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FOURTH QUARTER 2014
AND
2014 ANNUAL
GROUNDWATER QUALITY MONITORING REPORT

Genesis Solar Energy Project

Riverside County, California

COC S&W-20

January 27, 2015

Prepared By:

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FOURTH QUARTER 2014 AND 2014 ANNUAL GROUNDWATER QUALITY MONITORING REPORT

RIVERSIDE COUNTY, CALIFORNIA

PROFESSIONAL STATEMENT

I, Arlin W. Brewster, a Professional Geologist with the State of California, have reviewed this report, '***Fourth Quarter 2014 and 2014 Annual Groundwater Quality Monitoring Report, Genesis Solar Energy Project, Riverside County, California***'.

Arlin W. Brewster

Professional Geologist 9207

January 27, 2015

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LIST OF ACRONYMS AND ABBREVIATIONS

afy	acre-feet per year
amsl	above mean sea level
AFC	Application for Certificate
ASTM	American Society of Testing Materials
bgs	below ground surface
BLM	Bureau of Land Management
CEC	California Energy Commission
CRWQCB – CRBR	California Regional Water Quality Control Board – Colorado River Basin Region
C	Celsius/Centigrade
COC S&W-20	Condition of Certification Soil & Water 20
CSDLAC	County Sanitation Districts of Los Angeles County
CVGB	Chuckwalla Valley Groundwater Basin
°	Degrees
DOH	Department of Health
ELAP	Environmental Laboratory Accreditation Program
F	Fahrenheit
FEIS	Final Environmental Impact Statement
GMWL	Global Meteoric Water Line
GQMP	Groundwater Quality Monitoring Program
GSEP	Genesis Solar Energy Project
HTF	Heat Transfer Fluid
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MW	Megawatt
mm	millimeters
MRP	Monitoring and Reporting Program
NWIS	National Water Information System
NCDC	National Climate Data Center
NELAP	National Environmental Laboratory Accreditation Program
POD	Plan of Development

PVMGB	Palo Verde Mesa Groundwater Basin
toc	top of casing
tds	total dissolved solids
VSMOW	Vienna Standard Mean Ocean Water
WDR	Waste Discharge Requirements

1.0 INTRODUCTION

This Fourth Quarter 2014 and 2014 Annual Groundwater Quality Monitoring Report has been prepared by Northstar Environmental Remediation (Northstar) to provide information collected during the Groundwater Quality Monitoring Event performed in December 2014 and to summarize all information collected during the 2014 calendar year at the Genesis Solar Energy Project (GSEP). The work was performed during normal facility operation (post-construction) in accordance with Condition of Certification Soil & Water 20 (COC S&W-20) as presented in the California Energy Commission (CEC) Final Decision document dated October 12, 2010 (CEC, 2010). This work was also performed in accordance with the California Regional Water Quality Control Board – Colorado River Basin Region (CRWQCB – CRBR) Waste Discharge Requirements (WDR) and Monitoring and Reporting Program (MRP) documents for the GSEP, part of Board Order R7-2013-0005. As shown in **Figure 1**, the GSEP is located approximately 25 miles west of the city of Blythe, California in eastern Riverside County on lands managed by the Bureau of Land Management (BLM).

1.1 Background

An updated Plan of Development (POD) for the GSEP was submitted to the BLM by Genesis Solar LLC (Genesis) in September 2010 (Genesis Solar, LLC, 2010). In addition, Genesis submitted an Application for Certification (AFC) for the GSEP to the California Energy Commission (CEC) in August 2009 (Genesis Solar, LLC, 2009). The CEC issued its Final Decision on the GSEP on October 12, 2010 (CEC, 2010). The BLM issued the Final Environmental Impact Statement (FEIS) for the GSEP for public comment on August 27, 2010.

As described in the CEC's Final Decision, the GSEP consists of two independent concentrated solar electric generating facilities with a nominal net electrical output of 125 megawatts (MW) each for a total net electrical output of 250 MW. The GSEP utilizes dry cooling technology and relies on groundwater as a water source during the current operation of the facility. Three groundwater production wells were installed on the GSEP between July and October 2011. These are permitted to pump groundwater at up to 1,348 acre-feet per year (afy) during construction and an average rate of 202 afy during operation. The potential impacts associated with the proposed groundwater use by the GSEP are discussed in the Final Decision and FEIS. Groundwater drawdown impacts are anticipated to be less than significant, but because the prediction of groundwater level effects by computer modeling entails inherent uncertainty, both the Final Decision and the FEIS adopted COC S&W-20 for the GSEP to monitor groundwater quality at the vicinity of the GSEP.

The evaporation ponds are licensed as Class II Surface Impoundments which include the installation and sampling of at least three groundwater monitoring wells. A total of three groundwater monitoring wells were installed along the west, east, and south perimeter of the evaporation ponds and are sampled as part of the monitoring program to comply with the requirements of COC S&W-6.

1.2 Geographic Setting

The GSEP is located between the communities of Blythe, California (approximately 25 miles east) and Desert Center, California (approximately 27 miles west). Land use is characterized predominantly by open space and conservation and wilderness areas. Chuckwalla and Ironwood State Prisons are located approximately 6 miles to the southeast of the GSEP.

The GSEP lies on a broad, relatively flat, sloping surface underlain by alluvial deposits derived from the Palen Mountains to the north-northwest, and the McCoy Mountains to the northeast **(Figure 2)**.

The deposits immediately adjacent to the mountains have formed alluvial fans from multiple identifiable sources. The multiple fan surfaces have coalesced into a single bajada surface that wraps around each of these mountain fronts. Between the bajada surfaces from each mountain chain lies a broad valley-axial drainage that extends southward between the mountains and drains to the Ford Dry Lake playa, located about 1 mile south of the GSEP facility. The GSEP is on relatively flat topography and generally slopes from north to south with elevations of approximately 400 to 370 feet above mean sea level (amsl). It is occupied by a community of low creosote and bursage scrub vegetation.

Climatic data collected from Weather Station Blythe Riverside Airport (33.61°N, -114.71°W, at an elevation of about 387 feet amsl) indicate that the average maximum temperature in the airport vicinity is approximately 87.6°F (30.9°C). Average rainfall is reported to be approximately 3.6 inches (91.4 mm). These data were received from National Climate Data Center TD 9641 Clim 81 1961-1990 Normals for a 30-year period (between 1961 and 1990).

1.3 Hydrogeologic Setting

The GSEP is located within the Chuckwalla Valley Groundwater Basin (CVGB) which has a surface area of 940 mi^2 (2,435 km^2) underlying Chuckwalla Valley. The CVGB is bounded upgradient by three other groundwater basins that include the eastern part of the Orocopia Valley and Pinto Valley Groundwater Basins and the southern part of the Cadiz Valley Groundwater Basin; and, downgradient by the Palo Verde Mesa Groundwater Basin (PVMGB) **(Figure 2)**. Groundwater occurs at depths of about 80 to 130 feet below ground surface (bgs). Groundwater flow is generally southeast to eastward from the CVGB into the PVMGB **(Figure 2)**.

Recharge to the CVGB is from sources including precipitation, inflow from the Orocopia Valley and Pinto Valley Groundwater Basins, and return flows from agricultural sources and treated wastewater effluent. Groundwater provides the only available water resource in Chuckwalla Valley with extraction being the method by which local demand is met. Therefore, groundwater extraction represents the primary source of groundwater outflow. Other minor sources of outflow include underflow to the PVMGB and evapotranspiration in portions of Palen Dry Lake (where shallow groundwater is present). Calculations of the CVGB groundwater budget prior to GSEP operations indicate a stable surplus of 2,600 afy (CEC, 2010). Current operational demands are

estimated to not exceed 202 afy. As such, GSEP operations are not expected to exceed the annual CVGB surplus (CEC, 2010).

Based on recent monitoring data, the depth to groundwater in the Bouse Formation ranges from approximately 86.50 feet bgs (300.90 feet amsl) in TW-1 (located upgradient of the site) to 137.18 feet bgs (254.92 feet amsl) in Well 23a (located downgradient of the site). Perched water exists at the Chuckwalla State Prison but is unlikely to occur within the GSEP boundaries as there is no irrigation.

1.4 Monitoring Program Objectives

Groundwater quality monitoring is performed at the GSEP in accordance with COC S&W-20, as described in the CEC's Final Decision. Monitoring will occur semi-annually during planned facility operation in the Second and Fourth Quarter of each year. The primary objectives for the Water Quality Monitoring Program are to: a) identify potential changes in the existing water quality of the proposed water supply resulting from GSEP pumping (if any) in compliance with COC S&W-20; b) establish groundwater quality data in the area at and near the GSEP; and, c) provide a mechanism for early warning to help avoid, minimize, or mitigate significant impacts to groundwater quality.

2.0 GROUNDWATER MONITORING PROGRAM

This section provides an overview of the Groundwater Quality Monitoring Program (GQMP) for the GSEP following construction and during the first five years of facility operation.

2.1 Monitoring Well Network

A brief summary of the monitoring well network for the GSEP required under COC S&W-20 is provided below. Well locations are illustrated in **Figure 3** and are summarized in **Table 1**.

- The onsite wells installed by WorleyParsons for the GSEP include the deep test wells TW-1 and TW-2 and shallow observation well OBS-1;
- Observation well OBS-2 which was installed by WorleyParsons for the GSEP and is monitored through four buried multi-level pressure transducers;
- Existing and functional offsite wells located within two (2) miles of the GSEP and offsite linears, including water supply well 23a (located at CalTrans rest stop at Wiley's Well Exit and Interstate 10) and wells 24-1, 24-2, and 24-3 (anode protection wells owned by the Southern California Gas Company (SoCal Gas) located north of Interstate 10 and west of the CalTrans rest stop);
- Well 14, a water supply well located along Chuckwalla Valley Road south of I-10, which was added to the program at the request of CEC staff;
- Three production wells (Production Well 0, Production Well 1, and Production Well 2, referenced as PW-0, PW-1, and PW-2, respectively) were installed at the GSEP between June and October 2011. Currently, PW-1 is sealed with a metal plate and PW-0 and PW-2 have ports installed to manually gauge water levels;
- Three groundwater monitoring wells (Detection Monitoring Well 1, Detection Monitoring Well 2, and Detection Monitoring Well 3, referenced as DM-1, DM-2, and DM-3, respectively) were installed for the GSEP evaporation ponds in February 2012; and,
- Other water wells within 10 miles of GSEP for which water level data are available from the National Water Information System (NWIS) database maintained by the U.S. Geological Survey (USGS). Data reported for these wells has been inconsistent but is used for general groundwater contouring if data exists within the most recent year.

2.2 Groundwater Monitoring Activities

The Semi-Annual GQMP at the GSEP includes the following scope of work:

- Groundwater level measurement in wells included in the GQMP;
- Semi-annual purging and sampling of wells included in the GQMP;

- Analysis of the groundwater samples for general minerals, major anions and cations, deuterium and oxygen-18;
- Compilation of water level and water quality data for wells located in the CVGB within 10 miles of the GSEP for which data is available from public sources;
- Evaluation of water quality data, including appropriate statistical and graphical methods;
- Evaluation of stable isotope data for potential water sources; and,
- Evaluation of water level data and preparation of a potentiometric surface map.

3.0 FIELD METHODS

Fourth Quarter 2014 groundwater quality monitoring was performed at the GSEP on December 4 and 5, 2014.

3.1 Water Level Measurements

The depth to groundwater in each well was measured using an electric well sounder in general accordance with the American Society for Testing and Materials (ASTM) Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation Well) (ASTM, 1993a). Water level measurements were taken at each well as quickly as practical to best represent the potentiometric surface across the GSEP at a single time. Water level measurements were recorded to the nearest hundredth (0.01) foot.

Water levels were recorded on a water level monitoring field form. A copy of the groundwater level monitoring field form is included in **Appendix A**. The depth to water measurements recorded for wells included in the monitoring program during this event are presented in **Table 2**. A summary of current and historical water level measurements and calculated groundwater elevations for wells included in the GQMP, and additional wells in the CVGB that are located within 10 miles of GSEP, are also presented in **Table 2**.

Water levels were also historically measured using the buried multi-level pressure transducers at OBS-2. OBS-2 consists of an array of four buried Geokon Model 4500S vibrating wire pressure transducers placed at depths of approximately 270, 315, 370, and 400 feet below ground surface. Instantaneous measurements were historically taken from the transducers in OBS-2 using a Geokon Model 800 data logger for the transducers following the manufacturer's instructions. The data from OBS-2 is no longer collected due to the loss of the original transducer configuration file and calibration data. The measurements obtained and water level calculations are included in **Appendix A** and the results are summarized in **Table 2**.

Continuous water level measurements were obtained from well TW-2 from January to February 2011, in well OBS-1 from November 2010 to present, and in well TW-1 from November 2010 to present through self-contained, continuous recording Solinst Levelogger pressure transducers. Continuous water level measurements at TW-2 ended on February 8, 2011. The pressure transducers were programmed and installed in accordance with the manufacturer's instructions. These pressure transducers were lowered into the wells to depths of approximately 10 feet below the water table on braided nylon string secured to the wellhead. They were programmed to record the water pressure values in feet of water above the transducer at 6-hour intervals. In addition, a Solinst Barologger transducer capable of recording changes in barometric pressure was hung in the casing of Well OBS-1 above the water table to assess changes in water level that are due to barometric pressure changes. During each monitoring event, the data is downloaded from the Levelogger and Barologger transducers and manual depth to water measurements are obtained. Using Solinst software, the Levelogger data is calibrated to the manual groundwater elevation measurements and adjusted for changes in barometric pressure using the Barologger data. This data set is then analyzed for seasonal and diurnal trends in the shallower Alluvium aquifer (OBS-1) and the deeper Bouse Formation aquifer (TW-1).

3.2 Groundwater Sampling

Samples from wells TW-1, TW-2, OBS-1, and 23a were collected using the HydraSleeve™ method during the Fourth Quarter 2014 monitoring event. Field parameter measurements were taken from composited excess water within each HydraSleeve™ and recorded in the field sampling record.

Detection monitoring wells DM-1, DM-2, and DM-3 are equipped with dedicated 1.66-inch diameter Geotech® submersible bladder pumps with their intakes set at the middle of wetted screen at approximately 115 feet bgs. The samples from these wells were collected using the low-flow purging method in accordance with the guidelines established in the EPA document *Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures* (Puls and Barcelona, 1996). Field parameters were measured with a Horiba U-52 field instrument that was decontaminated prior to use and between wells and calibrated at the beginning of each day of sampling. Measurements of field parameters (pH, electrical conductivity (EC), temperature, turbidity, and oxidation-reduction potential (ORP)) were taken periodically and at the time of sampling as part of the low flow purge method of sampling. Purging was performed until water quality parameters were stable over three successive readings (+/- 0.2 for pH, +/- 10% for EC, ORP and turbidity). The sampling methods, volume of water purged, pumping rate, field parameter measurements, observations of water turbidity, and odor were recorded in the field sampling record.

Groundwater production wells PW-0, PW-1 and PW-2 are generally equipped with dedicated water production pumps or are capped with a welded steel plate. Pumps may intermittently be turned online or offline depending on the needs of the facility. Consistent with the COC documents for the GSEP, groundwater elevations are only measured in wells that are offline, and groundwater samples are only collected from wells that are online via the well head spigot. The sampling methods, field parameter measurements, and observations of water turbidity and odor were recorded in the field sampling record. During the Fourth Quarter 2014 groundwater monitoring event, well PW-0 was offline, PW-1 was capped and inaccessible, and PW-2 was online.

Field sampling records are included **Appendix A**. The measured field parameters at the end of purging are summarized in **Table 3**.

3.3 Purge Water Disposal

Excess water purged from all wells was temporarily containerized in a sealed 5-gallon bucket for transport and then disposed of in the brine ponds, per the MRP (CRWQCB – CRBR, 2013a).

3.4 Collection of Groundwater Samples

The methodology described within this section is in general accordance with the procedures described in ASTM's Guide for Sampling Groundwater Monitoring Wells (ASTM, 1992). The sampler wore clean, chemically resistant gloves while collecting groundwater samples. Samples

were collected directly from the pump discharge tube or sampling port into laboratory-prepared bottles. Where directed by the laboratory, samples were passed through a new, disposable 0.45 micrometer filter utilizing a peristaltic pump. The purpose of the filter is to remove particulates larger than 0.45 micrometers prior to being placed in bottles. Prior to sampling, the tubing is disconnected from the flow-through cell and the flow rate reduced as low as feasible to minimize volatilization.

3.5 Laboratory Analytical

The groundwater samples collected during the Fourth Quarter 2014 groundwater monitoring event were placed into appropriate laboratory-provided bottles and analyzed for the following parameters, as outlined in the MRP prepared by the CRWQCB – CRBR and required by COC S&W-20:

- Chloride, Sulfate, and Nitrate by EPA Method 300.0;
- Mercury by Standard Method 7470A;
- Total Dissolved Solids by Standard Method 2540C;
- pH by Standard Method 4500H;
- Specific Conductance by Standard Method 2510B;
- HTF by EPA Method 8015B;
- Heavy Metals by EPA Method 200.7 and 200.8;
- Oil & Grease by EPA Method 1664A;
- Oxygen-18 and Deuterium by Isotope Geochemistry.

3.6 Equipment Decontamination

Reusable/non-dedicated equipment (e.g., water level probes, HydraSleeve™ weights) were decontaminated prior to use in each well. Decontamination of reusable equipment consisted of washing with a laboratory-grade non-phosphate detergent (Liquinox or equivalent) and potable water solution followed by a double rinse with demineralized water.

3.7 Sample Handling

Sample containers were labeled before sampling. The samples were immediately placed into an ice cooled chest. Bottles were placed into closable plastic bags and carefully packed to protect them during shipping. Exposure to dust, direct sunlight, high temperature, adverse weather conditions and possible cross-contamination were avoided.

Chain of custody (COC) protocols were followed for the groundwater samples as described in ASTM's Practice for Sampling Chain-of-Custody Procedures (ASTM, 1993b).

The samples were delivered to TestAmerica Laboratories, Inc. located in Irvine, California. TestAmerica is certified by the National Environmental Laboratory Accreditation Program (NELAP) and also holds California Environmental Laboratory Accreditation Program (ELAP)

#2706 and County Sanitation Districts of Los Angeles County (CSDLAC) #10256 accreditations, respectively. The laboratory signed each COC as receiver when the samples were delivered at the laboratory. TestAmerica subcontracts the oxygen-18 and deuterium analyses to Pace Analytical (formerly ZymaX) located in Pittsburgh, Pennsylvania. Pace Analytical is certified by the NELAP and also holds California Department of Health (DOH) certification #04222CA.

3.8 Quality Assurance / Quality Control

The laboratory conducted standard Level 2 Quality Assurance/Quality Control to assure analytical accuracy and precision. This included preparation and analysis of method blanks, surrogate spikes, matrix spike/matrix spike duplicate (MS/MSD) pairs and Laboratory Control Samples, as required, with each analytical batch.

A duplicate sample is collected once per sampling event from a single well and is submitted to the laboratory without any identifiers that associate the sample with a particular well. During the Fourth Quarter 2014 groundwater sampling event, a duplicate sample from well PW-2 was collected and analyzed and is presented in **Table 4** immediately below the regular sample for this well.

In addition to these methods, a set of quality control blank samples is normally collected and put on hold at the laboratory pending analysis of the groundwater samples. These samples include a field blank and trip blank. The field blank bottle set is filled with demineralized water and set adjacent to the work area with the lids off during the work day and is intended to screen out constituents in ambient air. The trip blank bottle set is prepared at the laboratory and is sealed throughout the groundwater sampling event. It is stored inside the sample coolers and is intended to screen out constituents in the coolers. An additional 1-liter unpreserved poly bottle is also collected with each sample set and held for use in additional quality control analysis, if required. The quality control blank samples are only analyzed if there is anomalous data present for the groundwater sampling results.

4.0 RESULTS OF LABORATORY ANALYSES

4.1 General Inorganic Chemical Analysis

This section presents results of inorganic chemical analyses (major cations and anions, and general mineral constituents) performed on groundwater samples collected during the Fourth Quarter 2014 Groundwater Monitoring Event at the GSEP Site.

Current and historical analytical results for all wells sampled in the GQMP are presented in **Table 4**. Historical analytical results for additional wells not included in the GQMP, but within the CVGB, are presented in **Table 5**. Comparison of the current analytical results with prior results indicates they are generally similar for all the wells in the GQMP.

Time series plots of chloride, tds, oxygen-18, and deuterium are presented in **Appendix E** for wells TW-1, TW-2, OBS-1, 23a, DM-1, DM-2, DM-3, PW-0, PW-1, and PW-2. These plots also display best fit, linear trend lines that are useful for tracking temporal trends in concentrations. In general, the graphs display no significant concentration trends. Given that DM-1, DM-2, DM-3, PW-0, PW-1, and PW-2 have a limited set of data points, trend lines would not be representative and thus have not been displayed. Trend lines for these monitoring points will be added once a sufficient data set has been acquired.

In addition to the graphical representation of concentration trends, the results were analyzed using the Mann-Kendall (M-K), non-parametric statistical test to evaluate trends as directed in COC S&W-20, Part E. The M-K test compares the most recent round of groundwater data with the results of historical rounds. The statistical analysis tests whether the trend in the data set is increasing, decreasing, or stable/has no determined trend. The M-K test typically requires a minimum data set of between 4 to 10 values, and M-K tests performed on data sets within this range may not necessarily yield reliable results. The M-K test results are also subject to seasonal variations when there is a limited data set.

For the Fourth Quarter 2014 monitoring event, the Mann-Kendall statistical analysis was applied to wells TW-1, TW-2, OBS-1, 23a, DM-1, DM-2, DM-3, and PW-2. Wells PW-0 and PW-1 have not been analyzed due to an insufficient number of data points. The analysis was run on the same five (5) constituents (calcium, sulfate, chloride, total dissolved solids, and specific conductivity) for each well and trend direction is reported at the 90% confidence interval in **Appendix C**. Additional constituents that are projected to be present in the wastewater discharge in the evaporation ponds, as identified in the WDR (CRWQCB – CRBR, 2013b), either lack sufficient data to be statistically analyzed (Arsenic, Barium, Copper, Nickel, Selenium, and Zinc) or have not been detected above reporting limits to date (Antimony, Cadmium, Chromium, Cobalt, HTF, Lead, and Mercury). The Mann-Kendall statistical analysis will be applied to these constituents once a sufficient number of data points is available. Below is a summary of the Mann-Kendall statistical analysis for the Fourth Quarter 2014 monitoring event:

- TW-1: No increasing trends were found.
- TW-2: An increasing trend was found at 90% confidence for total dissolved solids and specific conductivity. No other increasing trends were found.

- OBS-1: An increasing trend was found at 90% confidence for specific conductivity. No other increasing trends were found.

- 23a: an increasing trend was found at 90% confidence for specific conductivity. No other increasing trends were found.

- DM-1: No increasing trends were found.

- DM-2: An increasing trend was found at 90% confidence for total dissolved solids and specific conductivity. No other increasing trends were found.

- DM-3: An increasing trend was found at 90% confidence for calcium, chloride, and specific conductivity. No other increasing trends were found.

- PW-2: An increasing trend was found at 90% confidence for specific conductivity. No other increasing trends were found.

While the Mann-Kendall software indicates data for DM-2, DM-3, and PW-2 have increasing trends for a number of constituents, the data set used for the analysis is still very limited and long-term trends are still being evaluated. It should be noted that while these trends may be statistically significant for the time period evaluated, they are most likely within the range of natural variation for the analytes considered. Concentration trends in these wells will be further assessed in future monitoring reports.

4.2 Stable Isotope Analysis

Oxygen-18 and deuterium are naturally occurring stable isotopes of oxygen and hydrogen that occur at varying concentrations in all water. The concentration of these heavier isotopes varies in precipitation depending on latitude, elevation and climate (Froehlich and Yurtsever, 1995; Izbicki, Martin and Michel, 1995; Kendall and Coplen, 2001). Precipitation falling at higher elevations, higher latitudes, or cooler climates tends to be depleted in these heavier isotopes. The amount of isotope depletion relative to Vienna Standard Mean Ocean Water (VSMOW) is expressed in delta notation as parts per thousand, or "per mil" (‰). The ratio of oxygen-18 to deuterium has been well established around the world as falling on a straight line called the Global Meteoric Water Line (GMWL). This relationship between oxygen-18 and deuterium is useful for determining the source and history of a water sample. For example, precipitation falling at different elevations or in different climates will plot at different points along the GMWL. Departures from ratios along the GMWL can occur due to evaporation, which tends to leave the remaining water enriched in heavier isotopes (less depleted), due to mixing with waters from other origins, or due to chemical reactions with surrounding materials or the atmosphere (Domenico and Schwartz, 1998).

The oxygen-18 and deuterium content of the water samples collected to date is presented in **Table 4**. A graph of the oxygen-18 and deuterium of the water samples relative to the GMWL is presented in **Appendix D**. The data indicates that groundwater in both the shallow Alluvium aquifer and the deeper Bouse Formation aquifer become increasingly depleted in oxygen-18 and

deuterium relative to VSMOW in the downgradient direction. The data also indicates that the upgradient wells are more depleted in oxygen-18 and deuterium relative to the GMWL than the downgradient wells. This indicates a greater degree of evaporation of the upgradient groundwater compared to the downgradient groundwater, the latter of which having additional sources of precipitation influx from the McCoy, Chuckwalla, and Little Chuckwalla Mountains.

The laboratory analytical results for stable isotopes have not yet been received for the 2014 Groundwater Quality Monitoring Event due to laboratory equipment failure. This data will be presented in an addendum letter once the laboratory issues the final report.

4.3 Quality Assurance/Quality Control

As documented in the attached laboratory reports (see **Appendix B**), all groundwater samples collected from network wells during the Fourth Quarter 2014 Monitoring Event at the GSEP were received by the laboratory in good condition, at acceptable temperatures, and within the specified holding times. The submitted samples were analyzed using the specified methods and holding times.

None of the analytes were detected in the laboratory blank samples.

The nitrate analytes for groundwater samples OBS-1 and TW-2 were analyzed outside the 48-hour hold time due to laboratory equipment malfunction.

Matrix spike/matrix spike duplicate (MS/MSD) and laboratory control sample (LCS) recoveries for each method and analytical batch were within the laboratory's established control limits, except as noted below:

- The LCS for 1,1-Biphenyl for batch 224082 was recovered 1% below the lower control limit. The associated duplicate (LCSD) recovery was within the control limits. The associated samples were re-extracted past the 7-day hold time and the LCS/LCSD were within the control limits.

- MS/MSD was not run for batch 224082 and 224621 for Method 8015B due to insufficient volume; instead, a duplicate of the LCS was analyzed to provide precision data for these batches.

- MS/MSD was not run for batch 224694 and 224727 for Method 1664A due to insufficient volume; instead, a duplicate of the LCS was analyzed to provide precision data for these batches.

5.0 ANNUAL SUMMARY

Groundwater analytical data for calendar year 2014 are generally in accordance with historical analytical data. The Mann-Kendall test typically requires a minimum data set of between 4 to 10 values, and M-K tests performed on data sets within this range may not necessarily yield reliable results. The M-K test results are also subject to seasonal variations when there is a limited data set. Historically, there has not been a large enough analytical data set to analyze all the groundwater monitoring wells using the M-K statistical analysis software. The analytical data obtained during the fourth quarter of 2014 have made statistical analysis possible for DM-1, DM-2, DM-3, and PW-2, though the resultant trend analyses are questionable due to the limited data set. A larger data set will be required to properly determine the long-term trends in these wells.

The following is a list of the analytes that have displayed increasing trends during the 2014 calendar year:

- TW-1 sulfate displayed an increasing trend during the second quarter of 2014 but remained within the bounds of the historical high and low analytical values;
- TW-2 total dissolved solids displayed an increasing trend during the second and fourth quarter of 2014 but either remained within the bounds of the historical high and low analytical values, or remained within 5% of the same;
- TW-2 specific conductivity displayed an increasing trend during the second and fourth quarter of 2014 but remained within the bounds of the historical high and low analytical values;
- OBS-1 specific conductivity displayed an increasing trend during the second and fourth quarter of 2014 but remained within the bounds of the historical high and low analytical values;
- 23a sulfate displayed an increasing trend during the second quarter of 2014 but remained within 10% of historical high and low analytical values;
- 23a specific conductivity displayed an increasing trend in the fourth quarter of 2014 but remained within the bounds of the historical high and low analytical values;
- DM-2 specific conductivity displayed an increasing trend during the fourth quarter of 2014 but remained within the bounds of the historical high and low analytical values, and has only been statistically analyzed once;
- DM-3 calcium displayed an increasing trend during the fourth quarter of 2014 but remained within 5% of historical high and low analytical values, and has only been statistically analyzed once;
- DM-3 chloride displayed an increasing trend during the fourth quarter of 2014 but remained within the bounds of the historical high and low analytical values, and has only been statistically analyzed once;

- DM-3 specific conductivity displayed an increasing trend during the fourth quarter of 2014 but remained within 5% of historical high and low analytical values, and has only been statistically analyzed once; and,
- PW-2 specific conductivity displayed an increasing trend during the fourth quarter of 2014 but remained within the bounds of the historical high and low analytical values, and has only been statistically analyzed once.

6.0 CONCLUSIONS

Based on the available data, it does not appear that the GSEP has negatively impacted the groundwater quality in the CVGB or within a 10-mile radius of the GSEP facility to date. All available groundwater quality data is generally stable with minor trend fluctuations that are normal for a small data set. It is anticipated that these trends will level out as more data is acquired and a more representative baseline is developed. Stable isotope data is consistent with historical and baseline data and is also consistent with the hydrogeology of the region.

7.0 REFERENCES

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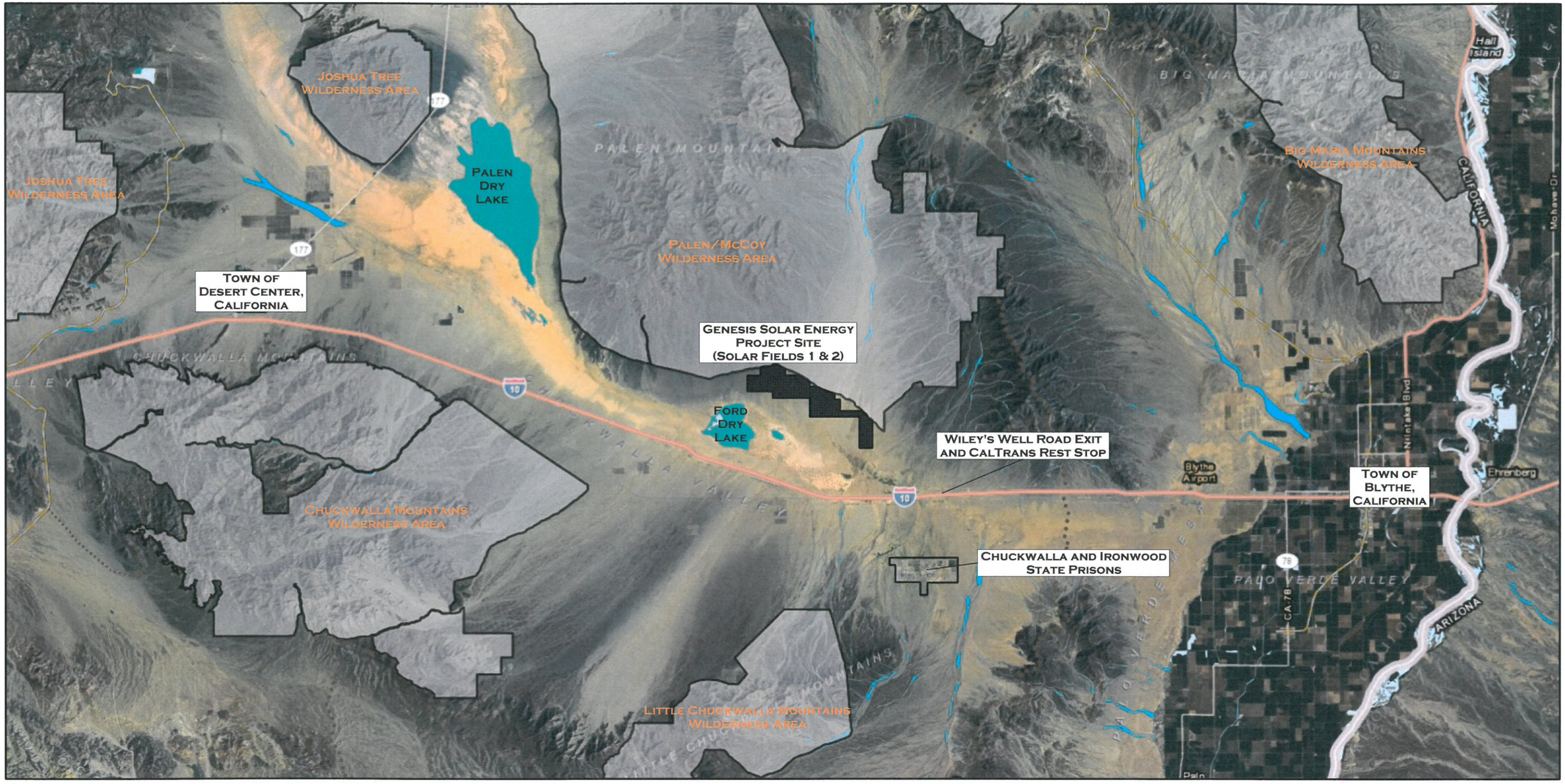
FIGURES



Source: ESRI, DigitalGlobe, GeoEye, USDA, USGS. All locations are approximate.

Legend

- Project Site
- Wilderness Area

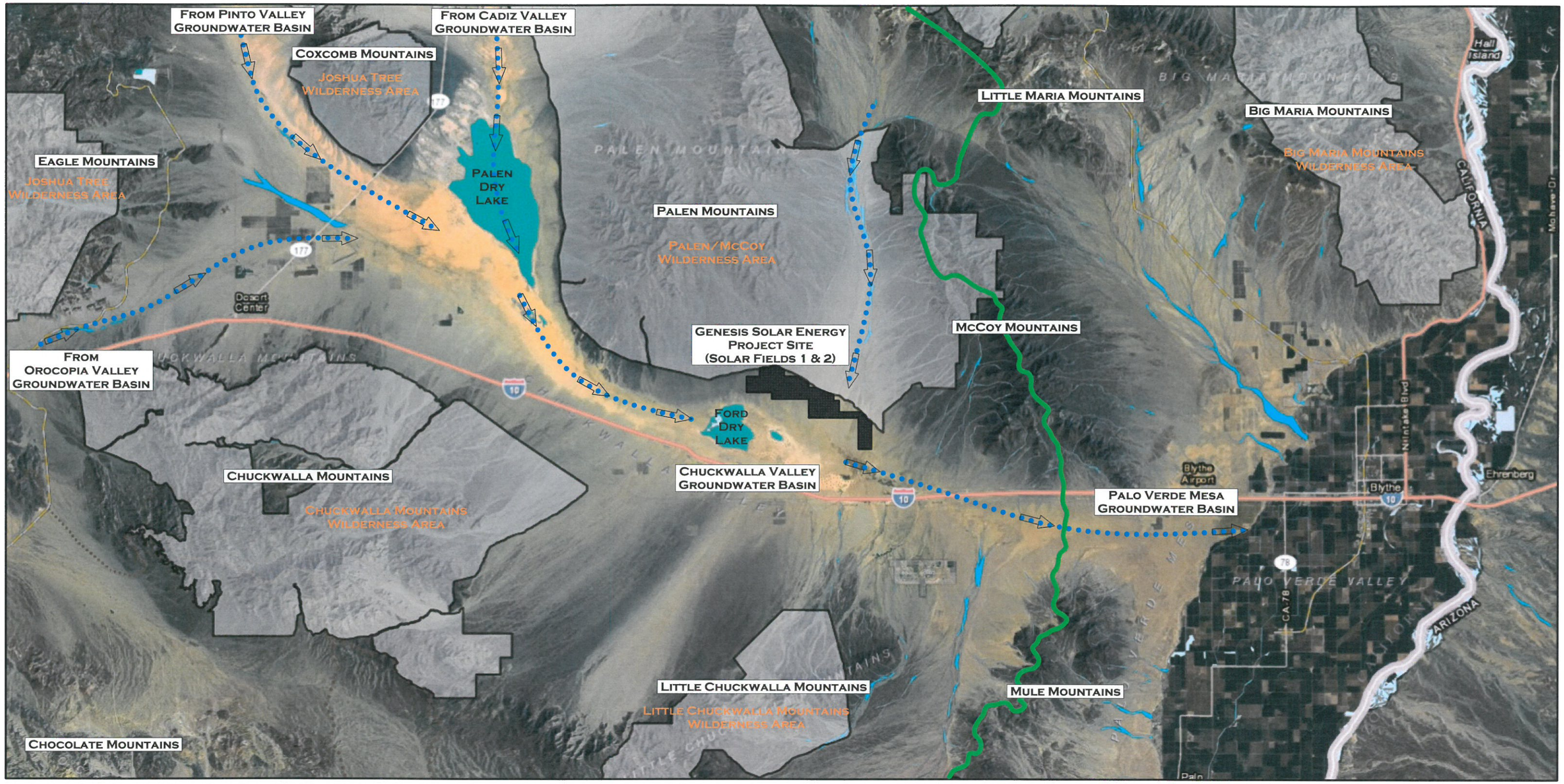
0 1 2 3 4 8 12

Approximate Scale:
1 Inch = 4 Miles

N

679

NORTHSTAR Environmental Remediation	Project Name: Genesis Solar Energy Project	Project Number: 196-004-01
	Project Address: 11995 Wiley's Well Rd, Blythe, CA	Drawn/Checked By: AWB/CGK
	Engineering Firm: Northstar Environmental Remediation	Date: 01/26/2015
	Address of Firm: 26225 Enterprise Ct, Lake Forest, CA	Version Number: Version 01
Phone: 949.580.2800	Figure Title: Project Location	Figure Number: Figure 1



Source: ESRI, DigitalGlobe, GeoEye, USDA, USGS; Hydrogeologic Flow Adapted From Steinemann, 1989. All locations are approximate.

Legend

- Project Site
- Wilderness Area
- Chuckwalla Valley Groundwater Basin Eastern Boundary
- Hydrogeologic Water Flow Direction

0 1 2 3 4 8 12

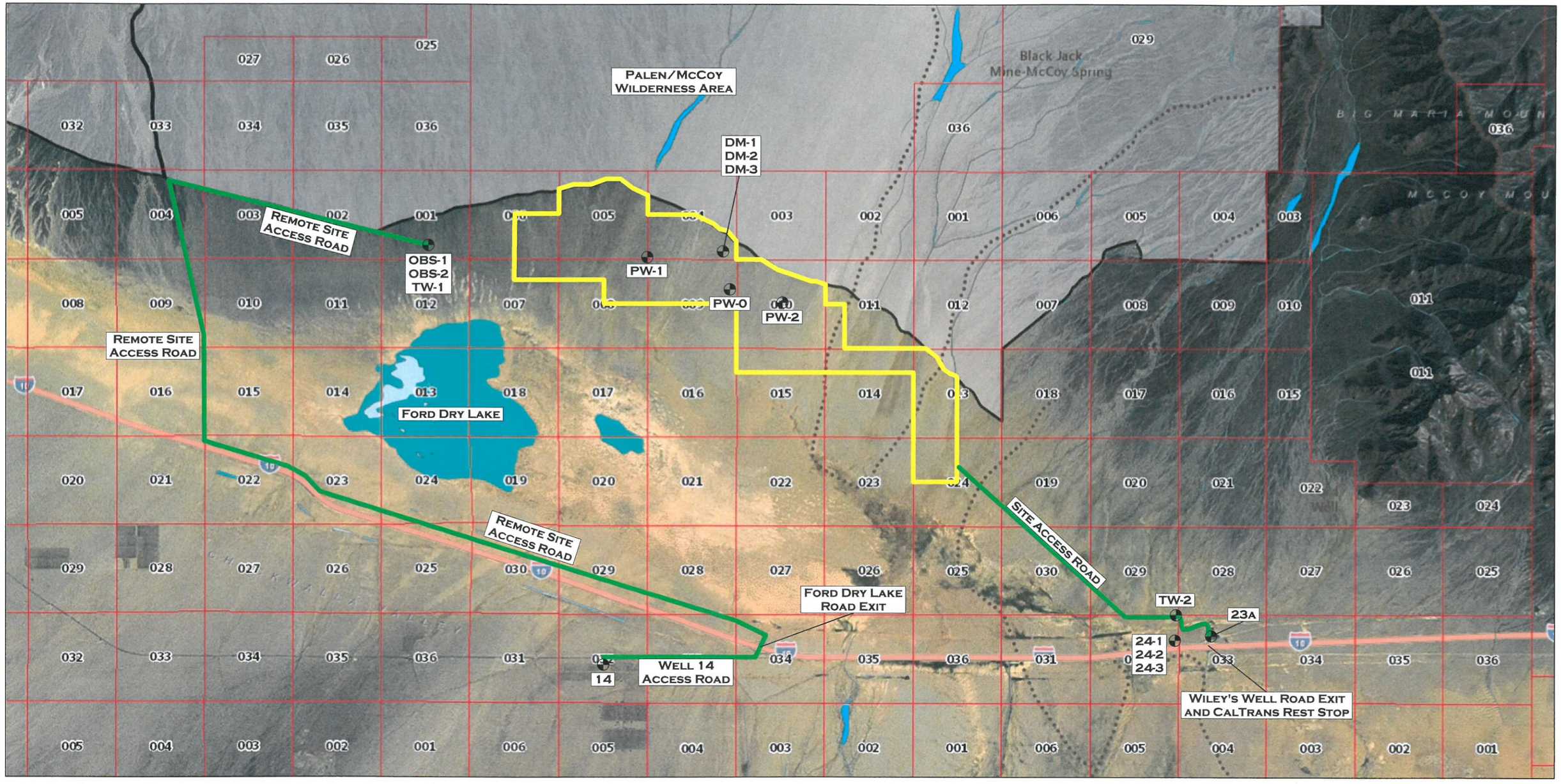
Approximate Scale:
1 Inch = 4 Miles

N

NORTHSTAR ENVIRONMENTAL REMEDIATION

Phone
949.580.2800

Project Name: Genesis Solar Energy Project	Project Number: 196-004-01
Project Address: 11995 Wiley's Well Rd, Blythe, CA	Drawn/Checked By: AWB/CGK
Engineering Firm: Northstar Environmental Remediation	Date: 01/26/2015
Address of Firm: 26225 Enterprise Ct, Lake Forest, CA	Version Number: Version 01
Figure Title: Hydrogeologic Setting	Figure Number: Figure 2



Source: ESRI, DigitalGlobe, GeoEye, USDA, USGS. All locations are approximate.

Legend

- Active Monitoring Well
- Project Site Boundary
- Access Roads
- Wilderness Area
- Drainage Divide

0 1 2 3

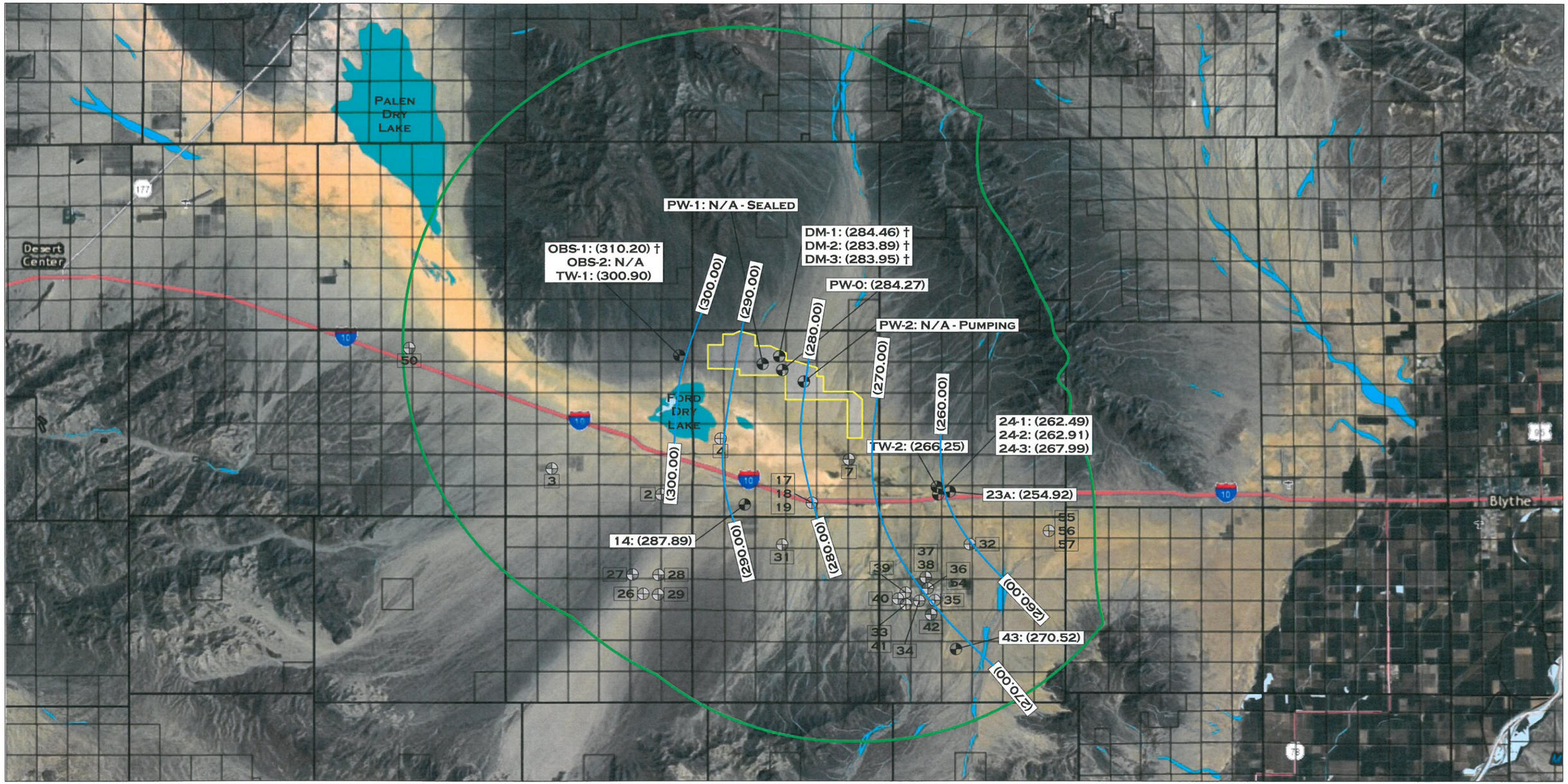
Approximate Scale:
1 Inch = 1 Mile

N

NORTHSTAR ENVIRONMENTAL REMEDIATION

Phone: 949.580.2800

Project Name: Genesis Solar Energy Project	Project Number: 196-004-01
Project Address: 11995 Wiley's Well Rd, Blythe, CA	Drawn/Checked By: AWB/CGK
Engineering Firm: Northstar Environmental Remediation	Date: 01/26/2015
Address of Firm: 26225 Enterprise Ct, Lake Forest, CA	Version Number: Version 01
Figure Title: Groundwater Monitoring Area and Well Locations	Figure Number: Figure 3



Source: ESRI, DigitalGlobe, GeoEye, USDA, USGS. All locations are approximate.

Legend

- Active Monitoring Well
- Inactive Monitoring Well
- Genesis Solar Energy Project Boundary
- 10 Mile Groundwater Basin Site Buffer
- Groundwater Elevation Contour
- (300.00) Groundwater Elevation (ft amsl)
- † Groundwater elevation is in Alluvium aquifer and not used for contouring

0 3.2 6.4 9.6

Approximate Scale:
1 Inch = 3.2 Miles

N

NORTHSTAR ENVIRONMENTAL REMEDIATION

Phone: 949.580.2800

Project Name: Genesis Solar Energy Project	Project Number: 196-004-01
Project Address: 11995 Wiley's Well Rd, Blythe, CA	Drawn/Checked By: AWB/CGK
Engineering Firm: Northstar Environmental Remediation	Date: 01/26/2015
Address of Firm: 26225 Enterprise Ct, Lake Forest, CA	Version Number: Version 01
Figure Title: 4th Quarter 2014 Bouse Formation Groundwater Elevation Contour Map	Figure Number: Figure 4

TABLES

Table 1
INVENTORY OF WELLS IN THE GROUNDWATER MONITORING AREA
Genesis Solar Energy Project, Riverside County, California

Well ID	State Well Number	Other Name	Owner	Installation Date	Use/Status	Well Casing Diameter (inches)	Approximate Ground Surface Elevation (feet amsl)	Top Of Casing Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Geologic Unit
WELLS INCLUDED IN THE GROUNDWATER MONITORING PROGRAM											
OBS-1 [1]	--	Shallow Observation Well 1	Genesis Solar, LLC	5/9/2009	Monitoring / Active	5	385.857	388.3	160	100 to 150	Alluvium
OBS-2-270 [1,2]	--	Nested Observation Well 2	Genesis Solar, LLC	7/2/2009	Buried Transducer / Active	--	385.617	388.14	270	265 to 275	Bouse Formation
OBS-2-315 [1,2]	--	Nested Observation Well 2	Genesis Solar, LLC	7/2/2009	Buried Transducer / Active	--	385.617	388.14	315	304 to 327	Bouse Formation
OBS-2-370 [1,2]	--	Nested Observation Well 2	Genesis Solar, LLC	7/2/2009	Buried Transducer / Active	--	385.617	388.14	370	359 to 374	Bouse Formation
OBS-2-400 [1,2]	--	Nested Observation Well 2	Genesis Solar, LLC	7/2/2009	Buried Transducer / Active	--	385.617	388.14	400	387 to 418	Bouse Formation
TW-1 [1]	--	Test Well 1	Genesis Solar, LLC	5/22/2009	Monitoring / Active	5	385.91	387.4	565	340 to 564	Bouse Formation
TW-2 [1]	--	Test Well 2	Genesis Solar, LLC	12/9/2009	Monitoring and Dust Control / Active	5	390.003	393.47	1,841	793-873, 1042-1123, 1439-1601, 1739-1820	Bouse Formation / Fanglomerate
PW-0	--	Production Well 0	Genesis Solar, LLC	7/9/2011	Production Well	10	--	--	1,251	882-1002, 1226-1251	Bouse Formation / Fanglomerate
PW-1	--	Production Well 1	Genesis Solar, LLC	8/14/2011	Production Well	10	--	--	1,360	930-950, 990-1000, 1040-1100, 1120-1140, 1160-1200, 1260-1360	Bouse Formation / Fanglomerate
PW-2	--	Production Well 2	Genesis Solar, LLC	9/15/2011	Production Well	10	--	--	1,125	770-930, 980-1120	Bouse Formation
DM-1	--	Detection Monitoring Well 1	Genesis Solar, LLC	2/22/2012	Monitoring / Active	4	--	391.49	120	100 to 120	Alluvium
DM-2	--	Detection Monitoring Well 2	Genesis Solar, LLC	2/21/2012	Monitoring / Active	4	--	391.32	120	100 to 120	Alluvium
DM-3	--	Detection Monitoring Well 3	Genesis Solar, LLC	2/20/2012	Monitoring / Active	4	--	388.34	120	100 to 120	Alluvium
14 [1,3]	6S/19E-32	--	Lorne Froats (AZCA Drilling)	5/1/1991	Domestic/ Irrigation/ Dust Control	12 to 10	393.548	388.14	982 (obstructed at 450)	890 to 940	Fanglomerate
23a [1,4]	6S/20E-33C1	CalTrans Well @ WWRS	CalTrans	Unknown	Water Supply / Inactive	8	397.28	392.1	1,825	1800-1825	Fanglomerate
24-1 [1,5]	6S/20E-33	SCG Anode Well	So Cal Gas	4/29/1989	Anode / Inactive	2	389.3	389.4	435	235 to 435	Alluvium/Bouse Formation
24-2 [5]	6S/20E-33	SCG Anode Well	So Cal Gas	Unknown	Anode / Inactive	1	389.09	388.86	Obstructed at 373 feet	235 to 435	Alluvium/Bouse Formation
24-3 [5]	6S/20E-33	SCG Anode Well	So Cal Gas	Unknown	Anode / Inactive	1	388.2	392.04	Unknown	--	Alluvium/Bouse Formation
ADDITIONAL WELLS IN THE CHUCKWALLA VALLEY GROUNDWATER BASIN WITHIN 10 MILES OF THE SITE FOR WHICH MONITORING DATA IS AVAILABLE											
2	6S/18E-36E1	- -	CA Jojoba Research and Development	12/18/1981	Irrigation	10 to 6	424	--	940	250 to 290 770 to 810	Alluvium/Bouse Formation
3	6S/18E-29	Siddall Well	Agra Energy Corp.	2/26/1982	Irrigation	20 to 8	498	--	957	560 to 940	Bouse Formation
4	6S/19E-19J1	--	--	--	Unused	12	354	--	--	--	--
9	6S/19E-28R1	--	--	--	Unused	--	354	--	--	--	--
15	6S/19E-32K1	--		--	--	12.5	390.2	--	Obstructed at 526 feet	--	Bouse Formation
16	6S/19E-32K2	--		--	--	10.5	390	--	Obstructed at 297 feet	--	Bouse Formation
22	6S/20E-33L1	--	--	--	Unknown / Destroyed	--	--	--	--	--	Bouse Formation
23	6S/20E-33C1	--	--	--	Unknown / Destroyed	10	392	--	400	--	--
26	7S/18E-14F1	--	U.S. AgriResearch and Development	12/26/1982	Irrigation	16 to 10	562.58	--	1,000 (obstructed at 952 feet)	410 to 630 750 to 770 810 to 870	Alluvium/Bouse Formation
27	7S/18E-11N1	--	--	--	Unused	16	555	--	486.4	--	Bouse Formation
28	7S/18E-11R1	--	--	--	Unused	16	520	--	779.4	--	Bouse Formation
29	7S/18E-14H1	--	U.S. AgriResearch and Development	1/16/1983	Irrigation	10	545.91	--	985 (obstructed at 950 feet)	420 to 460, 500 to 520, 540 to 580, 620-820, 840-990	Bouse Formation
31	7S/19E-4R1	Teaque Well	--	--	Unused	12	423.89	--	242.2	--	Alluvium
32	7S/20E-4R1	Vada McBride	--	--	Unused	16	418	--	315.7	--	Bouse Formation
33	7S/20E-16M1	--	CA Department of Corrections	--	--	30 to 16	456.02	--	1,200	690 to 1190	Bouse Formation/ Fanglomerate
34	7S/20E-17L1	WP-4	CA Department of Corrections	9/8/1992	Public Water Supply	24	458.3	--	1,200	690 to 1190	Bouse Formation/ Fanglomerate
35	7S/20E-17K1	--	CA Department of Corrections	12/20/1989	--	30 to 16	456.48	--	1,200	690 to 1190	Bouse Formation/ Fanglomerate
36 [6]	7S/20E-17G1	--	CA Department of Corrections	12/30/1987	Industrial	30 to 16 to 10	443.5	--	1,200	690 to 1190	Bouse Formation/ Fanglomerate
37 [6]	7S/20E-17C1	78, North Well	CA Department of Corrections	7/28/1981	Irrigation	14-10	433.09	--	1,050	750 to 1,050	Bouse Formation/ Fanglomerate
39	7S/20E-18H1	--	CA Department of Corrections	--	--	--	442.9	--	1,139	--	Bouse Formation/ Fanglomerate
40	7S/20E-18K1	WP-6	CA Department of Corrections	11/4/1992	Public Water Supply	15 to 10	449.4	--	1,200	690 to 1,200	Bouse Formation/ Fanglomerate
41	7S/20E-18R1	WP-5	CA Department of Corrections	10/24/1992	Public Water Supply	13.5 to 10	453.6	--	1,160	--	Fanglomerate
42	7S/20E-20B1	79 / Observation Well 3	--	6/4/1905	Irrigation	16 to 12	470	--	1,100	738 to 1,100	Bouse Formation/ Fanglomerate

Table 1
INVENTORY OF WELLS IN THE GROUNDWATER MONITORING AREA
Genesis Solar Energy Project, Riverside County, California

Well ID	State Well Number	Other Name	Owner	Installation Date	Use/Status	Well Casing Diameter (inches)	Approximate Ground Surface Elevation (feet amsl)	Top Of Casing Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Geologic Unit
43	7S/20E-28C1	7S/20E-28F1/80	Jojoba Inc.	3/15/1982	Irrigation	10 to 8	505.6	--	830	510 to 600 and 680 to 780	Bouse Formation
44	7S/20E-28C2	--	Jojoba Southwest	11/30/1989	Irrigation	16 to 12	505.3	--	1,100	700 to 1,100	Bouse Formation/ Fanglomerate
47	8S/20E-10N2	60	--	1984	--	4	621	--	872	500 to 580, 620 to 640, 710 to 850	Bouse Formation
50	6S/17E-3M1	--	--	--	--	--	566	--	818	--	Bouse Formation
54	8S/20E-28N1	--	--	--	--	--	654.5	--	500	--	Bouse Formation
55	7S/20E-1M1	CWV1#1	USGS	1/23/2012	Exploratory	2	415.4	--	993	973 to 993	Bouse Formation
56	7S/20E-1M2	CWV1#2	USGS	1/23/2012	Exploratory	2	415.4	--	505	485 to 505	Pinto Formation
57	7S/20E-1M3	CWV1#3	USGS	1/23/2012	Exploratory	2	415.4	--	230	210 to 230	Alluvium
ADDITIONAL WELLS IN THE CHUCKWALLA VALLEY GROUNDWATER BASIN WITHIN 10 MILES OF THE SITE FOR WHICH MONITORING DATA ARE NOT AVAILABLE											
1	5S/20E-16M1	McCoy Spring and DWR-17	--	--	Unused	--	889	--	--	--	--
5	6S/19E-25P1	--	--	--	Unknown / Destroyed	10	360	--	85.7	--	Alluvium
6	6S/19E-25R1	--	--	--	Unknown / Destroyed	10	360	--	61.9	--	Alluvium
7	6S/19E-25	Boreholes 1A, 1B, 1C	USGS	1978	Exploratory Borehole / Abandoned	--	358	--	--	--	--
8	6S/19E-26Z1	--	--	--	Unknown / Destroyed	--	--	--	--	--	--
10	6S/19E-29E1	--	--	--	Destroyed/ Collapsed	6	377	--	Obstructed at 19.7	--	--
11	6S/19E-30H1	--	--	--	Destroyed	6	370	--	28.7	--	Alluvium
12	6S/19E-31Z1	--	--	--	Destroyed	--	--	--	--	--	--
13	6S/19E-32	--	Jacado Agri Corp.	6/27/1982	Destroyed	22 to 18 to 12	392	--	732	307 to 327 365 to 732	Bouse Formation
17	6S/19E-33A1	Hopkins Well and DWR-33X1	--	1911	Destroyed	12 to 8	361	--	1,200 (obstructed at 267 feet)	1,175 to 1,200	Fanglomerate
18	6S/19E-34	--	So Cal Gas	4/29/1989	Anode	1	368	--	400	200 to 400	Alluvium/Bouse Formation
19	6S/19E-34	--	So Cal Gas	7/15/1981	Other	--	369	--	274	0 to 274	Alluvium/Bouse Formation
20	6S/19E-36A1	--	--	--	Destroyed	10	365	--	64.8	--	Alluvium
21	6S/20E-30Z1	Ford Well	--	--	Stock / Destroyed	10	--	--	--	--	--
25	6S/20E-33	--	So Cal Gas	7/20/1981	Monitoring / Presumed Destroyed	1	397	--	278	0 to 278	Alluvium/Bouse Formation
30	7S/18E-14H1	--	--	--	Destroyed	6	546	--	123.9	--	Alluvium
38	7/20E-17C2	Observation Well 1	CA Department of Corrections	6/20/1986	Monitoring / Presumed Destroyed	1 1/4	433	--	1,040	795 to 815 and 995 to 1,015	Bouse Formation/ Fanglomerate
45	7S/20E-28	--	Chuckwalla Jojoba inc Great American Securities	6/6/1989	Test Hole/Abandoned	--	505	--	825	--	--
46	7S/20E-27L1	--	--	--	Destroyed	8	517	--	53.6	- -	Alluvium

Notes:
-- = information not available or unknown
amsl = above mean sea level
bgs = below ground surface
1. Wells were surveyed on February 8 & 9, 2011. Ground surface elevation survey measurement taken at top of concrete pad.
2. Nested pressure transducer buried in place.
3. Well is obstructed at 450 feet and therefore not suitable for groundwater quality monitoring. Used for groundwater level monitoring only.
4. Well completion and screened interval determined by video log performed on 11/09/2010
5. Anode well completed with Coke Breeze and not considered to be suitable for water quality sampling and used for groundwater level monitoring program only.
6. No access port for groundwater level monitoring; used for groundwater quality monitoring only.

Table 2
GROUNDWATER LEVEL MEASUREMENTS
Genesis Solar Energy Project, Riverside County, California

Well ID	Date	Source	Top of Casing Elevation (feet amsl) [1]	Depth to Water (feet below TOC) [2]	Groundwater Elevation (feet amsl)	Comments / Use
WELLS INCLUDED IN THE GROUNDWATER LEVEL MONITORING PROGRAM						
TW-1	5/23/2009	WorleyParsons	387.40	89.75	297.65	Monitoring
	11/10/2010	WorleyParsons		86.65	300.75	Monitoring
	2/8/2011	WorleyParsons		86.67	300.73	Monitoring
	6/8/2011	WorleyParsons		86.58	300.82	Monitoring
	9/25/2011	WorleyParsons		86.48	300.92	Monitoring
	12/13/2011	WorleyParsons		86.25	301.15	Monitoring
	2/21/2012	WorleyParsons		86.58	300.82	Monitoring
	5/23/2012	WorleyParsons		86.43	300.97	Monitoring
	7/26/2012	WorleyParsons		86.47	300.93	Monitoring
	10/23/2012	WorleyParsons		86.43	300.97	Monitoring
	3/29/2013	WorleyParsons		86.46	300.94	Monitoring
	6/20/2013	WorleyParsons		86.43	300.97	Monitoring
	8/13/2013	WorleyParsons		86.43	300.97	Monitoring
	11/14/2013	WorleyParsons		86.53	300.87	Monitoring
	2/26/2014	WorleyParsons		86.49	300.91	Monitoring
	5/20/2014	Northstar		86.47	300.93	Monitoring
	8/8/2014	Northstar		86.46	300.94	Monitoring
	12/4/2014	Northstar		86.50	300.90	Monitoring
TW-2	1/5/2010	WorleyParsons	393.47	132.37	261.10	Monitoring
	11/9/2010	WorleyParsons		127.09	266.38	Monitoring
	1/19/2011	WorleyParsons		125.68	267.79	Monitoring
	2/8/2011	WorleyParsons		Pumping		Pumping
	6/9/2011	WorleyParsons		126.46	267.01	Monitoring
	9/26/2011	WorleyParsons		128.04	265.43	Monitoring
	12/14/2011	WorleyParsons		127.75	265.72	Monitoring
	2/21/2012	WorleyParsons		127.85	265.62	Monitoring
	5/24/2012	WorleyParsons		127.88	265.59	Monitoring
	7/26/2012	WorleyParsons		128.09	265.38	Monitoring
	10/23/2012	WorleyParsons		127.87	265.60	Monitoring
	3/28/2013	WorleyParsons		127.22	266.25	Monitoring
	6/20/2013	WorleyParsons		127.52	265.95	Monitoring
	8/13/2013	WorleyParsons		127.88	265.59	Monitoring
	11/12/2013	WorleyParsons		128.07	265.40	Monitoring
	2/26/2014	WorleyParsons		127.00	266.47	Monitoring
	5/20/2014	Northstar		127.18	266.29	Monitoring
	8/8/2014	Northstar		127.40	266.07	Monitoring
	12/4/2014	Northstar		127.22	266.25	Monitoring
OBS-1	5/25/2009	WorleyParsons	388.30	79.22	309.08	Monitoring
	11/10/2010	WorleyParsons		77.67	310.63	Monitoring
	2/8/2011	WorleyParsons		77.98	310.32	Monitoring
	6/8/2011	WorleyParsons		77.99	310.31	Monitoring
	9/25/2011	WorleyParsons		78.08	310.22	Monitoring
	12/13/2011	WorleyParsons		78.29	310.01	Monitoring
	2/21/2012	WorleyParsons		78.17	310.13	Monitoring
	5/23/2012	WorleyParsons		78.14	310.16	Monitoring
	7/26/2012	WorleyParsons		78.15	310.15	Monitoring
	10/23/2012	WorleyParsons		78.09	310.21	Monitoring
	3/29/2013	WorleyParsons		78.06	310.24	Monitoring
	6/20/2013	WorleyParsons		78.05	310.25	Monitoring
	8/13/2013	WorleyParsons		78.07	310.23	Monitoring
	11/14/2013	WorleyParsons		78.15	310.15	Monitoring
	2/26/2014	WorleyParsons		78.12	310.18	Monitoring
	5/20/2014	Northstar		78.06	310.24	Monitoring
	8/8/2014	Northstar		78.05	310.25	Monitoring
	12/4/2014	Northstar		78.10	310.20	Monitoring
OBS-2-270 [7]	7/9/2009	WorleyParsons	388.14	78.75	309.39	Monitoring
	11/10/2010	WorleyParsons		80.56	307.58	Monitoring
	2/8/2011	WorleyParsons		80.61	307.53	Monitoring
	2/8/2011	WorleyParsons		80.68	307.46	Monitoring
	9/25/2011	WorleyParsons		80.77	307.37	Monitoring
	12/14/2011	WorleyParsons		NM [3]		Monitoring
	2/21/2012	WorleyParsons		80.47	307.67	Monitoring
	5/25/2012	WorleyParsons		81.28	306.86	Monitoring
	7/26/2012	WorleyParsons		81.00	307.14	Monitoring
	10/23/2012	WorleyParsons		81.01	307.13	Monitoring
	3/29/2013	WorleyParsons		80.99	307.15	Monitoring

Table 2
GROUNDWATER LEVEL MEASUREMENTS
Genesis Solar Energy Project, Riverside County, California

Well ID	Date	Source	Top of Casing Elevation (feet amsl) [1]	Depth to Water (feet below TOC) [2]	Groundwater Elevation (feet amsl)	Comments / Use
	6/20/2013	WorleyParsons		NM[3]		Monitoring
	8/13/2013	WorleyParsons		NM[3]		Monitoring
	11/12/2013	WorleyParsons		81.24	306.90	Monitoring
	2/26/2014	WorleyParsons		81.48	306.66	Monitoring
	7/9/2009	WorleyParsons		80.89	307.25	Monitoring
	11/10/2010	WorleyParsons		82.51	305.63	Monitoring
	2/8/2011	WorleyParsons		82.61	305.53	Monitoring
	2/8/2011	WorleyParsons		82.83	305.31	Monitoring
	9/25/2011	WorleyParsons		83.03	305.11	Monitoring
	12/14/2011	WorleyParsons		NM3		Monitoring
	2/21/2012	WorleyParsons		82.81	305.33	Monitoring
OBS-2-315 [7]	5/25/2012	WorleyParsons	388.14	NM[3]		Monitoring
	7/26/2012	WorleyParsons		83.38	304.76	Monitoring
	10/23/2012	WorleyParsons		83.43	304.71	Monitoring
	3/29/2013	WorleyParsons		83.45	304.69	Monitoring
	6/20/2013	WorleyParsons		NM[3]		Monitoring
	8/13/2013	WorleyParsons		NM[3]		Monitoring
	11/12/2013	WorleyParsons		83.74	304.40	Monitoring
	2/26/2014	WorleyParsons		83.96	304.18	Monitoring
	7/9/2009	WorleyParsons		82.46	305.68	Monitoring
	11/10/2010	WorleyParsons		84.60	303.54	Monitoring
	2/8/2011	WorleyParsons		85.01	303.13	Monitoring
	9/25/2011	WorleyParsons		85.24	302.90	Monitoring
	12/14/2011	WorleyParsons		NM[3]		Monitoring
	2/21/2012	WorleyParsons		85.05	303.09	Monitoring
	5/25/2012	WorleyParsons		85.84	302.30	Monitoring
OBS-2-370 [7]	7/26/2012	WorleyParsons	388.14	85.64	302.50	Monitoring
	10/23/2012	WorleyParsons		85.70	302.44	Monitoring
	3/29/2013	WorleyParsons		85.75	302.39	Monitoring
	6/20/2013	WorleyParsons		NM[3]		Monitoring
	8/13/2013	WorleyParsons		NM[3]		Monitoring
	11/12/2013	WorleyParsons		86.05	302.09	Monitoring
	2/26/2014	WorleyParsons		86.27	301.87	Monitoring
	7/9/2009	WorleyParsons		86.26	301.88	Monitoring
	11/10/2010	WorleyParsons		87.34	300.80	Monitoring
	2/8/2011	WorleyParsons		87.41	300.73	Monitoring
	2/8/2011	WorleyParsons		87.57	300.57	Monitoring
	9/25/2011	WorleyParsons		87.73	300.41	Monitoring
	12/14/2011	WorleyParsons		NM[3]		Monitoring
	2/21/2012	WorleyParsons		87.47	300.67	Monitoring
	5/25/2012	WorleyParsons		88.20	299.94	Monitoring
OBS-2-400 [7]	7/26/2012	WorleyParsons	388.14	87.96	300.18	Monitoring
	10/23/2012	WorleyParsons		87.97	300.17	Monitoring
	3/29/2013	WorleyParsons		88.20	299.94	Monitoring
	6/20/2013	WorleyParsons		NM[3]		Monitoring
	8/13/2013	WorleyParsons		NM[3]		Monitoring
	11/12/2013	WorleyParsons		88.12	300.02	Monitoring
	2/26/2014	WorleyParsons		88.31	299.83	Monitoring
	5/1/1991	DWR Well Records		109.71	278.43	Domestic / Irrigation / Dust Control
	2/8/2011	WorleyParsons		77.98	310.16	Monitoring
	6/8/2011	WorleyParsons		100.98	287.16	Monitoring
	9/26/2011	WorleyParsons		100.65	287.49	Monitoring
	12/14/2011	WorleyParsons		100.87	287.27	Monitoring
	2/21/2012	WorleyParsons		100.85	287.29	Monitoring
	5/24/2012	WorleyParsons		100.70	287.44	Monitoring
	7/26/2012	WorleyParsons		100.72	287.42	Monitoring
14	10/23/2012	WorleyParsons	388.14	100.66	287.48	Monitoring
	3/28/2013	WorleyParsons		100.49	287.65	Monitoring
	6/20/2013	WorleyParsons		100.46	287.68	Monitoring
	8/13/2013	WorleyParsons		100.46	287.68	Monitoring
	11/12/2013	WorleyParsons		NM[5]		Monitoring
	2/26/2014	WorleyParsons		100.39	287.75	Monitoring
	5/20/2014	Northstar		100.35	287.79	Monitoring
	8/8/2014	Northstar		100.26	287.88	Monitoring

Table 2
GROUNDWATER LEVEL MEASUREMENTS
Genesis Solar Energy Project, Riverside County, California

Well ID	Date	Source	Top of Casing Elevation (feet amsl) [1]	Depth to Water (feet below TOC) [2]	Groundwater Elevation (feet amsl)	Comments / Use
	12/4/2014	Northstar		100.25	287.89	Monitoring
23a	11/11/2010	WorleyParsons	392.1	138.05	254.05	Monitoring
	2/8/2011	WorleyParsons		137.12	254.98	Monitoring
	6/7/2011	WorleyParsons		137.58	254.52	Monitoring
	9/26/2011	WorleyParsons		138.01	254.09	Monitoring
	12/14/2011	WorleyParsons		138.88	253.22	Monitoring
	2/22/2012	WorleyParsons		137.70	254.40	Monitoring
	5/24/2012	WorleyParsons		137.74	254.36	Monitoring
	7/26/2012	WorleyParsons		137.76	254.34	Monitoring
	10/23/2012	WorleyParsons		137.94	254.16	Monitoring
	3/28/2013	WorleyParsons		137.27	254.83	Monitoring
	6/20/2013	WorleyParsons		137.77	254.33	Monitoring
	8/13/2013	WorleyParsons		137.81	254.29	Monitoring
	11/12/2013	WorleyParsons		138.01	254.09	Monitoring
	2/25/2014	WorleyParsons		136.90	255.20	Monitoring
	5/20/2014	Northstar		137.15	254.95	Monitoring
	8/8/2014	Northstar		137.31	254.79	Monitoring
	12/4/2014	Northstar		137.18	254.92	Monitoring
24-1	2/8/2011	WorleyParsons	389.4	123.66	265.74	Monitoring
	6/8/2011	WorleyParsons		126.71	262.69	Monitoring
	9/26/2011	WorleyParsons		127.15	262.25	Monitoring
	12/13/2011	WorleyParsons		126.98	262.42	Monitoring
	2/22/2012	WorleyParsons		127.20	262.20	Monitoring
	5/23/2012	WorleyParsons		127.14	262.26	Monitoring
	7/26/2012	WorleyParsons		127.31	262.09	Monitoring
	10/23/2012	WorleyParsons		127.21	262.19	Monitoring
	3/28/2013	WorleyParsons		126.73	262.67	Monitoring
	6/19/2013	WorleyParsons		127.95	261.45	Monitoring
	8/14/2013	WorleyParsons		127.18	262.22	Monitoring
	11/13/2013	WorleyParsons		127.31	262.09	Monitoring
	2/25/2014	WorleyParsons		125.70	263.70	Monitoring
	5/22/2014	Northstar		126.84	262.56	Monitoring
	8/8/2014	Northstar		126.91	262.49	Monitoring
	12/5/2014	Northstar		126.91	262.49	Monitoring
24-2	2/8/2011	WorleyParsons	388.86	124.91	263.95	Monitoring
	10/23/2011	WorleyParsons		125.69	263.17	Monitoring
	6/19/2013	WorleyParsons		125.40	263.46	Monitoring
	8/14/2013	WorleyParsons		126.60	262.26	Monitoring
	5/22/2014	Northstar		125.82	263.04	Monitoring
	8/8/2014	Northstar		125.33	263.53	Monitoring
	12/5/2014	Northstar		125.95	262.91	Monitoring
24-3	2/8/2011	WorleyParsons	392.04	126.45	265.59	Monitoring
	10/23/2011	WorleyParsons		124.48	267.56	Monitoring
	6/19/2013	WorleyParsons		124.15	267.89	Monitoring
	8/14/2013	WorleyParsons		124.44	267.60	Monitoring
	5/22/2014	Northstar		124.00	268.04	Monitoring
	8/8/2014	Northstar		124.07	267.97	Monitoring
	12/5/2014	Northstar		124.05	267.99	Monitoring
PW-0	12/14/2011	WorleyParsons	383.92	NM[4]		Production/Monitoring
	2/23/2012	WorleyParsons		NM[4]		Production/Monitoring
	5/23/2012	WorleyParsons		NM[4]		Production/Monitoring
	7/26/2012	WorleyParsons		NM[4]		Production/Monitoring
	10/23/2012	WorleyParsons		Pumping		Production/Monitoring
	3/28/2013	WorleyParsons		67.71	316.21	Production/Monitoring
	6/19/2013	WorleyParsons		Pumping		Production/Monitoring
	8/13/2013	WorleyParsons		100.49	283.43	Production/Monitoring
	11/13/2013	WorleyParsons		118.10	265.82	Production/Monitoring
	2/26/2014	WorleyParsons		98.46	285.46	Production/Monitoring
	5/20/2014	Northstar		99.60	284.32	Production/Monitoring
	8/8/2014	Northstar		99.06	284.86	Production/Monitoring
	12/4/2014	Northstar		99.65	284.27	Production/Monitoring
	12/14/2011	WorleyParsons		Pumping		Production/Monitoring
	2/23/2012	WorleyParsons		100.84	283.26	Production/Monitoring
	5/23/2012	WorleyParsons		Pumping		Production/Monitoring

