

| | | |
|----------------------------------|---|--|
| Date Started: 09/03/2020 | Surface Elevation: 483.62 ft amsl | Well ID: MW-96-45 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: 483.84 ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: NA ft amsl | Client: PG&E |
| Drilling Method: Sonic Drilling | Northing (NAD83): 2103533.18 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615815.27 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: Gantt Jeffers | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/22/2020 | |
| Total Depth: 49 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 | | | | | (+0.8 - 2.5') Surface Completion | | (+0.8 - 2.5') 24 bags Note: 30" diameter concrete pad with 18" diameter lockable vault Quikrete concrete dyed Buff |
| 1 | | | | | (0.2 - 25.0') 2" PVC Sch 80 Casing | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | (0.0 - 8.0') 12.0" Borehole | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | (2.5 - 16.3') Portland Cement 6% Bentonite Type I, II, and V with Hydrogel | (2.5 - 16.3') 56.6 gallons | (2.5 - 16.3') 50 gallons (88%) Note: Grout seal |
| 10 | | | NR | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | (8.0 - 49.0') 6.0" Borehole | | |
| 15 | | | | | | | |
| 16 | | | | | (15.5 - 16.5') Centralizer | | |
| 17 | | | | | (16.3 - 18.2') Cemex #0/30 Mesh (30x50) Lapis Lustre Sand | (16.3 - 18.2') 0.7 bags | (16.3 - 18.2') 1 bags (143%) Note: Transition sand, used >20% of the calculated volume due to potential voids forming during drilling |
| 18 | | | | | | | |
| 19 | | | | | (18.2 - 22.0') Formation Collapse | | Note: Heaving sands |

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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 17:02

| | | |
|----------------------------------|---|--|
| Date Started: 09/03/2020 | Surface Elevation: 483.62 ft amsl | Well ID: MW-96-45 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: 483.84 ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: NA ft amsl | Client: PG&E |
| Drilling Method: Sonic Drilling | Northing (NAD83): 2103533.18 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615815.27 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: Gantt Jeffers | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/22/2020 | |
| Total Depth: 49 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 | | | | | (0.2 - 25.0') 2" PVC Sch 80 Casing | | |
| 21 | | | | | (18.2 - 22.0') Formation Collapse | | Note: Heaving sands |
| 22 | | | NR | | (22.0 - 23.0') Bentonite chip seal Puregold Medium Chips | (22.0 - 23.0') 0.24 bags | (22.0 - 23.0') 0.25 bags (104%) Note: Seal between filter pack and grout |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | (25.0 - 45.0') 2" 20-Slot Sch 80 PVC Screen | | |
| 26 | | | | | | | |
| 27 | | Topock - Fill | SP | | | | |
| 28 | | | | | | | |
| 29 | | | | | (8.0 - 49.0') 6.0" Borehole | | |
| 30 | | | | | | | |
| 31 | | | | | (23.0 - 49.0') Cemex #3 MESH (8x10) Lapis Lustre Sand | (23.0 - 49.0') 9.2 bags | (23.0 - 49.0') 11 bags (120%) Note: Filter pack |
| 32 | | | | | | | |
| 33 | | | NR | | | | |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | Topock - Fill | SP | | | | |
| 38 | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | Topock - Fluvial Deposits | ML | | | | |
| 39 | | | | | | | |

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-96s

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 12/30/20 17:02

| | | |
|----------------------------------|---|--|
| Date Started: 09/03/2020 | Surface Elevation: 483.62 ft amsl | Well ID: MW-96-45 |
| Date Completed: 10/06/2020 | Shallow Well Elevation: 483.84 ft amsl | |
| Drilling Co.: Cascade | Deep Well Elevation: NA ft amsl | Client: PG&E |
| Drilling Method: Sonic Drilling | Northing (NAD83): 2103533.18 | Project: Final GW Remedy Phase 1 |
| Driller Name: Jose Hernandez | Easting (NAD83): 7615815.27 | Location: PG&E Topock, Needles, California |
| Drilling Asst: Franisco Sandoval | Borehole Diameter: 6-12 inches | |
| Logger: Gantt Jeffers | Static Water Level: See Log for Depths | Project Number: RC000753.0051 |
| Editor: Sean McGrane | Development End Date: 9/22/2020 | |
| Total Depth: 49 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 | Topock - Fluvial Deposits | ML | | (25.0 - 45.0') 2" 20-Slot Sch 80 PVC Screen | | | |
| 41 | | | | | | | | |
| 42 | MW-97-VAS-45-50 (<0.033 U ppb) 8/5/2020 14:50 | Topock - Fluvial Deposits | SM | | (23.0 - 49.0') Cemex #3 MESH (8x10) Lapis Lustre Sand | (8.0 - 49.0') 6.0" Borehole | (23.0 - 49.0') 9.2 bags | (23.0 - 49.0') 11 bags (120%) Note: Filter pack |
| 43 | | Topock - Fluvial Deposits | SM | | | | | |
| 44 | | Topock - Fluvial Deposits | SM | | | | | |
| 45 | | Topock - Fluvial Deposits | SM | | | | | |
| 46 | | | | | (45.5 - 46.5') Centralizer | | | |
| 47 | | Topock - Fluvial Deposits | SW | | (45.0 - 47.3') Sump and SS End Cap | | | |
| 48 | | Topock - Fluvial Deposits | SW | | | | | |
| 49 | | Topock - Fluvial Deposits | SW | | | | | |

