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# 2023 SECOND SEMIANNUAL AND ANNUAL GROUNDWATER DETECTION MONITORING REPORT
# Genesis Solar Energy Project

Riverside County, California

COC S&W-6

January 10, 2024

Prepared By:

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# SIGNATURE PAGE

## 2023 SECOND SEMIANNUAL AND ANNUAL GROUNDWATER DETECTION MONITORING REPORT

## GENESIS SOLAR ENERGY PROJECT

## 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.

I further certify that this report has been reviewed by the appropriate authority at NextEra Energy Resources and is being submitted with their written consent.


Arlin W. Brewster

Professional Geologist 9207

January 10, 2024

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# 1.0 INTRODUCTION

Northstar Environmental Remediation (Northstar) has prepared this 2023 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 2023 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 that the average maximum temperature in the airport vicinity is approximately 88.6°F (31.4°C). Average rainfall is reported to be approximately 3.08 inches (78.2 mm). These data were received from National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information 2006-2020 Normals.

## 1.3 Hydrogeologic Setting

The GSEP lies within the Chuckwalla Valley Groundwater Basin (Chuckwalla Basin) which has a surface area of 940 $mi^2$ (2,435 $km^2$) 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 2023 extraction data, is approximately 126.0 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 87.20 feet bgs (300.20 feet amsl) in TW-1, located upgradient of the site, to 136.35 feet bgs (255.75 feet amsl) in Well 23a, located downgradient of the site. Perched water exists at the Chuckwalla State Prison but is unlikely to occur within the GSEP boundaries as there is no irrigation.

## 1.4 Monitoring Program Objectives

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 sump. The pond drainage sump slopes away from the centerline of the ponds to the north and south and is equipped with a set of three moisture detection probes in each side. Each pond is also equipped with a pump to return all accumulated 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 Eurofins Calscience Laboratories, Inc. (Eurofins) of Tustin, California. 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 copper, potassium, iron, magnesium, antimony, cadmium, chromium (all species), cobalt, lead, nickel, selenium, mercury, oil & grease, or heat transfer fluid in either pond; and,
- Compound concentrations were generally higher in the North Pond.

# 3.0 POND DRAINAGE SUMP SYSTEM

## 3.1 Pond Drainage Sump System Overview

A cross-sectional schematic of the pond drainage sump 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 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 part of the sump), Northstar notifies NextEra operations who then conduct further investigation.

## 3.3 Monitoring Results

No water was pumped from the North or South Pond during the reporting period and the totalizers currently read 605.55 and 7.48 gallons, respectively.

None of the moisture detection probes showed signs of water saturation during monitoring. Probes #1W, #2W, and #3E in the North Pond currently shown signs of increasing humidity. Probe #1E in the South Pond currently shows signs of increasing humidity. Condensate was also noted on the underside of the west caps for both the North and South Ponds.

# 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 collect samples from these wells using the low flow purging method in accordance with the most recent EPA guidance document (USEPA, 2017).

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 laboratory-grade non-phosphate detergent (Liquinox or equivalent) and potable water solution followed by a double rinse with demineralized water.

Field staff measure groundwater parameters with a water quality field instrument (YSI Pro, Horiba U-52, or equivalent). Staff calibrated the instrument 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 at 5-minute intervals 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) and the discharge volume exceeded the drawdown, tubing, and flow-through cell volume. 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 (Part II A.1.b.). **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 Eurofins Calscience Laboratories, Inc. (Eurofins) of Tustin, 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, 2024) 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 workday and is intended to screen out constituents in ambient air. The trip blank

bottle sets are prepared at the laboratory and are sealed throughout the groundwater sampling event. They are stored inside the sample coolers and are 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 104.52 (well DM-3) to 107.74 (well DM-2) feet bgs, and the calculated groundwater elevations range from 283.58 (well DM-2) to 284.08 (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 to southeast direction at a gradient of approximately 0.0005 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 (in feet per day)
**Kh** = aquifer horizontal hydraulic conductivity (in feet per day)
**I** = average hydraulic gradient (vertical change in groundwater elevation/corresponding horizontal distance in feet per lateral feet), 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 fine-grained 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 0.0005 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 0.030 to 0.060 feet laterally per day, or 10.95 to 21.90 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 9,760 milligrams per liter (mg/L), averaging 5,409 mg/L.
- **Sulfate as $SO_4$** detections have been consistent for all wells and have ranged from 1,600 to 4,350 mg/L, averaging 2,120 mg/L.
- **Nitrate as $NO_3$** detections have been consistent for all wells and have ranged from non-detect to 21.2 mg/L, averaging 7.70 mg/L.
- **Total Dissolved Solid** concentrations have been consistent for all wells and have ranged from 6,800 to 14,000 mg/L, averaging 10,604 mg/L.
- **pH** levels have been consistent for all wells and have ranged from 7.2 to 8.2 standard units, averaging 7.8 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 17,684 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 non-detect to 26 µg/L, averaging 11.4 µg/L.
- **Barium** detections have been inconsistent between all wells, averaging 34.1 µg/L in upgradient well DM-1, 62.6 µg/L in downgradient well DM-2, and 18.6 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 190 to 470 mg/L, averaging 252 mg/L.
- **Chromium (All Species)** 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 0.006 to 0.027 mg/L, averaging 0.011 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 0.68 to 55 µg/L, averaging 15.1 µg/L.
- **Zinc** detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 0.55 to 76 µg/L, averaging 24.4 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: There are no constituents of concern that meet the release detection criteria.
- 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 report (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 pH, which has a 15-minute hold time, and nitrate as $NO_3$, which has a 48-hour hold time).

No analytes were detected in the method blank sample.

Matrix spike/matrix spike duplicate (MS/MSD) and laboratory control sample (LCS) recoveries for each method and analytical batch were within the laboratory's established control limits for the final report, with the following exceptions:

- The spike recovery and/or relative percent difference (RPD) was outside acceptable limits for the MS and/or MSD, but the batch was accepted based on acceptable LCS recovery data. This may have affected the results for **arsenic and copper**.

- The spike recovery was outside acceptable limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptable criteria and the data was accepted because the chemist determined that there should be no impact to the final results. This may have affected the results for **fluoride, chloride, and sulfate as SO4.**

Duplicate sample control: For this event, a duplicate sample (named DUP) was collected from sample point PW-2. The sample was submitted to the laboratory without date or time qualifiers. For this event, all sample results for PW-2 and DUP agreed within 10% except for the following:

- Arsenic by EPA Method 200.8, which was reported at concentrations of 26 and 31 µg/L, respectively (16% difference).

## 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 would be more effectively 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 (or as needed) and analyzed by EPA Method 8015M for Therminol (characterized by the chemical markers 1,1'-oxybis-benzene and 1,1'-biphenyl) 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.

There were no releases of Therminol in the second half of 2023, and all land treatment unit bays are currently empty.

## 6.0 ANNUAL SUMMARY

In accordance with WDR R7-2013-0005, this section presents a summary of the monitoring activities conducted during the 2023 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 2023 calendar year represents the tenth year of post-construction normal facility operation. The laboratory analytical data from the 2023 calendar year is consistent with the historical background data collected prior to settlement pond construction and operation.

The non-statistical analysis of the constituents of concern identified one potential release during the first half of the 2023 calendar year, based upon a compound detection that was not detected in the upgradient well DM-1. Details of this detection is as follows:

1. Arsenic was detected above the PQL of 10 µg/L at a concentration of 16 µg/L. Arsenic has historically been detected at low concentrations in all detection monitoring wells onsite. The detected concentration of 16 µg/L matches the average background concentration for this well.

During the 2023 calendar year, the groundwater gradient ranged from 0.0004 to 0.0005 feet per linear foot to the east-southeast; groundwater elevations ranged from 283.50 feet amsl in well DM-2 to 284.08 feet amsl in well DM-1; and groundwater flow velocity ranged between 0.024 to 0.060 feet laterally per day, or 8.76 to 30.66 lateral feet per year.

Each of the settlement ponds is equipped with a moisture detection system consisting of six moisture probes installed in a drainage sump below the pond liners. Northstar monitors the probes quarterly at a minimum. If leaks are detected, the pond is drained (if necessary) and the lining inspected and repaired. No leaks were detected in the 2023 calendar year, but there are signs of increasing humidity on the west side of each pond. 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:

- The non-statistical analysis did not identify any potential releases.
- Available groundwater quality data is generally stable with minor trend fluctuations.
- 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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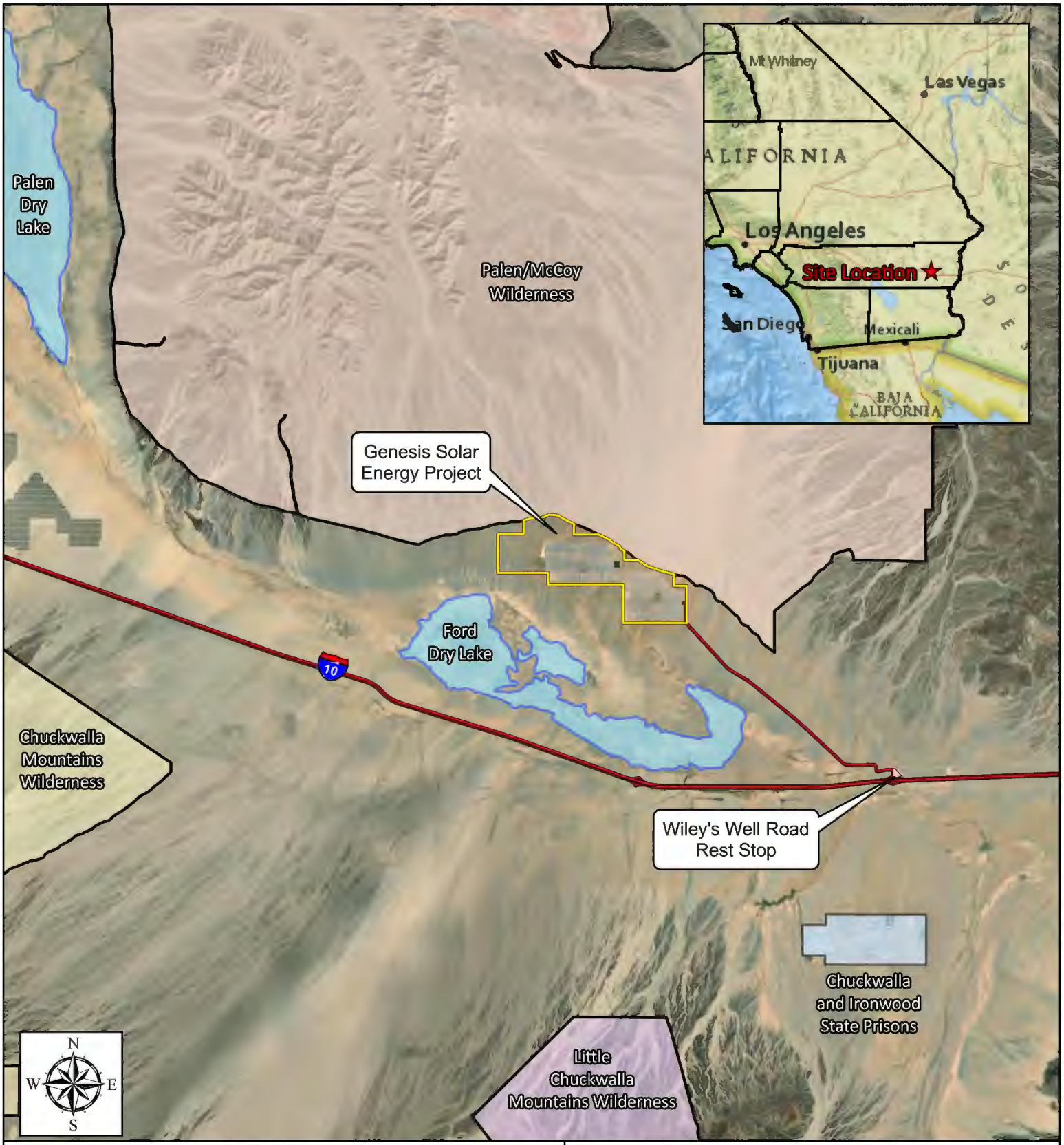
# FIGURES




## Legend

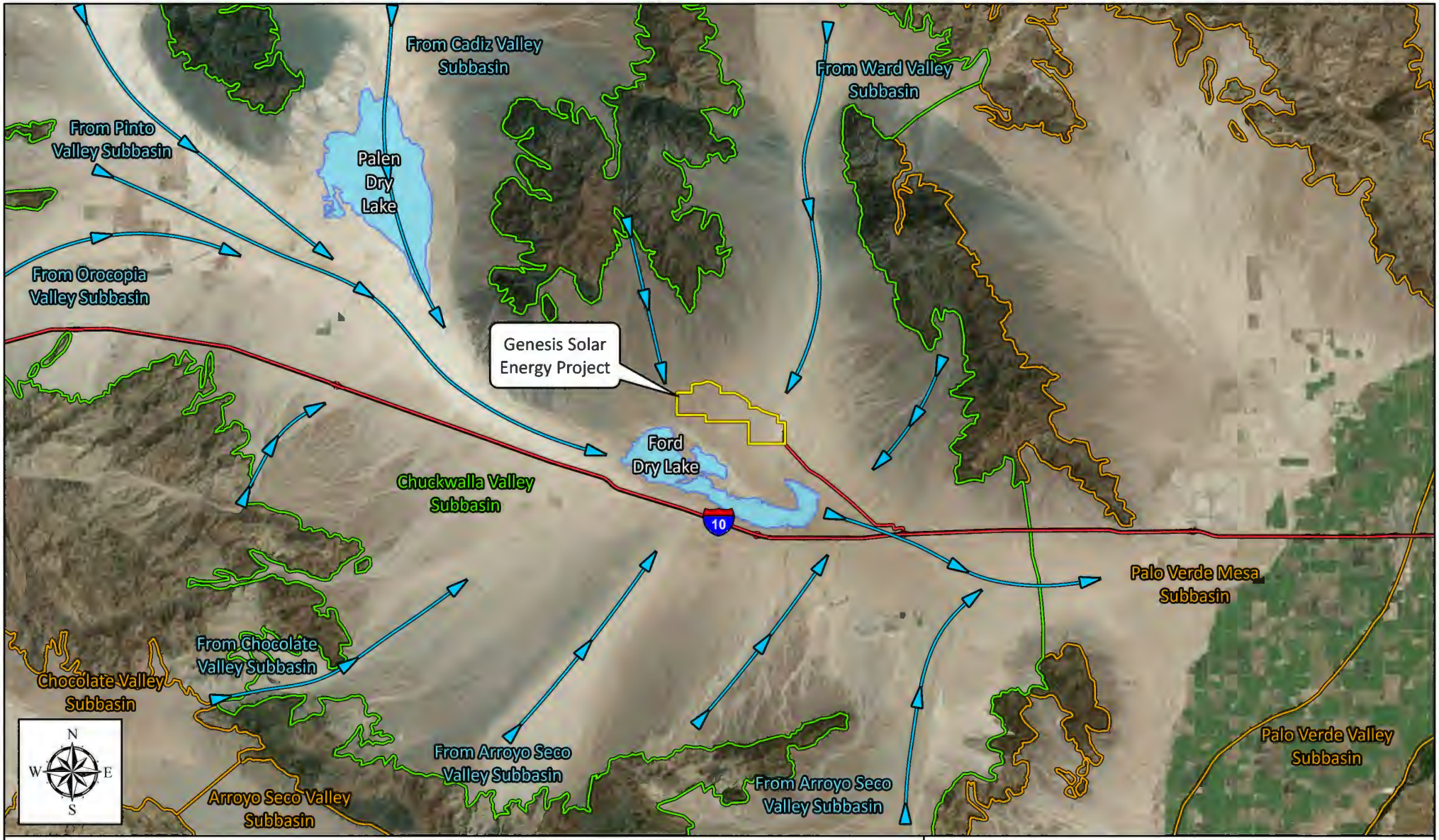
- GSEP Property Boundary
- Chuckwalla and Ironwood State Prisons
- Chuckwalla Mountains Wilderness Area
- Little Chuckwalla Mountains Wilderness Area
- Palen/McCoy Wilderness Area
- Dry Lakes
- Roads

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

**FIGURE 1**
**Site Vicinity Map**

| | | |
|---|---|---|
| NORTHSTAR | Scale: 1:200,000 | Draw Date: 1/5/24 |
| | Drawn By: AWB | Checked By: AWB |

File Name: Figure 1 - Vicinity Map




## Legend

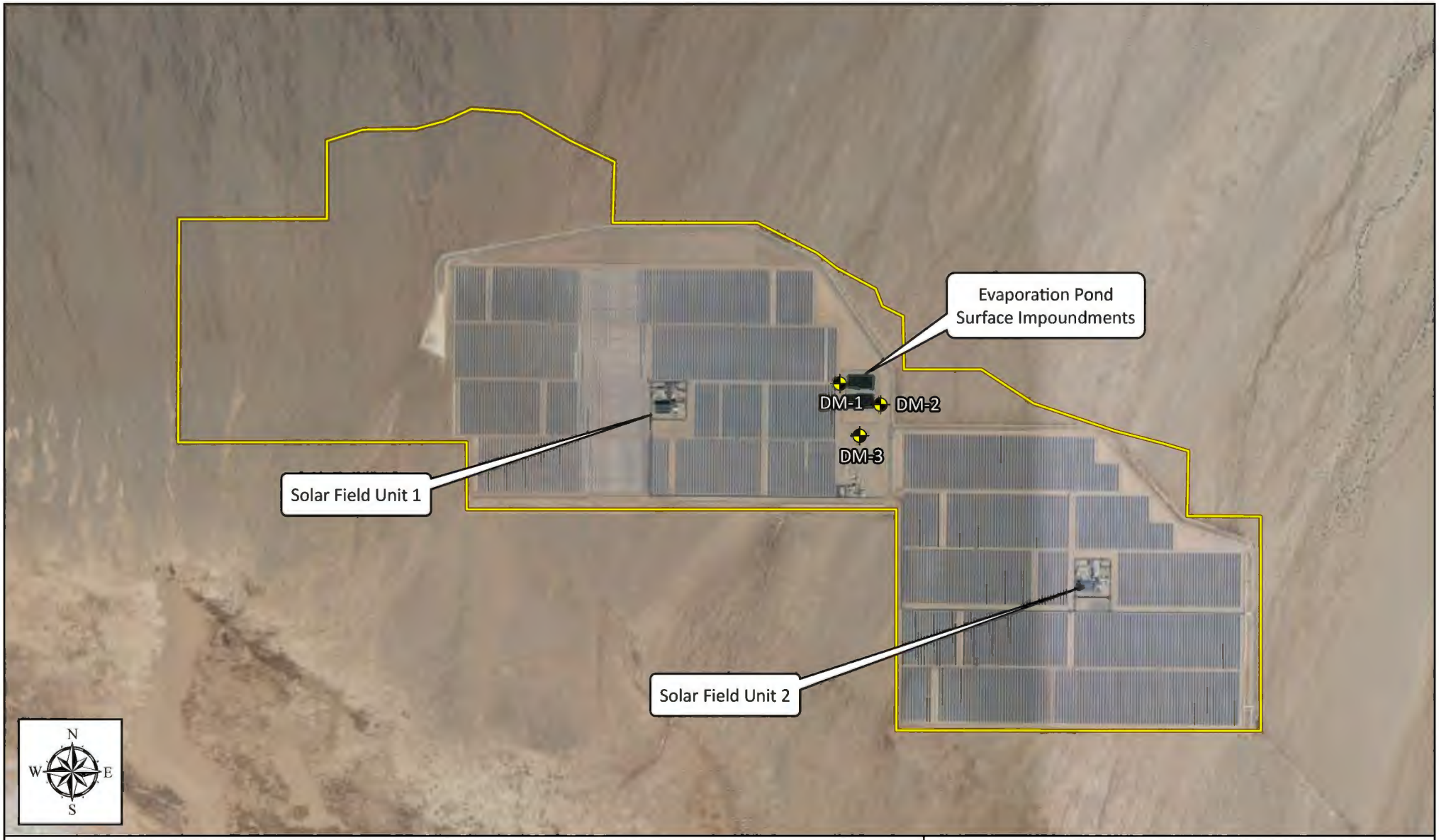
- GSEP Property Boundary
- Chuckwalla Valley Groundwater Subbasin
- Adjacent Groundwater Subbasins
- Dry Lakes
- Water Flow Direction

