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2022 SECOND SEMIANNUAL AND ANNUAL GROUNDWATER DETECTION MONITORING REPORT

Genesis Solar Energy Project

Riverside County, California

COC S&W-6

January 13, 2023

Prepared By:

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SIGNATURE PAGE

2022 SECOND SEMIANNUAL AND ANNUAL GROUNDWATER DETECTION MONITORING REPORT

RIVERSIDE COUNTY, CALIFORNIA

PROFESSIONAL STATEMENT

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

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 13, 2023

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1.0 INTRODUCTION

Northstar Environmental Remediation (Northstar) has prepared this 2022 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 2022 at the Genesis Solar Energy Project (GSEP) and provides a summary of the 2022 calendar year.

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

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

1.1 Background

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

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

The Final Decision and FEIS discuss the potential impacts associated with the proposed groundwater use by the GSEP. Groundwater drawdown impacts are anticipated to be less than significant, but because the prediction of groundwater level effects by computer modeling entails inherent uncertainty, both the Final Decision and the FEIS adopted COC S&W-2 for the GSEP to monitor groundwater level at the vicinity of the GSEP.

Two evaporation ponds (licensed as Class II Surface Impoundments) located between Solar Fields 1 and 2 accept wastewater generated during GSEP operation (**Figure 3**). Three detection monitoring wells (DM-1,

DM-2, and DM-3) were installed, per the Final Decision, along the west, east, and south perimeter of the evaporation ponds in February 2012 (**Figure 4**). Groundwater samples were collected for four quarterly events prior to GSEP operation to establish baseline conditions. Semiannual sampling will be conducted to comply with the requirements of COC S&W-6 and the WDR and MRP documents.

1.2 Geographic Setting

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

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

The deposits immediately adjacent to the mountains have formed alluvial fans from multiple identifiable sources, and multiple fan surfaces have coalesced into a single bajada surface that wraps around each of these mountain fronts. Between the bajada surfaces from each mountain chain lies a broad valley-axial drainage that extends southward between the mountains and drains to the Ford Dry Lake playa, located about 1 mile south of the GSEP facility.

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

1.3 Hydrogeologic Setting

The GSEP lies within the Chuckwalla Valley Groundwater Basin (Chuckwalla Basin) which has a surface area of 940 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 2021 extraction data, is approximately 125 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 87.28 feet bgs (300.12 feet amsl) in TW-1, located upgradient of the site, to 136.58 feet bgs (255.52 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,

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, cobalt, lead, nickel, mercury, oil & grease, or heat transfer fluid in either pond; and,
- Compound concentrations were similar in both ponds.

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 South Pond during the reporting period and the totalizer currently reads 7.48 gallons. The North Pond developed a small leak early in the third quarter which resulted in approximately 600 gallons of water being recovered from the sumps. NextEra staff investigated and made repairs as necessary, and no additional water was recovered through the rest of the reporting period. The North Pond totalizer currently reads 605.55 gallons. Northstar increased the monitoring frequency of the moisture detection probes in the third quarter to ensure the repairs held.

None of the moisture detection probes showed signs of water saturation during monitoring. Probe #1W and #2W in the North Pond currently shown signs of increasing humidity, and probe #3E in the North Pond currently shows signs of decreasing humidity. Probe #1W, #1E, and #2E in the South Pond currently show signs of increasing humidity.

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 Horiba water quality field instrument. Staff calibrate the Horiba at the beginning of each day and decontaminate 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, 2022) 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 104.50 (well DM-3) to 107.72 (well DM-2) feet bgs, and the calculated groundwater elevations range from 283.60 (well DM-2) to 284.09 (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 0.0007 feet/foot. The groundwater flow direction and gradient are consistent with historical monitoring events. Groundwater flow direction has historically ranged between east-northeast and southeast and the gradient has ranged between 0.0004 and 0.0007 feet/foot.

4.4 Groundwater Flow Velocity

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

V = (KhI)/ne

Where:

V = average linear groundwater velocity (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 0.0007 feet/foot, as estimated from **Figure 4**.

Based on these calculations, the average groundwater velocity estimated in the uppermost water-bearing zone beneath the evaporation ponds is approximately 0.042 to 0.084 feet laterally per day, or 15.33 to 30.66 lateral feet per year. Historically, estimates of groundwater flow velocity have ranged from 8.76 to 30.66 lateral feet per year.

4.5 General Chemical Analysis

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

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

- **Chloride** detections have been consistent for all wells and have ranged from 4,400 to 9,760 milligrams per liter (mg/L), averaging 5,416 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 2,132 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 7.95 mg/L.
- **Total Dissolved Solid** concentrations have been consistent for all wells and have ranged from 7,100 to 14,000 mg/L, averaging 10,703 mg/L.
- **pH** levels have been consistent for all wells and have ranged from 7.2 to 8.0 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 17,631 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 11.2 µg/L.
- **Barium** detections have been inconsistent between all wells, averaging 34.8 µg/L in upgradient well DM-1, 65.6 µg/L in downgradient well DM-2, and 18.7 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 (Total)** detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 3.1 to 3.7 µg/L, averaging 3.4 µg/L.
- **Cobalt** has not been detected above the reporting limit for all wells.
- **Copper** detections have been inconsistent because the concentrations are frequently between the MDL and RL. Reportable concentrations have ranged from 0.006 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 reports (see **Appendix C**), groundwater samples collected from the evaporation pond detection monitoring wells during this sampling event were received by the laboratory in good condition, within the temperature limits required, and analyzed within the required holding times using the specified methods (with the exception of pH, which has a 15-minute hold time, and nitrate as NO3, which has a 48-hour hold time).

Calcium was detected in the method blank sample. The concentration was less than 10% of the sample results and was therefore considered to be negligible according to the method criteria.

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 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, barium, cadmium, chromium, and lead**.

- 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 many analytes including **aluminum, cadmium, calcium, chloride, chromium, copper, iron, lead, magnesium, molybdenum, nickel, potassium, sodium, sulfate as SO4, and zinc.**

Duplicate sample control: For this event, a duplicate sample (named DUP) was collected from sample point PW-2 (as reported in the *Groundwater Quality Monitoring Report* (Northstar, 2022). 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:

- Total Dissolved Solids by Standard Method 2540C, which was reported at concentrations of 2,000 and 5,200 mg/L, respectively (62% 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. Laboratory reports for the data referenced below is included in **Appendix D**.

Soil was added to LTU Bay #1 in May 2022 and was sampled on June 2, 2022 to obtain baseline results. The concentrations of the marker compounds were as follows:

- LTU Bay #1:
  - 1,1'-oxybis-benzene: 1,400 mg/kg
  - 1,1'-biphenyl: 430 mg/kg

An HTF release early in the third quarter of 2022 resulted in additional soil being added to LTU Bay #1, 2, and 3 before bioremediation could be completed on the existing stockpile in LTU Bay #1. The existing stockpile was mixed in with the inbound soil. Soil was turned over regularly on a weekly basis, and was also partially spread out in LTU Bay #4 to enhance bioremediation and exposure to sunlight. The three bays of soil were sampled on August 4, 2022 and the concentrations of the marker compounds were as follows:

- LTU Bay #1:
  - 1,1'-oxybis-benzene: 46,000 mg/kg
  - 1,1'-biphenyl: 16,000 mg/kg
- LTU Bay #2:
  - 1,1'-oxybis-benzene: 44,000 mg/kg
  - 1,1'-biphenyl: 16,000 mg/kg
- LTU Bay #3:
  - 1,1'-oxybis-benzene: 45,000 mg/kg
  - 1,1'-biphenyl: 16,000 mg/kg

There were no additional HTF releases in the third or fourth quarters of 2022. Soil bioremediation continued through the rest of the year and was resampled on December 1, 2022. The soil stockpiles had

been consolidated into two LTU bays shortly before resampling. The concentrations of the marker compounds were as follows:

- LTU Bay #1:
  - 1,1'-oxybis-benzene: 14,000 mg/kg
  - 1,1'-biphenyl: 3,900 mg/kg
- LTU Bay #2:
  - 1,1'-oxybis-benzene: 28,000 mg/kg
  - 1,1'-biphenyl: 8,800 mg/kg

The soil added to LTU Bay #1 in the second quarter of 2022 was feasible for bioremediation treatment. While the soil added to LTU Bay #1, 2, and 3 in the third quarter of 2022 initially had highly elevated concentrations of the marker compounds, an effort was made to treat the soil onsite before resorting to offsite transport and treatment.

Between the initial sampling and resampling in August and December 2022 of these soils, marker compound concentrations were significantly reduced but still exceeded the effective treatment threshold of 10,000 mg/kg. However, since the concentrations were reduced so significantly, treatment will continue onsite and the soil stockpiles will be resampled in March 2023.

6.0 ANNUAL SUMMARY

In accordance with WDR R7-2013-0005, this section presents a summary of the monitoring activities conducted during the 2022 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 2022 calendar year represents the ninth year of post-construction normal facility operation. The laboratory analytical data from the 2022 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 2022 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. Zinc was detected in DM-3 in the second quarter of 2022 at a concentration of 50 µg/L. Zinc is naturally occurring in all three detection monitoring wells, and has been detected consistently when the laboratory has used lower reporting limits. Historically, the laboratory used a PQL of 100 µg/L; for this sample, the PQL was reduced to 50 µg/L, identical to the detected concentration. Due to the low PQLs used during this event, it appears that this constituent would normally have been non-detect, or at least below the PQL if normal reporting limits had been used, and would not have fit the potential release criteria.

During the 2022 calendar year, the groundwater gradient was 0.0007 feet per linear foot to the east-southeast; groundwater elevations ranged from 283.60 feet amsl in well DM-2 to 284.24 feet amsl in well DM-1; and groundwater flow velocity ranged between 0.042 to 0.084 feet laterally per day, or 15.33 to 30.66 lateral feet per year.

Each of the settlement ponds is equipped with a 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. A minor leak was detected in the North Pond during the third quarter of 2022, resulting in approximately 600 gallons being recovered through the drainage sumps. NextEra staff successfully repaired the leak shortly after, and there were no additional leaks through the rest of 2022. Since the repair, the moisture detection probes have indicated some residual humidity in the pipe, but there were no signs of new leaks or probe saturation. 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:

- A detection of zinc equaling the PQL in detection monitoring well DM-3 during the first semiannual monitoring event did not meet the tentative release criteria because no other constituents of concern were detected in this well that were not present in upgradient background well DM-1.
- 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, with exceptions as noted above.

8.0 REFERENCES

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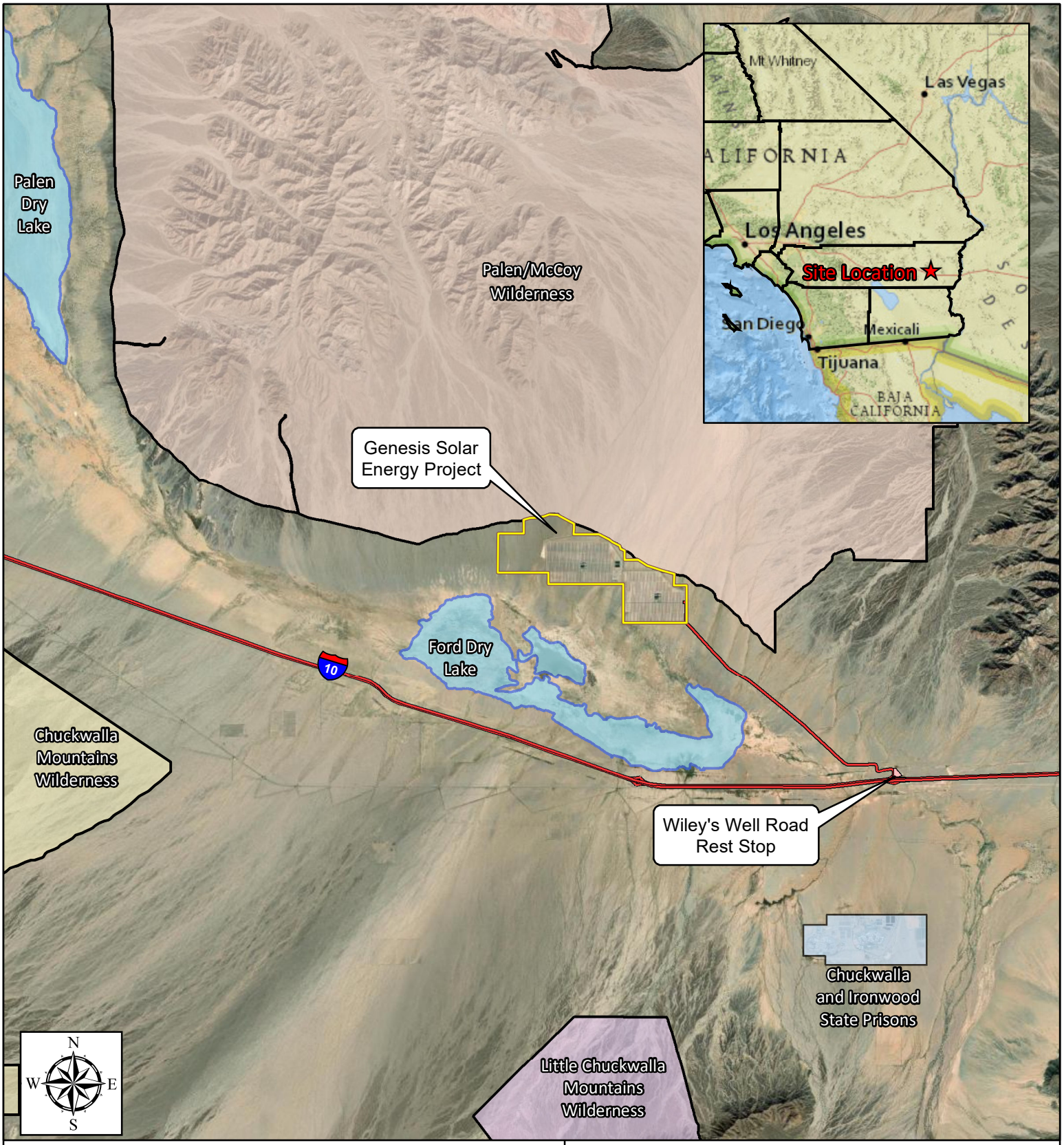
FIGURES



Legend

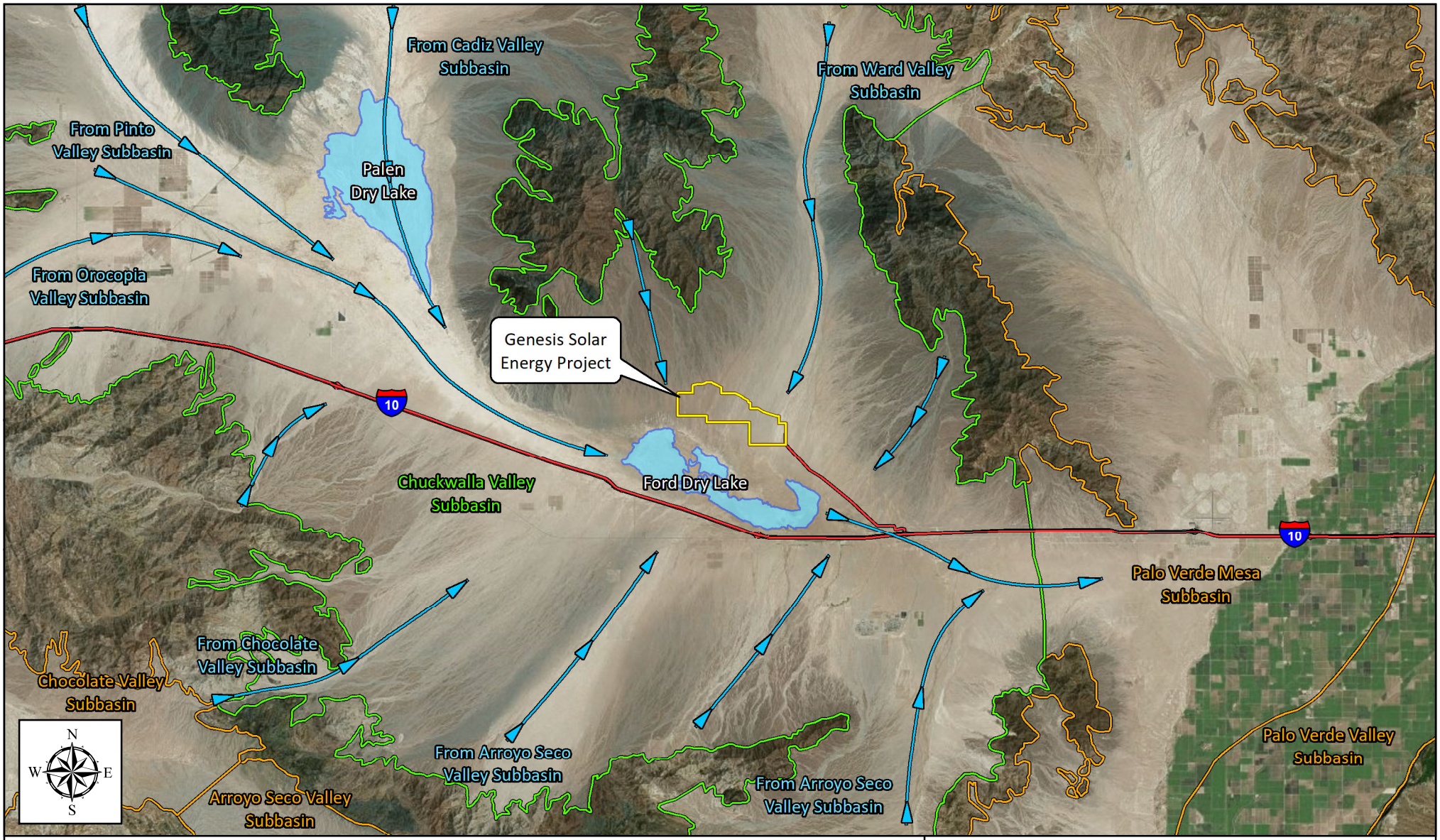
- GSEP Property Boundary
- Chuckwalla and Ironwood State Prisons
- Chuckwalla Mountains Wilderness Area
- Little Chuckwalla Mountains Wilderness Area
- Palen/McCoy Wilderness Area
- Dry Lakes
- Roads

