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2018 SECOND SEMIANNUAL and ANNUAL GROUNDWATER DETECTION MONITORING REPORT Genesis Solar Energy Project

Riverside County, California

COC S&W-6

December 26, 2018

Prepared By:

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2018 SECOND SEMIANNUAL and ANNUAL GROUNDWATER DETECTION MONITORING REPORT RIVERSIDE COUNTY, CALIFORNIA

PROFESSIONAL STATEMENT

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

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Arlin W. Brewster Professional Geologist 9207 December 26, 2018



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1.0 INTRODUCTION

Northstar Environmental Remediation (Northstar) has prepared this 2018 Second Semiannual and Annual Groundwater Detection Monitoring Report on behalf of Genesis Solar, LLC (Genesis). This report details groundwater detection monitoring performed in the second half of 2018 at the Genesis Solar Energy Project (GSEP).

The GSEP lies roughly 25 miles west of the city of Blythe, California in eastern Riverside County on lands managed by the Bureau of Land Management (BLM) (**Figure 1**). The GSEP consists of two independent concentrated solar electric generating facilities with a nominal net electrical output of 125 megawatts (MW) each (a total net electrical output of 250 MW).

Northstar conducts groundwater detection monitoring in accordance with Condition of Certification Soil & Water 6 (COC S&W-6) as presented in the California Energy Commission (CEC) Final Decision document dated October 12, 2010 (CEC, 2010). The COC S&W-6 requires compliance with Waste Discharge Requirements (WDR) and Monitoring and Reporting Program (MRP) Board Order No. R7-2013-0005, issued by the California Regional Water Quality Control Board, Colorado River Basin Region (CRWQCB).

1.1 Background

Genesis submitted an updated Plan of Development (POD) for the GSEP in September 2010 (Genesis Solar, LLC 2010). In addition, Genesis filed an Application for Certification (AFC) for the GSEP to the 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.

The GSEP uses dry cooling technology and relies on groundwater as a water source during operation. Three groundwater production wells installed at the GSEP between July and October 2011 are permitted to pump groundwater at an average rate of 202 acre-feet per year (afy) (up to 1,348 afy during construction).

The Final Decision and FEIS discuss the potential impacts associated with the proposed groundwater use by the GSEP. 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-2 for the GSEP to monitor groundwater level at the vicinity of the GSEP.

Two evaporation ponds (licensed as Class II Surface Impoundments) located between Solar Fields 1 and 2 accept wastewater generated during GSEP operation (**Figure 3**). Three detection monitoring wells (DM-1, DM-2, and DM-3) were installed, per the Final Decision, along the west, east, and south perimeter of the

evaporation ponds in February 2012 (**Figure 4**). Groundwater samples were collected for four quarterly events prior to GSEP operation to establish baseline conditions. Semiannual sampling will be conducted to comply with the requirements of COC S&W-6 and the WDR and MRP documents.

1.2 Geographic Setting

The GSEP lies between the communities of Blythe and Desert Center, California. Land use is predominantly open space and conservation and wilderness areas occupied by a community of low creosote and bursage vegetation. Chuckwalla and Ironwood State Prisons are located approximately 6 miles southeast of the GSEP.

The GSEP lies on broad, relatively flat topography sloping north to south at elevations between 400 and 370 feet above mean sea level (amsl). The surface is underlain by alluvial deposits derived from the Palen Mountains to the north-northwest, and the McCoy Mountains to the northeast (**Figure 1**).

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 GSEP facility.

Climatic data collected from Weather Station Blythe Riverside Airport (33.61°N, -114.71°W, at an elevation of about 387 feet amsl) indicate the average maximum temperature in the airport vicinity is approximately 87.8°F (31.0°C). Average rainfall is reported to be approximately 3.83 inches (97.3 mm). Northstar obtained this data from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information 1981-2010 Normals.

1.3 Hydrogeologic Setting

The GSEP lies within the Chuckwalla Valley Groundwater Basin (Chuckwalla Basin) which has a surface area of 940 mi² (2,435 km²) underlying Chuckwalla Valley. It is bounded upgradient by three groundwater basins including 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 (Palo Verde Basin) (**Figure 2**). Groundwater occurs at depths of about 80 to 140 feet below ground surface (bgs) and groundwater flow is generally southeast to eastward, from the Chuckwalla Basin to the Palo Verde Basin (**Figure 2**).

Sources of groundwater recharge to the Chuckwalla Basin includes precipitation, inflow from the Orocopia Valley and Pinto Valley Groundwater Basins, and return flows from agricultural sources and treated wastewater effluent. Groundwater is the only available water resource in Chuckwalla Valley, with extraction to meet local demand the primary source of groundwater outflow. Other minor sources of

outflow include underflow to the Palo Verde Basin and evapotranspiration in portions of Palen Dry Lake (where shallow groundwater is present).

Calculations of the Chuckwalla Basin groundwater budget prior to GSEP operations indicate a stable surplus of 2,600 afy (CEC, 2010). Current operational demand, based on calendar year 2017 extraction data, is approximately 116 afy.

The region of the Chuckwalla Basin occupied by the GSEP and associated groundwater monitoring wells is underlain by four geological units. The shallowest unit is the unconsolidated Holocene-aged Alluvium, consisting of geologically recent lake, river, and wind deposits (DWR, 1963). Beneath the Alluvium is the unconsolidated Pleistocene-aged Pinto Formation, consisting of coarse alluvial fan deposits (known as fanglomerate), interspersed with clays and basalt (DWR, 1963). Beneath the Pinto Formation is the unconsolidated to partially consolidated Pliocene-aged Bouse Formation, consisting of coarse alluvium and fanglomerate deposits (Wilson and Owen-Joyce, 1994). Below the Bouse Formation is bedrock consisting of metamorphic rocks and intrusive igneous basalts (DWR, 1963).

Groundwater in the GSEP monitoring region occurs in two aquifers: the shallower Alluvium aquifer (extending to a maximum approximate depth of 250 feet below ground surface); and, the deeper Bouse Formation aquifer (extending between approximately 250 to 6,500 feet below ground surface) (Wilson and Owen-Joyce, 1994). The Pinto Formation exists only on the eastern fringe of the Chuckwalla Basin and is generally not encountered by the GSEP monitoring wells. Monitoring data indicate a downward vertical hydraulic gradient of groundwater flow from the Alluvium to the Bouse Formation aquifer.

Based on recent monitoring data, the depth to groundwater in the Bouse Formation ranges from approximately 86.75 feet bgs (300.65 feet amsl) in TW-1, located upgradient of the site, to 127.38 feet bgs (266.09 feet amsl) in TW-2, located downgradient of the site. Perched water exists at the Chuckwalla State Prison but is unlikely to occur within the GSEP boundaries.

1.4 Monitoring Program Objectives

Northstar performs groundwater detection monitoring in accordance with COC S&W-6 as described in the CEC's Final Decision. The primary objectives for the evaporation pond detection as outlined in the MRP are to:

- Establish baseline conditions by conducting four quarters of monitoring prior to discharge of wastewater to the ponds;
- Collect water level elevation data to characterize groundwater flow conditions in the uppermost water-bearing zone beneath the evaporation pond area;
- Collect and evaluate water quality data using approved statistical and other methods to identify potential changes in the existing water quality of the aquifer immediately underlying the evaporation ponds; and,

• Demonstrate compliance with the discharge requirements contained in COC S&W-6 and the WDR for the GSEP.

2.0 EVAPORATION PONDS

2.1 Evaporation Pond Overview

The North and South Evaporation Ponds (sometimes referred to as the West and East ponds, respectively) were designed by Fluor Corp. and are identified on **Figure 3**. Each pond is constructed with multiple layers of containment that drain to a centralized collection trench. The trench slopes away from the centerline of the ponds to the north and south and is equipped with a set of three leakage detection probes in each side. Each pond is also equipped with a pump to return all leaked water back to the pond surface.

2.2 Monitoring Methods

On a semiannual basis, a sample is collected from each of the evaporation ponds and identified as the North Pond and South Pond. Representative water is collected in a clean, dedicated 5-gallon bucket and processed into sample containers inside the containment area. Laboratory samples are submitted to SunStar Laboratories, Inc. (SunStar) of Lake Forest, California. SunStar subcontracts the heat transfer fluid analysis to TestAmerica Laboratories, Inc. (TestAmerica) of Irvine, California. They also subcontract the oxygen-18 and deuterium analysis to Isotech Laboratories, Inc. of Champaign, Illinois. All laboratories are state and federally certified and analyze the samples by the following methods, as detailed in the Final Decision, WDR, and MRP documents:

- 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;
- Heat Transfer Fluid (HTF) by EPA Method 8015B;
- Heavy Metals by EPA Method 200.7 and 200.8;
- Oil & Grease by EPA Method 1664A; and,
- Oxygen-18 and Deuterium by Isotope Geochemistry.

2.3 Evaporation Pond Sample Results

Analytical data for the evaporation ponds is included in **Table 4** and certified laboratory reports are included in **Appendix B**. In summary:

- The laboratory did not detect iron, antimony, cadmium, chromium, cobalt, lead, selenium, mercury, or heat transfer fluid in either pond; and,
- Compound concentrations were generally higher in the North Pond.

3.0 LEAKAGE DETECTION SYSTEM

3.1 Leakage Detection System Overview

A cross-sectional schematic of the leakage detection system is included in **Figure 5**. As shown in the figure, each pond is equipped with a total of six probes (Watermark Model 200SS electrical resistance probes) installed at a distance of 15, 70, and 110 feet from the pond centerline.

The leaked water return pumps are installed on the north side of the North Pond and the south side of the South Pond. Readings from the totalizers on each pump are recorded on a quarterly basis.

3.2 Monitoring Methods

Terminals attached to the probe wire leads are stored in a weatherproof vault at the north and south end of each pond, where resistivity readings can be collected using a Watermark 30-KTCD-NL meter. Values can range from 0-10 centibars (saturated) to 199 centibars (dry). Readings are collected from the probes and the nearby water return pumps on a quarterly basis and summarized in **Table 5**. If the pump totalizers show any signs of increase, or if the probes display values within the saturated range (usually started with probe #1 in the lowest end of the trench), Northstar notifies NextEra operations who then conduct further investigation.

3.3 Monitoring Results

The water return pump totalizers have not increased during the reporting period, and currently read 1,688.26 gallons for the North Pond and 24.21 gallons for the South Pond.

None of the leak detection probes showed signs of water saturation, though several showed signs of humidity in the collection trench, including: North Pond #1W, 2W, and 3E and South Pond #1E and #2E, intermittently. These probes have shown signs of sensor drift and sensitivity in previous events.

4.0 DETECTION MONITORING WELLS

4.1 Detection Monitoring Well Overview

A total of three detection monitoring wells were installed around the perimeter of the evaporation ponds (**Figure 4**). Detection monitoring wells DM-1, DM-2, and DM-3 were installed to a total depth of 120 feet bgs into the shallow Alluvium aquifer with screened intervals between 100 to 120 feet bgs. **Table 1** provides construction details for the wells. Well DM-1 is located upgradient, west of the ponds. Well DM-2 and DM-3 are located downgradient, east and south of the ponds, respectively.

4.2 Monitoring Methods

Northstar measured the depth to groundwater in each well using a Solinst interface probe. Field staff documented depth to water to the nearest hundredth (0.01) foot below a surveyed measuring mark located on the north side of the top of casing (toc) on a groundwater level measurement form (**Appendix A**). **Table 2** includes the groundwater level measurements and calculated water level elevations. **Figure 4** illustrates the groundwater elevation contours and flow direction.

Each detection monitoring well has a dedicated 1.66-inch diameter Geotech[®] stainless steel submersible bladder pump and dedicated Teflon-lined tubing with water intakes set at the middle of wetted screen at approximately 115 feet btoc. Field staff collected samples 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 staff decontaminated reusable/non-dedicated equipment (water level probe and flow-through cell) prior to use at each well. Decontamination of reusable equipment consisted of washing with a laboratorygrade non-phosphate detergent (Liquinox or equivalent) and potable water solution followed by a double rinse with demineralized water.

Field staff measured groundwater parameters with a Horiba U-52 field instrument (Horiba). Staff calibrated the Horiba at the beginning of each day and decontaminated the instrument prior to use and between wells. 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.

Wells were purged until water quality parameters stabilized over three successive readings (+/- 0.2 for pH, +/- 10% for EC, ORP and turbidity). Northstar staff recorded the sampling methods, volume of water purged, pumping rate, field parameter measurements, and observations of water turbidity and odor on the groundwater sampling field form (**Appendix A**).

After purging and parameter stabilization, the flow-through cell was disconnected so samples could be collected from the pump discharge. Field staff wore new nitrile gloves to collect groundwater samples in clean bottles (preserved as appropriate) provided by the laboratory. Where required, samples were field filtered with a new 0.45-micron filter attached to the end of the discharge tubing. Staff labeled sample containers with the well identification, date, time, sampler, analytical method, and placed them in a chilled ice chest. Northstar delivered the samples under proper chain-of-custody protocol to the laboratory.

Groundwater purged from DM-1, DM-2, and DM-3 was temporarily contained in a sealed 5-gallon bucket and then disposed in the evaporation ponds as directed in the MRP. **Table 3** includes the measured field parameters documented at the end of purging activities.

Laboratory samples are submitted to SunStar Laboratories, Inc. (SunStar) of Lake Forest, California. SunStar subcontracts the heat transfer fluid analysis to TestAmerica Laboratories, Inc. (TestAmerica) of Irvine, California. They also subcontract the oxygen-18 and deuterium analysis to Isotech Laboratories, Inc. of Champaign, Illinois. All laboratories are state and federally certified and analyze the samples by the following methods, as detailed in the Final Decision, WDR, and MRP documents:

- 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;
- Heat Transfer Fluid (HTF) by EPA Method 8015B;
- Heavy Metals by EPA Method 200.7 and 200.8;
- Oil & Grease by EPA Method 1664A; and,
- Oxygen-18 and Deuterium by Isotope Geochemistry.

The laboratory conducted standard Quality Assurance/Quality Control (QA/QC) 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 (LCS), as required, with each analytical batch.

Northstar collects a duplicate sample once per sampling event that is submitted to the laboratory without identifiers that associate the sample with a well, date, or time. During this event, a duplicate sample from well PW-2 was collected for analysis. **Table 4** of the *Groundwater Quality Monitoring Report* (Northstar, 2018) provides a summary of analytical results for the duplicate sample.

In addition to these methods, a set of quality control blank samples is 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. The quality control blank samples are only analyzed if there is anomalous data present for the groundwater sampling results.

4.3 Results of Water Level Measurements

Table 2 provides the wellhead reference elevation (toc elevation), depth-to-groundwater, and water level elevations for each detection monitoring well. Depth to groundwater ranged from 104.68 (well DM-3) to 107.80 (well DM-2) feet bgs, and the calculated groundwater elevations range from 283.52 (well DM-2) to 284.04 (well DM-1) feet amsl.

Northstar used groundwater elevation data to generate a potentiometric surface contour map of the uppermost water-bearing zone beneath the evaporation pond (**Figure 4**). The groundwater flow direction and gradient beneath the site were determined based on linear interpolation between contours of equal elevation. Groundwater flow beneath the evaporation ponds was determined to be predominantly in an east direction at a gradient of approximately 0.0007 feet/foot. The groundwater flow direction and gradient are consistent with historical monitoring events. Groundwater flow direction has historically ranged between east-northeast and southeast and the gradient has ranged between 0.0004 and 0.0007 feet/foot.

4.4 Groundwater Flow Velocity

The average horizontal groundwater flow velocity beneath the evaporation ponds was estimated using the following equation:

V = (KhI)/ne

Where:

- **V** = average linear groundwater velocity
- **Kh** = aquifer horizontal hydraulic conductivity
- I = average hydraulic gradient (vertical change in groundwater elevation/corresponding horizontal distance), and
- **ne** = effective aquifer porosity.

Each monitoring well is screened from 100-120 feet bgs in fine-grained sand, as detailed in the Detection Monitoring Well Installation Report (WorleyParsons, 2012). The reported hydraulic conductivity for finegrained sand is approximately 0.03 to 60 feet/day, as stated in scientific references (Domenico and Schwartz, 1990). Based on the characteristics of the shallow Alluvium aquifer in which the detection monitoring wells are screened, this calculation assumes an average hydraulic conductivity value of 15 to 30 feet/day, an effective porosity of 25 percent, and an average gradient of 0.0007 feet/foot, as estimated from **Figure 4**. Based on these calculations, the average groundwater velocity estimated in the uppermost water-bearing zone beneath the evaporation ponds is approximately 0.042 to 0.084 feet laterally per day, or 15.33 to 30.66 lateral feet per year. Historically, estimates of groundwater flow velocity have ranged from 8.76 to 30.66 lateral feet per year.

4.5 General Chemical Analysis

Table 4 provides a summary of the detection monitoring well groundwater sample analytical results. **Appendix C** contains copies of the laboratory analytical reports for the groundwater samples. Groundwater samples from detection monitoring wells DM-1, DM-2, and DM-3 were analyzed for the parameters listed in Section 4.2. The concentration of detected analytes is generally similar between the detection monitoring wells. Similarity in the concentrations of analytes is expected as the three wells are located within 1,000 feet of each other and are screened at the same depth interval (100-120 feet bgs).

The following is a summary of the groundwater monitoring results for the detection monitoring wells since the beginning of the monitoring program:

- **Chloride** detections have been consistent for all wells and have ranged from 4,400 to 8,180 milligrams per liter (mg/L), averaging 5,187 mg/L.
- Sulfate detections have been consistent for all wells and have ranged from 1,600 to 3,280 mg/L, averaging 2,088 mg/L.
- Nitrate detections have been consistent for all wells and have ranged from non-detect to 17.5 mg/L, averaging 8.1 mg/L.
- **Total dissolved solid** levels have been consistent for all wells and have ranged from 7,100 to 13,000 mg/L, averaging 10,943 mg/L.
- pH levels have been consistent for all wells and have ranged from 7.66 to 7.95 standard units, averaging 7.83 standard units.
- Specific conductivity levels have been consistent for all wells and have ranged from 13,000 to 22,000 microsiemens per centimeter (μs/cm), averaging 17,576 μs/cm.
- Antimony has not been detected above the reporting limit for all wells.
- Arsenic detections have been consistent for all wells and have ranged from 4.7 to 20 μg/L, averaging 10.1 μg/L.
- Barium detections have been inconsistent between all wells, averaging 37 μg/L in upgradient well DM-1, 78 μg/L in downgradient well DM-2, and 19 μg/L in downgradient well DM-3.
- **Cadmium** has not been detected above the reporting limit for all wells.
- Calcium detections have been consistent for all wells and have ranged from 210 to 470 mg/L, averaging 258 mg/L.
- Chromium (Total) detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 3.1 to 3.7 μg/L, averaging 3.4 μg/L.
- **Cobalt** has not been detected above the reporting limit for all wells.

- Copper detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 0.025 to 0.027 mg/L, averaging 0.026 mg/L.
- Lead has not been detected above the reporting limit for all wells.
- Mercury has only been detected once above the reporting limit in upgradient well DM-1 at a concentration of 0.26 μg/L. Mercury has not been detected at or above the reporting limit in wells DM-2 and DM-3.
- Nickel has only been detected once above the reporting limit in downgradient well DM-3 at a concentration of 10 µg/L. Nickel has not been detected at or above the reporting limit in wells DM-1 or DM-2.
- Selenium detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 3.3 to 6.3 μg/L, averaging 5.0 μg/L.
- Zinc detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 4.5 to 28 μg/L, averaging 10.8 μg/L.

4.6 Non-Statistical Analysis

In accordance with the MRP Part II.A.5 and Part III.A.2, a non-statistical analysis has been applied to the groundwater analytical results for this sampling event.

The non-statistical analysis requires all detections of the constituents of concern (ie, those defined in Part II.A.4 of the same document) reported above the method detection limit (MDL) in the downgradient wells (DM-2 and DM-3) that do not appear in the upgradient well (DM-1) be identified, and where there are either a) two or more constituents identified in this list from a single downgradient monitoring point, or b) one of the identified constituents in this list exceeds the Practical Quantification Limit (PQL), a release is tentatively indicated.

For the purposes of this report, the PQL is equal to the reporting limit (RL) as identified for each constituent in the laboratory report, which is generally 5 times the MDL. The results of the non-statistical method for this sampling event is as follows:

- Well DM-2: Zinc occurs above the reporting limit at a concentration of 28 µg/L and was not detected in either DM-1 or DM-3. The history of zinc in the detection monitoring well network is not well known because the reporting limits were historically above 100 µg/L, and all zinc detections to date have been 28 µg/L or lower. It is believed that this detection is a result of a change to lower reporting limits, and therefore is not indicative of a release.
- Well DM-3: There are no constituents of concern that meet the release detection criteria.

4.7 Quality Assurance/Quality Control

As documented in the attached laboratory reports (see **Appendix C**), groundwater samples collected from the evaporation pond detection monitoring wells during this sampling event were received by the laboratory in good condition, within the temperature limits required, and analyzed within the required holding times using the specified methods (with the exception of temperature and pH, which have a 15-minute hold time).

None of the analytes were detected in the laboratory blank samples. MS/MSD and LCS recoveries for each method and analytical batch were within the laboratory's established control limits.

5.0 LAND TREATMENT UNIT SUMMARY

The Land Treatment Unit (LTU) is an onsite bioremediation landfarm utilized for the treatment of soil contaminated with the heat transfer fluid (HTF) Therminol. Soil from all HTF spills is excavated within 48 hours and placed in one of four treatment bays, numbered LTU #1 to 4. The soil is then tested to determine whether it can be effectively treated onsite (under 10,000 mg/kg of HTF) or if it is hazardous and must be treated offsite (above 10,000 mg/kg of HTF). Soil in the LTUs is overturned on a weekly basis by onsite staff to aid in the bioremediation of the soil. A representative composite soil sample is collected from each bay on a quarterly basis and analyzed by EPA Method 8260B for benzene to monitor the progress of remediation. Once the concentration is less than 100 mg/kg of HTF, the soil may be removed from the LTU and staged onsite for later use. Treatment is enhanced by the addition of moisture and fertilizers.

Contaminated soil in all LTUs was overturned on a weekly basis during the 2018 calendar year. Soil was tested from LTU #1 (June), LTU #2 (March, September and December), and LTU #3 (March) and found to be below the 100 mg/kg threshold on all occasions.

6.0 ANNUAL SUMMARY

In accordance with WDR R7-2013-0005, this section presents a summary of the monitoring activities conducted during the 2018 monitoring period. Monitoring activities during this period included the following:

- Semiannual groundwater sampling and analysis of the detection monitoring network; and,
- Semiannual groundwater level measurements of the detection monitoring network.

The groundwater level and analytical data are included in **Tables 2** and **4**, respectively.

The data collected during the semiannual detection well monitoring events during the 2018 calendar year represents the fifth year of post-construction normal facility operation. The laboratory analytical data from the 2018 calendar year is consistent with the historical background data collected prior to settlement pond construction and operation.

The non-statistical analysis identified one potential release in detection monitoring well DM-2 only in December 2018. A zinc concentration of 28 μ g/L was detected in this well but not in the upgradient well DM-1 or downgradient well DM-3. Given that zinc concentrations are relatively unknown (due to a historical reporting limit above 100 μ g/L), it is believed that this detection does not represent a release so much as a normal detection with lower reporting limit protocols. No other evidence of release was detected.

During the 2018 calendar year, the groundwater gradient was a consistent 0.0007 feet per linear foot to the east; groundwater elevations ranged from 283.52 feet amsl in well DM-2 to 284.39 feet amsl in well DM-1; and groundwater flow velocity ranged between 0.042 to 0.084 feet laterally per day, or 15.33 to 30.66 lateral feet per year.

Each of the settlement ponds is equipped with a leakage detection system consisting of six moisture probes installed in a drain pipe below the pond liners. Northstar monitors the probes quarterly at a minimum. If leaks are detected, the pond is drained and the lining inspected and repaired as necessary. The pond lining was most recently repaired in 2016, and the moisture probes under the north pond were replaced in December of that year after becoming saturated. During the 2018 calendar year, the moisture probes have indicated some residual humidity in the pipe, but no significant leaks. Should a leak occur, each pond is equipped with two recirculation pumps to drain the lining and redeposit the water in the pond until an inspection can be performed.

7.0 CONCLUSIONS

Based on the available data obtained during this sample event:

- Sample results do not indicate a release at the GSEP to date.
- Available groundwater quality data is generally stable with minor trend fluctuations.
- The non-statistical analysis of the constituents of concern has not identified any potential releases.
- Groundwater flow direction, gradient, and velocity is consistent with historical events.

All data currently indicates compliance with the discharge requirements contained in COC S&W-6 and the WDR for the GSEP.

