

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume |
|------------|-----------------------|--------------------|-----------|------------|--|------------------------------|---|
| 0 | | | | | (+0.5 - 2.5') Surface Completion | | |
| 1 | | | | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | (+0.5 - 2.5') 24 bags Note: 30" diameter concrete pad with 18" diameter lockable vault Quikrete concrete dyed Buff |
| 2 | | | | | | | |
| 3 | | Topock - Fill | SW | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | Topock - Fill | SP-SC | | (2.5 - 14.0') Portland Cement 5% Bentonite Type I, II and V with Hydrogel | (2.5 - 14.0') 65.66 gallons | (2.5 - 14.0') 100 gallons (152%) Note: Grout seal 2nd lift, used >20% of the calculated volume due to potential voids forming during drilling and grout migration. |
| 9 | | | | | | | |
| 10 | | Topock - Fill | SP | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | NR | | | | |
| 15 | | | | | | | |
| 16 | | | | | (14.0 - 17.5') Portland Cement 5% Bentonite Type I, II and V with Hydrogel | (14.0 - 17.5') 14.27 gallons | (14.0 - 17.5') 150 gallons (1051%) Note: Grout seal 1st lift, used >20% of the calculated volume due to potential voids forming during drilling and grout migration. |
| 17 | | | | | | | |
| 18 | | Topock - Fill | SP | | (17.5 - 21.0') Cemex #0/30 Mesh (30x50) Lapis Lustre Sand | (17.5 - 21.0') 4.4 bags | (17.5 - 21.0') 6 bags (136%) Note: Transition sand, used >20% of the calculated volume due to potential voids forming during drilling. |
| 19 | | | | | (19.0 - 179.0') 10.0" Borehole | | |

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: solid blue water table mark represent depth to water (ft. bgs.) measured post development; installed in MW-96d

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK TOPOCK DRAFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume |
|------------|---|---------------------------|-----------|------------------|--|------------------------------|---|
| 20 | | Topock - Fill | SP | [Dotted Pattern] | (17.5 - 21.0') Cemex #0/30 Mesh (30x50) Lapis Lustre Sand | (17.5 - 21.0') 4.4 bags | (17.5 - 21.0') 6 bags (136%) Note: Transition sand, used >20% of the calculated volume due to potential voids forming during drilling. |
| 21 | | | | | | | (+0.0 - 197.0') 2" PVC Sch 80 Casing |
| 22 | | | | | | | |
| 23 | | Topock - Fill | SP | [Dotted Pattern] | (21.0 - 62.5') Bentonite chip seal Puregold Medium Chips | (21.0 - 62.5') 30.16 bags | (21.0 - 62.5') 32 bags (106%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 24 | | | | | | | |
| 25 | | | NR | [X Pattern] | | | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | | | | (19.0 - 179.0') 10.0" Borehole | | |
| 31 | | | | | | | |
| 32 | | | NR | [X Pattern] | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | Topock - Fluvial Deposits | CL | [Diagonal Lines] | | | |
| 39 | | | | | | | |

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\122820\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume |
|------------|---|----------------------------|-----------|------------|---|--|--|
| 40 | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | | CL | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | |
| 41 | | Topock - Fluvial Deposits | SC | | | | |
| 42 | | Topock - Fluvial Deposits | CL | | | | |
| 43 | | Topock - Fluvial Deposits | SC | | | | |
| 44 | | | | | | | |
| 45 | MW-97-VAS-45-50 (<0.033 U ppb) 8/5/2020 14:50 | | NR | | | | |
| 46 | | | | | | | |
| 47 | | | | | | | |
| 48 | | | | | | | |
| 49 | | Topock - Fluvial Deposits | CL | | | (21.0 - 62.5') Bentonite chip seal Puregold Medium Chips | (21.0 - 62.5') 30.16 bags |
| 50 | Topock - Fluvial Deposits | SM | | | | | |
| 51 | Topock - Fluvial Deposits | SW-SM | | | | | |
| 52 | Topock - Fluvial Deposits | SM | | | | | |
| 53 | | | | | | | |
| 54 | | | | | | | |
| 55 | | | | | | | |
| 56 | | Topock - Alluvium Deposits | SM | | | | |
| 57 | | | | | | | |
| 58 | | | | | (57.5 - 58.5') Centralizer | | |
| 59 | | | | | | | |

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK_DRAFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume |
|------------|-----------------------|----------------------------|-----------|------------|--|----------------------------------|--|
| 60 | | | SM | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | |
| 61 | | Topock - Alluvium Deposits | SM | | (21.0 - 62.5') Bentonite chip seal Puregold Medium Chips | (21.0 - 62.5') 30.16 bags | (21.0 - 62.5') 32 bags (106%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 62 | | | | | | | |
| 63 | | Topock - Alluvium Deposits | SW-SM | | | | |
| 64 | | | | | | | |
| 65 | | | | | | | |
| 66 | | | | | | | |
| 67 | | | | | | | |
| 68 | | Topock - Alluvium Deposits | SM | | | | |
| 69 | | | | | | | |
| 70 | | | | | (19.0 - 179.0') 10.0" Borehole | | |
| 71 | | | | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 72 | | | | | | | |
| 73 | | Topock - Alluvium Deposits | SM | | | | |
| 74 | | | | | | | |
| 75 | | | | | | | |
| 76 | | | | | | | |
| 77 | | Topock - Alluvium Deposits | SM | | | | |
| 78 | | | | | | | |
| 79 | | | | | | | |

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume | |
|------------|---|----------------------------|-----------|------------|--|-----------------------------------|--|--|
| 80 | | | | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | | |
| 81 | | | | | | | | |
| 82 | | | | | | | | |
| 83 | | | | | | | | |
| 84 | MW-96-VAS-82-87 (<0.17 U ppb) 8/6/2020 11:45 | Topock - Alluvium Deposits | SM | | | | | |
| 85 | | | | | | | | |
| 86 | | | | | | | | |
| 87 | | | | | | | | |
| 88 | | | | | | | | |
| 89 | | | | | | | | |
| 90 | | | | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (19.0 - 179.0') 10.0" Borehole | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 91 | | | | | | | | |
| 92 | | | | | | | | |
| 93 | | Topock - Alluvium Deposits | SM | | | | | |
| 94 | | | | | | | | |
| 95 | | | | | | | | |
| 96 | | | | | | | | |
| 97 | | Topock - Alluvium Deposits | SM | | | | | |
| 98 | | | | | | | | |
| 99 | | | | | (97.5 - 98.5') Centralizer | | | |