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Well ID	Date	Source	Top of Casing Elevation (feet amsl) [1]	Depth to Water (feet below TOC) [2]	Groundwater Elevation (feet amsl)	Comments / Use
PW-1	7/26/2012	WorleyParsons	384.10	101.09		Production/Monitoring
	10/23/2012	WorleyParsons		100.89	283.21	Production/Monitoring
	3/28/2013	WorleyParsons		100.60	283.50	Production/Monitoring
	6/19/2013	WorleyParsons		Pumping		Production/Monitoring
	8/13/2013	WorleyParsons		109.35	274.75	Production/Monitoring
	11/13/2013	WorleyParsons		99.89	284.21	Production/Monitoring
	2/26/2014	WorleyParsons		98.49	285.61	Production/Monitoring
	5/20/2014	Northstar		NM[6]		Production/Monitoring
	8/8/2014	Northstar		NM[6]		Production/Monitoring
	12/4/2014	Northstar		NM[6]		Production/Monitoring
PW-2	12/14/2011	WorleyParsons	384.10	Pumping		Production/Monitoring
	2/23/2012	WorleyParsons		Pumping		Production/Monitoring
	5/23/2012	WorleyParsons		Pumping		Production/Monitoring
	7/26/2012	WorleyParsons		101.30	282.80	Production/Monitoring
	10/23/2012	WorleyParsons		Pumping		Production/Monitoring
	3/28/2013	WorleyParsons		Pumping		Production/Monitoring
	6/19/2013	WorleyParsons		Pumping		Production/Monitoring
	8/13/2013	WorleyParsons		101.75	282.35	Production/Monitoring
	11/12/2013	WorleyParsons		102.69	281.41	Production/Monitoring
	2/26/2014	WorleyParsons		100.52	283.58	Production/Monitoring
	5/20/2014	Northstar		Pumping		Production/Monitoring
	8/8/2014	Northstar		Pumping		Production/Monitoring
	12/4/2014	Northstar		Pumping		Production/Monitoring
DM-1	2/27/2012	WorleyParsons	391.49	106.63	284.86	Monitoring
	5/24/2012	WorleyParsons		107.11	284.38	Monitoring
	7/26/2012	WorleyParsons		107.10	284.39	Monitoring
	11/14/2012	WorleyParsons		108.15	283.34	Monitoring
	3/29/2013	WorleyParsons		107.34	284.15	Monitoring
	6/19/2013	WorleyParsons		107.19	284.30	Monitoring
	8/13/2013	WorleyParsons		107.07	284.42	Monitoring
	11/12/2013	WorleyParsons		107.22	284.27	Monitoring
	2/26/2014	WorleyParsons		107.13	284.36	Monitoring
	5/22/2014	Northstar		107.05	284.44	Monitoring
	8/8/2014	Northstar		107.11	284.38	Monitoring
	12/4/2014	Northstar		107.03	284.46	Monitoring
DM-2	2/27/2012	WorleyParsons	391.32	106.92	284.40	Monitoring
	5/24/2012	WorleyParsons		107.37	283.95	Monitoring
	7/26/2012	WorleyParsons		107.33	283.99	Monitoring
	11/14/2012	WorleyParsons		108.33	282.99	Monitoring
	3/29/2013	WorleyParsons		107.59	283.73	Monitoring
	6/19/2013	WorleyParsons		107.41	283.91	Monitoring
	8/13/2013	WorleyParsons		107.31	284.01	Monitoring
	11/12/2013	WorleyParsons		107.63	283.69	Monitoring
	2/26/2014	WorleyParsons		107.40	283.92	Monitoring
	5/22/2014	Northstar		107.28	284.04	Monitoring
	8/8/2014	Northstar		107.28	284.04	Monitoring
	12/4/2014	Northstar		107.43	283.89	Monitoring
DM-3	2/27/2012	WorleyParsons	388.34	103.85	284.49	Monitoring
	5/24/2012	WorleyParsons		104.35	283.99	Monitoring
	7/26/2012	WorleyParsons		104.28	284.06	Monitoring
	11/14/2012	WorleyParsons		105.25	283.09	Monitoring
	3/29/2013	WorleyParsons		104.35	283.99	Monitoring
	6/19/2013	WorleyParsons		104.20	284.14	Monitoring
	8/13/2013	WorleyParsons		104.31	284.03	Monitoring
	11/12/2013	WorleyParsons		104.43	283.91	Monitoring
	2/26/2014	WorleyParsons		104.31	284.03	Monitoring
	5/22/2014	Northstar		104.20	284.14	Monitoring
	8/8/2014	Northstar		104.21	284.13	Monitoring
	12/4/2014	Northstar		104.39	283.95	Monitoring
ADDITIONAL WELLS IN THE CHUCKWALLA VALLEY GROUNDWATER BASIN WITHIN 10 MILES OF THE SITE FOR WHICH GROUNDWATER LEVEL DATA IS AVAILABLE						
2	5/19/1961	DWR, 1963	424	140.00	284.00	Irrigation
3	2/26/1982	DWRWell Records	498	180.00	318.00	Irrigation
4	7/24/1961	DWR, 1963	354	60.05	293.95	Unused
9	9/16/1990	USGS-NWIS	354	81.36	272.64	
	9/24/1990	USGS-NWIS		81.56	272.44	Unknown

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	2/13/1992	USGS-NWIS		81.20	272.80	
15	2/17/1992	USGS-NWIS	390.2	104.36	285.84	Unknown
	3/15/2000	USGS-NWIS		97.36	292.84	
	9/23/2009	WorleyParsons		97.00	293.20	
16	2/17/1992	USGS-NWIS	390	110.39	279.61	Unknown
	9/23/2009	WorleyParsons		103.00	287.00	
22	2/4/2002	USGS-NWIS	387.6	125.29	262.31	Unknown
23	9/26/1990	USGS-NWIS	392.1	134.10	258.00	Unknown
	2/10/1992	USGS-NWIS		134.80	257.30	
26	12/26/1982	USGS-NWIS	562.6	300.00	262.60	Irrigation
	2/13/1992	USGS-NWIS		270.28	292.32	
	3/15/2000	USGS-NWIS		269.85	292.75	
	9/23/2009	WorleyParsons		282.00	280.60	
27	6/19/1961	DWR, 1963	555	258.83	296.17	Unused
28	6/19/1961	DWR, 1963	520	21.65	498.35	Unused
29	1/16/1983	USGS-NWIS	545.9	270.00	275.90	Irrigation
	2/13/1992	USGS-NWIS		257.61	288.29	
	3/15/2000	USGS-NWIS		257.22	288.68	
	9/23/2009	WorleyParsons		250.00	295.90	
	4/28/2011	USGS-NWIS		257.83	288.07	
31	9/16/1990	USGS-NWIS	423.9	144.25	279.65	Unused
	3/29/2000	USGS-NWIS		144.41	279.49	
32	6/12/1961	USGS-NWIS	418	151.83	266.17	Unused
	10/10/1961	USGS-NWIS		151.09	266.91	
	11/8/1961	USGS-NWIS		151.03	266.97	
	1/10/1962	USGS-NWIS		151.04	266.96	
	3/8/1962	USGS-NWIS		150.89	267.11	
	4/9/1962	USGS-NWIS		150.73	267.27	
	5/7/1962	USGS-NWIS		150.83	267.17	
	10/31/1962	USGS-NWIS		150.90	267.10	
	3/13/1963	USGS-NWIS		150.84	267.16	
	10/31/1963	USGS-NWIS		150.91	267.09	
	3/19/1964	USGS-NWIS		150.77	267.23	
	11/25/1964	USGS-NWIS		151.13	266.87	
	3/18/1965	USGS-NWIS		151.21	266.79	
	11/18/1965	USGS-NWIS		151.40	266.60	
	3/2/1966	USGS-NWIS		150.66	267.34	
	10/27/1966	USGS-NWIS		150.89	267.11	
	3/16/1967	USGS-NWIS		150.92	267.08	
	10/25/1967	USGS-NWIS		150.86	267.14	
	10/23/1969	USGS-NWIS		150.89	267.11	
	4/30/1970	USGS-NWIS		150.95	267.05	
33	1987	USGS-NWIS	457.5	202.25	255.25	Unknown
	9/17/1990	USGS-NWIS		205.62	251.88	
	2/10/1992	USGS-NWIS		206.70	250.80	
	2/11/1992	USGS-NWIS		206.27	251.23	
34	10/8/1992	USGS-NWIS	458.3	213.00	245.30	Public Water Supply
35	12/1987	USGS-NWIS	456.5	205.00	251.50	Unknown
	2/10/1992	USGS-NWIS		200.50	256.00	
	2/11/1992	USGS-NWIS		199.07	257.43	
	2/11/1992	USGS-NWIS		199.60	256.90	
36	12/1987	USGS-NWIS	443.5	203.00	240.50	Public Water Supply
	9/17/1990	USGS-NWIS		189.05	254.45	
	2/10/1992	USGS-NWIS		187.70	255.80	
	2/10/1992	USGS-NWIS		186.20	257.30	
	3/16/2000	USGS-NWIS		199.24	244.26	
37	7/1/1981	Kennedy/Jenks/Chilton	433.09	163.00	270.09	Irrigation (abandoned)
	2/11/1992	USGS-NWIS		174.47	258.62	
39	4/5/1961	USGS-NWIS	442.9	168.37	274.53	Irrigation
	4/30/1970	USGS-NWIS		171.81	271.09	
	7/31/1979	USGS-NWIS		173.48	269.42	
	7/24/1980	USGS-NWIS		169.06	273.84	
	1/23/1981	USGS-NWIS		169.22	273.68	
	9/23/1981	USGS-NWIS		169.23	273.67	
	3/3/1982	USGS-NWIS		170.26	272.64	
	1/28/1983	USGS-NWIS		170.54	272.36	
	7/31/1984	USGS-NWIS		170.65	272.25	
	2/27/1985	USGS-NWIS		171.10	271.80	
	6/12/1985	USGS-NWIS		172.90	270.00	
	2/9/1992	USGS-NWIS		183.46	259.44	
40	10/30/1992	USGS-NWIS	449.4	193.00	256.40	Public Water Supply

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Well ID	Date	Source	Top of Casing Elevation (feet amsl) [1]	Depth to Water (feet below TOC) [2]	Groundwater Elevation (feet amsl)	Comments / Use
41	10/19/1992	USGS-NWIS	453.6	202.00	251.60	Public Water Supply
42	1/1/1982	Kennedy/Jenks/Chilton	470	197.00	273.00	Irrigation
	3/15/1982	USGS-NWIS		248.00	257.60	
	2/13/1992	USGS-NWIS		232.35	273.25	
	3/29/2000	USGS-NWIS		234.50	271.10	
	10/5/2000	USGS-NWIS		234.84	270.76	
	1/10/2001	USGS-NWIS		234.89	270.71	
	2/23/2001	USGS-NWIS		234.45	271.15	
	4/16/2001	USGS-NWIS		234.82	270.78	
	4/16/2001	USGS-NWIS		234.82	270.78	
	7/10/2001	USGS-NWIS		235.40	270.20	
	11/7/2001	USGS-NWIS		235.66	269.94	
	11/7/2001	USGS-NWIS		235.69	269.91	
	4/3/2002	USGS-NWIS		234.69	270.91	
	4/3/2002	USGS-NWIS		234.69	270.91	
	10/2/2002	USGS-NWIS		236.04	269.56	
	10/2/2002	USGS-NWIS		236.16	269.44	
	6/3/2003	USGS-NWIS		235.59	270.01	
	6/3/2003	USGS-NWIS		235.61	269.99	
	11/5/2003	USGS-NWIS		236.46	269.14	
	11/5/2003	USGS-NWIS		236.45	269.15	
	3/2/2004	USGS-NWIS		235.65	269.95	
	3/2/2004	USGS-NWIS		235.63	269.97	
	8/4/2004	USGS-NWIS		235.85	269.75	
	12/8/2004	USGS-NWIS		235.78	269.82	
	4/15/2005	USGS-NWIS		235.28	270.32	
	8/31/2005	USGS-NWIS		235.89	269.71	
	8/31/2005	USGS-NWIS		235.84	269.76	
	2/14/2006	USGS-NWIS		235.78	269.82	
	2/14/2006	USGS-NWIS		235.79	269.81	
	5/5/2006	USGS-NWIS		236.38	269.22	
	5/5/2006	USGS-NWIS		236.39	269.21	
	8/10/2006	USGS-NWIS		236.66	268.94	
	8/10/2006	USGS-NWIS		236.66	268.94	
	12/8/2006	USGS-NWIS		236.57	269.03	
	12/8/2006	USGS-NWIS		236.57	269.03	
	2/7/2007	USGS-NWIS		236.16	269.44	
	2/7/2007	USGS-NWIS		236.16	269.44	
	5/17/2007	USGS-NWIS		236.55	269.05	
43	5/17/2007	USGS-NWIS	505.6	236.56	269.04	Irrigation
	9/5/2007	USGS-NWIS		236.91	268.69	
	9/5/2007	USGS-NWIS		236.91	268.69	
	9/5/2007	USGS-NWIS		236.91	268.69	
	12/13/2007	USGS-NWIS		236.55	269.05	
	12/13/2007	USGS-NWIS		236.54	269.06	
	3/19/2008	USGS-NWIS		235.65	269.95	
	3/19/2008	USGS-NWIS		235.64	269.96	
	3/19/2008	USGS-NWIS		235.67	269.93	
	6/25/2008	USGS-NWIS		235.62	269.98	
	6/25/2008	USGS-NWIS		235.60	270.00	
	9/24/2008	USGS-NWIS		235.73	269.87	
	9/24/2008	USGS-NWIS		235.73	269.87	
	9/24/2008	USGS-NWIS		235.72	269.88	
	1/14/2009	USGS-NWIS		235.25	270.35	
	1/14/2009	USGS-NWIS		235.26	270.34	
	4/16/2009	USGS-NWIS		235.28	270.32	
	4/16/2009	USGS-NWIS		235.29	270.31	
	7/30/2009	USGS-NWIS		235.80	269.80	
	7/30/2009	USGS-NWIS		235.79	269.81	
	10/29/2009	USGS-NWIS		235.61	269.99	
	10/29/2009	USGS-NWIS		235.60	270.00	
	1/20/2010	USGS-NWIS		235.98	269.62	
	1/20/2010	USGS-NWIS		235.99	269.61	
	4/23/2010	USGS-NWIS		235.26	270.34	
	4/23/2010	USGS-NWIS		235.26	270.34	
	7/22/2010	USGS-NWIS		235.67	269.93	
	11/4/2010	USGS-NWIS		235.71	269.89	
	11/4/2010	USGS-NWIS		235.73	269.87	
	1/13/2011	USGS-NWIS		235.27	270.33	
	4/28/2011	USGS-NWIS		235.12	270.48	
	10/18/2011	USGS-NWIS		235.48	270.12	

Table 2

GROUNDWATER LEVEL MEASUREMENTS

Genesis Solar Energy Project, Riverside County, California

Well ID	Date	Source	Top of Casing Elevation (feet amsl) [1]	Depth to Water (feet below TOC) [2]	Groundwater Elevation (feet amsl)	Comments / Use
	5/9/2012	USGS-NWIS		235.25	270.35	
	5/11/2012	USGS-NWIS		235.24	270.36	
	10/5/2012	USGS-NWIS		235.65	269.95	
	2/12/2013	USGS-NWIS		235.36	270.24	
	8/29/2013	USGS-NWIS		235.62	269.98	
	11/21/2013	USGS-NWIS		235.36	270.24	
	5/7/2014	USGS-NWIS		235.08	270.52	
44	11/29/1989	USGS-NWIS	505.3	234.00	271.30	Irrigation
47	2/14/1984	USGS-NWIS	580.90	300.00	280.90	Unknown
	9/28/1990	USGS-NWIS		299.61	281.29	
	2/9/1992	USGS-NWIS		299.69	281.21	
	3/30/2000	USGS-NWIS		300.05	280.85	
50	4/7/1961	USGS-NWIS	566	189.85	376.15	Unknown
	4/20/1961	USGS-NWIS		189.98	376.02	
54	1985-05	USGS-NWIS	654.5	360.00	294.50	Unknown
	9/28/1990	USGS-NWIS		369.19	285.31	
	2/10/1992	USGS-NWIS		369.15	285.35	
	3/30/2000	USGS-NWIS		369.08	285.42	
55	1/23/2012	USGS-NWIS	415.4	162.60	252.80	Exploratory
	5/9/2012	USGS-NWIS		162.57	252.83	
56	1/23/2012	USGS-NWIS	415.4	159.69	255.71	Exploratory
	5/9/2012	USGS-NWIS		159.89	255.51	
57	1/23/2012	USGS-NWIS	415.4	154.20	261.20	Exploratory
	5/9/2012	USGS-NWIS		154.28	261.12	

Notes:

amsl = above mean sea level

TOC = top of casing

1. Wells within the Groundwater Monitoring Program were surveyed on February 8 & 9, 2011. Top of Casing elevation for all other wells in this table are approximate and estimated from topographic maps.
2. Measured as feet below top of casing
3. No data was collected due to equipment or software malfunction
4. Sounding tube is blocked with concrete
5. Well not accessible - Unknown lock on well
6. Well not accessible - Steel plate welded over well
7. Due to loss of configuration file and calibration data following the 1st Quarter 2014 monitoring event, the OBS-2 buried transducers are no longer accessible.

Table 3
FIELD DATA COLLECTED DURING THE FOURTH QUARTER 2014 GROUNDWATER MONITORING EVENT
Genesis Solar Energy Project, Riverside, California

Well ID	Date	Groundwater Purging			Field Parameters					
		Rate of Groundwater Discharge (mL/min)	Purging Method	Total Volume Purged (mL)	pH	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temperature (C^0)	ORP (mV)
23a	12/4/2014	N/A	HydraSleeve	N/A[1]	8.27	2.96	20.7	7.34	20.81	+41
OBS-1	12/4/2014	N/A	HydraSleeve	N/A[1]	8.44	26.7	8.3	3.33	17.81	+14
TW-1	12/4/2014	N/A	HydraSleeve	N/A[1]	9.24	16.4	40.9	7.98	17.55	-259
TW-2	12/4/2014	N/A	HydraSleeve	N/A[1]	9.14	5.97	41.6	6.25	21.38	-270
PW-0	12/4/2014	N/A	Production Pump	N/A[2]	--	--	--	--	--	--
PW-1	12/4/2014	N/A	Production Pump	N/A[3]	--	--	--	--	--	--
PW-2	12/4/2014	N/A	Production Pump	N/A[4]	8.33	3.78	8.5	3.43	20.83	-69
DM-1	12/4/2014	188	Bladder Pump	5,452	7.67	19.0	0.0	4.55	19.74	+90
DM-2	12/4/2014	107	Bladder Pump	7,704	7.64	17.4	94.9	1.94	18.70	+100
DM-3	12/5/2014	121	Bladder Pump	8,349	7.43	18.8	7.4	1.86	16.04	+162

NOTES:
mL = milliLiters
mL/min = milliLiters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Units
DO = Dissolved Oxygen
mg/L = milligrams per Liter
^oC = degrees Celsius
mV = milliVolts
N/A = Not Applicable or Not Available
-- = Not Measured
1. Sampled using a HydraSleeve, a disposable, no-purge, groundwater grab sampler.
2. Pump offline - not sampled (inaccessible)
3. Wellhead sealed with welded steel plate - not sampled (inaccessible)
4. Well was sampled during continuous production pumping and therefore purging was not necessary.

Table 4
SUMMARY OF LABORATORY ANALYTICAL RESULTS
Genesis Solar Energy Project

Well ID	Date Sampled	Sampling Method	Chloride (mg/L)	Sulfate (SO4) (mg/L)	Nitrate (NO3)-N (mg/L)	Calcium (mg/L)	Copper (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Iron (mg/L)	Magnesium (mg/L)	Zinc (mg/L)	Antimony (ug/L)	Arsenic (ug/L)	Barium (ug/L)	Cadmium (ug/L)	Chromium (Total) (ug/L)	Cobalt (ug/L)	Lead (ug/L)	Manganese (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Zinc (ug/L)	Mercury (ug/L)	Total Dissolved Solids (mg/L)	Specific Conductance (us/cm)	pH (std. Units)	Oil & Grease / HEM (mg/L)	HTF (mg/L)	Deuterium (‰ relative to VSMOW)	Oxygen-18 (‰ relative to VSMOW)
			EPA Method 300.0			EPA Method 200.7							EPA Method 200.8											SM7470A	SM2540C	SM2510B	SM4500H	SM1664A	8015B	Isotope Geochemistry	
TW-1	6/5/2009	Low Flow	5,600	1,500	<0.25	160	<0.010	4,500	30	1.4	38	<0.10	-	-	-	-	-	-	-	65	-	-	-	-	9,500	19,000	7.9	-	-	-	-
	7/9/2009	Low Flow	5,300	1,400	-	-	<0.010	4,000	27	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	10,000	19,000	7.9	-	-	-	-
	7/13/2009	Low Flow	6,400	1,800	-	-	<0.010	3,600	24	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	9,500	18,000	7.9	-	-	-	-
	7/16/2009	Low Flow	4,700	1,200	<0.25	-	<0.010	3,600	25	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	8,900	18,000	7.8	-	-	-	-
	11/10/2010	Low Flow	6,200	1,600	<0.25	170	<0.010	4,000	23	1.7	35	<0.10	-	-	-	-	-	-	-	79	-	-	-	-	11,000	18,000	8	-	-	-69.9	-8.61
	11/10/2010	Low Flow	6,100	1,600	<0.25	170	<0.010	4,100	22	1.6	34	<0.10	-	-	-	-	-	-	-	77	-	-	-	-	9,900	18,000	8	-	-	-69.3	-8.56
	6/8/2011	Low Flow	5,100	1,600	<0.25	170	<0.010	3,300	24	5.1	30	<0.10	-	-	-	-	-	-	-	73	-	-	-	-	10,000	20,000	8	-	-	-67.0	-8.24
	12/13/2011	Low Flow	3,900	1,300	<1.1	82	<0.010	3,400	23	9.5	25	0.011	-	-	-	-	-	-	-	-	-	-	-	-	9,100	9,800	9	-	-	-63.7	-8.2
	12/13/2011	Hydrasleeve	3,900	1,300	<1.1	75	0.0052	3,100	21	30	24	0.041	-	-	-	-	-	-	-	-	-	-	-	-	9,200	15,000	9	-	-	-64.2	-8.2
	5/23/2012	Hydrasleeve	4,400	1,700	<2.2	81	<0.010	3,000	20	<0.040	21	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	8,800	17,000	9.23	-	-	-66.3	-8.2
	10/23/2012	Hydrasleeve	4,100	1,700	<2.2	71	<0.010	3,100	19	<0.040	23	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	9,000	15,000	9.24	-	-	-66.0	-8.0
	5/20/2014	Hydrasleeve	3,900	1,400	-	81	<0.010	3,000	20	0.29	12	0.024	<10	2.5[J]	17	<5.0	<10	<5.0	<5.0	9.6	2.9[J]	<10	<100	<0.20	8,900	15,000	9.73	<4.7	-	-63.74	-7.83
	12/4/2014	Hydrasleeve	3,900	1,200	<2.2	86	<0.050	3,200	21	0.057[J]	11	-	<10	3.8[J]	17	<5.0	<10	<5.0	<5.0	8.6	4.4[J]	<10	<100	<0.20	8,500	15,000	9.87	<4.7	<0.095	N/A[2]	N/A[2]
TW-2	1/8/2010	Low Flow	1,500	460	<0.25	98	<0.010	860	18	<0.3	1.9	0.06	-	-	-	-	-	-	-	80	-	-	-	-	3,100	5,500	8.2	-	-	-	-
	1/8/2010	Low Flow	1,400	500	<0.25	100	<0.010	1,000	18	0.5	3.8	<0.10	-	-	-	-	-	-	-	5	-	-	-	-	3,000	5,500	8	-	-	-	-
	1/21/2010	Low Flow	1,500	500	<0.25	120	<0.010	1,000	21	0.73	3.4	<0.10	-	-	-	-	-	-	-	93	-	-	-	-	3,100	5,400	8	-	-	-	-
	11/9/2010	Low Flow	1,500	520	<0.25	110	<0.010	1,000	19	2.9	4.2	0.15	-	-	-	-	-	-	-	140	-	-	-	-	3,300	5,800	8.4	-	-	-78.5	-10.13
	6/7/2011	Low Flow	1,600	520	<0.25	120	<0.010	870	20	0.38	3.1	<0.10	-	-	-	-	-	-	-	94	-	-	-	-	3,200	5,700	8.1	-	-	-79.5	-10.25
	6/7/2011	Low Flow	1,500	510	<0.25	120	<0.010	880	20	0.42	3.1	<0.10	-	-	-	-	-	-	-	95	-	-	-	-	3,100	5,500	8	-	-	-78.3	-10.14
	12/14/2011	Hydrasleeve	1,500	460	<0.55	100	0.0076	1,100	23	24	4.1	8.9	-	-	-	-	-	-	-	-	-	-	-	-	3,400	4,100	8.3	-	-	-76.0	-10.2
	5/24/2012	Hydrasleeve	1,400	500	<1.1	78	<0.010	1,000	19	<0.040	1.5	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	3,000	6,200	8.83	-	-	-77.8	-10.2
	10/23/2012	Hydrasleeve	1,400	500	<1.1	96	<0.010	870	21	<0.040	3.1	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	3,500	5,500	8.63	-	-	-78.0	-10.1
	5/20/2014	Hydrasleeve	1,600	430	-	64	<0.010	1,000	22	0.022[J]	0.093	<0.020	<2.0	2.9	30	<1.0	<2.0	<1.0	<1.0	4.1	0.91[J]	<2.0	<20	<0.020	3,300	5,700	9.87	<4.7	-	-76.18	-10.17
	12/4/2014	Hydrasleeve	1,500	420	<1.1	67	<0.020	1,000	21	0.041[J]	0.11	-	<2.0	4.4	36	<1.0	<2.0	<1.0	<1.0	3.4	1.8[J]	<2.0	2.9[J]	<0.020	2,900	5,800	9.68	<4.7	<0.096	N/A[2]	N/A[2]
OBS-1	11/10/2010	Low Flow	8,300	9,400	0.78	450	0.036	6,500	25	2.4	110	0.2	-	-	-	-	-	-	-	59	-	-	-	-	20,000	23,000	7.7	-	-	-62.9	-6.88
	6/8/2011	Low Flow	6,600	6,800	0.81	460	<0.010	5,800	26	2.3	94	<0.10	-	-	-	-	-	-	-	60	-	-	-	-	19,000	32,000	7.7	-	-	-63.1	-6.82
	6/8/2011	Low Flow	6,600	6,800	0.64	470	<0.010	5,800	25	2.3	91	<0.10	-	-	-	-	-	-	-	71	-	-	-	-	19,000	31,000	7.7	-	-	-62.7	-6.86
	12/13/2011	Low Flow	6,300	6,700	1.4	430	0.0051	6,500	34	0.4	91	0.015	-	-	-	-	-	-	-	-	-	-	-	-	21,000	27,000	7.8	-	-	-60.9	-6.80
	12/13/2011	Hydrasleeve	6,200	6,500	1.4	400	0.0045	6,300	32	0.35	87	0.039	-	-	-	-	-	-	-	-	-	-	-	-	20,000	28,000	7.8	-	-	-61.4	-6.90
	5/23/2012	Hydrasleeve	6,400	7,000	1.9	380	<0.010	7,200	33	<0.040	73	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	21,000	36,000	7.89	-	-	-62.8	-6.90
	10/23/2012	Hydrasleeve	6,400	6,700	<2.2	400	<0.010	6,200	31	<0.040	89	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	21,000	36,000	7.3	-	-	-64.3	-6.80
	5/20/2014	Hydrasleeve	6,300	5,700	-	330	<0.020	5,500	27	<0.040	77	0.011[J]	<10	<5.0	13	<5.0	<10	<5.0	<5.0	4.9[J]	4.7[J]	58	<100	<0.020	17,000	30,000	7.86	<4.7	-	-59.93	-7.03
	12/4/2014	Hydrasleeve	5,400	4,900	4.3[J]	330	<0.050	6,100	27	<0.20	87	-	<10	2.8[J]	13	<5.0	<10	<5.0	<5.0	2.5[J]	6.8[J]	59	18[J]	<0.020	17,000	26,000	7.98	<4.7	<0.094	N/A[2]	N/A[2]
OBS-2	6/17/2009	Grab	2,300	810	0.5	66	<0.010	1,500	12	0.46	14	<0.10	-	-	-	-	-	-	-	29	-	-	-	-	5,000	8,800	7.8	-	-	-	-
Well 36	11/10/2010	Spigot	270	250	<0.25	13	<0.010	300	1.8	<0.30	0.76	<0.10	-	-	-	-	-	-	-	<5	-	-	-	-	860	1,500	8.7	-	-	-77.2	-9.79
	6/8/2011	Spigot	240	250	<0.25	14	<0.010	270	2.2	<0.30	0.63	<0.10	-	-	-	-	-	-	-	<5	-	-	-	-	840	1,500	8.7	-	-	-77.8	-9.78
	12/14/2011	Spigot	240	210	0.082	12	<0.010	290	2.3	0.034	0.65	0.014	-	-	-	-	-	-	-	-	-	-	-	-	870	1,300	8.6	-	-	-74.6	-9.8
Well 23a	11/11/2010	Hydrasleeve	620	470	<0.25	29	0.4	520	11	13	1.5	7.8	-	-	-	-	-	-	-	500	-	-	-	-	1,700	2,900	8.3	-	-	-76.0	-10.24
	6/7/2011	Hydrasleeve	480	400	<0.25	26	0.012	440	9	1.9	<0.50	3.2	-	-	-	-	-	-	-	78	-	-	-	-	1,500	2,500	8.4	-	-	-77.7	-10.40
	12/14/2011	Hydrasleeve	510	400	<0.22	24	0.016	550	11.0	3.8	0.47	2	-	-	-	-	-	-	-	-	-	-	-	-	1,600	2,400	8.2	-	-	-75.0	-10.30
	5/24/2012	Hydrasleeve	410	410	<0.22	25	<0.010	420	11.0	0.071	0.29	0.0075	-	-	-	-	-	-	-	-	-	-	-	-	1,500	2,500	8.33	-	-	-76.2	-10.40
	10/23/2012	Hydrasleeve	440	440	<0.22	19	<0.010	420	8.7	0.059	3.0	0.026	-	-	-	-	-	-	-	-	-	-	-	-	1,400	2,400	8.25	-	-	-77.6	-10.40
	5/20/2014	Hydrasleeve	570	490	-	24	<0.010	540	10	0.042	0.51	0.11	<10	<5.0	20	<5.0	<10	<5.0	<5.0	7.2	<10	<10	100[B]	<0.20	1,600	2,800	8.07	<4.7	-	-74.05	-10.33
	12/4/2014	Hydrasleeve	480	370	<0.22	24	<0.010	520	10	0.011[J]	0.51	-	<10	<5.0	20	<5.0	<10	<5.0	<5.0	5.6	<10	<10	100	<0.20	1,500	2,900	8.2	<4.7	<0.095	N/A[2]	N/A[2]
DM-1	5/24/2012	Low Flow	4,600	2,000	3.9	250	<0.10	3,800	23.0	<0.40	56	<20	-	-	-	-	-	-	-	-	-	-	-	-	12,000	16,000	7.84	-	-	-65.1	-8.8
	10/24/2012	Low Flow	5,400	2,300	<1.1	210	<0.010	3,200	20.0	<0.040	58	<40	-	-	-	-	-	-	-	11	-	-	-	-	11,000	18,000	7.83	-	-	-72.1	-8.6
	5/22/2014	Low Flow	5,300	2,000	-	240	<0.010	3,700	22	<0.040	54	0.0094[J]	<10	6.2	52	<5.0	<10	<5.0	<5.0	2.5[J]	4.6[J]	3.0[J]	<100	<0.20	11,000	19,000	7.81	<5.0	-	-68.50	-8.51
	5/22/2014 [1]	Low Flow	5,200	2,000	-	230	<0.010	3,600	22	<0.040	53	<0.020	<10	5.6	50	<5.0	<10	<5.0	<5.0	<5.0	3.9[J]	3.1[J]	<100	<0.20	11,000	19,000	7.74	<5.3	-	-69.47	-8.74
	12/4/2014	Low Flow	4,800	1,700	2.9	230	<0.050	3,600	21	<0.20	57	-	<10	7.7	50	<5.0	<10	<5.0	<5.0	<5.0	9.2[J]	<10	25[J]	0.15[J]	11,000	19,000	7.92	<4.7	<0.094	N/A[2]	N/A[2]
DM-2	5/24/2012	Low Flow	4,500	2,000	2.9	290	<0.10	3,500	25.0	<0.40	59	<20	-	-	-	-	-	-	-	-	-	-	-	-	13,000	16,000	7.80	-	-	-71.7	-8.8
	10/23/2012	Low Flow	4,800	2,000	<1.1	470	<0.010	2,600	27.0	<0.040	54	<40	-	-	-	-	-	-	-	110	-	-	-	-	9,900	16,000	7.72	-	-	-70.9	-8.9
	5/22/2014	Low Flow	5,100	2,000	-	320	<0.020	3,500	23	0.022[J]	54	<0.020	<10	4.7[J]	97	<5.0	<10	<5.0	<5.0	59	4.1[J]	3.3[J]	<100	<0.20	11,000	18,000	7.79	<5.1	-	-69.95	-8.72
	12/4/2014	Low Flow	4,400	1,600	3.0	300	<0.050	3,100	20	0.082[J]	55	-	<10	5.7	140	<5.0	<10	<5.0	<5.0	90	8.4[J]	<10	<100	<0.20	9,900	17,000	7.90	<4.7	<0.095	N/A[2]	N/A[2]
DM-3	5/24/2012	Low Flow	4,600	2,000	<2.2	220	<0.10	3,500	20.0	<0.40	51	<20	-	-	-	-	-	-	-	-	-	-	-	-	12,000	16,000	7.83	-	-	-71.4	-8.9
	10/23/2012	Low Flow	5,100	2,100	<2.2	210	<0.010	3,000	20.0	<0.040	52	<0.10	-	-	-	-	-	-	-	<1.0	-	-	-	-	11,000	18,000	7.83	-	-	-72.6	-8.7
	5/22/2014	Low Flow	5,400	2,100	-	230	<0.010	3,600	21	<0.040	51	<0.020	<10	13	18	<5.0	<10	<5.0	<5.0	<5.0	10	<10	<100	<0.20	11,000	19,000	7.66	<4.9	-	-68.86	-8.52
	12/5/2014	Low Flow	4,900	1,800	1.8[J]	230	<0.050	3,600	20	<0.20	56	-	<10	16	18	<5.0	<10	<5.0	<5.0	<5.0	9.6[J]	<10	<100	<0.20	11,000	18,000	7.82	<4.7	<0.099	N/A[2]	N/A[2]
PW-0	5/23/2012	Spigot	1,100	480	<0.55	66	<0.010	610	8.8	0.015	2.0	0.025	-	-	-	-	-	-	-	-	-	-	-	-	2,500	4,600	8.03	-	-	-78.9	-10.40
	10/23/2012	Spigot	780	450	<0.55	55	<0.010	530	7.9	0.015[J]	2.1	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	2,100	3,400	8.04	-	-	-79.4	-10.40
PW-1	12/14/2011	Spigot	1,300	470	<0.55	100	<0.010	1,100	7	0.11	6.9	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	3,000	3,800	8	-	-	-78.1	-10.3
	5/23/2012	Spigot	1,100	510	<0.55	92	<0.010	850	8.2	<0.040	6.8	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	2,100	5,100	8.12	-	-	-79.6	-10.40
	10/23/2012	Spigot	1,300	540	<1.1	90	<0.010	850	8.2	0.018[J]	7.5	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	3,200	5,000	7.96	-	-	-79.1	-10.20
	12/14/2011	Spigot	890	440	<0.22	63	0.0062	740	6.7	1.7	6.1	0.076	-	-	-	-	-	-	-	-	-	-	-	-	2,200	2,900	8.1	-	-	-77.7	-10.4

Table 4
SUMMARY OF LABORATORY ANALYTICAL RESULTS
Genesis Solar Energy Project

		Sampling	Chloride (mg/L)	Sulfate (SO4) (mg/L)	Nitrate (NO3)-N (mg/L)	Calcium (mg/L)	Copper (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Iron (mg/L)	Magnesium (mg/L)	Zinc (mg/L)	Antimony (ug/L)	Arsenic (ug/L)	Barium (ug/L)	Cadmium (ug/L)	Chromium (Total) (ug/L)	Cobalt (ug/L)	Lead (ug/L)	Manganese (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Zinc (ug/L)	Mercury (ug/L)	Total Dissolved Solids (mg/L)	Specific Conductance (us/cm)	pH (std. Units)	Oil & Grease / HEM (mg/L)	HTF (mg/L)	Deuterium (‰ relative to VSMOW)	Oxygen-18 (‰ relative to VSMOW)
PW-2	5/23/2012	Spigot	810	450	<0.55	53	<0.010	700	5.5	<0.040	4.7	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	2,200	4,100	8.06	-	-	-79.6	-10.40
	10/23/2012	Spigot	880	530	<0.55	48	<0.010	560	5.0	<0.040	4.8	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	2,300	3,800	8.04	-	-	-80.0	-10.30
	5/20/2014	Spigot	570	290	-	50	<0.010	700	5.1	0.030[J]	4.1	<0.020	<10	27	39	<5.0	<10	<5.0	<5.0	19	<10	<10	<100	<0.20	2,100	3,800	8.17	1.5[J]	-	-76.65	-10.08
	12/4/2014	Spigot	900	440	<0.55	52	<0.010	670	5.6	0.075	4.3	-	<10	28	40	<5.0	<10	<5.0	<5.0	22	<10	<10	<100	<0.20	2,100	3,900	8.12	<4.7	<0.095	N/A[2]	N/A[2]
	12/4/2014 [1]	Spigot	840	440	<0.55	52	<0.010	670	5.7	0.072	4.4	-	<10	28	38	<5.0	<10	<5.0	<5.0	23	2.7[J]	<10	<100	<0.20	2,100	3,900	8.13	<4.8	<0.096	N/A[2]	N/A[2]

NOTES:
mg/L = milligrams per liter
ug/L = micrograms per liter
uS/cm = microsiemens per centimeter
‰ = parts per thousand
VSMOW = Vienna Standard Mean Ocean Water
< = not detected at or above the indicated reporting limit
- = information is unknown / not applicable / not analyzed
B - Compound was detected in the laboratory equipment blank.
J - Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit, thus the concentration is an approximate value.
1 - Duplicate sample
2 - Analytical results not available at time of reporting due to laboratory equipment failure.

Table 5

AVAILABLE HISTORICAL ANALYTICAL DATA FOR ADDITIONAL WELLS IN CHUCKWALLA VALLEY GROUNDWATER BASIN WITHIN 10 MILES OF THE SITE

Genesis Solar Energy Project, Riverside, California

Well ID	Date Sampled	Data Source	Sample Depth (ft amsl)	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (SO4) (mg/L)	Sodium (mg/L)	Silica (Total) (mg/L)	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Dissolved Solids (mg/L)
1	5/19/1961	DWR, 1963	--	--	656	--	--	--	--	--	--	--	1,760
3	4/20/2009	Azca Drilling and Pump	560 to 940	--	--	--	--	--	--	--	--	--	910
	9/3/2009	WorleyParsons	560 to 940	--	--	--	--	--	--	--	--	--	970
5	10/10/1961	DWR, 1963	--to 85.7	--	1,770	--	--	--	--	--	--	--	5,730
14	6/25/1991	DWR Well Records	890 to 940	--	--	--	--	--	--	--	--	--	2,400
	7/29/2009	WorleyParsons	--	--	3,400 [1]	--	--	--	--	--	--	--	6,600 [1]
15	9/16/2009	WorleyParsons	200.0	--	--	--	--	--	--	--	--	--	19,000 [2]
			500.0	--	--	--	--	--	--	--	--	--	26,000 [2]
16	9/16/2009	WorleyParsons	247.00	--	--	--	--	--	--	--	--	--	3,100
17	1959	DWR, 1963	1,175 to 1,200	--	986	--	--	--	--	--	--	--	2,150
	9/17/2009	WorleyParsons	247	--	--	--	--	--	--	--	--	--	20,000 [2]
21	10/17/1917	DWR, 1963	--	--	865	--	--	--	--	--	--	--	3,820
23	4/19/1979	NWIS	--	6.3	950	450	800	38	16	0.6	67	170	2,350
26	9/16/2009	WorleyParsons	760.00	--	--	--	--	--	--	--	--	--	1,100
27	10/10/1961	DWR, 1963	-- to 486.4	--	718	--	--	--	--	--	--	--	2,210
28	10/10/1961	DWR, 1963	-- to 779.4	--	273	--	--	--	--	--	--	--	1,470
29	9/16/2009	WorleyParsons	720	--	--	--	--	--	--	--	--	--	1,100
31	10/10/1961	DWR, 1963	-- to 242.2	--	734	--	--	--	--	--	--	--	2,560
32	10/10/1961	DWR, 1963	-- to 315.7	--	3,250	--	--	--	--	--	--	--	8,150
37	6/4/1990	Engineering-Science, 1990	750 to 1,050	--	214	--	--	--	--	--	--	--	752
38 [3]	6/20/1986	Woodward-Clyde Consultants, 1986	275 to 815	--	519	--	--	--	--	--	--	--	1,313
			835 to 1,015	--	267	--	--	--	--	--	--	--	719
39	1/1986 (TDS)	CH2M Hill and Boyle Engineering, 1995/DWR, 1963	853 to 1,083	--	216	--	--	--	--	--	--	--	786
	6/12/1961 (Chloride)												
42	5/1/1988 (TDS)	CH2M Hill and Boyle Engineering, 1995/Woodward-Clyde Consultants, 1986	738 to 1,100	--	199	--	--	--	--	--	--	--	765
	8/24/83 (Chloride)												
43	Jan-86	Kennedy/Jenks/Chilton, 1986	510 to 780	--	460	--	--	--	--	--	--	--	1,150
47	Jan-86	Kennedy/Jenks/Chilton, 1986	500 to 850	--	520	--	--	--	--	--	--	--	1,350
	1/4/1984	Woodward-Clyde Consultants, 1986	490	--	550	--	--	--	--	--	--	--	2,090
	1/5/1984		590	--	586	--	--	--	--	--	--	--	1,740
	2/7/1984		850	--	570	--	--	--	--	--	--	--	1,380
50	1959	DWR, 1963	-- to 818	--	131	--	--	--	--	--	--	--	--

Notes:

amsl =above mean sea level

mg/L =milligrams per liter

--= Information not available or not applicable

1. The sample collected from well 14 on 7/29/09 is from an unknown interval. This well has been reportedly re-constructed at a shallower depth. As such, the sample result is considered unreliable.

2. Water sample result is anomalous and may be indicative of a sample not collected from the screened interval or from static water inside a collapsed well.

3. The TDS concentrations for well 38 were calculated based on electrical conductivity values and a conversion factor (TDS = EC x 0.47) reported by Woodward-Clyde Consultants, 1986

Sources:

DWR, 1963, Data on Water Wells and Springs in the Chuckwalla Valley Area. DWR Bull. 91-7
Kennedy/Jenks/Chilton, 1986. Final Report Sampling and Analysis in the Wiley's Well Area. Dated March 19.
CH2M Hill and Boyle Engineering, 1995. Technical Memorandum, Water Treatment Plant Evaluation -Phase I. Dated March 30
Woodward-Clyde Consultants, 1986. Final Report, Groundwater Quality Investigation, Wiley Well Area. Dated March 13.
Engineering Science, 1990. Water and Wastewater Facilities Engineering Study, California State Prison -Chuckwalla Valley. Dated September.

APPENDIX A

FIELD DATA SHEETS

GROUNDWATER LEVEL MEASUREMENT FORM

Quarter: 4th Quarter 2014	Site: GENESIS SOLAR ENERGY PROJECT	Project No: 196-004-01
Project: GROUNDWATER LEVEL MONITORING PROGRAM		PM: AWB
Measurement Method/Device: Solinst Interface Probe		Technicians: RCD/AWB
Weather: Cloudy, Warm		

Well No.	Date	TOC Reference Elevation (ft)	Depth to Water (ft)	Corrected Water Level Elevation (ft)	Comments
TW-1	12/04/14	387.40	86.50	300.90	Solinst Levelogger Transducer
TW-2	12/04/14	393.47	127.22	266.25	Manual Measurement
OBS-1	12/04/14	388.30	78.10	310.20	Solinst Levelogger Transducer
OBS-2-270	—	388.14	—	—	Buried Transducer Cable
OBS-2-315	—	388.14	—	—	Buried Transducer Cable
OBS-2-370	—	388.14	—	—	Buried Transducer Cable
OBS-2-400	—	388.14	—	—	Buried Transducer Cable
14	12/04/14	388.14	100.25	287.89	Manual Measurement
23a	12/04/14	392.10	137.18	254.92	Manual Measurement
24-1	12/05/14	389.40	126.91	262.49	Manual Measurement
24-2	12/05/14	388.86	125.95	262.91	Manual Measurement
24-3	12/05/14	392.04	124.05	267.99	Manual Measurement
PW-0	12/04/14	383.92	99.65	284.27	Manual Measurement
PW-1	—	384.10	—	—	Manual Measurement
PW-2	—	384.10	—	—	Manual Measurement
DM-1	12/04/14	391.49	107.03	284.46	Manual Measurement
DM-2	12/04/14	391.32	107.43	283.89	Manual Measurement
DM-3	12/04/14	388.34	104.39	283.95	Manual Measurement

Additional Notes: OBS-2 transducers inaccessible (programming issue).
PW-1 inaccessible (cap welded over well).
PW-2 inaccessible (pump is online).

GROUNDWATER SAMPLING FIELD FORM

Quarter: Q4 2014 | Site: GENESIS SOLAR ENERGY PROJECT | Project No: 196-004-01

Project: GROUNDWATER QUALITY MONITORING PROGRAM | Project Manager: AWB

Technicians: RCD/AWB | Weather: Cloudy, warm

Sampling Method: Geotech Submersible Bladder Pump - Low Flow Purge (< 250 mL/minute); Flow-Through Cell;

Parameters Stable Once Within 10%

Well No.	DM-1	Time	Water Level (ft btoc)	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	4.0	1201	107.05	19.86	7.72	18.7	0.0	68	4.55
Total Depth (ft btoc)	120	1203	107.05	19.77	7.75	18.9	0.0	83	4.40
Screened Interval (ft btoc)	100 - 120	1205	107.05	19.52	7.70	18.9	0.0	87	4.77
Depth to Water (ft btoc)	107.03	1207	107.05	19.49	7.69	18.9	0.0	88	4.44
Depth of Inlet (ft btoc)	115.00	1209	107.05	19.74	7.67	19.0	0.0	90	4.55
Discharge Time (sec)	25								
Fill Time (sec)	15								
Cycles per Minute	1.5								
Volume per Cycle (mL)	125								
Pump Rate (mL/min)	188								
Sample Date	12/04/14								
Sample Time	1230								

General Well Location: West side of settlement ponds

COMMENTS:

Well No.	DM-2	Time	Water Level (ft btoc)	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	4.0	1333	107.55	18.53	7.73	15.5	263	102	4.81
Total Depth (ft btoc)	120	1335	107.64	18.65	7.66	17.1	96.3	103	2.51
Screened Interval (ft btoc)	100 - 120	1337	107.68	18.69	7.64	17.4	93.9	101	1.73
Depth to Water (ft btoc)	107.43	1339	107.70	18.70	7.64	17.4	94.9	100	1.94
Depth of Inlet (ft btoc)	115.00								
Discharge Time (sec)	30								
Fill Time (sec)	40								
Cycles per Minute	0.86								
Volume per Cycle (mL)	125								
Pump Rate (mL/min)	107								
Sample Date	12/04/14								
Sample Time	1445								

General Well Location: East side of settlement ponds

COMMENTS:

Well No.	DM-3	Time	Water Level (ft btoc)	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	4.0	0746	104.41	12.55	7.28	18.6	3.9	189	6.89
Total Depth (ft btoc)	120	0748	104.39	14.51	7.36	18.8	4.9	181	3.30
Screened Interval (ft btoc)	100 - 120	0750	104.39	14.96	7.36	18.7	5.4	180	2.85
Depth to Water (ft btoc)	104.39	0752	104.39	15.45	7.39	18.8	7.0	173	2.19
Depth of Inlet (ft btoc)	115.00	0754	104.39	15.97	7.41	18.8	7.6	167	1.84
Discharge Time (sec)	27	0756	104.39	15.99	7.42	18.8	7.7	163	2.01
Fill Time (sec)	35	0758	104.40	16.04	7.43	18.8	7.4	162	1.86
Cycles per Minute	0.97								
Volume per Cycle (mL)	125								
Pump Rate (mL/min)	121								
Sample Date	12/05/14								
Sample Time	0855								

General Well Location: South side of settlement ponds

COMMENTS:

GROUNDWATER SAMPLING FIELD FORM

Quarter: Q4 2014	Site: GENESIS SOLAR ENERGY PROJECT	Project No: 196-004-01
Project: GROUNDWATER QUALITY MONITORING PROGRAM		Project Manager: AWB
Technicians: RCD/AWB		Weather: Cloudy, warm
Sampling Method: Hydrasleeve Grab Sample		

Well No.	23a	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	8.0	20.81	8.27	2.96	20.7	41	7.34
Total Depth (ft btoc)	1,825						
Screened Interval (ft btoc)	1800 - 1825						
Depth to Water (ft btoc)	137.18						
Sample Date	12/04/14						
Sample Time	0850						

General Well Location: CalTrans Rest Stop at Wiley's Well Road (10 days notice to CalTrans required)
COMMENTS:

Well No.	OBS-1	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	5.0	17.81	8.44	26.7	8.3	14	3.33
Total Depth (ft btoc)	160						
Screened Interval (ft btoc)	100 - 150						
Depth to Water (ft btoc)	78.10						
Sample Date	12/04/14						
Sample Time	0730						

General Well Location: Approximately 1 mile west of property boundary; access via Ford Dry Lake service road
COMMENTS:

Well No.	TW-1	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	5.0	17.55	9.24	16.4	40.9	-259	7.98
Total Depth (ft btoc)	565						
Screened Interval (ft btoc)	340 - 564						
Depth to Water (ft btoc)	86.50						
Sample Date	12/04/14						
Sample Time	0715						

General Well Location: Approximately 1 mile west of property boundary; access via Ford Dry Lake service road
COMMENTS: Organic odor

Well No.	TW-2	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	5.0	21.38	9.14	5.97	41.6	-270	6.25
Total Depth (ft btoc)	1,841						
Screened Interval (ft btoc)	Multiple						
Depth to Water (ft btoc)	127.22						
Sample Date	12/04/14						
Sample Time	0930						

General Well Location: NE corner of Section 32 (Township 7S, Range 20E); near bend in site access road
COMMENTS: Organic odor

GROUNDWATER SAMPLING FIELD FORM

Quarter: Q4 2014	Site: GENESIS SOLAR ENERGY PROJECT	Project No: 196-004-01
Project: GROUNDWATER QUALITY MONITORING PROGRAM		Project Manager: AWB
Technicians: RCD/AWB		Weather: Cloudy, warm
Sampling Method: Production Well Effluent Grab Sample		

Well No.	PW-0	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	10.0						
Total Depth (ft btoc)	1,251						
Screened Interval (ft btoc)	Multiple						
Depth to Water (ft btoc)	99.65						
Sample Date	—						
Sample Time	—						

General Well Location: Between Solar Field #1 and #2, near main road
COMMENTS: offline

Well No.	PW-1	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	10.0						
Total Depth (ft btoc)	1,360						
Screened Interval (ft btoc)	Multiple						
Depth to Water (ft btoc)	—						
Sample Date	—						
Sample Time	—						

General Well Location: NE corner of Solar Field 1 cooling/processing facility, between Block 6 & Block 7
COMMENTS: offline + capped

Well No.	PW-2	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)	10.0	20.83	8.33	3.78	8.5	-69	3.43
Total Depth (ft btoc)	1,125						
Screened Interval (ft btoc)	Multiple						
Depth to Water (ft btoc)	—						
Sample Date	12/04/14						
Sample Time	1045						

General Well Location: NW corner of Solar Field 2 cooling/processing facility, between Block 7 & Block 8
COMMENTS: Slight organic odor, light yellow color

Well No.		Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	ORP (mV)	DO (mg/L)
Casing Diameter (in.)							
Total Depth (ft btoc)							
Screened Interval (ft btoc)							
Depth to Water (ft btoc)							
Sample Date							
Sample Time							

General Well Location:
COMMENTS:

APPENDIX B

LABORATORY ANALYTICAL RESULTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-95427-1
Client Project/Site: Genesis Solar-Blythe

For:
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Attn: Arlin Brewster

Authorized for release by:
12/16/2014 4:48:48 PM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

Table of Contents

Sample Summary

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-95427-1	DM-1	Water	12/04/14 12:30	12/05/14 14:05
440-95427-2	DM-2	Water	12/04/14 14:45	12/05/14 14:05
440-95427-3	DM-3	Water	12/05/14 08:55	12/05/14 14:05
440-95427-4	PW-2	Water	12/04/14 10:45	12/05/14 14:05
440-95427-5	23A	Water	12/04/14 08:50	12/05/14 14:05
440-95427-6	TW-1	Water	12/04/14 07:15	12/05/14 14:05
440-95427-7	TW-2	Water	12/04/14 09:30	12/05/14 14:05
440-95427-8	OBS-1	Water	12/04/14 07:30	12/05/14 14:05
440-95427-9	DUP	Water	12/04/14 00:01	12/05/14 14:05

Job ID: 440-95427-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-95427-1

Comments
Oxygen and Deuterium isotope results will be reported separately when complete.

Receipt
The samples were received on 12/5/2014 2:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.7º C, 4.5º C, 5.2º C, 5.2º C and 5.4º C.

HPLC/IC
Method(s) 300.0: The following samples were analyzed outside of 48-hour analytical holding time for nitrate due to instrument malfunction: OBS-1 (440-95427-8), TW-2 (440-95427-7).

Method(s) 300.0: The following samples were diluted for nitrate due to the nature of the sample matrix: DM-3 (440-95427-3), PW-2 (440-95427-4), 23A (440-95427-5), TW-1 (440-95427-6), TW-2 (440-95427-7), OBS-1 (440-95427-8), DUP (440-95427-9). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8015B: The laboratory control sample (LCS) for batch 224082 recovered 1% below the lower control limit for 1,1-Biphenyl (49%). The laboratory control sample duplicate (LCSD) recovery was within acceptance limits. The samples were re-extracted past 7-day extraction holding time with acceptable LCS and LCSD results and all samples confirmed as ND. The original set of data has been reported.

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batches 224082 and 224621. The laboratory control sample (LCS) was performed in duplicate to provide precision data for each batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 200.8: The following samples were diluted due to the nature of the sample matrix: DM-1 (440-95427-1), DM-2 (440-95427-2), DM-3 (440-95427-3), PW-2 (440-95427-4), 23A (440-95427-5), TW-1 (440-95427-6), OBS-1 (440-95427-8), DUP (440-95427-9). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batches 224694 and 224727. The laboratory control sample (LCS) was performed in duplicate to provide precison data for each batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: DM-1
Date Collected: 12/04/14 12:30
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-1
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.094	0.019	mg/L		12/11/14 12:36	12/12/14 13:44	1
1,1'-Biphenyl	ND	*	0.094	0.019	mg/L		12/11/14 12:36	12/12/14 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*67*		*45 - 120*	*12/11/14 12:36*	*12/12/14 13:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4800**		250	130	mg/L			12/05/14 17:50	500
Nitrate as N	**2.9**		2.2	1.1	mg/L			12/05/14 17:34	20
Sulfate	**1700**		250	130	mg/L			12/05/14 17:50	500

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**230**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:09	5
Copper	ND		0.050	0.025	mg/L		12/10/14 13:19	12/12/14 17:09	5
Iron	ND		0.20	0.050	mg/L		12/10/14 13:19	12/12/14 17:09	5
Magnesium	**57**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:09	5
Potassium	**21**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:09	5
Sodium	**3600**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:09	5
Strontium	**7.0**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:09	5

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Arsenic	**7.7**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Barium	**50**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:00	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Manganese	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Nickel	**9.2**	**J**	10	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:00	5
Zinc	**25**	**J**	100	13	ug/L		12/10/14 13:21	12/11/14 12:00	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00015**	**J**	0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 20:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**19000**		2.0	2.0	umhos/cm			12/11/14 07:13	2
Total Dissolved Solids	**11000**		100	50	mg/L			12/11/14 08:40	1
pH	**7.92**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**20.0**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: DM-2
Date Collected: 12/04/14 14:45
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-2
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.095	0.019	mg/L		12/11/14 12:36	12/12/14 14:06	1
1,1'-Biphenyl	ND	*	0.095	0.019	mg/L		12/11/14 12:36	12/12/14 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*69*		*45 - 120*	*12/11/14 12:36*	*12/12/14 14:06*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4400**		250	130	mg/L			12/05/14 18:23	500
Nitrate as N	**3.0**		2.2	1.1	mg/L			12/05/14 18:07	20
Sulfate	**1600**		250	130	mg/L			12/05/14 18:23	500

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**300**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 16:46	5
Copper	ND		0.050	0.025	mg/L		12/10/14 13:19	12/12/14 16:46	5
Iron	**0.082**	**J**	0.20	0.050	mg/L		12/10/14 13:19	12/12/14 16:46	5
Magnesium	**55**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 16:46	5
Potassium	**20**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 16:46	5
Sodium	**3100**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 16:46	5
Strontium	**7.4**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 16:46	5

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Arsenic	**5.7**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Barium	**140**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 11:52	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Manganese	**90**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Nickel	**8.4**	**J**	10	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 11:52	5
Zinc	ND		100	13	ug/L		12/10/14 13:21	12/11/14 11:52	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 20:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 10:59	12/15/14 12:51	1
Specific Conductance	**17000**		2.0	2.0	umhos/cm			12/11/14 07:13	2
Total Dissolved Solids	**9900**		100	50	mg/L			12/11/14 08:40	1
pH	**7.90**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.7**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: DM-3
Date Collected: 12/05/14 08:55
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-3
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.099	0.020	mg/L		12/11/14 12:36	12/12/14 14:29	1
1,1'-Biphenyl	ND	*	0.099	0.020	mg/L		12/11/14 12:36	12/12/14 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*76*		*45 - 120*	*12/11/14 12:36*	*12/12/14 14:29*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4900**		250	130	mg/L			12/05/14 18:56	500
Nitrate as N	**1.8**	**J**	2.2	1.1	mg/L			12/05/14 18:39	20
Sulfate	**1800**		250	130	mg/L			12/05/14 18:56	500

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**230**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:12	5
Copper	ND		0.050	0.025	mg/L		12/10/14 13:19	12/12/14 17:12	5
Iron	ND		0.20	0.050	mg/L		12/10/14 13:19	12/12/14 17:12	5
Magnesium	**56**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:12	5
Potassium	**20**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:12	5
Sodium	**3600**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:12	5
Strontium	**6.6**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:12	5

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Arsenic	**16**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Barium	**18**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:02	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Manganese	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Nickel	**9.6**	**J**	10	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:02	5
Zinc	ND		100	13	ug/L		12/10/14 13:21	12/11/14 12:02	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 20:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**18000**		2.0	2.0	umhos/cm			12/11/14 07:13	2
Total Dissolved Solids	**11000**		100	50	mg/L			12/11/14 08:40	1
pH	**7.82**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.5**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: PW-2
Date Collected: 12/04/14 10:45
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-4
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.095	0.019	mg/L		12/11/14 12:36	12/12/14 14:06	1
1,1'-Biphenyl	ND	*	0.095	0.019	mg/L		12/11/14 12:36	12/12/14 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*71*		*45 - 120*	*12/11/14 12:36*	*12/12/14 14:06*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**900**		100	50	mg/L			12/05/14 19:28	200
Nitrate as N	ND		0.55	0.28	mg/L			12/05/14 19:12	5
Sulfate	**440**		100	50	mg/L			12/05/14 19:28	200

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**52**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:14	1
Copper	ND		0.010	0.0050	mg/L		12/10/14 13:19	12/12/14 17:14	1
Iron	**0.075**		0.040	0.010	mg/L		12/10/14 13:19	12/12/14 17:14	1
Magnesium	**4.3**		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:14	1
Potassium	**5.6**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:14	1
Sodium	**670**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:14	1
Strontium	**1.2**		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:14	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Arsenic	**28**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Barium	**40**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:04	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Manganese	**22**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Nickel	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:04	5
Zinc	ND		100	13	ug/L		12/10/14 13:21	12/11/14 12:04	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 20:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**3900**		1.0	1.0	umhos/cm			12/11/14 07:13	1
Total Dissolved Solids	**2100**		20	10	mg/L			12/11/14 08:40	1
pH	**8.12**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.6**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: 23A
Date Collected: 12/04/14 08:50
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-5
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.095	0.019	mg/L		12/11/14 12:36	12/12/14 13:44	1
1,1'-Biphenyl	ND	*	0.095	0.019	mg/L		12/11/14 12:36	12/12/14 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*74*		*45 - 120*	*12/11/14 12:36*	*12/12/14 13:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**480**		50	25	mg/L			12/05/14 20:01	100
Nitrate as N	ND		0.22	0.11	mg/L			12/05/14 19:45	2
Sulfate	**370**		50	25	mg/L			12/05/14 20:01	100

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**24**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:27	1
Copper	ND		0.010	0.0050	mg/L		12/10/14 13:19	12/12/14 17:27	1
Iron	**0.011**	**J**	0.040	0.010	mg/L		12/10/14 13:19	12/12/14 17:27	1
Magnesium	**0.51**		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:27	1
Potassium	**10**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:27	1
Sodium	**520**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:27	1
Strontium	**0.93**		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:27	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Arsenic	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Barium	**20**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:07	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Manganese	**5.6**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Nickel	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:07	5
Zinc	**100**		100	13	ug/L		12/10/14 13:21	12/11/14 12:07	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 20:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**2900**		1.0	1.0	umhos/cm			12/11/14 07:13	1
Total Dissolved Solids	**1500**		20	10	mg/L			12/11/14 08:40	1
pH	**8.20**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.8**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: TW-1
Date Collected: 12/04/14 07:15
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-6
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.095	0.019	mg/L		12/11/14 12:36	12/12/14 12:39	1
1,1'-Biphenyl	ND	*	0.095	0.019	mg/L		12/11/14 12:36	12/12/14 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*76*		*45 - 120*	*12/11/14 12:36*	*12/12/14 12:39*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3900**		250	130	mg/L			12/05/14 21:06	500
Nitrate as N	ND		2.2	1.1	mg/L			12/05/14 20:50	20
Sulfate	**1200**		250	130	mg/L			12/05/14 21:06	500

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**86**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:30	5
Copper	ND		0.050	0.025	mg/L		12/10/14 13:19	12/12/14 17:30	5
Iron	**0.057**	**J**	0.20	0.050	mg/L		12/10/14 13:19	12/12/14 17:30	5
Magnesium	**11**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:30	5
Potassium	**21**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:30	5
Sodium	**3200**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:30	5
Strontium	**3.8**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:30	5

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Arsenic	**3.8**	**J**	5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Barium	**17**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:25	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Manganese	**8.6**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Nickel	**4.4**	**J**	10	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:25	5
Zinc	ND		100	13	ug/L		12/10/14 13:21	12/11/14 12:25	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 21:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**15000**		2.0	2.0	umhos/cm			12/11/14 07:13	2
Total Dissolved Solids	**8500**		100	50	mg/L			12/11/14 08:40	1
pH	**9.87**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**20.0**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: TW-2
Date Collected: 12/04/14 09:30
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-7
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.096	0.019	mg/L		12/11/14 12:36	12/12/14 13:01	1
1,1'-Biphenyl	ND	*	0.096	0.019	mg/L		12/11/14 12:36	12/12/14 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*78*		*45 - 120*	*12/11/14 12:36*	*12/12/14 13:01*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		100	50	mg/L			12/06/14 13:26	200
Nitrate as N	ND	H	1.1	0.55	mg/L			12/06/14 13:08	10
Sulfate	**420**		100	50	mg/L			12/06/14 13:26	200

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**67**		0.20	0.10	mg/L		12/10/14 13:19	12/12/14 17:32	2
Copper	ND		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:32	2
Iron	**0.041**	**J**	0.080	0.020	mg/L		12/10/14 13:19	12/12/14 17:32	2
Magnesium	**0.11**		0.040	0.020	mg/L		12/10/14 13:19	12/12/14 17:32	2
Potassium	**21**		1.0	0.50	mg/L		12/10/14 13:19	12/12/14 17:32	2
Sodium	**1000**		1.0	0.50	mg/L		12/10/14 13:19	12/12/14 17:32	2
Strontium	**4.2**		0.040	0.020	mg/L		12/10/14 13:19	12/12/14 17:32	2

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Arsenic	**4.4**		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Barium	**36**		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Cadmium	ND		1.0	0.25	ug/L		12/10/14 13:21	12/11/14 12:28	1
Chromium	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Cobalt	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Lead	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Manganese	**3.4**		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Nickel	**1.8**	**J**	2.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Selenium	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 12:28	1
Zinc	**2.9**	**J**	20	2.5	ug/L		12/10/14 13:21	12/11/14 12:28	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 21:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**5800**		1.0	1.0	umhos/cm			12/11/14 07:13	1
Total Dissolved Solids	**2900**		100	50	mg/L			12/11/14 08:40	1
pH	**9.68**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.8**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: OBS-1
Date Collected: 12/04/14 07:30
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-8
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.094	0.019	mg/L		12/11/14 12:36	12/12/14 13:22	1
1,1'-Biphenyl	ND	*	0.094	0.019	mg/L		12/11/14 12:36	12/12/14 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*71*		*45 - 120*	*12/11/14 12:36*	*12/12/14 13:22*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5400**		500	250	mg/L			12/06/14 14:01	1000
Nitrate as N	**4.3**	**J H**	5.5	2.8	mg/L			12/06/14 13:43	50
Sulfate	**4900**		500	250	mg/L			12/06/14 14:01	1000

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**330**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:34	5
Copper	ND		0.050	0.025	mg/L		12/10/14 13:19	12/12/14 17:34	5
Iron	ND		0.20	0.050	mg/L		12/10/14 13:19	12/12/14 17:34	5
Magnesium	**87**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:34	5
Potassium	**27**		2.5	1.3	mg/L		12/10/14 13:19	12/12/14 17:34	5
Sodium	**6100**		25	13	mg/L		12/10/14 13:19	12/12/14 17:56	50
Strontium	**8.8**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:34	5

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Arsenic	**2.8**	**J**	5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Barium	**13**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:30	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Manganese	**2.5**	**J**	5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Nickel	**6.8**	**J**	10	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Selenium	**59**		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:30	5
Zinc	**18**	**J**	100	13	ug/L		12/10/14 13:21	12/11/14 12:30	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 21:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.7	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**26000**		2.0	2.0	umhos/cm			12/11/14 07:13	2
Total Dissolved Solids	**17000**		200	100	mg/L			12/11/14 08:40	1
pH	**7.98**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.8**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: DUP
Date Collected: 12/04/14 00:01
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-9
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.096	0.019	mg/L		12/11/14 12:36	12/12/14 14:29	1
1,1'-Biphenyl	ND	*	0.096	0.019	mg/L		12/11/14 12:36	12/12/14 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*90*		*45 - 120*	*12/11/14 12:36*	*12/12/14 14:29*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**840**		100	50	mg/L			12/05/14 18:07	200
Nitrate as N	ND		0.55	0.28	mg/L			12/05/14 17:50	5
Sulfate	**440**		100	50	mg/L			12/05/14 18:07	200

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**52**		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 17:37	1
Copper	ND		0.010	0.0050	mg/L		12/10/14 13:19	12/12/14 17:37	1
Iron	**0.072**		0.040	0.010	mg/L		12/10/14 13:19	12/12/14 17:37	1
Magnesium	**4.4**		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:37	1
Potassium	**5.7**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:37	1
Sodium	**670**		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 17:37	1
Strontium	**1.2**		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 17:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Arsenic	**28**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Barium	**38**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Cadmium	ND		5.0	1.3	ug/L		12/10/14 13:21	12/11/14 12:33	5
Chromium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Cobalt	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Lead	ND		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Manganese	**23**		5.0	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Nickel	**2.7**	**J**	10	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Selenium	ND		10	2.5	ug/L		12/10/14 13:21	12/11/14 12:33	5
Zinc	ND		100	13	ug/L		12/10/14 13:21	12/11/14 12:33	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 21:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		4.8	1.3	mg/L		12/15/14 12:35	12/15/14 12:53	1
Specific Conductance	**3900**		1.0	1.0	umhos/cm			12/11/14 07:13	1
Total Dissolved Solids	**2100**		20	10	mg/L			12/11/14 08:40	1
pH	**8.13**	**HF**	0.100	0.100	SU			12/06/14 08:56	1
Temperature	**19.8**	**HF**	1.00	1.00	Degrees C			12/06/14 08:56	1

Method Summary

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL IRV
200.8	Metals (ICP/MS)	EPA	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV
1664A	HEM and SGT-HEM	1664A	TAL IRV
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Client Sample ID: DM-1

Lab Sample ID: 440-95427-1

Date Collected: 12/04/14 12:30

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1060 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1060 mL	1 mL	224288	12/12/14 13:44	KW	TAL IRV
Total/NA	Prep	3510C			1055 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1055 mL	1 mL	224688	12/15/14 18:32	KW	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		222762	12/05/14 17:34	JRA	TAL IRV
Total/NA	Analysis	300.0		500	5 mL		222763	12/05/14 17:50	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		5	25 mL	25 mL	224523	12/12/14 17:09	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:00	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 20:38	DB	TAL IRV
Total/NA	Prep	1664A			1065 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1065 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		2			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: DM-2

Lab Sample ID: 440-95427-2

Date Collected: 12/04/14 14:45

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1055 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1055 mL	1 mL	224288	12/12/14 14:06	KW	TAL IRV
Total/NA	Prep	3510C			1060 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1060 mL	1 mL	224688	12/15/14 16:00	KW	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		222762	12/05/14 18:07	JRA	TAL IRV
Total/NA	Analysis	300.0		500	5 mL		222763	12/05/14 18:23	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		5	25 mL	25 mL	224523	12/12/14 16:46	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 11:52	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 20:45	DB	TAL IRV
Total/NA	Prep	1664A			1065 mL	1000 mL	224694	12/15/14 10:59	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1065 mL	1000 mL	224734	12/15/14 12:51	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		2			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: DM-3

Lab Sample ID: 440-95427-3

Date Collected: 12/05/14 08:55

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1010 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1010 mL	1 mL	224288	12/12/14 14:29	KW	TAL IRV
Total/NA	Prep	3510C			1010 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1010 mL	1 mL	224688	12/15/14 16:22	KW	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		222762	12/05/14 18:39	JRA	TAL IRV
Total/NA	Analysis	300.0		500	5 mL		222763	12/05/14 18:56	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		5	25 mL	25 mL	224523	12/12/14 17:12	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:02	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 20:47	DB	TAL IRV
Total/NA	Prep	1664A			1065 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1065 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		2			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: PW-2

Lab Sample ID: 440-95427-4

Date Collected: 12/04/14 10:45

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1050 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1050 mL	1 mL	224286	12/12/14 14:06	KW	TAL IRV
Total/NA	Prep	3510C			1050 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1050 mL	1 mL	224688	12/15/14 16:43	KW	TAL IRV
Total/NA	Analysis	300.0		5	5 mL		222762	12/05/14 19:12	JRA	TAL IRV
Total/NA	Analysis	300.0		200	5 mL		222763	12/05/14 19:28	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1	25 mL	25 mL	224523	12/12/14 17:14	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:04	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 20:55	DB	TAL IRV
Total/NA	Prep	1664A			1060 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1060 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		1			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: 23A

Lab Sample ID: 440-95427-5

Date Collected: 12/04/14 08:50

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1050 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1050 mL	1 mL	224286	12/12/14 13:44	KW	TAL IRV
Total/NA	Prep	3510C			1050 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1050 mL	1 mL	224688	12/15/14 17:05	KW	TAL IRV
Total/NA	Analysis	300.0		2	5 mL		222762	12/05/14 19:45	JRA	TAL IRV
Total/NA	Analysis	300.0		100	5 mL		222763	12/05/14 20:01	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1	25 mL	25 mL	224523	12/12/14 17:27	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:07	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 20:57	DB	TAL IRV
Total/NA	Prep	1664A			1060 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1060 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		1			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: TW-1

Lab Sample ID: 440-95427-6

Date Collected: 12/04/14 07:15

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1055 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1055 mL	1 mL	224286	12/12/14 12:39	KW	TAL IRV
Total/NA	Prep	3510C			1060 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1060 mL	1 mL	224688	12/15/14 17:27	KW	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		222762	12/05/14 20:50	JRA	TAL IRV
Total/NA	Analysis	300.0		500	5 mL		222763	12/05/14 21:06	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		5	25 mL	25 mL	224523	12/12/14 17:30	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:25	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 21:00	DB	TAL IRV
Total/NA	Prep	1664A			1055 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1055 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		2			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: TW-2

Lab Sample ID: 440-95427-7

Date Collected: 12/04/14 09:30

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1045 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1045 mL	1 mL	224286	12/12/14 13:01	KW	TAL IRV
Total/NA	Prep	3510C			1055 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1055 mL	1 mL	224688	12/15/14 17:48	KW	TAL IRV
Total/NA	Analysis	300.0		10	5 mL		222991	12/06/14 13:08	NN	TAL IRV
Total/NA	Analysis	300.0		200	5 mL		222992	12/06/14 13:26	NN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		2	25 mL	25 mL	224523	12/12/14 17:32	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		1	25 mL	25 mL	224105	12/11/14 12:28	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 21:02	DB	TAL IRV
Total/NA	Prep	1664A			1060 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1060 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		1			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Client Sample ID: OBS-1

Lab Sample ID: 440-95427-8

Date Collected: 12/04/14 07:30

Matrix: Water

Date Received: 12/05/14 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1065 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1065 mL	1 mL	224286	12/12/14 13:22	KW	TAL IRV
Total/NA	Prep	3510C			1070 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1070 mL	1 mL	224688	12/15/14 18:10	KW	TAL IRV
Total/NA	Analysis	300.0		50	5 mL		222991	12/06/14 13:43	NN	TAL IRV
Total/NA	Analysis	300.0		1000	5 mL		222992	12/06/14 14:01	NN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		5	25 mL	25 mL	224523	12/12/14 17:34	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		50	25 mL	25 mL	224523	12/12/14 17:56	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:30	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 21:04	DB	TAL IRV
Total/NA	Prep	1664A			1070 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1070 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		2			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Client Sample ID: DUP
Date Collected: 12/04/14 00:01
Date Received: 12/05/14 14:05

Lab Sample ID: 440-95427-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1040 mL	1 mL	224082	12/11/14 12:36	BB	TAL IRV
Total/NA	Analysis	8015B		1	1040 mL	1 mL	224286	12/12/14 14:29	KW	TAL IRV
Total/NA	Prep	3510C			1050 mL	1 mL	224621	12/15/14 09:23	BB	TAL IRV
Total/NA	Analysis	8015B		1	1050 mL	1 mL	224688	12/15/14 15:38	KW	TAL IRV
Total/NA	Analysis	300.0		5	5 mL		222760	12/05/14 17:50	JRA	TAL IRV
Total/NA	Analysis	300.0		200	5 mL		222761	12/05/14 18:07	JRA	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223770	12/10/14 13:19	APS	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1	25 mL	25 mL	224523	12/12/14 17:37	EN	TAL IRV
Dissolved	Prep	200.2			25 mL	25 mL	223771	12/10/14 13:21	APS	TAL IRV
Dissolved	Analysis	200.8		5	25 mL	25 mL	224105	12/11/14 12:33	NH	TAL IRV
Dissolved	Prep	7470A			20 mL	20 mL	223415	12/09/14 10:04	JS1	TAL IRV
Dissolved	Analysis	7470A		1	20 mL	20 mL	223786	12/09/14 21:07	DB	TAL IRV
Total/NA	Prep	1664A			1050 mL	1000 mL	224727	12/15/14 12:35	AMR	TAL IRV
Total/NA	Analysis	1664A		1	1050 mL	1000 mL	224736	12/15/14 12:53	AMR	TAL IRV
Total/NA	Analysis	SM 2510B		1			223955	12/11/14 07:13	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	223986	12/11/14 08:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1		50 mL	222974	12/06/14 08:56	EN	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 440-224082/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 224288 — **Prep Batch: 224082**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.10	0.020	mg/L		12/11/14 12:36	12/12/14 12:39	1
1,1'-Biphenyl	ND		0.10	0.020	mg/L		12/11/14 12:36	12/12/14 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*72*		*45 - 120*	*12/11/14 12:36*	*12/12/14 12:39*	*1*

