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2023 FIRST SEMIANNUAL GROUNDWATER DETECTION MONITORING REPORT

Genesis Solar Energy Project

Riverside County, California

COC S&W-6

July 5, 2023

Prepared By:

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SIGNATURE PAGE

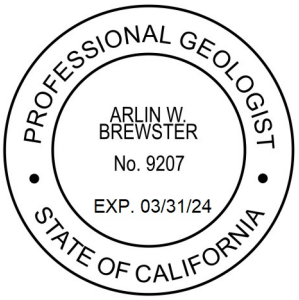
2023 THIRD SEMIANNUAL GROUNDWATER DETECTION MONITORING REPORT

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

July 5, 2023

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1.0 INTRODUCTION

Northstar Environmental Remediation (Northstar) has prepared this 2023 First Semiannual Groundwater Detection Monitoring Report on behalf of Genesis Solar, LLC (Genesis). This report details groundwater detection monitoring performed in the first half of 2023 at the Genesis Solar Energy Project (GSEP).

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

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

1.1 Background

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

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

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

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

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

1.2 Geographic Setting

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

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

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

Climatic data collected from Weather Station Blythe Riverside Airport (33.61°N, -114.71°W, at an elevation of about 387 feet amsl) indicate 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 2022 extraction data, is approximately 121.3 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 87.35 feet bgs (300.05 feet amsl) in TW-1, located upgradient of the site, to 136.18 feet bgs (255.92 feet amsl) in Well 23a, located downgradient of the site. Perched water exists at the Chuckwalla State Prison but is unlikely to occur within the GSEP boundaries as there is no irrigation.

1.4 Monitoring Program Objectives

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

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

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

2.0 EVAPORATION PONDS

2.1 Evaporation Pond Overview

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

2.2 Monitoring Methods

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

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

2.3 Evaporation Pond Sample Results

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

- The laboratory did not detect copper, potassium, iron, magnesium, antimony, cadmium, chromium, cobalt, lead, nickel, mercury, oil & grease, or heat transfer fluid in either pond; and,
- Compound concentrations were slightly higher in the North Pond.

3.0 POND DRAINAGE SUMP SYSTEM

3.1 Pond Drainage Sump System Overview

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

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

3.2 Monitoring Methods

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

3.3 Monitoring Results

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

None of the moisture detection probes showed signs of water saturation during monitoring. 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 in the North Pond currently shows 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, 2023) 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 104.68 (well DM-3) to 107.82 (well DM-2) feet bgs, and the calculated groundwater elevations range from 283.50 (well DM-2) to 284.00 (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 0.0004 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 0.0004 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 0.024 to 0.048 feet laterally per day, or 8.76 to 17.52 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 5,413 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 2,130 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 7.86 mg/L.
- **Total Dissolved Solid** concentrations have been consistent for all wells and have ranged from 6,800 to 14,000 mg/L, averaging 10,617 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 17,647 µs/cm.
- **Antimony** has not been detected above the reporting limit for all wells.
- **Arsenic** detections have been consistent for all wells and have ranged from non-detect to 26 µg/L, averaging 11.4 µg/L.
- **Barium** detections have been inconsistent between all wells, averaging 34.4 µg/L in upgradient well DM-1, 63.9 µg/L in downgradient well DM-2, and 18.6 µg/L in downgradient well DM-3.
- **Cadmium** has not been detected above the reporting limit for all wells.
- **Calcium** detections have been consistent for all wells and have ranged from 190 to 470 mg/L, averaging 253 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: Arsenic was detected above the PQL of 10 µg/L at a concentration of 16 µg/L. Arsenic has historically been detected at low concentrations in all detection monitoring wells onsite. The detected concentration of 16 µg/L matches the average background concentration of 16 µg/L for this well.

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).

No analytes were detected in the method blank sample.

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

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

- 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 **calcium, chloride, iron, magnesium, potassium, sodium, and sulfate as SO4.**

- A blank sample was outside of the acceptable range, but the data was accepted based on a duplicate blank sample passing, both samples having an acceptable RPD, and other acceptable QC criteria. This may have affected the results for **oil & grease only**.

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, 2023). The sample was submitted to the laboratory without date or time qualifiers. For this event, all sample results for PW-2 and DUP agreed within 10% except for the following:

- Arsenic by EPA Method 200.8, which was reported at concentrations of 28 and 32 µg/L, respectively (13% 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**.

In response to a minor spill of motor oil onsite, soil was added to LTU Bay #4 in late January 2023 and was sampled on February 2, 2023 to develop a waste profile. The soil was analyzed for the full range of petroleum hydrocarbons, Title 22 metals, mercury, and Therminol. The following summarizes the results:

- LTU Bay #4:
  - 1,1'-oxybis-benzene: Not Detected
  - 1,1'-biphenyl: Not Detected
  - Gasoline-Range Organics: Not Detected
  - Diesel-Range Organics: 2,300 mg/kg
  - Oil-Range Organics: 930 mg/kg
  - Various metals were detected below hazardous concentrations, including arsenic, barium, cobalt, chromium, copper, molybdenum, nickel, vanadium, zinc, and lead.
  - Mercury: Not Detected

After receiving the results, the soil was sampled again on March 29, 2023 and analyzed for VOCs, which were all non-detect. The soil was then transported offsite for disposal.

As reported previously, soil with elevated concentrations of Therminol were present in LTU Bays #1 to 3 since the third quarter of 2022. Despite the elevated concentrations, an attempt to bioremediate the soil stockpiles was undertaken until they were resampled on March 29, 2023. The following summarizes the results:

- LTU Bay #1:
  - 1,1'-oxybis-benzene: 25,000 mg/kg
  - 1,1'-biphenyl: 8,000 mg/kg

- LTU Bay #2:
    - 1,1’-oxybis-benzene: 27,000 mg/kg
    - 1,1’-biphenyl: 9,000 mg/kg
- LTU Bay #3:
    - 1,1’-oxybis-benzene: 22,000 mg/kg
    - 1,1’-biphenyl: 6,900 mg/kg

Due to the persistent elevated concentrations of Therminol in all samples, the soil has been removed from the LTUs and is temporarily staged in the transporter’s shipping containers onsite while the final transport is being scheduled. There were no releases of Therminol in the first half of 2023, and all land treatment unit bays are currently empty.

6.0 ANNUAL SUMMARY

The 2023 annual summary will be included in the *2023 First Semiannual and Annual Groundwater Detection Monitoring Report*, produced by Northstar by January 15, 2024.

7.0 CONCLUSIONS

Based on the available data obtained during this sample event:

- A detection of arsenic above 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

Bureau of Land Management, 2010. *Final Environmental Impact Statement, Genesis Solar Energy Project*. August 27, 2010.

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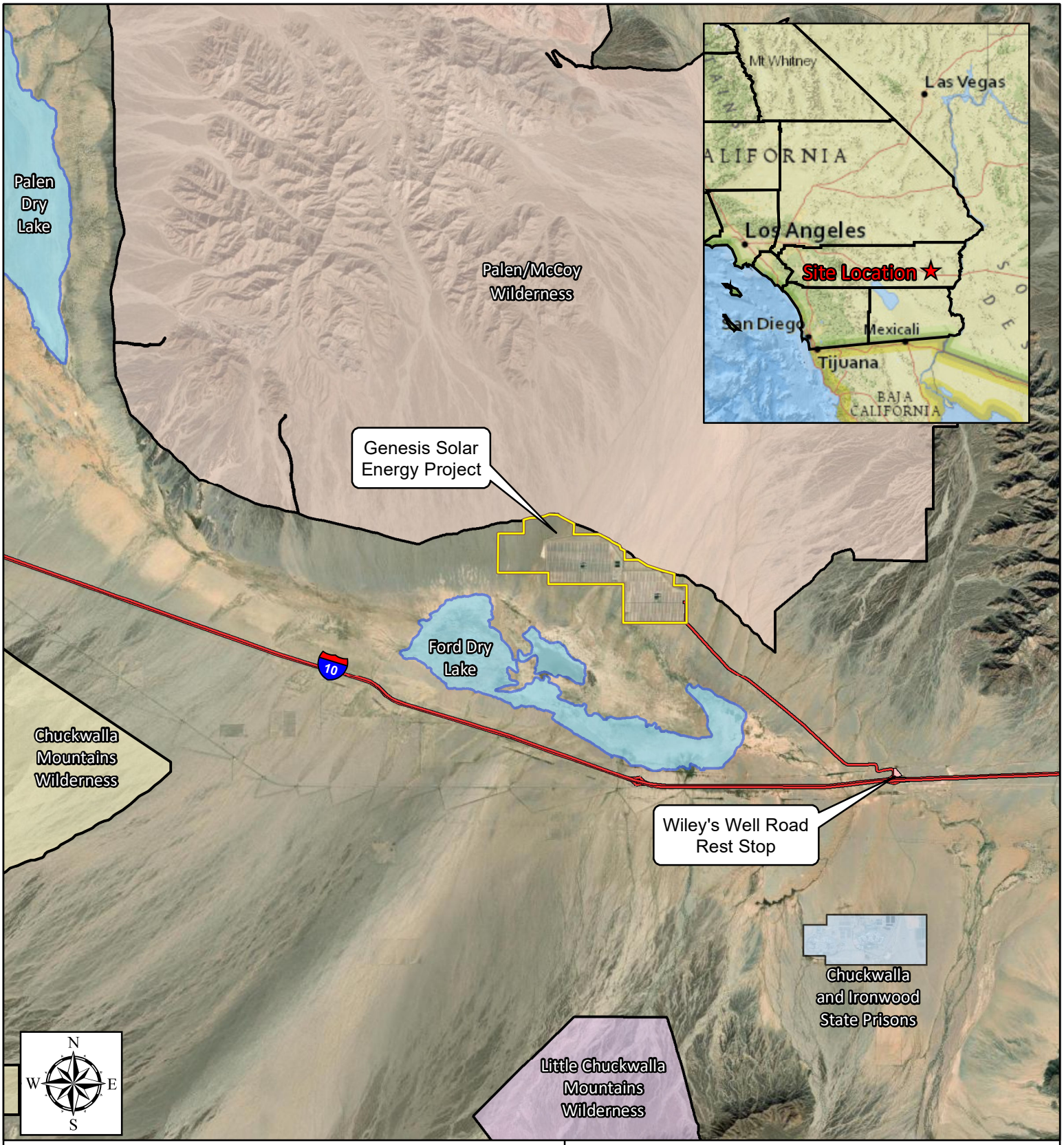
FIGURES



Legend

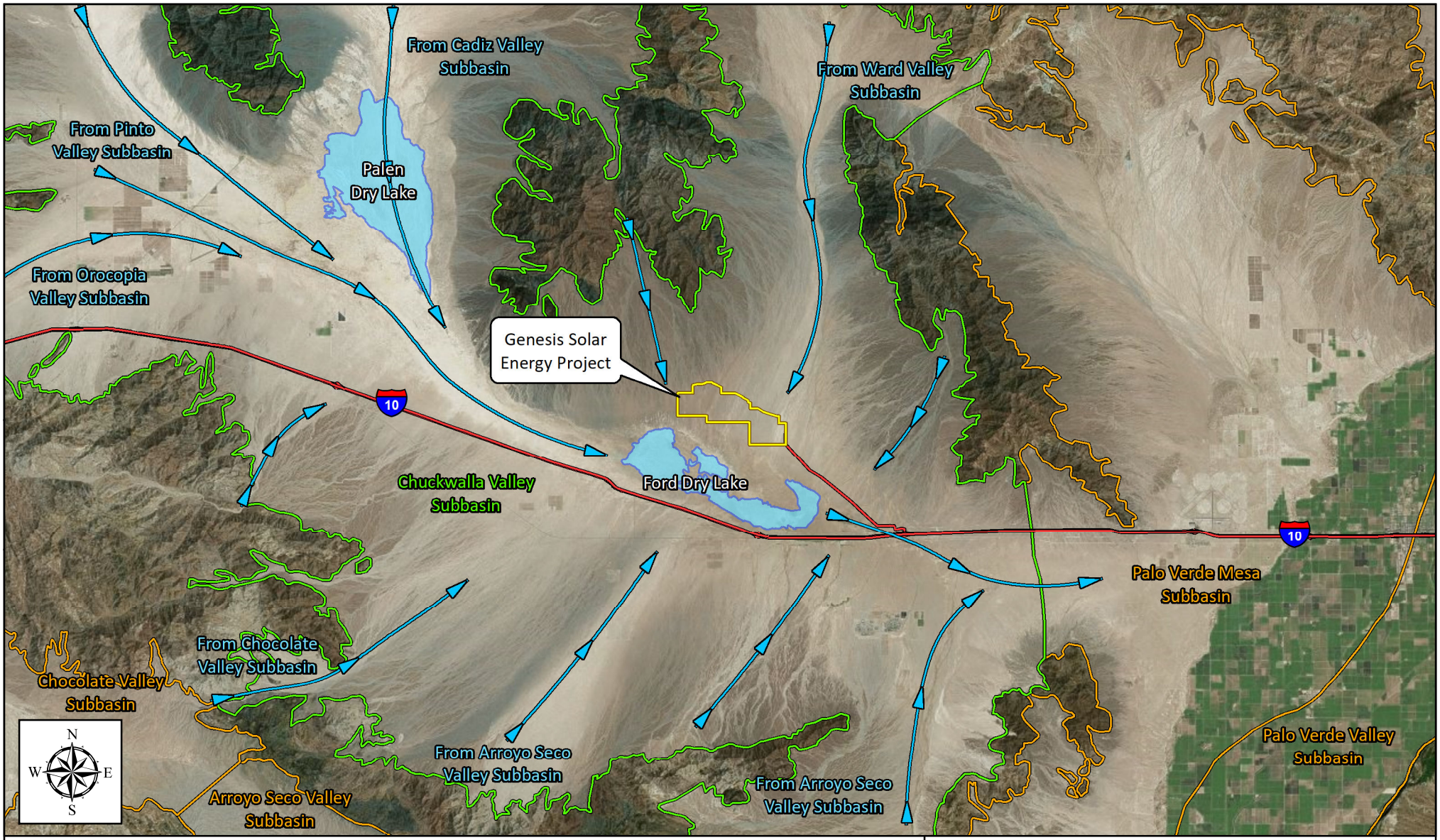
- GSEP Property Boundary
- Chuckwalla and Ironwood State Prisons
- Chuckwalla Mountains Wilderness Area
- Little Chuckwalla Mountains Wilderness Area
- Palen/McCoy Wilderness Area
- Dry Lakes
- Roads