8.0 REFERENCES

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FIGURES







Detection Monitoring Well





Northstar Environmental Remediation 26225 Enterprise Court Lake Forest, California 92630 (949) 580-2800

Project Number: 196-004-06

Genesis Solar Energy Project 11995 Wiley's Well Road Blythe, California 92225

Figure 3 Evaporation Pond and Detection Monitoring Well Locations





TABLES

TABLE 1DETECTION MONITORING WELL DETAILS

Genesis Solar Energy Project, Riverside County, California

| Well ID | Other Name | Owner | er 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 | | | | | | | | | | | | | |
| 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 | | | | |

Notes:

-- = information is not available or unknown

amsl = above mean sea level

bgs = below ground surface

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

| Well ID | Date | Source | Top of Casing Elevation (feet amsl) | below toc) | Groundwater Elevation (fe amsl) | et Comments / Us |
|---------|------------|---------------|--|-----------------------|------------------------------------|------------------|
| | | WELLS INCLU | DED IN THE GROUNDWATER LEV | EL MONITORING PROGRAM | | |
| DM-1 | 2/27/2012 | WorleyParsons | 391.49 | 106.63 | 284.86 | Monitoring |
| DM-1 | 5/24/2012 | WorleyParsons | 391.49 | 107.11 | 284.38 | Monitoring |
| DM-1 | 7/26/2012 | WorleyParsons | 391.49 | 107.10 | 284.39 | Monitoring |
| DM-1 | 11/14/2012 | WorleyParsons | 391.49 | 108.15 | 283.34 | Monitoring |
| DM-1 | 3/29/2013 | WorleyParsons | 391.49 | 107.34 | 284.15 | Monitoring |
| DM-1 | 6/19/2013 | WorleyParsons | 391.49 | 107.19 | 284.30 | Monitoring |
| DM-1 | 8/13/2013 | WorleyParsons | 391.49 | 107.07 | 284.42 | Monitoring |
| DM-1 | 11/12/2013 | WorleyParsons | 391.49 | 107.22 | 284.27 | Monitoring |
| DM-1 | 2/26/2014 | WorleyParsons | 391.49 | 107.13 | 284.36 | Monitoring |
| DM-1 | 5/22/2014 | Northstar | 391.49 | 107.05 | 284.44 | Monitoring |
| DM-1 | 8/8/2014 | Northstar | 391.49 | 107.11 | 284.38 | Monitoring |
| DM-1 | 12/4/2014 | Northstar | 391.49 | 107.03 | 284.46 | Monitoring |
| DM-1 | 6/11/2015 | Northstar | 391.49 | 107.01 | 284.48 | Monitoring |
| DM-1 | 12/10/2015 | Northstar | 391.49 | 106.98 | 284.51 | Monitoring |
| DM-1 | 6/2/2016 | Northstar | 391.49 | 107.18 | 284.31 | Monitoring |
| DM-1 | 11/30/2016 | Northstar | 391.49 | 107.27 | 284.22 | Monitoring |
| DM-1 | 6/1/2017 | Northstar | 391.49 | 107.12 | 284.37 | Monitoring |
| DM-1 | 12/5/2017 | Northstar | 391.49 | 107.38 | 284.11 | Monitoring |
| DM-1 | 5/30/2018 | Northstar | 391.49 | 107.10 | 284.39 | Monitoring |
| DM-1 | 12/4/2018 | Northstar | 391.49 | 107.45 | 284.04 | Monitoring |
| | ., | | - | - | - | |
| DM-2 | 2/27/2012 | WorleyParsons | 391.32 | 106.92 | 284.40 | Monitoring |
| DM-2 | 5/24/2012 | WorleyParsons | 391.32 | 107.37 | 283.95 | Monitoring |
| DM-2 | 7/26/2012 | WorleyParsons | 391.32 | 107.33 | 283.99 | Monitoring |
| DM-2 | 11/14/2012 | WorleyParsons | 391.32 | 108.33 | 282.99 | Monitoring |
| DM-2 | 3/29/2013 | WorleyParsons | 391.32 | 107.59 | 283.73 | Monitoring |
| DM-2 | 6/19/2013 | WorleyParsons | 391.32 | 107.41 | 283.91 | Monitoring |
| DM-2 | 8/13/2013 | WorleyParsons | 391.32 | 107.31 | 284.01 | Monitoring |
| DM-2 | 11/12/2013 | WorleyParsons | 391.32 | 107.63 | 283.69 | Monitoring |
| DM-2 | 2/26/2014 | WorleyParsons | 391.32 | 107.40 | 283.92 | Monitoring |
| DM-2 | 5/22/2014 | Northstar | 391.32 | 107.28 | 283.32 | Monitoring |
| DM-2 | 8/8/2014 | Northstar | 391.32 | 107.28 | 284.04 | |
| | | | | | | Monitoring |
| DM-2 | 12/4/2014 | Northstar | 391.32 | 107.43 | 283.89 | Monitoring |
| DM-2 | 6/11/2015 | Northstar | 391.32 | 107.40 | 283.92 | Monitoring |
| DM-2 | 12/10/2015 | Northstar | 391.32 | 107.30 | 284.02 | Monitoring |
| DM-2 | 6/2/2016 | Northstar | 391.32 | 107.38 | 283.94 | Monitoring |
| DM-2 | 11/30/2016 | Northstar | 391.32 | 107.52 | 283.80 | Monitoring |
| DM-2 | 6/1/2017 | Northstar | 391.32 | 107.47 | 283.85 | Monitoring |
| DM-2 | 12/5/2017 | Northstar | 391.32 | 107.78 | 283.54 | Monitoring |
| DM-2 | 5/30/2018 | Northstar | 391.32 | 107.45 | 283.87 | Monitoring |
| DM-2 | 12/4/2018 | Northstar | 391.32 | 107.80 | 283.52 | Monitoring |
| | 0/07/00/0 | | | 100.05 | | |
| DM-3 | 2/27/2012 | WorleyParsons | 388.34 | 103.85 | 284.49 | Monitoring |
| DM-3 | 5/24/2012 | WorleyParsons | 388.34 | 104.35 | 283.99 | Monitoring |
| DM-3 | 7/26/2012 | WorleyParsons | 388.34 | 104.28 | 284.06 | Monitoring |
| DM-3 | 11/14/2012 | WorleyParsons | 388.34 | 105.25 | 283.09 | Monitoring |
| DM-3 | 3/29/2013 | WorleyParsons | 388.34 | 104.35 | 283.99 | Monitoring |
| DM-3 | 6/19/2013 | WorleyParsons | 388.34 | 104.20 | 284.14 | Monitoring |
| DM-3 | 8/13/2013 | WorleyParsons | 388.34 | 104.31 | 284.03 | Monitoring |
| DM-3 | 11/12/2013 | WorleyParsons | 388.34 | 104.43 | 283.91 | Monitoring |
| DM-3 | 2/26/2014 | WorleyParsons | 388.34 | 104.31 | 284.03 | Monitoring |
| DM-3 | 5/22/2014 | Northstar | 388.34 | 104.20 | 284.14 | Monitoring |
| DM-3 | 8/8/2014 | Northstar | 388.34 | 104.21 | 284.13 | Monitoring |
| DM-3 | 12/4/2014 | Northstar | 388.34 | 104.39 | 283.95 | Monitoring |
| DM-3 | 6/12/2015 | Northstar | 388.34 | 104.18 | 284.16 | Monitoring |
| DM-3 | 12/11/2015 | Northstar | 388.34 | 103.96 | 284.38 | Monitoring |
| DM-3 | 6/3/2016 | Northstar | 388.34 | 104.38 | 283.96 | Monitoring |
| DM-3 | 12/2/2016 | Northstar | 388.34 | 104.28 | 284.06 | Monitoring |
| DM-3 | 6/1/2017 | Northstar | 388.34 | 104.25 | 284.09 | Monitoring |
| DM-3 | 12/5/2017 | Northstar | 388.34 | 104.62 | 283.72 | Monitoring |
| DM-3 | 5/30/2018 | Northstar | 388.34 | 104.27 | 284.07 | Monitoring |
| | | | | | | |

Notes:

amsl = above mean sea level

toc = top of casing

TABLE 3 FIELD DATA COLLECTED DURING THE MOST RECENT GROUNDWATER MONITORING EVENT

Genesis Solar Energy Project, Riverside County, California

| | | | Groundwater Pu | rging | Field Parameters | | | | | | | | | |
|---------|-----------|---|-------------------|--------------------------|------------------|-------------------------|--------------------|----------------|----------------------------------|-------------|--|--|--|--|
| Well ID | Date | Rate of Groundwater Discharge (mL/min) | Purging Method | Total Volume Purged (mL) | рН | Conductivity (mS/cm) | Turbidity (NTU) | D.O. (mg/L) | Temperature (C ⁰) | ORP (mV) | | | | |
| DM-1 | 12/4/2018 | 188 | Bladder Pump | 6,254 | 7.78 | 19.3 | 6.6 | 4.86 | 21.60 | +66 | | | | |
| DM-2 | 12/4/2018 | 112 | Bladder Pump | 5,646 | 7.81 | 17.9 | 75.0 | 3.07 | 22.82 | +100 | | | | |
| DM-3 | 12/4/2018 | 121 | Bladder Pump | 5,718 | 7.80 | 18.8 | 3.2 | 4.34 | 22.33 | +130 | | | | |

NOTES:

mL = milliliters

mL/min = milliliters per minute

mS/cm = millisiemens per centermeter

NTU = Nephelometric Turbidity Units

DO = Dissolved Oxygen

mg/L = milligrams per liter

⁰C = degree Celsius

mV = millivolts

TABLE 4 SUMMARY OF LABORATORY ANALYTICAL RESULTS Genesis Solar Energy Project, Riverside County, California

| | | | | | | | | | | | | | | | | | | | | | | | | Total | | | Oil & | | | |
|--------------------------|-------------------------|----------------------|-------------------|-----------------|------------------|------------|----------------------------|------------------|--------------|--------------------------|------------------|-------------------|------------------|-----------|--------------|------------------|--------------|--------------|--------------|-------------------|------------------|------------------|----------------|-------------------|-------------------|--------------|---------------|------------------|------------------|---------------------------|
| | | | | Sulfate | Nitrate | | | | | | | | | | | Chromium | | | | | | | | Dissolved | Specific | | Grease / | | Deuterium | Oxygen-18 |
| | | | Chloride | (SO4) | (NO3)-N | Calcium | Copper | Sodium | Potassium | Iron | Magnesium | Antimony | Arsenic | Barium | Cadmium | (Total) | Cobalt | | Manganese | Nickel | Selenium | | Mercury | Solids | Conductance | pH (std. | HEM | HTF | (‰ relative | (‰ relative |
| | | Sampling | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | Lead (ug/L) | (ug/L) | (ug/L) | (ug/L) | Zinc (ug/L) | (ug/L) | (mg/L) | (us/cm) | Units) | (mg/L) | (mg/L) | to VSMOW) | to VSMOW) |
| Well ID | Date Sampled | Method | | A Method 3 | | | 1 | | thod 200.7 | | | | | 1 | | EP | A Method 20 | 0.8 | | | T | 1 | SM7470A | | SM2510B | SM4500H | SM1664A | 8015B | - | eochemistry |
| DM-1 | 5/24/2012 | Low Flow | 4,600 | 2,000 | 3.9 | 250 | <0.10 | 3,800 | 23.0 | < 0.40 | 56 | - | - | - | - | - | - | - | - | - | - | - | - | 12,000 | 16,000 | 7.84 | - | - | -65.1 | -8.8 |
| DM-1 | 10/24/2012 | Low Flow | 5,400 | 2,300 | <1.1 | 210 | <0.010 | 3,200 | 20.0 | <0.040 | 58 | - | - | - | - | - | | - | 11 | - | - | - | - | 11,000 | 18,000 | 7.83 | - | - | -72.1 | -8.6 |
| DM-1 | 5/22/2014 | Low Flow | 5,300 | 2,000 | - | 240 | <0.010 | 3,700 | 22 | <0.040 | 54 | <10 | 6.2 | 52 | <5.0 | <10 | <5.0 | <5.0 | 2.5 | 4.6' | 3.0 | <100 | <0.20 | 11,000 | 19,000 | 7.81 | <5.0 | - | -68.50 | -8.51 |
| DM-1 | 5/22/2014 | Low Flow | 5,200 | 2,000 | - | 230 | <0.010 | 3,600 | 22 | <0.040 | 53 | <10 | 5.6 | 50 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 3.9' | 3.1 | <100 | <0.20 | 11,000 | 19,000 | 7.74 | <5.3 | - | -69.47 | -8.74 |
| DM-1 | 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 | <10 | 25 | 0.15 | 11,000 | 19,000 | 7.92 | <4.7 | < 0.094 | N/A ² | N/A ² |
| DM-1 | 6/11/2015 | Low Flow | 4,600 | 2,000 | 3.7 | 230 | <0.10 | 3,600 | 21 | <0.40 | 52 | <10 | 3.8 | 36 | <5.0 | 2.9' | <5.0 | <5.0 | 3.6 | 6.3 | 3.6 | <100 | 0.26 | 10,000 | 19,000 | 7.81 | <4.7 | <0.10 | -69.2 | -8.47 |
| DM-1 | 12/10/2015 | Low Flow | 5,300 | 2,100 | 4.9 | 260 | <0.010 | 3,700 | 22 | <0.040 | 57 | <10 | 5.6 | 38 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <10 | 5.2 | <100 | <0.20 | 12,000 | 19,000 | 7.79 | <5.0 | < 0.094 | -70.3 | -8.57 |
| DM-1 | 6/2/2016 | Low Flow | 4,700 | 1,800 | 7.8 | 230 | <0.10 | 3,800 | 18 | <0.40 | 57 | <2.0 | 5.1 | 31 | <1.0 | 1.9' | <1.0 | <1.0 | 0.99 | 1.1' | 3.3 | 2.5 | <0.20 | 11,000 | 20,000 | 7.87 | <4.7 | <0.094 | -69.87 | -8.83 |
| DM-1 | 11/30/2016 | Low Flow | 5,200 | 2,000 | <5.5 | 230 | < 0.010 | 3,700 | 23 | <0.040 | 59 | <20 | 6.7 | 31 | <10 | <20 | <10 | <10 | <10 | <10 | 13 | <200 | <0.20 | 11,000 | 17,000 | 7.8 | <4.7 | < 0.093 | -70.70 | -8.68 |
| DM-1 | 6/1/2017 | Low Flow | 4,600 | 1,900 | 4.2 | 250 | <0.10 | 4,100 | 21 | <1.0 | 62 | <10 | 4.8 | 28 | <5.0 | 5.9 ^J | <5.0 | <5.0 | <5.0 | 7.6 | 6.9 ^J | <100 | <0.20 | 11,000 | 16,000 | 7.9 | <5.1 | < 0.094 | -70.30 | -8.57 |
| DM-1 | 12/5/2017 | Low Flow | 7,130 | 2,770 | 12.8 | 230 | 0.025 | 1,100 | 30 | <1.0 | 59 | <1.0 | 6.2 | 28 | <2.5 | 3.1 | <2.5 | <2.5 | - | <2.5 | 5.1 | 6.6 | <0.50 | 10,000 | 17,200 | 7.8 | <5.0 | <0.10 | -69.14 | -8.90 |
| DM-1 DM-1 | 5/30/2018 12/4/2018 | Low Flow Low Flow | 5,190 8,180 | 2,030 3,280 | 14.7 9.00 | 270 260 | 0.096 ¹ <0.5 | 5,200 4,800 | 63 33 | 0.78 ¹ <20 | 64 68 | <0.50 <10 | 5.0 10 | 30 31 | <0.50 <10 | <5.0 <10 | <0.50 <10 | <5.0 <10 | - | <5.0 <10 | 5.9 <10 | 9.5 <10 | <0.50 <0.50 | 11,000 11,000 | 17,300 17,400 | 7.9 7.7 | <5.0 <5.0 | <0.10 <0.10 | -71.10 | -8.57 -8.55 |
| DIVI-1 | 12/4/2018 | LOW FIOW | 0,100 | 5,200 | 9.00 | 200 | NO.3 | 4,000 | 33 | N20 | 00 | <10 | 10 | 51 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <0.50 | 11,000 | 17,400 | 1.1 | <3.0 | <0.10 | -70.10 | -0.55 |
| DM-2 | 5/24/2012 | Low Flow | 4,500 | 2,000 | 2.9 | 290 | <0.10 | 3,500 | 25.0 | <0.40 | 59 | - | - | - | - | - | - | - | - | | - | - | - | 13,000 | 16,000 | 7.80 | - | - | -71.7 | -8.8 |
| DM-2 | 10/23/2012 | Low Flow | 4,800 | 2,000 | <1.1 | 470 | <0.010 | 2,600 | 27.0 | <0.040 | 54 | - | - | - | - | - | - | - | 110 | - | - | - | - | 9,900 | 16,000 | 7.72 | - | - | -70.9 | -8.9 |
| DM-2 | 5/22/2014 | Low Flow | 5,100 | 2,000 | - | 320 | <0.020 | 3,500 | 23 | 0.022 ^J | 54 | <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 |
| DM-2 | 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-2 | 6/11/2015 | Low Flow | 4,500 | 2,000 | 3.8 | 290 | <0.10 | 3,500 | 22 | <0.40 | 55 | <10 | 4.1 ^J | 110 | <5.0 | 2.9 ^J | <5.0 | <5.0 | 40 | 4.9 ^J | <10 | <100 | <0.20 | 9,600 | 18,000 | 7.92 | <4.7 | <0.10 | -68.2 | -8.52 |
| DM-2 | 12/10/2015 | Low Flow | 5,400 | 2,200 | <5.5 | 290 | <0.010 | 3,600 | 21 | 0.062 | 61 | <10 | 5.9 | 85 | <5.0 | <10 | <5.0 | <5.0 | 88 | <10 | 5.5 | <100 | <0.20 | 12,000 | 18,000 | 7.85 | <5.0 | < 0.096 | -69.4 | -8.43 |
| DM-2 | 6/2/2016 | Low Flow | 4,800 | 1,900 | 8.0 | 280 | <0.10 | 3,800 | 20 | 0.27 ^J | 60 | 0.51 ^J | 4.7 | 62 | <1.0 | 1.5 ^J | <1.0 | <1.0 | 62 | 1.1 ^J | 3.5 | <20 | <0.20 | 12,000 | 22,000 | 7.95 | <4.9 | < 0.097 | -69.53 | -8.63 |
| DM-2 | 11/30/2016 | Low Flow | 5,300 | 2,200 | 2.8 ^J | 290 | <0.010 | 4,200 | 28 | <0.040 | 61 | <20 | 5.9 ^J | 56 | <10 | <20 | <10 | <10 | 40 | <20 | 18 ^J | <200 | <0.20 | 11,000 | 17,000 | 7.8 | <4.7 | < 0.097 | -70.20 | -8.37 |
| DM-2 | 6/1/2017 | Low Flow | 4,800 | 1,900 | 3.1 ^J | 280 | <0.10 | 4,100 | 21 | <1.0 | 62 | <10 | 4.4 ^J | 52 | <5.0 | <10 | <5.0 | <5.0 | 17 | 5.2 ^J | 5.6 ^J | <100 | <0.20 | 12,000 | 16,000 | 7.9 | <5.2 | <0.097 | -70.10 | -8.51 |
| DM-2 | 12/5/2017 | Low Flow | 4,930 | 1,960 | 13.4 | 250 | <0.025 | 1,400 | 34 | <1.0 | 62 | <1.0 | 5.5 | 69 | <2.5 | 3.7 | <2.5 | <2.5 | - | <2.5 | 5.7 | 4.5 | <0.50 | 11,000 | 17,200 | 7.8 | <5.0 | <0.10 | -67.66 | -8.63 |
| DM-2 | 5/30/2018 | Low Flow | 6,000 | 2,280 | 17.5 | 300 | 0.11 | 4,800 | 68 | <10 | 67 | <5.0 | 5.1 | 51 | <0.50 | <5.0 | <0.50 | <0.50 | - | <0.50 | 6.3 | <5.0 | <0.50 | 9,900 | 17,000 | 7.9 | <5.0 | <0.11 | -69.20 | -8.39 |
| DM-2 | 12/4/2018 | Low Flow | 5,290 | 1,770 | 11.4 | 240 | <0.5 | 4,900 | 35 | <20 | 60 | <10 | <10 | 57 | <10 | <10 | <10 | <10 | - | <10 | <10 | 28 | <0.50 | 7,100 | 13,000 | 7.8 | <5.0 | <0.10 | -72.30 | -8.98 |
| | - / / | | | | | | | | | | | | | | | | | | | | | | | | | | | Ļ' | | |
| DM-3 | 5/24/2012 | Low Flow | 4,600 | 2,000 | <2.2 | 220 | <0.10 | 3,500 | 20.0 | <0.40 | 51 | - | - | - | - | - | - | - | - | - | - | - | - | 12,000 | 16,000 | 7.83 | - | | -71.4 | -8.9 -8.7 |
| DM-3 DM-3 | 10/23/2012 5/22/2014 | Low Flow Low Flow | 5,100 5,400 | 2,100 2,100 | <2.2 | 210 230 | <0.010 <0.010 | 3,000 3,600 | 20.0 | <0.040 <0.040 | 52 51 | - <10 | - 13 | - 18 | - <5.0 | <10 | - <5.0 | <5.0 | <1.0 <5.0 | - 10 | - <10 | <100 | <0.20 | 11,000 11,000 | 18,000 19,000 | 7.83 7.66 | <4.9 | - | -72.6 | -8.7 |
| DIVI-3 DM-3 | 12/5/2014 | Low Flow | 4,900 | 1,800 | 1.8 ^J | 230 | < 0.010 | 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 | <4.5 | <0.099 | N/A ² | -8.52 N/A ² |
| DIVI-3 DM-3 | 6/12/2015 | Low Flow | 4,900 | 1,800 | <5.5 | 230 | <0.030 | 3,600 | 18 | <0.20 | 50 | <10 | 10 | 18 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 4.5 ^J | <10 | <100 | <0.20 | 9,800 | 18,000 | 7.82 | <4.7 | <0.099 | -69.6 | -8.90 |
| DM-3 | 12/11/2015 | Low Flow | 5,100 | 2,200 | <5.5 | 250 | 0.0057 ^J | 3,500 | 19 | <0.40 | 50 | <10 | 14 | 21 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 4.5 <10 | 3.1 | <100 | <0.20 | 11,000 | 18,000 | 7.79 | <5.0 | <0.10 | -70.6 | -8.30 |
| DM-3 | 6/3/2016 | Low Flow | 4,700 | 1,900 | 7.1 | 220 | <0.10 | 3,700 | 19 | <0.040 | 53 | <2.0 | 17 | 16 | <1.0 | 0.66 | <1.0 | <1.0 | 0.64 | 0.88 ^J | 1.0 | 5.1 ^J | <0.20 | 11,000 | 20,000 | 7.86 | <4.7 | <0.094 | -69.29 | -8.75 |
| DM-3 | 12/2/2016 | Low Flow | 4,900 | 2,100 | <5.5 | 240 | 0.0052 ^J | 4,100 | 23 | <0.40 | 56 | <10 | 14 | 10 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <10 | 5.6 ^J | <100 | <0.20 | 11,000 | 17,000 | 7.8 | <4.7 | <0.093 | -72.20 | -8.75 |
| DM-3 | 6/1/2017 | Low Flow | 4,800 | 2,000 | <5.5 | 240 | <0.10 | 3,900 | 19 | <1.0 | 55 | <10 | 15 | 18 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 3.9 ^J | 2.7 ^J | <100 | <0.20 | 11,000 | 16,000 | 7.9 | <5.1 | <0.097 | -70.80 | -8.75 |
| DM-3 | 12/5/2017 | Low Flow | 4,880 | 2,000 | 2.77 | 230 | 0.027 | 1,200 | 31 | 0.073 | 59 | <2.5 | 15 | 15 | <2.5 | <2.5 | <2.5 | <2.5 | - | <2.5 | <2.5 | 5.6 | <0.20 | 13,000 | 17,000 | 7.8 | <5.0 | <0.10 | -69.57 | -8.87 |
| DM-3 | 5/30/2018 | Low Flow | 6,350 | 2,620 | 10.7 | 260 | 0.027 | 4,100 | 61 | <10 | 61 | <0.50 | 13 | 15 | <0.50 | <5.0 | <0.50 | <0.50 | - | <0.50 | <5.0 | <5.0 | <0.50 | 12,000 | 17,000 | 7.9 | <5.0 | <0.10 | -70.60 | -8.67 |
| DM-3 | 12/4/2018 | Low Flow | 6,770 | 2,840 | 2.50 | 280 | <0.5 | 5,200 | 33 | <20 | 69 | <10 | 20 | 34 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <0.50 | 9,700 | 17,100 | 7.8 | <5.0 | <0.11 | -70.60 | -8.67 |
| | , .,5 | | -, | _,, | | | | -, | | | | | | | | | | | | | | | | -, | , | | | | | |
| North Pond | 6/1/2018 | Composite | 61,700 | 21,000 | 0.870 | 230 | <0.015 | 12,000 | 430 | <0.35 | 4.6 ^J | <10 | 470 | 230 | <10 | <0.50 | <10 | <0.50 | - | 25 | <25 | 62 | <0.50 | 120,000 | 148,000 | 9.4 | <1.40 | <0.095 | N/A | N/A |
| North Pond | 12/3/2018 | Composite | 241,000 | 18,600 | 24.3 | 630 | 2.9 | 46,000 | 8,300 | <20 | 27 | <25 | 1,000 | 68 | <25 | <25 | <25 | <25 | - | 59 | <25 | <25 | <0.50 | 400,000 | 241,000 | 7.6 | <5.00 | <0.099 | N/A | N/A |
| Courth Doubl | C /1 /2010 | Composite | 152.000 | 50 500 | 22.2 | 27 | -0.015 | 17.000 | 1 1 0 0 | 10.25 | 17 | -10 | 1 100 | 05 | -25 | (10 | -10 | -0.50 | | 10 | 42 | 70 | -0.50 | 210.000 | 210.000 | 0.2 | -1.40 | 10,000 | N/A | N/A |
| South Pond South Pond | 6/1/2018 12/3/2018 | Composite | 152,000 33,200 | 59,500 8,710 | 22.2 65.1 | 27 410 | <0.015 2.8 | 17,000 34,000 | 1,100 420 | <0.35 <20 | 17 27 | <10 <25 | 1,100 390 | 85 310 | <25 <25 | <10 <25 | <10 <25 | <0.50 <25 | - | 46 <25 | 43 <25 | 79 160 | <0.50 <0.50 | 310,000 39,000 | 218,000 61,200 | 8.3 8.9 | <1.40 36.4 | <0.090 <0.097 | N/A N/A | N/A N/A |
| South Polid | 12/3/2018 | Composite | 33,200 | 5,710 | 03.1 | 410 | 2.0 | 34,000 | 420 | ~20 | 21 | ~23 | 330 | 510 | ~23 | ~23 | ~23 | ~25 | - | ~23 | ~25 | 100 | ~0.50 | 39,000 | 01,200 | 0.3 | 50.4 | ~0.057 | IN/A | N/A |
| L | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | I | | 1 | | 1 | | 1 | 1 | | 1 | 1 | I | I | | | 1 | ·' | 1 | |

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

VSMOW = Vienna Standard Mean Ocean Water
< = not detected at or above the indicated reporting limit
- = information is unknown / not applicable / not analyzed
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.
+ Heat Transfer Fluid (HTF) is characterized by the analytes 1,1'-oxybis-benzene and 1,1'-biphenyl.
1 - Duplicate sample
2 - Analytical results not available at time of reporting due to laboratory equipment failure.
Analytical data shaded grey is a monitored Contaminant of Concern as defined in the Waste Discharge Requirements, Condition 79, Page 16

TABLE 5 SUMMARY OF LEAKAGE DETECTION SYSTEM DATA Genesis Solar Energy Project, Riverside County, California

| | | | | | | | Sensor R | eadings ¹ | | | | | | | | | | |
|-----------------|-----|-----|-----|------------|-----|-----|-----------|----------------------|-----|-----|------------|-----|-----|-----------|--|--|--|--|
| | | | | North Pond | ł | | | | | | South Pond | ł | | | | | | |
| Date of Reading | #1W | #2W | #3W | #1E | #2E | #3E | Totalizer | #1W | #2W | #3W | #1E | #2E | #3E | Totalizer | Comments | | | |
| 1st Qtr 2014 | 199 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | All probes are dry | | | |
| 2nd Qtr 2014 | 199 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 3rd Qtr 2014 | 199 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 12/05/2014 | 199 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 03/26/2015 | 199 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 06/12/2015 | 133 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 09/03/2015 | 78 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 09/15/2015 | 67 | 199 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 12/10/2015 | 0 | 75 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | Sump pumps turned on - no water | | | |
| 03/01/2016 | 6 | 101 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 06/02/2016 | 4 | 80 | 199 | 199 | 199 | 199 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 09/01/2016 | 0 | 42 | 146 | 199 | 175 | 105 | - | 199 | 199 | 199 | 199 | 199 | 199 | - | | | | |
| 12/01/2016 | 0 | 59 | 199 | 199 | 199 | 188 | 1,144.79 | 199 | 199 | 199 | 183 | 199 | 199 | 24.21 | Readings on arrival | | | |
| 12/01/2016 | 199 | 199 | 199 | 199 | 199 | 199 | 1,144.79 | 199 | 199 | 199 | 183 | 199 | 199 | 24.21 | Readings on departure, new probes in North Pond | | | |
| 03/02/2017 | 199 | 199 | 199 | 199 | 199 | 199 | 1,144.79 | 199 | 199 | 199 | 199 | 199 | 199 | 24.21 | | | | |
| 06/01/2017 | 199 | 199 | 199 | 199 | 199 | 199 | 1,144.79 | 199 | 199 | 199 | 199 | 199 | 199 | 24.21 | | | | |
| 09/04/2017 | 199 | 199 | 199 | 199 | 199 | 199 | 1,695.44 | 199 | 199 | 199 | 192 | 178 | 199 | 24.21 | | | | |
| 12/05/2017 | 114 | 165 | 199 | 199 | 179 | 180 | 1,695.66 | 199 | 199 | 199 | 166 | 199 | 199 | 24.21 | To date, all totalizer increases are from pump testing | | | |
| 03/06/2018 | 186 | 199 | 199 | 199 | 199 | 199 | 1,695.66 | 199 | 199 | 199 | 199 | 199 | 199 | 24.21 | | | | |
| 06/01/2018 | 159 | 199 | 199 | 199 | 199 | 199 | 1,695.66 | 199 | 199 | 199 | 177 | 186 | 199 | 24.21 | | | | |
| 09/12/2018 | 78 | 192 | 199 | 199 | 199 | 192 | 1,694.83 | 199 | 199 | 199 | 197 | 187 | 199 | 24.21 | | | | |
| 12/03/2018 | 119 | 181 | 199 | 199 | 199 | 199 | 1,688.26 | 199 | 199 | 199 | 199 | 168 | 199 | 24.21 | | | | |
| | | | | | | | | | | | | | | | | | | |

1 - Readings in centibars, collected with a Watermark 30 KTCD-NL Soil Moisture Meter

APPENDIX A

FIELD DATA SHEETS



GROUNDWATER SAMPLING FIELD FORM

| T | | | | 0.00 | | | 1.1.1 | | |
|---|------------------|--------------|--------------------------|---------------------|----------|---------------------------------------|---------------------|-------------|--------------|
| Event: 2018 2nd Semiann | iual | Site: Gene | esis Solar Ener | gy Project | | | | Project No: | 196-004-06 |
| Project: Groundwater Qu | ality Monito | ring Program | 1 | | | | | Project Man | ager: AWB |
| Technicians: RCD/AWB | | | | | | 0.000 | | Weather: Co | ool, clear |
| Sampling Method: Geotec | h Submers | ible Bladder | Pump - Low FI | ow Purge (< | 250 mL/r | ninute); Flow-Th | nrough Cel | | |
| | | e Once With | | | | | 1.16.1 | | |
| Well No. | DM-1 | Time | Water Level (ft btoc) | Temp ⁰C | pН | Conductivity (mS/cm) | Turbidity (NTUs) | ORP (mV) | DO (mg/L) |
| Casing Diameter (in.) | 4.0 | 6:24 | 107.46 | 21.59 | 7.72 | 19.1 | 7.2 | +68 | 4.82 |
| Total Depth (ft btoc) | 120 | 6:26 | 107.46 | 21.60 | 7.76 | 19.2 | 6.8 | +64 | 4.86 |
| Screened Interval (ft btoc) | 100 - 120 | 6:28 | 107.46 | 21.60 | 7.78 | 19.3 | 6.6 | +66 | 4.86 |
| Depth to Water (ft btoc) | 107.45 | | | | | | | | |
| Depth of Inlet (ft btoc) | 115.00 | | | | | | | | |
| Discharge Time (sec) | 25 | | 1 | | | · · · · · · · · · · · · · · · · · · · | | | |
| Fill Time (sec) | 15 | | | | | | | | |
| Cycles per Minute | 1.5 | | | | | | | | |
| Volume per Cycle (mL) | 125 | | | | | | | | |
| Pump Rate (mL/min) | 188 | | | | | 1 | | | |
| Sample Date | 12/4/201B | | | | | | | | |
| Sample Time | 6:30 | | | | | | | | |
| General Well Location: Wes COMMENTS: | t side of settle | ement ponds | (OD) | | | | ι. | | 1 |
| Well No. | DM-2 | Time | Water Level (ft btoc) | Temp °C | рН | Conductivity (mS/cm) | Turbidity (NTUs) | ORP (mV) | DO (mg/L) |
| Casing Diameter (in.) | 4.0 | 6:54 | 107.90 | 22.79 | 7.79 | 17.6 | 76.1 | +104 | 3.12 |
| Total Depth (ft btoc) | 120 | 6:56 | 107.90 | 22.81 | 7.79 | 17.7 | 75.1 | +101 | 3.08 |
| Screened Interval (ft btoc) | 100 - 120 | 6:58 | 107.90 | 22.82 | 7.81 | 17.9 | 75.0 | +100 | 3.07 |
| Depth to Water (ft btoc) | 107.80 | | | | | | | | |
| Depth of Inlet (ft btoc) | 115.00 | | | | | | | | |
| Discharge Time (sec) | 27 | | | | | | | | |
| Fill Time (sec) | 40 | | | | | | | | |
| Cycles per Minute | 0.9 | | | | | | | | |
| Volume per Cycle (mL) | 125 | | | | | | - | | |
| Pump Rate (mL/min) | 112 | | | | | | | | |
| Sample Date | 12/4/2018 | | | | 1 | | | | |
| Sample Time | 7:00 | | | | | | | | |
| General Well Location: East | | ment ponds | | | | | | | 21 |
| Well No. | DM-3 | Time | Water Level (ft btoc) | Temp ^o C | рН | Conductivity (mS/cm) | Turbidity (NTUs) | ORP (mV) | DO (mg/L) |
| Casing Diameter (in.) | 4.0 | 7:24 | 104.74 | 22.33 | 7.82 | 18.8 | 2.7 | +127 | 4.31 |
| Total Depth (ft btoc) | 120 | 7:26 | 104.74 | 22.28 | 7.80 | 18.8 | 3.1 | +128 | 4.33 |
| Screened Interval (ft btoc) | 100 - 120 | 7:28 | 104.74 | 22.33 | 7.80 | 18.8 | 3.2 | +130 | 4.34 |
| Depth to Water (ft btoc) | 104.68 | 1.00 | | | | | | | |
| Depth of Inlet (ft btoc) | 115.00 | | | | | | | | |
| Discharge Time (sec) | 27 | | | | | | | | |
| Fill Time (sec) | 35 | 1 | - | | | | | | |
| Cycles per Minute | 0.97 | | 1 | | | 1 | | | |
| Volume per Cycle (mL) | 125 | · · · · · | | | | | | | |
| Pump Rate (mL/min) | 121 | | | | | 1 | | | |
| Sample Date | 12/4/2018 | 5 | | | | | | | |
| Sample Time | 7:30 | | | | - | | 1 | | |
| General Well Location: Sout | h side of settl | ement ponds | | | | | | | |

APPENDIX B

LABORATORY ANALYTICAL RESULTS

EVAPORATION PONDS



25712 Commercentre Drive Lake Forest, California 92630 949.297.5020 Phone 949.297.5027 Fax

26 December 2018

Arlin Brewster Northstar Environmental Remediation 26225 Enterprise Court Lake Forest, CA 92630 RE: Genesis Solar LTUs & Ponds

Enclosed are the results of analyses for samples received by the laboratory on 12/05/18 10:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Joann Marroquin

Joann Marroquin Client Services Manager


| Northstar Environmental Remediation | Project: Genesis Solar LTUs & Ponds | |
|-------------------------------------|-------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-05 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/18 15:12 |

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|------------|---------------|--------|----------------|----------------|
| NORTH POND | T183599-01 | Water | 12/03/18 12:00 | 12/05/18 10:50 |
| SOUTH POND | T183599-02 | Water | 12/03/18 12:20 | 12/05/18 10:50 |

SunStar Laboratories, Inc.