Lab Sample ID: LCS 440-224082/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 224286 — **Prep Batch: 224082**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene, 1,1'-oxybis-	0.100	0.0517	J	mg/L		52	50 - 115
1,1'-Biphenyl	0.100	0.0494	J *	mg/L		49	50 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane	*57*		*45 - 120*

Lab Sample ID: LCSD 440-224082/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 224288 — **Prep Batch: 224082**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-	0.100	0.0568	J	mg/L		57	50 - 115	28	30
1,1'-Biphenyl	0.100	0.0558	J	mg/L		56	50 - 115	29	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane	*71*		*45 - 120*

Lab Sample ID: MB 440-224621/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 224688 — **Prep Batch: 224621**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		0.10	0.020	mg/L		12/15/14 07:22	12/15/14 14:33	1
1,1'-Biphenyl	ND		0.10	0.020	mg/L		12/15/14 07:22	12/15/14 14:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*64*		*45 - 120*	*12/15/14 07:22*	*12/15/14 14:33*	*1*

Lab Sample ID: LCS 440-224621/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 224688 — **Prep Batch: 224621**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene, 1,1'-oxybis-	0.100	0.0669	J	mg/L		67	50 - 115
1,1'-Biphenyl	0.100	0.0655	J	mg/L		66	50 - 115

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 440-224621/2-A
Matrix: Water
Analysis Batch: 224688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224621

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane	*74*		*45 - 120*

Lab Sample ID: LCSD 440-224621/3-A
Matrix: Water
Analysis Batch: 224688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 224621

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			0.100	0.0686	J	mg/L		69	50 - 115	2	30
1,1'-Biphenyl			0.100	0.0672	J	mg/L		67	50 - 115	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane	*76*		*45 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-222760/4
Matrix: Water
Analysis Batch: 222760

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/05/14 09:37	1

Lab Sample ID: LCS 440-222760/2
Matrix: Water
Analysis Batch: 222760

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N			1.13	1.05		mg/L		93	90 - 110

Lab Sample ID: 550-35435-D-1 MS
Matrix: Water
Analysis Batch: 222760

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	12		11.3	19.6	F1	mg/L		67	80 - 120

Lab Sample ID: 550-35435-D-1 MSD
Matrix: Water
Analysis Batch: 222760

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	12		11.3	19.0	F1	mg/L		62	80 - 120	3	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 440-222761/4
Matrix: Water
Analysis Batch: 222761

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.25	mg/L			12/05/14 09:37	1
Sulfate	ND		0.50	0.25	mg/L			12/05/14 09:37	1

Lab Sample ID: LCS 440-222761/2
Matrix: Water
Analysis Batch: 222761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.04		mg/L		101	90 - 110
Sulfate	5.00	4.98		mg/L		100	90 - 110

Lab Sample ID: 550-35435-D-1 MS
Matrix: Water
Analysis Batch: 222761

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	140		50.0	170	F1	mg/L		68	80 - 120
Sulfate	260		50.0	286	4	mg/L		44	80 - 120

Lab Sample ID: 550-35435-D-1 MSD
Matrix: Water
Analysis Batch: 222761

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	140		50.0	169	F1	mg/L		67	80 - 120	0	20
Sulfate	260		50.0	288	4	mg/L		49	80 - 120	1	20

Lab Sample ID: MB 440-222762/7
Matrix: Water
Analysis Batch: 222762

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/05/14 11:11	1

Lab Sample ID: LCS 440-222762/6
Matrix: Water
Analysis Batch: 222762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.09		mg/L		96	90 - 110

Lab Sample ID: 440-95242-A-1 MS
Matrix: Water
Analysis Batch: 222762

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.0	J	11.3	11.2		mg/L		82	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-95242-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222762

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.0	J	11.3	11.7		mg/L		86	80 - 120	4	20

Lab Sample ID: MB 440-222763/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222763

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.25	mg/L			12/05/14 11:11	1
Sulfate	ND		0.50	0.25	mg/L			12/05/14 11:11	1

Lab Sample ID: LCS 440-222763/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.91		mg/L		98	90 - 110
Sulfate	5.00	4.71		mg/L		94	90 - 110

Lab Sample ID: 440-95242-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222763

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	200		50.0	236	4	mg/L		67	80 - 120
Sulfate	300		50.0	329	4	mg/L		53	80 - 120

Lab Sample ID: 440-95242-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222763

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	200		50.0	238	4	mg/L		71	80 - 120	1	20
Sulfate	300		50.0	327	4	mg/L		49	80 - 120	1	20

Lab Sample ID: MB 440-222991/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222991

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/06/14 11:19	1

Lab Sample ID: LCS 440-222991/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 222991

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.03		mg/L		91	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-95469-G-3 MS
Matrix: Water
Analysis Batch: 222991

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	7.7		11.3	18.5		mg/L		95	80 - 120

Lab Sample ID: 440-95469-G-3 MSD
Matrix: Water
Analysis Batch: 222991

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	7.7		11.3	18.3		mg/L		93	80 - 120	1	20

Lab Sample ID: MB 440-222992/4
Matrix: Water
Analysis Batch: 222992

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.25	mg/L			12/06/14 11:19	1
Sulfate	ND		0.50	0.25	mg/L			12/06/14 11:19	1

Lab Sample ID: LCS 440-222992/6
Matrix: Water
Analysis Batch: 222992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.98		mg/L		99	90 - 110
Sulfate	5.00	5.05		mg/L		101	90 - 110

Lab Sample ID: 440-95469-G-3 MS
Matrix: Water
Analysis Batch: 222992

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	41		50.0	94.4		mg/L		108	80 - 120
Sulfate	70		50.0	121		mg/L		103	80 - 120

Lab Sample ID: 440-95469-G-3 MSD
Matrix: Water
Analysis Batch: 222992

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	41		50.0	93.9		mg/L		107	80 - 120	1	20
Sulfate	70		50.0	120		mg/L		100	80 - 120	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-223770/1-A
Matrix: Water
Analysis Batch: 224523

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 223770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		0.10	0.050	mg/L		12/10/14 13:19	12/12/14 16:35	1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: MB 440-223770/1-A
Matrix: Water
Analysis Batch: 224523

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 223770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.010	0.0050	mg/L		12/10/14 13:19	12/12/14 16:35	1
Iron	ND		0.040	0.010	mg/L		12/10/14 13:19	12/12/14 16:35	1
Magnesium	ND		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 16:35	1
Potassium	ND		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 16:35	1
Sodium	ND		0.50	0.25	mg/L		12/10/14 13:19	12/12/14 16:35	1
Strontium	ND		0.020	0.010	mg/L		12/10/14 13:19	12/12/14 16:35	1

Lab Sample ID: LCS 440-223770/2-A
Matrix: Water
Analysis Batch: 224523

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 223770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	2.50	2.66		mg/L		106	85 - 115
Copper	0.500	0.535		mg/L		107	85 - 115
Iron	0.500	0.547		mg/L		109	85 - 115
Magnesium	2.50	2.70		mg/L		108	85 - 115
Potassium	5.00	5.54		mg/L		111	85 - 115
Sodium	5.00	5.29		mg/L		106	85 - 115
Strontium	0.500	0.539		mg/L		108	85 - 115

Lab Sample ID: 440-95427-2 MS
Matrix: Water
Analysis Batch: 224523

Client Sample ID: DM-2
Prep Type: Dissolved
Prep Batch: 223770

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	300		2.50	304	4	mg/L		136	70 - 130
Copper	ND		0.500	0.557		mg/L		111	70 - 130
Iron	0.082	J	0.500	0.526		mg/L		89	70 - 130
Magnesium	55		2.50	58.7	4	mg/L		136	70 - 130
Potassium	20		5.00	25.3		mg/L		112	70 - 130
Sodium	3100		5.00	3190	4	mg/L		2240	70 - 130
Strontium	7.4		0.500	8.00	4	mg/L		114	70 - 130

Lab Sample ID: 440-95427-2 MSD
Matrix: Water
Analysis Batch: 224523

Client Sample ID: DM-2
Prep Type: Dissolved
Prep Batch: 223770

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	300		2.50	299	4	mg/L		-82	70 - 130	2	20
Copper	ND		0.500	0.520		mg/L		104	70 - 130	7	20
Iron	0.082	J	0.500	0.513		mg/L		86	70 - 130	2	20
Magnesium	55		2.50	55.4	4	mg/L		6	70 - 130	6	20
Potassium	20		5.00	24.8		mg/L		101	70 - 130	2	20
Sodium	3100		5.00	3060	4	mg/L		-244	70 - 130	4	20
Strontium	7.4		0.500	7.84	4	mg/L		83	70 - 130	2	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-223771/1-A
Matrix: Water
Analysis Batch: 224105

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 223771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Arsenic	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Barium	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Cadmium	ND		1.0	0.25	ug/L		12/10/14 13:21	12/11/14 11:48	1
Chromium	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Cobalt	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Lead	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Manganese	ND		1.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Nickel	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Selenium	ND		2.0	0.50	ug/L		12/10/14 13:21	12/11/14 11:48	1
Zinc	ND		20	2.5	ug/L		12/10/14 13:21	12/11/14 11:48	1

Lab Sample ID: LCS 440-223771/2-A
Matrix: Water
Analysis Batch: 224105

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 223771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	80.0	78.5		ug/L		98	85 - 115
Arsenic	80.0	80.6		ug/L		101	85 - 115
Barium	80.0	78.9		ug/L		99	85 - 115
Cadmium	80.0	79.2		ug/L		99	85 - 115
Chromium	80.0	79.6		ug/L		100	85 - 115
Cobalt	80.0	80.4		ug/L		100	85 - 115
Lead	80.0	79.6		ug/L		99	85 - 115
Manganese	80.0	80.2		ug/L		100	85 - 115
Nickel	80.0	79.7		ug/L		100	85 - 115
Selenium	80.0	78.8		ug/L		98	85 - 115
Zinc	80.0	82.7		ug/L		103	85 - 115

Lab Sample ID: 440-95427-2 MS
Matrix: Water
Analysis Batch: 224105

Client Sample ID: DM-2
Prep Type: Dissolved
Prep Batch: 223771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		80.0	83.3		ug/L		104	70 - 130
Arsenic	5.7		80.0	90.3		ug/L		106	70 - 130
Barium	140		80.0	211		ug/L		87	70 - 130
Cadmium	ND		80.0	75.1		ug/L		94	70 - 130
Chromium	ND		80.0	79.9		ug/L		100	70 - 130
Cobalt	ND		80.0	78.9		ug/L		99	70 - 130
Lead	ND		80.0	84.6		ug/L		106	70 - 130
Manganese	90		80.0	161		ug/L		89	70 - 130
Nickel	8.4	J	80.0	80.9		ug/L		91	70 - 130
Selenium	ND		80.0	74.5		ug/L		93	70 - 130
Zinc	ND		80.0	83.9	J	ug/L		105	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-95427-2 MSD — **Client Sample ID: DM-2**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 224105 — **Prep Batch: 223771**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		80.0	82.6		ug/L		103	70 - 130	1	20
Arsenic	5.7		80.0	89.5		ug/L		105	70 - 130	1	20
Barium	140		80.0	211		ug/L		87	70 - 130	0	20
Cadmium	ND		80.0	75.8		ug/L		95	70 - 130	1	20
Chromium	ND		80.0	80.7		ug/L		101	70 - 130	1	20
Cobalt	ND		80.0	79.4		ug/L		99	70 - 130	1	20
Lead	ND		80.0	85.6		ug/L		107	70 - 130	1	20
Manganese	90		80.0	161		ug/L		90	70 - 130	0	20
Nickel	8.4	J	80.0	81.8		ug/L		92	70 - 130	1	20
Selenium	ND		80.0	75.4		ug/L		94	70 - 130	1	20
Zinc	ND		80.0	81.3	J	ug/L		102	70 - 130	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-223415/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 223786 — **Prep Batch: 223415**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		12/09/14 10:04	12/09/14 20:33	1

Lab Sample ID: LCS 440-223415/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 223786 — **Prep Batch: 223415**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00702		mg/L		88	80 - 120

Lab Sample ID: 440-95427-1 MS — **Client Sample ID: DM-1**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 223786 — **Prep Batch: 223415**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00015	J	0.00800	0.00624		mg/L		76	70 - 130

Lab Sample ID: 440-95427-1 MSD — **Client Sample ID: DM-1**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 223786 — **Prep Batch: 223415**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00015	J	0.00800	0.00639		mg/L		78	70 - 130	2	20

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-224694/1-A
Matrix: Water
Analysis Batch: 224734

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 224694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	1.4	mg/L		12/15/14 10:59	12/15/14 12:51	1

Lab Sample ID: LCS 440-224694/2-A
Matrix: Water
Analysis Batch: 224734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil & Grease)	20.0	18.2		mg/L		91	78 - 114

Lab Sample ID: LCSD 440-224694/3-A
Matrix: Water
Analysis Batch: 224734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 224694

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM (Oil & Grease)	20.0	18.9		mg/L		95	78 - 114	4	11

Lab Sample ID: MB 440-224727/1-A
Matrix: Water
Analysis Batch: 224736

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 224727

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	1.4	mg/L		12/15/14 12:35	12/15/14 12:53	1

Lab Sample ID: LCS 440-224727/2-A
Matrix: Water
Analysis Batch: 224736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil & Grease)	20.0	19.0		mg/L		95	78 - 114

Lab Sample ID: LCSD 440-224727/3-A
Matrix: Water
Analysis Batch: 224736

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 224727

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM (Oil & Grease)	20.0	19.5		mg/L		97	78 - 114	3	11

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-223955/3
Matrix: Water
Analysis Batch: 223955

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			12/11/14 07:13	1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 440-223955/4
Matrix: Water
Analysis Batch: 223955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			765	784		umhos/cm		102	90 - 110		

Lab Sample ID: 440-95427-3 DU
Matrix: Water
Analysis Batch: 223955

Client Sample ID: DM-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	18000			18000		umhos/cm				0.2	5

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-223986/1
Matrix: Water
Analysis Batch: 223986

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	5.0	mg/L			12/11/14 08:40	1

Lab Sample ID: LCS 440-223986/2
Matrix: Water
Analysis Batch: 223986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	988		mg/L		99	90 - 110		

Lab Sample ID: 440-95427-2 DU
Matrix: Water
Analysis Batch: 223986

Client Sample ID: DM-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	9900			9870		mg/L				0.2	5

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-95427-9 DU
Matrix: Water
Analysis Batch: 222974

Client Sample ID: DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.13	HF		8.140		SU				0.1	2
Temperature	19.8	HF		20.00		Degrees C				1	

GC Semi VOA

Prep Batch: 224082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	3510C	
440-95427-2	DM-2	Total/NA	Water	3510C	
440-95427-3	DM-3	Total/NA	Water	3510C	
440-95427-4	PW-2	Total/NA	Water	3510C	
440-95427-5	23A	Total/NA	Water	3510C	
440-95427-6	TW-1	Total/NA	Water	3510C	
440-95427-7	TW-2	Total/NA	Water	3510C	
440-95427-8	OBS-1	Total/NA	Water	3510C	
440-95427-9	DUP	Total/NA	Water	3510C	
LCS 440-224082/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-224082/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-224082/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 224286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-4	PW-2	Total/NA	Water	8015B	224082
440-95427-5	23A	Total/NA	Water	8015B	224082
440-95427-6	TW-1	Total/NA	Water	8015B	224082
440-95427-7	TW-2	Total/NA	Water	8015B	224082
440-95427-8	OBS-1	Total/NA	Water	8015B	224082
440-95427-9	DUP	Total/NA	Water	8015B	224082
LCS 440-224082/2-A	Lab Control Sample	Total/NA	Water	8015B	224082

Analysis Batch: 224288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	8015B	224082
440-95427-2	DM-2	Total/NA	Water	8015B	224082
440-95427-3	DM-3	Total/NA	Water	8015B	224082
LCSD 440-224082/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	224082
MB 440-224082/1-A	Method Blank	Total/NA	Water	8015B	224082

Prep Batch: 224621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	3510C	
440-95427-2	DM-2	Total/NA	Water	3510C	
440-95427-3	DM-3	Total/NA	Water	3510C	
440-95427-4	PW-2	Total/NA	Water	3510C	
440-95427-5	23A	Total/NA	Water	3510C	
440-95427-6	TW-1	Total/NA	Water	3510C	
440-95427-7	TW-2	Total/NA	Water	3510C	
440-95427-8	OBS-1	Total/NA	Water	3510C	
440-95427-9	DUP	Total/NA	Water	3510C	
LCS 440-224621/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-224621/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-224621/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 224688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	8015B	224621
440-95427-2	DM-2	Total/NA	Water	8015B	224621
440-95427-3	DM-3	Total/NA	Water	8015B	224621

GC Semi VOA (Continued)

Analysis Batch: 224688 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-4	PW-2	Total/NA	Water	8015B	224621
440-95427-5	23A	Total/NA	Water	8015B	224621
440-95427-6	TW-1	Total/NA	Water	8015B	224621
440-95427-7	TW-2	Total/NA	Water	8015B	224621
440-95427-8	OBS-1	Total/NA	Water	8015B	224621
440-95427-9	DUP	Total/NA	Water	8015B	224621
LCS 440-224621/2-A	Lab Control Sample	Total/NA	Water	8015B	224621
LCSD 440-224621/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	224621
MB 440-224621/1-A	Method Blank	Total/NA	Water	8015B	224621

HPLC/IC

Analysis Batch: 222760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-9	DUP	Total/NA	Water	300.0	
550-35435-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-35435-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 440-222760/2	Lab Control Sample	Total/NA	Water	300.0	
MB 440-222760/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 222761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-9	DUP	Total/NA	Water	300.0	
550-35435-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-35435-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 440-222761/2	Lab Control Sample	Total/NA	Water	300.0	
MB 440-222761/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 222762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95242-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-95242-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-95427-1	DM-1	Total/NA	Water	300.0	
440-95427-2	DM-2	Total/NA	Water	300.0	
440-95427-3	DM-3	Total/NA	Water	300.0	
440-95427-4	PW-2	Total/NA	Water	300.0	
440-95427-5	23A	Total/NA	Water	300.0	
440-95427-6	TW-1	Total/NA	Water	300.0	
LCS 440-222762/6	Lab Control Sample	Total/NA	Water	300.0	
MB 440-222762/7	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 222763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95242-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-95242-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-95427-1	DM-1	Total/NA	Water	300.0	
440-95427-2	DM-2	Total/NA	Water	300.0	
440-95427-3	DM-3	Total/NA	Water	300.0	
440-95427-4	PW-2	Total/NA	Water	300.0	
440-95427-5	23A	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 222763 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-6	TW-1	Total/NA	Water	300.0	
LCS 440-222763/6	Lab Control Sample	Total/NA	Water	300.0	
MB 440-222763/7	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 222991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-7	TW-2	Total/NA	Water	300.0	
440-95427-8	OBS-1	Total/NA	Water	300.0	
440-95469-G-3 MS	Matrix Spike	Total/NA	Water	300.0	
440-95469-G-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 440-222991/6	Lab Control Sample	Total/NA	Water	300.0	
MB 440-222991/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 222992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-7	TW-2	Total/NA	Water	300.0	
440-95427-8	OBS-1	Total/NA	Water	300.0	
440-95469-G-3 MS	Matrix Spike	Total/NA	Water	300.0	
440-95469-G-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 440-222992/6	Lab Control Sample	Total/NA	Water	300.0	
MB 440-222992/4	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 223415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Dissolved	Water	7470A	
440-95427-1 MS	DM-1	Dissolved	Water	7470A	
440-95427-1 MSD	DM-1	Dissolved	Water	7470A	
440-95427-2	DM-2	Dissolved	Water	7470A	
440-95427-3	DM-3	Dissolved	Water	7470A	
440-95427-4	PW-2	Dissolved	Water	7470A	
440-95427-5	23A	Dissolved	Water	7470A	
440-95427-6	TW-1	Dissolved	Water	7470A	
440-95427-7	TW-2	Dissolved	Water	7470A	
440-95427-8	OBS-1	Dissolved	Water	7470A	
440-95427-9	DUP	Dissolved	Water	7470A	
LCS 440-223415/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-223415/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 223770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Dissolved	Water	200.2	
440-95427-2	DM-2	Dissolved	Water	200.2	
440-95427-2 MS	DM-2	Dissolved	Water	200.2	
440-95427-2 MSD	DM-2	Dissolved	Water	200.2	
440-95427-3	DM-3	Dissolved	Water	200.2	
440-95427-4	PW-2	Dissolved	Water	200.2	
440-95427-5	23A	Dissolved	Water	200.2	
440-95427-6	TW-1	Dissolved	Water	200.2	

Metals (Continued)

Prep Batch: 223770 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-7	TW-2	Dissolved	Water	200.2	
440-95427-8	OBS-1	Dissolved	Water	200.2	
440-95427-9	DUP	Dissolved	Water	200.2	
LCS 440-223770/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-223770/1-A	Method Blank	Total Recoverable	Water	200.2	

Prep Batch: 223771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Dissolved	Water	200.2	
440-95427-2	DM-2	Dissolved	Water	200.2	
440-95427-2 MS	DM-2	Dissolved	Water	200.2	
440-95427-2 MSD	DM-2	Dissolved	Water	200.2	
440-95427-3	DM-3	Dissolved	Water	200.2	
440-95427-4	PW-2	Dissolved	Water	200.2	
440-95427-5	23A	Dissolved	Water	200.2	
440-95427-6	TW-1	Dissolved	Water	200.2	
440-95427-7	TW-2	Dissolved	Water	200.2	
440-95427-8	OBS-1	Dissolved	Water	200.2	
440-95427-9	DUP	Dissolved	Water	200.2	
LCS 440-223771/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-223771/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 223786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Dissolved	Water	7470A	223415
440-95427-1 MS	DM-1	Dissolved	Water	7470A	223415
440-95427-1 MSD	DM-1	Dissolved	Water	7470A	223415
440-95427-2	DM-2	Dissolved	Water	7470A	223415
440-95427-3	DM-3	Dissolved	Water	7470A	223415
440-95427-4	PW-2	Dissolved	Water	7470A	223415
440-95427-5	23A	Dissolved	Water	7470A	223415
440-95427-6	TW-1	Dissolved	Water	7470A	223415
440-95427-7	TW-2	Dissolved	Water	7470A	223415
440-95427-8	OBS-1	Dissolved	Water	7470A	223415
440-95427-9	DUP	Dissolved	Water	7470A	223415
LCS 440-223415/2-A	Lab Control Sample	Total/NA	Water	7470A	223415
MB 440-223415/1-A	Method Blank	Total/NA	Water	7470A	223415

Analysis Batch: 224105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Dissolved	Water	200.8	223771
440-95427-2	DM-2	Dissolved	Water	200.8	223771
440-95427-2 MS	DM-2	Dissolved	Water	200.8	223771
440-95427-2 MSD	DM-2	Dissolved	Water	200.8	223771
440-95427-3	DM-3	Dissolved	Water	200.8	223771
440-95427-4	PW-2	Dissolved	Water	200.8	223771
440-95427-5	23A	Dissolved	Water	200.8	223771
440-95427-6	TW-1	Dissolved	Water	200.8	223771
440-95427-7	TW-2	Dissolved	Water	200.8	223771
440-95427-8	OBS-1	Dissolved	Water	200.8	223771
440-95427-9	DUP	Dissolved	Water	200.8	223771

Metals (Continued)

Analysis Batch: 224105 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-223771/2-A	Lab Control Sample	Total Recoverable	Water	200.8	223771
MB 440-223771/1-A	Method Blank	Total Recoverable	Water	200.8	223771

Analysis Batch: 224523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-2	DM-2	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-2 MS	DM-2	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-2 MSD	DM-2	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-3	DM-3	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-4	PW-2	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-5	23A	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-6	TW-1	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-7	TW-2	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-8	OBS-1	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-8	OBS-1	Dissolved	Water	200.7 Rev 4.4	223770
440-95427-9	DUP	Dissolved	Water	200.7 Rev 4.4	223770
LCS 440-223770/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	223770
MB 440-223770/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	223770

General Chemistry

Analysis Batch: 222974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	SM 4500 H+ B	
440-95427-2	DM-2	Total/NA	Water	SM 4500 H+ B	
440-95427-3	DM-3	Total/NA	Water	SM 4500 H+ B	
440-95427-4	PW-2	Total/NA	Water	SM 4500 H+ B	
440-95427-5	23A	Total/NA	Water	SM 4500 H+ B	
440-95427-6	TW-1	Total/NA	Water	SM 4500 H+ B	
440-95427-7	TW-2	Total/NA	Water	SM 4500 H+ B	
440-95427-8	OBS-1	Total/NA	Water	SM 4500 H+ B	
440-95427-9	DUP	Total/NA	Water	SM 4500 H+ B	
440-95427-9 DU	DUP	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 223955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	SM 2510B	
440-95427-2	DM-2	Total/NA	Water	SM 2510B	
440-95427-3	DM-3	Total/NA	Water	SM 2510B	
440-95427-3 DU	DM-3	Total/NA	Water	SM 2510B	
440-95427-4	PW-2	Total/NA	Water	SM 2510B	
440-95427-5	23A	Total/NA	Water	SM 2510B	
440-95427-6	TW-1	Total/NA	Water	SM 2510B	
440-95427-7	TW-2	Total/NA	Water	SM 2510B	
440-95427-8	OBS-1	Total/NA	Water	SM 2510B	
440-95427-9	DUP	Total/NA	Water	SM 2510B	
LCS 440-223955/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MB 440-223955/3	Method Blank	Total/NA	Water	SM 2510B	

General Chemistry (Continued)

Analysis Batch: 223986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	SM 2540C	
440-95427-2	DM-2	Total/NA	Water	SM 2540C	
440-95427-2 DU	DM-2	Total/NA	Water	SM 2540C	
440-95427-3	DM-3	Total/NA	Water	SM 2540C	
440-95427-4	PW-2	Total/NA	Water	SM 2540C	
440-95427-5	23A	Total/NA	Water	SM 2540C	
440-95427-6	TW-1	Total/NA	Water	SM 2540C	
440-95427-7	TW-2	Total/NA	Water	SM 2540C	
440-95427-8	OBS-1	Total/NA	Water	SM 2540C	
440-95427-9	DUP	Total/NA	Water	SM 2540C	
LCS 440-223986/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-223986/1	Method Blank	Total/NA	Water	SM 2540C	

Prep Batch: 224694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-2	DM-2	Total/NA	Water	1664A	
LCS 440-224694/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-224694/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-224694/1-A	Method Blank	Total/NA	Water	1664A	

Prep Batch: 224727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	1664A	
440-95427-3	DM-3	Total/NA	Water	1664A	
440-95427-4	PW-2	Total/NA	Water	1664A	
440-95427-5	23A	Total/NA	Water	1664A	
440-95427-6	TW-1	Total/NA	Water	1664A	
440-95427-7	TW-2	Total/NA	Water	1664A	
440-95427-8	OBS-1	Total/NA	Water	1664A	
440-95427-9	DUP	Total/NA	Water	1664A	
LCS 440-224727/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-224727/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-224727/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 224734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-2	DM-2	Total/NA	Water	1664A	224694
LCS 440-224694/2-A	Lab Control Sample	Total/NA	Water	1664A	224694
LCSD 440-224694/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	224694
MB 440-224694/1-A	Method Blank	Total/NA	Water	1664A	224694

Analysis Batch: 224736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-95427-1	DM-1	Total/NA	Water	1664A	224727
440-95427-3	DM-3	Total/NA	Water	1664A	224727
440-95427-4	PW-2	Total/NA	Water	1664A	224727
440-95427-5	23A	Total/NA	Water	1664A	224727
440-95427-6	TW-1	Total/NA	Water	1664A	224727
440-95427-7	TW-2	Total/NA	Water	1664A	224727
440-95427-8	OBS-1	Total/NA	Water	1664A	224727
440-95427-9	DUP	Total/NA	Water	1664A	224727

General Chemistry (Continued)

Analysis Batch: 224736 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-224727/2-A	Lab Control Sample	Total/NA	Water	1664A	224727
LCSD 440-224727/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	224727
MB 440-224727/1-A	Method Blank	Total/NA	Water	1664A	224727

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H	Sample was prepped or analyzed beyond the specified holding time
F1	MS and/or MSD Recovery exceeds the control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Northstar Environmental Remediation
Project/Site: Genesis Solar-Blythe

TestAmerica Job ID: 440-95427-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15
Northern Mariana Islands	State Program	9	MP0002	01-29-15
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-15
USEPA UCMR	Federal	1	CA01531	01-31-15

* Certification renewal pending - certification considered valid.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

081203

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Arlin Brewster	Site Contact:	Date: 12/05/14	COC No:
Company Name: Northstar	Tel/Fax: 949-274-1719	Lab Contact: Patty Mata	Carrier:	1 of ____ COCs
Address: 26225 Enterprise Ct.	Analysis Turnaround Time			Sampler: AWB/RCD
City/State/Zip: Lake Forest, CA 92630	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 949-580-2800	TAT if different from Below ____			Walk-in Client:
Fax: 949-580-2802	☒ 2 weeks			Lab Sampling
Project Name: Genesis Solar - Blythe	☐ 1 week			Job / SDG No.:
Site: California	☐ 2 days			
PO # 196-004-01	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8015B_DRO-Therm	Subcontract-018+Dexa	300_ORGFM_28D-cl,SO4	2540C_Calcd-TDS	SM4500_H+-PH	2510B-Sp. Cond.	300_ORGFMS-NO3	1664A-HEM (Oil+Gr.	7470A-Mercury	200.8	200.7	Sample Specific Notes.
DM-1	12/04/14	1230	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
DM-2	12/04/14	1445	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
DM-3	12/05/14	0855	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
PW-2	12/04/14	1045	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
23a	12/04/14	0850	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
TW-1	12/04/14	0715	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
TW-2	12/04/14	0930	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
OBS-1	12/04/14	0730	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
Dup	—	—	G	W	8			X	X	X	X	X	X	X	X	X	X	X	
Trip Blank	12/4/14	0700	G	W	3														Hold
Field Blank	12/4/14	0700	G	W	3														Hold

440-95427 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments: 7470A, 200.8, 200.7 samples are field filtered.
Please generate EDF report for Global ID T1000000006093

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd. ____ | Therm ID No.: 4 8

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Northstar	12-5-14 1105			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TestAmerica	12.5.14 14:05

5.8/5.8 5.1/4.5 5.8/5.2 4.3/3.7 4.0/5.4

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12/16/2014

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 440-95427-1

Login Number: 95427

List Source: TestAmerica Irvine

List Number: 1

Creator: Blocker, Kristina M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C

MANN-KENDALL TREND ANALYSIS

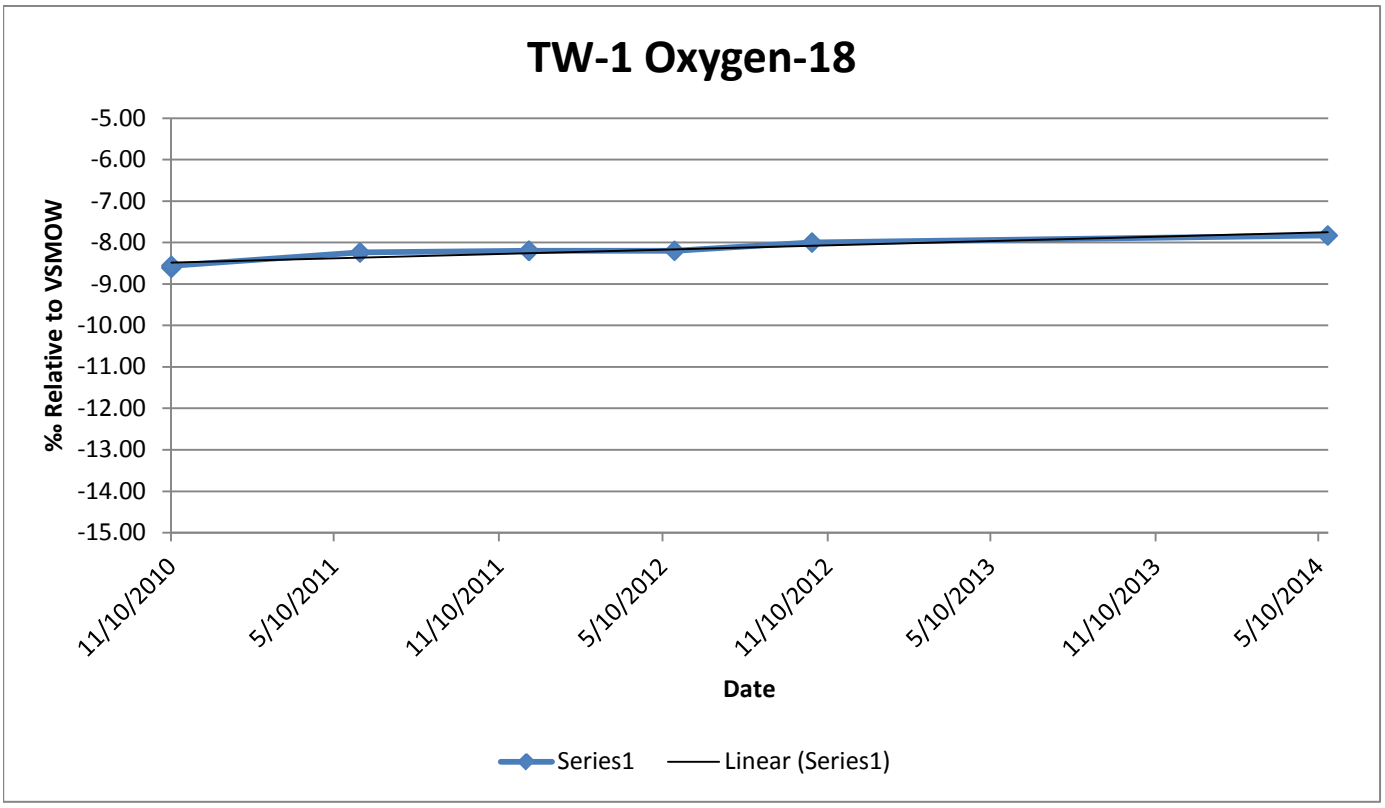
Appendix C
Summary of Mann-Kendall Test for Trend
Genesis Solar Energy Project, Blythe, CA

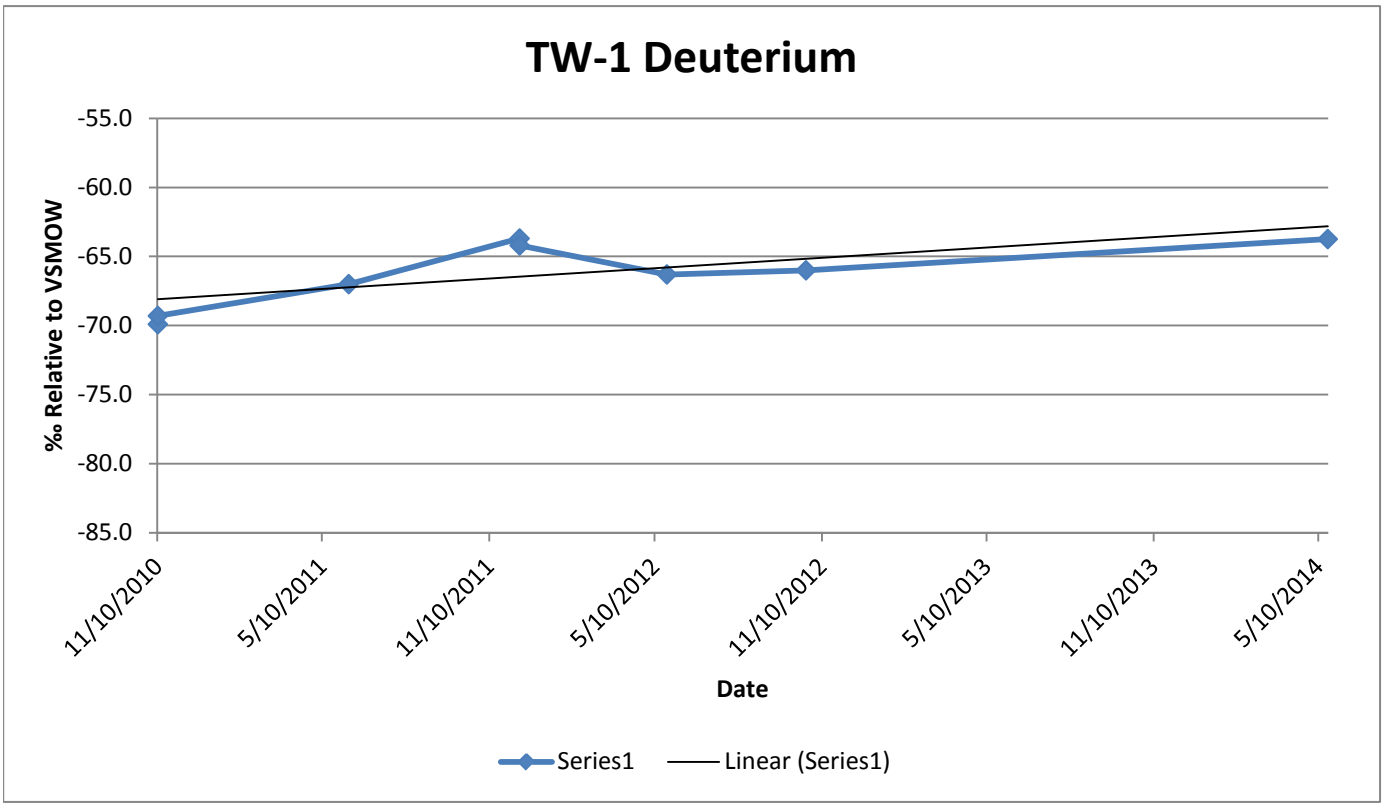
Well ID	Constituent	Trend Direction at 90% Confidence Interval
TW-1	Calcium	No Trend
	Sulfate	Decreasing Trend
	Chloride	No Trend
	Total Dissolved Solids	No Trend
	Specific Conductivity	No Trend
TW-2	Calcium	No Trend
	Sulfate	No Trend
	Chloride	Decreasing Trend
	Total Dissolved Solids	Increasing Trend
	Specific Conductivity	Increasing Trend
OBS-1	Calcium	No Trend
	Sulfate	No Trend
	Chloride	No Trend
	Total Dissolved Solids	Decreasing Trend
	Specific Conductivity	Increasing Trend
23a	Calcium	No Trend
	Sulfate	No Trend
	Chloride	Decreasing Trend
	Total Dissolved Solids	Decreasing Trend
	Specific Conductivity	Increasing Trend
DM-1	Calcium	Decreasing Trend
	Sulfate	Decreasing Trend
	Chloride	No Trend
	Total Dissolved Solids	Decreasing Trend
	Specific Conductivity	No Trend
DM-2	Calcium	No Trend
	Sulfate	Decreasing Trend
	Chloride	No Trend
	Total Dissolved Solids	Decreasing Trend
	Specific Conductivity	Increasing Trend
DM-3	Calcium	Increasing Trend
	Sulfate	Decreasing Trend
	Chloride	Increasing Trend
	Total Dissolved Solids	Decreasing Trend
	Specific Conductivity	Increasing Trend
PW-0	Calcium	N/A
	Sulfate	N/A
	Chloride	N/A
	Total Dissolved Solids	N/A
	Specific Conductivity	N/A
PW-1	Calcium	N/A
	Sulfate	N/A
	Chloride	N/A
	Total Dissolved Solids	N/A
	Specific Conductivity	N/A
PW-2	Calcium	Decreasing Trend
	Sulfate	Decreasing Trend
	Chloride	No Trend
	Total Dissolved Solids	Decreasing Trend
	Specific Conductivity	Increasing Trend

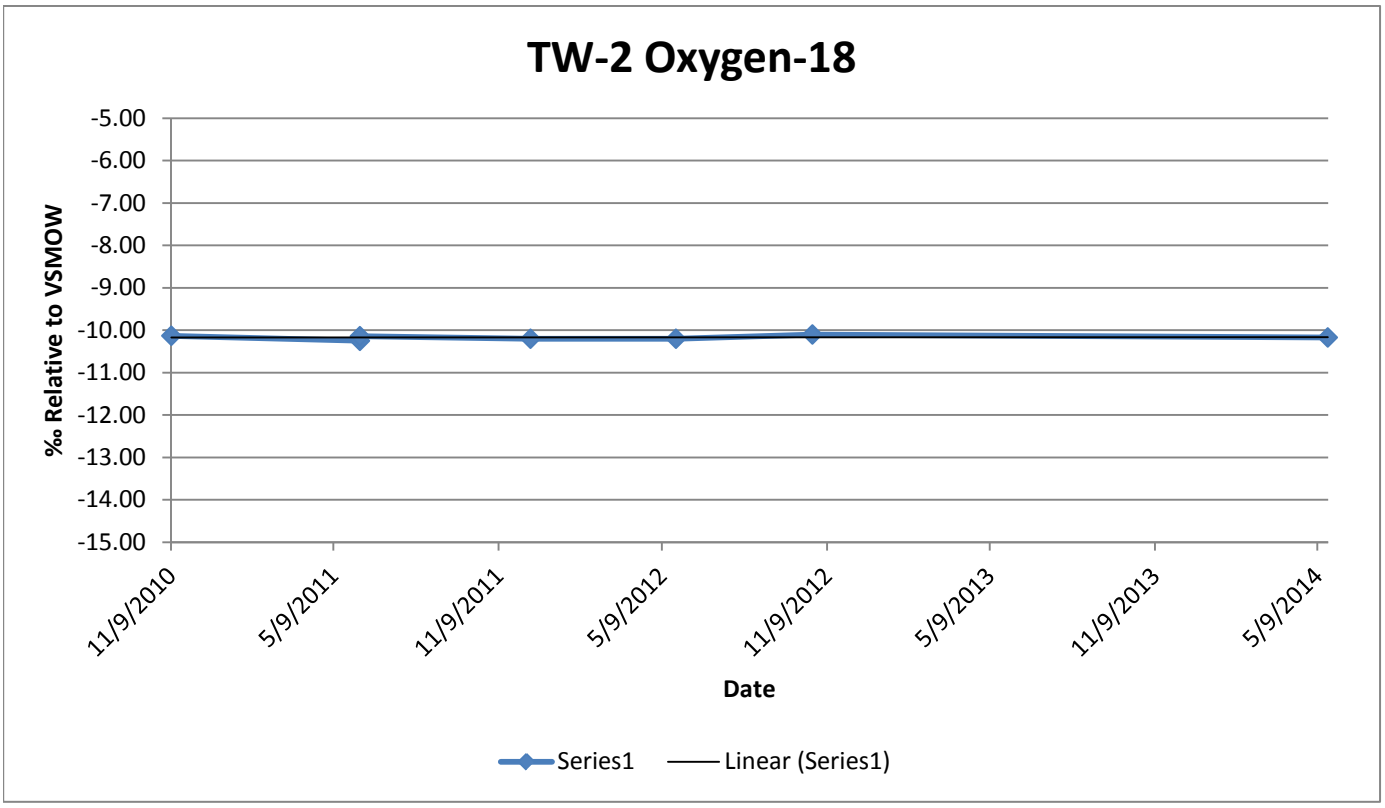
N/A - Not Applicable; not enough data to calculate trend

APPENDIX D

STABLE ISOTOPE GRAPHS


TW-1 Oxygen-18
-5.00
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
11/10/2010
5/10/2011
11/10/2011
5/10/2012
11/10/2012
5/10/2013
11/10/2013
5/10/2014
Date
Series1
Linear (Series1)


TW-1 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
11/10/2010
5/10/2011
11/10/2011
5/10/2012
11/10/2012
5/10/2013
11/10/2013
5/10/2014
Date
Series1
Linear (Series1)


TW-2 Oxygen-18
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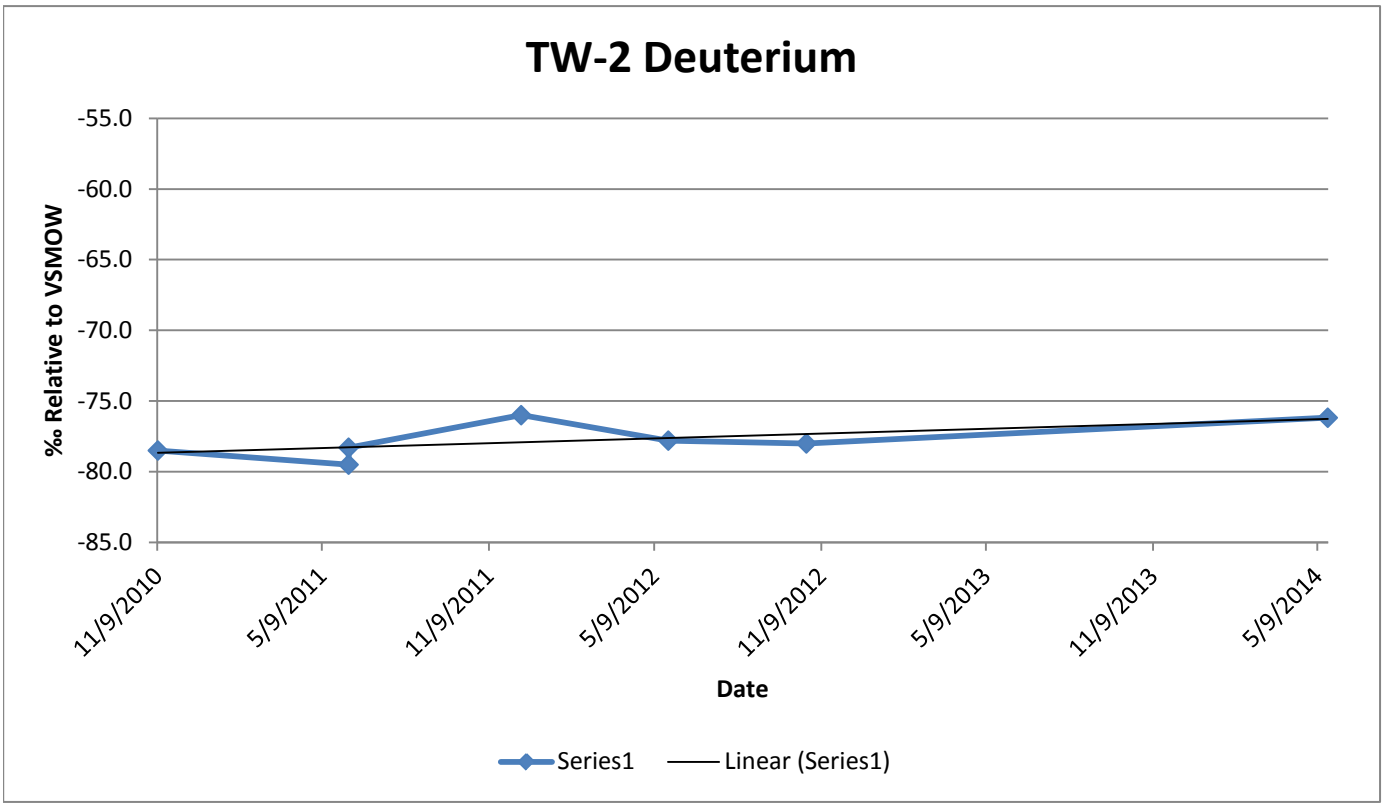
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
11/9/2010
5/9/2011
11/9/2011
5/9/2012
11/9/2012
5/9/2013
11/9/2013
5/9/2014
Date
Series1
Linear (Series1)


TW-2 Deuterium
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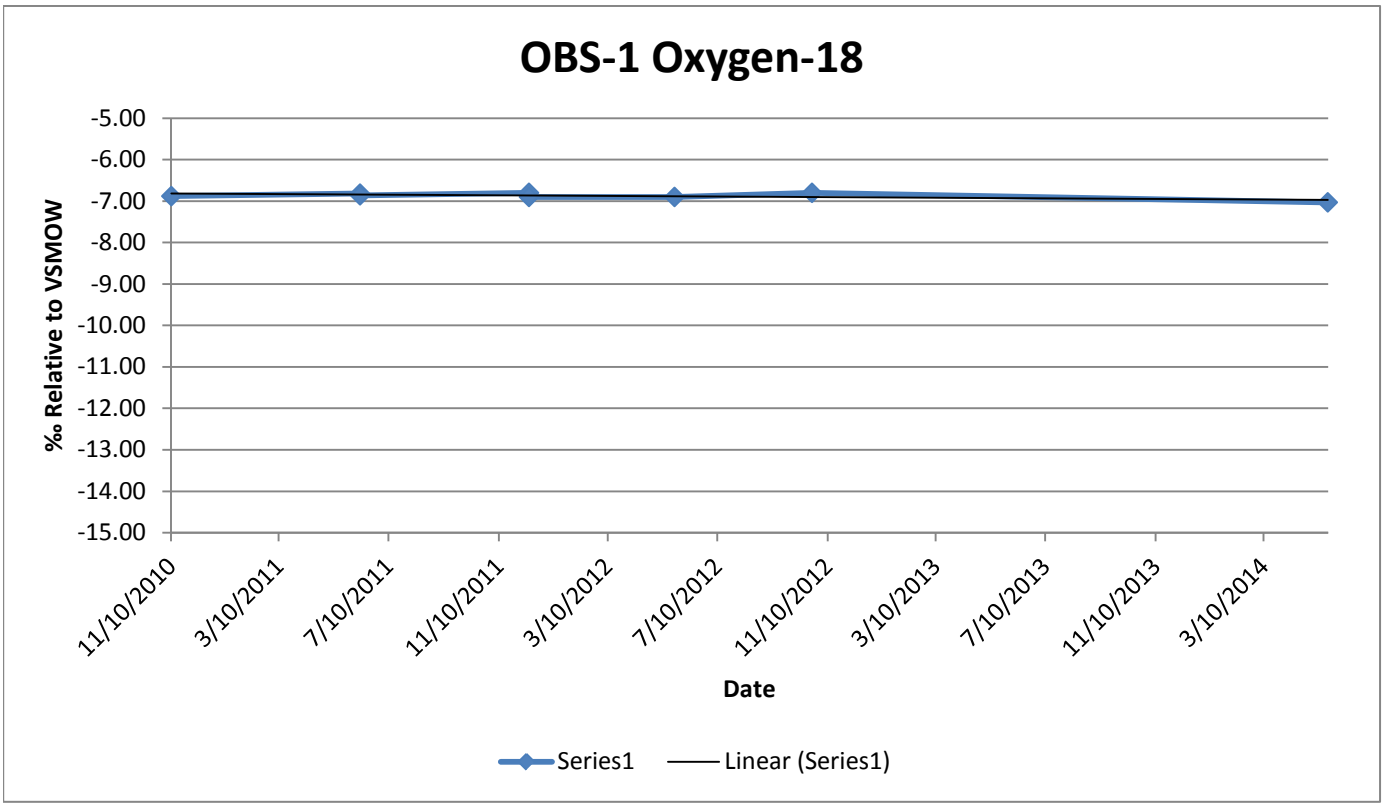
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
11/9/2010
5/9/2011
11/9/2011
5/9/2012
11/9/2012
5/9/2013
11/9/2013
5/9/2014
Date
Series1
Linear (Series1)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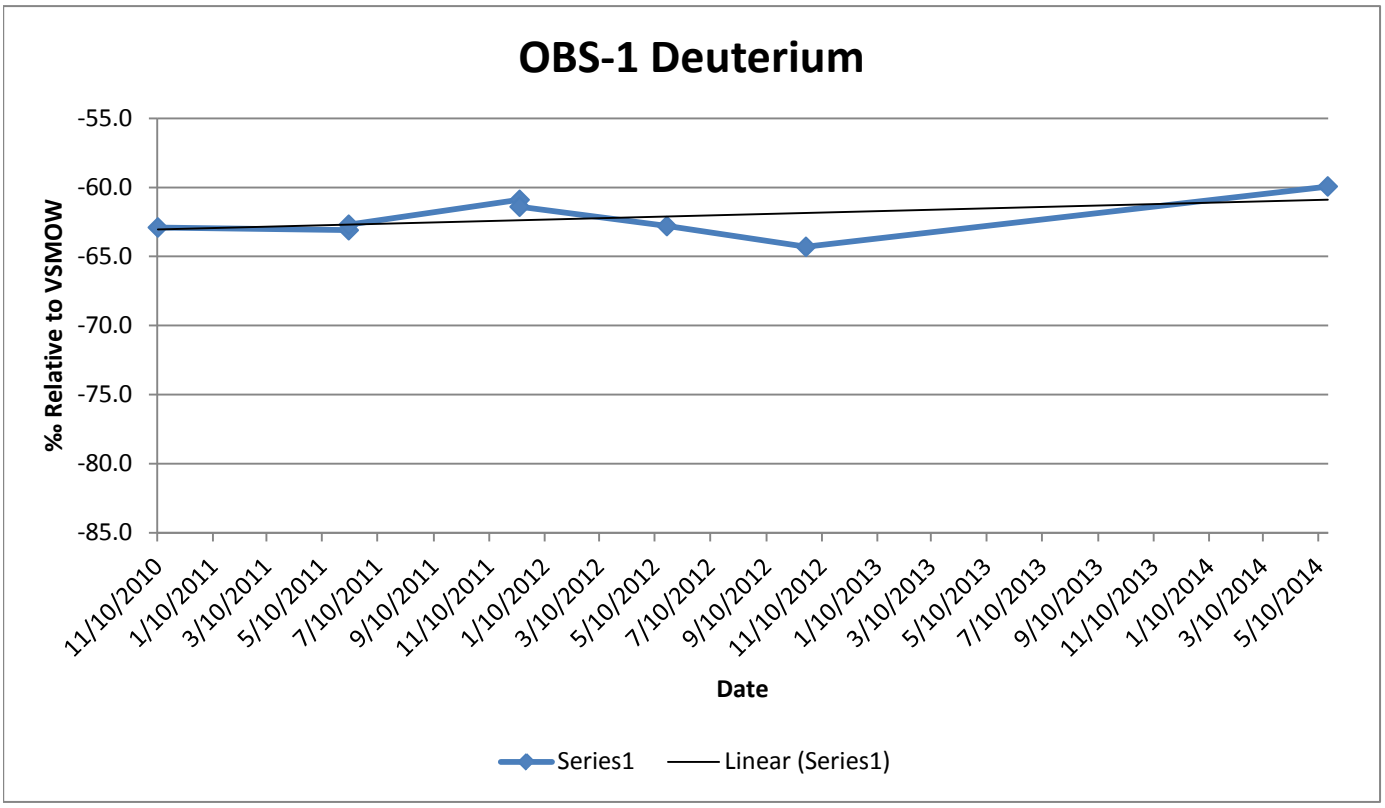
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
11/10/2010
3/10/2011
7/10/2011
11/10/2011
3/10/2012
7/10/2012
11/10/2012
3/10/2013
7/10/2013
11/10/2013
3/10/2014
Date
Series1
Linear (Series1)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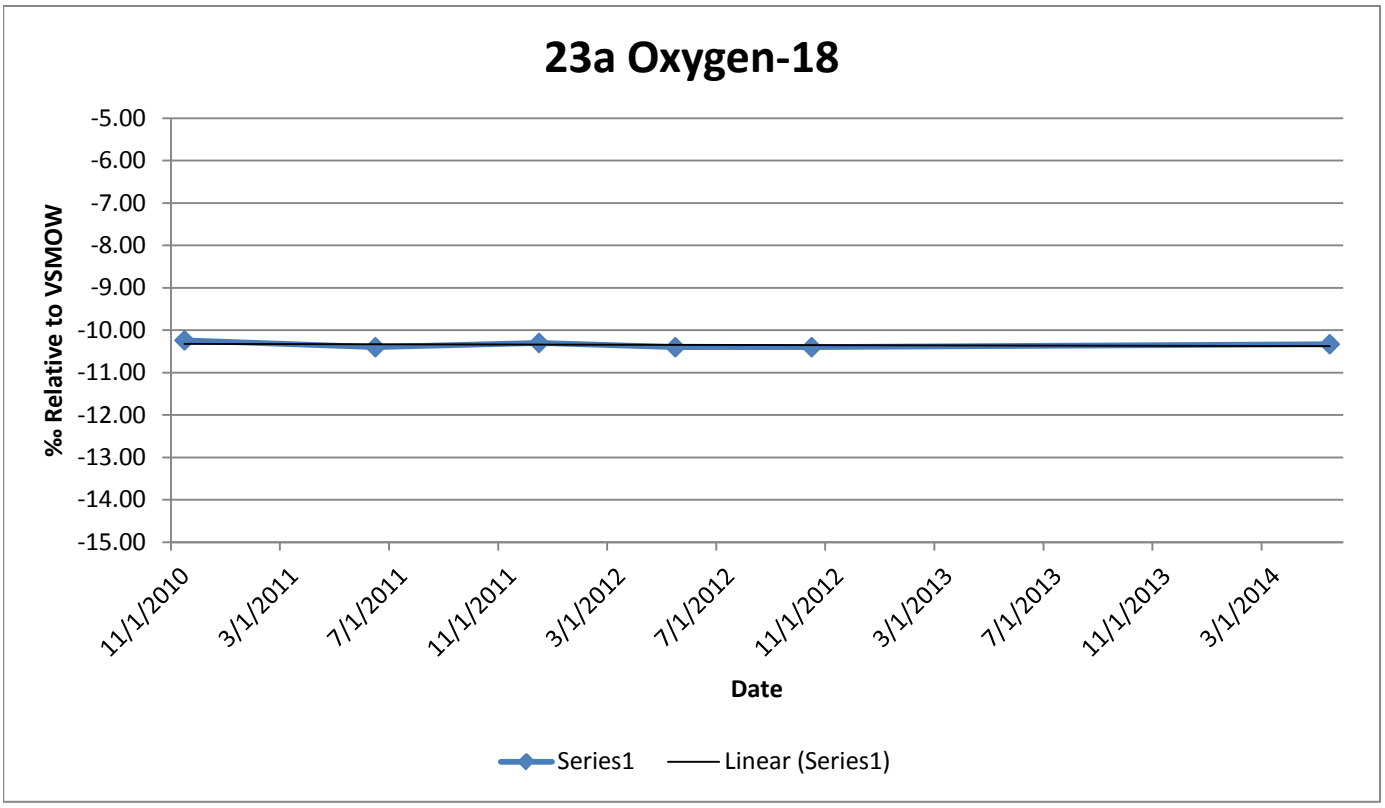
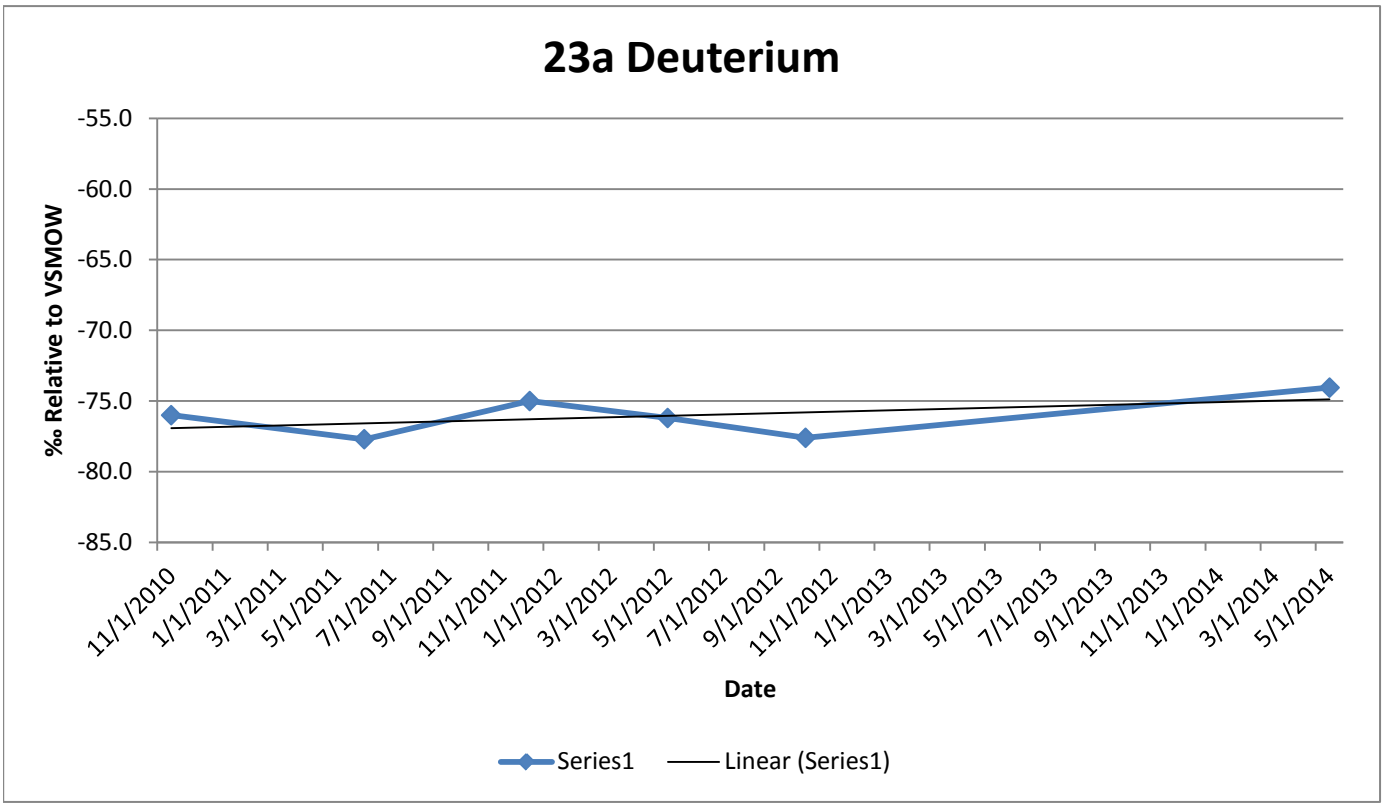
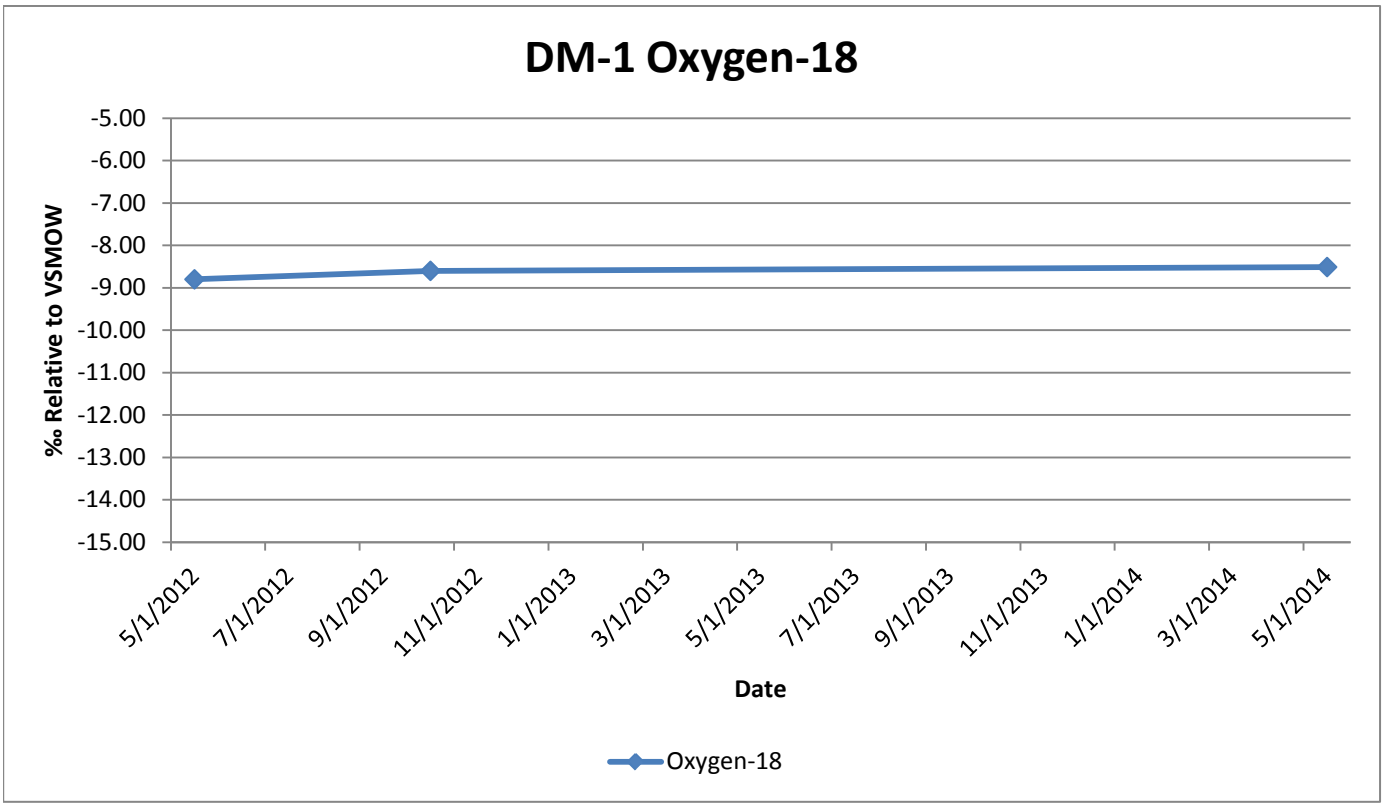
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
11/10/2010
1/10/2011
3/10/2011
5/10/2011
7/10/2011
9/10/2011
11/10/2011
1/10/2012
3/10/2012
5/10/2012
7/10/2012
9/10/2012
11/10/2012
1/10/2013
3/10/2013
5/10/2013
7/10/2013
9/10/2013
11/10/2013
1/10/2014
3/10/2014
5/10/2014
Date
Series1
Linear (Series1)


23a Oxygen-18
-5.00
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
11/1/2010
3/1/2011
7/1/2011
11/1/2011
3/1/2012
7/1/2012
11/1/2012
3/1/2013
7/1/2013
11/1/2013
3/1/2014
Date
Series1
Linear (Series1)


23a Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
11/1/2010
1/1/2011
3/1/2011
5/1/2011
7/1/2011
9/1/2011
11/1/2011
1/1/2012
3/1/2012
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Series1
Linear (Series1)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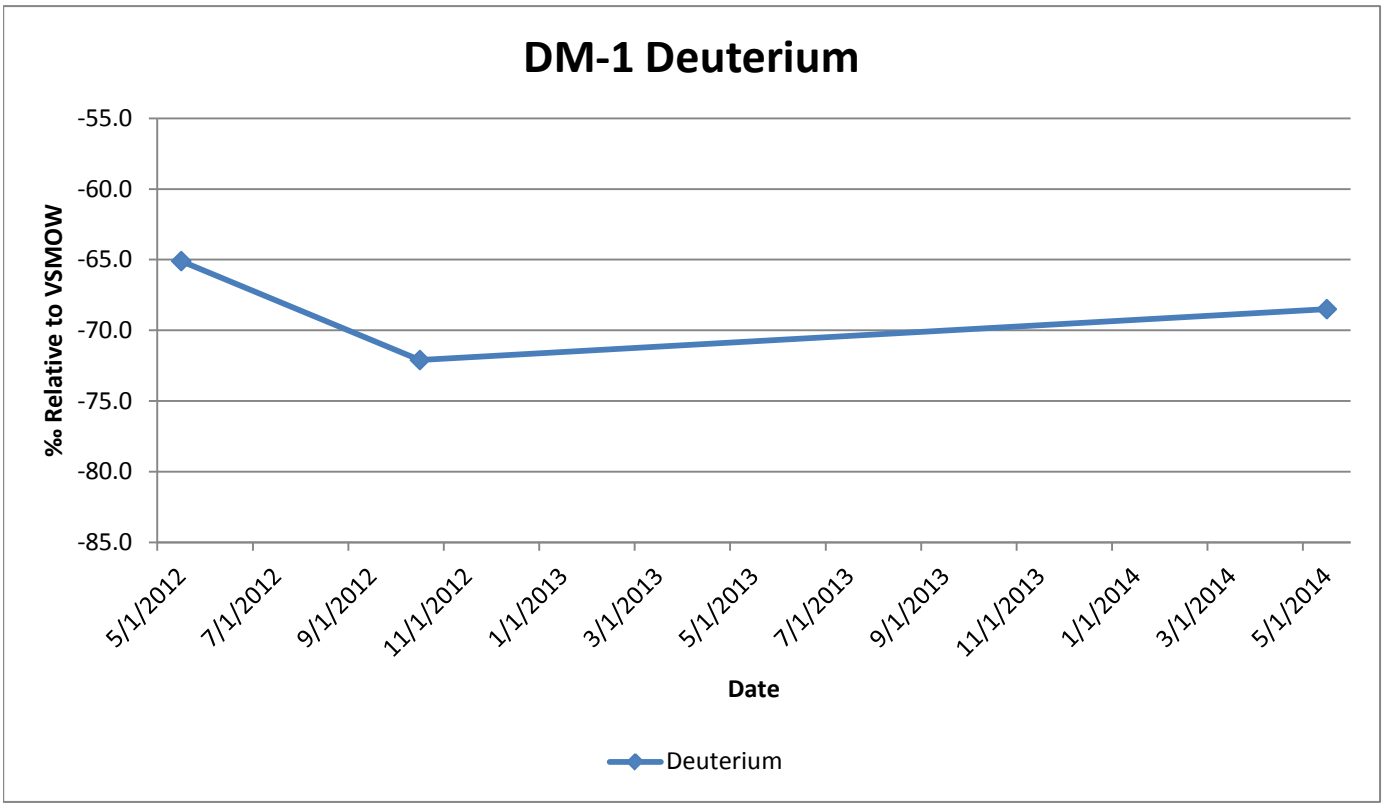
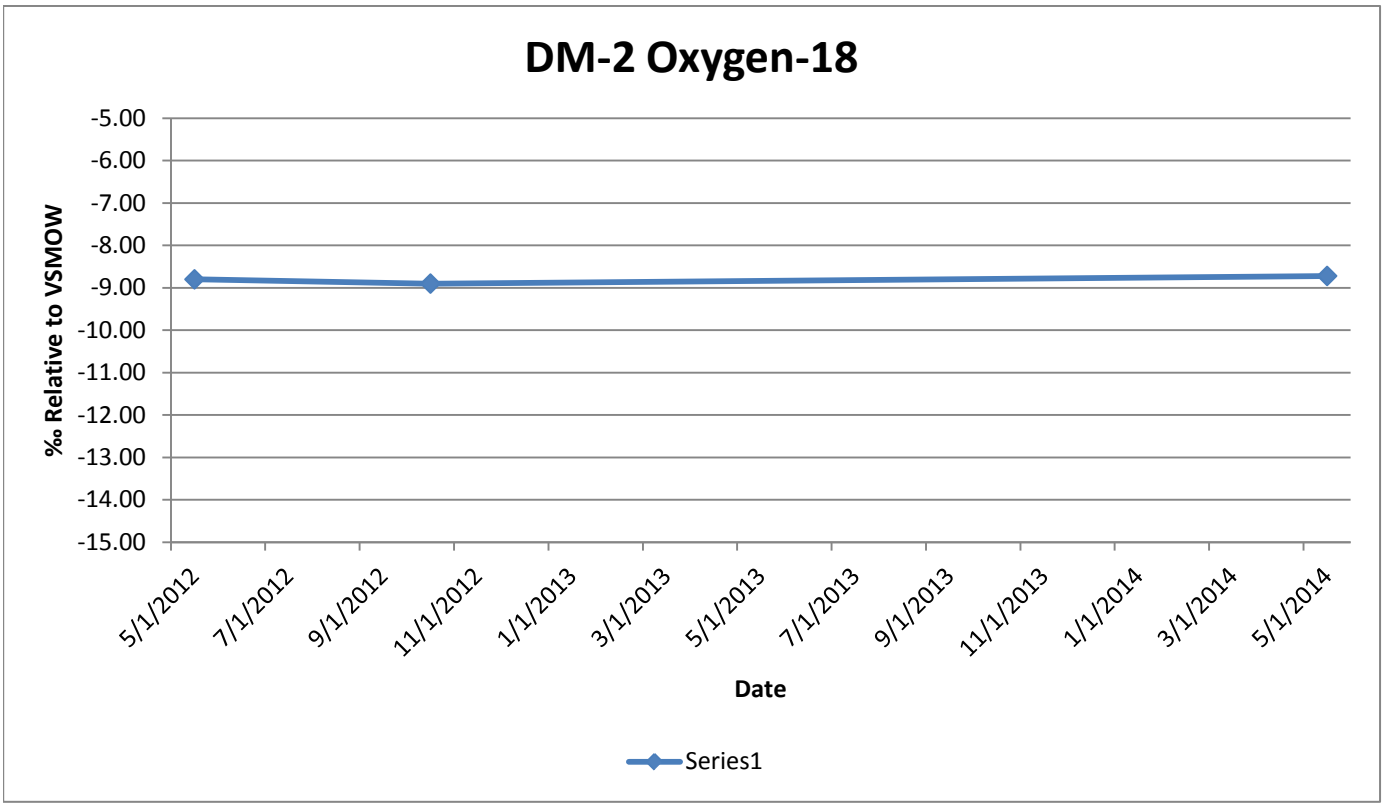
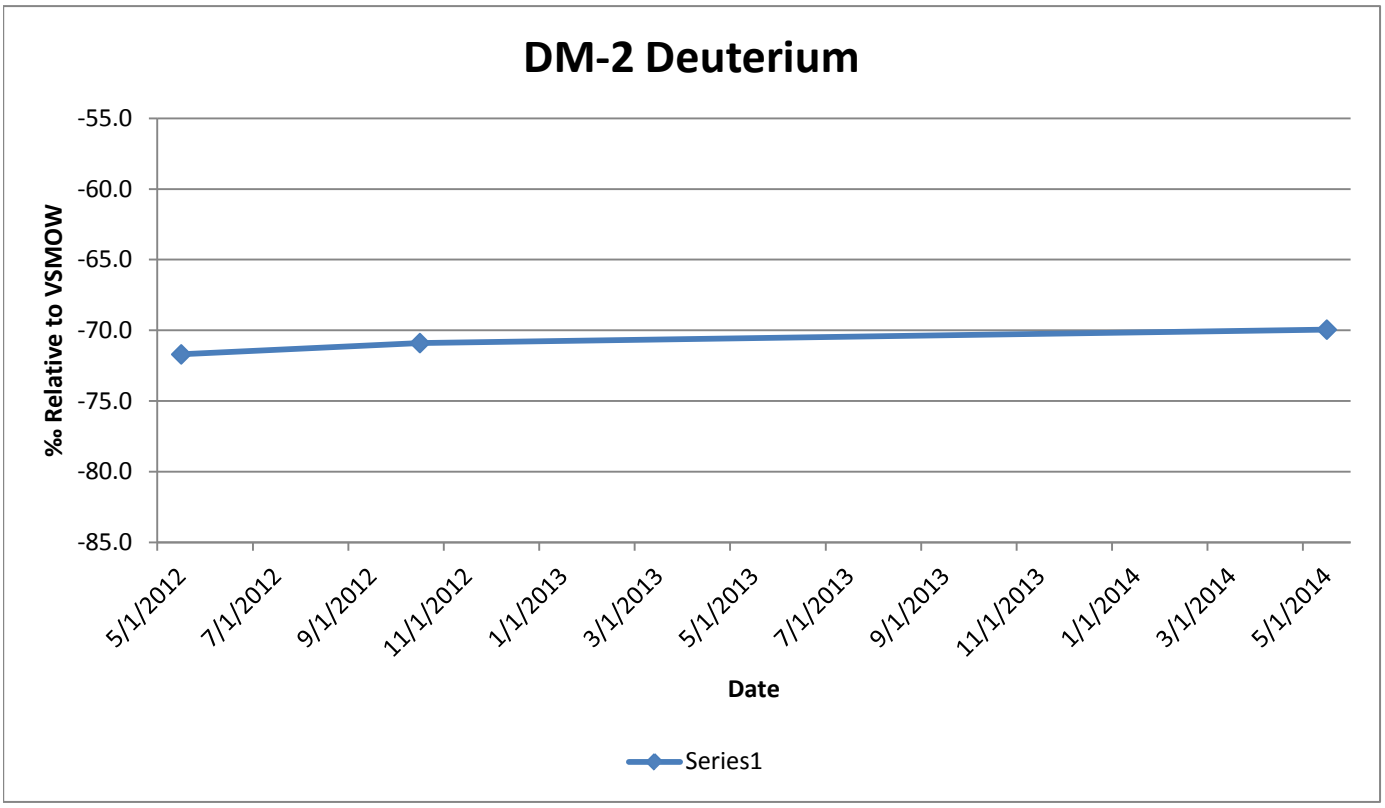
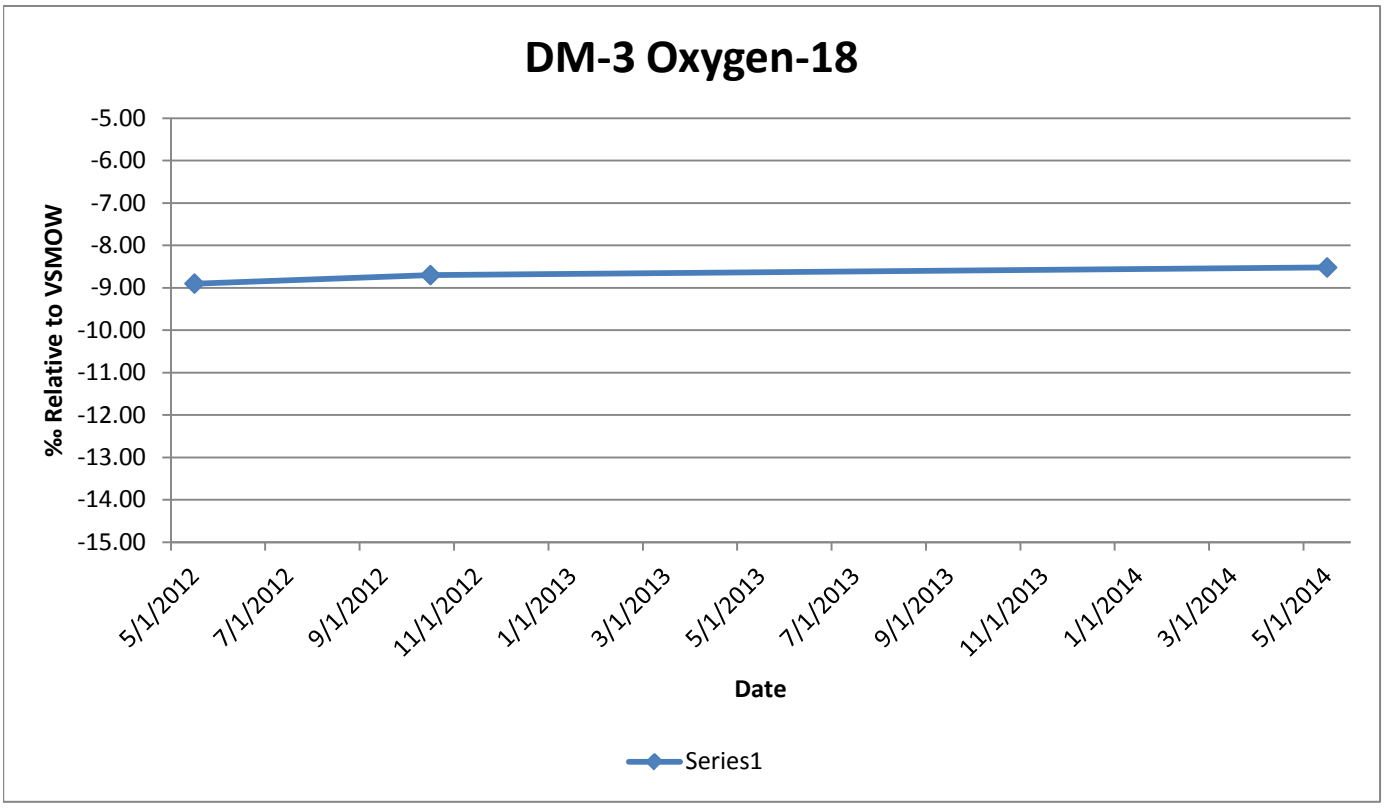
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Oxygen-18