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

FIGURE 1
Site Vicinity Map

NORTHSTAR ENVIRONMENTAL REMEDIATION	Scale: 1:200,000	Draw Date: 07/06/22
	Drawn By: AWB	Checked By: AWB

File Name: Figure 1 - Vicinity Map



Legend

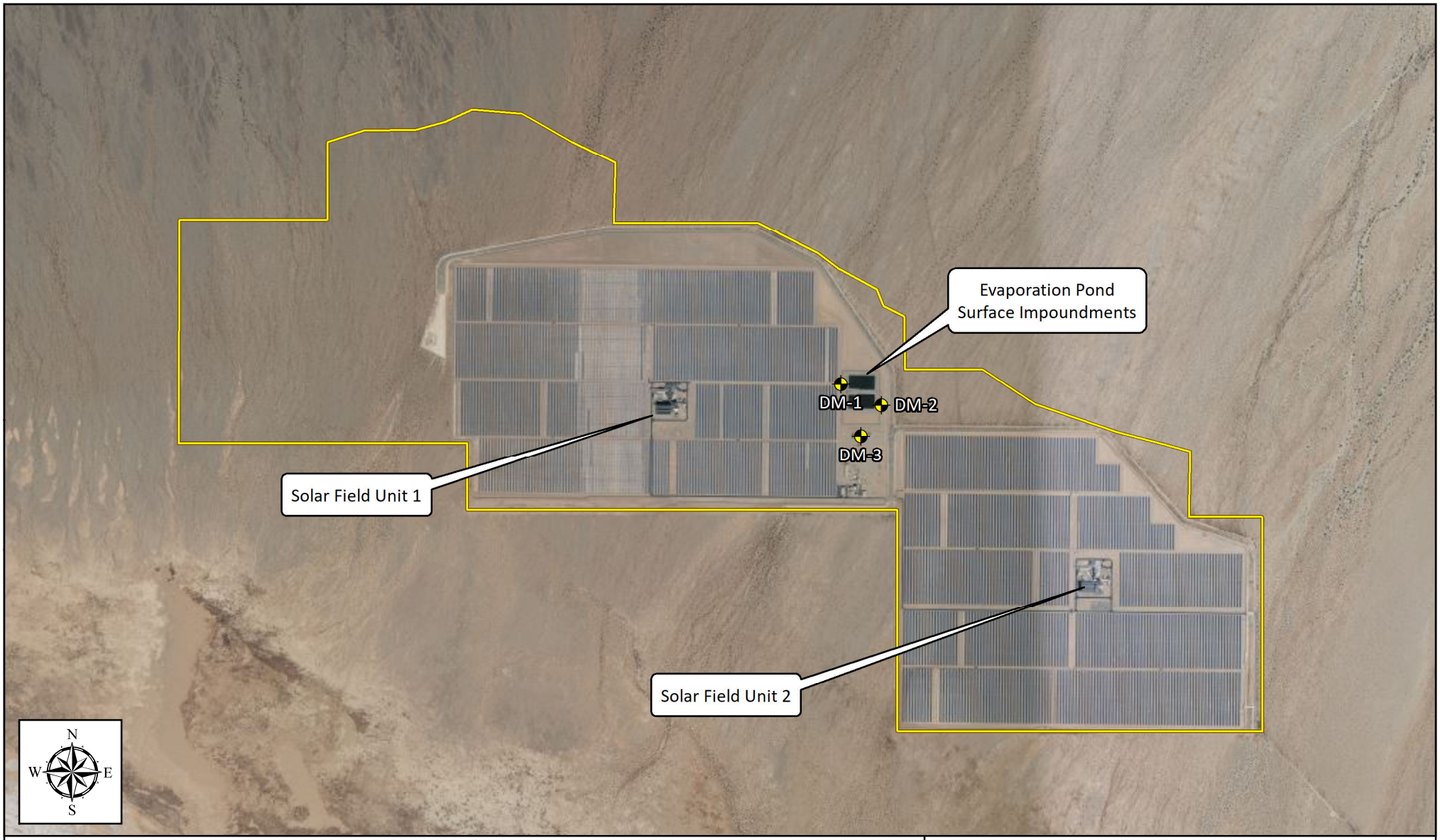
- GSEP Property Boundary
- Chuckwalla Valley Groundwater Subbasin
- Adjacent Groundwater Subbasins
- Dry Lakes
- Water Flow Direction

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

FIGURE 2
Hydrogeologic Setting

NORTHSTAR	Scale: 1:360,000	Draw Date: 07/06/22
	Drawn By: AWB	Checked By: AWB

File Name: Figure 2 - Hydrogeology



Legend

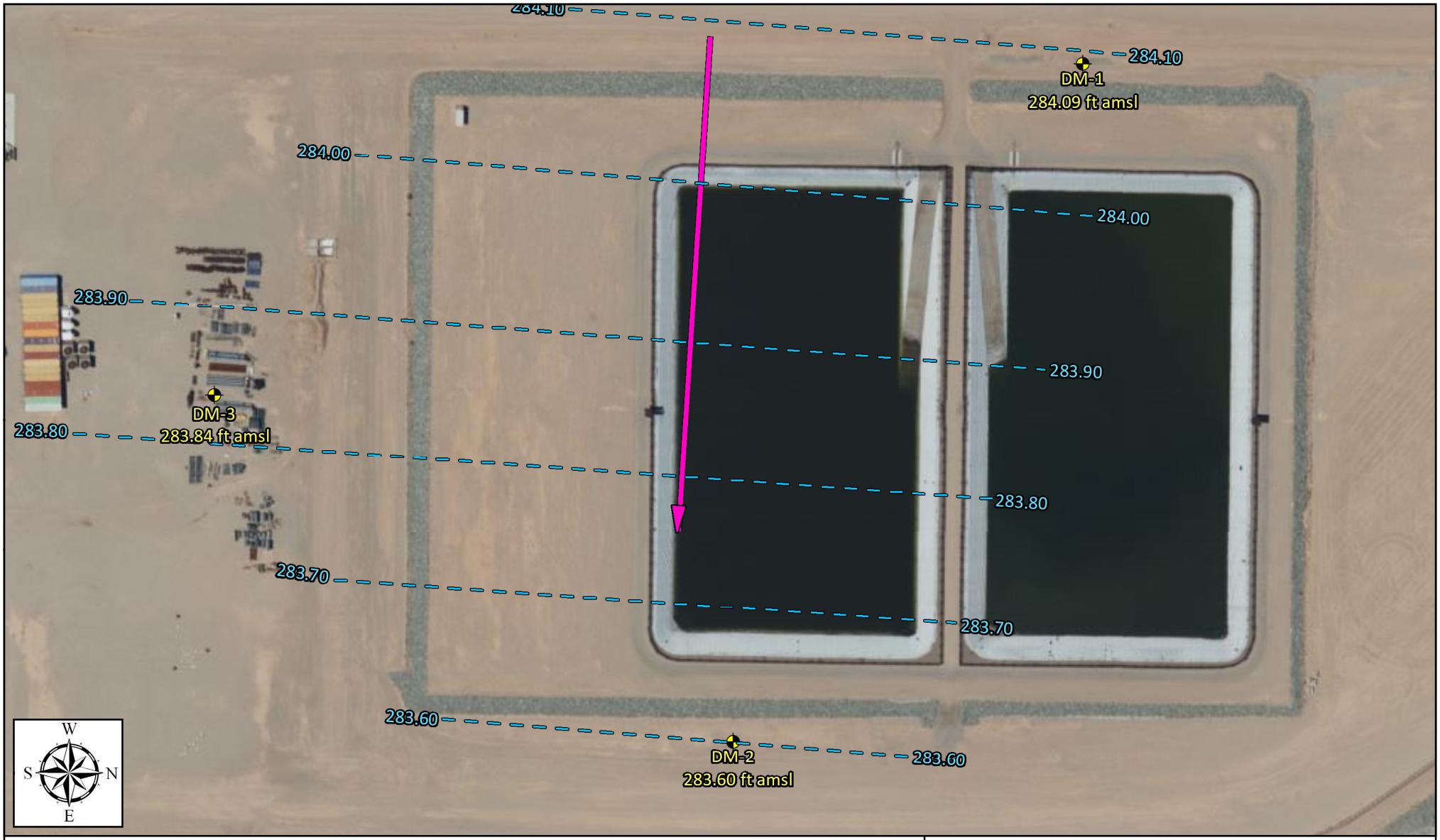
- GSEP Property Boundary
- Detection Monitoring Wells

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: 07/07/22
	Drawn By: AWB	Checked By: AWB

File Name: Figure 3 - Monitoring Area



Legend

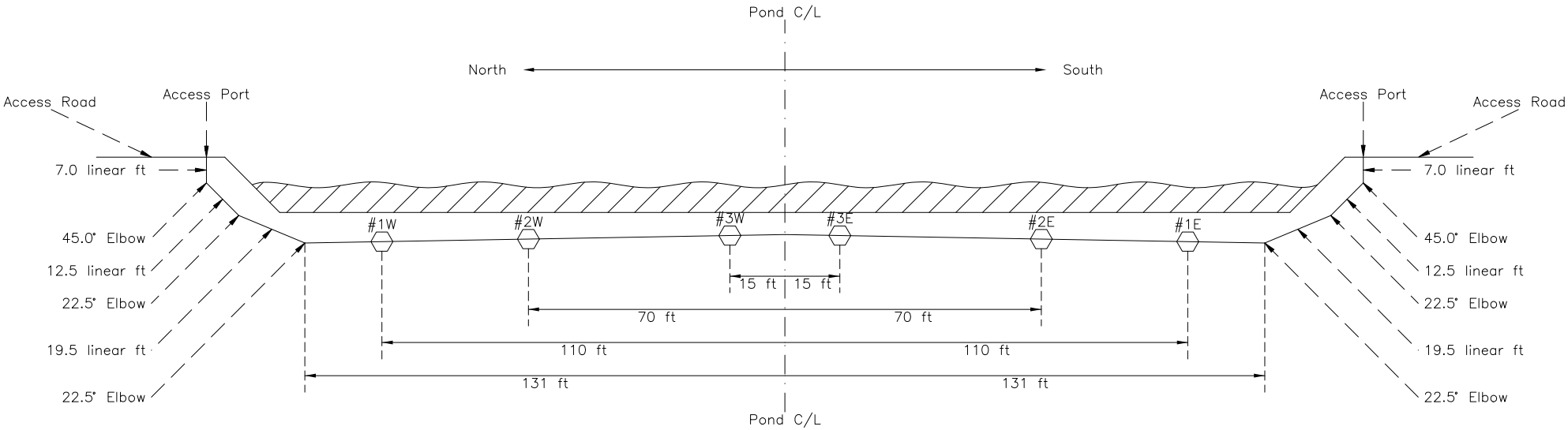
- Detection Monitoring Wells
- Groundwater Elevation Contour Line (in feet above mean sea level)
- Groundwater Gradient Direction

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

FIGURE 4
Groundwater Elevation Contour Map
December 2022

NORTHSTAR	Scale: 1" = 180'	Draw Date: 01/10/23
	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. 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: 07/07/2022
Figure Description: Leak Detection 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-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-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
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

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	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

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	12/1/2022	180	Bladder Pump	3,600	26.3	7.60	17.10	10.1	+83	6.44
DM-2	12/1/2022	138	Bladder Pump	2,760	26.6	7.49	17.40	90.9	+74	0.98
DM-3	12/1/2022	143	Bladder Pump	2,860	26.2	7.59	16.60	5.8	+86	6.33

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 (Total) (ug/L)	Cobalt (ug/L)	Lead (ug/L)	Manganese (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Zinc (ug/L)	Mercury (ug/L)	Total Dissolved Solids (mg/L)	Specific Conductance (us/cm)	pH (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-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-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
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

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 (Total) (ug/L)	Cobalt (ug/L)	Lead (ug/L)	Manganese (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Zinc (ug/L)	Mercury (ug/L)	Total Dissolved Solids (mg/L)	Specific Conductance (us/cm)	pH (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	
North Pond	6/1/2018	Composite	61,700	21,000	0.870	230	<0.015	12,000	430	<0.35	4.6[1]	<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
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

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	

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 LEVEL MEASUREMENT FORM

Date: Dec 1, 2022	Site: Genesis Solar Energy Project	Project No: 196-004-06
Project: Groundwater Level Monitoring Program		PM: AWB
Measurement Method/Device: Solinst Interface Probe		Technicians: AWB/RCD
Weather:		

Well No.	Date	TOC Reference Elevation (ft)	Depth to Water (ft)	Corrected Water Level Elevation (ft)	Comments
TW-1	12/1/2022	387.40	87.28	300.12	Levelogger 62100045
TW-2	12/1/2022	393.47	126.88	266.59	Manual Measurement
OBS-1	12/1/2022	388.30	78.15	310.15	Levelogger 32045678; Barologger 12100120
OBS-2-270	N/A	388.14	N/A	N/A	Buried Transducer Cable
OBS-2-315	N/A	388.14	N/A	N/A	Buried Transducer Cable
OBS-2-370	N/A	388.14	N/A	N/A	Buried Transducer Cable
OBS-2-400	N/A	388.14	N/A	N/A	Buried Transducer Cable
14	12/1/2022	388.14	99.95	288.19	Manual Measurement
23a	12/1/2022	392.10	136.58	255.52	Manual Measurement
24-1	12/1/2022	389.40	126.98	262.42	Manual Measurement
24-2	12/1/2022	388.86	124.90	263.96	Manual Measurement
24-3	12/1/2022	392.04	123.35	268.69	Manual Measurement
PW-0	12/1/2022	385.64	N/A	N/A	Manual Measurement
PW-1	12/1/2022	384.43	98.70	285.73	Levelogger 62149233
PW-2	12/1/2022	385.15	N/A	N/A	Manual Measurement
DM-1	12/1/2022	391.49	107.40	284.09	Manual Measurement
DM-2	12/1/2022	391.32	107.72	283.60	Manual Measurement
DM-3	12/1/2022	388.34	104.50	283.84	Manual Measurement

Additional Notes:

GROUNDWATER SAMPLING FIELD FORM

Date: 12/01/2022	Site: Genesis Solar Energy Project	Project No: 196-004-06
Project: Groundwater Quality Monitoring Program		Project Manager: AWB
Technicians: AWB/RCD		Weather:
Sampling Method: Low-Flow Sampling with Submersible Pump (EPA 2017 Protocols)		

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	11:43	107.40	25.1	7.59	17.2	19.3	+86	7.57
Total Depth (ft btoc)	120	11:48	107.40	26.1	7.60	17.2	10.7	+85	6.40
Screen Interval (ft btoc)	100 - 120	11:53	107.39	26.2	7.60	17.1	10.2	+83	6.53
Depth to Water (ft btoc)	107.40	11:58	107.39	26.3	7.60	17.1	10.1	+83	6.44
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)	3,600								
Sample Date	12/01/22								
Sample Time	12:00								

Purge Volume Calculation: Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **1,229 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	13:12	108.00	26.1	7.50	17.0	96.8	+86	1.32
Total Depth (ft btoc)	120	13:17	108.02	26.3	7.49	17.2	91.7	+76	1.01
Screen Interval (ft btoc)	100 - 120	13:22	108.02	26.4	7.49	17.4	91.0	+75	1.00
Depth to Water (ft btoc)	107.72	13:27	108.03	26.6	7.49	17.4	90.9	+74	0.98
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)	2,760								
Sample Date	12/01/22								
Sample Time	13:30								

Purge Volume Calculation: Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **1,967 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	14:40	104.50	26.1	7.52	16.7	13.7	+90	7.09
Total Depth (ft btoc)	120	14:45	104.50	26.1	7.57	16.7	6.5	+86	6.36
Screen Interval (ft btoc)	100 - 120	14:50	104.50	26.1	7.58	16.6	5.9	+85	6.31
Depth to Water (ft btoc)	104.50	14:55	104.50	26.2	7.59	16.6	5.8	+86	6.33
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)	2,860								
Sample Date	12/01/22								
Sample Time	15:00								

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.
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Lake Forest, California 92630
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14 December 2022

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 12/02/22 13:55. 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
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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	12/14/22 12:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North Pond	T223450-01	Water	12/01/22 11:10	12/02/22 13:55
South Pond	T223450-02	Water	12/01/22 11:15	12/02/22 13:55