Joann Marroquin

Joann Marroquin, Client Services Manager



| | Northstar Environmental Remediation | Project: Genesi | is Solar LTUs & Ponds | |
|---|-------------------------------------|--------------------------|-----------------------|----------------|
| I | 26225 Enterprise Court | Project Number: 196-00 | 4-05 | Reported: |
| | Lake Forest CA, 92630 | Project Manager: Arlin I | }rewster | 12/26/18 15:12 |

DETECTIONS SUMMARY

| Sample ID: NORTH POND | Laborat | ory ID: | T183599-01 | | |
|---------------------------|---------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 1000 | 25 | ug/l | 200.8 | |
| Barium | 68 | 25 | ug/l | 200.8 | |
| Copper | 2.9 | 0.50 | mg/l | EPA 200.7 | |
| Nickel | 59 | 25 | ug/l | 200.8 | |
| Calcium | 630 | 10 | mg/l | EPA 200.7 | |
| Potassium | 8300 | 10 | mg/l | EPA 200.7 | |
| Magnesium | 27 | 10 | mg/l | EPA 200.7 | |
| Sodium | 46000 | 50 | mg/l | EPA 200.7 | |
| Total Dissolved Solids | 400000 | 55 | mg/l | TDS by SM2540C | |
| pH | 7.6 | 0.10 | pH Units | SM4500 | O-04 |
| Specific Conductance (EC) | 241000 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 241000 | 2500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 18600 | 2500 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | 24.3 | 10.0 | mg/l | EPA 300.0 | O-07 |

| Sample ID: SOUTH POND | Labora | tory ID: | T183599-02 | | |
|---------------------------|--------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 390 | 25 | ug/l | 200.8 | |
| Barium | 310 | 25 | ug/l | 200.8 | |
| Copper | 2.8 | 0.50 | mg/l | EPA 200.7 | |
| Zinc | 160 | 25 | ug/l | 200.8 | |
| Calcium | 410 | 10 | mg/l | EPA 200.7 | |
| Magnesium | 27 | 10 | mg/l | EPA 200.7 | |
| Potassium | 420 | 10 | mg/l | EPA 200.7 | |
| Sodium | 34000 | 50 | mg/l | EPA 200.7 | |
| Oil & Grease | 36.4 | 5.00 | mg/l | EPA 1664B | |
| рН | 8.9 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 39000 | 55 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | 61200 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 33200 | 500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 8710 | 500 | mg/l | EPA 300.0 | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Gen | esis Solar LTUs & Ponds | |
|-------------------------------------|------------------------|-------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196- | -004-05 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin | n Brewster | 12/26/18 15:12 |

| Sample ID: SOUTH POND | Laborat | ory ID: | T183599-02 | | |
|-----------------------|---------|-----------|------------|-----------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Nitrate as NO3 | 65.1 | 0.500 | mg/l | EPA 300.0 | O-07 |

SunStar Laboratories, Inc.

Joann Marroquin

Joann Marroquin, Client Services Manager



| Northstar Environmental Remediation | | | ect: Genesis | | s & Ponds | | | | | |
|--|---|--------------------|--------------|----------|-----------|-------------|----------------|--------------------|------------|--|
| 26225 Enterprise Court | | Project Num | ber: 196-004 | 4-05 | | | | Reported: | | |
| Lake Forest CA, 92630 | est CA, 92630 Project Manager: Arlin Brewster | | | | | 12/26/18 15 | 12/26/18 15:12 | | | |
| | | NOF | RTH PON | D | | | | | | |
| | | | 99-01 (Wat | | | | | | | |
| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | |
| | | SunStar I | aboratorie | es, Inc. | | | | | | |
| Metals by EPA 200 Series Methods | | | | | | | | | FILT | |
| Copper | 2.9 | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | | |
| Calcium | 630 | 10 | " | " | " | " | " | " | | |
| Iron | ND | 20 | " | " | " | " | " | " | R-07 | |
| Magnesium | 27 | 10 | " | " | " | " | " | " | | |
| Potassium | 8300 | 10 | " | " | " | " | " | 11 | | |
| Sodium | 46000 | 50 | " | 500 | " | | 12/13/18 | " | | |
| Antimony | ND | 25 | ug/l | 50 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | | |
| Arsenic | 1000 | 25 | " | " | " | " | " | " | | |
| Barium | 68 | 25 | " | " | " | " | " | ** | | |
| Cadmium | ND | 25 | " | " | " | " | " | " | | |
| Chromium | ND | 25 | " | " | " | " | " | " | | |
| Cobalt | ND | 25 | " | " | " | " | " | " | R-0 | |
| Lead | ND | 25 | " | " | " | " | " | " | R-0 | |
| Nickel | 59 | 25 | " | " | " | | " | " | | |
| Selenium | ND | 25 | ** | " | " | " | " | " | | |
| Zinc | ND | 25 | " | " | " | " | " | " | R-0 | |
| Cold Vapor Extraction EPA 7470/7471 | | | | | | | | | | |
| Mercury | ND | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | | |
| Conventional Chemistry Parameters by A | APHA/EPA/ASTM | Methods | | | | | | | | |
| Dil & Grease | ND | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | | |
| Specific Conductance (EC) | 241000 | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | | |
| рН | 7.6 | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 | |
| Fotal Dissolved Solids | 400000 | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | | |

SunStar Laboratories, Inc.

Joann Marroquin

Joann Marroquin, Client Services Manager



O-07

12/06/18

| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | | Proje Project Numb Project Manag | er: 196-0 | | 's & Ponds | | | Reported 12/26/18 15 | |
|--|-----------------|--|-----------|-----------|--------------|----------|---------------|--------------------------------|-------|
| NORTH POND T183599-01 (Water) | | | | | | | | | |
| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | SunStar L | aborator | ies, Inc. | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | |
| Chloride Sulfate as SO4 | 241000 18600 | 2500 2500 | mg/l " | 500 " | 8120528 " | 12/05/18 | 12/06/18 " | EPA 300.0 " | |

"

10.0

24.3

20

SunStar Laboratories, Inc.

Nitrate as NO3

Joann Marroquin

Joann Marroquin, Client Services Manager



| Northstar Environmental Remediation | | Proj | ject: Genesis | s Solar LTU | s & Ponds | | | | | |
|--|---------------------------------|-------------|---------------|-------------|-----------|-------------|----------------|--------------------|------------|--|
| 26225 Enterprise Court | | Project Num | ber: 196-004 | 4-05 | | | | Reported: | | |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | | | | | 12/26/18 15 | 12/26/18 15:12 | | | |
| | | SOU | TH PON | D | | | | | | |
| | | T1835 | 99-02 (Wat | ter) | | | | | | |
| | | Reporting | | | | - · | | | | |
| Analyte | Result | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | |
| | | SunStar I | aboratorie | es, Inc. | | | | | | |
| Metals by EPA 200 Series Methods | | | | | | | | | FILT | |
| Copper | 2.8 | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | | |
| Calcium | 410 | 10 | " | " | " | " | " | " | | |
| Iron | ND | 20 | " | " | " | " | " | " | R-07 | |
| Magnesium | 27 | 10 | " | " | " | " | " | " | | |
| Potassium | 420 | 10 | " | " | " | " | н | " | | |
| Sodium | 34000 | 50 | " | 500 | " | " | 12/13/18 | " | | |
| Antimony | ND | 25 | ug/l | 50 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | | |
| Arsenic | 390 | 25 | " | " | " | " | н | " | | |
| Barium | 310 | 25 | " | " | " | " | " | " | | |
| Cadmium | ND | 25 | " | " | " | " | " | " | | |
| Chromium | ND | 25 | " | " | " | " | " | " | | |
| Cobalt | ND | 25 | " | " | " | " | " | " | R-0 | |
| Lead | ND | 25 | " | " | " | | | " | R-0 | |
| Nickel | ND | 25 | " | " | " | " | " | " | | |
| Selenium | ND | 25 | " | " | " | " | " | " | | |
| Zinc | 160 | 25 | " | " | " | " | " | " | | |
| Cold Vapor Extraction EPA 7470/7471 | | | | | | | | | | |
| Mercury | ND | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | | |
| Conventional Chemistry Parameters by A | APHA/EPA/ASTM | Methods | | | | | | | | |
| Oil & Grease | 36.4 | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | | |
| Specific Conductance (EC) | 61200 | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | | |
| pH | 8.9 | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 | |
| Total Dissolved Solids | 39000 | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | | |

SunStar Laboratories, Inc.

Joann Marroquin

Joann Marroquin, Client Services Manager



Nitrate as NO3

25712 Commercentre Drive Lake Forest, California 92630 949.297.5020 Phone 949.297.5027 Fax

12/05/18

"

O-07

| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | | Proje Project Numb Project Manag | er: 196-0 | | s & Ponds | | | Reported 12/26/18 15 | |
|--|---------------|--|-----------|-----------|--------------|----------|----------|--------------------------------|-------|
| SOUTH POND T183599-02 (Water) | | | | | | | | | |
| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | SunStar L | aborator | ies, Inc. | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | |
| Chloride Sulfate as SO4 | 33200 8710 | 500 500 | mg/l " | 100 " | 8120528 " | 12/05/18 | 12/06/18 | EPA 300.0 | |

"

0.500

65.1

1

.,

SunStar Laboratories, Inc.

Joann Marroquin

Joann Marroquin, Client Services Manager



| | Northstar Environmental Remediation | Project: Genesis Solar LTUs & Ponds | |
|---|-------------------------------------|-------------------------------------|----------------|
| I | 26225 Enterprise Court | Project Number: 196-004-05 | Reported: |
| | Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/18 15:12 |

Metals by EPA 200 Series Methods - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------------------------------|--------|--------------------|-------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch 8120712 - EPA 3010A | | | | | | | | | | |
| Blank (8120712-BLK1) | | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | 2/13/18 | | | |
| Copper | ND | 0.005 | mg/l | | | | | | | |
| Calcium | ND | 0.10 | " | | | | | | | |
| Iron | ND | 0.20 | " | | | | | | | |
| Potassium | ND | 0.10 | н | | | | | | | |
| Magnesium | ND | 0.10 | н | | | | | | | |
| Sodium | ND | 0.10 | " | | | | | | | QB-0 |
| LCS (8120712-BS1) | | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | 2/13/18 | | | |
| Copper | 0.485 | 0.005 | mg/l | 0.500 | | 97.0 | 85-115 | | | |
| Matrix Spike (8120712-MS1) | Sou | rce: T183598- | 01 | Prepared: 1 | 2/07/18 A | nalyzed: 12 | 2/13/18 | | | FILT |
| Copper | 3.27 | 0.50 | mg/l | 0.500 | ND | 653 | 70-130 | | | |
| Matrix Spike Dup (8120712-MSD1) | Sou | rce: T183598- | 01 | Prepared: 1 | 2/07/18 A | nalyzed: 12 | 2/13/18 | | | FIL |
| Copper | 3.27 | 0.50 | mg/l | 0.500 | ND | 654 | 70-130 | 0.161 | 30 | |

Batch 8121043 - EPA 3010A

| Blank (8121043-BLK1) | | | | Prepared: 12/10/18 Analyzed: 12/12/18 |
|----------------------|----|------|------|---------------------------------------|
| Antimony | ND | 0.50 | ug/l | |
| Arsenic | ND | 0.50 | н | |
| Barium | ND | 0.50 | н | |
| Beryllium | ND | 0.50 | н | |
| Cadmium | ND | 0.50 | " | |
| Chromium | ND | 0.50 | " | |
| Cobalt | ND | 0.50 | " | |
| Lead | ND | 0.50 | " | |
| Nickel | ND | 0.50 | н | |
| Selenium | ND | 0.50 | н | |
| Zinc | ND | 0.50 | н | |
| | | | | |

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| Northstar Environmental Remediation | Project: | Genesis Solar LTUs & Ponds | |
|-------------------------------------|------------------|----------------------------|----------------|
| 26225 Enterprise Court | Project Number: | 196-004-05 | Reported: |
| Lake Forest CA, 92630 | Project Manager: | Arlin Brewster | 12/26/18 15:12 |

Metals by EPA 200 Series Methods - Quality Control

SunStar Laboratories, Inc.

| | | Suistai | | | | | | | | |
|---------------------------------|--------|--------------------|-------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
| Batch 8121043 - EPA 3010A | | | | | | | | | | |
| LCS (8121043-BS1) | | | | Prepared: 1 | 2/10/18 A | nalyzed: 12 | /12/18 | | | |
| Arsenic | 57.1 | 0.50 | ug/l | 50.0 | | 114 | 75-125 | | | |
| Barium | 48.3 | 0.50 | | 50.0 | | 96.6 | 75-125 | | | |
| Cadmium | 54.0 | 0.50 | " | 50.0 | | 108 | 75-125 | | | |
| Chromium | 46.6 | 0.50 | " | 50.0 | | 93.1 | 75-125 | | | |
| Lead | 47.0 | 0.50 | " | 50.0 | | 94.1 | 75-125 | | | |
| Matrix Spike (8121043-MS1) | Sour | ce: T183598- | D1 | Prepared: 1 | 2/10/18 A | nalyzed: 12 | /12/18 | | | |
| Arsenic | 116 | 10 | ug/l | 50.0 | 6.69 | 218 | 75-125 | | | QM-01 |
| Barium | 62.3 | 10 | | 50.0 | 13.6 | 97.3 | 75-125 | | | |
| Cadmium | 48.7 | 10 | " | 50.0 | 1.27 | 94.9 | 75-125 | | | |
| Chromium | 110 | 10 | " | 50.0 | 2.50 | 216 | 75-125 | | | QM-01 |
| Lead | 107 | 10 | " | 50.0 | ND | 213 | 75-125 | | | QM-01 |
| Matrix Spike Dup (8121043-MSD1) | Sour | ce: T183598- | 01 | Prepared: 1 | 2/10/18 A | nalyzed: 12 | /12/18 | | | |
| Arsenic | 61.3 | 10 | ug/l | 50.0 | 6.69 | 109 | 75-125 | 61.5 | 20 | QM-01 |
| Barium | 60.4 | 10 | " | 50.0 | 13.6 | 93.6 | 75-125 | 3.05 | 20 | |
| Cadmium | 45.9 | 10 | " | 50.0 | 1.27 | 89.2 | 75-125 | 6.10 | 20 | |
| Chromium | 52.8 | 10 | " | 50.0 | 2.50 | 101 | 75-125 | 70.6 | 20 | QM-01 |
| Lead | 51.3 | 10 | | 50.0 | ND | 103 | 75-125 | 70.2 | 20 | QM-01 |
| | | | | | | | | | | |

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| Northstar Environmental Remediation | Project: Genesis Solar LTUs & Ponds | |
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| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/18 15:12 |

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

| | | Reporting | | Spike | Source | | %REC | | RPD | |
|---------------------------------|--------------------|--------------|-------------|-------------|-------------|-------------|--------|------|-------|-------|
| Analyte | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
| Batch 8120723 - EPA 7470A Water | | | | | | | | | | |
| Blank (8120723-BLK1) | Η | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | | | | |
| Mercury | ND | 0.50 | ug/l | | | | | | | |
| LCS (8120723-BS1) | | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | | | | |
| Mercury | 5.53 | 0.50 | ug/l | 5.00 | | 111 | 80-120 | | | |
| Matrix Spike (8120723-MS1) | Sour | ce: T183598- | D1 | Prepared: 1 | 2/07/18 A | nalyzed: 12 | /10/18 | | | |
| Mercury | 3.45 | 0.50 | ug/l | 5.00 | ND | 68.9 | 75-125 | | | QM-0 |
| Matrix Spike Dup (8120723-MSD1) | Source: T183598-01 | | Prepared: 1 | 2/07/18 At | nalyzed: 12 | /10/18 | | | | |
| Mercury | 4.48 | 0.50 | ug/l | 5.00 | ND | 89.5 | 75-125 | 26.0 | 20 | QM-0 |

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| Northstar Environmental Remediation | Project: | Genesis Solar LTUs & Ponds | |
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| 26225 Enterprise Court | Project Number: | 196-004-05 | Reported: |
| Lake Forest CA, 92630 | Project Manager: | Arlin Brewster | 12/26/18 15:12 |

Conventional Chemistry Parameters by APHA/EPA/ASTM Methods - Quality Control

SunStar Laboratories, Inc.

| | | Reporting | | Spike | Source | | %REC | | RPD | |
|-------------------------------------|------------------------|--------------|----------|-------------|-----------|-------------|---------|-------|-------|-------|
| Analyte | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
| Batch 8120530 - General Preparation | | | | | | | | | | |
| Duplicate (8120530-DUP1) | Source: T183598-01 Pro | | | Prepared & | Analyzed: | 12/05/18 | | | | |
| pH | 7.91 | 0.10 | pH Units | | 7.89 | | | 0.253 | 20 | |
| Batch 8120531 - General Preparation | | | | | | | | | | |
| Duplicate (8120531-DUP1) | Source: T183598-01 P | | | Prepared & | Analyzed: | 12/05/18 | | | | |
| Specific Conductance (EC) | 23600 | 10.0 | umhos/cm | | 23600 | | | 0.00 | 15 | |
| Batch 8120538 - General Preparation | | | | | | | | | | |
| Blank (8120538-BLK1) | | | | Prepared: 1 | 2/05/18 A | nalyzed: 12 | 2/06/18 | | | |
| Total Dissolved Solids | ND | 55 | mg/l | | | | | | | |
| LCS (8120538-BS1) | | | | Prepared: | 2/05/18 A | nalyzed: 12 | 2/06/18 | | | |
| Total Dissolved Solids | 512 | 55 | mg/l | 500 | | 102 | 80-120 | | | |
| Duplicate (8120538-DUP1) | Sour | rce: T183598 | -01 | Prepared: 1 | 2/05/18 A | nalyzed: 12 | 2/06/18 | | | |
| Total Dissolved Solids | 17100 | 55 | mg/l | | 16800 | | | 1.30 | 5 | |
| Batch 8120722 - General Preparation | | | | | | | | | | |
| Blank (8120722-BLK1) | | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | 2/11/18 | | | |
| Oil & Grease | ND | 5.00 | mg/l | | | | | | | |
| LCS (8120722-BS1) | | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | 2/11/18 | | | |
| Oil & Grease | 36.5 | 5.00 | mg/l | 40.0 | | 91.2 | 83-101 | | | |

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| | Northstar Environmental Remediation | Project: Genesis Solar LTUs & Po | nds |
|---|-------------------------------------|----------------------------------|----------------|
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| | Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/18 15:12 |

Conventional Chemistry Parameters by APHA/EPA/ASTM Methods - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes | | |
|-------------------------------------|---------------------------------------|--------------------|-------|----------------|------------------|------|----------------|------|--------------|-------|--|--|
| Batch 8120722 - General Preparation | | | | | | | | | | | | |
| LCS Dup (8120722-BSD1) | Prepared: 12/07/18 Analyzed: 12/11/18 | | | | | | | | | | | |
| Oil & Grease | 33.7 | 5.00 | mg/l | 40.0 | | 84.2 | 83-101 | 7.98 | 11 | | | |

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| Northstar Environmental Remediation | Project: Genesis Solar LTUs & Ponds | |
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| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/18 15:12 |

Anions by EPA Method 300.0 - Quality Control

SunStar Laboratories, Inc.

| | | Reporting | | Spike | Source | | %REC | | RPD | |
|-------------------------------------|--------|---------------|-------|---------------------------------------|---------------------------------------|------------|--------|------|-------|-------|
| Analyte | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
| Batch 8120528 - General Preparation | | | | | | | | | | |
| Blank (8120528-BLK1) | | | | Prepared 8 | k Analyzed: | : 12/05/18 | | | | |
| Fluoride | ND | 0.500 | mg/l | | | | | | | |
| Chloride | ND | 5.00 | " | | | | | | | |
| Sulfate as SO4 | ND | 5.00 | " | | | | | | | |
| Nitrate as NO3 | ND | 0.500 | " | | | | | | | |
| LCS (8120528-BS1) | | | | Prepared 8 | k Analyzed: | : 12/05/18 | | | | |
| Chloride | 26.4 | 5.00 | mg/l | 25.0 | | 106 | 75-125 | | | |
| Sulfate as SO4 | 26.4 | 5.00 | " | 25.0 | | 106 | 75-125 | | | |
| Nitrate as NO3 | 26.8 | 0.500 | " | 25.0 | | 107 | 75-125 | | | |
| Matrix Spike (8120528-MS1) | Sou | rce: T183598- | 01 | Prepared: 12/05/18 Analyzed: 12/06/18 | | | | | | |
| Chloride | 7920 | 100 | mg/l | 25.0 | 7680 | 963 | 75-125 | | | QM-02 |
| Sulfate as SO4 | 7450 | 100 | " | 25.0 | 7130 | NR | 75-125 | | | QM-02 |
| Nitrate as NO3 | 26.5 | 0.500 | " | 25.0 | 5.52 | 83.9 | 75-125 | | | |
| Matrix Spike Dup (8120528-MSD1) | Sou | rce: T183598- | 01 | Prepared: | Prepared: 12/05/18 Analyzed: 12/06/18 | | | | | |
| Chloride | 9040 | 100 | mg/l | 25.0 | 7680 | NR | 75-125 | 13.2 | 20 | QM-02 |
| Sulfate as SO4 | 8560 | 100 | " | 25.0 | 7130 | NR | 75-125 | 13.9 | 20 | QM-0 |
| Nitrate as NO3 | 31.6 | 0.500 | " | 25.0 | 5.52 | 104 | 75-125 | 17.6 | 20 | |
| | | | | | | | | | | |

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| Northstar Environmental Remediation | Project: Genesis Solar LTUs & Ponds | |
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| 26225 Enterprise Court | Project Number: 196-004-05 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/18 15:12 |

Notes and Definitions

- R-07 Reporting limit for this compound(s) has been raised to account for dilution necessary due to high levels of interfering compound(s) and/or matrix affect.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- QM-01 The % recovery is outside of established control limits due to matrix interference and/or sample dilution due to matrix effect. The batch was accepted based on acceptable LCS recovery.
- QB-01 The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
- O-07 The sample was analyzed outside the EPA recommended holding time of 48 hours.
- O-04 This sample was received and analyzed outside the EPA recommended holding time.
- FILT The sample was filtered prior to analysis.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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| | | | dard | round time: Standard | ime: | ınd ti | arou | Turn ai | | : | Pickup | Pi | Return to client | Return t | ach | Disposal @ \$2.00 each | Sample disposal Instructions: Dis | S |
|-----------------------|---|-----------------|-------------|----------------------------------|---------------------------------|---|---------------------------|-----------------|----------------------|------------------------------------|--|---|--------------------------|------------|-------------|------------------------|--|----------|
| | Reporting limits must match previous reports | 2.4 | n/cold | Received good condition/cold | od co | , d goc | ceive | R | 1 | Time | Date / Time | | Received by: (signature) | Received b | me | Date / Time | Relinquished by: (signature) | 2 |
| | | | NN NN | Seals intact? Y/N/NA | s inta | Seal | | | | Time | Date / Time | . ~ | Received by: (signature) | Received b | v | ' Date / Ti | Rélinquished by: (signature) | 교 |
| | | | NA) | of Custody seals Y/N/NA | dy se | Justo | n of C | Chain d | | Ö | | 12518 | | R | 052 | 12/05/18 @ | Imtr | |
| | Notes | , 16 | ainers | Total # of containers | ון 1 # of | Tota | | | | Time | Date / Time |) | Received by: (signature) | Received b | | Date / Time | Relinquished by: (signature) | 교 |
| | | | | | \vdash | | | | | | | | | | | | | |
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| 6 | | 04 | | +- | ╉ | ╀ | - | 1 | | ╞ | | | Various | × | N/A | N/A | Trip Blank | Γ |
| <u>ى د</u> | | 203 | | ╈ | <u>·</u> . | + | - | | | | - | | Various | . ≤ | NA | N/A | Field Blank | [|
| | 7 | 02 | | ť | 5 | > | > | > | > | > | > | > | Various | × | 1.200 | 114041X | South Pond | |
| | | 0 | \uparrow | + | | - | _ | | $\langle \times$ | $\langle \times$ | $\langle \times$ | $\langle \times$ | Various | 1 | 00 61 | 21/5.0/21 | North Pond | |
| | | | T | ╀ | ╋ | +- | + | _ | 1 | (3 | | | | - 100 | 2111 | Campice | | |
| Total # of containers | Comments/Preservative | _aboratory ID # | | | 3015M - Therminol (Subcontract) | SM2510B - Conductivity, Specific SM2540C - Total Dis. Solids | 9040 - pH | 7470A - Mercury | 664 - Oil and Grease | 300.0 - Chloride, Nitrate, Sulfate | 200.8 - Metals: Sb, As, Ba, Cd, Cr, Co, Pb, Ni, Se, Zn (F.F.) | 200.7 - Metals: Ca, Cu, Na, K, Fe, Mg (FIELD FILTERED) | Container | Sample | Timp | Sampled | | |
| 1 | EDF #: 110000006093 | | | 29 | 1183599 | | 11895 | | | Batch #: | Ba | | | | | ster | Project Manager: Arlin Brewster | Pr |
| | Client Project #: 196-004-05 | | | | | ster_ | Collector: Arlin Brewster | rlin E | or: A | llect | | . 1 | | | Fax: | | Phone: 949-274-1719 | Ph |
| • | | & Ponds | с 8 Р | Project Name: Genesis Solar LTUs | olar | sis S | enes | າe: G | Nan | oject | Pro | I | |)2630 | prest, CA 9 | ourt, Lake Fo | Address: 26225 Enterprise Court, Lake Forest, CA 92630 | Ad |
| | e of | _ Page: | | | | 81 | 103 | 2/6 | - | <u>ଟି</u> | Date: | • * | | | 9 | ital Remediat | Client: Northstar Environmental Remediation | <u>n</u> |
| | | | | | | | | | | n an a Russian a | | | | | | | 25712 Commercentre Dr Lake Forest, CA 92630 949-297-5020 | 94 La |
| | | | | | | | | 2 | C C C | スの | nain of custody Record | | Chain | | | | nCtar Lahoratories Inc | ō |