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume |
|------------|-----------------------|----------------------------|-----------|------------|--|----------------------------------|--|
| 100 | | Topock - Alluvium Deposits | SM | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | |
| 101 | | | | | | | |
| 102 | | Topock - Alluvium Deposits | SM | | (19.0 - 179.0') 10.0" Borehole | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 103 | | | | | | | |
| 104 | | | | | | | |
| 105 | | Topock - Alluvium Deposits | SM | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | | |
| 106 | | | | | | | |
| 107 | | Topock - Alluvium Deposits | SM | | | | |
| 108 | | | | | | | |
| 109 | | | | | | | |
| 110 | | Topock - Alluvium Deposits | SM | | | | |
| 111 | | | | | | | |
| 112 | | Topock - Alluvium Deposits | SM | | | | |
| 113 | | | | | | | |
| 114 | | | | | | | |
| 115 | | Topock - Alluvium Deposits | SM | | | | |
| 116 | | | | | | | |
| 117 | | Topock - Alluvium Deposits | SM | | | | |
| 118 | | | | | | | |
| 119 | | | | | | | |

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATA TEMPLATE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume | |
|------------|--|----------------------------|-----------|------------|--|-----------------------------------|--|--|
| 120 | | | | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | | |
| 121 | | | | | | | | |
| 122 | | | | | | | | |
| 123 | | | | | | | | |
| 124 | | | | | | | | |
| 125 | | | | | | | | |
| 126 | | | | | | | | |
| 127 | | | | | | | | |
| 128 | | | | | | | | |
| 129 | | Topock - Alluvium Deposits | SM | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (19.0 - 179.0') 10.0" Borehole | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 130 | | | | | | | | |
| 131 | | | | | | | | |
| 132 | | | | | | | | |
| 133 | | | | | | | | |
| 134 | MW-96-VAS-132-137 (<0.17 U ppb) 8/7/2020 09:25 | | | | | | | |
| 135 | | | | | | | | |
| 136 | | | | | | | | |
| 137 | | | | | | | | |
| 138 | | | | | (137.5 - 138.5') Centralizer | | | |
| 139 | | | | | | | | |

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATA TEMPLATE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

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| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
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| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume | | |
|------------|-----------------------|----------------------------|-----------|------------------|--|-----------------------------------|--|--|--|
| 140 | | Topock - Alluvium Deposits | SM | [Dotted Pattern] | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | | | |
| 141 | | | | | | | | | |
| 142 | | | | | | | | | |
| 143 | | | | | | | | | |
| 144 | | | | | | | | | |
| 145 | | | | | | | | | |
| 146 | | | | | | | | | |
| 147 | | | | | | | | | |
| 148 | | | | | | | | | |
| 149 | | | | | | | | | |
| 150 | | | | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (19.0 - 179.0') 10.0" Borehole | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. | |
| 151 | | | | | | | | | |
| 152 | | | | | | | | | |
| 153 | | Topock - Alluvium Deposits | SM | [Dotted Pattern] | | | | | |
| 154 | | | | | | | | | |
| 155 | | | | | | | | | |
| 156 | | | | | | | | | |
| 157 | | | | | | | | | |
| 158 | | | | | | | | | |
| 159 | | | | | | | | | |

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| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume | |
|------------|-----------------------|----------------------------|-----------|------------|--|-----------------------------------|--|--|
| 160 | | | | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | | |
| 161 | | | | | | | | |
| 162 | | | | | | | | |
| 163 | | | | | | | | |
| 164 | | | | | | | | |
| 165 | | | | | | | | |
| 166 | | | | | | | | |
| 167 | | | | | | | | |
| 168 | | | | | | | | |
| 169 | | Topock - Alluvium Deposits | SM | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (19.0 - 179.0') 10.0" Borehole | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 170 | | | | | | | | |
| 171 | | | | | | | | |
| 172 | | | | | | | | |
| 173 | | | | | | | | |
| 174 | | | | | | | | |
| 175 | | | | | | | | |
| 176 | | | | | | | | |
| 177 | | | | | | | | |
| 178 | | | | | (177.5 - 178.5') Centralizer | | | |
| 179 | | Topock - Alluvium Deposits | SM | | | (179.0 - 194.0') 8.0" Borehole | | |

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: solid blue water table mark represent depth to water (ft. bgs.) measured post development; installed in MW-96d

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK_C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume |
|------------|--|----------------------------|-----------|------------|--|----------------------------------|--|
| 180 | | | | | (+0.0 - 197.0') 2" PVC Sch 80 Casing | | |
| 181 | | | | | | | |
| 182 | | Topock - Alluvium Deposits | SM | | | | |
| 183 | MW-96-VAS-182-187 (<0.17 U ppb) 8/8/2020 09:25 | | | | (62.5 - 186.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (62.5 - 186.0') 101.2 buckets | (62.5 - 186.0') 102 buckets (101%) Note: Annular seal across the screen interval of wells in the MW-96s borehole. |
| 184 | | | | | | | |
| 185 | | | | | | | |
| 186 | | Topock - Alluvium Deposits | SM | | | | |
| 187 | | | | | (179.0 - 194.0') 8.0" Borehole | | |
| 188 | | | | | | | |
| 189 | | | | | (186.0 - 192.0') Cemex #60 Mesh (40x70) Lapis Lustre Sand | (186.0 - 192.0') 3.9 bags | (186.0 - 192.0') 2 bags (51%) Note: Transition sand |
| 190 | | | | | | | |
| 191 | | | | | | | |
| 192 | | Topock - Alluvium Deposits | SW-SM | | | | |
| 193 | | | | | | | |
| 194 | MW-96-VAS-192-197 (<0.17 U ppb) 8/8/2020 13:30 | | | | (192.0 - 221.2') Cemex #3 MESH (8x20) Lapis Lustre Sand | (192.0 - 221.2') 12.2 bags | (192.0 - 221.2') 12 bags (98%) Note: Filter pack |
| 195 | | | | | | | |
| 196 | | | | | | | |
| 197 | | Topock - Alluvium Deposits | SM | | (197.0 - 217.0') 2" 20-Slot Sch 80 PVC Screen | | |
| 198 | | | | | | | |
| 199 | | Topock - Alluvium Deposits | SM | | | | |