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	12/14/22 12:43

DETECTIONS SUMMARY

Sample ID: North Pond **Laboratory ID:** T223450-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**340**	25	ug/l	200.8	FILT
Barium	**170**	25	ug/l	200.8	FILT
Selenium	**41**	25	ug/l	200.8	FILT
Zinc	**56**	25	ug/l	200.8	FILT
Calcium	**250**	120	mg/l	EPA 200.7	FILT
Sodium	**21000**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**41000**	10	mg/l	TDS by SM2540C	
pH	**8.4**	0.10	pH Units	SM 4500-H+B	O-04
pH Temperature °C	**21**		pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**70300**	10.0	mho/cm @25°(	SM2510b mod.	
Chloride	**24200**	5000	mg/l	EPA 300.0	
Sulfate as SO4	**8040**	5000	mg/l	EPA 300.0	
Nitrate as NO3	**47.8**	25.0	mg/l	EPA 300.0	O-07
Nitrate as N	**11.0**	10.0	mg/l	EPA 300.0	O-07

Sample ID: South Pond **Laboratory ID:** T223450-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**260**	25	ug/l	200.8	FILT
Barium	**210**	25	ug/l	200.8	FILT
Selenium	**59**	25	ug/l	200.8	FILT
Zinc	**60**	25	ug/l	200.8	FILT
Calcium	**300**	120	mg/l	EPA 200.7	FILT
Sodium	**20000**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**35000**	10	mg/l	TDS by SM2540C	
pH	**8.5**	0.10	pH Units	SM 4500-H+B	O-04
pH Temperature °C	**20**		pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**67400**	10.0	mho/cm @25°(	SM2510b mod.	
Chloride	**24000**	5000	mg/l	EPA 300.0	
Sulfate as SO4	**5500**	5000	mg/l	EPA 300.0	

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	12/14/22 12:43

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	12/14/22 12:43

North Pond

T223450-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	1.2	mg/l	250	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Calcium	**250**	120	"	"	"	"	12/06/22	"	FILT
Iron	ND	50	"	"	"	"	"	"	FILT
Magnesium	ND	25	"	"	"	"	"	"	FILT
Potassium	ND	250	"	500	"	"	"	"	FILT
Sodium	**21000**	250	"	"	"	"	"	"	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	**340**	25	"	"	"	"	"	"	FILT
Barium	**170**	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	**41**	25	"	"	"	"	"	"	FILT
Zinc	**56**	25	"	"	"	"	"	"	FILT
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**70300**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**8.4**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**		"	"	"	"	"	"	O-04
Total Dissolved Solids	**41000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	12/14/22 12:43

North Pond

T223450-01 (Water)

SunStar Laboratories, Inc.

Anions by EPA Method 300.0

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**24200**	5000	mg/l	1000	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**8040**	5000	"	"	"	"	"	"	
Nitrate as NO3	**47.8**	25.0	"	50	"	"	12/05/22	"	O-07
Nitrate as N	**11.0**	10.0	"	"	"	"	"	"	O-07

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	12/14/22 12:43

South Pond

T223450-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	1.2	mg/l	250	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Calcium	**300**	120	"	"	"	"	"	"	FILT
Iron	ND	50	"	"	"	"	"	"	FILT
Magnesium	ND	25	"	"	"	"	"	"	FILT
Potassium	ND	250	"	500	"	"	12/06/22	"	FILT
Sodium	**20000**	250	"	"	"	"	"	"	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	**260**	25	"	"	"	"	"	"	FILT
Barium	**210**	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	**59**	25	"	"	"	"	"	"	FILT
Zinc	**60**	25	"	"	"	"	"	"	FILT
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**67400**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**8.5**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**20**		"	"	"	"	"	"	O-04
Total Dissolved Solids	**35000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	

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Jeff Lee, Project Manager

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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	12/14/22 12:43

South Pond

T223450-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Anions by EPA Method 300.0									
Chloride	**24000**	5000	mg/l	1000	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**5500**	5000	"	"	"	"	"	"	
Nitrate as NO3	ND	25.0	"	50	"	"	12/05/22	"	O-07, R-01
Nitrate as N	ND	10.0	"	"	"	"	"	"	O-07

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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	12/14/22 12:43

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 22L0029 - EPA 3010A										
Blank (22L0029-BLK1)				Prepared: 12/02/22 Analyzed: 12/06/22						
Cadmium	ND	0.005	mg/l							
Chromium	ND	0.005	"							
Copper	ND	0.005	"							
Lead	ND	0.005	"							
Molybdenum	ND	0.005	"							
Nickel	ND	0.005	"							
Silver	ND	0.030	"							
Zinc	ND	0.030	"							
LCS (22L0029-BS1)				Prepared: 12/02/22 Analyzed: 12/06/22						
Cadmium	1.50	0.005	mg/l	1.50		99.8	85-115			
Chromium	1.48	0.005	"	1.50		98.8	85-115			
Copper	1.49	0.005	"	1.50		99.3	85-115			
Lead	1.50	0.005	"	1.50		100	85-115			
Molybdenum	1.41	0.005	"	1.50		94.0	85-115			
Nickel	1.50	0.005	"	1.50		99.9	85-115			
Zinc	1.49	0.030	"	1.50		99.7	85-115			
Matrix Spike (22L0029-MS1)	**Source: T223443-01**			Prepared: 12/02/22 Analyzed: 12/09/22						
Cadmium	1.63	0.005	mg/l	1.50	0.018	108	70-130			QM-05, R-01
Chromium	2.53	0.005	"	1.50	1.06	98.0	70-130			QM-05, R-01
Copper	2.06	0.005	"	1.50	0.008	137	70-130			QM-05, R-01
Lead	1.68	0.005	"	1.50	0.004	112	70-130			QM-05, R-01
Molybdenum	1.97	0.005	"	1.50	0.010	130	70-130			QM-05, R-01
Nickel	1.63	0.005	"	1.50	0.005	108	70-130			QM-05, R-01
Zinc	85.8	0.030	"	1.50	0.103	NR	70-130			QM-05, R-01
Aluminum	163	0.10	"	1.50	ND	NR	70-130			QM-05
Calcium	279	0.50	"	1.50	ND	NR	70-130			QM-05
Iron	610	0.20	"	1.50	ND	NR	70-130			QM-05
Potassium	194	1.0	"	1.50	ND	NR	70-130			QM-05
Sodium	366	1.0	"	1.50	ND	NR	70-130			QM-05

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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	12/14/22 12:43

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 22L0029 - EPA 3010A										
Matrix Spike Dup (22L0029-MSD1)	**Source: T223443-01**			Prepared: 12/02/22 Analyzed: 12/09/22						
Cadmium	1.65	0.005	mg/l	1.50	0.018	109	70-130	1.02	30	QM-05, R-01
Chromium	2.58	0.005	"	1.50	1.06	101	70-130	1.61	30	QM-05, R-01
Copper	2.10	0.005	"	1.50	0.008	139	70-130	1.79	30	QM-05, R-01
Lead	1.69	0.005	"	1.50	0.004	113	70-130	0.934	30	QM-05, R-01
Molybdenum	1.99	0.005	"	1.50	0.010	132	70-130	1.20	30	QM-05, R-01
Nickel	1.65	0.005	"	1.50	0.005	109	70-130	1.30	30	QM-05, R-01
Selenium	1.44	0.030	"	1.50	ND	95.9	70-130	0.936	30	
Zinc	86.1	0.030	"	1.50	0.103	NR	70-130	0.312	30	QM-05
Aluminum	164	0.10	"	1.50	ND	NR	70-130	0.881	30	QM-05
Calcium	287	0.50	"	1.50	ND	NR	70-130	3.01	30	QM-05
Iron	638	0.20	"	1.50	ND	NR	70-130	4.41	30	QM-05
Potassium	10.6	1.0	"	1.50	ND	708	70-130	179	30	QM-05
Sodium	376	1.0	"	1.50	ND	NR	70-130	2.58	30	QM-05
Batch 22L0050 - EPA 3010A										
Blank (22L0050-BLK1)				Prepared: 12/05/22 Analyzed: 12/08/22						
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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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	12/14/22 12:43

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 22L0050 - EPA 3010A										
LCS (22L0050-BS1)				Prepared: 12/05/22 Analyzed: 12/08/22						
Arsenic	51.9	0.50	ug/l	50.0		104	85-115			
Barium	45.5	0.50	"	50.0		91.0	85-115			
Cadmium	48.2	0.50	"	50.0		96.4	85-115			
Chromium	47.5	0.50	"	50.0		95.1	85-115			
Lead	47.1	0.50	"	50.0		94.2	85-115			
Matrix Spike (22L0050-MS1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/08/22						
Arsenic	49.5	25	ug/l	50.0	ND	99.0	70-130			
Barium	66.5	25	"	50.0	15.0	103	70-130			QM-07
Cadmium	50.0	25	"	50.0	ND	100	70-130			
Chromium	46.0	25	"	50.0	ND	92.0	70-130			
Lead	49.5	25	"	50.0	ND	99.0	70-130			
Matrix Spike Dup (22L0050-MSD1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/08/22						
Arsenic	43.0	25	ug/l	50.0	ND	86.0	70-130	14.1	20	QM-07
Barium	62.0	25	"	50.0	15.0	94.0	70-130	7.00	20	QM-07
Cadmium	46.0	25	"	50.0	ND	92.0	70-130	8.33	20	QM-07
Chromium	44.0	25	"	50.0	ND	88.0	70-130	4.44	20	QM-07
Lead	46.0	25	"	50.0	ND	92.0	70-130	7.33	20	QM-07

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26225 Enterprise Court	Project Number: 196-004-05	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	12/14/22 12:43

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 22L0041 - EPA 7470A Water										
Blank (22L0041-BLK1)				Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	ND	1.0	ug/l							
LCS (22L0041-BS1)				Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	6.67	1.0	ug/l	7.00		95.3	80-120			
Matrix Spike (22L0041-MS1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	7.23	1.0	ug/l	7.00	ND	103	75-125			
Matrix Spike Dup (22L0041-MSD1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	7.27	1.0	ug/l	7.00	ND	104	75-125	0.491	20	

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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	12/14/22 12:43

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 22L0035 - General Preparation										
Blank (22L0035-BLK1)				Prepared: 12/05/22 Analyzed: 12/09/22						
Total Dissolved Solids	ND	10	mg/l							
LCS (22L0035-BS1)				Prepared: 12/05/22 Analyzed: 12/09/22						
Total Dissolved Solids	454	10	mg/l	500		90.8	80-120			
Duplicate (22L0035-DUP1)		**Source: T223439-03**		Prepared: 12/05/22 Analyzed: 12/09/22						
Total Dissolved Solids	770	10	mg/l		804			4.32	20	
Batch 22L0036 - General Preparation										
Blank (22L0036-BLK1)				Prepared & Analyzed: 12/05/22						
Oil & Grease	ND	5.00	mg/l							
LCS (22L0036-BS1)				Prepared & Analyzed: 12/05/22						
Oil & Grease	39.8	5.00	mg/l	53.1		75.0	78-114			BS-4
LCS Dup (22L0036-BSD1)				Prepared & Analyzed: 12/05/22						
Oil & Grease	41.5	5.00	mg/l	53.1		78.2	78-114	4.18	20	
Batch 22L0056 - General Preparation										
Duplicate (22L0056-DUP1)		**Source: T223449-01**		Prepared: 12/06/22 Analyzed: 12/07/22						
pH	8.20	0.10	pH Units		8.36			1.93	20	O-04
pH Temperature °C	21.0		"		21.1			0.475	200	O-04

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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	12/14/22 12:43

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 22L0074 - General Preparation										
Duplicate (22L0074-DUP1)		**Source: T223449-01**		Prepared: 12/06/22 Analyzed: 12/09/22						
Specific Conductance (EC)	2680	10.0	umho/cm @25°C		2690			0.372	15	

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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	12/14/22 12:43

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 22L0031 - General Preparation										
Blank (22L0031-BLK1)				Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	ND	5.00	mg/l							
Sulfate as SO4	ND	5.00	"							
Nitrate as NO3	ND	0.500	"							
Nitrate as N	ND	0.200	"							
LCS (22L0031-BS1)				Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	23.6	5.00	mg/l	25.0		94.4	75-125			
Sulfate as SO4	24.5	5.00	"	25.0		98.0	75-125			
Nitrate as NO3	22.6	0.500	"	25.0		90.5	75-125			
Matrix Spike (22L0031-MS1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	449	100	mg/l	25.0	451	NR	75-125			QM-05
Sulfate as SO4	396	100	"	25.0	396	1.36	75-125			QM-05
Nitrate as NO3	23.1	0.500	"	25.0	0.984	88.3	75-125			
Matrix Spike Dup (22L0031-MSD1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	453	100	mg/l	25.0	451	4.88	75-125	0.874	20	QM-05
Sulfate as SO4	400	100	"	25.0	396	15.4	75-125	0.884	20	QM-05
Nitrate as NO3	23.1	0.500	"	25.0	0.984	88.5	75-125	0.178	20	

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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	12/14/22 12:43

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-07	The sample was analyzed outside the EPA recommended holding time of 48 hours.
O-04	This sample was received and analyzed outside the EPA recommended holding time.
FILT	The sample was filtered prior to analysis.
BS-4	A BS was outside of acceptance range, however, the data was accepted based on the passing duplicate BS, acceptable RPD, and other batch QCs.
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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25712 Commercentre Dr
Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: Northstar Environmental Remediation _____ Date: 12/2/2022 Page: 1 of 1

Address: 26225 Enterprise Court, Lake Forest, CA 92630 _____ Project Name: Genesis Solar LTUs & Ponds _____

Phone: 949-274-1719 _____ Fax: _____ Collector: Arlin Brewster _____ Client Project #: 196-004-05 _____

Project Manager: Arlin Brewster _____ Batch #: T223450 EDF #: Not Required _____

Sample 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/Preservative	Total # of containers
North Pond	12/1/22	1110	W	Various	X	X	X	X	X	X	X	X	X					6
South Pond	12/1/22	1115	W	Various	X	X	X	X	X	X	X	X	X					6
Field Blank	N/A	N/A	W	Various													HOLD	1
Trip Blank	N/A	N/A	W	Various													HOLD	1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Arlin Br	12/2/22 @ 1355	[signature]	12-2-22 1355
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (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: 1.7°C

Turn around time: Standard

Notes

EDF report not required.

Reporting limits must match previous reports

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

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Printed: 12/2/2022 3:03:27PM

WORK ORDER

T223450

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

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

Date Due: 12/19/22 00:00 (11 day TAT)
Received By: Dave Berner
Date Received: 12/02/22 13:55
Logged In By: Jeff Lee
Date Logged In: 12/02/22 15:00

Samples Received at: 1.7°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confirm Yes

Analysis	Due	TAT	Expires	Comments
T223450-01 North Pond [Water] Sampled 12/01/22 11:10 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 11:10	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 11:10	Ca,Cu,Na,K,Fe,Mg (F.F)
200.8	12/09/22 15:00	5	05/30/23 11:10	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 11:10	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 11:10	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 11:10	
Conductivity	12/09/22 15:00	5	12/29/22 11:10	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 11:10	
TDS-160.1	12/09/22 15:00	5	12/08/22 11:10	
T223450-02 South Pond [Water] Sampled 12/01/22 11:15 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 11:15	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 11:15	Ca,Cu,Na,K,Fe,Mg (F.F)
200.8	12/09/22 15:00	5	05/30/23 11:15	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 11:15	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 11:15	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 11:15	
Conductivity	12/09/22 15:00	5	12/29/22 11:15	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 11:15	
TDS-160.1	12/09/22 15:00	5	12/08/22 11:15	

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

WORK ORDER

T223450

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

Analysis	Due	TAT	Expires	Comments
T223450-03 Field Blank [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
T223450-04 Trip Blank [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				

Eurofins Calscience (Tustin)

T223450-01 North Pond [Water] Sampled 12/01/22 11:10 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 11:10	8015M- Therminol
T223450-02 South Pond [Water] Sampled 12/01/22 11:15 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 11:15	8015M- Therminol

Reviewed By

Date

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/14/2022 7:58:16 AM

JOB DESCRIPTION

T223450

JOB NUMBER

570-119387-1

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 data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

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

Generated
12/14/2022 7:58:16 AM

Authorized for release by
Don Burley, Senior Project Manager
Donald.Burley@et.eurofinsus.com
(657)212-3033

Table of Contents

Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T223450

Job ID: 570-119387-1

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 ID: 570-119387-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-119387-1

Comments
No additional comments.

Receipt
The samples were received on 12/5/2022 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 was 5.7° C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-287119. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 3510C: The reference method requires samples to be preserved to a pH of 6-9. The following samples were received with insufficient preservation at a pH of 2: T223450-01 (570-119387-1) and T223450-02 (570-119387-2). The samples were preserved to the appropriate pH in the laboratory.

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: T223450

Job ID: 570-119387-1

Client Sample ID: T223450-01 — Lab Sample ID: 570-119387-1

No Detections.