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

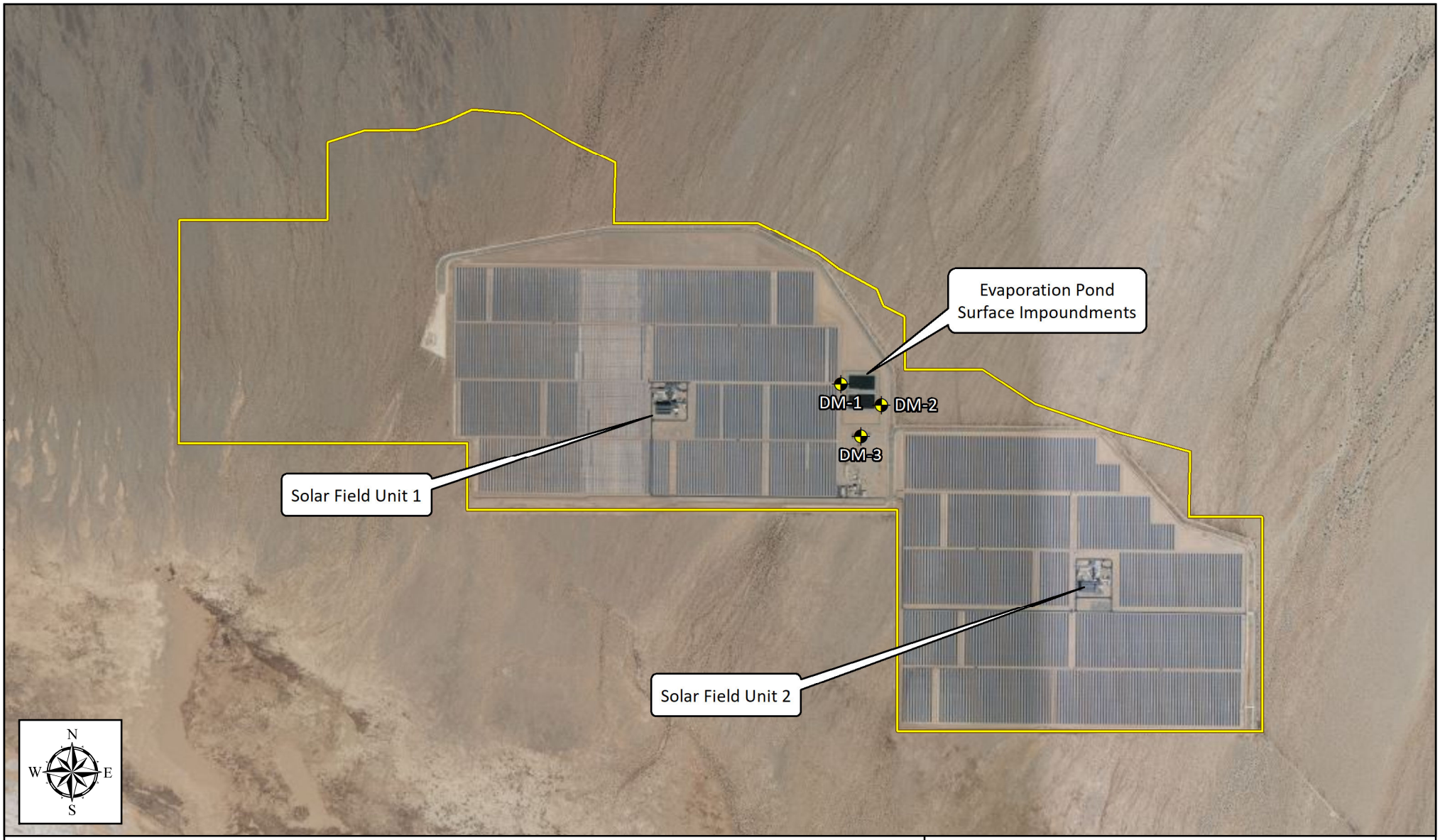
- GSEP Property Boundary
- Chuckwalla Valley Groundwater Subbasin
- Adjacent Groundwater Subbasins
- Dry Lakes
- Water Flow Direction

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

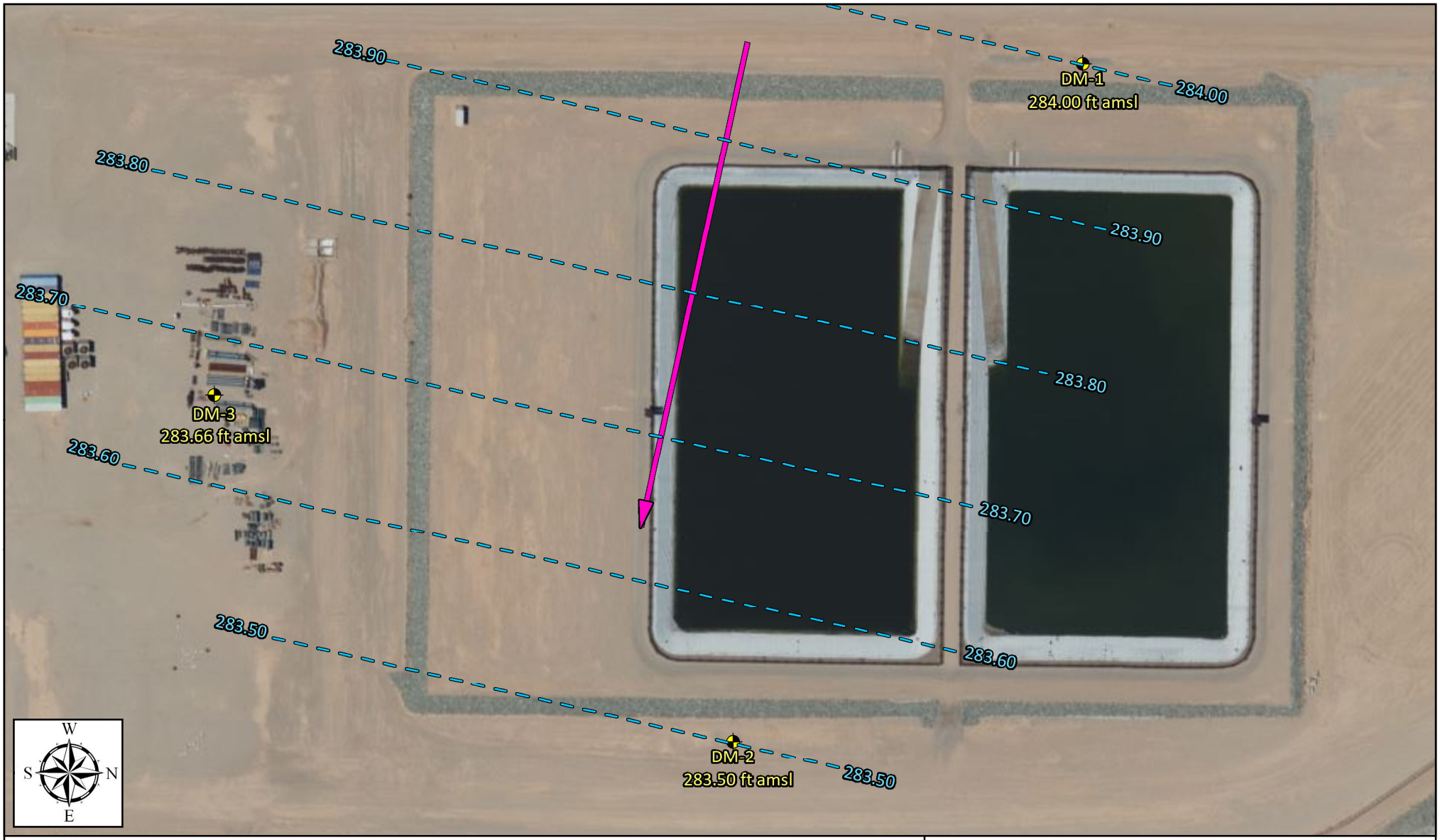
- GSEP Property Boundary
- Detection Monitoring Wells

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

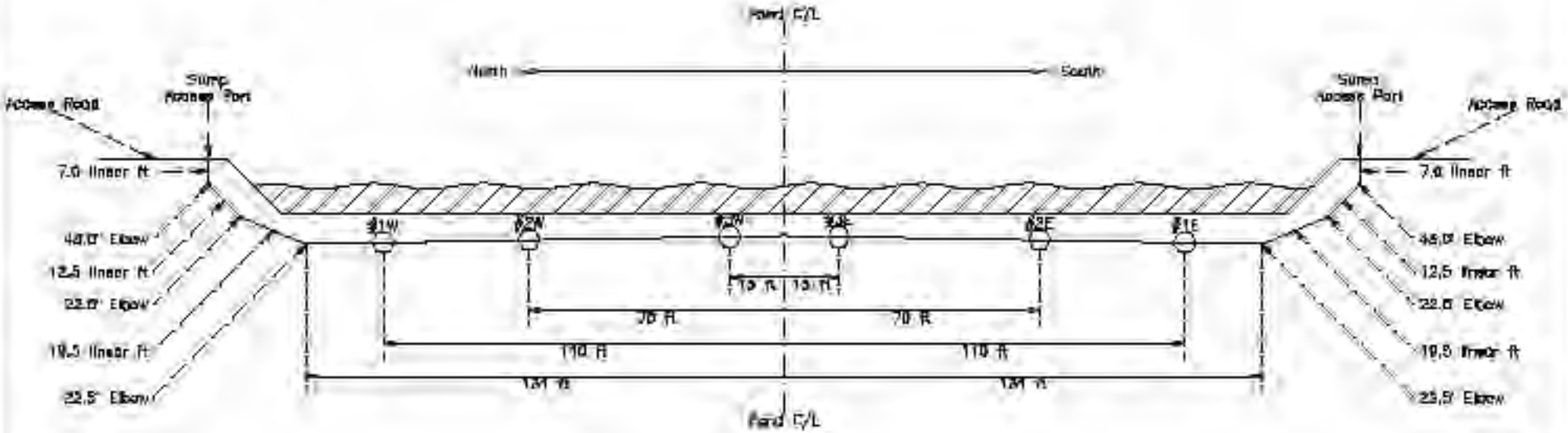
- Detection Monitoring Wells
- Groundwater Elevation Contour Line (in feet above mean sea level)
- Groundwater Gradient Direction

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

FIGURE 4
Groundwater Elevation Contour Map
June 2023

NORTHSTAR	Scale: 1" = 180'	Draw Date: 5 Jul 2023
	Drawn By: AWB	Checked By: AWB

File Name: Figure 4 - GW Contours



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

Notes:

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

0 15 30
Scale: 1 inch = 30 Feet

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

TABLES

TABLE 1

DETECTION MONITORING WELL DETAILS

Genesis Solar Energy Project, Riverside County, California

Well ID	Other Name	Owner	Installation Date	Use/Status	Well Casing Diameter (inches)	Approximate Ground Surface Elevation (feet amsl)	Top Of Casing Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Geologic Unit
WELLS INCLUDED IN THE GROUNDWATER MONITORING PROGRAM										
DM-1	Detection Monitoring Well 1	Genesis Solar, LLC	2/22/2012	Monitoring / Active	4	--	391.49	120	100 to 120	Alluvium
DM-2	Detection Monitoring Well 2	Genesis Solar, LLC	2/21/2012	Monitoring / Active	4	--	391.32	120	100 to 120	Alluvium
DM-3	Detection Monitoring Well 3	Genesis Solar, LLC	2/20/2012	Monitoring / Active	4	--	388.34	120	100 to 120	Alluvium

Notes:

-- = information is not available or unknown

amsl = above mean sea level

bgs = below ground surface

TABLE 2

GROUNDWATER LEVEL MEASUREMENTS

Genesis Solar Energy Project, Riverside County, California

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

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	5/22/2014	Northstar	388.34	104.20	284.14	0.15	Monitoring
DM-3	8/8/2014	Northstar	388.34	104.21	284.13	0.14	Monitoring
DM-3	12/4/2014	Northstar	388.34	104.39	283.95	-0.04	Monitoring
DM-3	3/26/2015	Northstar	388.34	104.59	283.75	-0.24	Monitoring
DM-3	6/12/2015	Northstar	388.34	104.18	284.16	0.17	Monitoring
DM-3	12/11/2015	Northstar	388.34	103.96	284.38	0.39	Monitoring
DM-3	6/3/2016	Northstar	388.34	104.38	283.96	-0.03	Monitoring
DM-3	12/2/2016	Northstar	388.34	104.28	284.06	0.07	Monitoring
DM-3	6/1/2017	Northstar	388.34	104.25	284.09	0.10	Monitoring
DM-3	12/5/2017	Northstar	388.34	104.62	283.72	-0.27	Monitoring
DM-3	5/30/2018	Northstar	388.34	104.27	284.07	0.08	Monitoring
DM-3	12/4/2018	Northstar	388.34	104.68	283.66	-0.33	Monitoring
DM-3	6/14/2019	Northstar	388.34	104.38	283.96	-0.03	Monitoring
DM-3	12/6/2019	Northstar	388.34	104.66	283.68	-0.31	Monitoring
DM-3	6/5/2020	Northstar	388.34	104.32	284.02	0.03	Monitoring
DM-3	12/3/2020	Northstar	388.34	104.80	283.54	-0.45	Monitoring
DM-3	6/3/2021	Northstar	388.34	104.29	284.05	0.06	Monitoring
DM-3	12/2/2021	Northstar	388.34	104.50	283.84	-0.15	Monitoring
DM-3	6/2/2022	Northstar	388.34	104.50	283.84	-0.15	Monitoring
DM-3	12/1/2022	Northstar	388.34	104.50	283.84	-0.15	Monitoring
DM-3	6/8/2023	Northstar	388.34	104.68	283.66	-0.33	Monitoring

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	6/8/2023	180	Bladder Pump	3,600	31.6	7.80	18.90	--	+119	6.01
DM-2	6/8/2023	138	Bladder Pump	2,760	29.7	7.76	18.70	--	+120	2.58
DM-3	6/8/2023	143	Bladder Pump	2,860	31.9	7.80	18.60	--	+90	4.01

