainage ditches. An assumed soil velocity of 328 feet per microsecond (typical for sandy to gravely soil) was used for depth determinations throughout the GPR survey. The actual depths of the GPR survey are assumed to be accurate to approximately +/- 20% of the actual depth based on local soil conditions. Anomalies identified during the GPR survey were marked on the ground using spray paint and are identified on Figure 2. The analyzed report provided by GeoPotential is included in Attachment B.

RESULTS

The features identified and interpreted on the GPR profiles are shown on Figure 2 and in the GPR Report (Attachment B). The GPR identified previously known and previously unknown features on the site that are summarized as follows:

Previously Known Features:

- Utility Tunnel: Piping related to the silos was detected along transects R21 (page 35; Attachment B) and R22 (page 36; Attachment B). The piping daylights to the Southeast of R22.
- Coarse Fill: Coarse backfill was interpreted along R13 (pages 22, 23, and 24; Attachment B) and R14 (page 25, Attachment B), which may be related to the Former Washwater Impoundment Area.
- Areas of Disturbed Soil: Areas of disturbed soil such as excavations or former test pit locations were interpreted along R3 (page 12; Attachment B), R19 (page 32; Attachment B), and R27 (page 42; Attachment B).
- Silo Foundation: The silo foundation footing was interpreted from R18 (page 31; Attachment B) to assist with the placement of a soil boring in this area.

Previously Unknown Features:

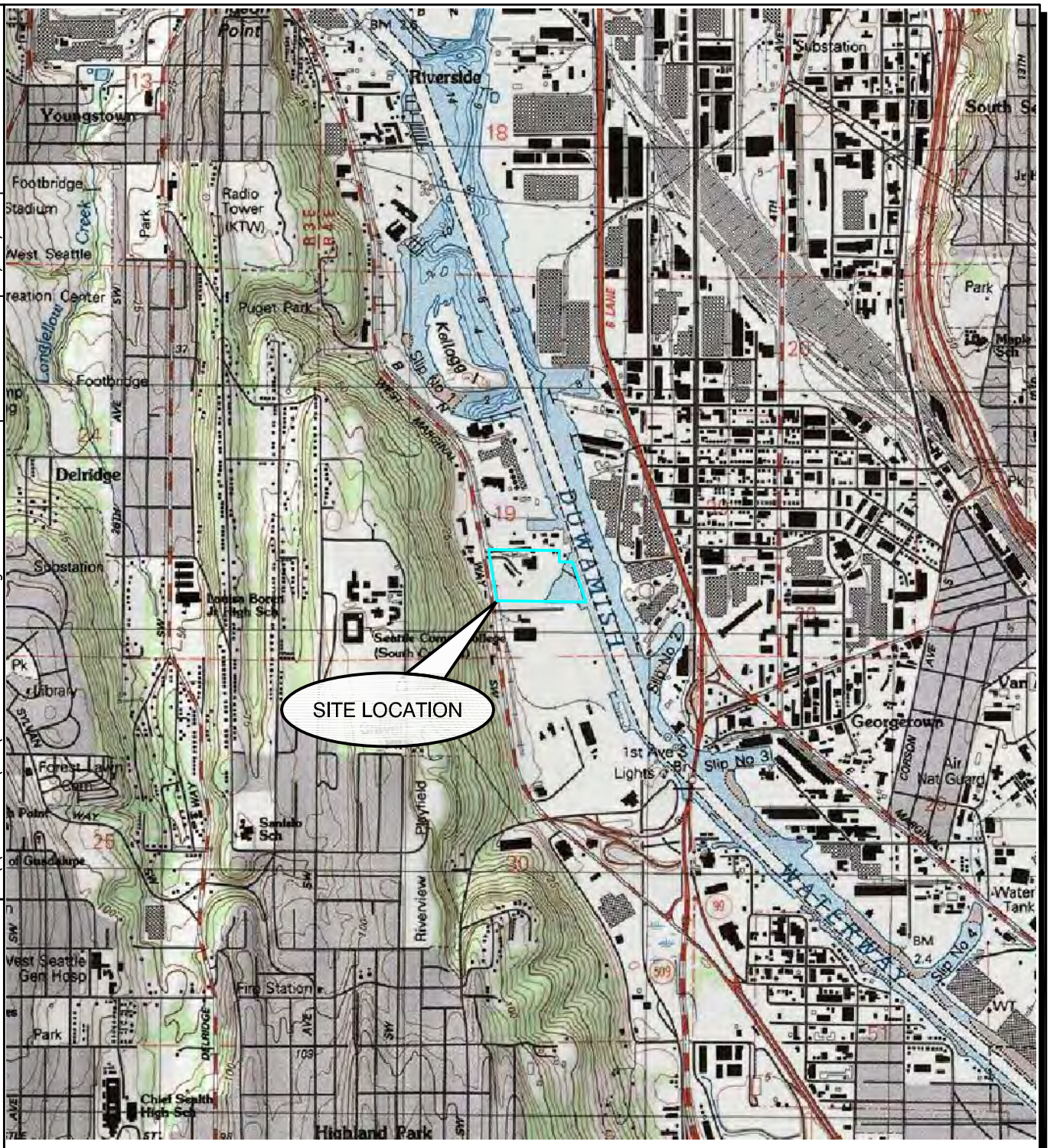
- Utility Pipes, boulders, or debris: GPR anomalies that may be caused by utility pipes, large boulders, or debris are shown on Figure 2 (depicted as light blue dots) and in the GPR Report in Attachment B. The location and depth of these anomalies are not believed to be associated with the historical storm water pipe, as the GPR anomalies were identified as two inch features compared to the 15-inch diameter historical stormwater pipe, as shown in as-built drawings. It should be noted that activities to identify the location of the historical storm water pipe will be completed during the planned historical storm water pipe abandonment, as described in the *Revised Final RI/FS Work Plan,* dated May 2012.
- Utility Trench: A utility trench is interpreted along R23 (page 38; Attachment B), R24 (page 39; Attachment B), and R25 (page 40; Attachment B) located south of the southern fence line between the southern fence and Port of Seattle easement. This trench may be for an electrical cable or other unidentified utility.

DISCUSSION

The GPR survey conducted using standard equipment and methods did not successfully identify features that are interpreted as historical drainage ditches. Because information from the GPR survey did not successfully supplement information regarding the location or configuration of the historical ditches, no modification to the location or sampling approach for soil borings or riverbank samples, based on GPR Survey results is advised.

Figures

Project No. 0112489.05
Date: 04/13/10
Drawn By: R. Olson
CAD File: G:\0112489\05\011248905-01.dwg



SCALE 1: 24,000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

N

References:
TOPO!® Software
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Seattle South E, WA
Version: 1983; Current: 1978

Figure 1
Site Location Map
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 W. Marginal Way, SW
Seattle, Washington

ERM 04/10

F:\Projects\0155129_107WE05 R-G Site Rem (2012) (central file on SEA server)\Spring 2012 Figs\GPRTransects_rev1.mxd

Drawn By: Mike Appel Date: 11/29/2012 Project: 0155129.10



Legend

- Approximate Soil Boring Location
- Riverbank Samples Request by Ecology
- Ground Penetrating Radar (GPR) Transect (Transect Noted)
- Utility Pipe Detected (Depth Noted)
- Utility Tunnel or Trench
- Area of Coarse Fill
- Areas of Disturbed Soil
- Approximate Former Drainage Ditch Location (Provided by Ecology)

Notes:
Aerial: ESRI Aerial Imagery Web Server, May 15, 2009
Soil borings not yet surveyd, locations based on proposed locations.
Former drainage ditch locations are based on Figure 6 from the Final Remedial Investigation and Feasibility Study Work Plan, dated August 2012, prepared by the Washington Department of Ecology (Ecology).

N

0 50 100 200 Feet

FIGURE 2

GPR TRANSECTS AND SOIL BORING LOCATIONS
Glacier Northwest, Inc.
- Reichhold, Inc. Site
5900 W. Marginal Way SW
Seattle, Washington

Environmental Resources Management
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101
425-214-0468

Attachment A
Standard Operating Procedure K:
Conducting Ground Penetrating
Radar Surveys

SOP K: CONDUCTING GROUND PENETRATING RADAR SURVEYS

Scope:

The objective of the Ground Penetrating Radar (GPR) survey is to identify the location and configuration of historical drainage ditches in the northern, central and southern portions of the Site as noted in Ecology's Final Remedial Investigation and Feasibility Study Work Plan, dated August 2012, to the extent possible. The GPR survey will consist of surveying multiple transects perpendicular to the location of the suspected historical drainage ditch locations which were identified using aerial photographs or historical site maps.

Application:

GPR is a continuous geophysical survey method that can accurately locate metallic and non-metallic utilities, buried building materials and changes in stratigraphy whether man-made or natural. GPR works best when there are well defined differences in the electromagnetic properties of the survey materials. Gradual change in the survey material is more difficult to detect. GPR uses short impulses of high frequency radio waves directed into the ground to acquire information about the subsurface. The energy radiated into the ground is reflected back to the antenna by features having different electrical properties to that of the surrounding material, the greater the contrast, the stronger the reflection. Typical reflectors include water table, bedrock, bedding, fractures, voids, and man-made objects such as metal and plastic utilities. Materials having little electrical contrast like clay and concrete pipes may not produce strong reflections and may not be seen.

The frequency of the radar signal used for this survey will be either 250 MHz or 500 MHz antenna using a MALA RAMAC GPR. Lower frequencies (250 MHz) provide deeper penetration but low resolution so that pipes and utilities may not be seen. Pipes and utilities may be seen using higher frequencies (500 MHz) but the depth of penetration may be limited to only a few feet especially in the wet, clayey soils found in many areas of the Pacific Northwest. Many buried objects produce echoes that may be similar to the echo expected from the target object. Boulders and debris produce reflections that are similar to pipes and tanks. Subtle changes in the electrical properties along a traverse caused by changes in soil type, mineralogy, grain size, and moisture content all produce "noise" that can make interpretation difficult. The GPR unit will be hardline connected to a field laptop computer to ensure the quality of data collected is sufficient in real-time. Data will be digitally recorded or downloaded to a laptop computer for filtering and later processing.

Procedures:

The following procedures will be followed for the collection of GPR data:

1) Using Global Positioning Satellite unit, mark out the desired transects on the ground with white spray paint. Note: If a transect cannot be conducted due to site obstructions such as blackberry brush, large equipment, or large immovable materials, the transect line will be moved in an east/west direction or as appropriate to continue the transect in an accessible area of the site. Final GPR transects will be recorded with a GPS unit.
2) Configure the MALA RAMAC GPR unit with the appropriate dielectric constant for the subsurface materials (i.e., silty sand) at the site. A dielectric constant calibrates the GPR antennae and receiver to specific site conditions (i.e. various soil types).
3) Navigate the GPR unit along each transect as painted on the ground to search for subsurface anomalies or changes in lithology. Note: The data acquisition rate is calibrated to a measuring wheel attached to the GPR antenna, so the horizontal velocity of data collection is not a variable in the quality of the recorded data.
4) At the completion of each transect, the GPR raw profile will be interpreted in the field to determine the presence/absence of subsurface anomalies. The anomalies will be marked on the ground and GPS coordinates taken.
5) After completion of the field data acquisition effort, the GPR contractor will post process and interpret the GPR profiles. Modifications to the original interpretation (if any) will be made and marked on the Site.

Documentation:

Documentation of observations and data acquired in the field will provide information on the activities conducted during the survey and a permanent record of field activities. The observations and data will be recorded with waterproof ink in a permanently bound weatherproof field logbook. The following information will be recorded in the bound field log book:

- Names of personnel
- Weather conditions
- Date, time, and location of logging
- Description of the survey set-up and data collection
- Times that procedures and measurements were completed
- Documentation of problems encountered or deviations from the work plan
- Calibration information
- Other applicable information

The results of the GPR survey will be summarized in a report and presented with GPR logs showing stratigraphic conditions and horizontal coordinates along each transect. The report will include a map with the profile locations and an interpretation map showing the final results of the GPR survey. The GPR survey report will be provided to Ecology for review.

Attachment B
Ground Penetrating Radar Summary Report

GeoPotential

ENVIRONMENTAL & EXPLORATION GEOPHYSICS

22323 East Wild Fern Lane, Brightwood, Oregon 97011• PH (503) 622-0154• FAX (503) 622-0526
WEB http://www.geopotential.biz/ E-MAIL GeoPotential@geopotential.biz

SUMMARY REPORT

SUBSURFACE MAPPING SURVEY TO DETECT BURIED DRAINAGE DITCHES

Glacier Northwest, Inc. – Reichhold, Inc
201 South Wenatchee Avenue
Seattle, Washington

CLIENT

ERM – West, Inc.
1218 3rd Avenue, Suite 1412
Seattle, Washington 98101

DATE OF SURVEY

September 20, 2012

GeoPotential Project Number: 8953

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SUMMARY

A Subsurface Mapping Survey (SMS) was conducted over portions of the Glacier Northwest, In. – Reichhold, Inc Site in Seattle, Washington for the purpose of detecting buried drainage ditches.

A Ground Penetrating Radar (GPR) Survey was conducted in an attempt to locate and map the buried drainage ditches.

The drainage ditches could not be detected at this Site with the GPR Survey. Other features of interest were detected and mapped such as possible utility pipes, ditches and tunnels and areas of backfill.

INTRODUCTION

Ralph Soule & Tony Bartruff of GeoPotential conducted the Subsurface Mapping Survey. ERM'S on site representatives were Mr. Mike Mendes and Mr. Matt Crandell. Fieldwork was conducted on September 20th, 2012. The final report was completed and e-mailed to ERM on October 24, 2012.

Subsurface mapping surveys are geophysical surveys utilizing geophysical methods and data to detect and locate natural and manmade subsurface features. Ground Penetrating Radar (GPR) Surveys are used to map both natural and manmade subsurface features such as USTs, utilities, backfilled pits, etc.

SURVEY OBJECTIVES

The objectives of this subsurface mapping survey are:

1. Search for buried drainage ditches.

SURVEY SITE

The survey site is shown on Figures 1, 2 & 3. The Site consists of asphalt, concrete and gravel covered lots with buildings and silos. ERM provided GeoPotential with a map of the site showing the expected locations of the buried drainage ditches (locations shown on Figure 2). ERM verbally described the backfilled ditches as approximately 3 to 4 feet wide and 3 to 4 feet in depth. They backfilled tops of the drainage ditches were buried under approximately 3 feet of backfill that currently covers the site.

GeoPotential was also requested to locate the extent of the footing for one of the silos (GPR Profile R18).

SURVEY EQUIPMENT

The following geophysical instruments were used to conduct the survey:

- MALA Ramac Ground Penetrating Radar with 500 MHz Antenna (GPR Survey).
- Trimble Global Positioning System (GPS Survey) with differential correction provided by ERM.

This equipment and the procedures used to meet the survey objectives of this project have been proven effective in detecting features such as disturbed soil from backfilled pits.

Geophysical techniques are excellent at detecting changes in the subsurface caused by natural and manmade objects; however, they are poor at actually identifying subsurface features. Complementary information may be used to assist in the interpretation; however, the only sure way of identifying a buried feature is by excavation.

Brief descriptions of the radar method are included in Appendix B.

PROCEDURE

GPR / GPS Survey

The desired locations of GPR Profiles were provided to GeoPotential by ERM prior to the SMS. The final locations of the acquired GPR Profiles (designated on Maps as R0 – R32) are shown on Figures 2 and 3. GPS tracks were acquired along each GPR Profile by ERM. The distance from the starting point of each GPR Profile was measured in the field with a measuring wheel attached to the GPR antenna. At the end of the acquisition of each GPR Profile a field interpretation of the Profile was conducted and objects of interest were measured from the starting point with a measuring wheel and marked on the surface with pink marking paint. ERM then took a GPS reading of the location of the object.

The 500 MHz GPR antenna provided useable data from 3 to 6 feet in depth. An assumed soil velocity of 328 feet per microsecond was used for depth determinations throughout the Survey (GPR electromagnetic soil velocities range from 197 to 492 feet per microsecond). Local variations from this assumed velocity can cause significant errors in interpreted depths of objects. The depths are thought to be accurate to about 20% of the actual depth.

ERM provided GeoPotential with the processed GPS data. The GPS data is advertised by Trimble to be accurate within 3 feet of the actual location. This data was used to generate the grid shown on Figures 2 and 3 and is referenced to the Washington State Reference Network – Seattle.

After completion of the field acquisition the GPR data was reprocessed and interpreted. Final results were posted on Figures 2 and 3 and are posted on the Final GPR Profiles shown in Appendix A. (Note: there is no GPR Profile R1 as it was corrupted during acquisition and reacquired as Profile R2).

RESULTS

Results are shown on Figures 2 & 3. Results were marked on the Site with pink marking paint.

The locations of the buried drainage ditches could not be interpreted with confidence from the GPR data.

Several other features were interpreted from the data:

- Utility Pipe. GPR anomalies that may be utility pipes are shown on Figures 2 and 3. These anomalies may be caused by objects other then utility pipes such as large boulders, pipes, debris etc.
- Utility Tunnel. A utility tunnel was detected along R21 and R22. The tunnel daylights to the Southeast of R22.
- Utility ditch. A utility ditch is interpreted along R23, R24 and R25. This ditch may be for electrical cable for street lighting along this road.
- Backfilled excavation. Backfilled excavations were interpreted along R3 and R19.
- Coarse Fill. Deep coarse backfill were interpreted along R13 and R14 and is speculated to be fill for a river channel or lagoon.
- Silo Foundation. The location for the Silo foundation footing was interpreted from R18.

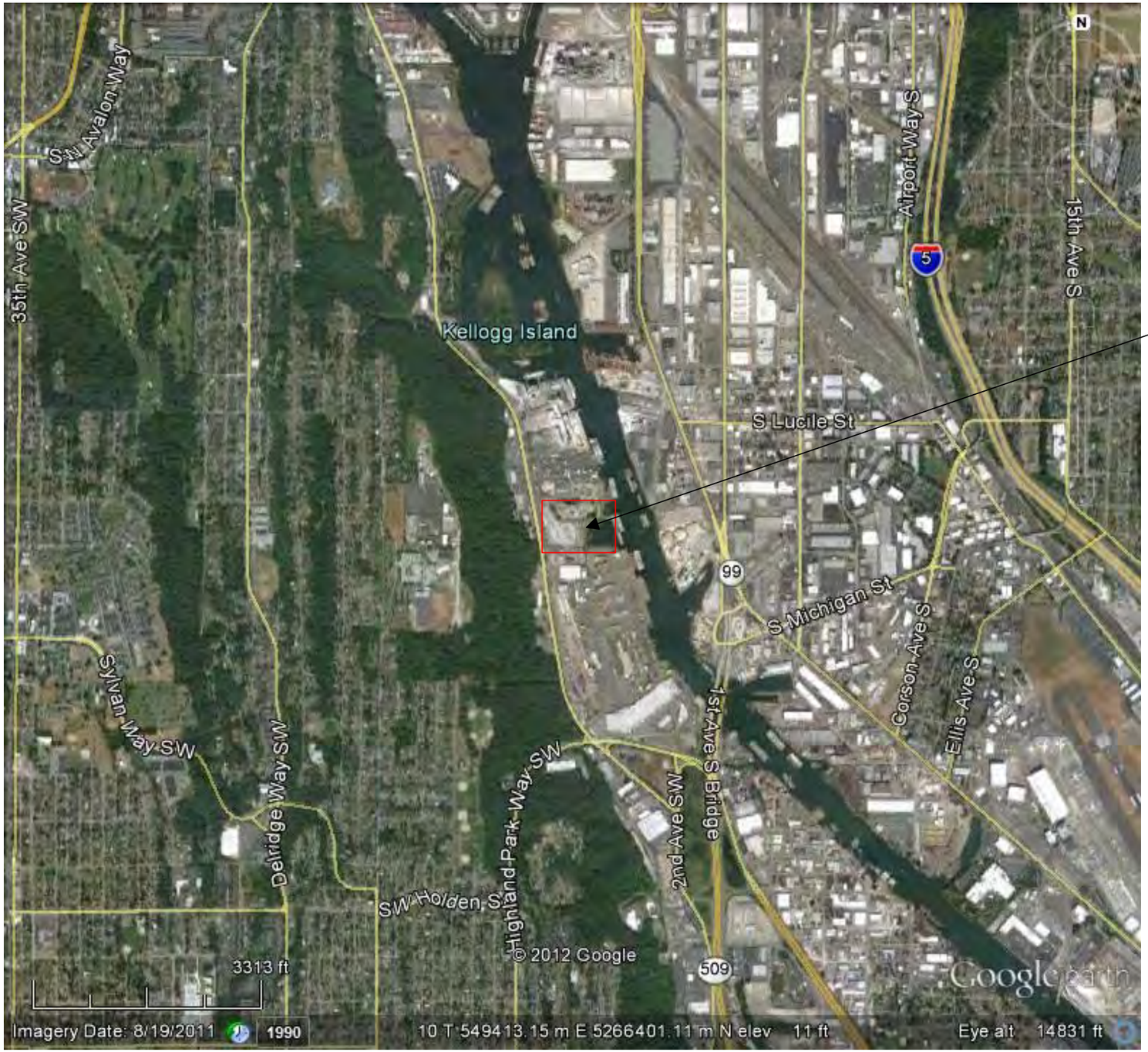
LIMITATIONS

Limitations of GPR surveys can be seen in the Appendix B.

Geophysical surveys consist of interpreting geophysical responses from subsurface features. Since a variety of subsurface features can produce identical geophysical responses, it may be necessary to confirm the geophysical interpretation with intrusive investigations such as excavating or drilling. In addition, many subsurface features may produce no geophysical response.

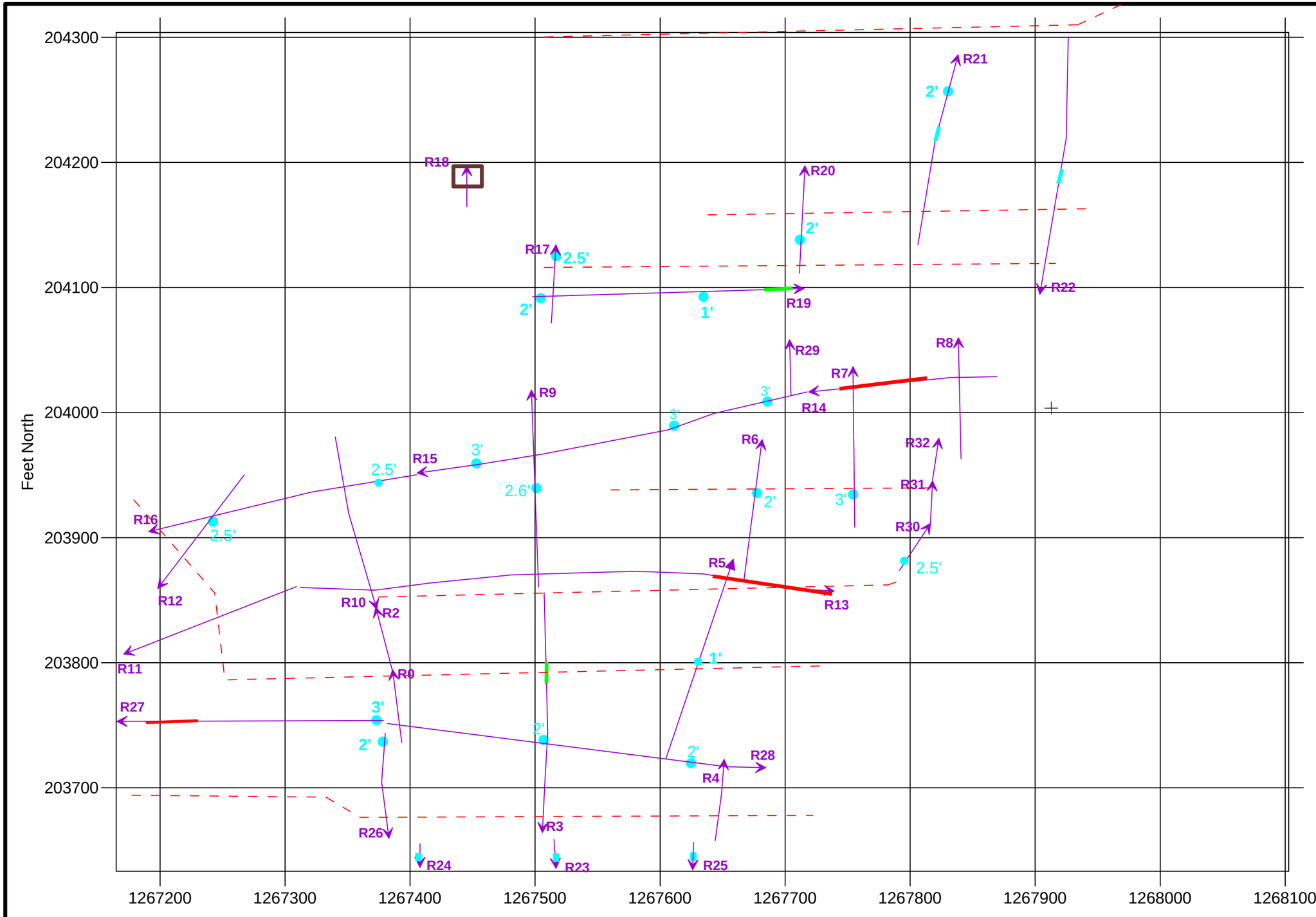


Ralph Soule **October 24, 2012**
GeoPotential





GeoPotential ENVIRONMENTAL & EXPLORATION GEOPHYSICS 22323 East Wild Fern Lane, Brightwood, Oregon 97011• PH (503) 622-0154• FAX (503) 622-0526 WEB http://www.geopotential.biz/ E-MAIL GeoPotential@geopotential.biz	LOCATION: Glacier Northwest, Inc. - Reichhold, Inc 5900 West Marginal Way Seattle, Washington	**Figure 1.** **Location Map**
DATE: September 2012 *SUBSURFACE MAPPING SURVEY* PROJECT No. 8935	CLIENT: ERM-West, Inc.	



Map legend

GPR Profile R9

Utility Pipe (feet bgs) 1'

Utility Tunnel

Utility Ditch

Backfilled Excavationl

Coarse Fill

Silo Foundation

Expected Locations of Drainage Ditches

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5900 West Marginal Way
Seattle, Washington

CLIENT: 7 ERM-West, Inc.

Figure 2.
Site Map



Map legend

GPR Profile R9

Utility Pipe (feet bgs) 1'

Utility Tunnel

Utility Ditch

Backfilled Excavationl

Coarse Fill

Silo Foundation

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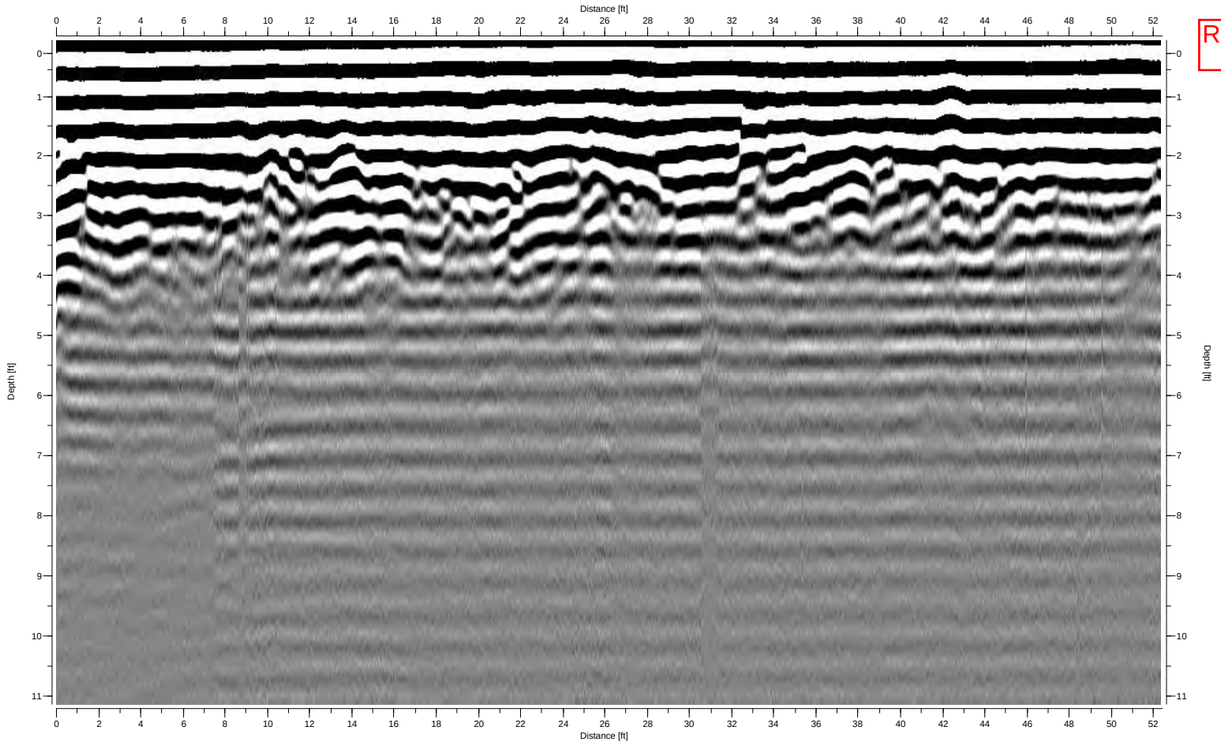
Figure 3.
Interpretation Map

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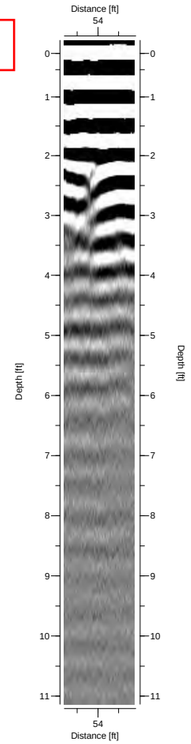
Appendix A
Ground Penetrating Radar Profiles

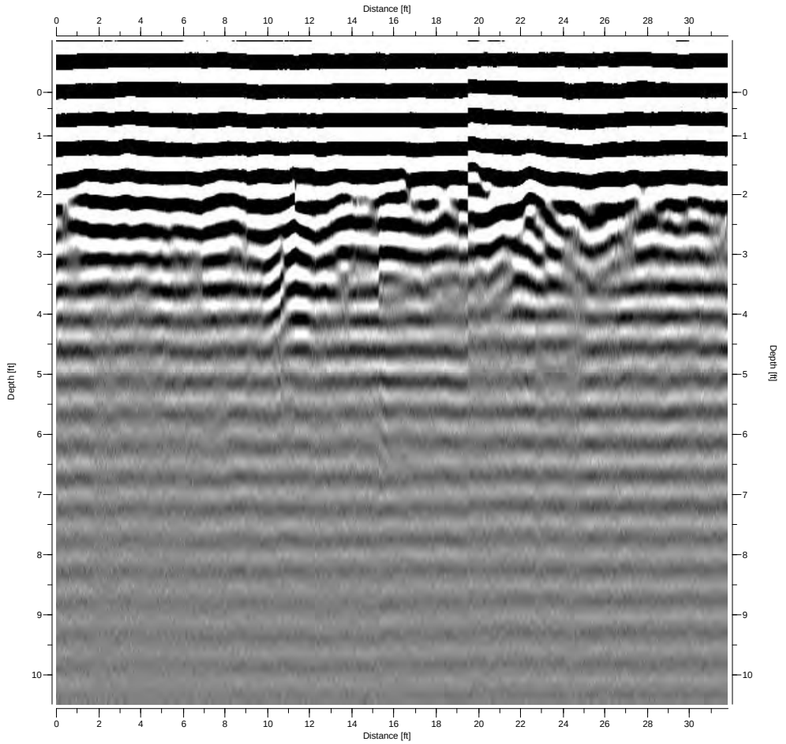
Antennas: Shielded 500 MHz
Site: Glacier Northwest, Inc. - Reichhold, Inc.
Customer: ERM-West, Inc.
Operator: GeoPotential
Comment: Assumed Ground Velocity = 328 Feet/Microsecond

Start position: 0.00 ft
Stop position: 17.00 ft
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Number of samples: 512
Sampling frequency: 7614 MHz
Number of stacks: 4
Trace interval: 0.06 ft
Time window: 67 ns



R0

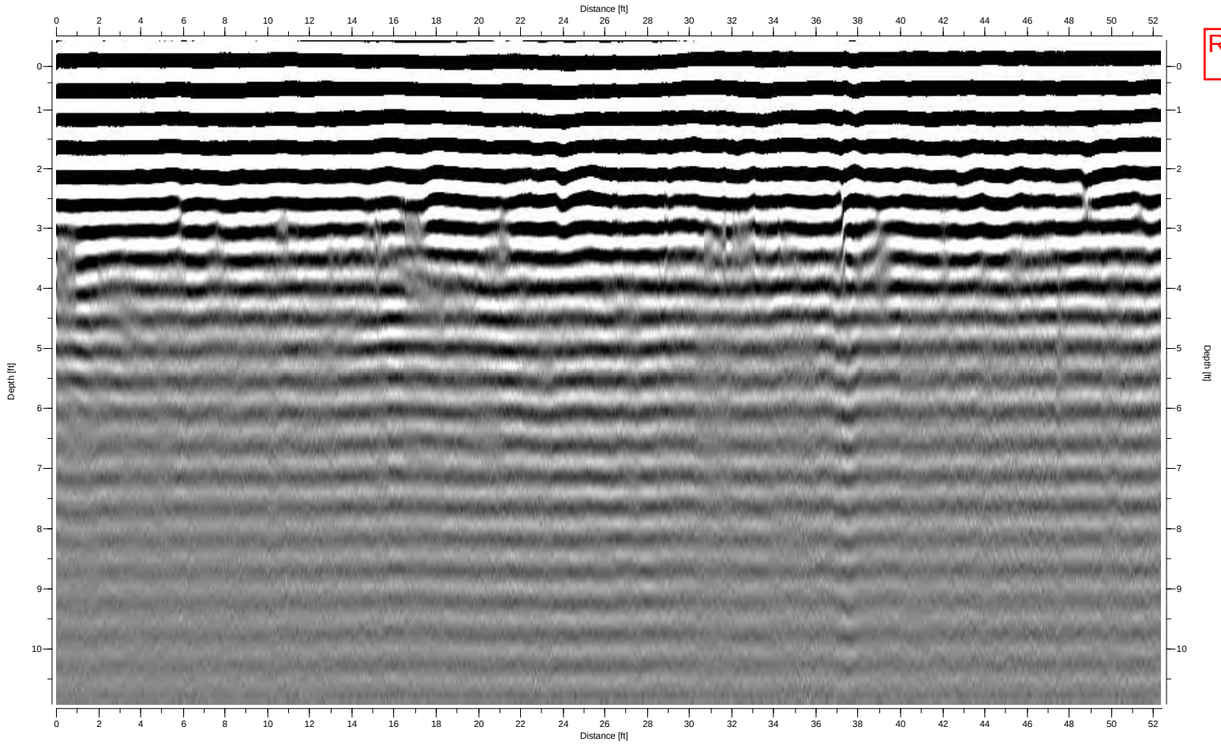




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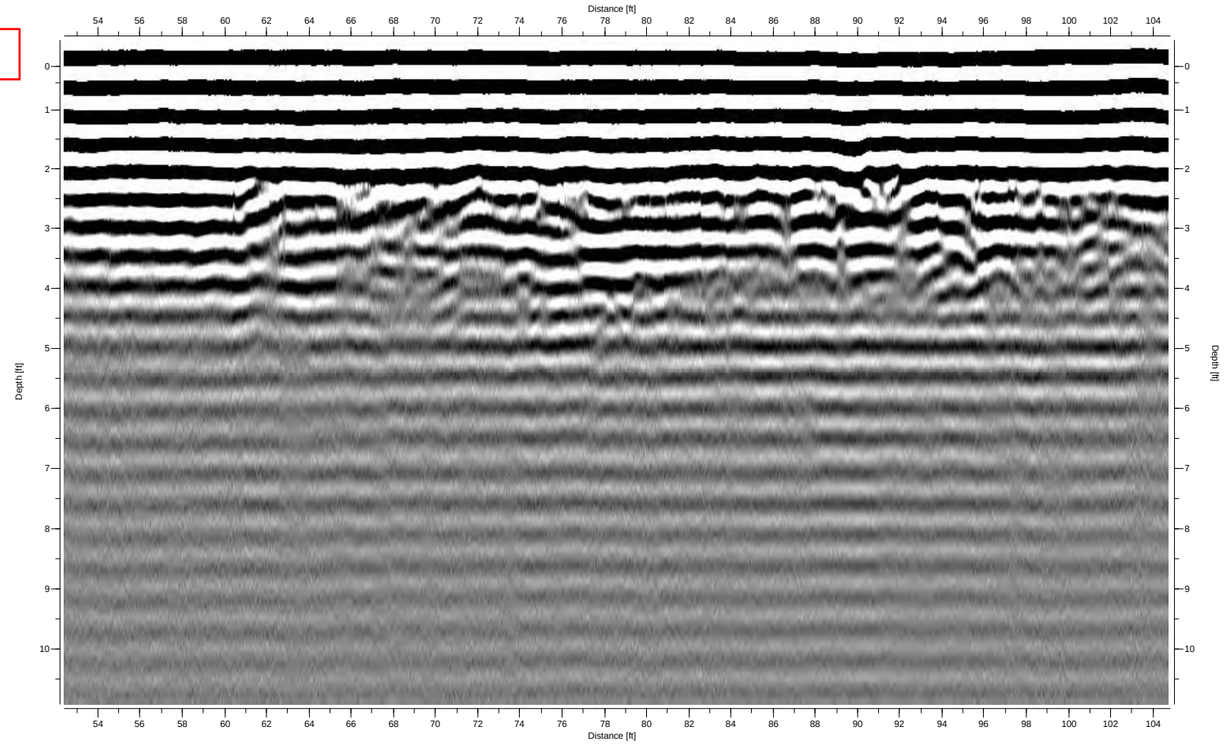
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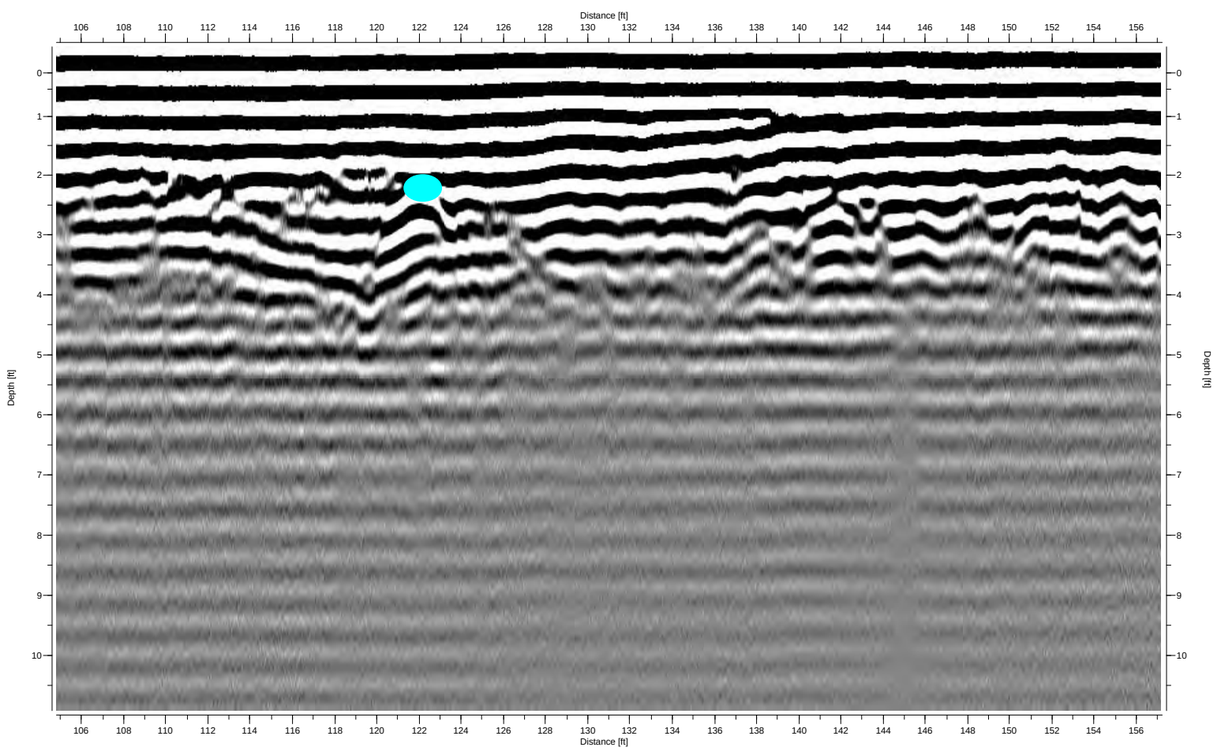