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

**FIGURE 2**
**Hydrogeologic Setting**

| | | |
|---|---|---|
| NORTHSTAR | Scale: 1:360,000 | Draw Date: 1/5/24 |
| | Drawn By: AWB | Checked By: AWB |

File Name: Figure 2 - Hydrogeology




## Legend

- GSEP Property Boundary
- Detection Monitoring Wells

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

**FIGURE 3**
**Monitoring Area Showing**
**Detection Monitoring Wells**

| | | |
|---|---|---|
| NORTHSTAR | Scale: 1:36,000 | Draw Date: 1/5/24 |
| | Drawn By: AWB | Checked By: AWB |

File Name: Figure 3 - Monitoring Area


## Legend

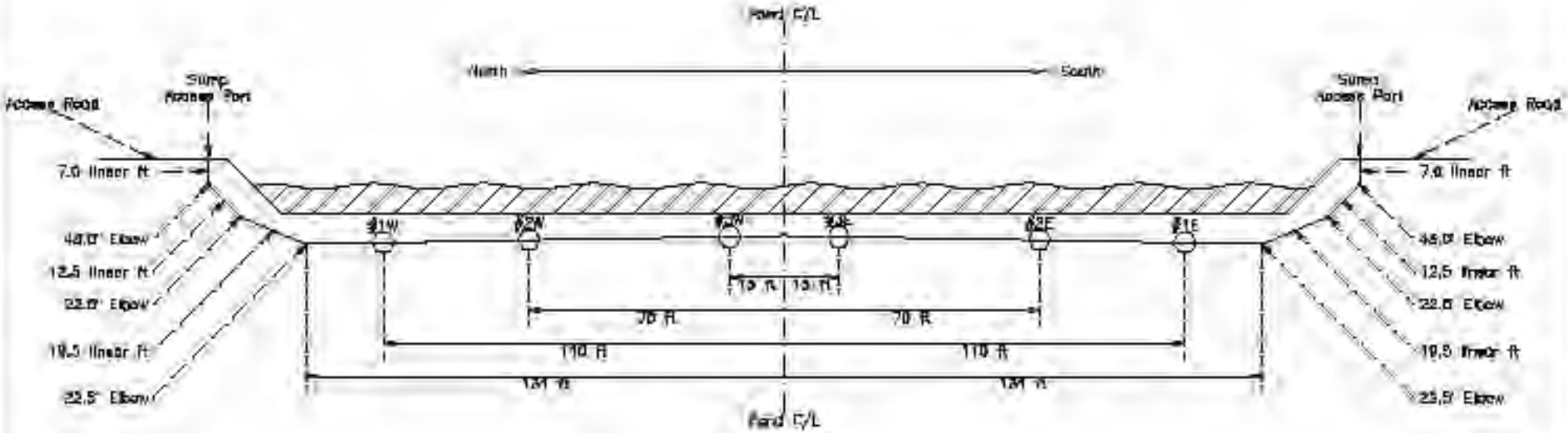
- Detection Monitoring Wells
- Groundwater Elevation Contour Lines *(feet above mean sea level)*
- Groundwater Gradient Direction

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

**FIGURE 4**
**Groundwater Elevation Contour Map**
**December 2023**

| | | |
|---|---|---|
| NORTHSTAR | Scale: 1" = 180' | Draw Date: 1/5/24 |
| | Drawn By: AWB | Checked By: AWB |

File Name: Figure 4 - GW Contours




Note: All dimensions are approximate and are based upon field observations.

Notes:

1. Probes installed at #1W through #1E are Irrometer/Watermark Model 200SS Moisture Probes.
2. Sump access port is 4-inch diameter HDPE pipe.
3. Moisture probes are tied to 1/4-inch diameter braided steel pull-through cable (total length of approximately 340 feet).
4. Probes installed in 4-inch diameter perforated pipe with approximate 1 degree slope away from C/L.
5. Moisture probes furnished with two leads for direct read by Watermark Model 30 KTCD-NL meter.

0 15 30
Scale: 1 inch = 30 Feet

| | |
|---|---|
| Project Name: Genesis Solar Energy Project | Project Number: 196-004-05 |
| Project Address: 11995 Wiley's Well Rd, Blythe, CA | Drawn/Checked By: AWB |
| Consulting Firm: Northstar Environmental Remediation | Date Drawn: 01/13/2023 |
| Figure Description: Pond Drainage Sump System Detail | Figure Number: Figure 5 |

# TABLES

**TABLE 1**

**DETECTION MONITORING WELL DETAILS**

**Genesis Solar Energy Project, Riverside County, California**

| Well ID | Other Name | Owner | Installation Date | Use/Status | Well Casing Diameter (inches) | Approximate Ground Surface Elevation (feet amsl) | Top Of Casing Elevation (feet amsl) | Well Depth (feet bgs) | Screened Interval (feet bgs) | Geologic Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| **WELLS INCLUDED IN THE GROUNDWATER MONITORING PROGRAM** | | | | | | | | | | |
| 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) | Depth to Water (feet below TOC) | Groundwater Elevation (feet amsl) | Difference from Baseline (feet) | Comments / Use |
|---|---|---|---|---|---|---|---|
| **WELLS INCLUDED IN THE GROUNDWATER DETECTION MONITORING PROGRAM** | | | | | | | |
| DM-1 | 2/27/2012 | WorleyParsons | 391.49 | 106.63 | 284.86 | N/A | Monitoring |
| DM-1 | 5/24/2012 | WorleyParsons | 391.49 | 107.11 | 284.38 | 0.00 | Baseline |
| DM-1 | 7/26/2012 | WorleyParsons | 391.49 | 107.10 | 284.39 | 0.01 | Monitoring |
| DM-1 | 11/14/2012 | WorleyParsons | 391.49 | 108.15 | 283.34 | -1.04 | Monitoring |
| DM-1 | 3/29/2013 | WorleyParsons | 391.49 | 107.34 | 284.15 | -0.23 | Monitoring |
| DM-1 | 6/19/2013 | WorleyParsons | 391.49 | 107.19 | 284.30 | -0.08 | Monitoring |
| DM-1 | 8/13/2013 | WorleyParsons | 391.49 | 107.07 | 284.42 | 0.04 | Monitoring |
| DM-1 | 11/12/2013 | WorleyParsons | 391.49 | 107.22 | 284.27 | -0.11 | Monitoring |
| DM-1 | 2/26/2014 | WorleyParsons | 391.49 | 107.13 | 284.36 | -0.02 | Monitoring |
| DM-1 | 5/22/2014 | Northstar | 391.49 | 107.05 | 284.44 | 0.06 | Monitoring |
| DM-1 | 8/8/2014 | Northstar | 391.49 | 107.11 | 284.38 | 0.00 | Monitoring |
| DM-1 | 12/4/2014 | Northstar | 391.49 | 107.03 | 284.46 | 0.08 | Monitoring |
| DM-1 | 3/26/2015 | Northstar | 391.49 | 107.22 | 284.27 | -0.11 | Monitoring |
| DM-1 | 6/11/2015 | Northstar | 391.49 | 107.01 | 284.48 | 0.10 | Monitoring |
| DM-1 | 12/10/2015 | Northstar | 391.49 | 106.98 | 284.51 | 0.13 | Monitoring |
| DM-1 | 6/2/2016 | Northstar | 391.49 | 107.18 | 284.31 | -0.07 | Monitoring |
| DM-1 | 11/30/2016 | Northstar | 391.49 | 107.27 | 284.22 | -0.16 | Monitoring |
| DM-1 | 6/1/2017 | Northstar | 391.49 | 107.12 | 284.37 | -0.01 | Monitoring |
| DM-1 | 12/5/2017 | Northstar | 391.49 | 107.38 | 284.11 | -0.27 | Monitoring |
| DM-1 | 5/30/2018 | Northstar | 391.49 | 107.10 | 284.39 | 0.01 | Monitoring |
| DM-1 | 12/4/2018 | Northstar | 391.49 | 107.45 | 284.04 | -0.34 | Monitoring |
| DM-1 | 6/14/2019 | Northstar | 391.49 | 107.18 | 284.31 | -0.07 | Monitoring |
| DM-1 | 12/5/2019 | Northstar | 391.49 | 107.42 | 284.07 | -0.31 | Monitoring |
| DM-1 | 6/4/2020 | Northstar | 391.49 | 107.10 | 284.39 | 0.01 | Monitoring |
| DM-1 | 12/3/2020 | Northstar | 391.49 | 107.70 | 283.79 | -0.59 | Monitoring |
| DM-1 | 6/3/2021 | Northstar | 391.49 | 107.06 | 284.43 | 0.05 | Monitoring |
| DM-1 | 12/2/2021 | Northstar | 391.49 | 107.35 | 284.14 | -0.24 | Monitoring |
| DM-1 | 6/2/2022 | Northstar | 391.49 | 107.25 | 284.24 | -0.14 | Monitoring |
| DM-1 | 12/1/2022 | Northstar | 391.49 | 107.40 | 284.09 | -0.29 | Monitoring |
| DM-1 | 6/8/2023 | Northstar | 391.49 | 107.49 | 284.00 | -0.38 | Monitoring |
| DM-1 | 12/7/2023 | Northstar | 391.49 | 107.41 | 284.08 | -0.30 | Monitoring |
| | | | | | | | |
| DM-2 | 2/27/2012 | WorleyParsons | 391.32 | 106.92 | 284.40 | N/A | Monitoring |
| DM-2 | 5/24/2012 | WorleyParsons | 391.32 | 107.37 | 283.95 | 0.00 | Baseline |
| DM-2 | 7/26/2012 | WorleyParsons | 391.32 | 107.33 | 283.99 | 0.04 | Monitoring |
| DM-2 | 11/14/2012 | WorleyParsons | 391.32 | 108.33 | 282.99 | -0.96 | Monitoring |
| DM-2 | 3/29/2013 | WorleyParsons | 391.32 | 107.59 | 283.73 | -0.22 | Monitoring |
| DM-2 | 6/19/2013 | WorleyParsons | 391.32 | 107.41 | 283.91 | -0.04 | Monitoring |
| DM-2 | 8/13/2013 | WorleyParsons | 391.32 | 107.31 | 284.01 | 0.06 | Monitoring |
| DM-2 | 11/12/2013 | WorleyParsons | 391.32 | 107.63 | 283.69 | -0.26 | Monitoring |
| DM-2 | 2/26/2014 | WorleyParsons | 391.32 | 107.40 | 283.92 | -0.03 | Monitoring |
| DM-2 | 5/22/2014 | Northstar | 391.32 | 107.28 | 284.04 | 0.09 | Monitoring |
| DM-2 | 8/8/2014 | Northstar | 391.32 | 107.28 | 284.04 | 0.09 | Monitoring |
| DM-2 | 12/4/2014 | Northstar | 391.32 | 107.43 | 283.89 | -0.06 | Monitoring |
| DM-2 | 3/26/2015 | Northstar | 391.32 | 107.61 | 283.71 | -0.24 | Monitoring |
| DM-2 | 6/11/2015 | Northstar | 391.32 | 107.40 | 283.92 | -0.03 | Monitoring |
| DM-2 | 12/10/2015 | Northstar | 391.32 | 107.30 | 284.02 | 0.07 | Monitoring |
| DM-2 | 6/2/2016 | Northstar | 391.32 | 107.38 | 283.94 | -0.01 | Monitoring |
| DM-2 | 11/30/2016 | Northstar | 391.32 | 107.52 | 283.80 | -0.15 | Monitoring |
| DM-2 | 6/1/2017 | Northstar | 391.32 | 107.47 | 283.85 | -0.10 | Monitoring |
| DM-2 | 12/5/2017 | Northstar | 391.32 | 107.78 | 283.54 | -0.41 | Monitoring |
| DM-2 | 5/30/2018 | Northstar | 391.32 | 107.45 | 283.87 | -0.08 | Monitoring |
| DM-2 | 12/4/2018 | Northstar | 391.32 | 107.80 | 283.52 | -0.43 | Monitoring |
| DM-2 | 6/14/2019 | Northstar | 391.32 | 107.55 | 283.77 | -0.18 | Monitoring |
| DM-2 | 12/5/2019 | Northstar | 391.32 | 107.72 | 283.60 | -0.35 | Monitoring |
| DM-2 | 6/4/2020 | Northstar | 391.32 | 107.45 | 283.87 | -0.08 | Monitoring |
| DM-2 | 12/3/2020 | Northstar | 391.32 | 108.03 | 283.29 | -0.66 | Monitoring |
| DM-2 | 6/3/2021 | Northstar | 391.32 | 107.64 | 283.68 | -0.27 | Monitoring |
| DM-2 | 12/2/2021 | Northstar | 391.32 | 107.71 | 283.61 | -0.34 | Monitoring |
| DM-2 | 6/2/2022 | Northstar | 391.32 | 107.65 | 283.67 | -0.28 | Monitoring |
| DM-2 | 12/1/2022 | Northstar | 391.32 | 107.72 | 283.60 | -0.35 | Monitoring |
| DM-2 | 6/8/2023 | Northstar | 391.32 | 107.82 | 283.50 | -0.45 | Monitoring |
| DM-2 | 12/7/2023 | Northstar | 391.32 | 107.74 | 283.58 | -0.37 | Monitoring |
| | | | | | | | |
| DM-3 | 2/27/2012 | WorleyParsons | 388.34 | 103.85 | 284.49 | N/A | Monitoring |
| DM-3 | 5/24/2012 | WorleyParsons | 388.34 | 104.35 | 283.99 | 0.00 | Baseline |
| DM-3 | 7/26/2012 | WorleyParsons | 388.34 | 104.28 | 284.06 | 0.07 | Monitoring |
| DM-3 | 11/14/2012 | WorleyParsons | 388.34 | 105.25 | 283.09 | -0.90 | Monitoring |
| DM-3 | 3/29/2013 | WorleyParsons | 388.34 | 104.35 | 283.99 | 0.00 | Monitoring |
| DM-3 | 6/19/2013 | WorleyParsons | 388.34 | 104.20 | 284.14 | 0.15 | Monitoring |
| DM-3 | 8/13/2013 | WorleyParsons | 388.34 | 104.31 | 284.03 | 0.04 | Monitoring |

**TABLE 2**

**GROUNDWATER LEVEL MEASUREMENTS**

**Genesis Solar Energy Project, Riverside County, California**

| Well ID | Date | Source | Top of Casing Elevation (feet amsl) | Depth to Water (feet below TOC) | Groundwater Elevation (feet amsl) | Difference from Baseline (feet) | Comments / Use |
|---|---|---|---|---|---|---|---|
| DM-3 | 11/12/2013 | WorleyParsons | 388.34 | 104.43 | 283.91 | -0.08 | Monitoring |
| DM-3 | 2/26/2014 | WorleyParsons | 388.34 | 104.31 | 284.03 | 0.04 | Monitoring |
| DM-3 | 5/22/2014 | Northstar | 388.34 | 104.20 | 284.14 | 0.15 | Monitoring |
| DM-3 | 8/8/2014 | Northstar | 388.34 | 104.21 | 284.13 | 0.14 | Monitoring |
| DM-3 | 12/4/2014 | Northstar | 388.34 | 104.39 | 283.95 | -0.04 | Monitoring |
| DM-3 | 3/26/2015 | Northstar | 388.34 | 104.59 | 283.75 | -0.24 | Monitoring |
| DM-3 | 6/12/2015 | Northstar | 388.34 | 104.18 | 284.16 | 0.17 | Monitoring |
| DM-3 | 12/11/2015 | Northstar | 388.34 | 103.96 | 284.38 | 0.39 | Monitoring |
| DM-3 | 6/3/2016 | Northstar | 388.34 | 104.38 | 283.96 | -0.03 | Monitoring |
| DM-3 | 12/2/2016 | Northstar | 388.34 | 104.28 | 284.06 | 0.07 | Monitoring |
| DM-3 | 6/1/2017 | Northstar | 388.34 | 104.25 | 284.09 | 0.10 | Monitoring |
| DM-3 | 12/5/2017 | Northstar | 388.34 | 104.62 | 283.72 | -0.27 | Monitoring |
| DM-3 | 5/30/2018 | Northstar | 388.34 | 104.27 | 284.07 | 0.08 | Monitoring |
| DM-3 | 12/4/2018 | Northstar | 388.34 | 104.68 | 283.66 | -0.33 | Monitoring |
| DM-3 | 6/14/2019 | Northstar | 388.34 | 104.38 | 283.96 | -0.03 | Monitoring |
| DM-3 | 12/6/2019 | Northstar | 388.34 | 104.66 | 283.68 | -0.31 | Monitoring |
| DM-3 | 6/5/2020 | Northstar | 388.34 | 104.32 | 284.02 | 0.03 | Monitoring |
| DM-3 | 12/3/2020 | Northstar | 388.34 | 104.80 | 283.54 | -0.45 | Monitoring |
| DM-3 | 6/3/2021 | Northstar | 388.34 | 104.29 | 284.05 | 0.06 | Monitoring |
| DM-3 | 12/2/2021 | Northstar | 388.34 | 104.50 | 283.84 | -0.15 | Monitoring |
| DM-3 | 6/2/2022 | Northstar | 388.34 | 104.50 | 283.84 | -0.15 | Monitoring |
| DM-3 | 12/1/2022 | Northstar | 388.34 | 104.50 | 283.84 | -0.15 | Monitoring |
| DM-3 | 6/8/2023 | Northstar | 388.34 | 104.68 | 283.66 | -0.33 | Monitoring |
| DM-3 | 12/7/2023 | Northstar | 388.34 | 104.52 | 283.82 | -0.17 | 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**

| Well ID | Date | Groundwater Purging | | | Field Parameters | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Rate of Groundwater Discharge (mL/min) | Purging Method | Total Volume Purged (mL) | Temperature (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | ORP (mV) | D.O. (mg/L) |
| DM-1 | 12/7/2023 | 180 | Bladder Pump | 3,600 | 25.0 | 7.47 | 18.0 | 34.8 | +135 | 3.62 |
| DM-2 | 12/7/2023 | 138 | Bladder Pump | 2,760 | 23.2 | 7.36 | 18.3 | 38.3 | +143 | 2.00 |
| DM-3 | 12/7/2023 | 143 | Bladder Pump | 2,860 | 26.5 | 7.34 | 17.5 | 4.8 | +131 | 3.44 |