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-1	6/8/2023	Low Flow	5,300	2,000	7.58	240	<0.50	4,100	<50	<20	65	<10	<10	29	<10	<10	<10	<10	-	<10	<10	<10	<1.0	10,000	18,000	7.8	<5.0	<0.097	-69.30	-8.53
DM-2	5/24/2012	Low Flow	4,500	2,000	2.9	290	<0.10	3,500	25.0	<0.40	59	-	-	-	-	-	-	-	-	-	-	-	-	13,000	16,000	7.80	-	-	-71.7	-8.8
DM-2	10/23/2012	Low Flow	4,800	2,000	<1.1	470	<0.010	2,600	27.0	<0.040	54	-	-	-	-	-	-	-	110	-	-	-	-	9,900	16,000	7.72	-	-	-70.9	-8.9
DM-2	5/22/2014	Low Flow	5,100	2,000	-	320	<0.020	3,500	23	0.022[J]	54	<10	4.7[J]	97	<5.0	<10	<5.0	<5.0	59	4.1[J]	3.3[J]	<100	<0.20	11,000	18,000	7.79	<5.1	-	-69.95	-8.72
DM-2	12/4/2014	Low Flow	4,400	1,600	3.0	300	<0.050	3,100	20	0.082[J]	55	<10	5.7	140	<5.0	<10	<5.0	<5.0	90	8.4[J]	<10	<100	<0.20	9,900	17,000	7.90	<4.7	<0.095	N/A[2]	N/A[2]
DM-2	6/11/2015	Low Flow	4,500	2,000	3.8[J]	290	<0.10	3,500	22	<0.40	55	<10	4.1[J]	110	<5.0	2.9[J]	<5.0	<5.0	40	4.9[J]	<10	<100	<0.20	9,600	18,000	7.92	<4.7	<0.10	-68.2	-8.52
DM-2	12/10/2015	Low Flow	5,400	2,200	<5.5	290	<0.010	3,600	21	0.062	61	<10	5.9	85	<5.0	<10	<5.0	<5.0	88	<10	5.5[J]	<100	<0.20	12,000	18,000	7.85	<5.0	<0.096	-69.4	-8.43
DM-2	6/2/2016	Low Flow	4,800	1,900	8.0	280	<0.10	3,800	20	0.27[J]	60	0.51[J]	4.7	62	<1.0	1.5[J]	<1.0	<1.0	62	1.1[J]	3.5	<20	<0.20	12,000	22,000	7.95	<4.9	<0.097	-69.53	-8.63
DM-2	11/30/2016	Low Flow	5,300	2,200	2.8[J]	290	<0.010	4,200	28	<0.040	61	<20	5.9[J]	56	<10	<20	<10	<10	40	<20	18[J]	<200	<0.20	11,000	17,000	7.8	<4.7	<0.097	-70.20	-8.37
DM-2	6/1/2017	Low Flow	4,800	1,900	3.1[J]	280	<0.10	4,100	21	<1.0	62	<10	4.4[J]	52	<5.0	<10	<5.0	<5.0	17	5.2[J]	5.6[J]	<100	<0.20	12,000	16,000	7.9	<5.2	<0.097	-70.10	-8.51
DM-2	12/5/2017	Low Flow	4,930	1,960	13.4	250	<0.025	1,400	34	<1.0	62	<1.0	5.5	69	<2.5	3.7	<2.5	<2.5	-	<2.5	5.7	4.5	<0.50	11,000	17,200	7.8	<5.0	<0.10	-67.66	-8.63
DM-2	5/30/2018	Low Flow	6,000	2,280	17.5	300	0.11[J]	4,800	68	<10	67	<5.0	5.1	51	<0.50	<5.0	<0.50	<0.50	-	<0.50	6.3	<5.0	<0.50	9,900	17,000	7.9	<5.0	<0.11	-69.20	-8.39
DM-2	12/4/2018	Low Flow	5,290	1,770	11.4	240	<0.5	4,900	35	<20	60	<10	<10	57	<10	<10	<10	<10	-	<10	<10	28	<0.50	7,100	13,000	7.8	<5.0	<0.10	-72.30	-8.98
DM-2	6/14/2019	Low Flow	5,240	2,080	11.2	300	<0.005	5,100	68	<0.20	67	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	-	<0.50	9,300	18,000	7.3	<5.0	<0.10	-70.10	-8.50
DM-2	12/5/2019	Low Flow	7,680	2,330[J]	21.2	310	0.007	4,400	30	<0.20	65	<5.0	<5.0	50	<5.0	2.9[J]	<5.0	<5.0	-	<5.0	3.2[J]	76	<0.50	10,000	17,000	7.6	<5.0	<0.10	-70.00	-8.48
DM-2	6/4/2020	Low Flow	5,580	2,240	10.4	280	0.007	4,100	41	<0.20	55	<5.0	<5.0	46	<5.0	<5.0	<5.0	<5.0	-	<5.0	9.8	24	<0.50	11,000	18,100	7.4	<5.0	<0.096	-69.90	-8.47
DM-2	12/3/2020	Low Flow	5,730	2,340	9.46	250	<0.005	11,000	34	<0.20	51	<5.0	<5.0	49	<5.0	<5.0	<5.0	<5.0	-	<5.0	0.94	<0.50	<0.50	10,000	18,000	7.8	<5.0	<0.11	-70.10	-8.50
DM-2	6/3/2021	Low Flow	5,610	2,210	7.85	230	<0.50	3,800	<50	<20	58	<10	<10	45	<10	<10	<10	<10	-	<10	16	<10	<0.50	9,000	18,200	7.6	<5.0	<0.092	-69.90	-8.50
DM-2	12/2/2021	Low Flow	5,470	2,100	10.0	270	<0.50	4,500	<50	<20	63	<10	<10	44	<10	<10	<10	<10	-	<10	16	<10	<1.0	13,000	18,200	7.8	<5.0	<0.095	-69.50	-8.47
DM-2	6/2/2022	Low Flow	5,860	2,160	10.9	240	<2.5	4,200	<250	<100	67	<50	<50	<50	<50	<50	<50	<50	-	<50	53	<50	<1.0	9,300	18,200	7.7	<5.0	<0.093	-69.60	-8.51
DM-2	12/1/2022	Low Flow	5,450	2,180	9.45	250	<0.005	4,700	57	<0.20	65	<25	<25	37	<25	<25	<25	<25	-	<25	<25	<25	<1.0	10,000	18,300	7.8	<5.0	<0.098	-69.50	-8.49
DM-2	6/8/2023	Low Flow	5,470	2,190	9.73	300	<0.50	4,800	<50	<20	85	<10	<10	37	<10	<10	<10	<10	-	<10	<10	<10	<1.0	6,800	18,300	7.6	<5.0	<0.100	-70.00	-8.51
DM-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	
DM-3	6/8/2023	Low Flow	5,230	2,100	2.61	240	<0.50	4,200	<50	<20	66	<10	16	17	<10	<10	<10	<10	-	<10	<10	<10	<1.0	9,800	17,600	7.7	<5.0	<0.099	-71.10	-8.76
North Pond	6/1/2018	Composite	61,700	21,000	0.870	230	<0.015	12,000	430	<0.35	4.6[J]	<10	470	230	<10	<0.50	<10	<0.50	-	25	<25	62	<0.50	120,000	148,000	9.4	<1.40	<0.095	N/A	N/A
North Pond	12/3/2018	Composite	241,000	18,600	24.3	630	2.9	46,000	8,300	<20	27	<25	1,000	68	<25	<25	<25	<25	-	59	<25	<25	<0.50	400,000	241,000	7.6	<5.00	<0.099	N/A	N/A
North Pond	6/13/2019	Composite	39,800	12,000	<0.500	280	0.038	41,000	<0.10	<0.20	5.7	<10	25	12	<10	<10	<10	<10	-	<10	<10	-	<0.50	72,000	108,000	9.1	<5.00	<0.094	N/A	N/A
North Pond	12/5/2019	Composite	83,000	27,000	<500	380	0.090	43,000	340	<0.20	3.0	<5.0	800	200	<5.0	<50	<50	<5.0	-	<50	<50	4,300	<0.50	120,000	120,000	8.8	<5.00	<0.095	N/A	N/A
North Pond	6/4/2020	Composite	40,900	11,300	27.4	510	3.4	20,000	240	<20	570	<25	560	76	<25	<25	<25	<25	-	<25	38	39	<0.50	70,000	107,000	9.4	<5.00	<0.090	N/A	N/A
North Pond	12/3/2020	Composite	38,000	11,800	7.73	390	<0.5	30,000	250	<20	19	<25	8.7	330	<25	<25	<25	<25	-	<25	0.81	0.81	<0.50	57,000	95,000	8.9	<5.00	<0.10	N/A	N/A
North Pond	6/4/2021	Composite	48,200	15,200	53.1	400	<0.50	31,000	230	<20	12	<25	510	130	<25	<25	<25	<25	-	30	53	<25	<0.50	16,000	119,000	9.4	<5.00	<0.087	N/A	N/A
North Pond	12/2/2021	Composite	57,500	18,600	<50.0	470	<0.50	44,000	300	<20	17	<20	640	170	<20	<20	<20	<20	-	<20	31	<20	<1.0	91,000	142,000	8.9	<5.00	<0.092	N/A	N/A
North Pond	6/2/2022	Composite	86,200	30,400	47.8	<100	<5.0	79,000	<500	<200	<100	<50	940	300	<50	<50	<50	<50	-	<50	89	<50	<1.0	180,000	175,000	8.6	<5.00	<0.098	N/A	N/A
North Pond	12/1/2022	Composite	24,200	8,040	47.8	250	<1.2	21,000	<250	<50	<25	<25	340	170	<25	<25	<25	<25	-	<25	41	56	<1.0	41,000	70,300	8.4	<5.00	<0.100	N/A	N/A
North Pond	6/8/2023	Composite	28,700	7,800	1,910	380	<2.0	23,000	<200	<80	<40	<10	340	280	<10	<10	<10	<10	-	<10	<10	<10	<1.0	46,000	75,500	8.8	<5.00	<0.099	N/A	N/A
South Pond	6/1/2018	Composite	152,000	59,500	22.2	27	<0.015	17,000	1,100	<0.35	17	<10	1,100	85	<25	<10	<10	<0.50	-	46	43	79	<0.50	310,000	218,000	8.3	<1.40	<0.090	N/A	N/A
South Pond	12/3/2018	Composite	33,200	8,710	65.1	410	2.8	34,000	420	<20	27	<25	390	310	<25	<25	<25	<25	-	<25	<25	160	<0.50	39,000	61,200	8.9	36.4	<0.097	N/A	N/A
South Pond	6/13/2019	Composite	38,700	10,800	57.2	430	0.064	40,000	<0.10	<0.20	16	<10	28	25	<10	<10	<10	<10	-	<10	<10	-	<0.50	68,000	104,000	9.3	<5.00	<0.097	N/A	N/A
South Pond	12/5/2019	Composite	30,000	6,770	2.17	200	0.041	14,000	160	<0.20	13	<5.0	200	170	<5.0	<5.0	<5.0	<5.0	-	<5.0	<5.0	190	<0.50	35,000	49,700	9.0	<5.00	<0.099	N/A	N/A
South Pond	6/4/2020	Composite	74,600	23,900	14.8	390	4.2	62,000	470	<20	1,100	<25	1,100	360	<25	<25	<25	<25	-	36	68	48	<0.50	130,000	166,000	8.8	<5.00	<0.091	N/A	N/A
South Pond	12/3/2020	Composite	73,700	16,600	10.6	370	<0.5	42,000	480	<20	23	<25	14	290	<25	<25	<25	<25	-	<25	0.73	3.0	<0.50	92,000	150,000	8.6	<5.00	<0.099	N/A	N/A
South Pond	6/4/2021	Composite	91,000	22,300	<50.0	420	<0.50	55,000	620	<20	29	<25	1,100	420	<25	<25	<25	<25	-	56	69	100	<0.50	25,000	183,000	9.0	<5.00	<0.091	N/A	N/A
South Pond	12/2/2021	Composite	24,000	6,560	<50.0	240	<0.50	19,000	150	<20	16	<10	290	200	<10	<10	<10	<20	-	21	18	64	<1.0	38,000	67,500	8.9	<5.00	<0.090	N/A	N/A
South Pond	6/2/2022	Composite	80,200	21,900	45.2	300	<5.0	65,000	<500	<200	100	<50	920	310	<50	<50	<50	<50	-	<50	82	<50	<1.0	140,000	168,000	8.4	<5.00	<0.095	N/A	N/A
South Pond	12/1/2022	Composite	24,000	5,500	<25.0	300	<1.2	20,000	<250	<50	<25	<25	260	210	<25	<25	<25	<25	-	<25	59	60	<1.0	35,000	67,400	8.5	<5.00	<0.100	N/A	N/A
South Pond	6/8/2023	Composite	25,800	5,600	959	270	<2.0	19,000	<200	<80	<40	<10	280	210	<10	<10	<10	<10	-	<10	12	39	<1.0	22,000	66,300	8.2	<5.00	<0.099	N/A	N/A

NOTES:
mg/L = milligrams per liter
ug/L = micrograms per liter
uS/cm = microsiemens per centimeter
‰ = parts per thousand
VSMOW = Vienna Standard Mean Ocean Water
< = not detected at or above the indicated reporting limit
- = information is unknown / not applicable / not analyzed
J - Result is less than the reporting limit but greater than or equal to the method detection limit, thus the concentration is an approximate value.
† - Heat Transfer Fluid (HTF) is characterized by the analytes 1,1'-oxybis-benzene and 1,1'-biphenyl.
1 - Duplicate sample
2 - Analytical results not available at time of reporting due to laboratory equipment failure.
Analytical data shaded grey is a monitored Contaminant of Concern as defined in the Waste Discharge Requirements, Condition 79, Page 16

TABLE 5

SUMMARY OF POND DRAINAGE SUMP DATA

Genesis Solar Energy Project, Riverside County, California

Date of Reading	Sensor Readings[1]														Comments
	North Pond							South Pond							
	#1W	#2W	#3W	#1E	#2E	#3E	Totalizer	#1W	#2W	#3W	#1E	#2E	#3E	Totalizer	
1st Qtr 2014	199	199	199	199	199	199	-	199	199	199	199	199	199	-	All probes are dry
2nd Qtr 2014	199	199	199	199	199	199	-	199	199	199	199	199	199	-	
3rd Qtr 2014	199	199	199	199	199	199	-	199	199	199	199	199	199	-	
12/05/2014	199	199	199	199	199	199	-	199	199	199	199	199	199	-	
03/26/2015	199	199	199	199	199	199	-	199	199	199	199	199	199	-	
06/12/2015	133	199	199	199	199	199	-	199	199	199	199	199	199	-	
09/03/2015	78	199	199	199	199	199	-	199	199	199	199	199	199	-	
09/15/2015	67	199	199	199	199	199	-	199	199	199	199	199	199	-	
12/10/2015	0	75	199	199	199	199	-	199	199	199	199	199	199	-	Sump pumps turned on - no water
03/01/2016	6	101	199	199	199	199	-	199	199	199	199	199	199	-	
06/02/2016	4	80	199	199	199	199	-	199	199	199	199	199	199	-	
09/01/2016	0	42	146	199	175	105	-	199	199	199	199	199	199	-	
12/01/2016	0	59	199	199	199	188	1,144.79	199	199	199	183	199	199	24.21	Readings on arrival
12/01/2016	199	199	199	199	199	199	1,144.79	199	199	199	183	199	199	24.21	Readings on departure, new probes in North Pond
03/02/2017	199	199	199	199	199	199	1,144.79	199	199	199	199	199	199	24.21	
06/01/2017	199	199	199	199	199	199	1,144.79	199	199	199	199	199	199	24.21	
09/04/2017	199	199	199	199	199	199	1,695.44	199	199	199	192	178	199	24.21	
12/05/2017	114	165	199	199	179	180	1,695.66	199	199	199	166	199	199	24.21	To date, all totalizer increases are from pump testing
03/06/2018	186	199	199	199	199	199	1,695.66	199	199	199	199	199	199	24.21	
06/01/2018	159	199	199	199	199	199	1,695.66	199	199	199	177	186	199	24.21	
09/12/2018	78	192	199	199	199	192	1,694.83	199	199	199	197	187	199	24.21	
12/03/2018	119	181	199	199	199	199	1,688.26	199	199	199	199	168	199	24.21	
03/08/2019	150	199	199	199	199	199	1,690.80	199	199	199	115	168	199	24.21	
06/13/2019	199	199	199	199	199	199	1,687.19	199	199	199	188	199	199	24.21	
09/08/2019	199	199	199	199	199	199	1,686.68	199	199	199	188	199	199	24.21	
12/05/2019	145	199	199	199	199	199	1,683.78	199	199	199	199	199	199	24.21	
03/17/2020	168	199	199	199	199	199	1,681.87	199	199	199	199	199	199	24.21	
06/04/2020	109	199	199	199	199	199	1,657.23	199	199	199	199	199	199	22.64	
09/16/2020	199	199	199	199	199	199	1,619.72	199	199	199	199	199	199	20.34	
12/03/2020	98	199	199	199	199	199	1,624.77	199	199	199	199	199	199	20.34	
03/23/2021	104	199	199	199	199	199	1,628.91	199	199	199	199	199	199	20.34	
06/04/2021	119	199	199	199	199	199	2,017.91	199	199	199	199	199	199	205.98	Sump pumps tested prior to readings
09/21/2021	89	199	199	199	199	199	2,188.61	199	199	199	199	199	199	197.30	
12/02/2021	97	199	199	199	199	199	2,186.30	199	199	199	199	199	199	N/A [2]	
03/30/2022	134	199	199	199	199	199	2,183.93	199	199	199	199	199	199	N/A [2]	
06/02/2022	151	199	199	199	199	199	7.48	199	199	199	189	199	199	7.48	New pumps and totalizers installed in 2nd quarter
08/04/2022	109	191	199	199	199	105	605.44	199	199	199	188	199	199	7.48	Verification readings following leak reported by NextEra
09/30/2022	105	189	199	199	199	122	605.44	199	199	199	199	199	199	7.48	
12/01/2022	103	179	199	199	197	176	605.55	171	199	199	189	174	199	7.48	
03/29/2023	181	199	199	199	199	199	605.55	199	199	199	199	199	199	7.48	
06/08/2023	56	198	199	199	199	196	605.55	199	199	199	198	199	199	7.48	