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WELL CONSTRUCTION DETAILS_PG&E TOPOCK_DRAFT BORING LOGS\GINT FILES\122820\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume | |
|------------|--|----------------------------------|-----------|------------|--|-----------------------------------|--|---|
| 200 | | | SM | | (197.0 - 217.0') 2" 20-Slot Sch 80 PVC Screen | | | |
| 201 | | Topock - Older Alluvium Deposits | SM | | | | | |
| 202 | | | | | | | | |
| 203 | | Topock - Older Alluvium Deposits | SM | | | | | |
| 204 | MW-96-VAS-202-207 (<0.17 U ppb) 8/9/2020 09:25 | | | | | | | |
| 205 | | | | | | | | |
| 206 | | | | | | | | |
| 207 | | | | | | | | |
| 208 | | | | | | | | |
| 209 | | | | | | | | |
| 210 | | Topock - Older Alluvium Deposits | SM | | (192.0 - 221.2') Cemex #3 MESH (8x20) Lapis Lustre Sand | (194.0 - 227.0') 6.0" Borehole | (192.0 - 221.2') 12.2 bags | (192.0 - 221.2') 12 bags (98%) Note: Filter pack |
| 211 | | | | | | | | |
| 212 | | | | | | | | |
| 213 | | | | | | | | |
| 214 | MW-96-VAS-212-217 (<0.17 U ppb) 8/9/2020 14:40 | | | | | | | |
| 215 | | | | | | | | |
| 216 | | | | | | | | |
| 217 | | Topock - Older Alluvium Deposits | ML | | | | | |
| 218 | | Topock - Older Alluvium Deposits | SM | | (217.5 - 218.5') Centralizer | | | |
| 219 | | | SM | | (217.0 - 219.3') Sump and SS End | | | |

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK_TOPOCK DRAFT BORING LOGS\GINT FILES\122820\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/29/20 17:31

| | | |
|----------------------------------|---|--|
| Date Started: 08/23/2020 | Surface Elevation: 483.58 ft amsl | Well ID: MW-96-217 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: NA ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: 483.61 ft amsl | Client: PG&E |
| Drilling Method: Dual Rotary | Northing (NAD83): 2103539.22 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615813.49 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: SM / CB/ GJ | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/16/2020 | |
| Total Depth: 227 ft bgs | Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault | |

| Depth (ft) | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Well Construction | Calculated Material Volumes | Material Volumes Installed Note: percentages are the actual volume vs the calculated volume | | | |
|------------|---|----------------------------------|-----------|------------|---|---------------------------------|--|--|--|--|
| 220 | | Topock - Older Alluvium Deposits | SM | | Cap (192.0 - 221.2') Cemex #3 MESH (8x20) Lapis Lustre Sand | (192.0 - 221.2') 12.2 bags | (192.0 - 221.2') 12 bags (98%) Note: Filter pack | | | |
| 221 | | | | | | | | | | |
| 222 | MW-96-VAS-222-227 (<0.17 U ppb) 8/10/2020 10:55 | Topock - Older Alluvium Deposits | ML | | (221.2 - 227.0') Bentonite pellets seal Pel-Plug (TR30) 3/8" | (221.2 - 227.0') 1.7 buckets | (221.2 - 227.0') 2 buckets (118%) Note: Decommissioned rathole | | | |
| 223 | | | | | | | | | | |
| 224 | | | | | | | | | | |
| 225 | | | | | | | | | | |
| 226 | | | | | | | | | | |
| 227 | | | | | End of Boring at 227.0 ft bgs. | | | | | |
| 228 | | | | | | | | | | |
| 229 | | | | | | | | | | |
| 230 | | | | | | | | | | |
| 231 | | | | | | | | | | |
| 232 | | | | | | | | | | |
| 233 | | | | | | | | | | |
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| 235 | | | | | | | | | | |
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| 239 | | | | | | | | | | |

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\122820\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

Final 2130120

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: solid blue water table mark represent depth to water (ft. bgs.) measured post development; installed in MW-96d

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB/ GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