DM-1 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Deuterium


DM-2 Oxygen-18
-5.00
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Series1


DM-2 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Series1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-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
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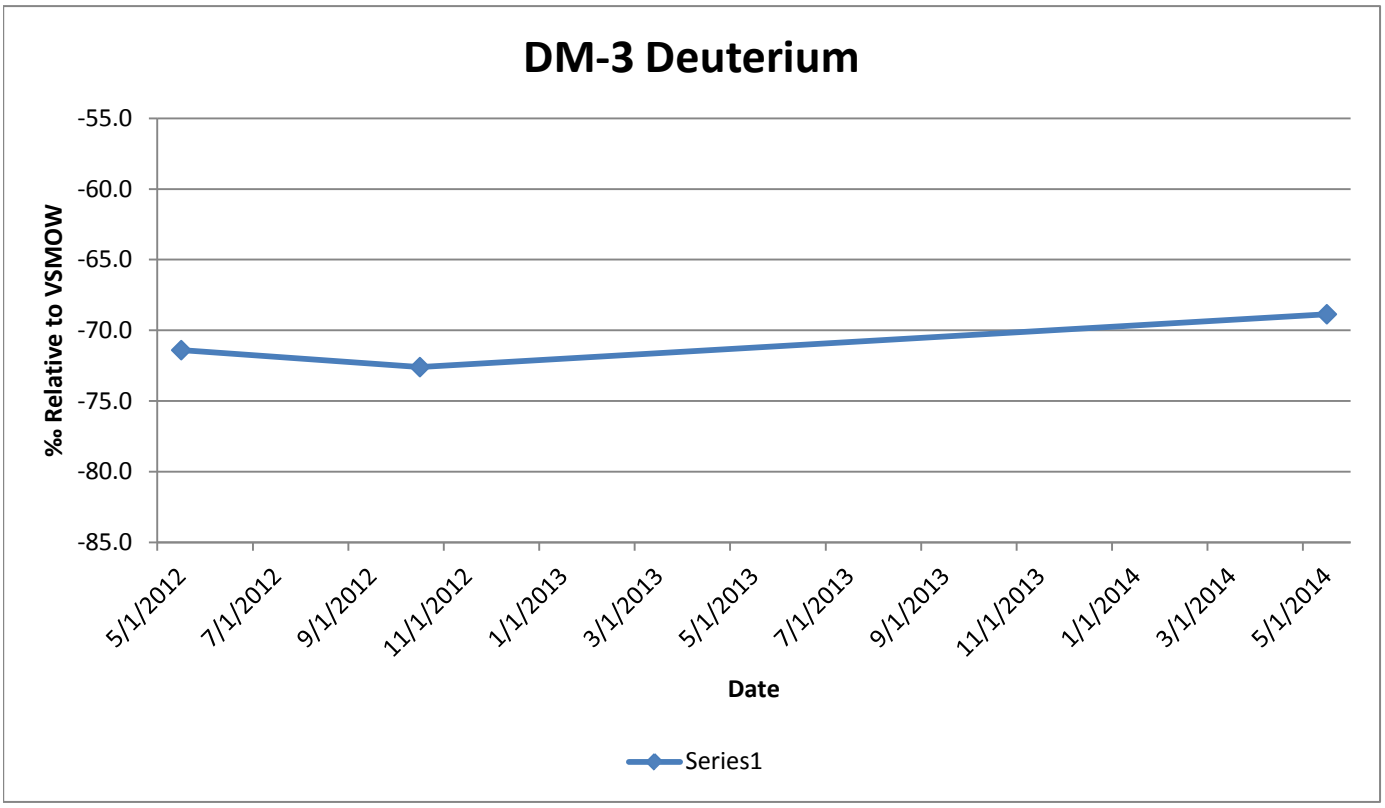
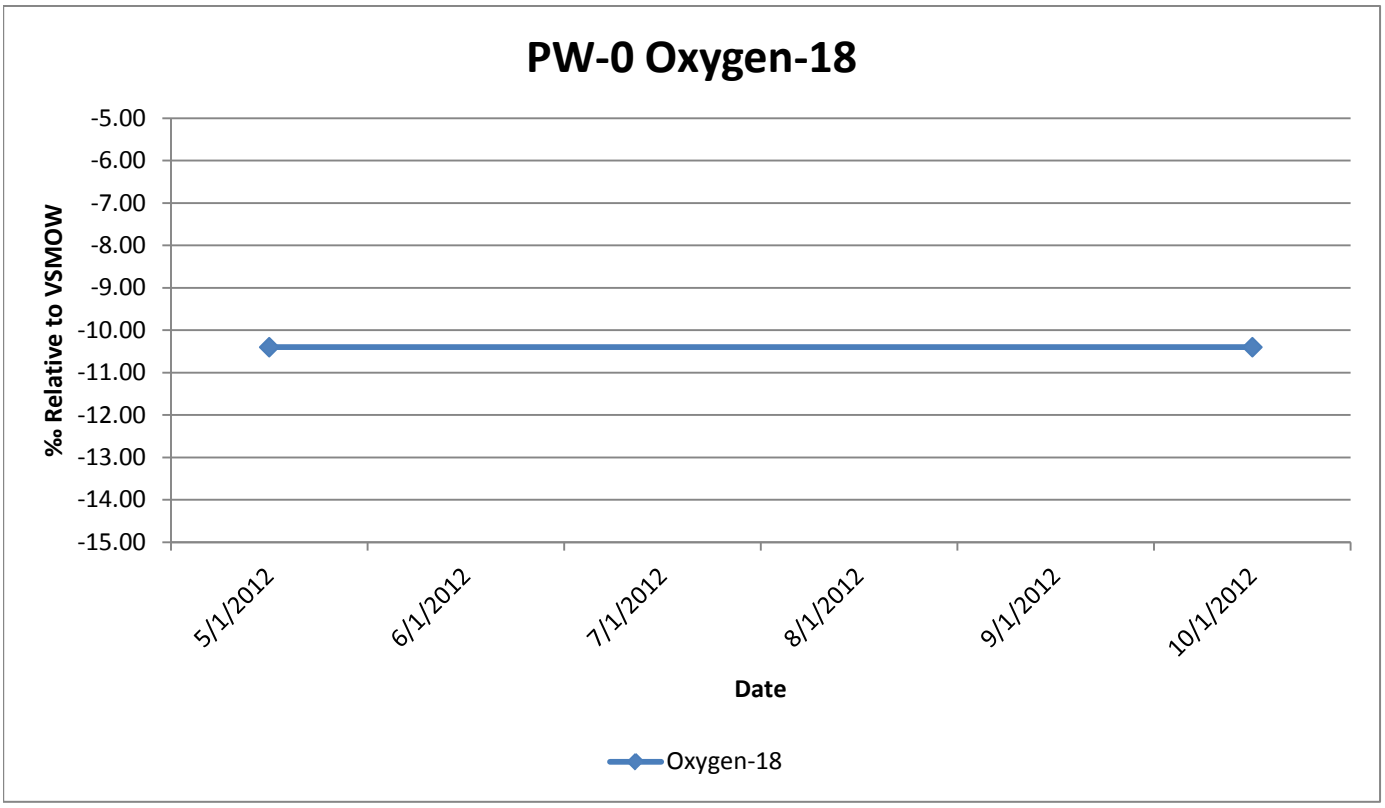
-14.00
-15.00
‰ Relative to VSMOW
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Series1


DM-3 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
5/1/2012
7/1/2012
9/1/2012
11/1/2012
1/1/2013
3/1/2013
5/1/2013
7/1/2013
9/1/2013
11/1/2013
1/1/2014
3/1/2014
5/1/2014
Date
Series1


PW-0 Oxygen-18
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-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
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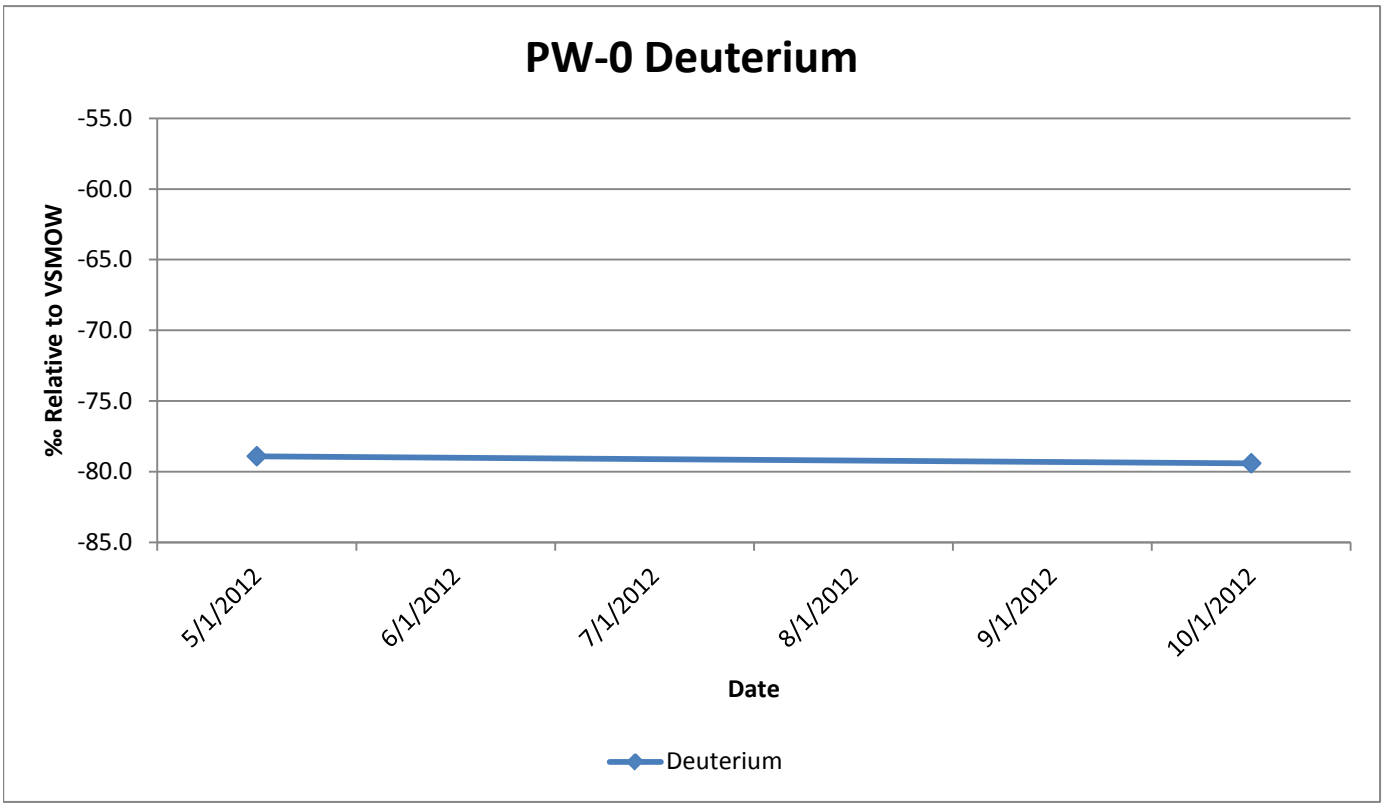
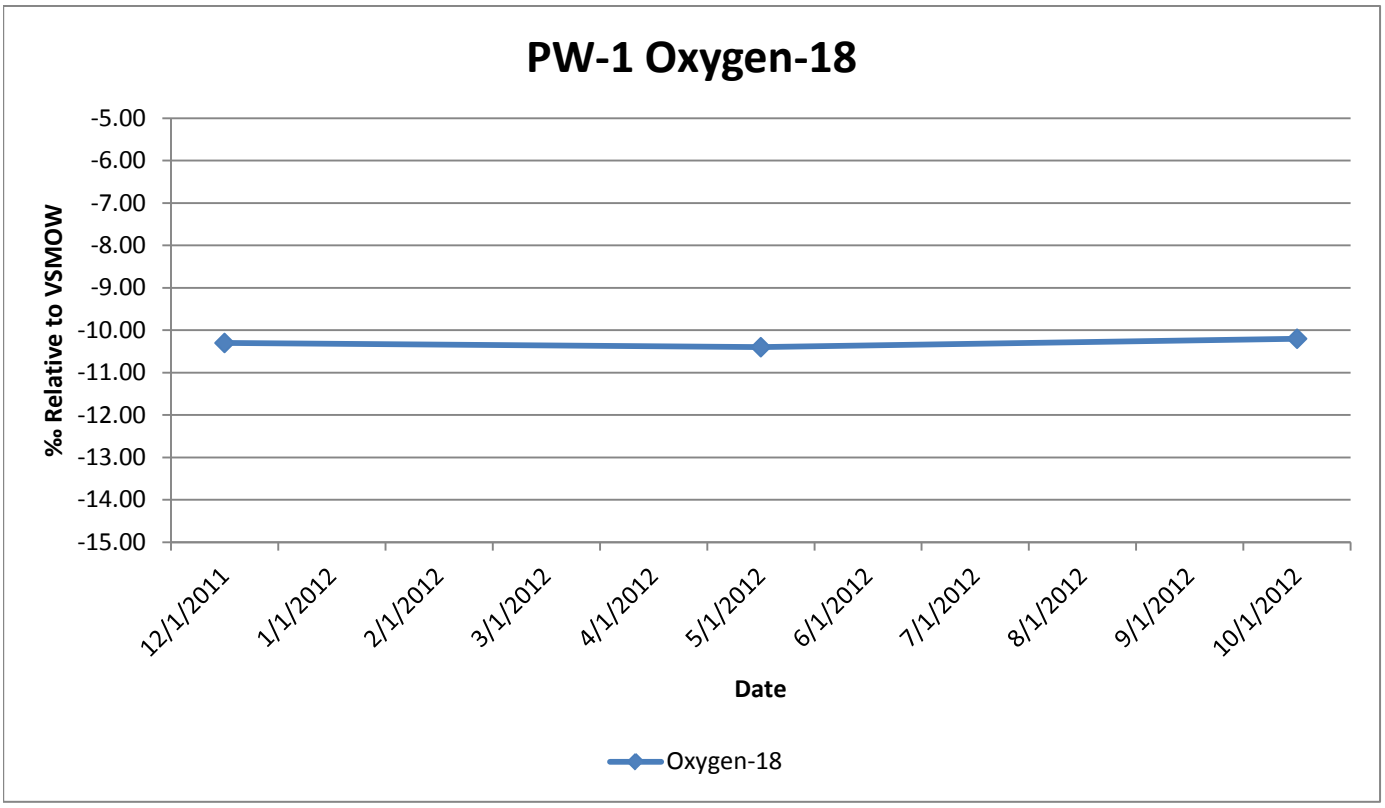
-14.00
-15.00
‰ Relative to VSMOW
5/1/2012
6/1/2012
7/1/2012
8/1/2012
9/1/2012
10/1/2012
Date
Oxygen-18


PW-0 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
5/1/2012
6/1/2012
7/1/2012
8/1/2012
9/1/2012
10/1/2012
Date
Deuterium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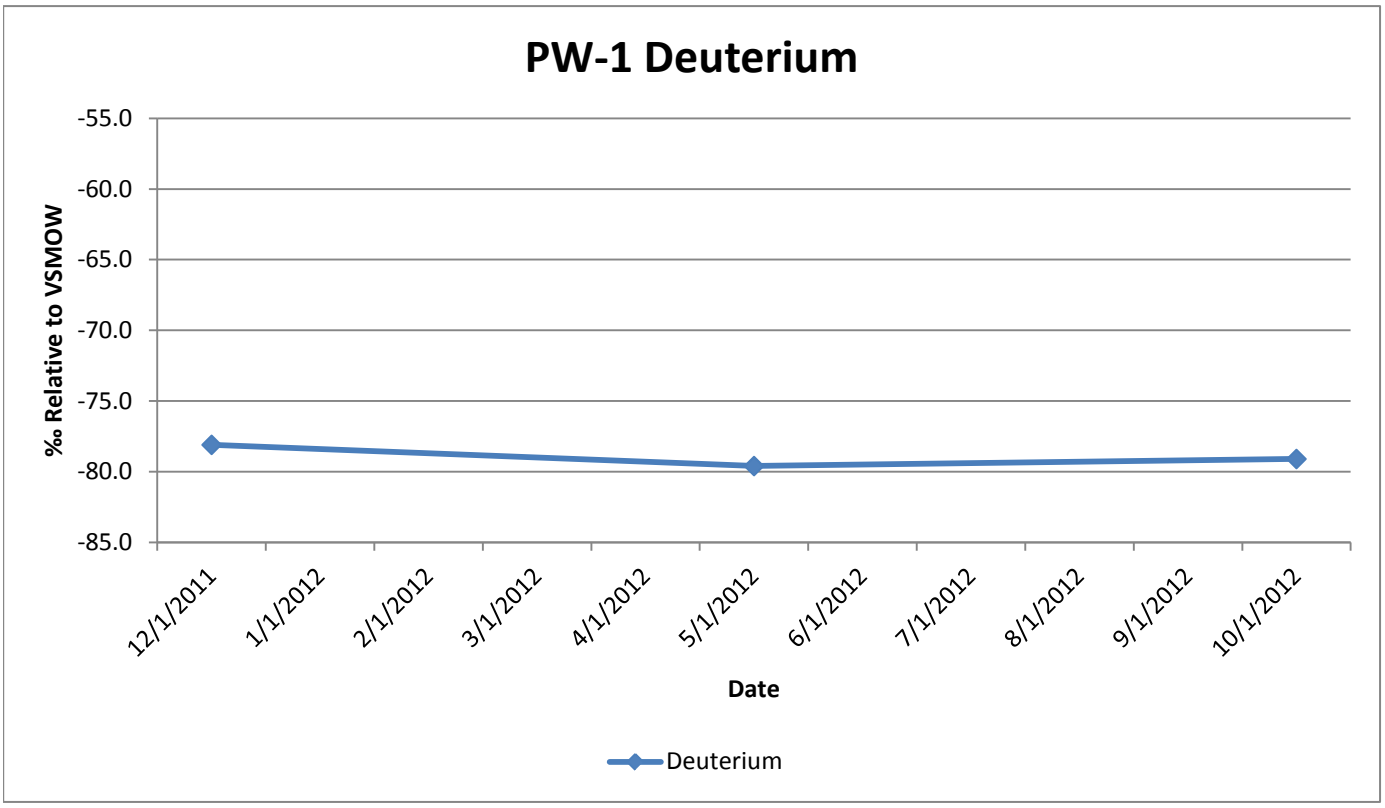
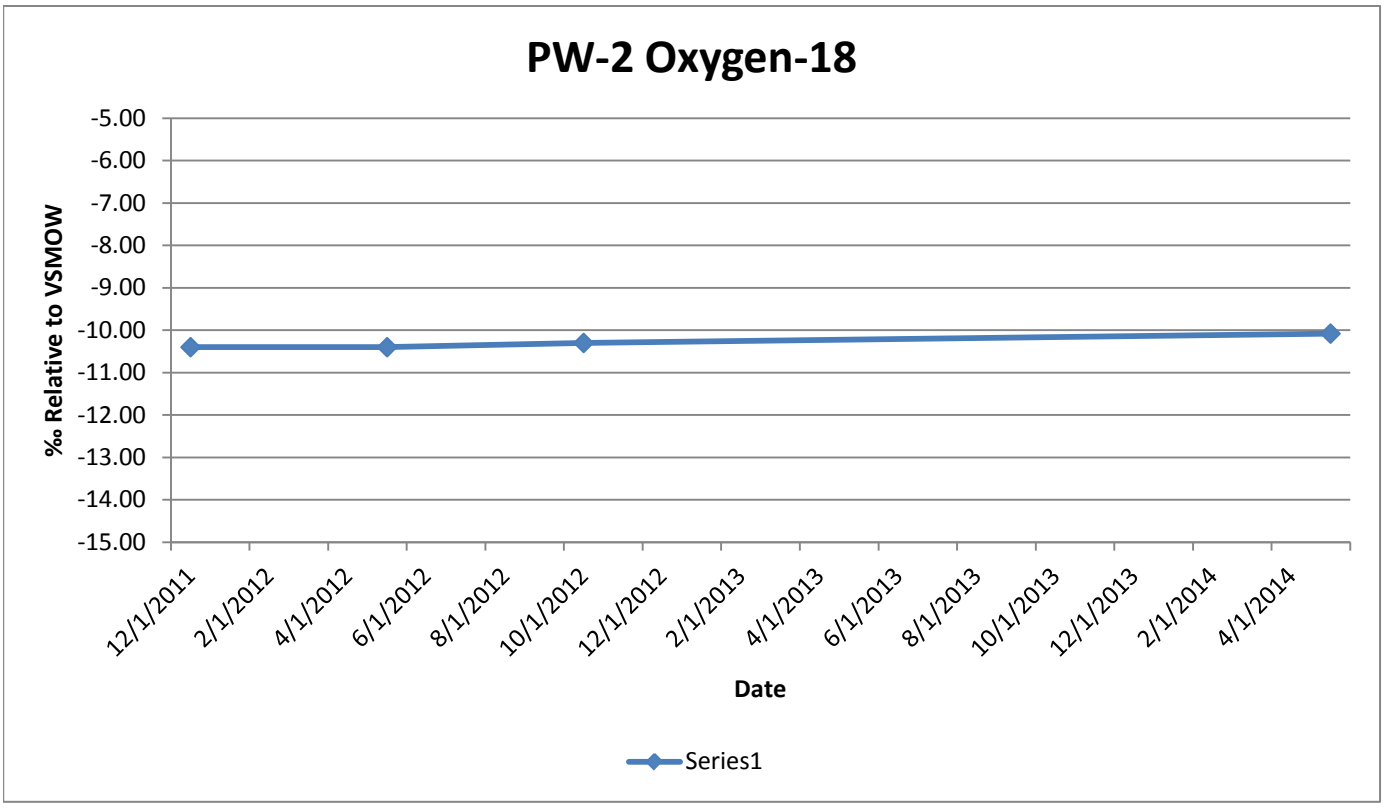
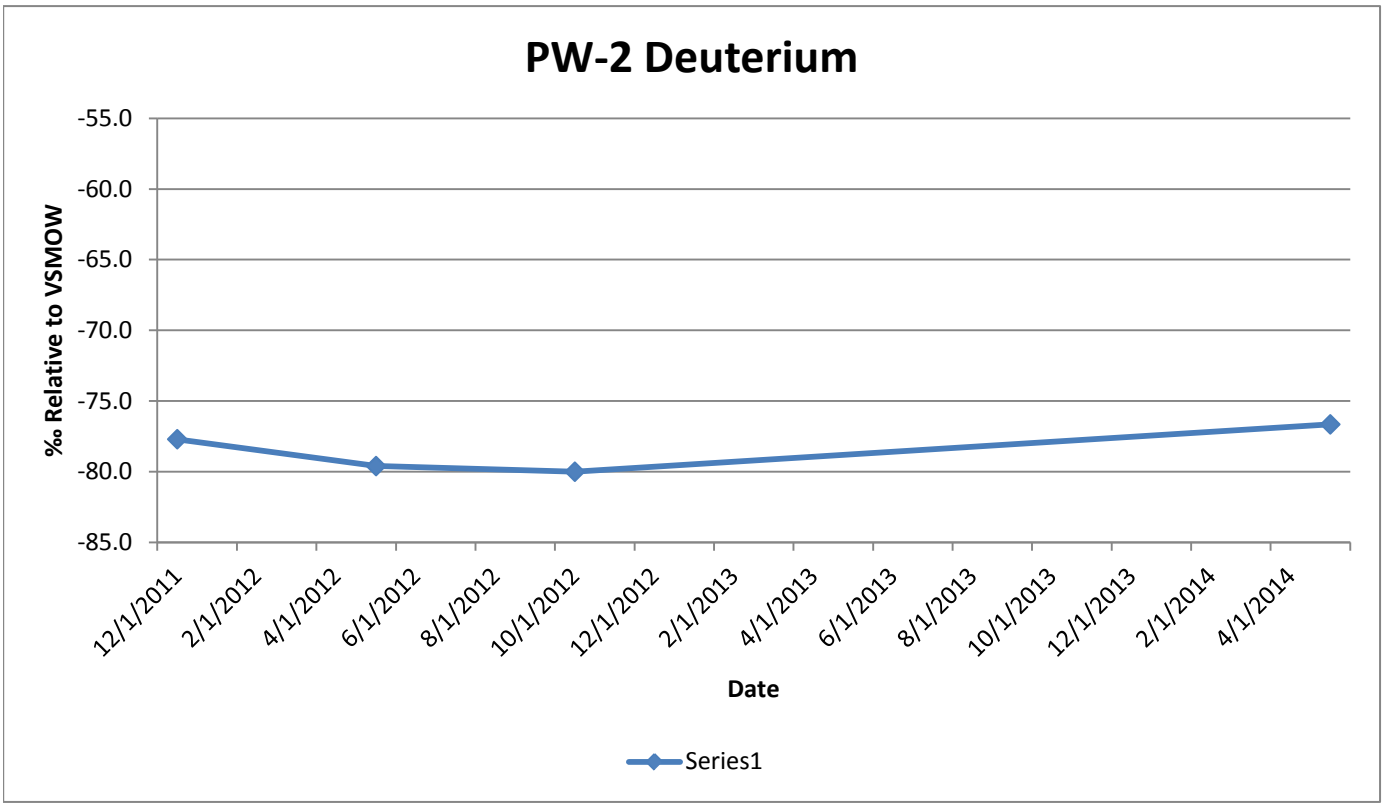
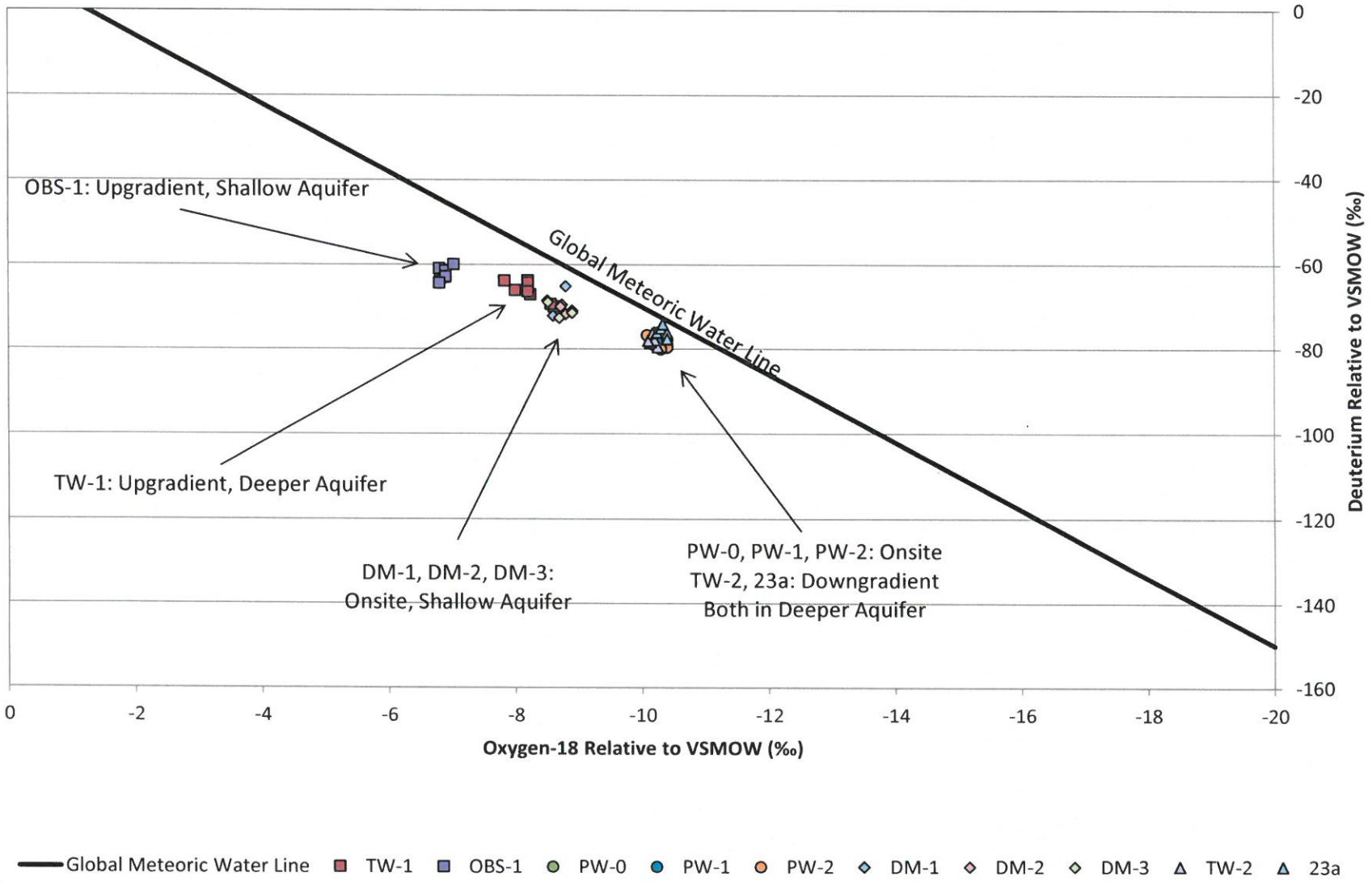
-5.00
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
12/1/2011
1/1/2012
2/1/2012
3/1/2012
4/1/2012
5/1/2012
6/1/2012
7/1/2012
8/1/2012
9/1/2012
10/1/2012
Date
Oxygen-18


PW-1 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
12/1/2011
1/1/2012
2/1/2012
3/1/2012
4/1/2012
5/1/2012
6/1/2012
7/1/2012
8/1/2012
9/1/2012
10/1/2012
Date
Deuterium


PW-2 Oxygen-18
-5.00
-6.00
-7.00
-8.00
-9.00
-10.00
-11.00
-12.00
-13.00
-14.00
-15.00
‰ Relative to VSMOW
12/1/2011
2/1/2012
4/1/2012
6/1/2012
8/1/2012
10/1/2012
12/1/2012
2/1/2013
4/1/2013
6/1/2013
8/1/2013
10/1/2013
12/1/2013
2/1/2014
4/1/2014
Date
Series1

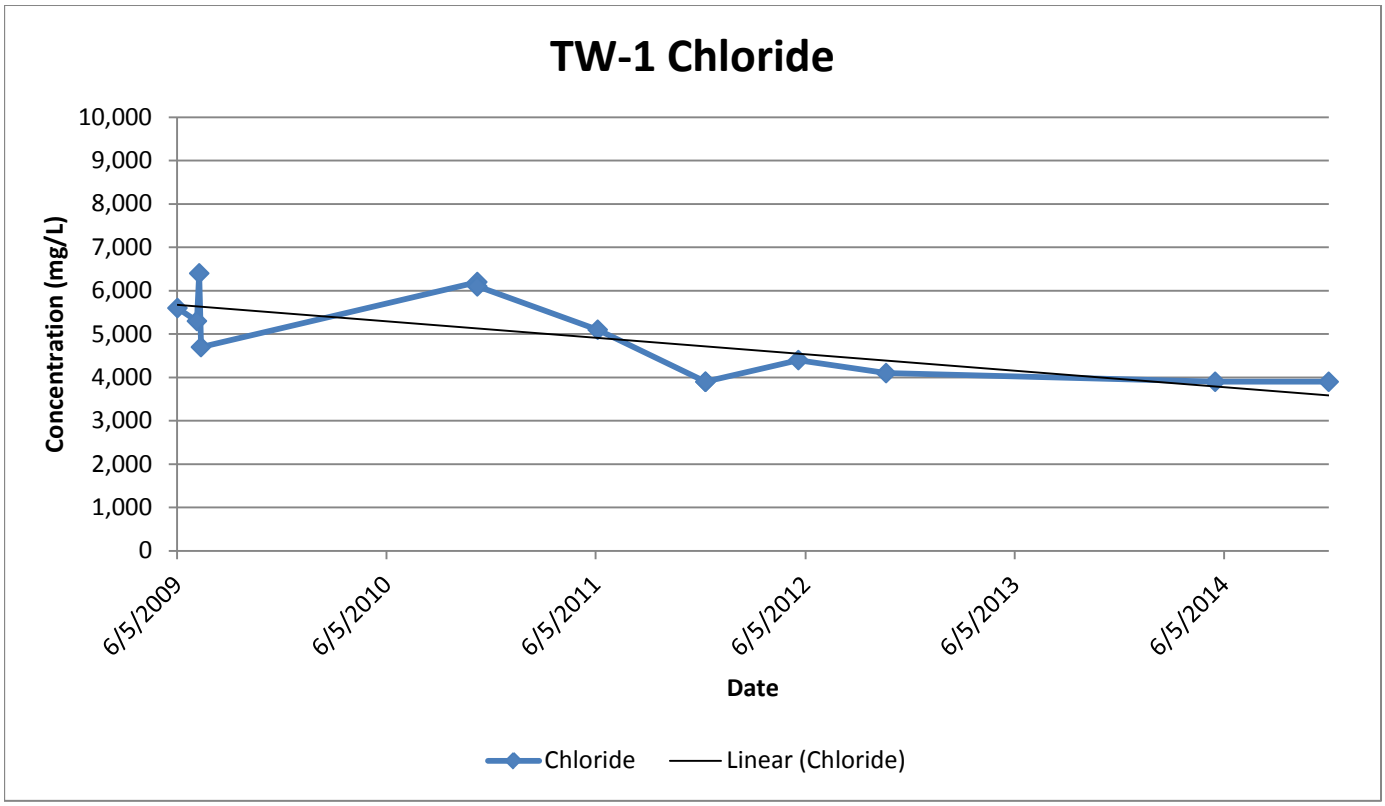

PW-2 Deuterium
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
-85.0
‰ Relative to VSMOW
12/1/2011
2/1/2012
4/1/2012
6/1/2012
8/1/2012
10/1/2012
12/1/2012
2/1/2013
4/1/2013
6/1/2013
8/1/2013
10/1/2013
12/1/2013
2/1/2014
4/1/2014
Date
Series1

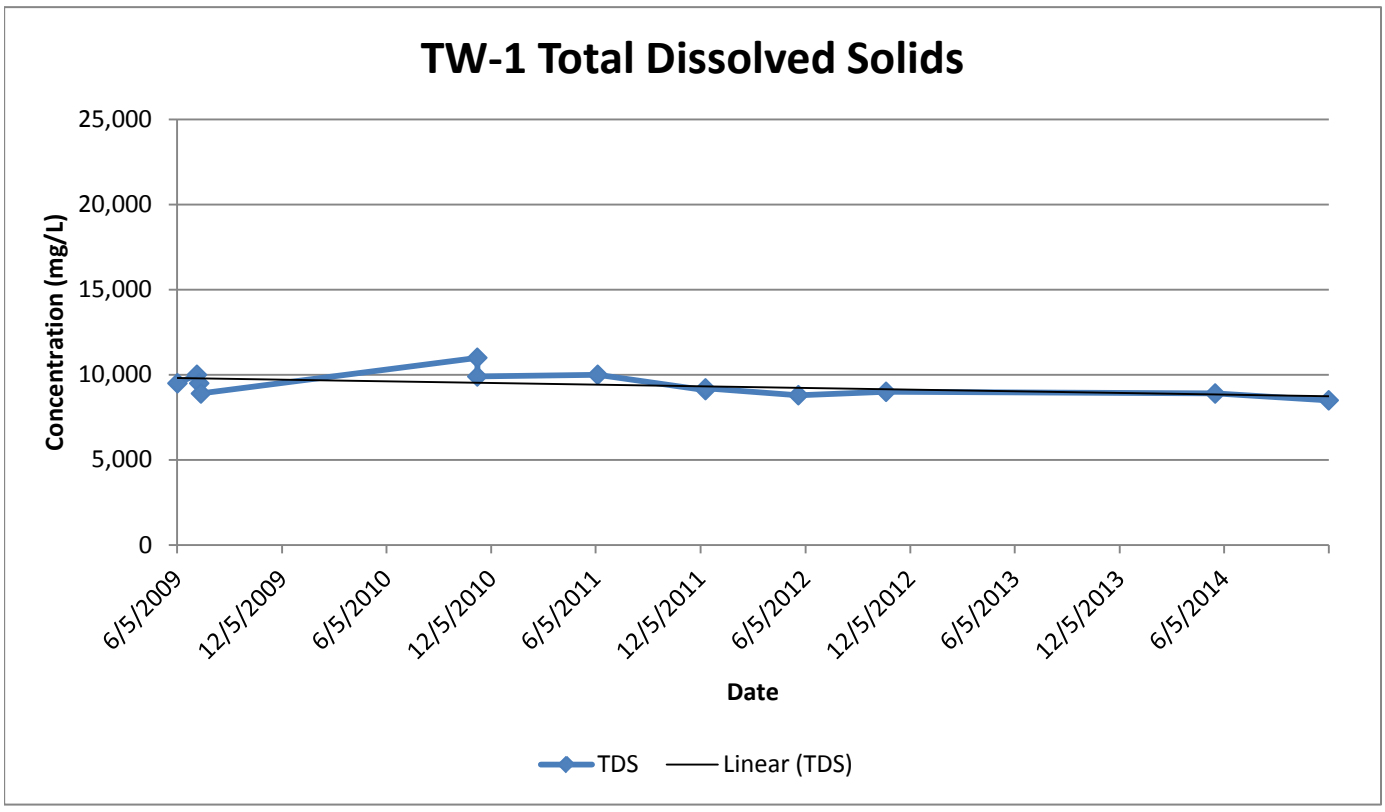
Deuterium vs. Oxygen-18 Concentrations Relative to Vienna Standard Mean Oceanic Water



APPENDIX E

TIME SERIES GRAPHS


TW-1 Chloride
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Concentration (mg/L)
6/5/2009
6/5/2010
6/5/2011
6/5/2012
6/5/2013
6/5/2014
Date
Chloride
Linear (Chloride)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12/5/2010
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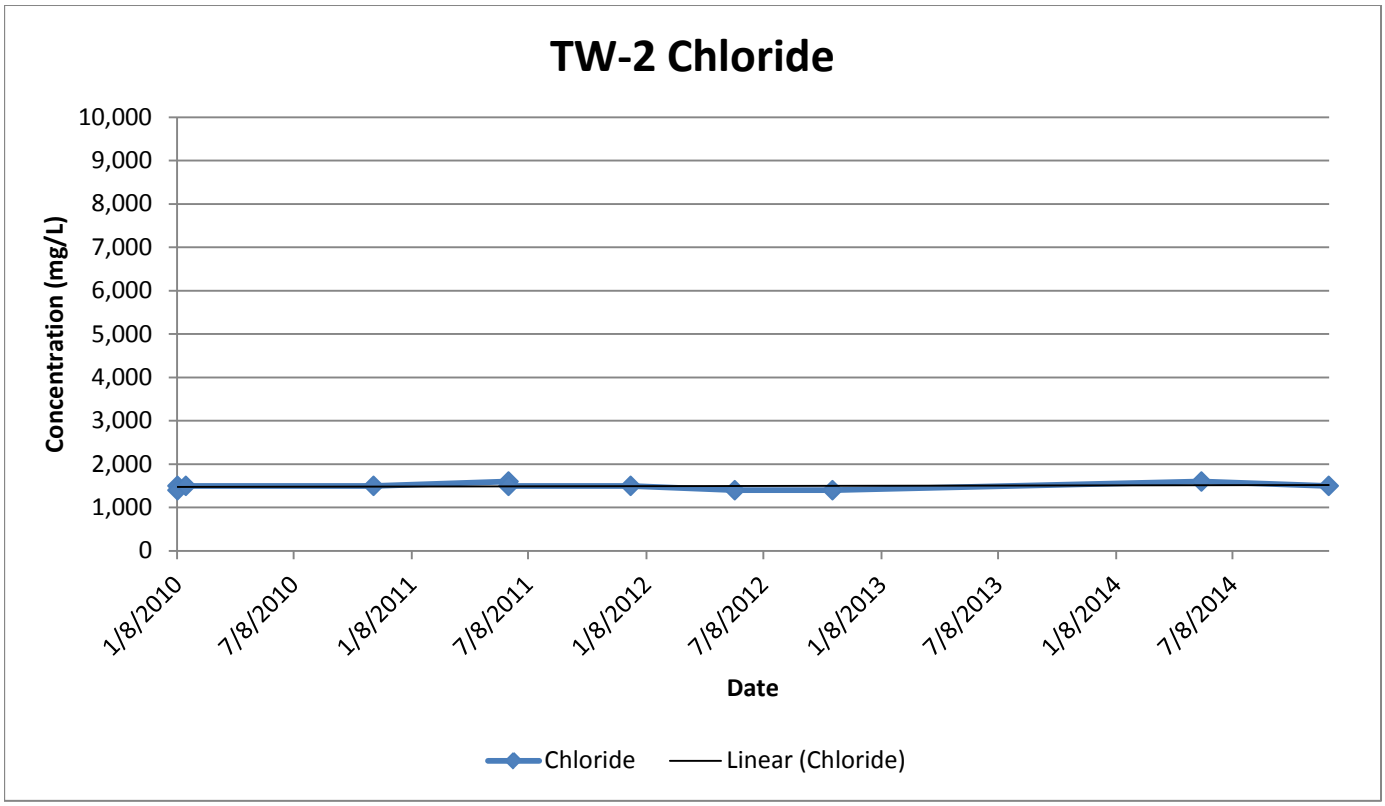
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Date
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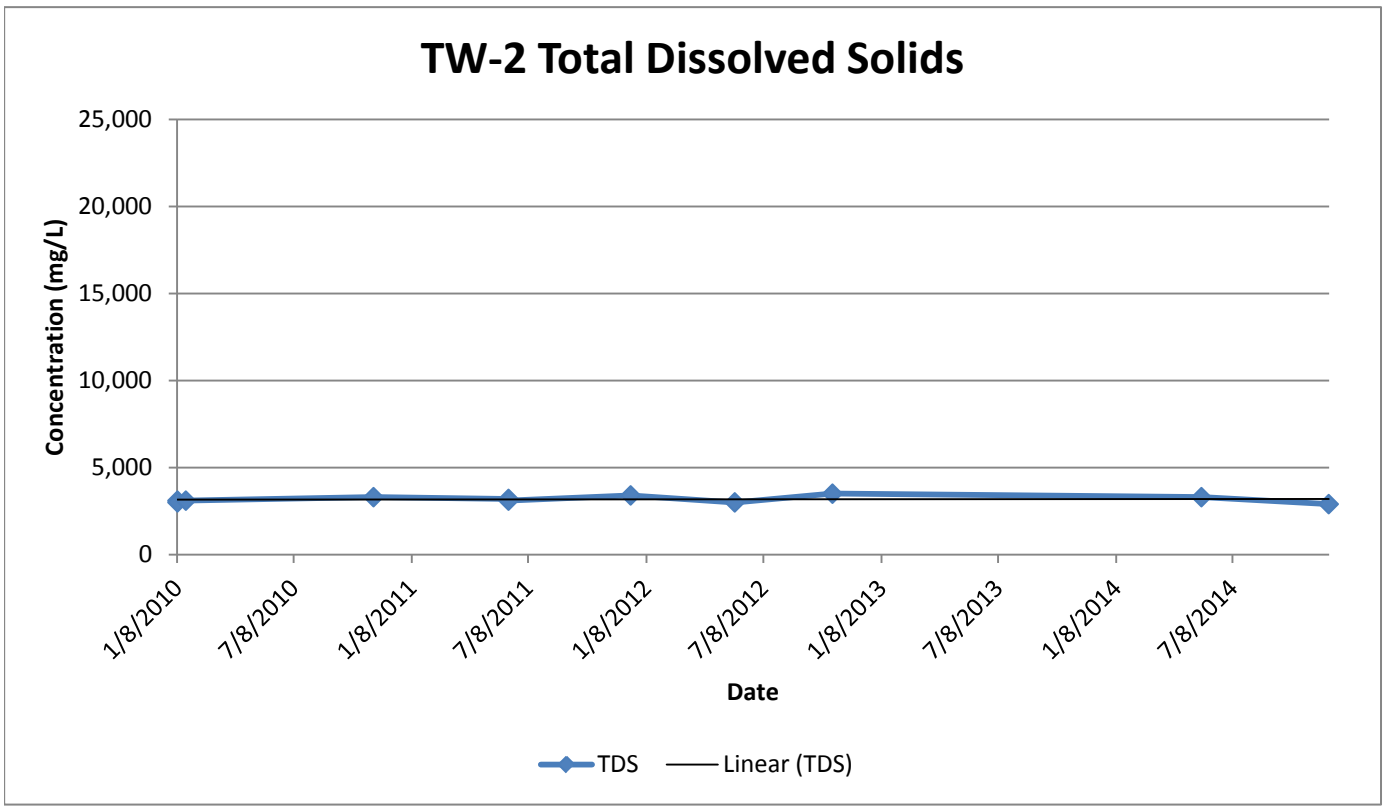
Linear (Chloride)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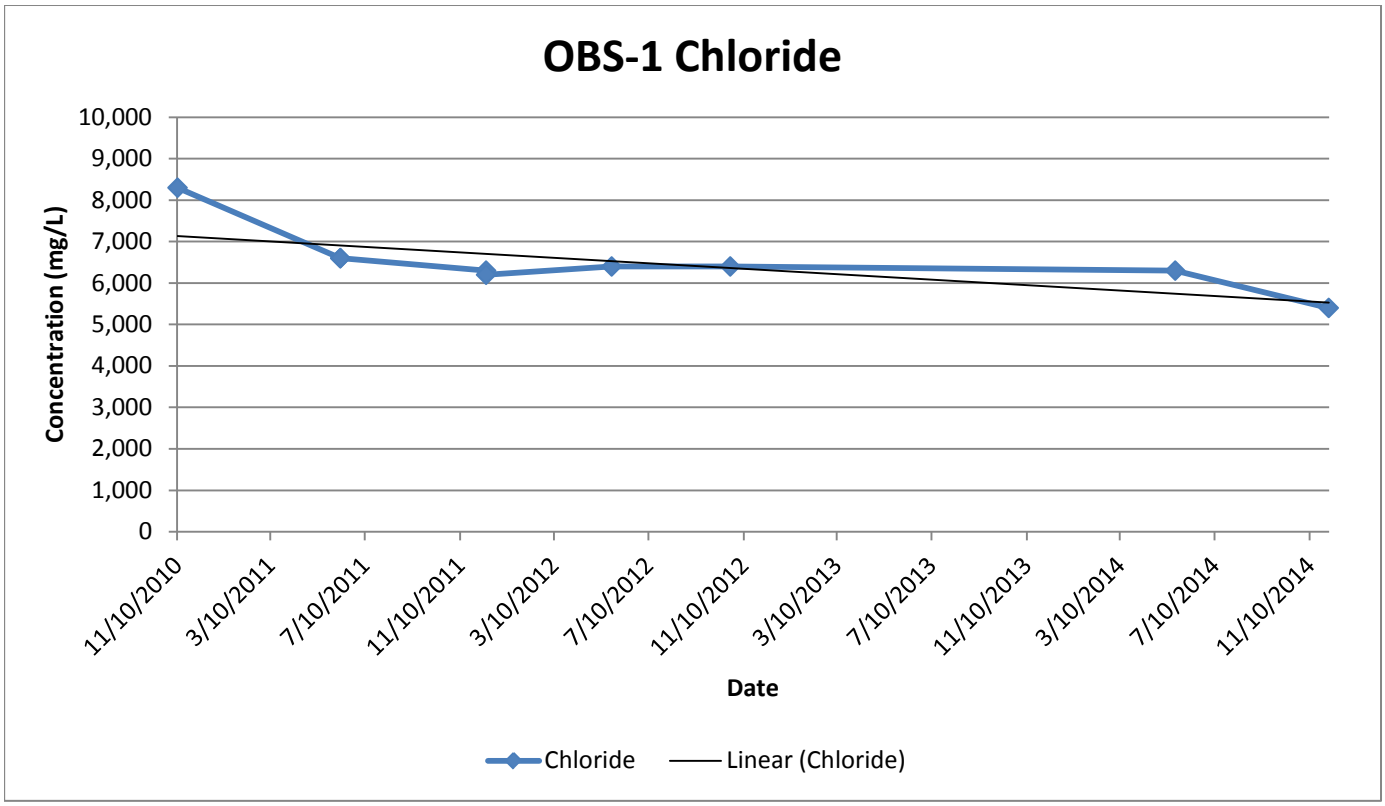
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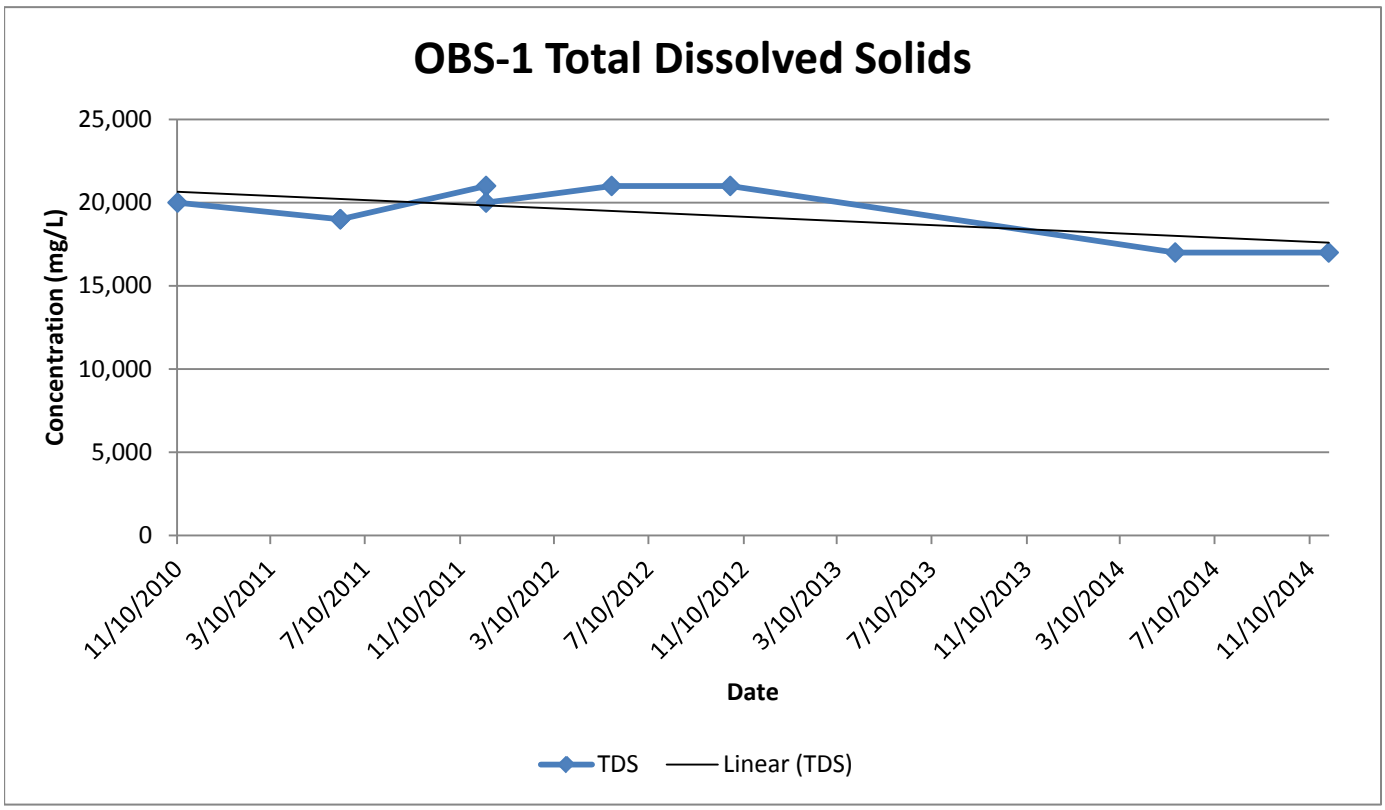
Linear (Chloride)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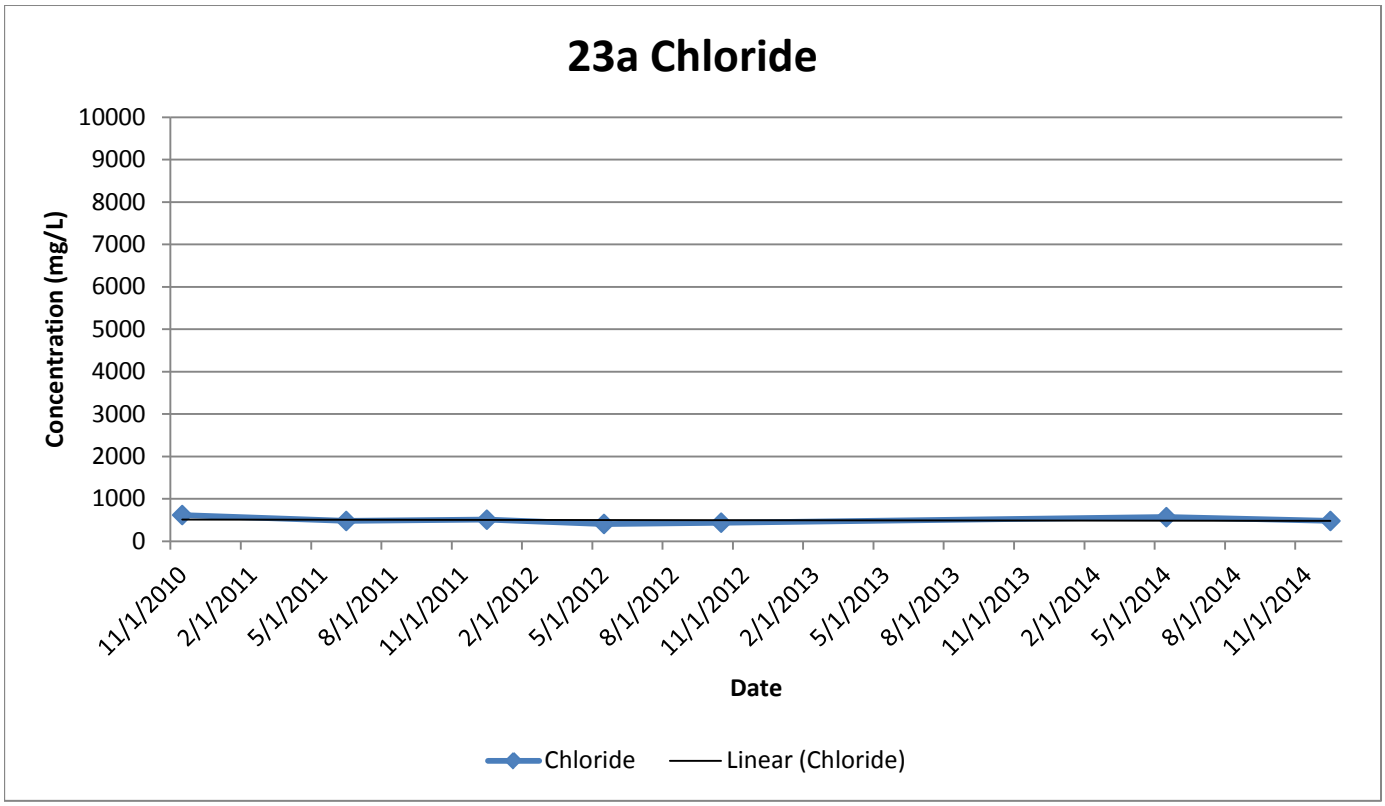
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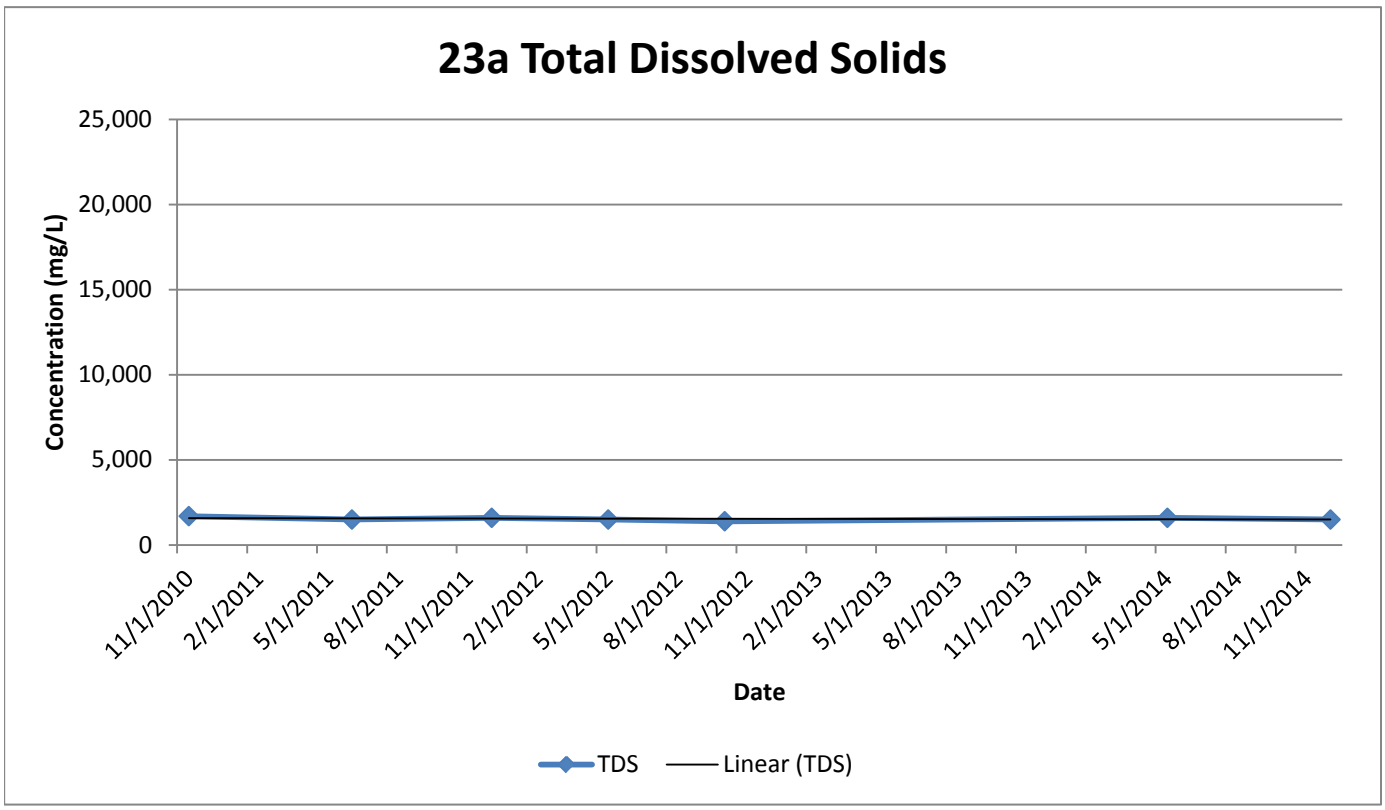
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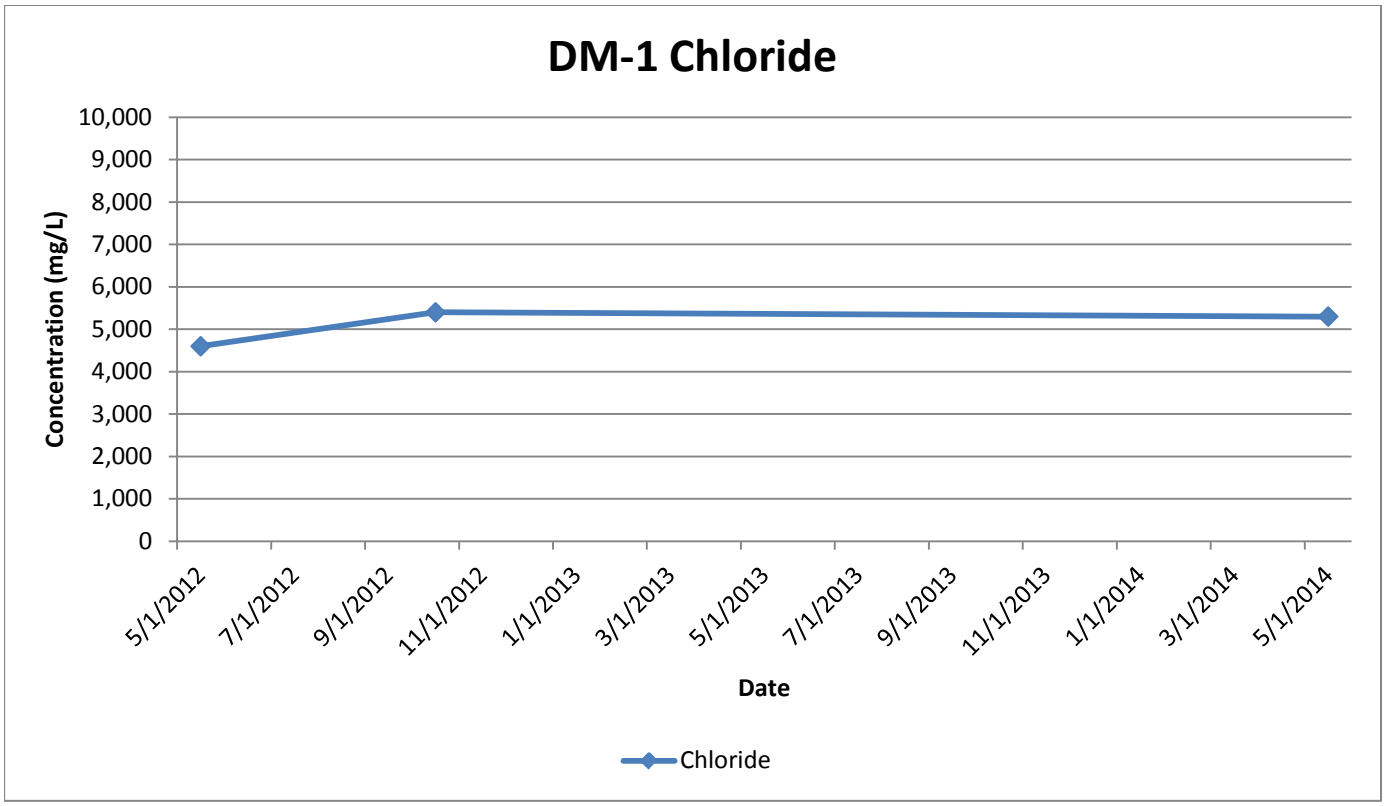
Linear (TDS)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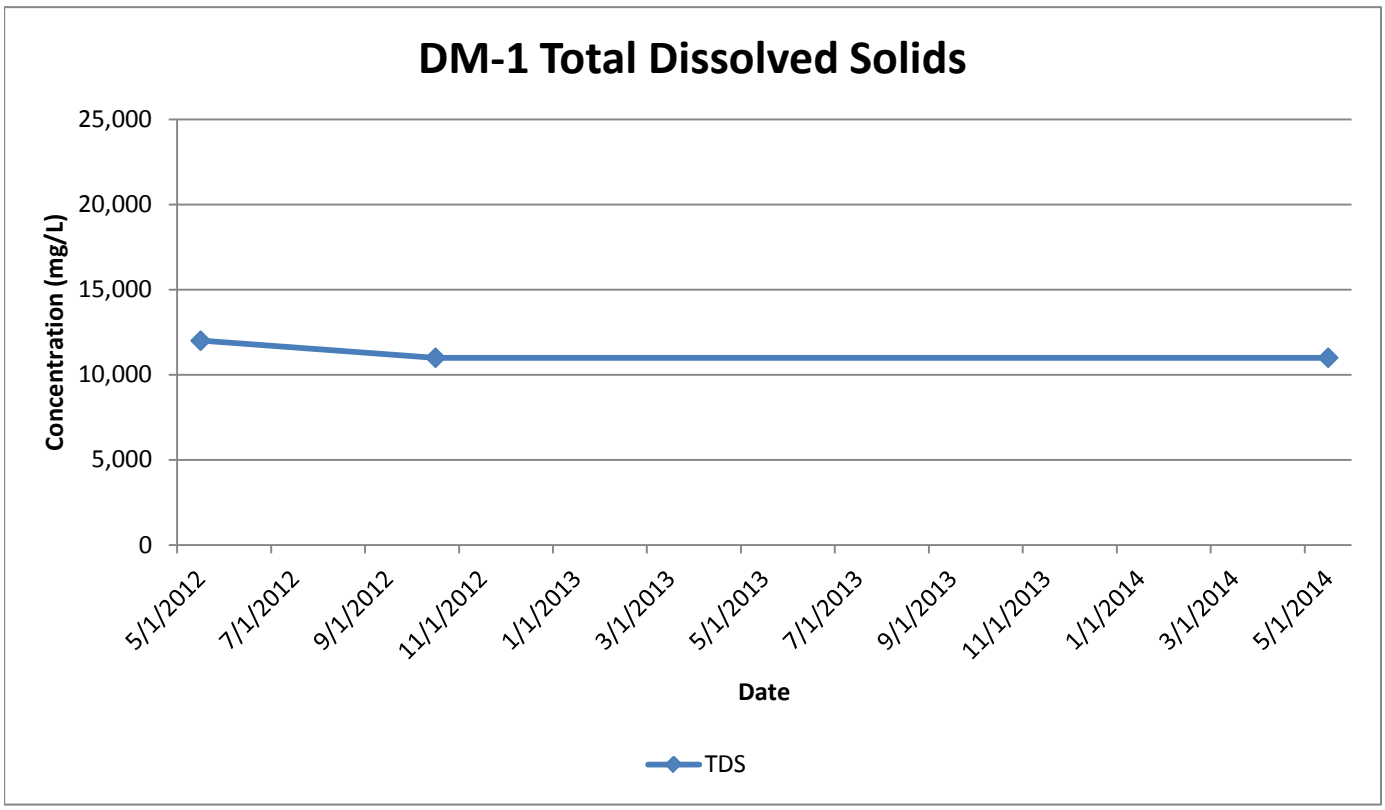
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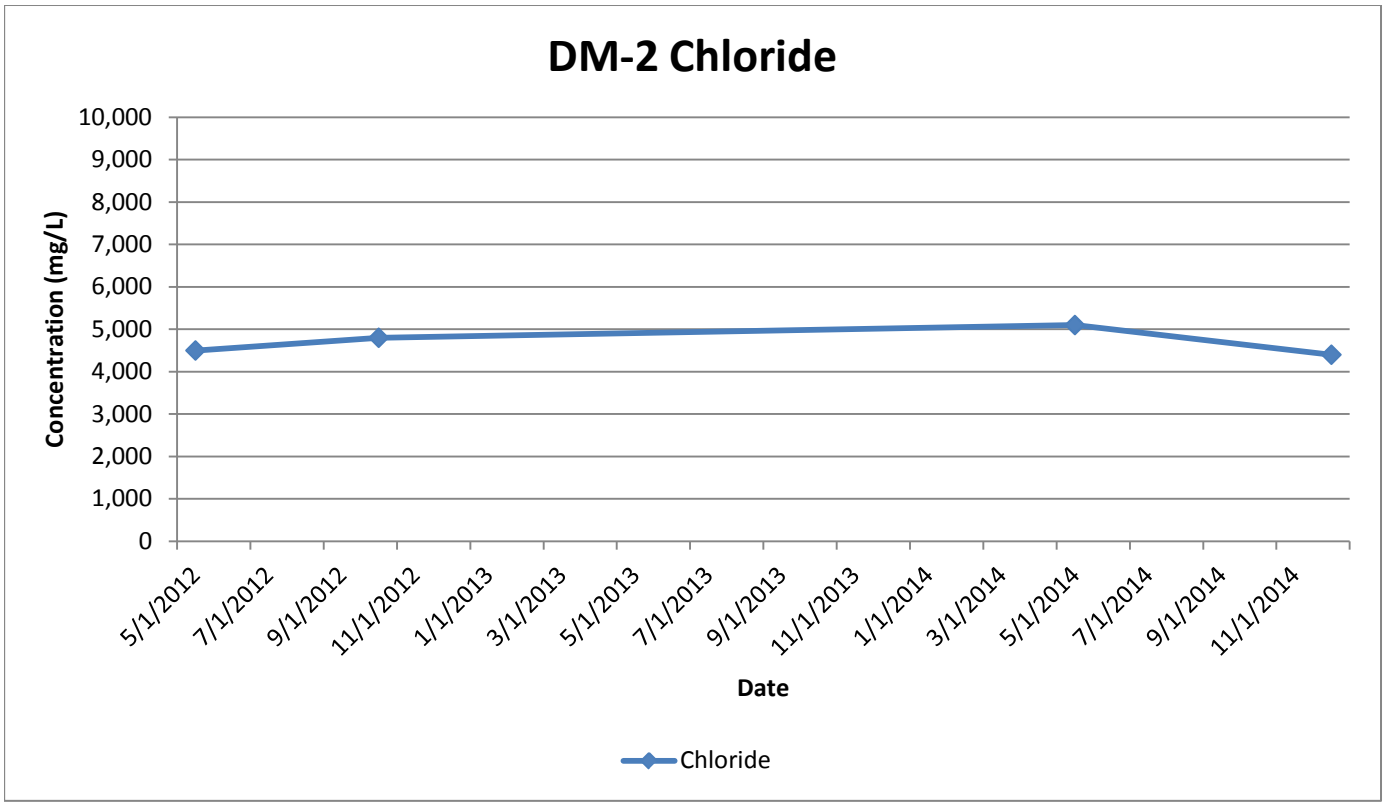
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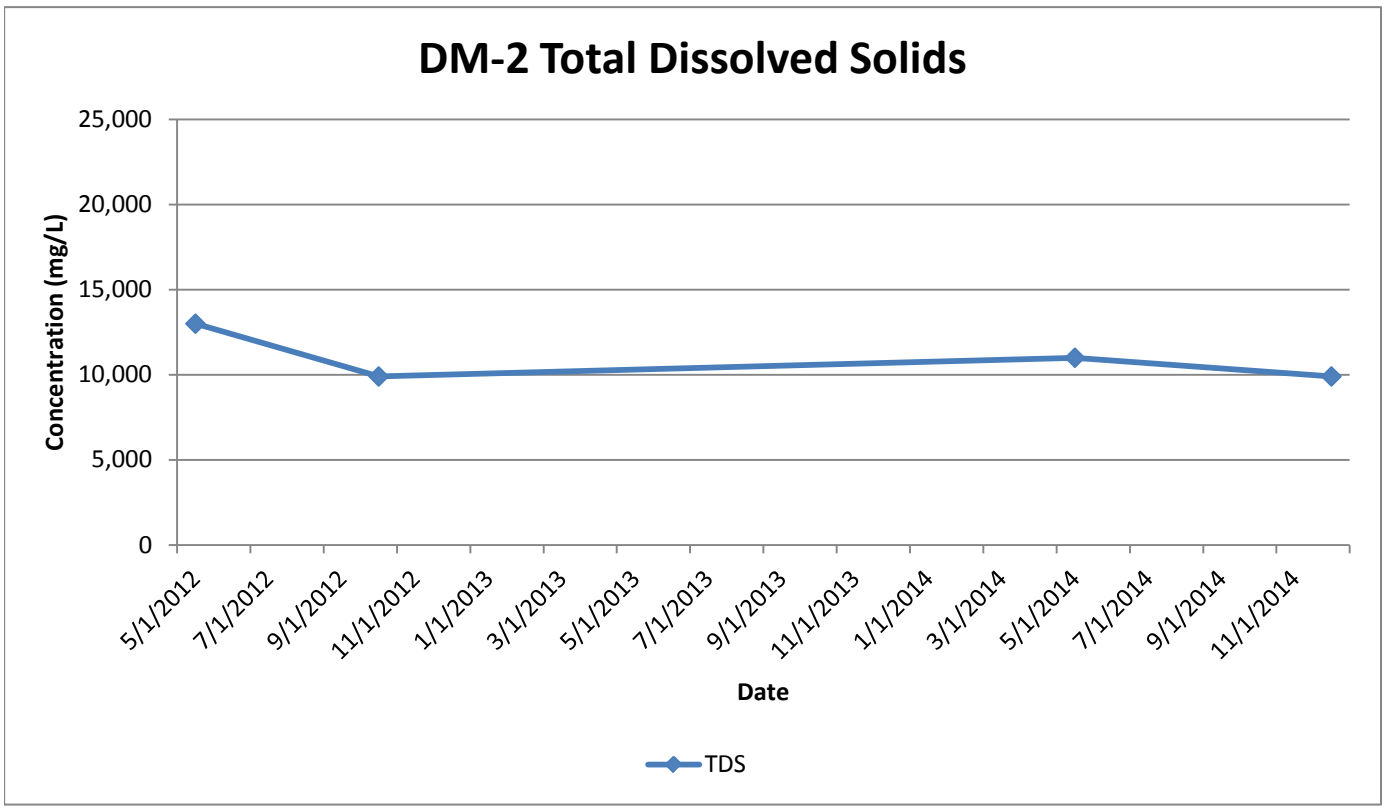
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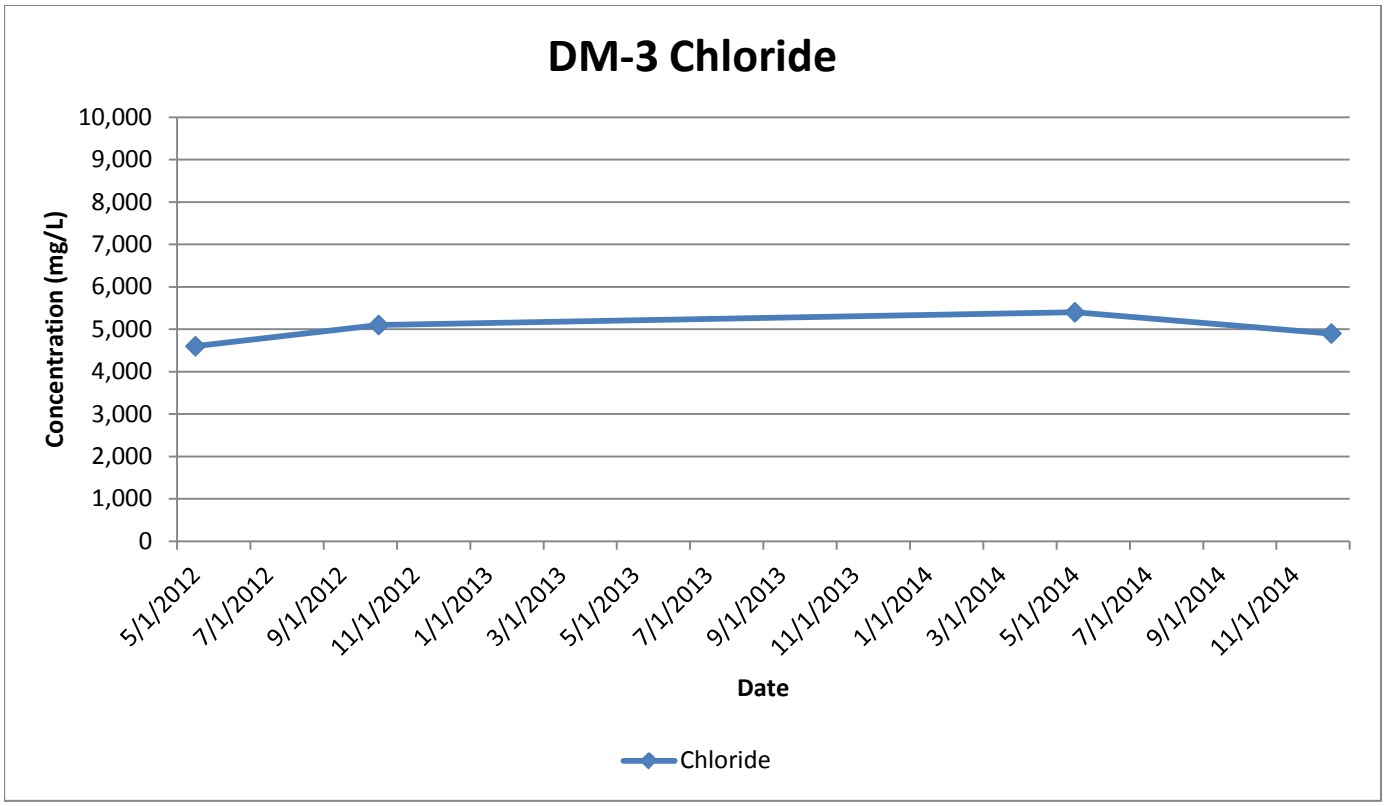
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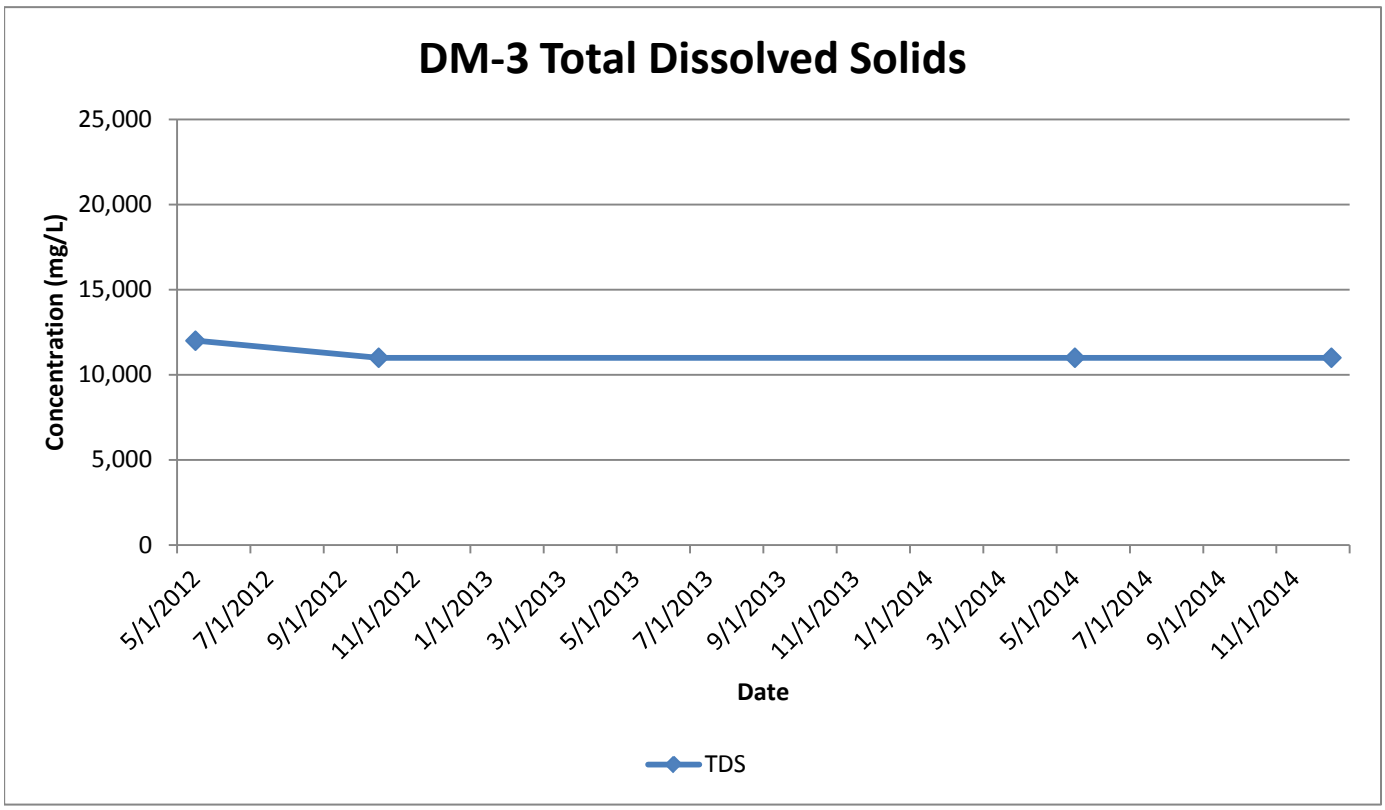
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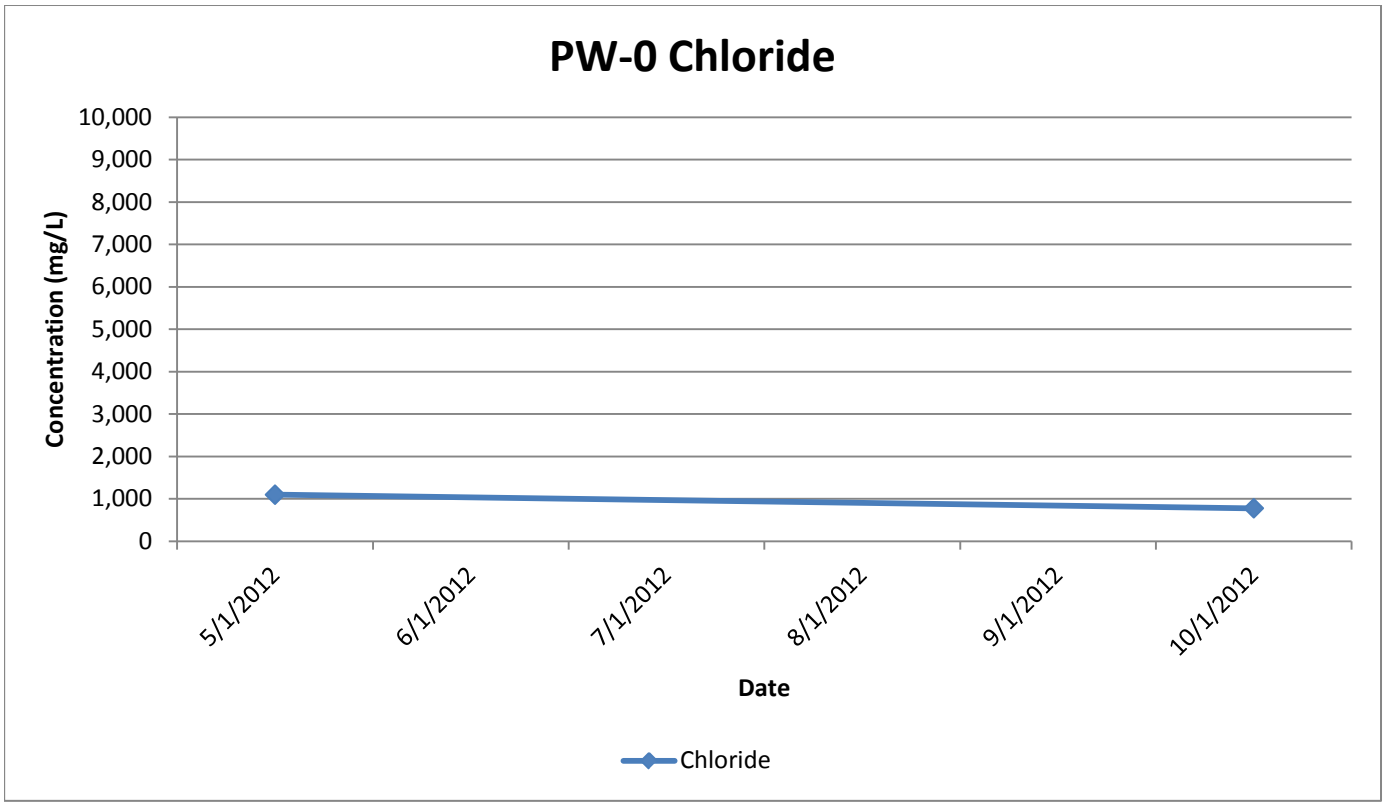
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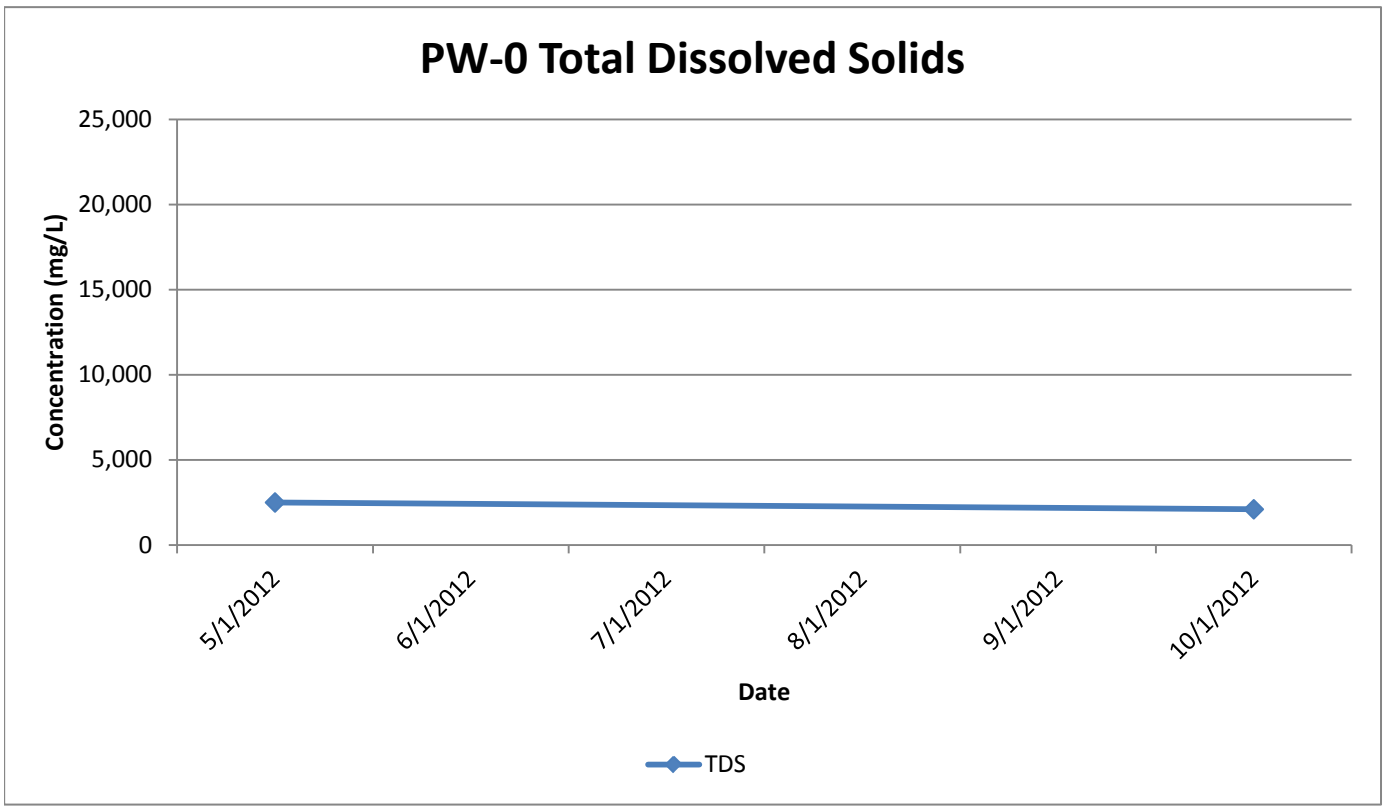
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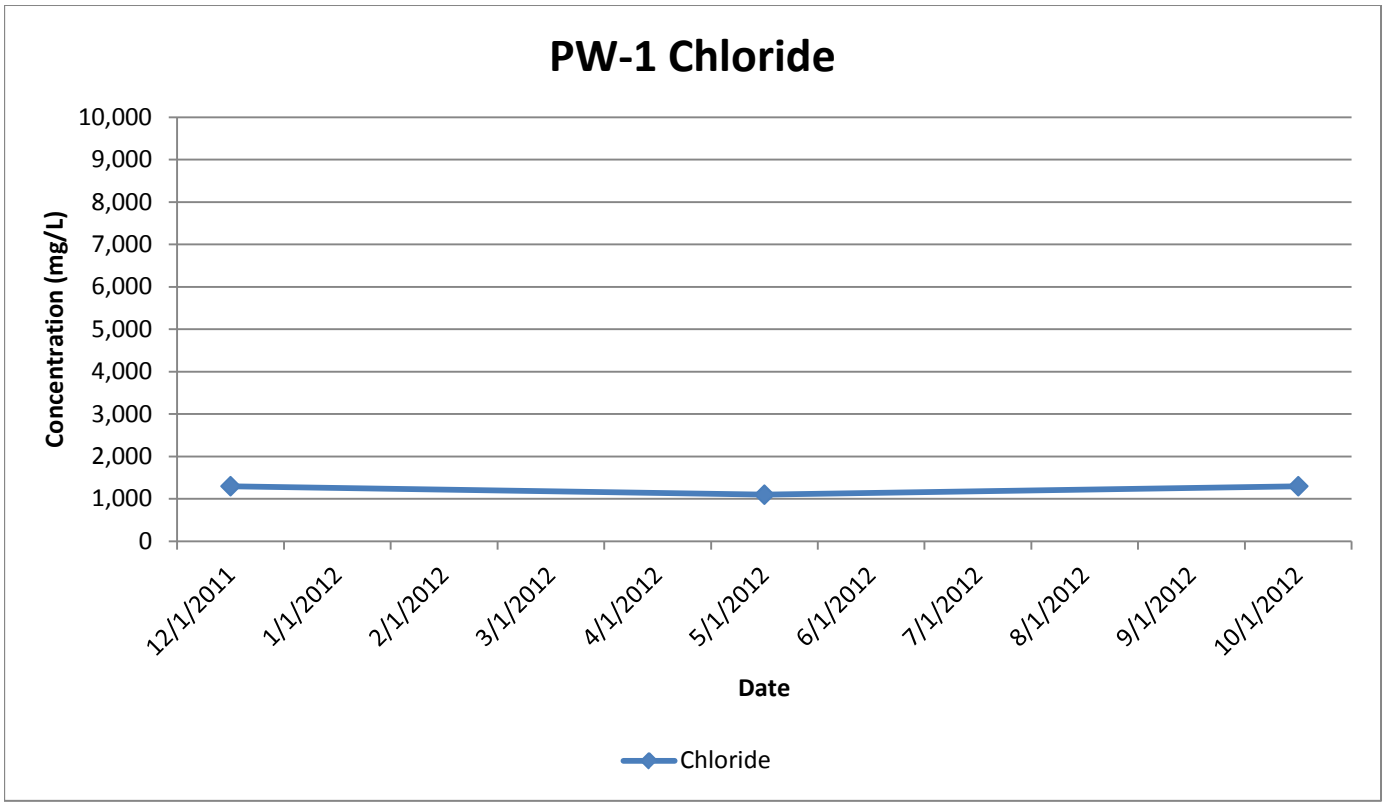
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3,000
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Concentration (mg/L)
12/1/2011
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2/1/2012
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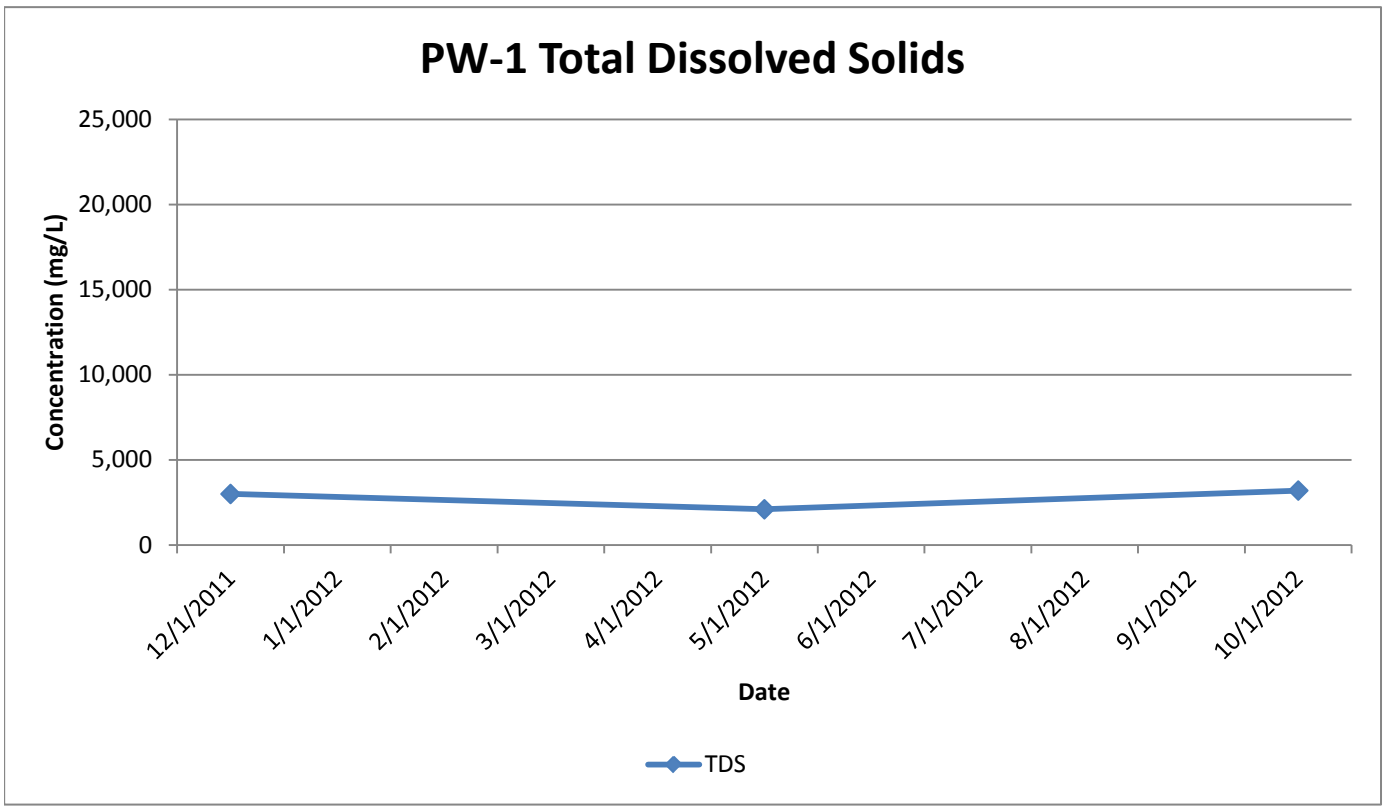
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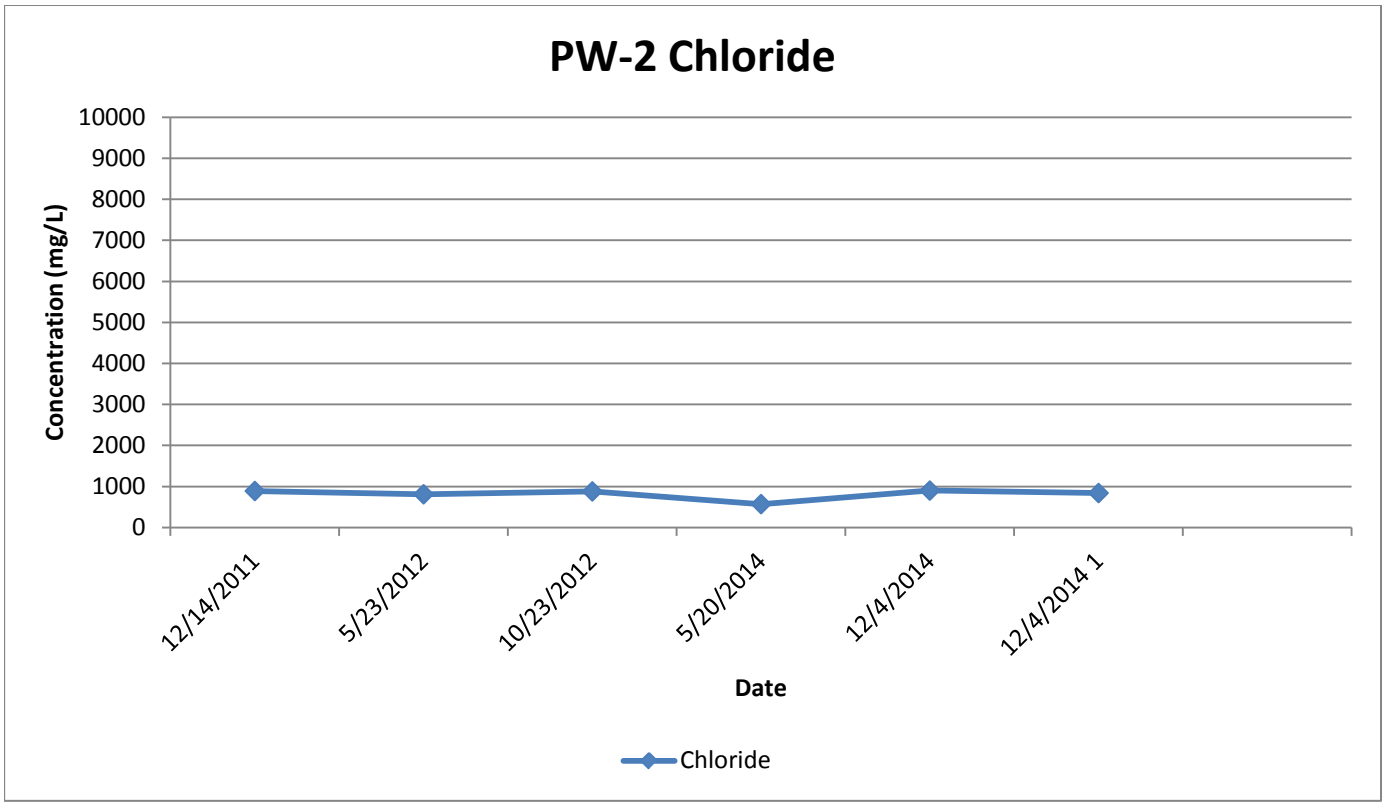
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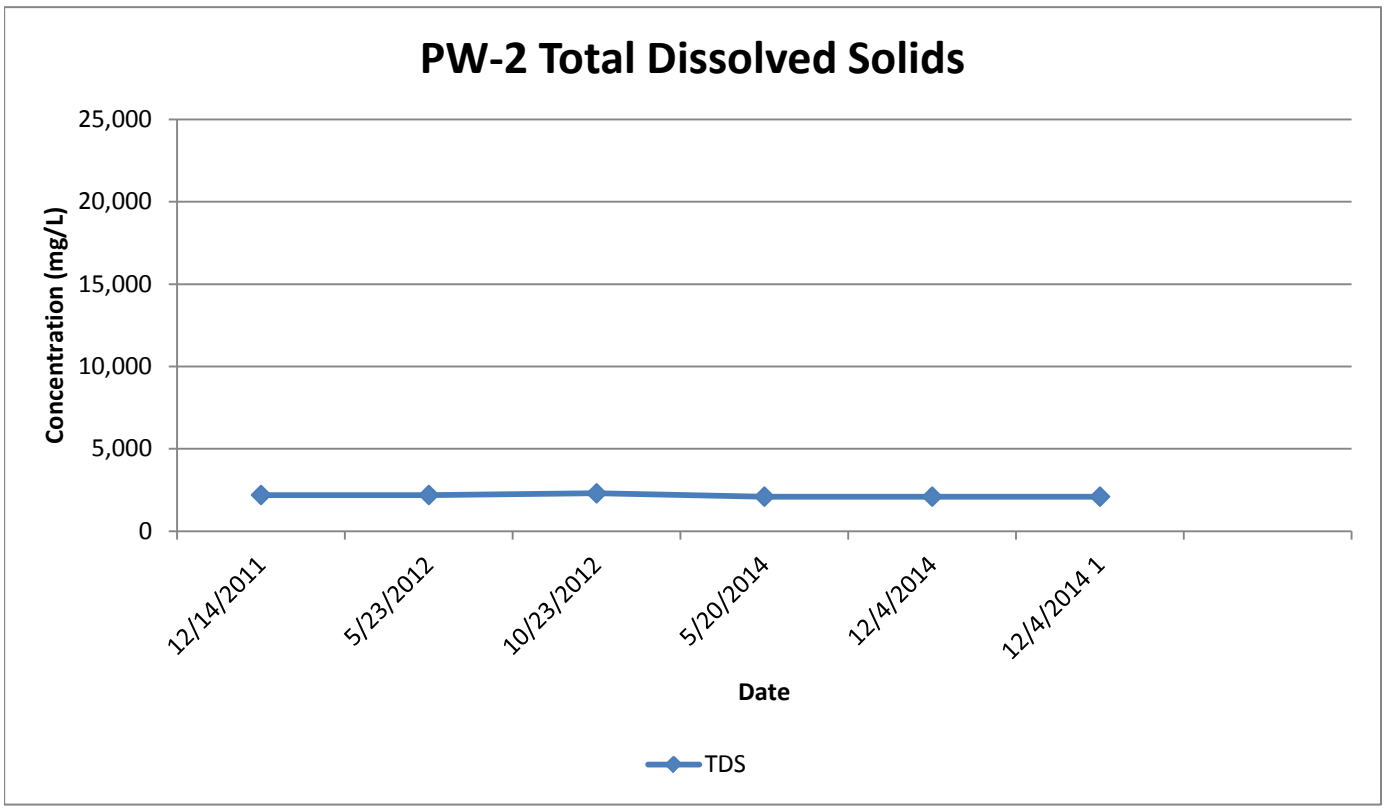
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10/23/2012
5/20/2014
12/4/2014
12/4/2014 1
Date
TDS