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

2 - Pump totalizer not functioning

APPENDIX A

FIELD DATA SHEETS

GROUNDWATER SAMPLING FIELD FORM

Date: 6/8/23	Site: Genesis Solar Energy Project	Project No: 196-004-06
Project: Groundwater Quality Monitoring Program		Project Manager: AWB
Technicians: AWB/RCD		Weather: Hot
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	17:50	107.40	32.7	7.88	19.4	--	+123	8.90
Total Depth (ft btoc)	120	17:55	107.40	31.8	7.80	19.1	--	+121	6.07
Screen Interval (ft btoc)	100 - 120	18:00	107.40	31.7	7.80	19.0	--	+120	6.05
Depth to Water (ft btoc)	107.49	18:05	107.40	31.6	7.80	18.9	--	+119	6.01
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	06/08/23								
Sample Time	18:10								

Purge Volume Calculation: Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **1,425 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	19:20	108.10	30.5	7.85	19.1	--	+126	5.28
Total Depth (ft btoc)	120	19:25	108.20	29.9	7.75	18.8	--	+122	2.98
Screen Interval (ft btoc)	100 - 120	19:30	108.30	29.8	7.75	18.8	--	+121	2.62
Depth to Water (ft btoc)	107.82	19:35	108.32	29.7	7.76	18.7	--	+120	2.58
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	06/08/23								
Sample Time	19:40								

Purge Volume Calculation: Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **2,434 mL**

Well No.	DM-3	Time (5 Min Int)	Water Level (ft btoc)	Temp °C (3%)	pH (+/- 0.1)	Cond (mS/cm) (3%)	Turbidity (NTUs) (10%)	ORP (mV) (+/- 10)	DO (mg/L) (10%)
Casing Diameter (in.)	4.0	16:25	104.69	34.1	7.14	19.8	--	+91	6.85
Total Depth (ft btoc)	120	16:30	104.69	32.6	7.77	18.7	--	+91	4.03
Screen Interval (ft btoc)	100 - 120	16:35	104.69	31.7	7.79	18.5	--	+90	4.00
Depth to Water (ft btoc)	104.68	16:40	104.69	31.9	7.80	18.6	--	+90	4.01
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	06/08/23								
Sample Time	16:45								

Purge Volume Calculation: Total must exceed tubing volume (1,204 mL) plus drawdown volume (2,460 mL/foot) = **1,229 mL**

APPENDIX B

LABORATORY ANALYTICAL RESULTS

EVAPORATION PONDS

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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23 June 2023

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

RE: Genesis Solar LTUs & Ponds

Enclosed are the results of analyses for samples received by the laboratory on 06/09/23 08:25. 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
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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	06/23/23 17:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North Pond	T231541-01	Water	06/08/23 15:50	06/09/23 08:25
South Pond	T231541-02	Water	06/08/23 16:00	06/09/23 08:25

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	06/23/23 17:21

DETECTIONS SUMMARY

Sample ID: North Pond **Laboratory ID:** T231541-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**340**	10	ug/l	200.8	FILT
Barium	**280**	10	ug/l	200.8	FILT
Calcium	**380**	200	mg/l	EPA 200.7	FILT
Sodium	**23000**	200	mg/l	EPA 200.7	FILT
pH	**8.8**	0.10	pH Units	SM 4500-H+B	
Total Dissolved Solids	**46000**	10	mg/l	TDS by SM2540C	
pH Temperature °C	**19**		pH Units	SM 4500-H+B	
Specific Conductance (EC)	**75500**	10.0	mho/cm @25°(	SM2510b mod.	
Chloride	**28700**	10000	mg/l	EPA 300.0	
Sulfate as SO4	**7800**	2500	mg/l	EPA 300.0	
Nitrate as NO3	**1910**	1000	mg/l	EPA 300.0	
Nitrate as N	**440**	400	mg/l	EPA 300.0	

Sample ID: South Pond **Laboratory ID:** T231541-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**280**	10	ug/l	200.8	FILT
Barium	**210**	10	ug/l	200.8	FILT
Selenium	**12**	10	ug/l	200.8	FILT
Zinc	**39**	10	ug/l	200.8	FILT
Calcium	**270**	200	mg/l	EPA 200.7	FILT
Sodium	**19000**	200	mg/l	EPA 200.7	FILT
pH	**8.7**	0.10	pH Units	SM 4500-H+B	
Total Dissolved Solids	**22000**	10	mg/l	TDS by SM2540C	
Specific Conductance (EC)	**66300**	10.0	mho/cm @25°(	SM2510b mod.	
pH Temperature °C	**20**		pH Units	SM 4500-H+B	
Chloride	**25800**	5000	mg/l	EPA 300.0	
Sulfate as SO4	**5600**	5000	mg/l	EPA 300.0	
Nitrate as NO3	**959**	500	mg/l	EPA 300.0	
Nitrate as N	**220**	200	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	06/23/23 17:21

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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	06/23/23 17:21

North Pond

T231541-01 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Copper	ND	2.0	mg/l	400	23F0140	06/09/23	06/16/23	EPA 200.7	FILT, R-01
Calcium	**380**	200	"	"	"	"	06/16/23	"	FILT
Iron	ND	80	"	"	"	"	"	"	FILT, R-01
Magnesium	ND	40	"	"	"	"	"	"	FILT, R-01
Potassium	ND	200	"	"	"	"	"	"	FILT, R-01
Sodium	**23000**	200	"	"	"	"	"	"	FILT
Antimony	ND	10	ug/l	20	23F0149	06/09/23	06/13/23	200.8	FILT, R-01
Arsenic	**340**	10	"	"	"	"	"	"	FILT
Barium	**280**	10	"	"	"	"	"	"	FILT
Cadmium	ND	10	"	"	"	"	"	"	FILT, R-01
Chromium	ND	10	"	"	"	"	"	"	FILT, R-01
Cobalt	ND	10	"	"	"	"	"	"	FILT, R-01
Lead	ND	20	"	40	"	"	06/13/23	"	FILT, R-01
Nickel	ND	10	"	20	"	"	06/13/23	"	FILT, R-01
Selenium	ND	10	"	"	"	"	"	"	FILT, R-01
Zinc	ND	10	"	"	"	"	"	"	FILT, R-01
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	23F0143	06/09/23	06/12/23	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	23F0155	06/09/23	06/14/23	EPA 1664B	
Specific Conductance (EC)	**75500**	10.0	umho/cm @25°C	"	23F0163	06/09/23	06/12/23	SM2510b mod.	
pH	**8.8**	0.10	pH Units	"	23F0139	06/09/23	06/09/23	SM 4500-H+B	
pH Temperature °C	**19**		"	"	"	"	"	"	
Total Dissolved Solids	**46000**	10	mg/l	"	23F0162	06/09/23	06/16/23	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	06/23/23 17:21

North Pond

T231541-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Anions by EPA Method 300.0									
Chloride	**28700**	10000	mg/l	2000	23F0138	06/09/23	06/12/23	EPA 300.0	
Sulfate as SO4	**7800**	2500	"	500	"	"	06/10/23	"	
Nitrate as NO3	**1910**	1000	"	2000	"	"	"	"	
Nitrate as N	**440**	400	"	"	"	"	"	"	

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	06/23/23 17:21

South Pond

T231541-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	2.0	mg/l	400	23F0140	06/09/23	06/16/23	EPA 200.7	FILT, R-01
Calcium	**270**	200	"	"	"	"	06/16/23	"	FILT
Iron	ND	80	"	"	"	"	"	"	FILT, R-01
Magnesium	ND	40	"	"	"	"	"	"	FILT, R-01
Potassium	ND	200	"	"	"	"	"	"	FILT, R-01
Sodium	**19000**	200	"	"	"	"	"	"	FILT
Antimony	ND	10	ug/l	20	23F0149	06/09/23	06/13/23	200.8	FILT, R-01
Arsenic	**280**	10	"	"	"	"	"	"	FILT
Barium	**210**	10	"	"	"	"	"	"	FILT
Cadmium	ND	10	"	"	"	"	"	"	FILT, R-01
Chromium	ND	10	"	"	"	"	"	"	FILT, R-01
Cobalt	ND	10	"	"	"	"	"	"	FILT, R-01
Lead	ND	10	"	"	"	"	"	"	FILT, R-01
Nickel	ND	10	"	"	"	"	"	"	FILT, R-01
Selenium	**12**	10	"	"	"	"	"	"	FILT
Zinc	**39**	10	"	"	"	"	"	"	FILT
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	23F0143	06/09/23	06/12/23	EPA 7470A Water	
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	23F0155	06/09/23	06/14/23	EPA 1664B	
Specific Conductance (EC)	**66300**	10.0	umho/cm @25°C	"	23F0163	06/09/23	06/12/23	SM2510b mod.	
pH	**8.7**	0.10	pH Units	"	23F0139	06/09/23	06/09/23	SM 4500-H+B	
pH Temperature °C	**20**		"	"	"	"	"	"	
Total Dissolved Solids	**22000**	10	mg/l	"	23F0162	06/09/23	06/16/23	TDS by SM2540C	

SunStar Laboratories, Inc.

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	06/23/23 17:21

South Pond

T231541-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Anions by EPA Method 300.0									
Chloride	**25800**	5000	mg/l	1000	23F0138	06/09/23	06/10/23	EPA 300.0	
Sulfate as SO4	**5600**	5000	"	"	"	"	"	"	
Nitrate as NO3	**959**	500	"	"	"	"	"	"	
Nitrate as N	**220**	200	"	"	"	"	"	"	

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	06/23/23 17:21

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 23F0140 - EPA 3010A										
Blank (23F0140-BLK1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	ND	0.005	mg/l							
Calcium	ND	0.50	"							
Iron	ND	0.20	"							
Magnesium	ND	0.10	"							
Potassium	ND	0.50	"							
Sodium	ND	0.50	"							
LCS (23F0140-BS1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	1.53	0.005	mg/l	1.50		102	85-115			
Calcium	1.52	0.50	"	1.50		101	80-120			
Iron	1.52	0.20	"	1.50		101	80-120			
Magnesium	1.56	0.10	"	1.50		104	80-120			
Potassium	1.44	0.50	"	1.50		96.0	80-120			
Sodium	1.44	0.50	"	1.50		95.9	80-120			
Matrix Spike (23F0140-MS1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	1.99	0.50	mg/l	1.50	0.058	129	70-130			
Calcium	31.4	50	"	1.50	28.4	195	70-130			QM-07, R-01
Iron	2.24	20	"	1.50	0.847	92.6	70-130			R-01
Magnesium	ND	10	"	1.50	ND		70-130			QM-05, R-01
Potassium	ND	50	"	1.50	ND		70-130			QM-05, R-01
Sodium	614	50	"	1.50	590	NR	70-130			QM-05
Matrix Spike Dup (23F0140-MSD1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	1.78	0.50	mg/l	1.50	0.058	115	70-130	11.2	30	
Calcium	29.0	50	"	1.50	28.4	40.8	70-130	7.65	30	QM-05, R-01
Iron	1.73	20	"	1.50	0.847	59.1	70-130	25.3	30	QM-05, R-01
Magnesium	ND	10	"	1.50	ND		70-130		30	QM-05, R-01
Potassium	17.2	50	"	1.50	ND	NR	70-130		30	QM-05, R-01
Sodium	576	50	"	1.50	590	NR	70-130	6.32	30	QM-05, R-01

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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	06/23/23 17:21

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 23F0149 - EPA 3010A										
Blank (23F0149-BLK1)				Prepared: 06/09/23 Analyzed: 06/13/23						
Antimony	ND	0.50	ug/l							
Arsenic	ND	0.50	"							
Barium	ND	0.50	"							
Cadmium	ND	0.50	"							
Chromium	ND	0.50	"							
Cobalt	ND	0.50	"							
Lead	ND	0.50	"							
Nickel	ND	0.50	"							
Selenium	ND	0.50	"							
Zinc	ND	0.50	"							
LCS (23F0149-BS1)				Prepared: 06/09/23 Analyzed: 06/13/23						
Arsenic	23.6	0.50	ug/l	25.0		94.3	85-115			
Barium	23.6	0.50	"	25.0		94.6	85-115			
Cadmium	23.6	0.50	"	25.0		94.5	85-115			
Chromium	23.9	0.50	"	25.0		95.7	85-115			
Lead	25.4	0.50	"	25.0		102	85-115			
Matrix Spike (23F0149-MS1)	**Source: T231538-02**			Prepared: 06/09/23 Analyzed: 06/13/23						
Arsenic	27.0	10	ug/l	25.0	0.400	106	70-130			
Barium	36.8	10	"	25.0	13.8	92.0	70-130			
Cadmium	25.6	10	"	25.0	3.80	87.2	70-130			
Chromium	23.6	10	"	25.0	ND	94.4	70-130			
Lead	27.0	10	"	25.0	ND	108	70-130			
Matrix Spike Dup (23F0149-MSD1)	**Source: T231538-02**			Prepared: 06/09/23 Analyzed: 06/13/23						
Arsenic	29.2	10	ug/l	25.0	0.400	115	70-130	7.83	20	
Barium	37.4	10	"	25.0	13.8	94.4	70-130	1.62	20	
Cadmium	28.0	10	"	25.0	3.80	96.8	70-130	8.96	20	
Chromium	24.0	10	"	25.0	ND	96.0	70-130	1.68	20	
Lead	27.2	10	"	25.0	ND	109	70-130	0.738	20	

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949.297.5027 Fax

Northstar Environmental Remediation	Project: Genesis Solar LTUs & Ponds	
26225 Enterprise Court	Project Number: 196-004-05	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/23/23 17:21

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 23F0143 - EPA 7470A Water										
Blank (23F0143-BLK1)				Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	ND	1.0	ug/l							
LCS (23F0143-BS1)				Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	7.33	1.0	ug/l	7.50		97.7	80-120			
Matrix Spike (23F0143-MS1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	7.76	1.0	ug/l	7.50	ND	103	80-120			
Matrix Spike Dup (23F0143-MSD1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	7.98	1.0	ug/l	7.50	ND	106	80-120	2.80	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	06/23/23 17:21