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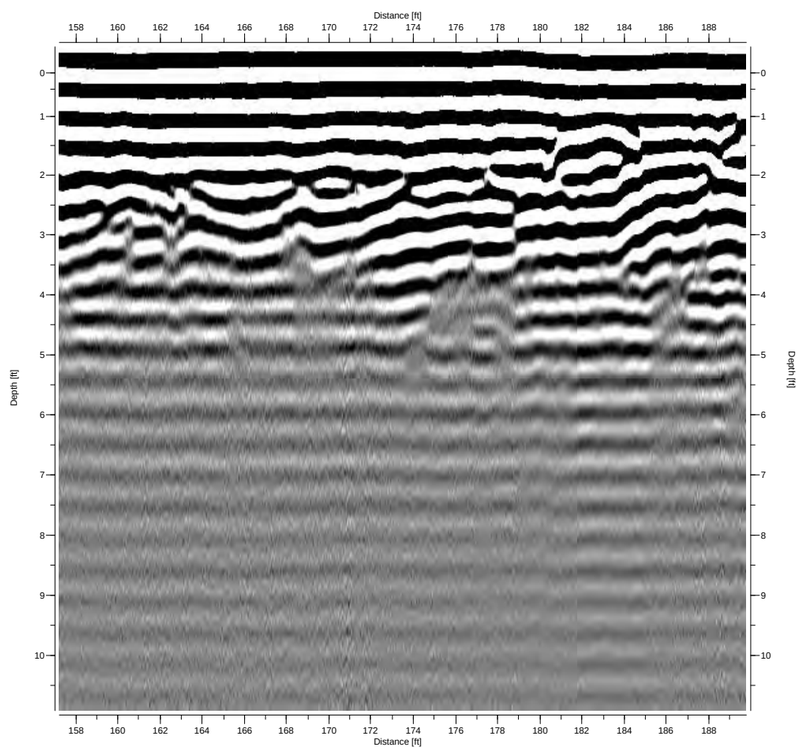
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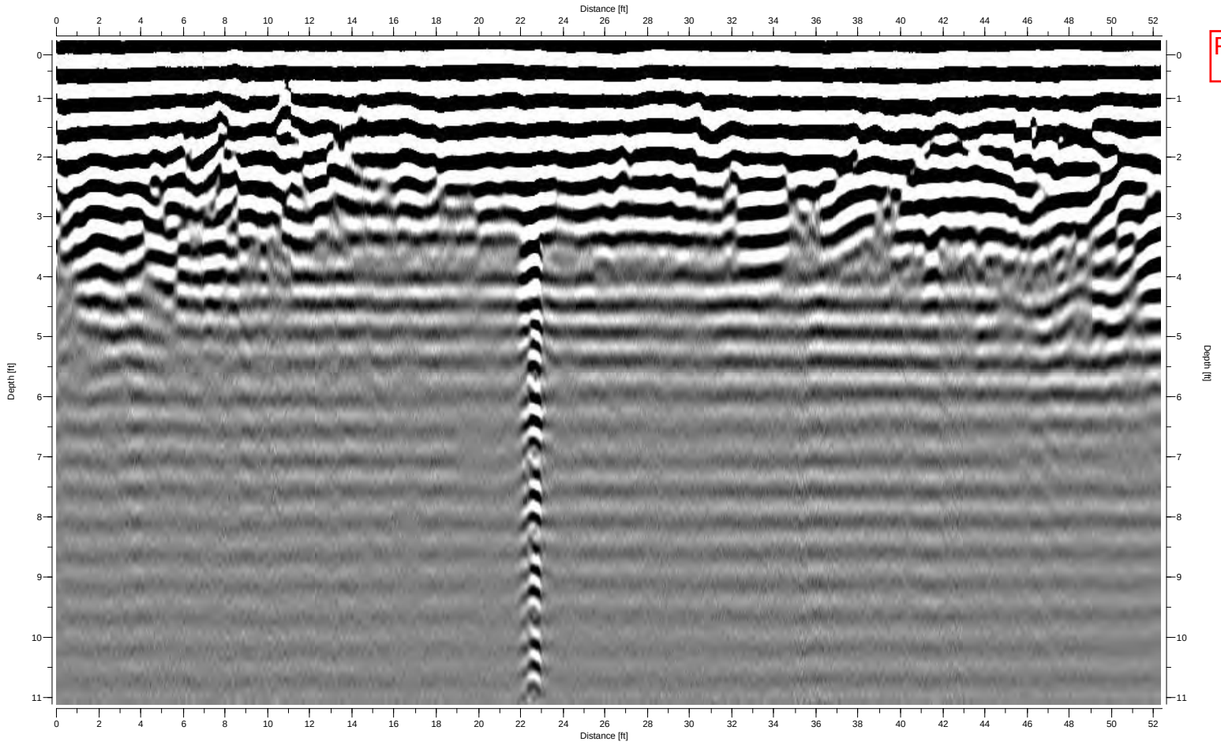
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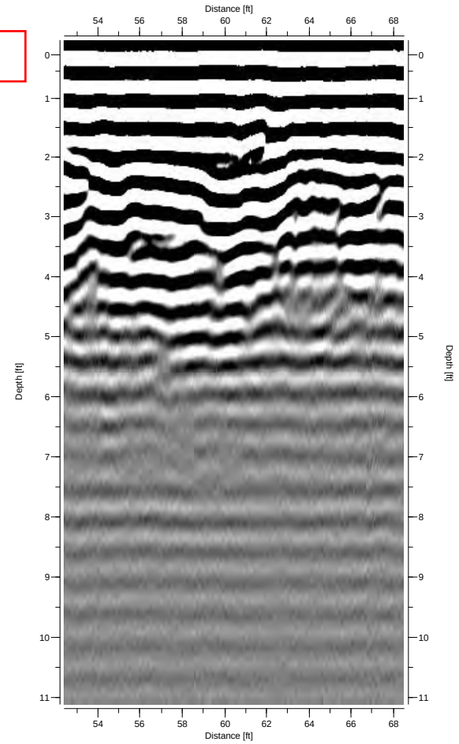
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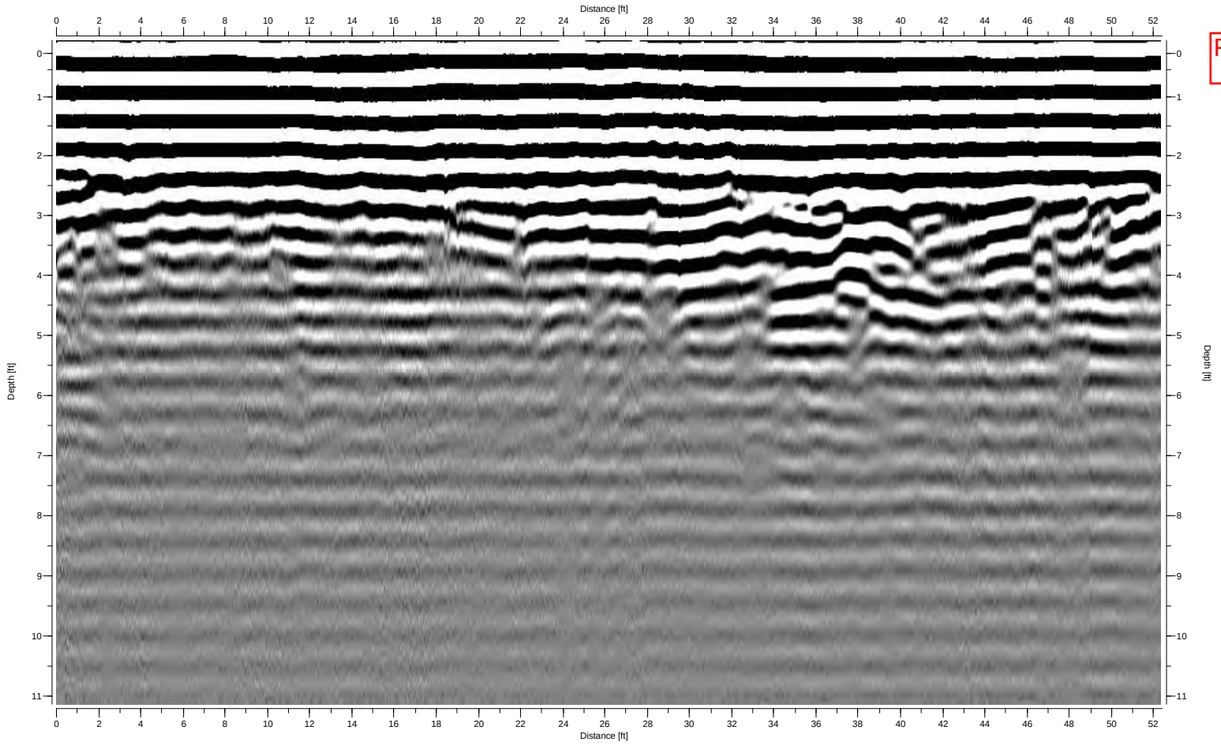
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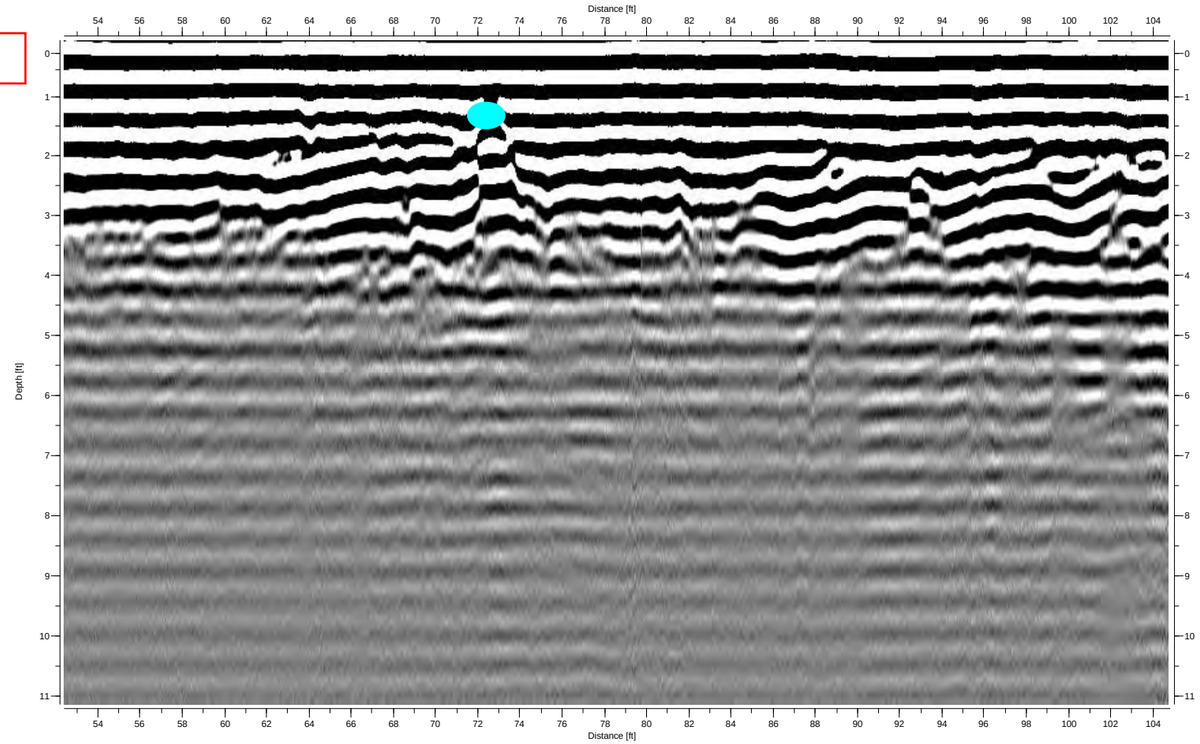
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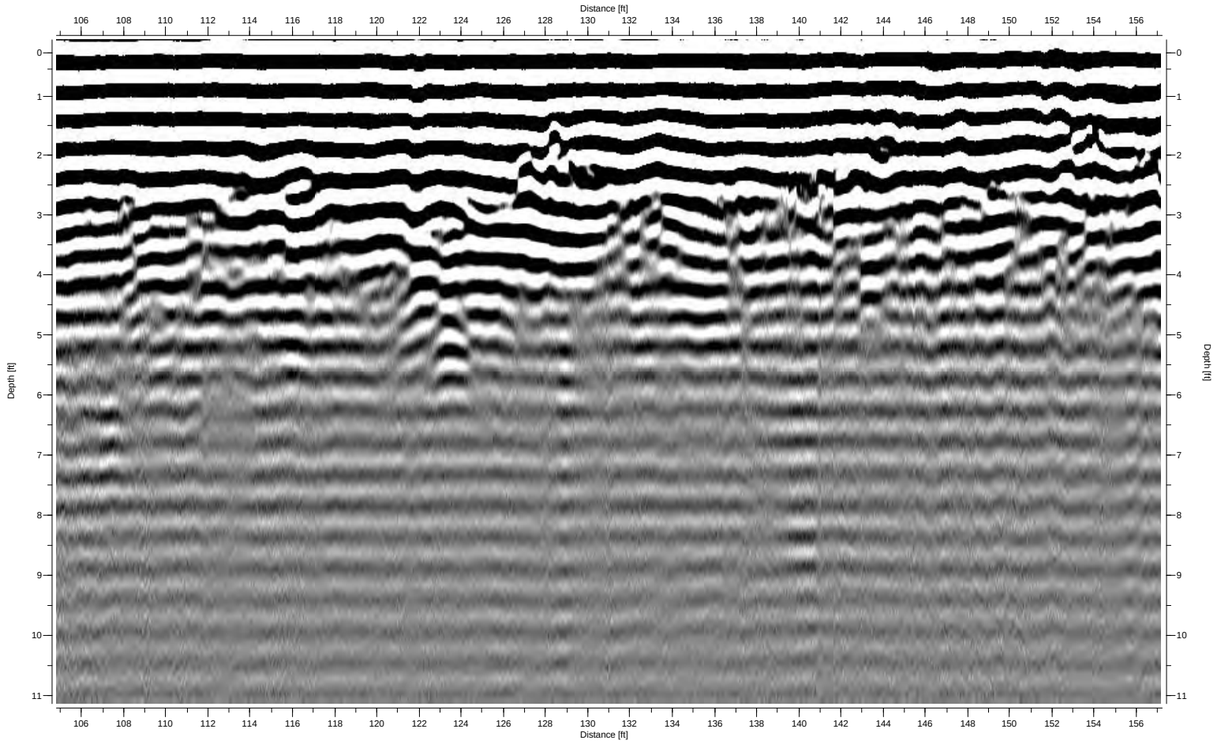


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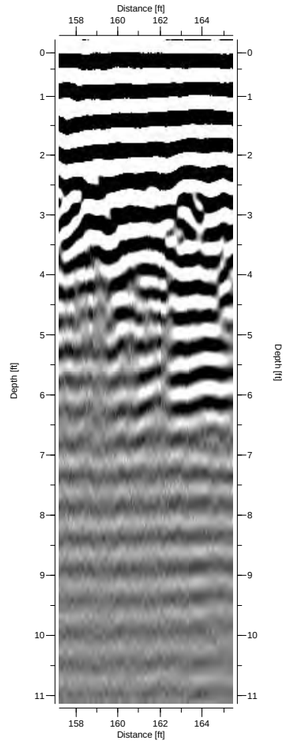
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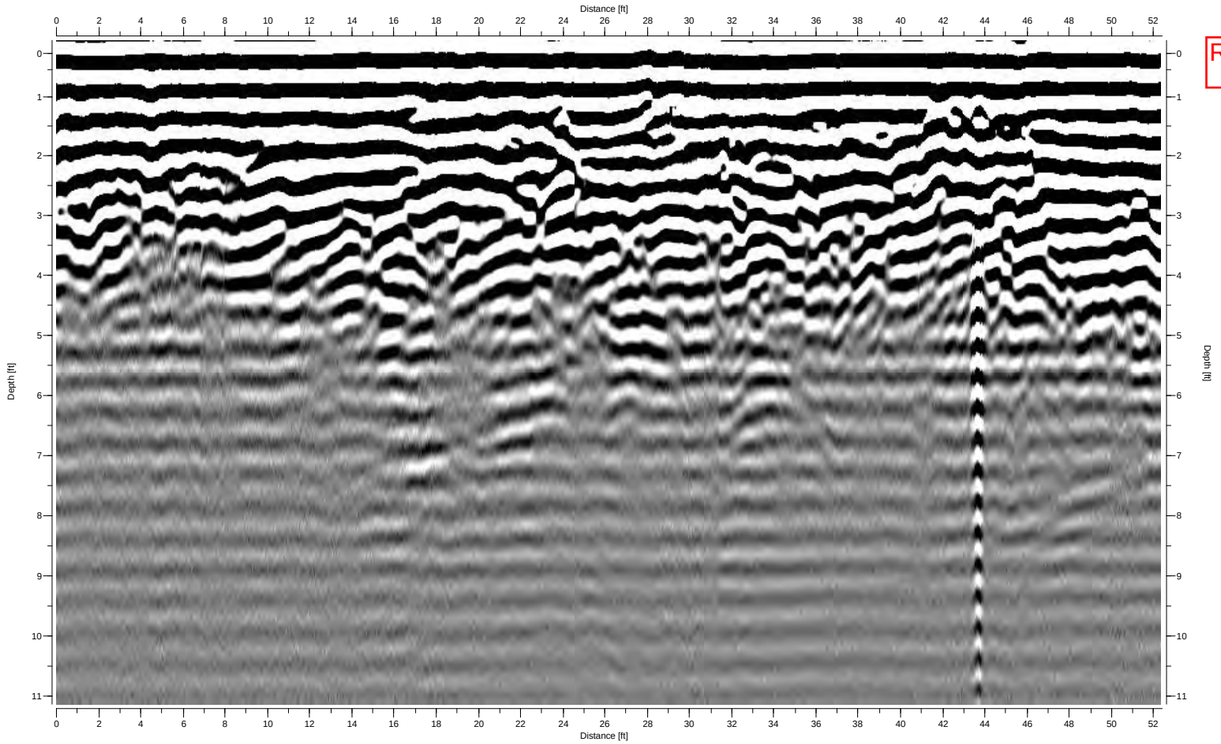
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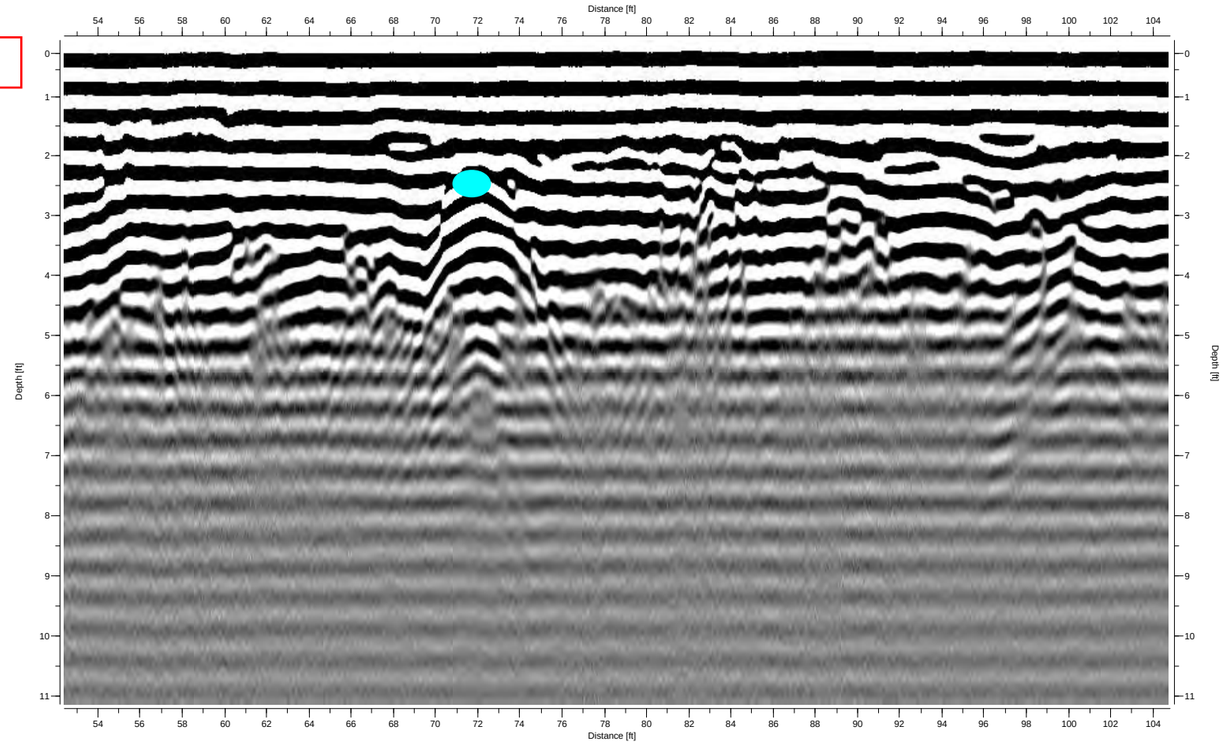


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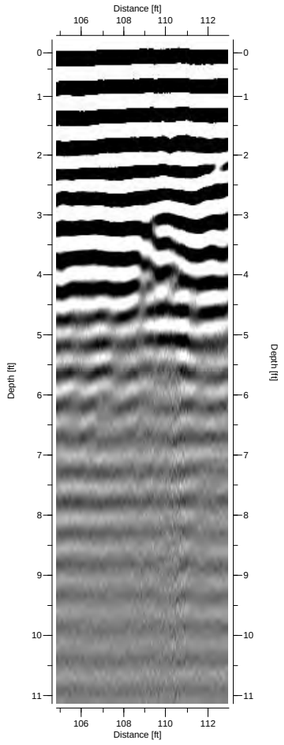


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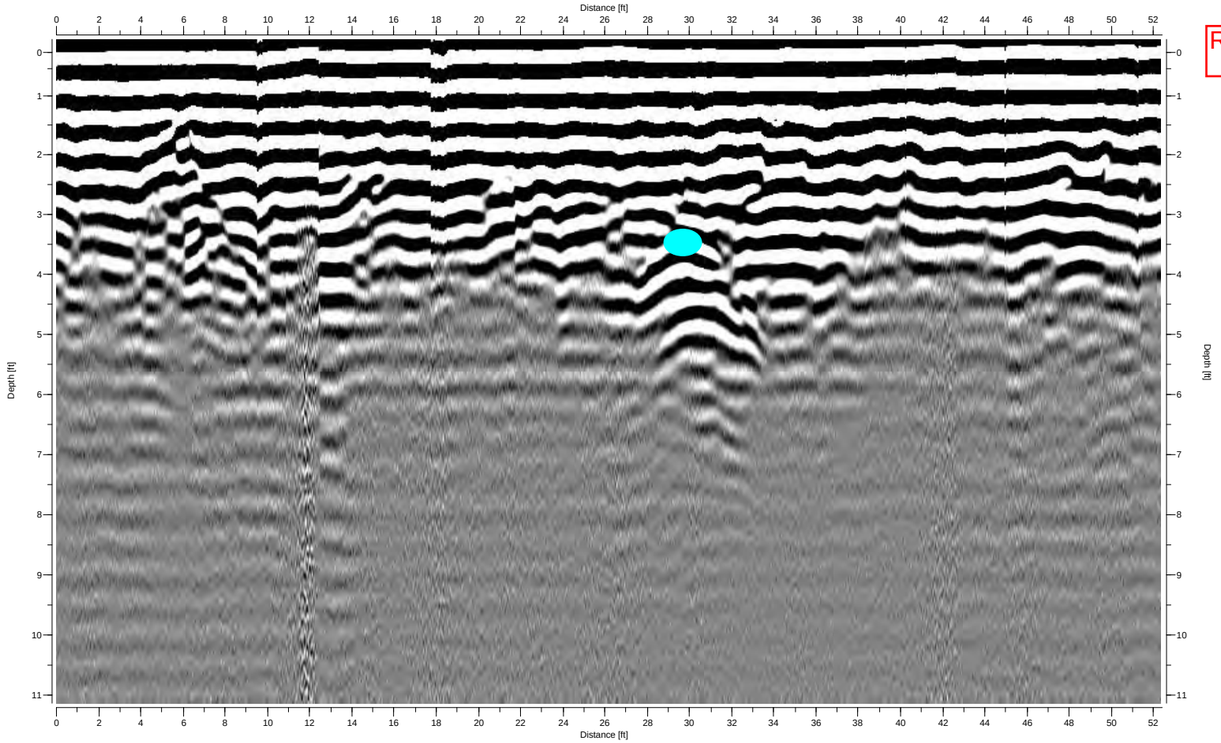
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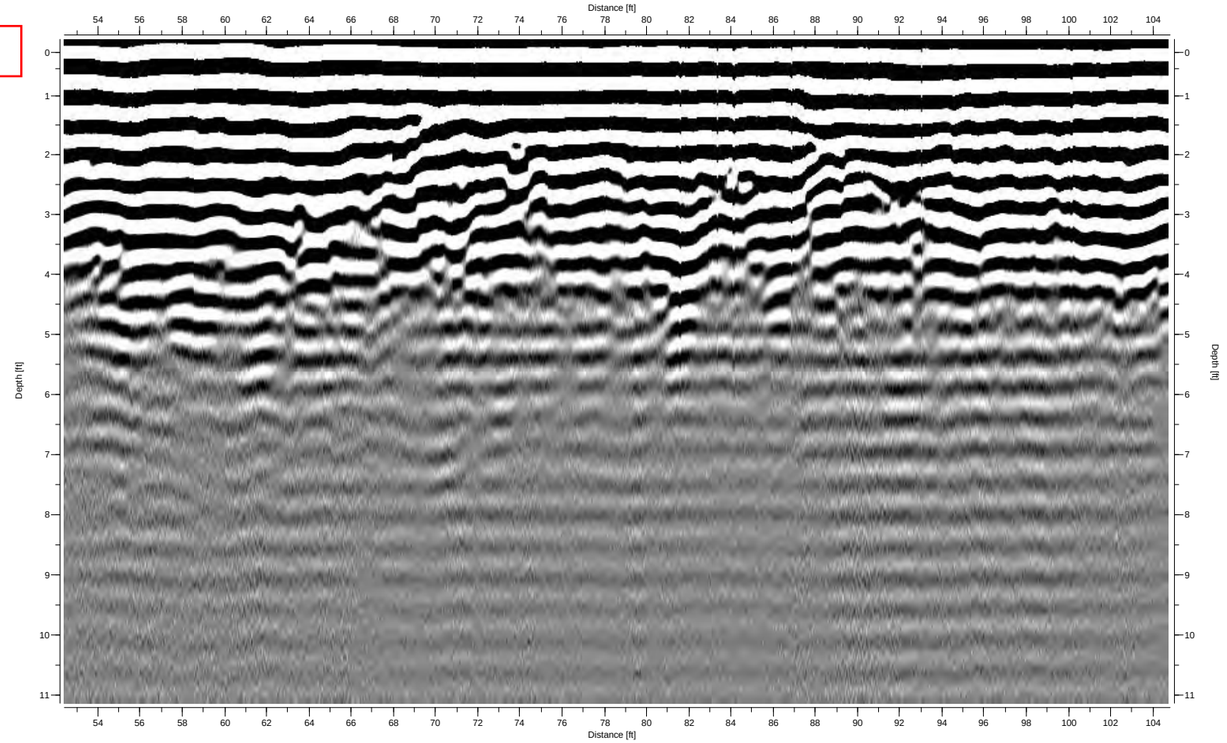


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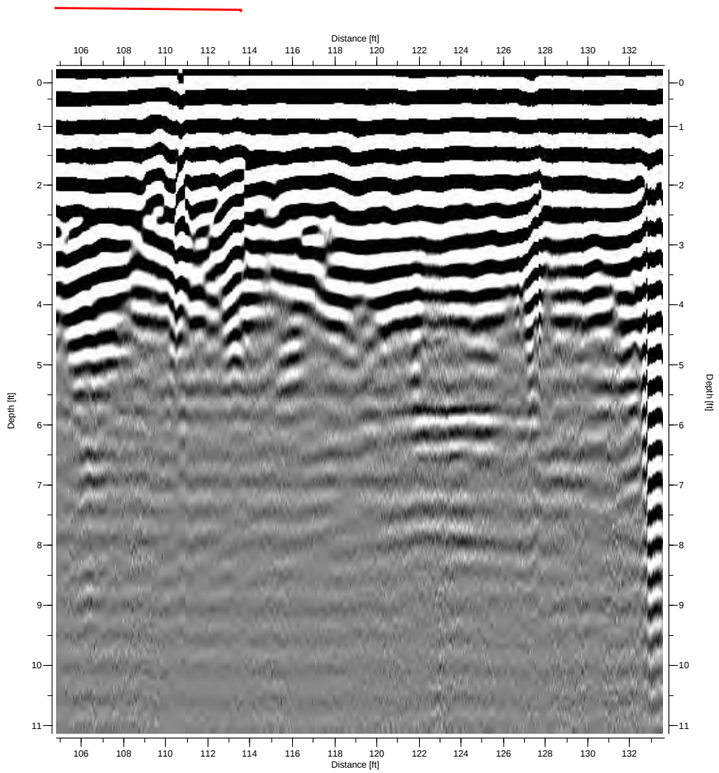


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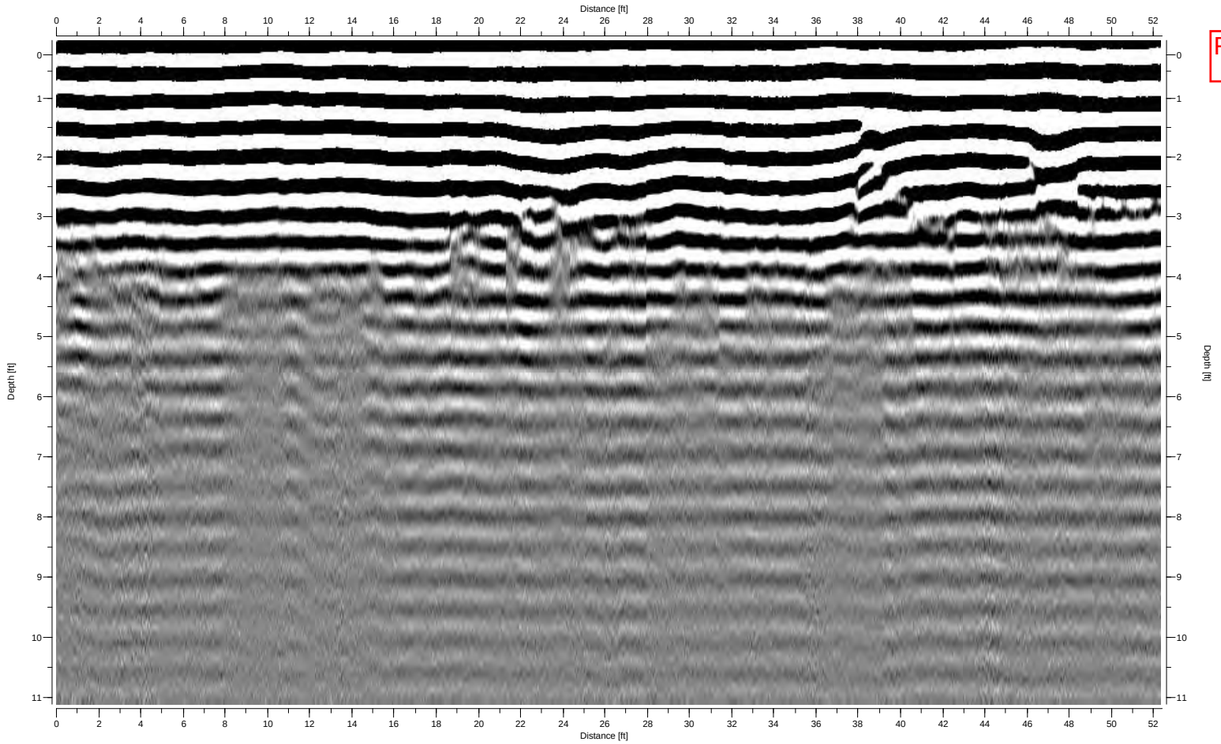


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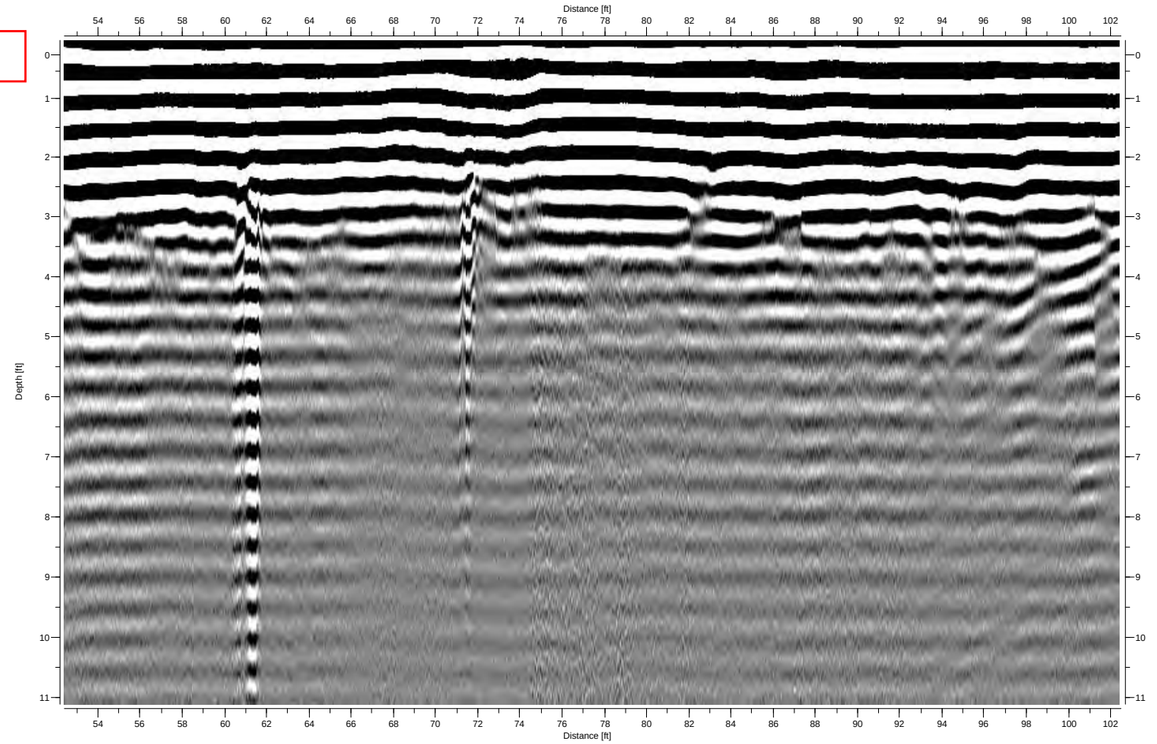
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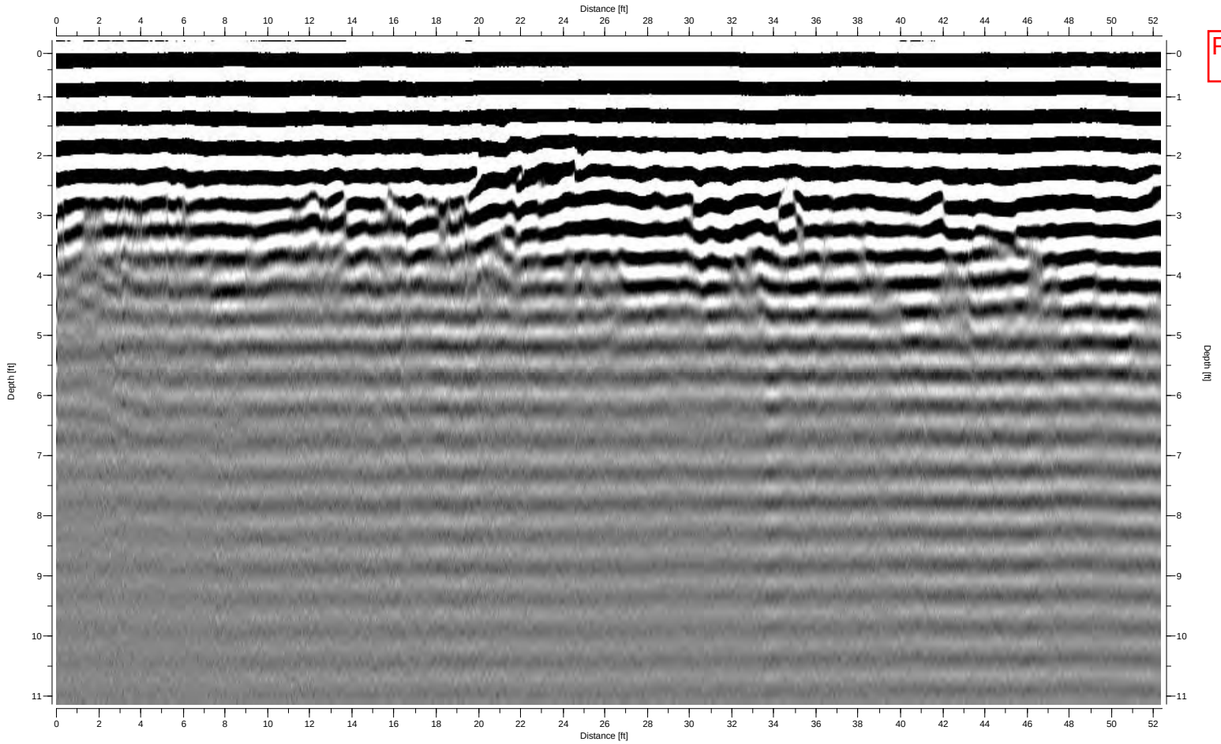
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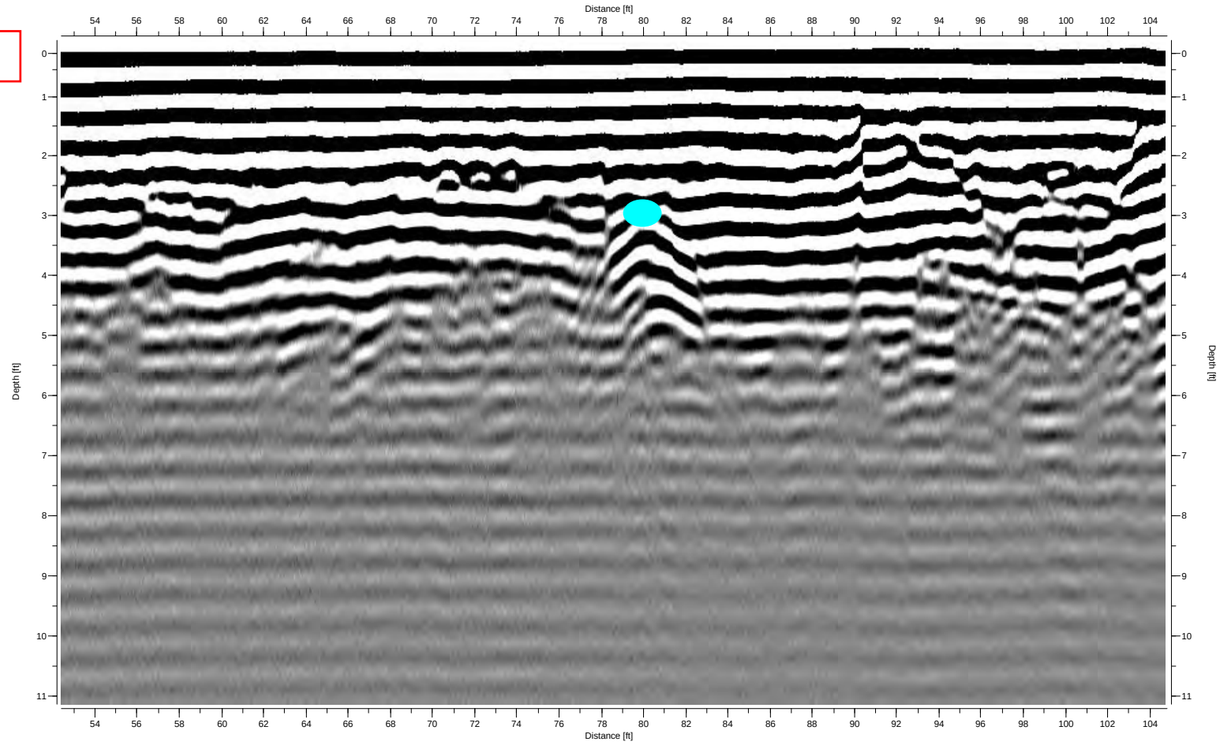
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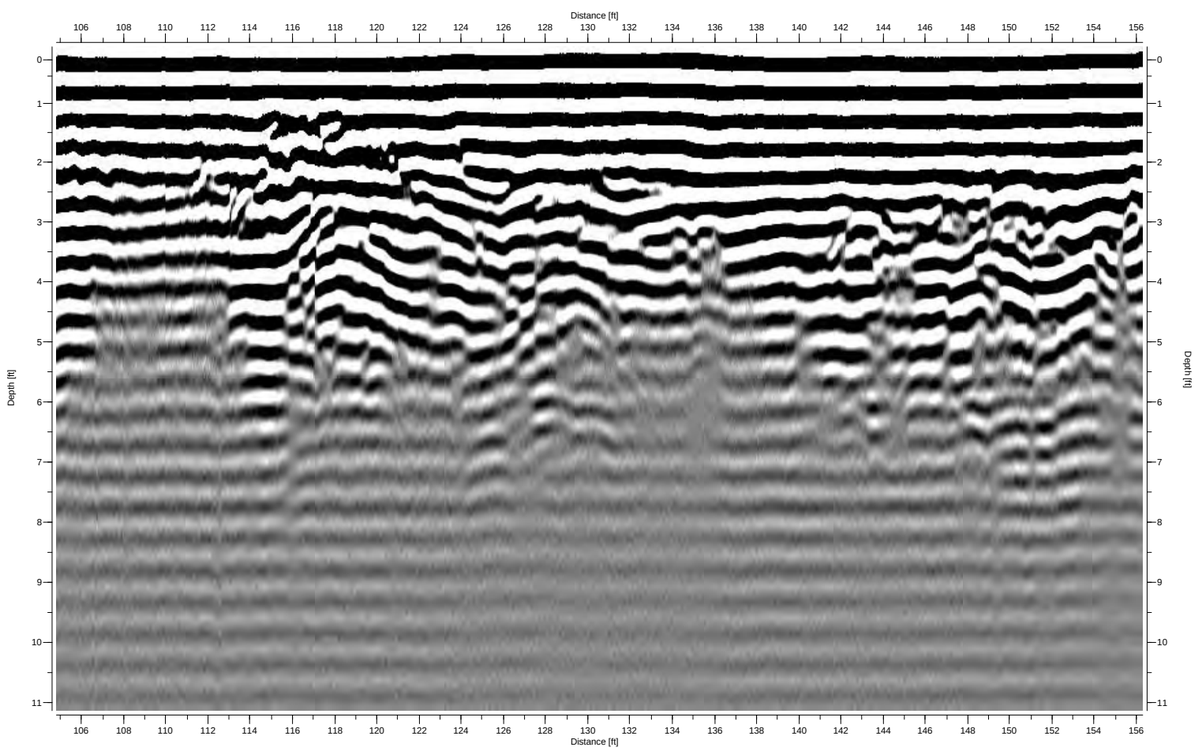
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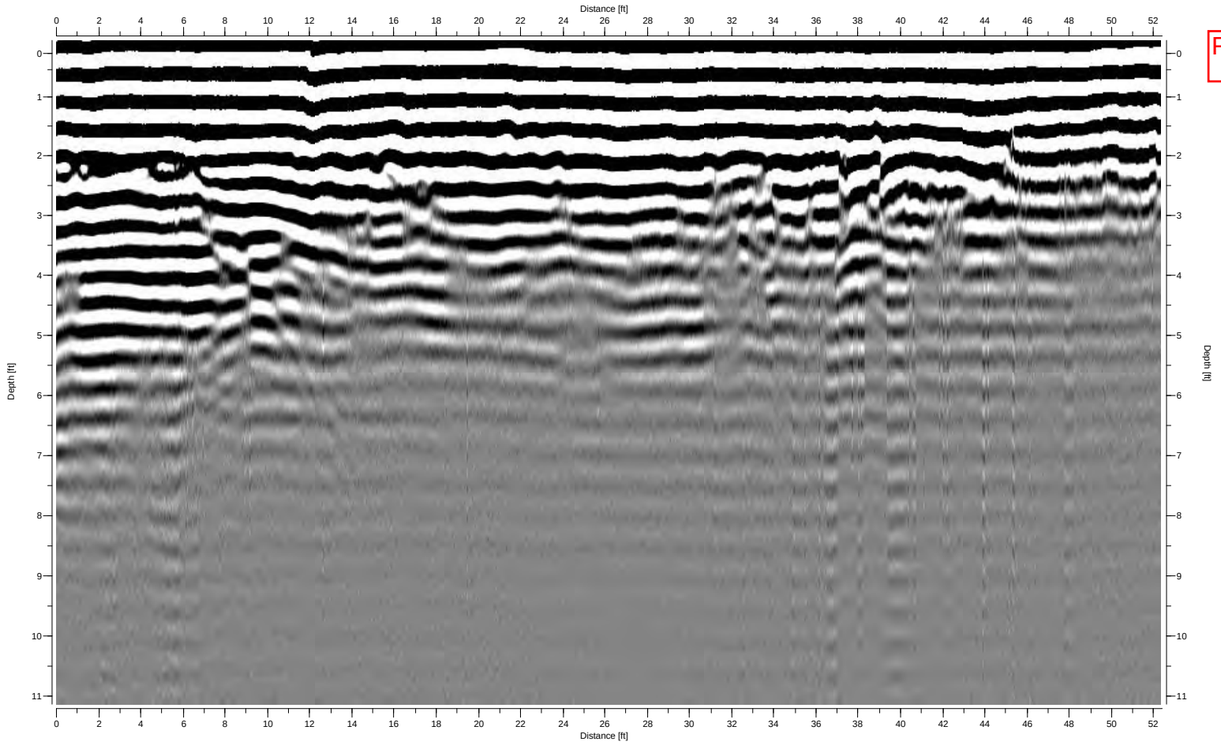
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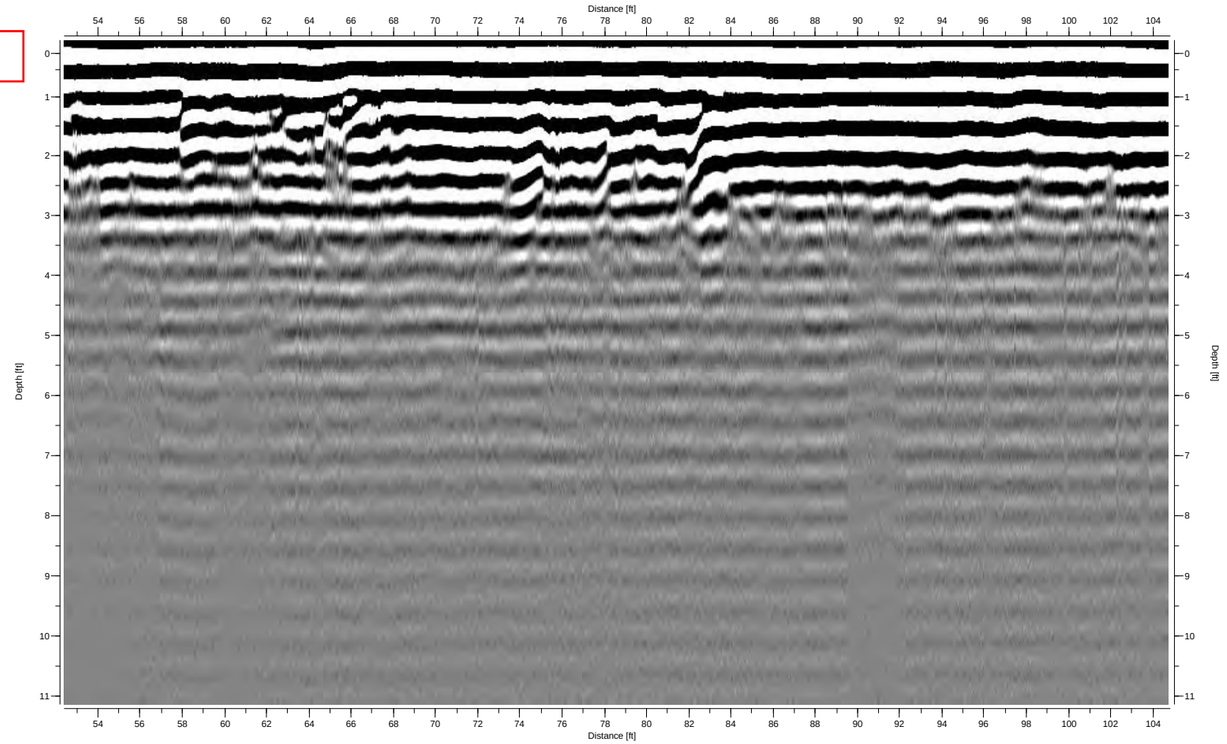