End of Boring at 49.0 ft bgs.

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| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|----------------------------------|
| Date Started: | 09/02/2020 | Surface Elevation: | 483.62 ft amsl | Boring No.: MW-96s | |
| Date Completed: | 09/02/2020 | Northing (NAD83): | 2103533.18 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615815.27 | Client: | PG&E |
| Drilling Method: | Sonic Drilling | Total Depth: | 49 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: | 37.6 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 10 ft Core Barrel | | |
| Logger: | Gantt Jeffers | Sampling Interval: | Screen Interval | | |
| 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 | | | | | | | (0.0 - 25.0') No recovery (NR); core not collected see MW-96D Boring Log for details | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | No Sieve Samples Collected | | | NR | | | | |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | |

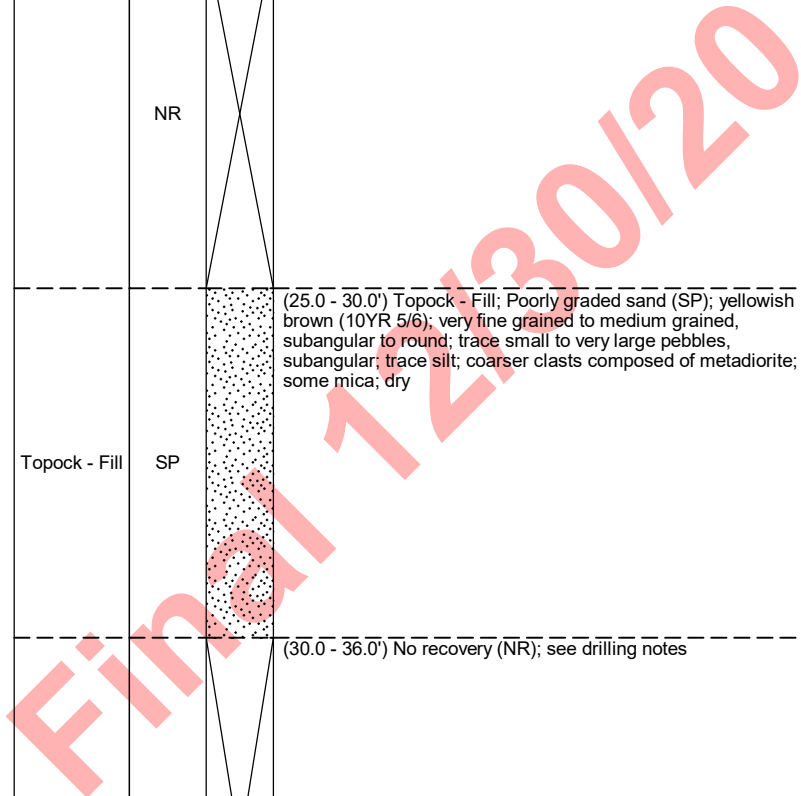
Final 12/30/20

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 MW-96D; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-96-45 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 17:08