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 23F0139 - General Preparation										
Duplicate (23F0139-DUP1)	**Source: T231538-01**			Prepared & Analyzed: 06/09/23						
pH	8.22	0.10	pH Units		8.31			1.09	10	
pH Temperature °C	18.9		"		18.5			2.14	200	
Batch 23F0155 - General Preparation										
Blank (23F0155-BLK1)				Prepared: 06/09/23 Analyzed: 06/14/23						
Oil & Grease	ND	5.00	mg/l							
LCS (23F0155-BS1)				Prepared: 06/09/23 Analyzed: 06/14/23						
Oil & Grease	41.5	5.00	mg/l	53.1		78.2	78-114			
LCS Dup (23F0155-BSD1)				Prepared: 06/09/23 Analyzed: 06/14/23						
Oil & Grease	40.0	5.00	mg/l	53.1		75.3	78-114	3.68	20	BS-4
Batch 23F0162 - General Preparation										
Blank (23F0162-BLK1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Total Dissolved Solids	ND	10	mg/l							
LCS (23F0162-BS1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Total Dissolved Solids	564	10	mg/l	500		113	80-120			
Duplicate (23F0162-DUP1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/16/23						
Total Dissolved Solids	1400	10	mg/l		1490			6.09	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	06/23/23 17:21

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 23F0163 - General Preparation										
Duplicate (23F0163-DUP1)		**Source: T231538-01**		Prepared: 06/09/23 Analyzed: 06/12/23						
Specific Conductance (EC)	2680	10.0	umho/cm @25°C		2690			0.372	15	

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949.297.5027 Fax

Northstar Environmental Remediation	Project: Genesis Solar LTUs & Ponds	
26225 Enterprise Court	Project Number: 196-004-05	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/23/23 17:21

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 23F0138 - General Preparation										
Blank (23F0138-BLK1)				Prepared & Analyzed: 06/09/23						
Fluoride	ND	0.500	mg/l							
Chloride	ND	5.00	"							
Nitrite as NO2	ND	0.500	"							
Sulfate as SO4	ND	5.00	"							
Nitrate as NO3	ND	0.500	"							
Phosphate, Total as Orthophosphate	ND	0.500	"							
Nitrite as N	ND	0.200	"							
Nitrate as N	ND	0.200	"							
LCS (23F0138-BS1)				Prepared & Analyzed: 06/09/23						
Fluoride	22.6	0.500	mg/l	25.0		90.4	75-125			
Chloride	24.6	5.00	"	25.0		98.3	75-125			
Sulfate as SO4	25.4	5.00	"	25.0		101	75-125			
Nitrate as NO3	25.7	0.500	"	25.0		103	75-125			
Matrix Spike (23F0138-MS1)		**Source: T231538-01**		Prepared & Analyzed: 06/09/23						
Fluoride	29.4	0.500	mg/l	25.0	4.80	98.6	75-125			
Chloride	449	125	"	25.0	451	NR	75-125			QM-05
Sulfate as SO4	392	125	"	25.0	390	7.30	75-125			QM-05
Nitrate as NO3	24.6	0.500	"	25.0	0.888	94.7	75-125			
Matrix Spike Dup (23F0138-MSD1)		**Source: T231538-01**		Prepared & Analyzed: 06/09/23						
Fluoride	26.8	0.500	mg/l	25.0	4.80	88.2	75-125	9.20	20	
Chloride	445	125	"	25.0	451	NR	75-125	0.744	20	QM-05
Sulfate as SO4	391	125	"	25.0	390	4.20	75-125	0.198	20	QM-05
Nitrate as NO3	24.8	0.500	"	25.0	0.888	95.6	75-125	0.953	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	06/23/23 17:21

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.
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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aboratories, Inc.
mmercentre Dr
st, CA 92630
020

Chain of Custody Record

nstar Environmental Remediation
6225 Enterprise Court, Lake Forest, CA 92630
-274-1719 Fax:
nager: Arlin Brewster

Date: 6/9/2023 Page: 1 of
Project Name: Genesis Solar LTUs & Ponds
Collector: Arlin Brewster Client Project #: 196-004-05
Batch #: T231541 EDF #: Not Required

mple ID	Date Sampled	Time	Sample Type	Container Type	200.7 - Dissolved Metals: Ca, Cu, Na, K, Fe, Mg (FIELD FILTERED)	200.8 - Dissolved Metals: Sb, As, Ba, Cd, Cr, Co, Pb, Ni, Se, Zn (F.F.)	300.0 - Chloride, Nitrate, Sulfate	1664 - Oil and Grease	7470A - Mercury	9040 - pH	SM2510B - Conductivity, Specific	SM2540C - Total Dis. Solids	8015M - Therminol (Subcontract)			Laboratory ID #	Comments/Preservat
th Pond	6/8/23	1550	W	Various	X	X	X	X	X	X	X	X	X				
th Pond	↓	1600	W	Various	X	X	X	X	X	X	X	X	X				
d Blank	N/A	N/A	W	Various													HOLD
o Blank	N/A	N/A	W	Various													HOLD

by: (signature) Date / Time: 6/9/23 @ 0825
Received by: (signature) Date / Time: 6/9/23 8:25 am
by: (signature) Date / Time
Received by: (signature) Date / Time
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: 0.8 °C

Turn around time: Standard

Notes
EDF report not re
Reporting limits mu
previous repo

al 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 #: T231541

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

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

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

Lab Received by: Jaan Date/Time Lab Received: 6.9.23 0825

Total number of coolers received: 1 Thermometer ID: SC-1 Calibration due : 8/2/23

Temperature:	Cooler #1	0.7 °C +/- the CF (+ 0.1°C) =	0.8	°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: BS 6.9.23

Comments:

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/22/2023 3:54:55 PM

JOB DESCRIPTION

T231541

JOB NUMBER

570-141351-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

Job Notes

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

Authorization

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6/22/2023 3:54:55 PM

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

Table of Contents

Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T231541

Job ID: 570-141351-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance 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: T231541

Job ID: 570-141351-1

Job ID: 570-141351-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-141351-1

Comments
No additional comments.

Receipt
The samples were received on 6/12/2023 10:17 AM. 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 2.8º C.

GC Semi VOA
Method 8015B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 570-337466 and analytical batch 570-338949 recovered outside control limits for the following analytes: Benzene, 1,1'-oxybis-. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Organic Prep
Method 3510C: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 3510C: The following samples formed emulsions during the extraction procedure: T231541-01 (570-141351-1) and T231541-02 (570-141351-2). The emulsions were broken up using Na2SO4.

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: T231541

Job ID: 570-141351-1

Client Sample ID: T231541-01 — Lab Sample ID: 570-141351-1

No Detections.

Client Sample ID: T231541-02 — Lab Sample ID: 570-141351-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: T231541-01
Date Collected: 06/08/23 15:50
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141351-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND	*+	99		ug/L		06/14/23 20:52	06/20/23 18:36	1
1,1'-Biphenyl	ND		99		ug/L		06/14/23 20:52	06/20/23 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*67*		*53 - 151*	*06/14/23 20:52*	*06/20/23 18:36*	*1*

Client Sample ID: T231541-02
Date Collected: 06/08/23 16:00
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141351-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND	*+	99		ug/L		06/14/23 20:52	06/20/23 19:01	1
1,1'-Biphenyl	ND		99		ug/L		06/14/23 20:52	06/20/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*72*		*53 - 151*	*06/14/23 20:52*	*06/20/23 19:01*	*1*

Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T231541

Job ID: 570-141351-1

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)**
570-141351-1	T231541-01	67
570-141351-2	T231541-02	72
LCS 570-337466/2-A	Lab Control Sample	106
LCSD 570-337466/3-A	Lab Control Sample Dup	119
MB 570-337466/1-A	Method Blank	92

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-337466/1-A
Matrix: Water
Analysis Batch: 338949

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 337466

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		06/14/23 20:52	06/20/23 17:23	1
1,1'-Biphenyl	ND		100		ug/L		06/14/23 20:52	06/20/23 17:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*92*		*53 - 151*	*06/14/23 20:52*	*06/20/23 17:23*	*1*

Lab Sample ID: LCS 570-337466/2-A
Matrix: Water
Analysis Batch: 338949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 337466

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			1000	1229	*+	ug/L		123	57 - 120		
1,1'-Biphenyl			1000	898.4		ug/L		90	45 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*53 - 151*

Lab Sample ID: LCSD 570-337466/3-A
Matrix: Water
Analysis Batch: 338949

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 337466

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			1000	1375	*+	ug/L		137	57 - 120	11	20
1,1'-Biphenyl			1000	1003		ug/L		100	45 - 120	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*119*		*53 - 151*

QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T231541

Job ID: 570-141351-1

GC Semi VOA

Prep Batch: 337466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141351-1	T231541-01	Total/NA	Water	3510C	
570-141351-2	T231541-02	Total/NA	Water	3510C	
MB 570-337466/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-337466/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-337466/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 338949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141351-1	T231541-01	Total/NA	Water	8015B	337466
570-141351-2	T231541-02	Total/NA	Water	8015B	337466
MB 570-337466/1-A	Method Blank	Total/NA	Water	8015B	337466
LCS 570-337466/2-A	Lab Control Sample	Total/NA	Water	8015B	337466
LCSD 570-337466/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	337466

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T231541

Job ID: 570-141351-1

Client Sample ID: T231541-01

Date Collected: 06/08/23 15:50
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141351-1

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			251.8 mL	2.5 mL	337466	06/14/23 20:52	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	338949	06/20/23 18:36	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T231541-02

Date Collected: 06/08/23 16:00
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141351-2

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			251.9 mL	2.5 mL	337466	06/14/23 20:52	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	338949	06/20/23 19:01	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: T231541

Job ID: 570-141351-1

Laboratory: Eurofins Calscience

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

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

Method Summary

Client: SunStar Laboratories Inc
Project/Site: T231541

Job ID: 570-141351-1

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: T231541

Job ID: 570-141351-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-141351-1	T231541-01	Water	06/08/23 15:50	06/12/23 10:17
570-141351-2	T231541-02	Water	06/08/23 16:00	06/12/23 10:17

570-141351 Chain of Custody

Loc: 570
141351

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T231541

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: T231541-01	**Water**	**Sampled:06/08/23 15:50**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 15:50		8015M- Therminol
Containers Supplied:				
Sample ID: T231541-02	**Water**	**Sampled:06/08/23 16:00**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 16:00		8015M- Therminol
Containers Supplied:				

Released By	Date	Received By	Date
(signature)	6-12-23 10:17	(signature) EC	6/12/23 10:17

Released By	Date	Received By	Date

2-6/2-8 SG

Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-141351-1

Login Number: 141351
List Number: 1
Creator: Vitente, Precy

List Source: Eurofins Calscience

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

T231541

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

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

Date Due:	06/26/23 00:00 (11 day TAT)		
Received By:	Joann Marroquin	Date Received:	06/09/23 08:25
Logged In By:	Jeff Lee	Date Logged In:	06/09/23 10:18

Samples Received at:	**0.8°C**		
Custody Seals	No	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confirı	Yes		

Analysis	Due	TAT	Expires	Comments
T231541-01 North Pond [Water] Sampled 06/08/23 15:50 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 15:50	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 15:50	Ca,Cu,Na,K,Fe,Mg (F.F)
200.8	06/16/23 15:00	5	12/05/23 15:50	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 15:50	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 15:50	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 15:50	
Conductivity	06/16/23 15:00	5	07/06/23 15:50	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 15:50	
TDS-160.1	06/16/23 15:00	5	06/15/23 15:50	
T231541-02 South Pond [Water] Sampled 06/08/23 16:00 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 16:00	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 16:00	Ca,Cu,Na,K,Fe,Mg (F.F)
200.8	06/16/23 15:00	5	12/05/23 16:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (F.F)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 16:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 16:00	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 16:00	
Conductivity	06/16/23 15:00	5	07/06/23 16:00	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 16:00	
TDS-160.1	06/16/23 15:00	5	06/15/23 16:00	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T231541

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

Analysis	Due	TAT	Expires	Comments
T231541-03 Field Blank [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
T231541-04 Trip Blank [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
Eurofins Calscience (Tustin)				
T231541-01 North Pond [Water] Sampled 06/08/23 15:50 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 15:50	8015M- Therminol
T231541-02 South Pond [Water] Sampled 06/08/23 16:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 16:00	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

29 June 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 06/09/23 08:25. 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	06/29/23 12:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DM-1	T231538-10	Water	06/08/23 18:10	06/09/23 08:25
DM-2	T231538-11	Water	06/08/23 19:40	06/09/23 08:25
DM-3	T231538-12	Water	06/08/23 16:45	06/09/23 08:25

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.

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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 Groundwater	
26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

DETECTIONS SUMMARY

Sample ID: DM-1 **Laboratory ID:** T231538-10

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**29**	10	ug/l	200.8	FILT
Calcium	**240**	50	mg/l	EPA 200.7	FILT
Magnesium	**65**	10	mg/l	EPA 200.7	FILT
Sodium	**4100**	50	mg/l	EPA 200.7	FILT
pH	**7.8**	0.10	pH Units	SM 4500-H+B	
Total Dissolved Solids	**10000**	10	mg/l	TDS by SM2540C	
pH Temperature °C	**21**		pH Units	SM 4500-H+B	
Specific Conductance (EC)	**18000**	10.0	mho/cm @25°(	SM2510b mod.	
Chloride	**5300**	1000	mg/l	EPA 300.0	
Sulfate as SO4	**2000**	1000	mg/l	EPA 300.0	
Nitrate as NO3	**7.58**	0.500	mg/l	EPA 300.0	
Nitrate as N	**1.71**	0.200	mg/l	EPA 300.0	

Sample ID: DM-2 **Laboratory ID:** T231538-11

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**37**	10	ug/l	200.8	FILT
Calcium	**300**	50	mg/l	EPA 200.7	FILT
Magnesium	**85**	10	mg/l	EPA 200.7	FILT
Sodium	**4800**	50	mg/l	EPA 200.7	FILT
pH	**7.6**	0.10	pH Units	SM 4500-H+B	
Total Dissolved Solids	**6800**	10	mg/l	TDS by SM2540C	
pH Temperature °C	**20**		pH Units	SM 4500-H+B	
Specific Conductance (EC)	**18300**	10.0	mho/cm @25°(	SM2510b mod.	
Chloride	**5470**	1000	mg/l	EPA 300.0	
Sulfate as SO4	**2190**	1000	mg/l	EPA 300.0	
Nitrate as NO3	**9.73**	0.500	mg/l	EPA 300.0	
Nitrate as N	**2.20**	0.200	mg/l	EPA 300.0	

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	06/29/23 12:05

Sample ID: DM-3 **Laboratory ID:** T231538-12

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**16**	10	ug/l	200.8	FILT
Barium	**17**	10	ug/l	200.8	FILT
Calcium	**240**	50	mg/l	EPA 200.7	FILT
Magnesium	**66**	10	mg/l	EPA 200.7	FILT
Sodium	**4200**	50	mg/l	EPA 200.7	FILT
Total Dissolved Solids	**9800**	10	mg/l	TDS by SM2540C	
pH	**7.7**	0.10	pH Units	SM 4500-H+B	
pH Temperature °C	**19**		pH Units	SM 4500-H+B	
Specific Conductance (EC)	**17600**	10.0	mho/cm @25°C	SM2510b mod.	
Chloride	**5230**	1000	mg/l	EPA 300.0	
Sulfate as SO4	**2100**	1000	mg/l	EPA 300.0	
Nitrate as NO3	**2.61**	0.500	mg/l	EPA 300.0	
Nitrate as N	**0.590**	0.200	mg/l	EPA 300.0	

SunStar Laboratories, Inc.