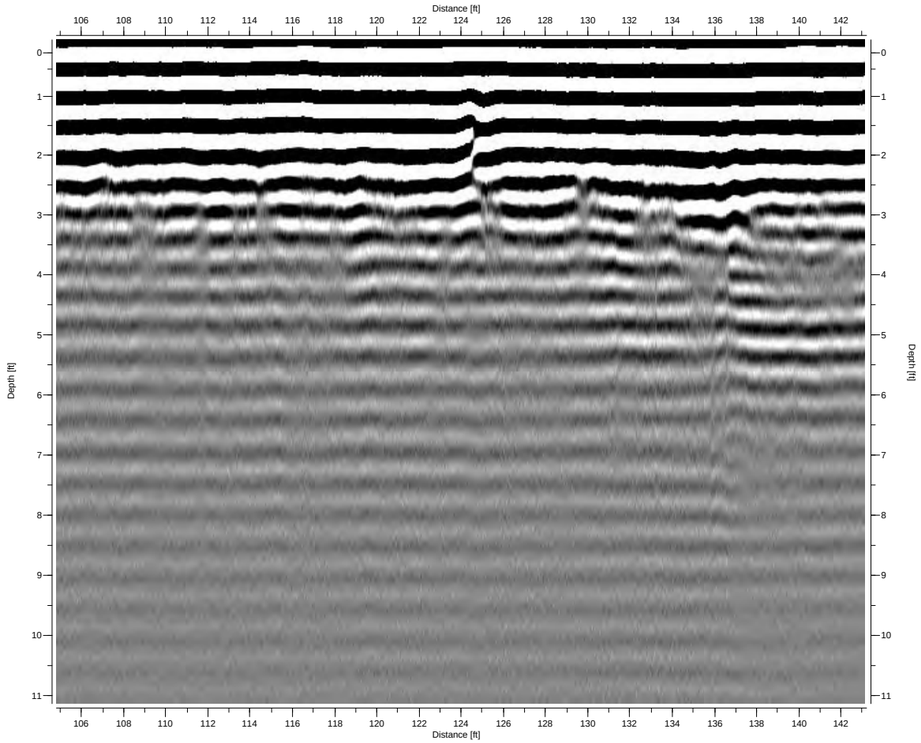
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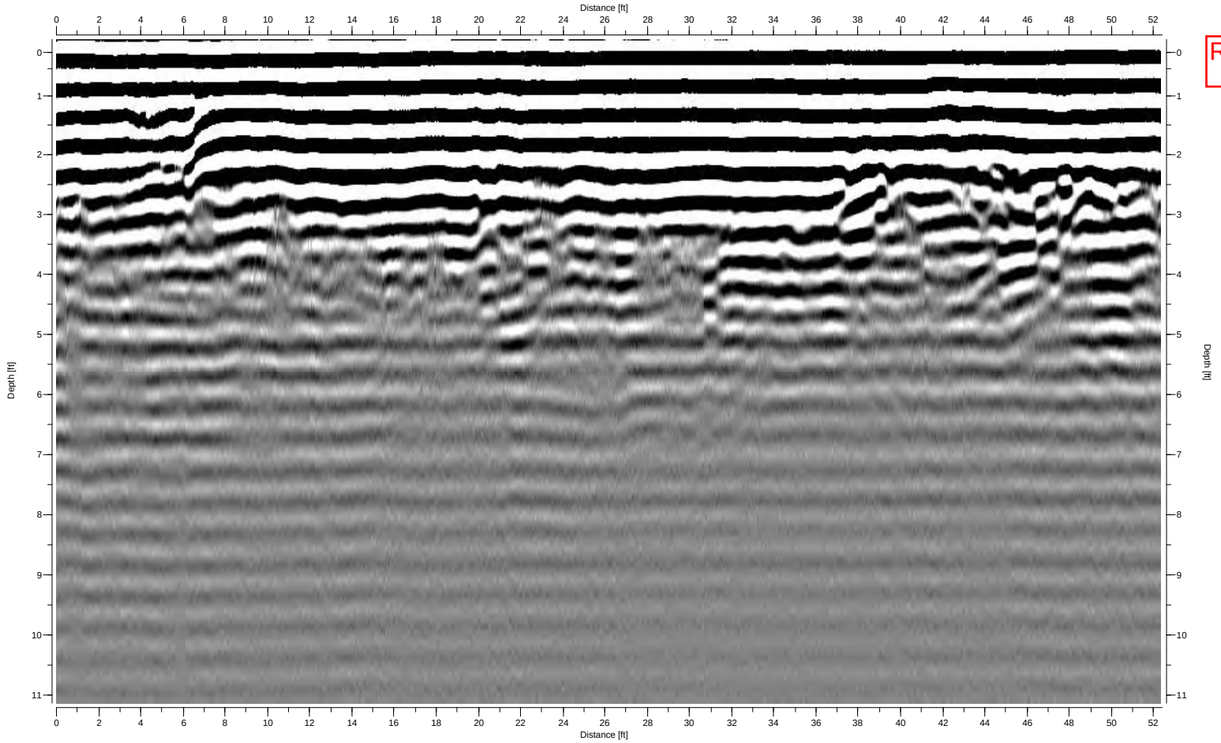

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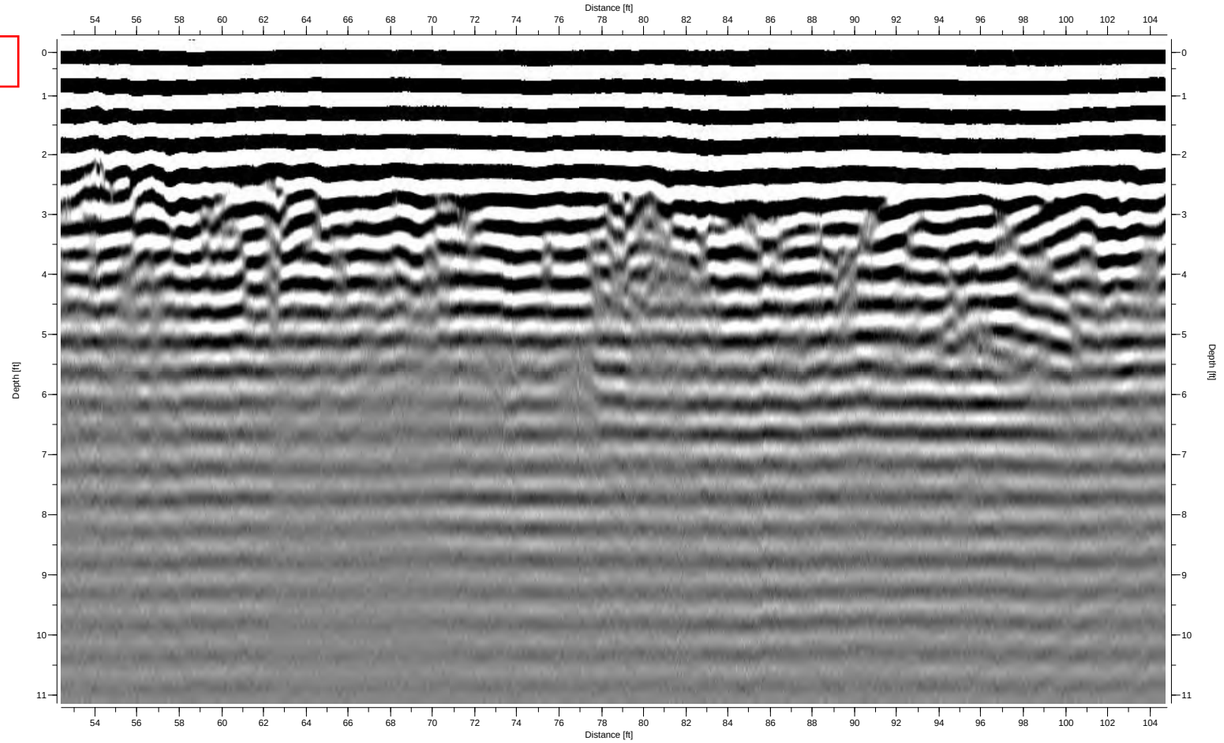
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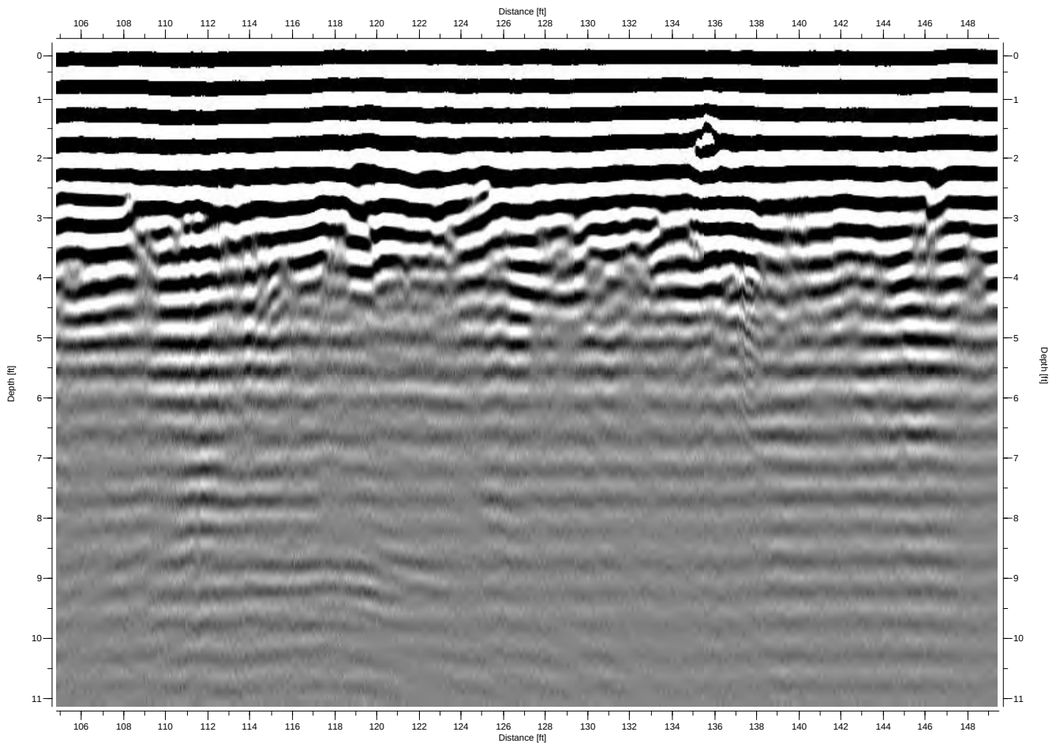

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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11

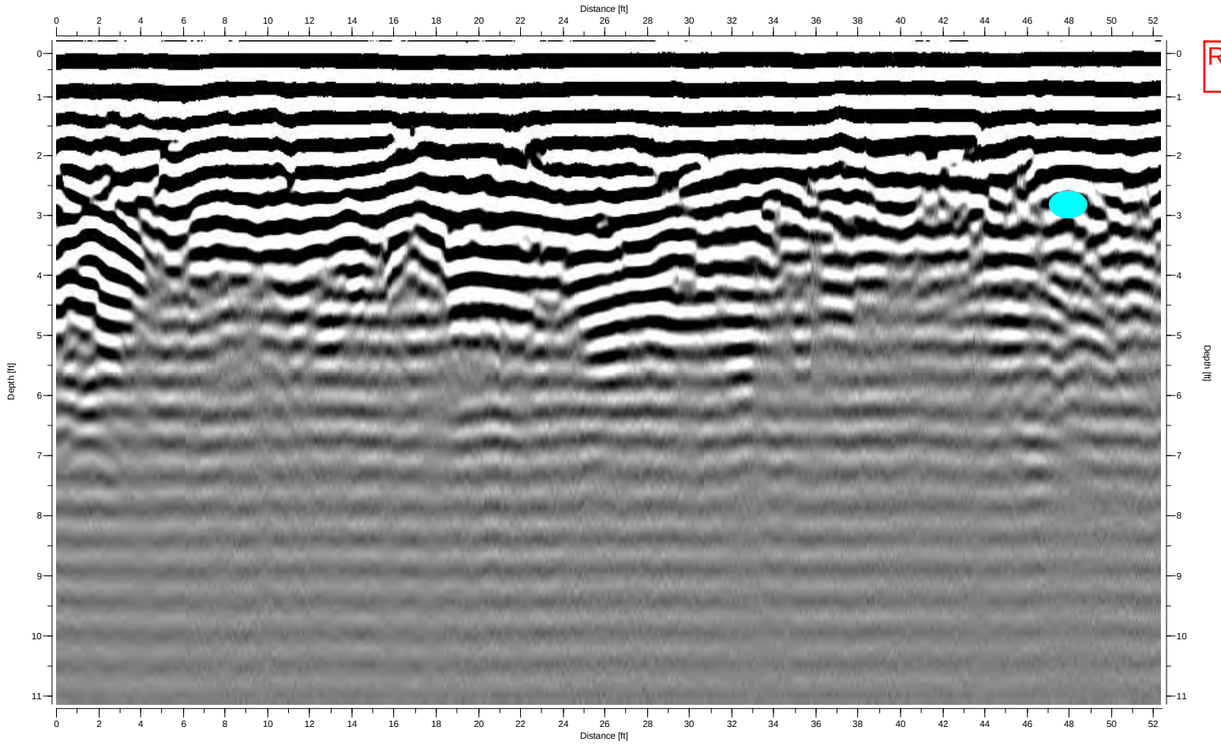

Distance [ft]
106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Distance [ft]
106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11

R11


Distance [ft]
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
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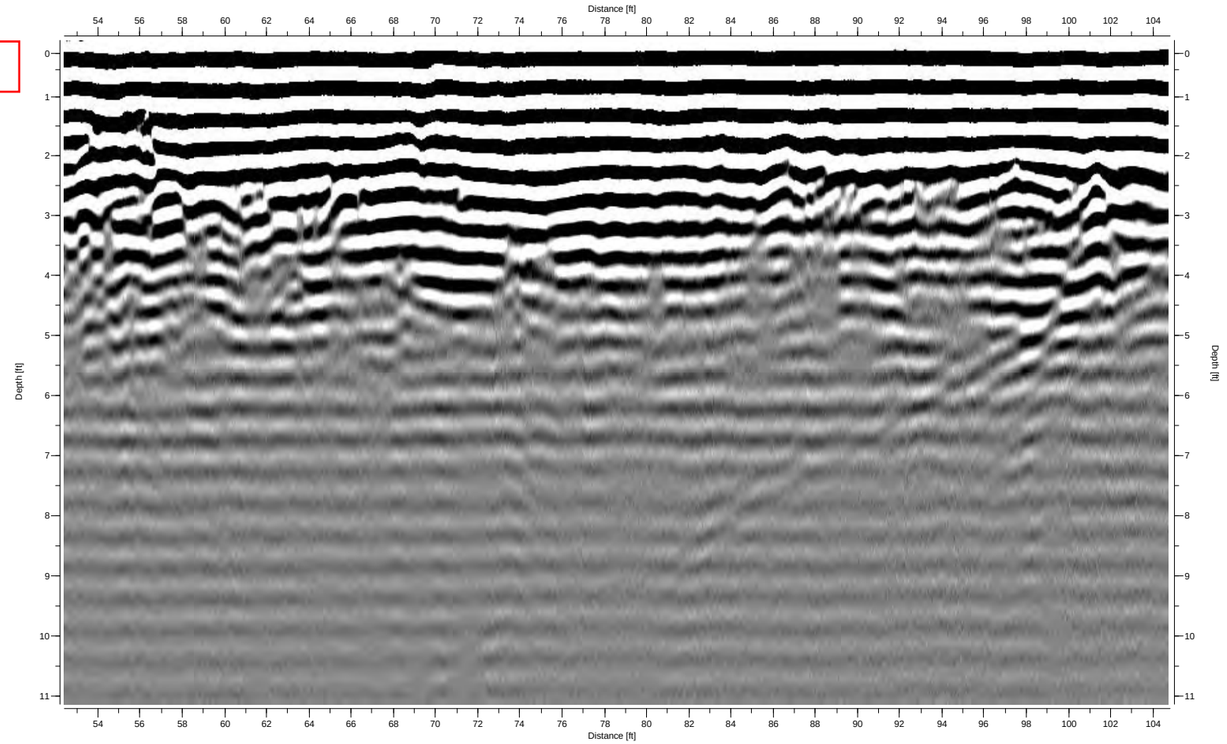

Distance [ft]
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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Distance [ft]
54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11


Distance [ft]
106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142 144 146 148
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Distance [ft]
106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142 144 146 148
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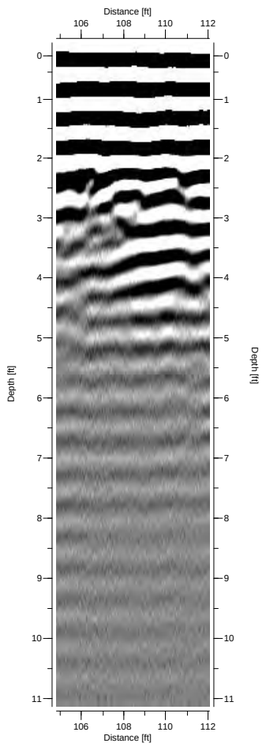


R12

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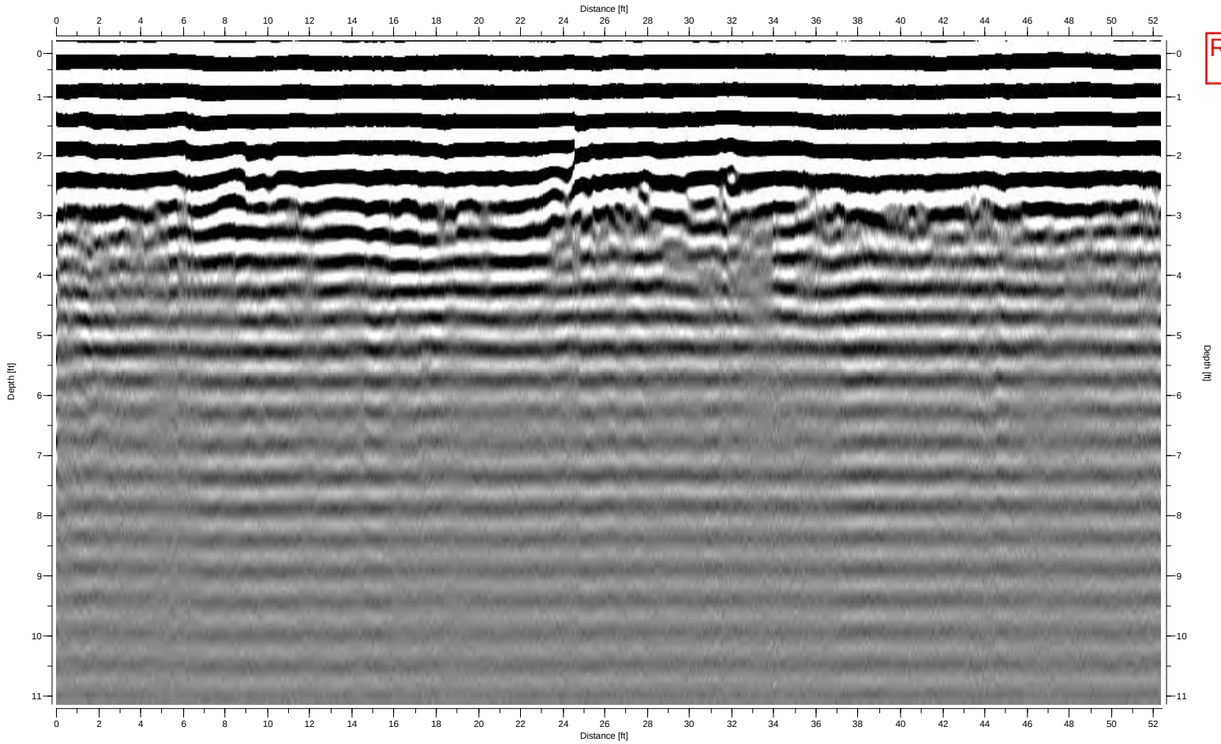


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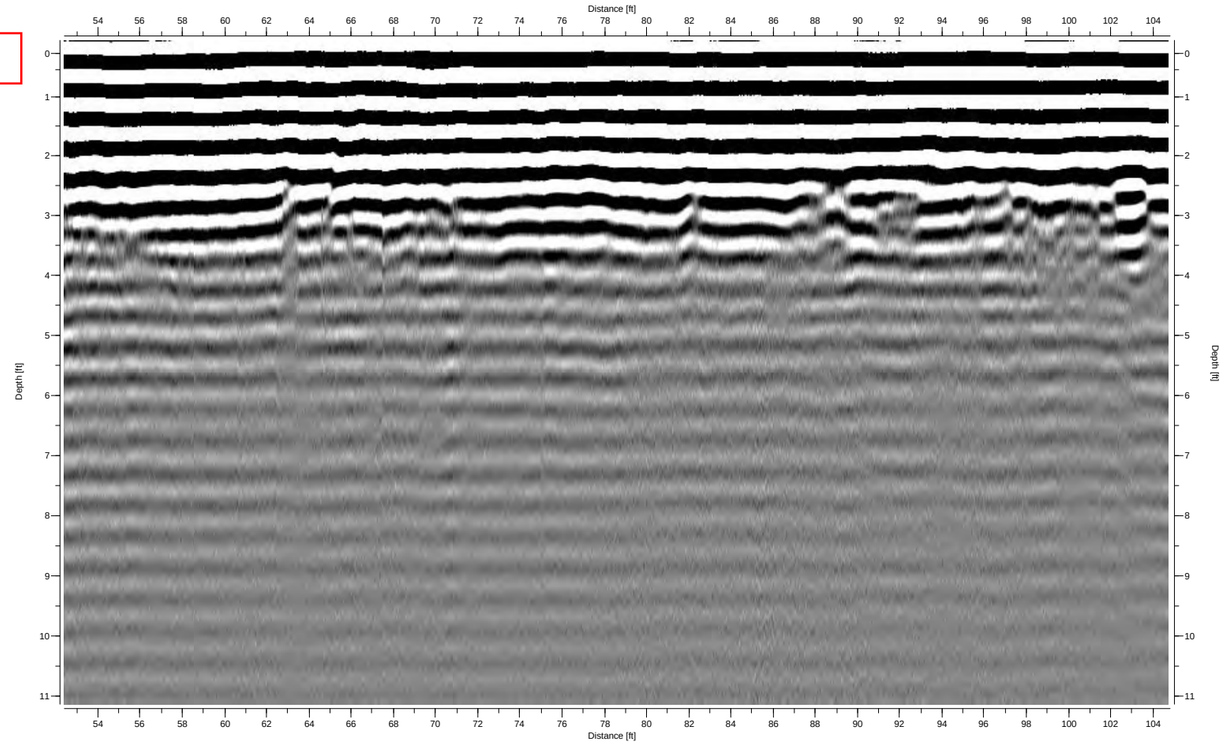


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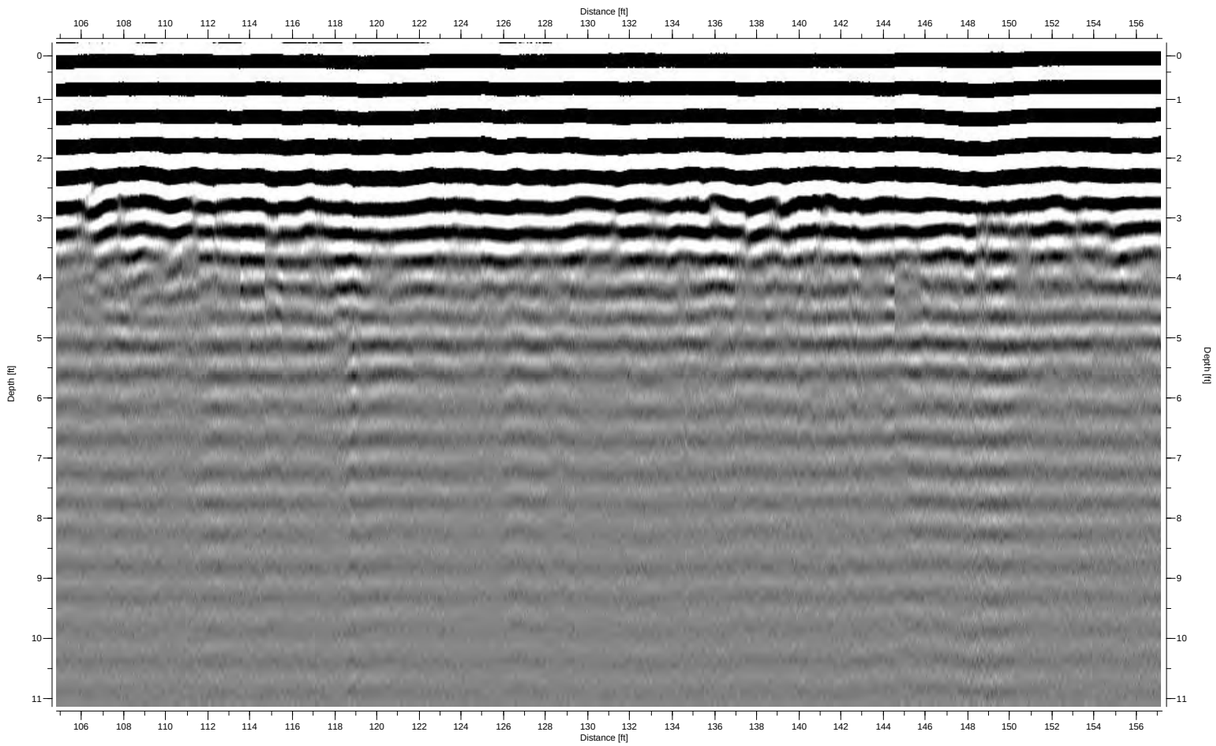
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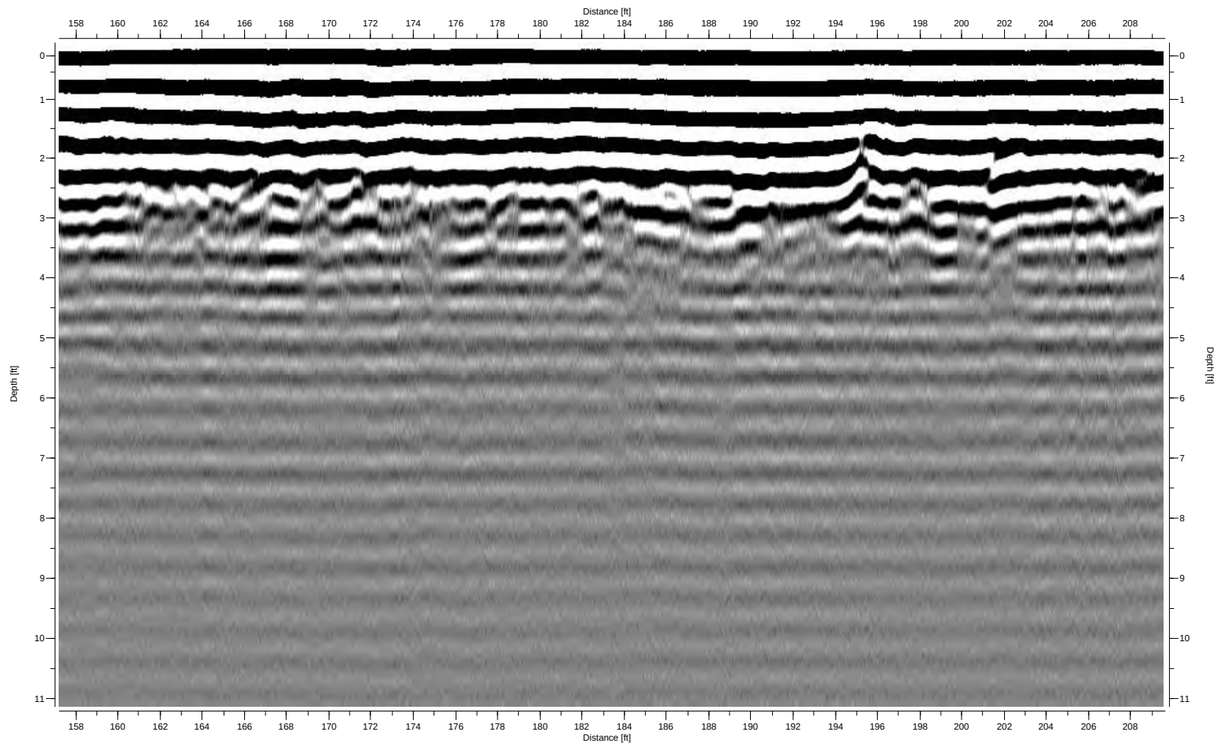
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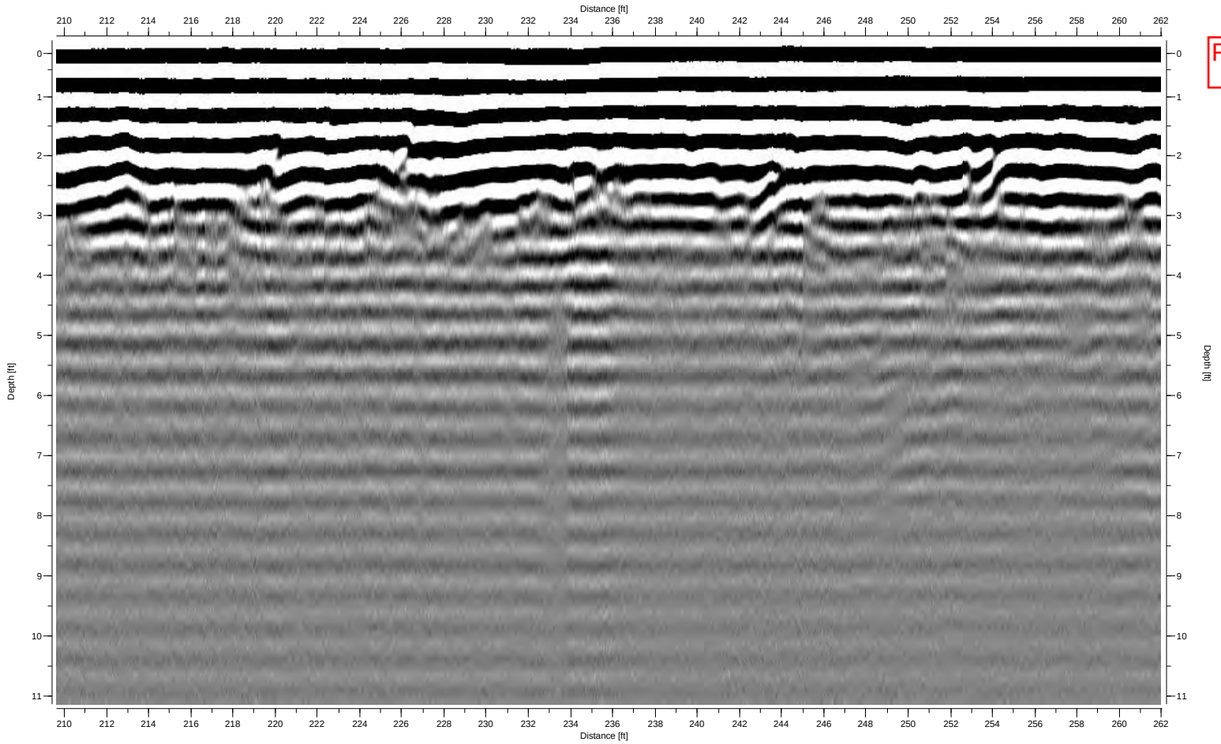
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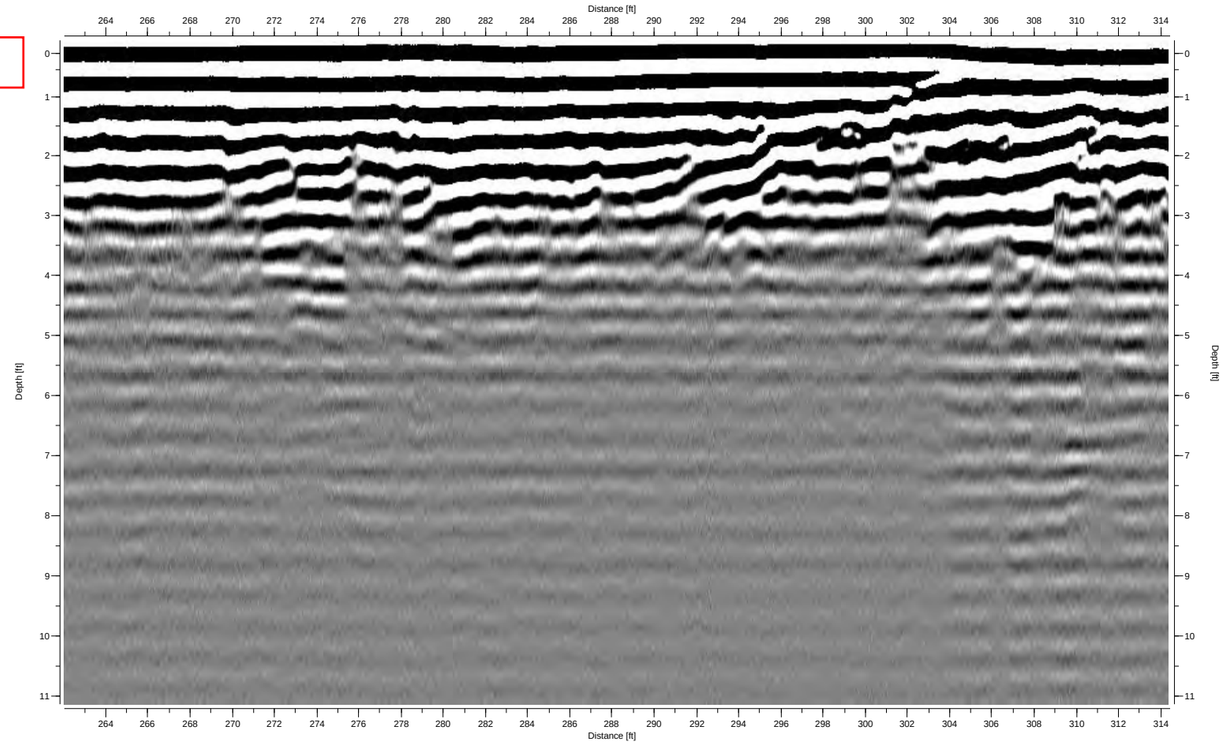
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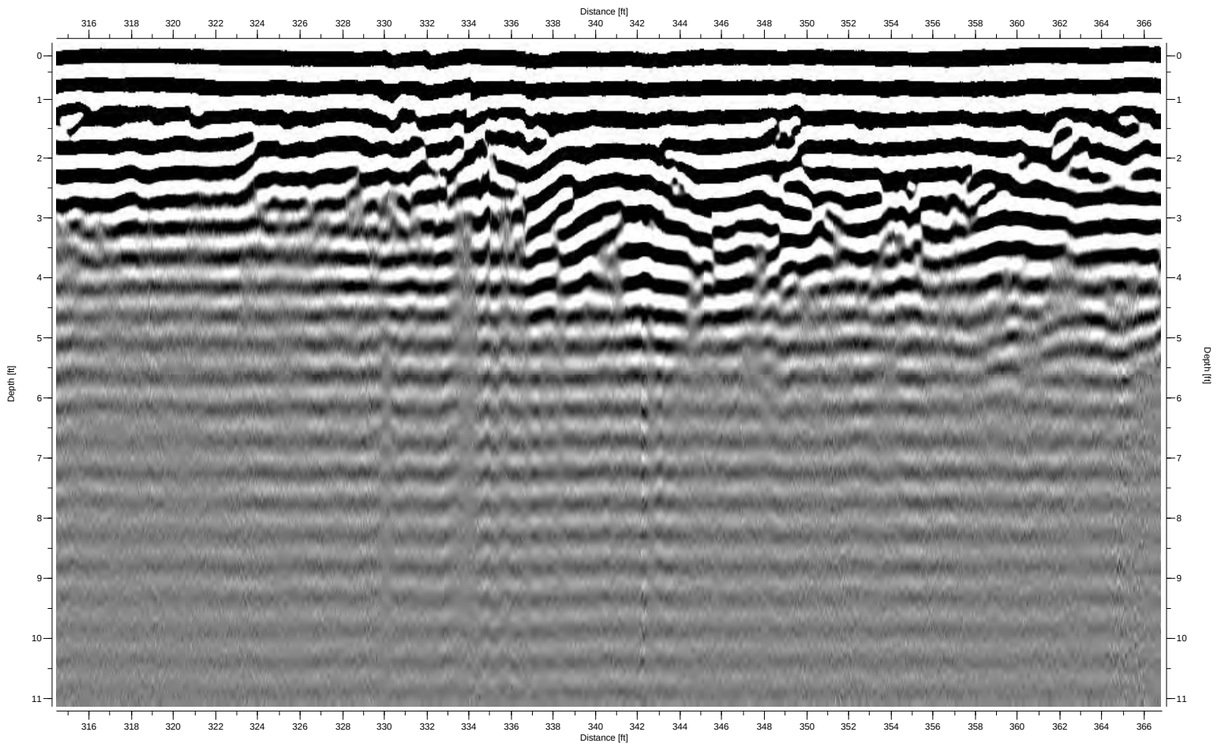