**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

$^{0}$C = degree Celsius

mV = millivolts

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

| Well ID | Date Sampled | Sampling Method | Chloride (mg/L) | Sulfate (SO4) (mg/L) | Nitrate (NO3)-N (mg/L) | Calcium (mg/L) | Copper (mg/L) | Sodium (mg/L) | Potassium (mg/L) | Iron (mg/L) | Magnesium (mg/L) | Antimony (ug/L) | Arsenic (ug/L) | Barium (ug/L) | Cadmium (ug/L) | Chromium (All Species) (ug/L) | Cobalt (ug/L) | Lead (ug/L) | Manganese (ug/L) | Nickel (ug/L) | Selenium (ug/L) | Zinc (ug/L) | Mercury (ug/L) | Total Dissolved Solids (mg/L) | Specific Conductance (us/cm) | pH (standard Units) | Oil & Grease / HEM (mg/L) | HTF† (mg/L) | Deuterium (‰ relative to VSMOW) | Oxygen-18 (‰ relative to VSMOW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | EPA Method 300.0 | | | EPA Method 200.7 | | | | | | EPA Method 200.8 | | | | | | | | | | | SM7470A | SM2540C | SM2510B | SM4500H | SM1664A | 8015B | Isotope Geochemistry | |
| 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[J] | 4.6[J] | 3.0[J] | <100 | <0.20 | 11,000 | 19,000 | 7.81 | <5.0 | - | -68.50 | -8.51 |
| DM-1 | 5/22/2014 [1] | 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[J] | 3.1[J] | <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[J] | <10 | 25[J] | 0.15[J] | 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[J] | 230 | <0.10 | 3,600 | 21 | <0.40 | 52 | <10 | 3.8[J] | 36 | <5.0 | 2.9[J] | <5.0 | <5.0 | 3.6[J] | 6.3[J] | 3.6[J] | <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[J] | 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[J] | <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[J] | <1.0 | <1.0 | 0.99[J] | 1.1[J] | 3.3 | 2.5[J] | <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[J] | 31 | <10 | <20 | <10 | <10 | <10 | <10 | 13[J] | <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[J] | 250 | <0.10 | 4,100 | 21 | <1.0 | 62 | <10 | 4.8[J] | 28 | <5.0 | 5.9[J] | <5.0 | <5.0 | <5.0 | 7.6[J] | 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 | 5/30/2018 | Low Flow | 5,190 | 2,030 | 14.7 | 270 | 0.096[J] | 5,200 | 63 | 0.78[J] | 64 | <0.50 | 5.0 | 30 | <0.50 | <5.0 | <0.50 | <5.0 | - | <5.0 | 5.9 | 9.5 | <0.50 | 11,000 | 17,300 | 7.9 | <5.0 | <0.10 | -71.10 | -8.57 |
| DM-1 | 12/4/2018 | Low Flow | 8,180 | 3,280 | 9.00 | 260 | <0.5 | 4,800 | 33 | <20 | 68 | <10 | 10 | 31 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <0.50 | 11,000 | 17,400 | 7.7 | <5.0 | <0.10 | -70.10 | -8.55 |
| DM-1 | 6/14/2019 | Low Flow | 5,040 | 1,930 | 8.76 | 280 | 0.006 | 4,800 | 65 | 0.35 | 63 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | - | <10 | <10 | - | <0.50 | 9,600 | 17,700 | 7.2 | <5.0 | <0.10 | -70.40 | -8.58 |
| DM-1 | 12/5/2019 | Low Flow | 7,460 | 2,150[J] | 16.3 | 250 | 0.004[J] | 4,200 | 32 | <0.20 | 67 | <5.0 | 0.80[J] | 32 | <5.0 | 2.1[J] | <5.0 | <5.0 | - | <5.0 | 0.80[J] | 47 | <0.50 | 11,000 | 17,600 | 7.7 | <5.0 | <0.10 | -70.10 | -8.55 |
| DM-1 | 6/4/2020 | Low Flow | 5,500 | 2,090 | 8.04 | 220 | 0.007 | 4,300 | 24 | <0.20 | 53 | <5.0 | <5.0 | 33 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | 13 | 16 | <0.50 | 12,000 | 17,800 | 7.3 | <5.0 | <0.096 | -70.30 | -8.57 |
| DM-1 | 12/3/2020 | Low Flow | 5,530 | 2,150 | 8.50 | 230 | <0.005 | 9,500 | 35 | <0.20 | 49 | <5.0 | <5.0 | 35 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | 0.87 | <0.50 | <0.50 | 12,000 | 18,000 | 7.9 | <5.0 | <0.11 | -70.20 | -8.57 |
| DM-1 | 6/3/2021 | Low Flow | 5,520 | 2,050 | 8.28 | 220 | <0.50 | 3,800 | <50 | <20 | 57 | <10 | <10 | 31 | <10 | <10 | <10 | <10 | - | <10 | 17 | <10 | <0.50 | 8,100 | 17,800 | 7.7 | <5.0 | <0.095 | -70.80 | -8.62 |
| DM-1 | 12/2/2021 | Low Flow | 5,360 | 1,930 | 8.59 | 230 | <0.50 | 4,200 | <50 | <20 | 58 | <10 | <10 | 29 | <10 | <10 | <10 | <10 | - | <10 | 16 | <10 | <1.0 | 14,000 | 17,800 | 7.8 | <5.0 | <0.099 | -70.10 | -8.58 |
| DM-1 | 6/2/2022 | Low Flow | 5,530 | 2,070 | 8.70 | 240 | <2.5 | 4,500 | <250 | <100 | 69 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | - | <50 | 52 | <50 | <1.0 | 9,300 | 17,800 | 7.8 | <5.0 | <0.095 | -70.20 | -8.62 |
| DM-1 | 12/1/2022 | Low Flow | 5,130 | 1,960 | 7.36 | 230 | <0.005 | 4,500 | 58 | <0.20 | 61 | <25 | <25 | 26 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 11,000 | 17,900 | 7.8 | <5.0 | <0.096 | -70.20 | -8.62 |
| DM-1 | 6/8/2023 | Low Flow | 5,300 | 2,000 | 7.58 | 240 | <0.50 | 4,100 | <50 | <20 | 65 | <10 | <10 | 29 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <1.0 | 10,000 | 18,000 | 7.8 | <5.0 | <0.097 | -69.30 | -8.53 |
| DM-1 | 12/7/2023 | Low Flow | 5,290 | 1,830 | 7.18 | 230 | <0.50 | 4,500 | <50 | <20 | 65 | <25 | <25 | 29 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 10,000 | 18,400 | 8.2 | <5.0 | <0.100 | -69.80 | -8.59 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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[J] | 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[J] | <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[J] | 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 |
| DM-2 | 6/14/2019 | Low Flow | 5,240 | 2,080 | 11.2 | 300 | <0.005 | 5,100 | 68 | <0.20 | 67 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | - | <10 | <10 | - | <0.50 | 9,300 | 18,000 | 7.3 | <5.0 | <0.10 | -70.10 | -8.50 |
| DM-2 | 12/5/2019 | Low Flow | 7,680 | 2,330[J] | 21.2 | 310 | 0.007 | 4,400 | 30 | <0.20 | 65 | <5.0 | <5.0 | 50 | <5.0 | 2.9[J] | <5.0 | <5.0 | - | <5.0 | 3.2[J] | 76 | <0.50 | 10,000 | 17,000 | 7.6 | <5.0 | <0.10 | -70.00 | -8.48 |
| DM-2 | 6/4/2020 | Low Flow | 5,580 | 2,240 | 10.4 | 280 | 0.007 | 4,100 | 41 | <0.20 | 55 | <5.0 | <5.0 | 46 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | 9.8 | 24 | <0.50 | 11,000 | 18,100 | 7.4 | <5.0 | <0.096 | -69.90 | -8.47 |
| DM-2 | 12/3/2020 | Low Flow | 5,730 | 2,340 | 9.46 | 250 | <0.005 | 11,000 | 34 | <0.20 | 51 | <5.0 | <5.0 | 49 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | 0.94 | <0.50 | <0.50 | 10,000 | 18,000 | 7.8 | <5.0 | <0.11 | -70.10 | -8.50 |
| DM-2 | 6/3/2021 | Low Flow | 5,610 | 2,210 | 7.85 | 230 | <0.50 | 3,800 | <50 | <20 | 58 | <10 | <10 | 45 | <10 | <10 | <10 | <10 | - | <10 | 16 | <10 | <0.50 | 9,000 | 18,200 | 7.6 | <5.0 | <0.092 | -69.90 | -8.50 |
| DM-2 | 12/2/2021 | Low Flow | 5,470 | 2,100 | 10.0 | 270 | <0.50 | 4,500 | <50 | <20 | 63 | <10 | <10 | 44 | <10 | <10 | <10 | <10 | - | <10 | 16 | <10 | <1.0 | 13,000 | 18,200 | 7.8 | <5.0 | <0.095 | -69.50 | -8.47 |
| DM-2 | 6/2/2022 | Low Flow | 5,860 | 2,160 | 10.9 | 240 | <2.5 | 4,200 | <250 | <100 | 67 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | - | <50 | 53 | <50 | <1.0 | 9,300 | 18,200 | 7.7 | <5.0 | <0.093 | -69.60 | -8.51 |
| DM-2 | 12/1/2022 | Low Flow | 5,450 | 2,180 | 9.45 | 250 | <0.005 | 4,700 | 57 | <0.20 | 65 | <25 | <25 | 37 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 10,000 | 18,300 | 7.8 | <5.0 | <0.098 | -69.50 | -8.49 |
| DM-2 | 6/8/2023 | Low Flow | 5,470 | 2,190 | 9.73 | 300 | <0.50 | 4,800 | <50 | <20 | 85 | <10 | <10 | 37 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <1.0 | 6,800 | 18,300 | 7.6 | <5.0 | <0.100 | -70.00 | -8.51 |
| DM-2 | 12/7/2023 | Low Flow | 5,390 | 1,930 | 6.21 | 240 | <0.50 | 4,300 | <50 | <20 | 66 | <25 | <25 | 40 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 11,000 | 18,900 | 7.9 | <5.0 | <0.100 | -69.60 | -8.49 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 |
| DM-3 | 10/23/2012 | Low Flow | 5,100 | 2,100 | <2.2 | 210 | <0.010 | 3,000 | 20.0 | <0.040 | 52 | - | - | - | - | - | - | - | <1.0 | - | - | - | - | 11,000 | 18,000 | 7.83 | - | - | -72.6 | -8.7 |
| DM-3 | 5/22/2014 | Low Flow | 5,400 | 2,100 | - | 230 | <0.010 | 3,600 | 21 | <0.040 | 51 | <10 | 13 | 18 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 10 | <10 | <100 | <0.20 | 11,000 | 19,000 | 7.66 | <4.9 | - | -68.86 | -8.52 |
| DM-3 | 12/5/2014 | Low Flow | 4,900 | 1,800 | 1.8[J] | 230 | <0.050 | 3,600 | 20 | <0.20 | 56 | <10 | 16 | 18 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 9.6[J] | <10 | <100 | <0.20 | 11,000 | 18,000 | 7.82 | <4.7 | <0.099 | N/A[2] | N/A[2] |
| DM-3 | 6/12/2015 | Low Flow | 4,400 | 1,900 | <5.5 | 220 | <0.10 | 3,600 | 18 | <0.40 | 50 | <10 | 14 | 17 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 4.5[J] | <10 | <100 | <0.20 | 9,800 | 18,000 | 7.75 | <4.9 | <0.10 | -69.6 | -8.90 |
| DM-3 | 12/11/2015 | Low Flow | 5,100 | 2,200 | <5.5 | 250 | 0.0057[J] | 3,500 | 19 | <0.040 | 51 | <10 | 17 | 21 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <10 | 3.1[J] | <100 | <0.20 | 11,000 | 18,000 | 7.79 | <5.0 | <0.094 | -70.6 | -8.73 |
| DM-3 | 6/3/2016 | Low Flow | 4,700 | 1,900 | 7.1 | 220 | <0.10 | 3,700 | 17 | <0.40 | 53 | <2.0 | 14 | 16 | <1.0 | 0.66[J] | <1.0 | <1.0 | 0.64[J] | 0.88[J] | 1.0[J] | 5.1[J] | <0.20 | 11,000 | 20,000 | 7.86 | <4.7 | <0.093 | -69.29 | -8.75 |
| DM-3 | 12/2/2016 | Low Flow | 4,900 | 2,100 | <5.5 | 240 | 0.0052[J] | 4,100 | 23 | <0.040 | 56 | <10 | 16 | 18 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <10 | 5.6[J] | <100 | <0.20 | 11,000 | 17,000 | 7.8 | <4.8 | <0.097 | -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 | <0.095 | -70.80 | -8.71 |
| DM-3 | 12/5/2017 | Low Flow | 4,880 | 2,020 | 2.77 | 230 | 0.027 | 1,200 | 31 | 0.073[J] | 59 | <2.5 | 15 | 15 | <2.5 | <2.5 | <2.5 | <2.5 | - | <2.5 | <2.5 | 5.6 | <0.50 | 13,000 | 17,000 | 7.8 | <5.0 | <0.10 | -69.57 | -8.87 |
| DM-3 | 5/30/2018 | Low Flow | 6,350 | 2,600 | 10.7 | 260 | 0.11[J] | 4,100 | 61 | <10 | 61 | <0.50 | 14 | 15 | <0.50 | <5.0 | <0.50 | <0.50 | - | <0.50 | <5.0 | <5.0 | <0.50 | 12,000 | 17,100 | 7.9 | <5.0 | <0.11 | -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 | <0.10 | -70.60 | -8.67 |
| DM-3 | 6/14/2019 | Low Flow | 4,880 | 1,960 | 2.87 | 270 | 0.009 | 4,900 | 60 | <0.20 | 59 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | - | <10 | <10 | - | <0.50 | 9,300 | 16,800 | 7.5 | <5.0 | <0.10 | -70.80 | -8.69 |
| DM-3 | 12/6/2019 | Low Flow | 9,760 | 4,350 | 3.52 | 240 | 0.006 | 4,100 | 31 | <0.20 | 58 | <5.0 | 11 | 18 | <5.0 | 0.90[J] | <5.0 | <5.0 | - | <5.0 | 0.40[J] | 51 | <0.50 | 11,000 | 17,800 | 7.7 | <5.0 | <0.10 | -70.50 | -8.64 |
| DM-3 | 6/5/2020 | Low Flow | 5,250 | 2,080 | 2.44 | 230 | 0.007 | 4,000 | 35 | <0.20 | 48 | <5.0 | 16 | 17 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | 6.4 | 13 | <0.50 | 11,000 | 17,400 | 7.5 | <5.0 | <0.097 | -70.70 | -8.65 |
| DM-3 | 12/3/2020 | Low Flow | 5,420 | 2,300 | 2.47 | 220 | <0.005 | 9,100 | 29 | <0.20 | 45 | <5.0 | <5.0 | 20 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | 0.68 | 0.55 | <0.50 | 10,000 | 17,000 | 7.9 | <5.0 | <0.11 | -70.90 | -8.71 |
| DM-3 | 6/3/2021 | Low Flow | 5,380 | 2,130 | 2.44 | 190 | <0.50 | 3,500 | <50 | <20 | 48 | <10 | 17 | 18 | <10 | <10 | <10 | <10 | - | <10 | 20 | 10 | <0.50 | 7,700 | 17,400 | 7.7 | <5.0 | <0.093 | -70.40 | -8.69 |
| DM-3 | 12/2/2021 | Low Flow | 5,230 | 2,020 | 3.06 | 220 | <0.50 | 4,000 | <50 | <20 | 53 | <10 | 26 | 17 | <10 | <10 | <10 | <10 | - | <10 | 11 | <10 | <1.0 | 12,000 | 17,400 | 7.8 | <5.0 | <0.094 | -70.60 | -8.69 |