Client Sample ID: T223450-02 — Lab Sample ID: 570-119387-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client: SunStar Laboratories Inc
Project/Site: T223450

Job ID: 570-119387-1

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

Client Sample ID: T223450-01
Date Collected: 12/01/22 11:10
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119387-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		12/07/22 21:39	12/13/22 04:11	1
1,1'-Biphenyl	ND		100		ug/L		12/07/22 21:39	12/13/22 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*96*		*53 - 151*	*12/07/22 21:39*	*12/13/22 04:11*	*1*

Client Sample ID: T223450-02
Date Collected: 12/01/22 11:15
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119387-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		12/07/22 21:39	12/13/22 04:38	1
1,1'-Biphenyl	ND		100		ug/L		12/07/22 21:39	12/13/22 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*102*		*53 - 151*	*12/07/22 21:39*	*12/13/22 04:38*	*1*

Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T223450

Job ID: 570-119387-1

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)**
570-119387-1	T223450-01	96
570-119387-2	T223450-02	102
LCS 570-287119/2-A	Lab Control Sample	103
LCSD 570-287119/3-A	Lab Control Sample Dup	109
MB 570-287119/1-A	Method Blank	117

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-287119/1-A
Matrix: Water
Analysis Batch: 288189

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287119

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		12/07/22 21:39	12/13/22 02:50	1
1,1'-Biphenyl	ND		100		ug/L		12/07/22 21:39	12/13/22 02:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*117*		*53 - 151*	*12/07/22 21:39*	*12/13/22 02:50*	*1*

Lab Sample ID: LCS 570-287119/2-A
Matrix: Water
Analysis Batch: 288189

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287119

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			1000	1036		ug/L		104	57 - 120		
1,1'-Biphenyl			1000	917.8		ug/L		92	45 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*103*		*53 - 151*

Lab Sample ID: LCSD 570-287119/3-A
Matrix: Water
Analysis Batch: 288189

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 287119

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			1000	1195		ug/L		119	57 - 120	14	20
1,1'-Biphenyl			1000	911.5		ug/L		91	45 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*109*		*53 - 151*

QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T223450

Job ID: 570-119387-1

GC Semi VOA

Prep Batch: 287119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-119387-1	T223450-01	Total/NA	Water	3510C	
570-119387-2	T223450-02	Total/NA	Water	3510C	
MB 570-287119/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-287119/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-287119/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 288189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-119387-1	T223450-01	Total/NA	Water	8015B	287119
570-119387-2	T223450-02	Total/NA	Water	8015B	287119
MB 570-287119/1-A	Method Blank	Total/NA	Water	8015B	287119
LCS 570-287119/2-A	Lab Control Sample	Total/NA	Water	8015B	287119
LCSD 570-287119/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	287119

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T223450

Job ID: 570-119387-1

Client Sample ID: T223450-01

Lab Sample ID: 570-119387-1

Date Collected: 12/01/22 11:10

Matrix: Water

Date Received: 12/05/22 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			244.4 mL	2.5 mL	287119	12/07/22 21:39	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 04:11	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223450-02

Lab Sample ID: 570-119387-2

Date Collected: 12/01/22 11:15

Matrix: Water

Date Received: 12/05/22 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			245.8 mL	2.5 mL	287119	12/07/22 21:39	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 04:38	N5Y3	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: T223450

Job ID: 570-119387-1

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-23

Method Summary

Client: SunStar Laboratories Inc
Project/Site: T223450

Job ID: 570-119387-1

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: T223450

Job ID: 570-119387-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-119387-1	T223450-01	Water	12/01/22 11:10	12/05/22 13:17
570-119387-2	T223450-02	Water	12/01/22 11:15	12/05/22 13:17

119387

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T223450

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: T223450-01	**Water**	**Sampled: 12/01/22 11:10**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 11 10		8015M- Therminol
Containers Supplied				
Sample ID: T223450-02	**Water**	**Sampled: 12/01/22 11:15**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 11 15		8015M- Therminol
Containers Supplied				

570-119387 Chain of Custody

Released By	Date	Received By	Date
	12-5-22 13:17	EC	12-5-22 13:17
Released By	Date	Received By	Date
		5.9/5.7 SCII	

Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-119387-1

Login Number: 119387
List Number: 1
Creator: Burley, Don

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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

T223450

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

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

Date Due: 12/19/22 00:00 (11 day TAT)
Received By: Dave Berner
Date Received: 12/02/22 13:55
Logged In By: Jeff Lee
Date Logged In: 12/02/22 15:00

Samples Received at: **1.7°C**

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

Analysis	Due	TAT	Expires	Comments
T223450-01 North Pond [Water] Sampled 12/01/22 11:10 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 11:10	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 11:10	Ca,Cu,Na,K,Fe,Mg (F.F)
200.8	12/09/22 15:00	5	05/30/23 11:10	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 11:10	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 11:10	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 11:10	
Conductivity	12/09/22 15:00	5	12/29/22 11:10	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 11:10	
TDS-160.1	12/09/22 15:00	5	12/08/22 11:10	
T223450-02 South Pond [Water] Sampled 12/01/22 11:15 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 11:15	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 11:15	Ca,Cu,Na,K,Fe,Mg (F.F)
200.8	12/09/22 15:00	5	05/30/23 11:15	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 11:15	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 11:15	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 11:15	
Conductivity	12/09/22 15:00	5	12/29/22 11:15	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 11:15	
TDS-160.1	12/09/22 15:00	5	12/08/22 11:15	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T223450

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

Analysis	Due	TAT	Expires	Comments
T223450-03 Field Blank [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
T223450-04 Trip Blank [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
Eurofins Calscience (Tustin)				
T223450-01 North Pond [Water] Sampled 12/01/22 11:10 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 11:10	8015M- Therminol
T223450-02 South Pond [Water] Sampled 12/01/22 11:15 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 11:15	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

10 January 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 12/02/22 13:55. 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 Groundwater	
26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
23a	T223449-01	Water	12/01/22 09:00	12/02/22 13:55
OBS-1	T223449-02	Water	12/01/22 07:32	12/02/22 13:55
TW-1	T223449-03	Water	12/01/22 07:20	12/02/22 13:55
TW-2	T223449-04	Water	12/01/22 09:22	12/02/22 13:55
PW-0	T223449-05	Water	12/01/22 10:06	12/02/22 13:55
PW-2	T223449-06	Water	12/01/22 10:20	12/02/22 13:55
DM-1	T223449-07	Water	12/01/22 12:00	12/02/22 13:55
DM-2	T223449-08	Water	12/01/22 13:30	12/02/22 13:55
DM-3	T223449-09	Water	12/01/22 15:00	12/02/22 13:55
DUP	T223449-10	Water	12/01/22 00:00	12/02/22 13:55

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	01/10/23 14:29

DETECTIONS SUMMARY

Sample ID: 23a **Laboratory ID:** T223449-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Zinc	**66**	25	ug/l	200.8	FILT
Sodium	**570**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**1400**	10	mg/l	TDS by SM2540C	
pH	**8.4**	0.10	pH Units	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**2690**	10.0	mho/cm @25°(	SM2510b mod.	
Chloride	**451**	100	mg/l	EPA 300.0	
Sulfate as SO4	**396**	100	mg/l	EPA 300.0	
Nitrate as NO3	**0.984**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**0.220**	0.200	mg/l	EPA 300.0	O-07

Sample ID: 23a **Laboratory ID:** T223449-01RE3

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**15**	0.50	mg/l	EPA 200.7	FILT
Iron	**0.24**	0.20	mg/l	EPA 200.7	FILT
Magnesium	**0.44**	0.10	mg/l	EPA 200.7	FILT
Potassium	**13**	0.50	mg/l	EPA 200.7	FILT

Sample ID: OBS-1 **Laboratory ID:** T223449-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Selenium	**74**	25	ug/l	200.8	FILT
Sodium	**6700**	250	mg/l	EPA 200.7	FILT
pH	**7.9**	0.10	pH Units	SM 4500-H+B	O-04
Oil & Grease	**6.20**	5.00	mg/l	EPA 1664B	
Total Dissolved Solids	**16000**	10	mg/l	TDS by SM2540C	
Specific Conductance (EC)	**24600**	10.0	mho/cm @25°(	SM2510b mod.	
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**6450**	500	mg/l	EPA 300.0	
Sulfate as SO4	**5770**	500	mg/l	EPA 300.0	

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

Sample ID: OBS-1 **Laboratory ID:** T223449-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Nitrate as NO3	**4.77**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**1.08**	0.200	mg/l	EPA 300.0	O-07

Sample ID: OBS-1 **Laboratory ID:** T223449-02RE3

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**300**	2.0	mg/l	EPA 200.7	FILT
Iron	**0.23**	0.20	mg/l	EPA 200.7	FILT
Magnesium	**89**	0.10	mg/l	EPA 200.7	FILT
Potassium	**40**	2.0	mg/l	EPA 200.7	FILT

Sample ID: TW-1 **Laboratory ID:** T223449-03

Analyte	Result	Reporting Limit	Units	Method	Notes
Sodium	**4300**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**9000**	10	mg/l	TDS by SM2540C	
pH	**9.4**	0.10	pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**15900**	10.0	mho/cm @25°C	SM2510b mod.	
pH Temperature °C	**20**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**4930**	500	mg/l	EPA 300.0	
Sulfate as SO4	**1650**	500	mg/l	EPA 300.0	
Nitrate as NO3	**0.950**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**0.210**	0.200	mg/l	EPA 300.0	O-07

Sample ID: TW-1 **Laboratory ID:** T223449-03RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**65**	0.50	mg/l	EPA 200.7	FILT
Iron	**0.89**	0.20	mg/l	EPA 200.7	FILT
Magnesium	**14**	0.10	mg/l	EPA 200.7	FILT
Potassium	**55**	0.50	mg/l	EPA 200.7	FILT

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

Sample ID: TW-2 **Laboratory ID:** T223449-04

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**65**	25	ug/l	200.8	FILT
Zinc	**75**	25	ug/l	200.8	FILT
Sodium	**1300**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**3000**	10	mg/l	TDS by SM2540C	
pH	**7.0**	0.10	pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**6040**	10.0	mho/cm @25°C	SM2510b mod.	
pH Temperature °C	**20**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**1670**	250	mg/l	EPA 300.0	
Sulfate as SO4	**445**	250	mg/l	EPA 300.0	
Nitrate as NO3	**0.912**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**0.210**	0.200	mg/l	EPA 300.0	O-07

Sample ID: TW-2 **Laboratory ID:** T223449-04RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**110**	0.50	mg/l	EPA 200.7	FILT
Iron	**8.3**	0.20	mg/l	EPA 200.7	FILT
Magnesium	**4.6**	0.10	mg/l	EPA 200.7	FILT
Potassium	**34**	0.50	mg/l	EPA 200.7	FILT

Sample ID: PW-0 **Laboratory ID:** T223449-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**53**	25	ug/l	200.8	FILT
Barium	**48**	25	ug/l	200.8	FILT
Zinc	**130**	25	ug/l	200.8	FILT
Sodium	**1500**	250	mg/l	EPA 200.7	FILT
pH	**7.9**	0.10	pH Units	SM 4500-H+B	O-04
Total Dissolved Solids	**3400**	10	mg/l	TDS by SM2540C	
pH Temperature °C	**20**	1.0	pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**6430**	10.0	mho/cm @25°C	SM2510b mod.	
Chloride	**1780**	250	mg/l	EPA 300.0	
Sulfate as SO4	**542**	250	mg/l	EPA 300.0	

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Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

Sample ID: PW-0 **Laboratory ID:** T223449-05RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**110**	0.50	mg/l	EPA 200.7	FILT
Iron	**0.31**	0.20	mg/l	EPA 200.7	FILT
Magnesium	**1.9**	0.10	mg/l	EPA 200.7	FILT
Potassium	**35**	0.50	mg/l	EPA 200.7	FILT

Sample ID: PW-2 **Laboratory ID:** T223449-06

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**43**	25	ug/l	200.8	FILT
Sodium	**820**	250	mg/l	EPA 200.7	FILT
pH	**8.2**	0.10	pH Units	SM 4500-H+B	O-04
Total Dissolved Solids	**5200**	10	mg/l	TDS by SM2540C	
Specific Conductance (EC)	**3910**	10.0	mho/cm @25°(	SM2510b mod.	
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**892**	250	mg/l	EPA 300.0	
Sulfate as SO4	**426**	250	mg/l	EPA 300.0	

Sample ID: PW-2 **Laboratory ID:** T223449-06RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**52**	0.50	mg/l	EPA 200.7	FILT
Magnesium	**4.5**	0.10	mg/l	EPA 200.7	FILT
Potassium	**11**	0.50	mg/l	EPA 200.7	FILT

Sample ID: DM-1 **Laboratory ID:** T223449-07

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**26**	25	ug/l	200.8	FILT
Sodium	**4500**	250	mg/l	EPA 200.7	FILT
pH	**7.8**	0.10	pH Units	SM 4500-H+B	O-04
Total Dissolved Solids	**11000**	10	mg/l	TDS by SM2540C	
Specific Conductance (EC)	**17900**	10.0	mho/cm @25°(	SM2510b mod.	
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**5130**	1000	mg/l	EPA 300.0	

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Sample ID: DM-1 **Laboratory ID:** T223449-07

Analyte	Result	Reporting Limit	Units	Method	Notes
Sulfate as SO4	**1960**	1000	mg/l	EPA 300.0	
Nitrate as NO3	**7.36**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**1.66**	0.200	mg/l	EPA 300.0	O-07

Sample ID: DM-1 **Laboratory ID:** T223449-07RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**230**	2.0	mg/l	EPA 200.7	FILT
Potassium	**58**	0.50	mg/l	EPA 200.7	FILT
Magnesium	**61**	0.10	mg/l	EPA 200.7	FILT

Sample ID: DM-2 **Laboratory ID:** T223449-08

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**37**	25	ug/l	200.8	FILT
Sodium	**4700**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**10000**	10	mg/l	TDS by SM2540C	
pH	**7.8**	0.10	pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**18300**	10.0	mho/cm @25°C	SM2510b mod.	
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**5450**	1000	mg/l	EPA 300.0	
Sulfate as SO4	**2180**	1000	mg/l	EPA 300.0	
Nitrate as NO3	**9.45**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**2.13**	0.200	mg/l	EPA 300.0	O-07

Sample ID: DM-2 **Laboratory ID:** T223449-08RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**250**	2.0	mg/l	EPA 200.7	FILT
Magnesium	**65**	0.10	mg/l	EPA 200.7	FILT
Potassium	**57**	0.50	mg/l	EPA 200.7	FILT

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Sample ID: DM-3 **Laboratory ID:** T223449-09

Analyte	Result	Reporting Limit	Units	Method	Notes
Sodium	**4400**	250	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**9900**	10	mg/l	TDS by SM2540C	
pH	**7.8**	0.10	pH Units	SM 4500-H+B	O-04
Specific Conductance (EC)	**17600**	10.0	mho/cm @25°(	SM2510b mod.	
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**5300**	1000	mg/l	EPA 300.0	
Sulfate as SO4	**2110**	1000	mg/l	EPA 300.0	
Nitrate as NO3	**3.11**	0.500	mg/l	EPA 300.0	O-07
Nitrate as N	**0.700**	0.200	mg/l	EPA 300.0	O-07

Sample ID: DM-3 **Laboratory ID:** T223449-09RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**210**	2.0	mg/l	EPA 200.7	FILT
Magnesium	**56**	0.10	mg/l	EPA 200.7	FILT
Potassium	**55**	0.50	mg/l	EPA 200.7	FILT

Sample ID: DUP **Laboratory ID:** T223449-10

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**32**	25	ug/l	200.8	FILT
Barium	**42**	25	ug/l	200.8	FILT
Sodium	**800**	250	mg/l	EPA 200.7	FILT
pH	**8.1**	0.10	pH Units	SM 4500-H+B	O-04
Total Dissolved Solids	**2000**	10	mg/l	TDS by SM2540C	
Specific Conductance (EC)	**3920**	10.0	mho/cm @25°(	SM2510b mod.	
pH Temperature °C	**21**	1.0	pH Units	SM 4500-H+B	O-04
Chloride	**886**	250	mg/l	EPA 300.0	
Sulfate as SO4	**424**	250	mg/l	EPA 300.0	

Sample ID: DUP **Laboratory ID:** T223449-10RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Calcium	**52**	0.50	mg/l	EPA 200.7	FILT

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Sample ID: DUP **Laboratory ID:** T223449-10RE1

Analyte	Result	Reporting Limit	Units	Method	Notes
Magnesium	**4.6**	0.10	mg/l	EPA 200.7	FILT
Potassium	**12**	0.50	mg/l	EPA 200.7	FILT

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23a

T223449-01 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**570**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	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	**66**	25	"	"	"	"	"	"	FILT
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**2690**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**8.4**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**1400**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**451**	100	mg/l	20	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**396**	100	"	"	"	"	"	"	
Nitrate as NO3	**0.984**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**0.220**	0.200	"	"	"	"	"	"	O-07

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23a

T223449-01RE3 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**15**	0.50	"	"	"	"	12/30/22	"	FILT
Iron	**0.24**	0.20	"	"	"	"	"	"	FILT
Potassium	**13**	0.50	"	"	"	"	"	"	FILT
Magnesium	**0.44**	0.10	"	"	"	"	"	"	FILT