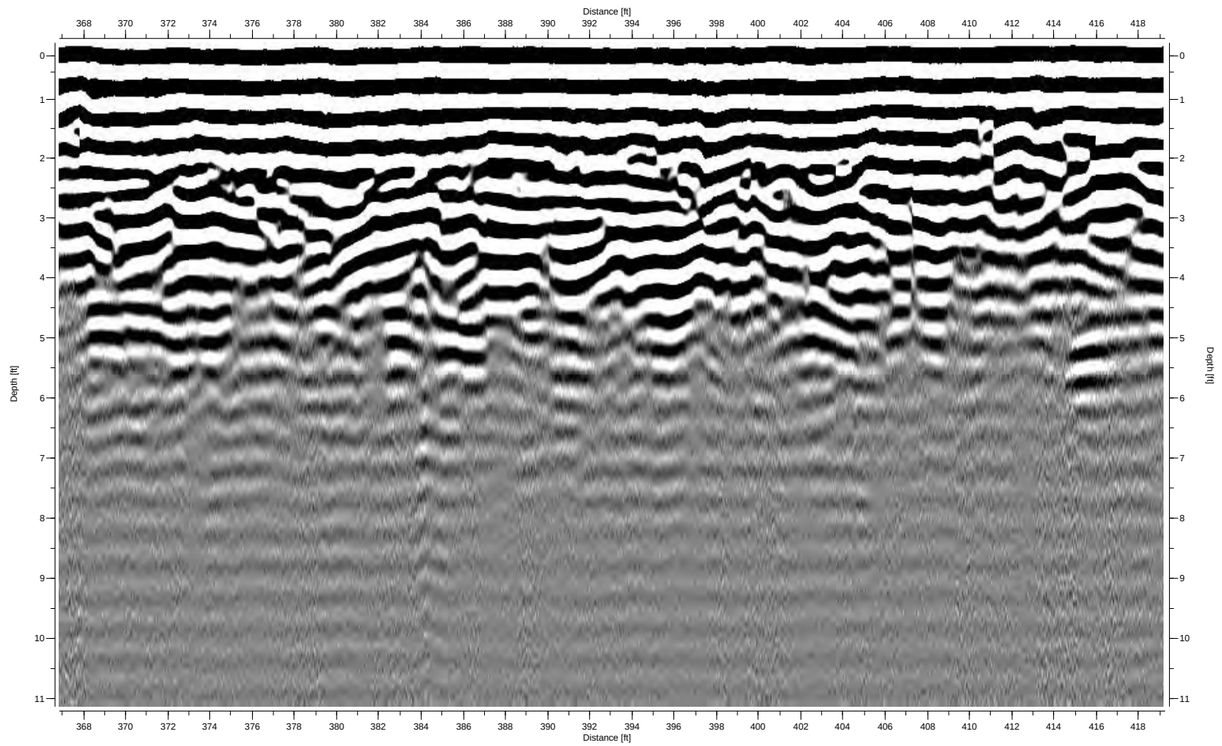
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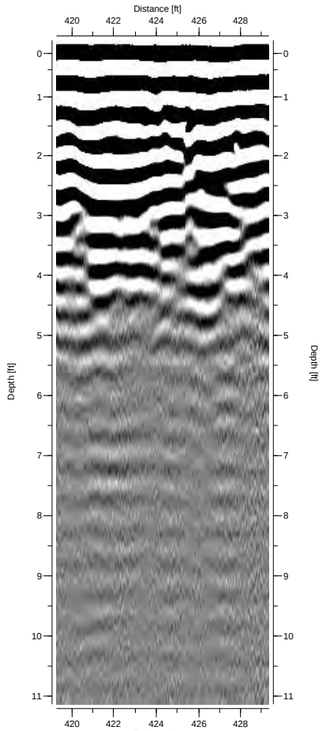

Distance [ft]
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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11

R13


Distance [ft]
264 266 268 270 272 274 276 278 280 282 284 286 288 290 292 294 296 298 300 302 304 306 308 310 312 314
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11


Distance [ft]
316 318 320 322 324 326 328 330 332 334 336 338 340 342 344 346 348 350 352 354 356 358 360 362 364 366
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11

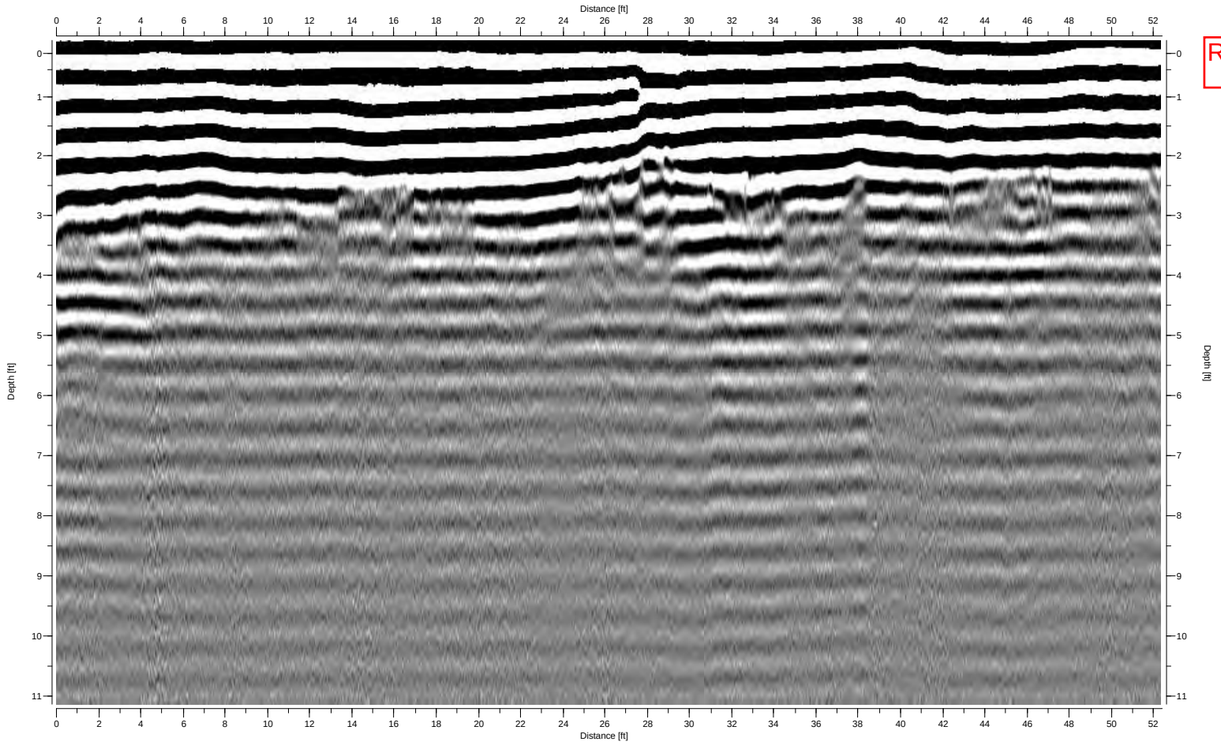

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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11



R13

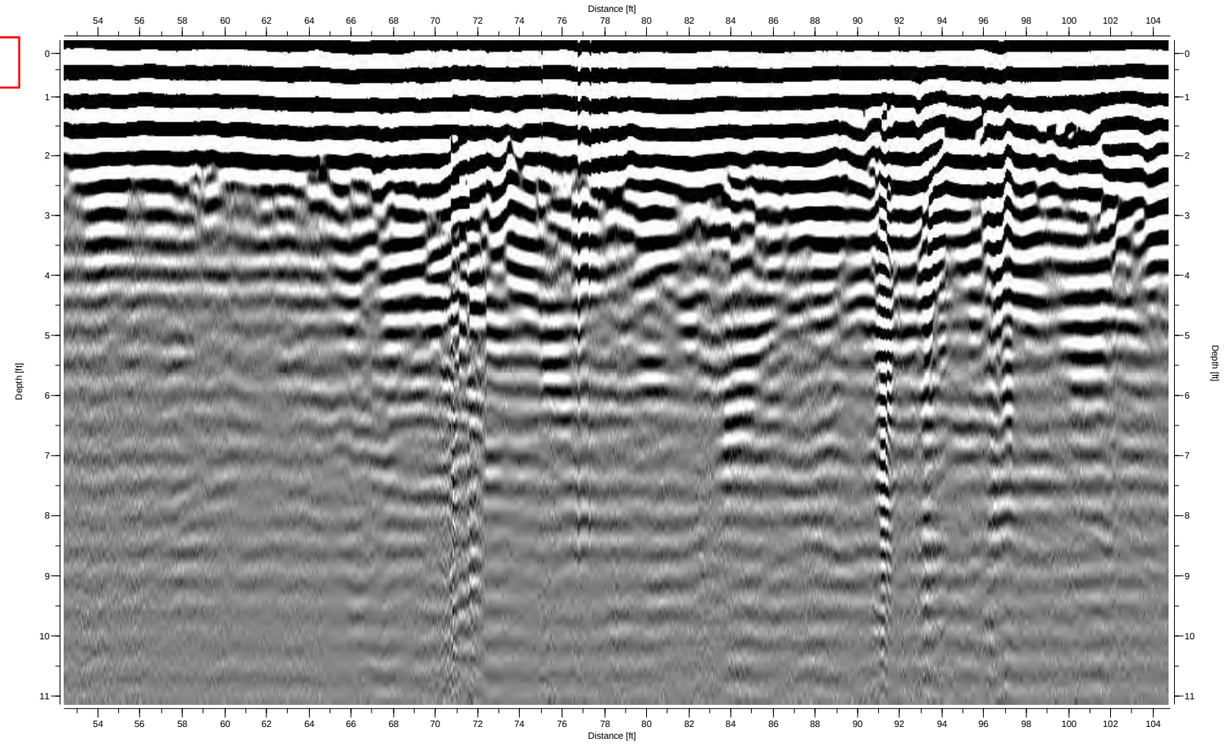
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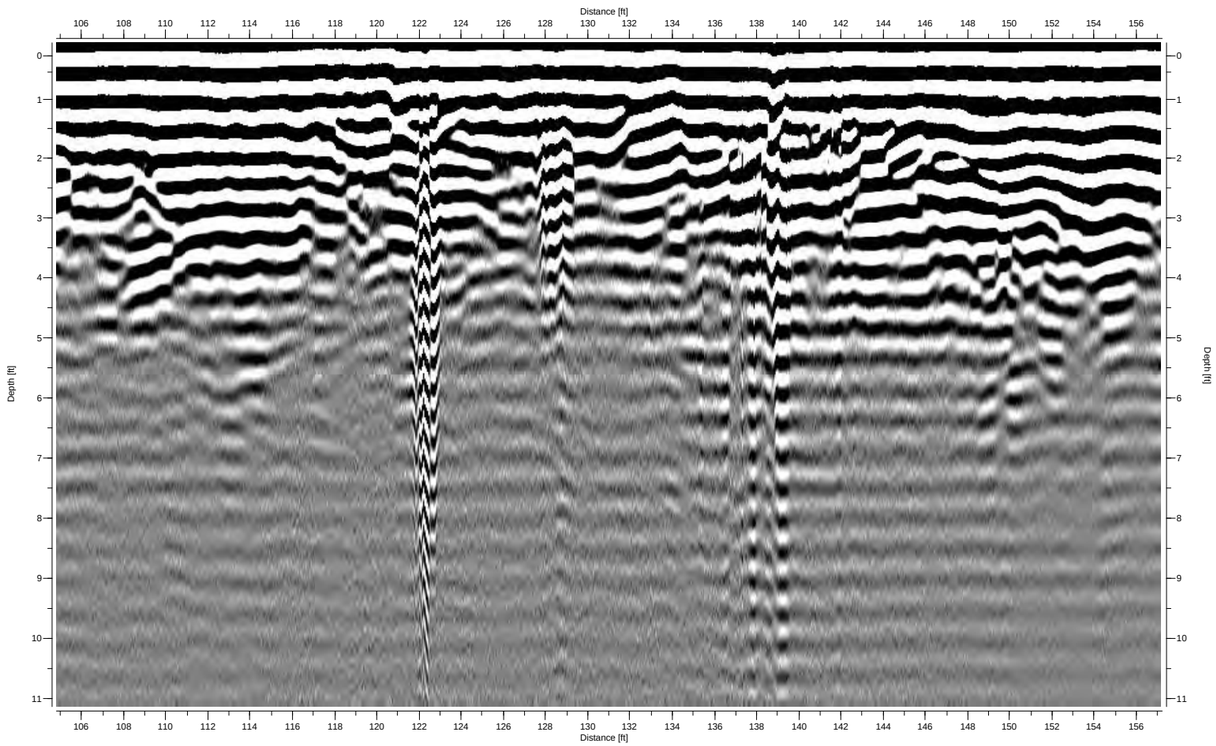


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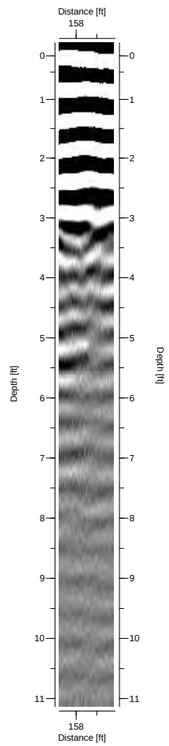
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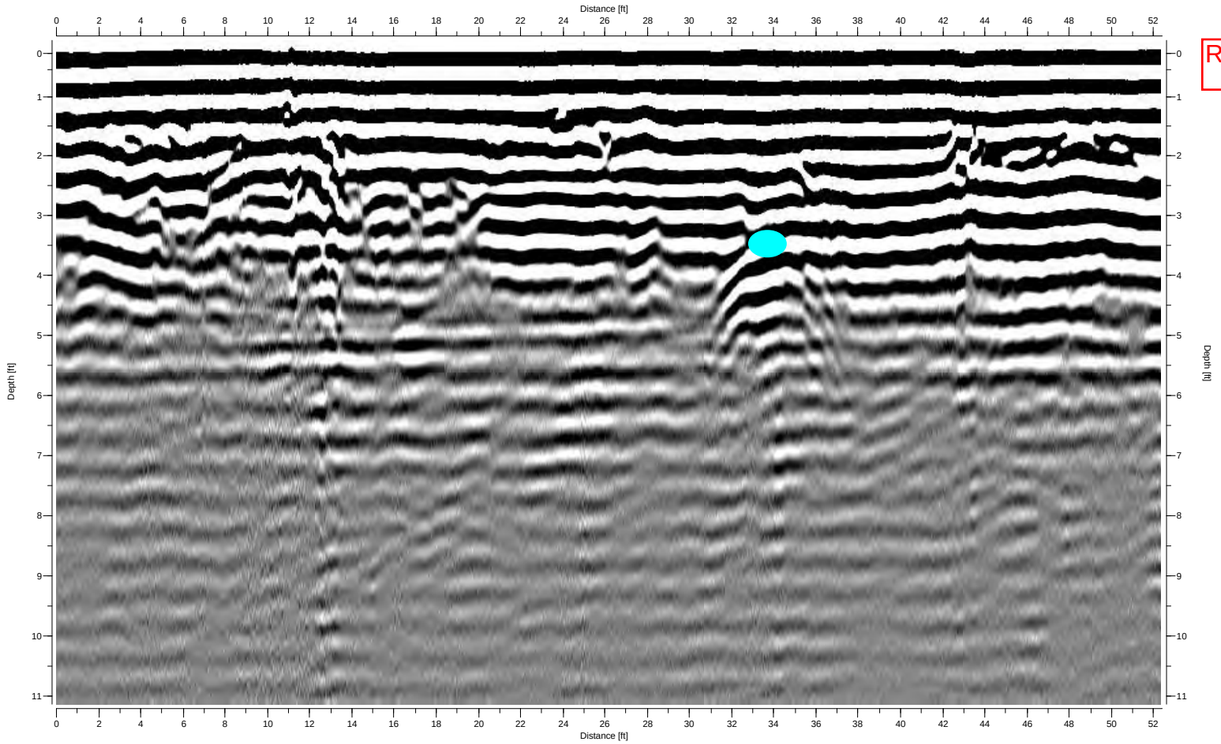
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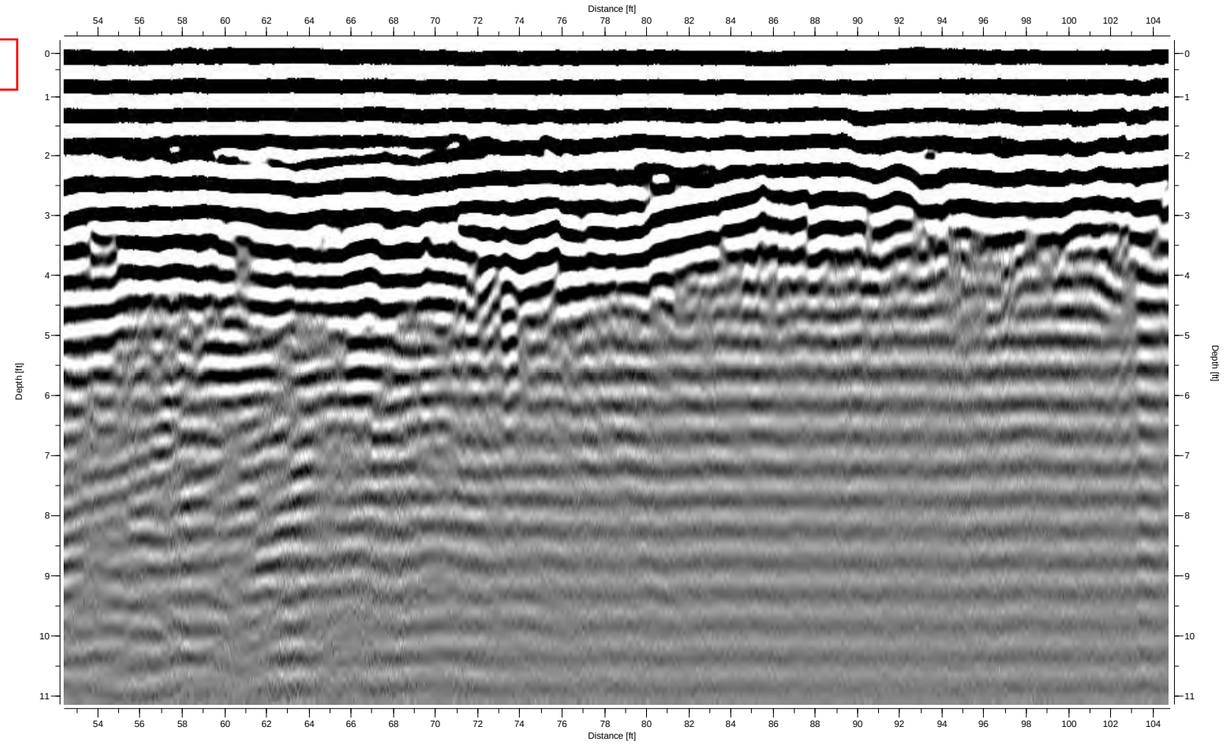


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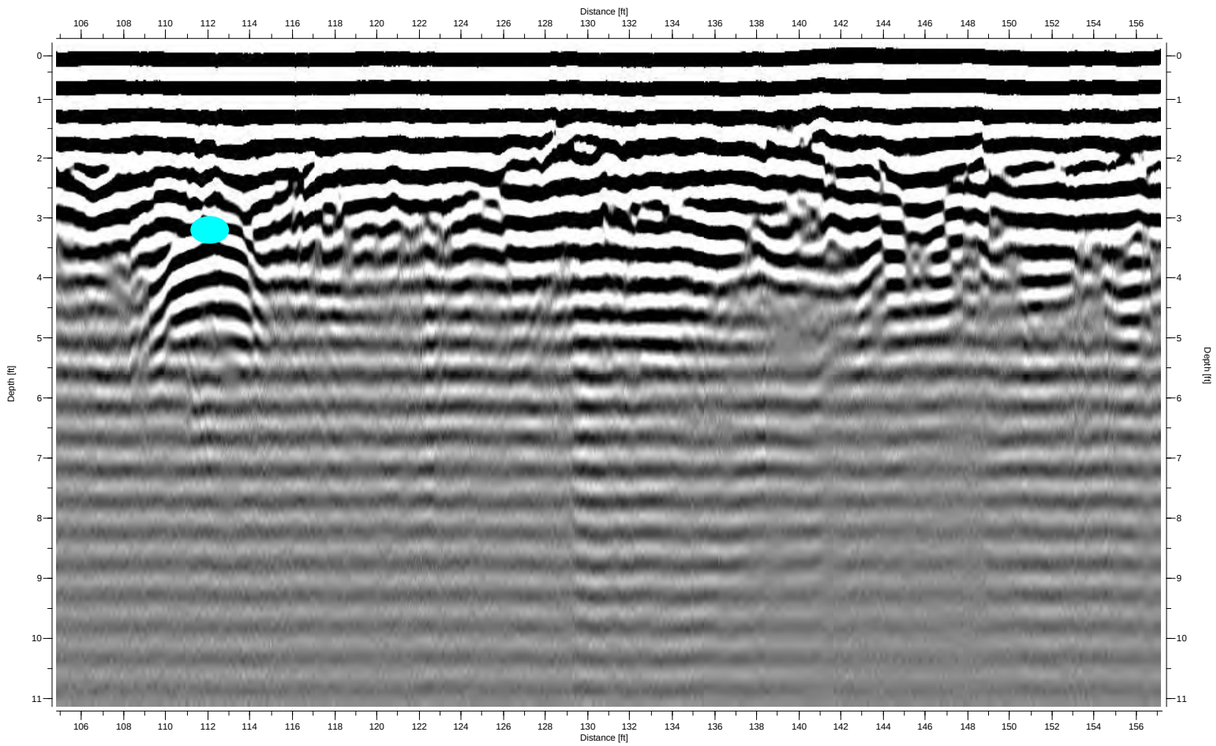


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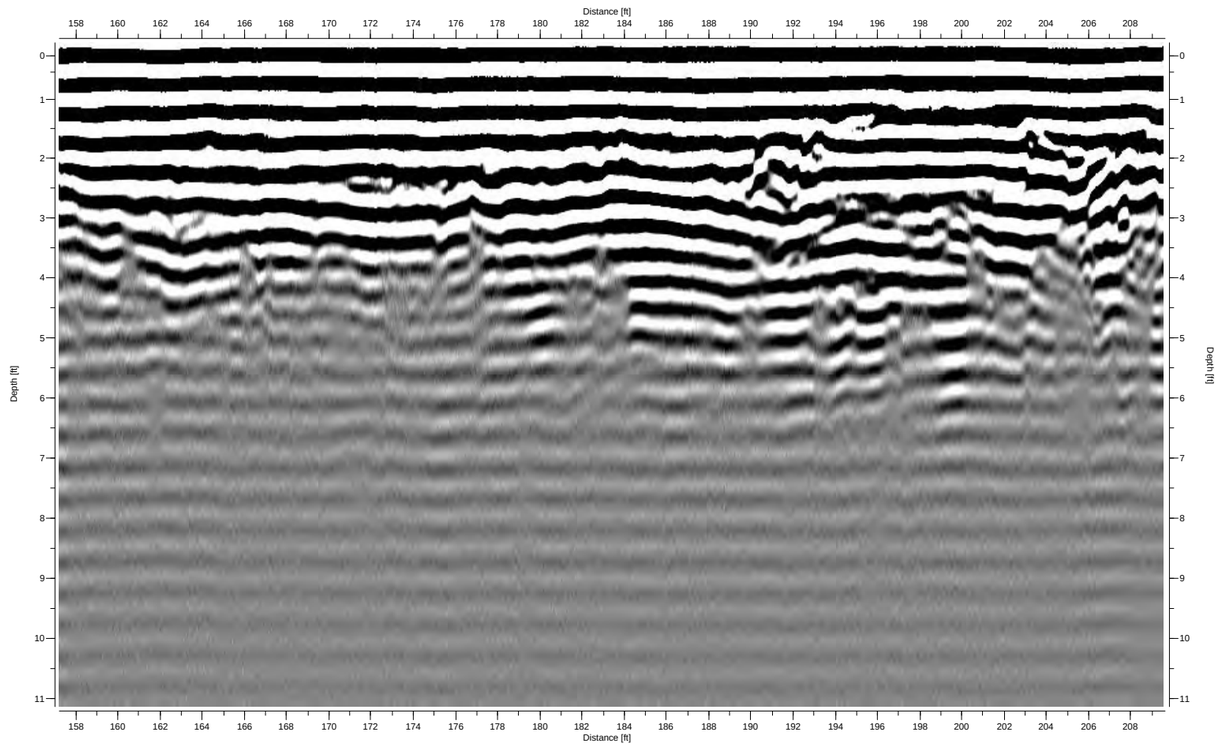
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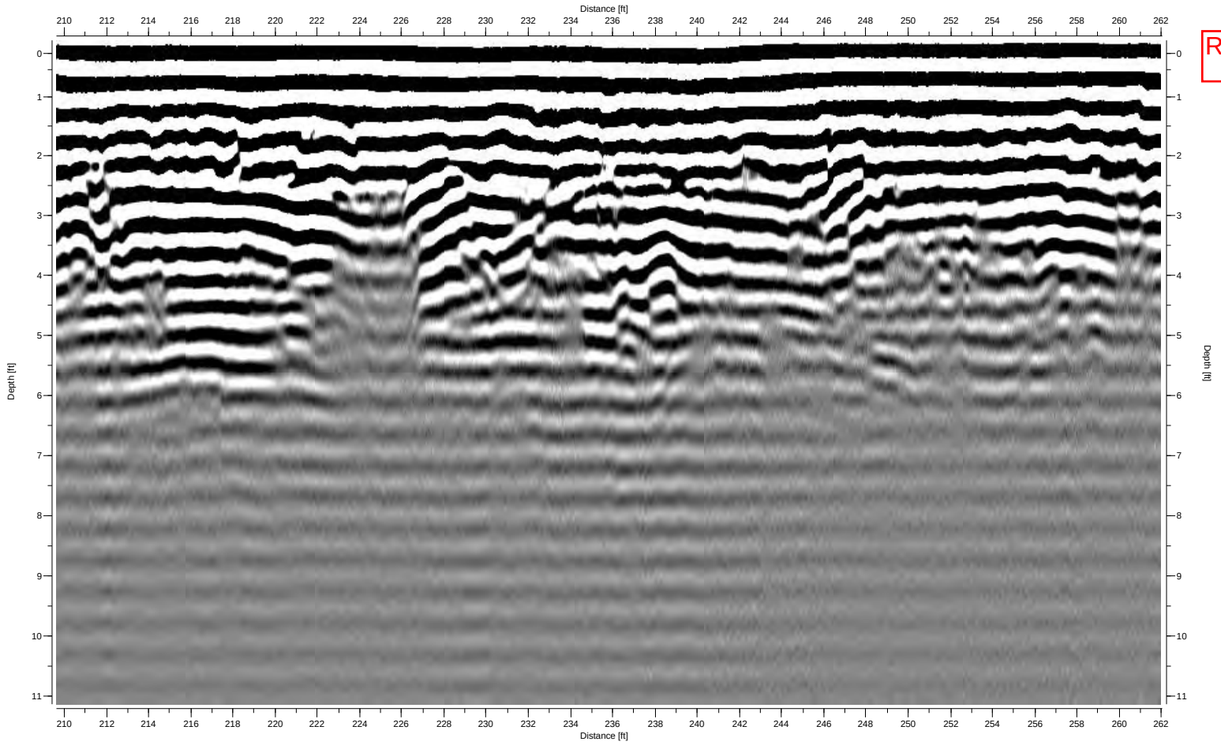
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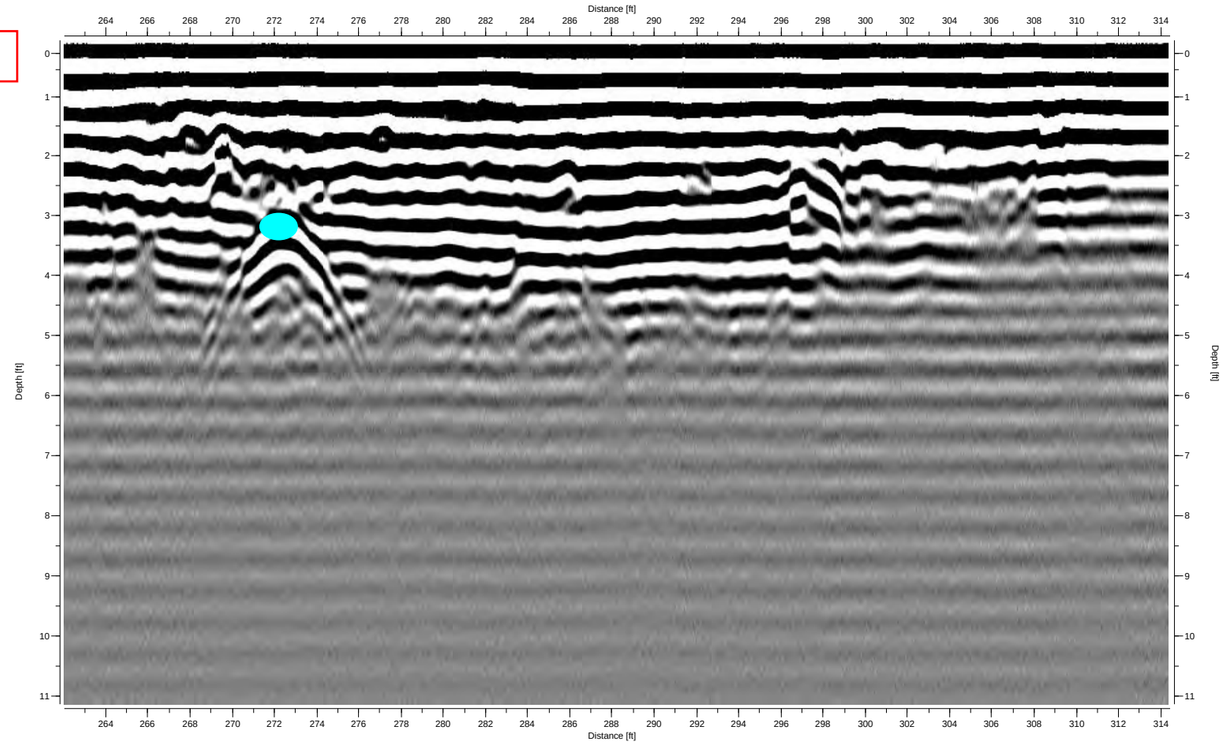
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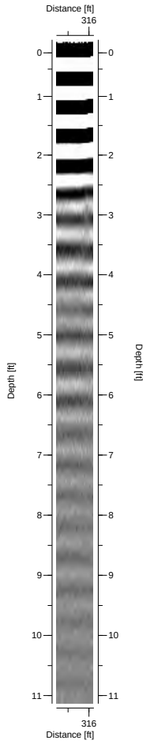


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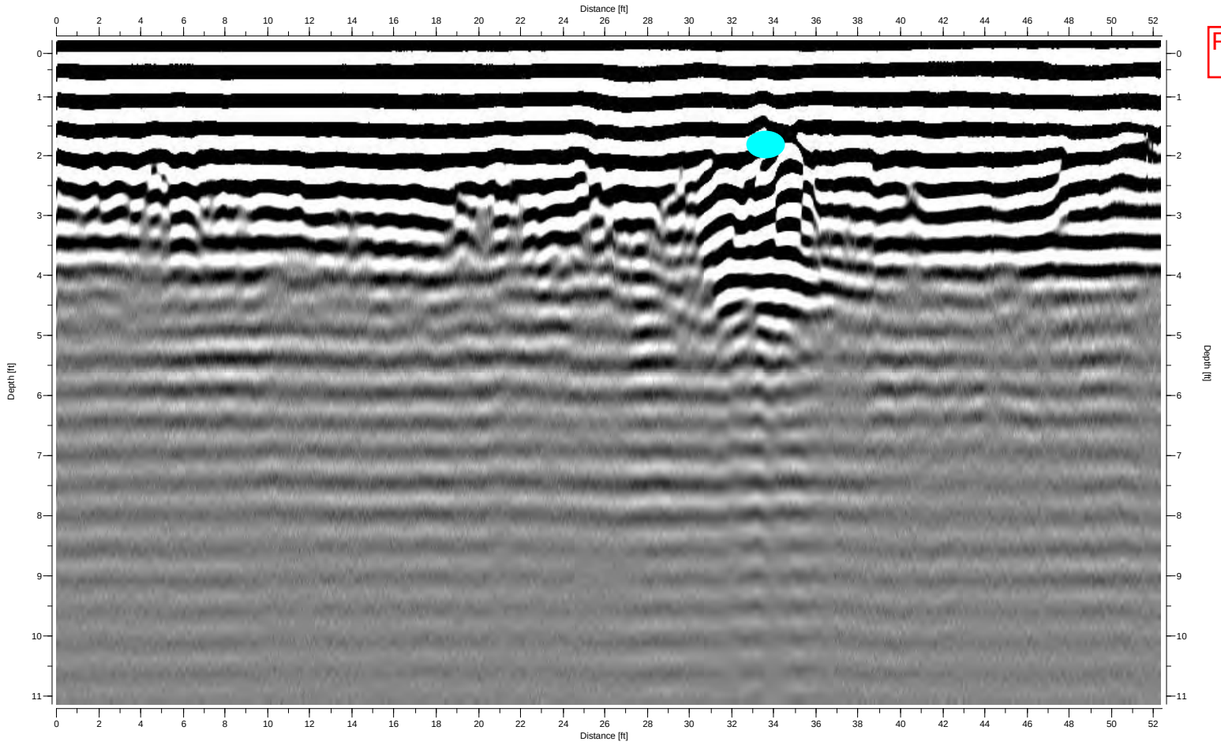

Distance [ft]
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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Depth [ft]
Distance [ft]

R15

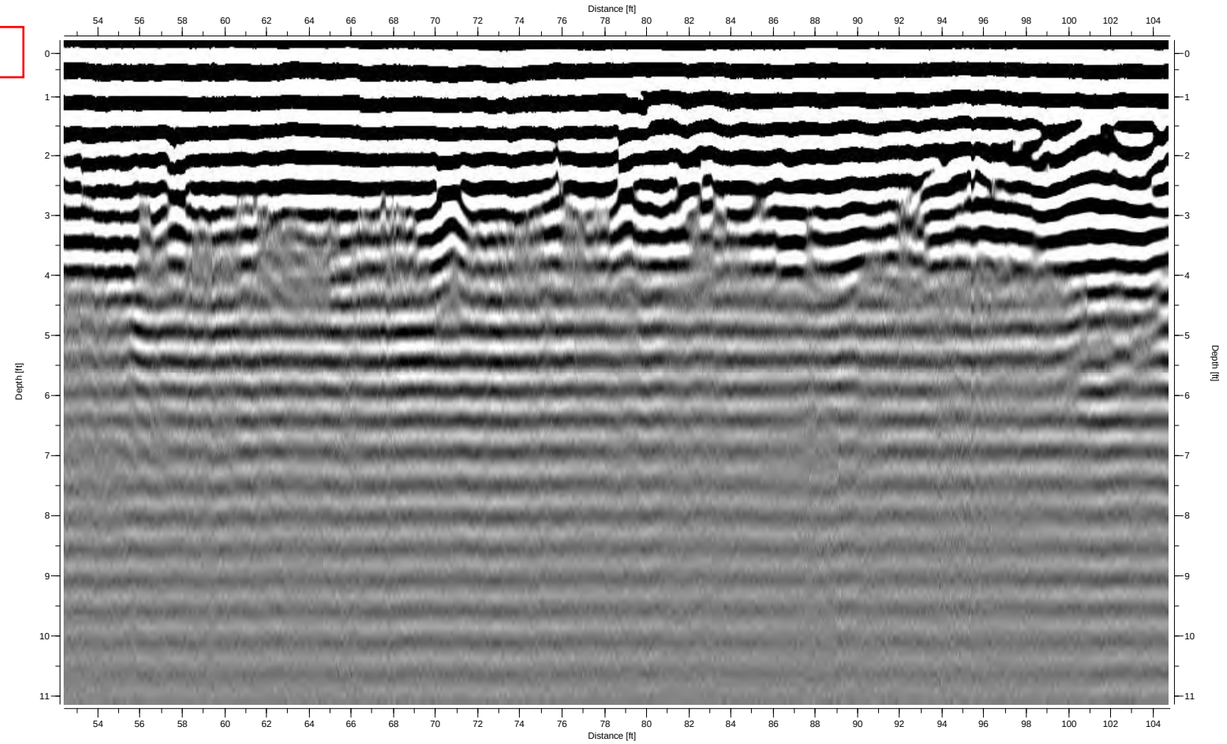

Distance [ft]
264 266 268 270 272 274 276 278 280 282 284 286 288 290 292 294 296 298 300 302 304 306 308 310 312 314
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Depth [ft]
Distance [ft]


Distance [ft]
316
0 1 2 3 4 5 6 7 8 9 10 11
Depth [ft]
Depth [ft]
316
Distance [ft]