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

| Well ID | Date Sampled | Sampling Method | Chloride (mg/L) | Sulfate (SO4) (mg/L) | Nitrate (NO3)-N (mg/L) | Calcium (mg/L) | Copper (mg/L) | Sodium (mg/L) | Potassium (mg/L) | Iron (mg/L) | Magnesium (mg/L) | Antimony (ug/L) | Arsenic (ug/L) | Barium (ug/L) | Cadmium (ug/L) | Chromium (All Species) (ug/L) | Cobalt (ug/L) | Lead (ug/L) | Manganese (ug/L) | Nickel (ug/L) | Selenium (ug/L) | Zinc (ug/L) | Mercury (ug/L) | Total Dissolved Solids (mg/L) | Specific Conductance (us/cm) | pH (standard Units) | Oil & Grease / HEM (mg/L) | HTF† (mg/L) | Deuterium (‰ relative to VSMOW) | Oxygen-18 (‰ relative to VSMOW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | EPA Method 300.0 | | | EPA Method 200.7 | | | | | | EPA Method 200.8 | | | | | | | | | | | | SM7470A | SM2540C | SM2510B | SM4500H | SM1664A | 8015B | Isotope Geochemistry | |
| DM-3 | 6/2/2022 | Low Flow | 5,570 | 2,110 | 2.82 | 240 | <2.5 | 4,500 | <250 | <100 | 59 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | - | <50 | 55 | 50 | <1.0 | 8,500 | 17,400 | 7.8 | <5.0 | <0.090 | -70.50 | -8.71 |
| DM-3 | 12/1/2022 | Low Flow | 5,300 | 2,110 | 3.11 | 210 | <0.005 | 4,400 | 55 | <0.20 | 56 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 9,900 | 17,600 | 7.8 | <5.0 | <0.099 | -70.50 | -8.71 |
| DM-3 | 6/8/2023 | Low Flow | 5,230 | 2,100 | 2.61 | 240 | <0.50 | 4,200 | <50 | <20 | 66 | <10 | 16 | 17 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <1.0 | 9,800 | 17,600 | 7.7 | <5.0 | <0.099 | -71.10 | -8.76 |
| DM-3 | 12/7/2023 | Low Flow | 5,300 | 1,940 | 2.65 | 220 | <0.50 | 4,100 | <50 | <20 | 60 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 10,000 | 18,100 | 8.0 | <5.0 | <0.099 | -71.50 | -8.76 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 |
| North Pond | 6/13/2019 | Composite | 39,800 | 12,000 | <0.500 | 280 | 0.038 | 41,000 | <0.10 | <0.20 | 5.7 | <10 | 25 | 12 | <10 | <10 | <10 | <10 | - | <10 | <10 | - | <0.50 | 72,000 | 108,000 | 9.1 | <5.00 | <0.094 | N/A | N/A |
| North Pond | 12/5/2019 | Composite | 83,000 | 27,000 | <500 | 380 | 0.090 | 43,000 | 340 | <0.20 | 3.0 | <5.0 | 800 | 200 | <5.0 | <50 | <50 | <5.0 | - | <50 | <50 | 4,300 | <0.50 | 120,000 | 120,000 | 8.8 | <5.00 | <0.095 | N/A | N/A |
| North Pond | 6/4/2020 | Composite | 40,900 | 11,300 | 27.4 | 510 | 3.4 | 20,000 | 240 | <20 | 570 | <25 | 560 | 76 | <25 | <25 | <25 | <25 | - | <25 | 38 | 39 | <0.50 | 70,000 | 107,000 | 9.4 | <5.00 | <0.090 | N/A | N/A |
| North Pond | 12/3/2020 | Composite | 38,000 | 11,800 | 7.73 | 390 | <0.5 | 30,000 | 250 | <20 | 19 | <25 | 8.7 | 330 | <25 | <25 | <25 | <25 | - | <25 | 0.81 | 0.81 | <0.50 | 57,000 | 95,000 | 8.9 | <5.00 | <0.10 | N/A | N/A |
| North Pond | 6/4/2021 | Composite | 48,200 | 15,200 | 53.1 | 400 | <0.50 | 31,000 | 230 | <20 | 12 | <25 | 510 | 130 | <25 | <25 | <25 | <25 | - | 30 | 53 | <25 | <0.50 | 16,000 | 119,000 | 9.4 | <5.00 | <0.087 | N/A | N/A |
| North Pond | 12/2/2021 | Composite | 57,500 | 18,600 | <50.0 | 470 | <0.50 | 44,000 | 300 | <20 | 17 | <20 | 640 | 170 | <20 | <20 | <20 | <20 | - | <20 | 31 | <20 | <1.0 | 91,000 | 142,000 | 8.9 | <5.00 | <0.092 | N/A | N/A |
| North Pond | 6/2/2022 | Composite | 86,200 | 30,400 | 47.8 | <100 | <5.0 | 79,000 | <500 | <200 | <100 | <50 | 940 | 300 | <50 | <50 | <50 | <50 | - | <50 | 89 | <50 | <1.0 | 180,000 | 175,000 | 8.6 | <5.00 | <0.098 | N/A | N/A |
| North Pond | 12/1/2022 | Composite | 24,200 | 8,040 | 47.8 | 250 | <1.2 | 21,000 | <250 | <50 | <25 | <25 | 340 | 170 | <25 | <25 | <25 | <25 | - | <25 | 41 | 56 | <1.0 | 41,000 | 70,300 | 8.4 | <5.00 | <0.100 | N/A | N/A |
| North Pond | 6/8/2023 | Composite | 28,700 | 7,800 | 1,910 | 380 | <2.0 | 23,000 | <200 | <80 | <40 | <10 | 340 | 280 | <10 | <10 | <10 | <10 | - | <10 | <10 | <10 | <1.0 | 46,000 | 75,500 | 8.8 | <5.00 | <0.099 | N/A | N/A |
| North Pond | 12/7/2023 | Composite | 37,200 | 9,530 | <250 | 390 | <2.0 | 28,000 | <200 | <80 | <40 | <25 | 420 | 100 | <25 | <25 | <25 | <25 | - | <25 | <25 | <25 | <1.0 | 65,000 | 100,000 | 9.1 | <5.00 | <0.100 | N/A | N/A |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| South Pond | 6/1/2018 | Composite | 152,000 | 59,500 | 22.2 | 27 | <0.015 | 17,000 | 1,100 | <0.35 | 17 | <10 | 1,100 | 85 | <25 | <10 | <10 | <0.50 | - | 46 | 43 | 79 | <0.50 | 310,000 | 218,000 | 8.3 | <1.40 | <0.090 | N/A | N/A |
| South Pond | 12/3/2018 | Composite | 33,200 | 8,710 | 65.1 | 410 | 2.8 | 34,000 | 420 | <20 | 27 | <25 | 390 | 310 | <25 | <25 | <25 | <25 | - | <25 | <25 | 160 | <0.50 | 39,000 | 61,200 | 8.9 | 36.4 | <0.097 | N/A | N/A |
| South Pond | 6/13/2019 | Composite | 38,700 | 10,800 | 57.2 | 430 | 0.064 | 40,000 | <0.10 | <0.20 | 16 | <10 | 28 | 25 | <10 | <10 | <10 | <10 | - | <10 | <10 | - | <0.50 | 68,000 | 104,000 | 9.3 | <5.00 | <0.097 | N/A | N/A |
| South Pond | 12/5/2019 | Composite | 30,000 | 6,770 | 2.17 | 200 | 0.041 | 14,000 | 160 | <0.20 | 13 | <5.0 | 200 | 170 | <5.0 | <5.0 | <5.0 | <5.0 | - | <5.0 | <5.0 | 190 | <0.50 | 35,000 | 49,700 | 9.0 | <5.00 | <0.099 | N/A | N/A |
| South Pond | 6/4/2020 | Composite | 74,600 | 23,900 | 14.8 | 390 | 4.2 | 62,000 | 470 | <20 | 1,100 | <25 | 1,100 | 360 | <25 | <25 | <25 | <25 | - | 36 | 68 | 48 | <0.50 | 130,000 | 166,000 | 8.8 | <5.00 | <0.091 | N/A | N/A |
| South Pond | 12/3/2020 | Composite | 73,700 | 16,600 | 10.6 | 370 | <0.5 | 42,000 | 480 | <20 | 23 | <25 | 14 | 290 | <25 | <25 | <25 | <25 | - | <25 | 0.73 | 3.0 | <0.50 | 92,000 | 150,000 | 8.6 | <5.00 | <0.099 | N/A | N/A |
| South Pond | 6/4/2021 | Composite | 91,000 | 22,300 | <50.0 | 420 | <0.50 | 55,000 | 620 | <20 | 29 | <25 | 1,100 | 420 | <25 | <25 | <25 | <25 | - | 56 | 69 | 100 | <0.50 | 25,000 | 183,000 | 9.0 | <5.00 | <0.091 | N/A | N/A |
| South Pond | 12/2/2021 | Composite | 24,000 | 6,560 | <50.0 | 240 | <0.50 | 19,000 | 150 | <20 | 16 | <10 | 290 | 200 | <10 | <10 | <10 | <20 | - | 21 | 18 | 64 | <1.0 | 38,000 | 67,500 | 8.9 | <5.00 | <0.090 | N/A | N/A |
| South Pond | 6/2/2022 | Composite | 80,200 | 21,900 | 45.2 | 300 | <5.0 | 65,000 | <500 | <200 | 100 | <50 | 920 | 310 | <50 | <50 | <50 | <50 | - | <50 | 82 | <50 | <1.0 | 140,000 | 168,000 | 8.4 | <5.00 | <0.095 | N/A | N/A |
| South Pond | 12/1/2022 | Composite | 24,000 | 5,500 | <25.0 | 300 | <1.2 | 20,000 | <250 | <50 | <25 | <25 | 260 | 210 | <25 | <25 | <25 | <25 | - | <25 | 59 | 60 | <1.0 | 35,000 | 67,400 | 8.5 | <5.00 | <0.100 | N/A | N/A |
| South Pond | 6/8/2023 | Composite | 25,800 | 5,600 | 959 | 270 | <2.0 | 19,000 | <200 | <80 | <40 | <10 | 280 | 210 | <10 | <10 | <10 | <10 | - | <10 | 12 | 39 | <1.0 | 22,000 | 66,300 | 8.2 | <5.00 | <0.099 | N/A | N/A |
| South Pond | 12/7/2023 | Composite | 17,900 | 4,040 | 449 | 240 | <2.0 | 17,000 | <200 | <80 | <40 | <25 | 250 | 190 | <25 | <25 | <25 | <25 | - | <25 | <25 | 170 | <1.0 | 35,000 | 59,500 | 9.3 | <5.00 | <0.100 | N/A | N/A |

NOTES:

mg/L = milligrams per liter

ug/L = micrograms per liter

uS/cm = microsiemens per centimeter

‰ = parts per thousand

VSMOW = Vienna Standard Mean Ocean Water

< = not detected at or above the indicated reporting limit

- = information is unknown / not applicable / not analyzed

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 POND DRAINAGE SUMP DATA**

**Genesis Solar Energy Project, Riverside County, California**

| Date of Reading | Sensor Readings[1] | | | | | | | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North Pond | | | | | | | South Pond | | | | | | | |
| | #1W | #2W | #3W | #1E | #2E | #3E | Totalizer | #1W | #2W | #3W | #1E | #2E | #3E | Totalizer | |
| 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 | |
| 03/08/2019 | 150 | 199 | 199 | 199 | 199 | 199 | 1,690.80 | 199 | 199 | 199 | 115 | 168 | 199 | 24.21 | |
| 06/13/2019 | 199 | 199 | 199 | 199 | 199 | 199 | 1,687.19 | 199 | 199 | 199 | 188 | 199 | 199 | 24.21 | |
| 09/08/2019 | 199 | 199 | 199 | 199 | 199 | 199 | 1,686.68 | 199 | 199 | 199 | 188 | 199 | 199 | 24.21 | |
| 12/05/2019 | 145 | 199 | 199 | 199 | 199 | 199 | 1,683.78 | 199 | 199 | 199 | 199 | 199 | 199 | 24.21 | |
| 03/17/2020 | 168 | 199 | 199 | 199 | 199 | 199 | 1,681.87 | 199 | 199 | 199 | 199 | 199 | 199 | 24.21 | |
| 06/04/2020 | 109 | 199 | 199 | 199 | 199 | 199 | 1,657.23 | 199 | 199 | 199 | 199 | 199 | 199 | 22.64 | |
| 09/16/2020 | 199 | 199 | 199 | 199 | 199 | 199 | 1,619.72 | 199 | 199 | 199 | 199 | 199 | 199 | 20.34 | |
| 12/03/2020 | 98 | 199 | 199 | 199 | 199 | 199 | 1,624.77 | 199 | 199 | 199 | 199 | 199 | 199 | 20.34 | |
| 03/23/2021 | 104 | 199 | 199 | 199 | 199 | 199 | 1,628.91 | 199 | 199 | 199 | 199 | 199 | 199 | 20.34 | |
| 06/04/2021 | 119 | 199 | 199 | 199 | 199 | 199 | 2,017.91 | 199 | 199 | 199 | 199 | 199 | 199 | 205.98 | Sump pumps tested prior to readings |
| 09/21/2021 | 89 | 199 | 199 | 199 | 199 | 199 | 2,188.61 | 199 | 199 | 199 | 199 | 199 | 199 | 197.30 | |
| 12/02/2021 | 97 | 199 | 199 | 199 | 199 | 199 | 2,186.30 | 199 | 199 | 199 | 199 | 199 | 199 | N/A [2] | |
| 03/30/2022 | 134 | 199 | 199 | 199 | 199 | 199 | 2,183.93 | 199 | 199 | 199 | 199 | 199 | 199 | N/A [2] | |
| 06/02/2022 | 151 | 199 | 199 | 199 | 199 | 199 | 7.48 | 199 | 199 | 199 | 189 | 199 | 199 | 7.48 | New pumps and totalizers installed in 2nd quarter |
| 08/04/2022 | 109 | 191 | 199 | 199 | 199 | 105 | 605.44 | 199 | 199 | 199 | 188 | 199 | 199 | 7.48 | Verification readings following leak reported by NextEra |
| 09/30/2022 | 105 | 189 | 199 | 199 | 199 | 122 | 605.44 | 199 | 199 | 199 | 199 | 199 | 199 | 7.48 | |
| 12/01/2022 | 103 | 179 | 199 | 199 | 197 | 176 | 605.55 | 171 | 199 | 199 | 189 | 174 | 199 | 7.48 | |
| 03/29/2023 | 181 | 199 | 199 | 199 | 199 | 199 | 605.55 | 199 | 199 | 199 | 199 | 199 | 199 | 7.48 | |
| 06/08/2023 | 56 | 198 | 199 | 199 | 199 | 196 | 605.55 | 199 | 199 | 199 | 198 | 199 | 199 | 7.48 | |
| 09/28/2023 | 75 | 153 | 199 | 199 | 199 | 149 | 605.55 | 199 | 199 | 199 | 199 | 199 | 199 | 7.48 | Moisture under both western caps |
| 12/07/2023 | 70 | 110 | 199 | 199 | 199 | 98 | 605.55 | 199 | 199 | 199 | 167 | 199 | 199 | 7.48 | Moisture under north pond, western cap |
| | | | | | | | | | | | | | | | |

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

2 - Pump totalizer not functioning

# APPENDIX A

## FIELD DATA SHEETS

# GROUNDWATER SAMPLING FIELD FORM

| | | |
|---|---|---|
| Date: 12/07/2023 | Site: Genesis Solar Energy Project | Project No: 196-004-06 |
| Project: Groundwater Detection Monitoring Program | | Project Manager: AWB |
| Technicians: AWB/RCD | | Weather: Warm |
| Sampling Method: Low-flow sampling with submersible pump (EPA 2017 protocols) and flow-through cell | | |

| Well No. | DM-1 | Time (5 Min Int) | Water Level (ft btoc) | Temp °C (3%) | pH (+/- 0.1) | Cond (mS/cm) (3%) | Turbidity (NTUs) (10%) | ORP (mV) (+/- 10) | DO (mg/L) (10%) |
|---|---|---|---|---|---|---|---|---|---|
| Casing Diameter (in.) | 4.0 | 17:40 | 107.41 | 24.3 | 7.42 | 18.0 | 35.5 | +135 | 3.73 |
| Total Depth (ft btoc) | 120 | 17:45 | 107.41 | 24.7 | 7.46 | 18.0 | 35.2 | +134 | 3.66 |
| Screen Interval (ft btoc) | 100 - 120 | 17:50 | 107.41 | 25.0 | 7.47 | 18.0 | 34.8 | +135 | 3.62 |
| Depth to Water (ft btoc) | 107.41 | | | | | | | | |
| Depth of Inlet (ft btoc) | 115.00 | | | | | | | | |
| Discharge Time (sec) | 30 | | | | | | | | |
| Fill Time (sec) | 20 | | | | | | | | |
| Cycles per Minute | 1.2 | | | | | | | | |
| Volume per Cycle (mL) | 150 | | | | | | | | |
| Pump Rate (mL/min) | 180 | | | | | | | | |
| Volume Purged (mL) | 4,500 | | | | | | | | |
| Sample Date | 12/07/23 | | | | | | | | |
| Sample Time | 17:55 | | | | | | | | |

**Purge Volume Calculation:** Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **1,204 mL**

| Well No. | DM-2 | Time (5 Min Int) | Water Level (ft btoc) | Temp °C (3%) | pH (+/- 0.1) | Cond (mS/cm) (3%) | Turbidity (NTUs) (10%) | ORP (mV) (+/- 10) | DO (mg/L) (10%) |
|---|---|---|---|---|---|---|---|---|---|
| Casing Diameter (in.) | 4.0 | 18:50 | 108.02 | 22.9 | 7.28 | 18.2 | 39.4 | +147 | 2.08 |
| Total Depth (ft btoc) | 120 | 18:55 | 108.14 | 23.1 | 7.35 | 18.3 | 38.6 | +142 | 2.03 |
| Screen Interval (ft btoc) | 100 - 120 | 19:00 | 108.30 | 23.2 | 7.36 | 18.3 | 38.3 | +143 | 2.00 |
| Depth to Water (ft btoc) | 107.74 | | | | | | | | |
| Depth of Inlet (ft btoc) | 115.00 | | | | | | | | |
| Discharge Time (sec) | 28 | | | | | | | | |
| Fill Time (sec) | 37 | | | | | | | | |
| Cycles per Minute | 0.9 | | | | | | | | |
| Volume per Cycle (mL) | 150 | | | | | | | | |
| Pump Rate (mL/min) | 138 | | | | | | | | |
| Volume Purged (mL) | 3,450 | | | | | | | | |
| Sample Date | 12/07/23 | | | | | | | | |
| Sample Time | 19:05 | | | | | | | | |

**Purge Volume Calculation:** Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **2,582 mL**

| Well No. | DM-3 | Time (5 Min Int) | Water Level (ft btoc) | Temp °C (3%) | pH (+/- 0.1) | Cond (mS/cm) (3%) | Turbidity (NTUs) (10%) | ORP (mV) (+/- 10) | DO (mg/L) (10%) |
|---|---|---|---|---|---|---|---|---|---|
| Casing Diameter (in.) | 4.0 | 16:25 | 104.54 | 25.4 | 7.24 | 17.5 | 5.2 | +137 | 3.49 |
| Total Depth (ft btoc) | 120 | 16:30 | 104.52 | 26.2 | 7.33 | 17.5 | 5.4 | +134 | 3.48 |
| Screen Interval (ft btoc) | 100 - 120 | 16:35 | 104.52 | 26.5 | 7.34 | 17.5 | 4.8 | +131 | 3.44 |
| Depth to Water (ft btoc) | 104.52 | | | | | | | | |
| Depth of Inlet (ft btoc) | 115.00 | | | | | | | | |
| Discharge Time (sec) | 28 | | | | | | | | |
| Fill Time (sec) | 35 | | | | | | | | |
| Cycles per Minute | 1.0 | | | | | | | | |
| Volume per Cycle (mL) | 150 | | | | | | | | |
| Pump Rate (mL/min) | 143 | | | | | | | | |
| Volume Purged (mL) | 3,575 | | | | | | | | |
| Sample Date | 12/07/23 | | | | | | | | |
| Sample Time | 16:40 | | | | | | | | |