SOIL and WATER 5 - CONSTRUCTION AND OPERATION WATER USE

Verification: At least thirty (30) days prior to the start of construction of the proposed Project, the Project owner shall submit to the CPM a copy of evidence that metering devices have been installed and are operational.
Beginning six (6) months after the start of construction, the Project owner shall prepare a semi-annual summary of amount of water used for construction purposes. The summary shall include the monthly range and monthly average of daily water usage in gallons per day.
The Project owner shall prepare an annual summary, which will include monthly range and monthly average of water usage in gallons per month, and total water used on an annual basis in acre-feet. For years subsequent to the initial year of operation, the annual summary will also include the yearly range and yearly average water use by source. For calculating the total water use, the term “year” will correspond to the date established for the annual compliance report submittal.

Total Annual Water Usage			
	Well 0	**Well 2**	**Total**
Max (gal/month)	410,632	3,982,643	4,367,479
Min (gal/month)	0	2,089,727	2,090,027
Average (gal/month)	55,435	3,510,349	3,565,784
Total (gal/yr.)	665,220	42,124,184	42,789,404
Total (acre-ft./yr.)	2.04	129.27	131.32

SOIL and WATER 13 - CHANNEL MAINTENANCE PROGRAM

Verification: At least sixty (60) days prior to the start of any project-related activities (not including linears), the Project owner shall coordinate with the CPM to develop the Channel Maintenance Program. The Project owner shall submit two copies of the programmatic documentation, describing the proposed Channel Maintenance Program, to the CPM (for review and approval). The Project owner shall provide written notification that they plan to adopt and implement the measures identified in the approved Channel Maintenance Program.

Declaration of Service

I, Charlyn Mosley, declare that on February 12, 2013, I served and filed the attached Genesis Solar Energy Project Channel Maintenance Plan, dated September 2012. This document is being submitted by the applicant, Genesis Solar LLC. The original document filed with the Docket Unit, is accompanied by a copy of the most recent Proof of service list, located on the web page for this project at:
[http://www.energy.ca.gov/sitingcases/genesis_solar].

The documents have been sent to other parties in this proceeding (as shown on the proof of service list) and to the Commission's Docket Unit, in the following manner:

(Check all that apply)

For Service To All Other Parties

____ sent electronically to all email addresses on the Proof of Service.

____ by personal delivery or by depositing in the United States mail to Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses NOT marked "email preferred".

AND

For Filing with the Energy Commission:

____ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method);***

OR

____ depositing in the mail an original and 8 paper copies, as follows:

California Energy Commission
Attn: Docket No._____
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Original Signed By:
Charlyn Mosley

GENESIS SOLAR LLC

Channel Maintenance Plan
Soil & Water 13

Submitted to:
California Energy Commission

Submitted by:
Genesis Solar LLC

With technical assistance from:

WorleyParsons Group, Inc.

September 2012

Prepared by:

_____
Charlyn Mosley Date

Table of Contents

Logs

1. Introduction

This report presents a Channel Maintenance Plan for the Genesis Solar LLC site, located in the Colorado Desert between the communities of Blythe, CA (approximately 24 miles east) and Desert Center, CA (approximately 27 miles west) (refer to Figure 1)

Genesis Solar LLC, is constructing the site as owner/operator on approximately 1,800-acres near Ford Dry Lake in Riverside County, CA. The project is a concentrated solar power (CSP) electric generating facility that will use a proven parabolic trough solar thermal technology. The troughs will concentrate the sun's heat on tubes carrying a petroleum-based Heat Transfer Fluid (HTF) that will be used for steam production. The steam in turn will be used to power a steam turbine generator.

As part of the Genesis Solar LLC site, a channel has been constructed to divert off-site watershed using diversion-channels/berms.

- Flows from the sub-basin 1 (north-western) will be diverted through the channel on the west side of the west 125 MW module;
- Flows from the sub-basin 2 (north) will be diverted through the channel between the two 125 MW modules; and
- Flows from sub-basin 3 (north-eastern) will be diverted through the channel along the east side of the east 125 MW module.

Maintenance of the channels will be accomplished as part of the ongoing operations and maintenance of the plant and its facilities. Production Technicians will be engaged as needed to perform specific maintenance activities, and the below channel maintenance program presented below will be implemented.

1.1 Purpose and Objectives

The purposes of the diversion channels are to prevent interaction with off-site stormwater and onsite stormwater which:

- Allow natural groundwater recharge of the off-site stormwater with no contact with the changed flow conditions of the on-site water;
- Protect the Site infrastructure from flash flood events, which have the potential to damage the solar parabolic troughs;
- Protect the site from upstream sediment loading;
- Control on site flows in the detention basins to ensure there is no increase in post developed flow discharging from the site, minimizing the impact on downstream ephemeral drainage features;
- Maximize the developable area within the solar field;
- Maintain a passageway, particularly through the center channel (channel B/C) for animals that may move from north to south;

Therefore, the objective of the channel maintenance plan is to;

- Maintain channel capacity, so the runoff from the upstream watershed (approximately 90,000 acres) is conveyed within the channel; and
- Maintain a clear passageway for animals in the channel that may move from north to south.

2. Channel Conditions

2.1 Hydrology

As shown, there are five channels on site which have the following estimated flows during the 100 year storm event:

	Stormwater Flow Rate (CFS)
Channel A	1,156.37
Channel B	4,086.17
Channel C	2,006.55
Channel B/C	6,092.72
Channel D	2,600.43
Channel D/E	2,854.18

Typical cross sections of the channels are provided in **Appendix A**. All runoff diversion channels have been designed with a soil/cement mix to prevent erosion by providing adequate protection against development of an uncontrolled low-flow thalweg or designed with a low flow channel to control any flow thalweg. The channels are designed with appropriate depth to width ratios and slope erosion control to prevent undercutting and head cutting within the channel.

2.2 Biology

The slopes will be a maximum of 2H to 1V and the exposed slope protection surface will not be uneven (i.e. no exposed rip rap, gabions, etc.) and therefore will not be a hazard to desert tortoises. The soil/cement mix of the diversion channel sidewalls will limit fossorial animal's ability to borrow. Rip rap totaling approximately 8" in thickness will be installed on the bottom of the channel floors to prevent burrowing and vegetation growth.

3. Success Criteria

The following is the success criteria of the channel maintenance plan.

- 100 year, 24 hour storm run off is contained with the channel and daylights at the outlet, transitioning back to surface sheet flow;
- Berm prevents upstream stormwater run off from entering the Project site.
- No vegetation or debris in the base of the channel;
- Soil-cement lined areas of the slopes in good condition;

4. Inspection and Maintenance Requirements

4.1 Inspection Program

The channels are to be inspected on an annual basis (spring) by the Environmental Specialist for routine maintenance activities and after storm events. A storm event is defined as significant water flow through the channels as a result of rain fall. The inspections are to access the following within the channel and along the banks:

- Erosion/sedimentation accumulation at the upstream inlet to the channel;
- Erosion/sedimentation accumulation at the downstream inlet to the channel;
- Erosion/sedimentation accumulation within the channel including development of an uncontrolled low-flow thalweg;
- Debris accumulation;
- Condition of soil/cement channel slopes;
- Visual evidence of the stormwater overtopping the channel;
- Vegetation/weed management;
- Evidence of animal use in the channel;
- Condition of grade control structures;
- Condition of berms; and
- Condition of the access roads.

The Environmental Specialist will record the finds from the inspections, which will dictate the level of maintenance activities required.

Especially after a storm event (see definition in section 4.1) the environmental specialist must note if the stormwater run off caused;

- Significant damage to the facility;
- A public safety concern;
- Negatively affected groundwater recharge; or
- Posed a hazard to wildlife.

4.2 Maintenance Program

The maintenance program will be implemented after any deficiencies in the channel system are noted. Generally, routine maintenance will occur after the annual site inspections or as needed after a storm event. Sediment removal will occur when accumulated sediment reduces the effective flooding capacity or at which time the sediment becomes a permanent, non-erodible barrier to in stream flow.

For weed control, there is a Site Weed Management Plan (BIO-14) that addresses weed prevention/control on the site. An aquatic weed control herbicide will be sprayed as needed to control invasive or nonnative vegetation as prescribed in Condition of Certification BIO-14.

Bank protection and grade control structure repairs involve any action by the Project owner to repair eroding banks, incising toes, scoured channel beds. The Project owner would implement instream repairs when the problem: (1) causes or could cause significant damage to Project; adjacent property, or the structural elements of the diversion channel; or (2) negatively affects groundwater recharge.

Trash removal and associated debris shall be removed from channels to maintain channel design capacity; repair of fences, gates and signs; grading and other repairs to restore the original contour of access roads.

This documentation provides the permitting requirements for channel maintenance work in accordance with the conditions of certification for individual routine maintenance of the engineered channel without having to perform separate CEQA/NEPA review or obtain permits. The Project owner shall supervise the implementation of a Channel Maintenance Program in accordance with conditions of certification. The Channel Maintainence Guidelines are based on two concepts: (1) the maintenance standard and (2) the acceptable maintenance condition, and applies to sediment removal, vegetation management, trash and debris collection, blockage removal, fence repairs, and access road maintenance.

5. Emergency Repairs

Emergency repairs will be undertaken on an as needed basis. Emergency repairs may be required over the lifetime of the plant due to unforeseen collapse in berms, embankments or in-stream structures.

6. Training

The site environmental specialist will ensure the Project Operation Managers and Technicians receive training on the Channel Maintenance Program.

7. Reporting

As part of the Project Annual Compliance Report to the CPM , submit a Channel Maintenance Program Annual Report specifying which maintenance activities were completed during the year including type of work, location, and measure of the activity (e.g. cubic yards of sediment removed). The Channel Maintenance Program Annual Report will include which maintenance activities were completed during the year including type of work, location, and measure of the activity (e.g. cubic yards of sediment removed), a report describing "Lessons Learned" to evaluate the effectiveness of both resource protection and maintenance methods used throughout the year and establishe policies to ensure that resources would be protected to the fullest extent feasible during routine channel maintenance activities.

A maintenance log will be kept by the environmental specialist and maintained at the Genesis Solar LLC facility. (Refer to Figure 3).This program may be revised during the lifetime of the facility to ensure elimination of deficiencies as discovered.

Logs

Figure 2

Channel Maintenance Plan Annual Inspection Log					
Inspection Point	Date	Inspector Initials	Comments	Evidence Y/N	Area Normal Check Y/N
Erosion/sedimentation accumulation upstream of inlet to channel					
Erosion/sedimentation accumulation at the downstream inlet to the channel					
Erosion/sedimentation accumulation within the channel including development of an uncontrolled low-flow thalweg					
Debris accumulation					
Condition of soil cement slopes					
Stormwater overtopping channel					
Vegetation/weeds					
Evidence of animals					
Grade control structures in tact					
Condition of berms					
Access road condition					
Gates and signs in good order					

Figure 3

Channel Maintenance Plan
Inspection Log After a Storm Event

Results of storm event	Date	Inspector Initials	Comments	Evidence Y/N	Area Normal Check Y/N
Did significant damage occur? If so note area.					
Any evidence to public safety?					
Was there negative affected groundwater recharge					
Were there negative hazards to wildlife?					

SOIL and WATER 16 - GROUNDWATER PRODUCTION REPORTING

Verification: The Project owner shall file an annual "Notice of Extraction and Diversion of Water" with the SWRCB in accordance with Water Code Sections 4999 et seq. The Project owner shall include a copy of the filling in the annual compliance report.

[SUMMARY OF FINAL SUBMITTED VERSION]

ANNUAL NOTICE OF GROUNDWATER EXTRACTION AND DIVERSION FOR 2013

Primary Owner: GENESIS SOLAR LLC
Recordation Number: G333094
Date Submitted: 2014-03-25

1. Reporting to a Local Agency	
Local Agency	Submitter does not report to a local agency.

2. Type(s) of Diversion	
a. Groundwater Extraction	> 25 acre-feet
b. Surface Diversion	None

3. Ownership Type of Owner(s) on Record	
Ownership Type	Lessee of land on which well or point of diversion is located, and is extracting/diverting water

4. Amount of Groundwater Extracted During Calendar Year	
Amount Extracted	91.783 Acre-Feet

5. Amount of Surface Water Diverted or Used
Not applicable; Surface Diversion was not chosen as a type of diversion.

5d. Maximum Rate of Surface Water Diversion
Not applicable; Surface Diversion was not chosen as a type of diversion.

6. Method of Measurement	
Method of Measurement	Water Meter

7. Type(s) of Use	
Other	Water Supply for Construction of Solar Power Generating Facility

8. Action Requested	
Action Requested	Record my water use

9. Supplemental Information	
Supplemental Information	Note:Please indicate that the subject well Recordation ID (G333094) refers to Well 1 (Serial No. 11-07804).

Attachments		
File Name	Descripton	Size
No Attachments		

Contact Information of the Person Submitting the Form	
First Name	Jennifer
Last Name	Gavaldon

Relation to Water Right	Other: Construction Compliance Manager
Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes

SOIL and WATER-20 GROUNDWATER QUALITY MONITORING AND REPORTING PLAN

Verification: The Project owner shall complete the following:
At least six (6) weeks prior to the start of construction activities, a Groundwater Level and Quality Monitoring and Reporting Plan shall be submitted to the CPM for review and approval.

WorleyParsons

resources & energy

GENESIS SOLAR, LLC

Groundwater Quality Monitoring and Reporting Plan

Genesis Solar Energy Project

Riverside County, California

27 October, 2010

Infrastructure and Environment

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1.0 INTRODUCTION

This Groundwater Quality Monitoring and Reporting Plan has been prepared by WorleyParsons to provide detailed methodology for monitoring background and site groundwater quality at the Genesis Solar Energy Project (GSEP) Site in Riverside County, California. As shown on **Figure 1**, the Project Site is located approximately 25 miles west of the city of Blythe, California in eastern Riverside County on lands managed by the Bureau of Land Management (BLM).

1.1 Background

An updated Plan of Development (POD) for the project was submitted to the BLM by Genesis Solar LLC in September 2010 (Genesis Solar, LLC, 2010). In addition, Genesis Solar, LLC submitted an Application for Certification (AFC) for the Project to the California Energy Commission (CEC) in August 2009 (Genesis Solar, LLC, 2009). The CEC issued its Final Decision on the project on October 12, 2010 (CEC, 2010). The BLM issued the Final Environmental Impact Statement for the GSEP for public comment on August 27, 2010.

As described in the CEC's Final Decision, the GSEP will consist of two independent concentrated solar electric generating facilities with a nominal net electrical output of 125 megawatts (MW) each, for a total net electrical output of 250 MW. The project will utilize dry cooling technology and will rely on groundwater as a water source during construction and operation. At least two groundwater production wells will be installed on the plant site and will pump groundwater at up to 1,348 acre-feet per year (AFY) during construction and an average rate of 202 AFY during operation. The potential impacts associated with the proposed groundwater use by the GSEP are discussed in the Final Decision and FEIS. Groundwater drawdown impacts are anticipated to be less than significant; however, because the prediction of groundwater quality effects by computer modeling entails inherent uncertainty, both the Final Decision and the FEIS adopted Condition of Certification Soil & Water 20 (COC S&W-20) for GSEP to monitor groundwater quality at and in the vicinity of the GSEP. A copy of this Condition of Certification is included as **Appendix A**.

The evaporation ponds will be licensed as Class II Surface Impoundments, which will include the installation and sampling of at least three groundwater monitoring wells. These monitoring wells will be sampled as part of the monitoring program described in this plan to comply with the requirements of COC S&W-20; however, the monitoring program for these wells will include additional sampling and analysis that will be required to comply with Waste Discharge Requirements adopted for the impoundments. These additional requirements are not discussed in this monitoring and reporting plan, and will be submitted to the CEC's Compliance Project Manager (CPM) and the BLM for separate approval.

1.2 Natural Setting

The GSEP Site lies on a broad, relatively flat, sloping surface underlain by alluvial deposits derived from the Palen Mountains to the north, and the McCoy Mountains to the south-southwest (**Figure 2**). The deposits immediately adjacent to the mountains have formed alluvial fans from multiple identifiable sources, and multiple fan surfaces have coalesced into a single bajada surface that wraps around each of these mountain fronts. Between the bajada surfaces from each mountain chain lies a broad valley-axial drainage that extends southward between the mountains and drains to the Ford Dry Lake playa, located about 1 mile south of the site. The site itself is relatively flat and generally slopes from north to south, with elevations of approximately 400 to 370 feet above MSL. It is occupied by a community of low creosote and bursage scrub vegetation.

The Project Site is located between the communities of Blythe, California (approximately 25 miles east) and Desert Center, California (approximately 27 miles west). Land use is characterized predominantly by open space and conservation and wilderness areas. Chuckwalla and Ironwood State Prisons are located approximately 6 miles to the southeast of the Project Site.

The GSEP site is located within the Chuckwalla Valley Groundwater Basin (CVGB) which has a surface area of 940 mi^2 (2,435 km^2) underlying Chuckwalla Valley. The CVGB is bounded upgradient by two other groundwater basins that include the eastern part of the Orocopia Valley and Pinto Valley groundwater basins and downgradient by the Palo Verde Mesa Groundwater Basin (**Figure 2**). Groundwater occurs at depths of about 80 to 130 feet below the ground surface and groundwater flow is generally southeast to eastward, from the CVGB into the Palo Verde Mesa Groundwater Basin (PVMGB) (**Figures 2 and 3**).

Recharge to the CVGB is from sources including precipitation, inflow from the Orocopia Valley and Pinto Valley groundwater basins, and return flows from agricultural sources and treated wastewater effluent. Groundwater provides the only available water resource in Chuckwalla Valley, with extraction to meet local demand representing the primary source of groundwater outflow. Other minor sources of outflow include underflow to the PVMGB and evapotranspiration in portions of Palen Dry Lake (where shallow groundwater is present). While the groundwater budget for the CVGB includes complex relationships between subsurface flows and withdrawals, the evidence indicates that levels are generally stable.

During field reconnaissance performed during the week of October 4, 2010, depth to groundwater was measured to be approximately 78 feet bgs and 87 feet bgs at Wells OBS-1 and TW-1, respectively (Ford Dry Lake #1 Site, see **Figure 4**), and approximately 128 feet bgs at Well TW-2 (Ford Dry Lake #2 Site). These depths correspond to elevations of 305 and 296 feet above MSL for Wells OBS-1 and TW-1, respectively and an elevation of approximately 262 feet above MSL for TW-2. Perched water

exists at the Chuckwalla State Prison, but is unlikely to occur within the GSEP Site boundaries, as there is no irrigation.

Groundwater quality varies markedly in the basin. Groundwater in the western portion of the basin near Desert Center generally contains lower concentrations of total dissolved solids (TDS) than groundwater in the eastern, downgradient portion of the basin near Ford Dry Lake (Steinemann, 1989). Groundwater to the south and west of Palen Lake is typically sodium chloride to sodium sulfate-chloride in character (DWR, 2004). The detected concentrations of TDS in the basin ranges from 274 milligrams per liter (mg/L) to 8,150 mg/L with an average concentration of 2,100 mg/L (Steinemann, 1989). In general, the groundwater in the basin has concentrations of sulfate, chloride, fluoride, and dissolved solids too high for domestic use and concentrations of sodium, boron and dissolved solids too high for irrigation use. Several of the wells sampled in the basin contain high levels of fluoride and boron.

Reported water quality of samples collected from wells near the Site is summarized in the AFC. This data indicates that water quality varies laterally and vertically in the area. Generally, water quality improves vertically with depth and laterally to the south. Vertically, TDS concentrations are generally highest in the alluvium followed by the Bouse Formation and finally by the Fanglomerate. Calculated TDS concentrations from borehole geophysical logging indicate TDS concentrations as high as 30,500 mg/L within finer grained units (silt and clay) in the alluvium decreasing to less than 5,000 mg/L TDS in more transmissive sediments in the Bouse Formation at depths of 800 to 900 feet bgs. TDS concentrations detected below 800 feet bgs in the Bouse Formation and Fanglomerate at test well TW-2 were near 3,000 mg/L. Laterally, TDS concentrations in groundwater decrease south and southeast of the Site within all three water bearing units in the basin, and are lowest in the area south of Interstate Highway 10.

1.3 Monitoring Program Objectives

Groundwater quality monitoring will be performed at the GSEP Site in accordance with COC S&W-20, as described in the CEC's Final Decision (**Appendix A**). Monitoring will occur during pre-construction, construction, and during planned facility operation. The primary objectives for the Water Quality Monitoring Program are to: (1) identify potential changes in the existing water quality of the proposed water supply resulting from Project pumping (if any), in compliance with COC S&W 20; (2) establish pre-construction groundwater quality data in the area at and near the Project Site; and 3) provide a mechanism for early warning to help avoid, minimize, or mitigate significant impacts to groundwater quality.

2.0 GROUNDWATER QUALITY MONITORING PROGRAM

This section provides an overview of the groundwater Quality monitoring program to be implemented for the GSEP prior to and during construction, and during the first five years of facility operation.

2.1 Monitoring Well Network

As required under COC S&W-20, field data collection for the groundwater quality monitoring program will extend up to 2 miles from the Project Site and off-site linears in order to assess groundwater quality and trends near the GSEP pumping wells and potentially impacted existing wells. **Figure 4** shows the boundary of this area (referred to herein as the Groundwater Monitoring Area or the GMA), and the locations of existing and planned wells in the area. An inventory of existing wells that are located within the GMA is presented in **Table 1**. This table lists the completion details and current status for the four existing test and observation wells installed for the Project (TW-1, TW-2, OBS-1, and OBS-2) and three existing and functional off-site wells proposed for inclusion in the groundwater quality monitoring program (23a [Cal Trans], 24 [So. Cal. Gas Anode Well] and 36 [DOC Water Supply Well No. 1]. Well 37 [DOC North Well] is included in the groundwater level monitoring program but not in the groundwater quality monitoring program because it is obstructed by an existing, non-servicable pump assembly and because it is located near Well 36 and screened in a similar depth interval. Six wells that occur within the GMA were reported to be unusable or destroyed before conducting a field reconnaissance in early October 2010 (Wells 6, 7, 8, 20, 21, and 22). These wells were confirmed to be either unusable or destroyed during the reconnaissance. It was also observed that Well 25 (So. Cal Gas) is apparently blocked at a depth of approximately 187 feet (the well was reported to be completed at 435 feet bgs). In addition, Wells 5 and 32 were found to be dry and in unsuitable condition for groundwater monitoring. Wells 23 and 38 could not be located. Well 38 is presumed destroyed based on a well record filed with the Department of Water Resources. Based on the results of the field reconnaissance, it is proposed that the groundwater monitoring well network for the GSEP (COC S&W-2) will consist of the following wells shown on **Figure 4**:

- The on-site wells installed by WorleyParsons for the GSEP, including the deep test wells TW-1 and TW-2, and shallow observation well OBS-1. These wells will be included in the pre-construction, construction and operation groundwater level monitoring programs. In addition, the multi-depth, buried pressure transducers installed at OBS-2 will be monitored as long as the transducers continue to operate.

- Three existing and functional off-site wells (23a, 24 and 36) are proposed for inclusion in the groundwater monitoring program. Monitoring of these wells will begin with the pre-construction monitoring event and will continue through construction and operation. Access

to Well 24 (the Southern California Gas Company Well) is still under negotiation at this time, and the well will be added to the monitoring program if/when it is available.[1] Wells 23a and 36 are deeper wells completed near the interval pumped by the project. Well 24 was found to be approximately 375 feet deep during the field reconnaissance and will serve as a shallow monitoring well.

- The production wells installed on the GSEP Site will be monitored after they are installed, which is expected to occur in the second or third quarter of 2011.

- The shallow monitoring wells that will be installed near the proposed GSEP evaporation ponds and land treatment unit to comply with Waste Discharge Requirements (WDRs) for the project will be monitored after they are installed, likely in late 2011.

Completion details for existing wells proposed for use in the monitoring program are summarized in **Table 1**. Lithologic logs of the wells are included in **Appendix B**.[2]

2.2 Pre-Construction Activities

Owners of private land parcels situated within the Groundwater Monitoring Area will be contacted by registered mail to notify them of the planned groundwater monitoring and well mitigation program. The landowners will also be asked to voluntarily provide information pertaining to groundwater wells located on their respective properties (e.g., well construction and use. A copy of the letters sent, proof of service and any responses received will be provided to the CEC's Compliance Project Manager (CPM).

An initial field reconnaissance was performed during the week of October 4 to investigate and document the condition and use of known existing groundwater wells within the GMA, select wells to be included in the Groundwater Level Monitoring Program, and identify any seeps or springs located within 1 mile of the perimeter of the Project Site. Follow-up reconnaissance will be conducted as needed if additional wells are identified that are not known at this time.

[1] Well 24 is completed in the alluvial aquifer and the upper Bouse Formation, which is separated from the aquifer the will be pumped for project water supply purposes by several hundred feet of low permeability sediments. Therefore, the well is unlikely to experience measurable drawdown for some time and a delay in water level measurement will not cause a bias in baseline water level data.

[2] Note that a lithologic log and completion details of Well 23a have been requested from CalTrans and are not available as of the date of this report. These details will be provided when received. If well completion details are not provided, then a video survey of the well will be completed to verify the screened interval, and the lithology will be assumed to be similar to that at TW-2.

The following information was recorded for each groundwater well during the field reconnaissance: (1) assessment of well access, (2) condition of well surface assembly, (3) depth to well bottom, (4) groundwater level in the well, (5) current well use, (6) coordinates of well location, (7) approximate coordinates and elevation at top of casing, and (8) available information pertaining to well construction, performance and condition. No seeps or springs were observed near the Project Site during our reconnaissance or during prior site visits or aerial photograph reviews. A field binder was maintained to document existing well construction information, boring logs, observations and notes recorded during interviews with owners. This information will be compiled and submitted to the CPM in the Pre-Construction Groundwater Level Monitoring Report. Field documentation recorded during the reconnaissance will be provided in the initial monitoring report. Information regarding the condition and access of groundwater wells will be updated as necessary in subsequent reports.

Pre-construction groundwater levels will be measured in the three existing on-site wells (TW-1, TW-2, and OBS-1), one multi-depth transducer array (OBS-2), and at four existing and functional off-site wells (23a, 24, 36 and 37) located within the GMA. Methods to be used for groundwater level measurements are described in **Section 3.0**, Field Methods. At the time of the initial groundwater level measurement, a video survey of Well 23a will be completed to establish the screened interval of this well if well construction details cannot be confirmed from other data sources. At least 30 days prior to pumping of groundwater for Project construction, a comprehensive report presenting all the data and information collected during the field reconnaissance and during the pre-construction groundwater level monitoring event will be prepared and submitted to the CPM. This report will include all calculations and assumptions made in interpreting the collected information, as described in more detail in **Section 4.0**.

A preliminary schedule for activities to be performed during the pre-construction phase of the project is presented below.

October 29, 2010	Send certified letters to property owners within 2 miles of the Project Site.
November 8, 2010	Perform baseline, pre-construction groundwater quality monitoring.
November 30, 2010	Submit a Pre-Construction Groundwater Monitoring Report (to the CPM) per the requirements of COC S&W-20, and as described in more detail in **Section 4.0**.

2.3 Activities to be Performed during Construction

Groundwater quality monitoring will occur on a semi-annual basis at three existing on-site wells (TW-1, TW-2, and OBS-1) and at three existing and functional off-site wells (Wells 23a [Cal Trans], 24 [So. Cal Gas] and 36 [DOC] located within the GMA throughout the construction period and at the end of the construction period. The planned Project production wells and monitoring wells required for

compliance with WDRs will be added to the monitoring program as they become available. Methods to be used for groundwater quality field measurements and laboratory analysis are described in **Section 3.0**. The data will be evaluated and submitted to the CPM in Semi-annual Construction Groundwater Quality Monitoring Reports per the requirements of COC S&W-20 and as described in more detail in **Section 4.0**.

It is anticipated that semi-annual groundwater quality monitoring will occur during the months of April and October, and that groundwater monitoring reports will be issued within 30 days following the end of the calendar quarter during which sampling is conducted.

2.4 Activities to be Performed During Facility Operation

Groundwater quality monitoring will occur semi-annually for the first five years of facility operation. Groundwater samples will be collected from three existing on-site wells (TW-1, TW-2, and OBS-1), from three existing and functional off-site wells (Wells 23a [Cal Trans], 24 [So. Cal Gas] and 36 [DOC] located within the GMA, from the production wells that are being actively pumped (to be installed) and the monitoring wells to be installed to comply with WDRs for the evaporation ponds and land treatment unit. Methods to be used for groundwater sampling are described in **Section 3.0**. The data will be evaluated and submitted to the CPM in Semi-Annual Groundwater Quality Monitoring Reports, per the requirements of COC S&W-20, and as described in more detail in **Section 4.0**. After the first five years of project operations, the frequency of the groundwater quality monitoring events will be reassessed by the CPM.

It is anticipated that semi-annual groundwater quality monitoring will occur during the months of April and October, and that groundwater monitoring reports will be issued by July 31 and January 31. The reports will include the data analysis and reporting requirements under COC S&W-20, as described in more detail in **Section 4.0**.

3.0 FIELD METHODS

3.1 Field Activity Documentation

Field activities will be documented through the use of field notes, electronic records and/or photographic records. Field personnel will be responsible for maintaining general daily field logs as well as specific records for individual tasks being performed. Information recorded in the daily field log will include, but may not be limited to, the following:

- Description of field activities;
- Personnel and companies represented on site;
- Field and weather conditions;
- Equipment calibration records;
- Well purging and sampling data;
- Deviations from the Groundwater Quality Monitoring and Reporting Plan, accompanied by a justification for the deviation; and,
- Description of equipment problems, if any.

Entries to daily field logs and task-specific data forms will be made in indelible ink and signed and dated by the person making the entry. If changes to entries are necessary, the person making the change will cross out the item to be changed with a single line and initial and date the change. An explanation of the change will be recorded, if necessary.

Field data collected electronically by computerized or automated measurement devices will be archived to a long-term storage medium. Photographs of field activities, events or conditions will be supplemented with written records of the subject and date and time of the photographs. Documentation will be kept on file at the WorleyParsons office located in Folsom, California. Copies of well sampling and field water quality measurement record sheets will be included with the groundwater monitoring reports.

3.2 Pre-Construction Reconnaissance

Wells included in the Groundwater Level Monitoring Program were accessed during field reconnaissance performed during the week of October 4, 2010. Future reconnaissance, if needed, will be performed using similar procedures. Wells were inspected by opening their protective steel covers and removing internal well caps so that measurements can be taken through the open casing. To measure the well depth, a weighted nylon rope was lowered into the well until it was noted that the line became slack, or until a decrease in weight was noted, which indicated that the line was touching the bottom of the well. The line was then be slowly raised until it became taut. With the line in this fixed position, a surveyors' wheel was placed at the position on the line that coincided with the top of well casing and the length of the line (from the bottom of the well to the top of the well casing) was measured and recorded in the field notebook.

The potential need for any well modifications in order to safely water level measurements and samples without the instruments becoming snagged was assessed during the initial reconnaissance. It was noted that groundwater wells at the Department of Correction Facility are equipped with pumps and are intermittently pumped to provide a water source for the facility. In addition, Well 37 was equipped with a non-functional pump assembly.

3.3 Water Level Measurements

The depth to groundwater in each well will be measured using a decontaminated electric well sounder in general accordance with ASTM's Test Method for Determining Subsurface Liquid levels in a Borehole or Monitoring Well (Observation Well) (ASTM, 1993). The following methodology describes the procedures to be followed during water level and well depth measurements.

Water level measurements will be taken at each well in the program as quickly as practical, to best represent the potentiometric surface across the Groundwater Monitoring Area at a single time. When groundwater level measurement is being taken in conjunction with groundwater sampling under COC S&W-20, the measurement will be taken prior to purging of the well. If pressure is suspected or has developed inside the well casing, the well will be allowed to stand without a cap for a few minutes or until the water level stabilizes before taking the water level measurement. Water level measurements will be recorded to the nearest hundredth (0.01) foot using an electronic well sounder. Equipment placed in the wells for water level measurements will be cleaned prior to reuse, using the procedures outlined in **Section 3.5**. Care will be taken not to drop foreign objects into the wells.

Water levels will be recorded on a water level monitoring form. Following review by the Project Manager, the original records will be kept in the project files and included as an attachment to groundwater level monitoring reports.

The procedure for measuring water levels with an electric sounder is as follows:

1) Turn sounder on, and check that it is working;
2) Lower the electric sounder cable into the well until the ammeter or buzzer indicates a closed circuit. Raise and lower the electric cable slightly until the shortest length of cable that gives the maximum response on the indicator is found;
3) With the cable in this fixed position, note the length of cable at the measuring point (generally a marked, surveyed point at the top of the north side of the well casing); and
4) If the electric cable is not graduated between foot markings, use a pocket steel tape measure or folding ruler (graduated in hundredths of a foot) to interpolate between consecutive marks.

If applicable, care must be taken to ensure that the tape measurements are subtracted from the graduated mark footage value when the water level hold point (determined in Step 3) is below the graduated mark and added when it is above the mark. Record the resulting value as water level below the measuring point (MP) on the water level monitoring record. The measuring point is a fixed location at the top of the well casing which has been surveyed for elevation relative to the National Geodetic Vertical Datum of 1929 (NGVD). The surveyed MP will be permanently marked on the casing by a colored mark or a small notch. Potentiometric surface elevations will be derived by subtracting the depth to water below the MP from the surveyed MP elevation. The MP will be indicated on the water level monitoring form.

3.4 Groundwater Well Purging

Prior to sampling, wells will be purged using either conventional or low-flow purging methods.

Low Flow Purge Technique

The following methodology should be employed for low-flow purging (Puls & Barcelona, 1996):

- The pump must be lowered very carefully into the well so as to minimize the generation of turbulence in the water column inside the well casing. The pump intake should be set slightly above the middle of the saturated screened interval; however, because some wells in the area have relatively long screened intervals, we recommend that the pump be placed not deeper than 15 feet below the top of the saturated screened interval.

- Purging should be undertaken at a low flow rate of between 100 and 500 milliliters per minute (mL/min). A bladder pump or gas actuated piston pump is preferable, but an electric submersible pump is acceptable.

- The drawdown in the well should be monitored during purging, and ideally should not exceed 0.3 foot (0.1 meter), but should never exceed 10% of the wetted screened interval length.

- Water quality parameters (potential hydrogen units [pH], temperature, specific electrical conductance (EC), dissolved oxygen (DO) and oxidation-reduction potential (ORP)) should be monitored continuously via a flow-through cell and recorded every 3 to 5 minutes as described in **Section 3.5**.

- Purging should continue until water quality parameters have stabilized over three successive readings (+/- 0.1 for pH, +/- 1 °C for temperature, +/- 10% for turbidity, EC, DO and ORP).

Conventional Purge Technique

The conventional purging method consists of purging groundwater from the well using an electric submersible pump until field water quality parameters are stabilized as indicated above, and at least three well casing volumes of groundwater have been removed. Because many of the wells included in the sampling program are deep, large diameter production wells, the volume of water in the well casing and upper 100 feet of screen interval shall be utilized to calculate an effective casing volume. This is appropriate because a typical submersible sampling pump will have a flow rate of approximately 5 to 10 gpm. At this relatively low flow rate, a well will typically only produce water from the upper 100 feet of its screened interval. Purging should continue until water quality parameters have stabilized over three successive readings (+/- 0.1 for pH, +/- 1 °C for temperature, +/- 10% for EC and turbidity) and at least three well volumes have been purged. Wells should be allowed to recharge to at least 80 percent of their pre-purging water level prior to sampling. Wells that are purged dry may be sampled after sufficient water has recharged the well.

If the well is fitted with a production pump, it will be used to purge and sample the well. If the well is not fitted with a production pump and a portable electric submersible pump is used, the purge intake will be located near the top of the water column for removal of at least one casing volume to remove stagnant water above the screened interval in the well casing. The pump may then be moved to the midscreen interval to finish the purging progress. In the event the screen interval is too deep to lower the pump into the screen interval, the pump shall be lowered to the lowest point possible.

Purge Water Disposal

Groundwater purged from the wells will be pumped into the project water supply system (when supply wells are sampled), utilized for dust control purposes, for irrigation at the Wiley's Well Rest Stop, or discharged to a permitted spray field. Purge water from shallow monitoring wells installed near the evaporation ponds may be discharged to the ponds, once they are constructed.

3.5 Groundwater Parameter Field Measurements

During groundwater purging and sampling, groundwater field parameters including temperature, pH, EC and turbidity will be measured. When utilizing the low flow purging method with a flow-through measurement cell, ORP and DO shall also be measured. Measurements shall be taken at the beginning of purging, approximately every three to five minutes during low-flow purging or every ½ to 1 casing volume during conventional purging, and at the time of sampling. The volume of water purged, pumping rate, periodic field parameter measurements, and observations of water turbidity and odor, will be recorded in the field sampling record.

Field water quality measurements will be recorded on the well sampling forms.

3.6 Field Equipment Calibration

To ensure that data are representative of the actual field conditions and consistent between wells, field equipment will be calibrated daily and a calibration check will be performed at least once during the day. Calibration will be conducted following the manufacturers recommendations. For each calibration, the time and date of the procedure, equipment identification number, and the calibration procedure and type of standards used will be recorded on field forms and/or notebooks accompanying the equipment.

3.7 Collection of Groundwater Samples

The methodology described within this section is in general accordance with the procedures described in ASTM's Guide for Sampling Groundwater Monitoring Wells (ASTM, 1992).

The sampler will wear clean, chemically resistant gloves while collecting groundwater samples. Samples will be collected directly from the pump discharge tube or sampling port into laboratory-prepared bottles. The sampling flow rate will be adjusted as low as feasible. Prior to sampling, flow will be maintained for a short period of time until the discharge line or port has been purged.

The groundwater samples collected during pre-construction, construction and facility operation from all wells in the monitoring network will be placed into appropriate laboratory-provided bottles for analysis of total dissolved solids (TDS), chloride, nitrates, major cations and anions, oxygen-18, and deuterium isotopes. **Table 2** summarizes the laboratory methods, bottle types, preservatives and holding times for the required analyses.

3.8 Equipment Cleaning

Reusable/non-dedicated equipment that enters the wells (e.g., pumps, water level probes, reusable bailers) will be cleaned prior to use in each well. The purpose of equipment cleaning is to minimize the potential for affecting the quality of water in wells that are included in the Groundwater Quality Monitoring Program under COC S&W-20. Factory new and sealed disposable bailers may be used for sampling without cleaning, and will not be reused. Cleaning of reusable equipment will consist of washing with a laboratory-grade detergent and potable water solution followed by a double rinse with distilled or deionized (DI) water, or by steam-cleaning.

3.9 Sample Handling

Sample containers will be labeled before or immediately after sampling with self-adhesive tags having the following information written in waterproof ink:

- Project Name;
- Project Number;
- Sample Identification Number;
- Date and time sample was collected;
- Initials of sample collector; and,
- Preservatives used (if any).

The samples will be immediately placed into a water-ice cooled chest. Bottles will be placed into closable plastic bags and inserted into foam inserts or wrapped with bubble wrap to protect them during shipping. All efforts will be made to handle, store, and transport supplies and samples safely. Exposure to dust, direct sunlight, high temperature, adverse weather conditions and possible contamination will be avoided.

Chain of custody (COC) protocols will be followed for the groundwater samples as described below. The methodology described is in general accordance with the procedures described in ASTM's Practice for Sampling Chain-of-Custody Procedures (ASTM, 1993).

COC procedures document the transfer of custody of samples from the field to the laboratory. Each sample sent to the laboratory for analysis will be recorded on a COC, which will include instructions to the laboratory specific to sample handling and requested analyses.

Information contained on the triplicate COC will include:

- Project number;
- Signature of sampler(s);
- Date and time sampled;

- Sample identification;
- Number of sample containers;
- Sample matrix;
- Analyses required;
- Remarks, including preservatives, special conditions, or specific quality control measures;
- Turnaround time and person to receive laboratory report;
- Method of shipment to the laboratory;
- Waybill number if samples are shipped via a common carrier;
- Release signature of sampler(s), and signatures of all people assuming custody; and
- Condition of samples when received by laboratory.

The procedure for preparing the COC will include the following:

- Blank spaces on the COC will be crossed out between the last sample listed and the signatures at the bottom of the sheet;
- The field sampler will sign the COC and will record the time and date at the time of transfer to the laboratory or to an intermediate person. A set of signatures is required for each relinquished/reserved transfer, including transfer within WorleyParsons;
- The original imprint of the COC will accompany the sample containers; and,
- A duplicate copy of the COC will be placed in the project file.

If the samples are to be shipped to the laboratory, the original COC will be sealed inside a plastic bag within the ice chest, and the chest will be sealed. U.S. Department of Transportation shipping requirements will be followed and the sample shipping receipt will be retained in the project files as part of the permanent COC documentation. It is required that the shipping company not sign the chain-of-custody forms as a receiver; instead the laboratory will sign as a receiver when the samples are delivered at the laboratory, and the waybill will become a separate part of the COC record.

The samples will be shipped or delivered to an analytical laboratory approved by the California Department of Health Services (CDHS) for the required analyses, and certified by the National Environmental Laboratory Accreditation Program (NELAP). Note however that these certifications may not apply to laboratories that specialize in the analysis of stable isotopes such as oxygen-18 and deuterium.

3.10 Quality Assurance/Quality Control

Duplicate groundwater samples will be collected at a frequency of 10 percent, at a minimum of one duplicate per semi-annual groundwater monitoring event. These samples will be submitted to the laboratory as blind samples with no indication of which primary sample was duplicated. In addition, the laboratory will conduct standard Level 3 Quality Assurance/Quality Control to assure analytical accuracy and precision. This will include preparation and analysis of method blanks, matrix spike/matrix spike duplicate (MS/MSD) pairs and Laboratory Control Samples as required with each analytical batch.

4.0 DATA ANALYSIS AND REPORTING

4.1 Pre-Construction Groundwater Quality Monitoring Report

Following the pre-construction groundwater quality monitoring event, groundwater chemistry data will be tabulated and summarized for all wells in the monitoring network. An assessment of pre-project groundwater quality will be performed with groundwater samples analyzed for TDS, chloride, nitrates, major cations and anions, oxygen-18, and deuterium isotopes.

At least 30 days prior to initiation of project construction, a report including a summary of all calculations and assumptions made in the development of the report data and interpretations will be submitted to BLM and the CEC's CPM. The report will include the following:

- A summary of available climatic information (monthly average temperature and rainfall records from the nearest weather station) and pre-project groundwater level data within 10 miles of the site;
- A description of field methods and findings;
- Tabulated groundwater chemistry data (TDS, chloride, nitrates, major cations and anions, oxygen-18, and deuterium isotope levels) for all wells in the monitoring network;
- Tabulated groundwater quality data for wells within 10 miles of the site for which data are publically available (e.g., from the National Water Information System (NWIS); and
- An assessment of pre-project groundwater quality, including statistical trend analysis (Mann-Kendall trend analysis) for wells for which a sufficient number of data points are available, preparation of Piper and Stiff Diagrams, and an evaluation of stable isotope data relative to potential water sources.

4.2 Construction Groundwater and Operation Water Quality Monitoring Reports

During construction, groundwater quality monitoring will be conducted on a semi-annual basis and reports will be submitted semi-annually to the CEC's CPM and the BLM. Reports will include all field measurements, data, calculations and assumptions made in development of the report data and interpretations. The semi-annual reports will present the results of the monitoring events and including the following information.

- A summary of available climatic information (monthly average temperature and rainfall records from the nearest weather station);
- Current and historical groundwater level data within 10 miles of the site, assessment of trends, and comparison to predicted drawdown;
- A description of field methods and findings;
- Tabulated groundwater chemistry data (TDS, chloride, nitrates, major cations and anions, oxygen-18, and deuterium isotope levels) for all wells in the monitoring network;
- Evaluation of water quality through intra-well trend analysis (e.g., Mann-Kendall test at 90 percent confidence once sufficient sample points are available); chemical characteristics and spatial distribution using Piper and Stiff Diagrams and for trends using the Mann-Kendall test for trend at 90 percent confidence; and comparison to pre-project and mean or median concentrations using an Analysis of Variance (ANOVA) or other appropriate statistical method approved by the Regional Water Quality Control Board (RWQCB) for evaluation of water quality impacts;
- Evaluation of stable isotope data relative to water sources;
- A summary of the monthly groundwater use of the project and known or estimated groundwater pumping data for nearby groundwater users; and
- A comparison of water quality data to applicable Water Quality Objectives.
- After five years, the scope and frequency of groundwater quality monitoring will be re-assessed and changes implemented subject to the approval of the BLM and the CPM.

5.0 REFERENCES

ASTM, 1992, Guide for Sampling Groundwater Monitoring Wells. ASTM D4448-85a.

ASTM, 1993a, Test Method for Determining Subsurface Liquid levels in a Borehole or Monitoring Well (Observation Well). ASTM D4750-87.

ASTM, 1993b, Practice for Sampling Chain-of-Custody Procedures. ASTM D4840-88.

California Department of Water Resources (DWR), 2004, Chuckwalla Valley Groundwater Basin Description. California's Groundwater Bulletin 118 – Supplemental Information.

California Energy Commission (CEC), 2010, Genesis Solar Energy Project Commission Decision. October 12.

Genesis Solar, LLC, 2009, Application for Certification, Genesis Solar Energy Project, Riverside County, California. August 31.

Genesis Solar, LLC, 2010, Plan of Development CA48880, Genesis Solar Energy Project, Riverside County, California. October.

Puls, Robert W. and Michael J. Barcelona, 1996. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures. Ground Water Issue, EPA Superfund Technology Support Center for Ground Water. EPA/540/S-95/504. April.

Steinemann, A.C., 1989, Evaluation of Non-Potable Ground Water in the Desert Area of Southeastern California for Powerplant Cooling. U.S. Geological Survey Water Supply Paper 2343. 44 pages.