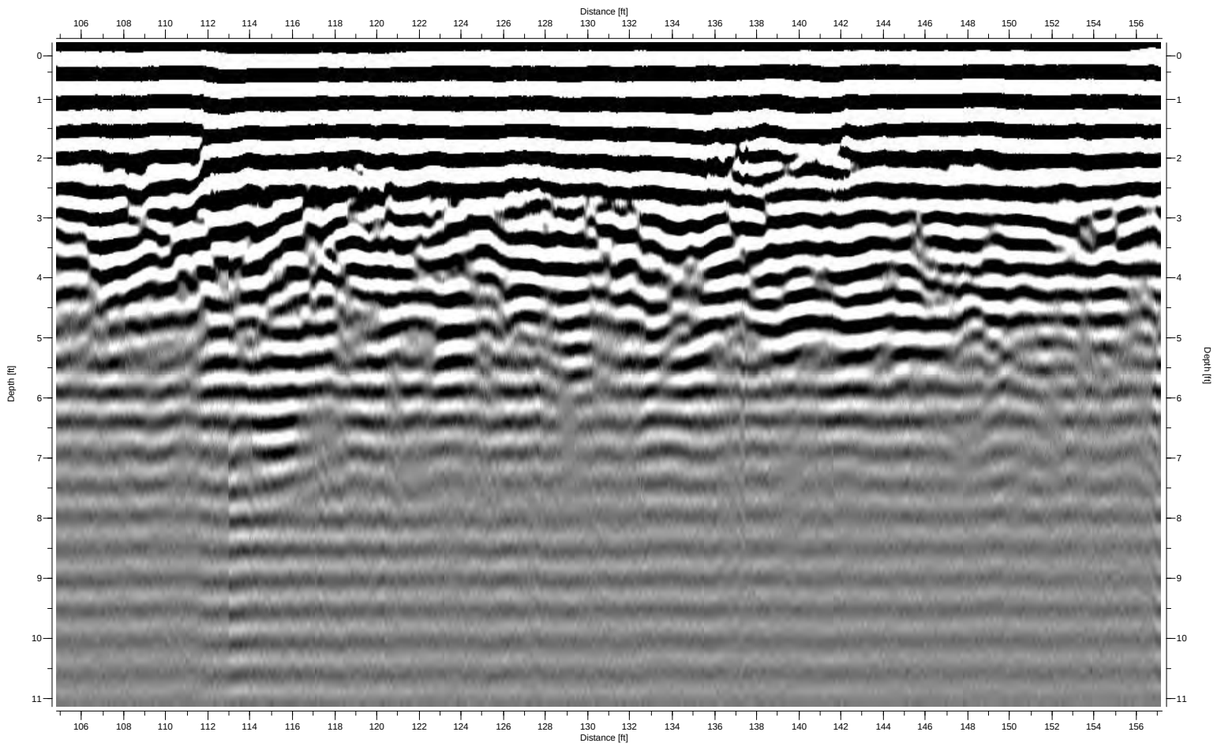
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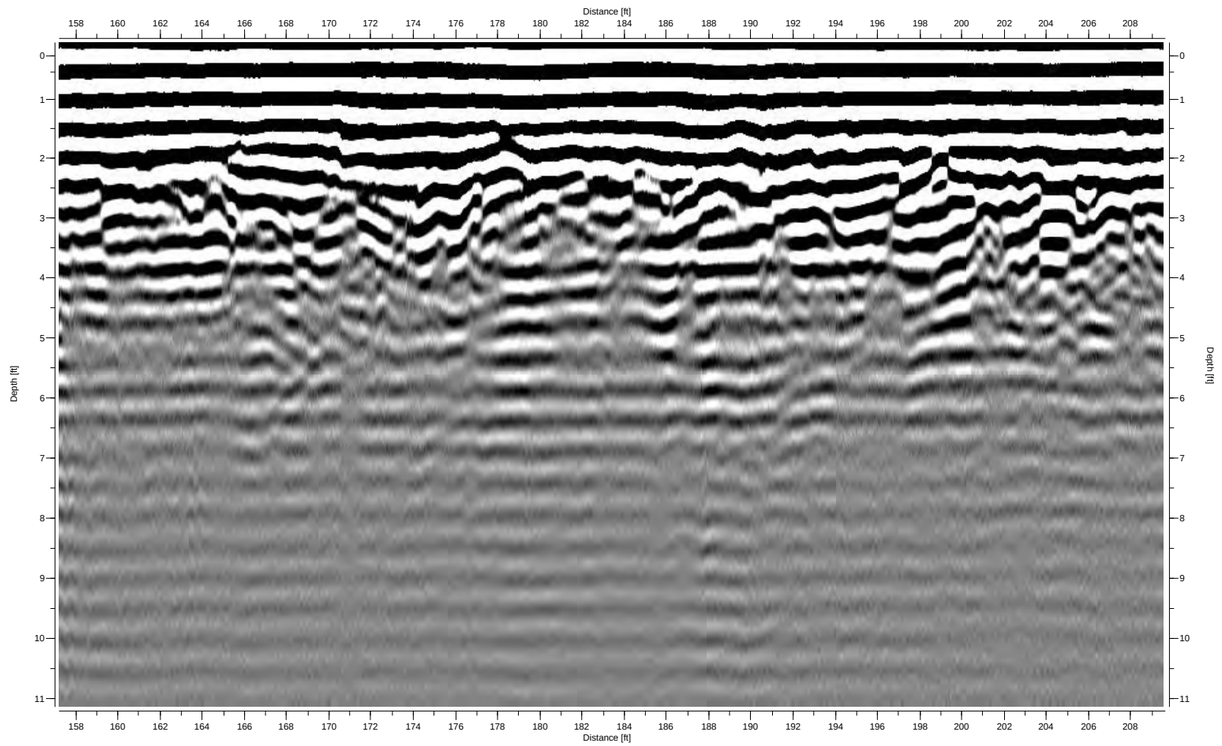
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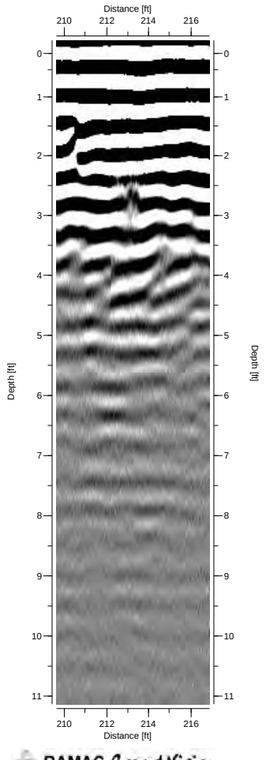
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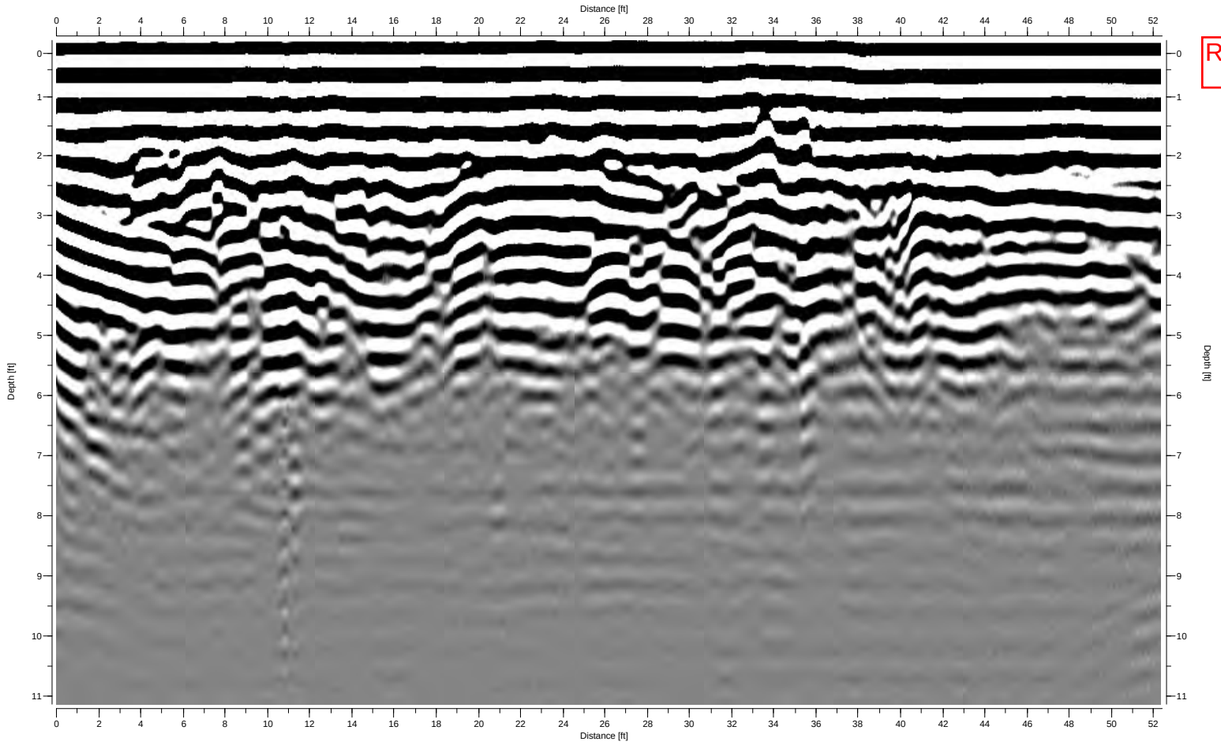
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Distance [ft]
210
212
214
216
0
1
2
3
4
5
6
7
8
9
10
11
Depth [ft]
Depth [ft]
Distance [ft]
210
212
214
216

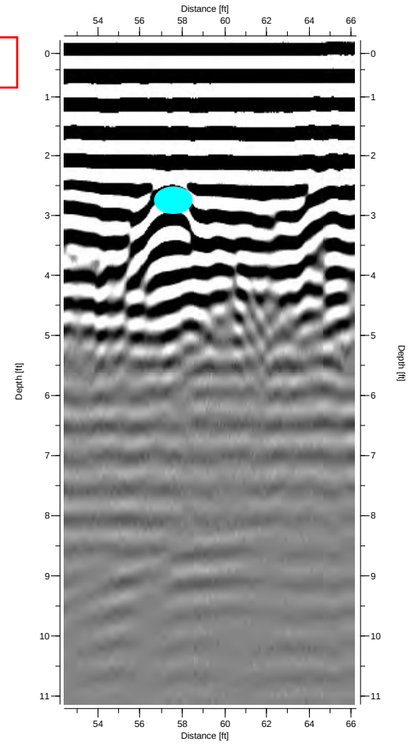
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R17

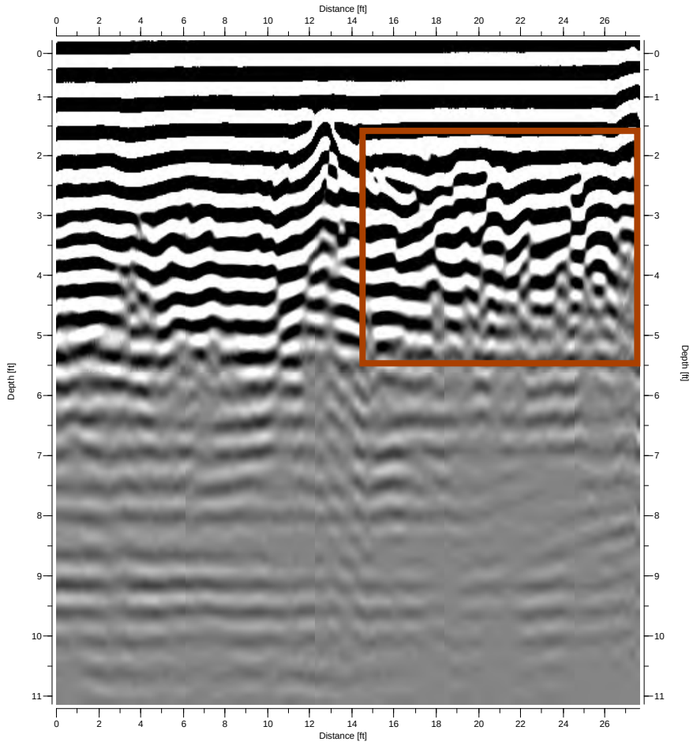
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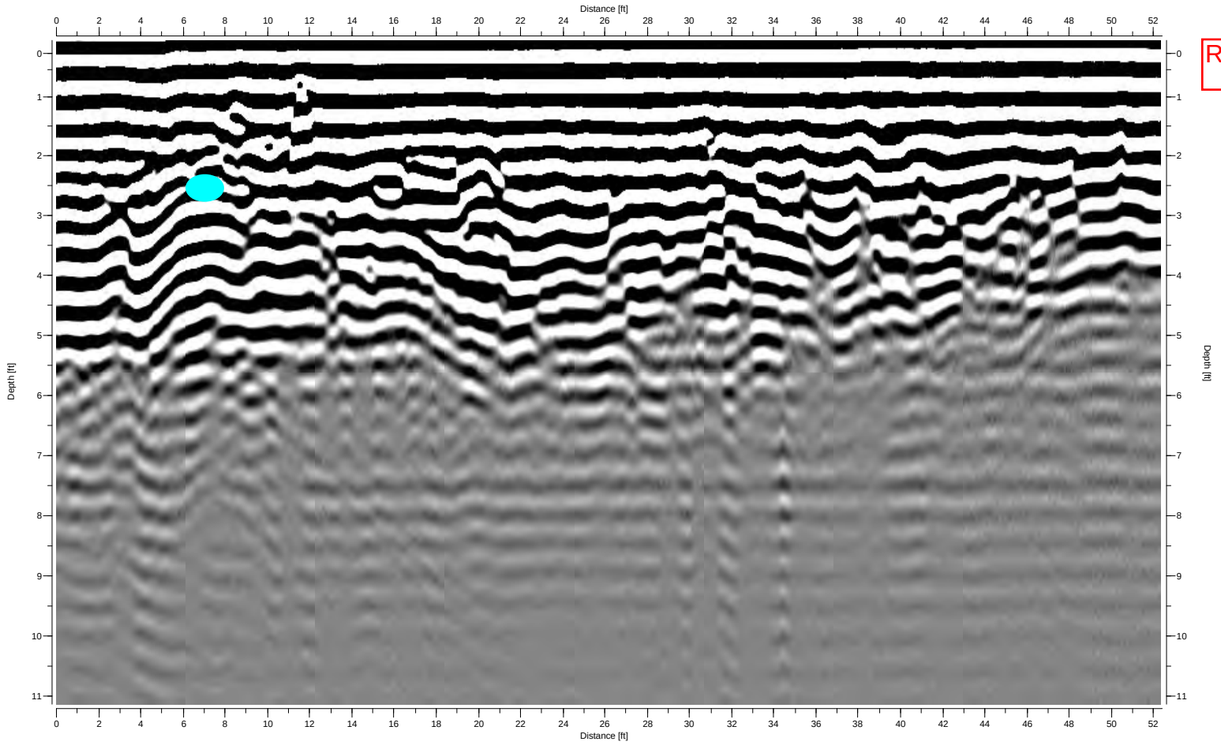
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R18

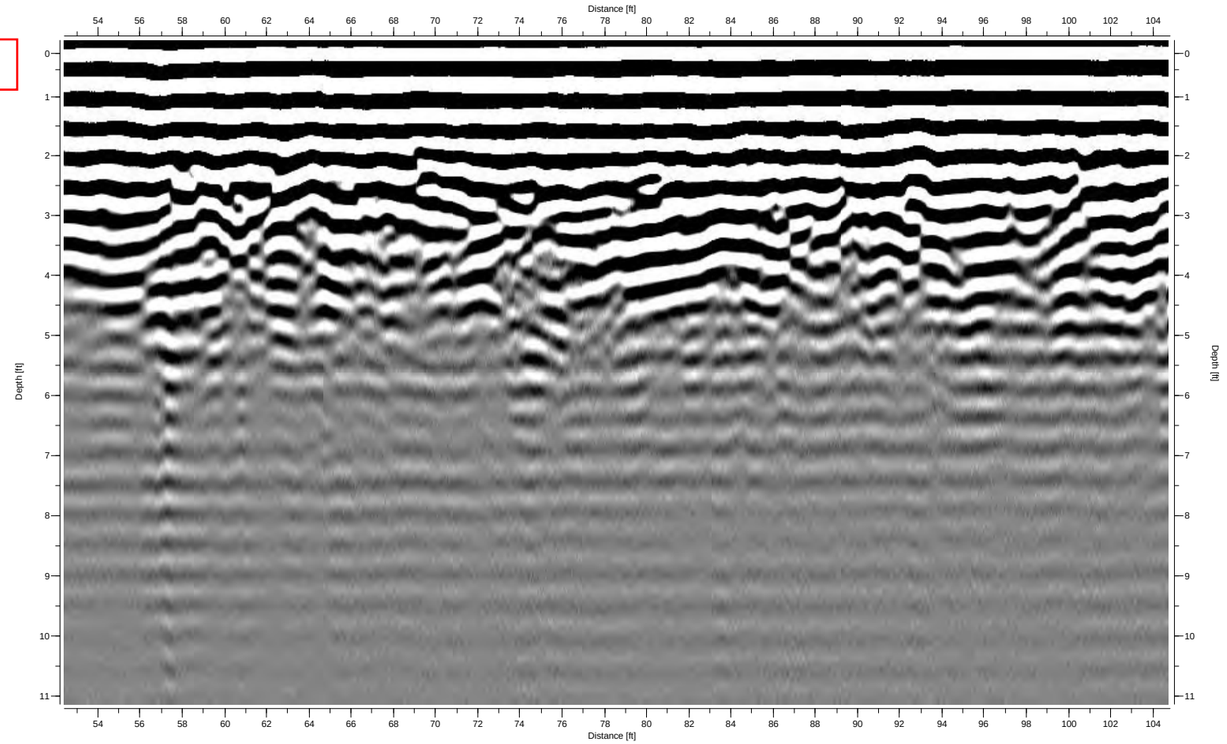
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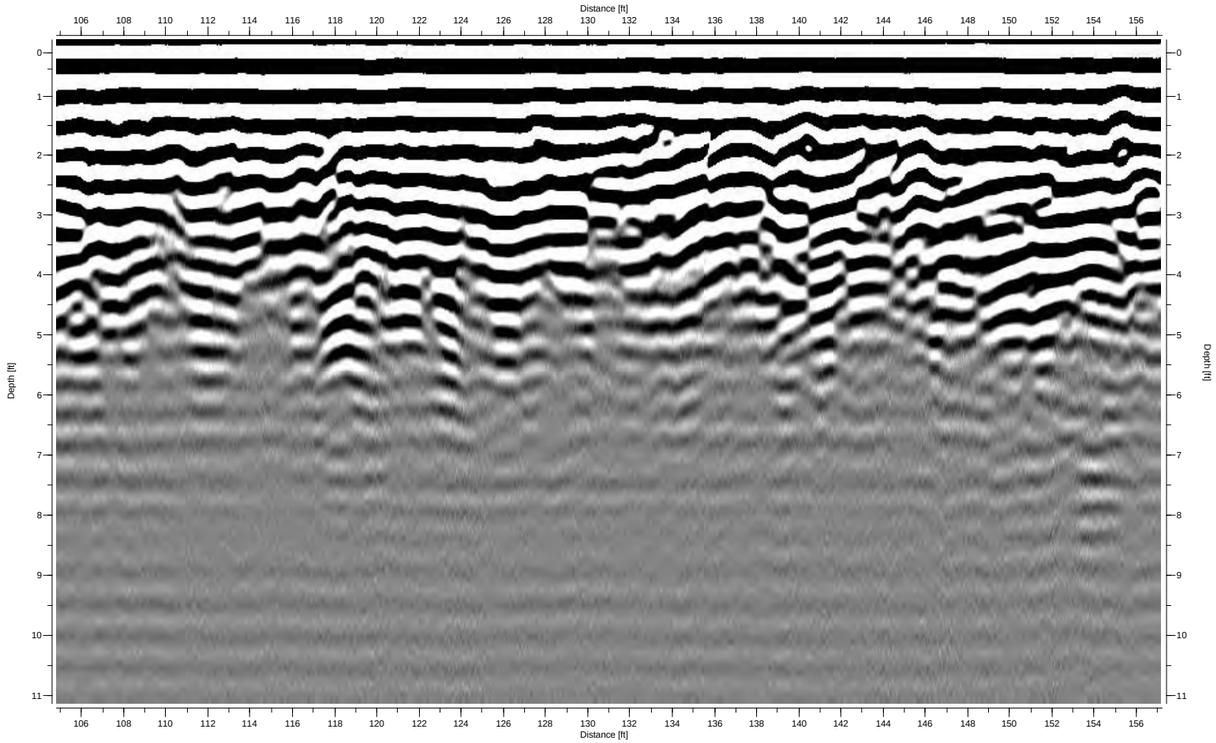


R19

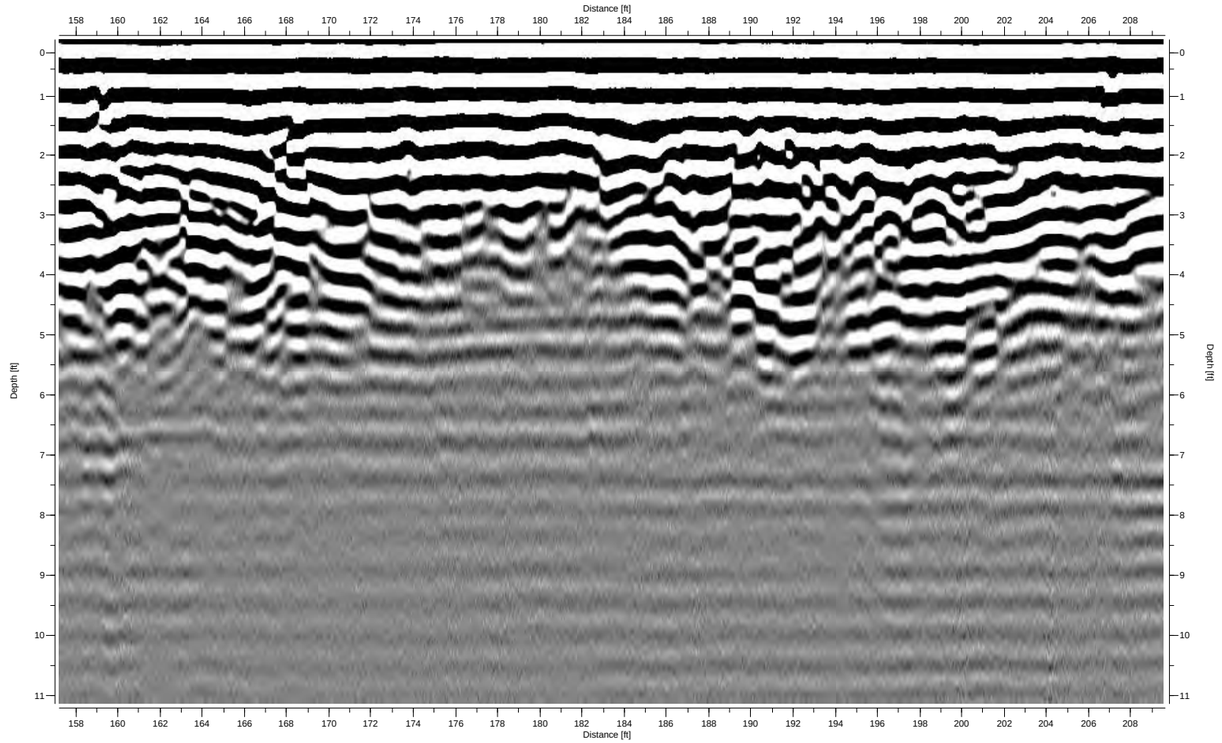
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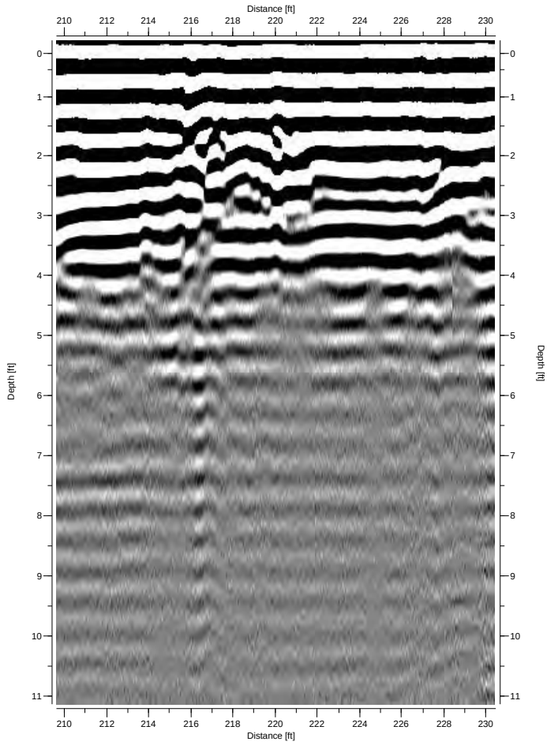
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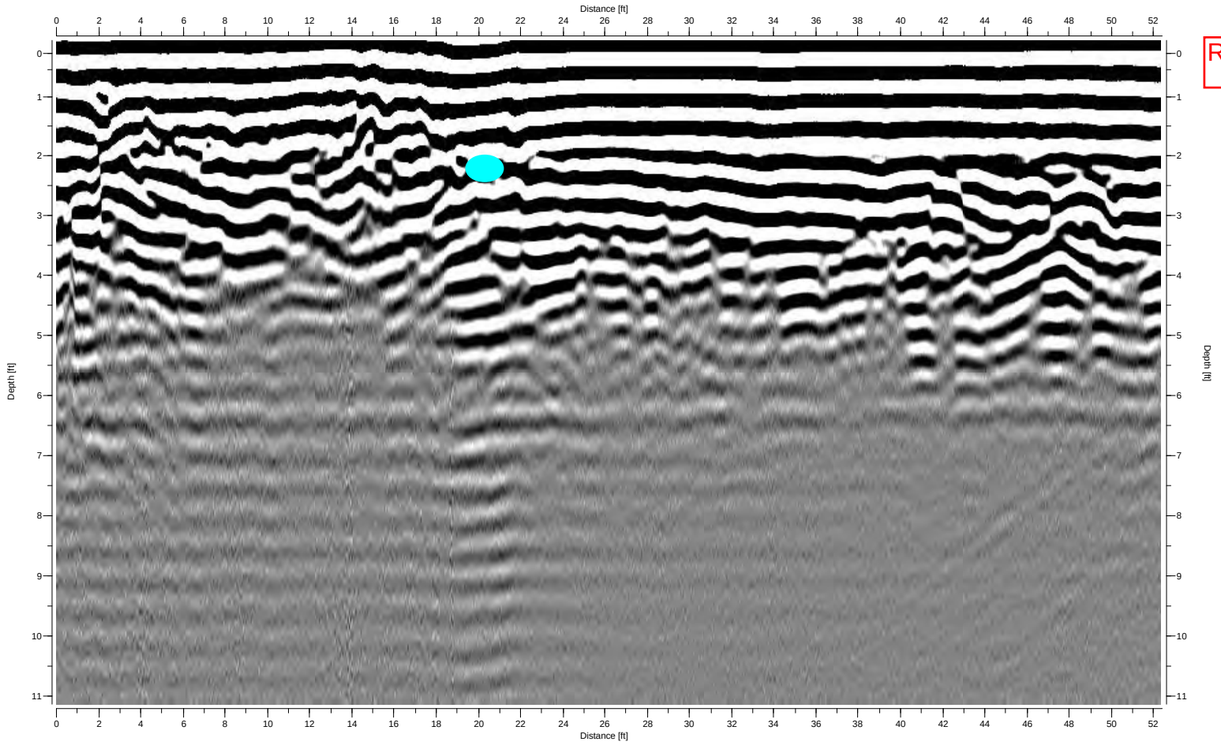
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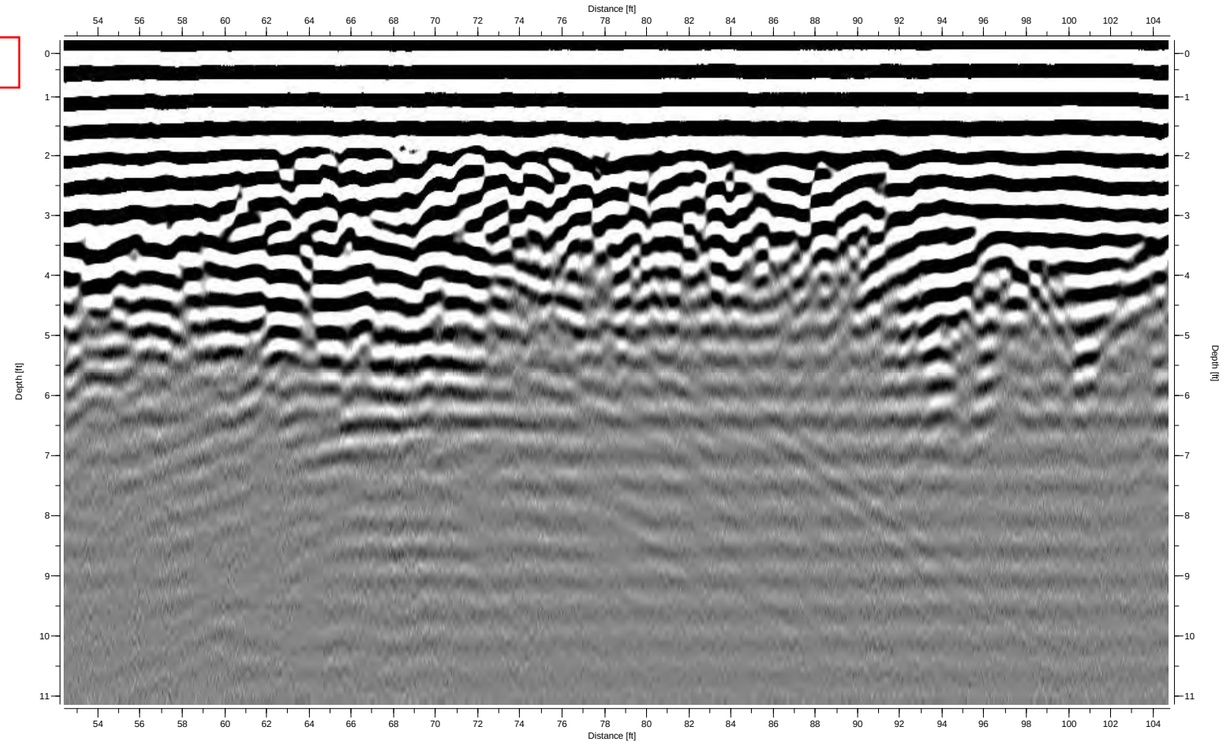
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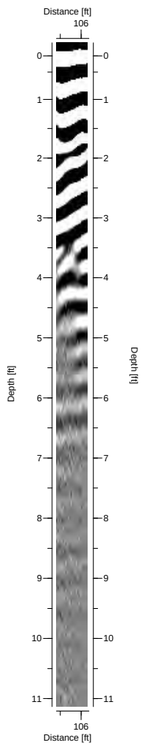
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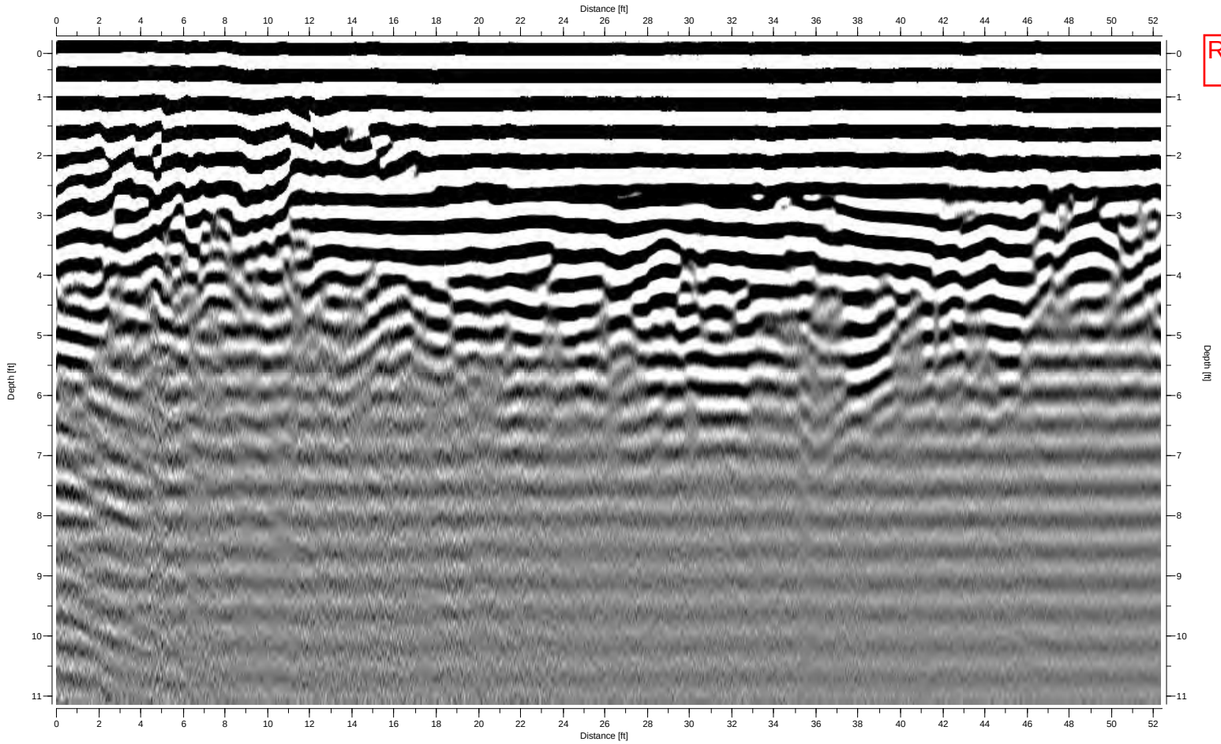
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Distance [ft]
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Depth [m]
0 1 2 3 4 5 6 7 8 9 10 11
Distance [ft]
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52

R20

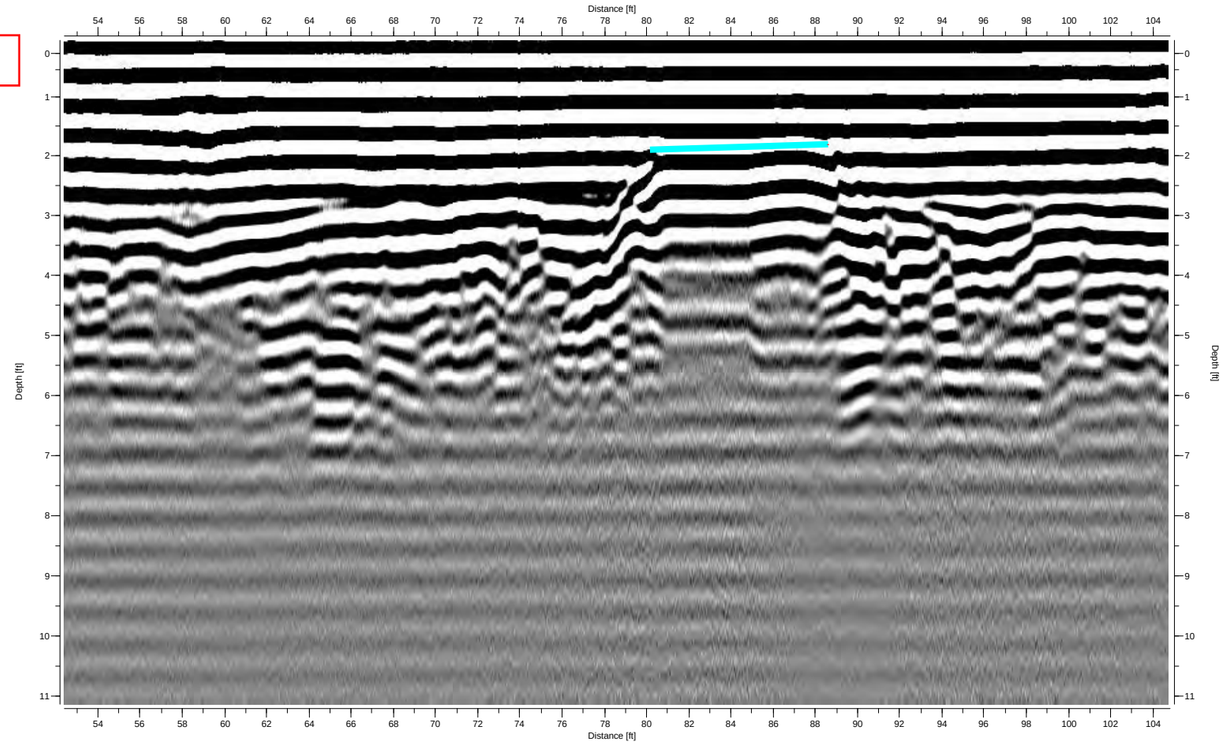

Distance [ft]
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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Depth [m]
0 1 2 3 4 5 6 7 8 9 10 11
Distance [ft]
54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104


Distance [ft]
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Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
Depth [ft]
0 1 2 3 4 5 6 7 8 9 10 11
106
Distance [ft]

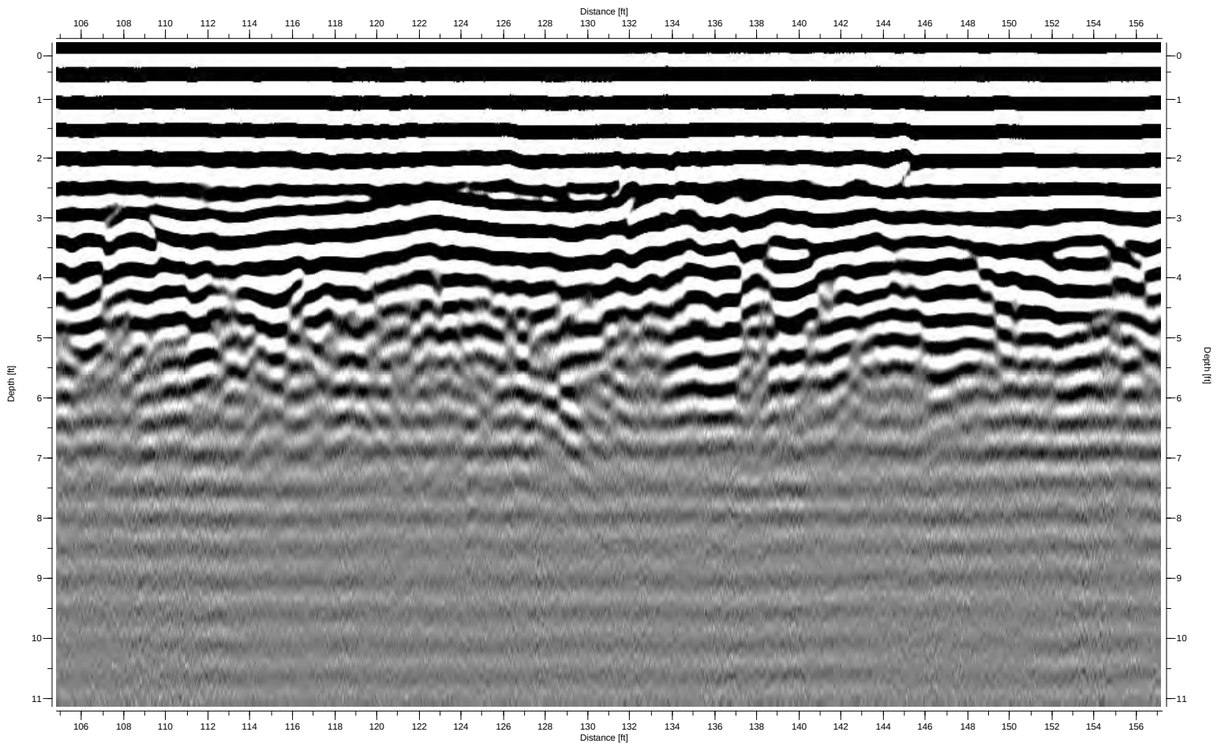


R21

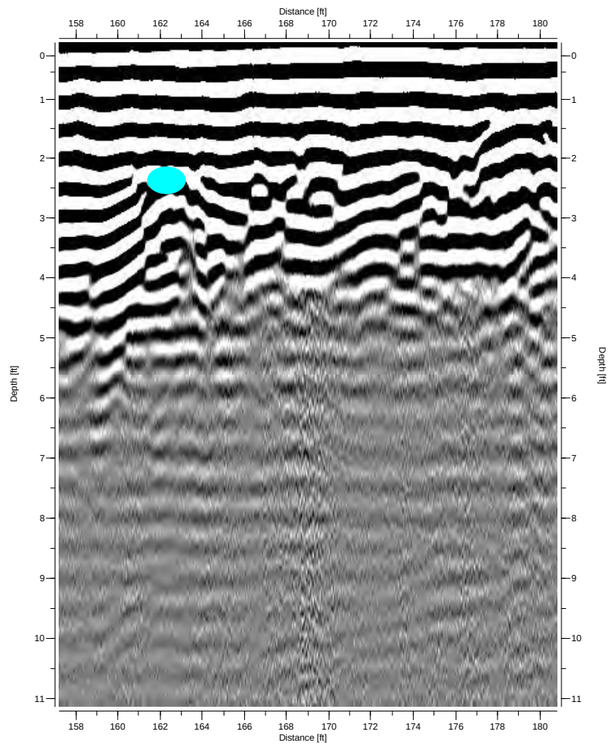
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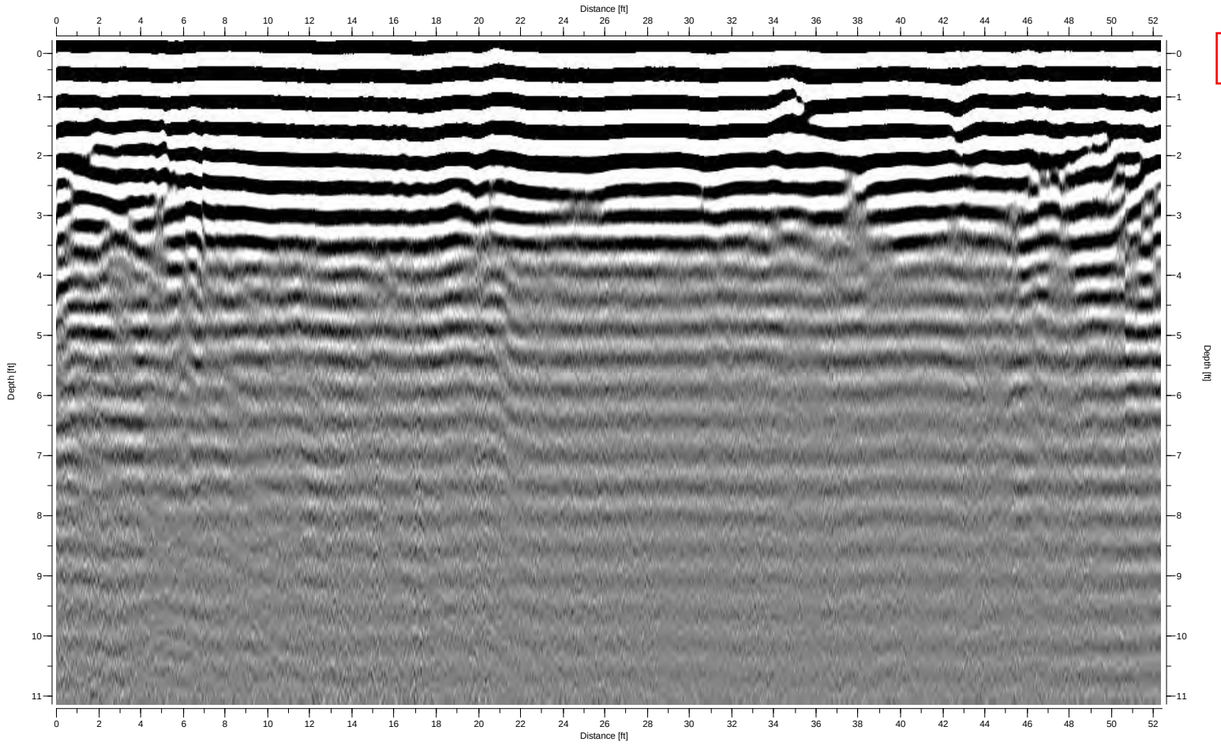
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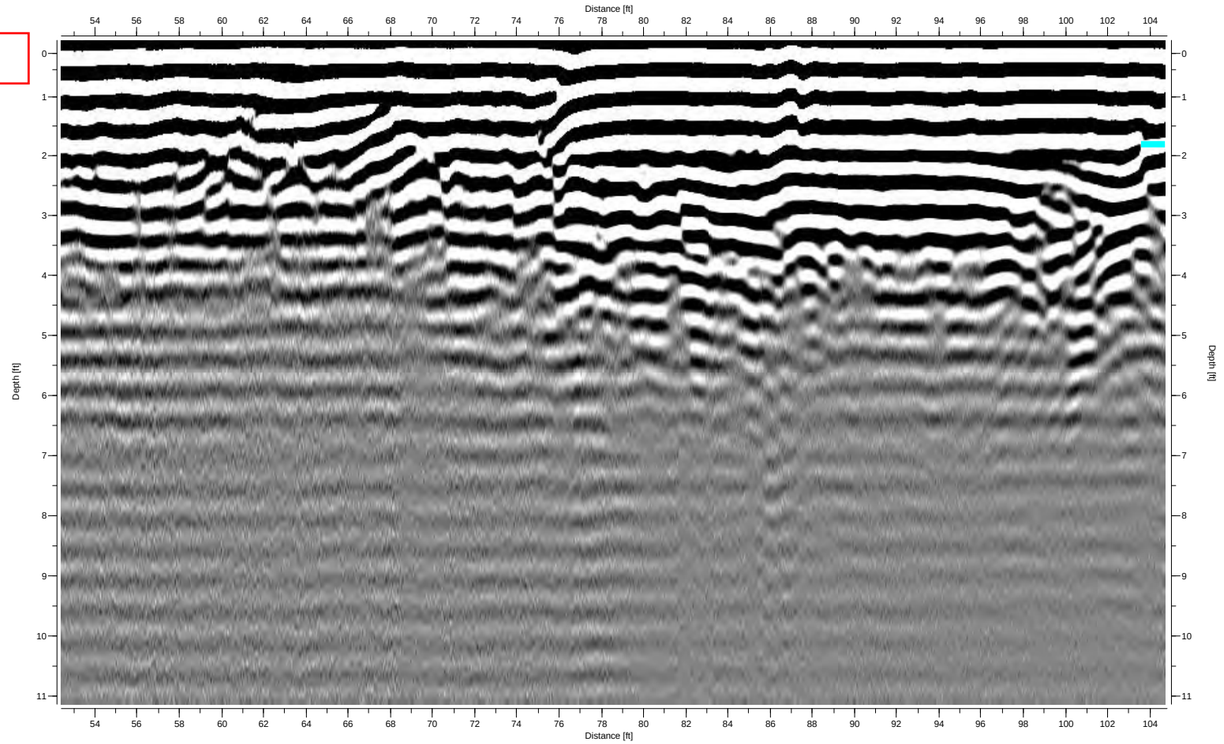