**Purge Volume Calculation:** Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **1,204 mL**

# APPENDIX B

## LABORATORY ANALYTICAL RESULTS

## EVAPORATION PONDS

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

26 December 2023

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 12/08/23 12:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Lee
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

| | | |
|---|---|---|
| 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 | 12/26/23 17:50 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| North Pond | T233668-01 | Water | 12/07/23 16:00 | 12/08/23 12:45 |
| South Pond | T233668-02 | Water | 12/07/23 16:10 | 12/08/23 12:45 |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**25712 Commercentre Drive**
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**949.297.5027 Fax**

| | | |
|---|---|---|
| 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 | 12/26/23 17:50 |

## DETECTIONS SUMMARY

**Sample ID:** North Pond **Laboratory ID:** T233668-01

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Arsenic | **420** | 25 | ug/l | 200.8 | FILT |
| Barium | **100** | 25 | ug/l | 200.8 | FILT |
| Calcium | **390** | 200 | mg/l | EPA 200.7 | FILT |
| Sodium | **28000** | 200 | mg/l | EPA 200.7 | FILT |
| pH | **9.1** | 0.10 | pH Units | SM 4500-H+B | O-09 |
| Total Dissolved Solids | **65000** | 10 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | **100000** | 10.0 | mho/cm @25°C | SM2510b mod. | |
| pH Temperature °C | **22** | | pH Units | SM 4500-H+B | O-09 |
| Chloride | **37200** | 2500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | **9530** | 2500 | mg/l | EPA 300.0 | |

**Sample ID:** South Pond **Laboratory ID:** T233668-02

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Arsenic | **250** | 25 | ug/l | 200.8 | FILT |
| Barium | **190** | 25 | ug/l | 200.8 | FILT |
| Zinc | **170** | 25 | ug/l | 200.8 | FILT |
| Calcium | **240** | 200 | mg/l | EPA 200.7 | FILT |
| Sodium | **17000** | 200 | mg/l | EPA 200.7 | FILT |
| pH | **9.3** | 0.10 | pH Units | SM 4500-H+B | O-09 |
| Total Dissolved Solids | **35000** | 10 | mg/l | TDS by SM2540C | |
| Specific Conductance (EC) | **59500** | 10.0 | mho/cm @25°C | SM2510b mod. | |
| pH Temperature °C | **22** | | pH Units | SM 4500-H+B | O-09 |
| Chloride | **17900** | 2500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | **4040** | 2500 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | **449** | 250 | mg/l | EPA 300.0 | O-04, R-01 |
| Nitrate as N | **100** | 100 | mg/l | EPA 300.0 | O-04, R-01 |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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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 | 12/26/23 17:50 |

## North Pond

### T233668-01 (Water)

### SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Metals by EPA 200 Series Methods** | | | | | | | | | |
| Copper | ND | 2.0 | mg/l | 400 | 23L0201 | 12/11/23 | 12/15/23 | EPA 200.7 | FILT, R-01 |
| **Calcium** | **390** | 200 | " | " | " | " | 12/15/23 | " | FILT |
| Iron | ND | 80 | " | " | " | " | " | " | FILT, R-01 |
| Magnesium | ND | 40 | " | " | " | " | " | " | FILT, R-01 |
| Potassium | ND | 200 | " | " | " | " | " | " | FILT, R-01 |
| **Sodium** | **28000** | 200 | " | " | " | " | " | " | FILT |
| Antimony | ND | 25 | ug/l | 50 | 23L0203 | 12/11/23 | 12/14/23 | 200.8 | FILT, R-01 |
| **Arsenic** | **420** | 25 | " | " | " | " | " | " | FILT |
| **Barium** | **100** | 25 | " | " | " | " | " | " | FILT |
| Cadmium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Chromium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Cobalt | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Lead | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Nickel | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Selenium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Zinc | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Cold Vapor Extraction EPA 7470/7471** | | | | | | | | | |
| Mercury | ND | 1.0 | ug/l | 1 | 23L0186 | 12/11/23 | 12/14/23 | EPA 7470A Water | |
| **Conventional Chemistry Parameters by APHA/EPA/ASTM Methods** | | | | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | 1 | 23L0176 | 12/08/23 | 12/12/23 | EPA 1664B | |
| **Specific Conductance (EC)** | **100000** | 10.0 | umho/cm @25°C | " | 23L0170 | 12/08/23 | 12/13/23 | SM2510b mod. | |
| **pH** | **9.1** | 0.10 | pH Units | " | 23L0169 | 12/08/23 | 12/13/23 | SM 4500-H+B | O-09 |
| **pH Temperature °C** | **22** | | " | " | " | " | " | " | O-09 |
| **Total Dissolved Solids** | **65000** | 10 | mg/l | " | 23L0171 | 12/08/23 | 12/15/23 | TDS by SM2540C | |

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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 | 12/26/23 17:50 |

## North Pond

**T233668-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Anions by EPA Method 300.0** | | | | | | | | | |
| **Chloride** | **37200** | 2500 | mg/l | 500 | 23L0163 | 12/08/23 | 12/11/23 | EPA 300.0 | |
| **Sulfate as SO4** | **9530** | 2500 | " | " | " | " | " | " | |
| Nitrate as NO3 | ND | 250 | " | " | " | " | " | " | O-04, R-01 |
| Nitrate as N | ND | 100 | " | " | " | " | " | " | O-04, R-01 |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## South Pond

### T233668-02 (Water)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Metals by EPA 200 Series Methods** | | | | | | | | | |
| Copper | ND | 2.0 | mg/l | 400 | 23L0201 | 12/11/23 | 12/15/23 | EPA 200.7 | FILT, R-01 |
| **Calcium** | **240** | 200 | " | " | " | " | 12/15/23 | " | FILT |
| Iron | ND | 80 | " | " | " | " | " | " | FILT, R-01 |
| Magnesium | ND | 40 | " | " | " | " | " | " | FILT, R-01 |
| Potassium | ND | 200 | " | " | " | " | " | " | FILT, R-01 |
| **Sodium** | **17000** | 200 | " | " | " | " | " | " | FILT |
| Antimony | ND | 25 | ug/l | 50 | 23L0203 | 12/11/23 | 12/14/23 | 200.8 | FILT, R-01 |
| **Arsenic** | **250** | 25 | " | " | " | " | " | " | FILT |
| **Barium** | **190** | 25 | " | " | " | " | " | " | FILT |
| Cadmium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Chromium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Cobalt | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Lead | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Nickel | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Selenium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Zinc** | **170** | 25 | " | " | " | " | " | " | FILT |
| **Cold Vapor Extraction EPA 7470/7471** | | | | | | | | | |
| Mercury | ND | 1.0 | ug/l | 1 | 23L0186 | 12/11/23 | 12/14/23 | EPA 7470A Water | |
| **Conventional Chemistry Parameters by APHA/EPA/ASTM Methods** | | | | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | 1 | 23L0176 | 12/08/23 | 12/12/23 | EPA 1664B | |
| **Specific Conductance (EC)** | **59500** | 10.0 | umho/cm @25°C | " | 23L0170 | 12/08/23 | 12/13/23 | SM2510b mod. | |
| **pH** | **9.3** | 0.10 | pH Units | " | 23L0169 | 12/08/23 | 12/13/23 | SM 4500-H+B | O-09 |
| **pH Temperature °C** | **22** | | " | " | " | " | " | " | O-09 |
| **Total Dissolved Solids** | **35000** | 10 | mg/l | " | 23L0171 | 12/08/23 | 12/15/23 | TDS by SM2540C | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## South Pond

**T233668-02 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Anions by EPA Method 300.0** | | | | | | | | | |
| **Chloride** | **17900** | 2500 | mg/l | 500 | 23L0163 | 12/08/23 | 12/11/23 | EPA 300.0 | |
| **Sulfate as SO4** | **4040** | 2500 | " | " | " | " | " | " | |
| **Nitrate as NO3** | **449** | 250 | " | " | " | " | " | " | O-04, R-01 |
| **Nitrate as N** | **100** | 100 | " | " | " | " | " | " | O-04, R-01 |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## 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 23L0201 - EPA 3010A** | | | | | | | | | | |
| **Blank (23L0201-BLK1)** | | | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | ND | 0.005 | mg/l | | | | | | | |
| Aluminum | ND | 0.10 | " | | | | | | | |
| Calcium | ND | 0.50 | " | | | | | | | |
| Iron | ND | 0.20 | " | | | | | | | |
| Magnesium | ND | 0.10 | " | | | | | | | |
| Potassium | ND | 0.50 | " | | | | | | | |
| Sodium | ND | 0.50 | " | | | | | | | |
| **LCS (23L0201-BS1)** | | | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | 0.545 | 0.005 | mg/l | 0.500 | | 109 | 85-115 | | | |
| **Matrix Spike (23L0201-MS1)** | | **Source: T233668-01** | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | 0.604 | 0.50 | mg/l | 0.500 | ND | 121 | 70-130 | | | QM-07 |
| **Matrix Spike Dup (23L0201-MSD1)** | | **Source: T233668-01** | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | 0.475 | 0.50 | mg/l | 0.500 | ND | 95.1 | 70-130 | 23.7 | 30 | QM-07, R-01 |
| **Batch 23L0203 - EPA 3010A** | | | | | | | | | | |
| **Blank (23L0203-BLK1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Antimony | ND | 0.50 | ug/l | | | | | | | |
| Arsenic | ND | 0.50 | " | | | | | | | |
| Barium | 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 | " | | | | | | | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## 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 23L0203 - EPA 3010A** | | | | | | | | | | |
| **LCS (23L0203-BS1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Arsenic | 24.6 | 0.50 | ug/l | 25.0 | | 98.2 | 85-115 | | | |
| Barium | 24.0 | 0.50 | " | 25.0 | | 96.0 | 85-115 | | | |
| Cadmium | 24.3 | 0.50 | " | 25.0 | | 97.1 | 85-115 | | | |
| Chromium | 22.1 | 0.50 | " | 25.0 | | 88.2 | 85-115 | | | |
| Lead | 24.1 | 0.50 | " | 25.0 | | 96.6 | 85-115 | | | |
| **Matrix Spike (23L0203-MS1)** | **Source: T233668-01** | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Arsenic | 416 | 25 | ug/l | 25.0 | 415 | 4.00 | 70-130 | | | QM-07 |
| Barium | 128 | 25 | " | 25.0 | 103 | 98.0 | 70-130 | | | |
| Cadmium | 28.0 | 25 | " | 25.0 | 5.50 | 90.0 | 70-130 | | | |
| Chromium | 32.0 | 25 | " | 25.0 | 7.00 | 100 | 70-130 | | | |
| Lead | 27.5 | 25 | " | 25.0 | ND | 110 | 70-130 | | | |
| **Matrix Spike Dup (23L0203-MSD1)** | **Source: T233668-01** | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Arsenic | 420 | 25 | ug/l | 25.0 | 415 | 18.0 | 70-130 | 0.838 | 20 | QM-07 |
| Barium | 127 | 25 | " | 25.0 | 103 | 96.0 | 70-130 | 0.393 | 20 | |
| Cadmium | 27.0 | 25 | " | 25.0 | 5.50 | 86.0 | 70-130 | 3.64 | 20 | |
| Chromium | 33.0 | 25 | " | 25.0 | 7.00 | 104 | 70-130 | 3.08 | 20 | |
| Lead | 26.0 | 25 | " | 25.0 | ND | 104 | 70-130 | 5.61 | 20 | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## Cold Vapor Extraction EPA 7470/7471 - Quality Control

## SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 23L0186 - EPA 7470A Water** | | | | | | | | | | |
| **Blank (23L0186-BLK1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | ND | 1.0 | ug/l | | | | | | | |
| **LCS (23L0186-BS1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | 6.87 | 1.0 | ug/l | 7.50 | | 91.6 | 80-120 | | | |
| **Matrix Spike (23L0186-MS1)** | **Source: T233642-01** | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | 6.56 | 1.0 | ug/l | 7.50 | 0.199 | 84.8 | 80-120 | | | |
| **Matrix Spike Dup (23L0186-MSD1)** | **Source: T233642-01** | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | 6.49 | 1.0 | ug/l | 7.50 | 0.199 | 83.9 | 80-120 | 1.05 | 20 | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## 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 23L0169 - General Preparation** | | | | | | | | | | |
| **Duplicate (23L0169-DUP1)** | **Source: T233669-01** | | | Prepared: 12/08/23 Analyzed: 12/13/23 | | | | | | |
| pH | 9.01 | 0.10 | pH Units | | 8.16 | | | 9.90 | 10 | |
| pH Temperature °C | 21.9 | | " | | 21.6 | | | 1.38 | 200 | |
| **Batch 23L0170 - General Preparation** | | | | | | | | | | |
| **Duplicate (23L0170-DUP1)** | **Source: T233668-01** | | | Prepared: 12/08/23 Analyzed: 12/13/23 | | | | | | |
| Specific Conductance (EC) | 99900 | 10.0 | umho/cm @25°C | | 100000 | | | 0.200 | 15 | |
| **Batch 23L0171 - General Preparation** | | | | | | | | | | |
| **Blank (23L0171-BLK1)** | | | | Prepared: 12/08/23 Analyzed: 12/15/23 | | | | | | |
| Total Dissolved Solids | ND | 10 | mg/l | | | | | | | |
| **LCS (23L0171-BS1)** | | | | Prepared: 12/08/23 Analyzed: 12/15/23 | | | | | | |
| Total Dissolved Solids | 470 | 10 | mg/l | 500 | | 94.0 | 80-120 | | | |
| **Duplicate (23L0171-DUP1)** | **Source: T233670-01** | | | Prepared: 12/08/23 Analyzed: 12/15/23 | | | | | | |
| Total Dissolved Solids | 1670 | 10 | mg/l | | 1630 | | | 2.12 | 20 | |
| **Batch 23L0176 - General Preparation** | | | | | | | | | | |
| **Blank (23L0176-BLK1)** | | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | | | | | | | |
| **LCS (23L0176-BS1)** | | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Oil & Grease | 44.1 | 5.00 | mg/l | 53.1 | | 83.1 | 78-114 | | | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## 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 23L0176 - General Preparation** | | | | | | | | | | |
| **LCS Dup (23L0176-BSD1)** | | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Oil & Grease | 43.0 | 5.00 | mg/l | 53.1 | | 81.0 | 78-114 | 2.53 | 20 | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
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## Anions by EPA Method 300.0 - Quality Control

## SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 23L0163 - General Preparation** | | | | | | | | | | |
| **Blank (23L0163-BLK1)** | | | | Prepared: 12/08/23 Analyzed: 12/11/23 | | | | | | |
| Fluoride | ND | 0.500 | mg/l | | | | | | | |
| Chloride | ND | 5.00 | " | | | | | | | |
| Sulfate as SO4 | ND | 5.00 | " | | | | | | | |
| Nitrate as NO3 | ND | 0.500 | " | | | | | | | |
| Nitrate as N | ND | 0.200 | " | | | | | | | |
| **LCS (23L0163-BS1)** | | | | Prepared: 12/08/23 Analyzed: 12/11/23 | | | | | | |
| Fluoride | 27.6 | 0.500 | mg/l | 25.0 | | 111 | 75-125 | | | |
| Chloride | 25.6 | 5.00 | " | 25.0 | | 103 | 75-125 | | | |
| Sulfate as SO4 | 25.9 | 5.00 | " | 25.0 | | 104 | 75-125 | | | |
| Nitrate as NO3 | 24.7 | 0.500 | " | 25.0 | | 98.8 | 75-125 | | | |
| **Matrix Spike (23L0163-MS1)** | **Source: T233669-01** | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Fluoride | 7.96 | 0.500 | mg/l | 25.0 | ND | 31.8 | 75-125 | | | QM-05 |
| Chloride | 5020 | 500 | " | 25.0 | 5290 | NR | 75-125 | | | QM-05 |
| Sulfate as SO4 | 1760 | 500 | " | 25.0 | 1830 | NR | 75-125 | | | QM-05 |
| Nitrate as NO3 | 30.7 | 0.500 | " | 25.0 | 7.18 | 94.1 | 75-125 | | | |
| **Matrix Spike Dup (23L0163-MSD1)** | **Source: T233669-01** | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Fluoride | 7.90 | 0.500 | mg/l | 25.0 | ND | 31.6 | 75-125 | 0.757 | 20 | QM-05 |
| Chloride | 4880 | 500 | " | 25.0 | 5290 | NR | 75-125 | 2.91 | 20 | QM-05 |
| Sulfate as SO4 | 1710 | 500 | " | 25.0 | 1830 | NR | 75-125 | 2.79 | 20 | QM-05 |
| Nitrate as NO3 | 30.3 | 0.500 | " | 25.0 | 7.18 | 92.4 | 75-125 | 1.34 | 20 | |

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| 26225 Enterprise Court | Project Number: 196-004-05 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/26/23 17:50 |

## Notes and Definitions

| | |
|---|---|
| R-01 | The Reporting Limit has been raised to account for dilution necessary due to matrix interference. |
| QM-07 | The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. |
| 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. |
| O-09 | The sample was analyzed outside the EPA recommended holding time of 24 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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t, CA 92630
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# Chain of Custody Record

star Environmental Remediation _____
225 Enterprise Court, Lake Forest, CA 92630 _____
274-1719 _____ Fax: _____
ager: Arlin Brewster _____

Date: 12/7/2023 Page: 1 of 1
Project Name: Genesis Solar LTUs & Ponds _____
Collector: Arlin Brewster _____ Client Project #: 196-004-05 _
Batch #: T233668 EDF #: Not Required _____

| nple ID | Date Sampled | Time | Sample Type | Container Type | 200.7 - Dissolved Metals: Ca, Cu, Na, K, Fe, Mg (FIELD FILTERED) | 200.8 - Dissolved Metals: Sb, As, Ba, Cd, Cr, Co, Pb, Ni, Se, Zn (F.F.) | 300.0 - Chloride, Nitrate, Sulfate | 1664 - Oil and Grease | 7470A - Mercury | 9040 - pH | SM2510B - Conductivity, Specific | SM2540C - Total Dis. Solids | 8015M - Therminol (Subcontract) | | | Laboratory ID # | Comments/Preservativ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| h Pond | 12/7/23 | 1600 | W | Various | X | X | X | X | X | X | X | X | X | | | | |
| h Pond | 12/7/23 | 1610 | W | Various | X | X | X | X | X | X | X | X | X | | | | |
| d Blank | N/A | N/A | W | Various | | | | | | | | | | | | | HOLD |
| Blank | N/A | N/A | W | Various | | | | | | | | | | | | | HOLD |

y: (signature) Date / Time | Received by: (signature) Date / Time
12/8/23 @ 1245 | 12/8/23 12:45
y: (signature) Date / Time | Received by: (signature) Date / Time
y: (signature) Date / Time | Received by: (signature) Date / Time