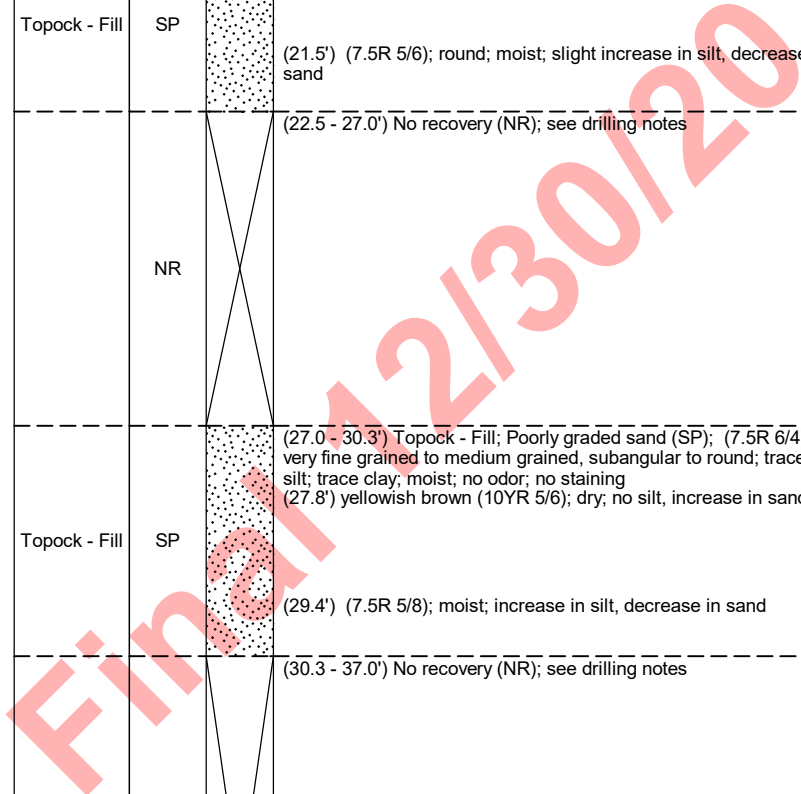
| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|-----------------------|--------------------|-----------|------------|---|---|------------------------------|
| 1 | | | | Topock - Fill | SW | | (0.0 - 8.0') Topock - Fill; Well graded sand (SW); yellowish brown (10YR 5/6); very fine grained to coarse grained, angular to round; trace granules, subround; trace very coarse grained sand, angular to round; trace silt; trace clay; dry; no odor; no staining | (0.0 - 8.0') Core was not collected, material was vibed into the hopper. Soil description logged from hopper cuttings. | (0.0 - 221.0') No water used |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | 0 | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | Topock - Fill | SP-SC | | (8.0 - 9.0') Topock - Fill; Poorly graded sand with clay (SP-SC); yellowish brown / moderate yellowish brown (10YR 5/4) trace brown (10YR 4/3); very fine grained to medium grained, subangular to round; little clay; trace silt; moist; no odor; no staining | (8.0 - 37.0') Very soft drilling, poor recoveries due to compaction of sands in bags and loss of material out of core barrel. Difficult to determine no recovery intervals. | |
| 10 | | No Sieve Samples Collected | | Topock - Fill | SP | | (9.0 - 12.0') Topock - Fill; Poorly graded sand (SP); yellowish brown (10YR 5/6); very fine grained to medium grained, subangular to round; trace silt; trace clay; dry; no odor; no staining | | |
| 11 | | | | | | | | | |
| 12 | 48 | | | | | | (12.0 - 17.0') No recovery (NR); see drilling notes | | |
| 13 | | | | | NR | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | Topock - Fill | SP | | (17.0 - 22.5') Topock - Fill; Poorly graded sand (SP); (7.5R 5/4); very fine grained to medium grained, subangular to round; trace coarse grained sand, subround; trace silt; trace clay; moist; no odor; no staining (17.3') yellowish brown (10YR 5/6); dry; no silt, increase in sand | | |
| 19 | 66 | | | | | | | | |
| 20 | | | | | | | | | |

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\1228-20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB/ GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|---|---------------------------|-----------|------------|--|---|----------------|
| 21 | 66 | | | Topock - Fill | SP | | (21.5') (7.5R 5/6); round; moist; slight increase in silt, decrease in sand | | |
| 22 | | | | | | | (22.5 - 27.0') No recovery (NR); see drilling notes | | |
| 23 | 39.6 | No Sieve Samples Collected | | Topock - Fill | SP | | (27.0 - 30.3') Topock - Fill; Poorly graded sand (SP); (7.5R 6/4); very fine grained to medium grained, subangular to round; trace silt; trace clay; moist; no odor; no staining | | |
| 24 | | | | | | | (27.8') yellowish brown (10YR 5/6); dry; no silt, increase in sand | | |
| 25 | | | | | | | (29.4') (7.5R 5/8); moist; increase in silt, decrease in sand | | |
| 26 | 60 | | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | Topock - Fluvial Deposits | CL | | (30.3 - 37.0') No recovery (NR); see drilling notes | (32.0 - 37.0') Proposed sample interval was tagged dry with 6-inch casing at 37 ft. | |
| 27 | | | | | | | (37.0 - 40.3') Topock - Fluvial Deposits; Lean clay (CL); brown (7.5YR 4/4) little dark grayish brown / dark yellowish brown (10YR 4/2); medium plasticity; some silt; little very fine to fine grained sand, subangular to subround; trace large pebbles, subround; moist; very stiff; no odor; mottled; no staining; (10YR 4/2) forms nodules, pebbles are caliche react with acid | | |
| 28 | | | | | | | | | |
| 29 | | | | | | | | | |
| 30 | | | | | | | | | |
| 31 | | | | | | | | | |
| 32 | | | | | | | | | |
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| 38 | | | | | | | | | |
| 39 | | | | | | | | | |
| 40 | | | | | | | | | |



Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|-------------------------------------|
| Date Started: | 08/04/2020 | Surface Elevation: | 483.58 ft amsl | Boring No.: MW-96d | |
| Date Completed: | 08/22/2020 | Northing (NAD83): | 2103539.22 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615813.49 | Client: | PG&E |
| Drilling Method: | Dual Rotary | Total Depth: | 227 ft bgs | Project: | Final GW Remedy Phase 1 |
| Drill Rig Type: | Boart Longyear Trackmount | Borehole Diameter: | 6-12 inches | Location: | PG&E Topock, Needles, California |
| Driller Name: | Jose Hernandez | Depth to First Water: | 28.1 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 4 in x 10 ft Core Barrel | | |
| Logger: | SM / CB/ GJ | Sampling Interval: | Continuous | | |
| Editor: | Sean McGrane | Converted to Well: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|---|----------------------------|-----------|------------|--|--|----------------|
| 41 | 60 | | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | Topock - Fluvial Deposits | CL | | (40.3 - 41.0') Topock - Fluvial Deposits; Clayey sand (SC); brown (7.5YR 5/3) and brown (7.5YR 5/4); very fine grained to fine grained, subangular to round; some clay; trace large pebbles, subround; trace small cobbles, subround; wet; no odor; no staining; pebbles and cobbles caliche nodules reacts with acid | | |
| 42 | | | | Topock - Fluvial Deposits | SC | | (41.0 - 41.7') Topock - Fluvial Deposits; Lean clay (CL); same as 37 to 40.3 ft bgs | (42.0 - 49.0') Sediments saturated and fell out of core barrel into hopper after bagging 49-52 ft bgs. | |
| 43 | | | | Topock - Fluvial Deposits | CL | | (41.7 - 42.0') Topock - Fluvial Deposits; Clayey sand (SC); same as 40.3 to 41 ft bgs | | |
| 44 | | | | Topock - Fluvial Deposits | NR | | (42.0 - 49.0') No recovery (NR); see drilling notes | | |
| 45 | | | | | NR | | | (45.0') Difficulty breaking 10 inch casing joint during well installation. | |
| 46 | 36 | | MW-97-VAS-45-50 (<0.033 U ppb) 8/5/2020 14:50 | | | | | | |
| 47 | | | | | | | | | |
| 48 | | | | | | | | | |
| 49 | | No Sieve Samples Collected | | Topock - Fluvial Deposits | CL | | (49.0 - 49.5') Topock - Fluvial Deposits; Lean clay (CL); strong brown (7.5YR 5/8); medium plasticity; some silt; little very fine to very coarse grained sand, angular to round; trace granules to large pebbles, angular to subround; trace small cobbles, subround; wet; soft; no odor; no staining; very large pebbles and cobbles caliche nodules | (50.0 - 52.0') Sampler was set at 45 to 50 ft bgs due to sediment of material in the casing. | |
| 50 | | | | Topock - Fluvial Deposits | SM | | (49.5 - 51.0') Topock - Fluvial Deposits; Silty sand (SM); strong brown (7.5YR 4/6); very fine grained to medium grained, subangular to round; and silt; little granules to very large pebbles, angular to round; little coarse to very coarse grained sand, subangular to subround; moist to wet; no odor; no staining (50') strong brown (7.5YR 5/6); very fine grained to very coarse grained, subangular to round; little silt; trace small cobbles, angular; trace clay; increase in sand | (51.0') Ach and Tribes notified about potential burn feature. Feature determined to be schist cobble. | |
| 51 | | | | Topock - Fluvial Deposits | SW-SM | | (51.0 - 51.2') Topock - Fluvial Deposits; Well graded sand with silt and gravel (SW-SM); black (10YR 2/1) with dark yellowish brown (10YR 4/6); very fine grained to very coarse grained, subangular to subround; little granules to very large pebbles, angular to round; little silt; trace small cobbles, angular; trace clay; some mica; wet; no odor; cobble is low grade schist | | |
| 52 | | | | Topock - Fluvial Deposits | SM | | (51.2 - 53.0') Topock - Fluvial Deposits; Silty sand (SM); dark yellowish brown (10YR 4/6); very fine grained to very coarse grained, angular to round; and silt; little granules to very large pebbles, angular to subround; trace clay; coarser clasts composed of metadiorite; moist to wet; no odor; no staining | | |
| 53 | | | | | | | (53.0 - 60.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; trace clay; coarser clasts composed of metadiorite; moist; no odor; no staining | | |
| 54 | | | | Topock - Alluvium Deposits | SM | | | | |
| 55 | | | | | | | | | |
| 56 | 96 | | | | | | | | |
| 57 | | | | | | | | | |
| 58 | | | | | | | | | |
| 59 | | | | | | | | | |
| 60 | | | | | | | (59') brown (10YR 5/3); dry; decrease silt, increase sand, coarser clasts consist of metadiorite and low grade schist | (59.0 - 60.0') Very hard drilling | |

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

SOIL BORING LOG: PG&E-TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|----------------------------------|
| Date Started: | 08/04/2020 | Surface Elevation: | 483.58 ft amsl | Boring No.: MW-96d | |
| Date Completed: | 08/22/2020 | Northing (NAD83): | 2103539.22 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615813.49 | Client: | PG&E |
| Drilling Method: | Dual Rotary | Total Depth: | 227 ft bgs | Project: | Final GW Remedy Phase 1 |
| Drill Rig Type: | Boart Longyear Trackmount | Borehole Diameter: | 6-12 inches | Location: | PG&E Topock, Needles, California |
| Driller Name: | Jose Hernandez | Depth to First Water: | 28.1 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 4 in x 10 ft Core Barrel | | |
| Logger: | SM / CB / GJ | Sampling Interval: | Continuous | | |
| Editor: | Sean McGrane | Converted to Well: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid | | |
|------------|----------------------------|-----------------|-----------------------|----------------------------|-----------|------------|--|---|----------------|--|--------------------------------|
| 61 | 150 | | | Topock - Alluvium Deposits | SM | | (60.0 - 62.0') Topock - Alluvium Deposits; Silty sand (SM); (7.5R 4/3); very fine grained to very coarse grained, angular to subround; little silt; trace granules to very large pebbles, angular to subround; trace clay; coarser clasts composed of metadiorite; wet; no odor | (60.0 - 71.0') Extra recovery due to stretching of sediments 67 to 71 ft bgs. | | | |
| 62 | | | | Topock - Alluvium Deposits | SW-SM | | (62.0 - 64.6') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); (7.5R 4/3); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet; no odor | | | | |
| 63 | | | | Topock - Alluvium Deposits | SM | | (64.6 - 71.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); (7.5R 4/3); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet; no odor | | | | |
| 64 | No Sieve Samples Collected | | | Topock - Alluvium Deposits | SM | | (66.5'); increase silt, decrease gravel | | | | |
| 65 | | | | | | | (71.0 - 72.0') Hard drilling lost core downhole | | | | |
| 66 | | | | | | | | | | (72.0 - 74.0') Hard drilling | |
| 67 | | | | | | | | | | | (76.0 - 87.0') Smooth drilling |
| 68 | | | | | | | | | | | |
| 69 | 69.6 | | | Topock - Alluvium Deposits | SM | | (72.8') medium grained to very coarse grained, angular to subround; little very fine to fine grained sand, angular to subround; little silt; trace granules to very large pebbles, angular to subround; grain size sand distribution change, increase in sand | | | | |
| 70 | | | | 132 | | | Topock - Alluvium Deposits | SM | | (75.6 - 92.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 4/3); medium grained to very coarse grained, angular to subround; some silt; little granules to very large pebbles, angular to subround; trace clay; trace coarser clasts composed of metadiorite; wet; medium dense (76.5'); increase in silt, decrease in sand | |
| 71 | | | | | | | | | | | |
| 72 | | | | | | | | | | | |
| 73 | | | | | | | | | | | |
| 74 | | | | | | | | | | | |
| 75 | | | | | | | | | | | |
| 76 | | | | | | | | | | | |
| 77 | | | | | | | | | | | |
| 78 | | | | | | | | | | | |
| 79 | | | | | | | | | | | |
| 80 | | | | | | | | | | | |