| | | |
|---|--|--|
| Date Started: 09/02/2020 | Surface Elevation: 483.62 ft amsl | Boring No.: MW-96s |
| Date Completed: 09/02/2020 | Northing (NAD83): 2103533.18 | |
| Drilling Co.: Cascade | Easting (NAD83): 7615815.27 | Client: PG&E |
| Drilling Method: Sonic Drilling | Total Depth: 49 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: 37.6 ft bgs | Project Number: RC000753.0051 |
| Drilling Asst: Franisco Sandoval | Sampling Method: 10 ft Core Barrel | |
| Logger: Gantt Jeffers | Sampling Interval: Screen Interval | |
| 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 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | NR | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | |
| 26 | | | | Topock - Fill | SP | | (25.0 - 30.0') Topock - Fill; Poorly graded sand (SP); yellowish brown (10YR 5/6); very fine grained to medium grained, subangular to round; trace small to very large pebbles, subangular; trace silt; coarser clasts composed of metadiorite; some mica; dry | (25.0 - 44.0') Normal drilling | |
| 27 | | | | | | | | | |
| 28 | | | | | | | | | |
| 29 | | | | | | | | | |
| 30 | 60 | No Sieve Samples Collected | | | | | (30.0 - 36.0') No recovery (NR); see drilling notes | (30.0 - 35.0') No recovery due to compaction of loose unconsolidated sands. | |
| 31 | | | | | | | | | |
| 32 | | | | | | | | | |
| 33 | | | | | NR | | | | |
| 34 | | | | | | | | | |
| 35 | | | | | | | | | |
| 36 | | | | | | | | | |
| 37 | | | | Topock - Fill | SP | | (36.0 - 38.0') Topock - Fill; Poorly graded sand (SP); yellowish brown (10YR 5/6); very fine grained to medium grained, subangular to subround; trace silt; little mica; dry | | |
| 38 | 120 | | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | | | | (37.6'); wet | | |
| 39 | | | | Topock - Fluvial Deposits | ML | | (38.0 - 42.5') Topock - Fluvial Deposits; Sandy silt (ML); dark yellowish brown (10YR 4/4); medium plasticity, no dilatency; and very fine grained sand, subround; little mica; medium stiff; organic odor; roots/organics first 0.5 ft of unit | | |
| 40 | | | | | | | | | |



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| | | | | | |
|------------------|---------------------------|-----------------------|---|---------------------------|-------------------------------------|
| Date Started: | 09/02/2020 | Surface Elevation: | 483.62 ft amsl | Boring No.: MW-96s | |
| Date Completed: | 09/02/2020 | Northing (NAD83): | 2103533.18 | | |
| Drilling Co.: | Cascade | Easting (NAD83): | 7615815.27 | Client: | PG&E |
| Drilling Method: | Sonic Drilling | Total Depth: | 49 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: | 37.6 ft bgs | Project Number: | RC000753.0051 |
| Drilling Asst: | Franisco Sandoval | Sampling Method: | 10 ft Core Barrel | | |
| Logger: | Gantt Jeffers | Sampling Interval: | Screen Interval | | |
| 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 | 120 | No Sieve Samples Collected | MW-96-VAS-37-42 (<0.033 U ppb) 8/5/2020 11:40 | Topock - Fluvial Deposits | ML | | | | | |
| 42 | | | | | | | | | | |
| 43 | | | | | Topock - Fluvial Deposits | SM | | (42.5 - 43.4') Topock - Fluvial Deposits; Silty sand (SM); dark yellowish brown (10YR 4/4); very fine grained to fine grained, subround to round; some silt; little mica; wet | | |
| 44 | | | | | Topock - Fluvial Deposits | SM | | (43.4 - 46.0') Topock - Fluvial Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to medium grained, subangular to round; some silt; little granules to very large pebbles, subround to round; trace small cobbles, round; coarser clasts composed of metadiorite; little mica; wet; increase gravel down formation | (44.0 - 46.0') Rough drilling | (44.0 - 49.0') gallons of water used; gallons of water recovered; gallons of water lost; Water used to flush casing volumes not documented. |
| 45 | 36 | No Sieve Samples Collected | MW-97-VAS-45-50 (<0.033 U ppb) 8/5/2020 14:50 | Topock - Fluvial Deposits | SW | | (46.0 - 47.5') Topock - Fluvial Deposits; Well graded sand (SW); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, subangular to subround; trace silt; coarser clasts composed of metadiorite; little mica; wet | (46.0 - 49.0') Normal drilling | | |
| 46 | | | | | | Topock - Fluvial Deposits | SW | | (47.5 - 49.0') Topock - Fluvial Deposits; Well graded sand with gravel (SW); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, subangular to subround; little granules to very large pebbles, subround to round; trace small cobbles, round; trace silt; coarser clasts composed of metadiorite; little mica; wet | |
| 47 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| 49 | | | | | | | End of Boring at 49.0 ft bgs. | | | |
| 50 | | | | | | | | | | |
| 51 | | | | | | | | | | |
| 52 | | | | | | | | | | |
| 53 | | | | | | | | | | |
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| 55 | | | | | | | | | | |
| 56 | | | | | | | | | | |
| 57 | | | | | | | | | | |
| 58 | | | | | | | | | | |
| 59 | | | | | | | | | | |
| 60 | | | | | | | | | | |

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