Total # of containers 14
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 1.1°C

Turn around time: Standard

Notes
EDF report not requ
Reporting limits must
previous report

l Instructions: Disposal @ $2.00 each ____ Return to client ____ Pickup ____

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

Rev. 02C Date 11/23
Receiving Form 001A

# SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #: JZ33668

Client Name: Northstar Environmental Remediation Project: Genesis Solar LTUs & Ponds

Delivered by: ☒ Client ☐ SunStar Courier ☐ GLS ☐ FedEx ☐ Other

If Courier, Received by: _____ Date/Time Courier Received: _____

Lab Received by: Paul Date/Time Lab Received: 12.8.23 1245

Total number of coolers received: 1 Thermometer ID: SC-1 Calibration due: 11/17/2024

| | | | | |
|---|---|---|---|---|
| Temperature: | Cooler #1 | 1.0 °C +/- the CF (+ 0.1°C) = | 1.1 | °C corrected temperature |
| Temperature: | Cooler #2 | °C +/- the CF (+ 0.1°C) = | | °C corrected temperature |
| Temperature: | Cooler #3 | °C +/- the CF (+ 0.1°C) = | | °C corrected temperature |

| | | |
|---|---|---|
| **Temperature criteria = ≤ 6°C (no frozen containers)** | Within criteria? | ☒ **Yes** ☐ **No** ☐ **N/A** |
| **If NO:** | | |
| Samples received on ice? | ☐ Yes | ☐ **No → Complete Non-Conformance Sheet** |
| If on ice, samples received same day collected? | ☐ Yes → Acceptable | ☐ **No → Complete Non-Conformance Sheet** |

| | | | |
|---|---|---|---|
| Custody seals intact on cooler/sample | ☐ Yes | ☐ No* | ☒ N/A |
| Sample containers intact | ☒ Yes | ☐ No* | |
| 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 analyses requested | ☒ Yes | ☐ No* | ☐ N/A |
| Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times | ☒ **Yes** | ☐ **No*** | |

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date: DB 12.8.23

**Comments:**



(949) 297-5020 ■ www.sunstarlabs.com ■ 25712 Commercentre Drive ■ Lake Forest, CA 92630

eurofins | Environment Testing

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Jeff Lee
SunStar Laboratories Inc
25712 Commercentre Drive
Lake Forest, California 92630

Generated 12/22/2023 11:23:07 AM

## JOB DESCRIPTION

T233668

## JOB NUMBER

570-164069-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

# Eurofins Calscience

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

## Authorization

Authorized for release by
Sandy Tat, Project Manager I
Sandy.Tat@et.eurofinsus.com
(714)895-5494

Generated
12/22/2023 11:23:07 AM

# Table of Contents

# Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

## 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 |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| 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) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| 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) |
| TNTC | Too Numerous To Count |

**Job Narrative**
**570-164069-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

**Receipt**
The samples were received on 12/11/2023 1:17 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.5°C

**Diesel Range Organics**
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: T233668

Job ID: 570-164069-1

## Client Sample ID: T233668-01 — Lab Sample ID: 570-164069-1

No Detections.

## Client Sample ID: T233668-02 — Lab Sample ID: 570-164069-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

## Method: SW846 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: T233668-01**
**Date Collected: 12/07/23 16:00**
**Date Received: 12/11/23 13:17**

**Lab Sample ID: 570-164069-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 19:09 | 1 |
| 1,1'-Biphenyl | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 19:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *76* | | *53 - 151* | *12/13/23 12:17* | *12/19/23 19:09* | *1* |

**Client Sample ID: T233668-02**
**Date Collected: 12/07/23 16:10**
**Date Received: 12/11/23 13:17**

**Lab Sample ID: 570-164069-2**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 19:33 | 1 |
| 1,1'-Biphenyl | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 19:33 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *83* | | *53 - 151* | *12/13/23 12:17* | *12/19/23 19:33* | *1* |

# Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

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

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) |
|---|---|---|
| **Lab Sample ID** | **Client Sample ID** | **OTCSN1 (53-151)** |
| 570-164069-1 | T233668-01 | 76 |
| 570-164069-2 | T233668-02 | 83 |
| LCS 570-392271/2-A | Lab Control Sample | 76 |
| LCSD 570-392271/3-A | Lab Control Sample Dup | 79 |
| MB 570-392271/1-A | Method Blank | 80 |

**Surrogate Legend**

OTCSN = n-Octacosane (Surr)

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

**Lab Sample ID: MB 570-392271/1-A**
**Matrix: Water**
**Analysis Batch: 394262**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 392271**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 13:50 | 1 |
| 1,1'-Biphenyl | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 13:50 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *80* | | *53 - 151* | *12/13/23 12:17* | *12/19/23 13:50* | *1* |

**Lab Sample ID: LCS 570-392271/2-A**
**Matrix: Water**
**Analysis Batch: 394262**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 392271**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | | | 1000 | 1198 | | ug/L | | 120 | 57 - 120 | | |
| 1,1'-Biphenyl | | | 1000 | 867.9 | | ug/L | | 87 | 45 - 120 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *76* | | *53 - 151* |

**Lab Sample ID: LCSD 570-392271/3-A**
**Matrix: Water**
**Analysis Batch: 394262**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 392271**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | | | 1000 | 1204 | | ug/L | | 120 | 57 - 120 | 0 | 20 |
| 1,1'-Biphenyl | | | 1000 | 872.4 | | ug/L | | 87 | 45 - 120 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *79* | | *53 - 151* |

# QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

## GC Semi VOA

### Prep Batch: 392271

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-164069-1 | T233668-01 | Total/NA | Water | 3510C | |
| 570-164069-2 | T233668-02 | Total/NA | Water | 3510C | |
| MB 570-392271/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 570-392271/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 570-392271/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 394262

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-164069-1 | T233668-01 | Total/NA | Water | 8015B | 392271 |
| 570-164069-2 | T233668-02 | Total/NA | Water | 8015B | 392271 |
| MB 570-392271/1-A | Method Blank | Total/NA | Water | 8015B | 392271 |
| LCS 570-392271/2-A | Lab Control Sample | Total/NA | Water | 8015B | 392271 |
| LCSD 570-392271/3-A | Lab Control Sample Dup | Total/NA | Water | 8015B | 392271 |

# Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

## Client Sample ID: T233668-01

**Lab Sample ID: 570-164069-1**

**Date Collected: 12/07/23 16:00**

**Matrix: Water**

**Date Received: 12/11/23 13:17**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3510C | | | 248 mL | 2.5 mL | 392271 | 12/13/23 12:17 | UFLU | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 1 mL | 1 mL | 394262 | 12/19/23 19:09 | SP9M | EET CAL 4 |
| | Instrument ID: GC70B | | | | | | | | | |

## Client Sample ID: T233668-02

**Lab Sample ID: 570-164069-2**

**Date Collected: 12/07/23 16:10**

**Matrix: Water**

**Date Received: 12/11/23 13:17**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3510C | | | 249.2 mL | 2.5 mL | 392271 | 12/13/23 12:17 | UFLU | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 1 mL | 1 mL | 394262 | 12/19/23 19:33 | SP9M | EET CAL 4 |
| | Instrument ID: GC70B | | | | | | | | | |

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Accreditation/Certification Summary

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

## Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Oregon | NELAP | 4175 | 02-02-24 |

# Method Summary

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | EET CAL 4 |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | EET CAL 4 |

**Protocol References:**

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

**Laboratory References:**

EET CAL 4 = Eurofins Calscience  Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Sample Summary

Client: SunStar Laboratories Inc
Project/Site: T233668

Job ID: 570-164069-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 570-164069-1 | T233668-01 | Water | 12/07/23 16:00 | 12/11/23 13:17 |
| 570-164069-2 | T233668-02 | Water | 12/07/23 16:10 | 12/11/23 13:17 |

# SUBCONTRACT ORDER

**SunStar Laboratories, Inc.**

**T233668**

Loc: 570
**164069**

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

Eurofins Calscience (Tustin)
2841 Dow Ave, Suite 100
Tustin, CA 92780
Phone :(949) 261-1022
Fax: N/A

| Analysis | Due | Expires | Laboratory ID | Comments |
|---|---|---|---|---|
| **Sample ID: T233668-01** | **Water** | **Sampled: 12/07/23 16:00** | 1 | |
| Misc Water Testing #1 | 12/26/23 00:00 | 06/04/24 16:00 | | 8015M- Therminol |
| *Containers Supplied:* | | | | |
| **Sample ID: T233668-02** | **Water** | **Sampled: 12/07/23 16:10** | 2 | |
| Misc Water Testing #1 | 12/26/23 00:00 | 06/04/24 16:10 | | 8015M- Therminol |
| *Containers Supplied:* | | | | |

570-164069 Chain of Custody

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 12-1-23 13:17 | [signature] EC | 12-1-23 13:17 |
| Released By | Date | Received By | Date |
| | | 5.6/5.5 SC12 | |

# Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-164069-1

**Login Number: 164069**
**List Number: 1**
**Creator: Vitente, Precy**

**List Source: Eurofins Calscience**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| 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. | True | |
| 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 | |

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**WORK ORDER**

**T233668**

| | | | |
|---|---|---|---|
| **Client:** | **Northstar Environmental Remediation** | **Project Manager:** | **Jeff Lee** |
| **Project:** | **Genesis Solar LTUs & Ponds** | **Project Number:** | **196-004-05** |

**Report To:**
Northstar Environmental Remediation
Arlin Brewster
26225 Enterprise Court
Lake Forest, CA 92630

| | | | |
|---|---|---|---|
| Date Due: | 12/27/23 00:00 (11 day TAT) | | |
| Received By: | Paul Berner | Date Received: | 12/08/23 12:45 |
| Logged In By: | Jeff Lee | Date Logged In: | 12/08/23 15:42 |

Samples Received at: **1.1°C**

| | | | |
|---|---|---|---|
| Custody Seals | No | Received On Ice | Yes |
| Containers Intact | Yes | | |
| COC/Labels Agree | Yes | | |
| Preservation Confirı | Yes | | |

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **T233668-01 North Pond [Water] Sampled 12/07/23 16:00 (GMT-08:00) Pacific Time (US &** | | | | |
| 1664 | 12/15/23 15:00 | 5 | 01/04/24 16:00 | Oil & Grease |
| 200.7 | 12/15/23 15:00 | 5 | 06/04/24 16:00 | Ca,Cu,Na,K,Fe,Mg (F.F) |
| 200.8 | 12/15/23 15:00 | 5 | 06/04/24 16:00 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F) |
| 300.0 - F, Cl, Br, SO4 | 12/15/23 15:00 | 5 | 01/04/24 16:00 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/15/23 15:00 | 5 | 12/09/23 16:00 | Nitrate |
| 7470/71 Hg | 12/15/23 15:00 | 5 | 03/06/24 16:00 | |
| Conductivity | 12/15/23 15:00 | 5 | 01/04/24 16:00 | |
| pH water SM 4500-H+B | 12/13/23 15:00 | 3 | 12/08/23 16:00 | |
| TDS-160.1 | 12/15/23 15:00 | 5 | 12/14/23 16:00 | |
| **T233668-02 South Pond [Water] Sampled 12/07/23 16:10 (GMT-08:00) Pacific Time (US &** | | | | |
| 1664 | 12/15/23 15:00 | 5 | 01/04/24 16:10 | Oil & Grease |
| 200.7 | 12/15/23 15:00 | 5 | 06/04/24 16:10 | Ca,Cu,Na,K,Fe,Mg (F.F) |
| 200.8 | 12/15/23 15:00 | 5 | 06/04/24 16:10 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F) |
| 300.0 - F, Cl, Br, SO4 | 12/15/23 15:00 | 5 | 01/04/24 16:10 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/15/23 15:00 | 5 | 12/09/23 16:10 | Nitrate |
| 7470/71 Hg | 12/15/23 15:00 | 5 | 03/06/24 16:10 | |
| Conductivity | 12/15/23 15:00 | 5 | 01/04/24 16:10 | |
| pH water SM 4500-H+B | 12/13/23 15:00 | 3 | 12/08/23 16:10 | |
| TDS-160.1 | 12/15/23 15:00 | 5 | 12/14/23 16:10 | |

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**WORK ORDER**

**T233668**

**Client:** Northstar Environmental Remediation
**Project:** Genesis Solar LTUs & Ponds
**Project Manager:** Jeff Lee
**Project Number:** 196-004-05

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **T233668-03 Field Blank [Water] Sampled 12/07/23 00:00 (GMT-08:00) Pacific Time (US &** | | | | **HOLD** |
| [NO ANALYSES] | | | | |
| **T233668-04 Trip Blank [Water] Sampled 12/07/23 00:00 (GMT-08:00) Pacific Time (US &** | | | | **HOLD** |
| [NO ANALYSES] | | | | |
| **Eurofins Calscience (Tustin)** | | | | |
| **T233668-01 North Pond [Water] Sampled 12/07/23 16:00 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 10 | 06/04/24 16:00 | 8015M- Therminol |
| **T233668-02 South Pond [Water] Sampled 12/07/23 16:10 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 10 | 06/04/24 16:10 | 8015M- Therminol |

Reviewed By

Date

# APPENDIX C

## LABORATORY ANALYTICAL RESULTS

## DETECTION MONITORING WELLS

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

28 December 2023

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 12/08/23 12:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Lee
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| DM-1 | T233669-01 | Water | 12/07/23 17:55 | 12/08/23 12:45 |
| DM-2 | T233669-02 | Water | 12/07/23 19:05 | 12/08/23 12:45 |
| DM-3 | T233669-03 | Water | 12/07/23 16:40 | 12/08/23 12:45 |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DETECTIONS SUMMARY

**Sample ID:** DM-1 **Laboratory ID:** T233669-01

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Barium | **29** | 25 | ug/l | 200.8 | FILT |
| Calcium | **230** | 50 | mg/l | EPA 200.7 | FILT |
| Magnesium | **65** | 10 | mg/l | EPA 200.7 | FILT |
| Sodium | **4500** | 50 | mg/l | EPA 200.7 | FILT |
| Total Dissolved Solids | **10000** | 10 | mg/l | TDS by SM2540C | |
| pH | **8.2** | 0.10 | pH Units | SM 4500-H+B | |
| pH Temperature °C | **22** | | pH Units | SM 4500-H+B | |
| Specific Conductance (EC) | **18400** | 10.0 | mho/cm @25° | SM2510b mod. | |
| Chloride | **5290** | 500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | **1830** | 500 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | **7.18** | 0.500 | mg/l | EPA 300.0 | O-04 |
| Nitrate as N | **1.62** | 0.200 | mg/l | EPA 300.0 | O-04 |

**Sample ID:** DM-2 **Laboratory ID:** T233669-02

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Barium | **40** | 25 | ug/l | 200.8 | FILT |
| Calcium | **240** | 50 | mg/l | EPA 200.7 | FILT |
| Magnesium | **66** | 10 | mg/l | EPA 200.7 | FILT |
| Sodium | **4300** | 50 | mg/l | EPA 200.7 | FILT |
| Total Dissolved Solids | **11000** | 10 | mg/l | TDS by SM2540C | |
| pH | **7.9** | 0.10 | pH Units | SM 4500-H+B | |
| pH Temperature °C | **22** | | pH Units | SM 4500-H+B | |
| Specific Conductance (EC) | **18900** | 10.0 | mho/cm @25° | SM2510b mod. | |
| Chloride | **5390** | 500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | **1930** | 500 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | **6.21** | 0.500 | mg/l | EPA 300.0 | O-04 |
| Nitrate as N | **1.40** | 0.200 | mg/l | EPA 300.0 | O-04 |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

**Sample ID:** DM-3 **Laboratory ID:** T233669-03

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Calcium | **220** | 50 | mg/l | EPA 200.7 | FILT |
| Magnesium | **60** | 10 | mg/l | EPA 200.7 | FILT |
| Sodium | **4100** | 50 | mg/l | EPA 200.7 | FILT |
| pH | **8.0** | 0.10 | pH Units | SM 4500-H+B | O-09 |
| Total Dissolved Solids | **10000** | 10 | mg/l | TDS by SM2540C | |
| pH Temperature °C | **21** | | pH Units | SM 4500-H+B | O-09 |
| Specific Conductance (EC) | **18100** | 10.0 | mho/cm @25°C | SM2510b mod. | |
| Chloride | **5300** | 500 | mg/l | EPA 300.0 | |
| Sulfate as SO4 | **1940** | 500 | mg/l | EPA 300.0 | |
| Nitrate as NO3 | **2.65** | 0.500 | mg/l | EPA 300.0 | O-04 |
| Nitrate as N | **0.600** | 0.200 | mg/l | EPA 300.0 | O-04 |

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DM-1

### T233669-01 (Water)

### SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Metals by EPA 200 Series Methods** | | | | | | | | | |
| Copper | ND | 0.50 | mg/l | 100 | 23L0201 | 12/11/23 | 12/15/23 | EPA 200.7 | FILT, R-01 |
| **Calcium** | **230** | 50 | " | " | " | " | " | " | FILT |
| Iron | ND | 20 | " | " | " | " | " | " | FILT, R-01 |
| **Magnesium** | **65** | 10 | " | " | " | " | " | " | FILT |
| Potassium | ND | 50 | " | " | " | " | " | " | FILT, R-01 |
| **Sodium** | **4500** | 50 | " | " | " | " | " | " | FILT |
| Antimony | ND | 25 | ug/l | 50 | 23L0203 | 12/11/23 | 12/14/23 | 200.8 | FILT, R-01 |
| Arsenic | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Barium** | **29** | 25 | " | " | " | " | " | " | FILT |
| Cadmium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Chromium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Cobalt | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Lead | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Nickel | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Selenium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Zinc | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Cold Vapor Extraction EPA 7470/7471** | | | | | | | | | |
| Mercury | ND | 1.0 | ug/l | 1 | 23L0186 | 12/11/23 | 12/14/23 | EPA 7470A Water | |
| **Conventional Chemistry Parameters by APHA/EPA/ASTM Methods** | | | | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | 1 | 23L0176 | 12/08/23 | 12/12/23 | EPA 1664B | |
| **Specific Conductance (EC)** | **18400** | 10.0 | umho/cm @25°C | " | 23L0170 | 12/08/23 | 12/13/23 | SM2510b mod. | |
| **pH** | **8.2** | 0.10 | pH Units | " | 23L0169 | 12/08/23 | 12/13/23 | SM 4500-H+B | |
| **pH Temperature °C** | **22** | | " | " | " | " | " | " | |
| **Total Dissolved Solids** | **10000** | 10 | mg/l | " | 23L0089 | 12/11/23 | 12/13/23 | TDS by SM2540C | |