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GPJ 12/30/20 17:31

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB/ GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|--|----------------------------|-----------|---------------------|---|----------------|----------------|
| 81 | 132 | No Sieve Samples Collected | MW-96-VAS-82-87 (<0.17 U ppb) 8/6/2020 11:45 | Topock - Alluvium Deposits | SM | [Soil Core Diagram] | (83'); little silt; decrease in silt, increase in sand | | |
| 82 | | | | | | | (84.5'); increase in silt, decrease in sand | | |
| 83 | | | | | | | (87') brown (10YR 5/3); little silt; decrease in silt, increase in sand | | |
| 84 | | | | | | | | | |
| 85 | | | | | | | | | |
| 86 | | | | | | | | | |
| 87 | | | | | | | | | |
| 88 | | | | | | | | | |
| 89 | | | | | | | | | |
| 90 | | | | | | | | | |
| 91 | | | | | | | | | |
| 92 | | | | | | | | | |
| 93 | | | | | | | 156 | | |
| 94 | | | | | | | | | |
| 95 | | | | | | | | | |
| 96 | | | | | | | | | |
| 97 | | | | | | | | | |
| 98 | | | | | | | | | |
| 99 | | | | | | | | | |
| 100 | | | | | | | | | |

Final 12/30/20

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMC\GRAND\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB / GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|-----------------------|----------------------------|-----------|------------|---|-----------------------------------|----------------|
| 101 | | | | Topock - Alluvium Deposits | SM | | | | |
| 102 | | | | Topock - Alluvium Deposits | SM | | (102.0 - 107.0') Topock - Alluvium Deposits; Silty sand (SM); brown (7.5YR 5/2); medium grained to very coarse grained, angular to subround; some silt; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; trace clay; coarser clasts composed of metadiorite; wet | | |
| 103 | 84 | | | | | | | | |
| 104 | | | | Topock - Alluvium Deposits | SM | | (107.0 - 113.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 5/3); medium grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet | (112.0 - 113.0') Hard drilling | |
| 105 | | | | | | | | | |
| 106 | | | | | | | | | |
| 107 | | | | Topock - Alluvium Deposits | SM | | (113.0 - 115.5') Topock - Alluvium Deposits; Silty sand (SM); brown (7.5YR 5/2); medium grained to very coarse grained, angular to subround; some silt; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; trace clay; coarser clasts composed of metadiorite; wet | | |
| 108 | | | | | | | | | |
| 109 | | No Sieve Samples Collected | | | | | | | |
| 110 | 108 | | | | | | | | |
| 111 | | | | Topock - Alluvium Deposits | SM | | (115.5 - 152.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/4); medium grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet | | |
| 112 | | | | | | | | | |
| 113 | | | | Topock - Alluvium Deposits | SM | | | | |
| 114 | | | | | | | | | |
| 115 | | | | | | | | | |
| 116 | | | | | | | | | |
| 117 | | | | Topock - Alluvium Deposits | SM | | | | |
| 118 | 144 | | | | | | | | |
| 119 | | | | | | | | | |
| 120 | | | | | | | | | |

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/20/20 17:31

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|----------------------------------|
| Date Started: | 08/04/2020 | Surface Elevation: | 483.58 ft amsl | Boring No.: MW-96d | |
| Date Completed: | 08/22/2020 | Northing (NAD83): | 2103539.22 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615813.49 | Client: | PG&E |
| Drilling Method: | Dual Rotary | Total Depth: | 227 ft bgs | Project: | Final GW Remedy Phase 1 |
| Drill Rig Type: | Boart Longyear Trackmount | Borehole Diameter: | 6-12 inches | Location: | PG&E Topock, Needles, California |
| Driller Name: | Jose Hernandez | Depth to First Water: | 28.1 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 4 in x 10 ft Core Barrel | | |
| Logger: | SM / CB / GJ | Sampling Interval: | Continuous | | |
| Editor: | Sean McGrane | Converted to Well: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|--|----------------------------|-----------|------------|--|---|----------------|
| 121 | | | | | | | (121') brown (10YR 5/3); decrease in silt, increase in sand | | |
| 122 | | | | | | | | | |
| 123 | | | | | | | | | |
| 124 | 144 | | | | | | | | |
| 125 | | | | | | | (124.5') reddish brown / moderate brown (5YR 4/4); very fine grained to medium grained, angular to subround; some very fine to fine grained sand, angular to subround; some silt; grain size distribution change, decrease in sand | | |
| 126 | | | | | | | | | |
| 127 | | | | | | | | | |
| 128 | | | | | | | | | |
| 129 | | | | | | | | | |
| 130 | | No Sieve Samples Collected | | Topock - Alluvium Deposits | SM | | | | |
| 131 | | | | | | | | | |
| 132 | | | | | | | (132') medium grained to very coarse grained, angular to subround; moist to wet; decrease in silt, increase in sand | (132.0 - 137.0') Hard drilling | |
| 133 | 108 | | | | | | | | |
| 134 | | | MW-96-VAS-132-137 (<0.17 U ppb) 8/7/2020 09:25 | | | | (134'); wet | | |
| 135 | | | | | | | | | |
| 136 | | | | | | | | | |
| 137 | | | | | | | | | |
| 138 | 240 | | | | | | | (138.0') Pulled 10 inch casing back during telescoping, retrieval of 10 inch casing | |
| 139 | | | | | | | | | |
| 140 | | | | | | | (139.5') dark reddish brown / moderate brown (5YR 3/4); decrease | | |