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SAMPLE RECEIVING REVIEW SHEET

| Client Name: | Batch/Work Order #: | T183599 | | |
|---|--|-----------------------------------|-----------------------------|--------------------------------|
| If Courier, Received by: Date/Time Courier Lab Received by: Date/Time Lab Total number of coolers received: Image: Cooler #1 Temperature: Cooler #1 ℓ^2 C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #2 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Samples received on ice? IYe | Client Name: | NORTHSTAR EAN. | Project: | GENESIS SOLAR LTUS & PONDS |
| If Courier, Received by: Lab Received by: Total number of coolers received: Temperature: Cooler #1 /.2 °C +/- the CF (1.2°C) = $z.4$ °C corrected temperature Temperature: Cooler #2 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Samples received on ice? If NO: Sample second same day Clusted yeals intact on cooler/sample Sample containers intact Sample labels match Chain of Custody IDs Total number of containers received match COC Proper preservative indicated on COC/containers for analyses requested Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: $x = 2.5 \times 10^{-1}$ | Delivered by: | 🔀 Client 🔲 SunStar Courie | r 🗌 GSO 🗌 FedEx | Other |
| Lab Received by: | If Courier, Received by: | | Received: | |
| Temperature:Cooler #1 \cdot .4 $^{\circ}$ C +/- the CF (1.2°C) = 2.4 $^{\circ}$ C corrected temperatureTemperature:Cooler #2 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature criteria = \leq 6°CWithin criteria? \square Yes \square NoIf NO: \square Yes \square No $\stackrel{\rightarrow}{=}$ Samples received on ice? \square Yes \square No $\stackrel{\rightarrow}{=}$ If on ice, samples received same day collected? \square Yes \square No $\stackrel{\rightarrow}{=}$ Custody seals intact on cooler/sample \square Yes \square No $\stackrel{\rightarrow}{=}$ Sample containers intact \square No $\stackrel{\rightarrow}{=}$ Complete Non-Conformance Shee \square NoSample labels match Chain of Custody IDs \square No $\stackrel{\rightarrow}{=}$ Total number of containers received match COC \square Yes \square NoProper preservative indicated on COC/containers for analyses requested Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times \square No* Complete Non-Conformance Receiving Sheet if checkedCooler/Sample Review - Initials and date: \cong /2:5:18 | Lab Received by: | Sunny | | 12.5.18 / 10:50 |
| Temperature:Cooler #2 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureTemperature:Cooler #3 $^{\circ}$ C +/- the CF (1.2°C) = $^{\circ}$ C corrected temperatureIf NO:Cooler #3 $^{\circ}$ C corrected temperature $^{\circ}$ C corrected temperatureSamples received on ice? $^{\circ}$ Yes $^{\circ}$ Acceptable $^{\circ}$ No $^{\circ}$ Custody seals intact on cooler/sample $^{\circ}$ Yes $^{\circ}$ No $^{\circ}$ $^{\circ}$ No $^{\circ}$ Sample containers intactSample containers received match COC $^{\circ}$ Yes $^{\circ}$ No $^{\circ}$ Sample labels match Chain of Custody IDs $^{\circ}$ Yes $^{\circ}$ No $^{\circ}$ $^{\circ}$ No $^{\circ}$ Total number of containers received match COC $^{\circ}$ Yes $^{\circ}$ No $^{\circ}$ Proper pre | Total number of coolers re | eceived: | | |
| Temperature: Cooler #3 °C +/- the CF (1.2°C) = °C corrected temperature Temperature criteria = ≤ 6°C (no frozen containers) Within criteria? Yes No If NO: Samples received on ice? Pyes No → Complete Non-Conformance Shee If on ice, samples received same day collected? Pyes → Acceptable No → Complete Non-Conformance Shee Sample containers intact Yes → Acceptable Pyes → Mo* No ★ Sample labels match Chain of Custody IDs Yes → No* No ★ Total number of containers received for analyses requested on COC Yes → No* No ★ Proper preservative indicated on COC/containers for analyses requested holding times No ★ No ★ * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: Yes □No* | Temperature: Cooler #1 | /.2 °C +/- the CF (1.2°C) | = 2,4 °C corre | ected temperature |
| Temperature criteria = $\leq 6^{\circ}$ C (no frozen containers)Within criteria? \blacksquare Yes \square NoIf NO: Samples received on ice? If on ice, samples received same day collected? \square Yes \square No \neg Complete Non-Conformance Shee \square NoCustody seals intact on cooler/sample \square Yes \square No \square Complete Non-Conformance Shee \square NoSample containers intact \square Yes \square No \square NoSample labels match Chain of Custody IDs \square Yes \square NoTotal number of containers received match COC \square Yes \square NoProper preservative indicated on COC/containers for analyses requested nolding times \square Yes \square No* Complete Non-Conformance Receiving Sheet if checkedCooler/Sample Review - Initials and date: \blacksquare / μ -5-18 | Temperature: Cooler #2 | °C +/- the CF (1.2°C) | = °C corre | ccted temperature |
| In or frozen containers) within criteria? I res INO If NO: Samples received on ice? Yes No → Complete Non-Conformance Shee If on ice, samples received same day Yes → Acceptable No → Complete Non-Conformance Shee Custody seals intact on cooler/sample Yes → Acceptable Yes No → Sample containers intact Yes No* NA Sample labels match Chain of Custody IDs XYes No* Total number of containers received match COC XYes No* Proper containers received for analyses requested on COC XYes No* Proper preservative indicated on COC/containers for analyses requested Xes No* Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified No* No* * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: Xes No* | Temperature: Cooler #3 | °C +/- the CF (1.2°C) | = °C corre | cted temperature |
| If NO: \square Yes \square No \rightarrow Samples received on ice? \square Yes \square No \rightarrow If on ice, samples received same day \square Yes \rightarrow Acceptable \square No \rightarrow Custody seals intact on cooler/sample \square Yes \rightarrow Acceptable \square No \rightarrow Sample containers intact \square No \square No Sample labels match Chain of Custody IDs \square Yes \square No* \square No Total number of containers received match COC \square Yes \square No* Proper containers received for analyses requested on COC \square Yes \square No* Proper preservative indicated on COC/containers for analyses requested \square Yes \square No* Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times \square Yes \square No* * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: \cancel 12.5.18 | 그 가슴 그 가 흔들 것 같아요. 그 것 같아요. 그 같아요. 그 것 같아요. 그 그 것 같아요. 그 그 집 . 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 | ≤6°C Within c | riteria? Xes | □No |
| Sample containers intact Image: Yes Image: No* Sample labels match Chain of Custody IDs Image: Yes Image: No* Total number of containers received match COC Image: Yes Image: No* Proper containers received for analyses requested on COC Image: Yes Image: No* Proper preservative indicated on COC/containers for analyses requested Image: Yes Image: No* Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times Yes Image: No* * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: Xes Image: Yes | Samples received If on ice, samples | rocoived same day | Accentable | ete Non-Conformance Sheet |
| Total number of containers received match COC Image: Section of the section of t | | oler/sample | | |
| Proper containers received for analyses requested on COC Proper preservative indicated on COC/containers for analyses requested Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: # (2.5.18) | Sample labels match Chai | n of Custody IDs | XYes | □No* |
| Proper preservative indicated on COC/containers for analyses requested Yes N/A Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified Yes No* holding times * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: # 12-5-18 | Total number of container | s received match COC | Xes | ⊡No* |
| Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified Yes No* holding times * Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: # 12-5-18 | Proper containers received | l for analyses requested on COC | Yes | ⊡No* |
| containers, labels, volumes preservatives and within method specified Yes No* holding times * Complete Non-Conformance Receiving Sheet if checked <u>Cooler/Sample Review - Initials and date:</u> * <u>Cooler/Sample Review - Initials and date:</u> | Proper preservative indica | ted on COC/containers for analyse | s requested Xes | □No* □N/A |
| <i>₩</i> | containers, labels, volume | • | | s 🗍 No* |
| Comments: | * Complete Non-Conforman | ce Receiving Sheet if checked Co | oler/Sample Review - Initia | ls and date: <u>84 12.5.18</u> |
| | Comments: | | | |
| | | | | |

Page 1 of _/_

| SunStar | | | | Printed: 12/6/2018 10:47:08AM |
|--|------------------|--------------|-------------------------------------|--|
| - Laboratories | s, Inc. | WO | RK ORDER | |
| PROVIDING QUALITY ANALYTICAL SERVICE | S NATIONWIDE | | 183599 | |
| Client: Northstar Environments Project: Genesis Solar Groundwa | | | Project Manager: Project Number: | Joann Marroquin 196-004-05 |
| Report To: Northstar Environmental Remediat Arlin Brewster 26225 Enterprise Court Lake Forest, CA 92630 | ion | | | |
| Date Due:12/12/18 17:00 (Received By:Sunny LounethoLogged In By:Sunny Lounetho | ne | | Date Received: Date Logged In: | 12/05/18 10:50 12/05/18 11:43 |
| Samples Received at:2.4°CCustody SealsNoReceived On IceContainers IntactYesCOC/Labels AgreeYesPreservation ConfinYes | Yes | | | |
| Analysis | Due | ТАТ | Expires | Comments |
| T183599-01 NORTH POND [W Pacific Time (US & | ater] Sampled 12 | 2/03/18 12:0 | 00 (GMT-08:00) | |
| 1664 | 12/12/18 15:00 | 5 | 12/31/18 12:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/01/19 12:00 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/01/19 12:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 12/31/18 12:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/05/18 12:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/03/19 12:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 12/31/18 12:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/04/18 12:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/10/18 12:00 | |
| T183599-02 SOUTH POND [W Pacific Time (US & | ater] Sampled 12 | /03/18 12:2 | 0 (GMT-08:00) | |
| 1664 | 12/12/18 15:00 | 5 | 12/31/18 12:20 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/01/19 12:20 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/01/19 12:20 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 12/31/18 12:20 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/05/18 12:20 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/03/19 12:20 | |
| Conductivity | 12/12/18 15:00 | 5 | 12/31/18 12:20 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/04/18 12:20 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/10/18 12:20 | |

| SunStar | | | | Printed: 12/6/2018 10:47:08AN |
|--|--|-------------------------|----------------------------------|-------------------------------|
| | Ories, Inc. | WO | RK ORDER | _ |
| 1 | |] | Г183599 | |
| Client: Northstar Enviro | nmental Remediation | | Project Manager: | Joann Marroquin |
| Project: Genesis Solar Gro | oundwater | | Project Number: | 196-004-05 |
| Analysis | Due | TAT | Expires | Comments |
| Pacific Time (US & [NO ANALYSES] | | | | |
| [NO ANALYSES] T183599-04 TRIP BLAN | K [Water] Sampled 12/ | 03/18 00:00 | 0 (GMT-08:00) | |
| [NO ANALYSES] | K [Water] Sampled 12/ | 03/18 00:0 | 0 (GMT-08:00) | |
| [NO ANALYSES] T183599-04 TRIP BLAN Pacific Time (US & | atories | | | |
| [NO ANALYSES] T183599-04 TRIP BLAN Pacific Time (US & [NO ANALYSES] TestAmerica (Irvine) Labor T183599-01 NORTH POI | atories | | | 8015M- Therminol |
| [NO ANALYSES] T183599-04 TRIP BLAN Pacific Time (US & [NO ANALYSES] TestAmerica (Irvine) Labor T183599-01 NORTH POI Pacific Time (US & | atories ND [Water] Sampled 12 12/12/18 15:00 | 2/03/18 12: 5 | 00 (GMT-08:00) 06/01/19 12:00 | 8015M- Therminol |

| SunStar | | | | Printed: 12/6/2018 10:59:11AM |
|--|--------------------|--------------|-------------------------------------|---|
| - Laboratori | es, Inc. | WO | RK ORDER | |
| PROVIDING QUALITY ANALYTICAL SER | VICES NATIONWIDE | | 183599 | |
| Client: Northstar Environme Project: Genesis Solar LTUs & | | | Project Manager: Project Number: | Joann Marroquin 196-004-05 |
| Report To: Northstar Environmental Remec Arlin Brewster 26225 Enterprise Court Lake Forest, CA 92630 | liation | | | |
| Date Due: 12/12/18 17:0 | 00 (5 day TAT) | | | |
| Received By: Sunny Lounet | hone | | Date Received: | 12/05/18 10:50 |
| Logged In By: Sunny Lounet | hone | | Date Logged In: | 12/05/18 11:43 |
| Samples Received at:2.4°CCustody SealsNoReceived OnContainers IntactYesCOC/Labels AgreeYesPreservation ConfinYes | Ice Yes | | | |
| Analysis | Due | TAT | Expires | Comments |
| T183599-01 NORTH POND Pacific Time (US & | [Water] Sampled 12 | 2/03/18 12:0 | 00 (GMT-08:00) | |
| 1664 | 12/12/18 15:00 | 5 | 12/31/18 12:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/01/19 12:00 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/01/19 12:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 12/31/18 12:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/05/18 12:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/03/19 12:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 12/31/18 12:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/04/18 12:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/10/18 12:00 | |
| T183599-02 SOUTH POND Pacific Time (US & | [Water] Sampled 12 | 2/03/18 12:2 | 0 (GMT-08:00) | |
| 1664 | 12/12/18 15:00 | 5 | 12/31/18 12:20 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/01/19 12:20 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/01/19 12:20 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 12/31/18 12:20 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/05/18 12:20 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/03/19 12:20 | |
| Conductivity | 12/12/18 15:00 | 5 | 12/31/18 12:20 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/04/18 12:20 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/10/18 12:20 | |

Page 1 of 2 Page 20 of 21

| SunStar | | | | Printed: 12/6/2018 10:59:11AM |
|--|---|-------------------------|----------------------------------|-------------------------------|
| | ories, Inc. | wo | RK ORDER | |
| | |] | Г183599 | |
| Client: Northstar Enviro | nmental Remediation | | Project Manager: | Joann Marroquin |
| Project: Genesis Solar LT | Us & Ponds | | Project Number: | 196-004-05 |
| Analysis | Due | TAT | Expires | Comments |
| Pacific Time (US & [NO ANALYSES] | | | | |
| T183599-04 TRIP BLAN Pacific Time (US & | K [Water] Sampled 12/ | 03/18 00:0 | 0 (GMT-08:00) | |
| T183599-04 TRIP BLAN Pacific Time (US & [NO ANALYSES] | K [Water] Sampled 12/ | 03/18 00:0 | 0 (GMT-08:00) | |
| Pacific Time (US & | ratories | | | |
| Pacific Time (US & [NO ANALYSES] TestAmerica (Irvine) Labor T183599-01 NORTH PO | ratories | | | 8015M- Therminol |
| Pacific Time (US & [NO ANALYSES] TestAmerica (Irvine) Labor T183599-01 NORTH PO Pacific Time (US & | ratories ND [Water] Sampled 12 12/12/18 15:00 | 2/03/18 12: 5 | 00 (GMT-08:00) 06/01/19 12:00 | 8015M- Therminol |





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: 440-226400-1 Client Project/Site: T183599

For:

LINKS

Review your project results through

Total Access

Have a Question?

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The

www.testamericainc.com

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Expert

SunStar Laboratories Inc 25712 Commercentre Drive Lake Forest, California 92630

Attn: Joann Marroquin

aneg Robersos

Authorized for release by: 12/14/2018 3:37:09 PM Danielle Roberts, Senior Project Manager (949)261-1022

danielle.roberts@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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| Lab Chronicle | 9 |
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| Certification Summary | 13 |
| Chain of Custody | 14 |
| Receipt Checklists | 17 |

| Lab Sample ID | Client Sample ID | Matrix | Collected Received |
|---------------|------------------|--------|-------------------------------|
| 440-226400-1 | T183599-01 | Water | 12/03/18 12:00 12/05/18 14:50 |
| 40-226400-2 | T183599-02 | Water | 12/03/18 12:20 12/05/18 14:50 |
| | | | |
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Job ID: 440-226400-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-226400-1

Case Narrative

Comments

No additional comments.

Receipt

The samples were received on 12/5/2018 2:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

GC Semi VOA

Method(s) 8015B: Insufficient 8015-DRO sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch preparation batch 440-515342 and analytical batch 440-515553. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch: (LCS 440-515342/2-A)

Method(s) 8015B: Surrogate recovery for the following 8015-DRO sample was outside control limits due to "heavy emulsion": T183599-01 (440-226400-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 3510C 8015B TH preparation batch 440-515342.

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

Detection Summary

Client: SunStar Laboratories Inc Project/Site: T183599

| Lab Sample ID: 440-226400-1 | |
|-----------------------------|----|
| | |
| Lab Sample ID: 440-226400-2 | 5 |
| | 6 |
| | |
| | 8 |
| | 9 |
| | |
| | |
| | |
| | 13 |
| | |

Client Sample ID: T183599-01

No Detections.

Client Sample ID: T183599-02

No Detections.

This Detection Summary does not include radiochemical test results.

RL

0.099

0.099

Limits

45 - 120

MDL Unit

0.020 mg/L

0.020 mg/L

D

Prepared

Prepared

Date Collected: 12/03/18 12:00

Date Received: 12/05/18 14:50

Analyte

1,1'-Biphenyl

n-Octacosane

Surrogate

Benzene, 1,1'-oxybis-

Client Sample ID: T183599-01

Client Sample ID: T183599-02

Date Collected: 12/03/18 12:20 Date Received: 12/05/18 14:50

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

Result Qualifier

ND

ND

%Recovery Qualifier

18 X

Lab Sample ID: 440-226400-1 Matrix: Water Analyzed Dil Fac 12/06/18 09:50 12/07/18 12:52 1 6 12/06/18 09:50 12/07/18 12:52 1

Dil Fac

| 12/06/18 09:50 12/07/18 12:52 | 1 |
|------------------------------------|---|
| Lab Sample ID: 440-2264 Matrix: | |
| | |

Analyzed

| Method: 8015B - Diesel | Range Organics (I | DRO) (GC |) | | | | | | |
|------------------------|-------------------|-----------|----------|-------|------|---|----------------|----------------|---------|
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.097 | 0.019 | mg/L | | 12/06/18 09:50 | 12/07/18 13:34 | 1 |
| 1,1'-Biphenyl | ND | | 0.097 | 0.019 | mg/L | | 12/06/18 09:50 | 12/07/18 13:34 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 60 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 13:34 | 1 |

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

| Matrix: Water | | | Prep Type: Total/NA |
|---------------------|------------------------|----------|--|
| _ | | | Percent Surrogate Recovery (Acceptance Limits) |
| | | OTCN1 | |
| Lab Sample ID | Client Sample ID | (45-120) | |
| 440-226400-1 | T183599-01 | 18 X | |
| 440-226400-2 | T183599-02 | 60 | |
| LCS 440-515342/2-A | Lab Control Sample | 59 | |
| LCSD 440-515342/3-A | Lab Control Sample Dup | 61 | |
| MB 440-515342/1-A | Method Blank | 62 | |
| Surrogate Legend | | | |
| OTCN = n-Octacosane | | | |

Client: SunStar Laboratories Inc Project/Site: T183599

| Method | Method Description | Protocol | Laboratory |
|--------|--|----------|------------|
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | TAL IRV |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL IRV |

Protocol References:

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

Lab Sample ID: 440-226400-1

440-226400-1 2 40-226400-1 3 Matrix: Water 4 7 4 7 40-226400-2 Matrix: Water 8 9

Client Sample ID: T183599-01 Date Collected: 12/03/18 12:00

| | necteu. | 12/03/10 | 12.00 |
|---------|-----------|----------|-------|
| Date Re | ceived: 1 | 12/05/18 | 14:50 |

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analvst | Lab |
|-----------|---------------|-----------------|-----|---------------|-------------------|-----------------|-----------------|-------------------------|---------|---------|
| Total/NA | Prep | 3510C | | | 1015 mL | 1 mL | 515342 | 12/06/18 09:50 | | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 12:52 | LMB | TAL IRV |

Client Sample ID: T183599-02 Date Collected: 12/03/18 12:20 Date Received: 12/05/18 14:50

| Lab Sample ID: | 440-226400-2 |
|----------------|---------------|
| | 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 | | | 1030 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 13:34 | LMB | TAL IRV |

Laboratory References:

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

5 6 7

10

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

| Lab Sample ID: MB 440-51 | 15342/1-A | | | | | | | Cli | | ole ID: Met | | |
|----------------------------------|--------------|-------------|----------------|------------------|-------|------|----------|-------|-----------------|----------------------|-------|---------|
| Matrix: Water | | | | | | | | | | Prep Type | | |
| Analysis Batch: 515553 | | | | | | | | | | Prep Bat | ch: 5 | 15342 |
| Ameliate | | B MB | | | | 11 | | | | A | -1 | |
| Analyte | | t Qualifier | | | | Unit | | | repared | Analyze | | Dil Fac |
| Benzene, 1,1'-oxybis- | N | | 0.10 | | | mg/L | | | 06/18 09:50 | | | 1 |
| 1,1'-Biphenyl | N | J | 0.10 | , (| 0.020 | mg/L | | 12/0 | 06/18 09:50 | 12/07/18 11 | 1:08 | 1 |
| | M | B MB | | | | | | | | | | |
| Surrogate | %Recover | y Qualifier | Limits | | | | | F | Prepared | Analyze | d | Dil Fa |
| n-Octacosane | 6 | 2 | 45 - 120 | - | | | | 12/0 | 06/18 09:50 | 12/07/18 1 | 1:08 | ŕ |
| | | | | | | | 0 | | | | | |
| Lab Sample ID: LCS 440-5 | 15342/2-A | | | | | | Cile | nt Sa | | Lab Cont | | |
| Matrix: Water | | | | | | | | | | Prep Type | | |
| Analysis Batch: 515553 | | | Omilia | 1.00 | | | | | | Prep Bat | cn: 5 | 15342 |
| Awalista | | | Spike Added | - | LCS | | 11 | _ | 0/ D = = | %Rec. | | |
| Analyte Benzene, 1,1'-oxybis- | | | 0.100 | Result 0.0624 | | imer | Unit | D | %Rec | Limits | | |
| 1,1'-Biphenyl | | | 0.100 | 0.0624 | | | mg/L | | 62 51 | 50 - 115 50 - 115 | | |
| т, т-вірпенуі | | | 0.100 | 0.0515 | J | | mg/L | | 51 | 50 - 115 | | |
| | LCS LC | s | | | | | | | | | | |
| Surrogate | %Recovery Qu | ıalifier | Limits | | | | | | | | | |
| n-Octacosane | 59 | | 45 - 120 | | | | | | | | | |
| Lab Sample ID: LCSD 440 | 515312/3_A | | | | | | liont Sa | mnlo | ID: Lab | Control Sa | ampl | |
| Matrix: Water | -J1JJ42/J-A | | | | | | | ampie | | Prep Type | | _ |
| Analysis Batch: 515553 | | | | | | | | | | Prep Bate | | |
| Analysis Batch. 515555 | | | Spike | LCSD | LCS | D | | | | %Rec. | un. 5 | RPI |
| Analyte | | | Added | Result | | - | Unit | п | %Rec | Limits | RPD | Limi |
| Benzene, 1,1'-oxybis- | | | 0.100 | 0.0627 | | | mg/L | | 63 | 50 - 115 | 1 | 30 |
| 1,1'-Biphenyl | | | 0.100 | 0.0522 | | | mg/L | | 52 | 50 - 115 | 1 | 30 |
| | LCSD LC | SD | | | | | | | | | | |
| Surrogate | %Recovery Q | | Limits | | | | | | | | | |
| n-Octacosane | <u>61</u> | | 45 - 120 | | | | | | | | | |

GC Semi VOA

Prep Batch: 515342

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|--------|--------|------------|
| 440-226400-1 | T183599-01 | Total/NA | Water | 3510C | |
| 440-226400-2 | T183599-02 | Total/NA | Water | 3510C | |
| MB 440-515342/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 440-515342/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 440-515342/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

Analysis Batch: 515553

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|--------|--------|------------|
| 440-226400-1 | T183599-01 | Total/NA | Water | 8015B | 515342 |
| 440-226400-2 | T183599-02 | Total/NA | Water | 8015B | 515342 |
| MB 440-515342/1-A | Method Blank | Total/NA | Water | 8015B | 515342 |
| LCS 440-515342/2-A | Lab Control Sample | Total/NA | Water | 8015B | 515342 |
| LCSD 440-515342/3-A | Lab Control Sample Dup | Total/NA | Water | 8015B | 515342 |

5

2 3 4

Qualifiers

GC Semi VOA

| Qualifier | Qualifier Description |
|-----------|--|
| Х | Surrogate is outside control limits |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

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 | <u>S</u> |
| DER | Duplicate Error Ratio (normalized absolute difference) | |
| Dil Fac | Dilution Factor | |
| DL | Detection Limit (DoD/DOE) | |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample | |
| DLC | Decision Level Concentration (Radiochemistry) | |
| EDL | Estimated Detection Limit (Dioxin) | 1 |
| LOD | Limit of Detection (DoD/DOE) | |
| LOQ | Limit of Quantitation (DoD/DOE) | |
| MDA | Minimum Detectable Activity (Radiochemistry) | |
| MDC | Minimum Detectable Concentration (Radiochemistry) | |
| 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 (Radiochemistry) | |
| 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)

13 14

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| uthority | Program | | EPA Region | Identification Number | Expiration Date |
|-----------------------|--------------------------|-----------------|-----------------------|-----------------------------|-----------------------|
| alifornia | State Prog | gram | 9 | CA ELAP 2706 | 06-30-19 |
| | o aro moladoa m ano ropo | | o not contined by the | e governing authority. This | not may morado analy. |
| the agency does not o | offer certification. | | 2 | | |
| 0, | • | Matrix Water | Analyt | | |

Mouton, Alain

| From: Sent: | Joann Marroquin <joann@sunstarlabs.com> Thursday, December 06, 2018 8:16 PM</joann@sunstarlabs.com> |
|----------------|---|
| То: | Mouton, Alain |
| Cc: | Roberts, Danielle C. |
| Subject: | RE: TestAmerica Sample Login Confirmation files from 440-226400 T183599 |

-External Email-

Alain,

Please set these to your std TAT, no rush.