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Jeff Lee, Project Manager

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DM-1

### T233669-01 (Water)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Anions by EPA Method 300.0** | | | | | | | | | |
| **Chloride** | **5290** | 500 | mg/l | 100 | 23L0163 | 12/08/23 | 12/12/23 | EPA 300.0 | |
| **Sulfate as SO4** | **1830** | 500 | " | " | " | " | " | " | |
| **Nitrate as NO3** | **7.18** | 0.500 | " | 1 | " | " | 12/11/23 | " | O-04 |
| **Nitrate as N** | **1.62** | 0.200 | " | " | " | " | " | " | O-04 |

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Jeff Lee, Project Manager

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DM-2

### T233669-02 (Water)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Metals by EPA 200 Series Methods** | | | | | | | | | |
| Copper | ND | 0.50 | mg/l | 100 | 23L0201 | 12/11/23 | 12/15/23 | EPA 200.7 | FILT, R-01 |
| **Calcium** | **240** | 50 | " | " | " | " | " | " | FILT |
| Iron | ND | 20 | " | " | " | " | " | " | FILT, R-01 |
| **Magnesium** | **66** | 10 | " | " | " | " | " | " | FILT |
| Potassium | ND | 50 | " | " | " | " | " | " | FILT, R-01 |
| **Sodium** | **4300** | 50 | " | " | " | " | " | " | FILT |
| Antimony | ND | 25 | ug/l | 50 | 23L0203 | 12/11/23 | 12/14/23 | 200.8 | FILT, R-01 |
| Arsenic | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Barium** | **40** | 25 | " | " | " | " | " | " | FILT |
| Cadmium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Chromium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Cobalt | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Lead | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Nickel | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Selenium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Zinc | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Cold Vapor Extraction EPA 7470/7471** | | | | | | | | | |
| Mercury | ND | 1.0 | ug/l | 1 | 23L0186 | 12/11/23 | 12/14/23 | EPA 7470A Water | |
| **Conventional Chemistry Parameters by APHA/EPA/ASTM Methods** | | | | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | 1 | 23L0176 | 12/08/23 | 12/12/23 | EPA 1664B | |
| **Specific Conductance (EC)** | **18900** | 10.0 | umho/cm @25°C | " | 23L0170 | 12/08/23 | 12/13/23 | SM2510b mod. | |
| **pH** | **7.9** | 0.10 | pH Units | " | 23L0169 | 12/08/23 | 12/13/23 | SM 4500-H+B | |
| **pH Temperature °C** | **22** | | " | " | " | " | " | " | |
| **Total Dissolved Solids** | **11000** | 10 | mg/l | " | 23L0089 | 12/11/23 | 12/13/23 | TDS by SM2540C | |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DM-2

### T233669-02 (Water)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Anions by EPA Method 300.0** | | | | | | | | | |
| **Chloride** | **5390** | 500 | mg/l | 100 | 23L0163 | 12/08/23 | 12/12/23 | EPA 300.0 | |
| **Sulfate as SO4** | **1930** | 500 | " | " | " | " | " | " | |
| **Nitrate as NO3** | **6.21** | 0.500 | " | 1 | " | " | 12/11/23 | " | O-04 |
| **Nitrate as N** | **1.40** | 0.200 | " | " | " | " | " | " | O-04 |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DM-3

### T233669-03 (Water)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Metals by EPA 200 Series Methods** | | | | | | | | | |
| Copper | ND | 0.50 | mg/l | 100 | 23L0201 | 12/11/23 | 12/15/23 | EPA 200.7 | FILT, R-01 |
| **Calcium** | **220** | 50 | " | " | " | " | " | " | FILT |
| Iron | ND | 20 | " | " | " | " | " | " | FILT, R-01 |
| Potassium | ND | 50 | " | " | " | " | " | " | FILT, R-01 |
| **Magnesium** | **60** | 10 | " | " | " | " | " | " | FILT |
| **Sodium** | **4100** | 50 | " | " | " | " | " | " | FILT |
| Antimony | ND | 25 | ug/l | 50 | 23L0203 | 12/11/23 | 12/14/23 | 200.8 | FILT, R-01 |
| Arsenic | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Barium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Cadmium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Chromium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Cobalt | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Lead | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Nickel | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Selenium | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| Zinc | ND | 25 | " | " | " | " | " | " | FILT, R-01 |
| **Cold Vapor Extraction EPA 7470/7471** | | | | | | | | | |
| Mercury | ND | 1.0 | ug/l | 1 | 23L0186 | 12/11/23 | 12/14/23 | EPA 7470A Water | |
| **Conventional Chemistry Parameters by APHA/EPA/ASTM Methods** | | | | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | 1 | 23L0176 | 12/08/23 | 12/12/23 | EPA 1664B | |
| **Specific Conductance (EC)** | **18100** | 10.0 | umho/cm @25°C | " | 23L0170 | 12/08/23 | 12/13/23 | SM2510b mod. | |
| **pH** | **8.0** | 0.10 | pH Units | " | 23L0169 | 12/08/23 | 12/13/23 | SM 4500-H+B | O-09 |
| **pH Temperature °C** | **21** | | " | " | " | " | " | " | O-09 |
| **Total Dissolved Solids** | **10000** | 10 | mg/l | " | 23L0089 | 12/11/23 | 12/13/23 | TDS by SM2540C | |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## DM-3

**T233669-03 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **SunStar Laboratories, Inc.** | | | | | | | | | |
| **Anions by EPA Method 300.0** | | | | | | | | | |
| **Chloride** | **5300** | 500 | mg/l | 100 | 23L0163 | 12/08/23 | 12/12/23 | EPA 300.0 | |
| **Sulfate as SO4** | **1940** | 500 | " | " | " | " | " | " | |
| **Nitrate as NO3** | **2.65** | 0.500 | " | 1 | " | " | 12/11/23 | " | O-04 |
| **Nitrate as N** | **0.600** | 0.200 | " | " | " | " | " | " | O-04 |

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Jeff Lee, Project Manager

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| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## 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 23L0201 - EPA 3010A** | | | | | | | | | | |
| **Blank (23L0201-BLK1)** | | | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | ND | 0.005 | mg/l | | | | | | | |
| Aluminum | ND | 0.10 | " | | | | | | | |
| Calcium | ND | 0.50 | " | | | | | | | |
| Iron | ND | 0.20 | " | | | | | | | |
| Magnesium | ND | 0.10 | " | | | | | | | |
| Potassium | ND | 0.50 | " | | | | | | | |
| Sodium | ND | 0.50 | " | | | | | | | |
| **LCS (23L0201-BS1)** | | | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | 0.545 | 0.005 | mg/l | 0.500 | | 109 | 85-115 | | | |
| **Matrix Spike (23L0201-MS1)** | | **Source: T233668-01** | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | 0.604 | 0.50 | mg/l | 0.500 | ND | 121 | 70-130 | | | QM-07 |
| **Matrix Spike Dup (23L0201-MSD1)** | | **Source: T233668-01** | | Prepared: 12/11/23 Analyzed: 12/15/23 | | | | | | |
| Copper | 0.475 | 0.50 | mg/l | 0.500 | ND | 95.1 | 70-130 | 23.7 | 30 | QM-07, R-01 |
| **Batch 23L0203 - EPA 3010A** | | | | | | | | | | |
| **Blank (23L0203-BLK1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Antimony | ND | 0.50 | ug/l | | | | | | | |
| Arsenic | ND | 0.50 | " | | | | | | | |
| Barium | 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 | " | | | | | | | |

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Jeff Lee, Project Manager

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|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## 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 23L0203 - EPA 3010A** | | | | | | | | | | |
| **LCS (23L0203-BS1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Arsenic | 24.6 | 0.50 | ug/l | 25.0 | | 98.2 | 85-115 | | | |
| Barium | 24.0 | 0.50 | " | 25.0 | | 96.0 | 85-115 | | | |
| Cadmium | 24.3 | 0.50 | " | 25.0 | | 97.1 | 85-115 | | | |
| Chromium | 22.1 | 0.50 | " | 25.0 | | 88.2 | 85-115 | | | |
| Lead | 24.1 | 0.50 | " | 25.0 | | 96.6 | 85-115 | | | |
| **Matrix Spike (23L0203-MS1)** | | **Source: T233668-01** | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Arsenic | 416 | 25 | ug/l | 25.0 | 415 | 4.00 | 70-130 | | | QM-07 |
| Barium | 128 | 25 | " | 25.0 | 103 | 98.0 | 70-130 | | | |
| Cadmium | 28.0 | 25 | " | 25.0 | 5.50 | 90.0 | 70-130 | | | |
| Chromium | 32.0 | 25 | " | 25.0 | 7.00 | 100 | 70-130 | | | |
| Lead | 27.5 | 25 | " | 25.0 | ND | 110 | 70-130 | | | |
| **Matrix Spike Dup (23L0203-MSD1)** | | **Source: T233668-01** | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Arsenic | 420 | 25 | ug/l | 25.0 | 415 | 18.0 | 70-130 | 0.838 | 20 | QM-07 |
| Barium | 127 | 25 | " | 25.0 | 103 | 96.0 | 70-130 | 0.393 | 20 | |
| Cadmium | 27.0 | 25 | " | 25.0 | 5.50 | 86.0 | 70-130 | 3.64 | 20 | |
| Chromium | 33.0 | 25 | " | 25.0 | 7.00 | 104 | 70-130 | 3.08 | 20 | |
| Lead | 26.0 | 25 | " | 25.0 | ND | 104 | 70-130 | 5.61 | 20 | |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## Cold Vapor Extraction EPA 7470/7471 - Quality Control

## SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 23L0186 - EPA 7470A Water** | | | | | | | | | | |
| **Blank (23L0186-BLK1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | ND | 1.0 | ug/l | | | | | | | |
| **LCS (23L0186-BS1)** | | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | 6.87 | 1.0 | ug/l | 7.50 | | 91.6 | 80-120 | | | |
| **Matrix Spike (23L0186-MS1)** | **Source: T233642-01** | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | 6.56 | 1.0 | ug/l | 7.50 | 0.199 | 84.8 | 80-120 | | | |
| **Matrix Spike Dup (23L0186-MSD1)** | **Source: T233642-01** | | | Prepared: 12/11/23 Analyzed: 12/14/23 | | | | | | |
| Mercury | 6.49 | 1.0 | ug/l | 7.50 | 0.199 | 83.9 | 80-120 | 1.05 | 20 | |

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Lake Forest, California 92630
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949.297.5027 Fax

| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## 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 23L0089 - General Preparation** | | | | | | | | | | |
| **Blank (23L0089-BLK1)** | | | | Prepared: 12/06/23 Analyzed: 12/13/23 | | | | | | |
| Total Dissolved Solids | ND | 10 | mg/l | | | | | | | |
| **LCS (23L0089-BS1)** | | | | Prepared: 12/06/23 Analyzed: 12/13/23 | | | | | | |
| Total Dissolved Solids | 505 | 10 | mg/l | 500 | | 101 | 80-120 | | | |
| **Duplicate (23L0089-DUP1)** | | **Source: T233620-02** | | Prepared: 12/06/23 Analyzed: 12/13/23 | | | | | | |
| Total Dissolved Solids | 1230 | 10 | mg/l | | 1240 | | | 0.647 | 20 | |
| **Batch 23L0169 - General Preparation** | | | | | | | | | | |
| **Duplicate (23L0169-DUP1)** | | **Source: T233669-01** | | Prepared: 12/08/23 Analyzed: 12/13/23 | | | | | | |
| pH | 9.01 | 0.10 | pH Units | | 8.16 | | | 9.90 | 10 | |
| pH Temperature °C | 21.9 | | " | | 21.6 | | | 1.38 | 200 | |
| **Batch 23L0170 - General Preparation** | | | | | | | | | | |
| **Duplicate (23L0170-DUP1)** | | **Source: T233668-01** | | Prepared: 12/08/23 Analyzed: 12/13/23 | | | | | | |
| Specific Conductance (EC) | 99900 | 10.0 | umho/cm @25°C | | 100000 | | | 0.200 | 15 | |
| **Batch 23L0176 - General Preparation** | | | | | | | | | | |
| **Blank (23L0176-BLK1)** | | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Oil & Grease | ND | 5.00 | mg/l | | | | | | | |
| **LCS (23L0176-BS1)** | | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Oil & Grease | 44.1 | 5.00 | mg/l | 53.1 | | 83.1 | 78-114 | | | |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## 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 23L0176 - General Preparation** | | | | | | | | | | |
| **LCS Dup (23L0176-BSD1)** | | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Oil & Grease | 43.0 | 5.00 | mg/l | 53.1 | | 81.0 | 78-114 | 2.53 | 20 | |

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Jeff Lee, Project Manager

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| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## Anions by EPA Method 300.0 - Quality Control

## SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 23L0163 - General Preparation** | | | | | | | | | | |
| **Blank (23L0163-BLK1)** | | | | Prepared: 12/08/23 Analyzed: 12/11/23 | | | | | | |
| Fluoride | ND | 0.500 | mg/l | | | | | | | |
| Chloride | ND | 5.00 | " | | | | | | | |
| Sulfate as SO4 | ND | 5.00 | " | | | | | | | |
| Nitrate as NO3 | ND | 0.500 | " | | | | | | | |
| Nitrate as N | ND | 0.200 | " | | | | | | | |
| **LCS (23L0163-BS1)** | | | | Prepared: 12/08/23 Analyzed: 12/11/23 | | | | | | |
| Fluoride | 27.6 | 0.500 | mg/l | 25.0 | | 111 | 75-125 | | | |
| Chloride | 25.6 | 5.00 | " | 25.0 | | 103 | 75-125 | | | |
| Sulfate as SO4 | 25.9 | 5.00 | " | 25.0 | | 104 | 75-125 | | | |
| Nitrate as NO3 | 24.7 | 0.500 | " | 25.0 | | 98.8 | 75-125 | | | |
| **Matrix Spike (23L0163-MS1)** | **Source: T233669-01** | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Fluoride | 7.96 | 0.500 | mg/l | 25.0 | ND | 31.8 | 75-125 | | | QM-05 |
| Chloride | 5020 | 500 | " | 25.0 | 5290 | NR | 75-125 | | | QM-05 |
| Sulfate as SO4 | 1760 | 500 | " | 25.0 | 1830 | NR | 75-125 | | | QM-05 |
| Nitrate as NO3 | 30.7 | 0.500 | " | 25.0 | 7.18 | 94.1 | 75-125 | | | |
| **Matrix Spike Dup (23L0163-MSD1)** | **Source: T233669-01** | | | Prepared: 12/08/23 Analyzed: 12/12/23 | | | | | | |
| Fluoride | 7.90 | 0.500 | mg/l | 25.0 | ND | 31.6 | 75-125 | 0.757 | 20 | QM-05 |
| Chloride | 4880 | 500 | " | 25.0 | 5290 | NR | 75-125 | 2.91 | 20 | QM-05 |
| Sulfate as SO4 | 1710 | 500 | " | 25.0 | 1830 | NR | 75-125 | 2.79 | 20 | QM-05 |
| Nitrate as NO3 | 30.3 | 0.500 | " | 25.0 | 7.18 | 92.4 | 75-125 | 1.34 | 20 | |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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| | | |
|---|---|---|
| Northstar Environmental Remediation | Project: Genesis Solar Groundwater | |
| 26225 Enterprise Court | Project Number: 196-004-06 | **Reported:** |
| Lake Forest CA, 92630 | Project Manager: Arlin Brewster | 12/28/23 12:04 |

## Notes and Definitions

| | |
|---|---|
| R-01 | The Reporting Limit has been raised to account for dilution necessary due to matrix interference. |
| QM-07 | The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. |
| 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. |
| O-09 | The sample was analyzed outside the EPA recommended holding time of 24 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 |

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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aboratories, Inc.
mmercentre Dr
st, CA 92630
020

# Chain of Custody Record

nstar Environmental Remediation _____ Date: 12/7/2023 Page: 1 of _____
225 Enterprise Court, Lake Forest, CA 92630 _____ Project Name: Genesis Solar Groundwater _____
-274-1719 _____ Fax: _____ Collector: Arlin Brewster _____ Client Project #: 196-004-06 _
ager: Arlin Brewster _____ Batch #: T233669 EDF #: T10000006093 _____

| mple ID | Date Sampled | Time | Sample Type | Container Type | 200.7 - Dissolved Metals: Ca, Cu, Na, K, Fe, Mg (FIELD FILTERED) | 200.8 - Dissolved Metals: Sb, As, Ba, Cd, Cr, Co, Pb, Ni, Se, Zn (F.F.) | 300.0 - Chloride, Nitrate, Sulfate | 1664 - Oil and Grease | 7470A - Mercury | 9040 - pH | SM2510B - Conductivity, Specific | SM2540C - Total Dis. Solids | 8015M - Therminol (Subcontract) | Deuterium, Oxygen-18 (Subcont.) | 300.0 - Fluoride | Laboratory ID # | Comments/Preservati |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DM-1 | 12/7/23 | 1755 | W | Various | X | X | X | X | X | X | X | X | X | X | | | |
| DM-2 | ↓ | 1905 | W | Various | X | X | X | X | X | X | X | X | X | X | | | |
| DM-3 | ↓ | 1640 | W | Various | X | X | X | X | X | X | X | X | X | X | | | |

y: (signature) Date / Time
12/8/23 @ 1745

Received by: (signature) Date / Time
Paul Dr 12/8/23 12:45

y: (signature) Date / Time

Received by: (signature) Date / Time

y: (signature) Date / Time

Received by: (signature) Date / Time

Total # of containers 21
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 1.1°

Notes
** Deuterium & Oxyg
subcontract has 10 d

Reporting limits mus
previous repor

**Turn around time: Standard ****

Instructions: Disposal @ $2.00 each ____ Return to client ____ Pickup ____

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

Rev. 02C Date 11/23
Receiving Form 001A

# SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #: T233669

Client Name: Northstar Environmental Remediation Project: Genesis Solar Groundwater

Delivered by: ☒ Client ☐ SunStar Courier ☐ GLS ☐ FedEx ☐ Other

If Courier, Received by: _____ Date/Time Courier Received: _____

Lab Received by: Paul Date/Time Lab Received: 12.8.23 1245

Total number of coolers received: 1 Thermometer ID: SC-1 Calibration due: 11/17/2024

| | | | | |
|---|---|---|---|---|
| Temperature: Cooler #1 | 1.0 °C +/- the CF (+ 0.1°C) | = | 1.1 | °C corrected temperature |
| Temperature: Cooler #2 | °C +/- the CF (+ 0.1°C) | = | | °C corrected temperature |
| Temperature: Cooler #3 | °C +/- the CF (+ 0.1°C) | = | | °C corrected temperature |

| | | |
|---|---|---|
| **Temperature criteria = ≤ 6°C (no frozen containers)** | Within criteria? | ☒ **Yes** ☐ **No** ☐ **N/A** |
| **If NO:** | | |
| Samples received on ice? | ☐ Yes | ☐ **No → Complete Non-Conformance Sheet** |
| If on ice, samples received same day collected? | ☐ Yes → Acceptable | ☐ **No → Complete Non-Conformance Sheet** |

| | | | |
|---|---|---|---|
| Custody seals intact on cooler/sample | ☐ Yes | ☐ No* | ☒ N/A |
| Sample containers intact | ☒ Yes | ☐ No* | |
| 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 analyses requested | ☒ Yes | ☐ No* | ☐ N/A |
| Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times | ☒ **Yes** | ☐ **No*** | |

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date: DB 12.8.23

**Comments:**



(949) 297-5020 ■ www.sunstarlabs.com ■ 25712 Commercentre Drive ■ Lake Forest, CA 92630

eurofins | Environment Testing

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Jeff Lee
SunStar Laboratories Inc
25712 Commercentre Drive
Lake Forest, California 92630

Generated 12/22/2023 11:29:35 AM

## JOB DESCRIPTION

T233669

## JOB NUMBER

570-164075-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

# Eurofins Calscience

## Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

## Authorization

Authorized for release by
Sandy Tat, Project Manager I
Sandy.Tat@et.eurofinsus.com
(714)895-5494

Generated
12/22/2023 11:29:35 AM

# Table of Contents

# Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T233669

Job ID: 570-164075-1

## 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 |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| 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) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| 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) |
| TNTC | Too Numerous To Count |

**Job Narrative**
**570-164075-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

**Receipt**
The samples were received on 12/11/2023 1:17 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.5°C

**Diesel Range Organics**
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: T233669

Job ID: 570-164075-1

## Client Sample ID: T233669-01 — Lab Sample ID: 570-164075-1

No Detections.