TABLES

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Table 1

INVENTORY OF WELLS IN THE GROUNDWATER MONITORING AREA

Genesis Solar Energy Project
Riverside County, California

Well ID	State Well Number	Other Name	Owner	Installation Date	Use/Status	Well Casing Diameter (inches)	Approximate Ground Surface Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Geologic Unit
WELLS PROPOSED FOR USE IN THE GROUNDWATER MONITORING PROGRAM										
OBS-1	- -	Shallow Observation Well 1	Genesis Solar, LLC	09-May-09	Monitoring/Active	5	883	160	100 to 150	Alluvium
OBS-2-270 [5]	- -	Nested Observation Well 2	Genesis Solar, LLC	02-Jul-09	Buried Transducer/Active	- -	883	270	265 to 275	Bouse Formation
OBS-2-315 [5]	- -	Nested Observation Well 2	Genesis Solar, LLC	02-Jul-09	Buried Transducer/Active	- -	883	315	304 to 327	Bouse Formation
OBS-2-370 [5]	- -	Nested Observation Well 2	Genesis Solar, LLC	02-Jul-09	Buried Transducer/Active	- -	883	370	359 to 374	Bouse Formation
OBS-2-400 [5]	- -	Nested Observation Well 2	Genesis Solar, LLC	02-Jul-09	Buried Transducer/Active	- -	883	400	387 to 418	Bouse Formation
TW-1	- -	Test Well 1	Genesis Solar, LLC	22-May-09	Monitoring/Active	5	883	560	350 to 550	Bouse Formation
TW-2	- -	Test Well 2	Genesis Solar, LLC	09-Dec-09	Monitoring and Dust Control/Active	5	390	1,841	793-873, 1042-1123, 1439-1601, 1739-1820	Bouse Formation/ Fanglomerate
23a [6]	- -	Cal Trans Well @ WWRS	Cal Trans	Unknown	Water Supply/Unused for 16 years	8	385.58	Measured 1800	Unknown	Unknown
24	6S/20E-33	SCG Anode Well	Sol Cal Gas	29-Apr-89	Anode/Currently unused	1	374.66	435 (measured 373)	235 to 435	Alluvium/Bouse Formation
36	7S/20E-17G1	DOC Water Supply Well 1	CA D.O.C.	30-Dec-87	Water Supply/Active	16-10	424.3	1,040	690 to 1190	Bouse Formation/ Fanglomerate
37	7S/20E-17C1	DOC North Well	CA D.O.C.	1981	Agricultural/Abandoned	Unknown	423.9	1,050	750 to 1,050	Bouse Formation/ Fanglomerate
OTHER WELLS IN THE GROUNDWATER MONITORING AREA										
5	6S/19E-25P1	- -	- -	- -	Unknown/Destroyed	10	360	85.7	- -	Alluvium
6	6S/19E-25R1	- -	- -	- -	Unknown/Destroyed	10	360	61.9	- -	Alluvium
7	6S/19E-25	Boreholes 1A, 1B and 1C	USGS	1978	Exploratory boreholes/ Abandoned	- -	358	- -	- -	- -
8	6S/19E-26Z1	- -	- -	- -	Unknown/Destroyed	- -	- -	- -	- -	- -
21	6S/20E-30Z1	Ford Well	- -	- -	Stock/Destroyed	10	- -	- -	- -	- -
22	6S/20E-L1	- -	- -	- -	Unknown/Presumed destroyed	- -	- -	- -	- -	- -

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Table 1

INVENTORY OF WELLS IN THE GROUNDWATER MONITORING AREA

Genesis Solar Energy Project
Riverside County, California

Well ID	State Well Number	Other Name	Owner	Installation Date	Use/Status	Well Casing Diameter (inches)	Approximate Ground Surface Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Geologic Unit
23	6S/20E-33C1	- -	- -	- -	Unknown/Presumed destroyed	10	392	400	- -	- -
25	6S/20E-33	- -	So. Cal. Gas	20-Jul-81	Anode/Collapsed	1	397	278	0 to 278	Alluvium/Bouse Formation
38	7S/20E-17C2	Observation Well 1	CA D.O.C.	20-Jun-86	Monitoring/Presumed destroyed	1 ¼	433	1,040	795-815, 995-1015	Bouse Formation/ Fanglomerate

Notes:
1. -- = information not available or unknown
2. amsl = above mean sea level
3. bgs = below ground surface
4. USGS-NWIS = United States Geological Survey - National Water Information System (USGS-NWIS) website at http://nwis.waterdata.usgs.gov/ca/nwis/gwlevels
5. Nested pressure transducer buried in place.
6. Completion information and lithologic logs for this well are pending from CalTrans. If not available, well completion will be investigated by video survey.

TABLE 2

WATER QUALITY SAMPLING AND ANALYSIS REQUIREMENTS

General Minerals (Cations and Anions)		Addition Analyses - Isotopes
Ca	Alkalinity	Oxygen 18
K	Chloride	Deuterium
Mg	Flouride	
Na	Nitrates	
Cu	Sulfates	
Fe	Hardness	
Zn		
Specific Conductivity (EC)		
Total Dissolved Solids		
pH		

Bottle Requirements - Per sampling Point

General Minerals

(2) 1 Liter Polys Unpreserved - TDS & General Minerals (48hr Hold Time)

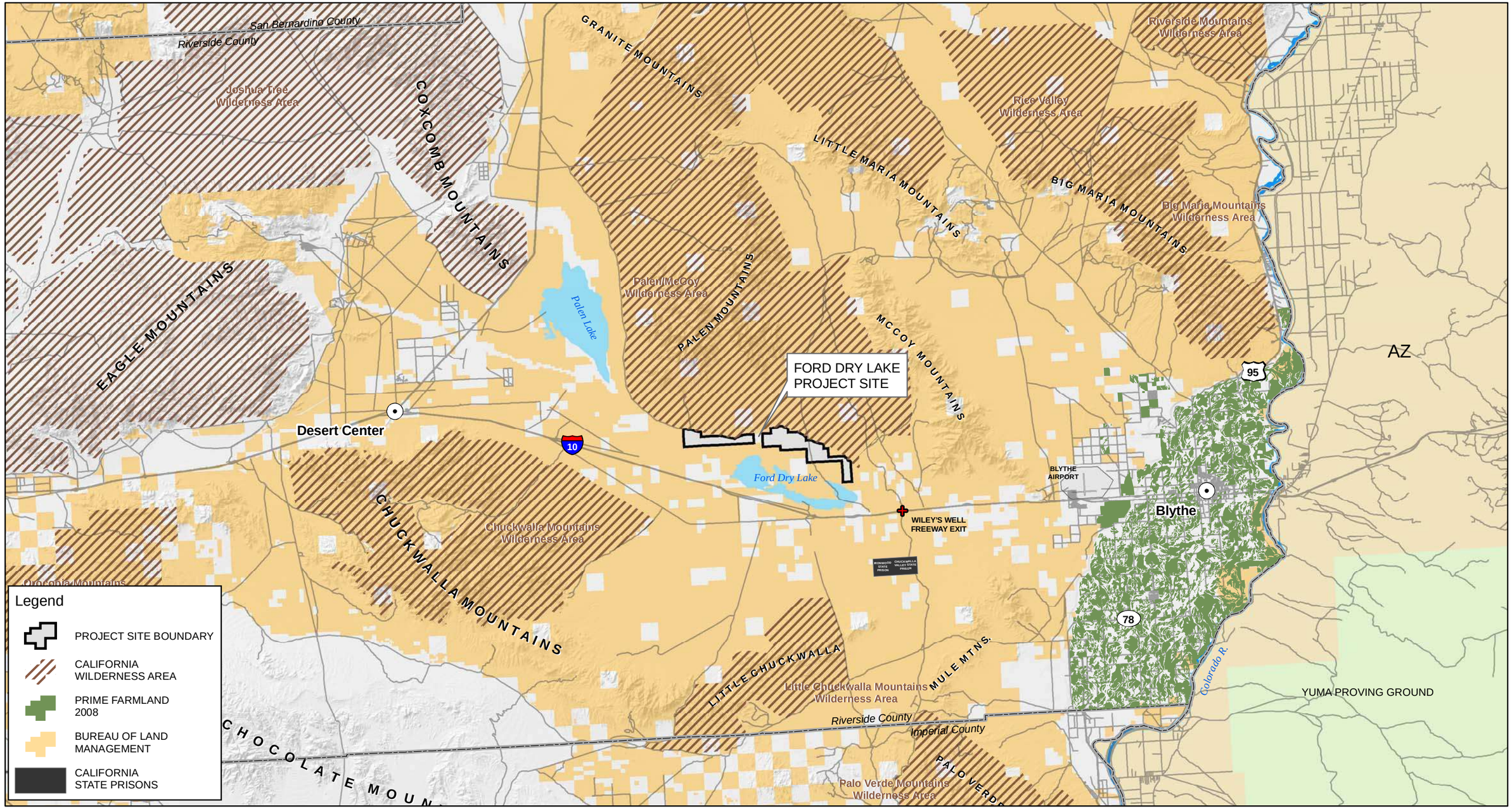
Anions:

(1) 500mL Unpreserved (48hr Hold Time)

Additional Analysis:

(1) 50 ml double capped glass or polyethylene bottle – Oxygen 18 and Deuterium – No sample filtration or preservation is required

FIGURES



SOURCE:
USGS, BLM, ESRI, CASIL
California Dept. Conservation
County of Riverside, CA
All locations approximate

N W E S

0 10
Miles

813

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PROJECT LOCATION

SWL	NB	9/2010
52004617		1

R 11 12 13 14 15 16 17 18 19 20 21 22 23 24

T 1 2 3 4 5 6 7 8 9

DALE VALLEY 7-9
CADIZ VALLEY 7-7
STATE HWY 62
WARD VALLEY 7-3
RICE VALLEY 7-4
GRANITE MOUNTAINS
COXCOMB MOUNTAINS
STATE HWY 177
LITTLE MARIA MOUNTAINS
BIG MARIA MOUNTAINS
LCRP 27
STATE HWY 95
PINTO VALLEY 7-6
EAGLE MOUNTAINS
49
Palen Lake
PALEN MOUNTAINS
McCOY MOUNTAINS
48
52
53
51
Desert Center
50
OBS-1
OBS-2
TW-1
CHUCKWALLA VALLEY 7-5
Ford Dry Lake
PALO VERDE MESA 7-39
56
21
4
11 10 9 8 5 6 TW-2 23
3
2 12 13 14 17 20
15 16 19 18
22 24, 25
57
55 59 58
63 60
61
62
64
Blythe
STATE HWY 78
PALO VERDE VALLEY 7-38
US HWY 95
OROCOPIA VALLEY 7-31
CHUCKWALLA MOUNTAINS
CHOCOLATE VALLEY 7-32
31
39
37
38 36
32
27 28
29
26 30
40 54
41 33 35
34 44
42 43 45
LITTLE CHUCKWALLA MOUNTAINS
47
MULE MTNS
54
ARROYO SECO VALLEY 7-37
PALO VERDE MOUNTAINS

Legend

- WELLS
- BOREHOLE
- GROUNDWATER FLOW DIRECTION (STEINEMANN, 1989)
- POD AREA
- STUDY AREA/ MODEL BOUNDARY

10 11 12 13 14 15 16 17 18

N W E S

0 10
Miles

SOURCE:
SDC Major Roads
USGS 30 Meter NED (Hillshade)
CASIL Groundwater Basins
All locations approximate

814

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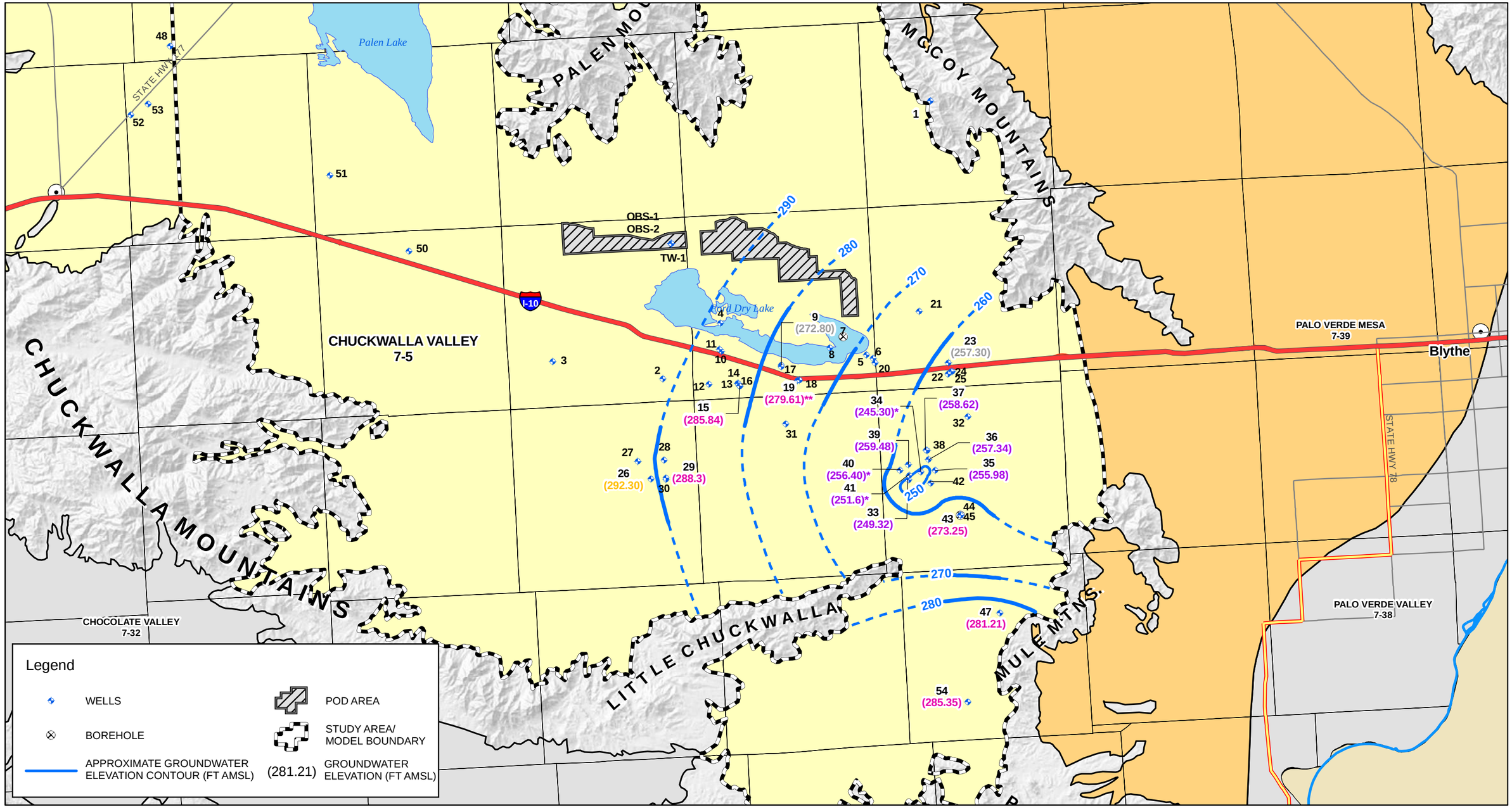
HYDROGEOLOGIC SETTING

SWL	NB	4/2010
52004617		2

R 15 16 17 18 19 20 21 22 23

T 4 5 6 7 8



Legend

- WELLS
- BOREHOLE
- APPROXIMATE GROUNDWATER ELEVATION CONTOUR (FT AMSL)
- POD AREA
- STUDY AREA/ MODEL BOUNDARY
- (281.21) GROUNDWATER ELEVATION (FT AMSL)

SOURCE:
SDC Major Roads
USGS 30 Meter NED (Hillshade)
CASIL Groundwater Basins
All locations approximate

N W E S

0 5
Miles

815

GEOLOGIC UNIT PENETRATED BY THE WELL SCREEN

ALLUVIUM/BOUSE FORMATION
BOUSE FORMATION
FANGLOMERATE
BOUSE/FANGLOMERATE
UNKNOWN

NOTES:
1. Water level data is from February, 1992
2. * = Water level data is from October, 1992
3. ** = Anomolous data not used in contouring
4. FT AMSL - Feet Above Mean Sea Level
5. Contours dashed where inferred

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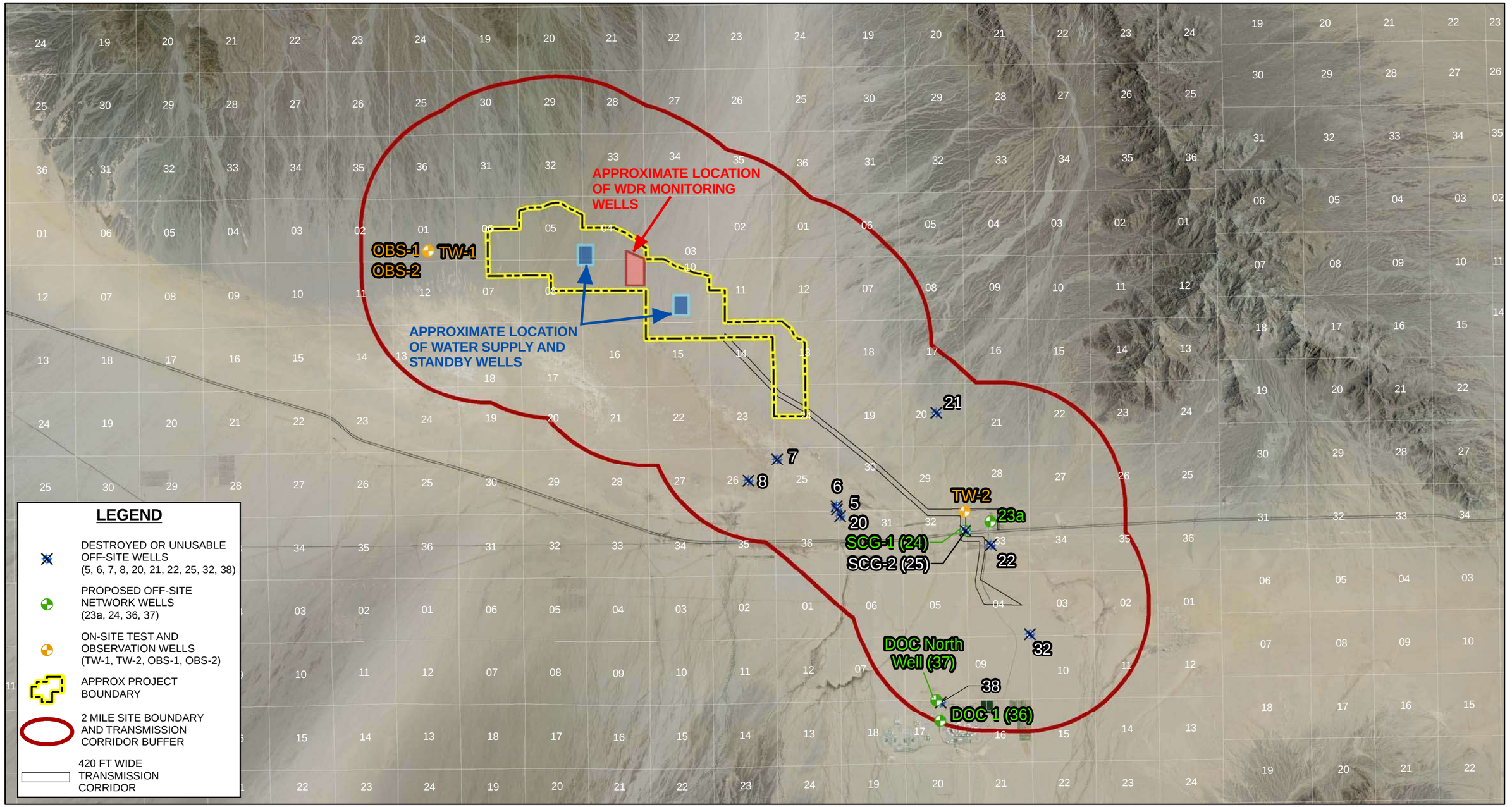
GROUNDWATER LEVEL CONTOUR MAP (1992)

SWL	NB	1/2010
52004617		3



SOURCE:
USDA NAIP, 2009, USGS-NWIS
DWR, 1963 Bulletin 91-7
All locations approximate

N W E S

0 3
Miles

816

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GROUNDWATER MONITORING AREA AND WELL LOCATIONS

SWL	EB	10/2010
108010-00045		4

APPENDIX A

following cessation of pumping. The latency period will extend until underflow achieves pre-project conditions.

C. An assessment report shall be prepared summarizing the methods and results of this supplemental analysis, presenting any supporting data, assumptions made, and an estimate of the uncertainty of PVMGB underflow depletion.

D. The Project owner shall present the results of the conceptual model, numerical model, transient runs and sensitivity analysis in a report for review and approval by the CPM. The report shall include all pertinent information regarding the development of the numerical models. The report shall include:

1. Introduction
2. Previous Investigations
3. Conceptual Model
4. Numerical Model and Input Parameters
5. Sensitivity Analysis
6. Transient Modeling Runs
7. Conclusions

Verification: Within thirty (30) days prior to mobilization of the proposed Project, the Project owner will submit to the CPM for their approval a report detailing the results of the modeling effort. The report will include the estimated amount of PVMGB underflow depletion due to project pumping. This estimate shall be used for determining the appropriate volume of water for mitigation in accordance with **SOIL&WATER-15**.

GROUNDWATER QUALITY MONITORING AND REPORTING PLAN

SOIL&WATER-20 The Project owner shall submit a Groundwater Quality Monitoring and Reporting Plan to the CPM for review and approval. The Groundwater Quality Monitoring and Reporting Plan shall provide a description of the methodology for monitoring background and site groundwater levels and quality. The sampling required for the water quality monitoring program shall be implemented during groundwater level monitoring events using the well identified to comply with **SOIL&WATER-2**. Prior to project construction, monitoring shall commence to establish pre-construction groundwater quality conditions in the well proposed for the program. Monitoring shall continue during construction and project operation. The primary objectives for the water quality monitoring program are to identify potential changes in

the existing water quality of the proposed water supply resulting from Project pumping, if any, in concert with Condition of Certification **SOIL&WATER–2,** establish pre-construction and project related groundwater quality data and to avoid, minimize, or mitigate significant impacts to sensitive receptors (springs and groundwater-dependent vegetation, and groundwater supply users).

A. The Plan shall include a scaled map showing the site and vicinity, existing well locations, and proposed monitoring locations (both existing wells and new monitoring wells proposed for construction). Additional monitoring wells to be installed include wells required under Waste Discharge Requirements issued by the CRBRWQCB for the evaporation ponds and land treatment unit proposed for the project. The map shall also include relevant natural and man-made features (existing and proposed as part of this project). The plan also shall provide: (1) well construction information and borehole lithology for each existing well proposed for use as a monitoring well; (2) description of proposed drilling and well installation methods; (3) proposed monitoring well design; and, (4) schedule for completion of the work.

B. At least four (4) weeks prior to construction, a Well Monitoring Installation and Groundwater Quality Network Report shall be submitted to the CPM for review and approval in conjunction with Condition of Certification **SOIL&WATER-2**. The report shall include a scaled map showing the final monitoring well network. It shall document the drilling methods employed, provide individual well construction as-builds, borehole lithology recorded from the drill cuttings, well development, and well survey results. The well survey shall measure the location and elevation of the top of the well casing and reference point for all water level measurements, and shall include the coordinate system and datum for the survey measurements.

C. As part of the monitoring well network development, all newly constructed monitoring wells shall be constructed consistent with State and Riverside County specifications.

D. At least four (4) weeks prior to use of any groundwater for construction, all groundwater quality and groundwater level monitoring data shall be reported to the CPM. The report shall include the following:

1. An assessment of pre-project groundwater levels, a summary of available climatic information (monthly average temperature and rainfall records from the nearest weather station).
2. As assessment of pre-project groundwater quality with groundwater samples analyzed for TDS, chloride, nitrates, major cations and anions, oxygen-18 and deuterium isotopes, and any other

constituents the CPM deem critical in protecting existing water supply quality.

3. The data shall be tabulated, summarized, and submitted to the CPM. The data summary shall include the estimated range (minimum and maximum values), average, and median for each constituent analyzed. If a sufficient number of data points are available, the data shall also be analyzed using the Mann-Kendall test for trend at 90 percent confidence to assess whether pre-project water quality trends, if any, are statistically significant.

E. During project construction and during the first five years of project operations, the Project owner shall semi-annually monitor the quality of groundwater and changes in groundwater elevation and submit data semi-annually to the CPM. After five years of project operations, the frequency and scope of the monitoring program shall be reassessed by the CPM. The summary report shall document water level and quality monitoring methods, the water level and quality data, water level and quality plots and trend evaluation, and a comparison between pre- and post-project start-up water level trends as itemized below. The report shall also include a summary of actual water use conditions, monthly climatic information (temperature and rainfall) from the nearest meteorological monitoring station, and a comparison and assessment of water level data relative to the assumptions and simulated spatial trends predicted by the applicant's groundwater model.

1. Groundwater samples from all wells in the monitoring well network shall be analyzed and reported semi-annually for TDS, chloride, nitrates, cations and anions, oxygen-18 and deuterium isotopes. These analyses, and particularly the stable isotope data, can be useful for identifying water sources and assessing their contributions to the quality of water produced by wells.

2. For analysis purposes, pre-project water quality shall be defined by samples collected prior to project construction as specified above, and compliance data shall be defined by samples collected after the construction start date. The compliance data shall be analyzed for both trends and for contrast with the pre-project data.

3. Trends shall be analyzed using the Mann-Kendall test for trend at the 90 percent confidence, once a statistically significant number of sample data are available. Trends in the compliance data shall be compared and contrasted to pre-project trends, if any.

4. The contrast between pre-project and compliance mean or median concentrations shall be compared using an Analysis of Variance (ANOVA) or other appropriate statistical method approved by the

RWQCB for evaluation of water quality impacts. A parametric ANOVA (for example, an F-test) can be conducted on the two data sets if the residuals between observed and expected values are normally distributed and have equal variance, or the data can be transformed to an approximately normal distribution. If the data cannot be represented by a normal distribution, then a nonparametric ANOVA shall be conducted (for example, the Kruskal-Wallis test). If a statistically significant difference is identified at 90 percent confidence between the two data sets, the monitoring data are inconsistent with random differences between the pre-project and baseline data indicating a water quality impact from project pumping may be occurring.

5. If compliance data indicate that the water supply quality has deteriorated (exceeds pre-project constituent concentrations in TDS, sodium, chloride, or other constituents identified as part of the monitoring plan and applicable Water Quality Objectives are exceeded for the applicable beneficial uses of the water supply) for three consecutive years, the Project owner shall provide treatment or a new water supply to either meet or exceed pre-project water quality conditions to any impacted water supply wells.

Verification: The Project owner shall complete the following:

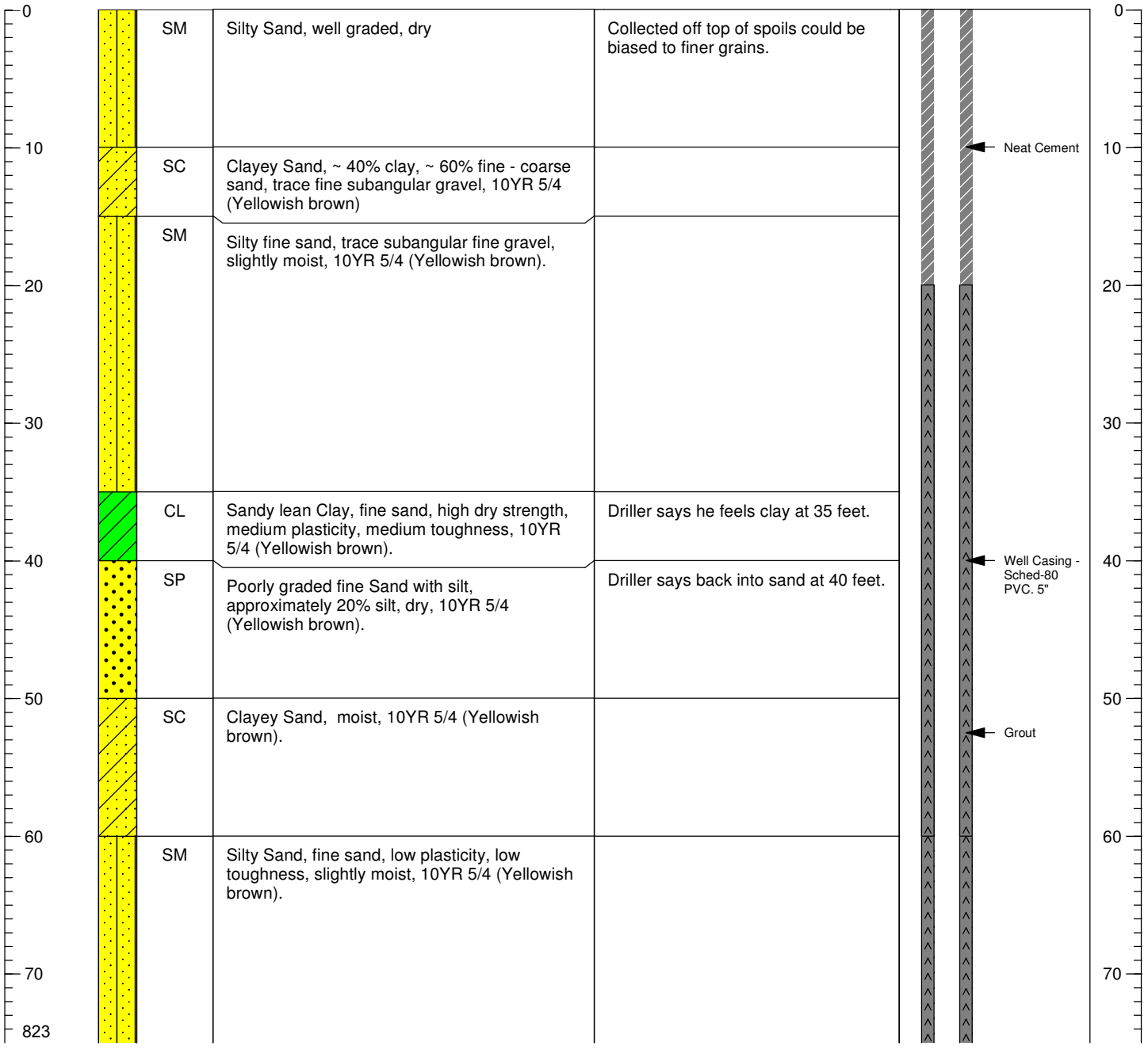
At least six (6) weeks prior to the start of construction activities, a Groundwater Level and Quality Monitoring and Reporting Plan shall be submitted to the CPM for review and approval.

APPENDIX B

Lithologic Log of OBS-01

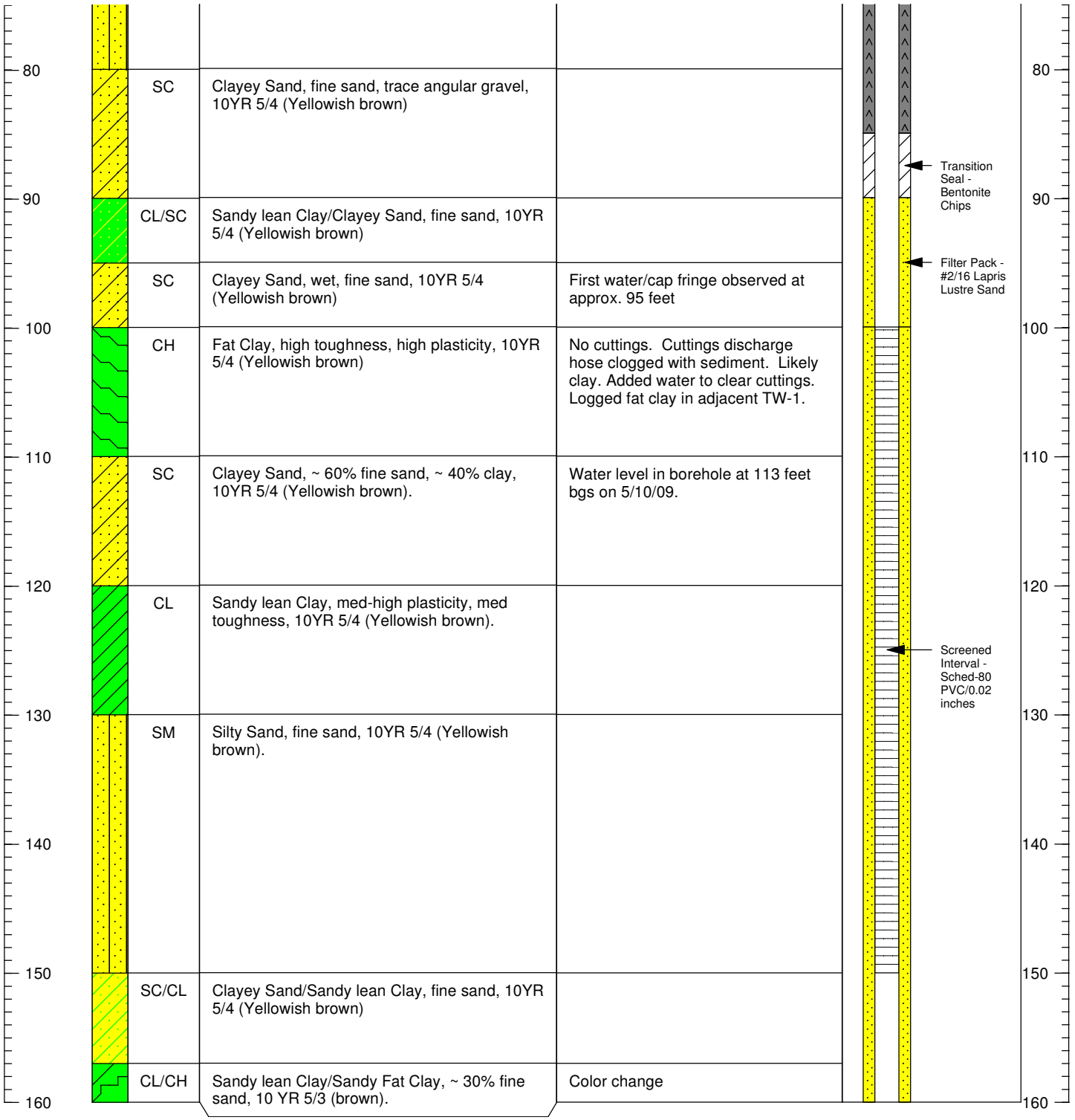
Genesis Solar, LLC
Project Number: 52004617

Date Drilled: 05/08/2009 to 05/09/2009		Borehole Location: N33°40' 24.91" W115°03'5.85"	
Drilling Method: Air Rotary, 10" Diameter		Ground Surface Elevation: 383 feet amsl	
Drilling Contractor: WDC Exploration		Static Water Level: 76.77 feet amsl	
Geologist: Ryan Farrel	Reviewer: Nat Beal	Total Depth: 160 ft	Well Depth:
Notes:			



Lithologic Log of OBS-1

Genesis Solar, LLC
Project Number: 52004617



SC	Clayey Sand, fine sand, trace angular gravel, 10YR 5/4 (Yellowish brown)	
CL/SC	Sandy lean Clay/Clayey Sand, fine sand, 10YR 5/4 (Yellowish brown)	
SC	Clayey Sand, wet, fine sand, 10YR 5/4 (Yellowish brown)	First water/cap fringe observed at approx. 95 feet
CH	Fat Clay, high toughness, high plasticity, 10YR 5/4 (Yellowish brown)	No cuttings. Cuttings discharge hose clogged with sediment. Likely clay. Added water to clear cuttings. Logged fat clay in adjacent TW-1.
SC	Clayey Sand, ~ 60% fine sand, ~ 40% clay, 10YR 5/4 (Yellowish brown).	Water level in borehole at 113 feet bgs on 5/10/09.
CL	Sandy lean Clay, med-high plasticity, med toughness, 10YR 5/4 (Yellowish brown).	
SM	Silty Sand, fine sand, 10YR 5/4 (Yellowish brown).	
SC/CL	Clayey Sand/Sandy lean Clay, fine sand, 10YR 5/4 (Yellowish brown)	
CL/CH	Sandy lean Clay/Sandy Fat Clay, ~ 30% fine sand, 10 YR 5/3 (brown).	Color change

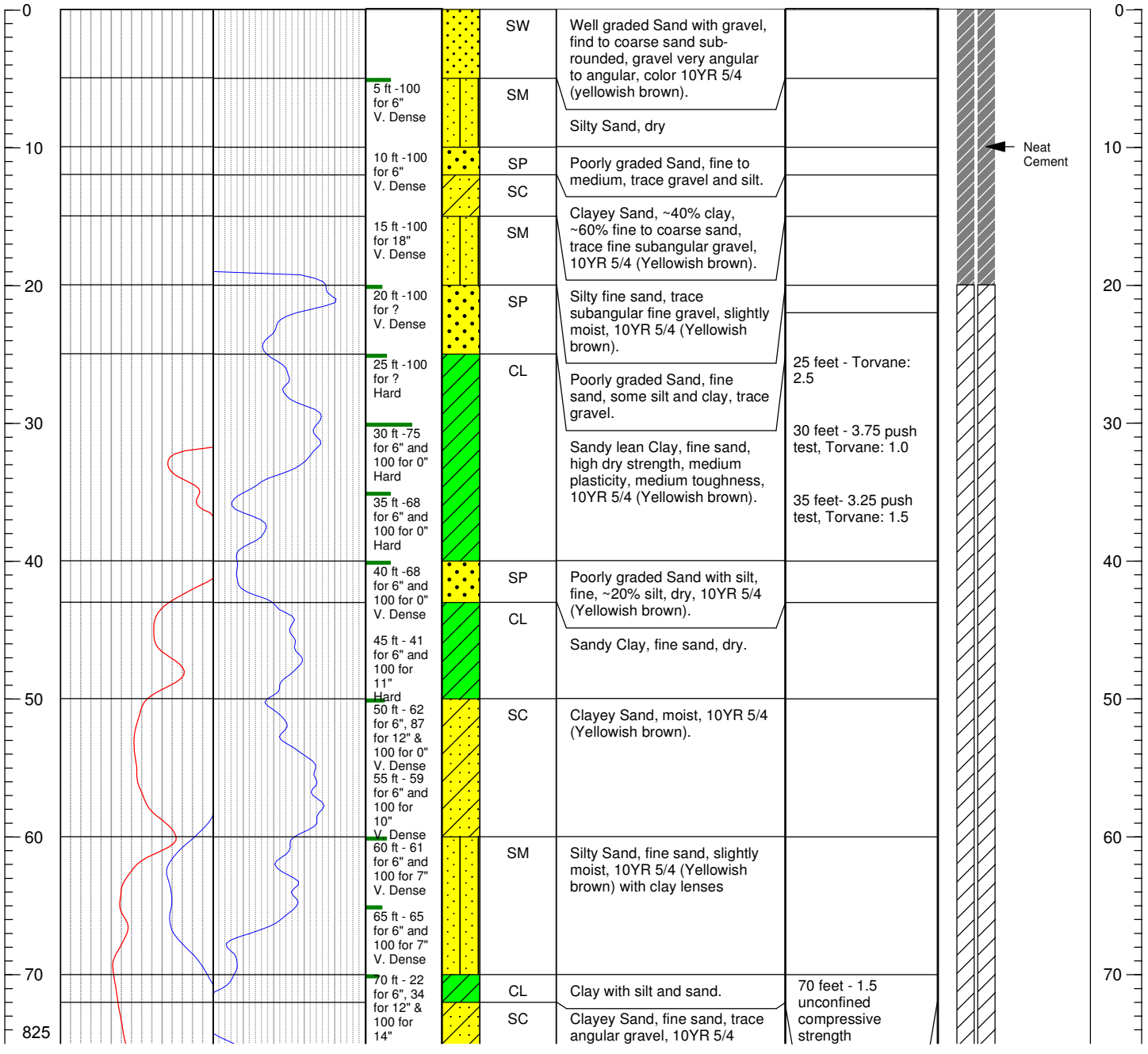
824

Lithologic Log of OBS-2 - 0 fbgs to 75 fbgs

Genesis Solar, LLC
Project Number: 52004617

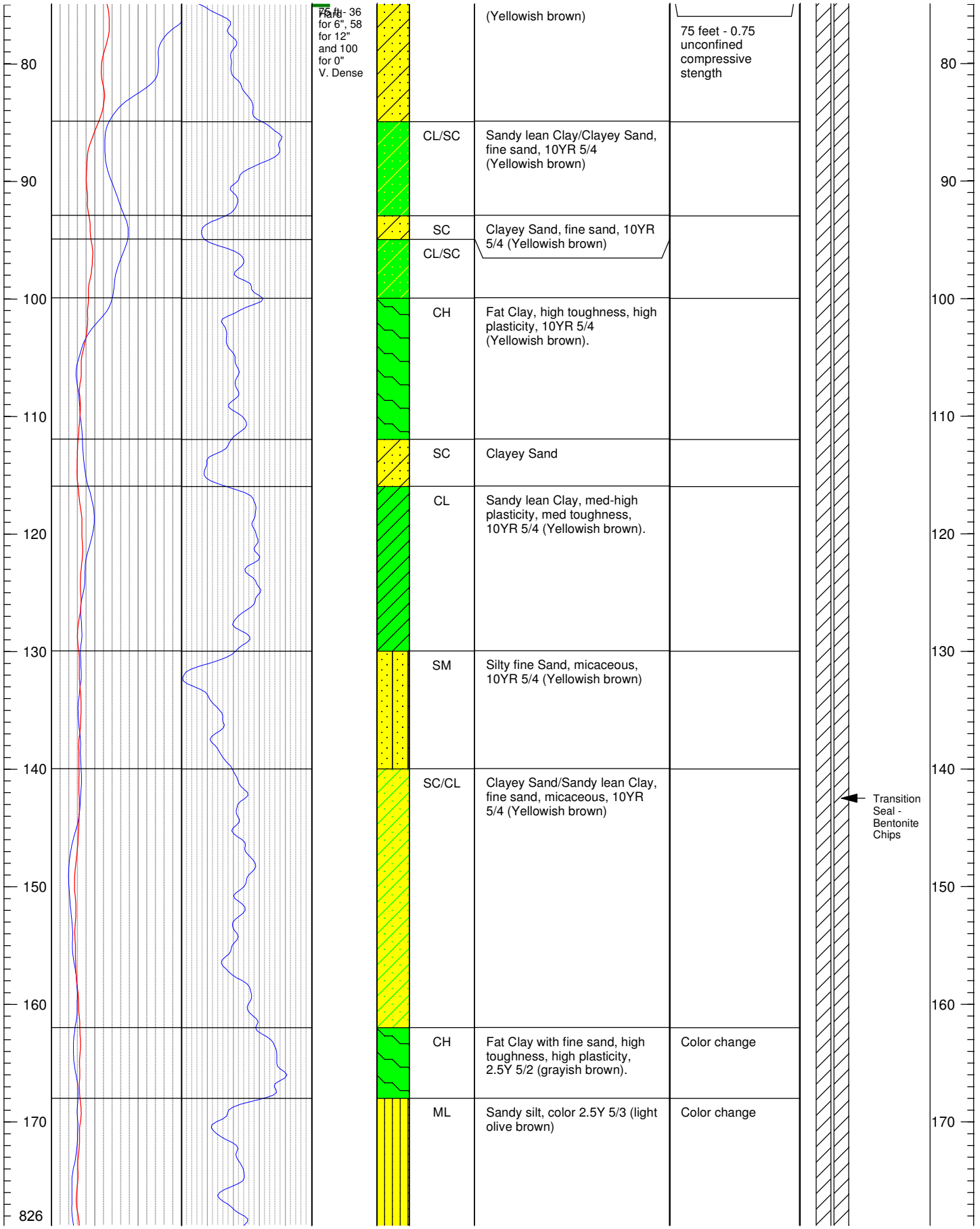
Date Drilled: 05/28/2009 to 07/02/2009		Borehole Location: N33°40.419' W115°03.268	
Drilling Method: Mud Rotary, 10" Diameter		Ground Surface Elevation: 383 feet amsl	
Drilling Contractor: WDC Exploration		Static Water Level: N/A	
Geologist: Andie Gehlhausen	Reviewer: Nat Beal	Total Depth: 900 ft	Well Depth: 405 ft

Notes:
1) Lithologic log was adjusted based on the cuttings log from OBS-1 and the geophysical logs
2) RSN and RLS have been corrected to 77 degrees F
3) Soil samples were collected using a Modified California Split Spoon Sampler and a standard 140-pound drive hammer



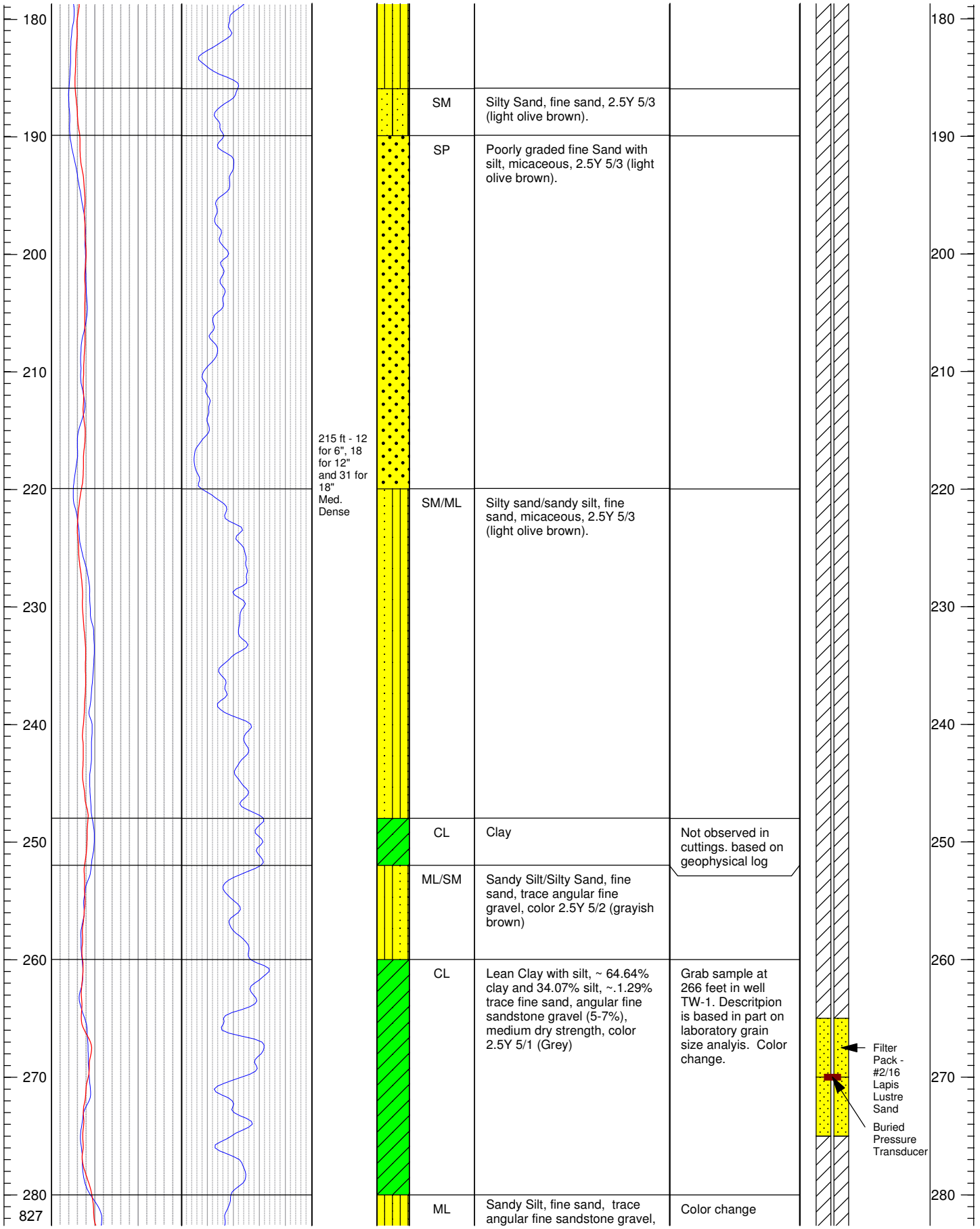
Lithologic Log of OBS-2

Genesis Solar, LLC
Project Number: 52004617



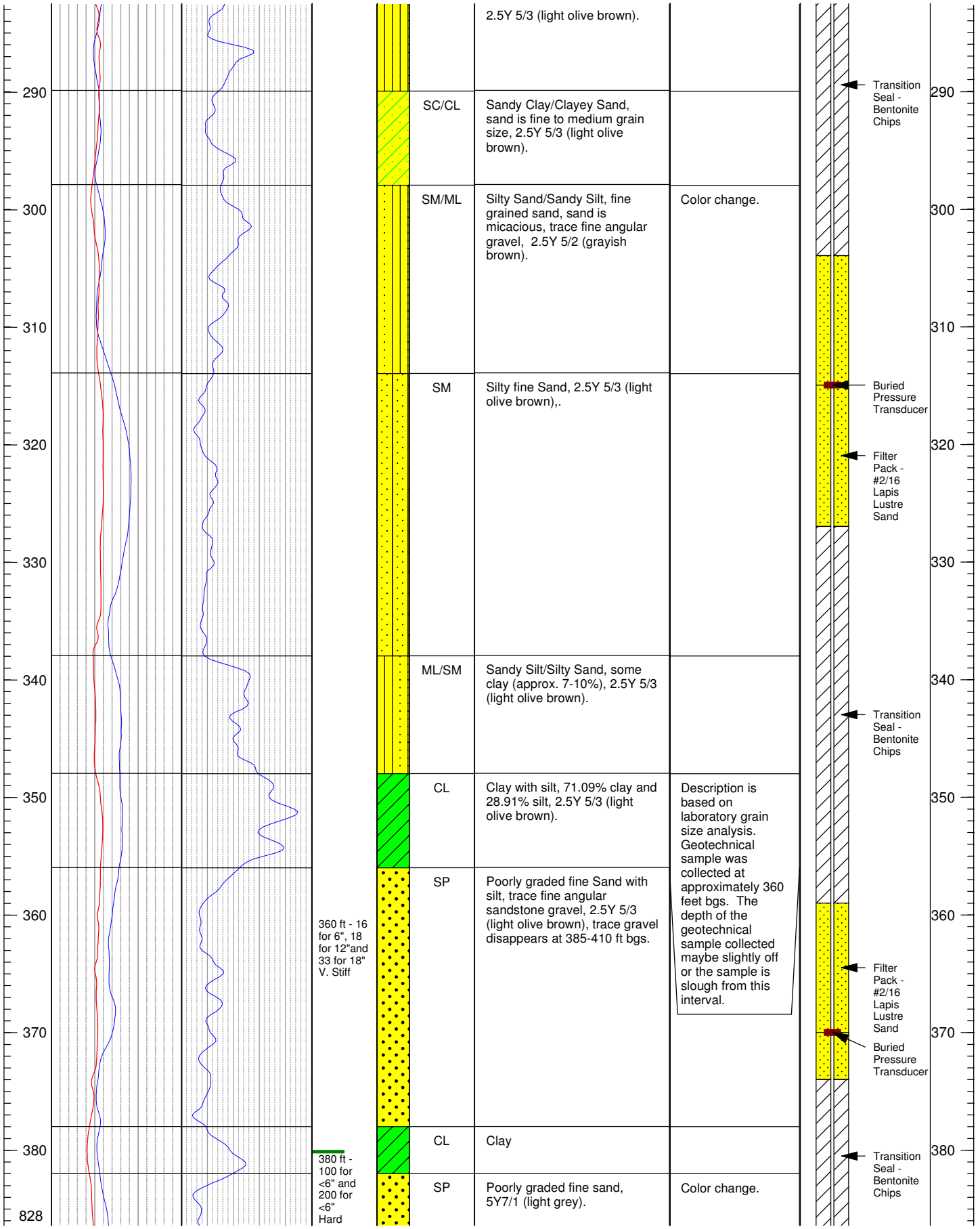
Lithologic Log of OBS-2

Genesis Solar, LLC
Project Number: 52004617



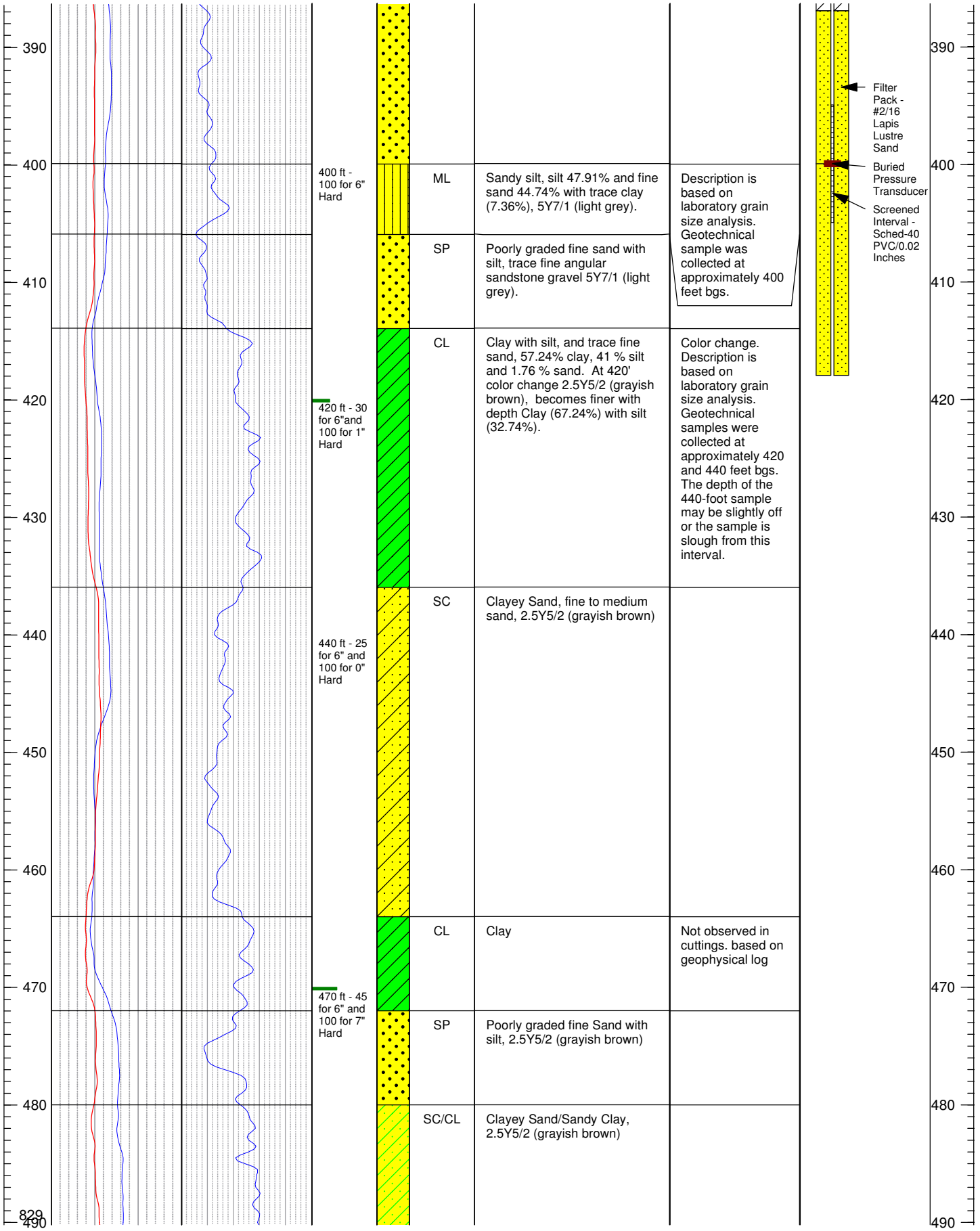
Lithologic Log of OBS-2

Genesis Solar, LLC
Project Number: 52004617



Lithologic Log of OBS-2

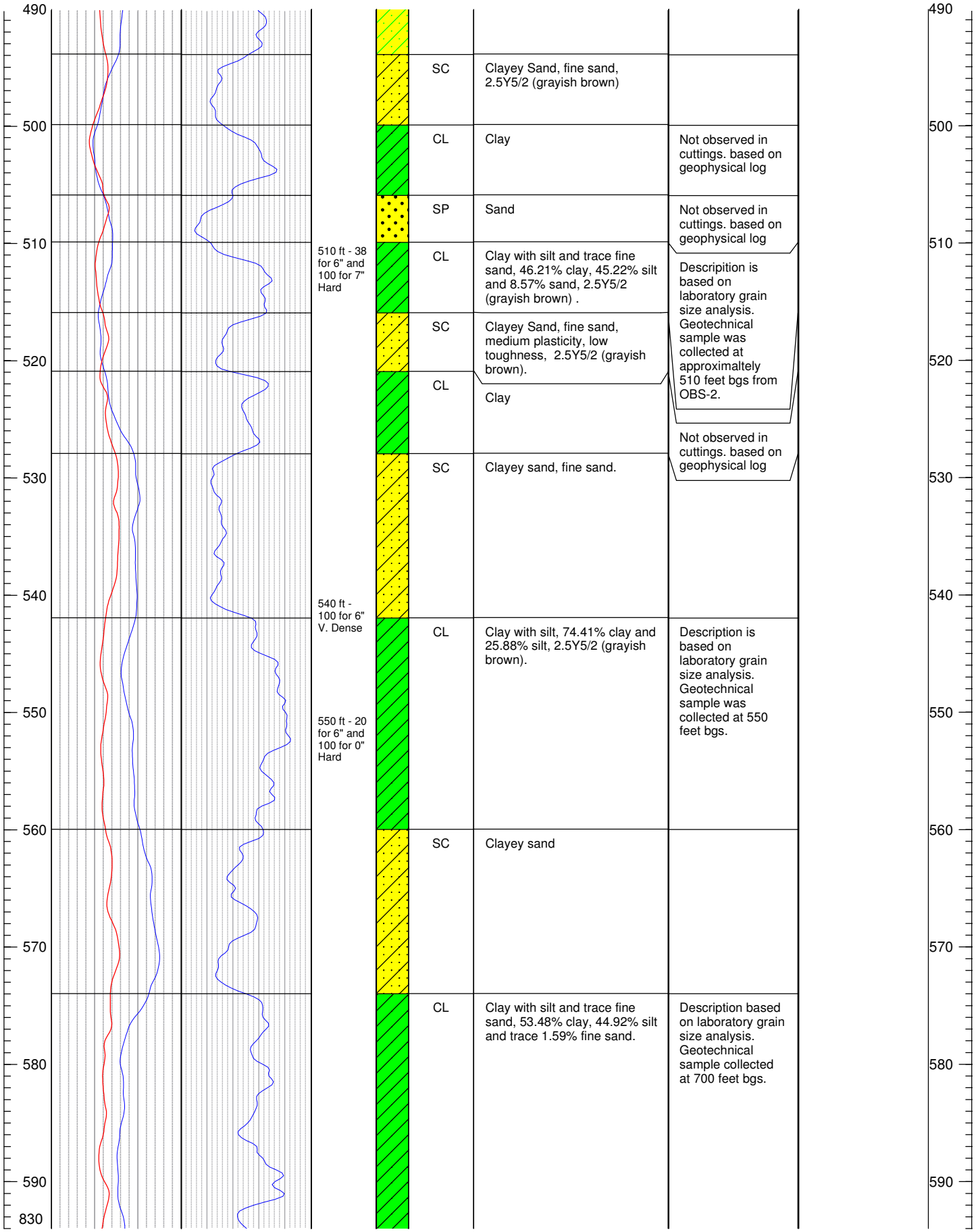
Genesis Solar, LLC
Project Number: 52004617



WorleyParsons
resources & energy

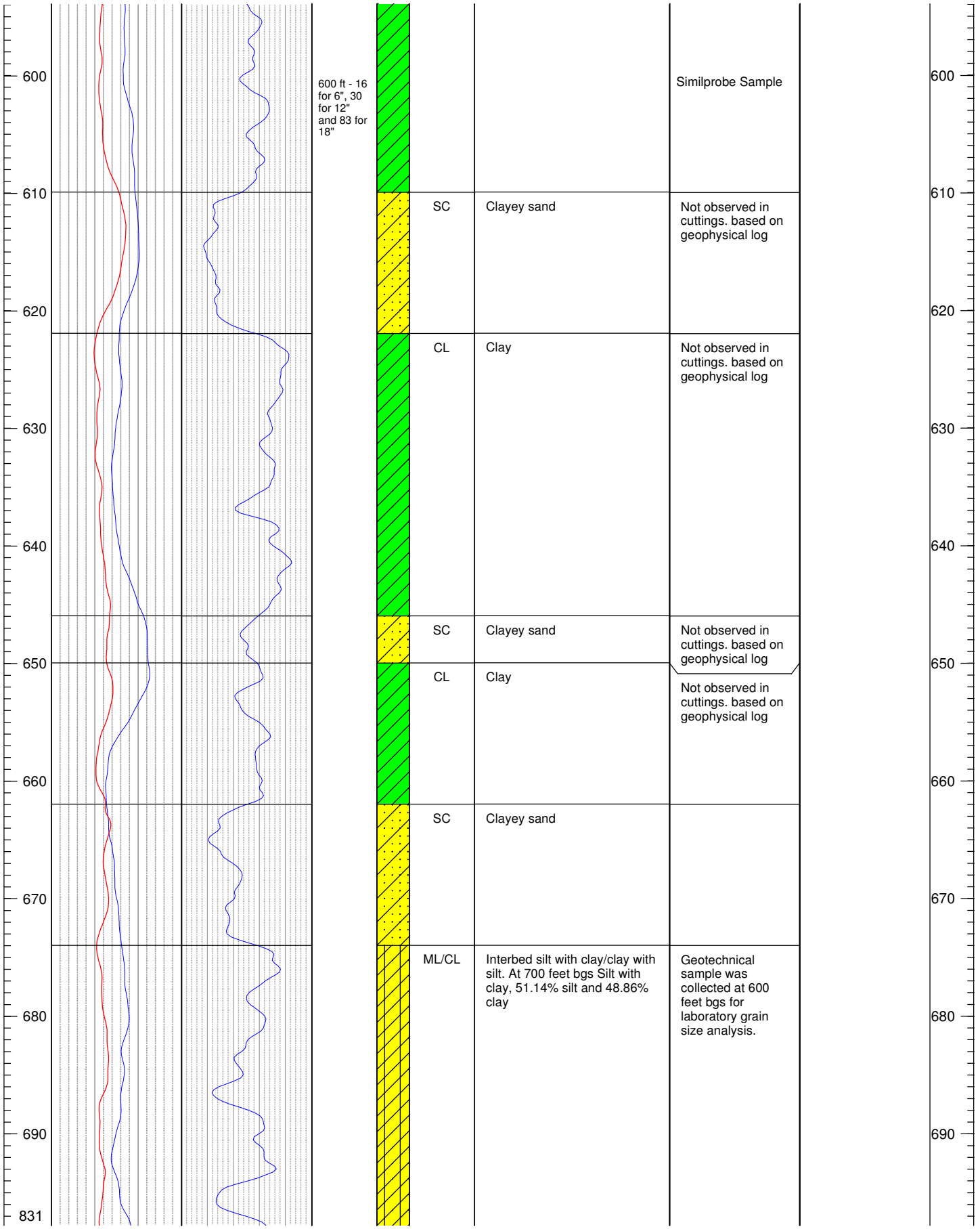
Lithologic Log of OBS-2

Genesis Solar, LLC
Project Number: 52004617



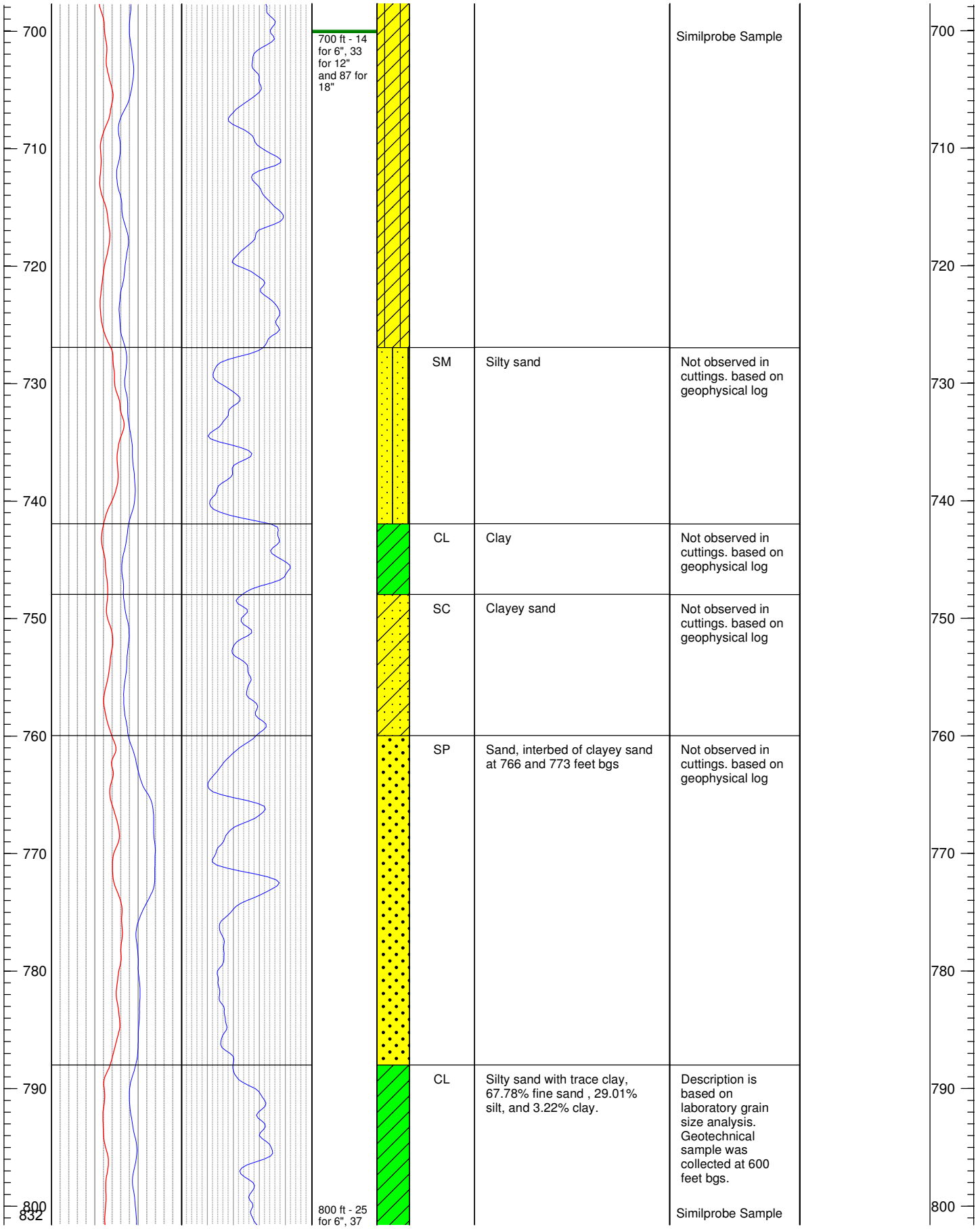
Lithologic Log of OBS-2

Genesis Solar, LLC
Project Number: 52004617



Lithologic Log of OBS-2

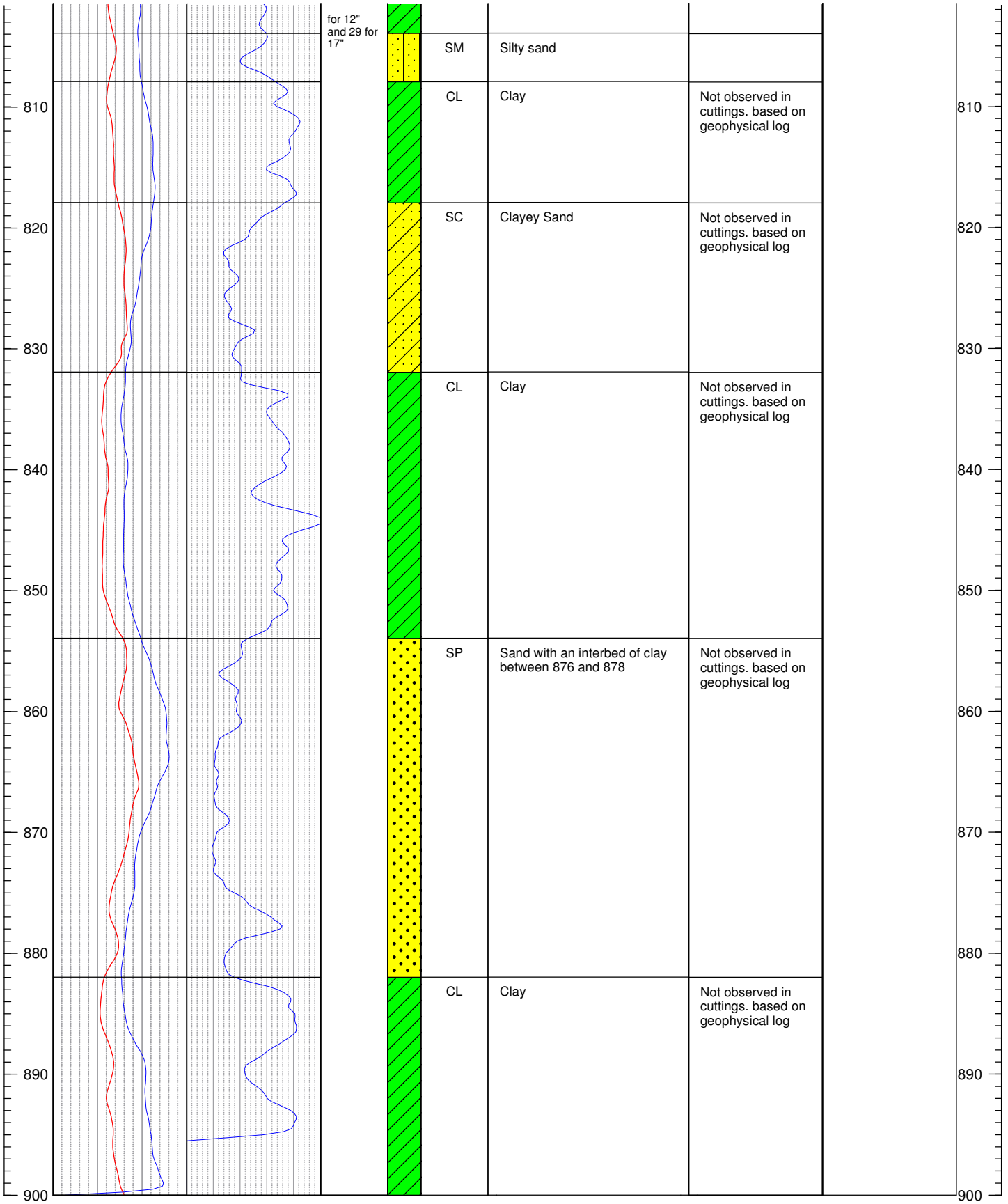
Genesis Solar, LLC
Project Number: 52004617



		Similprobe Sample
SM	Silty sand	Not observed in cuttings. based on geophysical log
CL	Clay	Not observed in cuttings. based on geophysical log
SC	Clayey sand	Not observed in cuttings. based on geophysical log
SP	Sand, interbed of clayey sand at 766 and 773 feet bgs	Not observed in cuttings. based on geophysical log
CL	Silty sand with trace clay, 67.78% fine sand , 29.01% silt, and 3.22% clay.	Description is based on laboratory grain size analysis. Geotechnical sample was collected at 600 feet bgs. Similprobe Sample

Lithologic Log of OBS-2

Genesis Solar, LLC
Project Number: 52004617



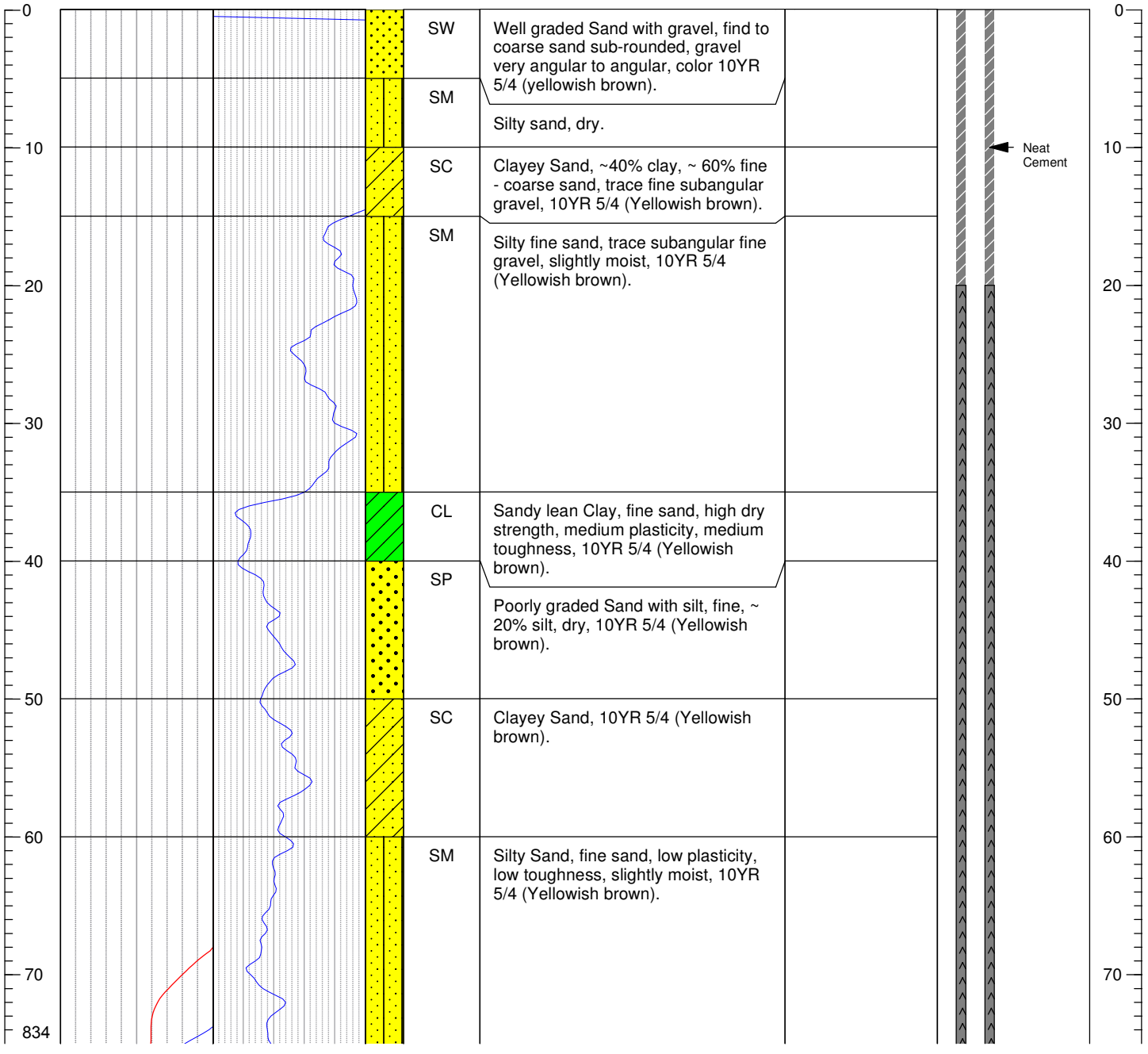
833

Adjusted Lithologic Log of TW-1

Genesis Solar, LLC
Project Number: 52004617

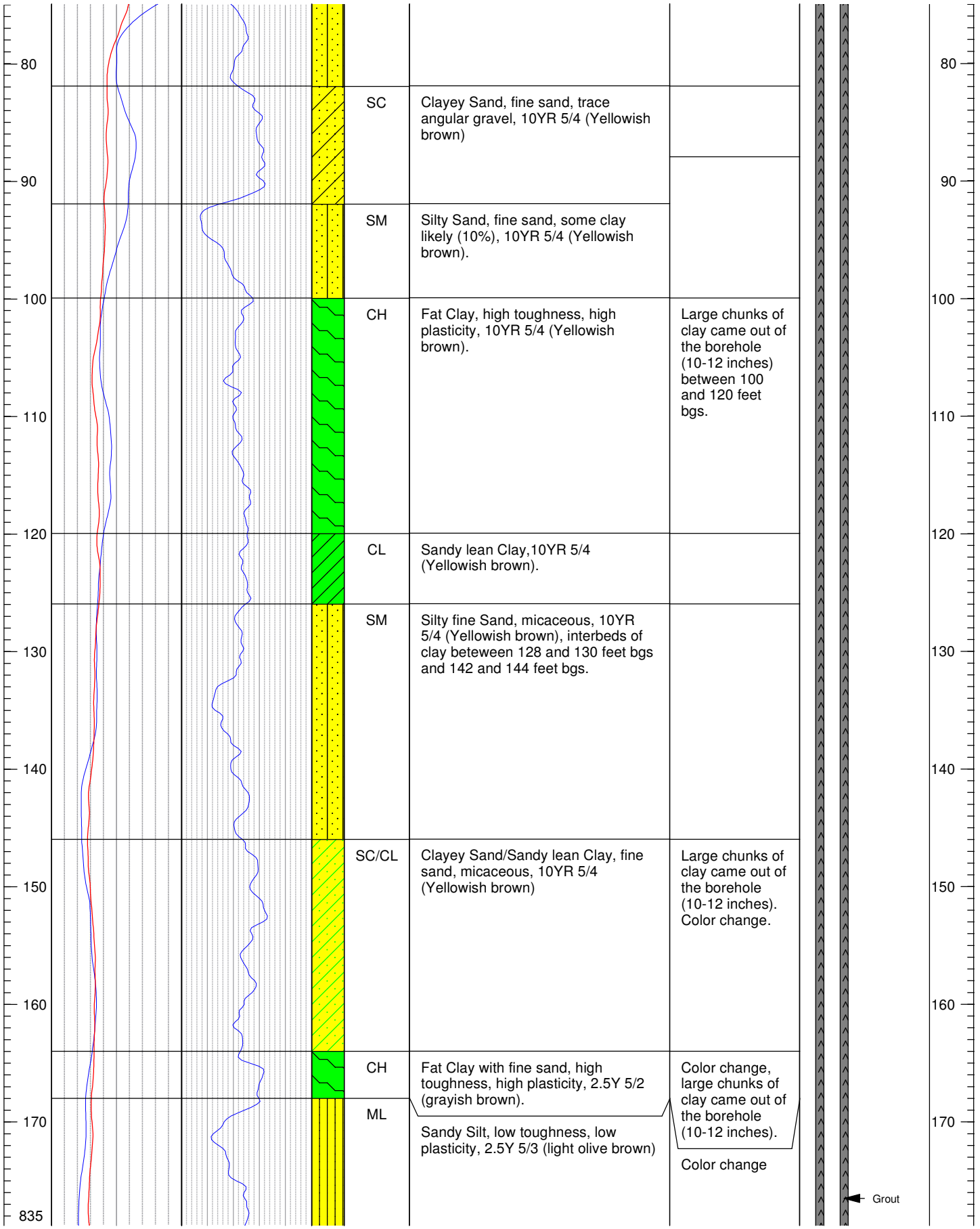
Date Drilled: 05/15/2009 to 05/18/2009		Borehole Location: N33°40.419' W115°03.268	
Drilling Method: Mud Rotary, 10" Diameter		Ground Surface Elevation: 383 feet amsl	
Drilling Contractor: WDC Exploration		Static Water Level: 86.26 feet amsl	
Geologist: Nat Beal	Reviewer: Nat Beal	Total Depth: 564 ft	Well Depth: 555 ft