Thank you, Joann

Joann Marroquin Southern California Sales/CSM



25712 Commercentre Dr., Lake Forest, CA 92630 Office: (949) 297-5020 | Fax: (949) 297-5027 | Cell: (949) 469-3124 CA ELAP Certification: 2250 | CA Small Business Certification: 31511

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From: Mouton, Alain [mailto:alain.mouton@testamericainc.com]
Sent: Thursday, December 06, 2018 4:41 PM
To: Joann Marroquin; Rose Fasheh
Cc: Danielle C. Roberts
Subject: TestAmerica Sample Login Confirmation files from 440-226400 T183599

Hello,

Attached, please find the Sample Confirmation files for job 440-226400; T183599

Please feel free to contact me or your PM, Danielle Roberts, if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from

1

TestAmerica on this project by visiting our website at: Project Feedback

ALAIN MOUTON

Project Manager Assistant

TestAmerica Irvine THE LEADER IN ENVIRONMENTAL TESTING

Tel: 949.261,1022

Reference: [486738] Attachments: 2

| | | SunStar La | RACT ORDER aboratories, Inc. 83599 | | |
|--|--|-----------------------------------|--|------------------------------|--|
| SENDING LABORATORY | <u> </u> | | RECEIVING LABORA | TORY: | |
| SunStar Laboratories, Inc. | | | TestAmerica (Irvine) L | aboratories | |
| 25712 Commercentre Driv Lake Forest, CA 92630 | Commercentre Drive I rest, CA 92630 I | | 17461 Derian Ave, #100 Irvine, CA 92614 | | |
| Phone: (949) 297-5020 | | | Phone :(949) 261-1022 | | |
| Fax: (949) 297-5027 | | | | | |
| Project Manager: Joann 1 | Marroquin | | | | |
| | iviai i Oquill | | | | |
| Analysis | Due | Expires | Laboratory ID | Comments | |
| | Due | Expires Sampled:12/03/18 12:00 | Laboratory ID | Comments | |
| Analysis | Due | Sampled:12/03/18 12:00 | Laboratory ID | Comments 8015M- Therminol | |
| Analysis Sample 1D: T183599-01 Misc Water Testing #1 | Due Water 5 12/12/18 15:00 | Sampled:12/03/18 12:00 | Laboratory ID | | |

20/2/5/19

| 440-226400 Chain of 1 | Custody |
|-----------------------|---------|

| | - 12-5-18 | 1450 ATT | H'RY 12/5/18 1450 |
|-------------|-----------|-------------|--|
| Released By | Date | Received By | Date |
| Released By | Date | Received By | $\int Date = \int P q_{2} p_{1} q_{2}$ |
| | | | 40/3.5 18 BPage 1 of 1 |

12/14/2018
Client: SunStar Laboratories Inc

Login Number: 226400 List Number: 1 Creator: Bonta, Lucia F

| Question | Answer | Comment |
|--|--------|-------------|
| Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td> | True | |
| The cooler's custody seal, if present, is intact. | N/A | Not present |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| 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 (excluding tests with immediate HTs) | 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 | |

Job Number: 440-226400-1

List Source: TestAmerica Irvine

APPENDIX C

LABORATORY ANALYTICAL RESULTS

DETECTION MONITORING WELLS



21 December 2018

Arlin Brewster Northstar Environmental Remediation 26225 Enterprise Court Lake Forest, CA 92630 RE: Genesis Solar Groundwater

Enclosed are the results of analyses for samples received by the laboratory on 12/05/18 10:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Joann Marroquin

Joann Marroquin Client Services Manager



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| OBS-1 | T183598-01 | Water | 12/04/18 10:25 | 12/05/18 10:50 |
| TW-1 | T183598-02 | Water | 12/04/18 11:00 | 12/05/18 10:50 |
| TW-2 | T183598-03 | Water | 12/04/18 09:00 | 12/05/18 10:50 |
| PW-0 | T183598-04 | Water | 12/04/18 08:25 | 12/05/18 10:50 |
| PW-2 | T183598-05 | Water | 12/04/18 08:35 | 12/05/18 10:50 |
| DM-1 | T183598-06 | Water | 12/04/18 06:30 | 12/05/18 10:50 |
| DM-2 | T183598-07 | Water | 12/04/18 07:00 | 12/05/18 10:50 |
| DM-3 | T183598-08 | Water | 12/04/18 07:30 | 12/05/18 10:50 |
| DUP | T183598-09 | Water | 12/04/18 00:00 | 12/05/18 10:50 |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

DETECTIONS SUMMARY

| Sample ID: OBS-1 | Labora | tory ID: | T183598-01 | | |
|---------------------------|--------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Barium | 14 | 10 | ug/l | 200.8 | |
| Selenium | 80 | 10 | ug/l | 200.8 | |
| Calcium | 480 | 10 | mg/l | EPA 200.7 | |
| Potassium | 63 | 10 | mg/l | EPA 200.7 | |
| Magnesium | 140 | 10 | mg/l | EPA 200.7 | R-07 |
| Sodium | 12000 | 10 | mg/l | EPA 200.7 | |
| pH | 7.9 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 17000 | 55 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | 23600 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 7680 | 100 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 7130 | 100 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | 5.52 | 0.500 | mg/l | EPA 300.0 | |

| Sample ID: TW-1 | Laborat | ory ID: | T183598-02 | | |
|---------------------------|---------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 20 | 10 | ug/l | 200.8 | |
| Barium | 15 | 10 | ug/l | 200.8 | |
| Calcium | 89 | 10 | mg/l | EPA 200.7 | |
| Potassium | 35 | 10 | mg/l | EPA 200.7 | |
| Sodium | 4800 | 10 | mg/l | EPA 200.7 | |
| Total Dissolved Solids | 8100 | 55 | mg/l | TDS by SM2540C | |
| pH | 10 | 0.10 | pH Units | SM4500 | O-04 |
| Specific Conductance (EC) | 13900 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 6910 | 100 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 2400 | 100 | mg/l | EPA 300.0 | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

| Sample ID: TW-2 | Labora | tory ID: | T183598-03 | | |
|---------------------------|--------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 11 | 10 | ug/l | 200.8 | |
| Barium | 40 | 10 | ug/l | 200.8 | |
| Zinc | 39 | 10 | ug/l | 200.8 | |
| Calcium | 87 | 10 | mg/l | EPA 200.7 | |
| Potassium | 30 | 10 | mg/l | EPA 200.7 | |
| Sodium | 1200 | 10 | mg/l | EPA 200.7 | |
| pH | 10 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 2600 | 55 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | 5540 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 1930 | 50.0 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 454 | 5.00 | mg/l | EPA 300.0 | |

| ample ID: PW-0 | Labora | tory ID: | T183598-04 | | |
|---------------------------|--------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 45 | 10 | ug/l | 200.8 | |
| Barium | 55 | 10 | ug/l | 200.8 | |
| Zinc | 92 | 10 | ug/l | 200.8 | |
| Calcium | 100 | 10 | mg/l | EPA 200.7 | |
| Potassium | 25 | 10 | mg/l | EPA 200.7 | |
| Sodium | 1100 | 10 | mg/l | EPA 200.7 | |
| pH | 7.9 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 2600 | 55 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | 6170 | 10.0 | umhos/cm | SM2510b mod. | |
| Fluoride | 5.82 | 0.500 | mg/l | EPA 300.0 | |
| Chloride | 2100 | 50.0 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 698 | 50.0 | mg/l | EPA 300.0 | |

| Sample ID: PW-2 | Laboratory ID: | T183598-05 | | | | | |
|-----------------|----------------|------------|-----------|-------|--|--|--|
| | Reporting | | | | | | |
| Analyte | Result Limit | Units | Method | Notes | | | |
| Arsenic | 34 10 | ug/l | 200.8 | | | | |
| Barium | 41 10 | ug/l | 200.8 | | | | |
| Calcium | 55 10 | mg/l | EPA 200.7 | | | | |
| Potassium | 11 10 | mg/l | EPA 200.7 | | | | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

| Sample ID: PW-2 | Labora | tory ID: | T183598-05 | | |
|---------------------------|--------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Sodium | 690 | 10 | mg/l | EPA 200.7 | |
| pH | 8.1 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 1900 | 55 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | 3580 | 10.0 | umhos/cm | SM2510b mod. | |
| Fluoride | 6.16 | 0.500 | mg/l | EPA 300.0 | |
| Chloride | 895 | 50.0 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 454 | 5.00 | mg/l | EPA 300.0 | |

| Sample ID: DM-1 | Labora | tory ID: | T183598-06 | | |
|---------------------------|--------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 10 | 10 | ug/l | 200.8 | |
| Barium | 31 | 10 | ug/l | 200.8 | |
| Calcium | 260 | 10 | mg/l | EPA 200.7 | |
| Magnesium | 68 | 10 | mg/l | EPA 200.7 | |
| Potassium | 33 | 10 | mg/l | EPA 200.7 | |
| Sodium | 4800 | 10 | mg/l | EPA 200.7 | |
| Total Dissolved Solids | 11000 | 55 | mg/l | TDS by SM2540C | |
| pH | 7.7 | 0.10 | pH Units | SM4500 | O-04 |
| Specific Conductance (EC) | 17400 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 8180 | 100 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 3280 | 100 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | 9.00 | 0.500 | mg/l | EPA 300.0 | |
| | | | | | |

| ample ID: DM-2 | Laboratory ID: | | T183598-07 | | |
|------------------------|----------------|-----------|------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Barium | 57 | 10 | ug/l | 200.8 | |
| Zinc | 28 | 10 | ug/l | 200.8 | |
| Calcium | 240 | 10 | mg/l | EPA 200.7 | |
| Potassium | 35 | 10 | mg/l | EPA 200.7 | |
| Magnesium | 60 | 10 | mg/l | EPA 200.7 | |
| Sodium | 4900 | 10 | mg/l | EPA 200.7 | |
| pH | 7.8 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 7100 | 55 | mg/l | TDS by SM2540C | |

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Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

| | | Reporting | | | |
|---------------------------|--------|-----------|--------------|--------------|------|
| Analyte | Result | Limit | Units | Method | Note |
| Specific Conductance (EC) | 13000 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 5290 | 100 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 1770 | 100 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | 11.4 | 0.500 | mg/l | EPA 300.0 | |
| | | | | | |
| mple ID: DM-2 | Labora | tory ID: | T183598-07RE | 1 | |

No Results Detected

| Sample ID: DM-3 | Laboratory ID: | | T183598-08 | | |
|---------------------------|----------------|-----------|---------------|----------------|-------|
| | | Reporting | | | |
| Analyte | Result | Limit | Units | Method | Notes |
| Arsenic | 20 | 10 | ug/l | 200.8 | |
| Barium | 34 | 10 | ug/l | 200.8 | |
| Calcium | 280 | 10 | mg/l | EPA 200.7 | |
| Potassium | 33 | 10 | mg/l | EPA 200.7 | |
| Magnesium | 69 | 10 | mg/l | EPA 200.7 | |
| Sodium | 5200 | 10 | mg/l | EPA 200.7 | |
| pH | 7.8 | 0.10 | pH Units | SM4500 | O-04 |
| Total Dissolved Solids | 9700 | 55 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | 17100 | 10.0 | umhos/cm | SM2510b mod. | |
| Chloride | 6770 | 100 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | 2840 | 100 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | 2.50 | 0.500 | mg/l | EPA 300.0 | |
| Sample ID: DM-3 | Labora | tory ID: | T183598-08RE1 | | |

No Results Detected

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

| Laboratory ID: | | T183598-09 | | |
|----------------|---|---|---|---|
| | Reporting | | | |
| Result | Limit | Units | Method | Notes |
| 33 | 10 | ug/l | 200.8 | |
| 44 | 10 | ug/l | 200.8 | |
| 72 | 10 | mg/l | EPA 200.7 | |
| 12 | 10 | mg/l | EPA 200.7 | |
| 950 | 10 | mg/l | EPA 200.7 | |
| 1800 | 55 | mg/l | TDS by SM2540C | |
| 15.4 | 5.00 | mg/l | EPA 1664B | |
| 8.1 | 0.10 | pH Units | SM4500 | O-04 |
| 3580 | 10.0 | umhos/cm | SM2510b mod. | |
| 998 | 50.0 | mg/l | EPA 300.0 | |
| 454 | 5.00 | mg/l | EPA 300.0 | |
| | Result 33 44 72 12 950 1800 15.4 8.1 3580 998 | Reporting Result Limit 33 10 44 10 72 10 12 10 950 10 1800 55 15.4 5.00 8.1 0.10 3580 10.0 998 50.0 | Reporting Result Limit Units 33 10 ug/l 44 10 ug/l 72 10 mg/l 12 10 mg/l 950 10 mg/l 1800 55 mg/l 15.4 5.00 mg/l 8.1 0.10 pH Units 3580 10.0 umhos/cm 998 50.0 mg/l | Reporting Result Limit Units Method 33 10 ug/l 200.8 44 10 ug/l 200.8 72 10 mg/l EPA 200.7 12 10 mg/l EPA 200.7 950 10 mg/l EPA 200.7 1800 55 mg/l TDS by SM2540C 15.4 5.00 mg/l EPA 1664B 8.1 0.10 pH Units SM4500 3580 10.0 umhos/cm SM2510b mod. 998 50.0 mg/l EPA 300.0 |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remedia | ation | | Proj | ect: Genesis | s Solar Gro | undwater | | | | |
|---------------------------------------|------------------|------------|--------------------|--------------|----------------|----------|----------|----------|--------------------|-------|
| 26225 Enterprise Court | | | Project Num | ber: 196-00 | 4-06 | | | | Reporte | ed: |
| Lake Forest CA, 92630 | |] | Project Mana | ger: Arlin B | rewster | | | | 12/21/18 1 | 10:53 |
| | | | | OBS-1 | | | | | | |
| | | | | 98-01(Wat | er) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | <u>SunStar I</u> | Laboratorie | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Method | ls | | | | | | | | | FIL |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 480 | | 10 | " | " | ** | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | R-0 |
| Magnesium | 140 | | 10 | " | " | " | " | " | " | R-0 |
| Potassium | 63 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 12000 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | ND | | 10 | " | " | " | " | " | " | |
| Barium | 14 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0 |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0 |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 |
| Selenium | 80 | | 10 | " | | " | " | " | " | |
| Zinc | ND | | 10 | " | " | " | | " | " | |
| Cold Vapor Extraction EPA 7470/ | 7471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Paramet | ers by APHA/EPA/ | ASTM Metho | ods | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 23600 | | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| рН | 7.9 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 |
| Total Dissolved Solids | 17000 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court | | Р | | Reported: | | | | | | | | | |
|---|--------|---------------------------------|--------------------|------------------|----------|---------|----------|----------|-----------|----------------|--|--|--|
| Lake Forest CA, 92630 | | Project Manager: Arlin Brewster | | | | | | | | 12/21/18 10:53 | | | |
| | | | (| DBS-1 | | | | | | | | | |
| | | | T18359 | 98-01(Wa | iter) | | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | | |
| | | | <u>SunStar L</u> | <u>aboratori</u> | es, Inc. | | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | | |
| Chloride | 7680 | | 100 | mg/l | 20 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | | | | |
| Sulfate as SO4 | 7130 | | 100 | " | " | " | " | " | " | | | | |
| Nitrate as NO3 | 5.52 | | 0.500 | " | 1 | " | " | 12/05/18 | " | | | | |

Joann Marroquin



| Northstar Environmental Remedia | tion | | Proj | ect: Genesis | s Solar Gro | undwater | | | | |
|--|-------------------|------------|--------------------|--------------|-------------|----------|----------|----------|--------------------|-------|
| 26225 Enterprise Court | | | Project Num | ber: 196-00 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | | I | Project Mana | ger: Arlin B | rewster | | | | 12/21/18 1 | 0:53 |
| | | | | TXV 1 | | | | | | |
| | | | | TW-1 | ~~) | | | | | |
| | | | 11835 | 98-02(Wat | er) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | <u>SunStar I</u> | Laboratorie | s, Inc. | | | | | |
| Metals by EPA 200 Series Methods | s | | | | | | | | | FILT |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 89 | | 10 | " | " | " | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | |
| Magnesium | ND | | 10 | " | " | " | " | " | " | R-0 |
| Potassium | 35 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 4800 | | 10 | " | " | " | " | | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 20 | | 10 | " | " | " | " | " | " | |
| Barium | 15 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | 17 | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0 |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0 |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 |
| Selenium | ND | | 10 | " | " | " | " | " | " | |
| Zinc | ND | | 10 | " | " | " | " | " | " | R-0 |
| Cold Vapor Extraction EPA 7470/ | 7471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Paramete | ers by APHA/EPA/A | ASTM Metho | ods | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 13900 | | 10.0 | umhos/cm | 17 | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| pH | 10 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 |
| Total Dissolved Solids | 8100 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | Project: Genesis Solar Groundwater Project Number: 196-004-06 Project Manager: Arlin Brewster | | | | | | | | Reported: 12/21/18 10:53 | | |
|--|---|-----|--------------------|------------------|----------|---------|----------|----------|------------------------------------|-------|--|
| | | | | TW-1 98-02(Wa | ator) | | | | | | |
| | | | | 0-02(*** | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | |
| Chloride | 6910 | | 100 | mg/l | 20 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | | |
| Sulfate as SO4 | 2400 | | 100 | " | " | " | " | " | " | | |
| Nitrate as NO3 | ND | | 0.500 | " | 1 | " | " | 12/05/18 | " | | |

Joann Marroquin



| Northstar Environmental Remediati | on | | | ject: Genesi | | undwater | | | | |
|-----------------------------------|------------------|------------|--------------------|--------------|----------------|----------|----------|----------|--------------------|------------|
| 26225 Enterprise Court | | | Project Num | ber: 196-00 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | |] | Project Mana | ger: Arlin E | Brewster | | | | 12/21/18 1 | 0:53 |
| | | | | TW-2 | | | | | | |
| | | | T1835 | 598-03(Wat | ær) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | SunStar I | Laboratorie | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Methods | | | | | | | | | | FILT |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 87 | | 10 | " | " | " | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | |
| Magnesium | ND | | 10 | " | " | " | " | " | " | R-0 |
| Potassium | 30 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 1200 | | 10 | " | " | " | " | 12/13/18 | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 11 | | 10 | " | " | " | " | " | " | |
| Barium | 40 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0' |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0 |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 |
| Selenium | ND | | 10 | " | " | " | " | " | " | |
| Zinc | 39 | | 10 | " | " | " | " | " | " | |
| Cold Vapor Extraction EPA 7470/74 | 471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Parameter | rs by APHA/EPA/A | ASTM Metho | ods | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 5540 | | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| pH | 10 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 |
| Total Dissolved Solids | 2600 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court | | Project: Genesis Solar Groundwater Project Number: 196-004-06 | | | | | | | | | | |
|---|--------|--|--------------------|-----------|----------|---------|----------|----------|-----------|-------|--|--|
| Lake Forest CA, 92630 | | Р | roject Manag | er: Arlin | Brewster | | | | 12/21/18 | 0:53 | | |
| | | | , | ГW-2 | | | | | | | | |
| | | | T18359 | 98-03(Wa | iter) | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | |
| Chloride | 1930 | | 50.0 | mg/l | 10 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | | | |
| Sulfate as SO4 | 454 | | 5.00 | " | 1 | " | " | 12/05/18 | " | | | |
| Nitrate as NO3 | ND | | 0.500 | " | | " | " | " | " | | | |

Joann Marroquin



| Northstar Environmental Remediation | | | Proj | ject: Genesi | s Solar Gro | undwater | | | | |
|-------------------------------------|--------------|-----------|--------------------|--------------|----------------|----------|----------|----------|--------------------|------------|
| 26225 Enterprise Court | | | Project Num | ber: 196-00 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | | | Project Mana | ger: Arlin B | rewster | | | | 12/21/18 | 0:53 |
| | | | | PW-0 | | | | | | |
| | | | T1835 | 598-04(Wat | er) | | | | | |
| | | | | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | SunStar I | Laboratorie | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Methods | | | | | | | | | | FILT |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 100 | | 10 | " | " | " | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | R-0 |
| Magnesium | ND | | 10 | " | " | " | " | " | " | R-0 |
| Potassium | 25 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 1100 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 45 | | 10 | " | " | " | " | " | " | |
| Barium | 55 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0 |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0 |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 |
| Selenium | ND | | 10 | " | " | " | " | " | " | |
| Zinc | 92 | | 10 | " | " | " | " | | " | |
| Cold Vapor Extraction EPA 7470/7471 | l | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Parameters I | by APHA/EPA/ | ASTM Meth | ods | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 6170 | | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| рН | 7.9 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 |
| Total Dissolved Solids | 2600 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | | Project:Genesis Solar GroundwaterProject Number:196-004-06Project Manager:Arlin Brewster12/21/18 10:53 | | | | | | | | | | |
|--|--------|--|--------------------|-----------|-----------|---------|----------|----------|-----------|-------|--|--|
| | | PW-0 T183598-04(Water) | | | | | | | | | | |
| | | | 118359 | 78-04(Wa | ater) | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | |
| | | | <u>SunStar L</u> | aboratori | ies, Inc. | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | |
| Fluoride | 5.82 | | 0.500 | mg/l | 1 | 8120528 | 12/05/18 | 12/05/18 | EPA 300.0 | | | |
| Chloride | 2100 | | 50.0 | " | 10 | " | " | 12/06/18 | " | | | |
| Sulfate as SO4 | 698 | | 50.0 | " | " | " | " | " | " | | | |
| Nitrate as NO3 | ND | | 0.500 | " | 1 | " | " | 12/05/18 | " | | | |

Joann Marroquin



| Northstar Environmental Remediat | tion | | Proj | ect: Genesis | s Solar Gro | undwater | | | | |
|----------------------------------|-------------------|------------|--------------------|-------------------|----------------|----------|----------|----------|--------------------|--------------|
| 26225 Enterprise Court | | | Project Num | ber: 196-00 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | | I | Project Mana | ger: Arlin B | rewster | | | | 12/21/18 1 | 0:53 |
| | | | | PW-2 | | | | | | |
| | | | | 98-05(Wat | er) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | Trobuit | | | | | Butth | Tiepareu | 1 | meniou | 110100 |
| | | | <u>SunStar I</u> | <u>aboratorie</u> | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Methods | 6 | | | | | | | | | FILI |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 55 | | 10 | " | " | " | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | R-0′ |
| Magnesium | ND | | 10 | " | " | " | " | " | " | R-0 ′ |
| Potassium | 11 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 690 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 34 | | 10 | " | " | " | " | " | " | |
| Barium | 41 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0' |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0' |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 ′ |
| Selenium | ND | | 10 | " | | " | " | " | " | |
| Zinc | ND | | 10 | " | " | " | " | " | " | R-0′ |
| Cold Vapor Extraction EPA 7470/7 | 471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Paramete | ers by APHA/EPA/A | ASTM Metho | ods | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 3580 | | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| рН | 8.1 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-04 |
| Total Dissolved Solids | 1900 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | | Project:Genesis Solar GroundwaterProject Number:196-004-06Project Manager:Arlin Brewster12/21/1810:53 | | | | | | | | | | | |
|--|--------|---|--------------------|-----------|-----------------|---------|----------|----------|-----------|-------|--|--|--|
| | | | | PW-2 | | | | | | | | | |
| | | | T18359 | 98-05(Wa | iter) | | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | | |
| | | | <u>SunStar L</u> | aboratori | <u>es, Inc.</u> | | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | | |
| Fluoride | 6.16 | | 0.500 | mg/l | 1 | 8120528 | 12/05/18 | 12/05/18 | EPA 300.0 | | | | |
| Chloride | 895 | | 50.0 | " | 10 | " | " | 12/06/18 | " | | | | |
| Sulfate as SO4 | 454 | | 5.00 | " | 1 | " | " | 12/05/18 | " | | | | |
| Nitrate as NO3 | ND | | 0.500 | " | " | " | " | " | " | | | | |

Joann Marroquin



| Northstar Environmental Remedia | ation | | Proj | ect: Genesis | s Solar Gro | undwater | | | | |
|---------------------------------------|-------------------|------------|--------------------|--------------|-------------|----------|----------|----------|--------------------|-------|
| 26225 Enterprise Court | | | Project Num | ber: 196-004 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | | I | Project Mana | ger: Arlin B | rewster | | | | 12/21/18 1 | 0:53 |
| | | | | DM-1 | | | | | | |
| | | | | 198-06(Wat | er) | | | | | |
| | | | | |) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | <u>SunStar I</u> | Laboratorie | s, Inc. | | | | | |
| Metals by EPA 200 Series Method | s | | | | | | | | | FIL |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 260 | | 10 | " | " | ** | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | |
| Magnesium | 68 | | 10 | " | " | " | " | " | " | |
| Potassium | 33 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 4800 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 10 | | 10 | " | | " | " | " | " | |
| Barium | 31 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | | " | " | " | " | R-0 |
| Lead | ND | | 10 | " | | " | " | " | " | R-0 |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 |
| Selenium | ND | | 10 | " | " | " | " | " | " | |
| Zinc | ND | | 10 | " | " | " | " | " | " | |
| Cold Vapor Extraction EPA 7470/ | 7471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Paramet | ers by APHA/EPA/A | ASTM Metho | ods | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 17400 | | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| рН | 7.7 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-0 |
| Total Dissolved Solids | 11000 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court | | Project: Genesis Solar Groundwater Project Number: 196-004-06 | | | | | | | | | | |
|---|--------|--|--------------------|-----------|----------|---------|----------|----------|-----------|-------|--|--|
| Lake Forest CA, 92630 | | P | roject Manag | er: Arlin | Brewster | | | | 12/21/18 | 10:53 | | |
| | | |] | DM-1 | | | | | | | | |
| | | | T18359 | 98-06(Wa | nter) | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | |
| Chloride | 8180 | | 100 | mg/l | 20 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | | | |
| Sulfate as SO4 | 3280 | | 100 | " | " | " | " | " | " | | | |
| Nitrate as NO3 | 9.00 | | 0.500 | " | 1 | " | " | 12/05/18 | " | | | |

Joann Marroquin



| Northstar Environmental Remediati | ion | | • | ject: Genesis | | undwater | | | | |
|-----------------------------------|------------------|------------|-------------|---------------|----------------|----------|----------|----------|--------------------|--------------|
| 26225 Enterprise Court | |] | Project Num | ber: 196-00 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | | P | roject Mana | ger: Arlin B | rewster | | | | 12/21/18 1 | 0:53 |
| | | | | DM-2 | | | | | | |
| | | | T1835 | 598-07(Wat | er) | | | | | |
| | | | Reporting | | | | | | | |
| Analyte | Result | MDL | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | SunStar 1 | Laboratorie | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Methods | | | | | | | | | | FILT |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 240 | | 10 | " | " | " | " | 12/13/18 | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | R-0′ |
| Magnesium | 60 | | 10 | " | " | " | " | " | " | |
| Potassium | 35 | | 10 | " | " | " | " | 12/13/18 | " | |
| Sodium | 4900 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | ND | | 10 | " | " | " | " | " | " | |
| Barium | 57 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0 ′ |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0 ′ |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0′ |
| Selenium | ND | | 10 | " | " | " | " | " | " | |
| Zinc | 28 | | 10 | " | " | " | " | " | " | |
| Cold Vapor Extraction EPA 7470/74 | 471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Parameter | rs by APHA/EPA/A | ASTM Metho | ds | | | | | | | |
| Specific Conductance (EC) | 13000 | | 10.0 | umhos/cm | 1 | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| pH | 7.8 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-04 |
| Total Dissolved Solids | 7100 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | | Project:Genesis Solar GroundwaterProject Number:196-004-06Project Manager:Arlin Brewster12/21/18 10:53 | | | | | | | | | | |
|--|--------|--|--------------------|-----------|----------|---------|----------|----------|-----------|-------|--|--|
| | | |] | DM-2 | | | | | | | | |
| | | | T18359 | 98-07(Wa | ater) | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | |
| Chloride | 5290 | | 100 | mg/l | 20 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | | | |
| Sulfate as SO4 | 1770 | | 100 | " | " | " | " | " | " | | | |
| Nitrate as NO3 | 11.4 | | 0.500 | " | 1 | " | " | 12/05/18 | " | | | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | Project:Genesis Solar GroundwaterProject Number:196-004-06Project Manager:Arlin Brewster12/21 | | | | | | | | | |
|--|---|------------|--------------------|------------------|----------|---------|----------|----------|-----------|-------|
| | | | T183598 | DM-2 -07RE1() | Water) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | SunStar L | aboratori | es, Inc. | | | | | |
| Conventional Chemistry Parameters by | APHA/EPA/A | STM Method | ls | | | | | | | |
| Dil & Grease | ND | | 5.00 | mg/l | 1 | 8122037 | 12/20/18 | 12/20/18 | EPA 1664B | |

Joann Marroquin



| Northstar Environmental Remedia 26225 Enterprise Court | tion | Droject | | ect: Genesis er: 196-004 | | undwater | | | Reporte | d. |
|---|-------------------|---------------|-----------------|-----------------------------|----------------|----------|----------|----------|-----------------------|-------|
| Lake Forest CA, 92630 | | - | | er: 196-004 | | | | | керогте 12/21/18 1 | |
| Luxo 1 0105t 011, 92050 | | 110,000 | Intantag | or. Turnin D | 10 10 101 | | | | 12/21/10 1 | 0.55 |
| | | |] | DM-3 | | | | | | |
| | | Т | 18359 | 98-08(Wat | er) | | | | | |
| Analyte | Result | Repo MDL I | orting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| i mury co | result | | | | | Butch | Tiepareu | ThuryZou | methou | 10005 |
| | | Suns | Star La | aboratorie | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Methods | S | | | | | | | | | FILT |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 280 | | 10 | " | " | " | " | " | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | |
| Magnesium | 69 | | 10 | " | " | " | " | " | " | |
| Potassium | 33 | | 10 | " | " | " | " | " | " | |
| Sodium | 5200 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 20 | | 10 | " | " | " | " | " | " | |
| Barium | 34 | | 10 | " | " | " | | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-0′ |
| Lead | ND | | 10 | " | " | " | " | " | " | |
| Nickel | ND | | 10 | " | " | " | " | " | " | |
| Selenium | ND | | 10 | " | " | " | " | " | " | |
| Zinc | ND | | 10 | " | " | " | " | " | " | |
| Cold Vapor Extraction EPA 7470/2 | 7471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Paramete | ers by APHA/EPA/A | ASTM Methods | | | | | | | | |
| Specific Conductance (EC) | 17100 | | 10.0 | umhos/cm | 1 | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| рН | 7.8 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-04 |
| Total Dissolved Solids | 9700 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court | | Project: Genesis Solar Groundwater Project Number: 196-004-06 Re | | | | | | | | | | |
|---|--------|---|--------------------|-----------|----------|---------|----------|----------|-----------|-------|--|--|
| Lake Forest CA, 92630 | | P | roject Manag | er: Arlin | Brewster | | | | 12/21/18 | 10:53 | | |
| | | |] | DM-3 | | | | | | | | |
| | | | T18359 | 98-08(Wa | iter) | | | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes | | |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | | | |
| Chloride | 6770 | | 100 | mg/l | 20 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | | | |
| Sulfate as SO4 | 2840 | | 100 | " | " | " | " | " | " | | | |
| Nitrate as NO3 | 2.50 | | 0.500 | " | 1 | " | " | 12/05/18 | " | | | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court Lake Forest CA, 92630 | | Project: Genesis Solar Groundwater Project Number: 196-004-06 Project Manager: Arlin Brewster | | | | | | | | ed: 10:53 |
|--|------------|---|--------------------|-----------|----------|---------|----------|----------|-----------|--------------|
| | | | T183598 | DM-3 | Notor) | | | | | |
| | | | | -VOREI(| water) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | |
| Conventional Chemistry Parameters by | APHA/EPA/A | STM Method | ls | | | | | | | |
| Dil & Grease | ND | | 5.00 | mg/l | 1 | 8122037 | 12/20/18 | 12/20/18 | EPA 1664B | |