## Client Sample ID: T233669-02 — Lab Sample ID: 570-164075-2

No Detections.

## Client Sample ID: T233669-03 — Lab Sample ID: 570-164075-3

No Detections.

This Detection Summary does not include radiochemical test results.

## Method: SW846 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: T233669-01**
**Date Collected: 12/07/23 17:55**
**Date Received: 12/11/23 13:17**

**Lab Sample ID: 570-164075-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/20/23 17:06 | 1 |
| 1,1'-Biphenyl | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/20/23 17:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *92* | | *53 - 151* | *12/13/23 12:17* | *12/20/23 17:06* | *1* |

**Client Sample ID: T233669-02**
**Date Collected: 12/07/23 19:05**
**Date Received: 12/11/23 13:17**

**Lab Sample ID: 570-164075-2**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/20/23 17:31 | 1 |
| 1,1'-Biphenyl | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/20/23 17:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *88* | | *53 - 151* | *12/13/23 12:17* | *12/20/23 17:31* | *1* |

**Client Sample ID: T233669-03**
**Date Collected: 12/07/23 16:40**
**Date Received: 12/11/23 13:17**

**Lab Sample ID: 570-164075-3**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 99 | | ug/L | | 12/13/23 12:17 | 12/20/23 17:55 | 1 |
| 1,1'-Biphenyl | ND | | 99 | | ug/L | | 12/13/23 12:17 | 12/20/23 17:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *84* | | *53 - 151* | *12/13/23 12:17* | *12/20/23 17:55* | *1* |

# Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T233669

Job ID: 570-164075-1

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

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) |
|---|---|---|
| **Lab Sample ID** | **Client Sample ID** | **OTCSN1 (53-151)** |
| 570-164075-1 | T233669-01 | 92 |
| 570-164075-2 | T233669-02 | 88 |
| 570-164075-3 | T233669-03 | 84 |
| LCS 570-392271/2-A | Lab Control Sample | 76 |
| LCSD 570-392271/3-A | Lab Control Sample Dup | 79 |
| MB 570-392271/1-A | Method Blank | 80 |

**Surrogate Legend**

OTCSN = n-Octacosane (Surr)

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

**Lab Sample ID: MB 570-392271/1-A**
**Matrix: Water**
**Analysis Batch: 394262**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 392271**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 13:50 | 1 |
| 1,1'-Biphenyl | ND | | 100 | | ug/L | | 12/13/23 12:17 | 12/19/23 13:50 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *80* | | *53 - 151* | *12/13/23 12:17* | *12/19/23 13:50* | *1* |

**Lab Sample ID: LCS 570-392271/2-A**
**Matrix: Water**
**Analysis Batch: 394262**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 392271**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | | | 1000 | 1198 | | ug/L | | 120 | 57 - 120 | | |
| 1,1'-Biphenyl | | | 1000 | 867.9 | | ug/L | | 87 | 45 - 120 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *76* | | *53 - 151* |

**Lab Sample ID: LCSD 570-392271/3-A**
**Matrix: Water**
**Analysis Batch: 394262**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 392271**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene, 1,1'-oxybis- | | | 1000 | 1204 | | ug/L | | 120 | 57 - 120 | 0 | 20 |
| 1,1'-Biphenyl | | | 1000 | 872.4 | | ug/L | | 87 | 45 - 120 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *79* | | *53 - 151* |

# QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T233669

Job ID: 570-164075-1

## GC Semi VOA

### Prep Batch: 392271

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-164075-1 | T233669-01 | Total/NA | Water | 3510C | |
| 570-164075-2 | T233669-02 | Total/NA | Water | 3510C | |
| 570-164075-3 | T233669-03 | Total/NA | Water | 3510C | |
| MB 570-392271/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 570-392271/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 570-392271/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 394262

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 570-392271/1-A | Method Blank | Total/NA | Water | 8015B | 392271 |
| LCS 570-392271/2-A | Lab Control Sample | Total/NA | Water | 8015B | 392271 |
| LCSD 570-392271/3-A | Lab Control Sample Dup | Total/NA | Water | 8015B | 392271 |

### Analysis Batch: 394852

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-164075-1 | T233669-01 | Total/NA | Water | 8015B | 392271 |
| 570-164075-2 | T233669-02 | Total/NA | Water | 8015B | 392271 |
| 570-164075-3 | T233669-03 | Total/NA | Water | 8015B | 392271 |

# Lab Chronicle

Client: SunStar Laboratories Inc
Job ID: 570-164075-1
Project/Site: T233669

## Client Sample ID: T233669-01
**Lab Sample ID: 570-164075-1**
**Date Collected: 12/07/23 17:55**
**Matrix: Water**
**Date Received: 12/11/23 13:17**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3510C | | | 247.6 mL | 2.5 mL | 392271 | 12/13/23 12:17 | UFLU | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 1 mL | 1 mL | 394852 | 12/20/23 17:06 | SP9M | EET CAL 4 |
| | Instrument ID: GC70B | | | | | | | | | |

## Client Sample ID: T233669-02
**Lab Sample ID: 570-164075-2**
**Date Collected: 12/07/23 19:05**
**Matrix: Water**
**Date Received: 12/11/23 13:17**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3510C | | | 250.1 mL | 2.5 mL | 392271 | 12/13/23 12:17 | UFLU | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 1 mL | 1 mL | 394852 | 12/20/23 17:31 | SP9M | EET CAL 4 |
| | Instrument ID: GC70B | | | | | | | | | |

## Client Sample ID: T233669-03
**Lab Sample ID: 570-164075-3**
**Date Collected: 12/07/23 16:40**
**Matrix: Water**
**Date Received: 12/11/23 13:17**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3510C | | | 253.8 mL | 2.5 mL | 392271 | 12/13/23 12:17 | UFLU | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 1 mL | 1 mL | 394852 | 12/20/23 17:55 | SP9M | EET CAL 4 |
| | Instrument ID: GC70B | | | | | | | | | |

**Laboratory References:**
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Accreditation/Certification Summary

Client: SunStar Laboratories Inc
Project/Site: T233669

Job ID: 570-164075-1

## Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Oregon | NELAP | 4175 | 02-02-24 |

# Method Summary

Client: SunStar Laboratories Inc
Project/Site: T233669

Job ID: 570-164075-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | EET CAL 4 |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | EET CAL 4 |

**Protocol References:**

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

**Laboratory References:**

EET CAL 4 = Eurofins Calscience  Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Sample Summary

Client: SunStar Laboratories Inc
Project/Site: T233669

Job ID: 570-164075-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 570-164075-1 | T233669-01 | Water | 12/07/23 17:55 | 12/11/23 13:17 |
| 570-164075-2 | T233669-02 | Water | 12/07/23 19:05 | 12/11/23 13:17 |
| 570-164075-3 | T233669-03 | Water | 12/07/23 16:40 | 12/11/23 13:17 |

Loc: 570
164075

# SUBCONTRACT ORDER

**SunStar Laboratories, Inc.**

**T233669**

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

Eurofins Calscience (Tustin)
2841 Dow Ave, Suite 100
Tustin, CA 92780
Phone :(949) 261-1022
Fax: N/A

| Analysis | Due | Expires | Laboratory ID | Comments |
|---|---|---|---|---|
| **Sample ID: T233669-01** | **Water** | **Sampled: 12/07/23 17:55** | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 06/04/24 17:55 | | 8015M- Therminol |
| *Containers Supplied:* | | | | |
| **Sample ID: T233669-02** | **Water** | **Sampled: 12/07/23 19:05** | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 06/04/24 19:05 | | 8015M- Therminol |
| *Containers Supplied:* | | | | |
| **Sample ID: T233669-03** | **Water** | **Sampled: 12/07/23 16:40** | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 06/04/24 16:40 | | 8015M- Therminol |
| *Containers Supplied:* | | | | |

570-164075 Chain of Custody

| Released By | Date | Received By | Date |
|---|---|---|---|
| | 12-11-23 13:17 | FC | 12-11-23 13:17 |
| Released By | Date | Received By | Date |
| | | | |

5.6/5.5 SCR

# Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-164075-1

**Login Number: 164075**
**List Number: 1**
**Creator: Vitente, Precy**

**List Source: Eurofins Calscience**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| 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. | True | |
| 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 | |

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| | | | | | |
|---|---|---|---|---|---|
| Lab #: | 902419 | Job #: | 57012 | IS-101168 | Co. Job#: |
| Sample Name: | T233669-01 | | | | Co. Lab#: |
| Company: | SunStar Laboratories, Inc | | | | |
| API/Well: | | | | | |
| Container: | 250ml Plastic Bottle | | | | |
| Field/Site Name: | T233669 | | | | |
| Location: | | | | | |
| Formation/Depth: | | | | | |
| Sampling Point: | | | | | |
| Date Sampled: | 12/07/2023 17:55 | Date Received: | 12/12/2023 | Date Reported: | 12/27/2023 |

| | | |
|---|---|---|
| $\delta D$ of water | ---------- | -69.8 ‰ relative to VSMOW |
| $\delta^{18}O$ of water | ---------- | -8.59 ‰ 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:

nd = not detected. na = not analyzed.
*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

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| | | | | | |
|---|---|---|---|---|---|
| Lab #: | 902420 | Job #: | 57012 | IS-101168 | Co. Job#: |
| Sample Name: | T233669-02 | | | | Co. Lab#: |
| Company: | SunStar Laboratories, Inc | | | | |
| API/Well: | | | | | |
| Container: | 250ml Plastic Bottle | | | | |
| Field/Site Name: | T233669 | | | | |
| Location: | | | | | |
| Formation/Depth: | | | | | |
| Sampling Point: | | | | | |
| Date Sampled: | 12/07/2023 19:05 | Date Received: | 12/12/2023 | Date Reported: | 12/27/2023 |

| | | |
|---|---|---|
| $\delta D$ of water | ---------- | -69.6 ‰ relative to VSMOW |
| $\delta^{18}O$ of water | ---------- | -8.49 ‰ 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:

nd = not detected. na = not analyzed.
*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

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| | | | | | |
|---|---|---|---|---|---|
| Lab #: | 902421 | Job #: | 57012 | IS-101168 | Co. Job#: |
| Sample Name: | T233669-03 | | | | Co. Lab#: |
| Company: | SunStar Laboratories, Inc | | | | |
| API/Well: | | | | | |
| Container: | 250ml Plastic Bottle | | | | |
| Field/Site Name: | T233669 | | | | |
| Location: | | | | | |
| Formation/Depth: | | | | | |
| Sampling Point: | | | | | |
| Date Sampled: | 12/07/2023 16:40 | Date Received: | 12/12/2023 | Date Reported: | 12/27/2023 |

| | | |
|---|---|---|
| $\delta D$ of water | ---------- | -71.5 ‰ relative to VSMOW |
| $\delta^{18}O$ of water | ---------- | -8.76 ‰ 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:

nd = not detected. na = not analyzed.
*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**WORK ORDER**

**T233669**

**Client:** Northstar Environmental Remediation
**Project:** Genesis Solar Groundwater
**Project Manager:** Jeff Lee
**Project Number:** 196-004-06

**Report To:**
Northstar Environmental Remediation
Arlin Brewster
26225 Enterprise Court
Lake Forest, CA 92630

Date Due: 12/27/23 00:00 (11 day TAT)
Received By: Paul Berner
Date Received: 12/08/23 12:45
Logged In By: Jeff Lee
Date Logged In: 12/08/23 15:53

Samples Received at: **1.1°C**

| | | | |
|---|---|---|---|
| Custody Seals | No | Received On Ice | Yes |
| Containers Intact | Yes | | |
| COC/Labels Agree | Yes | | |
| Preservation Confirı | Yes | | |

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **T233669-01 DM-1 [Water] Sampled 12/07/23 17:55 (GMT-08:00) Pacific Time (US &** | | | | |
| 1664 | 12/15/23 15:00 | 5 | 01/04/24 17:55 | Oil & Grease |
| 200.7 | 12/15/23 15:00 | 5 | 06/04/24 17:55 | Ca,Cu,Na,K,Fe,Mg (Field Filtered) |
| 200.8 | 12/15/23 15:00 | 5 | 06/04/24 17:55 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered) |
| 300.0 - F, Cl, Br, SO4 | 12/15/23 15:00 | 5 | 01/04/24 17:55 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/15/23 15:00 | 5 | 12/09/23 17:55 | Nitrate |
| 7470/71 Hg | 12/15/23 15:00 | 5 | 03/06/24 17:55 | |
| Conductivity | 12/15/23 15:00 | 5 | 01/04/24 17:55 | |
| pH water SM 4500-H+B | 12/13/23 15:00 | 3 | 12/08/23 17:55 | |
| TDS-160.1 | 12/15/23 15:00 | 5 | 12/14/23 17:55 | |
| **T233669-02 DM-2 [Water] Sampled 12/07/23 19:05 (GMT-08:00) Pacific Time (US &** | | | | |
| 1664 | 12/15/23 15:00 | 5 | 01/04/24 19:05 | Oil & Grease |
| 200.7 | 12/15/23 15:00 | 5 | 06/04/24 19:05 | Ca,Cu,Na,K,Fe,Mg (Field Filtered) |
| 200.8 | 12/15/23 15:00 | 5 | 06/04/24 19:05 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered) |
| 300.0 - F, Cl, Br, SO4 | 12/15/23 15:00 | 5 | 01/04/24 19:05 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/15/23 15:00 | 5 | 12/09/23 19:05 | Nitrate |
| 7470/71 Hg | 12/15/23 15:00 | 5 | 03/06/24 19:05 | |
| Conductivity | 12/15/23 15:00 | 5 | 01/04/24 19:05 | |
| pH water SM 4500-H+B | 12/13/23 15:00 | 3 | 12/08/23 19:05 | |
| TDS-160.1 | 12/15/23 15:00 | 5 | 12/14/23 19:05 | |

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**WORK ORDER**

**T233669**

**Client:** Northstar Environmental Remediation
**Project:** Genesis Solar Groundwater
**Project Manager:** Jeff Lee
**Project Number:** 196-004-06

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **T233669-03 DM-3 [Water] Sampled 12/07/23 16:40 (GMT-08:00) Pacific Time (US &** | | | | |
| 1664 | 12/15/23 15:00 | 5 | 01/04/24 16:40 | Oil & Grease |
| 200.7 | 12/15/23 15:00 | 5 | 06/04/24 16:40 | Ca,Cu,Na,K,Fe,Mg (Field Filtered) |
| 200.8 | 12/15/23 15:00 | 5 | 06/04/24 16:40 | Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered) |
| 300.0 - F, Cl, Br, SO4 | 12/15/23 15:00 | 5 | 01/04/24 16:40 | Chloride,Sulfate only |
| 300.0 - NO2, NO3, PO4 | 12/15/23 15:00 | 5 | 12/09/23 16:40 | Nitrate |
| 7470/71 Hg | 12/15/23 15:00 | 5 | 03/06/24 16:40 | |
| Conductivity | 12/15/23 15:00 | 5 | 01/04/24 16:40 | |
| pH water SM 4500-H+B | 12/13/23 15:00 | 3 | 12/08/23 16:40 | |
| TDS-160.1 | 12/15/23 15:00 | 5 | 12/14/23 16:40 | |

**Eurofins Calscience (Tustin)**

| | | | | |
|---|---|---|---|---|
| **T233669-01 DM-1 [Water] Sampled 12/07/23 17:55 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 10 | 06/04/24 17:55 | 8015M- Therminol |
| **T233669-02 DM-2 [Water] Sampled 12/07/23 19:05 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 10 | 06/04/24 19:05 | 8015M- Therminol |
| **T233669-03 DM-3 [Water] Sampled 12/07/23 16:40 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #1 | 12/26/23 00:00 | 10 | 06/04/24 16:40 | 8015M- Therminol |

**Isotech Laboratories, Inc.**

| | | | | |
|---|---|---|---|---|
| **T233669-01 DM-1 [Water] Sampled 12/07/23 17:55 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #2 | 12/26/23 00:00 | 10 | 06/04/24 17:55 | Deuterium,Oxygen-18 |
| **T233669-02 DM-2 [Water] Sampled 12/07/23 19:05 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #2 | 12/26/23 00:00 | 10 | 06/04/24 19:05 | Deuterium,Oxygen-18 |
| **T233669-03 DM-3 [Water] Sampled 12/07/23 16:40 (GMT-08:00) Pacific Time (US &** | | | | |
| Misc Water Testing #2 | 12/26/23 00:00 | 10 | 06/04/24 16:40 | Deuterium,Oxygen-18 |

Reviewed By _____ Date _____