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 Groundwater	
26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

DM-1

T231538-10 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 200 Series Methods									
Copper	ND	0.50	mg/l	100	23F0140	06/09/23	06/16/23	EPA 200.7	FILT, R-01
Calcium	**240**	50	"	"	"	"	06/16/23	"	FILT
Iron	ND	20	"	"	"	"	"	"	FILT, R-01
Magnesium	**65**	10	"	"	"	"	"	"	FILT
Potassium	ND	50	"	"	"	"	"	"	FILT, R-01
Sodium	**4100**	50	"	"	"	"	"	"	FILT
Antimony	ND	10	ug/l	20	23F0149	06/09/23	06/13/23	200.8	FILT, R-01
Arsenic	ND	10	"	"	"	"	"	"	FILT, R-01
Barium	**29**	10	"	"	"	"	"	"	FILT
Cadmium	ND	10	"	"	"	"	"	"	FILT, R-01
Chromium	ND	10	"	"	"	"	"	"	FILT, R-01
Cobalt	ND	10	"	"	"	"	"	"	FILT, R-01
Lead	ND	10	"	"	"	"	"	"	FILT, R-01
Nickel	ND	10	"	"	"	"	"	"	FILT, R-01
Selenium	ND	10	"	"	"	"	"	"	FILT, R-01
Zinc	ND	10	"	"	"	"	"	"	FILT, R-01
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	23F0143	06/09/23	06/12/23	EPA 7470A Water	FILT
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	23F0155	06/09/23	06/14/23	EPA 1664B	
Specific Conductance (EC)	**18000**	10.0	umho/cm @25°C	"	23F0163	06/09/23	06/12/23	SM2510b mod.	
pH	**7.8**	0.10	pH Units	"	23F0139	06/09/23	06/09/23	SM 4500-H+B	
pH Temperature °C	**21**		"	"	"	"	"	"	
Total Dissolved Solids	**10000**	10	mg/l	"	23F0162	06/09/23	06/16/23	TDS by SM2540C	

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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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	06/29/23 12:05

DM-1

T231538-10 (Water)

SunStar Laboratories, Inc.

Anions by EPA Method 300.0

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**5300**	1000	mg/l	200	23F0138	06/09/23	06/09/23	EPA 300.0	
Sulfate as SO4	**2000**	1000	"	"	"	"	"	"	
Nitrate as NO3	**7.58**	0.500	"	1	"	"	06/09/23	"	
Nitrate as N	**1.71**	0.200	"	"	"	"	"	"	

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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Providing Quality Analytical Services Nationwide

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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	06/29/23 12:05

DM-2

T231538-11 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	0.50	mg/l	100	23F0140	06/09/23	06/16/23	EPA 200.7	FILT, R-01
Calcium	**300**	50	"	"	"	"	06/16/23	"	FILT
Iron	ND	20	"	"	"	"	"	"	FILT, R-01
Potassium	ND	50	"	"	"	"	"	"	FILT, R-01
Magnesium	**85**	10	"	"	"	"	"	"	FILT
Sodium	**4800**	50	"	"	"	"	"	"	FILT
Antimony	ND	10	ug/l	20	23F0149	06/09/23	06/13/23	200.8	FILT, R-01
Arsenic	ND	10	"	"	"	"	"	"	FILT, R-01
Barium	**37**	10	"	"	"	"	"	"	FILT
Cadmium	ND	10	"	"	"	"	"	"	FILT, R-01
Chromium	ND	10	"	"	"	"	"	"	FILT, R-01
Cobalt	ND	10	"	"	"	"	"	"	FILT, R-01
Lead	ND	10	"	"	"	"	"	"	FILT, R-01
Nickel	ND	10	"	"	"	"	"	"	FILT, R-01
Selenium	ND	10	"	"	"	"	"	"	FILT, R-01
Zinc	ND	10	"	"	"	"	"	"	FILT, R-01
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	23F0143	06/09/23	06/12/23	EPA 7470A Water	FILT
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	23F0155	06/09/23	06/14/23	EPA 1664B	
Specific Conductance (EC)	**18300**	10.0	umho/cm @25°C	"	23F0163	06/09/23	06/12/23	SM2510b mod.	
pH	**7.6**	0.10	pH Units	"	23F0139	06/09/23	06/09/23	SM 4500-H+B	
pH Temperature °C	**20**		"	"	"	"	"	"	
Total Dissolved Solids	**6800**	10	mg/l	"	23F0162	06/09/23	06/16/23	TDS by SM2540C	

SunStar Laboratories, Inc.

Jeff Lee, Project Manager

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Northstar Environmental Remediation	Project: Genesis Solar Groundwater	
26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

DM-2

T231538-11 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Anions by EPA Method 300.0									
Chloride	**5470**	1000	mg/l	200	23F0138	06/09/23	06/09/23	EPA 300.0	
Sulfate as SO4	**2190**	1000	"	"	"	"	"	"	
Nitrate as NO3	**9.73**	0.500	"	1	"	"	06/09/23	"	
Nitrate as N	**2.20**	0.200	"	"	"	"	"	"	

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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	06/29/23 12:05

DM-3

T231538-12 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Metals by EPA 200 Series Methods									
Copper	ND	0.50	mg/l	100	23F0140	06/09/23	06/16/23	EPA 200.7	FILT, R-01
Calcium	**240**	50	"	"	"	"	06/16/23	"	FILT
Iron	ND	20	"	"	"	"	"	"	FILT, R-01
Potassium	ND	50	"	"	"	"	"	"	FILT, R-01
Magnesium	**66**	10	"	"	"	"	"	"	FILT
Sodium	**4200**	50	"	"	"	"	"	"	FILT
Antimony	ND	10	ug/l	20	23F0149	06/09/23	06/13/23	200.8	FILT, R-01
Arsenic	**16**	10	"	"	"	"	"	"	FILT
Barium	**17**	10	"	"	"	"	"	"	FILT
Cadmium	ND	10	"	"	"	"	"	"	FILT, R-01
Chromium	ND	10	"	"	"	"	"	"	FILT, R-01
Cobalt	ND	10	"	"	"	"	"	"	FILT, R-01
Lead	ND	10	"	"	"	"	"	"	FILT, R-01
Nickel	ND	10	"	"	"	"	"	"	FILT, R-01
Selenium	ND	10	"	"	"	"	"	"	FILT, R-01
Zinc	ND	10	"	"	"	"	"	"	FILT, R-01
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	1.0	ug/l	1	23F0143	06/09/23	06/12/23	EPA 7470A Water	FILT
Conventional Chemistry Parameters by APHA/EPA/ASTM Methods									
Oil & Grease	ND	5.00	mg/l	1	23F0155	06/09/23	06/14/23	EPA 1664B	
Specific Conductance (EC)	**17600**	10.0	umho/cm @25°C	"	23F0163	06/09/23	06/12/23	SM2510b mod.	
pH	**7.7**	0.10	pH Units	"	23F0139	06/09/23	06/09/23	SM 4500-H+B	
pH Temperature °C	**19**		"	"	"	"	"	"	
Total Dissolved Solids	**9800**	10	mg/l	"	23F0162	06/09/23	06/16/23	TDS by SM2540C	

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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	06/29/23 12:05

DM-3

T231538-12 (Water)

SunStar Laboratories, Inc.

Anions by EPA Method 300.0

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	**5230**	1000	mg/l	200	23F0138	06/09/23	06/09/23	EPA 300.0	
Sulfate as SO4	**2100**	1000	"	"	"	"	"	"	
Nitrate as NO3	**2.61**	0.500	"	1	"	"	06/09/23	"	
Nitrate as N	**0.590**	0.200	"	"	"	"	"	"	

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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	06/29/23 12:05

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 23F0140 - EPA 3010A										
Blank (23F0140-BLK1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	ND	0.005	mg/l							
Calcium	ND	0.50	"							
Iron	ND	0.20	"							
Magnesium	ND	0.10	"							
Potassium	ND	0.50	"							
Sodium	ND	0.50	"							
LCS (23F0140-BS1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	1.53	0.005	mg/l	1.50		102	85-115			
Calcium	1.52	0.50	"	1.50		101	80-120			
Iron	1.52	0.20	"	1.50		101	80-120			
Potassium	1.44	0.50	"	1.50		96.0	80-120			
Magnesium	1.56	0.10	"	1.50		104	80-120			
Sodium	1.44	0.50	"	1.50		95.9	80-120			
Matrix Spike (23F0140-MS1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	1.99	0.50	mg/l	1.50	0.058	129	70-130			
Calcium	31.4	50	"	1.50	28.4	195	70-130			QM-07, R-01
Iron	2.24	20	"	1.50	0.847	92.6	70-130			R-01
Magnesium	ND	10	"	1.50	ND		70-130			QM-05, R-01
Potassium	ND	50	"	1.50	ND		70-130			QM-05, R-01
Sodium	614	50	"	1.50	590	NR	70-130			QM-05
Matrix Spike Dup (23F0140-MSD1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/16/23						
Copper	1.78	0.50	mg/l	1.50	0.058	115	70-130	11.2	30	
Calcium	29.0	50	"	1.50	28.4	40.8	70-130	7.65	30	QM-05, R-01
Iron	1.73	20	"	1.50	0.847	59.1	70-130	25.3	30	QM-05, R-01
Magnesium	ND	10	"	1.50	ND		70-130		30	QM-05, R-01
Potassium	17.2	50	"	1.50	ND	NR	70-130		30	QM-05, R-01
Sodium	576	50	"	1.50	590	NR	70-130	6.32	30	QM-05, R-01

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

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 23F0149 - EPA 3010A										
Blank (23F0149-BLK1)				Prepared: 06/09/23 Analyzed: 06/13/23						
Antimony	ND	0.50	ug/l							
Arsenic	ND	0.50	"							
Barium	ND	0.50	"							
Cadmium	ND	0.50	"							
Chromium	ND	0.50	"							
Cobalt	ND	0.50	"							
Lead	ND	0.50	"							
Nickel	ND	0.50	"							
Selenium	ND	0.50	"							
Zinc	ND	0.50	"							
LCS (23F0149-BS1)				Prepared: 06/09/23 Analyzed: 06/13/23						
Arsenic	23.6	0.50	ug/l	25.0		94.3	85-115			
Barium	23.6	0.50	"	25.0		94.6	85-115			
Cadmium	23.6	0.50	"	25.0		94.5	85-115			
Chromium	23.9	0.50	"	25.0		95.7	85-115			
Lead	25.4	0.50	"	25.0		102	85-115			
Matrix Spike (23F0149-MS1)	**Source: T231538-02**			Prepared: 06/09/23 Analyzed: 06/13/23						
Arsenic	27.0	10	ug/l	25.0	0.400	106	70-130			
Barium	36.8	10	"	25.0	13.8	92.0	70-130			
Cadmium	25.6	10	"	25.0	3.80	87.2	70-130			
Chromium	23.6	10	"	25.0	ND	94.4	70-130			
Lead	27.0	10	"	25.0	ND	108	70-130			
Matrix Spike Dup (23F0149-MSD1)	**Source: T231538-02**			Prepared: 06/09/23 Analyzed: 06/13/23						
Arsenic	29.2	10	ug/l	25.0	0.400	115	70-130	7.83	20	
Barium	37.4	10	"	25.0	13.8	94.4	70-130	1.62	20	
Cadmium	28.0	10	"	25.0	3.80	96.8	70-130	8.96	20	
Chromium	24.0	10	"	25.0	ND	96.0	70-130	1.68	20	
Lead	27.2	10	"	25.0	ND	109	70-130	0.738	20	

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

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 23F0143 - EPA 7470A Water										
Blank (23F0143-BLK1)				Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	ND	1.0	ug/l							
LCS (23F0143-BS1)				Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	7.33	1.0	ug/l	7.50		97.7	80-120			
Matrix Spike (23F0143-MS1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	7.76	1.0	ug/l	7.50	ND	103	80-120			
Matrix Spike Dup (23F0143-MSD1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/12/23						
Mercury	7.98	1.0	ug/l	7.50	ND	106	80-120	2.80	20	

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

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 23F0139 - General Preparation										
Duplicate (23F0139-DUP1)	**Source: T231538-01**			Prepared & Analyzed: 06/09/23						
pH	8.22	0.10	pH Units		8.31			1.09	10	
pH Temperature °C	18.9		"		18.5			2.14	200	
Batch 23F0155 - General Preparation										
Blank (23F0155-BLK1)				Prepared: 06/09/23 Analyzed: 06/14/23						
Oil & Grease	ND	5.00	mg/l							
LCS (23F0155-BS1)				Prepared: 06/09/23 Analyzed: 06/14/23						
Oil & Grease	41.5	5.00	mg/l	53.1		78.2	78-114			
LCS Dup (23F0155-BSD1)				Prepared: 06/09/23 Analyzed: 06/14/23						
Oil & Grease	40.0	5.00	mg/l	53.1		75.3	78-114	3.68	20	BS-4
Batch 23F0162 - General Preparation										
Blank (23F0162-BLK1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Total Dissolved Solids	ND	10	mg/l							
LCS (23F0162-BS1)				Prepared: 06/09/23 Analyzed: 06/16/23						
Total Dissolved Solids	564	10	mg/l	500		113	80-120			
Duplicate (23F0162-DUP1)	**Source: T231538-01**			Prepared: 06/09/23 Analyzed: 06/16/23						
Total Dissolved Solids	1400	10	mg/l		1490			6.09	20	

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

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 23F0163 - General Preparation										
Duplicate (23F0163-DUP1)		**Source: T231538-01**		Prepared: 06/09/23 Analyzed: 06/12/23						
Specific Conductance (EC)	2680	10.0	umho/cm @25°C		2690			0.372	15	

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

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 23F0138 - General Preparation										
Blank (23F0138-BLK1)				Prepared & Analyzed: 06/09/23						
Fluoride	ND	0.500	mg/l							
Chloride	ND	5.00	"							
Nitrite as NO2	ND	0.500	"							
Sulfate as SO4	ND	5.00	"							
Nitrate as NO3	ND	0.500	"							
Phosphate, Total as Orthophosphate	ND	0.500	"							
Nitrite as N	ND	0.200	"							
Nitrate as N	ND	0.200	"							
LCS (23F0138-BS1)				Prepared & Analyzed: 06/09/23						
Fluoride	22.6	0.500	mg/l	25.0		90.4	75-125			
Chloride	24.6	5.00	"	25.0		98.3	75-125			
Sulfate as SO4	25.4	5.00	"	25.0		101	75-125			
Nitrate as NO3	25.7	0.500	"	25.0		103	75-125			
Matrix Spike (23F0138-MS1)		**Source: T231538-01**		Prepared & Analyzed: 06/09/23						
Fluoride	29.4	0.500	mg/l	25.0	4.80	98.6	75-125			
Chloride	449	125	"	25.0	451	NR	75-125			QM-05
Sulfate as SO4	392	125	"	25.0	390	7.30	75-125			QM-05
Nitrate as NO3	24.6	0.500	"	25.0	0.888	94.7	75-125			
Matrix Spike Dup (23F0138-MSD1)		**Source: T231538-01**		Prepared & Analyzed: 06/09/23						
Fluoride	26.8	0.500	mg/l	25.0	4.80	88.2	75-125	9.20	20	
Chloride	445	125	"	25.0	451	NR	75-125	0.744	20	QM-05
Sulfate as SO4	391	125	"	25.0	390	4.20	75-125	0.198	20	QM-05
Nitrate as NO3	24.8	0.500	"	25.0	0.888	95.6	75-125	0.953	20	