Joann Marroquin



| Northstar Environmental Remediati | on | | Proj | ect: Genesis | s Solar Gro | undwater | | | | |
|-----------------------------------|------------------|-----------|--------------------|--------------|----------------|----------|----------|----------|--------------------|--------------|
| 26225 Enterprise Court | | | Project Num | ber: 196-00 | 4-06 | | | | Reporte | d: |
| Lake Forest CA, 92630 | | | Project Mana | | | | | | 12/21/18 1 | 0:53 |
| | | | | | | | | | | |
| | | | | DUP | | | | | | |
| | | | T1835 | 98-09(Wat | er) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | <u>SunStar I</u> | Laboratorie | <u>s, Inc.</u> | | | | | |
| Metals by EPA 200 Series Methods | | | | | | | | | | FILT |
| Copper | ND | | 0.50 | mg/l | 100 | 8120712 | 12/07/18 | 12/13/18 | EPA 200.7 | |
| Calcium | 72 | | 10 | " | " | " | " | " | " | |
| Iron | ND | | 20 | " | " | " | " | " | " | R-07 |
| Magnesium | ND | | 10 | " | " | " | " | " | " | R-07 |
| Potassium | 12 | | 10 | " | | " | " | " | " | |
| Sodium | 950 | | 10 | " | " | " | " | " | " | |
| Antimony | ND | | 10 | ug/l | 20 | 8121043 | 12/10/18 | 12/12/18 | 200.8 | |
| Arsenic | 33 | | 10 | " | " | " | " | " | " | |
| Barium | 44 | | 10 | " | " | " | " | " | " | |
| Cadmium | ND | | 10 | " | " | " | " | " | " | |
| Chromium | ND | | 10 | " | " | " | " | " | " | |
| Cobalt | ND | | 10 | " | " | " | " | " | " | R-07 |
| Lead | ND | | 10 | " | " | " | " | " | " | R-0′ |
| Nickel | ND | | 10 | " | " | " | " | " | " | R-0 ′ |
| Selenium | ND | | 10 | " | | " | " | " | " | |
| Zinc | ND | | 10 | " | " | " | " | " | " | R-07 |
| Cold Vapor Extraction EPA 7470/74 | 471 | | | | | | | | | |
| Mercury | ND | | 0.50 | ug/l | 1 | 8120723 | 12/07/18 | 12/10/18 | EPA 7470A Water | |
| Conventional Chemistry Parameter | rs by APHA/EPA/A | ASTM Meth | ods | | | | | | | |
| Oil & Grease | 15.4 | | 5.00 | mg/l | 1 | 8120722 | 12/07/18 | 12/11/18 | EPA 1664B | |
| Specific Conductance (EC) | 3580 | | 10.0 | umhos/cm | " | 8120531 | 12/05/18 | 12/05/18 | SM2510b mod. | |
| pH | 8.1 | | 0.10 | pH Units | " | 8120530 | 12/05/18 | 12/05/18 | SM4500 | O-04 |
| Total Dissolved Solids | 1800 | | 55 | mg/l | " | 8120538 | 12/05/18 | 12/06/18 | TDS by SM2540C | |

Joann Marroquin



| Northstar Environmental Remediation 26225 Enterprise Court | | Project: Genesis Solar Groundwater Project Number: 196-004-06 | | | | | | | | |
|---|--------|--|--------------------|-----------|----------|---------|----------|----------|-----------|-------|
| Lake Forest CA, 92630 | | Project Manager: Arlin Brewster | | | | | | | | 10:53 |
| | | | | DUP | | | | | | |
| | | | T18359 | 98-09(Wa | nter) | | | | | |
| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| | | | <u>SunStar L</u> | aboratori | es, Inc. | | | | | |
| Anions by EPA Method 300.0 | | | | | | | | | | |
| Chloride | 998 | | 50.0 | mg/l | 10 | 8120528 | 12/05/18 | 12/06/18 | EPA 300.0 | |
| Sulfate as SO4 | 454 | | 5.00 | " | 1 | " | " | 12/05/18 | " | |
| Nitrate as NO3 | ND | | 0.500 | " | " | " | " | " | " | |

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

Metals by EPA 200 Series Methods - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------------------------------|--------|---------|--------------------|-------|----------------|------------------|-------------|----------------|-------|--------------|---------------|
| Batch 8120712 - EPA 3010A | | | | | | | | | | | |
| Blank (8120712-BLK1) | | | | | Prepared: 1 | 12/07/18 A | nalyzed: 12 | /13/18 | | | |
| Copper | ND | | 0.005 | mg/l | | | | | | | |
| Calcium | ND | | 0.10 | " | | | | | | | |
| Iron | ND | | 0.20 | " | | | | | | | |
| Magnesium | ND | | 0.10 | " | | | | | | | |
| Potassium | ND | | 0.10 | " | | | | | | | |
| Sodium | ND | | 0.10 | " | | | | | | | QB-0 1 |
| LCS (8120712-BS1) | | | | | Prepared: | 12/07/18 A | nalyzed: 12 | /13/18 | | | |
| Copper | 0.485 | | 0.005 | mg/l | 0.500 | | 97.0 | 85-115 | | | |
| Matrix Spike (8120712-MS1) | | Source: | T183598-01 | | Prepared: 1 | 12/07/18 A | nalyzed: 12 | /13/18 | | | FILT |
| Copper | 3.27 | | 0.50 | mg/l | 0.500 | ND | 653 | 70-130 | | | |
| Matrix Spike Dup (8120712-MSD1) | | Source: | T183598-01 | | Prepared: 1 | 12/07/18 A | nalyzed: 12 | /13/18 | | | FILT |
| Copper | 3.27 | | 0.50 | mg/l | 0.500 | ND | 654 | 70-130 | 0.161 | 30 | |
| Batch 8121043 - EPA 3010A | | | | | | | | | | | |
| Blank (8121043-BLK1) | | | | | Prepared: 1 | 2/10/18 A | nalvzed: 12 | /12/18 | | | |
| Antimony | ND | | 0.50 | ug/l | 1.000 | 2,10,10 11 | | | | | |
| Arsenic | ND | | 0.50 | " | | | | | | | |
| Barium | ND | | 0.50 | | | | | | | | |
| Beryllium | ND | | 0.50 | " | | | | | | | |
| Cadmium | ND | | 0.50 | " | | | | | | | |
| Chromium | ND | | 0.50 | " | | | | | | | |
| Cobalt | ND | | 0.50 | | | | | | | | |
| Lead | ND | | 0.50 | " | | | | | | | |
| Nickel | ND | | 0.50 | " | | | | | | | |
| Selenium | ND | | 0.50 | " | | | | | | | |
| Zinc | ND | | 0.50 | | | | | | | | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis | s Solar Groundwater | |
|-------------------------------------|--------------------------|---------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-00 | 4-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin B | rewster | 12/21/18 10:53 |
| | | | |

Metals by EPA 200 Series Methods - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------|--------------------|-------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch 8121043 - EPA 3010A | | | | | | | | | | | |
| LCS (8121043-BS1) | | | | | Prepared: 1 | 12/10/18 A | nalyzed: 12 | /12/18 | | | |
| Arsenic | 57.1 | | 0.50 | ug/l | 50.0 | | 114 | 75-125 | | | |
| Barium | 48.3 | | 0.50 | " | 50.0 | | 96.6 | 75-125 | | | |
| Cadmium | 54.0 | | 0.50 | " | 50.0 | | 108 | 75-125 | | | |
| Chromium | 46.6 | | 0.50 | " | 50.0 | | 93.1 | 75-125 | | | |
| Lead | 47.0 | | 0.50 | " | 50.0 | | 94.1 | 75-125 | | | |
| Matrix Spike (8121043-MS1) | | Source: T | <u> [183598-01</u> | | Prepared: 1 | 12/10/18 A | nalyzed: 12 | /12/18 | | | |
| Arsenic | 116 | | 10 | ug/l | 50.0 | 6.69 | 218 | 75-125 | | | QM-01 |
| Barium | 62.3 | | 10 | " | 50.0 | 13.6 | 97.3 | 75-125 | | | |
| Cadmium | 48.7 | | 10 | " | 50.0 | 1.27 | 94.9 | 75-125 | | | |
| Chromium | 110 | | 10 | " | 50.0 | 2.50 | 216 | 75-125 | | | QM-01 |
| Lead | 107 | | 10 | " | 50.0 | ND | 213 | 75-125 | | | QM-01 |
| Matrix Spike Dup (8121043-MSD1) | | Source: 7 | Г183598-01 | | Prepared: 1 | 12/10/18 Ai | nalyzed: 12 | /12/18 | | | |
| Arsenic | 61.3 | | 10 | ug/l | 50.0 | 6.69 | 109 | 75-125 | 61.5 | 20 | QM-01 |
| Barium | 60.4 | | 10 | " | 50.0 | 13.6 | 93.6 | 75-125 | 3.05 | 20 | |
| Cadmium | 45.9 | | 10 | " | 50.0 | 1.27 | 89.2 | 75-125 | 6.10 | 20 | |
| Chromium | 52.8 | | 10 | " | 50.0 | 2.50 | 101 | 75-125 | 70.6 | 20 | QM-01 |
| Lead | 51.3 | | 10 | " | 50.0 | ND | 103 | 75-125 | 70.2 | 20 | QM-01 |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------------------------------|--------|---------|--------------------|-------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch 8120723 - EPA 7470A Water | | | | | | | | | | | |
| Blank (8120723-BLK1) | | | | | Prepared: 1 | .2/07/18 A | nalyzed: 12 | /10/18 | | | |
| Mercury | ND | | 0.50 | ug/l | | | | | | | |
| LCS (8120723-BS1) | | | | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | /10/18 | | | |
| Mercury | 5.53 | | 0.50 | ug/l | 5.00 | | 111 | 80-120 | | | |
| Matrix Spike (8120723-MS1) | | Source: | Г183598-01 | | Prepared: 1 | 2/07/18 A | nalyzed: 12 | /10/18 | | | |
| Mercury | 3.45 | | 0.50 | ug/l | 5.00 | ND | 68.9 | 75-125 | | | QM-05 |
| Matrix Spike Dup (8120723-MSD1) | | Source: | Г183598-01 | | Prepared: 1 | .2/07/18 A | nalyzed: 12 | /10/18 | | | |
| Mercury | 4.48 | | 0.50 | ug/l | 5.00 | ND | 89.5 | 75-125 | 26.0 | 20 | QM-05 |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

Conventional Chemistry Parameters by APHA/EPA/ASTM Methods - Quality Control

| | | SunStar | Labora | tories, In | ic. | | | | | |
|------------------------------------|------------|------------------|------------|------------|-------------|-------------|---------|-------|-------|----------|
| | D 1 | Reportin | - | Spike | Source | AVD DC | %REC | | RPD | N |
| Analyte | Result | MDL Lim | it Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
| Batch 8120530 - General Preparatio | n | | | | | | | | | |
| Duplicate (8120530-DUP1) | | Source: T183598- | 01 | Prepared & | z Analyzed: | 12/05/18 | | | | |
| pH | 7.91 | 0.1 | 0 pH Units | • | 7.89 | | | 0.253 | 20 | |
| Batch 8120531 - General Preparatio | n | | | | | | | | | |
| Duplicate (8120531-DUP1) | | Source: T183598- | 01 | Prepared & | z Analyzed: | 12/05/18 | | | | |
| Specific Conductance (EC) | 23600 | 10. | 0 umhos/cr | n | 23600 | | | 0.00 | 15 | |
| Batch 8120538 - General Preparatio | n | | | | | | | | | |
| Blank (8120538-BLK1) | | | | Prepared: | 12/05/18 A | nalyzed: 12 | 2/06/18 | | | |
| Total Dissolved Solids | ND | 5 | 5 mg/l | | | | | | | |
| LCS (8120538-BS1) | | | | Prepared: | 12/05/18 A | nalyzed: 12 | 2/06/18 | | | |
| Total Dissolved Solids | 512 | 5 | 5 mg/l | 500 | | 102 | 80-120 | | | |
| Duplicate (8120538-DUP1) | | Source: T183598- | 01 | Prepared: | 12/05/18 A | nalyzed: 12 | 2/06/18 | | | |
| Total Dissolved Solids | 17100 | 5 | 5 mg/l | | 16800 | | | 1.30 | 5 | |
| Batch 8120722 - General Preparatio | n | | | | | | | | | |
| Blank (8120722-BLK1) | | | | Prepared: | 12/07/18 A | nalyzed: 12 | 2/11/18 | | | |
| Oil & Grease | ND | 5.0 | 0 mg/l | | | | | | | |
| LCS (8120722-BS1) | | | | Prepared: | 12/07/18 A | nalyzed: 12 | 2/11/18 | | | |
| Oil & Grease | 36.5 | 5.0 | 0 mg/l | 40.0 | | 91.2 | 83-101 | | | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

Conventional Chemistry Parameters by APHA/EPA/ASTM Methods - Quality Control

| SunStar Laboratories, Inc. | | | | | | | | | | | |
|-------------------------------------|---------------------------------------|-----|--------------------|-------|----------------|------------------|------|----------------|------|--------------|-------|
| Analyte | Result | MDL | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
| Batch 8120722 - General Preparation | | | | | | | | | | | |
| LCS Dup (8120722-BSD1) | Prepared: 12/07/18 Analyzed: 12/11/18 | | | | | | | | | | |
| Oil & Grease | 33.7 | | 5.00 | mg/l | 40.0 | | 84.2 | 83-101 | 7.98 | 11 | |
| Batch 8122037 - General Preparation | | | | | | | | | | | |
| Blank (8122037-BLK1) | Prepared & Analyzed: 12/20/18 | | | | | | | | | | |
| Oil & Grease | ND | | 5.00 | mg/l | | | | | | | |
| LCS (8122037-BS1) | Prepared & Analyzed: 12/20/18 | | | | | | | | | | |
| Oil & Grease | 33.2 | | 5.00 | mg/l | 40.0 | | 83.0 | 83-101 | | | |
| LCS Dup (8122037-BSD1) | Prepared & Analyzed: 12/20/18 | | | | | | | | | | |
| Oil & Grease | 33.9 | | 5.00 | mg/l | 40.0 | | 84.8 | 83-101 | 2.09 | 11 | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
|-------------------------------------|------------------------------------|----------------|
| 26225 Enterprise Court | Project Number: 196-004-06 | Reported: |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/21/18 10:53 |

Anions by EPA Method 300.0 - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | R MDL | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------|--------|------------|--------------------|-------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch 8120528 - General Preparation | | | | | | | | | | | |
| Blank (8120528-BLK1) | | | | | Prepared & | Analyzed: | 12/05/18 | | | | |
| Fluoride | ND | | 0.500 | mg/l | | | | | | | |
| Chloride | ND | | 5.00 | " | | | | | | | |
| Sulfate as SO4 | ND | | 5.00 | " | | | | | | | |
| Nitrate as NO3 | ND | | 0.500 | " | | | | | | | |
| LCS (8120528-BS1) | | | | | Prepared & | Analyzed: | 12/05/18 | | | | |
| Chloride | 26.4 | | 5.00 | mg/l | 25.0 | | 106 | 75-125 | | | |
| Sulfate as SO4 | 26.4 | | 5.00 | " | 25.0 | | 106 | 75-125 | | | |
| Nitrate as NO3 | 26.8 | | 0.500 | " | 25.0 | | 107 | 75-125 | | | |
| Matrix Spike (8120528-MS1) | | Source: T1 | 83598-01 | | Prepared: 1 | 2/05/18 Aı | nalyzed: 12 | /06/18 | | | |
| Chloride | 7920 | | 100 | mg/l | 25.0 | 7680 | 963 | 75-125 | | | QM-02 |
| Sulfate as SO4 | 7450 | | 100 | " | 25.0 | 7130 | NR | 75-125 | | | QM-02 |
| Nitrate as NO3 | 26.5 | | 0.500 | " | 25.0 | 5.52 | 83.9 | 75-125 | | | |
| Matrix Spike Dup (8120528-MSD1) | | Source: T1 | 83598-01 | | Prepared: 1 | 2/05/18 Aı | nalyzed: 12 | /06/18 | | | |
| Chloride | 9040 | | 100 | mg/l | 25.0 | 7680 | NR | 75-125 | 13.2 | 20 | QM-02 |
| Sulfate as SO4 | 8560 | | 100 | " | 25.0 | 7130 | NR | 75-125 | 13.9 | 20 | QM-02 |
| Nitrate as NO3 | 31.6 | | 0.500 | " | 25.0 | 5.52 | 104 | 75-125 | 17.6 | 20 | |

SunStar Laboratories, Inc.

Joann Marroquin



| Northstar Environmental Remediation | Project: Ge | ect: Genesis Solar Groundwater | | | |
|-------------------------------------|---------------------|--------------------------------|----------------|--|--|
| 26225 Enterprise Court | Project Number: 19 | 96-004-06 | Reported: | | |
| Lake Forest CA, 92630 | Project Manager: An | rlin Brewster | 12/21/18 10:53 | | |

Notes and Definitions

- R-07 Reporting limit for this compound(s) has been raised to account for dilution necessary due to high levels of interfering compound(s) and/or matrix affect.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- QM-01 The % recovery is outside of established control limits due to matrix interference and/or sample dilution due to matrix effect. The batch was accepted based on acceptable LCS recovery.
- QB-01 The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
- O-04 This sample was received and analyzed outside the EPA recommended holding time.
- FILT The sample was filtered prior to analysis.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

SunStar Laboratories, Inc.

Joann Marroquin
SunStar Laboratories, Inc. 25712 Commercentre Dr Lake Forest, CA 92630 949-297-5020

Chain of Custody Record

| | | | | | ١ | | · : | sıəu | ejuoc | JO # [E | ĵоТ | 6 | ဖ | ю | 9 | 9 | 9 | 9 | 9 | ဖ | ω | 0 | ان | Т | | | · . | | | |
|--------------|---|--|------------------------------|---------------------------------|-----|----------|--------------|-------------------|-------------------|-----------|-----------------------|----------|----------|---------|---------|----------------|---------|---------|----------|----------|---------|-------------|------------|---|---|-----------------------------|--------------------------|------------------------------|---------------------------------|--|
| | e of | | Client Project #: 196-004-06 | EDF #: T1000006093 | | | | | | | Comments/Preservative | | 0(| 02 | 03 | с и | 05 | 06 | 07 | | 09 | HOLD 10 | HOLD # | | | 66 Notes | ** Deuterium & Oxygen-18 | subcontract has 10 day TAT | Deporting limits must match | previous reports |
| · · · | Page: | l Ier | Clier | EDF | | | | | # 0I / | (notero | ç eq | ¥ | 10 | -62- | 04 | 95 | 40 | 07 | -se- | -64- | ¢ | # | 4 | | | 2 | | | 2.3 | 9 20 |
| | | Project Name: Genesis Solar Groundwater | • | | ſ | | | | oride | 0 - דוי | 300 | | | | | Х | Х | | | | | | | | | ners | (J | | Received good condition/cold 23 | $\frac{3.6}{2.5}$ Turn around time: Standard ** |
| | | nou | | | | (.inoo | du2)8 | l-n∋b | , Oxy | munətı | Jeu | X | × | × | X | × | × | × | × | × | × | - | | | 1 | Total # of containers | s Y/N | Seals intact? Y/NNA | lition/ | anda |
| | | ar G | | | | (tact) | npcon | S) lon | hermi | T - Mð | 108 | × | × | × | Х | × | × | × | × | \times | × | - | | | | t d | seal | ntact | conc | le: St |
| | - 20 | Sol | <u>کر</u> | | | S | biloS | . si O' le | stoT - | 2640C | WS | × | Х | × | Х | X | X | × | X | × | × | | | | | otal ∌ | stody | eals i | pooe | d tim |
| | 81/ho/e1 | lesis | Collector: Arlin Brewster | 38 | | ວເງີເວອດ | ity, Sr | vitoub | noD - | 80192 | WS | X | × | × | X | × | × | × | × | × | × | | | | | | fCu | Ň | ved | ouno |
| | Set. | Gen | Bre | 1183598 | | | | | | Hq - 0 | 7 06 | X | × | × | × | × | × | × | × | × | × | | | | | | ain o | | lecei | nar |
| | ले | me | Arlin | R | | | | Â | ercur | M - A0 | 747 | X | × | × | × | × | × | × | × | × | × | | | | | | ਨ | • | <u> </u> | |
| | | t Nai | or. / | # | | | | | | 10 - 4 | | \vdash | × | × | × | × | × | × | × | \times | × | | | _ | | | ถ | | | |
| | Date: _ | oject | llect | Batch # | | əfetlu | iS ,ete | entin ,e | loride | 4O - 0' | 300 | X | × | × | X | × | × | × | \times | × | × | | _ | | | lime | 10250 | lime | | lime |
| | Da | Prd | ပိ | Ba | | Cd, Cr | s, Ba, | A ,d2 .A) nS | stals: , Se, | M - 8.0 | '00 500 | X | × | × | × | × | × | × | × | × | × | | • | | | Date / Time | 18 6 | Date / Time | | Date / Time |
| • | | | | | · . | K, Fe, | , N ,u (C | с ^{а,} с | LTILI (stals: |)- Z.(| Mg 200 | X | Х | Х | X | Х | ×X | × | × | × | × | | | | | | 12.5 | | | |
| | | | | | | | | | | Container | Type | Various | Various | Various | Various | Various | Various | Various | Various | Various | Various | Various | Various | | | y: (signature) | XX | y: (signature) | - | y: (signature) |
| | | 2630 | | | | | | | | Samole | Type | × | Μ | M | M | M | M | M | M | Ν | × | × | ≥ | | | Received by | A. | Received by: | | Received by |
| | tion | orest, CA 9 | Fax: | | | | | | | | Time | | 1025 | 1100 | 040 | Sego | 0835 | 0630 | 0040 | 0430 | N/A | N/A | NA | | | me | 5 1020 | ime | | me |
| | ntal Remediat | Court, Lake Fo | | ster | | | - - | | | Date | Sampled | 1 | 13/12/01 | | | | | | 1 | ~ | N/A | N/A | N/A | | | Date / Time | 12/2/18 0 1020 | Date / Time | | Date / Time |
| 949-297-5020 | Client: Northstar Environmental Remediation | Address: 26225 Enterprise Court, Lake Forest, CA 92630 | Phone: 949-274-1719 | Project Manager: Arlin Brewster | | | | | | | Sample ID | -23a - | OBS-1 | TW-1 | TW-2 | PW-0 | PW-2 | DM-1 | DM-2 | DM-3 | DUP | Field Blank | Trip Blank | | | Reinquished by: (signature) | | Relinquished by: (signature) | | Relinquished by: (signature) |

Pickup

Return to client

Sample disposal Instructions: Disposal @ \$2.00 each

Page 35 of 50



SAMPLE RECEIVING REVIEW SHEET

| Batch/Work Order #: | 가 같이 많는 것 같아요. 그는 것은 것은 것을 가지 않는 것을 가지 않는 것을 했다. <u></u> |
|---|--|
| Client Name: NORTHSTAR ENV. | Project: <u>GENESIS SOLAR GROUND WATER</u> |
| Delivered by: 🔀 Client 🗌 SunStar Cour | rier 🗌 GSO 🛄 FedEx 🗌 Other |
| If Courier, Received by: | Date/Time Courier Received: |
| Lab Received by: | Date/Time Lab Received: |
| Total number of coolers received: 3 | |
| Temperature: Cooler #1 ^{/./} °C +/- the CF (1.2°C | C) = 2.3 °C corrected temperature |
| Temperature: Cooler #2 2.4 °C +/- the CF (1.2°C | C) = 3.6 °C corrected temperature |
| Temperature: Cooler #3 | C) = 2.5 °C corrected temperature |
| Temperature criteria = $\leq 6^{\circ}$ C Within (no frozen containers) | n criteria? Xes No |
| If NO: Samples received on ice? If on ice, samples received same day collected? | $S \rightarrow Acceptable \qquad \boxed{\begin{tabular}{lllllllllllllllllllllllllllllllllll$ |
| Custody seals intact on cooler/sample Sample containers intact | ∑Yes □No* ⊠N/A S |
| Sample labels match Chain of Custody IDs | ⊠Yes □No* |
| Total number of containers received match COC | Yes No* |
| Proper containers received for analyses requested on COC | ⊠Yes □No* |
| Proper preservative indicated on COC/containers for analy | vses requested Yes No* N/A |
| Complete shipment received in good condition with correct containers, labels, volumes preservatives and within metho- holding times | |
| * Complete Non-Conformance Receiving Sheet if checked | Cooler/Sample Review - Initials and date: |
| Comments: | |
| | |
| | |
| | |
| | Page 1 of |

(949) 297-5020 🔲 www.sunstarlabs.com 🔲 25712 Commercentre Drive 🖾 Lake Forest, C 🛛 Page 36 of 50

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| SunStar | | | | Printed: 12/6/2018 8:53:17AM |
|--|-----------------------------------|-------------------------------------|----------------------|-------------------------------|
| PROVIDING QUALITY ANALYTICAL | ries, Inc. Services Nationwide | wo | RK ORDER | |
| | | ſ | [183598 | |
| Client: Northstar Environ Project: Genesis Solar Grou | | Project Manager: Project Number: | | Joann Marroquin 196-004-06 |
| Report To: Northstar Environmental Ren Arlin Brewster 26225 Enterprise Court Lake Forest, CA 92630 | nediation | | | |
| Date Due: 12/12/18 1 | 7:00 (5 day TAT) | | | |
| Received By: Sunny Lou | nethone | | Date Received: | 12/05/18 10:50 |
| Logged In By: Sunny Lou | | | Date Logged In: | 12/05/18 11:28 |
| Samples Received at:2.3°CCustody SealsNoReceivedContainers IntactYesCOC/Labels AgreeYesPreservation ConfinYes | On Ice Yes | | | |
| Analysis | Due | ТАТ | Expires | Comments |
| T183598-01 OBS-1 [Water (US & | ·] Sampled 12/04/18 10 |):25 (GMT | -08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 10:25 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 10:25 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 10:25 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 10:25 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 10:25 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 10:25 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 10:25 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 10:25 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 10:25 | |
| T183598-02 TW-1 [Water] (US & | Sampled 12/04/18 11 | :00 (GMT- | 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 11:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 11:00 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 11:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 11:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 11:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 11:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 11:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 11:00 | |
| FD9 169 1 | 10/10/10 15 00 | - | 10/11/10 11 00 | |

12/11/18 11:00

5

TDS-160.1

12/12/18 15:00

Page 1 of 6 Page 38 of 50



DEK

T183598

| Client: Northstar Environn Project: Genesis Solar Grou | | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
|---|----------------------|-----------|-------------------------------------|-------------------------------|
| Analysis | Due | TAT | Expires | Comments |
| T183598-03 TW-2 [Water] (US & | Sampled 12/04/18 09: | 00 (GMT-(| 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 09:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 09:00 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 09:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 09:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 09:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 09:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 09:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 09:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 09:00 | |
| T183598-04 PW-0 [Water] (US & | Sampled 12/04/18 08: | 25 (GMT-(| 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 08:25 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 08:25 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 08:25 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 08:25 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 08:25 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 08:25 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 08:25 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 08:25 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 08:25 | |
| T183598-05 PW-2 [Water] (US & | Sampled 12/04/18 08: | 35 (GMT-(| 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 08:35 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 08:35 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 08:35 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 08:35 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 08:35 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 08:35 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 08:35 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 08:35 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 08:35 | |