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

OBS-1

T223449-02 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**6700**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	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	**74**	25	"	"	"	"	"	"	FILT
Zinc	ND	25	"	"	"	"	"	"	FILT, R-01
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	**6.20**	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**24600**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**7.9**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**16000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**6450**	500	mg/l	100	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**5770**	500	"	"	"	"	"	"	
Nitrate as NO3	**4.77**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**1.08**	0.200	"	"	"	"	"	"	O-07

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OBS-1

T223449-02RE3 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**300**	2.0	"	4	"	"	12/30/22	"	FILT
Iron	**0.23**	0.20	"	1	"	"	"	"	FILT
Magnesium	**89**	0.10	"	"	"	"	"	"	FILT
Potassium	**40**	2.0	"	4	"	"	"	"	FILT

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

TW-1

T223449-03 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**4300**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	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	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**15900**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**9.4**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**20**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**9000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**4930**	500	mg/l	100	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**1650**	500	"	"	"	"	"	"	
Nitrate as NO3	**0.950**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**0.210**	0.200	"	"	"	"	"	"	O-07

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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	01/10/23 14:29

TW-1

T223449-03RE1 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**65**	0.50	"	"	"	"	12/30/22	"	FILT
Iron	**0.89**	0.20	"	"	"	"	"	"	FILT
Magnesium	**14**	0.10	"	"	"	"	"	"	FILT
Potassium	**55**	0.50	"	"	"	"	"	"	FILT

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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	01/10/23 14:29

TW-2

T223449-04 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**1300**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	ND	25	"	"	"	"	"	"	FILT, R-01
Barium	**65**	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	**75**	25	"	"	"	"	"	"	FILT
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**6040**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**7.0**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**20**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**3000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**1670**	250	mg/l	50	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**445**	250	"	"	"	"	"	"	
Nitrate as NO3	**0.912**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**0.210**	0.200	"	"	"	"	"	"	O-07

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

TW-2

T223449-04RE1 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**110**	0.50	"	"	"	"	"	"	FILT
Iron	**8.3**	0.20	"	"	"	"	"	"	FILT
Potassium	**34**	0.50	"	"	"	"	"	"	FILT
Magnesium	**4.6**	0.10	"	"	"	"	"	"	FILT

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

PW-0

T223449-05 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**1500**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	**53**	25	"	"	"	"	"	"	FILT
Barium	**48**	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	**130**	25	"	"	"	"	"	"	FILT
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**6430**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**7.9**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**20**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**3400**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**1780**	250	mg/l	50	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**542**	250	"	"	"	"	"	"	
Nitrate as NO3	ND	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	ND	0.200	"	"	"	"	"	"	O-07

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

PW-0

T223449-05RE1 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**110**	0.50	"	"	"	"	"	"	FILT
Iron	**0.31**	0.20	"	"	"	"	"	"	FILT
Magnesium	**1.9**	0.10	"	"	"	"	"	"	FILT
Potassium	**35**	0.50	"	"	"	"	"	"	FILT

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

PW-2

T223449-06 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**820**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	ND	25	"	"	"	"	"	"	FILT, R-01
Barium	**43**	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	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**3910**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**8.2**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**5200**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**892**	250	mg/l	50	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**426**	250	"	"	"	"	"	"	
Nitrate as NO3	ND	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	ND	0.200	"	"	"	"	"	"	O-07

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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	01/10/23 14:29

PW-2

T223449-06RE1 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**52**	0.50	"	"	"	"	12/30/22	"	FILT
Iron	ND	0.20	"	"	"	"	"	"	FILT
Magnesium	**4.5**	0.10	"	"	"	"	"	"	FILT
Potassium	**11**	0.50	"	"	"	"	"	"	FILT

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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	01/10/23 14:29

DM-1

T223449-07 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Sodium	**4500**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	ND	25	"	"	"	"	"	"	FILT, R-01
Barium	**26**	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	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**17900**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**7.8**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**11000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**5130**	1000	mg/l	200	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**1960**	1000	"	"	"	"	"	"	
Nitrate as NO3	**7.36**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**1.66**	0.200	"	"	"	"	"	"	O-07

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

DM-1

T223449-07RE1 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**230**	2.0	"	4	"	"	12/30/22	"	FILT
Iron	ND	0.20	"	1	"	"	"	"	FILT
Potassium	**58**	0.50	"	"	"	"	"	"	FILT
Magnesium	**61**	0.10	"	"	"	"	"	"	FILT

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

DM-2

T223449-08 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**4700**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	ND	25	"	"	"	"	"	"	FILT, R-01
Barium	**37**	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	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**18300**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**7.8**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**10000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**5450**	1000	mg/l	200	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**2180**	1000	"	"	"	"	"	"	
Nitrate as NO3	**9.45**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**2.13**	0.200	"	"	"	"	"	"	O-07

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

DM-2

T223449-08RE1 (Water)

SunStar Laboratories, Inc.

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**250**	2.0	"	4	"	"	12/30/22	"	FILT
Iron	ND	0.20	"	1	"	"	12/30/22	"	FILT
Magnesium	**65**	0.10	"	"	"	"	12/30/22	"	FILT
Potassium	**57**	0.50	"	"	"	"	"	"	FILT

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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	01/10/23 14:29

DM-3

T223449-09 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**4400**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	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	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**17600**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**7.8**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**9900**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**5300**	1000	mg/l	200	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**2110**	1000	"	"	"	"	"	"	
Nitrate as NO3	**3.11**	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	**0.700**	0.200	"	"	"	"	"	"	O-07

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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	01/10/23 14:29

DM-3

T223449-09RE1 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**210**	2.0	"	4	"	"	12/30/22	"	FILT
Iron	ND	0.20	"	1	"	"	"	"	FILT
Magnesium	**56**	0.10	"	"	"	"	"	"	FILT
Potassium	**55**	0.50	"	"	"	"	"	"	FILT

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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	01/10/23 14:29

DUP

T223449-10 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Sodium	**800**	250	mg/l	500	22L0029	12/02/22	12/06/22	EPA 200.7	FILT
Antimony	ND	25	ug/l	50	22L0050	12/05/22	12/08/22	200.8	FILT, R-01
Arsenic	**32**	25	"	"	"	"	"	"	FILT
Barium	**42**	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	22L0041	12/05/22	12/07/22	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	22L0036	12/05/22	12/05/22	EPA 1664B	
Specific Conductance (EC)	**3920**	10.0	umho/cm @25°C	"	22L0074	12/06/22	12/09/22	SM2510b mod.	
pH	**8.1**	0.10	pH Units	"	22L0056	12/06/22	12/07/22	SM 4500-H+B	O-04
pH Temperature °C	**21**	1.0	"	"	"	"	"	"	O-04
Total Dissolved Solids	**2000**	10	mg/l	"	22L0035	12/05/22	12/09/22	TDS by SM2540C	
Anions by EPA Method 300.0									
Chloride	**886**	250	mg/l	50	22L0031	12/05/22	12/06/22	EPA 300.0	
Sulfate as SO4	**424**	250	"	"	"	"	"	"	
Nitrate as NO3	ND	0.500	"	1	"	"	12/05/22	"	O-07
Nitrate as N	ND	0.200	"	"	"	"	"	"	O-07

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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	01/10/23 14:29

DUP

T223449-10RE1 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	0.005	mg/l	1	22L0406	12/30/22	12/30/22	EPA 200.7	FILT
Calcium	**52**	0.50	"	"	"	"	12/30/22	"	FILT
Iron	ND	0.20	"	"	"	"	"	"	FILT
Potassium	**12**	0.50	"	"	"	"	"	"	FILT
Magnesium	**4.6**	0.10	"	"	"	"	"	"	FILT

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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	01/10/23 14:29

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 22L0029 - EPA 3010A										
Blank (22L0029-BLK1)				Prepared: 12/02/22 Analyzed: 12/06/22						
Cadmium	ND	0.005	mg/l							
Chromium	ND	0.005	"							
Copper	ND	0.005	"							
Lead	ND	0.005	"							
Molybdenum	ND	0.005	"							
Nickel	ND	0.005	"							
Silver	ND	0.030	"							
Zinc	ND	0.030	"							
LCS (22L0029-BS1)				Prepared: 12/02/22 Analyzed: 12/06/22						
Cadmium	1.50	0.005	mg/l	1.50		99.8	85-115			
Chromium	1.48	0.005	"	1.50		98.8	85-115			
Copper	1.49	0.005	"	1.50		99.3	85-115			
Lead	1.50	0.005	"	1.50		100	85-115			
Molybdenum	1.41	0.005	"	1.50		94.0	85-115			
Nickel	1.50	0.005	"	1.50		99.9	85-115			
Zinc	1.49	0.030	"	1.50		99.7	85-115			
Matrix Spike (22L0029-MS1)	**Source: T223443-01**			Prepared: 12/02/22 Analyzed: 12/09/22						
Cadmium	1.63	0.005	mg/l	1.50	0.036	107	70-130			QM-05, R-01
Chromium	2.53	0.005	"	1.50	2.13	27.0	70-130			QM-05, R-01
Copper	2.06	0.005	"	1.50	0.016	136	70-130			QM-05, R-01
Lead	1.68	0.005	"	1.50	0.008	111	70-130			QM-05, R-01
Molybdenum	1.97	0.005	"	1.50	0.020	130	70-130			QM-05, R-01
Nickel	1.63	0.005	"	1.50	0.010	108	70-130			QM-05, R-01
Zinc	85.8	0.030	"	1.50	0.103	NR	70-130			QM-05, R-01
Aluminum	163	0.10	"	1.50	ND	NR	70-130			QM-05
Calcium	279	0.50	"	1.50	ND	NR	70-130			QM-05
Iron	610	0.20	"	1.50	ND	NR	70-130			QM-05
Potassium	194	1.0	"	1.50	ND	NR	70-130			QM-05
Sodium	366	1.0	"	1.50	ND	NR	70-130			QM-05

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

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 22L0029 - EPA 3010A										
Matrix Spike Dup (22L0029-MSD1)	**Source: T223443-01**			Prepared: 12/02/22 Analyzed: 12/09/22						
Cadmium	1.65	0.005	mg/l	1.50	0.036	108	70-130	1.02	30	QM-05, R-01
Chromium	2.58	0.005	"	1.50	2.13	29.7	70-130	1.61	30	QM-05, R-01
Copper	2.10	0.005	"	1.50	0.016	139	70-130	1.79	30	QM-05, R-01
Lead	1.69	0.005	"	1.50	0.008	112	70-130	0.934	30	QM-05, R-01
Molybdenum	1.99	0.005	"	1.50	0.020	131	70-130	1.20	30	QM-05, R-01
Nickel	1.65	0.005	"	1.50	0.010	109	70-130	1.30	30	QM-05, R-01
Selenium	1.44	0.030	"	1.50	ND	95.9	70-130	0.936	30	
Zinc	86.1	0.030	"	1.50	0.103	NR	70-130	0.312	30	QM-05
Aluminum	164	0.10	"	1.50	ND	NR	70-130	0.881	30	QM-05
Calcium	287	0.50	"	1.50	ND	NR	70-130	3.01	30	QM-05
Iron	638	0.20	"	1.50	ND	NR	70-130	4.41	30	QM-05
Potassium	10.6	1.0	"	1.50	ND	708	70-130	179	30	QM-05
Sodium	376	1.0	"	1.50	ND	NR	70-130	2.58	30	QM-05
Batch 22L0050 - EPA 3010A										
Blank (22L0050-BLK1)				Prepared: 12/05/22 Analyzed: 12/08/22						
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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Northstar Environmental Remediation	Project: Genesis Solar Groundwater	
26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

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 22L0050 - EPA 3010A										
LCS (22L0050-BS1)				Prepared: 12/05/22 Analyzed: 12/08/22						
Arsenic	51.9	0.50	ug/l	50.0		104	85-115			
Barium	45.5	0.50	"	50.0		91.0	85-115			
Cadmium	48.2	0.50	"	50.0		96.4	85-115			
Chromium	47.5	0.50	"	50.0		95.1	85-115			
Lead	47.1	0.50	"	50.0		94.2	85-115			
Matrix Spike (22L0050-MS1)		**Source: T223449-01**		Prepared: 12/05/22 Analyzed: 12/08/22						
Arsenic	49.5	25	ug/l	50.0	ND	99.0	70-130			
Barium	66.5	25	"	50.0	15.0	103	70-130			QM-07
Cadmium	50.0	25	"	50.0	ND	100	70-130			
Chromium	46.0	25	"	50.0	ND	92.0	70-130			
Lead	49.5	25	"	50.0	ND	99.0	70-130			
Matrix Spike Dup (22L0050-MSD1)		**Source: T223449-01**		Prepared: 12/05/22 Analyzed: 12/08/22						
Arsenic	43.0	25	ug/l	50.0	ND	86.0	70-130	14.1	20	QM-07
Barium	62.0	25	"	50.0	15.0	94.0	70-130	7.00	20	QM-07
Cadmium	46.0	25	"	50.0	ND	92.0	70-130	8.33	20	QM-07
Chromium	44.0	25	"	50.0	ND	88.0	70-130	4.44	20	QM-07
Lead	46.0	25	"	50.0	ND	92.0	70-130	7.33	20	QM-07
Batch 22L0406 - EPA 3010A										
Blank (22L0406-BLK1)				Prepared & Analyzed: 12/30/22						
Copper	ND	0.005	mg/l							
Calcium	ND	0.50	"							
Iron	ND	0.20	"							
Potassium	ND	0.50	"							
Magnesium	ND	0.10	"							

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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	01/10/23 14:29

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 22L0406 - EPA 3010A										
LCS (22L0406-BS1)				Prepared & Analyzed: 12/30/22						
Copper	1.54	0.005	mg/l	1.50		102	85-115			
Calcium	1.60	0.50	"	1.50		107	85-115			
Iron	1.54	0.20	"	1.50		103	85-115			
Potassium	1.66	0.50	"	1.50		110	85-115			
Magnesium	1.55	0.10	"	1.50		103	85-115			
Matrix Spike (22L0406-MS1)		**Source: T223443-01RE2**		Prepared & Analyzed: 12/30/22						
Copper	2.10	0.005	mg/l	1.50	0.434	111	70-130			
Calcium	284	0.50	"	1.50	300	NR	70-130			QM-05
Iron	623	0.20	"	1.50	690	NR	70-130			QM-05
Potassium	19.8	0.50	"	1.50	0.703	NR	70-130			QM-05
Magnesium	20.0	0.10	"	1.50	19.4	38.7	70-130			QM-05
Matrix Spike Dup (22L0406-MSD1)		**Source: T223443-01RE2**		Prepared & Analyzed: 12/30/22						
Copper	2.13	0.005	mg/l	1.50	0.434	113	70-130	1.59	30	
Calcium	283	0.50	"	1.50	300	NR	70-130	0.203	30	QM-05
Iron	630	0.20	"	1.50	690	NR	70-130	1.11	30	QM-05
Potassium	0.962	0.50	"	1.50	0.703	17.3	70-130	181	30	QM-05
Magnesium	19.8	0.10	"	1.50	19.4	29.8	70-130	0.670	30	QM-05

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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	01/10/23 14:29

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 22L0041 - EPA 7470A Water										
Blank (22L0041-BLK1)				Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	ND	1.0	ug/l							
LCS (22L0041-BS1)				Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	6.67	1.0	ug/l	7.00		95.3	80-120			
Matrix Spike (22L0041-MS1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	7.23	1.0	ug/l	7.00	ND	103	75-125			
Matrix Spike Dup (22L0041-MSD1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/07/22						
Mercury	7.27	1.0	ug/l	7.00	ND	104	75-125	0.491	20	

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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	01/10/23 14:29

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 22L0035 - General Preparation										
Blank (22L0035-BLK1)				Prepared: 12/05/22 Analyzed: 12/09/22						
Total Dissolved Solids	ND	10	mg/l							
LCS (22L0035-BS1)				Prepared: 12/05/22 Analyzed: 12/09/22						
Total Dissolved Solids	454	10	mg/l	500		90.8	80-120			
Duplicate (22L0035-DUP1)		**Source: T223439-03**		Prepared: 12/05/22 Analyzed: 12/09/22						
Total Dissolved Solids	770	10	mg/l		804			4.32	20	
Batch 22L0036 - General Preparation										
Blank (22L0036-BLK1)				Prepared & Analyzed: 12/05/22						
Oil & Grease	ND	5.00	mg/l							
LCS (22L0036-BS1)				Prepared & Analyzed: 12/05/22						
Oil & Grease	39.8	5.00	mg/l	53.1		75.0	78-114			BS-4
LCS Dup (22L0036-BSD1)				Prepared & Analyzed: 12/05/22						
Oil & Grease	41.5	5.00	mg/l	53.1		78.2	78-114	4.18	20	
Batch 22L0056 - General Preparation										
Duplicate (22L0056-DUP1)		**Source: T223449-01**		Prepared: 12/06/22 Analyzed: 12/07/22						
pH	8.20	0.10	pH Units		8.36			1.93	20	O-04
pH Temperature °C	21.0	1.0	"		21.1			0.475	200	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	01/10/23 14:29

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 22L0074 - General Preparation										
Duplicate (22L0074-DUP1)		**Source: T223449-01**		Prepared: 12/06/22 Analyzed: 12/09/22						
Specific Conductance (EC)	2680	10.0	umho/cm @25°C		2690			0.372	15	

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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 Groundwater	
26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	01/10/23 14:29