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMC\GRAND\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB / GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|---------------|----------------------------|-----------------------|----------------------------|-----------|------------|---|-----------------------------------|----------------|
| 141 | | | | | | | in silt, increase in sand | difficult tight formation. | |
| 142 | | | | | | | | | |
| 143 | | | | | | | | | |
| 144 | | | | | | | | | |
| 145 | | | | | | | | (144.0 - 147.0') Hard drilling | |
| 146 | | | | Topock - Alluvium Deposits | SM | | (145') dry (145.6') wet (146.5') little silt; increase in gravel | | |
| 147 | | | | | | | | | |
| 148 | | | | | | | (148') medium grained to very coarse grained, angular to subround; some silt; little very fine to fine grained sand, angular to subround; change in grain size distribution, decrease in gravel | | |
| 149 | 240 | | | | | | | | |
| 150 | | No Sieve Samples Collected | | | | | | | |
| 151 | | | | | | | | | |
| 152 | | | | | | | | | |
| 153 | | | | | | | (152.0 - 159.8') Topock - Alluvium Deposits; Silty sand (SM); dark reddish brown / moderate brown (5YR 3/4); medium grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet | | |
| 154 | | | | Topock - Alluvium Deposits | SM | | | | |
| 155 | | | | | | | | | |
| 156 | | | | | | | | | |
| 157 | | | | | | | | | |
| 158 | 108 | | | | | | | (158.0') Hard drilling | |
| 159 | | | | | | | | | |
| 160 | | | | | | | (159.6'); trace small cobbles, subangular to subround | | |

Final 12/30/20

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB / GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid | | |
|------------|---------------|----------------------------|-----------------------|----------------------------|-----------|------------|--|--|----------------|--|-----------------------------------|
| 161 | | | | Topock - Alluvium Deposits | SM | SM | (159.8 - 178.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); reddish brown / moderate brown (5YR 4/4); medium grained to very coarse grained, angular to subround; some silt; little granules to medium pebbles, angular to subround; little very fine to fine grained sand, angular to subround; trace clay; coarser clasts composed of metadiorite; wet | | | | |
| 162 | | | | | | | | | | | |
| 163 | 108 | | | | | | | | | | |
| 164 | | | | | | | | | | | |
| 165 | | | | | | | | | | | |
| 166 | | | | | | | | | | (165.5'); little silt; increase in sand | |
| 167 | | | | | | | | | | | (166.0 - 170.0') Hard drilling |
| 168 | | | | | | | | | | | |
| 169 | | | | | | | | | | (168.2'); trace small cobbles, subangular to subround (168.5') dark reddish brown / moderate brown (5YR 3/4); some silt; decrease in gravel, decrease in sand | |
| 170 | | No Sieve Samples Collected | | | | | | | | | |
| 171 | | | | | | | | | | | |
| 172 | 132 | | | | | | (171.5'); and silt; decrease in sand (172'); some silt; increase in sand | | | | |
| 173 | | | | | | | (172.5') reddish brown / moderate brown (5YR 4/4); little silt; increase in gravel | | | | |
| 174 | | | | | | | | | | | |
| 175 | | | | | | | | | | | |
| 176 | | | | | | | | | | | |
| 177 | | | | | | | | | | | |
| 178 | | | | | | | | | | | |
| 179 | 120 | | | Topock - Alluvium Deposits | SM | SM | (178.0 - 185.0') Topock - Alluvium Deposits; Silty sand (SM); dark reddish brown / moderate brown (5YR 3/4); medium grained to very coarse grained, angular to subround; some silt; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; trace clay; coarser clasts composed of metadiorite; wet | (179.0') Refusal with 10 inch drill | | | |
| 180 | | | | | | | | | | | |

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\DRAFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|-------------------------------------|
| Date Started: | 08/04/2020 | Surface Elevation: | 483.58 ft amsl | Boring No.: MW-96d | |
| Date Completed: | 08/22/2020 | Northing (NAD83): | 2103539.22 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615813.49 | Client: | PG&E |
| Drilling Method: | Dual Rotary | Total Depth: | 227 ft bgs | Project: | Final GW Remedy Phase 1 |
| Drill Rig Type: | Boart Longyear Trackmount | Borehole Diameter: | 6-12 inches | Location: | PG&E Topock, Needles, California |
| Driller Name: | Jose Hernandez | Depth to First Water: | 28.1 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 4 in x 10 ft Core Barrel | | |
| Logger: | SM / CB/ GJ | Sampling Interval: | Continuous | | |
| Editor: | Sean McGrane | Converted to Well: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid | |
|------------|---------------|----------------------------|--|----------------------------|-----------|------------|--|---|----------------|--|
| 181 | 120 | | MW-96-VAS-182-187 (<0.17 U ppb) 8/8/2020 09:25 | Topock - Alluvium Deposits | SM | | (181.5'); increase in silt, decrease in sand | casing, drillers request to telescope with 8 inch casing. Due to telescoping nested wells could not be installed shallow well installed in separate borehole. | | |
| 182 | | | | | | | (185.0 - 188.5') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark reddish brown / moderate brown (5YR 3/4); medium grained to very coarse grained, subangular to subround; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet | | | |
| 183 | | | | | | | | | | |
| 184 | 120 | No Sieve Samples Collected | | Topock - Alluvium Deposits | SM | | (188.5 - 196.5') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); yellowish red (5YR 4/6); medium grained to very coarse grained, subangular to subround; little granules to very large pebbles, angular to subround; little very fine to fine grained sand, angular to subround; trace silt; trace clay; coarser clasts composed of metadiorite; wet | (195.0 - 196.0') Hard drilling | | |
| 185 | | | | | | | | | | |
| 186 | | | | | | | | | | |
| 187 | 120 | | MW-96-VAS-192-197 (<0.17 U ppb) 8/8/2020 13:30 | Topock - Alluvium Deposits | SW-SM | | (198.5 - 200.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); yellowish red (5YR 4/6); very fine grained to very coarse grained, subangular to subround; little granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet | | | |
| 188 | | | | | | | | | | |
| 189 | | | | | | | | | | |
| 190 | 120 | | | Topock - Alluvium Deposits | SM | | | | | |
| 191 | | | | | | | | | | |
| 192 | | | | | | | | | | |
| 193 | 120 | | | Topock - Alluvium Deposits | SM | | | | | |
| 194 | | | | | | | | | | |
| 195 | | | | | | | | | | |
| 196 | 120 | | | Topock - Alluvium Deposits | SM | | | | | |
| 197 | | | | | | | | | | |
| 198 | | | | | | | | | | |
| 199 | 120 | | | Topock - Alluvium Deposits | SM | | | | | |
| 200 | | | | | | | | | | |