Notes:
1) The upper 160 ft were adjusted based on the cuttings log from OBS-1 and the geophysical logs
2) From 160 ft to 550 ft the log was adjusted based on the borehole geophysical logs for this well and geotechnical samples collected from well OBS-2.
3) RLN and RSN logs have been corrected to 77 degrees F



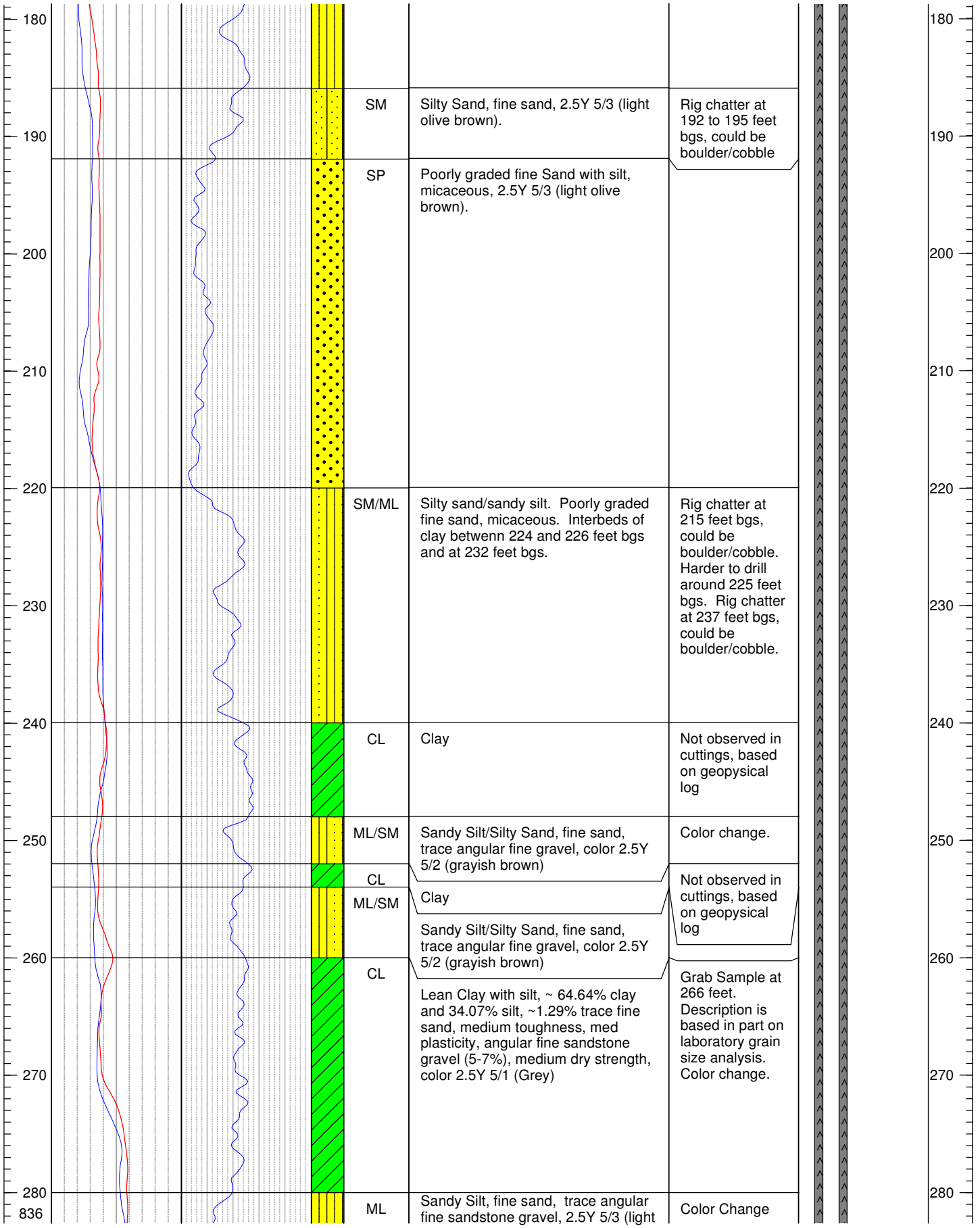
Adjusted Lithologic Log of TW-1

Genesis Solar, LLC
Project Number: 52004617



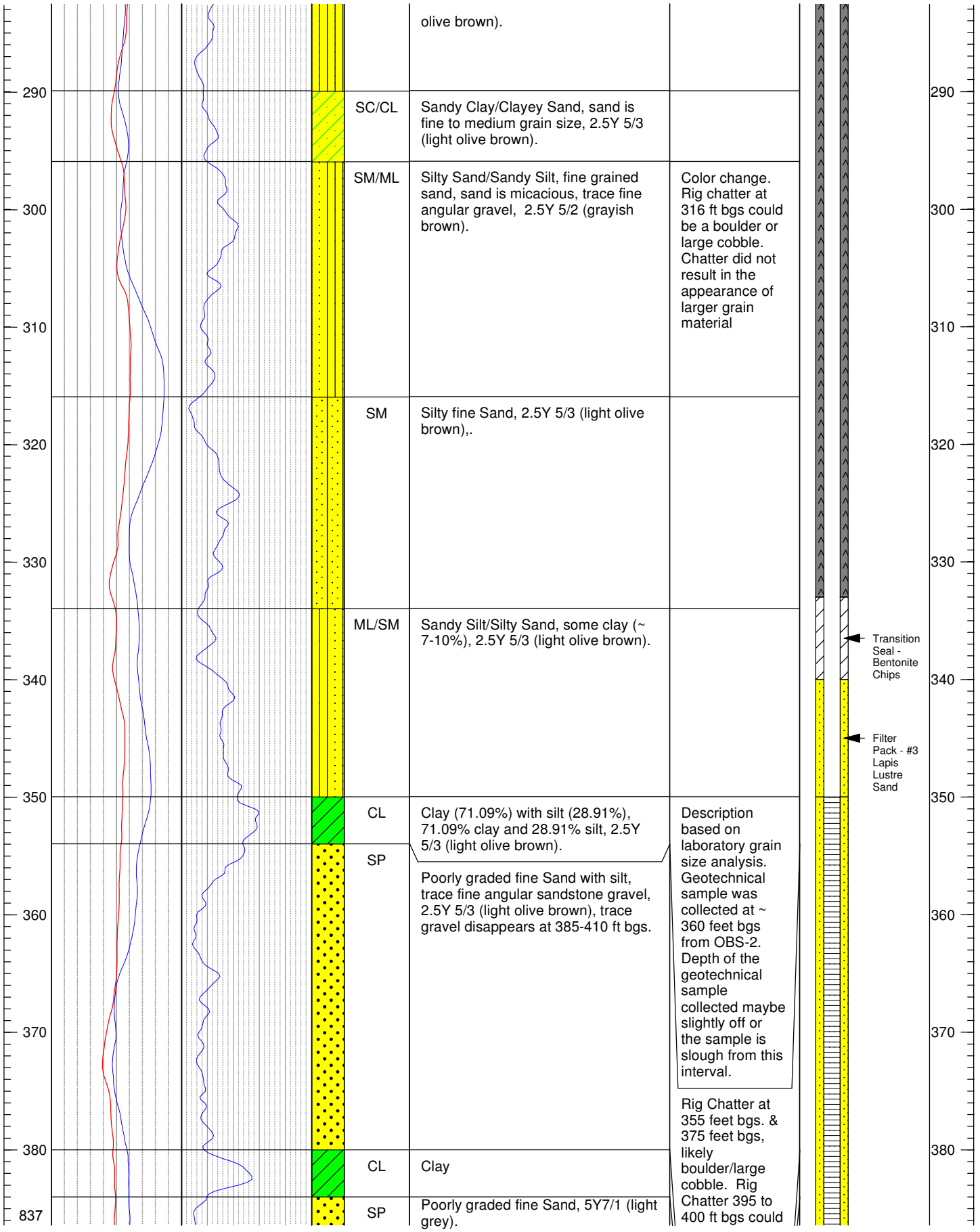
Adjusted Lithologic Log of TW-1

Genesis Solar, LLC
Project Number: 52004617



Adjusted Lithologic Log of TW-1

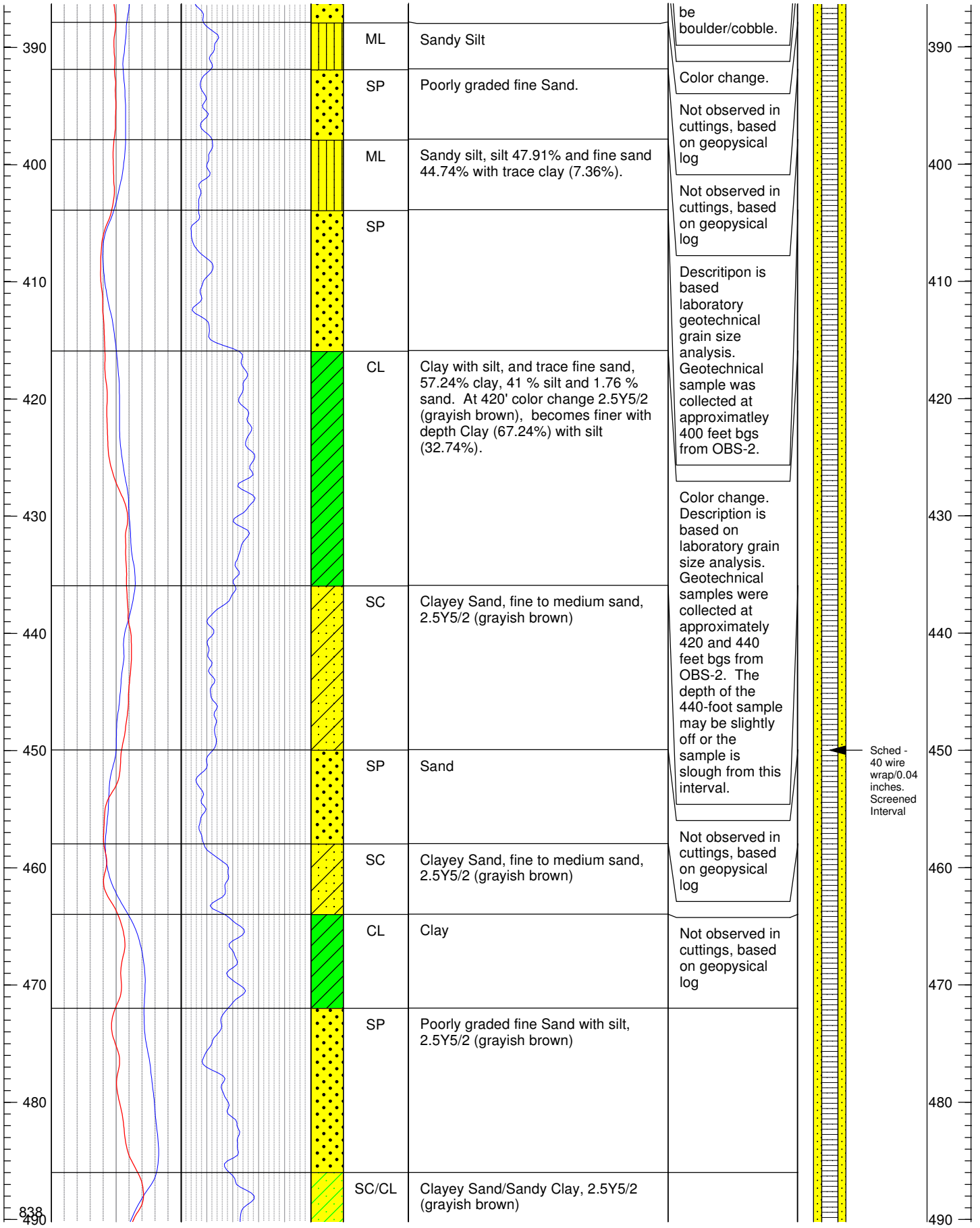
Genesis Solar, LLC
Project Number: 52004617



		olive brown).	
290	SC/CL	Sandy Clay/Clayey Sand, sand is fine to medium grain size, 2.5Y 5/3 (light olive brown).	
	SM/ML	Silty Sand/Sandy Silt, fine grained sand, sand is micacious, trace fine angular gravel, 2.5Y 5/2 (grayish brown).	Color change. Rig chatter at 316 ft bgs could be a boulder or large cobble. Chatter did not result in the appearance of larger grain material
300			
310			
320	SM	Silty fine Sand, 2.5Y 5/3 (light olive brown),.	
330			
340	ML/SM	Sandy Silt/Silty Sand, some clay (~ 7-10%), 2.5Y 5/3 (light olive brown).	
350	CL	Clay (71.09%) with silt (28.91%), 71.09% clay and 28.91% silt, 2.5Y 5/3 (light olive brown).	Description based on laboratory grain size analysis. Geotechnical sample was collected at ~ 360 feet bgs from OBS-2. Depth of the geotechnical sample collected maybe slightly off or the sample is slough from this interval.
	SP	Poorly graded fine Sand with silt, trace fine angular sandstone gravel, 2.5Y 5/3 (light olive brown), trace gravel disappears at 385-410 ft bgs.	
360			
370			
380	CL	Clay	Rig Chatter at 355 feet bgs. & 375 feet bgs, likely boulder/large cobble. Rig Chatter 395 to 400 ft bgs could
837	SP	Poorly graded fine Sand, 5Y7/1 (light grey).	

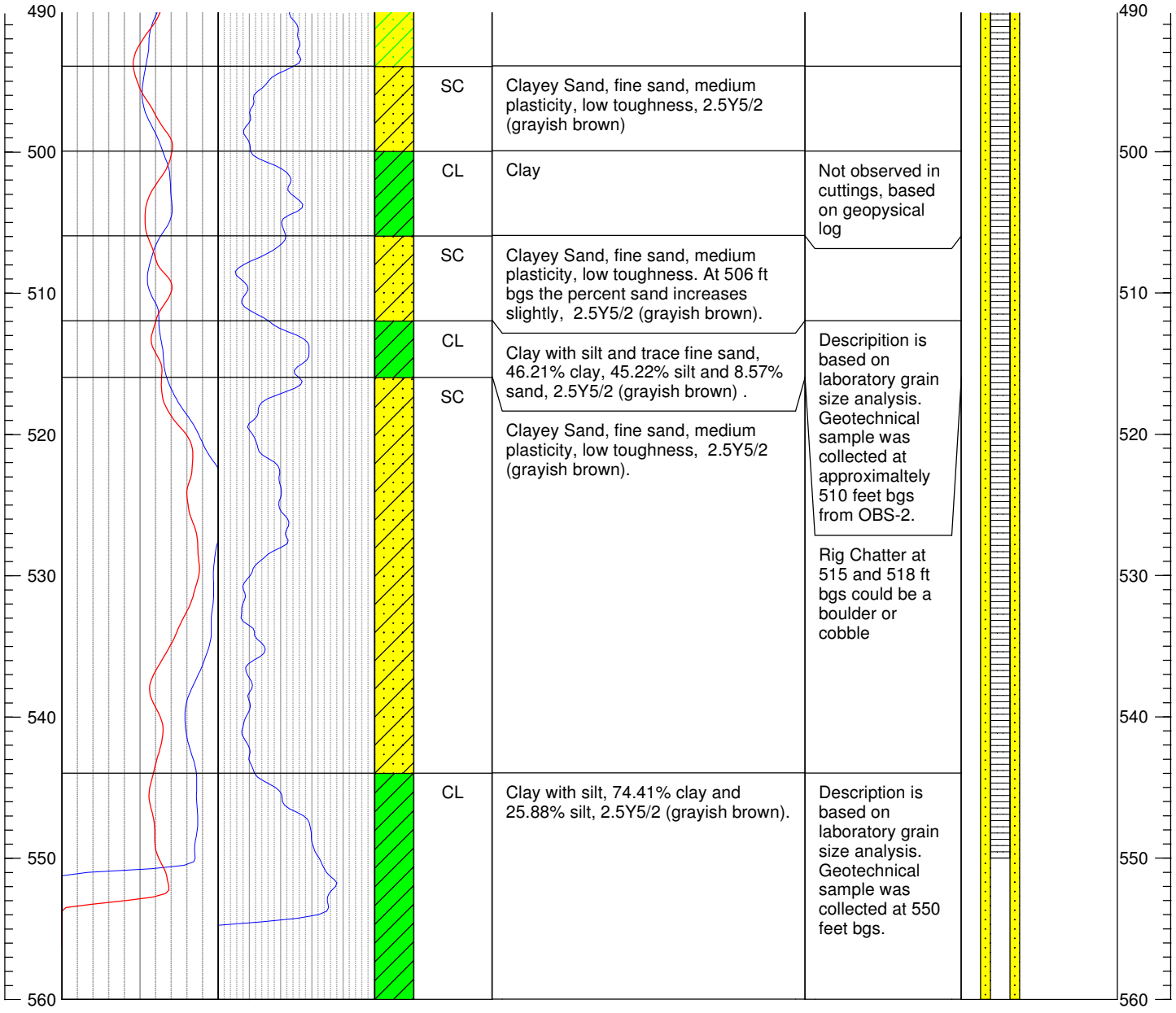
Adjusted Lithologic Log of TW-1

Genesis Solar, LLC
Project Number: 52004617



Adjusted Lithologic Log of TW-1

Genesis Solar, LLC
Project Number: 52004617

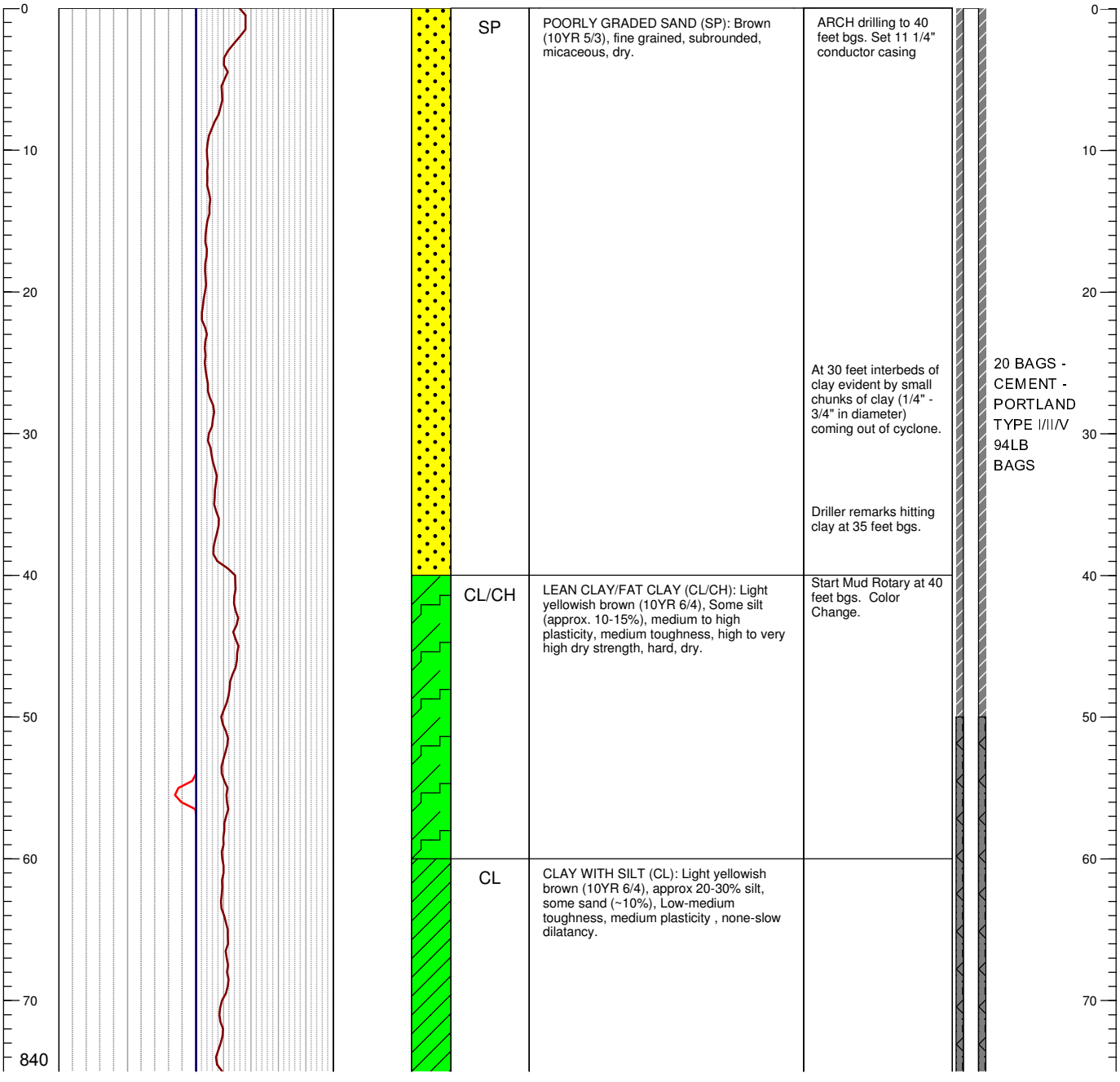


Draft Lithologic Log and Well Completion Details for TW-2

Genesis Solar, LLC
Project Number: 52004617

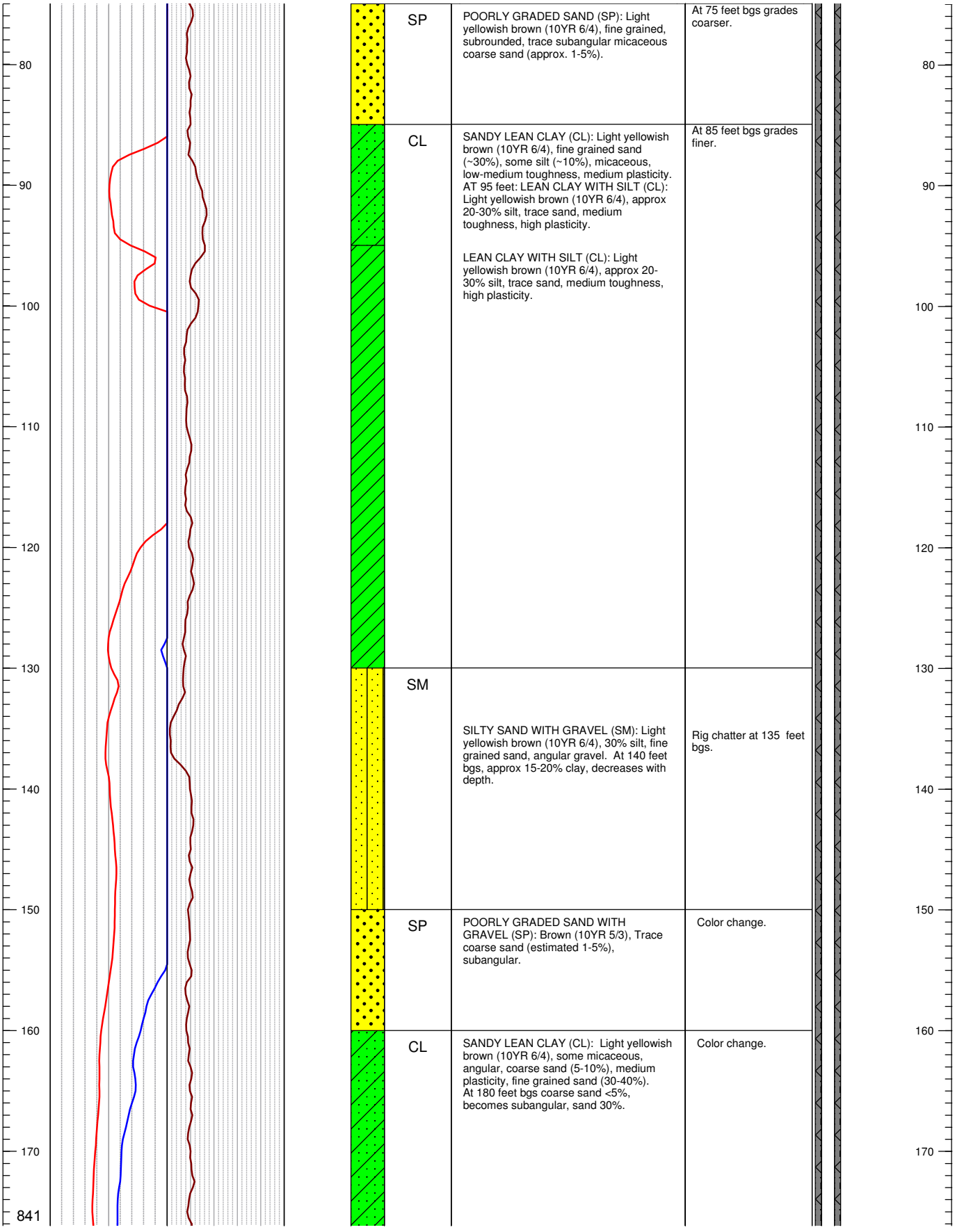
Date Drilled: 11/17/2009 to 12/09/2009	Northing 2169119.765 Easting 6970187.073	
Drilling Method: Mud Rotary, 10" Diameter Tricone	Ground Surface Elevation: 390.12 feet amsl	
Drilling Contractor: WDC Exploration	Total Depth: 1841 ft	Well Depth: 1830 ft
Geologist: Nat Beal, Ed Baqurizo, Ryan Farrell	Reviewer: Mike Tietze	

Notes: The cuttings log was adjusted based on the interpretation of the geophysical logs.



Draft Lithologic Logs and Well Completation Details for TW-2

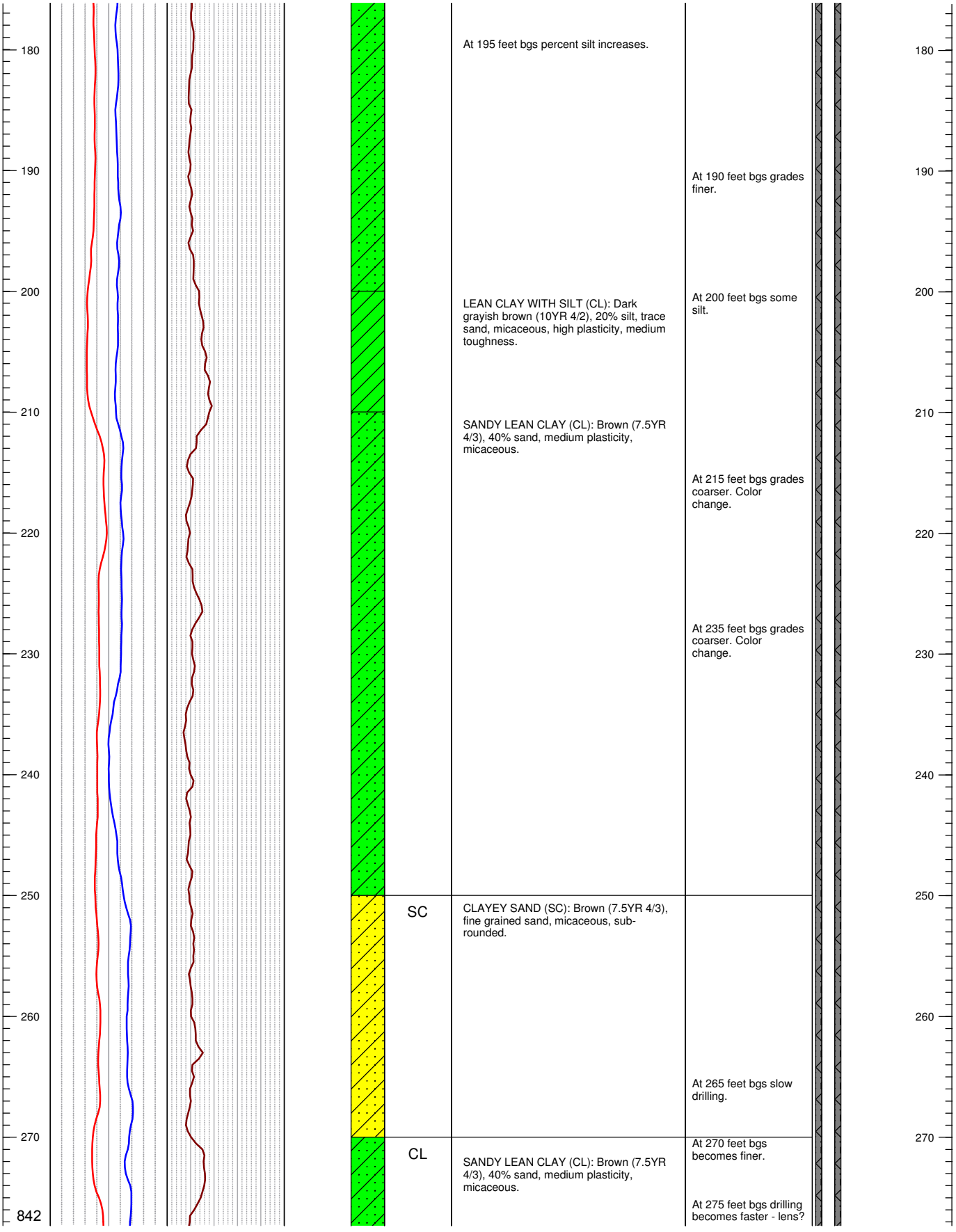
Genesis Solar, LLC
Project Number: 52004617



SP	POORLY GRADED SAND (SP): Light yellowish brown (10YR 6/4), fine grained, subrounded, trace subangular micaceous coarse sand (approx. 1-5%).	At 75 feet bgs grades coarser.
CL	SANDY LEAN CLAY (CL): Light yellowish brown (10YR 6/4), fine grained sand (~30%), some silt (~10%), micaceous, low-medium toughness, medium plasticity. AT 95 feet: LEAN CLAY WITH SILT (CL): Light yellowish brown (10YR 6/4), approx 20-30% silt, trace sand, medium toughness, high plasticity. LEAN CLAY WITH SILT (CL): Light yellowish brown (10YR 6/4), approx 20-30% silt, trace sand, medium toughness, high plasticity.	At 85 feet bgs grades finer.
SM	SILTY SAND WITH GRAVEL (SM): Light yellowish brown (10YR 6/4), 30% silt, fine grained sand, angular gravel. At 140 feet bgs, approx 15-20% clay, decreases with depth.	Rig chatter at 135 feet bgs.
SP	POORLY GRADED SAND WITH GRAVEL (SP): Brown (10YR 5/3), Trace coarse sand (estimated 1-5%), subangular.	Color change.
CL	SANDY LEAN CLAY (CL): Light yellowish brown (10YR 6/4), some micaceous, angular, coarse sand (5-10%), medium plasticity, fine grained sand (30-40%). At 180 feet bgs coarse sand <5%, becomes subangular, sand 30%.	Color change.

Draft Lithologic Logs and Well Completation Details for TW-2

Genesis Solar, LLC
Project Number: 52004617



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Genesis Solar, LLC
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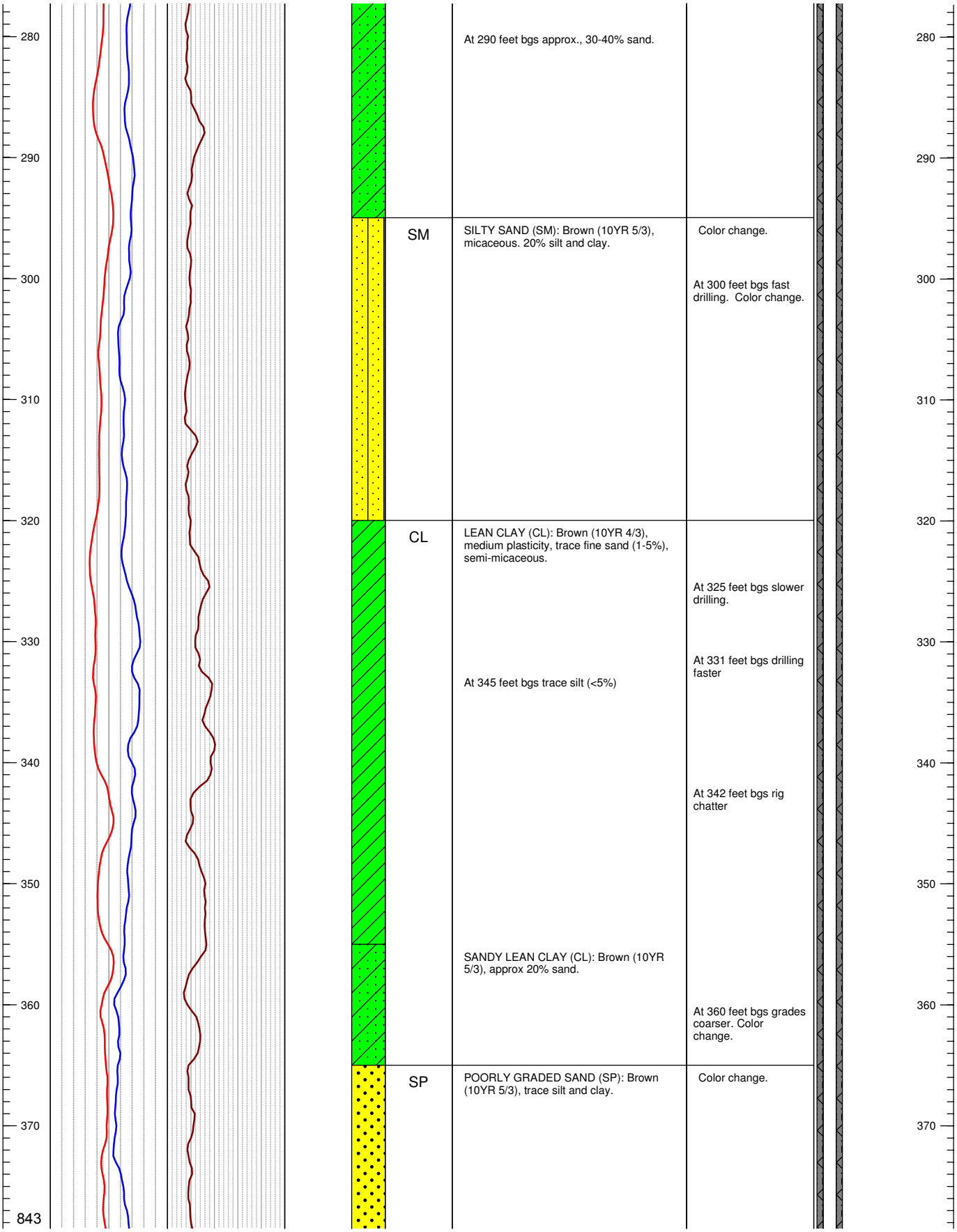

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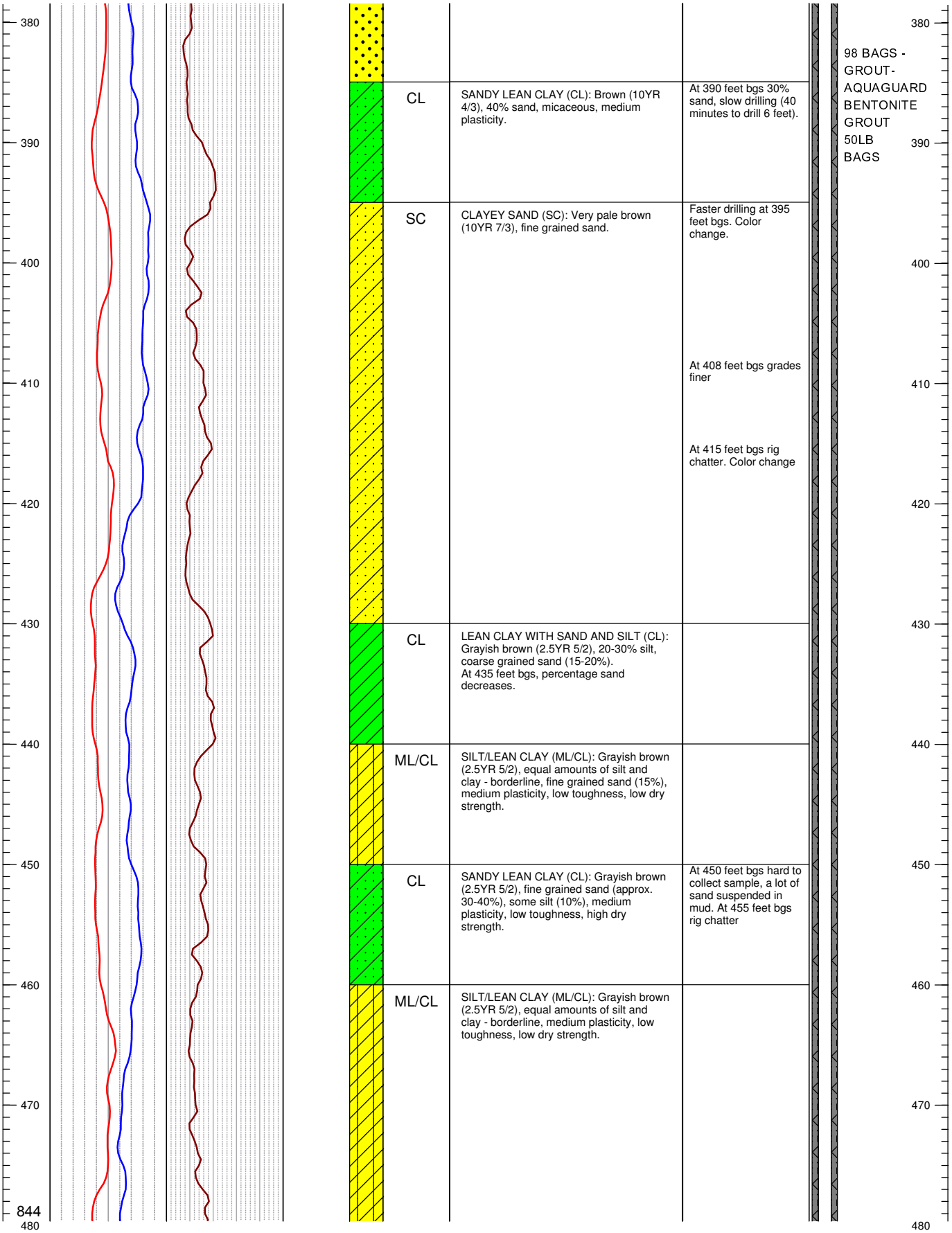

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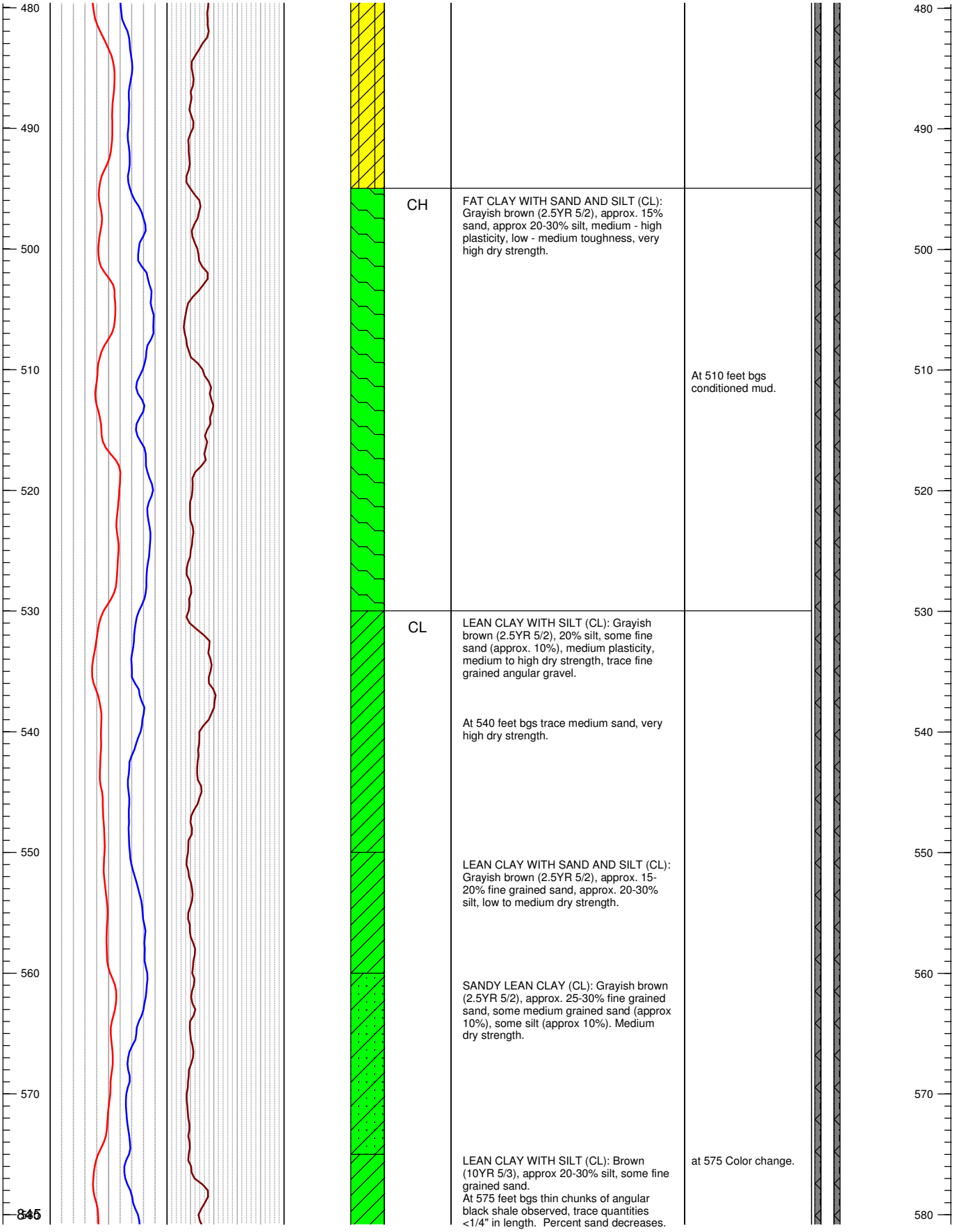

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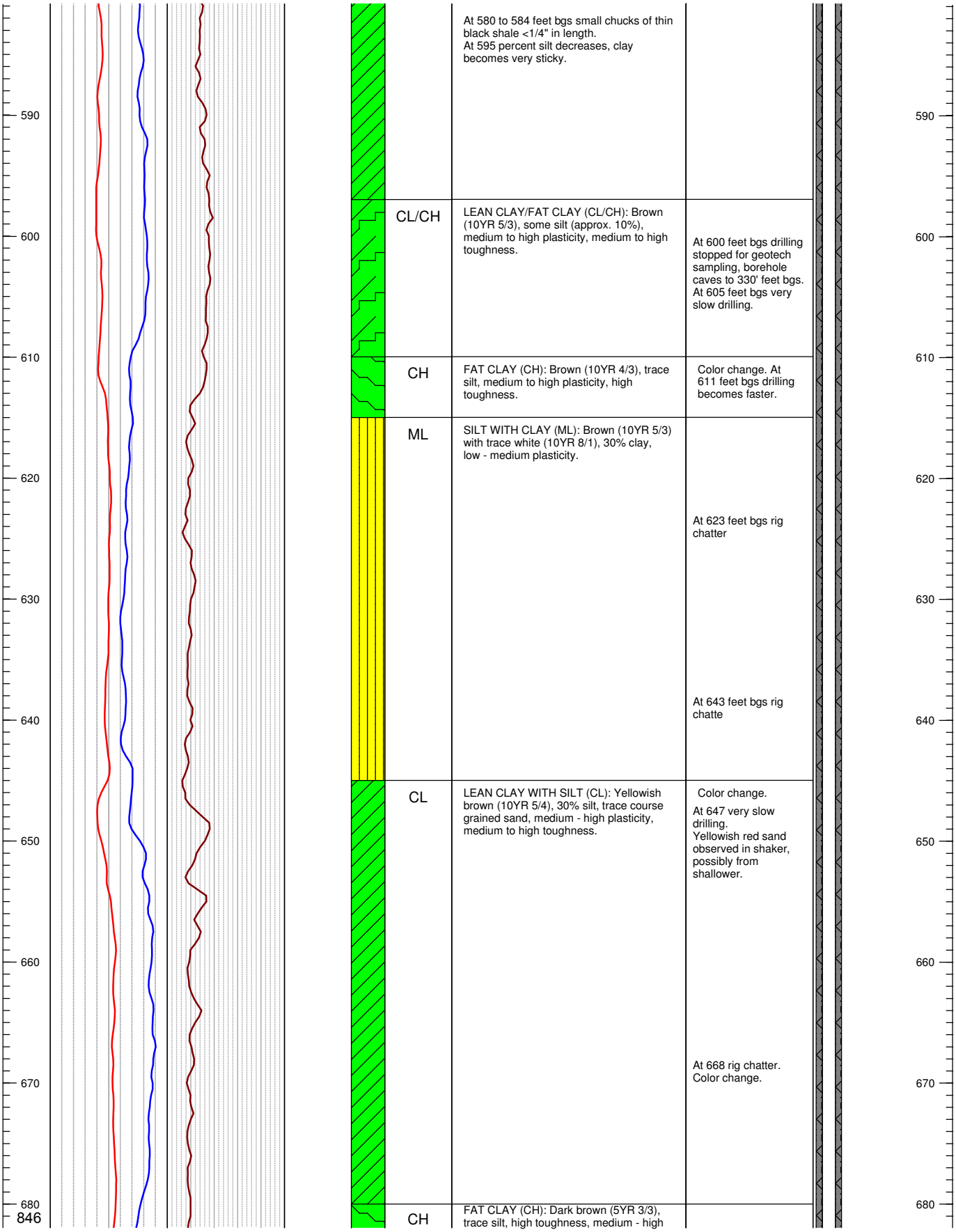

	At 580 to 584 feet bgs small chucks of thin black shale <1/4" in length. At 595 percent silt decreases, clay becomes very sticky.	
CL/CH	LEAN CLAY/FAT CLAY (CL/CH): Brown (10YR 5/3), some silt (approx. 10%), medium to high plasticity, medium to high toughness.	At 600 feet bgs drilling stopped for geotech sampling, borehole caves to 330' feet bgs. At 605 feet bgs very slow drilling.
CH	FAT CLAY (CH): Brown (10YR 4/3), trace silt, medium to high plasticity, high toughness.	Color change. At 611 feet bgs drilling becomes faster.
ML	SILT WITH CLAY (ML): Brown (10YR 5/3) with trace white (10YR 8/1), 30% clay, low - medium plasticity.	At 623 feet bgs rig chatter At 643 feet bgs rig chatte
CL	LEAN CLAY WITH SILT (CL): Yellowish brown (10YR 5/4), 30% silt, trace course grained sand, medium - high plasticity, medium to high toughness.	Color change. At 647 very slow drilling. Yellowish red sand observed in shaker, possibly from shallower. At 668 rig chatter. Color change.
CH	FAT CLAY (CH): Dark brown (5YR 3/3), trace silt, high toughness, medium - high	

Draft Lithologic Logs and Well Completation Details for TW-2

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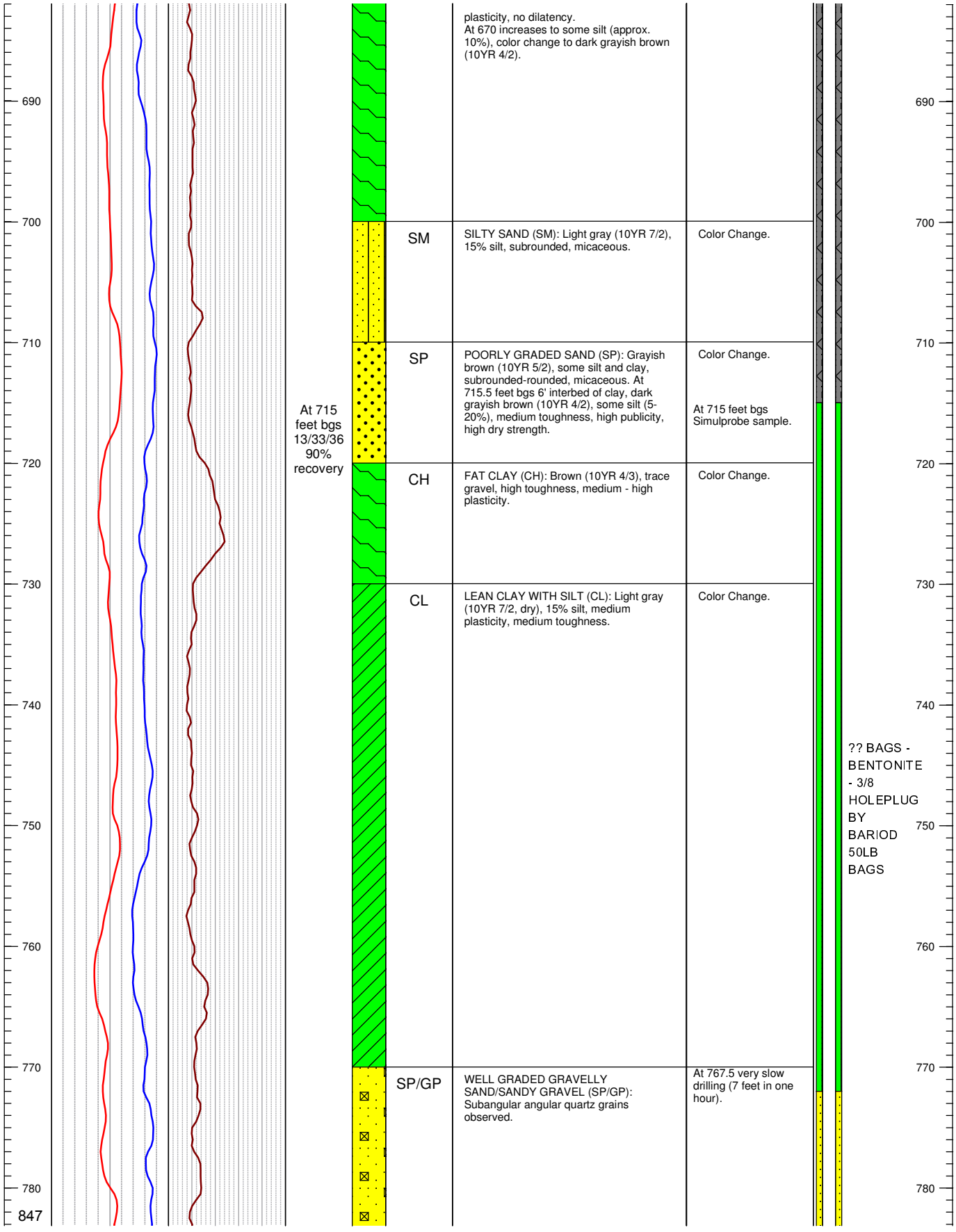

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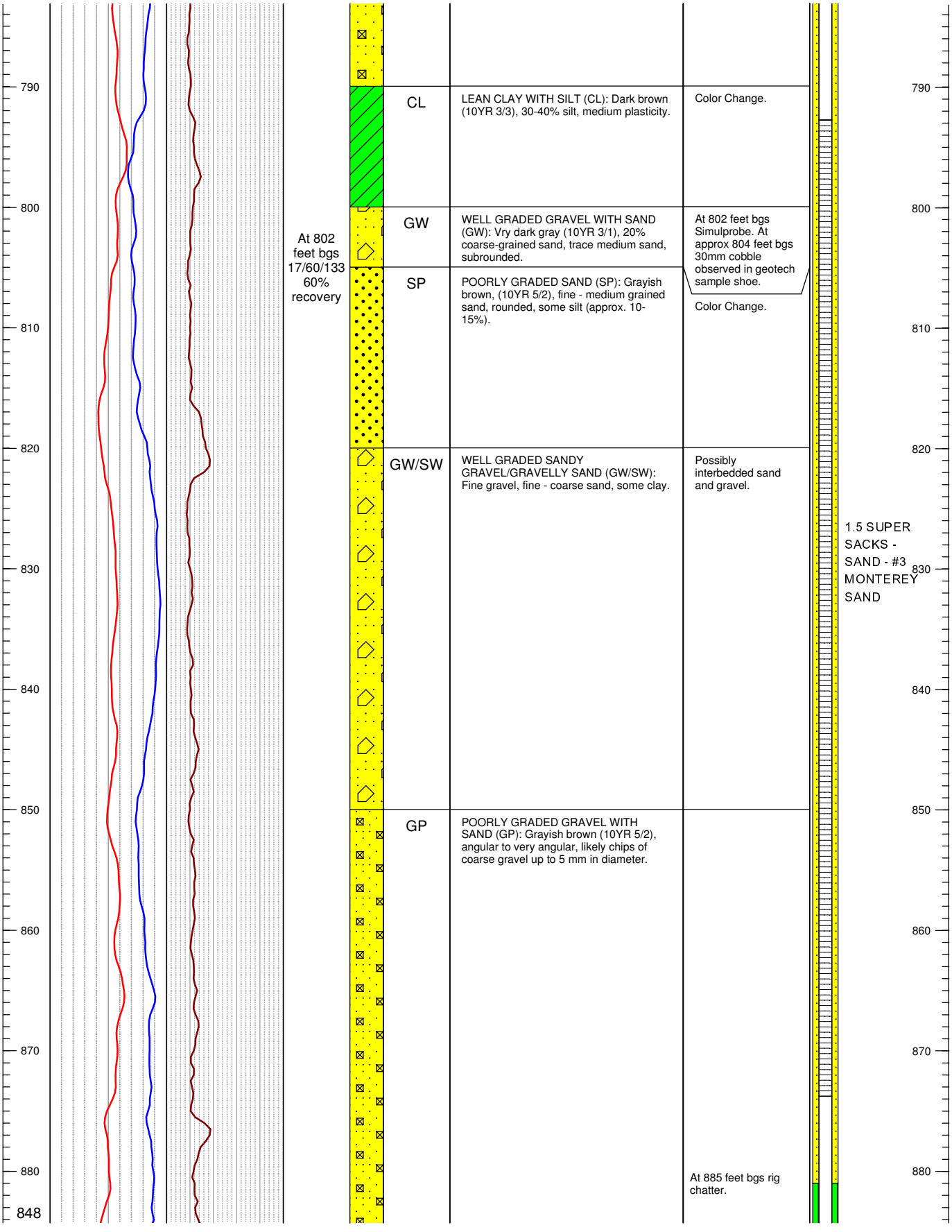

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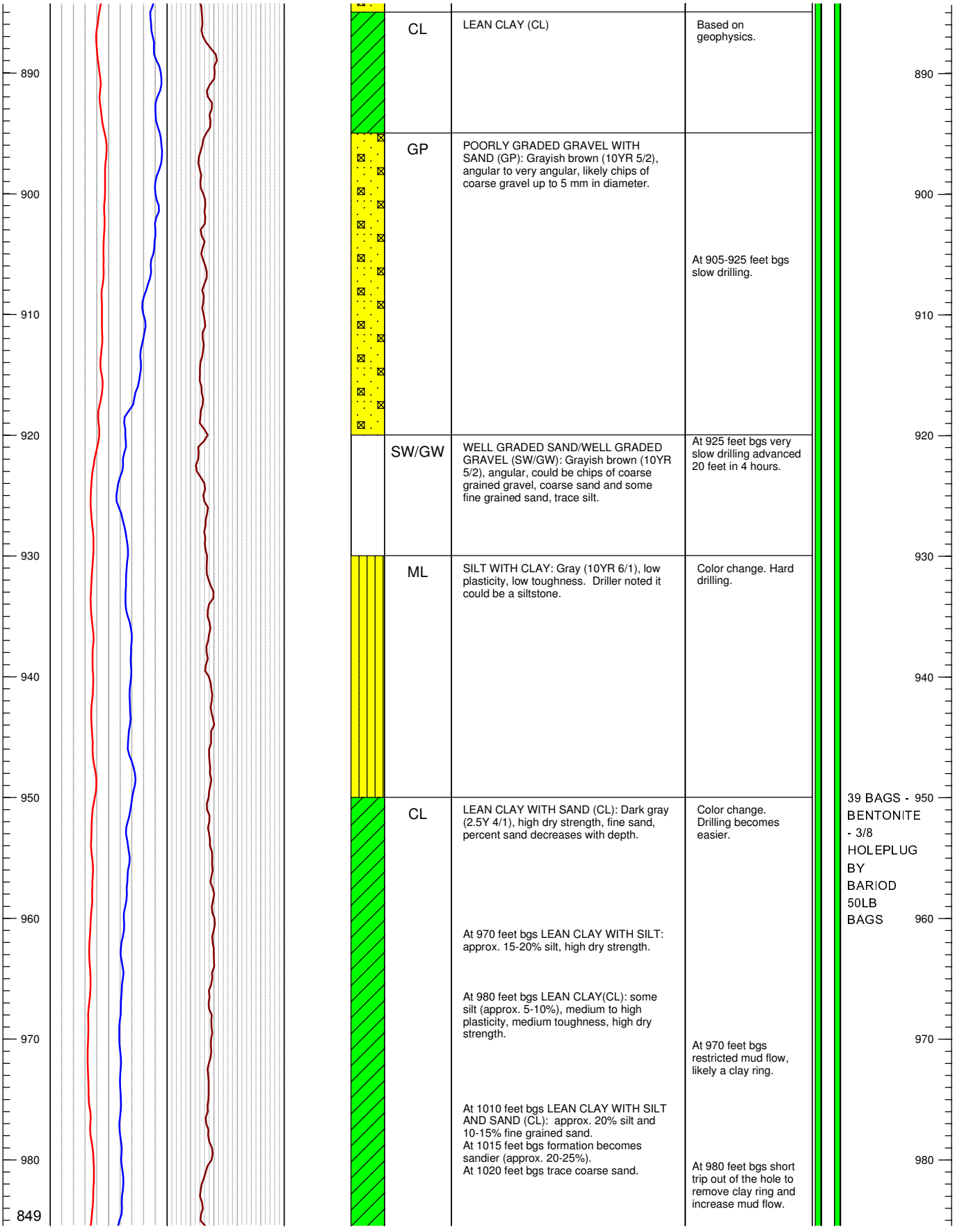

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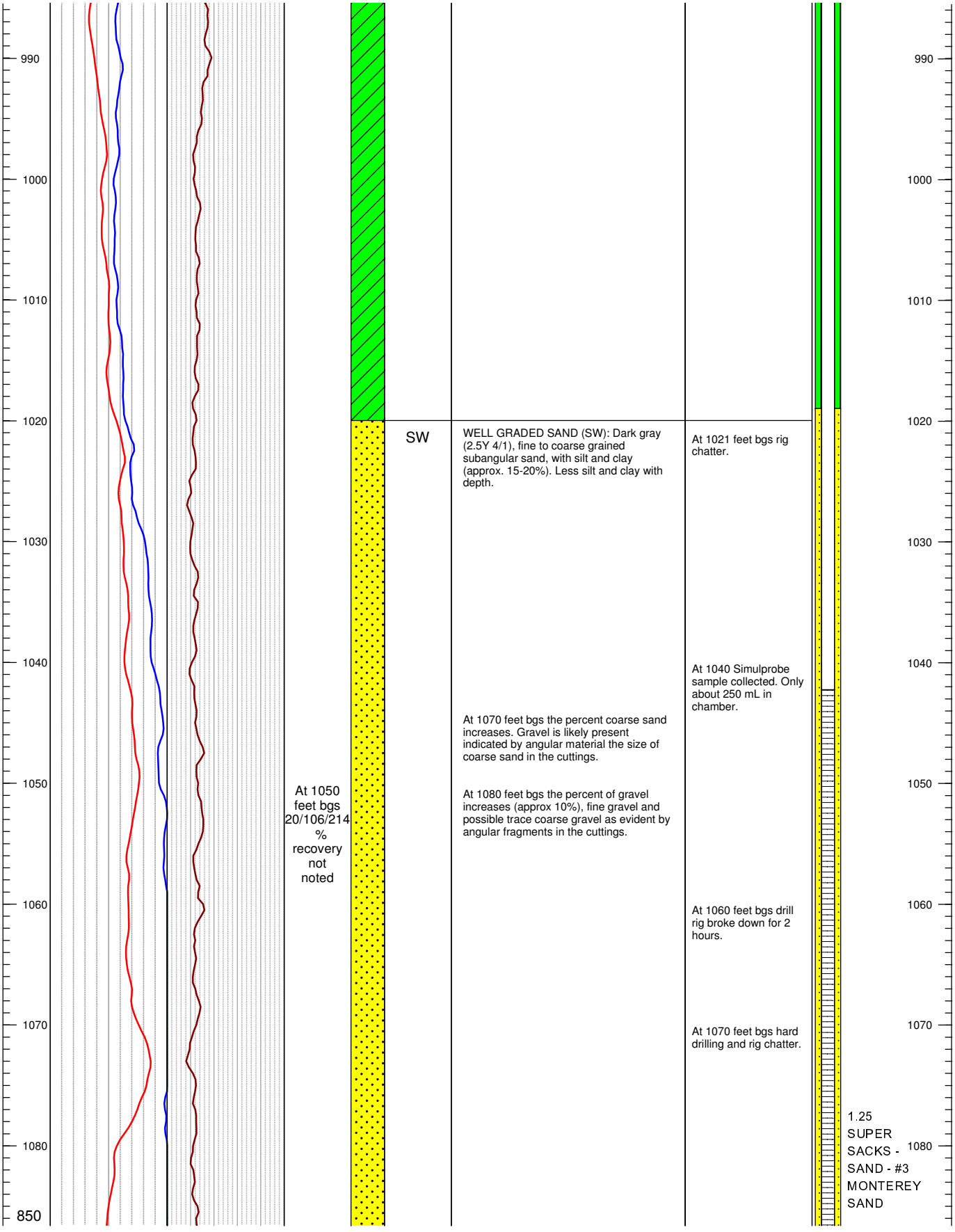

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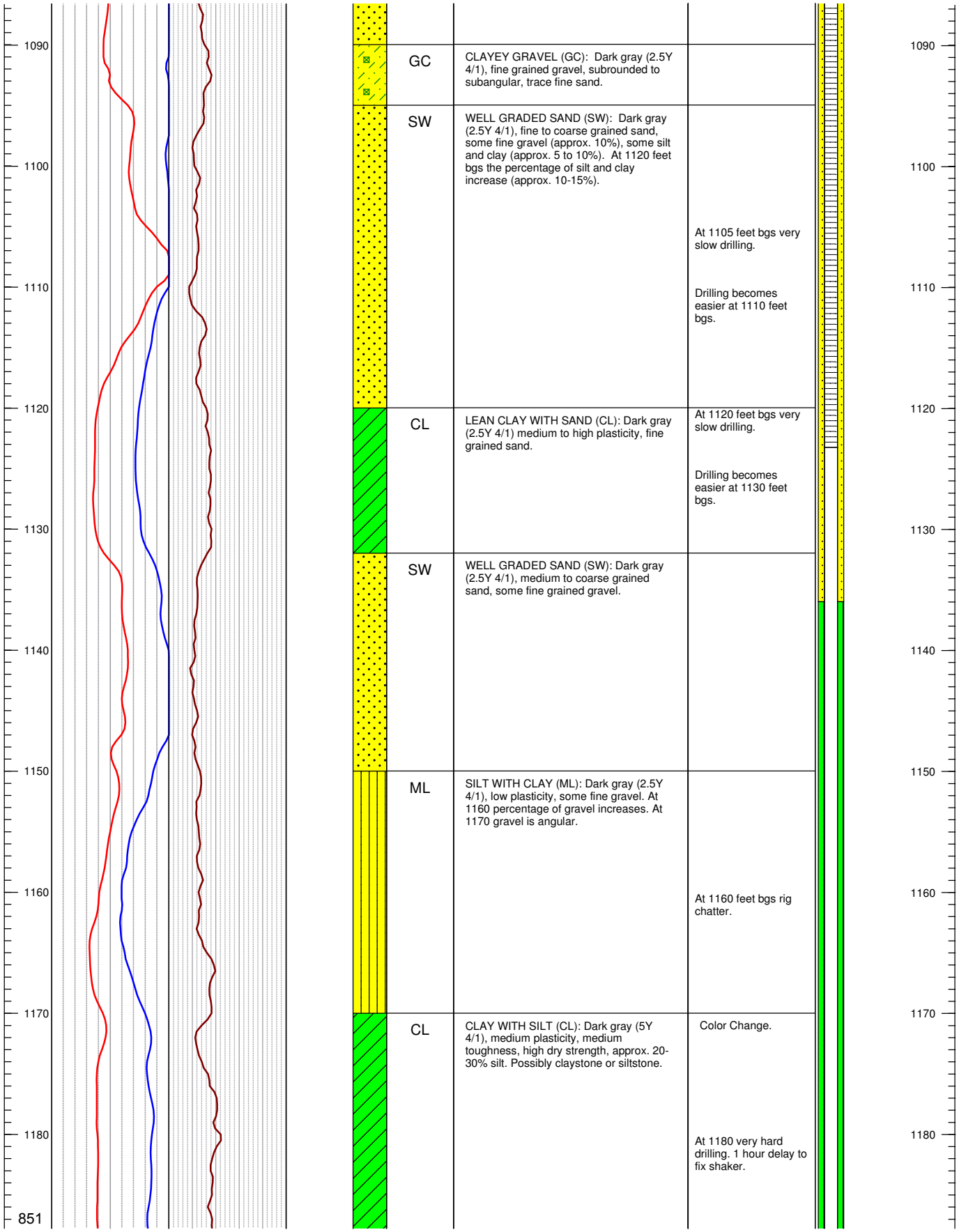

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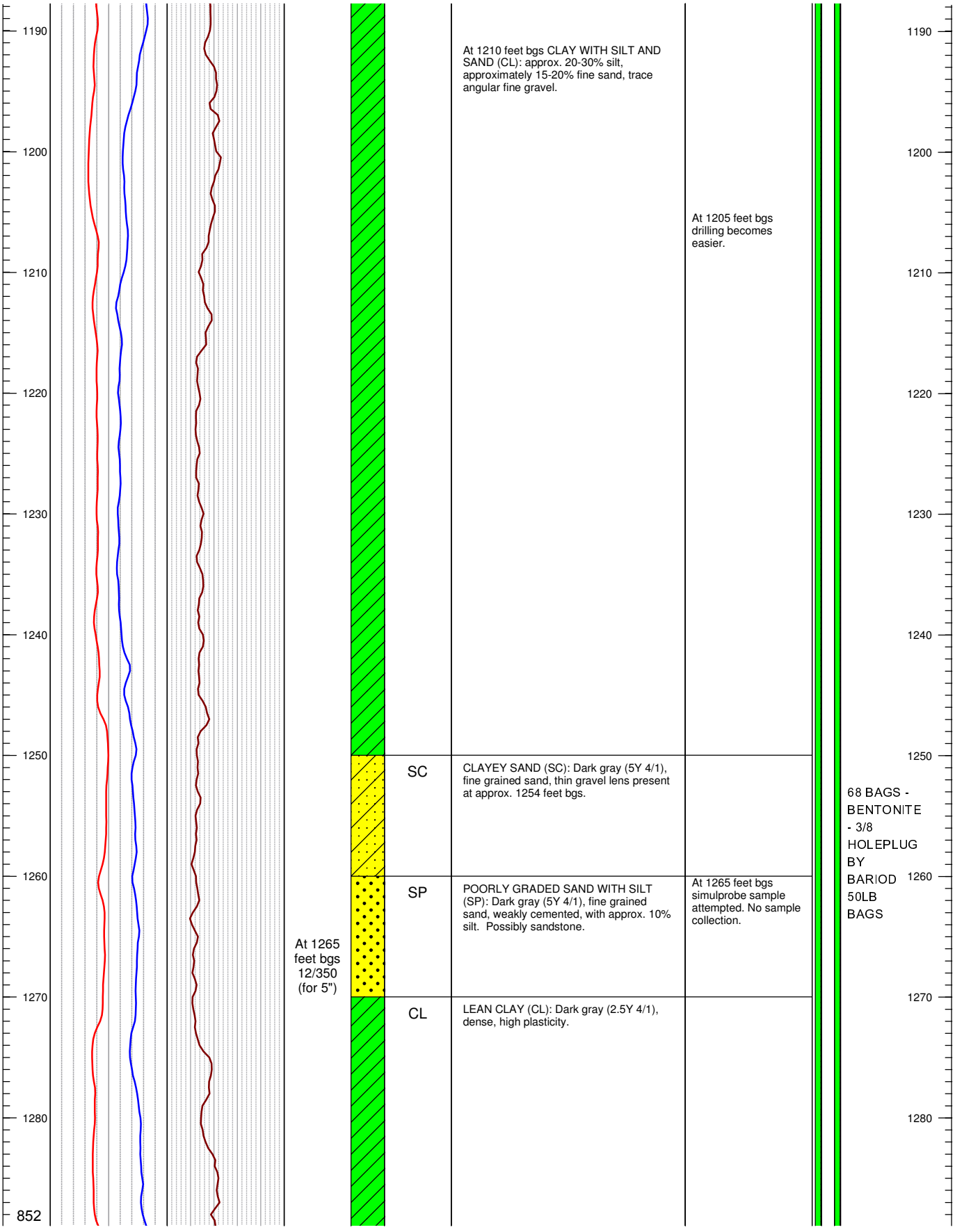

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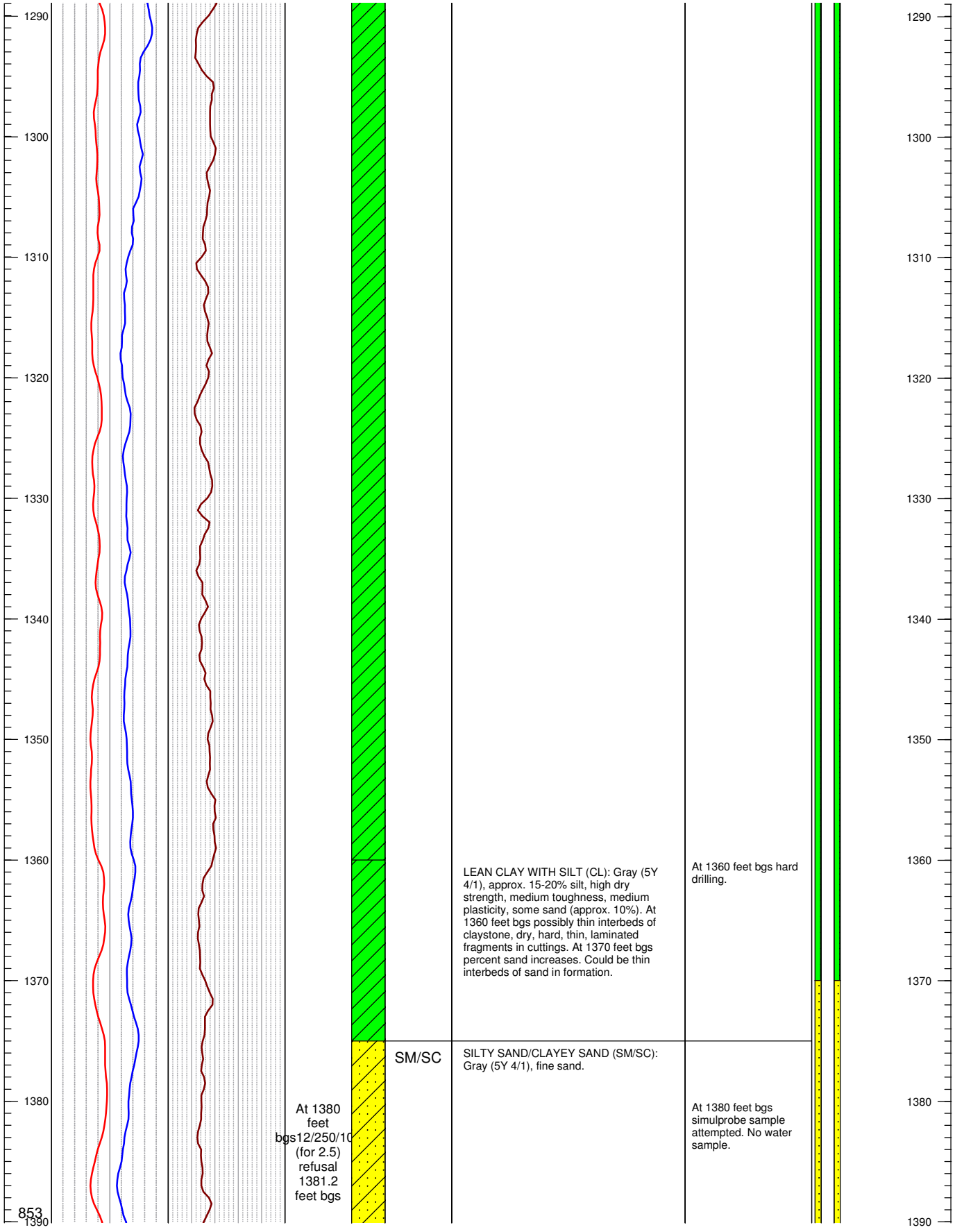

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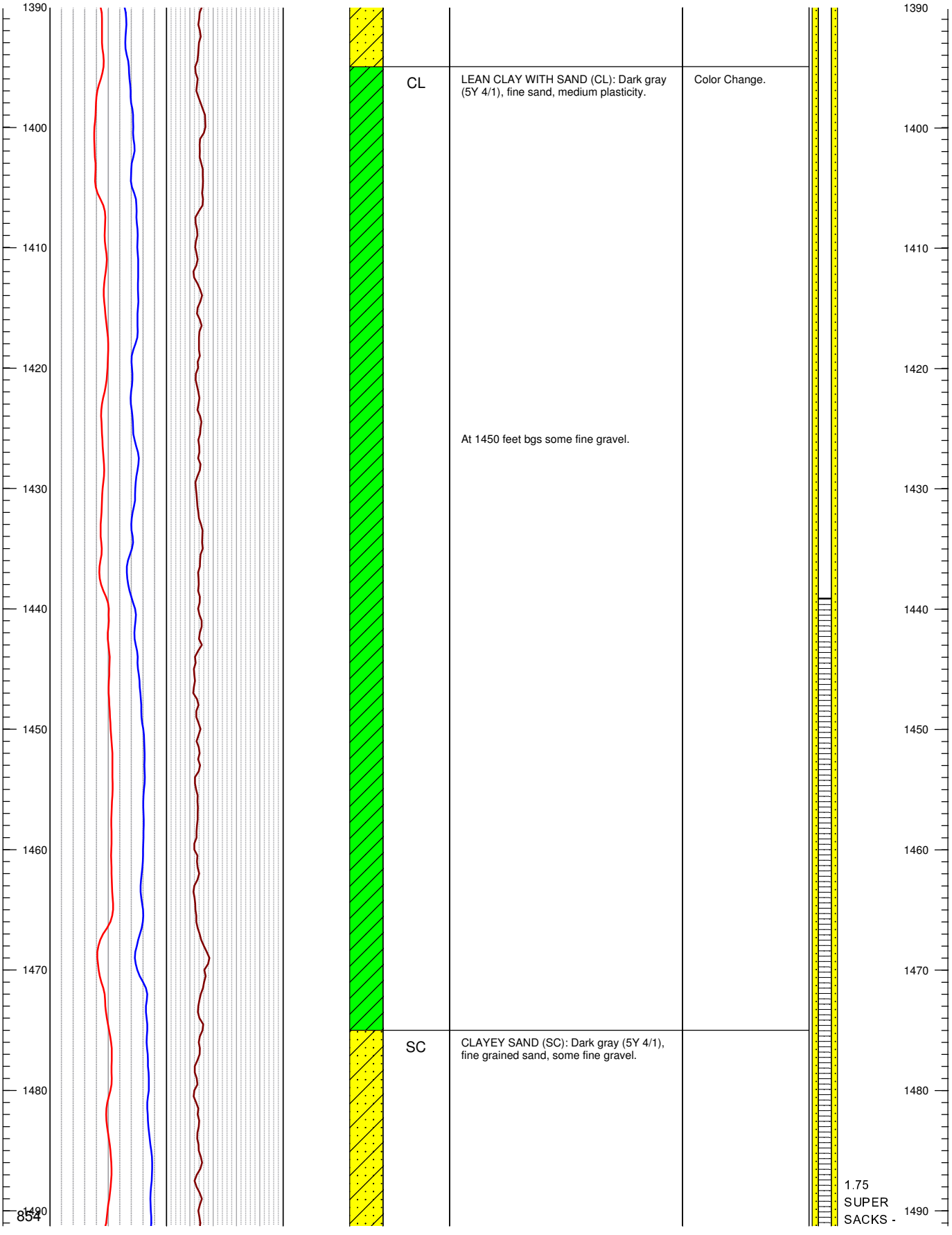