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 22L0031 - General Preparation										
Blank (22L0031-BLK1)				Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	ND	5.00	mg/l							
Sulfate as SO4	ND	5.00	"							
Nitrate as NO3	ND	0.500	"							
Nitrate as N	ND	0.200	"							
LCS (22L0031-BS1)				Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	23.6	5.00	mg/l	25.0		94.4	75-125			
Sulfate as SO4	24.5	5.00	"	25.0		98.0	75-125			
Nitrate as NO3	22.6	0.500	"	25.0		90.5	75-125			
Matrix Spike (22L0031-MS1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	449	100	mg/l	25.0	451	NR	75-125			QM-05
Sulfate as SO4	396	100	"	25.0	396	1.36	75-125			QM-05
Nitrate as NO3	23.1	0.500	"	25.0	0.984	88.3	75-125			
Matrix Spike Dup (22L0031-MSD1)	**Source: T223449-01**			Prepared: 12/05/22 Analyzed: 12/06/22						
Chloride	453	100	mg/l	25.0	451	4.88	75-125	0.874	20	QM-05
Sulfate as SO4	400	100	"	25.0	396	15.4	75-125	0.884	20	QM-05
Nitrate as NO3	23.1	0.500	"	25.0	0.984	88.5	75-125	0.178	20	

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25712 Commercentre Drive
Lake Forest, California 92630
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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	01/10/23 14:29

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-07	The sample was analyzed outside the EPA recommended holding time of 48 hours.
O-04	This sample was received and analyzed outside the EPA recommended holding time.
FILT	The sample was filtered prior to analysis.
BS-4	A BS was outside of acceptance range, however, the data was accepted based on the passing duplicate BS, acceptable RPD, and other batch QCs.
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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SunStar Laboratories, Inc.
25712 Commercentre Dr
Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: Northstar Environmental Remediation _____ Date: 12/2/22 Page: 1 of 1

Address: 26225 Enterprise Court, Lake Forest, CA 92630 _____ Project Name: Genesis Solar Groundwater _____

Phone: 949-274-1719 _____ Fax: _____ Collector: Arlin Brewster _____ Client Project #: 196-004-06 _____

Project Manager: Arlin Brewster _____ Batch #: T223449 EDF #: T10000006093 _____

	Sample 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/Preservative	Total # of containers
1	23a	12/1/22	0700	W	Various	X	X	X	X	X	X	X	X	X	X			7
2	OBS-1		0732	W	Various	X	X	X	X	X	X	X	X	X	X			7
3	TW-1		0720	W	Various	X	X	X	X	X	X	X	X	X	X			7
4	TW-2		0922	W	Various	X	X	X	X	X	X	X	X	X	X			7
5	PW-0		1006	W	Various	X	X	X	X	X	X	X	X	X	X	X		7
6	PW-2		1020	W	Various	X	X	X	X	X	X	X	X	X	X	X		7
7	DM-1		1200	W	Various	X	X	X	X	X	X	X	X	X	X			7
8	DM-2		1330	W	Various	X	X	X	X	X	X	X	X	X	X			7
9	DM-3		1500	W	Various	X	X	X	X	X	X	X	X	X	X			7
10	DUP	N/A	N/A	W	Various	X	X	X	X	X	X	X	X	X	X			7
11	Field Blank	N/A	N/A	W	Various												HOLD	1
12	Trip Blank	N/A	N/A	W	Various												HOLD	1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	12/2/22 @ 1355	[signature]	12.2.22 1355
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers 72

Chain of Custody seals Y/N/NA

Seals intact? Y/N/NA

Received good condition/cold 1.7°c

Turn around time: Standard **

Notes

** Deuterium & Oxygen-18 subcontract has 10 day TAT

Reporting limits must match previous reports

Sample disposal Instructions: Disposal @ $2.00 each ___ Return to client ___ Pickup ___

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

Rev. 02B Date 08/21
Receiving Form 001A

SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #: T223449

Client Name: Northstar Project: Genesis Solar GW

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

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

Lab Received by: Dave Berner Date/Time Lab Received: 12.2.22 1355

Total number of coolers received: Thermometer ID: SC-Gun Calibration due : 8/4/22

Temperature: Cooler #1	1.6 °C +/- the CF (+ 0.1°C) =	1.7	°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: JL 12.2.22

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 12/14/2022 7:52:19 AM

JOB DESCRIPTION

T223449

JOB NUMBER

570-119386-1

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 data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

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

Generated
12/14/2022 7:52:19 AM

Authorized for release by
Don Burley, Senior Project Manager
Donald.Burley@et.eurofinsus.com
(657)212-3033

Table of Contents

Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T223449

Job ID: 570-119386-1

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

Case Narrative

Client: SunStar Laboratories Inc
Project/Site: T223449

Job ID: 570-119386-1

Job ID: 570-119386-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-119386-1

Comments
No additional comments.

Receipt
The samples were received on 12/5/2022 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 was 5.7° C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-287119. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 3510C: The reference method requires samples to be preserved to a pH of 6-9. The following samples were received with insufficient preservation at a pH of 2: T223449-02 (570-119386-2), T223449-03 (570-119386-3), T223449-04 (570-119386-4), T223449-05 (570-119386-5), T223449-06 (570-119386-6), T223449-07 (570-119386-7), T223449-08 (570-119386-8), T223449-09 (570-119386-9) and T223449-10 (570-119386-10). The samples were preserved to the appropriate pH in the laboratory.

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: T223449

Job ID: 570-119386-1

Client Sample ID: T223449-01 — Lab Sample ID: 570-119386-1

No Detections.

Client Sample ID: T223449-02 — Lab Sample ID: 570-119386-2

No Detections.

Client Sample ID: T223449-03 — Lab Sample ID: 570-119386-3

No Detections.

Client Sample ID: T223449-04 — Lab Sample ID: 570-119386-4

No Detections.

Client Sample ID: T223449-05 — Lab Sample ID: 570-119386-5

No Detections.

Client Sample ID: T223449-06 — Lab Sample ID: 570-119386-6

No Detections.

Client Sample ID: T223449-07 — Lab Sample ID: 570-119386-7

No Detections.

Client Sample ID: T223449-08 — Lab Sample ID: 570-119386-8

No Detections.

Client Sample ID: T223449-09 — Lab Sample ID: 570-119386-9

No Detections.

Client Sample ID: T223449-10 — Lab Sample ID: 570-119386-10

No Detections.

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: T223449-01
Date Collected: 12/01/22 09:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	Nt		100		ug/L		12/07/22 21:39	12/13/22 05:04	1
1,1'-Biphenyl	ND		100		ug/L		12/07/22 21:39	12/13/22 05:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*96*		*53 - 151*	*12/07/22 21:39*	*12/13/22 05:04*	*1*

Client Sample ID: T223449-02
Date Collected: 12/01/22 07:32
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		12/07/22 21:39	12/13/22 05:32	1
1,1'-Biphenyl	ND		100		ug/L		12/07/22 21:39	12/13/22 05:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*102*		*53 - 151*	*12/07/22 21:39*	*12/13/22 05:32*	*1*

Client Sample ID: T223449-03
Date Collected: 12/01/22 07:20
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-3
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		97		ug/L		12/07/22 21:39	12/13/22 05:58	1
1,1'-Biphenyl	ND		97		ug/L		12/07/22 21:39	12/13/22 05:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*95*		*53 - 151*	*12/07/22 21:39*	*12/13/22 05:58*	*1*

Client Sample ID: T223449-04
Date Collected: 12/01/22 09:22
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-4
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		98		ug/L		12/07/22 21:39	12/13/22 06:25	1
1,1'-Biphenyl	ND		98		ug/L		12/07/22 21:39	12/13/22 06:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*101*		*53 - 151*	*12/07/22 21:39*	*12/13/22 06:25*	*1*

Client Sample ID: T223449-05
Date Collected: 12/01/22 10:06
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-5
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		94		ug/L		12/07/22 21:40	12/13/22 06:52	1
1,1'-Biphenyl	ND		94		ug/L		12/07/22 21:40	12/13/22 06:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*107*		*53 - 151*	*12/07/22 21:40*	*12/13/22 06:52*	*1*

Client Sample ID: T223449-06
Date Collected: 12/01/22 10:20
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-6
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		95		ug/L		12/07/22 21:40	12/13/22 07:19	1
1,1'-Biphenyl	ND		95		ug/L		12/07/22 21:40	12/13/22 07:19	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	98		53 - 151	12/07/22 21:40	12/13/22 07:19	1

Client Sample ID: T223449-07
Date Collected: 12/01/22 12:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-7
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		96		ug/L		12/07/22 21:40	12/13/22 07:46	1
1,1'-Biphenyl	ND		96		ug/L		12/07/22 21:40	12/13/22 07:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	102		53 - 151	12/07/22 21:40	12/13/22 07:46	1

Client Sample ID: T223449-08
Date Collected: 12/01/22 13:30
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-8
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		98		ug/L		12/07/22 21:40	12/13/22 08:12	1
1,1'-Biphenyl	ND		98		ug/L		12/07/22 21:40	12/13/22 08:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	101		53 - 151	12/07/22 21:40	12/13/22 08:12	1

Client Sample ID: T223449-09
Date Collected: 12/01/22 15:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-9
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		99		ug/L		12/07/22 21:40	12/13/22 08:39	1
1,1'-Biphenyl	ND		99		ug/L		12/07/22 21:40	12/13/22 08:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	101		53 - 151	12/07/22 21:40	12/13/22 08:39	1

Client Sample ID: T223449-10
Date Collected: 12/01/22 00:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-10
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		97		ug/L		12/07/22 21:41	12/13/22 09:06	1
1,1'-Biphenyl	ND		97		ug/L		12/07/22 21:41	12/13/22 09:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	101		53 - 151	12/07/22 21:41	12/13/22 09:06	1

Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T223449

Job ID: 570-119386-1

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)						
570-119386-1	T223449-01	96						
570-119386-2	T223449-02	102						
570-119386-3	T223449-03	95						
570-119386-4	T223449-04	101						
570-119386-5	T223449-05	107						
570-119386-6	T223449-06	98						
570-119386-7	T223449-07	102						
570-119386-8	T223449-08	101						
570-119386-9	T223449-09	101						
570-119386-10	T223449-10	101						
LCS 570-287119/2-A	Lab Control Sample	103						
LCSD 570-287119/3-A	Lab Control Sample Dup	109						
MB 570-287119/1-A	Method Blank	117						

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-287119/1-A
Matrix: Water
Analysis Batch: 288189

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287119

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		12/07/22 21:39	12/13/22 02:50	1
1,1'-Biphenyl	ND		100		ug/L		12/07/22 21:39	12/13/22 02:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*117*		*53 - 151*	*12/07/22 21:39*	*12/13/22 02:50*	*1*

Lab Sample ID: LCS 570-287119/2-A
Matrix: Water
Analysis Batch: 288189

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287119

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			1000	1036		ug/L		104	57 - 120		
1,1'-Biphenyl			1000	917.8		ug/L		92	45 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*103*		*53 - 151*

Lab Sample ID: LCSD 570-287119/3-A
Matrix: Water
Analysis Batch: 288189

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 287119

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			1000	1195		ug/L		119	57 - 120	14	20
1,1'-Biphenyl			1000	911.5		ug/L		91	45 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*109*		*53 - 151*

GC Semi VOA

Prep Batch: 287119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-119386-1	T223449-01	Total/NA	Water	3510C	
570-119386-2	T223449-02	Total/NA	Water	3510C	
570-119386-3	T223449-03	Total/NA	Water	3510C	
570-119386-4	T223449-04	Total/NA	Water	3510C	
570-119386-5	T223449-05	Total/NA	Water	3510C	
570-119386-6	T223449-06	Total/NA	Water	3510C	
570-119386-7	T223449-07	Total/NA	Water	3510C	
570-119386-8	T223449-08	Total/NA	Water	3510C	
570-119386-9	T223449-09	Total/NA	Water	3510C	
570-119386-10	T223449-10	Total/NA	Water	3510C	
MB 570-287119/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-287119/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-287119/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 288189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-119386-1	T223449-01	Total/NA	Water	8015B	287119
570-119386-2	T223449-02	Total/NA	Water	8015B	287119
570-119386-3	T223449-03	Total/NA	Water	8015B	287119
570-119386-4	T223449-04	Total/NA	Water	8015B	287119
570-119386-5	T223449-05	Total/NA	Water	8015B	287119
570-119386-6	T223449-06	Total/NA	Water	8015B	287119
570-119386-7	T223449-07	Total/NA	Water	8015B	287119
570-119386-8	T223449-08	Total/NA	Water	8015B	287119
570-119386-9	T223449-09	Total/NA	Water	8015B	287119
570-119386-10	T223449-10	Total/NA	Water	8015B	287119
MB 570-287119/1-A	Method Blank	Total/NA	Water	8015B	287119
LCS 570-287119/2-A	Lab Control Sample	Total/NA	Water	8015B	287119
LCSD 570-287119/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	287119

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T223449

Job ID: 570-119386-1

Client Sample ID: T223449-01
Date Collected: 12/01/22 09:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			247.2 mL	2.5 mL	287119	12/07/22 21:39	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 05:04	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-02
Date Collected: 12/01/22 07:32
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250.9 mL	2.5 mL	287119	12/07/22 21:39	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 05:32	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-03
Date Collected: 12/01/22 07:20
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258.4 mL	2.5 mL	287119	12/07/22 21:39	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 05:58	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-04
Date Collected: 12/01/22 09:22
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			255.6 mL	2.5 mL	287119	12/07/22 21:39	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 06:25	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-05
Date Collected: 12/01/22 10:06
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			265.2 mL	2.5 mL	287119	12/07/22 21:40	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 06:52	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T223449

Job ID: 570-119386-1

Client Sample ID: T223449-06
Date Collected: 12/01/22 10:20
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			261.9 mL	2.5 mL	287119	12/07/22 21:40	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 07:19	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-07
Date Collected: 12/01/22 12:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			259.7 mL	2.5 mL	287119	12/07/22 21:40	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 07:46	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-08
Date Collected: 12/01/22 13:30
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			256.2 mL	2.5 mL	287119	12/07/22 21:40	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 08:12	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-09
Date Collected: 12/01/22 15:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			252.6 mL	2.5 mL	287119	12/07/22 21:40	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 08:39	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223449-10
Date Collected: 12/01/22 00:00
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119386-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			256.9 mL	2.5 mL	287119	12/07/22 21:41	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	288189	12/13/22 09:06	N5Y3	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: T223449

Job ID: 570-119386-1

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-23

Method Summary

Client: SunStar Laboratories Inc
Project/Site: T223449

Job ID: 570-119386-1

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: T223449

Job ID: 570-119386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-119386-1	T223449-01	Water	12/01/22 09:00	12/05/22 13:17
570-119386-2	T223449-02	Water	12/01/22 07:32	12/05/22 13:17
570-119386-3	T223449-03	Water	12/01/22 07:20	12/05/22 13:17
570-119386-4	T223449-04	Water	12/01/22 09:22	12/05/22 13:17
570-119386-5	T223449-05	Water	12/01/22 10:06	12/05/22 13:17
570-119386-6	T223449-06	Water	12/01/22 10:20	12/05/22 13:17
570-119386-7	T223449-07	Water	12/01/22 12:00	12/05/22 13:17
570-119386-8	T223449-08	Water	12/01/22 13:30	12/05/22 13:17
570-119386-9	T223449-09	Water	12/01/22 15:00	12/05/22 13:17
570-119386-10	T223449-10	Water	12/01/22 00:00	12/05/22 13:17

119386

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T223449

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

570-119386 Chain of Custody

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: T223449-01	**Water**	**Sampled:12/01/22 09:00**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 09 00		8015M- Therminol
Containers Supplied				
Sample ID: T223449-02	**Water**	**Sampled:12/01/22 07:32**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 07 32		8015M- Therminol
Containers Supplied				
Sample ID: T223449-03	**Water**	**Sampled:12/01/22 07:20**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 07 20		8015M- Therminol
Containers Supplied				
Sample ID: T223449-04	**Water**	**Sampled:12/01/22 09:22**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 09 22		8015M- Therminol
Containers Supplied				
Sample ID: T223449-05	**Water**	**Sampled:12/01/22 10:06**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 10 06		8015M- Therminol
Containers Supplied				
Sample ID: T223449-06	**Water**	**Sampled:12/01/22 10:20**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 10 20		8015M- Therminol
Containers Supplied				

Released By	Date	Received By	Date
	12-5-22 13:17	EC	12-5-22 13'17
Released By	Date	Received By	Date
		5.9/5.7 SCII	

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T223449

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: T223449-07	**Water**	**Sampled: 12/01/22 12:00**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 12 00		8015M- Therminol
Containers Supplied				
Sample ID: T223449-08	**Water**	**Sampled: 12/01/22 13:30**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 13 30		8015M- Therminol
Containers Supplied				
Sample ID: T223449-09	**Water**	**Sampled: 12/01/22 15:00**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 15 00		8015M- Therminol
Containers Supplied				
Sample ID: T223449-10	**Water**	**Sampled: 12/01/22 00:00**		
Misc Water Testing #1	12/16/22 00 00	05/30/23 00 00		8015M- Therminol
Containers Supplied				

Released By	Date	Received By	Date
	12-5-22 13:17	EC	12-5-22 13:17
Released By	Date	Received By	Date
		5.9/5.7 SCII	

Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-119386-1

Login Number: 119386
List Number: 1
Creator: Burley, Don

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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 #:	851475	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-01				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 9:00	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-74.0 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-10.20 ‰ 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 #:	851476	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-02				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 7:32	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-61.2 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-6.83 ‰ 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 #:	851477	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-03				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 7:20	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-62.1 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-7.63 ‰ 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 #:	851478	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-04				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 9:22	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-75.5 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-10.03 ‰ 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 #:	851479	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-05				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 10:06	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-76.0 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-10.03 ‰ 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 #:	851480	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-06				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 10:20	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-77.9 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-10.28 ‰ 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 #:	851481	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-07				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 12:00	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-70.2 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-8.62 ‰ 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 #:	851482	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-08				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 13:30	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-69.5 ‰ 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 #:	851483	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-09				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 15:00	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-70.5 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-8.71 ‰ 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

ISOTECH
a Stratum Reservoir brand

www.isotechlabs.com

Lab #:	851484	Job #:	52967	IS-101168	Co. Job#:
Sample Name:	T223449-10				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T223449				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	12/01/2022 0:00	Date Received:	12/07/2022	Date Reported:	12/27/2022

δD of water	----------	-77.7 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-10.25 ‰ 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

T223449

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

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

Date Due:	12/19/22 00:00 (11 day TAT)		
Received By:	Dave Berner	Date Received:	12/02/22 13:55
Logged In By:	Jeff Lee	Date Logged In:	12/02/22 14:48

Samples Received at: **1.7°C**

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

Analysis	Due	TAT	Expires	Comments
T223449-01 23a [Water] Sampled 12/01/22 09:00 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 09:00	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 09:00	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 09:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 09:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 09:00	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 09:00	
Conductivity	12/09/22 15:00	5	12/29/22 09:00	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 09:00	
TDS-160.1	12/09/22 15:00	5	12/08/22 09:00	
T223449-02 OBS-1 [Water] Sampled 12/01/22 07:32 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 07:32	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 07:32	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 07:32	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 07:32	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 07:32	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 07:32	
Conductivity	12/09/22 15:00	5	12/29/22 07:32	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 07:32	
TDS-160.1	12/09/22 15:00	5	12/08/22 07:32	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T223449

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

Analysis	Due	TAT	Expires	Comments
T223449-03 TW-1 [Water] Sampled 12/01/22 07:20 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 07:20	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 07:20	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 07:20	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 07:20	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 07:20	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 07:20	
Conductivity	12/09/22 15:00	5	12/29/22 07:20	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 07:20	
TDS-160.1	12/09/22 15:00	5	12/08/22 07:20	
T223449-04 TW-2 [Water] Sampled 12/01/22 09:22 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 09:22	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 09:22	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 09:22	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 09:22	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 09:22	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 09:22	
Conductivity	12/09/22 15:00	5	12/29/22 09:22	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 09:22	
TDS-160.1	12/09/22 15:00	5	12/08/22 09:22	
T223449-05 PW-0 [Water] Sampled 12/01/22 10:06 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 10:06	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 10:06	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 10:06	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 10:06	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 10:06	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 10:06	
Conductivity	12/09/22 15:00	5	12/29/22 10:06	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 10:06	
TDS-160.1	12/09/22 15:00	5	12/08/22 10:06	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T223449

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

Analysis	Due	TAT	Expires	Comments
T223449-06 PW-2 [Water] Sampled 12/01/22 10:20 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 10:20	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 10:20	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 10:20	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 10:20	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 10:20	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 10:20	
Conductivity	12/09/22 15:00	5	12/29/22 10:20	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 10:20	
TDS-160.1	12/09/22 15:00	5	12/08/22 10:20	
T223449-07 DM-1 [Water] Sampled 12/01/22 12:00 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 12:00	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 12:00	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 12:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 12:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 12:00	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 12:00	
Conductivity	12/09/22 15:00	5	12/29/22 12:00	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 12:00	
TDS-160.1	12/09/22 15:00	5	12/08/22 12:00	
T223449-08 DM-2 [Water] Sampled 12/01/22 13:30 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 13:30	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 13:30	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 13:30	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 13:30	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 13:30	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 13:30	
Conductivity	12/09/22 15:00	5	12/29/22 13:30	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 13:30	
TDS-160.1	12/09/22 15:00	5	12/08/22 13:30	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T223449

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

Analysis	Due	TAT	Expires	Comments
T223449-09 DM-3 [Water] Sampled 12/01/22 15:00 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 15:00	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 15:00	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 15:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 15:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 15:00	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 15:00	
Conductivity	12/09/22 15:00	5	12/29/22 15:00	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 15:00	
TDS-160.1	12/09/22 15:00	5	12/08/22 15:00	
T223449-10 DUP [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				
1664	12/09/22 15:00	5	12/29/22 00:00	Oil & Grease
200.7	12/09/22 15:00	5	05/30/23 00:00	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	12/09/22 15:00	5	05/30/23 00:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	12/09/22 15:00	5	12/29/22 00:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	12/09/22 15:00	5	12/03/22 00:00	Nitrate
7470/71 Hg	12/09/22 15:00	5	03/01/23 00:00	
Conductivity	12/09/22 15:00	5	12/29/22 00:00	
pH water SM 4500-H+B	12/07/22 15:00	3	12/02/22 00:00	
TDS-160.1	12/09/22 15:00	5	12/08/22 00:00	
T223449-11 Field Blank [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
T223449-12 Trip Blank [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				

Eurofins Calscience (Tustin)

T223449-01 23a [Water] Sampled 12/01/22 09:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 09:00	8015M- Therminol
T223449-02 OBS-1 [Water] Sampled 12/01/22 07:32 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 07:32	8015M- Therminol

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T223449

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

Analysis	Due	TAT	Expires	Comments
Eurofins Calscience (Tustin)				
T223449-03 TW-1 [Water] Sampled 12/01/22 07:20 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 07:20	8015M- Therminol
T223449-04 TW-2 [Water] Sampled 12/01/22 09:22 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 09:22	8015M- Therminol
T223449-05 PW-0 [Water] Sampled 12/01/22 10:06 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 10:06	8015M- Therminol
T223449-06 PW-2 [Water] Sampled 12/01/22 10:20 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 10:20	8015M- Therminol
T223449-07 DM-1 [Water] Sampled 12/01/22 12:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 12:00	8015M- Therminol
T223449-08 DM-2 [Water] Sampled 12/01/22 13:30 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 13:30	8015M- Therminol
T223449-09 DM-3 [Water] Sampled 12/01/22 15:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 15:00	8015M- Therminol
T223449-10 DUP [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	12/16/22 00:00	10	05/30/23 00:00	8015M- Therminol
Isotech Laboratories, Inc.				
T223449-01 23a [Water] Sampled 12/01/22 09:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 09:00	Deuterium,Oxygen-18
T223449-02 OBS-1 [Water] Sampled 12/01/22 07:32 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 07:32	Deuterium,Oxygen-18

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T223449

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

Analysis	Due	TAT	Expires	Comments
Isotech Laboratories, Inc.				
T223449-03 TW-1 [Water] Sampled 12/01/22 07:20 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 07:20	Deuterium,Oxygen-18
T223449-04 TW-2 [Water] Sampled 12/01/22 09:22 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 09:22	Deuterium,Oxygen-18
T223449-05 PW-0 [Water] Sampled 12/01/22 10:06 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 10:06	Deuterium,Oxygen-18
T223449-06 PW-2 [Water] Sampled 12/01/22 10:20 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 10:20	Deuterium,Oxygen-18
T223449-07 DM-1 [Water] Sampled 12/01/22 12:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 12:00	Deuterium,Oxygen-18
T223449-08 DM-2 [Water] Sampled 12/01/22 13:30 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 13:30	Deuterium,Oxygen-18
T223449-09 DM-3 [Water] Sampled 12/01/22 15:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 15:00	Deuterium,Oxygen-18
T223449-10 DUP [Water] Sampled 12/01/22 00:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	12/16/22 00:00	10	05/30/23 00:00	Deuterium,Oxygen-18

Reviewed By

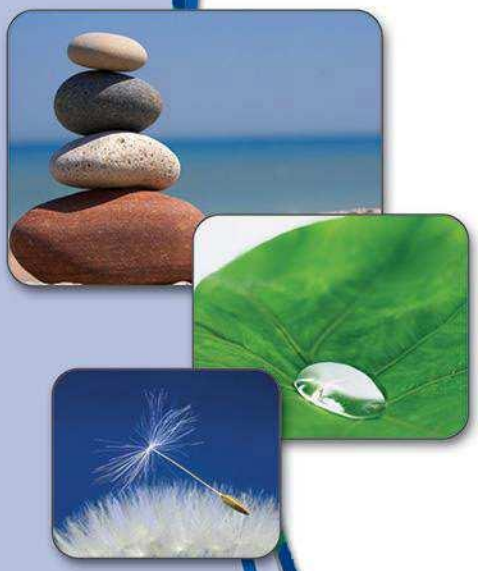
Date

APPENDIX D

LABORATORY ANALYTICAL RESULTS

LAND TREATMENT UNITS

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-98593-1
Client Project/Site: T221598

For:
SunStar Laboratories Inc
25712 Commercentre Drive
Lake Forest, California 92630

Attn: Jeff Lee

Authorized for release by:
6/21/2022 4:26:36 AM

Don Burley, Senior Project Manager
(657)212-3033
Donald.Burley@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.

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

Case Narrative

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Job ID: 570-98593-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-98593-1

Comments
No additional comments.

Receipt
The sample was received on 6/6/2022 11:22 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3º C.

GC Semi VOA
Method 8015B: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 570-240201 and analytical batch 570-242036 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of 1,1'-Biphenyl in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method 8015B: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: (570-98593-A-1-F MS) and (570-98593-A-1-G MSD). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported. Matrix interference is suspect.

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

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

Detection Summary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Client Sample ID: T221598-01

Lab Sample ID: 570-98593-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis-	1400	F2	50		mg/Kg	10		8015B	Total/NA
1,1'-Biphenyl	430	F2	50		mg/Kg	10		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

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

Client Sample ID: T221598-01
Date Collected: 06/03/22 11:45
Date Received: 06/06/22 11:22

Lab Sample ID: 570-98593-1
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	1400	F2	50		mg/Kg		06/09/22 10:08	06/17/22 20:11	10
1,1'-Biphenyl	430	F2	50		mg/Kg		06/09/22 10:08	06/17/22 20:11	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*111*		*60 - 138*	*06/09/22 10:08*	*06/17/22 20:11*	*10*

Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**OTCSN1 (60-138)**
570-98593-1	T221598-01	111
570-98593-1 MS	T221598-01	149 S1+
570-98593-1 MSD	T221598-01	139 S1+
LCS 570-240201/2-A	Lab Control Sample	101
LCSD 570-240201/3-A	Lab Control Sample Dup	90
MB 570-240201/1-A	Method Blank	94

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-240201/1-A
Matrix: Solid
Analysis Batch: 242036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240201

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		5.0		mg/Kg		06/09/22 10:08	06/16/22 15:55	1
1,1'-Biphenyl	ND		5.0		mg/Kg		06/09/22 10:08	06/16/22 15:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*94*		*60 - 138*	*06/09/22 10:08*	*06/16/22 15:55*	*1*

Lab Sample ID: LCS 570-240201/2-A
Matrix: Solid
Analysis Batch: 242036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240201

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			100	106.8		mg/Kg		107	68 - 120		
1,1'-Biphenyl			100	81.95		mg/Kg		82	57 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*101*		*60 - 138*

Lab Sample ID: LCSD 570-240201/3-A
Matrix: Solid
Analysis Batch: 242036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240201

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			100	107.1		mg/Kg		107	68 - 120	0	20
1,1'-Biphenyl			100	82.21		mg/Kg		82	57 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*90*		*60 - 138*

Lab Sample ID: 570-98593-1 MS
Matrix: Solid
Analysis Batch: 242381

Client Sample ID: T221598-01
Prep Type: Total/NA
Prep Batch: 240201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-	1400	F2	95.9	545.6	4	mg/Kg		-924	68 - 120		
1,1'-Biphenyl	430	F2	95.9	234.6	4	mg/Kg		-202	57 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*149*	*S1+*	*60 - 138*

Lab Sample ID: 570-98593-1 MSD
Matrix: Solid
Analysis Batch: 242381

Client Sample ID: T221598-01
Prep Type: Total/NA
Prep Batch: 240201

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-	1400	F2	102	773.4	4 F2	mg/Kg		-646	68 - 120	35	20
1,1'-Biphenyl	430	F2	102	318.3	4 F2	mg/Kg		-108	57 - 120	30	20

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

Lab Sample ID: 570-98593-1 MSD
Matrix: Solid
Analysis Batch: 242381

Client Sample ID: T221598-01
Prep Type: Total/NA
Prep Batch: 240201

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	*139*	*S1+*	*60 - 138*

QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

GC Semi VOA

Prep Batch: 240201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98593-1	T221598-01	Total/NA	Solid	3550C	
MB 570-240201/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-240201/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-240201/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-98593-1 MS	T221598-01	Total/NA	Solid	3550C	
570-98593-1 MSD	T221598-01	Total/NA	Solid	3550C	

Analysis Batch: 242036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-240201/1-A	Method Blank	Total/NA	Solid	8015B	240201
LCS 570-240201/2-A	Lab Control Sample	Total/NA	Solid	8015B	240201
LCSD 570-240201/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	240201

Analysis Batch: 242381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98593-1	T221598-01	Total/NA	Solid	8015B	240201
570-98593-1 MS	T221598-01	Total/NA	Solid	8015B	240201
570-98593-1 MSD	T221598-01	Total/NA	Solid	8015B	240201

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Client Sample ID: T221598-01
Date Collected: 06/03/22 11:45
Date Received: 06/06/22 11:22

Lab Sample ID: 570-98593-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			10.03 g	10 mL	240201	06/09/22 10:08	KG5J	ECL 4
Total/NA	Analysis	8015B		10			242381	06/17/22 20:11	N5Y3	ECL 4
	Instrument ID: GC70B									

Laboratory References:

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

Accreditation/Certification Summary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-22
Oregon	NELAP	4175	01-31-23

Method Summary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	ECL 4
3550C	Ultrasonic Extraction	SW846	ECL 4

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: SunStar Laboratories Inc
Project/Site: T221598

Job ID: 570-98593-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-98593-1	T221598-01	Solid	06/03/22 11:45	06/06/22 11:22

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

Printed: 6/3/2022 4:07:39PM

WORK ORDER

T221598

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

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

Date Due	06/17/22 00:00 (10 day TAT)		
Received By	Dave Berner	Date Received	06/03/22 11.45
Logged In By	Jeff Lee	Date Logged In	06/03/22 15 58

Samples Received at: 4.4°C

Custody Seals	No	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confin	Yes		

Analysis	Due	TAT	Expires	Comments
Eurofins Calscience (Tustin)				
T221598-01 LTU #1 [Soil] Sampled 06/03/22 11:45 (GMT-08:00) Pacific Time (US &				
Misc Subcontract (see notes)	06/17/22 00 00	10	11/30/22 11 45	8015M- Therminol

570-98593 Chain of Custody

REL: _____ 6-6-22 1122
Reviewed By Date

Rec by Olga Cinelas 6/6/22 1122 16/33 IR96

Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-98593-1

Login Number: 98593
List Number: 1
Creator: Skinner, Alma D

List Source: Eurofins Calscience

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

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

Chain of Custody Record

Client: Northstar Environmental Remediation _____ Date: 06/03/22 Page: 1 of 1

Address: 26225 Enterprise Court, Lake Forest, CA 92630 _____ Project Name: Genesis Solar LTUs & Ponds _____

Phone: 949-274-1719 _____ Fax: _____ Collector: Arlin Brewster _____ Client Project #: 196-004-05 _____

Project Manager: Arlin Brewster _____ Batch #: T221598 EDF #: Not Required _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8015M - Therminol (Subcontract)										Laboratory ID #	Comments/Preservative	Total # of containers
LTU #1	6/2/22	11:30	S	8-oz jar	X										1		1
LTU #2			S	8-oz jar													
LTU #3			S	8-oz jar													
LTU #4			S	8-oz jar													

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	06/03/22 @ 1145	[signature] 6.3.22	1145
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers	1
Chain of Custody seals Y/N/NA	
Seals intact? Y/N/NA	
Received good condition/cold	4.4 °C

Turn around time: Standard

Notes
Please report in ppmv. EDF report not required.

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-105475-1
Laboratory Sample Delivery Group: Genesis Solar LLC
Client Project/Site: GSEP LTU & Ponds

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

Attn: Arlin Brewster

Authorized for release by:
8/18/2022 11:07:03 AM

Sheri Fama, Project Manager I
(657)210-6368
Sheri.Fama@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
S1+	Surrogate recovery exceeds control limits, high biased.

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

Case Narrative

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Job ID: 570-105475-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-105475-1

Comments
No additional comments.

Receipt
The samples were received on 8/4/2022 4:30 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 was 4.4° C.