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measurement during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-217 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|-------------------------------------|
| Date Started: | 08/04/2020 | Surface Elevation: | 483.58 ft amsl | Boring No.: MW-96d | |
| Date Completed: | 08/22/2020 | Northing (NAD83): | 2103539.22 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615813.49 | Client: | PG&E |
| Drilling Method: | Dual Rotary | Total Depth: | 227 ft bgs | Project: | Final GW Remedy Phase 1 |
| Drill Rig Type: | Boart Longyear Trackmount | Borehole Diameter: | 6-12 inches | Location: | PG&E Topock, Needles, California |
| Driller Name: | Jose Hernandez | Depth to First Water: | 28.1 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 4 in x 10 ft Core Barrel | | |
| Logger: | SM / CB / GJ | Sampling Interval: | Continuous | | |
| Editor: | Sean McGrane | Converted to Well: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|------------|----------------------------|-----------------|--|----------------------------------|-----------|------------|---|----------------|----------------|
| 201 | 120 | | MW-96-VAS-202-207 (<0.17 U ppb) 8/9/2020 09:25 | Topock - Older Alluvium Deposits | SM | | (198.7'); moderate cementation (200.0 - 201.8') Topock - Older Alluvium Deposits; Silty sand (SM); yellowish red (5YR 4/6); very fine grained to very coarse grained, subangular to subround; some silt; little granules to very large pebbles, angular to subround; trace clay; coarser clasts composed of metadiorite; wet | | |
| 202 | | | | Topock - Older Alluvium Deposits | SM | | (201.8 - 204.5') Topock - Older Alluvium Deposits; Silty sand with gravel (SM); yellowish red (5YR 4/6); very fine grained to very coarse grained, subangular to subround; little granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet | | |
| 203 | | | | Topock - Older Alluvium Deposits | SM | | (204.5 - 216.0') Topock - Older Alluvium Deposits; Silty sand (SM); yellowish red (5YR 4/6); very fine grained to very coarse grained, subangular to subround; some silt; little granules to very large pebbles, angular to subround; trace clay; coarser clasts composed of metadiorite; wet | | |
| 204 | No Sieve Samples Collected | | | Topock - Older Alluvium Deposits | SM | | (206') medium grained to very coarse grained, subangular to subround; little very fine to fine grained sand, angular to subround; little silt; change in grain size distribution, increase in sand | | |
| 205 | | | | | | | (208.5'); some silt; decrease in sand | | |
| 206 | | | | | | | (209.5'); moderate cementation | | |
| 207 | | | | | | | (213.5'); no cementation | | |
| 208 | | | | | | | (216.0 - 217.0') Topock - Older Alluvium Deposits; Silt with sand (ML); brown (7.5YR 4/3); medium plasticity; some very fine to medium grained sand, angular to subround; trace granules to small pebbles, angular to subround; trace clay; wet; medium stiff (216.7'); and small cobbles, subangular to subround; 3 inch lens | ML | |
| 209 | 120 | | | Topock - Older Alluvium Deposits | SM | | (217.0 - 219.0') Topock - Older Alluvium Deposits; Silty sand with gravel (SM); yellowish red (5YR 4/6); very fine grained to very coarse grained, subangular to subround; some granules to very large pebbles, angular to subangular; little silt; trace clay; coarser clasts composed of metadiorite; wet | | |
| 210 | | | | Topock - Older Alluvium Deposits | SM | | (219.0 - 224.5') Topock - Older Alluvium Deposits; Silty sand (SM); dark red (2.5YR 3/6); medium grained to very coarse grained, subangular to subround; little granules to large pebbles, | | |
| 211 | | | | Topock - Older Alluvium | SM | | | | |

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SOIL BORING LOG: PG&E-TOPOCK-C:\USERS\SMC\GRAND\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\12.28.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/30/20 17:31

| | | |
|---|--|--|
| Date Started: 08/04/2020 | Surface Elevation: 483.58 ft amsl | Boring No.: MW-96d |
| Date Completed: 08/22/2020 | Northing (NAD83): 2103539.22 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615813.49 | Client: PG&E |
| Drilling Method: Dual Rotary | Total Depth: 227 ft bgs | Project: Final GW Remedy Phase 1 |
| Drill Rig Type: Boart Longyear Trackmount | Borehole Diameter: 6-12 inches | Location: PG&E Topock, Needles, California |
| Driller Name: Jose Hernandez | Depth to First Water: 28.1 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 4 in x 10 ft Core Barrel | |
| Logger: SM / CB/ GJ | Sampling Interval: Continuous | |
| Editor: Sean McGrane | Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| Depth (ft) | Recovery (in) | Sieve Sample ID | Groundwater Sample ID | Geologic Formation | USCS Code | USCS Class | Soil Description | Drilling Notes | Drilling Fluid |
|--------------------------------|---------------|----------------------------|---|----------------------------------|-----------|------------|---|----------------|--|
| 221 | 120 | No Sieve Samples Collected | MW-96-VAS-222-227 (<0.17 U ppb) 8/10/2020 10:55 | Deposits | SM | [Symbol] | angular to subround; little very fine to fine grained sand, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet (219.5'); moderate cementation (221'); no cementation | | (221.0') gallons of water used; gallons of water recovered; gallons of water lost; 9/2/2020 3:29:37 PM |
| 222 | | | | Topock - Older Alluvium Deposits | | | (224.5 - 227.0') Topock - Older Alluvium Deposits; Silt with sand (ML); red (2.5YR 4/6); medium plasticity; and very fine to very coarse grained sand, angular to subround; trace granules to small pebbles, angular to subround; trace clay; wet; medium stiff | | |
| 223 | | | | | | | | | |
| 224 | | | | | | | | | |
| 225 | | | | | | | | | |
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| 227 | | | | | | | | | |
| End of Boring at 227.0 ft bgs. | | | | | | | | | |
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Final 12/20/2020

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