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26225 Enterprise Court	Project Number: 196-004-06	**Reported:**
Lake Forest CA, 92630	Project Manager: Arlin Brewster	06/29/23 12:05

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.
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

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Chain of Custody Record

nstar Environmental Remediation _____
6225 Enterprise Court, Lake Forest, CA 92630 _____
-274-1719 _____ Fax: _____
nager: Arlin Brewster _____

Date: 6/9/2023 Page: 1 of _____
Project Name: Genesis Solar Groundwater _____
Collector: Arlin Brewster _____ Client Project #: 196-004-06 _
Batch #: _____ EDF #: T10000006093 _____

mple ID	Date Sampled	Time	Sample Type	Container Type	200.7 - Dissolved Metals: Ca, Cu, Na, K, Fe, Mg (FIELD FILTERED)	200.8 - Dissolved Metals: Sb, As, Ba, Cd, Cr, Co, Pb, Ni, Se, Zn (F.F.)	300.0 - Chloride, Nitrate, Sulfate	1664 - Oil and Grease	7470A - Mercury	9040 - pH	SM2510B - Conductivity, Specific	SM2540C - Total Dis. Solids	8015M - Therminol (Subcontract)	Deuterium, Oxygen-18 (Subcont.)	300.0 - Fluoride	Laboratory ID #	Comments/Preservat
DM-1	6/8/23	1610	W	Various	X	X	X	X	X	X	X	X	X	X			
DM-2	↓	1940	W	Various	X	X	X	X	X	X	X	X	X	X			
DM-3		1645	W	Various	X	X	X	X	X	X	X	X	X	X			

by: (signature)	Date / Time	Received by: (signature)	Date / Time
B	6/9/23 @ 0825	[signature]	6/9/23 8:25 AM
by: (signature)	Date / Time	Received by: (signature)	Date / Time
by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers 21
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 0.8°C

Turn around time: Standard **

Notes
** Deuterium & Oxy
subcontract has 10
Reporting limits mus
previous repo

al 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 #: T231538

Client Name: Northstar Project: Genesis Solar Groundwater

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

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

Lab Received by: Joann Date/Time Lab Received: 6-9-23 8:25

Total number of coolers received: _____ Thermometer ID: SC-1 Calibration due : 8/2/23

Temperature: Cooler #1	0.7 °C +/- the CF (+ 0.1°C)	=	0.8	°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: TB 6-9-23

Comments:

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/23/2023 10:05:59 AM Revision 1

JOB DESCRIPTION

T231538

JOB NUMBER

570-141353-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

Eurofins Calscience

Job Notes

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

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

Authorization

Generated
6/23/2023 10:05:59 AM
Revision 1

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

Table of Contents

Definitions/Glossary

Client: SunStar Laboratories Inc
Project/Site: T231538

Job ID: 570-141353-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance 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

Job ID: 570-141353-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-141353-1

Comments
No additional comments.

Receipt
The samples were received on 6/12/2023 10:17 AM. 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 2.9º C.

GC Semi VOA
Method 8015B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 570-337466 and analytical batch 570-338949 recovered outside control limits for the following analytes: Benzene, 1,1'-oxybis-. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Organic Prep
Method 3510C: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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: T231538

Job ID: 570-141353-1

Client Sample ID: T231538-10 — Lab Sample ID: 570-141353-8

No Detections.

Client Sample ID: T231538-11 — Lab Sample ID: 570-141353-9

No Detections.

Client Sample ID: T231538-12 — Lab Sample ID: 570-141353-10

No Detections.

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: T231538-10
Date Collected: 06/08/23 18:10
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141353-8
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND	*+	97		ug/L		06/14/23 20:52	06/20/23 22:16	1
1,1'-Biphenyl	ND		97		ug/L		06/14/23 20:52	06/20/23 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*101*		*53 - 151*	*06/14/23 20:52*	*06/20/23 22:16*	*1*

Client Sample ID: T231538-11
Date Collected: 06/08/23 19:40
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141353-9
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND	*+	100		ug/L		06/14/23 20:52	06/20/23 22:41	1
1,1'-Biphenyl	ND		100		ug/L		06/14/23 20:52	06/20/23 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*94*		*53 - 151*	*06/14/23 20:52*	*06/20/23 22:41*	*1*

Client Sample ID: T231538-12
Date Collected: 06/08/23 16:45
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141353-10
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND	*+	99		ug/L		06/14/23 20:52	06/20/23 23:06	1
1,1'-Biphenyl	ND		99		ug/L		06/14/23 20:52	06/20/23 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*99*		*53 - 151*	*06/14/23 20:52*	*06/20/23 23:06*	*1*

Surrogate Summary

Client: SunStar Laboratories Inc
Project/Site: T231538

Job ID: 570-141353-1

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)
570-141353-8	T231538-10	101
570-141353-9	T231538-11	94
570-141353-10	T231538-12	99

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-337466/1-A
Matrix: Water
Analysis Batch: 338949

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 337466

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		100		ug/L		06/14/23 20:52	06/20/23 17:23	1
1,1'-Biphenyl	ND		100		ug/L		06/14/23 20:52	06/20/23 17:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*92*		*53 - 151*	*06/14/23 20:52*	*06/20/23 17:23*	*1*

Lab Sample ID: LCS 570-337466/2-A
Matrix: Water
Analysis Batch: 338949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 337466

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			1000	1229	*+	ug/L		123	57 - 120		
1,1'-Biphenyl			1000	898.4		ug/L		90	45 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*53 - 151*

Lab Sample ID: LCSD 570-337466/3-A
Matrix: Water
Analysis Batch: 338949

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 337466

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			1000	1375	*+	ug/L		137	57 - 120	11	20
1,1'-Biphenyl			1000	1003		ug/L		100	45 - 120	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*119*		*53 - 151*

QC Association Summary

Client: SunStar Laboratories Inc
Project/Site: T231538

Job ID: 570-141353-1

GC Semi VOA

Prep Batch: 337466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141353-8	T231538-10	Total/NA	Water	3510C	
570-141353-9	T231538-11	Total/NA	Water	3510C	
570-141353-10	T231538-12	Total/NA	Water	3510C	

Analysis Batch: 338949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-141353-8	T231538-10	Total/NA	Water	8015B	337466
570-141353-9	T231538-11	Total/NA	Water	8015B	337466
570-141353-10	T231538-12	Total/NA	Water	8015B	337466

Lab Chronicle

Client: SunStar Laboratories Inc
Project/Site: T231538

Job ID: 570-141353-1

Client Sample ID: T231538-10

Date Collected: 06/08/23 18:10
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141353-8

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			257.5 mL	2.5 mL	337466	06/14/23 20:52	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	338949	06/20/23 22:16	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T231538-11

Date Collected: 06/08/23 19:40
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141353-9

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			248.5 mL	2.5 mL	337466	06/14/23 20:52	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	338949	06/20/23 22:41	N5Y3	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: T231538-12

Date Collected: 06/08/23 16:45
Date Received: 06/12/23 10:17

Lab Sample ID: 570-141353-10

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			252.8 mL	2.5 mL	337466	06/14/23 20:52	UFLU	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	338949	06/20/23 23:06	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: T231538

Job ID: 570-141353-1

Laboratory: Eurofins Calscience

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

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

Method Summary

Client: SunStar Laboratories Inc
Project/Site: T231538

Job ID: 570-141353-1

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: T231538

Job ID: 570-141353-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-141353-8	T231538-10	Water	06/08/23 18:10	06/12/23 10:17
570-141353-9	T231538-11	Water	06/08/23 19:40	06/12/23 10:17
570-141353-10	T231538-12	Water	06/08/23 16:45	06/12/23 10:17

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T231538

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

570-141353 Chain of Custody

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: T231538-01	**Water**	**Sampled:06/08/23 14:15**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 14:15		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-02	**Water**	**Sampled:06/08/23 12:30**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 12:30		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-03	**Water**	**Sampled:06/08/23 12:00**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 12:00		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-04	**Water**	**Sampled:06/08/23 14:30**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 14:30		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-05	**Water**	**Sampled:06/08/23 15:05**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 15:05		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-06	**Water**	**Sampled:06/08/23 15:20**	[redacted]	
Misc Water Testing #1	06/23/23 00:00	12/05/23 15:20		8015M- Therminol
Containers Supplied:				

Released By	Date	Received By	Date
[signature]	6.12.23 10:17	[signature] EZ	6/12/23 10:17
Released By	Date	Received By	Date
		27/2-9 SCB	

141353

SUBCONTRACT ORDER

SunStar Laboratories, Inc.

T231538

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: T231538-07	**Water**	**Sampled:06/08/23 00:00**		
Misc Water Testing #1	06/23/23 00:00	12/05/23 00:00		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-10	**Water**	**Sampled:06/08/23 18:10**		
Misc Water Testing #1	06/23/23 00:00	12/05/23 18:10		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-11	**Water**	**Sampled:06/08/23 19:40**		
Misc Water Testing #1	06/23/23 00:00	12/05/23 19:40		8015M- Therminol
Containers Supplied:				
Sample ID: T231538-12	**Water**	**Sampled:06/08/23 16:45**		
Misc Water Testing #1	06/23/23 00:00	12/05/23 16:45		8015M- Therminol
Containers Supplied:				

Released By	Date	Received By	Date
	6-12-23 10:17	EZ	6/12/23 10:17
Released By	**Date**	**Received By**	**Date**

Login Sample Receipt Checklist

Client: SunStar Laboratories Inc

Job Number: 570-141353-1

Login Number: 141353
List Number: 1
Creator: Vitente, Precy

List Source: Eurofins Calscience

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

ISOTECH
a Stratum Reservoir brand
www.isotechlabs.com

Lab #:	874738	Job #:	54935	IS-101168	Co. Job#:
Sample Name:	T231538-10				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T231538				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	6/08/2023 18:10	Date Received:	6/13/2023	Date Reported:	6/27/2023

δD of water	----------	-69.3 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-8.53 ‰ 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 #:	874739	Job #:	54935	IS-101168	Co. Job#:
Sample Name:	T231538-11				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T231538				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	6/08/2023 19:40	Date Received:	6/13/2023	Date Reported:	6/27/2023

δD of water	----------	-70.0 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-8.51 ‰ 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 #:	874740	Job #:	54935	IS-101168	Co. Job#:
Sample Name:	T231538-12				Co. Lab#:
Company:	SunStar Laboratories, Inc				
API/Well:					
Container:	250ml Plastic Bottle				
Field/Site Name:	T231538				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	6/08/2023 16:45	Date Received:	6/13/2023	Date Reported:	6/27/2023

δD of water	----------	-71.1 ‰ relative to VSMOW
δ^{18}O of water	----------	-8.76 ‰ relative to VSMOW
Tritium content of water	----------	na
δ^{13}C of DIC	----------	na
^{14}C content of DIC	----------	na
δ^{15}N of nitrate	----------	na
δ^{18}O of nitrate	----------	na
δ^{34}S of sulfate	----------	na
δ^{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

T231538

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:	06/26/23 00:00 (11 day TAT)		
Received By:	Joann Marroquin	Date Received:	06/09/23 08:25
Logged In By:	Jeff Lee	Date Logged In:	06/09/23 09:19

Samples Received at:	**0.8°C**		
Custody Seals	No	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confirı	Yes		

Analysis	Due	TAT	Expires	Comments
T231538-01 23a [Water] Sampled 06/08/23 14:15 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 14:15	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 14:15	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 14:15	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 14:15	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 14:15	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 14:15	
Conductivity	06/16/23 15:00	5	07/06/23 14:15	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 14:15	
TDS-160.1	06/16/23 15:00	5	06/15/23 14:15	
T231538-02 OBS-1 [Water] Sampled 06/08/23 12:30 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 12:30	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 12:30	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 12:30	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 12:30	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 12:30	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 12:30	
Conductivity	06/16/23 15:00	5	07/06/23 12:30	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 12:30	
TDS-160.1	06/16/23 15:00	5	06/15/23 12:30	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T231538

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

Analysis	Due	TAT	Expires	Comments
T231538-03 TW-1 [Water] Sampled 06/08/23 12:00 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 12:00	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 12:00	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 12:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 12:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 12:00	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 12:00	
Conductivity	06/16/23 15:00	5	07/06/23 12:00	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 12:00	
TDS-160.1	06/16/23 15:00	5	06/15/23 12:00	
T231538-04 TW-2 [Water] Sampled 06/08/23 14:30 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 14:30	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 14:30	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 14:30	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 14:30	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 14:30	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 14:30	
Conductivity	06/16/23 15:00	5	07/06/23 14:30	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 14:30	
TDS-160.1	06/16/23 15:00	5	06/15/23 14:30	
T231538-05 PW-0 [Water] Sampled 06/08/23 15:05 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 15:05	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 15:05	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 15:05	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 15:05	Chloride,Sulfate, and Fluoride only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 15:05	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 15:05	
Conductivity	06/16/23 15:00	5	07/06/23 15:05	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 15:05	
TDS-160.1	06/16/23 15:00	5	06/15/23 15:05	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T231538

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

Analysis	Due	TAT	Expires	Comments
T231538-06 PW-2 [Water] Sampled 06/08/23 15:20 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 15:20	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 15:20	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 15:20	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 15:20	Chloride,Sulfate, and Fluoride only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 15:20	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 15:20	
Conductivity	06/16/23 15:00	5	07/06/23 15:20	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 15:20	
TDS-160.1	06/16/23 15:00	5	06/15/23 15:20	
T231538-07 DUP [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				
1664	06/16/23 15:00	5	07/06/23 00:00	Oil & Grease
200.7	06/16/23 15:00	5	12/05/23 00:00	Ca,Cu,Na,K,Fe,Mg (Field Filtered)
200.8	06/16/23 15:00	5	12/05/23 00:00	Sb,As,Ba,Cd,Cr,Co,Pb,Ni,Se,Zn (Field Filtered)
300.0 - F, Cl, Br, SO4	06/16/23 15:00	5	07/06/23 00:00	Chloride,Sulfate only
300.0 - NO2, NO3, PO4	06/16/23 15:00	5	06/10/23 00:00	Nitrate
7470/71 Hg	06/16/23 15:00	5	09/06/23 00:00	
Conductivity	06/16/23 15:00	5	07/06/23 00:00	
pH water SM 4500-H+B	06/14/23 15:00	3	06/09/23 00:00	
TDS-160.1	06/16/23 15:00	5	06/15/23 00:00	
T231538-08 Field Blank [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
T231538-09 Trip Blank [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				**HOLD**
[NO ANALYSES]				
Eurofins Calscience (Tustin)				
T231538-01 23a [Water] Sampled 06/08/23 14:15 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 14:15	8015M- Therminol
T231538-02 OBS-1 [Water] Sampled 06/08/23 12:30 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 12:30	8015M- Therminol