GC Semi VOA
Method 8015B: Surrogate recovery for the following samples were outside control limits: LTU #1 (570-105475-1), LTU #2 (570-105475-2), LTU #3 (570-105475-3), (570-105475-A-1-A MS) and (570-105475-A-1-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Sample Summary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-105475-1	LTU #1	Solid	08/04/22 12:25	08/04/22 16:30
570-105475-2	LTU #2	Solid	08/04/22 12:28	08/04/22 16:30
570-105475-3	LTU #3	Solid	08/04/22 12:30	08/04/22 16:30

Detection Summary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Client Sample ID: LTU #1 — Lab Sample ID: 570-105475-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis-	46000		2500	1100	mg/Kg	500		8015B	Total/NA
1,1'-Biphenyl	16000		2500	680	mg/Kg	500		8015B	Total/NA

Client Sample ID: LTU #2 — Lab Sample ID: 570-105475-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis-	44000		2500	1100	mg/Kg	500		8015B	Total/NA
1,1'-Biphenyl	16000		2500	680	mg/Kg	500		8015B	Total/NA

Client Sample ID: LTU #3 — Lab Sample ID: 570-105475-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis-	45000		2500	1100	mg/Kg	500		8015B	Total/NA
1,1'-Biphenyl	16000		2500	680	mg/Kg	500		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Client Sample ID: LTU #1

Date Collected: 08/04/22 12:25
Date Received: 08/04/22 16:30

Lab Sample ID: 570-105475-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	46000		2500	1100	mg/Kg		08/05/22 09:07	08/17/22 17:51	500
1,1'-Biphenyl	16000		2500	680	mg/Kg		08/05/22 09:07	08/17/22 17:51	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*308*	*S1+*	*60 - 138*	*08/05/22 09:07*	*08/17/22 17:51*	*500*

Client Sample ID: LTU #2

Date Collected: 08/04/22 12:28
Date Received: 08/04/22 16:30

Lab Sample ID: 570-105475-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	44000		2500	1100	mg/Kg		08/05/22 09:07	08/17/22 18:16	500
1,1'-Biphenyl	16000		2500	680	mg/Kg		08/05/22 09:07	08/17/22 18:16	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*315*	*S1+*	*60 - 138*	*08/05/22 09:07*	*08/17/22 18:16*	*500*

Client Sample ID: LTU #3

Date Collected: 08/04/22 12:30
Date Received: 08/04/22 16:30

Lab Sample ID: 570-105475-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	45000		2500	1100	mg/Kg		08/05/22 09:07	08/17/22 18:41	500
1,1'-Biphenyl	16000		2500	680	mg/Kg		08/05/22 09:07	08/17/22 18:41	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*278*	*S1+*	*60 - 138*	*08/05/22 09:07*	*08/17/22 18:41*	*500*

Surrogate Summary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	OTCSN1 (60-138)								
570-105475-1	LTU #1	308 S1+								
570-105475-1 MS	LTU #1	342 S1+								
570-105475-1 MSD	LTU #1	321 S1+								
570-105475-2	LTU #2	315 S1+								
570-105475-3	LTU #3	278 S1+								
LCS 570-254682/2-A	Lab Control Sample	91								
LCSD 570-254682/3-A	Lab Control Sample Dup	91								
MB 570-254682/1-A	Method Blank	98								

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Client Sample ID: LTU #1

Date Collected: 08/04/22 12:25
Date Received: 08/04/22 16:30

Lab Sample ID: 570-105475-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			10.17 g	10 mL	254682	08/05/22 09:07	USUL	EET CAL 4
Total/NA	Analysis	8015B		500			257464	08/17/22 17:51	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: LTU #2

Date Collected: 08/04/22 12:28
Date Received: 08/04/22 16:30

Lab Sample ID: 570-105475-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			10.11 g	10 mL	254682	08/05/22 09:07	USUL	EET CAL 4
Total/NA	Analysis	8015B		500			257464	08/17/22 18:16	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: LTU #3

Date Collected: 08/04/22 12:30
Date Received: 08/04/22 16:30

Lab Sample ID: 570-105475-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			10.16 g	10 mL	254682	08/05/22 09:07	USUL	EET CAL 4
Total/NA	Analysis	8015B		500			257464	08/17/22 18:41	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Laboratory References:

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

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

Lab Sample ID: MB 570-254682/1-A
Matrix: Solid
Analysis Batch: 257464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 254682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		5.0	2.2	mg/Kg		08/05/22 09:07	08/17/22 14:28	1
1,1'-Biphenyl	ND		5.0	1.4	mg/Kg		08/05/22 09:07	08/17/22 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*98*		*60 - 138*	*08/05/22 09:07*	*08/17/22 14:28*	*1*

Lab Sample ID: LCS 570-254682/2-A
Matrix: Solid
Analysis Batch: 257464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 254682

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			100	102		mg/Kg		102	68 - 120		
1,1'-Biphenyl			100	77.0		mg/Kg		77	57 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*91*		*60 - 138*

Lab Sample ID: LCSD 570-254682/3-A
Matrix: Solid
Analysis Batch: 257464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 254682

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			100	101		mg/Kg		101	68 - 120	0	20
1,1'-Biphenyl			100	77.1		mg/Kg		77	57 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*91*		*60 - 138*

Lab Sample ID: 570-105475-1 MS
Matrix: Solid
Analysis Batch: 257464

Client Sample ID: LTU #1
Prep Type: Total/NA
Prep Batch: 254682

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-	46000		98.1	50200	4	mg/Kg		4728	68 - 120		
1,1'-Biphenyl	16000		98.1	17700	4	mg/Kg		1770	57 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*342*	*S1+*	*60 - 138*

Lab Sample ID: 570-105475-1 MSD
Matrix: Solid
Analysis Batch: 257464

Client Sample ID: LTU #1
Prep Type: Total/NA
Prep Batch: 254682

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-	46000		98.5	56600	4	mg/Kg		11212	68 - 120	12	20
1,1'-Biphenyl	16000		98.5	20100	4	mg/Kg		4277	57 - 120	13	20

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

Lab Sample ID: 570-105475-1 MSD
Matrix: Solid
Analysis Batch: 257464

Client Sample ID: LTU #1
Prep Type: Total/NA
Prep Batch: 254682

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	*321*	*S1+*	*60 - 138*

QC Association Summary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

GC Semi VOA

Prep Batch: 254682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-105475-1	LTU #1	Total/NA	Solid	3550C	
570-105475-2	LTU #2	Total/NA	Solid	3550C	
570-105475-3	LTU #3	Total/NA	Solid	3550C	
MB 570-254682/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-254682/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-254682/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-105475-1 MS	LTU #1	Total/NA	Solid	3550C	
570-105475-1 MSD	LTU #1	Total/NA	Solid	3550C	

Analysis Batch: 257464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-105475-1	LTU #1	Total/NA	Solid	8015B	254682
570-105475-2	LTU #2	Total/NA	Solid	8015B	254682
570-105475-3	LTU #3	Total/NA	Solid	8015B	254682
MB 570-254682/1-A	Method Blank	Total/NA	Solid	8015B	254682
LCS 570-254682/2-A	Lab Control Sample	Total/NA	Solid	8015B	254682
LCSD 570-254682/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	254682
570-105475-1 MS	LTU #1	Total/NA	Solid	8015B	254682
570-105475-1 MSD	LTU #1	Total/NA	Solid	8015B	254682

Accreditation/Certification Summary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-30-22
California	SCAQMD LAP	17LA0919	12-01-22
California	State	3082	07-31-23
Nevada	State	CA00111	08-31-22
Oregon	NELAP	4175	02-02-23
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-12-22

Method Summary

Client: Northstar Environmental Remediation
Project/Site: GSEP LTU & Ponds

Job ID: 570-105475-1
SDG: Genesis Solar LLC

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	EET CAL 4
3550C	Ultrasonic Extraction	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

Eurofins Calscience Irvine
2841 Dow Avenue
Tustin CA 92780
(714) 730-7950

Chain of Custody Record

105475

eurofins Environment Testing America

Client Information	Sampler: Mr Ralph DeLaParra	Lab PM: Sheri Fama	Carrier Tracking No(s)	COC No:
Client Contact: Mr Arlin Brewster	Phone: (949) 702-0968	E-Mail: sheri.fama@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Northstar Environmental Remediation	PWSID:	Analysis Requested		Job #:
Address: 26225 Enterprise Court	Due Date Requested:			Preservation Codes: A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify); Other:
City: Lake Forest	TAT Requested (days): 10 business days			
State, Zip: CA, 92630	Compliance Project: Δ Yes Δ No			
Phone: (949) 274-1719	PO #: 196-004-05			
Email: Arlin.Brewster@NorthstarER.com	WO #:			
Project Name: GSEP LTU & Ponds	Project #:			
Site: Genesis Solar LLC	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015M Therminol	Total Number of containers	Special Instructions/Note: EDF file NOT required
			Preservation Code.				I		
LTU #1	8-4-22	1225	G	Soil	N	N	X		
LTU #2	"	1228	"	"	"	"	X		
LTU #3	"	1230	"	"	"	"	X		
~~LTU #4~~									

570-105475 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
[signature]	8-4-22 1630	NorthStar	[signature]		
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
			[signature]	8/4/22 1630	EC

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.
		4 4/4.4 SO 12

Ver: 01/16/2019

8/18/2022

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 570-105475-1
SDG Number: Genesis Solar LLC

Login Number: 105475
List Number: 1
Creator: Lizotte, Lex

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/16/2022 5:57:43 AM

JOB DESCRIPTION

T223451

JOB NUMBER

570-119388-1

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 data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

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

Generated
12/16/2022 5:57:43 AM

Authorized for release by
Don Burley, Senior Project Manager
Donald.Burley@et.eurofinsus.com
(657)212-3033

Table of Contents

Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.

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

Case Narrative

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

Job ID: 570-119388-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-119388-1

Comments
No additional comments.

Receipt
The samples were received on 12/5/2022 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 was 5.7° C.

GC Semi VOA
Method 8015B: Surrogate recovery for the samples were outside control limits. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-289337 and analytical batch 570-289376 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Detection Summary

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

Client Sample ID: T223451-01 — Lab Sample ID: 570-119388-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis-	14000	F1	500		mg/Kg	100		8015B	Total/NA
1,1'-Biphenyl	3900	F1	500		mg/Kg	100		8015B	Total/NA

Client Sample ID: T223451-02 — Lab Sample ID: 570-119388-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis-	28000		500		mg/Kg	100		8015B	Total/NA
1,1'-Biphenyl	8800		500		mg/Kg	100		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

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

Client Sample ID: T223451-01
Date Collected: 12/01/22 10:35
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119388-1
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	14000	F1	500		mg/Kg		12/15/22 13:10	12/15/22 19:52	100
1,1'-Biphenyl	3900	F1	500		mg/Kg		12/15/22 13:10	12/15/22 19:52	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*186*	*S1+*	*60 - 138*	*12/15/22 13:10*	*12/15/22 19:52*	*100*

Client Sample ID: T223451-02
Date Collected: 12/01/22 10:40
Date Received: 12/05/22 13:17

Lab Sample ID: 570-119388-2
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	28000		500		mg/Kg		12/15/22 13:10	12/15/22 20:17	100
1,1'-Biphenyl	8800		500		mg/Kg		12/15/22 13:10	12/15/22 20:17	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*235*	*S1+*	*60 - 138*	*12/15/22 13:10*	*12/15/22 20:17*	*100*

Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**OTCSN1 (60-138)**
570-119388-1	T223451-01	186 S1+
570-119388-1 MS	T223451-01	234 S1+
570-119388-1 MSD	T223451-01	224 S1+
570-119388-2	T223451-02	235 S1+
LCS 570-289337/2-A	Lab Control Sample	96
LCSD 570-289337/3-A	Lab Control Sample Dup	93
MB 570-289337/1-A	Method Blank	97

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-289337/1-A
Matrix: Solid
Analysis Batch: 289376

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289337

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		5.0		mg/Kg		12/15/22 13:10	12/15/22 16:06	1
1,1'-Biphenyl	ND		5.0		mg/Kg		12/15/22 13:10	12/15/22 16:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*97*		*60 - 138*	*12/15/22 13:10*	*12/15/22 16:06*	*1*

Lab Sample ID: LCS 570-289337/2-A
Matrix: Solid
Analysis Batch: 289376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289337

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			100	116.7		mg/Kg		117	68 - 120		
1,1'-Biphenyl			100	93.08		mg/Kg		93	57 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*96*		*60 - 138*

Lab Sample ID: LCSD 570-289337/3-A
Matrix: Solid
Analysis Batch: 289376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 289337

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			100	115.1		mg/Kg		115	68 - 120	1	20
1,1'-Biphenyl			100	91.78		mg/Kg		92	57 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*93*		*60 - 138*

Lab Sample ID: 570-119388-1 MS
Matrix: Solid
Analysis Batch: 289376

Client Sample ID: T223451-01
Prep Type: Total/NA
Prep Batch: 289337

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-	14000	F1	99.9	3728	E 4	mg/Kg		-10028	68 - 120		
1,1'-Biphenyl	3900	F1	99.9	180.1	4	mg/Kg		-3705	57 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*234*	*S1+*	*60 - 138*

Lab Sample ID: 570-119388-1 MSD
Matrix: Solid
Analysis Batch: 289376

Client Sample ID: T223451-01
Prep Type: Total/NA
Prep Batch: 289337

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-	14000	F1	99.8	3424	E 4	mg/Kg		-10343	68 - 120	9	20
1,1'-Biphenyl	3900	F1	99.8	168.8	4	mg/Kg		-3720	57 - 120	6	20

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	224	S1+	60 - 138

QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

GC Semi VOA

Prep Batch: 289337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-119388-1	T223451-01	Total/NA	Solid	3550C	
570-119388-2	T223451-02	Total/NA	Solid	3550C	
MB 570-289337/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-289337/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-289337/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-119388-1 MS	T223451-01	Total/NA	Solid	3550C	
570-119388-1 MSD	T223451-01	Total/NA	Solid	3550C	

Analysis Batch: 289376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-119388-1	T223451-01	Total/NA	Solid	8015B	289337
570-119388-2	T223451-02	Total/NA	Solid	8015B	289337
MB 570-289337/1-A	Method Blank	Total/NA	Solid	8015B	289337
LCS 570-289337/2-A	Lab Control Sample	Total/NA	Solid	8015B	289337
LCSD 570-289337/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	289337
570-119388-1 MS	T223451-01	Total/NA	Solid	8015B	289337
570-119388-1 MSD	T223451-01	Total/NA	Solid	8015B	289337

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

Client Sample ID: T223451-01

Lab Sample ID: 570-119388-1

Date Collected: 12/01/22 10:35

Matrix: Solid

Date Received: 12/05/22 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	3550C			10.00 g	10 mL	289337	12/15/22 13:10	KH3Z	EET CAL 4
Total/NA	Analysis	8015B		100	1 mL	1 mL	289376	12/15/22 19:52	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T223451-02

Lab Sample ID: 570-119388-2

Date Collected: 12/01/22 10:40

Matrix: Solid

Date Received: 12/05/22 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	3550C			9.99 g	10 mL	289337	12/15/22 13:10	KH3Z	EET CAL 4
Total/NA	Analysis	8015B		100	1 mL	1 mL	289376	12/15/22 20:17	N5Y3	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: T223451

Job ID: 570-119388-1

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-23

Method Summary

Client: SunStar Laboratories Inc
Project/Site: T223451

Job ID: 570-119388-1

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	EET CAL 4
3550C	Ultrasonic Extraction	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: T223451

Job ID: 570-119388-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-119388-1	T223451-01	Solid	12/01/22 10:35	12/05/22 13:17
570-119388-2	T223451-02	Solid	12/01/22 10:40	12/05/22 13:17

119388

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T223451

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: T223451-01	**Soil**	**Sampled: 12/01/22 10:35**		
Misc Subcontract (see notes)	12/16/22 00 00	05/30/23 10 35		8015M- Therminol
Containers Supplied				
Sample ID: T223451-02	**Soil**	**Sampled: 12/01/22 10:40**		
Misc Subcontract (see notes)	12/16/22 00 00	05/30/23 10 40		8015M- Therminol
Containers Supplied				

570-119388 Chain of Custody

Released By	Date	Received By	Date
	12-5-22 12:17	EC	12-5-22 13:17
Released By	Date	Received By	Date
		5.9/5.7 SCII	

Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-119388-1

Login Number: 119388
List Number: 1
Creator: Burley, Don

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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.
25712 Commercentre Dr
Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: Northstar Environmental Remediation _____ Date: 12/2/2022 Page: 1 of 1

Address: 26225 Enterprise Court, Lake Forest, CA 92630 _____ Project Name: Genesis Solar LTUs & Ponds _____

Phone: 949-274-1719 _____ Fax: _____ Collector: Arlin Brewster _____ Client Project #: 196-004-05 _____

Project Manager: Arlin Brewster _____ Batch #: T223451 EDF #: Not Required _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8015M - Therminol (Subcontract)										Laboratory ID #	Comments/Preservative	Total # of containers
LTU #1	12/1/22	1035	S	8-oz jar	X												1
LTU #2	12/1/22	1040	S	8-oz jar	X												1
LTU #3			S	8-oz jar													
LTU #4			S	8-oz jar													

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Arlin Brewster	12/2/2022 @ 1355	[signature]	12.2.22 1355
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 2

Chain of Custody seals Y/N/NA

Seals intact? Y/N/NA

Received good condition/cold: 1.7 °C

Turn around time: Standard

Notes

Please report in ppmv. EDF report not required.

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