DER

| Client: Northstar Environ Project: Genesis Solar Grou | | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
|--|----------------------|----------|-------------------------------------|-------------------------------|
| Analysis | Due | TAT | Expires | Comments |
| T183598-06 DM-1 [Water] (US & | Sampled 12/04/18 06: | 30 (GMT- | 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 06:30 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 06:30 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 06:30 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 06:30 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 06:30 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 06:30 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 06:30 | |
| T183598-07 DM-2 [Water] (US & | - | | | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 07:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 07:00 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 07:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 07:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 07:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 07:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 07:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 07:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 07:00 | |
| T183598-08 DM-3 [Water] (US & | Sampled 12/04/18 07: | 30 (GMT- | 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 07:30 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 07:30 | Ca,Cu,Na,K,Fe,Mg |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 07:30 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 07:30 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 07:30 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 07:30 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 07:30 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 07:30 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 07:30 | |



T183598

| Project: Genesis Solar Grou | mental Remediation Indwater | | Project Manager: Project Number: | Joann Marroquin 196-004-06 | |
|--|--|---|---|---|--|
| Analysis | Due | TAT | Expires | Comments | |
| T183598-09 DUP [Water] (US & | Sampled 12/04/18 00:0 | 00 (GMT-0 | 8:00) Pacific Time | | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 00:00 | Oil & Grease | |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 00:00 | Ca,Cu,Na,K,Fe,Mg | |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 00:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn | |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 00:00 | Chloride,Sulfate only | |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 00:00 | Nitrate | |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 00:00 | | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 00:00 | | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 00:00 | | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 00:00 | | |
| T183598-11 TRIP BLANK Pacific Time (US & | [Water] Sampled 12/ | 04/18 00:00 |) (GMT-08:00) | | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water | | | | | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & | | | | Deuterium,Oxygen-18 | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water | r] Sampled 12/04/18 10 12/12/18 15:00 |):25 (GMT 5 | -08:00) Pacific Time 06/02/19 10:25 | | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water | r] Sampled 12/04/18 10 12/12/18 15:00 |):25 (GMT 5 | -08:00) Pacific Time 06/02/19 10:25 | | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & | r] Sampled 12/04/18 10 12/12/18 15:00 Sampled 12/04/18 11: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 | Deuterium,Oxygen-18 | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water | r] Sampled 12/04/18 10 12/12/18 15:00 Sampled 12/04/18 11: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 | Deuterium,Oxygen-18 | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water (US & | r] Sampled 12/04/18 10 12/12/18 15:00 Sampled 12/04/18 11: 12/12/18 15:00 Sampled 12/04/18 09: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 08:00) Pacific Time 06/02/19 09:00 | Deuterium,Oxygen-18 Deuterium,Oxygen-18 | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water (US & Misc Water Testing #2 T183598-04 PW-0 [Water] | r] Sampled 12/04/18 10 12/12/18 15:00 Sampled 12/04/18 11: 12/12/18 15:00 Sampled 12/04/18 09: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 08:00) Pacific Time 06/02/19 09:00 | Deuterium,Oxygen-18 Deuterium,Oxygen-18 | |
| Pacific Time (US & [NO ANALYSES] Isotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water (US & Misc Water Testing #2 T183598-04 PW-0 [Water] (US & | r] Sampled 12/04/18 10 12/12/18 15:00 Sampled 12/04/18 11: 12/12/18 15:00 Sampled 12/04/18 09: 12/12/18 15:00 Sampled 12/04/18 08: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 :00 (GMT- 5 :25 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 08:00) Pacific Time 06/02/19 09:00 08:00) Pacific Time 06/02/19 08:25 | Deuterium,Oxygen-18 Deuterium,Oxygen-18 Deuterium,Oxygen-18 | |



T183598

| | | | 105570 | |
|--|-------------------------|------------|-------------------------|---------------------|
| Client: Northstar Enviro | nmental Remediation | | Project Manager: | Joann Marroquin |
| Project: Genesis Solar Gro | undwater | | Project Number: | 196-004-06 |
| | | | - | |
| Analysis | Due | TAT | Expires | Comments |
| Isotech Laboratories, Inc. | | | | |
| T183598-06 DM-1 [Wate | r] Sampled 12/04/18 06; | :30 (GMT-(| 08:00) Pacific Time | |
| (US & | -) <u>I</u> | | ·····, - ····· - ····· | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | Deuterium,Oxygen-18 |
| T183598-07 DM-2 [Wate (US & | r] Sampled 12/04/18 07: | :00 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 07:00 | Deuterium,Oxygen-18 |
| T183598-08 DM-3 [Wate (US & | r] Sampled 12/04/18 07: | :30 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 07:30 | Deuterium,Oxygen-18 |
| T183598-09 DUP [Water] (US & | Sampled 12/04/18 00:0 | 00 (GMT-08 | 8:00) Pacific Time | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 00:00 | Deuterium,Oxygen-18 |
| TestAmerica (Irvine) Labora T183598-01 OBS-1 [Wate (US & | |):25 (GMT- | -08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 10:25 | 8015M- Therminol |
| T183598-02 TW-1 [Wate (US & | r] Sampled 12/04/18 11: | :00 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 11:00 | 8015M- Therminol |
| T183598-03 TW-2 [Wate (US & | r] Sampled 12/04/18 09: | :00 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 09:00 | 8015M- Therminol |
| T183598-04 PW-0 [Water (US & | r] Sampled 12/04/18 08: | 25 (GMT-0 | 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 08:25 | 8015M- Therminol |
| T183598-05 PW-2 [Water (US & | r] Sampled 12/04/18 08: | 35 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 08:35 | 8015M- Therminol |
| T183598-06 DM-1 [Wate (US & | r] Sampled 12/04/18 06 | :30 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | 8015M- Therminol |

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|---|--|--------------------|---|--------------------------------------|
| PROVIDING QUALITY ANALYTICA | Ories, Inc. AL SERVICES NATIONWIDE | wo | RK ORDER | |
| | |] | F 183598 | |
| Client: Northstar Environ Project: Genesis Solar Gro | nmental Remediation oundwater | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
| Analysis | Due | TAT | Expires | Comments |
| estAmerica (Irvine) Labor T183598-07 DM-2 [Wate | | :00 (GMT- | 08:00) Pacific Time | |
| estAmerica (Irvine) Labora T183598-07 DM-2 [Wate (US & | | :00 (GMT- | 08:00) Pacific Time | |
| T183598-07 DM-2 [Wate (US & Misc Water Testing #1 | [Sampled 12/04/18 07: 12/12/18 15:00 | 5 | 06/02/19 07:00 | 8015M- Therminol |
| T183598-07 DM-2 [Wate (US & | [Sampled 12/04/18 07: 12/12/18 15:00 | 5 | 06/02/19 07:00 | 8015M- Therminol |
| T183598-07 DM-2 [Wate (US & Misc Water Testing #1 T183598-08 DM-3 [Wate | [Sampled 12/04/18 07: 12/12/18 15:00 | 5 | 06/02/19 07:00 | 8015M- Therminol 8015M- Therminol |
| T183598-07 DM-2 [Wate (US & Misc Water Testing #1 T183598-08 DM-3 [Wate (US & | Sampled 12/04/18 07: 12/12/18 15:00 sampled 12/04/18 07: 12/12/18 15:00 | 5 30 (GMT- 5 | 06/02/19 07:00 08:00) Pacific Time 06/02/19 07:30 | |

| SunStar | | | Printed: 12/6/2018 10:34:25AM |
|--|---------------|-------------------------------------|--|
| Laboratories, Inc. | WO | RK ORDER | |
| PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE | | T183598 | |
| Client: Northstar Environmental Remediation Project: Genesis Solar Groundwater | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
| Report To: Northstar Environmental Remediation Arlin Brewster 26225 Enterprise Court Lake Forest, CA 92630 | | | |
| Date Due:12/12/18 17:00 (5 day TAT)Received By:Sunny LounethoneLogged In By:Sunny Lounethone | | Date Received: Date Logged In: | 12/05/18 10:50 12/05/18 11:28 |
| Samples Received at: 2.3°C Custody Seals No Received On Ice Yes Containers Intact Yes Yes COC/Labels Agree Yes Preservation Confir Yes Yes Yes | | | |
| Analysis Due | ТАТ | Expires | Comments |
| T183598-01 OBS-1 [Water] Sampled 12/04/2 (US & | 18 10:25 (GMT | -08:00) Pacific Time | |
| 1664 12/12/18 15: | 00 5 | 01/01/19 10:25 | Oil & Grease |
| 200.7 12/12/18 15: | 00 5 | 06/02/19 10:25 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 12/12/18 15: | 00 5 | 06/02/19 10:25 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 12/12/18 15: | 00 5 | 01/01/19 10:25 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 12/12/18 15: | 00 5 | 12/06/18 10:25 | Nitrate |
| 7470/71 Hg 12/12/18 15: | 00 5 | 03/04/19 10:25 | |
| Conductivity 12/12/18 15: | 00 5 | 01/01/19 10:25 | |
| pH water 9040 12/12/18 15: | 00 5 | 12/05/18 10:25 | |
| TDS-160.1 12/12/18 15: | 00 5 | 12/11/18 10:25 | |
| T183598-02 TW-1 [Water] Sampled 12/04/1 (US & | 8 11:00 (GMT- | 08:00) Pacific Time | |
| 1664 12/12/18 15: | 00 5 | 01/01/19 11:00 | Oil & Grease |
| 200.7 12/12/18 15: | | 06/02/19 11:00 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 12/12/18 15: | | 06/02/19 11:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 12/12/18 15: | 00 5 | 01/01/19 11:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 12/12/18 15: | 00 5 | 12/06/18 11:00 | Nitrate |
| 7470/71 Hg 12/12/18 15: | 00 5 | 03/04/19 11:00 | |
| Conductivity 12/12/18 15: | 00 5 | 01/01/19 11:00 | |
| pH water 9040 12/12/18 15: | 00 5 | 12/05/18 11:00 | |
| TDS-160.1 12/12/18 15: | 00 5 | 12/11/18 11:00 | |

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| Client: Northstar Environ Project: Genesis Solar Gro | | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
|---|--|-------------|--|---|
| Analysis | Due | TAT | Expires | Comments |
| T183598-03 TW-2 [Water (US & | ·] Sampled 12/04/18 09 | :00 (GMT- | 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 09:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 09:00 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 09:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 09:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 09:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 09:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 09:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 09:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 09:00 | |
| (US & 1664 200.7 200.8 | 12/12/18 15:00 12/12/18 15:00 12/12/18 15:00 | 5 5 5 | 01/01/19 08:25 06/02/19 08:25 06/02/19 08:25 | Oil & Grease Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Repor |
| | 10/10/10 15 00 | - | 01/01/10 00 05 | as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 08:25 | Chloride,Sulfate,Fluoride only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 12/12/18 15:00 | 5 5 | 12/06/18 08:25 | Nitrate |
| 7470/71 Hg Conductivity | 12/12/18 15:00 | 5 | 03/04/19 08:25 01/01/19 08:25 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 08:25 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/03/18 08:23 | |
| T183598-05 PW-2 [Water (US & | | | | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 08:35 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 08:35 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 08:35 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 08:35 | Chloride,Sulfate,Fluoride only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 08:35 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 08:35 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 08:35 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 08:35 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 08:35 | |

T183598

| | | | 1 103370 | |
|--|--------------------------------|-----------|-------------------------------------|---|
| Client: Northstar Environ Project: Genesis Solar Grou | mental Remediation Indwater | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
| Analysis | Due | TAT | Expires | Comments |
| T183598-06 DM-1 [Water] (US & | Sampled 12/04/18 06 | :30 (GMT- | 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 06:30 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 06:30 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 06:30 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 06:30 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 06:30 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 06:30 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 06:30 | |
| T183598-07 DM-2 [Water] (US & | - | | | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 07:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 07:00 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 07:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 07:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 07:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 07:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 07:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 07:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 07:00 | |
| T183598-08 DM-3 [Water] (US & | Sampled 12/04/18 07 | :30 (GMT- | 08:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 07:30 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 07:30 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 07:30 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 07:30 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 07:30 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 07:30 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 07:30 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 07:30 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 07:30 | |



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| T 4 | 0.0 = 0.0 | |
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| | 83598 | |

| Client: Northstar Environ Project: Genesis Solar Grou | mental Remediation Indwater | | Project Manager: Project Number: | Joann Marroquin 196-004-06 |
|--|--|---|---|---|
| Analysis | Due | TAT | Expires | Comments |
| T183598-09 DUP [Water] (US & | Sampled 12/04/18 00:0 |)0 (GMT-0 | 8:00) Pacific Time | |
| 1664 | 12/12/18 15:00 | 5 | 01/01/19 00:00 | Oil & Grease |
| 200.7 | 12/12/18 15:00 | 5 | 06/02/19 00:00 | Ca,Cu,Na,K,Fe,Mg (Field Filtered, Report as Dissolved) |
| 200.8 | 12/12/18 15:00 | 5 | 06/02/19 00:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered, Report as Dissolved) |
| 300.0 - F, Cl, Br, SO4 | 12/12/18 15:00 | 5 | 01/01/19 00:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/12/18 15:00 | 5 | 12/06/18 00:00 | Nitrate |
| 7470/71 Hg | 12/12/18 15:00 | 5 | 03/04/19 00:00 | |
| Conductivity | 12/12/18 15:00 | 5 | 01/01/19 00:00 | |
| pH water 9040 | 12/12/18 15:00 | 5 | 12/05/18 00:00 | |
| TDS-160.1 | 12/12/18 15:00 | 5 | 12/11/18 00:00 | |
| Pacific Time (US & [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & | [Water] Sampled 12/ | 04/18 00:00 |) (GMT-08:00) | |
| [NO ANALYSES] | [Water] Sampled 12/ | 04/18 00:00 |) (GMT-08:00) | |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & | | | | |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Wate: | | | | Deuterium,Oxygen-18 |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Wate: (US & | r] Sampled 12/04/18 10 12/12/18 15:00 |):25 (GMT 5 | -08:00) Pacific Time 06/02/19 10:25 | |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Wates (US & Misc Water Testing #2 T183598-02 TW-1 [Water | r] Sampled 12/04/18 10 12/12/18 15:00 |):25 (GMT 5 | -08:00) Pacific Time 06/02/19 10:25 | |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & | r] Sampled 12/04/18 10 12/12/18 15:00] Sampled 12/04/18 11: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 | Deuterium,Oxygen-18 |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water | r] Sampled 12/04/18 10 12/12/18 15:00] Sampled 12/04/18 11: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 | Deuterium,Oxygen-18 |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water (US & | r] Sampled 12/04/18 10 12/12/18 15:00] Sampled 12/04/18 11: 12/12/18 15:00] Sampled 12/04/18 09: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 08:00) Pacific Time 06/02/19 09:00 | Deuterium,Oxygen-18 Deuterium,Oxygen-18 |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water (US & Misc Water Testing #2 T183598-04 PW-0 [Water | r] Sampled 12/04/18 10 12/12/18 15:00] Sampled 12/04/18 11: 12/12/18 15:00] Sampled 12/04/18 09: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 :00 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 08:00) Pacific Time 06/02/19 09:00 | Deuterium,Oxygen-18 Deuterium,Oxygen-18 |
| [NO ANALYSES] T183598-11 TRIP BLANK Pacific Time (US & [NO ANALYSES] sotech Laboratories, Inc. T183598-01 OBS-1 [Water (US & Misc Water Testing #2 T183598-02 TW-1 [Water (US & Misc Water Testing #2 T183598-03 TW-2 [Water (US & Misc Water Testing #2 T183598-04 PW-0 [Water (US & | r] Sampled 12/04/18 10 12/12/18 15:00] Sampled 12/04/18 11: 12/12/18 15:00] Sampled 12/04/18 09: 12/12/18 15:00] Sampled 12/04/18 08: 12/12/18 15:00 |):25 (GMT- 5 :00 (GMT- 5 :00 (GMT- 5 :25 (GMT- 5 | -08:00) Pacific Time 06/02/19 10:25 08:00) Pacific Time 06/02/19 11:00 08:00) Pacific Time 06/02/19 09:00 08:00) Pacific Time 06/02/19 08:25 | Deuterium,Oxygen-18 Deuterium,Oxygen-18 Deuterium,Oxygen-18 |



T183598

| | | | 100070 | |
|---|--------------------------|------------|-------------------------|---------------------|
| Client: Northstar Enviro | onmental Remediation | | Project Manager: | Joann Marroquin |
| Project: Genesis Solar Gr | | | Project Number: | 196-004-06 |
| | | | - | |
| Analysis | Due | TAT | Expires | Comments |
| Isotech Laboratories, Inc. | | | | |
| T183598-06 DM-1 [Wat | er] Sampled 12/04/18 06 | :30 (GMT-(| 08:00) Pacific Time | |
| (US & | | | | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | Deuterium,Oxygen-18 |
| T183598-07 DM-2 [Wat (US & | er] Sampled 12/04/18 07 | :00 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 07:00 | Deuterium,Oxygen-18 |
| T183598-08 DM-3 [Wat (US & | er] Sampled 12/04/18 07 | :30 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 07:30 | Deuterium,Oxygen-18 |
| T183598-09 DUP [Wate (US & | r] Sampled 12/04/18 00:0 |)0 (GMT-0 | 8:00) Pacific Time | |
| Misc Water Testing #2 | 12/12/18 15:00 | 5 | 06/02/19 00:00 | Deuterium,Oxygen-18 |
| TestAmerica (Irvine) Labor T183598-01 OBS-1 [Wa (US & | |):25 (GMT- | -08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 10:25 | 8015M- Therminol |
| T183598-02 TW-1 [Wat (US & | er] Sampled 12/04/18 11: | :00 (GMT-0 | 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 11:00 | 8015M- Therminol |
| T183598-03 TW-2 [Wat (US & | er] Sampled 12/04/18 09 | :00 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 09:00 | 8015M- Therminol |
| T183598-04 PW-0 [Wat (US & | er] Sampled 12/04/18 08: | :25 (GMT-0 | 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 08:25 | 8015M- Therminol |
| T183598-05 PW-2 [Wat (US & | er] Sampled 12/04/18 08: | :35 (GMT-(| 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 08:35 | 8015M- Therminol |
| T183598-06 DM-1 [Wat (US & | er] Sampled 12/04/18 06 | :30 (GMT- | 08:00) Pacific Time | |
| Misc Water Testing #1 | 12/12/18 15:00 | 5 | 06/02/19 06:30 | 8015M- Therminol |

| SunStar | | | | Printed: 12/6/2018 10:34:25A |
|---|---|----------------------------|---|--------------------------------------|
| PROVIDING QUALITY ANALYTIC | Ories, Inc. | WO | RK ORDER | |
| | |] | [183598 | |
| Client: Northstar Enviro | nmental Remediation | | Project Manager: | Joann Marroquin |
| Project: Genesis Solar Gro | oundwater | | Project Number: | 196-004-06 |
| Analysis | Due | ТАТ | Expires | Comments |
| T183598-07 DM-2 [Wate | | :00 (GMT- | 08:00) Pacific Time | |
| - | | :00 (GMT- | 08:00) Pacific Time | |
| T183598-07 DM-2 [Wate (US & Misc Water Testing #1 | [Sampled 12/04/18 07 12/12/18 15:00 | 5 | 06/02/19 07:00 | 8015M- Therminol |
| T183598-07 DM-2 [Wate (US & | [Sampled 12/04/18 07 12/12/18 15:00 | 5 | 06/02/19 07:00 | 8015M- Therminol |
| T183598-07 DM-2 [Wate (US & | [Sampled 12/04/18 07 12/12/18 15:00 | 5 | 06/02/19 07:00 | 8015M- Therminol 8015M- Therminol |
| T183598-07 DM-2 [Wate (US & Mise Water Testing #1 T183598-08 DM-3 [Wate (US & | Sampled 12/04/18 07 12/12/18 15:00 sr] Sampled 12/04/18 07 12/12/18 15:00 | 5 :30 (GMT- 5 | 06/02/19 07:00 08:00) Pacific Time 06/02/19 07:30 | |

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Page 50 of 50



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: 440-226404-1 Client Project/Site: T183598

For:

LINKS

Review your project results through

Total Access

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

SunStar Laboratories Inc 25712 Commercentre Drive Lake Forest, California 92630

Attn: Joann Marroquin

aneg Roberso

Authorized for release by: 12/14/2018 3:46:49 PM Danielle Roberts, Senior Project Manager

(949)261-1022 danielle.roberts@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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| QC Sample Results 12 |
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| Certification Summary 15 |
| Chain of Custody 16 |
| Receipt Checklists 20 |

Sample Summary

Client: SunStar Laboratories Inc Project/Site: T183598 TestAmerica Job ID: 440-226404-1

| Lab Sample ID | Client Sample ID | Matrix | Collected Receive | ed |
|---------------|------------------|--------|---------------------------|-------|
| 440-226404-1 | T183598-01 | Water | 12/04/18 10:25 12/05/18 1 | 14:50 |
| 440-226404-2 | T183598-02 | Water | 12/04/18 11:00 12/05/18 1 | 14:50 |
| 440-226404-3 | T183598-03 | Water | 12/04/18 09:00 12/05/18 1 | 14:50 |
| 440-226404-4 | T183598-04 | Water | 12/04/18 08:25 12/05/18 1 | 14:50 |
| 440-226404-5 | T183598-05 | Water | 12/04/18 08:35 12/05/18 1 | 14:50 |
| 440-226404-6 | T183598-06 | Water | 12/04/18 06:30 12/05/18 1 | 14:50 |
| 440-226404-7 | T183598-07 | Water | 12/04/18 07:00 12/05/18 1 | 14:50 |
| 440-226404-8 | T183598-08 | Water | 12/04/18 07:30 12/05/18 1 | 14:50 |
| 440-226404-9 | T183598-09 | Water | 12/04/18 00:00 12/05/18 1 | 14:50 |

TestAmerica Irvine

Job ID: 440-226404-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-226404-1

Case Narrative

Comments

No additional comments.

Receipt

The samples were received on 12/5/2018 2:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

GC Semi VOA

Method(s) 8015B: Insufficient 8015-DRO sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch preparation batch 440-515342 and analytical batch 440-515553. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch: (LCS 440-515342/2-A)

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

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 3510C 8015B TH preparation batch 440-515342.

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

Detection Summary

| Client Sample ID: T183598-01 | Lab Sample ID: 440-226404-1 | |
|------------------------------|-----------------------------|---|
| No Detections. | | |
| Client Sample ID: T183598-02 | Lab Sample ID: 440-226404-2 | 5 |
| No Detections. | | 6 |
| Client Sample ID: T183598-03 | Lab Sample ID: 440-226404-3 | |
| No Detections. | | |
| Client Sample ID: T183598-04 | Lab Sample ID: 440-226404-4 | 8 |
| No Detections. | | 9 |
| Client Sample ID: T183598-05 | Lab Sample ID: 440-226404-5 | |
| No Detections. | | |
| Client Sample ID: T183598-06 | Lab Sample ID: 440-226404-6 | |
| No Detections. | | |
| Client Sample ID: T183598-07 | Lab Sample ID: 440-226404-7 | |
| No Detections. | | |
| Client Sample ID: T183598-08 | Lab Sample ID: 440-226404-8 | |
| No Detections. | | |
| Client Sample ID: T183598-09 | Lab Sample ID: 440-226404-9 | |
| No Detections | | |

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Irvine

| Client Sample ID: T183598 Date Collected: 12/04/18 10:25 | -01 | | | | | La | b Sample | ID: 440-226 Matrix: | |
|--|-----------------|------------|--------------------|-------|------|----|---------------------------------------|----------------------------------|------------|
| Date Received: 12/05/18 14:50 | | | | | | | | | |
| Method: 8015B - Diesel Range | Organica | | | | | | | | |
| Analyte | - | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.10 | 0.020 | | | · · · · · · · · · · · · · · · · · · · | 12/07/18 13:54 | 1 |
| 1,1'-Biphenyl | ND | | 0.10 | 0.020 | - | | 12/06/18 09:50 | 12/07/18 13:54 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 59 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 13:54 | 1 |
| Client Sample ID: T183598 Date Collected: 12/04/18 11:00 Date Received: 12/05/18 14:50 | -02 | | | | | La | ib Sample | ID: 440-226 Matrix: | |
| | Organica | | | | | | | | |
| Method: 8015B - Diesel Range Analyte | | Qualifier | RL | мы | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.099 | 0.020 | | | 12/06/18 09:50 | 12/07/18 14:15 | 1 |
| 1,1'-Biphenyl | ND | | 0.099 | 0.020 | - | | | 12/07/18 14:15 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fa |
| n-Octacosane | 62 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 14:15 | 1 |
| Client Sample ID: T183598 | -03 | | | | | La | b Sample | ID: 440-226 | 404-3 |
| Date Collected: 12/04/18 09:00 Date Received: 12/05/18 14:50 | | | | | | | • | Matrix | |
| Method: 8015B - Diesel Range | Organics | (DRO) (GC) | | | | | | | |
| Analyte | | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 14:36 | 1 |
| 1,1'-Biphenyl | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 14:36 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 59 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 14:36 | 1 |
| Client Sample ID: T183598 | -04 | | | | | La | b Sample | ID: 440-226 | 404-4 |
| Date Collected: 12/04/18 08:25 Date Received: 12/05/18 14:50 | | | | | | | | Matrix | Water |
| Date Received. 12/05/18 14.50 | | | | | | | | | |
| Method: 8015B - Diesel Range | - | | | | | _ | _ . | | _ = |
| Analyte | | Qualifier | | | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- 1,1'-Biphenyl | ND ND | | 0.10 | 0.020 | - | | 12/06/18 09:50 12/06/18 09:50 | 12/07/18 14:57 12/07/18 14:57 | 1 |
| | | 0 | | | 5 | | | | D.1 E. |
| Surrogate n-Octacosane | %Recovery 62 | Qualifier | Limits 45 - 120 | | | | Prepared | Analyzed 12/07/18 14:57 | Dil Fac |
| | 02 | | 45 - 120 | | | | 12/00/18 09.30 | 12/07/10 14.37 | I |
| Client Sample ID: T183598 | -05 | | | | | La | b Sample | ID: 440-226 | |
| Date Collected: 12/04/18 08:35 Date Received: 12/05/18 14:50 | | | | | | | | Matrix | Water |
| Method: 8015B - Diesel Range | Organice | | | | | | | | |
| Analyte | | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.11 | 0.021 | | | • | 12/07/18 15:18 | 1 |
| 1,1'-Biphenyl | ND | | 0.11 | 0.021 | - | | 12/06/18 09:50 | 12/07/18 15:18 | 1 |
| | | | | | | | | | |

; i r -

6

TestAmerica Irvine

n-Octacosane

| lient: SunStar Laboratories Inc | | | Sample I | | | 7 | Test∆merica | Job ID: 440-22 | 6404-1 |
|-----------------------------------|------------|------------|----------|-------|------|----|----------------|----------------|---------|
| roject/Site: T183598 | | | | | | • | | JOD ID. 440-22 | .0+0+-1 |
| Client Sample ID: T183598 | -05 | | | | | La | b Sample | ID: 440-226 | 404-5 |
| Date Collected: 12/04/18 08:35 | | | | | | | • | Matrix: | |
| Date Received: 12/05/18 14:50 | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 61 | | 45 - 120 | | | | 12/06/18 09:50 | • | 1 |
| Client Sample ID: T183598 | -06 | | | | | La | b Sample | ID: 440-226 | 404-6 |
| Date Collected: 12/04/18 06:30 | - | | | | | | | Matrix | |
| Date Received: 12/05/18 14:50 | | | | | | | | | |
| Method: 8015B - Diesel Range | Organics (| (DRO) (GC) | | | | | | | |
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 15:38 | 1 |
| 1,1'-Biphenyl | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 15:38 | 1 |
| Surrogate | %Recovery | | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 56 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 15:38 | 1 |
| Client Sample ID: T183598 | -07 | | | | | La | b Sample | ID: 440-226 | 404-7 |
| Date Collected: 12/04/18 07:00 | | | | | | | - | Matrix: | |
| Date Received: 12/05/18 14:50 | | | | | | | | | |
| _ Method: 8015B - Diesel Range | Organics | (DRO) (GC) | | | | | | | |
| Analyte | | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 15:59 | 1 |
| 1,1'-Biphenyl | ND | | 0.10 | | mg/L | | 12/06/18 09:50 | 12/07/18 15:59 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 62 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 15:59 | 1 |
| Client Sample ID: T183598 | -08 | | | | | La | b Sample | ID: 440-226 | 404-8 |
| Date Collected: 12/04/18 07:30 | | | | | | | | Matrix | |
| Date Received: 12/05/18 14:50 | | | | | | | | | |
| _ Method: 8015B - Diesel Range | Organics (| (DRO) (GC) | | | | | | | |
| Analyte | | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 16:20 | 1 |
| 1,1'-Biphenyl | ND | | 0.10 | 0.020 | mg/L | | 12/06/18 09:50 | 12/07/18 16:20 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| n-Octacosane | 60 | | 45 - 120 | | | | 12/06/18 09:50 | 12/07/18 16:20 | 1 |
| Client Sample ID: T183598 | -09 | | | | | La | b Sample | ID: 440-226 | 404-9 |
| Date Collected: 12/04/18 00:00 | | | | | | | | Matrix | |
| Date Received: 12/05/18 14:50 | | | | | | | | | |
| | Organics (| (DRO) (GC) | | | | | | | |
| Analyte | | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Benzene, 1,1'-oxybis- | ND | | 0.10 | 0.021 | mg/L | | 12/06/18 09:50 | 12/07/18 16:41 | 1 |
| 1,1'-Biphenyl | ND | | 0.10 | 0.021 | mg/L | | 12/06/18 09:50 | 12/07/18 16:41 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 0.1 | | | 45 100 | | | | 10/06/19 00.50 | 40/07/40 40.44 | |