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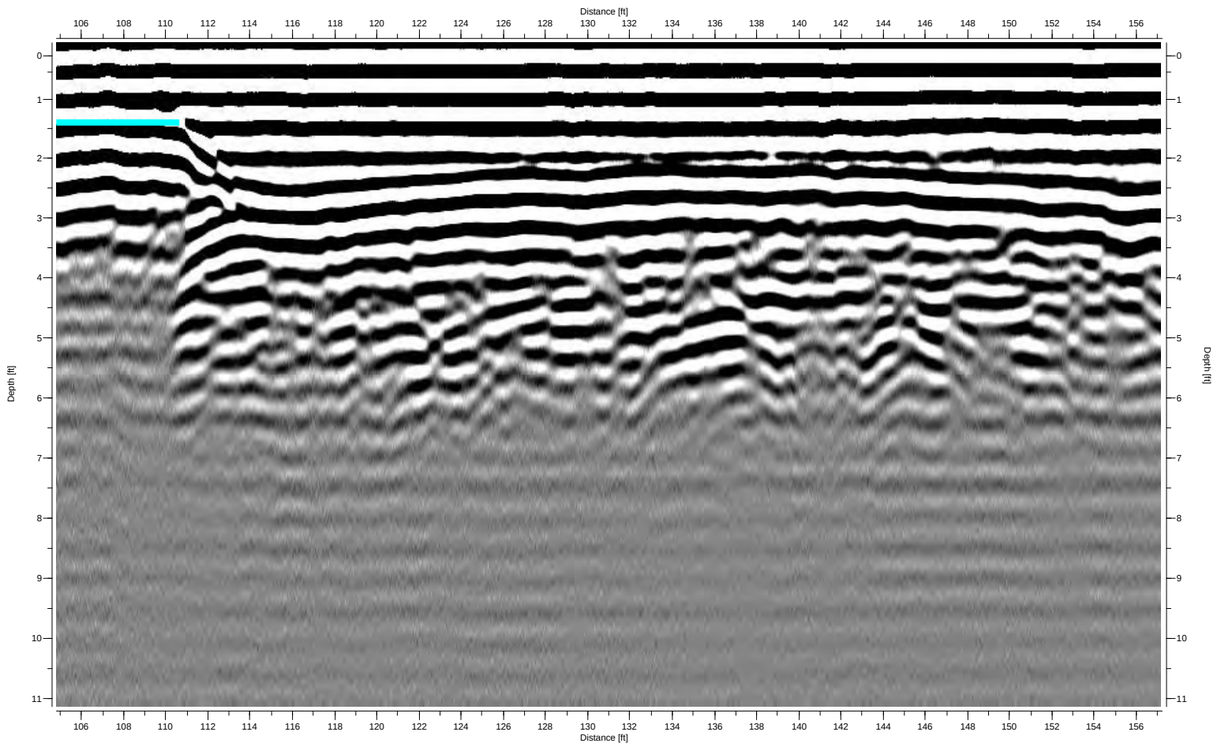


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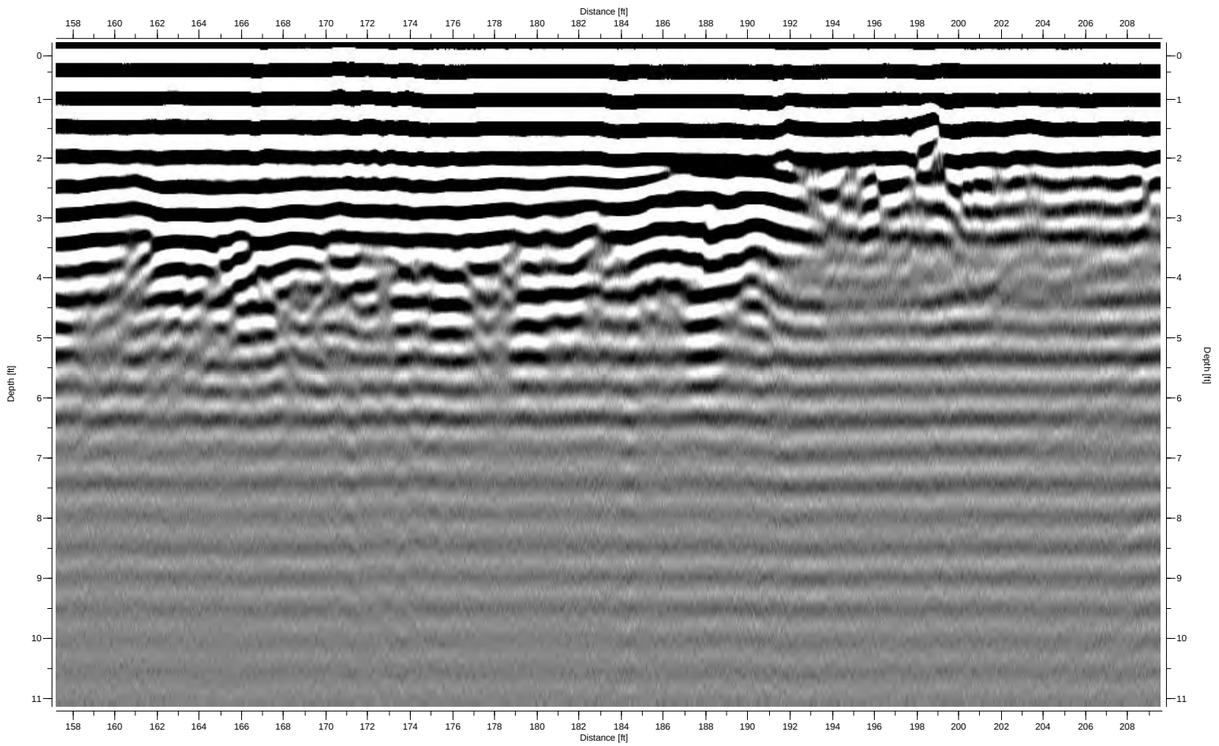
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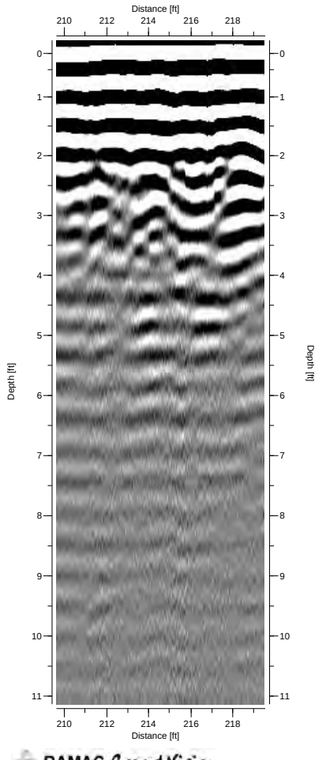
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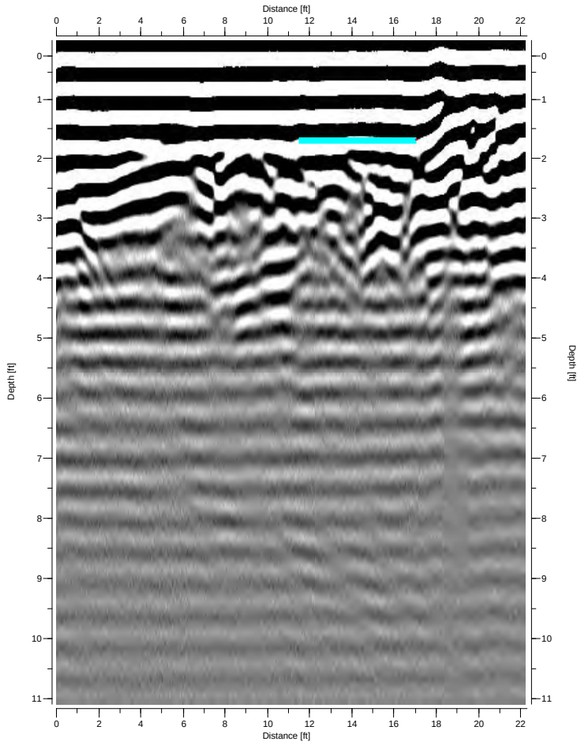
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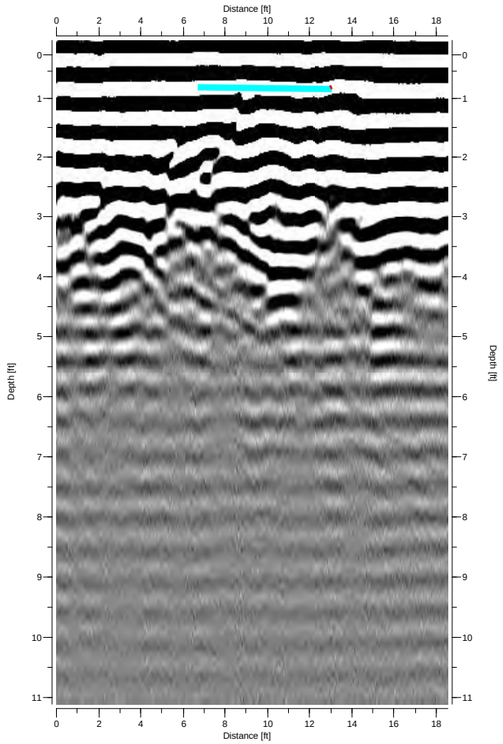
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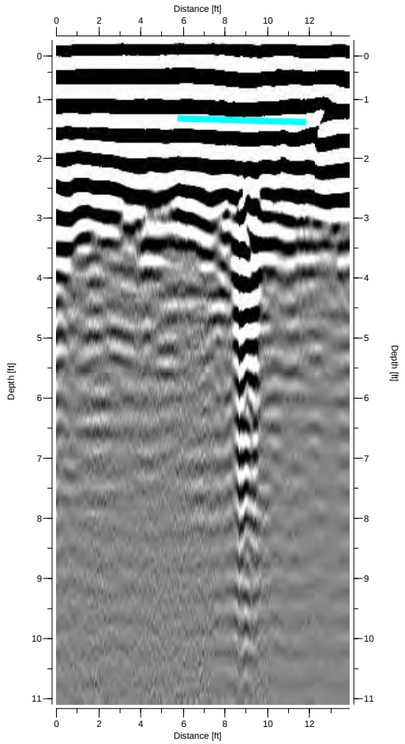
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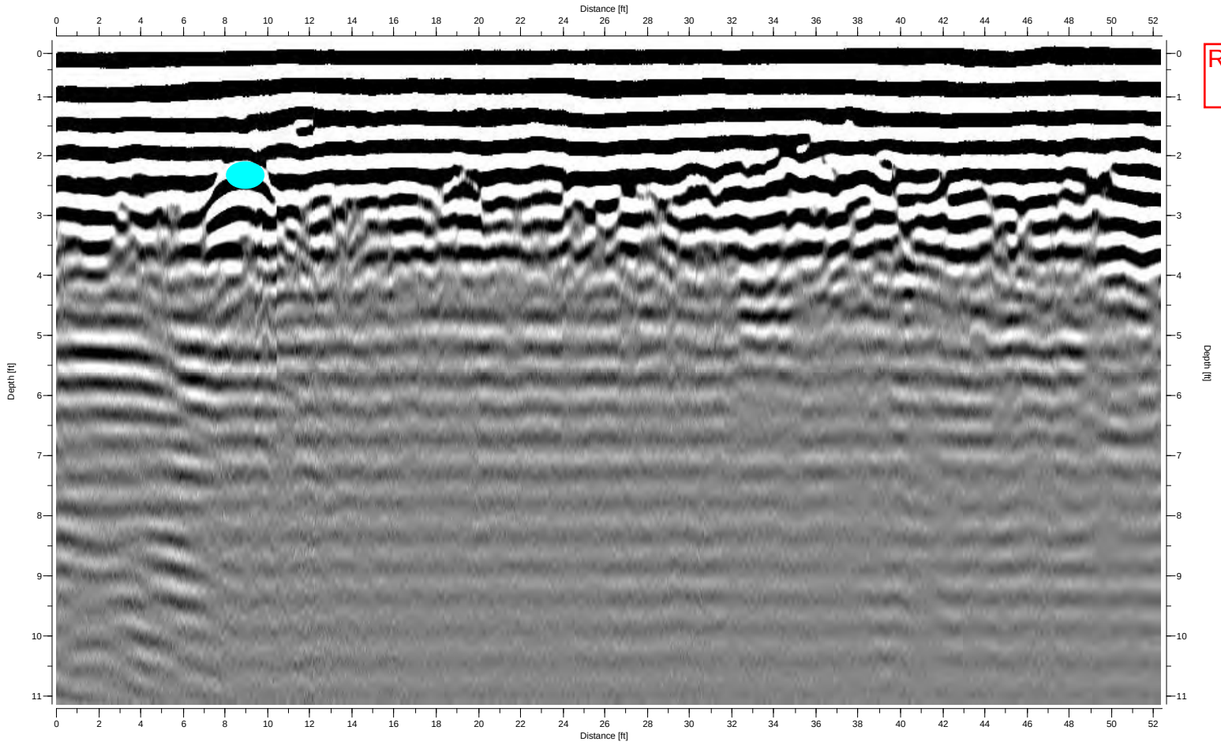
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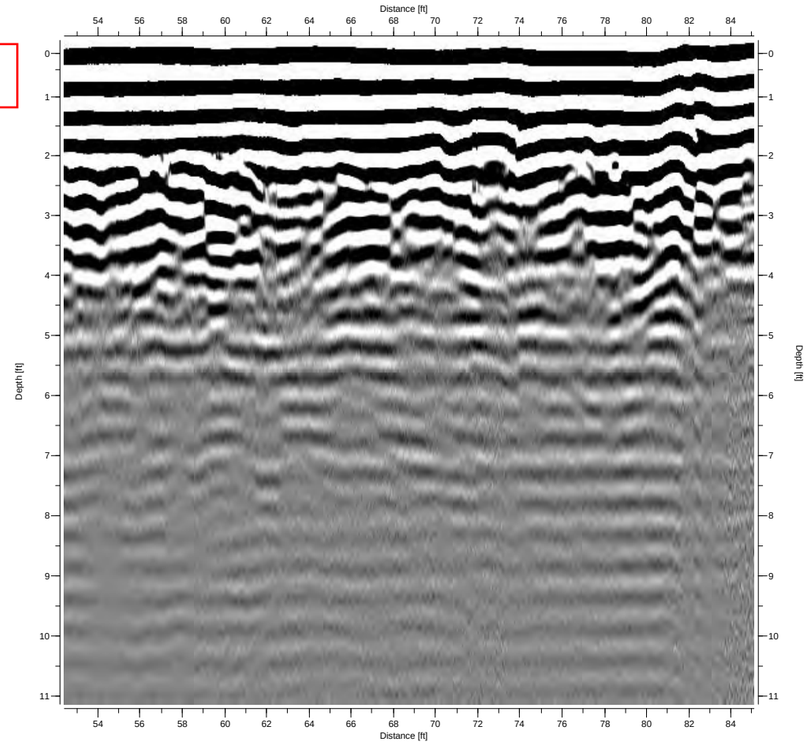
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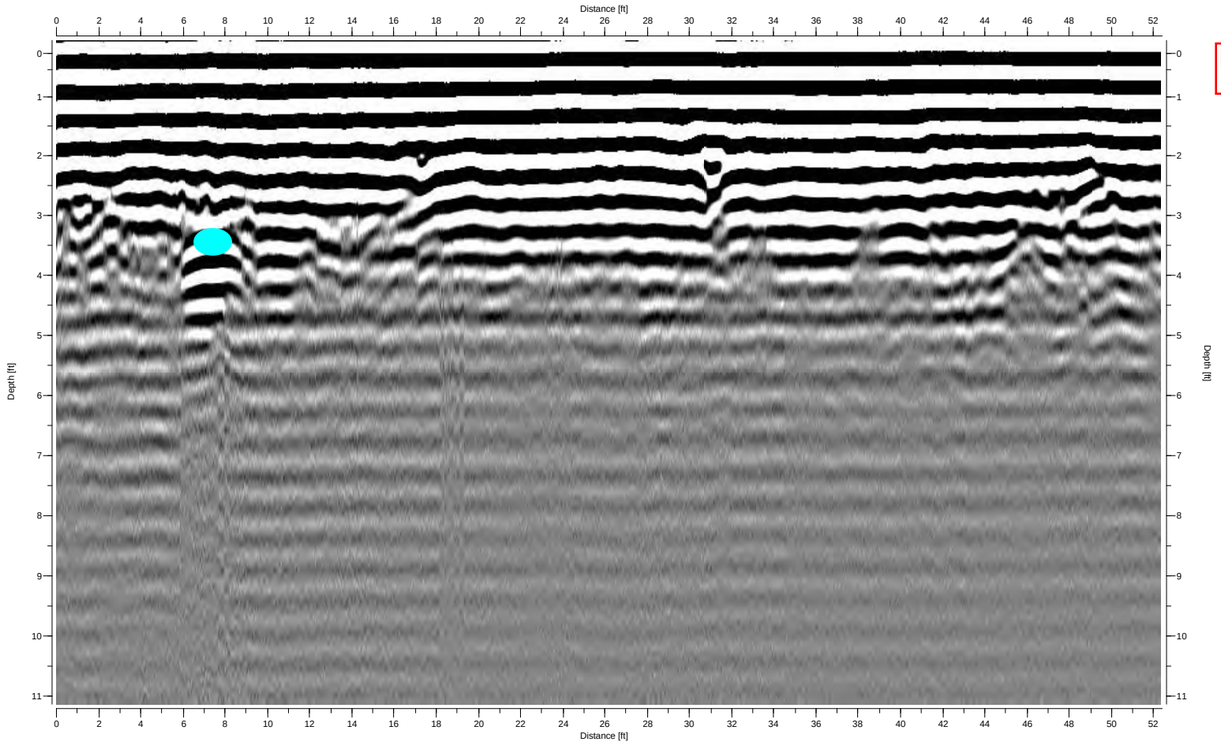


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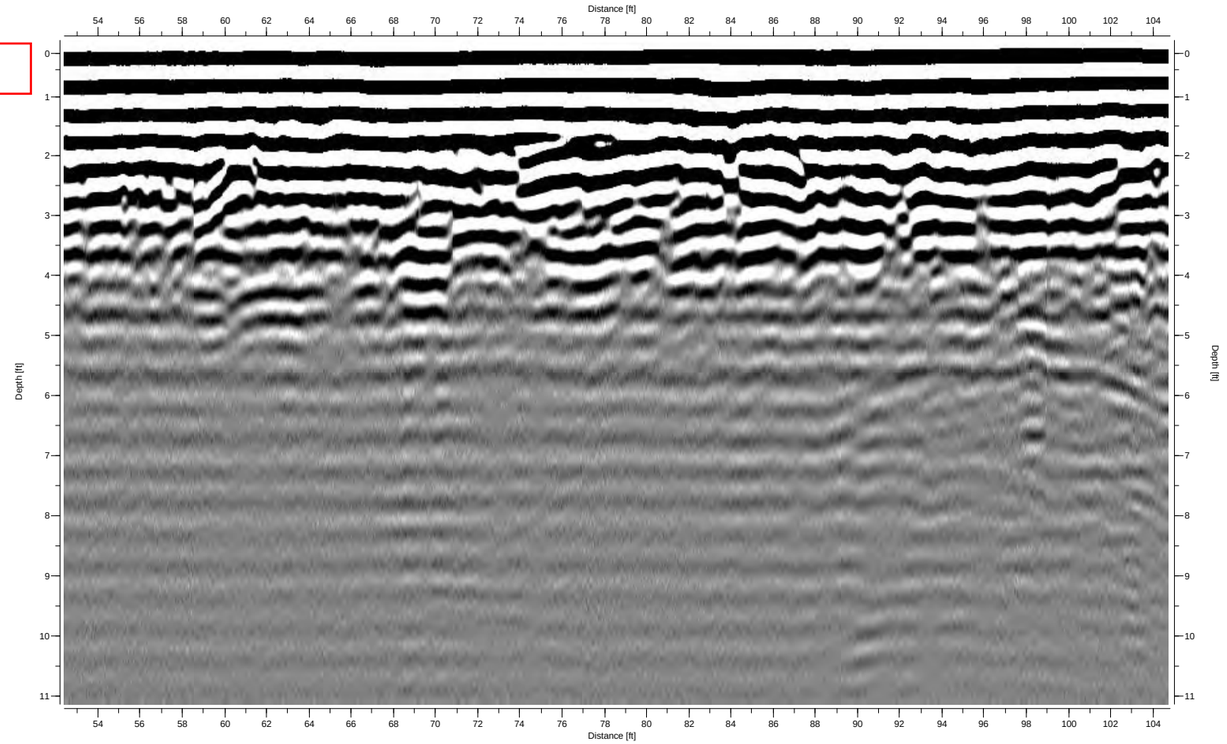


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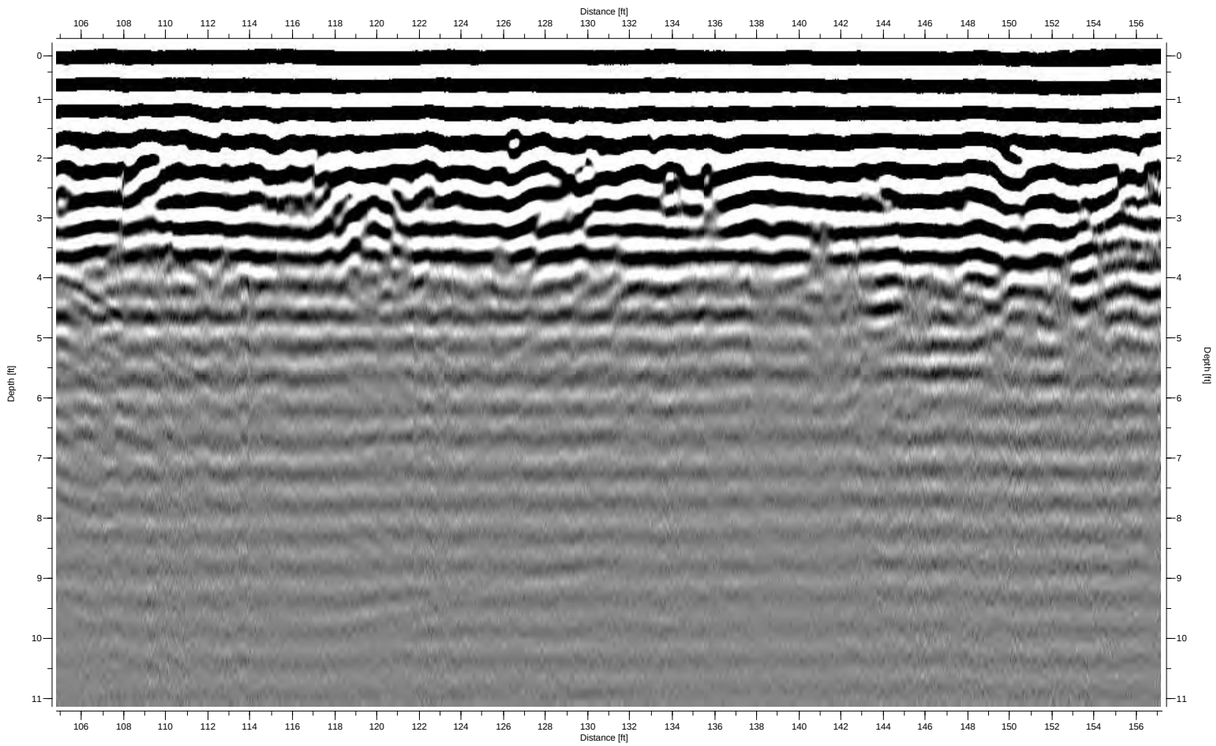


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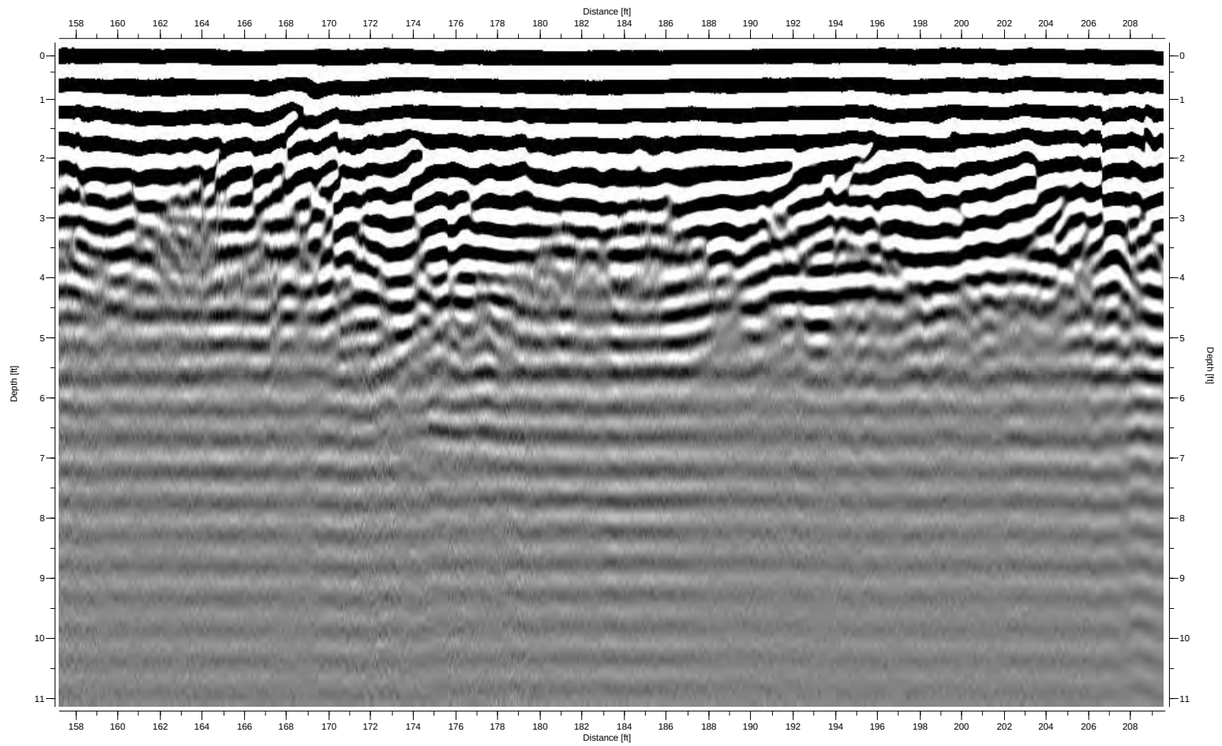
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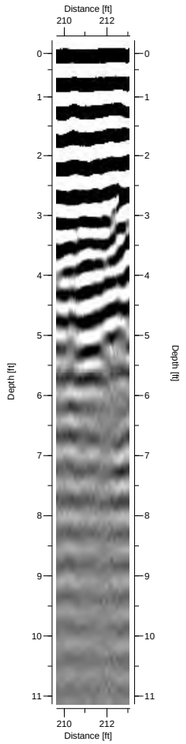
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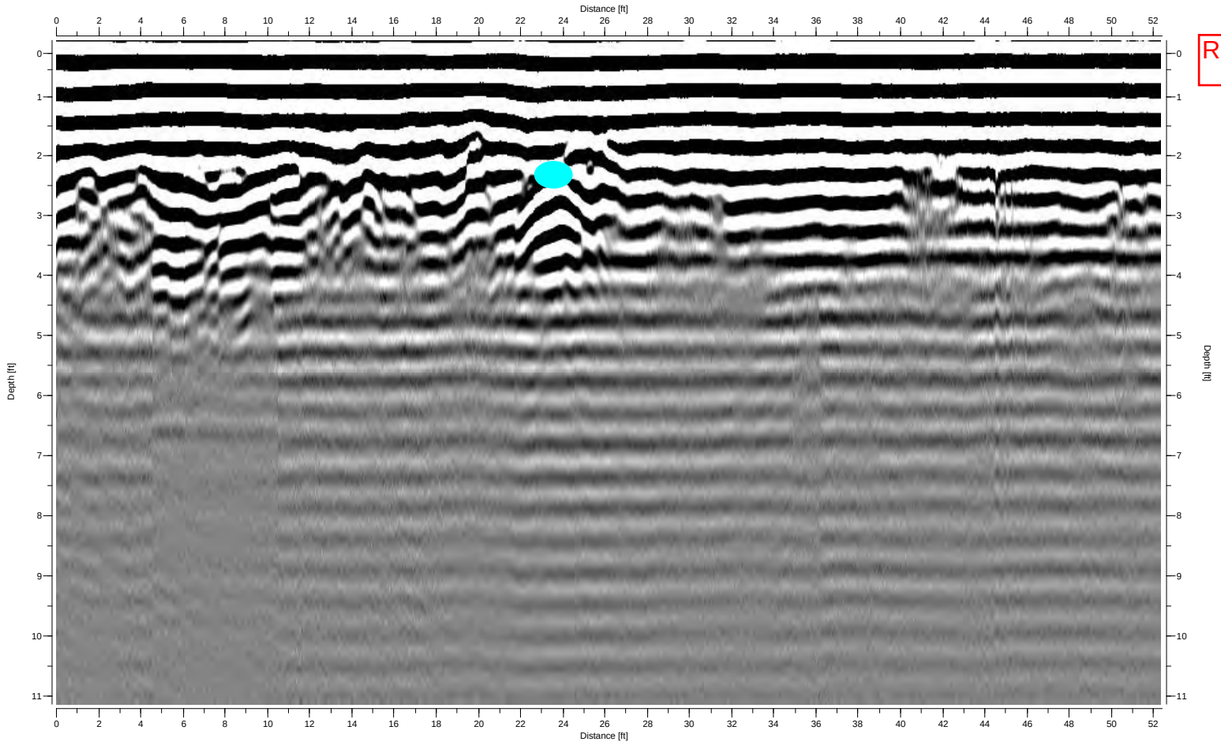
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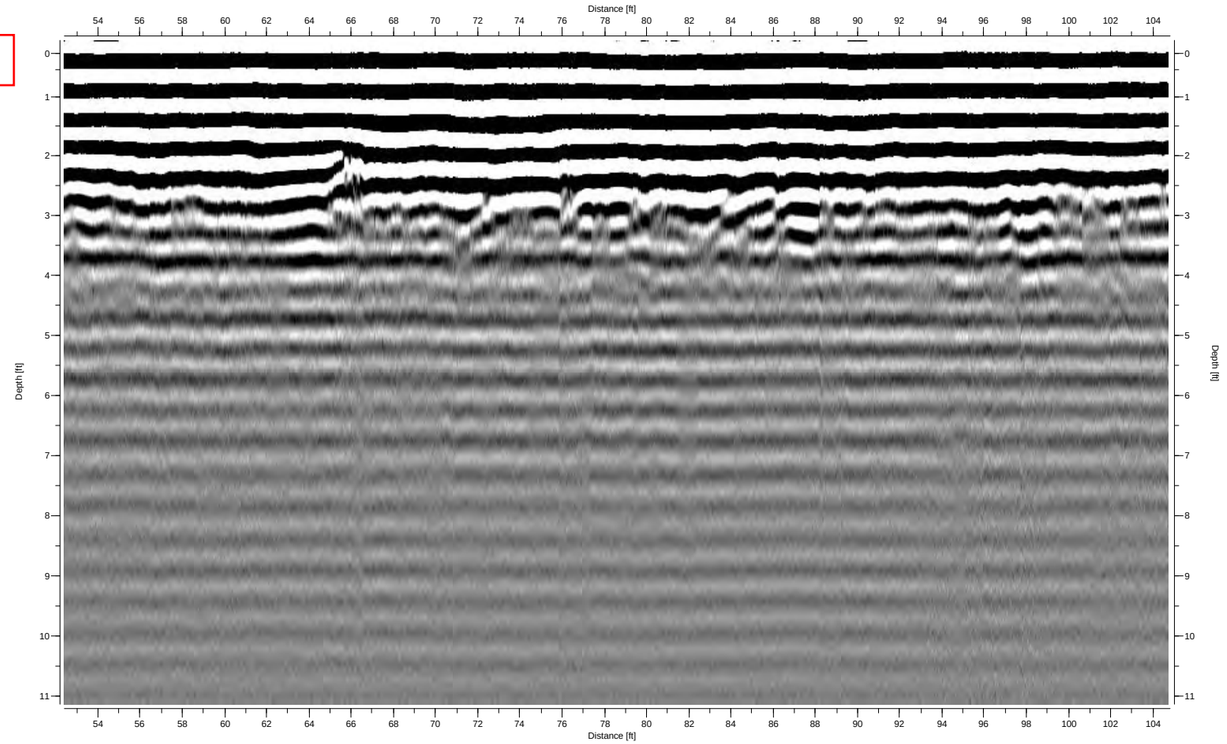
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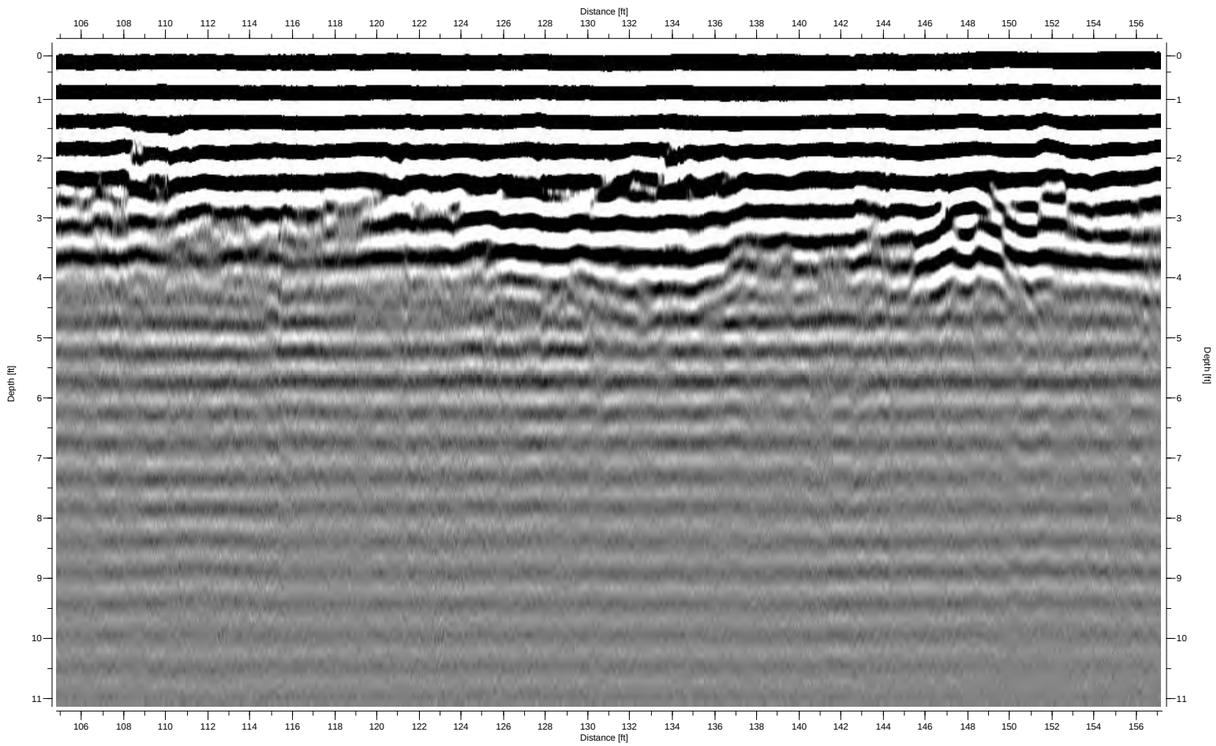