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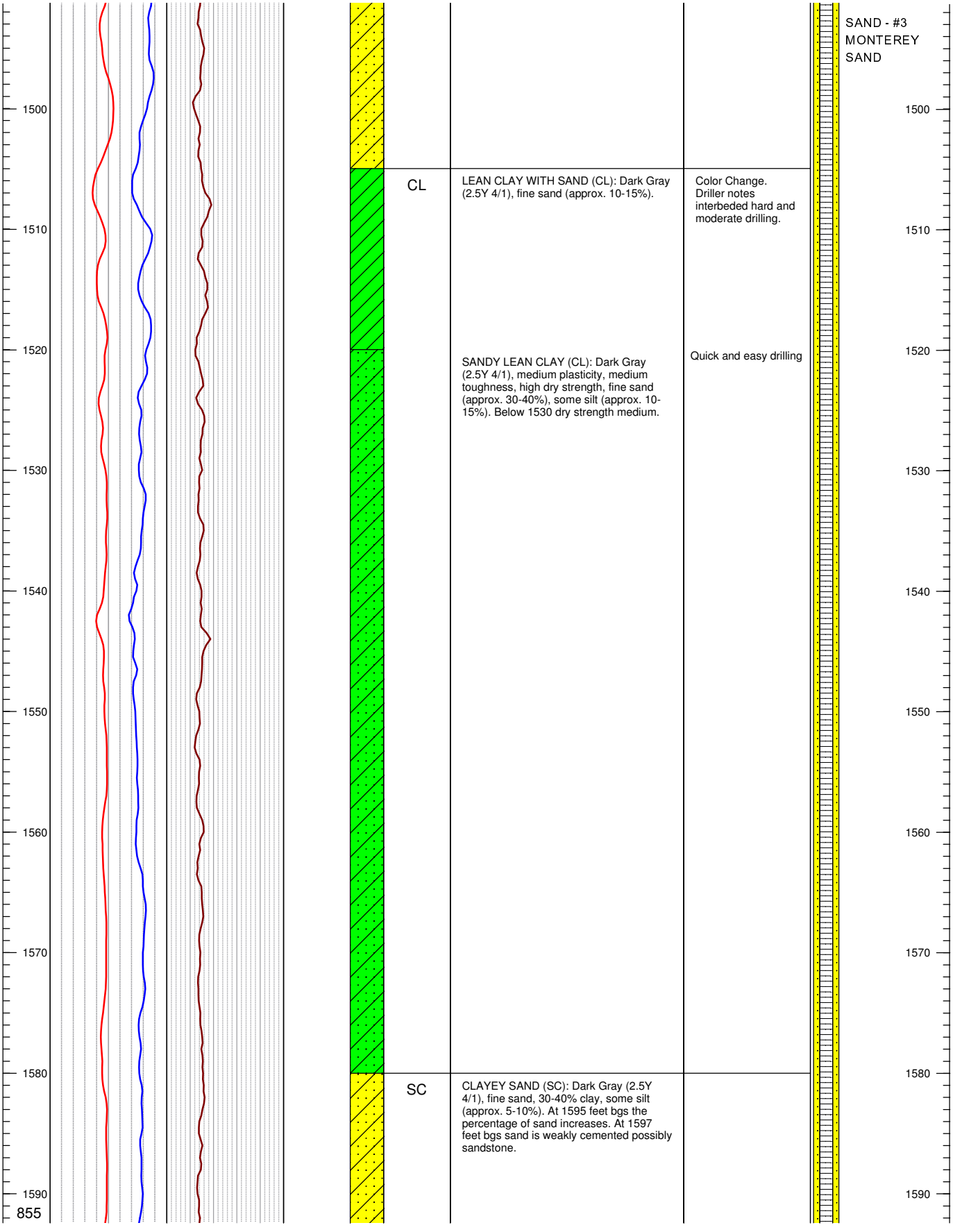

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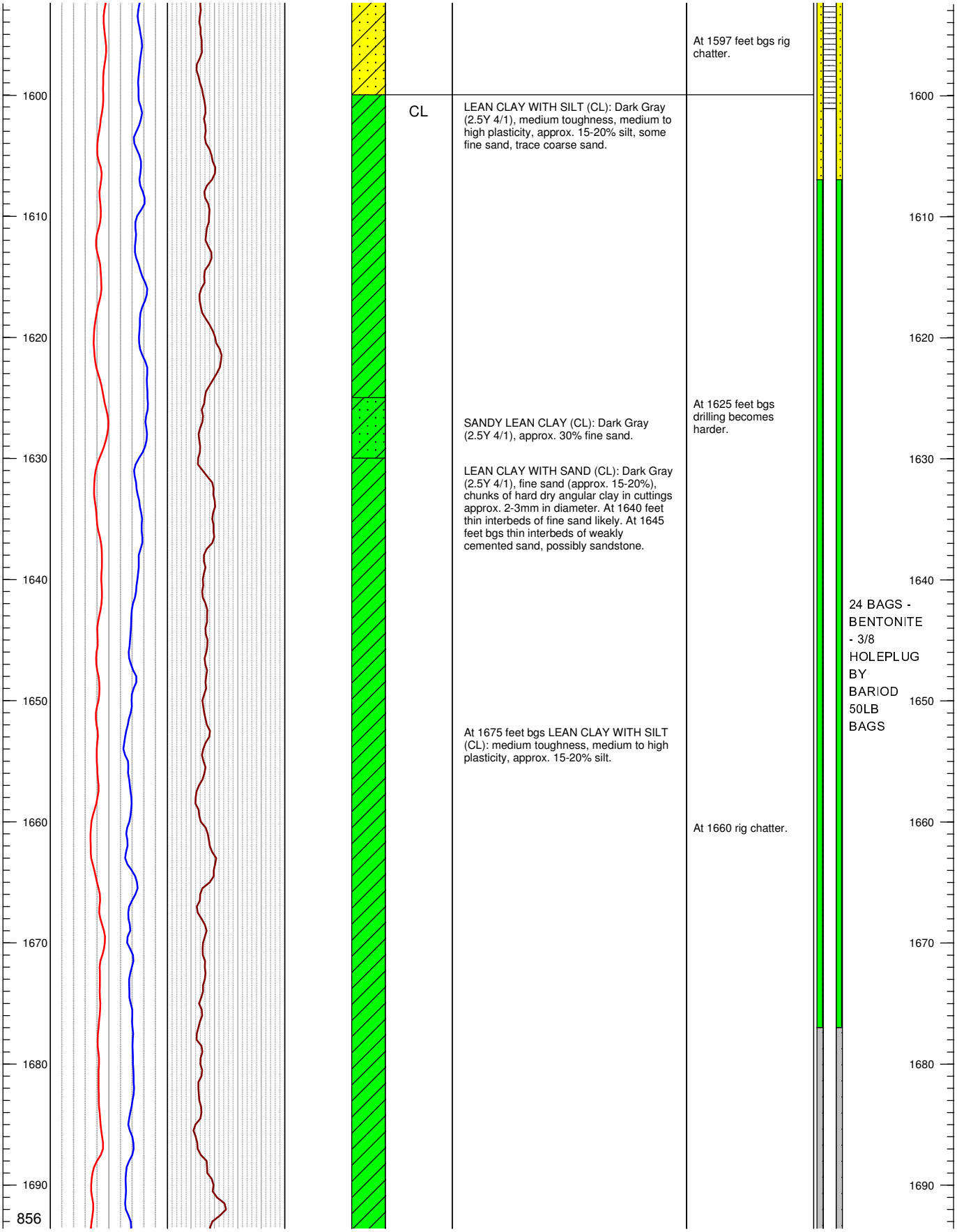

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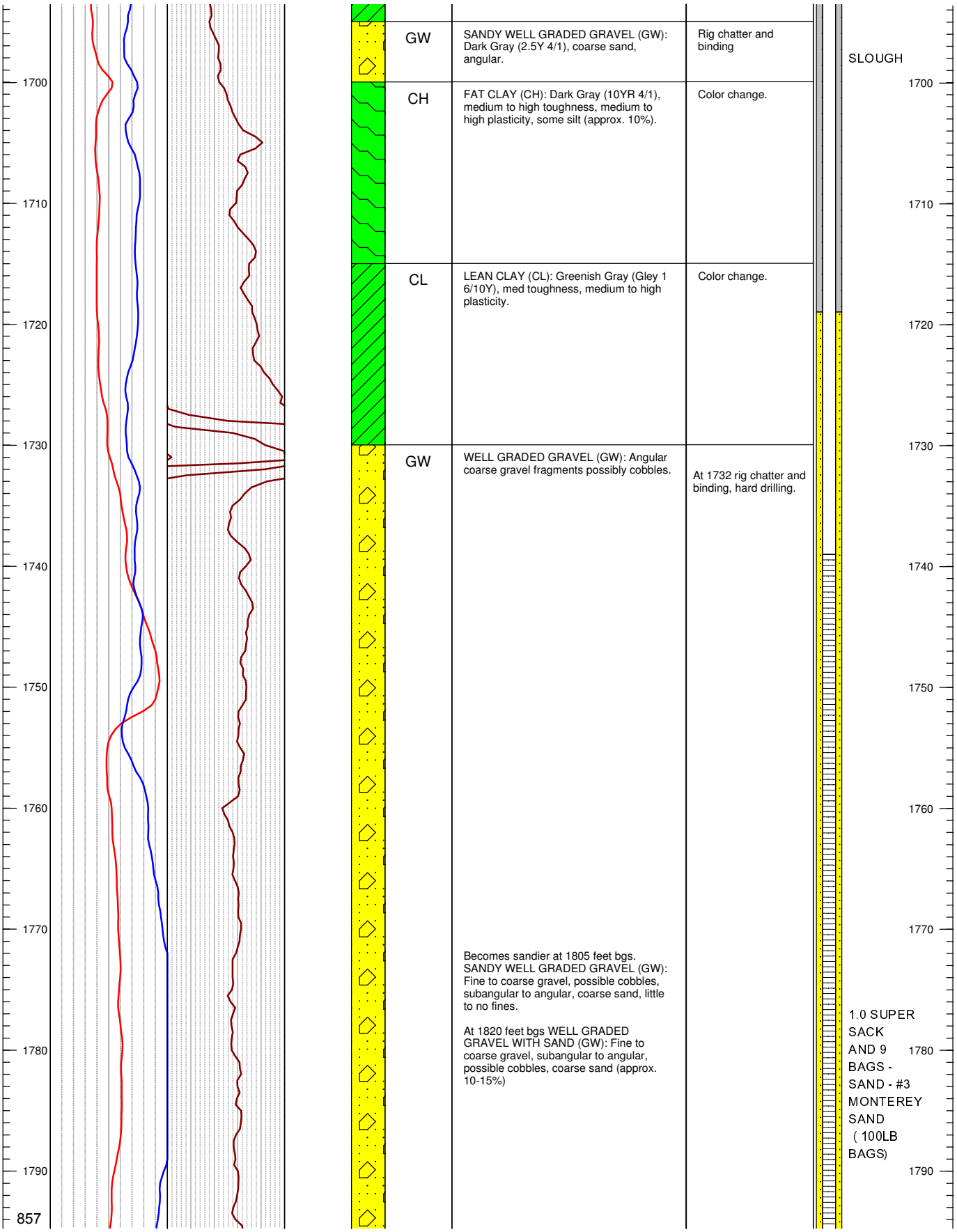

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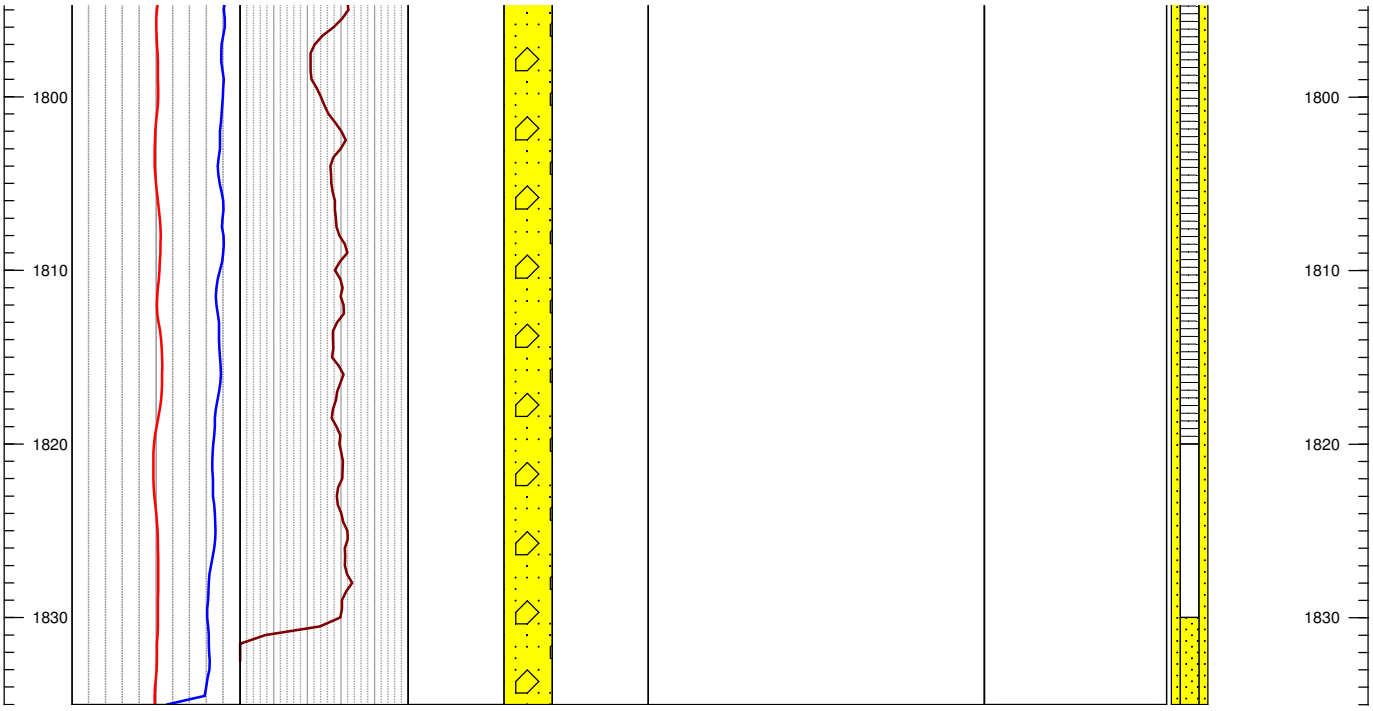


858

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in
No. 278937

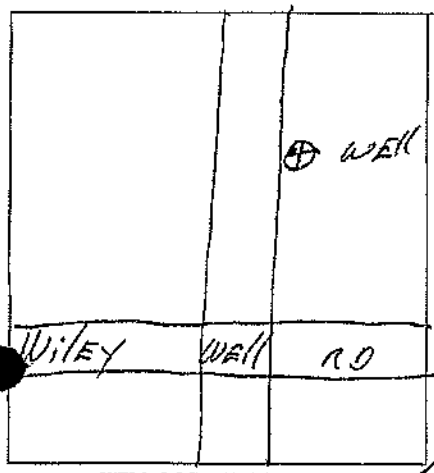
Notice of Intent No. 231149
Local Permit No. or Date 015191

State Well No. _____
Other Well No. _____

(1) OWNER: Name So. Cal. Gas Co.
Address P.O. Box 2008
City Beaumont Cal. ZIP 92223

(2) LOCATION OF WELL (See instructions):
County Riverside Owner's Well Number _____
Well address if different from above _____
Township 2-S Range 2.0 E Section 33
Distance from cities, roads, railroads, fences, etc. 2000' W-O Wiley Well Rd. No. side of I-10 Fwy

WELL LOCATION SKETCH



(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☒ Above
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size 3/4"
Diameter of bore _____
Packed from _____ ft. to _____ ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	435	4"		235	435	3/16 Holes

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth 235 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.
Method of sealing Concrete

(10) WATER LEVELS:
Depth of first water, if known 0 ft.
Standing level after well completion _____ ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom? _____
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☐ If yes, by whom? _____
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 435 ft. Completed depth 435 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	-160	Brn. Sandy Clay
160	-435	Brn. Sandy Clay with layers of sand & gravel

- 4-26-89

Work started 4-26 1989 Completed 4-28 1989

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed _____ (Well Driller)
NAME Cruse Drilling (Person, firm, or corporation) (Typed or printed)
Address 7601 Oakrim
City Bkfld ZIP 93308
License No. 278909 Date of this report 4-29-89

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

ORIGINAL

File with DWR (PAGE I)*

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 15917

Notice of Intent No.

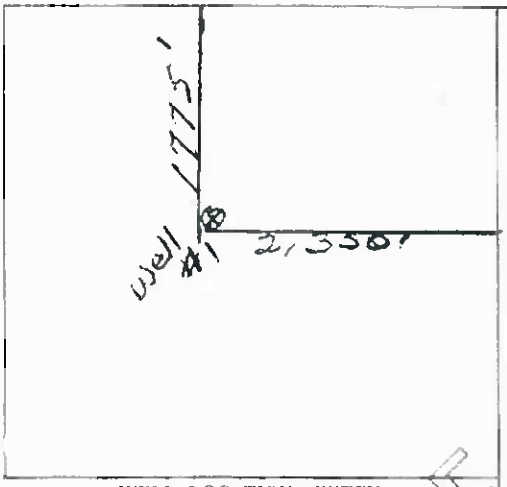
Permit No. or Date 13862

State Well No. 07S/20E-17G01S

Other Well No.

(1) OWNER: Name Calif. Dept. of Corrections
Address 150 North Broadway
City Blythe, California 92225

(2) LOCATION OF WELL (See instructions):
County Riverside Owner's Well Number 1
Well address if different from above
Township T 7 S Range 20 E Section 17
Distance from cities, roads, railroads, fences, etc.
SW ¼ of SE ¼



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well [X] Deepening [ ]
Reconstruction [ ]
Reconditioning [ ]
Horizontal Well [ ]
Destruction [ ] (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic [ ]
Irrigation [ ]
Industrial [X]
Test Well [ ]
Stock [ ]
Municipal [ ]
Other [ ]

(5) EQUIPMENT:
Rotary [X] Reverse [ ]
Cable [ ] Air [ ]
Other [ ] Bucket [ ]

(6) GRAVEL PACK:
Yes [X] No [ ] Size 4/16X8/16
Diameter of bore 26"
Packed from 230 ft. to 1200' ft.

(7) CASING INSTALLED:
Steel [X] Plastic [ ] Concrete [ ]

(8) PERFORATIONS: Stainless steel-Wirewrap screen
Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	80	30	.250	690	1190	.050
0	690	16	.250			
690	1200	10	.250			

(9) WELL SEAL:
Was surface sanitary seal provided? Yes [X] No [ ] If yes, to depth 240 ft.
Were strata sealed against pollution? Yes [ ] No [ ] Interval ft.
Method of sealing Cement Grout

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion 203' ft.

(11) WELL TESTS: CV Pump & Supply
Was well test made? Yes [X] No [ ] If yes, by whom:
Type of test Pump [X] Bailer [ ] Air lift [ ]
Depth to water at start of test 203' ft. At end of test 279.7 ft.
Discharge 1200 gal/min after 24 hours Water temperature
Chemical analysis made? Yes [ ] No [ ] If yes, by whom?
Electric log made? Yes [X] No [ ] If yes, attach copy to this report

(12) WELL LOG: Total depth ft. Depth of completed well ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	80	surface material
80	115	Fine to med. sand
115	145	Fine med. sand w/streaks of coarse sand and brown clay
145	175	Fine to med. sand w/streaks of coarse sand & brown clay
175	205	Brown clay w/thin streaks of fine s
205	240	Brown clay w/thin streak of fine to
240	290	Fine, med. to coarse sand w/ streaks of brown clay
290	330	Very fine to fine med. sand w/ streaks of brown clay
330	390	Brown clay w/streaks of fine sand
390	420	Very fine sand to med. w/large streaks of brown & grey clay
420	510	Brown, red & grey clay w/ streaks of fine sand
510	570	Grey clay w/ thin streaks of fine sand
570	635	Brown grey clay w/ thin streaksof coarse med. sand
635	670	Brown grey clay & lime w/ streak of fine med. to coarse sand
670	700	Brown grey clay & lime w/ streaks of fime med. sand
700	760	Grey & brown clay w/ large streaks of fine med. to coarse sand
760	790	Grey brown clay w/ streaks of fine med sand
790	820	Brown, red grey clay w/ streaks of shale, fine med. to coarse sand
820	910	Brown, grey, red clay w/ larger streaks of med. fine to coarse sand mixed
910	950	Brown, blue & grey clay w/ streaks of med. fine to coarse sand
950	1010	Med. fine to coarse sand w/ large streaks of brown & grey clay
1010	1040	Brown & grey clay w/ streak of fine med. sand

Work started Completed

WELL DRILLER'S STATEMENT: Continued on page 2
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)
NAME Coachella Valley Pump & Supply, Inc.
(Person, firm, or corporation) (Typed or printed)
Address P.O. Drawer QQQ
City Indio, Calif. 92202 Zip
License No. 161541 Date of this report 12/20/87

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 0816-950 7-76 50M QUAD OT OSP

860

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

(PAGE II)*

Intent No.

Permit No. or Date 13862

Do not fill in

No. 15918

State Well No. 05/20E-17G01S

Other Well No.

(1) OWNER:
Name Calif. Dept. of Correction
Address 150 No. Broadway
City Blythe, California Zip 92225

(2) LOCATION OF WELL (See instructions):
County Riverside Owner's Well Number 1
Well address if different from above
Township T 7 S Range 20 E Section 17
Distance from cities, roads, railroads, fences, etc.
SW ¼ of SE ¼

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☒
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

WELL LOCATION SKETCH

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size 4/16X8/16
Diameter of bore 26"
Packed from 230 ft. to 1200' ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	80	30	.250
0	690	16	.250
690	1200	10	.250

(8) PERFORATIONS:
Stainless steel-Wirewrap screen
Type of perforation or size of screen

From ft.	To ft.	Slot size
690	1190	.050

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 240' ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing Cement grout

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion 203' ft.

(11) WELL TESTS:
CV Pump & Supply
Was well test made? Yes ☒ No ☐ If yes, by whom?
Type of test Pump ☒ Bailer ☐ Air lift ☐
Depth to water at start of test 203' ft. At end of test 279.7 ft
Discharge 1200 gal/min after 24 hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG:
Total depth ft. Depth of completed well ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
1040	1100	Brown, grey & red clay w/ large streaks of med. fine to coarse sand
1100	1130	Fine med. to coarse sand w/large streaks of brown, grey & red clay
1130	1160	Med. fine sand w/ streaks of grey, brown, red & white clay
1160	1215	Med. fine to coarse sand w/streaks of brown clay

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)
NAME Coachella Valley Pump & Supply, Inc.
(Person, firm, or corporation) (Typed or printed)
Address P. O. Drawer 000
City Indio, Calif. 92202 Zip
License No. 161541 Date of this report Dec. 30, 1987

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 42616.050 7-76 5M QUAD OT OSP

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 218900

Notice of Intent No. _____

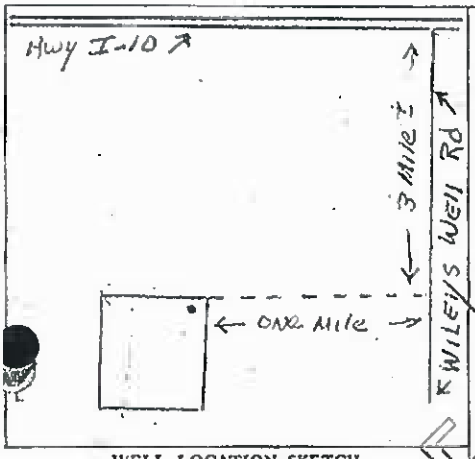
Local Permit No. or Date _____

State Well No. _____

Other Well No. _____

(1) OWNER: Name. Stewart Capital Corp.
Address 485 Madison Avenue
City New York, New York Zip 10022

(2) LOCATION OF WELL (See instructions):
County Riverside Owner's Well Number 1
Well address if different from above Wileys Well Rd. Blythe, Cal
Township 7 S Range 20 E Section 17
Distance from cities, roads, railroads, fences, etc. Approx. 15 miles W. of Blythe on I-10 to Wileys Well Rd. S. approx 2.7 miles and west one mile SE corner of propert



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☒
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size 5/16x4
Diameter of bore 20"
Packed from 0 to 1050 ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	20	20	.250
0	255	14	.250
255	1050	10	.250

(8) PERFORATIONS: Louvre
Type of perforation or size of screen

From ft.	To ft.	Slot size
750	1050	3/32

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 20 ft.
Were strata sealed against pollution? Yes ☐ No ☒ Interval _____ ft.
Method of sealing Cemented and cased

(10) WATER LEVELS:
Depth of first water, if known Ukn ft.
Standing level after well completion 163' ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom? Same
Type of test Pump ☒ Bailer ☐ Air lift ☐
Depth to water at start of test 163 ft. drawdown after test 225 ft
Discharge 800 gal/min after 24 hours Water temperature 110
Chemical analysis made? Yes ☒ No ☐ If yes, by whom? Environmental Engr. Lab San Diego
Was electric log made? Yes ☐ No ☒ If yes, attach copy to this report.

(12) WELL LOG: Total depth 1070 Depth of completed well 1050 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	60	Fine to coarse sand with rocks and cobbles
60	160	Sandy clay with rocks
160	900	Sandy clay - color range from brown to blue to grey
900	1070	Claey sand with some rocks and cobbles - over all color grey

Work started June 1981 Completed July 27 1981

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED _____ (Well Driller)

NAME Cain Drilling & Pump Co. Inc.
(Person, firm, or corporation) (Typed or printed)
Address P.O. Box 603
City Valley Center, California Zip 92082
License No. 328287 Date of this report 7/28/81

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

TLSN 3 – Fire Prevention Activities

Verification: During the first 5 years of plant operation, the project owner shall provide a summary of inspection results and any fire prevention activities carried out along the right-of-way and provide such summaries in the Annual Compliance Report.

TVMP Inspection

Genesis Solar

2014 Annual One Ground Inspection
(Initial TVMP Inspection)

October 15th 2014
FPL Power Delivery, Robert Lozano

Genesis Solar 230kV

Vegetation Management Condition Assessment

Inspected by: Robert Lozano
Patrol Date: 10/15/14
Patrol Time: 12 hours
Patrol Distance: 14.8 miles
Next Patrol Due by: 2Q 2015

October 2014 Observation Summary (Documented in TVMS2)
All conditions of the corridor found to be compliant with NERC FAC-003 standards at time of inspection.

Remaining 2015 Action Plan:
Annual 1 TVMP Inspection to occur within April 2015.

VEGETATION MANAGEMENT PROGRAM MANUAL

Contents

1 Introduction

This standard shall apply to all transmission lines operated at 200 kV and above and to any lower voltage lines designated by a Regional Entity as critical to the reliability of the electric system in the region.

2 Objective

The objective of this vegetation management program is to establish an integrated vegetation management program on transmission right-of-way in the NextEra Energy System to improve the reliability of the electric transmission systems by preventing outages from vegetation located on transmission rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW, maintaining clearances between transmission lines and vegetation on and along transmission ROW.

The basic philosophy of the program is to target only those plants that are incompatible with FPL's use of the land with the following objectives:

- Transmission Reliability – the reliability of electrical service through vegetation control regardless of accessibility or workability.
- Minimizing Fire Hazards - through first identifying potential problems and then by reducing fuel levels to acceptable limits.
- Compliance - ensuring that FPL is compliant with all governmental vegetation related regulations and restrictions. Adherence to NERC Standard FAC 003-3 Vegetation Management and state statutes is paramount.
- Resource Management - the ability to control resources by identifying work load. Treatments will be applied only on an as needed basis, thus allowing allocated resources to be utilized efficiently. As a result, work load and resources will be balanced.
- Improving/Maintaining Accessibility - promoting accessibility to structures and right-of-way by controlling vegetation on and around structure pads and patrol roads where practical.

3 Definitions

- **Right-of-Way (ROW):** The corridor of land under a transmission line(s) needed to operate the line(s). The width of the corridor is established by engineering or construction standards as documented in either construction documents, pre-2007 vegetation maintenance records, or by the blowout standard in effect when the line was built. The ROW width in no case exceeds the Transmission Owner's legal rights but may be less based on the aforementioned criteria. Inspector: Individual assigned with the responsibility of evaluating clearances in the Transmission Right of Way..
- **Clearance 1:** The minimum distance is determined by the distances identified in Table 2 of ANSI Z133.1-2012 (note that average species growth rate is added to Table 2 for span lengths of 1320' or greater).
- **Trigger Distance:** The distance between the conductor and vegetation in real time that initiates implementation of a control method (ANSI Z133.1, table 1). Vegetation inside the trigger distance will initiate the imminent threat process.
- **Imminent Threat:** Is a tree encroaching on the conductor at a distance of less than the Trigger Distance, or is a tree that could reasonably be expected to fall into or make contact with the transmission electrical facilities within the next 24 hours.

- **MVCD:** Minimum Vegetation Clearance Distance.
- **VEL:** Vegetation Encroachment Limit is calculated by adding MVCD to sag/blowout. This calculation is used to drive work schedule where greater than trigger distance (appendix 2).

4 System Structure/Work Prescriptions

4.1 Geographical Structure

The transmission system is first organized by the Transmission Management Areas. Within those areas the corridors are identified. A corridor is a single line circuit or several lines circuits running parallel and organized in such a manner that can be efficiently managed together. Whenever possible the corridors should begin and end at substations. The corridor should be easily identifiable and follow normal patrol patterns. Corridors are the largest management unit in a transmission area.

The corridors are subdivided in to stands. A stand is the basic management unit, generally longer than a span length, represented by an area of vegetation sufficiently uniform in species, composition, age, condition and/or land use to manage as a unit. For the purpose of these procedures the Florida Land Use Identification System (FLUX) is used. The stand is the basic management unit.

Individual stands are identified and quantified for the ROW. The stand is then field inventoried to develop a description (identifying stand types and use, species composition, acreage, density, height, growth, fire hazard, and accessibility) and prescription (prescribing an individual, site specific vegetation control method based on the stand description and a date).

4.2 Land Use Description

The description identifies the location, classifies the type of land use (Florida Land Use Identification System or FLUX), quantifies the size and identifies other attributes that would affect management of the land.

4.3 Practices and Prescriptions

NextEra Energy's vegetation management practices represent a system of managing plant communities thru identifying compatible and incompatible vegetation. The evaluation, selection and implementation of the most appropriate control method or methods to achieve set objectives are taken into consideration. The choice of control method or methods are based on environmental impact and anticipated effectiveness, along with site characteristics, security, economics, current land use and other factors. These methods include, but are not limited to pruning, removal, herbicide application and mowing.

Each stand shall have a prescription. The prescription defines what work activity is scheduled to meet the objectives of the plan, quantifies the work and sets an estimated schedule of when the work should be done.

Our methods / prescriptions are defined as follows:

- Remove Trees - To cut a tree or shrub (4" or greater at DBH, 5" or greater stump) at ground level and treat with the appropriate herbicide where necessary to prevent re-sprouting. Unit is number of trees.
- Mow - normal - Mow, cut or chop grass and brush in right-of-way to a height of less than six (6) inches. Brush diameter in right-of-way is less than two (2) inches. Unit is number of acres.
- Mow - heavy - Mow, cut or chop grass and brush in right-of-way to a height of less than six (6) inches. Brush diameter in right-of-way is greater than two (2) inches. Unit is number of acres.
- Mow - wet - Mow, cut or chop grass and brush in right-of-way to a height of less than six (6) inches. The average soil in right-of-way is sufficiently wet to require low ground pressure equipment (ground pressure ratio of less than 4 pounds per square foot). Unit is number of acres.
- Mow - Specialized – Vegetation clearing using unique methods with specialized equipment. Unit is number of acres.
- Mow Pads & Roads - Mow, cut or chop grass and brush Thirteen (13) feet on each side of the center line of the road or structure to a height of less than six (6) inches. Unit is number of acres.
- Roll ROW – Roll the grass down using the tracks and a chopper (under wet conditions).
- Trim Trees to Standard - To remove branches from a tree in accordance with ANSI A300 standards as they apply to utility pruning.. Unit is number of trees.
- Spot Treat Light - Application of an approved herbicide to the target species on a plant by plant basis. The application shall achieve a 90% kill after three months of all target species. Care should be taken to minimize over spray and drift so as to retain the native plant community. Excessive kill of non-target species will not be permitted. Target species density is less than two hundred (200) stems per acre or less than thirty percent (30%) of the area of the span. Unit is number of acres.
- Spot Treat - heavy - Application of an approved herbicide to the target species on a plant by plant basis. The application shall achieve a 90% kill after three months of all target species. Care should be taken to minimize over spray and drift so as to retain the native plant community. Excessive kill of non-target species will not be permitted. Target species density is greater than two hundred (200) stems per acre or greater than thirty percent (30%) of the area of the span. Unit is number of acres.
- Broadcast Treat - Application of a herbicide to the entire right-of-way to achieve a species shift in the right-of-way diversity (necessary when one or two incompatible species dominate the right-of-way) . Contractor shall achieve a 90% kill after three months of those target species. The process of broadcast spray recognizes that the entire right-of-way will brown-out. Unit is number of acres.
- Clear and Treat Brush - Remove woody species and apply herbicide to stumps or basal treat stems from around poles, guys, fence right-of-ways, ditch banks as directed. Unit is number of acres.
- Critical Trim - A tree or group of trees that poses an increased risk to the system and must be trimmed or removed within a short period of time. These trees are directly related to reliability. Unit is number of trees.

- TGR - Apply an approved tree growth regulator to a tree in order to slow its growth. Results should be evident within six (6) months and last for three years. Unit is number of trees.
- Pad Treatment - Spray structure pad to remove woody species for a minimum distance of ten (10) feet around the structure and one and one-half feet (1.5) around down guys. The area may vary. Unit is number of acres.
- Chop right-of-way - Chop right-of-way to a height of less than eighteen (18) inches. Unit is Number of acres.
- Linear Trim - To trim specifically identified spans of trees of high enough density that it is not practical to obtain a tree count in advance of trimming. In many cases, there will be some trees that require removal during the linear trimming process. It is not necessary to document the count of these removals during linear trimming because linear trimming is based on length of work (not tree counts). Unit is based on linear footage for each side of right-of-way.
- Aerial Spray – To broadcast treat using helicopters or fixed wing aircraft.
- Critical Removal – To remove a tree that is designated as critical (tree must be removed out of cycle and on short notice).
- Imminent Threat – Removal or Tree Trim to Standard of a tree that has been designated as an Imminent Threat.
- Widen ROW Edge – To extend the existing ROW wall beyond the point that it is currently cleared.
- Restricted Work – Vegetation work being done under restrictions placed on the site or job by a governmental agency.
- Remove Vines – The severing of vines at the base of the pole or above ground line and treating them with the appropriate approved herbicide. (Under no circumstances are vines to be removed from the pole if they are closer in elevation than ten (10) feet below energized facilities).
- Tree Group Removed – Trees removed and treated with appropriate herbicide in a specified area. (trees counted)
- Tree Group Trim – Trees trimmed to standard in a specified area. (trees counted)
- Clear Area – Vegetation removed in a specified area. (measured by area)
- Trim Area – Vegetation in a specific area that is trimmed to standard. (measured by area)
- Special – Unique vegetation work that is not currently in the prescription List.

5 Inspections

5.1 ROW Inspection Schedule (NERC Standard FAC-003-3, Requirement R6)

Generally, scheduled work will be determined by the inspection process. Routine inspections will normally occur on the ground. NextEra Energy may elect to utilize aerial inspections or LiDAR. All transmission circuits subject to FAC-003-3 are inspected at minimum annually with no more than 18 months between inspections.

The timing and number of inspections is flexible in order to respond to changing conditions such as fuel loading from drier than normal conditions. Other conditions resulting in adjusted

schedules could include heavy rain falls, high winds, landowner intervention and tree mortality caused by disease outbreaks or insect infestations.

Any change to the inspection schedule must be approved by the regional lead. Approval can be granted provided there is sufficient knowledge of the line that no vegetation outage would be expected, and timeframe does not exceed annual with no more than 18 months between inspections.

5.2 Inspection Purpose

- To inventory vegetation conditions that may impact the safe reliable operation of the transmission line.
- To prioritize work appropriate to species and site specific conditions.
- To adjust schedule for vegetation that has grown faster than predicted and prevent encroachment of MVCD area.

5.2.1 Inspection Elements

The inspections will identify the following:

1. Work prescriptions (sec 4.3) that are covered by this manual and any potential violation of FAC-003-3 requirements.
2. Any trees approaching the Trigger Distance or VEL (whichever is greater, appendix 2), taking into consideration species, site specific conditions, local climate conditions and the maximum sag and sway of the line.
3. Trees posing a fall-in threat should be examined to determine if they are danger trees.
4. Tree hazards caused by man that pose a risk of fall-in.
5. Additionally a review of completed routine annual maintenance will be documented

5.3 Inspection Records

Any observed conditions requiring work, which are identified through the inspection process, will be recorded and stored electronically. The inspection records will identify and prioritize work based on the risk to the line reliability. Each inspection shall be documented electronically with the date completed and the name of the Inspector.

5.4 Clearances at Time of Inspection (NERC Standard FAC-003-3, Requirement R2.1)

When inspecting lines and establishing prescriptions (work type, date needed, quantity) the arborist should plan work to meet one of the following conditions.

Below the line:

1. Prescribe work to maintain the trees below the reference height (generally fourteen (14) feet) either by eliminating all vegetation capable of growing greater than the reference height or by trimming trees below the reference height minus the expected growth before the next cycle.

Beside the line:

2. Prescribe work to maintain vegetation on each side of the line conductors to edge of the easement or other legal right of way to Clearance 1.

5.4.1 Trigger Distance and Vegetation Encroachment Limit

NextEra Energy Vegetation Management maintains vegetation to prevent outages and encroachment into MVCD on all lines 200KV and above. The following must be considered when inspecting and prescribing work so that the MVCD is never encroached:

1. Elevation
    a. (1) Elevation is determined using topographical maps, siting information, and real time elevation detection (i.e. GPS technology). We manage lines in locations throughout the United States (though the majority is in Florida at an elevation of approximately 153 ft above sea level)
2. Sag and Sway potential of the line
    a. Sag and Sway potential of the line as measured in typical constructed span lengths is provided by NextEra Energy Engineering.
3. Growth and bend-in potential of the vegetation
    a. Growth and bend-in potential are gauged through the course of patrol/inspection by our Arborists who are trained in the identification and plausible growth and bend-in potential of vegetation

At the time of inspection our Arborists take into account these 3 variables when utilizing the range finder to help enforce the Trigger Distance and VEL, whichever is greater. This serves as a vegetation encroachment buffer against MVCD issues.

- The Vegetation Encroachment Limit (VEL) is utilized to further protect the facilities from MVCD encroachment by adding sag and blowout to MVCD. VEL is used to guide work schedule where greater than trigger distance
- The Trigger Distance is the distance above and beyond MVCD that is utilized as a layer of early detection/prevention against vegetation encroachment into MVCD. Anything that is observed encroaching on the Trigger Distance or that, under the expert opinion of the Arborist, shows potential for encroachment under other ambient conditions (such as bend-in potential) triggers the Imminent Threat process.

.

6 Annual Work Plan (NERC Standard FAC-003-3, Requirement R3)

6.1 Annual Plan

During the budget process NextEra Energy Vegetation Management will review in the database the most current inspection and data collected on the condition of vegetation in the ROW. Work shall be prioritized and scheduled according to the following specifications:

- Clearance 1 shall be achieved by reducing all site specific variables of vegetation to a non-risk level within the ROW, complying with ANSI A300, Part 1 and Part 7, and ANSI Z133.1.
- Maintains the requirements of this manual, including Clearance 1 and MVCD encroachment.
- Reduces risk of trees falling into the corridor from outside of the ROW.
- Local site specific variables include operating voltage, appropriate vegetation management techniques, fire risk, reasonably anticipated tree and conductor movement, species types and growth rates, species failure characteristics, local climate and rainfall patterns, line terrain and elevation, location of the vegetation within the span, worker approach distance requirements, and protected species.
- Any trees approaching the VEL, taking into consideration species, site specific conditions, local climate conditions and the maximum sag and sway of the line will be mitigated to avoid violating MVCD.
- Allows the appropriate lead times for resolving permits, permissions, and resources.
- Is adjustable to accommodate changing conditions during implementation.
- All changes will be documented in the Vegetation Management Annual Plan (VMAP).

Annually NextEra Energy Vegetation Management will designate the database batches as the Annual Work Plan for the upcoming year. Periodically the plan will be reviewed and adjusted for changing condition of the vegetation. Deletion of entire batches will be documented. Individual prescriptions can be adjusted or changed based on the field conditions.

6.2 Work Specifications

Work specifications will be developed for each vegetation contract or job. The specifications will be consistent with Clearance 1 set forth in this document and will comply with the objectives of FAC 003-3 in the context of the specific prescription in the Vegetation Management Annual Plan. The specifications should take into consideration those standards set forth in the following documents:

- ANSI Z133.1-2006 Safety Requirements for Arboricultural Operations.
- OSHA 1910.269 Electric Power Generation, Transmission and Distribution.
- ANSI A300 (Part 1) 2006 Pruning for Tree Care Operations—Tree, Shrub and Other Woody Plant Maintenance—Standard Practices
- ANSI A300 (Part 7) 2006 IVM Tree, Shrub, and Other Woody Plant Maintenance—Standard Practices (Integrated Vegetation Management a. Electric Utility Rights-of-way)
- Integrated Vegetation Management Best Management Practices, Companion publication to ANSI A300 Part 7.

The Vegetation Management Annual Plan for the current year is maintained in the database.

The methods utilized for vegetation management at NextEra Energy are further described in NextEra Energy contract specifications. Specific work specifications will be developed as work is

bid or assigned. The specifications will be in compliance with the standards set forth for Clearance 1 and MVCD of this document.

The Annual Plan and schedule shall be maintained by NextEra Energy personnel. Work and status updates by NextEra Energy and contract personnel shall be kept current in the database.

6.3 Implementation (NERC Standard FAC-003-3, Requirement R7)

Tracking – Monthly, NextEra Energy Vegetation Management will review the progress of inspections, and work scheduled in the Annual Work Plan. Resource movements and schedule adjustments will be made as necessary to ensure work plan objectives are met. The Annual Plan completion is due at the end of the calendar year.

Quality Assurance and Auditing - Upon completion the contractor will certify the work as completed to the specification. In addition the work is inspected documented in the database by NextEra Energy employee or representative.

Documentation - The work plan is maintained in the database. Reports are monitored to ensure work plan is complete and exceptions are noted. Archiving the documentation in the database occurs and ends the process**.**

7 Mitigation Measures (NERC Standard FAC-003-3, Requirement R5)

Clearance 1 requirements define the expected extent of clearing. If the Clearance 1 specifications cannot be achieved at the time of scheduled maintenance, NextEra Energy shall implement mitigation measures. These measures shall be documented as prescriptions or inspections. These may include short prescription cycles or more frequent inspections to monitor the risk to the system.

Restrictions on scheduled work may include refusals by property owners to access or perform work, orders to stop work by local authorities, or restrictions by federal and state agencies. These restrictions will be brought to management for action. While negotiations or legal action with governmental entities or landowners is under way the field arborist will manage the restriction to prevent encroachment into MVCD.

7.1 Communication of Imminent Outage Threat (NERC Standard FAC-003-3, Requirement R4)

NextEra Energy shall communicate vegetation conditions that present an imminent threat to the appropriate control center.

Immediate Communication Requirements for NextEra Energy Employees and Contractors:

When a vegetative condition presenting an imminent threat is discovered, it will be promptly reported to the field arborist, Production Manager, Area Manager, Operations, Lead or the designated person responsible for handling emergencies. The threat will be verified by NextEra Energy Transmission Vegetation Management or area operations. After the Imminent Threat is

verified, the verifying employee will establish communications with the appropriate control center and area operations. In that communication they will jointly formulate a plan and schedule to remove the risk safely and at the least risk to the system.

Action:

After the appropriate personnel are apprised of the imminent threat, action will be delegated to appropriate personnel to remediate the emergency as quickly as practical. Safety and system reliability shall be the guiding factors for any plan of action. Actions may reduce line load or switch the line out of service until the vegetative threat has been removed.

Documentation:

The Arborist will maintain a detailed log of the event to track the work until completion. The Imminent Threat reporting will be documented and maintained by NextEra Energy Vegetation Management.

8 Reporting of Transmission Line Outages Caused by Vegetation (NERC Standard FAC-003-3, Requirement R2)

8.1 Quarterly Reporting to the Regional Entity (RE)

NextEra Energy shall report at least quarterly to the RE, sustained transmission line outages determined by NextEra Energy to have been caused by vegetation. (Some RE's require monthly reporting). Any outages occurring should be reviewed against the requirements for reporting in R 2 of FAC 003-3 of the NERC Standards.

If outages have occurred that meet the requirements for reporting, NextEra Energy Vegetation Management will review with the corporate compliance group prior to submission. Data required for the report is listed in Appendix 4 Required Information for Reporting.

8.2 Annual Document Review

Annually NextEra Energy Vegetation Management shall review the documents supplied by the NextEra Energy Compliance Manager. Based on a review of the inspections, the documentation of the completed vegetation Annual Work Plan, and a review of the Transmission Vegetation Manual NextEra Energy Vegetation Management shall certify that the NextEra Energy transmission system is in compliance with the NERC Standard FAC 003-3 as required by each RE.

Revision	Date	Author(s)	Description
1.0	6/18	Steve Jolly	Finalized Structure/Content
2.0	8/18	Steve Jolly	Added references to appendices and NERC requirements

Clearance 1 Minimum Distance for FAC-003-1 regulated Transmission Lines. The distances listed below are the minimum distances to be achieved at the time of scheduled vegetation maintenance work.

Table 2. Minimum approach distances to energized conductors for persons other than qualified line-clearance arborists and qualified line-clearance arborist trainees.

Nominal voltage in kilovolts (kV) phase-to-phase *	**Distance**	
	feet-inches	meters
0.0 to 1.0	10-00	3.05
1.1 to 15.0	10-00	3.05
15.1 to 36.0	10-00	3.05
36.1 to 50.0	10-00	3.05
50.1 to 72.5	10-09	3.28
72.6 to 121.0	12-04	3.76
138.0 to 145.0	13-02	4.00
161.0 to 169.0	14-00	4.24
230.0 to 242.0	16-05	4.97
345.0 to 362.0	20-05	6.17
500.0 to 550.0	26-08	8.05
785.0 to 800.0	35-00	10.55

* Exceeds phase to ground. Per 29 CFR 1910.333

Appendix 3

FAC-003 — TABLE 2 — Minimum Vegetation Clearance Distances (MVCD)[16]
For **Alternating Current** Voltages (feet)

(AC) Nominal System Voltage (KV)	(AC) Maximum System Voltage (kV)[17]	MVCD (feet) Over sea level up to 500 ft	MVCD (feet) Over 500 ft up to 1000 ft	MVCD feet Over 1000 ft up to 2000 ft	MVCD feet Over 2000 ft up to 3000 ft	MVCD feet Over 3000 ft up to 4000 ft	MVCD feet Over 4000 ft up to 5000 ft	MVCD feet Over 5000 ft up to 6000 ft	MVCD feet Over 6000 ft up to 7000 ft	MVCD feet Over 7000 ft up to 8000 ft	MVCD feet Over 8000 ft up to 9000 ft	MVCD feet Over 9000 ft up to 10000 ft	MVCD feet Over 10000 ft up to 11000 ft
765	800	8.2ft	8.33ft	8.61ft	8.89ft	9.17ft	9.45ft	9.73ft	10.01ft	10.29ft	10.57ft	10.85ft	11.13ft
500	550	5.15ft	5.25ft	5.45ft	5.66ft	5.86ft	6.07ft	6.28ft	6.49ft	6.7ft	6.92ft	7.13ft	7.35ft
345	362	3.19ft	3.26ft	3.39ft	3.53ft	3.67ft	3.82ft	3.97ft	4.12ft	4.27ft	4.43ft	4.58ft	4.74ft
287	302	3.88ft	3.96ft	4.12ft	4.29ft	4.45ft	4.62ft	4.79ft	4.97ft	5.14ft	5.32ft	5.50ft	5.68ft
230	242	3.03ft	3.09ft	3.22ft	3.36ft	3.49ft	3.63ft	3.78ft	3.92ft	4.07ft	4.22ft	4.37ft	4.53ft
161*	169	2.05ft	2.09ft	2.19ft	2.28ft	2.38ft	2.48ft	2.58ft	2.69ft	2.8ft	2.91ft	3.03ft	3.14ft
138*	145	1.74ft	1.78ft	1.86ft	1.94ft	2.03ft	2.12ft	2.21ft	2.3ft	2.4ft	2.49ft	2.59ft	2.7ft
115*	121	1.44ft	1.47ft	1.54ft	1.61ft	1.68ft	1.75ft	1.83ft	1.91ft	1.99ft	2.07ft	2.16ft	2.25ft
88*	100	1.18ft	1.21ft	1.26ft	1.32ft	1.38ft	1.44ft	1.5ft	1.57ft	1.64ft	1.71ft	1.78ft	1.86ft
69*	72	0.84ft	0.86ft	0.90ft	0.94ft	0.99ft	1.03ft	1.08ft	1.13ft	1.18ft	1.23ft	1.28ft	1.34ft

* Such lines are applicable to this standard only if PC has determined such per FAC-014 (refer to the Applicability Section above)

Span Length	Trigger Distance	(MVCD + Sag/Blowout)	VEL (Trigger distance or MVCD+Sag/Blowout, which ever is greater	VEB (Clearance 1 + Average Growth Rate)	Clearance 1 (with Buffer)
230KV - Span 350'	7.92	6.03	7.92		16.42
230KV - Span 650'	7.92	9.03	9.03		16.42
230KV - Span 1320'Sag	7.92	12.03	12.03		16.42
230KV - Span 1320'Blowout	7.92	21.03	21.03	21.42	21.42
230KV - Span 350'	13.17	6.19	13.17		20.42
230KV - Span 650'	13.17	9.19	13.17		20.42
230KV - Span 1320'Sag	13.17	12.19	13.17		20.42
230KV - Span 1320'Blowout	13.17	21.19	21.19	25.42	25.42
230KV - Span 350'	19	8.15	19		26.67
230KV - Span 650'	19	11.15	19		26.67
230KV - Span 1320'Sag	19	14.15	19		26.67
230KV - Span 1320'Blowout	19	23.15	23.15	31.67	31.67

o

VIS 1 – Building Colors

Verification: At least 30 days prior to specifying to the vendor the colors and finishes of the first structures or buildings that are surface treated during manufacture, the project owner shall submit the proposed treatment plan to the CPM for review and approval and simultaneously to Riverside County for review and comment. If the CPM determines that the plan requires revision, the project owner shall provide to and the CPM a plan with the specified revision(s) for review and approval by the CPM before any treatment is applied. Any modifications to the treatment plan must be submitted to the CPM for review and approval.

Response:

Colors of the buildings were visually verified by the CEC CPM and approved.

Waste 9 – Operational Waste Management Plan

Verification: The project owner shall submit the Operation Waste Management Plan to the CPM for approval no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary.

The project owner shall also document in each Annual Compliance Report the actual volume of wastes generated and the waste management methods used during the year; provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan; and update the Operation Waste Management Plan as necessary to address current waste generation and management practices.

Response:
In comparison of planned vs actual waste generation, Genesis disposed of more waste than expected for the year of 2014. This additional waste was due to emptying and cleaning the evaporative ponds. Pond contamination was carryover from construction and is not expected to occur in subsequent operating years.

DESCRIPTION

The purpose of the Waste Management Plan (WMP) is to identify the types and quantities of waste expected to be generated and present the waste management practices and procedures to be followed during the operation of the NextEra Energy – Genesis Solar, LLC power plant. The WMP identifies waste management activities to be conducted during the storage and the preparation and/or disposal of waste (including waste characterization, packaging, and management while in storage). The transportation and disposition of waste materials at appropriate disposal and recycling facilities is also included. It is the responsibility of the plant Environmental Specialist to verify that all plant personnel are aware of the requirements stipulated in this WMP.
The California Integrated Waste Management Act of 1989 required each city and county to divert 50 percent of its waste from landfills by the year 2000. The Riverside County Waste Management District (RCWMD) developed the Riverside County Integrated Waste Management Plan, and the Riverside County Source Reduction and Recycling Plan in order to meet this goal. A secondary goal of this plan is to ensure that waste minimization practices are followed to:

- Reduce the volume of waste that will be generated, stored, and removed from the site, for disposal.
- Recycle waste to reduce the amount of waste that is deposited in landfills, to the extent practical.

OBJECTIVE

The objective is to comply with the current California Integrated Waste Management Act of 1989 requiring each city and county to divert 50 percent of its waste from landfills by the year 2000. The Riverside County Waste Management District (RCWMD) developed the Riverside County Integrated Waste Management Plan, and the Riverside County Source Reduction and Recycling Plan in order to meet this goal. A secondary goal of this plan is to ensure that waste minimization practices are followed to:

- Reduce the volume of waste that will be generated, stored, and removed from the site, for disposal.
- Recycle waste to reduce the amount of waste that is deposited in landfills, to the extent practical.

1.0 WASTE DESCRIPTIONS

Operation activities will involve the generation, management, and disposal of various waste streams. Each waste stream and its respective classification have been identified for the operation of the plant. This information is summarized in Tables 1-1 along with the estimated quantity to be generated, shipping frequency, anticipated route and type of disposal location.

1.2 WASTE MANAGEMENT

The substantive requirements of the state and federal hazardous waste generation, characterization, storage, treatment, and management regulations of Title 22, California Code of Regulations (CCR), Section 66261, 66262, and 66264 and 40 Code of Federal Regulations (CFR), Part 261, 262 and 264 are applicable to the management of hazardous wastes generated during the operation of the Genesis Solar, LLC power plant. A summary of the key aspects of the waste management program is provided below.

Table 1-1. Genesis Solar, LLC Waste Streams and Materials

Waste Stream	Waste Stream Classification	Estimated Amount	Estimated Frequency of Generation	No. Truck Trips and Frequency	Quantity Shipped	Anticipated Route
Scrap wood, glass, plastic, paper, Class III garbage.	Non-hazardous solids	25,000 lbs.	Annually	12, 1X monthly	0	**Riverside County Landfill** From Hwy 10 exit Lovekin Blvd. North Lovekin Blvd. to Midland Rd. Left Midland Rd. to Landfill on Right.
Used hydraulic fluid, oils, grease, oily filters	Hazardous or non-hazardous liquids	500 lbs.	Annually	1 truck 1X	0	**Ashbury Environmental** 1. Start on Wiley's Well Road 0.4 2. Turn Right on S 7TH ST/S C AND D BLVD 0.2 3. Continue on 7TH ST 0.1 4. Turn Left to take the I-10 EAST ramp 0.2 5. Merge on I-10 EAST 145.6 6. Take the I-10-TRUCK ROUTE/I-17 SOUTH exit, exit #143B 0.7
Oil rags, oil absorbent generated during normal operation activities excluding lube oil flushes	Hazardous liquids	500 lbs.	Annually	1 truck 1X	0	
Liquid Lab Waste	Hazardous liquids	500 lbs.	Annually	1 truck 1X		
Solvents, paint, adhesives	Hazardous liquids	50 lbs.	Annually	1 truck 1X	0	
Spent lead acid batteries	Universal solids	50 lbs.	Annually	1 truck 1X	0	
Spent alkaline batteries	Universal waste	25 lbs.	Annually	1 truck 1X	0	
Waste oil from oily water separator	Hazardous or non-hazardous liquids	50 lbs.	Annually	1 truck 1X	0	

Waste Stream	Waste Stream Classification	Estimated Amount	Estimated Frequency of Generation	No. Truck Trips and Frequency	Quantity Shipped	Anticipated Route
Fluorescent, mercury vapor lamps	Universal Waste solids	25 lbs.	Annually	1 truck 1X	0	7. Merge on I-17 SOUTH 5.4
Waste Stream	Waste Stream Classification	Estimated Amount	Estimated Frequency of Generation	No. Truck Trips and Frequency	Quantity Shipped	8. Take the I-10 EAST exit towards TUCSON 0.6
						9. Merge on I-10 EAST 13.0
HTF Soil	Hazardous solids	2,000 lbs	1X every year	1 truck 1X	0	10. Take the MARICOPA RD NORTH exit, exit #162B 0.2
						11. Turn Right on S MARICOPA RD 0.4
						12. Continue on S 56TH ST/S MARICOPA RD 0.4
						13. Turn Right on W ALLISON RD 0.2

1.2.1 Waste Classification

Non-hazardous wastes may be disposed of at Class III waste disposal facilities. According to the State Water Resources Control Board, non-hazardous wastes are further divided into solid wastes that contain substantial quantities of degradable material (i.e., common municipal solid waste) and inert wastes, which do not contain degradable materials. Solid waste disposal is regulated by the California Integrated Waste Management Board and in the general area of the proposed site for the Genesis Solar facility, by the Riverside County Waste Management District (RCWMD). Inert wastes, such as wood, paper, glass and steel, will be recycled, to the extent practicable.

Hazardous waste is defined as any waste whose hazardous nature exceeds criteria for toxicity, corrosivity, ignitability, or reactivity as established by the Department of Toxic Substances (DTSC). California environmental health standards for the management of hazardous waste set forth in 22 CCR, Division 4.5 were approved by U.S. Environmental Protection Agency (EPA) as a component of the federally authorized California Resource Conservation and Recovery Act (RCRA) program. Therefore, the characterization of RCRA waste is based on the state requirements.

The characteristics of ignitability, corrosivity, reactivity, and toxicity are defined in 22 CCR, Sections 66261.21 through 66261.24. According to 22 CCR Section 66261.24(a)(1)(A), A waste that exhibits the characteristic of toxicity is assigned a hazardous waste code beginning with the letter “D” to wastes that exhibit the characteristic of toxicity; D waste codes are limited to “characteristic” hazardous wastes. According to 22 CCR, Section 66261.10, waste characteristics can be measured by an available standardized test method or be reasonably classified by generators of waste based on their knowledge of the waste **provided that the waste has already been reliably tested or if there is documentation of chemicals used.**

A waste determined not to be an RCRA hazardous waste may still be considered a state-regulated non-RCRA hazardous waste. The state is broader in scope in its RCRA program in determining hazardous waste. Title 22 CCR, Section 66261.24(a)(2) lists the total threshold limit concentrations (TTLCs) and the soluble threshold limit concentrations (STLCs) for non-RCRA hazardous waste. The state applies its own leaching procedure, waste extraction test (WET) that uses a different acid reagent and has a different dilution factor (tenfold). A waste is considered hazardous if its total concentrations exceed the TTLCs or if the extract concentrations from the WET exceed the STLCs. A WET is required when the total concentrations exceed the STLC by a factor of ten but are less than the TTLCs. Wastes determined to be hazardous wastes under California regulations and not under federal regulations are referred to as non-RCRA wastes.
General waste classifications for the waste streams at Genesis Solar are provided in Table 1-1. The majority of wastes generated at the site will be characterized based on process knowledge. **Process knowledge will be documented and kept with each waste stream file**. Waste oil, solvents, paint, spent batteries, fluorescent and mercury vapor lamps, and spent catalysts will be collected, contained, and sent off-site for recycling. All containers will be appropriately marked for recycling.

Most hazardous wastes may be disposed of only at Class I waste disposal sites approved by the DTSC. Certain hazardous wastes classified as restricted hazardous wastes are banned entirely from land disposal, because they pose a high threat to public health and the environment. Land disposal restrictions are provided in 22 CCR Section 66268.

1.2.2 Waste Accumulation and Storage

Part 262, 40 CFR and Section 66262, 22 CCR consist of regulations applicable to the generation, storage, management, and accumulation of RCRA and non-RCRA hazardous wastes, respectively. Specific requirements apply to the accumulation time for hazardous wastes on-site, and to the accumulation and labeling of hazardous wastes. The Genesis Solar facility will strive to maintain conditionally exempt small quantity generator (CESQG) status. Wastes will be managed, accumulated, and inspected in accordance with the appropriate generator status regulations.

1.2.3 Wastewater and Waste Fluids

Fluids will be collected in 55-gallon drums or tanks. The drums will be temporarily staged within the designated storage areas. The drums will be placed on secondary containment and marked appropriately pending characterization and appropriate disposal.

When possible, waste fluids generated from equipment and maintenance activities will be collected and removed from the site by a recycling company. If waste fluids are required to be stored on-site, they will be labeled accordingly, contained within Department of Transportation (DOT) approved containers and situated within the accumulation area. Containers of hazardous wastes holding free liquids have stringent secondary containment requirements. These requirements include:

- A base free of cracks or gaps and sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
- The base will be sloped or the containment system will be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation. Alternatively, the containers may be elevated on pallets to prevent contact with accumulated liquids.
- The containment system will have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater, plus the maximum rainfall from a 25-year 24-hour storm event.
- Spilled or leaked waste and accumulated precipitation will be removed from the sump or collection area in a timely manner to prevent overflow of the collection system.

1.2.4 Waste Disposal

Non-hazardous Waste Disposal Sites (Class III)

Existing non-hazardous solid waste disposal (Class II/III) facilities within 100 miles of the Genesis Solar facility that will accept non-hazardous wastes are listed in Table 1-2. It is likely that non-hazardous solid waste would go to Meca II Sanitary Landfill. The landfills listed in Table 1-2 accept all non-hazardous waste. Scrap metal, electronics, and tires are recycled.

Landfill Disposal Site Name	Location	Current (2003) Daily Usage (tons)	Remaining Capacity (cubic yards)	Anticipated Year of Closure	Approximate Distance from Site (miles)
Meca II Sanitary Landfill/EPA ID #33-AA-0071	Meca, CA	400	372,480 cubic yards	2005	50 miles
Riverside County Landfill/EPA ID# 33-AA-0017	Blythe, CA	400	8.8 million cubic yards	2034	10 miles

La Paz County Landfill/EPA ID #AZC950-823 (No RCRA or Cal-Haz wastes accepted)	Parker, CA	Unavailable	25.4 million cubic yards	No Permit Expiration date	50 miles
	TOTAL	N/A	34,572,480		

Hazardous Waste Disposal Sites

Hazardous waste will be disposed only at a hazardous waste disposal facility approved by FPL using the JES vendor audit system or facilities that were already approved by FPL during the construction process. The disposal facility must be permitted for the disposal of the particular type of hazardous waste generated. There are 2 major hazardous waste (Class I) landfills in southern California that may be utilized for disposing hazardous waste generated during operation activities at the Blythe facility. These landfills are:

- **Laidlaw Landfill, Buttonwillow, California (Class I)**

This facility accepts RCRA, non-RCRA, and non hazardous waste and is permitted as a Class I landfill. The facility has no restrictions for the amount of waste that can be received on a per day basis. EPA ID #, Years left of capacity

- **Kettleman Hills Landfill, Kettleman City, California (Class I)**

The Kettleman Hills Landfill is a permitted Class I landfill located in Kettleman City, California. The facility has no capacity restrictions and can accept RCRA, non-RCRA, and non hazardous waste. EPA ID#, Years left of capacity
In addition to landfills, there are numerous offsite commercial hazardous waste treatment and recycling facilities in California. These facilities have sufficient capacity to recycle and/or treat hazardous waste generated in California. Most hazardous waste generated at the Blythe facility will be generated from normal operations. Hazardous waste may be removed and delivered to a TSD facility. A permitted oil recycler will collect used oil.
Asbury Environmental, 300 E. Oak, Compton, CA 90221 (310-886-1810)

1.2.5 Waste Transportation

Hazardous wastes sent off-site for disposal or recycling will be done in accordance with the DOT Hazardous Material Transportation regulations of 49 CFR Parts 171 through 177 and 40 CFR Part 262, Subpart B and 22 CCR Section 66262, which involve packaging, placarding, labeling, and manifesting requirements, and with appropriate LDR certification notices per 40 CFR Part 268 and 22 CCR Section 66268. Personnel having the required DOT-training will perform all DOT functions.

Material that does not exhibit one of the nine DOT hazard class characteristics (i.e. explosives, gases, flammable/combustible liquids, flammable solids/spontaneously combustible materials/dangerous when wet materials, oxidizers and organic peroxides, toxic materials and infectious substances, radioactive materials, corrosive materials) is not regulated under DOT rules for hazardous material transportation. If material is hazardous, it will be shipped under the appropriate hazard class. All hazardous waste will be transported under DOT hazardous material regulations. Each shipment containing hazardous material will be properly classed using the Hazardous Materials Table in 49 CFR 172.101. DOT-trained personnel will make all determinations.

1.2.6 Waste Minimization and Recycling

In order to assist Riverside County in meeting their waste diversion goal, the following waste minimization guidelines will be implemented throughout operation activities:

- Hazardous waste will not be placed with non-hazardous waste.
- Work will be planned ahead.
- Products may be stored in large containers, but the smallest reasonable container will be used to transport the product to the location where it is needed.
- Absorbent material will be used to contain small spills or leaks.
- Material and equipment will be decontaminated and/or reused when practical.
- Implementation of zero-discharge wastewater collection system.
- Volume reduction techniques will be used when practicable.
- Waste containers will be verified to ensure they are solidly packed to minimize the number of containers.
- Only the size waste containers adequate to contain the volume of waste generated will be used.
- Environmentally friendly products will be used whenever possible.

In addition, recycling will be conducted where practical.

1.2.7 Inspections

While all waste accumulation areas will be informally inspected as part of daily walk through, formal inspections of all container accumulation areas will be conducted and recorded at least weekly in accordance with 40 CFR 264 Subpart I and 22 CCR 66264. The Plant Technician will conduct inspections. Inspections will be recorded on a weekly inspection checklist. The accumulation area(s) will be inspected to ensure that items, such as, but not limited to the following, will be covered:

- Drums/containers are in good condition.
- Drums/containers are made of materials that will not react with, and are otherwise compatible with, the hazardous waste to be stored.

- Drums/containers are closed at all times, except when adding or removing waste.
- Verify that containers are labeled correctly with the appropriate information.
- All waste stored at the waste slab will be weighed and logged on the log sheet. All blocks on the log sheet will be filled in.
- Batteries will be logged by constituent.
- All batteries will be placed in drums/buckets, and the drums/buckets will be marked. Each stream will have its own bucket/drum.

1.2.8 Hazardous Waste Manifests and LDR Certification

All hazardous waste transported from the site will be accompanied by a Hazardous Waste Manifest. The plant technician will be responsible for preparing and signing all waste documentation, including waste profiles, manifests, and LDR notifications (manifest packages). Prior to signing the manifest, the representative will ensure that pre-transport requirements of packaging, labeling, marking, and placarding are met according to 40 CFR Parts 262.30 through 262.33 and 49 CFR Parts 100 through 178.

INTERNAL SITE CONTACT

Charlyn Mosley, Environmental Specialist. 760-831-2651

Diesel Inventory					
Date	Total Gallons Purchased	Plant Equipment Identification (Gradall, toyota, JLG, Fire pump, rental equipment, etc.)	Gallons Used	Plant Technician Printed Name	Comments

Genesis
Hazardous Waste Log

Constituent	Weight	Generation Date	Production Technician Name	Barrel closed Y/N	Battery terminals taped? Y/N	Days remaining until pick up?

Waste Disposal Accounting

North Pond - Liquid Tankers

Manifest Number	Amount (gallons)	Estimated Water %	Estimated Oil %	Disposal facility	Date	Oil Total	Yards
12293176	4500	82%	18%	DK	10/13/2014	810	
12293177	5000	82%	18%	DK	10/14/2014	900	
12293180	5000	82%	18%	DK	10/15/2014	900	
12293181	5000	82%	18%	DK	10/15/2014	900	
12293185	5000	98%	2%	DK	10/16/2014	100	
12293186	5000	98%	2%	DK	10/16/2014	100	
12293200	5000	98%	2%	DK	10/20/2014	100	
12293321	4000	98%	2%	DK	10/25/2014	80	
12293322	5000	98%	2%	DK	10/25/2014	100	
12293200	5000	98%	2%	DK	10/20/2014	100	
12293176	5000	98%	2%	DK	10/25/2014	100	
12293244	4500	98%	2%	South Yuma county Landfill	10/27/2014	90	
12293243	4500	98%	2%	South Yuma county Landfill	10/27/2014	90	
12293241	4500	98%	2%	South Yuma county Landfill	10/27/2014	90	
12293242	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293247	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293248	3000	98%	2%	South Yuma county Landfill	10/29/2014	60	
12293246	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293241	4500	98%	2%	South Yuma county Landfill	10/27/2014	90	
12293242	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293243	4500	98%	2%	South Yuma county Landfill	10/27/2014	90	
12293244	4500	98%	2%	South Yuma county Landfill	10/27/2014	90	
12293245	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293246	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293247	4500	98%	2%	South Yuma county Landfill	10/28/2014	90	
12293248	3000	98%	2%	South Yuma county Landfill	10/29/2014	60	
12293250	4200	99%	1%	South Yuma county Landfill	10/31/2014	42	
12293251	4800	99%	1%	South Yuma county Landfill	11/11/2014	48	
12293321	4000	99%	1%	South Yuma county Landfill	10/25/2014	40	

Manifest Number	Amount (gallons)	Estimated Water %	Estimated Oil %	Disposal facility	Date	Oil Total	Yards
12293322	5000	99%	1%	South Yuma county Landfill	10/25/2014	50	
12293433	2	99%	1%	South Yuma county Landfill	11/13/2014	0.02	
7132012	5000	99%	1%	South Yuma county Landfill	12/26/2014	50	
7132013	5000	99%	1%	South Yuma county Landfill	12/27/2014	50	
7132014	5000	99%	1%	South Yuma county Landfill	12/27/2014	50	
7132015	5000	99%	1%	South Yuma county Landfill	12/26/2014	50	
7132018	3000	99%	1%	South Yuma county Landfill	12/30/2014	30	
7132019	5000	99%	1%	South Yuma county Landfill	12/30/2014	50	
7132020	5000	99%	1%	South Yuma county Landfill	12/30/2014	50	
7132021	5000	99%	1%	South Yuma county Landfill	12/29/2014	50	
7132022	5000	99%	1%	South Yuma county Landfill	12/29/2014	50	
7132023	5000	99%	1%	South Yuma county Landfill	12/24/2014	50	
7132024	5000	99%	1%	South Yuma county Landfill	12/29/2014	50	
7132025	5000	99%	1%	South Yuma county Landfill	12/28/2014	50	
7132026	5000	99%	1%	South Yuma county Landfill	12/28/2014	50	
8248905	2800	99%	1%	South Yuma county Landfill	11/28/2014	28	
8248913	5000	99%	1%	South Yuma county Landfill	12/4/2014	50	
8248914	4800	99%	1%	South Yuma county Landfill	12/5/2014	48	
8248916	4800	99%	1%	South Yuma county Landfill	12/4/2014	48	
8248917	4800	99%	1%	South Yuma county Landfill	12/5/2014	48	
8248927	5000	99%	1%	South Yuma county Landfill	12/8/2014	50	
8248931	4800	99%	1%	South Yuma county Landfill	12/8/2014	48	
Total						**6610.02**	**0**

North Pond - Solid Roll-Off Bins							
Manifest Number	**Amount (gallons)**	**Estimated Water %**	**Estimated Oil %**	**Disposal facility**	**Date**	**Oil Total**	**Yards**
12293363				South Yuma County Landfill	11/3/2014		20
12293364				South Yuma County Landfill	11/3/2014		20
12293365				South Yuma County Landfill	11/3/2014		20
12293366				South Yuma County Landfill	11/3/2014		20
12293367				South Yuma County Landfill	11/4/2014		20
12293368				South Yuma County Landfill	11/4/2014		20
12293369				South Yuma County Landfill	11/4/2014		20
12293370				South Yuma County Landfill	11/4/2014		20
12293372				South Yuma County Landfill	11/5/2014		18
12293373				South Yuma County Landfill	11/5/2014		20
12293375				South Yuma County Landfill	11/7/2014		15
12293377				South Yuma County Landfill	11/6/2014		20
12293378				South Yuma County Landfill	11/6/2014		20
12293379				South Yuma County Landfill	11/7/2014		20
12293380				South Yuma County Landfill	11/7/2014		20
12293381				South Yuma County Landfill	11/7/2014		20
12293382				South Yuma County Landfill	11/7/2014		20
12293402				South Yuma County Landfill	11/6/2014		20
12293403				South Yuma County Landfill	11/6/2014		20

Manifest Number	Amount (gallons)	Estimated Water %	Estimated Oil %	Disposal facility	Date	Oil Total	Yards
Total						0	373

South Pond - Liquid and Solid Roll-Off Bins							
Manifest Number	**Amount (gallons)**	**Estimated Water %**	**Estimated Oil %**	**Disposal facility**	**Date**	**Oil Total**	**Yards**
8248932	4800	99%	2%	South Yuma County Landfill	12/9/2014	96	
9872019				Southwest Regional Landfill	12/29/2014		20
9872020				Southwest Regional Landfill	12/29/2014		20
9872023				Southwest Regional Landfill	12/29/2014		20
11128000				Southwest Regional Landfill	12/29/2014		20
7132027				Southwest Regional Landfill	12/27/2014		20
7132028				Southwest Regional Landfill	12/26/2014		20
7132029				Southwest Regional Landfill	12/26/2014		20
7132030				Southwest Regional Landfill	12/26/2014		20
7132031				Southwest Regional Landfill	12/26/2014		20
7132032				Southwest Regional Landfill	12/24/2014		20
7132033				Southwest Regional Landfill	12/26/2014		20
7132034				Southwest Regional Landfill	12/26/2014		20
7132035				Southwest Regional Landfill	12/26/2014		20

Manifest Number	Amount (gallons)	Estimated Water %	Estimated Oil %	Disposal facility	Date	Oil Total	Yards
7132036				Southwest Regional Landfill	12/24/2014		20
Total						**96**	**280**

WORKER SAFETY-9

Verification: At least ten (10) days prior to the start of commissioning, the project owner shall submit to the CPM proof that a joint training program with the RCFD is established. In the annual compliance report to the CPM, the project owner shall include the date, list of participants, training protocol, and location of the joint training.

Response:

The Joint Training stipulation of compliance item Worker Safety-9 was not met due to scheduling issues between Genesis and the Riverside County Fire Department. Efforts will continue, between Genesis Solar and RCFD, working out a time to perform the joint training.

GEN 1 – Facility Design Modifications:

Verification:

Once the certificate of occupancy has been issued, the project owner shall inform the CPM at least 30 days prior to any construction, addition, alteration, moving, demolition, repair, or maintenance to be performed on any portion(s) of the completed facility that requires CBO approval for compliance with the above codes. The CPM will then determine if the CBO needs to approve the work.

Response:

- An Aux Transformer pad and equipment has been approved by the CPM on 12/29/2014.
- Replacement pond netting was approved by the CPM on 11/10/14. PO was issued on 11/22/2014.
- Warehouse certificate of occupancy was issued under the plant certificate of occupancy which was issued on April 24, 2014.
- Pond netting was approved by the CPM as a result of a combined conference call with the BLM, USFWS and CEC.

End of Report