12/06/18 09:50 12/07/18 16:41

45 - 120

67

1

Prep Type: Total/NA

5 6

7

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

| Matrix: | Water |
|---------|-------|
| | |

| | | | Percent Surrogate Recovery (Acceptance Limits) |
|---------------------|------------------------|----------|--|
| | | OTCN1 | |
| Lab Sample ID | Client Sample ID | (45-120) | |
| 440-226404-1 | T183598-01 | 59 | |
| 440-226404-2 | T183598-02 | 62 | |
| 440-226404-3 | T183598-03 | 59 | |
| 440-226404-4 | T183598-04 | 62 | |
| 440-226404-5 | T183598-05 | 61 | |
| 440-226404-6 | T183598-06 | 56 | |
| 440-226404-7 | T183598-07 | 62 | |
| 440-226404-8 | T183598-08 | 60 | |
| 440-226404-9 | T183598-09 | 67 | |
| LCS 440-515342/2-A | Lab Control Sample | 59 | |
| LCSD 440-515342/3-A | Lab Control Sample Dup | 61 | |
| MB 440-515342/1-A | Method Blank | 62 | |
| Surragata Lagand | | | |
| Surrogate Legend | | | |
| OTCN = n-Octacosane | • | | |

Client: SunStar Laboratories Inc Project/Site: T183598

| Method | Method Description | Protocol | Laboratory |
|--------|--|----------|------------|
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | TAL IRV |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL IRV |

Protocol References:

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

Lab Sample ID: 440-226404-1

Lab Sample ID: 440-226404-2

Lab Sample ID: 440-226404-3

Lab Sample ID: 440-226404-4

Lab Sample ID: 440-226404-5

Lab Sample ID: 440-226404-6

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

2 3 4 5 6 7 8 9

Client Sample ID: T183598-01 Date Collected: 12/04/18 10:25

| Date | oonected. | 12/04/10 10.20 | |
|------|-----------|----------------|--|
| Date | Received: | 12/05/18 14:50 | |

| Ргер Туре | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|---------------|-----------------|-----|---------------|-------------------|-----------------|-----------------|----------------------|---------|---------|
| Total/NA | Prep | 3510C | | | 985 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 13:54 | LMB | TAL IRV |

Client Sample ID: T183598-02 Date Collected: 12/04/18 11:00 Date Received: 12/05/18 14:50

| Prep Type | Batch e 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 | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 14:15 | LMB | TAL IRV |

Client Sample ID: T183598-03 Date Collected: 12/04/18 09:00 Date Received: 12/05/18 14:50

| Γ | Batch | Batch | | Dil | Initial | Final | Batch | Prepared | | |
|-----------|----------|--------|-----|--------|---------|--------|--------|----------------|---------|---------|
| Prep Type | Туре | Method | Run | Factor | Amount | Amount | Number | or Analyzed | Analyst | Lab |
| Total/NA | Prep | 3510C | | | 980 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 14:36 | LMB | TAL IRV |

Client Sample ID: T183598-04 Date Collected: 12/04/18 08:25 Date Received: 12/05/18 14:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|---------------|-----------------|-----|---------------|-------------------|-----------------|-----------------|----------------------|---------|---------|
| Total/NA | Prep | 3510C | | | 990 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 14:57 | LMB | TAL IRV |

Client Sample ID: T183598-05 Date Collected: 12/04/18 08:35 Date Received: 12/05/18 14:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|---------------|-----------------|-----|---------------|-------------------|-----------------|-----------------|-------------------------|---------|---------|
| Total/NA | Prep | 3510C | | | 945 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 15:18 | LMB | TAL IRV |

Client Sample ID: T183598-06 Date Collected: 12/04/18 06:30 Date Received: 12/05/18 14:50

| _ | Batch | Batch | | Dil | Initial | Final | Batch | Prepared | | |
|-----------|----------|--------|-----|--------|---------|--------|--------|----------------|---------|---------|
| Prep Туре | Туре | Method | Run | Factor | Amount | Amount | Number | or Analyzed | Analyst | Lab |
| Total/NA | Prep | 3510C | | | 995 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 15:38 | LMB | TAL IRV |

TestAmerica Irvine

Lab Sample ID: 440-226404-7

Lab Sample ID: 440-226404-8

Matrix: Water

Matrix: Water

1 2 3 4 5 6 7 8 9 10 11

13

Client Sample ID: T183598-07 Date Collected: 12/04/18 07:00

Date Received: 12/04/18 07:00

| Bron Tuno | Batch | Batch Method | Bun | Dil | Initial Amount | Final | Batch Number | Prepared | Analvst | Lab |
|-----------------------|--------------|-----------------|-----|--------|-------------------|----------------|-----------------|-------------------------------|---------|----------------|
| Prep Type Total/NA | Type Prep | 3510C | Run | Factor | Amount 985 mL | Amount 1 mL | 515342 | or Analyzed 12/06/18 09:50 | | Lab TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 15:59 | LMB | TAL IRV |

Client Sample ID: T183598-08 Date Collected: 12/04/18 07:30 Date Received: 12/05/18 14:50

| — | Batch | Batch | | Dil | Initial | Final | Batch | Prepared | | |
|-----------|----------|--------|-----|--------|---------|--------|--------|----------------|---------|---------|
| Prep Type | Туре | Method | Run | Factor | Amount | Amount | Number | or Analyzed | Analyst | Lab |
| Total/NA | Prep | 3510C | | | 1000 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 16:20 | LMB | TAL IRV |

Client Sample ID: T183598-09 Date Collected: 12/04/18 00:00 Date Received: 12/05/18 14:50

| Lab Sample ID: | 440-226404-9 |
|----------------|---------------|
| | Matrix: Water |

| | Batch | Batch | | Dil | Initial | Final | Batch | Prepared | | |
|-----------|----------|--------|-----|--------|---------|--------|--------|----------------|---------|---------|
| Prep Type | Туре | Method | Run | Factor | Amount | Amount | Number | or Analyzed | Analyst | Lab |
| Total/NA | Prep | 3510C | | | 960 mL | 1 mL | 515342 | 12/06/18 09:50 | HCK | TAL IRV |
| Total/NA | Analysis | 8015B | | 1 | | | 515553 | 12/07/18 16:41 | LMB | 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 440-5 Matrix: Water Analysis Batch: 515553 | 15342/1-A | | | | | | | | | Cli | ent | _ | ole ID: Me Prep Typ Prep Ba | e: To | tal/NA |
|--|-------------|-----------|-------|----------|------|--------|-------|--------|----------|-------|-------|-------|-----------------------------------|--------|---------|
| | Ν | ИВ МВ | | | | | | | | | | | Trop Du | | 100-12 |
| Analyte | Res | ult Quali | ifier | | RL | | MDL | Unit | | DI | Prepa | red | Analyz | ed | Dil Fac |
| Benzene, 1,1'-oxybis- | N | ND | | | 0.10 | C | 0.020 | mg/L | | _ 12/ | 06/18 | 09:50 | 12/07/18 1 | 1:08 | 1 |
| 1,1'-Biphenyl | ٦ | ١D | | | 0.10 | C | 0.020 | mg/L | | 12/ | 06/18 | 09:50 | 12/07/18 1 | 1:08 | 1 |
| | л | NB MB | | | | | | | | | | | | | |
| Surrogate | %Recove | ery Quali | ifier | Lim | its | | | | | I | Prepa | red | Analyz | ed | Dil Fac |
| n-Octacosane | | 62 | | 45 - | 120 | | | | | 12/ | 06/18 | 09:50 | 12/07/18 | 1:08 | 1 |
| _ Lab Sample ID: LCS 440-{ | 515342/2-A | | | | | | | | Clie | nt Sa | mnl | | Lab Con | trol S | amnle |
| Matrix: Water | | | | | | | | | • | | p. | | Prep Typ | | |
| Analysis Batch: 515553 | | | | | | | | | | | | | Prep Ba | | |
| · ····, ··· · · · · · · · · · · · · · · | | | | Spike | | LCS | LCS | 5 | | | | | %Rec. | | |
| Analyte | | | | Added | | Result | Qua | lifier | Unit | D | %R | lec | Limits | | |
| Benzene, 1,1'-oxybis- | | | | 0.100 | | 0.0624 | J | | mg/L | | | 62 | 50 - 115 | | |
| 1,1'-Biphenyl | | | | 0.100 | | 0.0515 | J | | mg/L | | | 51 | 50 ₋ 115 | | |
| | LCS L | cs | | | | | | | | | | | | | |
| Surrogate | %Recovery (| Qualifier | L | imits | | | | | | | | | | | |
| n-Octacosane | 59 | | 4 | 45 - 120 | - | | | | | | | | | | |
| Lab Sample ID: LCSD 440 Matrix: Water Analysis Batch: 515553 | -515342/3-A | | | | | | | C | lient Sa | ample | e ID: | | Control S Prep Typ Prep Ba | e: To | tal/NA |
| Analysis Datch. 515555 | | | | Spike | | LCSD | LCS | D | | | | | %Rec. | | RPD |
| Analyte | | | | Added | | Result | | | Unit | D | %R | lec | Limits | RPD | Limit |
| Benzene, 1,1'-oxybis- | | | | 0.100 | | 0.0627 | | | mg/L | | · | 63 | 50 - 115 | 1 | 30 |
| 1,1'-Biphenyl | | | | 0.100 | | 0.0522 | | | mg/L | | | 52 | 50 ₋ 115 | 1 | 30 |
| | LCSD L | CSD | | | | | | | | | | | | | |
| Surrogate | %Recovery (| Qualifier | I | imits | | | | | | | | | | | |
| n-Octacosane | 61 | | | 15 - 120 | - | | | | | | | | | | |

TestAmerica Irvine

GC Semi VOA

Prep Batch: 515342

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|--------|--------|------------|
| 440-226404-1 | T183598-01 | Total/NA | Water | 3510C | |
| 440-226404-2 | T183598-02 | Total/NA | Water | 3510C | |
| 440-226404-3 | T183598-03 | Total/NA | Water | 3510C | |
| 440-226404-4 | T183598-04 | Total/NA | Water | 3510C | |
| 440-226404-5 | T183598-05 | Total/NA | Water | 3510C | |
| 440-226404-6 | T183598-06 | Total/NA | Water | 3510C | |
| 440-226404-7 | T183598-07 | Total/NA | Water | 3510C | |
| 440-226404-8 | T183598-08 | Total/NA | Water | 3510C | |
| 440-226404-9 | T183598-09 | Total/NA | Water | 3510C | |
| MB 440-515342/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 440-515342/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 440-515342/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

Analysis Batch: 515553

| Analysis Batch: 5155 | 53 | | | | | 11 |
|----------------------|------------------------|-----------|--------|--------|------------|----|
| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch | |
| 440-226404-1 | T183598-01 | Total/NA | Water | 8015B | 515342 | 12 |
| 440-226404-2 | T183598-02 | Total/NA | Water | 8015B | 515342 | |
| 440-226404-3 | T183598-03 | Total/NA | Water | 8015B | 515342 | 13 |
| 440-226404-4 | T183598-04 | Total/NA | Water | 8015B | 515342 | |
| 440-226404-5 | T183598-05 | Total/NA | Water | 8015B | 515342 | 11 |
| 440-226404-6 | T183598-06 | Total/NA | Water | 8015B | 515342 | |
| 440-226404-7 | T183598-07 | Total/NA | Water | 8015B | 515342 | 15 |
| 440-226404-8 | T183598-08 | Total/NA | Water | 8015B | 515342 | 15 |
| 440-226404-9 | T183598-09 | Total/NA | Water | 8015B | 515342 | |
| MB 440-515342/1-A | Method Blank | Total/NA | Water | 8015B | 515342 | |
| LCS 440-515342/2-A | Lab Control Sample | Total/NA | Water | 8015B | 515342 | |
| LCSD 440-515342/3-A | Lab Control Sample Dup | Total/NA | Water | 8015B | 515342 | |

Qualifiers

GC Semi VOA

| 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. |

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 | 8 |
| CNF | Contains No Free Liquid | |
| DER | Duplicate Error Ratio (normalized absolute difference) | 9 |
| Dil Fac | Dilution Factor | |
| DL | Detection Limit (DoD/DOE) | |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample | |
| DLC | Decision Level Concentration (Radiochemistry) | |
| EDL | Estimated Detection Limit (Dioxin) | |
| LOD | Limit of Detection (DoD/DOE) | 12 |
| LOQ | Limit of Quantitation (DoD/DOE) | |
| MDA | Minimum Detectable Activity (Radiochemistry) | |
| MDC | Minimum Detectable Concentration (Radiochemistry) | |
| 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 (Radiochemistry) | |
| 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) | |
| TEO | Taxiaity Favilyalant Questiont (Diavin) | |

TEQ Toxicity Equivalent Quotient (Dioxin)

13 14

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| uthority | Program | | EPA Region | Identification Number | Expiration Date |
|-----------------------|--------------------------|-----------------|-----------------------|-----------------------------|-----------------------|
| alifornia | State Prog | gram | 9 | CA ELAP 2706 | 06-30-19 |
| | o aro moladoa m ano ropo | | o not contined by the | e governing authority. This | not may morado analy. |
| the agency does not o | offer certification. | | 2 | | |
| 0, | • | Matrix Water | Analyt | | |

TestAmerica Irvine

Mouton, Alain

| From: Sent: | Joann Marroquin <joann@sunstarlabs.com> Thursday, December 06, 2018 8:15 PM</joann@sunstarlabs.com> |
|----------------|---|
| То: | Mouton, Alain |
| Cc: | Roberts, Danielle C. |
| Subject: | RE: TestAmerica Sample Login Confirmation files from 440-226404 T183598 |

-External Email-

Alain,

Please set these to your std TAT, no rush.

Thank you, Joann

Joann Marroquin Southern California Sales/CSM



25712 Commercentre Dr., Lake Forest, CA 92630 Office: (949) 297-5020 | Fax: (949) 297-5027 | Cell: (949) 469-3124 CA ELAP Certification: 2250 | CA Small Business Certification: 31511

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From: Mouton, Alain [mailto:alain.mouton@testamericainc.com]
Sent: Thursday, December 06, 2018 5:10 PM
To: Joann Marroquin; Rose Fasheh
Cc: Danielle C. Roberts
Subject: TestAmerica Sample Login Confirmation files from 440-226404 T183598

Hello,

Attached, please find the Sample Confirmation files for job 440-226404; T183598

Please feel free to contact me or your PM, Danielle Roberts, if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from

TestAmerica on this project by visiting our website at: Project Feedback

ALAIN MOUTON

Project Manager Assistant

TestAmerica Irvine THE LEADER IN ENVIRONMENTAL TESTING

Tel: 949.261,1022

Reference: [486753] Attachments: 2

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T183598

SENDING LABORATORY:

SunStar Laboratories, Inc. 25712 Commercentre Drive Lake Forest, CA 92630 Phone: (949) 297-5020 Fax: (949) 297-5027 Project Manager: Joann Marroquin

RECEIVING LABORATORY:

TestAmerica (Irvine) Laboratories 17461 Derian Ave, #100 Irvine, CA 92614 Phone :(949) 261-1022 Fax: N/A

14

| Analysis | Due | Expires | Laboratory ID | Comments |
|---|-------------------|---------------------|---------------|---|
| Sample ID: T183598-01 | Water Sam | pled:12/04/18 10:25 | | - |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 10:25 | | 8015M- Therminol |
| Sample ID: T183598-02 | Water Sam | pled:12/04/18 11:00 | | |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 11:00 | | 8015M- Therminol |
| Sample ID: T183598-03 | Water Sam | pled:12/04/18 09:00 | | |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 09:00 | | 8015M- Therminol |
| Sample ID: T183598-04 | Water Sam | pled:12/04/18 08:25 | _ | |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 08:25 | | 8015M- Therminol |
| Sample ID: T183598-05 | Water Sam | pled:12/04/18 08:35 | | 8015M- Therminol |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 08:35 | | 8015M- Therminol |
| Sample ID: T183598-06 | Water Sam | pled:12/04/18 06:30 | | |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 06:30 | | 8015M- Therminol |
| | | | lı. | |
| Released By | · 12-5-18 Date | 1450 | Received By | 1 12/5/13 1450 Date |
| Released By | Date | | Received By | Date $Date = 0^{10}$ 4, 0/3.5 $IP93$ Page $3 of 412/14/20$ |
| | | Pa | ge 18 of 20 | 12/14/20 12/14/20 |

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T183598

| Analysis | Due | Expires | Laboratory ID | Comments | |
|---|----------------|-----------------------|---------------|---------------------------------------|---|
| Sample 1D: T183598-07 | Water Sa | mpled:12/04/18 07:00 | | | |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 07:00 | | 8015M- Therminol | |
| Sample ID: T183598-08 | Water Sa | mpled:12/04/18 07:30 | | | - |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 07:30 | | 8015M- Therminol | - |
| Sample ID: T183598-09 | Water Sa | umpled:12/04/18 00:00 | | | |
| Misc Water Testing #1 Containers Supplied: | 12/12/18 15:00 | 06/02/19 00:00 | | 8015M- Therminol | |
| | | | · · · | · · · · · · · · · · · · · · · · · · · | |
| | | | | | |
| | | | | | |

•

| | 12-5-18 | 1450 ATTAIRY | 12/5/13 | 1450 |
|-------------|---------|--------------|--------------------|-----------------|
| Released By | Date | Received By | Date | |
| Released By | Date | Received By | Date 6.0/3.5 /2 | Pg2 Page 4 of 4 |

Client: SunStar Laboratories Inc

Login Number: 226404 List Number: 1 Creator: Bonta, Lucia F

| Question | Answer | Comment |
|--|--------|-------------|
| Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td> | True | |
| The cooler's custody seal, if present, is intact. | N/A | Not present |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| 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 (excluding tests with immediate HTs) | 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 | |

Job Number: 440-226404-1

List Source: TestAmerica Irvine



| Lab #: | 694813 Job | #: 40280 | IS-101168 | Co. Job#: | |
|--------------------------------|--------------------------------|------------------|--------------|----------------|------------|
| Sample Name: Company: | T183598-01 SunStar Laborato | ries. Inc | | Co. Lab#: | |
| API/Well: | | | | | |
| Container: | 250ml Plastic Bot | tle | | | |
| Field/Site Name: | T183598 | | | | |
| Location: Formation/Depth: | | | | | |
| Sampling Point: | | | | | |
| Date Sampled: | 12/04/2018 10:25 | 5 Date Received | : 12/07/2018 | Date Reported: | 12/20/2018 |
| δD of water | | | | | |
| od of water | | -61.4 ‰ relative | to VSMOW | | |
| $\delta^{18}O$ of water | | -6.79 ‰ relative | to VSMOW | | |
| Tritium content of | water | na | | | |
| $\delta^{13}C$ of DIC | | na | | | |
| ¹⁴ C content of DIC | ; | na | | | |
| $\delta^{15}N$ of nitrate | | na | | | |
| δ^{18} O of nitrate | | 22 | | | |
| | | na | | | |
| $\delta^{34}S$ of sulfate | | na | | | |
| $\delta^{18}O$ of sulfate | | na | | | |
| Vacuum Distilled? | * | No | | | |
| Remarks: | | | | | |



| Lab #: Sample Name: | 694814 Job T183598-02 | o #: 40280 | IS-101168 | Co. Job#: Co. Lab#: | |
|--|-----------------------------|-----------------|---------------|------------------------|------------|
| Company: API/Well: | SunStar Laborato | pries, Inc | | 00. Lab#. | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bo T183598 | ttle | | | |
| Date Sampled: | 12/04/2018 11:0 | 0 Date Receive | d: 12/07/2018 | Date Reported: | 12/20/2018 |
| δD of water | | -63.5 ‰ relativ | e to VSMOW | | |
| $\delta^{18}O$ of water | | -7.97 ‰ relativ | e to VSMOW | | |
| Tritium content of | water | na | | | |
| δ^{13} C of DIC | | na | | | |
| ¹⁴ C content of DIC | ; | na | | | |
| $\delta^{15}N$ of nitrate | | na | | | |
| $\delta^{18}O$ of nitrate | | na | | | |
| $\delta^{34}S$ of sulfate | | na | | | |
| $\delta^{18}O$ of sulfate | | na | | | |
| Vacuum Distilled? |) * | No | | | |
| Remarks: | | | | | |



| Lab #: Sample Name: | 694815 Job | o #: 40280 | IS-101168 | Co. Job#: | | | | |
|--|-----------------------------|--|--------------|----------------|------------|--|--|--|
| Company: API/Well: | | T183598-03Co. Lab#:SunStar Laboratories, Inc | | | | | | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bo T183598 | 250ml Plastic Bottle T183598 | | | | | | |
| Date Sampled: | 12/04/2018 9:00 | Date Received | : 12/07/2018 | Date Reported: | 12/20/2018 | | | |
| δD of water | | -75.9 ‰ relative | to VSMOW | | | | | |
| $\delta^{18}O$ of water | | -10.05 ‰ relativ | e to VSMOW | | | | | |
| Tritium content of water na | | | | | | | | |
| $\delta^{13}C$ of DIC | | na | | | | | | |
| ¹⁴ C content of DIC | | na | | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | | |
| $\delta^{18}O$ of nitrate | | na | | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | | |
| $\delta^{18}O$ of sulfate | | na | | | | | | |
| Vacuum Distilled? |) * | No | | | | | | |
| Remarks: | | | | | | | | |



| Lab #: | 694816 Job | #: 40280 | IS-101168 | Co. Job#: | | | |
|--|------------------------------|--|---------------|----------------|------------|--|--|
| Sample Name: Company: API/Well: | | T183598-04Co. Lab#:SunStar Laboratories, Inc | | | | | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bot T183598 | 250ml Plastic Bottle T183598 | | | | | |
| Date Sampled: | 12/04/2018 8:25 | Date Receive | d: 12/07/2018 | Date Reported: | 12/20/2018 | | |
| δD of water | | -76.3 ‰ relative | e to VSMOW | | | | |
| $\delta^{18}O$ of water | | | | | | | |
| Tritium content of | na | | | | | | |
| δ^{13} C of DIC | | na | | | | | |
| ¹⁴ C content of DIC | | na | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | |
| $\delta^{18}O$ of nitrate | | na | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | |
| $\delta^{18}O$ of sulfate | | na | | | | | |
| Vacuum Distilled? |) * | No | | | | | |
| Remarks: | | | | | | | |



| Lab #: Sample Name: | 694817 Job | #: 40280 | IS-101168 | Co. Job#: | | | |
|--|------------------------------|--|------------|----------------|------------|--|--|
| Company: API/Well: | | T183598-05Co. Lab#:SunStar Laboratories, Inc | | | | | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bot T183598 | 250ml Plastic Bottle T183598 | | | | | |
| Date Sampled: | 12/04/2018 8:35 | Date Received | 12/07/2018 | Date Reported: | 12/20/2018 | | |
| δD of water | | -77.9 ‰ relative | to VSMOW | | | | |
| $\delta^{18}O$ of water | | -10.24 ‰ relative | e to VSMOW | | | | |
| Tritium content of water na | | | | | | | |
| $\delta^{13}C$ of DIC | | na | | | | | |
| ¹⁴ C content of DIC | | na | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | |
| $\delta^{18}O$ of nitrate | e na | | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | |
| $\delta^{18}O$ of sulfate | | na | | | | | |
| Vacuum Distilled? |) * | No | | | | | |
| Remarks: | | | | | | | |



| Lab #: | 694818 Job | #: 40280 | IS-101168 | Co. Job#: | | | |
|---|----------------------|------------------|--------------|----------------|------------|--|--|
| Sample Name: | T183598-06 Co. Lab#: | | | | | | |
| Company: | SunStar Laborato | ries, Inc | | | | | |
| API/Well: | | | | | | | |
| Container: | 250ml Plastic Bot | tle | | | | | |
| Field/Site Name: | T183598 | | | | | | |
| Location: | | | | | | | |
| Formation/Depth: | | | | | | | |
| Sampling Point: | | | | | | | |
| Date Sampled: | 12/04/2018 6:30 | Date Received | : 12/07/2018 | Date Reported: | 12/20/2018 | | |
| | | | | | | | |
| δD of water | | -70.1 ‰ relative | to VSMOW | | | | |
| $\delta^{18}O$ of water | | -8.55 ‰ relative | to VSMOW | | | | |
| T-itions and a f | | | | | | | |
| Tritium content of | water | na | | | | | |
| δ^{13} C of DIC | | na | | | | | |
| ¹⁴ C content of DIC | | 20 | | | | | |
| 0 0000000000000000000000000000000000000 | | na | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | |
| δ^{18} O of nitrate | | | | | | | |
| | | na | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | |
| S18O of outfate | | | | | | | |
| δ^{18} O of sulfate | | na | | | | | |
| Vacuum Distilled? |) * | No | | | | | |
| Remarks: | | | | | | | |



| Lab #: Sample Name: | 694819 Job | o #: 40280 | IS-101168 | Co. Job#: | | | |
|--|-----------------------------|---|-----------------|----------------|------------|--|--|
| Company: API/Well: | | T183598-07 Co. Lab#: SunStar Laboratories, Inc | | | | | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bo T183598 | 250ml Plastic Bottle 183598 | | | | | |
| Date Sampled: | 12/04/2018 7:00 | Date Receiv | ved: 12/07/2018 | Date Reported: | 12/20/2018 | | |
| δD of water | | -72.3 ‰ relat | ive to VSMOW | | | | |
| $\delta^{18}O$ of water | | 8.98 ‰ relative to VSMOW | | | | | |
| Tritium content of | water | na | | | | | |
| $\delta^{13}C$ of DIC | | na | | | | | |
| ¹⁴ C content of DIC | | na | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | |
| $\delta^{18}O$ of nitrate | | na | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | |
| $\delta^{18}O$ of sulfate | | na | | | | | |
| Vacuum Distilled? |) * | No | | | | | |
| Remarks: | | | | | | | |



| Lab #: | | b #: 40280 | IS-101168 | Co. Job#: | | | | |
|--|-----------------------------|---|-------------------|----------------|------------|--|--|--|
| Sample Name: Company: API/Well: | | T183598-08 Co. Lab#: SunStar Laboratories, Inc | | | | | | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bo T183598 | 250ml Plastic Bottle T183598 | | | | | | |
| Date Sampled: | 12/04/2018 7:3 | Date Rec | eived: 12/07/2018 | Date Reported: | 12/20/2018 | | | |
| δD of water | | -70.6 ‰ rel | lative to VSMOW | | | | | |
| $\delta^{18}O$ of water | | 8.67 ‰ relative to VSMOW | | | | | | |
| Tritium content of water na | | | | | | | | |
| $\delta^{13}C$ of DIC | | na | | | | | | |
| ¹⁴ C content of DIC | | na | | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | | |
| $\delta^{18}O$ of nitrate | | na | | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | | |
| $\delta^{18}O$ of sulfate | | na | | | | | | |
| Vacuum Distilled? |) * | No | | | | | | |
| Remarks: | | | | | | | | |



| Lab #: Sample Name: | | o #: 40280 | IS-101168 | Co. Job#: | | | | |
|--|-----------------------------|--|---------------|----------------|------------|--|--|--|
| Company: API/Well: | | T183598-09Co. Lab#:SunStar Laboratories, Inc | | | | | | |
| Container: Field/Site Name: Location: Formation/Depth: Sampling Point: | 250ml Plastic Bo T183598 | 250ml Plastic Bottle T183598 | | | | | | |
| Date Sampled: | 12/04/2018 0:00 | Date Receive | d: 12/07/2018 | Date Reported: | 12/20/2018 | | | |
| δD of water | | -77.8 ‰ relativ | e to VSMOW | | | | | |
| $\delta^{18}O$ of water | | | | | | | | |
| Tritium content of water na | | | | | | | | |
| $\delta^{13}C$ of DIC | | na | | | | | | |
| ¹⁴ C content of DIC |) <u></u> | na | | | | | | |
| $\delta^{15}N$ of nitrate | | na | | | | | | |
| $\delta^{18}O$ of nitrate | | na | | | | | | |
| $\delta^{34}S$ of sulfate | | na | | | | | | |
| $\delta^{18}O$ of sulfate | | na | | | | | | |
| Vacuum Distilled? |) * | No | | | | | | |
| Remarks: | | | | | | | | |