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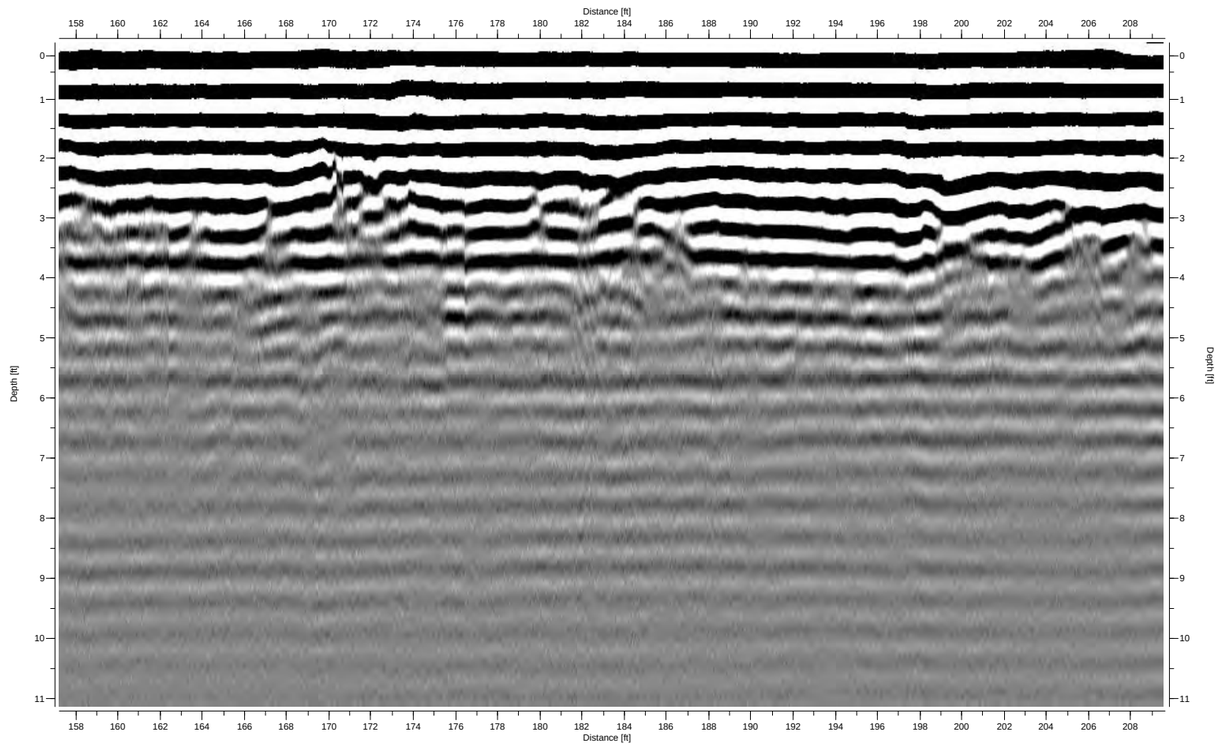
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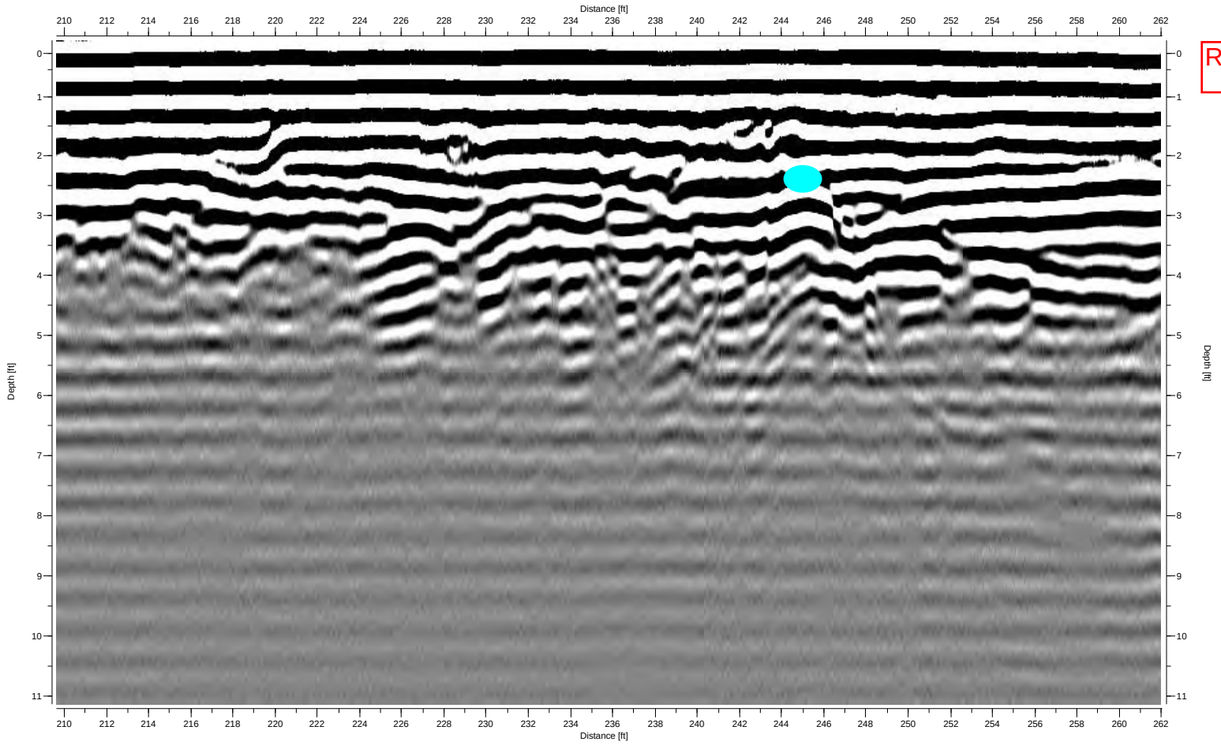
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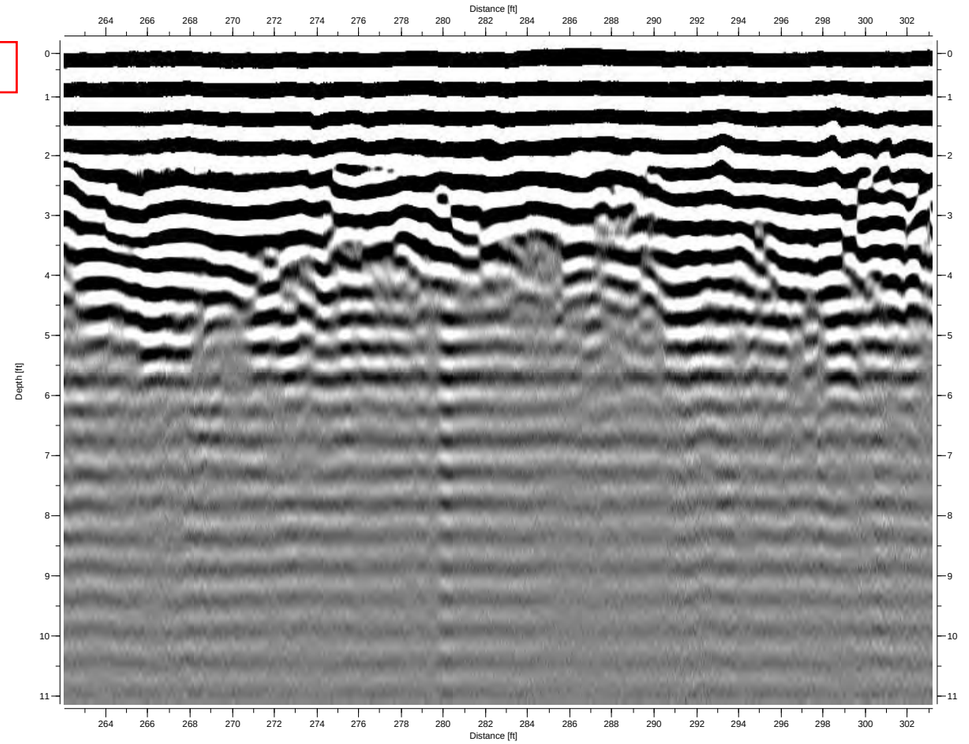
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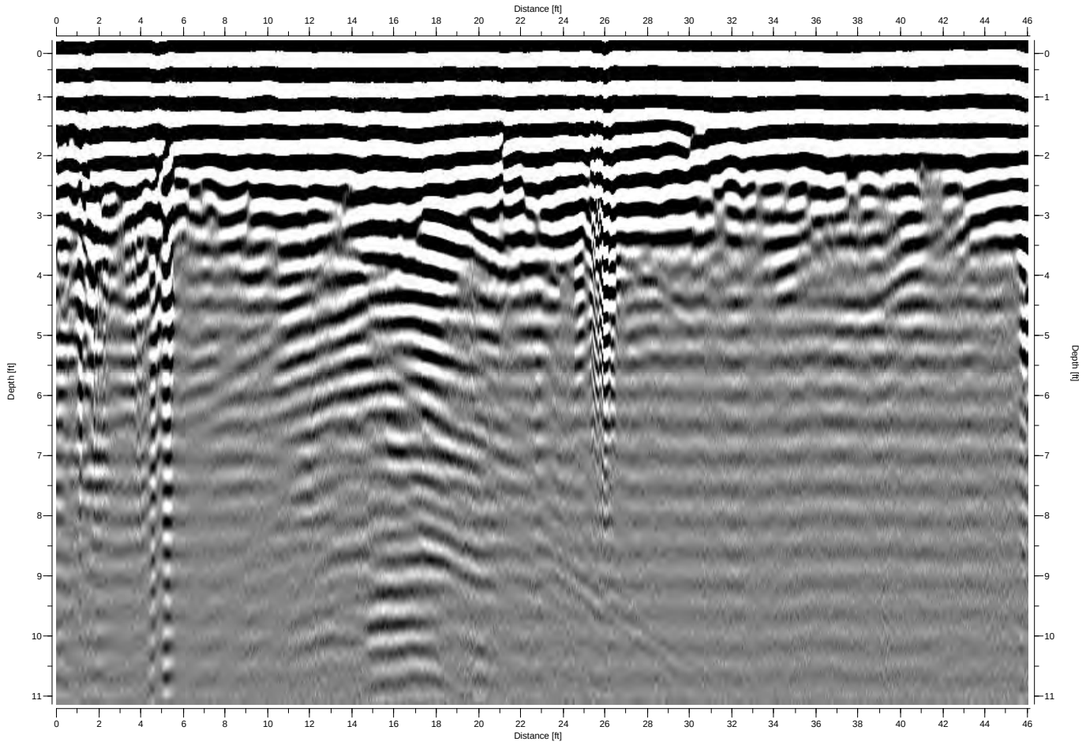


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Distance [ft]
Depth [ft]
Depth [m]
210 212 214 216 218 220 222 224 226 228 230 232 234 236 238 240 242 244 246 248 250 252 254 256 258 260 262
0 1 2 3 4 5 6 7 8 9 10 11

R28

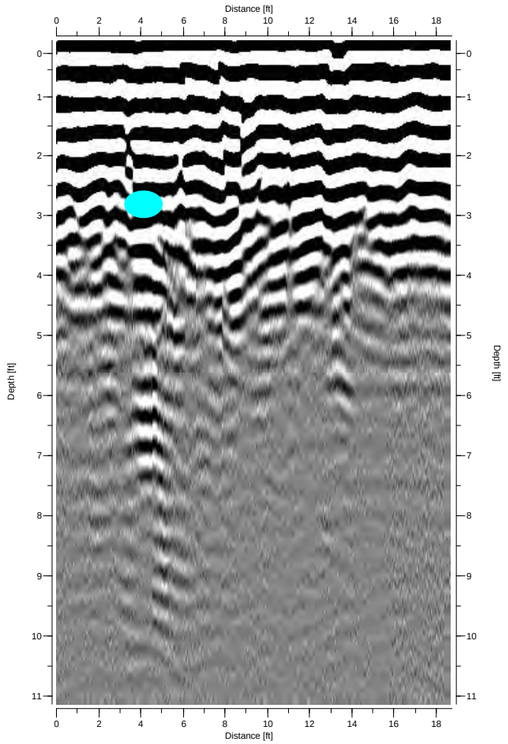

Distance [ft]
Depth [ft]
Depth [m]
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0 1 2 3 4 5 6 7 8 9 10 11



R29

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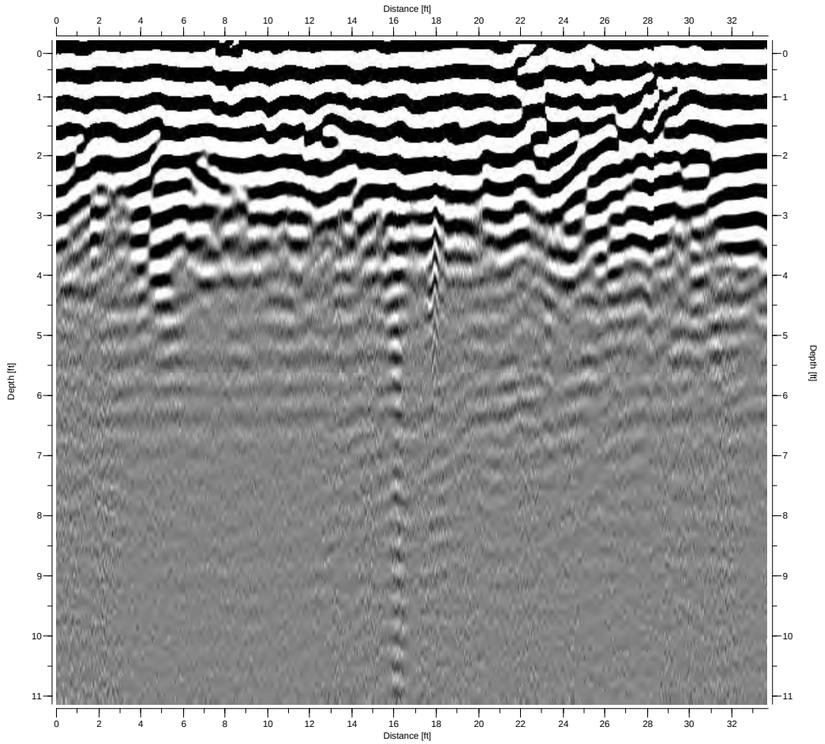
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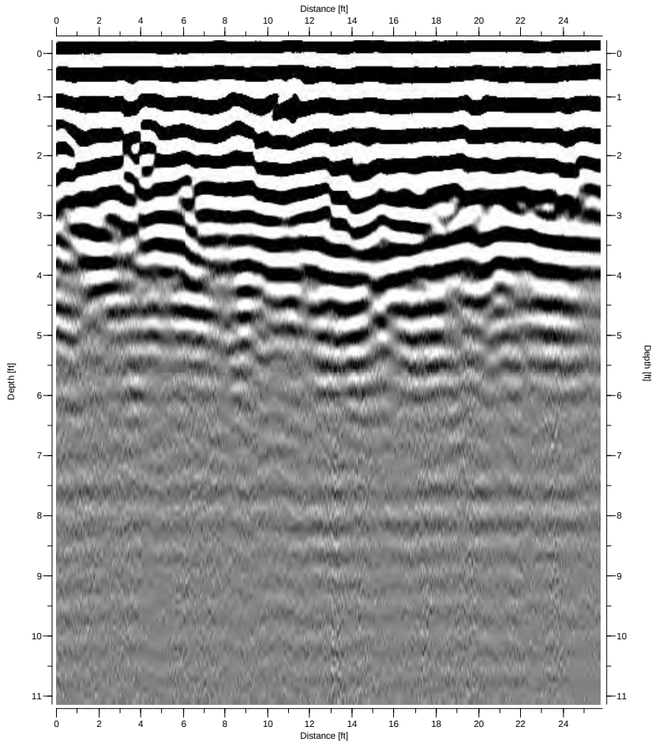
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R32

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Page 1 (2)

GeoPotential
ENVIRONMENTAL & EXPLORATION GEOPHYSICS
22323 East Wild Fern Lane, Brightwood, Oregon 97011• PH (503) 622-0154• FAX (503) 622-0526
WEB http://www.geopotential.biz/ E-MAIL GeoPotential@geopotential.biz

APPENDIX B
GROUND PENETRATING RADAR SURVEYS

Ground Penetrating Radar (GPR) can be a valuable tool to accurately locate both metallic and non-metallic UST's and utilities, buried drums and hazardous material at some sites. It may detect objects below reinforced concrete floors and slabs. GPR may delineate trenches and excavations and, under some conditions, it may be used to locate contaminant plumes. It has been used as an archaeological tool to look for buried artifacts. It may accurately profile fresh water lake bottoms either from a boat or from a frozen lake surface. GPR may be used to locate voids below roads and runways. GPR has numerous engineering applications. It can be used in non-destructive testing of engineering material, for example, locating rebar in concrete structures and determining the thickness of concrete and other structural material.

GPR uses short impulses of high frequency radio waves directed into the ground to acquire information about the subsurface. The energy radiated into the ground is reflected back to the antenna by features having different electrical properties to that of the surrounding material. The greater the contrast, the stronger the reflection. Typical reflectors include water table, bedrock, bedding, fractures, voids, contaminant plumes and man-made objects such as UST's and metal and plastic utilities. Materials having little electrical contrast like clay and concrete pipes may not produce strong reflections and may not be seen. Data are digitally recorded or downloaded to a laptop computer for filtering and processing.

The frequency of the radar signal used for a survey is a trade off. Low frequencies (250 MHz – 50 MHz) give better penetration but low resolution so that pipes and utilities may not be seen. Pipes and utilities may be seen using higher frequencies (500 MHz) but the depth of penetration may be limited to only a few feet especially in the wet, clayey soils found in many areas of the NW USA. The GPR frequency is dependent upon the antenna. Once an antenna is selected, nothing the operator can do can increase the depth of penetration.

Radar data is ambiguous. Many buried objects produce echoes that may be similar to the echo expected from the target object. Boulders and debris produce reflections that are similar to pipes and tanks. Subtle changes in the electrical properties along a traverse caused by changes in soil type, mineralogy, grain size, and moisture content all produce “noise” that can make interpretation difficult. Interpreting radargrams is an art as much as a science.

Under some conditions, although a UST itself may not be clearly visible in a GPR record, the excavation or trench in which the UST is buried is evident. Usually GPR data is used to compliment data from other “tools”. For example, a trench-like reflection but no clear UST reflection, combined with a “tank” shaped magnetic anomaly suggests the presence of a UST. Although the UST itself could not be seen using GPR, the radar showed a trench-like reflection. The magnetic data showed a large ferrous object. We would report a possible UST at that location.

GPR is often used in conjunction with magnetometer surveys. Magnetometer Surveys are very fast and large areas can be covered cost effectively. Magnetic anomalies are marked in the field, and then may be further investigated using radar.

GPR, like other geophysical tools, is excellent at detecting changes across a site, but it is poor at actually identifying the cause of the change. **The only definite way to identify buried objects is through excavation.**

ADVANTAGES - General

- When GPR data is properly interpreted subsurface objects can usually be confidently identified. This often requires the GPR data be combined with other geophysical data, surface features and historical information.
- GPR provides continuous records along traverses which, depending on the goal of the survey, may be interpreted in the field.
- At flat, open sites, for reconnaissance purposes, the antenna can be towed behind a vehicle at several mph.
- Many GPR antennas are shielded and are unaffected by surface and overhead objects and power lines.
- GPR can be used in conjunction with magnetic or EM surveys to accurately locate buried objects.

ADVANTAGES – Site specific

- With a low frequency antenna, in clean, dry, sandy soil, reflections from targets as deep as 100 feet are possible. Geologic features such as bedrock and cross bedding may be seen at some sites.
- The resolution of data is very high particularly for high frequency antennas.
- Shallow, man-made objects generally can be detected.
- Fiberglass UST's and plastic pipes can be detected using GPR.

LIMITATIONS - General

- To acquire the highest quality data, proper coupling between the antenna and the ground surface is necessary. Poor data may be obtained at sites covered with debris, an uneven surface, tall grass and brush. Objects located at curbs are difficult to see.
- Acquiring GPR data is slow. The antenna must be over the target. The signal from the antenna is cone-shaped. Reflections from objects to the side of the antenna may be seen, but their actual location relative to the antenna is not obvious.
- Penetration of the GPR signal is "site specific" and its depth of penetration at a particular site cannot be predicted ahead of time. Near surface conductive material, such as salty or contaminated ground water and wet, clay-rich soil, may attenuate the radar signal, limiting the effective depth of the survey to several feet. Reinforced concrete also can attenuate the signal. Rebar may produce reflections that look like pipes.

- GPR may not be cost-effective for some projects. For a detailed survey mapping underground storage tanks and utilities, it may be necessary to collect data in orthogonal directions at 5-foot line spacing.

LIMITATIONS – Interpretation

- Interpretation can be difficult. Radar data are ambiguous. Subsurface objects can be detected but, in general, they cannot be identified. USTs and utilities have a characteristic reflection, however, large rocks and boulders have a similar reflection.

- The reflection visible in a GPR record is very complex and may be caused by small changes in the electrical properties of the soil. The target in mind may not produce the reflection. Due to "noise", the target may be missed. USTs and deep utilities may be missed if they are under debris and/or other pipes.

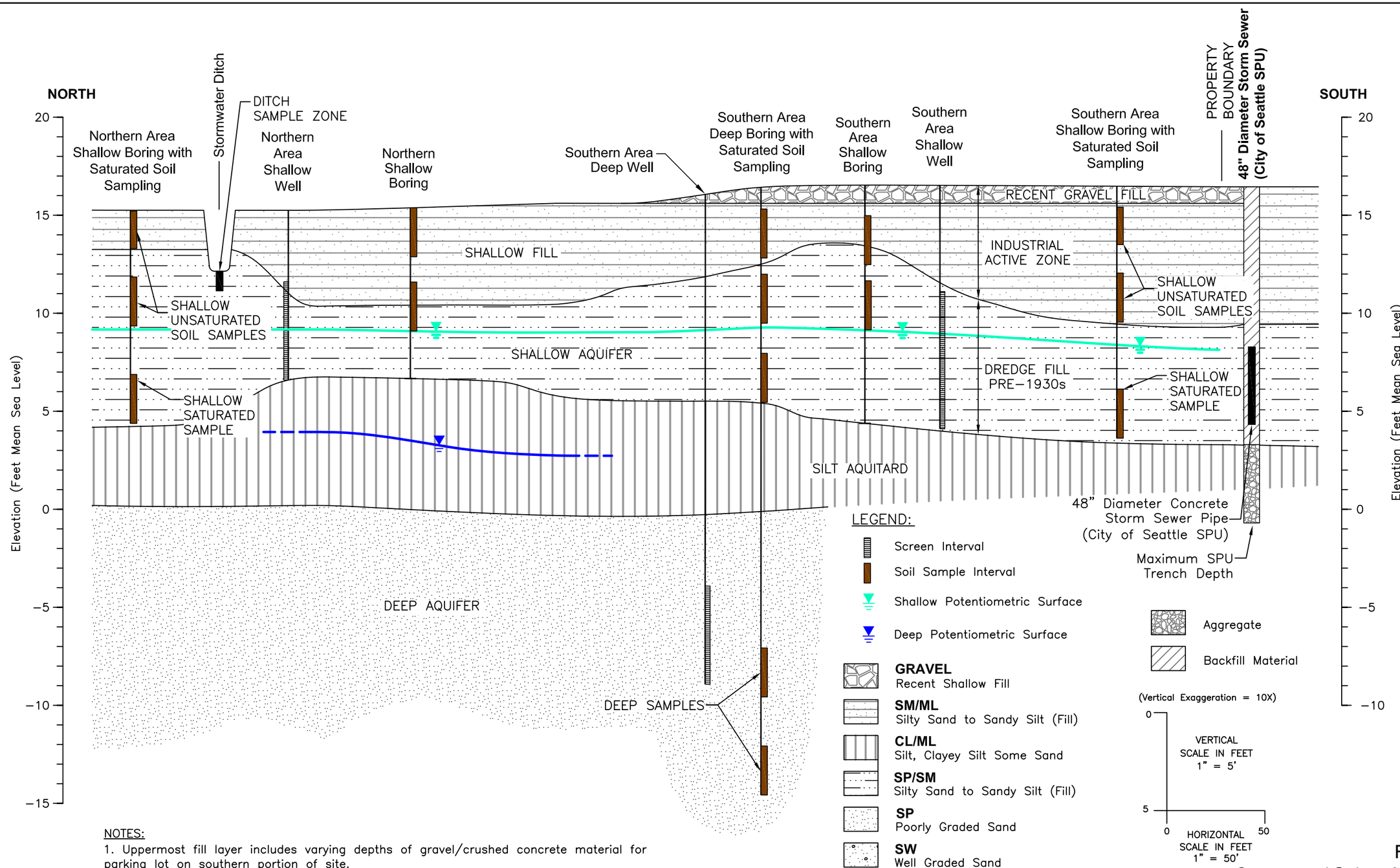
- Other methods may be necessary to aid in the interpretation of the data (use a magnetometer to detect a large metallic mass, then GPR to determine if the object is tank-like, or a utility locator to determine if there are feed lines and fill pipes leading to the object).

- Adequate contrast between the ground and the target is required to obtain reflections. UST's may be missed if they are badly corroded. Utilities made of "earth" materials like clay and concrete may not be detected since their electrical properties are similar to the surrounding soil.

- To determine the depth to an object without "ground truth", assumptions must be made regarding soil properties. Even with ground truth at several locations on the same site, changes in material across a site (therefore changes in signal velocity) can cause errors in depth measurements at other locations.

Attachment C
Conceptual Subsurface Model
Figures

Project No. 0155129.03
Date: 05/10/12
Drawn By: R. Olson
CAD File: G:\0155129\03\0155129003-11.dwg



NOTES:

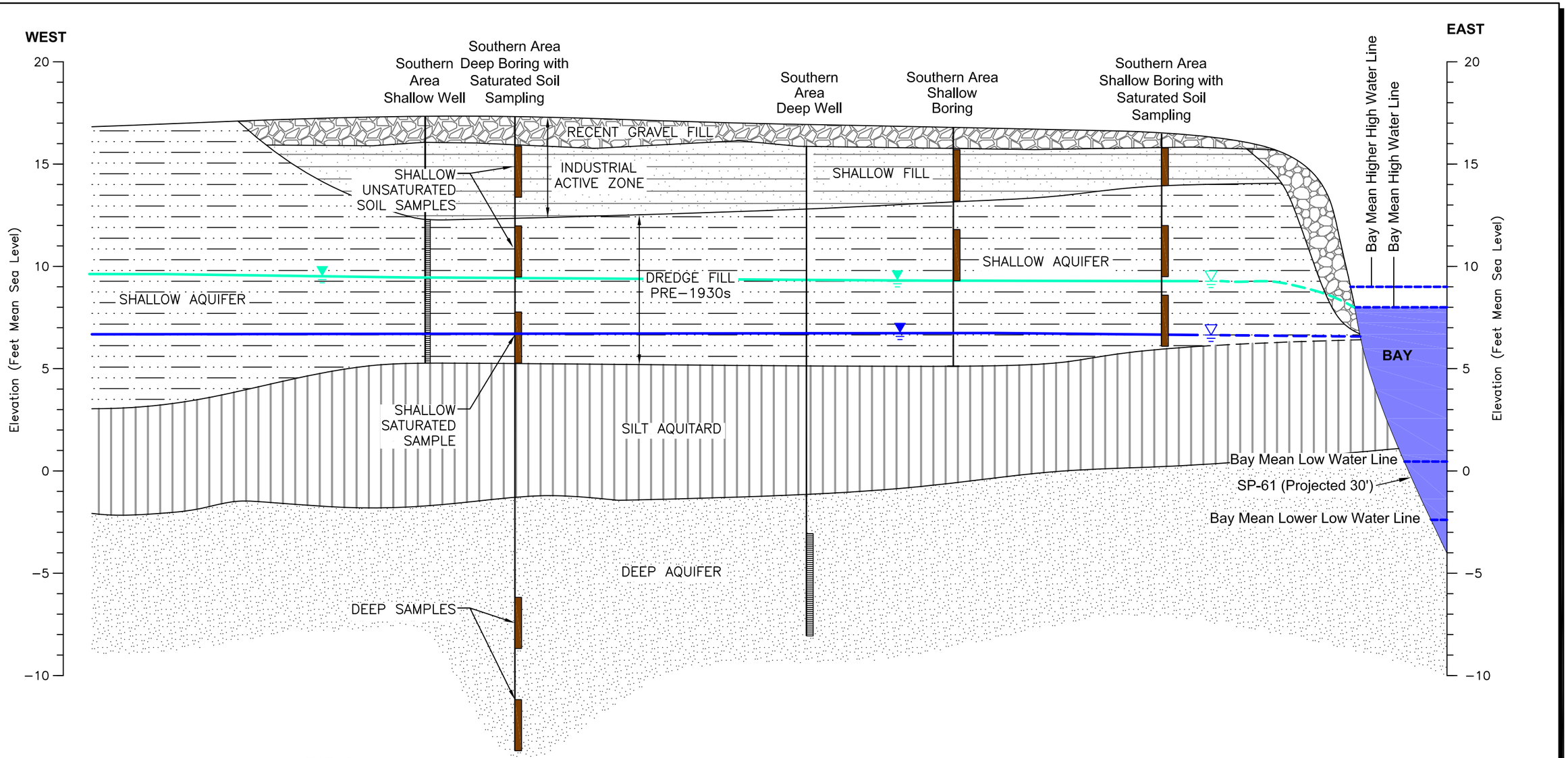
1. Uppermost fill layer includes varying depths of gravel/crushed concrete material for parking lot on southern portion of site.
2. 48" diameter storm sewer location, depth, and construction based on 1971 City of Seattle design drawing. Believed to have been constructed between 1971 and 1975 based on design drawings and site sewer as-built drawings.

Figure 3-2

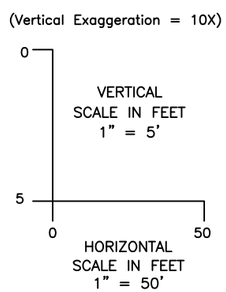
Conceptual Subsurface Model
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 West Marginal Way SW
Seattle, Washington

ERM 05/12

Project No. 0155129.03
Date: 05/10/12
Drawn By: R. Olson
CAD File: G:\0155129\03\0155129O3-11.dwg



(Vertical Exaggeration = 10X)



LEGEND:

- Screen Interval
- Soil Sample Interval
- Shallow Potentiometric Surface
- Inferred Shallow Potentiometric Surface
- Deep Potentiometric Surface
- Inferred Deep Potentiometric Surface

- **GRAVEL** — Recent Shallow Fill
- **RIPRAP**
- **SM/ML** — Silty Sand to Sandy Silt (Fill)
- **CL/ML** — Silt, Clayey Silt Some Sand
- **SP/SM** — Silty Sand to Sandy Silt (Fill)
- **SP** — Poorly Graded Sand

NOTES:

1. Uppermost fill layer includes varying depths of gravel/crushed concrete material for parking lot on southern portion of site.
2. Bay water line data interpreted from National Oceanic and Atmospheric Administration (NOAA) tidal datum for historical Lockheed Shipyard station on Harbor Island. Publication date: 6/13/2003.

Figure 3-3
Conceptual Subsurface Model
Glacier Northwest, Inc. - Reichhold, Inc. Site
5900 West Marginal Way SW
Seattle, Washington

ERM 05/12

APPENDIX Q WELL DEVELOPMENT RECORDS

WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-12D → into Dup 21 | LOCATION RE | DATE 11-[illegible]-94

CLIENT RE | DEVELOPMENT CONTRACTOR [illegible] | AIR TEMPERATURE 35°F

PROJECT NAME/NUMBER 12824 | DEVELOPMENT METHOD Surge pump | CASING VOLUME (GAL.) 2

WELL CONSTRUCTION DATA (Y/N) Y | FIELD SUPERVISOR [illegible] | TOTAL GALS. REMOVED 203

DEPTH TO WATER AT START 10.25' | DEPTH TO WATER AT END 10.75' | 253 [illegible]

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)		---	---	mg/L	NTU	Disposition of water, etc.)
1913				1		1	12.34	0.648	6.91		[illegible]	
0921				5		1	12.52	[illegible]	6.92		[illegible]	
3726				10		1	[illegible]	0.928	6.98		[illegible]	
0933				20		1	[illegible]	[illegible]	6.91		[illegible]	
2917				25		1					[illegible]	
0940				30							[illegible]	
0946				30		1	12.04	0.933	6.58		89.4	Water slightly yellow
0948												

SIGNATURE [illegible]

ERM-WEST, INC.

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-33S → Integrum 21
CLIENT
PROJECT NAME/NUMBER
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 6.44 ±1

LOCATION
DEVELOPMENT CONTRACTOR
DEVELOPMENT METHOD
FIELD SUPERVISOR MC
DEPTH TO WATER AT END 6.59 ±1

DATE 1/15/2001
AIR TEMPERATURE ~40°F
CASING VOLUME (GAL.) 0.65
TOTAL GALS. REMOVED 0.5

D.O. 16.45

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1008				1		1	14.23	0.571	8.60		900+	
1010				3		1	15.09	0.46	7.21		800+	
1012				5		1	15.03	0.455	6.81		800+	
1015				27		1	15.10	0.42+	6.21		271	
						1	15.1	0.422	6.23	0.34	159	
1019											122	
1021						1	15.4	0.420	6.2	0.35	33.6	
												Well purged dry

SIGNATURE [signature] 1/15/2001

ERM-WEST, INC.
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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-32D → into drum 22
CLIENT RB
PROJECT NAME/NUMBER 12879b
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 10.24

LOCATION RB
DEVELOPMENT CONTRACTOR Cascade
DEVELOPMENT METHOD Tube pump
FIELD SUPERVISOR MC
DEPTH TO WATER AT END 23.57

DATE 11/5/2014
AIR TEMPERATURE ~70°F
CASING VOLUME (GAL.) 2.26
TOTAL GALS. REMOVED ~~27~~ 22

00 TD: 24.27

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)		---	---	mg/L	NTU	Disposition of water, etc.)
1056	—	—	—			1	14.62	0.382	7.73	5.49	600+	
1109							14.12	.466	7.52			~20 gal to drum
												" 22 + 2 = 24 gal
												18 gal = 1 drum
												4 gal = 22 to 1 more drum

SIGNATURE Matt Conklin 11/7/2014

ERM-WEST, INC.
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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-32S

CLIENT 26

PROJECT NAME/NUMBER 120196

WELL CONSTRUCTION DATA (Y/N) Y

DEPTH TO WATER AT START 5.45 TOC

LOCATION 26

DEVELOPMENT CONTRACTOR Cascade

DEVELOPMENT METHOD bladder pump

FIELD SUPERVISOR A. C.

DEPTH TO WATER AT END 5.53 TOC

DATE 11-25-/200

AIR TEMPERATURE ~40°F

CASING VOLUME (GAL.) 8.36

TOTAL GALS. REMOVED 8.6

~1 gal

16.72 = TD

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.
1124				1		1	12.24	0.579	6.36		sed	
1127				2		1	11.66	0.577	6.22		sed	
1128				3		1	16.09	0.572	6.24		326	
1129				5		1	16.10	0.571	6.26		209	
1132				8		1	16.13	0.570	6.29		50.6	
1134						1	16.08	0.565	6.32		42.7	
1135				~14							18.22	
												~5 gallons removed for TOC

SIGNATURE Matt Brindle (for Bob)

ERM-WEST, INC.

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER 416-285
CLIENT KC
PROJECT NAME/NUMBER 128296
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 4.05

LOCATION KC
DEVELOPMENT CONTRACTOR Geosc
DEVELOPMENT METHOD whale pump
FIELD SUPERVISOR BC
DEPTH TO WATER AT END 4.50

DATE 11/15/96
AIR TEMPERATURE 50°F
CASING VOLUME (GAL.) 0.74
TOTAL GALS. REMOVED 7.4

8.41 → TD

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.
1158	-	-	-			1	14.92	0.503	6.63		5667	
1201	-	-	-			1	14.85	0.402	6.34		5007	
1204	-	-	-			1	14.87	0.438	6.17		627	
1205	-	-	-			1	14.79	0.434	6.05		459	
1207	-	-	-			1	14.75	0.435	6.07		288	
1208	-	-	-			1	14.69	0.433	6.10		167	
1210	-	-	-								85	
1212	-	-	-								25	
~~1~~												

SIGNATURE Matt Crawford / Helgason

ERM-WEST, INC.
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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-34S
CLIENT RB
PROJECT NAME/NUMBER 128246
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 4.91 ft

LOCATION RB
DEVELOPMENT CONTRACTOR Geosyntec
DEVELOPMENT METHOD bailer pump
FIELD SUPERVISOR BAC
DEPTH TO WATER AT END ~~9.46~~ 4.70

DATE 11/15/2014
AIR TEMPERATURE ~45°
CASING VOLUME (GAL.) 0.83
TOTAL GALS. REMOVED 2.5

9.81 → TD ~2.5 gallons

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.
1307						1	15.50	0.327	6.41		900+	
1312						1	15.53	0.278	6.19		800+	
1313						1	15.57	0.276	6.19		32	
1316						1	15.66	0.273	6.21		126	
1319						1	15.55	0.271	6.66		54.7	
1322											23.7	
1325											23.2	

SIGNATURE [signature] 11/15/14

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-353 | LOCATION R6 | DATE [illegible]

CLIENT [illegible] | DEVELOPMENT CONTRACTOR [illegible] | AIR TEMPERATURE [illegible]

PROJECT NAME/NUMBER [illegible] | DEVELOPMENT METHOD [illegible] | CASING VOLUME (GAL.) 0.65

WELL CONSTRUCTION DATA (Y/N) [illegible] | FIELD SUPERVISOR [illegible] | TOTAL GALS. REMOVED 0.3

DEPTH TO WATER AT START 5.56 | DEPTH TO WATER AT END [illegible]

9.45 - TD

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1346							15.29	0.272	5.17		[illegible]	
1347							15.51	0.242	5.34		655	
1349							15.55	0.236	5.36		796	
1350							15.56	0.235	5.34		479	
1352							15.58	0.229	5.23		382	
											150	

SIGNATURE [illegible]

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-319

CLIENT RG

PROJECT NAME/NUMBER 102226

WELL CONSTRUCTION DATA (Y/N) Y

DEPTH TO WATER AT START 5.80

LOCATION RG

DEVELOPMENT CONTRACTOR Bailer

DEVELOPMENT METHOD Submersible Pump

FIELD SUPERVISOR MC

DEPTH TO WATER AT END 5.80

DATE 11-[illegible]-95

AIR TEMPERATURE [illegible]

CASING VOLUME (GAL.) 2.53

TOTAL GALS. REMOVED 7.5

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.
1426	-					1	15.2	6.32	6.66		200+	
1428						1	16.9	5.57	6.15		167	
1430						1	16.9	6.25	6.40		235	
1432						1	16.9	6.57	6.56		185	
1434						1	16.9	6.57	6.59		97	
1436						1	16.9	6.55	6.59		49	
											123	
												[illegible]

SIGNATURE [illegible]

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER _____ LOCATION _____ DATE _____

CLIENT _____ DEVELOPMENT CONTRACTOR _____ AIR TEMPERATURE _____

PROJECT NAME/NUMBER _____ DEVELOPMENT METHOD _____ CASING VOLUME (GAL.) _____

WELL CONSTRUCTION DATA (Y/N) _____ FIELD SUPERVISOR _____ TOTAL GALS. REMOVED _____

DEPTH TO WATER AT START _____ DEPTH TO WATER AT END _____

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)		---	---	mg/L	NTU	Disposition of water, etc.)
1526							11.78	0.218				
~~1530~~												
1535												
1547												
1607												
1615												

SIGNATURE _____

ERM-WEST, INC.

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-305

CLIENT

PROJECT NAME/NUMBER

WELL CONSTRUCTION DATA (Y/N)

DEPTH TO WATER AT START

LOCATION

DEVELOPMENT CONTRACTOR

DEVELOPMENT METHOD

FIELD SUPERVISOR

DEPTH TO WATER AT END

DATE

AIR TEMPERATURE

CASING VOLUME (GAL.)

TOTAL GALS. REMOVED

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-35D
CLIENT ERM
PROJECT NAME/NUMBER 232 280.6
WELL CONSTRUCTION DATA (Y/N) Yes
DEPTH TO WATER AT START 7.15

LOCATION turning circle, south side
DEVELOPMENT CONTRACTOR Cascade Dr. Ling
DEVELOPMENT METHOD Surge block / whale pump
FIELD SUPERVISOR Chris
DEPTH TO WATER AT END 10.71

DATE 1/27/14
AIR TEMPERATURE 42 F°
CASING VOLUME (GAL.) ~110 L
TOTAL GALS. REMOVED 32

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm) Ct	TEMP.	COND. —	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1440	30				8.21	~25	6.96	1.32	7.48	0.831	Over	brown
1519			0		8.34		7.10	1.03	7.69	0.668	Over	
1530			13	20	8.34		7.48	1.24	7.34	0.793	Over	
1543			12	18	8.34		7.90	1.21	7.45	0.776	782	
1554			12	18	8.42		7.77	1.31	7.48	0.840	790	
1606			12	18	8.45		7.91	1.42	7.43	0.907	Over	
1618			12	18	9.14		7.59	1.41	7.47	0.902	877	light brown
1630			12	18	9.45							

SIGNATURE Ct 1/27/14

ERM-WEST, INC.
ptp/1.09/12.98

WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-38D
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.6
WELL CONSTRUCTION DATA (Y/N) Yes
DEPTH TO WATER AT START 7.94 ft btoc

LOCATION near Cal Portland office
DEVELOPMENT CONTRACTOR Cascade Drilling
DEVELOPMENT METHOD Surge block/whale pump
FIELD SUPERVISOR Cyrus
DEPTH TO WATER AT END 7.39

DATE 1/27/14
AIR TEMPERATURE 42 F°
CASING VOLUME (GAL.) ~6~
TOTAL GALS. REMOVED ~~700~~ 110 gallons

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS mg/L	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.				—	—		NTU	Disposition of water, etc.)
1145	30											
1217	4 min / 10 pump				7.97	2.0						
1232				5			9.66	0.712	5.72	0.441	over	brown
1237				5			8.85	1.01	6.40	0.647	Over	
1242				5	7.93		8.53	1.11	6.67	0.710	Over	
1254				12	8.17		8.61	1.19	6.89	0.735	Over	
1304				10	7.67		8.74	1.16	6.95	0.744	710	
1314				10	7.59		9.92	1.13	6.93	0.721	766	lighter
1326				12	7.53		9.07	1.15	6.97	0.738	970	
1340				14.5	7.42		9.42	1.15	6.94	0.735	334	
1350				10	7.48		9.44	1.15	6.99	0.736	357	
1400				10	7.47		9.44	1.16	6.99	0.739	411	
1410				10	7.39		9.24	1.12	7.07	0.717	Over	yellow brown

SIGNATURE [signature] 1/27/14

ERM-WEST, INC.
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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-~~33~~ 45S
LOCATION Seattle
DATE 1/23/14
CLIENT Reichhold Glacier
DEVELOPMENT CONTRACTOR Cascade
AIR TEMPERATURE
PROJECT NAME/NUMBER RG 232280
DEVELOPMENT METHOD Surge Block, whale Pump
CASING VOLUME (GAL.) 0.71 g
WELL CONSTRUCTION DATA (Y/N) Y
FIELD SUPERVISOR Cyrus Gorman
TOTAL GALS. REMOVED 47 g
DEPTH TO WATER AT START 6.68 TD = 11.10
DEPTH TO WATER AT END 7.39 TD = 11.12
Screen 4-~~12.2~~ 11.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.				—	—	mg/L	NTU	Disposition of water, etc.)
1350	20			—		—	—	—	—	—	—	~~2~~ 2.5' @ 10 min Surge Block
1418	2		~~2~~ start	5	6.68	—	12.15	0.921	6.75	—	over	went Dry
1422			start	0	6.71	—	11.81	0.89	6.74	—	over	Cloudy
1432	4		6 ~~10~~	15	8.34	1.5	11.91	0.845	6.55	—	336	31 Cloudy
1438			6	9	7.98	1.5	11.85	0.865	6.55	—	30.2	clear
1444			6	9	9.19	1.5	11.94	0.879	6.61	—	22.3	clear
1450			6	9	8.37	1.5	11.84	0.864	6.60	—	9.6	clear

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-451D
LOCATION Seattle
DATE 1/23/14
CLIENT Reichhold Glacier
DEVELOPMENT CONTRACTOR Cascade
AIR TEMPERATURE
PROJECT NAME/NUMBER RG/232280
DEVELOPMENT METHOD ~~Bailer~~, Surge, Pump while
CASING VOLUME (GAL.) 3.16 g
WELL CONSTRUCTION DATA (Y/N) N
FIELD SUPERVISOR Cyrus Goorman
TOTAL GALS. REMOVED 110 g
DEPTH TO WATER AT START 10.58 TD 24.06
DEPTH TO WATER AT END 16.91 TD = 24.06

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.				ms/cm	—	mg/L	NTU	Disposition of water, etc.)
~~1210~~		~~TVC~~				—	—	—	—	—		
1210	30											2.5' @ 15 min
1247 SR			START	0	11.75	—	12.65	0.542	6.49	44	over	cloudy
1251	~~#~~ 4		~~Y~~ 2R	10	17.16	2.5	12.77	@1.22	6.60		over	"
1255			4	10	15.60	2.5	12.91	1.47	6.88		"	"
1303	5		3	20	16.10	2.5	13.80	1.75	6.94		"	"
1311			8	20	10.24	2.5	12.76	1.77	6.90		44.5	yellowish
1315			4	10	16.31	2.5	12.71	1.84	6.92		47.0	"
1323			8	20	16.35	2.5	12.78	1.84	6.91		21.9	Pull tellowish
1331			8	~~20~~ 20	16.41	2.5	12.71	1.83	6.96		8.9	"
1335					11.26		—	—	—	—	—	

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW - 43D
CLIENT Richfield Glacier
PROJECT NAME/NUMBER RG 232280
WELL CONSTRUCTION DATA (Y/N)
DEPTH TO WATER AT START 12.18 TD=26.43

LOCATION Seattle
DEVELOPMENT CONTRACTOR Cascade
DEVELOPMENT METHOD Surge Block, whale Pump
FIELD SUPERVISOR Cyrus Bormann
DEPTH TO WATER AT END

DATE 1/23/14
AIR TEMPERATURE
CASING VOLUME (GAL.) 2.28 G
TOTAL GALS. REMOVED 130

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)		—	—	mg/L	NTU	Disposition of water, etc.)
1510	20											Surge Block 2.5' @ 10 min
1536			START	0	12.65		11.43	0.449	7.09	—	over	Blackish cloudy
1539	3		4	10	13.30	3.3	11.95	0.627	6.85	—	over	cloudy
1546	4		3	20	13.42	2.85	11.98	0.973	6.78	—	over	cloudy
1553			7	20	13.49	2.65	12.22	0.926	6.80	—	689	cloudy
1602			9	25	13.53	2.77	12.12	0.960	6.80	—	302	51 cloudy yellowish
1610			8	20	13.57	2.5	12.07	0.968	6.85	—	184	clear yellowish
1616			6	15	13.61	2.5	12.09	0.967	6.84	—	99.9	clear "
1624			8	20	13.67	2.5	12.12	0.981	6.85		76.8	clear "

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-435
CLIENT Reichhold Glacier
PROJECT NAME/NUMBER RG 232280
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 6.48 TD = 12.02

LOCATION Seattle
DEVELOPMENT CONTRACTOR Cascade
DEVELOPMENT METHOD Surge Block, whale Pump
FIELD SUPERVISOR Cyrus Gorman
DEPTH TO WATER AT END 7.16 TD 12.03

DATE 1/24/14
AIR TEMPERATURE
CASING VOLUME (GAL.) 0.89 g
TOTAL GALS. REMOVED 25 g

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)		—	—	mg/L	NTU	Disposition of water, etc.)
0730	25				6.48	—	—	—	—	—	—	Surging Block 3' @ 15m
0800	0		Start	0	6.40	0	6.58	0.673	6.58	—	over	Brackish cloudy
0807	4		3	15	9.36	3.14	9.74	0.468	6.75	—	210	SI cloudy
0814			7	5	9.46	0.71	10.68	0.470	6.70	—	9.35	clear
0820			6	5	8.53	0.83	11.12	0.464	6.75	—	6.77	clear

2.5@10.4

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-20D
LOCATION Seattle
DATE 1/24/14
CLIENT Reichhold Glacier
DEVELOPMENT CONTRACTOR Cascade
AIR TEMPERATURE
PROJECT NAME/NUMBER RG 232280
DEVELOPMENT METHOD Surge Block, whale Pump
CASING VOLUME (GAL.) 2.85 g
WELL CONSTRUCTION DATA (Y/N) Y
FIELD SUPERVISOR Cyrus Gorman
TOTAL GALS. REMOVED 95 g
DEPTH TO WATER AT START 12.05 TD = 29.85
DEPTH TO WATER AT END 16.38 TD = 29.85

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.				—	—	mg/L	NTU	Disposition of water, etc.)
0845	20			—	—	—	—	—	—	—	—	Surge Block 2.5' @ 10 min
0908			Start	0	15.10	—	10.24	0.292	7.34	—	over	Greyish cloudy
0919	10		5	20	26.00	1.81	11.20	0.557	7.12	—	over	Cloudy
0925			6	10	24.10	1.66	11.23	0.602	6.79	—	697	
0936			11	10	23.68	0.91	11.49	0.616	6.74	—	242	SI Cloudy
0948			12	15	23.65	1.25	11.57	0.622	6.76	—	70.5	SI Cloudy
0956			8	10	23.70	1.25	11.60	0.637	6.76	—	75.2	clear
1004			8	10	23.68	1.25	11.69	0.636	6.76	—	20.9	clear
1012			8	10	23.72	1.25	11.73	0.639	6.77	—	15.1	clear
1020			8	10	23.70	1.25	11.75	0.637	6.77	—	9.5	clear

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-31D
CLIENT Erm
PROJECT NAME/NUMBER 23228.6
WELL CONSTRUCTION DATA (Y/N) Yes
DEPTH TO WATER AT START 10.56 ft btoc

LOCATION turning circle
DEVELOPMENT CONTRACTOR Cascade
DEVELOPMENT METHOD Surge block/whale pump
FIELD SUPERVISOR Chris

DATE 1/27/14
AIR TEMPERATURE 40s
CASING VOLUME (GAL.) ~120
TOTAL GALS. REMOVED 26 L
DEPTH TO WATER AT END 13.92

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. —	pH —	SUSPEND. SOLIDS ~~mg/L~~	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1710	30				10.56							
1744	41 w/ pump			30	12.73	~2.5 gal/5	10.5	1.78	7.68	1.14	0.901	brown
1804				12.95	~~13.45~~		11.45	1.75	7.25	1.01	792	
1819				40	13.32	↓	10.84	1.55	7.51	0.996	48.2	↓
1839				40	13.96		10.23	1.59	7.64	1.02	236	light brown

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-38D

LOCATION MW-38D

DATE February 4 2014

CLIENT Glacier-Reichhold

DEVELOPMENT CONTRACTOR ERM

AIR TEMPERATURE 38°F

PROJECT NAME/NUMBER Uplands Soil Sampling/Monitoring Well Install

DEVELOPMENT METHOD whale pump

CASING VOLUME (GAL.) 2.4

WELL CONSTRUCTION DATA (Y/N) Yes

FIELD SUPERVISOR Cyrus Gorman

TOTAL GALS. REMOVED ~40

DEPTH TO WATER AT START 7.64 A btoc

DEPTH TO WATER AT END 7.65 A btoc

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.							NTU	Disposition of water, etc.)
0943 start	2 Min											
0951			3	4.2	7.72	1.4	8.80	1.27	7.09	0.809	>1000	Cloudy
0958			7	9.8	7.73	↑	8.57	1.41	7.26	0.904	182	Transparent, yellow sheen
1004			6	8.4	7.73		9.40	1.43	7.07	0.914	23.6	Clear, yellow
1009		5 min	~~1.2 gpm~~ 7		7.73		10.16	1.41	7.08	0.907	6.42	Clear, yellow
1015			6	8.4	7.74	↓	10.51	1.39	7.10	0.888	3.55	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-43D

LOCATION Dear MW 43SD

DATE February 4 2014

CLIENT Glacier-Reichhold

DEVELOPMENT CONTRACTOR ERM

AIR TEMPERATURE 36 F°

PROJECT NAME/NUMBER Uplands Soil Sampling/Monitoring Well Install

DEVELOPMENT METHOD whale pump

CASING VOLUME (GAL.) 2.6

WELL CONSTRUCTION DATA (Y/N) Yes

FIELD SUPERVISOR Cyrus Gorman

TOTAL GALS. REMOVED ~55 gallons

DEPTH TO WATER AT START 11.07 ft btoc

DEPTH TO WATER AT END 11.73 ft btoc

TD= 26.45 ft btoc

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND. ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
819 start												
	2					2.0						
0823			4	8	11.46		8.13	1.17	4.68	0.774	120	clear, yellow tinge
0834			11	22	11.35		8.80	1.27	5.83	0.842	9.90	↓
0840			4	8	11.36		7.97	1.18	6.64	0.757	7.68	↓
0846			6	12	11.34	↓	8.54	1.30	6.71	0.765	7.50	clear

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-310 | LOCATION turning circle | DATE February 4 2014

CLIENT Glacier-Reichhold | DEVELOPMENT CONTRACTOR ERM | AIR TEMPERATURE 40°

PROJECT NAME/NUMBER Uplands Soil Sampling/Monitoring Well Install | DEVELOPMENT METHOD whale pump | CASING VOLUME (GAL.) 2.7

WELL CONSTRUCTION DATA (Y/N) Yes | FIELD SUPERVISOR Cyrus Gorman | TOTAL GALS. REMOVED ~75

DEPTH TO WATER AT START 10.49 ft btoc | DEPTH TO WATER AT END 11.98 ft btoc

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS mg/L	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.				---	---		NTU	Disposition of water, etc.)
1238	2			5.2								
1242			4	5	10.83	1.3	8.09	1.93	8.05	1.24	97.1	Clear, yellow color
1247			5	6.5	10.95		9.29	2.01	7.80	1.28	27.7	
1252			5	6.5	11.08		10.66	2.04	7.44	1.31	18.8	Clear, yellow
1257			5	6.5	11.17		10.53	1.99	7.43	1.27	13.5	
1303			6	7.8	11.37		10.38	1.99	7.36	1.28	12.0	Clear, yellow
1309			6	7.8	11.52		10.90	2.00	7.29	1.28	10.3	clear, yellow color
1315			6	5.2	11.61		10.90	2.00	7.29	1.28	8.58	
1320			5	6.5	11.70		10.07	1.99	7.29	1.27	8.04	Clear, light yellow
1326			6	7.8	11.81		10.79	2.01	7.32	1.29	8.18	
1328			2	2.5							7.57	}
1330			2	2.5							8.14	} Turbidity readings
1333			3	4							7.94	}
1335			9	9.5	11.98		1131	2.00	7.16	1.28	8.17	Clear, light yellow

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-35D

LOCATION turning circle

DATE February 4 2014

CLIENT Glacier-Reichhold

DEVELOPMENT CONTRACTOR ERM

AIR TEMPERATURE 40

PROJECT NAME/NUMBER Uplands Soil Sampling/Monitoring Well Install

DEVELOPMENT METHOD whale pump

CASING VOLUME (GAL.) 3.2

WELL CONSTRUCTION DATA (Y/N) Yes

FIELD SUPERVISOR Cyrus Gorman

TOTAL GALS. REMOVED ~90

DEPTH TO WATER AT START 7.39 ft btoc

DEPTH TO WATER AT END 8.58 ft btoc

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.				---	---	mg/L	NTU	Disposition of water, etc.)
1035	2											
1037			2	~3.2	7.61	1.6	9.41	2.26	7.16	1.41	>1000	brown
1042			5	8	7.68		9.89	2.21	7.57	1.41	89.3	light brown
1047			5	8	7.80		8.19	2.11	7.53	1.35	35.0	pale to clear
1052			5	8	7.86		9.49	2.21	7.62	1.41	20.8	Clear, light yellow
1057			5	8	7.97		9.74	1.55	7.53	0.926	14.8	" "
1102			5	8	8.07		11.62	2.16	7.55	1.39	11.1	Clear, light yellow
1108			6	~10	8.19		11.20	2.19	7.67	1.40	9.85	
1113			5	8	8.25		10.98	2.16	7.56	1.38	8.87	Clear
1118			5	8	8.37		10.61	2.15	7.48	1.37	9.16	Clear, yellow
1124			6	10	8.48		10.06	2.17	7.49	1.39	8.18	
1129			5	8	8.58		10.52	2.19	7.49	1.40	7.62	Clear
											7.56	Final reading before pump shut tunned off

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-25S
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.01
WELL CONSTRUCTION DATA (Y/N) Yes
DEPTH TO WATER AT START 7.20 ft btoc
total depth 15.11 ft btoc

LOCATION Glacier Reichhold Site, S. Seattle
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD whale pump
FIELD SUPERVISOR C. Gorman
DEPTH TO WATER AT END 8.37 ft btoc

DATE 09 May 14
AIR TEMPERATURE 50°
CASING VOLUME (GAL.) 1.34
TOTAL GALS. REMOVED 59.50

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
0913	2			2.5								Strong Sulfur odor
0916			3	6.25	9.95	1.25	12.67	0.718	5.85	0.460	10.3	Clearing up
0920	4			11.25			12.27	0.543	6.15	0.348	~~227~~ 197	Surge Well
0924			2	13.75			↓	↓	↓	↓	↓	
0926	2			16.25								Surge Well
0930			4	20.25	11.51		12.34	0.485	6.13	0.315	4.73	
0933	9			24.00								↑
0942				35.25			12.79	0.490	6.17	0.318	4.47	Surge Well
0945	3			39.00								Surge Well
0950			5	44.50			12.55	0.465	6.14	0.302	4.63	
0959			9	55.75	9.05		12.61	0.455	6.23	0.292	3.34	
1002				59.50								Pump off

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-26S
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.09
WELL CONSTRUCTION DATA (Y/N) Yes
DEPTH TO WATER AT START 7.54 ~~ft~~ btoc
total depth 15.14 ft btoc

LOCATION Glacier Reichhold S.
DEVELOPMENT CONTRACTOR Erem
DEVELOPMENT METHOD whale pump
FIELD SUPERVISOR C. Gorman
DEPTH TO WATER AT END 12.31

DATE 09 May 14
AIR TEMPERATURE 50°
CASING VOLUME (GAL.) 1.3 gallons
TOTAL GALS. REMOVED 30.00

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. C°	COND. mS/cm ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1027	2			2.50		1.25	12.68	0.705	6.23	0.451	~~>1000~~ 550	Black
1032			3	6.25		↓	↓	↓	↓	↓	↓	
1035					Dry							Pump off - Dry
1036			2	8.75								
1038					Dry							Pump off - Dry
1039			3	12.50	14.10							
1041					Dry							Pump off - Dry
1044			3	16.25	13.35		12.17	0.520	6.19	0.333	26.4	
1047					Dry							Pump off Dry
1049			2	18.75							23.7	
1051					Dry							Pump off - Dry
1053			1	20.00							12.6	
1054					Dry							Pump off - Dry
1101			1	21.25							10.8	
1102					Dry							Pump off - Dry
1108			2	23.75							8.81	
1110					Dry							Pump off - Dry
1114			1	25.00							7.91	
1115					Dry							Pump off dry
1122			2	27.50	10.91		12.61	0.473	6.21	0.307	6.45	
1124					Dry							
1137			2	30.00							4.93	
1139												Pump off

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-275
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.04
WELL CONSTRUCTION DATA (Y/N) Yes
DEPTH TO WATER AT START 11.34 ft btoc
total depth 15.05 ft btoc

LOCATION Glacier Reichhold
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD whale pump
FIELD SUPERVISOR C. Gorman
DEPTH TO WATER AT END 11.57

DATE 07 May 14
AIR TEMPERATURE 50°
CASING VOLUME (GAL.) 0.63 gal/in
TOTAL GALS. REMOVED 30.25

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. C°	COND. mS/cm ---	pH ---	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1204	5			6.25		1.25						Black
1209			6	12.75	12.65	~~12.51~~	12.34	1.19	7.03	0.760	411	Wood debris, clear, sand
1212			2	15.25	12.70		12.09	1.27	7.01	0.810	12.9	Clear
1217	2			17.75								
1219			4	22.75	12.71		12.15	1.25	7.16	0.800	5.52	
1222	2		2	27.75								
1226	2			30.25	11.65		11.51	1.27	7.01	0.811	4.59	Clear
1228												Pump off

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-15
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 9.14 ft btoc
TD-12.33 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 9.26 ft btoc

DATE 7/21/2014
AIR TEMPERATURE 70
CASING VOLUME (GAL.) 0.52
TOTAL GALS. REMOVED 38.5 gal

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)	°C	mS/cm	—	mg/L	NTU	Disposition of water, etc.)
1126	4					-						
1130	5 min	5		2.0								Silty, dark
1143	5		1	8.0		1.5						
1147	2		3	12.5	9.61	1.5	17.31	0.450	6.67	0.294	288	Cloudy
1154	5		4	25.5		1.0	16.27	0.515	6.60	0.330	13.1	Clear
1159	4		1	30.5	10.00	1.0	16.37	0.509	6.62	0.322	97.5	Cloudy
1204	2		2	33.5		1.0	15.41	0.464	6.59	0.302	1.97	Clear
1208			4	38.5	10.03	1.0	15.05	0.467	6.54	0.303	1.14	Clear
1209	Pump off											

SIGNATURE Matthew Horine

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-10
CLIENT Glacier-Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 12.81 ft btoc
TD - 25.15 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 12.01 ft btoc

DATE 7/21/2014
AIR TEMPERATURE 70
CASING VOLUME (GAL.) 2.07
TOTAL GALS. REMOVED 43.0

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1232	6											
1238		5		3.0								
~~1243 mA~~												
1252	4			~~7.5~~ 7.0		1.0						
1256	2		4	13.0	12.57	1.0	16.10	0.757	6.82	0.485	298	Cloudy, yellowish
1302	3		5	18.0		1.0	15.19	0.783	6.90	0.501	261	
1307	1		5	23.0	12.41	1.0	14.66	0.755	6.90	0.483	125	Clear, yellow
1313	2		6	29.0		1.0	14.50	0.764	6.90	0.489	19.1	
1319			7	36.0	12.36	1.0	14.50	0.766	6.82	0.490	12.6	
1326			~~7.5~~	41.0		1.0	14.38	0.773	6.83	0.494	9.48	
1331			2	43.0	12.30	1.0	14.15	0.779	6.82	0.499	4.75	
1333	Pump	off									4.21	Clear, yellow

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-2D
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 16.39 ft btoc
TD - 24.96 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 16.11 ft btoc

DATE 7/22/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 1.40
TOTAL GALS. REMOVED 44

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
0909	4											
~~0914~~ 0913		6		2								
0914	7		7	16		1.0						
0933	3		3	22	16.58	1.0	14.10	1.17	6.34	0.749	133	Cloudy
0939	3		3	28		1.0	13.55	1.23	6.32	0.783	223	Cloudy
0945	1		5	34	16.67	1.0	13.37	1.22	6.40	0.782	15.7	Clear, Tannon color
0951	2		6	40		1.0	13.34	1.23	6.31	0.786	6.85	Clear, Tannon color
0959			3	43		1.0	13.33	1.23	6.30	0.788	6.24	Clear, Tannon color
1002			1	44	16.71	1.0	13.34	1.22	6.29	0.788	3.10	Clear
1003	Pump off										3.01	

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-25
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232220.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 8.91 ft btoc
12.37 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 9.21 ft btoc

DATE 7/22/14
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.47
TOTAL GALS. REMOVED 21.0

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
HRS/MIN	SURGE	BAIL	PUMP	GAL.								
0753	4											
0757		4		2								
0801	3		3	7								
0806	4		2	13	9.72	1.0	15.18	0.666	6.40	0.426	177	Cloudy
0812			4	17	10.05	1.0	15.12	0.642	6.24	0.411	11.2	Clear
0816	2		1	20	10.32	1.0	14.77	0.494	6.21	0.321	5.2	Clear
0819			1	21	10.81	1.0	14.65	0.493	6.21	0.320	1.8	
0820	Pump	dry									~~NTU~~ 0.7	

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-35
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 11.78 ft btoc
TD-13.91 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Loving
DEPTH TO WATER AT END 11.97 ft btoc

DATE 7/23/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.27
TOTAL GALS. REMOVED 8.5

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1328	5											
1334		4		1.5								Some silt
1340	2		1	3.0	n/a	0.5						Cloudy
1348	2		3	5.5		0.5	15.29	0.433	6.44	0.281	38.8	Clear
1388	1		4	8.0	n/a	0.5	14.91	0.451	6.36	0.280	19.7	Clear
1353			1	8.5			14.83	0.417	6.33	0.271	4.21	
1354	Pump off										3.36	

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-3D
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 15.12 ft-btoc
TD- 27.60 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Lorine
DEPTH TO WATER AT END 15.23 ft btoc

DATE 7/23/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 2.03
TOTAL GALS. REMOVED 35

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.								Disposition of water, etc.)
1417	3											
1424		4		2								
1431	4		1	7		1.0						Grey, S. City
1436	2		5	12	15.50	1.0	14.01	2.15	6.05	1.37	162	
1441	2		3	17		1.0	13.71	2.25	6.44	1.44	10.6	Clear, Tanic
1446			2	19	15.57	1.0	13.30	2.32	6.48	1.48	5.89	
1448	Pump off										4.32	

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-45
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 9.65 ft btoc
TD - 12.61 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD 1" Whale Pump
FIELD SUPERVISOR M. Herlihe
DEPTH TO WATER AT END 9.69 ft btoc

DATE 7/21/2014
AIR TEMPERATURE 60's
CASING VOLUME (GAL.) 0.48 gal
TOTAL GALS. REMOVED 21.5 gal
22.0 gal

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)	C°	mS/cm	—	mg/L	NTU	Disposition of water, etc.)
~~0845~~	4											
~~0849~~		7		2.5								Silt, grass
0856			5	10	10.61	1.5	16.60	0.381	5.97	0.248	17.6	Clear
0901			5	17.5	10.70	1.5	14.65	0.194	5.93	0.120	3.39	Clear
0906			5	22	10.68	1.5	14.26	0.159	6.95	0.159	0.58	Clear
0909	pump off											

SIGNATURE Matt Lamm

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-55
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 9.51 ft btoc
TD - 12.77 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Marine
DEPTH TO WATER AT END 9.65 ft btoc

DATE 7/21/2014
AIR TEMPERATURE 70's
CASING VOLUME (GAL.) 0.52
TOTAL GALS. REMOVED 24.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.								Disposition of water, etc.)
0948	4											
0954		6		2								
1000			8	~~13~~ 14	9.71	1.5	14.35	0.279	6.45	0.176	34.4	Cloudy
1005	1		3	18.5	10.82	1.5	15.73	0.317	6.38	0.206	0.61	Clear
1012			4	24.5	10.44	1.5	14.87	0.311	6.37	0.208	2.21	Clear
1015	Pump	off				1.5	14.68	0.320	6.35	0.208	0.59	Clear

SIGNATURE Matt Dann

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-12S
CLIENT Glacier Northwest
PROJECT NAME/NUMBER 132280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 6.94 ft btoc
TD - 11.22 ft btoc

LOCATION Seattle WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 7.01 ft btoc

DATE 7/21/2014
AIR TEMPERATURE 80
CASING VOLUME (GAL.) 0.70
TOTAL GALS. REMOVED 20.0

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. C°	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.							NTU	Disposition of water, etc.)
1720	5											
1723		→		2.0								
1733	4			6.0		1.0						Some silt, cloudy
1737	2		2+	12.0	9.80	1.0	18.38	0.471	6.87	0.306	6.13	Clear
1743	1		2	16.0		1.0	17.03	0.499	6.51	0.325	4.04	
1746	1		2	19.0	9.79	1.0	16.46	0.486	6.44	0.316	3.49	Clear
1749			1	20.0		1.0	16.38	0.485	6.40	0.316	2.81	
1750	Pump off											

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-13S
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 7.16 ft btoc / 10.67 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 10.02

DATE 7/22/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.57
TOTAL GALS. REMOVED 15.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.			°C	mS/cm	—	mg/L	NTU	Disposition of water, etc.)
1345	4											
1350		5		1.5								
1357	4			5.5		1.6						
1409	1		3	9.5	9.58	1.0	15.24	0.582	6.36	0.372	42.7	
1418	1		2	12.5			15.55	0.528	6.23	0.338	28.7	Dry, intermittent
1426			2	14.5	10.51		15.50	0.497	6.29	0.323	32.3	/
1434			1	15.5			15.51	0.482	6.31	0.321	14.9	Dry
1441	Pump off				—							Dry

SIGNATURE M. Horine

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-145
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 7.56 ft btoc
TD- 10.86 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 7.95 ft btoc

DATE 7/22/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.54
TOTAL GALS. REMOVED 18

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.			C	mS/cm	—	mg/L	NTU	Disposition of water, etc.)
1515	3											
1520		4		2gal								
1529	5			7	8.15	1.0						
1534	3		2	12		1.0	17.74	0.425	6.52	0.276	266	Cloudy, silty
1539	1		4	17			16.78	0.441	6.37	0.286	18.9	Clear,
1544			1	18	8.06		16.28	0.447	6.37	0.291	2.77	
1545	Pump off										2.71	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-14D
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 10.89 ft btoc
TD - 23.64 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Harine
DEPTH TO WATER AT END 10.81 ft btoc

DATE 7/22/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 2.02
TOTAL GALS. REMOVED 45

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.								Disposition of water, etc.)
1623	4											
1628		7		3								
1641	6		1	10		1.0						
1648	4		3	17	11.20	1.0	16.73	0.935	6.43	0.598	>1000	Dark gray
1655	17			34		1.0	15.94	0.970	6.36	0.621	>1000	
1712	5			39	11.74	1.0	15.23	0.982	6.48	0.628	297	Cloudy, tannic
1717	4			43		1.0	15.10	0.981	6.40	0.627	104	
1721	2			45	11.65	1.0	14.48	0.994	6.44	0.636	47.2	
1723	Pump off										40.5	Clear, tannic color

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-175
CLIENT Glacier-Rainwood
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 7.06 ft btoc
TD - 11.50 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Loring
DEPTH TO WATER AT END 7.45 ft btoc

DATE 2/7/2014
AIR TEMPERATURE 80
CASING VOLUME (GAL.) 0.72
TOTAL GALS. REMOVED 26

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.							NTU	Disposition of water, etc.)
1558	7											
1605		14		2								
1609	3			3		~~1.0~~	~~18.55~~	~~0.448~~	~~7.15~~	~~0.292~~		
1612	6		4	15	8.06	1.0	19.33	0.446	7.15	0.292	159	Cloudy, Grey
1622	4		2	21		1.0	17.68	0.431	6.79	0.281	196	Cloudy, Grey
1628	1		3	25	8.01	1.0	17.25	0.439	6.64	0.286	7.54	Clear
1632			1	26		1.0	17.18	0.440	6.66	0.286	2.70	Clear
1633	Pump off										1.83	Clear

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-18
CLIENT Glacier Redevelopment
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 9.07 ft btoc
TD - 12.55 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Harding
DEPTH TO WATER AT END 11.09 ft btoc

DATE 7/23/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.57
TOTAL GALS. REMOVED 7.5

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1225	3											
1229		4		1.5								Dark Grey, silty
1238	2			2.5		0.5						Clear
1240	—	—	1	—		0.5						Grey
1244	2		2	4.5	11.50	0.5	16.14	0.610	6.65	0.390	11.87	Cloudy
1248	1		1	6.5		0.5	15.82	0.609	6.72	0.393	8.22	Clear
1252			2	7.5	11.87	0.5	16.35	0.581	6.44	0.381	4.65	
1254	Pump dd						16.15	0.595	6.41	0.380	3.21	
							0.60					

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-19
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 8.10 ft btoc
TD- 12.91 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Marine
DEPTH TO WATER AT END 8.29 ft btoc

DATE 7/23/14
AIR TEMPERATURE 60s
CASING VOLUME (GAL.) 0.78
TOTAL GALS. REMOVED 25

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.			°C	mS/cm	—	mg/L	NTU	Disposition of water, etc.)
0918	4											
0923		4		2				0.410				
1018	5		4	11	10.31	1.0	15.90	~~0.449~~	6.49	0.266	29.0	Cloudy
1027	1		2	14		1.0	15.18	0.426	6.55	0.277	6.93	Clear/ no color
1030			1	15	10.87		15.16	0.425	6.31	0.278	4.68	Clear
1031	Dump dry										4.01	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-20
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 9.10 ft btoc
TD - 9.95 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horvitz
DEPTH TO WATER AT END 9.18 ft btoc

DATE 7/23/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.4
TOTAL GALS. REMOVED 5.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.								Disposition of water, etc.)
1106	5											
1109		4		1		0.5 gpm						Clear
1117	2		2	3	n/a	0.5	15.63	0.524	6.42	0.355	16.6	Clear
1121	1		3	5	n/a	0.5	15.47	0.531	6.43	0.340	7.24	
1125			1	5.5	n/a	0.5	15.54	0.528	6.41	0.338	3.80	
1126	Pump off										3.98	

SIGNATURE Matt Horvitz

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-21
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 8.16 ft btoc
TD - 13.52 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Hrinc
DEPTH TO WATER AT END 8.29 ft btoc

DATE 7/23/14
AIR TEMPERATURE 60
CASING VOLUME (GAL.) MH 19 0.87
TOTAL GALS. REMOVED MW 38 19

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
0813	4											
0820		5		2								
0829	3		4	9	9.14	1.0						
0836	1		4	14		1.0	16.19	0.540	5.88	0.346	40.2	Clear, Sulfur odor
0841	1		3	18	9.37	1.0	15.89	0.498	6.25	0.323	9.81	Clear, No odor
0845			1	19		1.0	15.65	0.495	6.26	0.320	4.85	
0846	Pump off										4.62	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-29S
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280-10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 3.64 ft btoc
TD - 8.53 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 3.70 ft btoc

DATE 7/24/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.79
TOTAL GALS. REMOVED 23.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.								Disposition of water, etc.)
1455	2											
1459		5		1.5								
1502	2			3.5	3.65	1.0	16.86	0.479	7.18	0.311	262	Silty, Grey
1504	2		2	7.5		1.0	15.82	0.486	6.79	0.316	43	Cloudy, some fines
1508			4	11.5		1.0	15.11	0.486	6.73	0.320	11.5	Clear
1512	1		4 3	15.5	3.81	1.0	15.09	0.499	6.71	0.320	7.81	
1516			4	19.5		1.0	15.08	0.500	6.71	0.321	5.23	
1520	Pump off			23.5	3.97						3.28	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-30S
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 4.09 ft btoc
TD - 6.45 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Hoehne
DEPTH TO WATER AT END 4.51 ft btoc

DATE 7/24/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.38 gal
TOTAL GALS. REMOVED 30.5 gal

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1318	2											
1323				2								
1331	3			6.5	4.96	0.5						
1334	1		3	12.5		0.5	16.91	04.98	7.92	0.323	334	Silty, Gray
1338			4	18.5	—	0.5	16.24	0.462	7.03	0.300	27.5	Clear, no color
1342			8	30.5		0.5	16.18	0.458	6.71	0.298	10.2	
1350	Pump off										4.98	Clear

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-315
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 6.38 ft btoc
TD - 8.61 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Hourihe
DEPTH TO WATER AT END 6.47 ft btoc

DATE 7/23/2014
AIR TEMPERATURE 60's
CASING VOLUME (GAL.) 0.36
TOTAL GALS. REMOVED 11.5

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1552	3											
1556		4		1.5								
1601	3		2	4.0	-	0.5	18.25	0.397	7.66	0.258	282	Silty Grey
1606	1		4	6.5		0.5	19.15	0.513	6.84	0.305	93.9	Cloudy, Grey
1611			5	9.0	-	0.5	19.21	0.305	6.55	0.198	18.2	Clear
1615			4	11.0		0.5	19.19	0.307	6.51	0.198	6.35	Clear, no odor, water level too low for pump
1620			1	11.5	-	0.5	19.20	0.304	6.50	0.198	3.96	Clear
1621	Pump off										4.07	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-31D
CLIENT Glacier Reid.hold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 7.24 ft btoc
TD-26.07 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Loring
DEPTH TO WATER AT END 7.10 ft btoc

DATE 7/23/2014
AIR TEMPERATURE 60.
CASING VOLUME (GAL.) 3.07
TOTAL GALS. REMOVED 42.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.							NTU	Disposition of water, etc.)
1644	3											
1652		4		2								
1701	3			6.5	7.28	1.5						Tannic
1704	1		5	12.5		1.5	15.50	1.44	6.07	0.934	507	Cloudy; Tannic
1708			4	18.5	7.41	1.5	14.53	1.54	6.77	0.984	208	
1712			4	24.5		1.5	14.42	1.56	6.89	0.995	51.1	Clear, Tannic
1716			4	30.5	7.44	1.5	14.26	1.56	6.85	0.999	31.0	
1720			4	36.5		1.5	14.23	1.56	6.86	1.00	18.0	Clear
1724			2	39.5	7.40	1.5	14.21	1.56	6.87	1.00	19.4	
1729			2	42.5		1.5	14.20	1.55	6.88	1.01	18.5	Clear, Tannic
1731	Pump off											

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-335
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 6.85 ft btoc
TD - 10.47 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 7.39

DATE 7/21/2014
AIR TEMPERATURE 80s
CASING VOLUME (GAL.) 0.59
TOTAL GALS. REMOVED 23.5 gal

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.			C°	mS/cm	—	mg/L	NTU	Disposition of water, etc.)
1445	4											
1449		9		2.5								S.G+, brown
1458	6		1	9.5	7.70	1.0	21.82	0.267	6.74	0.163	>1000	
1505	4		1	14.5		1.0	18.17	0.413	6.73	0.269	722	Brownish, cloudy
1510	2		3	19.5	7.91	1.0	17.36	0.414	6.58	0.269	67.5	
1515	1		3	22.5		1.0	16.85	0.414	6.56	0.269	12.1	Clear
1518			1	23.5	7.98	1.0	16.72	0.413	6.55	0.269	4.72	Clear
1519	Pump off										4.21	

SIGNATURE

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-345
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 4.62 ft btoc
10.04 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 5.74 ft btoc

DATE 7/24/2014
AIR TEMPERATURE 60s
CASING VOLUME (GAL.) 0.88
TOTAL GALS. REMOVED 36.5

TIME	DURATION (MIN)			VOL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.								Disposition of water, etc.)
0852	3											
0841		4		2								
0850	3		1	8		1.5						
0854	3		1	14	6.90	1.5	17.29	0.427	5.51	0.276	462	Cloudy, grey
0858			4	20		1.5	17.50	0.370	6.21	0.210	530	
0902			10	35	7.23	1.5	17.51	0.364	6.23	0.236	76.4	
0911			1	36.5							38.7	Clear
0913	Pump off											

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-355
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 6.00 ft btoc
9.62 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 6.28

DATE 7/24/2014
AIR TEMPERATURE 80
CASING VOLUME (GAL.) 0.59
TOTAL GALS. REMOVED 19

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
0959	3											
1004		5		2.5								
1010	5		2	6	7.71	0.5						Silty, Grey
1017	1		4	8.5		0.5	17.43	0.285	6.83	0.185	53.7	Cloudy
1022			5	12	8.15	0.5	17.40	0.277	6.40	0.180	27.3	
1027			5	14.5		0.5	17.40	0.272	6.37	0.177	12.20	Clear
1032			3	16	NR	0.5	17.39	0.271	6.36	0.175	9.81	Clear, No Reading DTW
1037			5	18.5	NR	0.5	17.37	0.270	6.36	0.175	6.65	Clear, " " " "
1042			1	19		0.5	17.36	0.270	6.35	0.174	4.17	Clear
1043	Pump off										3.96	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-35D
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 13.81 ft btoc
TD- 26.20 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Hooke
DEPTH TO WATER AT END 13.45 ft btoc

DATE 7/24/2019
AIR TEMPERATURE 60's
CASING VOLUME (GAL.) 2.02
TOTAL GALS. REMOVED 46.0

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1110	3											
1116		5		2.5	~~2.5~~ NM							
1123	4			8.5		1.5						
1129	1		3	14.5	13.90	1.5	15.49	1.28	6.27	0.820	>1000	Cloudy, Yellowish
1133			4	20.5		1.5	14.39	1.30	6.76	0.963	115	
1137			4	26.5	13.88	1.5	14.00	1.53	6.87	0.980	49.3	Clear, Tannic
1141			4	32.5		1.5	13.97	1.56	6.88	0.981	22.1	
1145			4	38.5	13.82	1.5	13.99	1.54	6.90	0.982	10.8	Clear, Tannic
1149			4	44.5		1.5	14.00	1.55	6.91	0.982	5.23	
1150	Pump dd		1	46.0							4.87	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-43~~B~~S
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 7.77 ft btoc
TD- 11.83 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 8.01

DATE 7/22/2014
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 0.66
TOTAL GALS. REMOVED 21

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1245	5											
1250		4		2	~~2gal~~							
1254	3		1	6	0	1.0						
1258	1		3	10	9.31	1.0	16.06	0.479	6.80	0.312	731	Grey, cloudy
1302	1		4	15		1.0	15.32	0.409	6.33	0.266	12.0	Clear
1307	1		4	20	9.78	1.0	14.93	0.436	6.36	0.277	9.07	Clear
1312			1	21		1.0	14.82	0.430	6.31	0.279	2.75	
1313	Pump dd										2.17	

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-43 MA D
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 232280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 13.52 ft btoc / 26.26 ft btoc

LOCATION Seattle, WA
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Pump
FIELD SUPERVISOR M. Hosline
DEPTH TO WATER AT END 13.19 ft btoc

DATE 7/22/04
AIR TEMPERATURE 60
CASING VOLUME (GAL.) 2.08
TOTAL GALS. REMOVED 28.0

TIME HRS/MIN	DURATION (MIN) SURGE	BAIL	PUMP	VOL. GAL.	DEPTH TO WATER	DISCHRG. RATE (gpm)	TEMP. °C	COND. mS/cm	pH —	SUSPEND. SOLIDS mg/L	TURBIDITY NTU	REMARKS Disposition of water, etc.)
1150	4											
1154		5		2.0								
1159	Pump on											
1206	4		1	7.0	13.58	1.0	15.71	0.998	7.04	0.699	158	Cloudy, yellow
1211	2		2	11.0		1.0	↓	↓	↓	↓	↓	
1215	3		4	18.0		1.0	14.68	1.01	6.67	0.645	42.2	Clear, tannic
1222	2		3	23.0	13.67	1.0	14.54	1.01	6.53	~~0.642~~	18.0	
1227			4	27.0		1.0	14.52	1.01	6.50	~~0.640~~ 0.644	9.80	
1231			1	28.0	13.69	1.0	14.53	1.00	6.51	0.649	4.71	
1232	Pump off										4.49	Clear

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WELL DEVELOPMENT/PURGE FORM

WELL NUMBER MW-22
CLIENT Glacier Reichhold
PROJECT NAME/NUMBER 23280.10
WELL CONSTRUCTION DATA (Y/N) Y
DEPTH TO WATER AT START 7.67 ft btoc
TD: 15.01 ft btoc

LOCATION 5900 W. Marginal Way SW
DEVELOPMENT CONTRACTOR ERM
DEVELOPMENT METHOD Bail / Pump
FIELD SUPERVISOR M. Horine
DEPTH TO WATER AT END 7.87 ft btoc

DATE 8/13/2021
AIR TEMPERATURE 60's
CASING VOLUME (GAL.) 1.20
TOTAL GALS. REMOVED 25.5

TIME	DURATION (MIN)			VOL.	DEPTH TO	DISCHRG. RATE	TEMP.	COND.	pH	SUSPEND. SOLIDS	TURBIDITY	REMARKS
HRS/MIN	SURGE	BAIL	PUMP	GAL.	WATER	(gpm)	°C	mS/cm	---	mg/L	NTU	Disposition of water, etc.)
1300	3											
1305		5		3.5								Dark Grey Silty
1324	4		2	12.5		1.5						
1330	1			14.0	NR	1.5	18.56	0.4941	5.70	11.24	>1000	Grey/No Sheen
1331 off												Dry
1334 on			1	15.5	7.91	~~1.5~~ 1.5						Quick recharge
1335			2	18.5	NR		17.59	0.4419	6.06	11.75	>1000	
1337 off												
1339 on			2	19.5	8.45	0.5						
1341			4	21.5		0.5	17.23	0.4445	6.14	11.62	78.5	Clear
1345			4	25.5	12.37	0.5	17.11	0.4451	6.20	11.58	10.9	
1349 off					11.48	0.5	17.09	0.4451	6.23	11.56	4.70	Pump off

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