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T231538

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)				
T231538-03 TW-1 [Water] Sampled 06/08/23 12:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 12:00	8015M- Therminol
T231538-04 TW-2 [Water] Sampled 06/08/23 14:30 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 14:30	8015M- Therminol
T231538-05 PW-0 [Water] Sampled 06/08/23 15:05 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 15:05	8015M- Therminol
T231538-06 PW-2 [Water] Sampled 06/08/23 15:20 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 15:20	8015M- Therminol
T231538-07 DUP [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #1	06/23/23 00:00	10	12/05/23 00:00	8015M- Therminol
Isotech Laboratories, Inc.				
T231538-01 23a [Water] Sampled 06/08/23 14:15 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 14:15	Deuterium,Oxygen-18
T231538-02 OBS-1 [Water] Sampled 06/08/23 12:30 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 12:30	Deuterium,Oxygen-18
T231538-03 TW-1 [Water] Sampled 06/08/23 12:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 12:00	Deuterium,Oxygen-18
T231538-04 TW-2 [Water] Sampled 06/08/23 14:30 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 14:30	Deuterium,Oxygen-18
T231538-05 PW-0 [Water] Sampled 06/08/23 15:05 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 15:05	Deuterium,Oxygen-18

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

WORK ORDER

T231538

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.				
T231538-06 PW-2 [Water] Sampled 06/08/23 15:20 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 15:20	Deuterium,Oxygen-18
T231538-07 DUP [Water] Sampled 06/08/23 00:00 (GMT-08:00) Pacific Time (US &				
Misc Water Testing #2	06/23/23 00:00	10	12/05/23 00:00	Deuterium,Oxygen-18

Reviewed By

Date

APPENDIX D

LABORATORY ANALYTICAL RESULTS

LAND TREATMENT UNITS

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Arlin Brewster
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Generated 2/21/2023 6:59:47 PM

JOB DESCRIPTION

GSEP LTU & Ponds
SDG NUMBER Genesis Solar, LLC

JOB NUMBER

570-126382-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

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

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2/21/2023 6:59:47 PM

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

Table of Contents

Definitions/Glossary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

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: 570-126382-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-126382-1

Receipt
The sample was received on 2/3/2023 6:01 PM. 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 time was 1.9°C

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

Diesel Range Organics
Method 8015B_DRO: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 570-305349 and analytical batch 570-305391 recovered outside control limits for the following analytes: Benzene, 1,1'-oxybis-. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015B_DRO: The following sample was re-prepared outside of preparation holding time due to insufficient spike used during first extraction : LTU #4 (570-126382-1).

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

Metals
Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Antimony for preparation batch 570-301658 and analytical batch 570-302021 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. (570-126466-A-26-B MS ^5) and (570-126466-A-26-C MSD ^5)

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

Sample Summary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-126382-1	LTU #4	Solid	02/02/23 09:20	02/03/23 18:01

Detection Summary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Client Sample ID: LTU #4

Lab Sample ID: 570-126382-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
C13-C22 - DL	2300		50		mg/Kg	10		8015B	Total/NA
C23-C40 - DL	930		50		mg/Kg	10		8015B	Total/NA
Arsenic	3.0		3.0		mg/Kg	5		6010B	Total/NA
Barium	69		3.0		mg/Kg	5		6010B	Total/NA
Cobalt	3.4		1.0		mg/Kg	5		6010B	Total/NA
Chromium	7.8		1.0		mg/Kg	5		6010B	Total/NA
Copper	13		2.0		mg/Kg	5		6010B	Total/NA
Molybdenum	11		2.0		mg/Kg	5		6010B	Total/NA
Nickel	7.0		2.0		mg/Kg	5		6010B	Total/NA
Vanadium	12		1.0		mg/Kg	5		6010B	Total/NA
Zinc	1100		5.1		mg/Kg	5		6010B	Total/NA
Lead	7.7		2.0		mg/Kg	5		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LTU #4

Date Collected: 02/02/23 09:20
Date Received: 02/03/23 18:01

Lab Sample ID: 570-126382-1

Matrix: Solid

Method: SW846 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C12)	ND		0.10		mg/Kg		02/06/23 10:42	02/06/23 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*55*		*42 - 126*	*02/06/23 10:42*	*02/06/23 19:15*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND	H *+ F1	5.0		mg/Kg		02/20/23 15:58	02/20/23 21:01	1
1,1'-Biphenyl	ND	H	5.0		mg/Kg		02/20/23 15:58	02/20/23 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*129*		*60 - 138*	*02/20/23 15:58*	*02/20/23 21:01*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	**2300**		50		mg/Kg		02/03/23 18:20	02/08/23 12:36	10
C23-C40	**930**		50		mg/Kg		02/03/23 18:20	02/08/23 12:36	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*119*		*60 - 138*	*02/03/23 18:20*	*02/08/23 12:36*	*10*

Method: SW846 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.5		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Arsenic	**3.0**		3.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Barium	**69**		3.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Beryllium	ND		0.51		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Cadmium	ND		0.51		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Cobalt	**3.4**		1.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Chromium	**7.8**		1.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Copper	**13**		2.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Molybdenum	**11**		2.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Nickel	**7.0**		2.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Antimony	ND		10		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Selenium	ND		3.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Thallium	ND		10		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Vanadium	**12**		1.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Zinc	**1100**		5.1		mg/Kg		02/07/23 08:03	02/08/23 00:43	5
Lead	**7.7**		2.0		mg/Kg		02/07/23 08:03	02/08/23 00:43	5

Method: SW846 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.082		mg/Kg		02/08/23 17:23	02/09/23 14:09	1

Surrogate Summary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (42-126)
570-126373-A-1-F MS	Matrix Spike	107
570-126373-A-1-G MSD	Matrix Spike Duplicate	123
570-126382-1	LTU #4	55
LCS 570-301382/1-A	Lab Control Sample	111
LCSD 570-301382/2-A	Lab Control Sample Dup	121
MB 570-301382/3-A	Method Blank	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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)
570-126256-G-3-B MS	Matrix Spike	109
570-126256-G-3-C MSD	Matrix Spike Duplicate	106
570-126382-1 - DL	LTU #4	119
570-126382-1	LTU #4	129
570-126382-1 MS	LTU #4	137
570-126382-1 MSD	LTU #4	155 S1+
LCS 570-301060/2-A	Lab Control Sample	107
LCS 570-305349/2-A	Lab Control Sample	120
LCSD 570-301060/3-A	Lab Control Sample Dup	112
LCSD 570-305349/3-A	Lab Control Sample Dup	105
MB 570-301060/1-A	Method Blank	108
MB 570-305349/1-A	Method Blank	112

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Lab Chronicle

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Client Sample ID: LTU #4

Date Collected: 02/02/23 09:20
Date Received: 02/03/23 18:01

Lab Sample ID: 570-126382-1

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	5030C			4.97 g	5 mL	301382	02/06/23 10:42	U1MC	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	301354	02/06/23 19:15	A9VE	EET CAL 4
	Instrument ID: GC22									
Total/NA	Prep	3550C	DL		9.99 g	10 mL	301060	02/03/23 18:20	KH3Z	EET CAL 4
Total/NA	Analysis	8015B	DL	10	10 mL	10 mL	301981	02/08/23 12:36	N5Y3	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3550C			10.01 g	10 mL	305349	02/20/23 15:58	KH3Z	EET CAL 4
Total/NA	Analysis	8015B		1	1 mL	1 mL	305391	02/20/23 21:01	N5Y3	EET CAL 4
	Instrument ID: GC70B									
Total/NA	Prep	3050B			1.98 g	50 mL	301658	02/07/23 08:03	GYR8	EET CAL 4
Total/NA	Analysis	6010B		5			302021	02/08/23 00:43	K1UV	EET CAL 4
	Instrument ID: ICP11									
Total/NA	Prep	7471A			0.51 g	50 mL	302294	02/08/23 17:23	CS5Z	EET CAL 4
Total/NA	Analysis	7471A		1			302557	02/09/23 14:09	C0YH	EET CAL 4
	Instrument ID: HG7									

Laboratory References:

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

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 570-301382/3-A
Matrix: Solid
Analysis Batch: 301354

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 301382

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C12)	ND		0.099		mg/Kg		02/06/23 09:42	02/06/23 11:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*42 - 126*	*02/06/23 09:42*	*02/06/23 11:07*	*1*

Lab Sample ID: LCS 570-301382/1-A
Matrix: Solid
Analysis Batch: 301354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 301382

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)			1.93	2.18		mg/Kg		113	70 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*42 - 126*

Lab Sample ID: LCSD 570-301382/2-A
Matrix: Solid
Analysis Batch: 301354

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 301382

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)			1.93	2.25		mg/Kg		117	70 - 124	3	18

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*42 - 126*

Lab Sample ID: 570-126373-A-1-F MS
Matrix: Solid
Analysis Batch: 301354

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 301382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)	ND		1.91	2.09		mg/Kg		106	48 - 114		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*42 - 126*

Lab Sample ID: 570-126373-A-1-G MSD
Matrix: Solid
Analysis Batch: 301354

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 301382

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	ND		1.93	2.00		mg/Kg		100	48 - 114	4	23

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*42 - 126*

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

Lab Sample ID: MB 570-301060/1-A
Matrix: Solid
Analysis Batch: 301403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 301060

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		5.0		mg/Kg		02/03/23 18:20	02/07/23 03:58	1
C23-C40	ND		5.0		mg/Kg		02/03/23 18:20	02/07/23 03:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*108*		*60 - 138*	*02/03/23 18:20*	*02/07/23 03:58*	*1*

Lab Sample ID: LCS 570-301060/2-A
Matrix: Solid
Analysis Batch: 301403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 301060

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			400	466		mg/Kg		116	80 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*107*		*60 - 138*

Lab Sample ID: LCSD 570-301060/3-A
Matrix: Solid
Analysis Batch: 301403

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 301060

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			400	479		mg/Kg		120	80 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*112*		*60 - 138*

Lab Sample ID: 570-126256-G-3-B MS
Matrix: Solid
Analysis Batch: 301403

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 301060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		399	471		mg/Kg		118	43 - 165		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*109*		*60 - 138*

Lab Sample ID: 570-126256-G-3-C MSD
Matrix: Solid
Analysis Batch: 301403

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 301060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		399	468		mg/Kg		117	43 - 165	1	35

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

Lab Sample ID: 570-126256-G-3-C MSD
Matrix: Solid
Analysis Batch: 301403

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 301060

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	106		60 - 138

Lab Sample ID: MB 570-305349/1-A
Matrix: Solid
Analysis Batch: 305391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305349

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		5.0		mg/Kg		02/20/23 15:58	02/20/23 18:54	1
1,1'-Biphenyl	ND		5.0		mg/Kg		02/20/23 15:58	02/20/23 18:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	112		60 - 138	02/20/23 15:58	02/20/23 18:54	1

Lab Sample ID: LCS 570-305349/2-A
Matrix: Solid
Analysis Batch: 305391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305349

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			100	146	*+	mg/Kg		146	68 - 120		
1,1'-Biphenyl			100	107		mg/Kg		107	57 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Octacosane (Surr)	120		60 - 138

Lab Sample ID: LCSD 570-305349/3-A
Matrix: Solid
Analysis Batch: 305391

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305349

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			100	153	*+	mg/Kg		153	68 - 120	5	20
1,1'-Biphenyl			100	112		mg/Kg		112	57 - 120	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Octacosane (Surr)	105		60 - 138

Lab Sample ID: 570-126382-1 MS
Matrix: Solid
Analysis Batch: 305391

Client Sample ID: LTU #4
Prep Type: Total/NA
Prep Batch: 305349

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-	ND	H *+ F1	99.5	137	F1	mg/Kg		138	68 - 120		
1,1'-Biphenyl	ND	H	99.5	99.8		mg/Kg		100	57 - 120		

Surrogate	MS %Recovery	MS Qualifier	Limits
n-Octacosane (Surr)	137		60 - 138

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

Lab Sample ID: 570-126382-1 MSD
Matrix: Solid
Analysis Batch: 305391

Client Sample ID: LTU #4
Prep Type: Total/NA
Prep Batch: 305349

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-	ND	H *+ F1	99.8	144	F1	mg/Kg		144	68 - 120	5	20
1,1'-Biphenyl	ND	H	99.8	105		mg/Kg		105	57 - 120	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*155*	*S1+*	*60 - 138*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-301658/1-A ^5
Matrix: Solid
Analysis Batch: 302021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 301658

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		1.5		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Arsenic	ND		3.1		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Barium	ND		3.1		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Beryllium	ND		0.51		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Cadmium	ND		0.51		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Cobalt	ND		1.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Chromium	ND		1.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Copper	ND		2.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Molybdenum	ND		2.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Nickel	ND		2.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Antimony	ND		10		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Selenium	ND		3.1		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Thallium	ND		10		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Vanadium	ND		1.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Zinc	ND		5.1		mg/Kg		02/07/23 08:03	02/07/23 23:47	5
Lead	ND		2.0		mg/Kg		02/07/23 08:03	02/07/23 23:47	5

Lab Sample ID: LCS 570-301658/2-A ^5
Matrix: Solid
Analysis Batch: 302021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 301658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Silver			25.4	23.1		mg/Kg		91	80 - 120		
Arsenic			50.8	46.1		mg/Kg		91	80 - 120		
Barium			50.8	46.6		mg/Kg		92	80 - 120		
Beryllium			50.8	46.1		mg/Kg		91	80 - 120		
Cadmium			50.8	46.3		mg/Kg		91	80 - 120		
Cobalt			50.8	46.2		mg/Kg		91	80 - 120		
Chromium			50.8	47.0		mg/Kg		93	80 - 120		
Copper			50.8	46.5		mg/Kg		92	80 - 120		
Molybdenum			50.8	47.1		mg/Kg		93	80 - 120		
Nickel			50.8	46.9		mg/Kg		92	80 - 120		
Antimony			50.8	51.2		mg/Kg		101	80 - 120		
Selenium			50.8	44.1		mg/Kg		87	80 - 120		
Thallium			50.8	46.4		mg/Kg		91	80 - 120		
Vanadium			50.8	46.0		mg/Kg		91	80 - 120		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 570-301658/2-A ^5
Matrix: Solid
Analysis Batch: 302021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 301658

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Zinc	50.8	46.3		mg/Kg		91	80 - 120
Lead	50.8	46.4		mg/Kg		91	80 - 120

Lab Sample ID: LCSD 570-301658/3-A ^5
Matrix: Solid
Analysis Batch: 302021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 301658

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	25.3	23.4		mg/Kg		93	80 - 120	1	20
Arsenic	50.5	46.5		mg/Kg		92	80 - 120	1	20
Barium	50.5	47.3		mg/Kg		94	80 - 120	1	20
Beryllium	50.5	46.8		mg/Kg		93	80 - 120	2	20
Cadmium	50.5	47.0		mg/Kg		93	80 - 120	2	20
Cobalt	50.5	47.3		mg/Kg		94	80 - 120	2	20
Chromium	50.5	47.9		mg/Kg		95	80 - 120	2	20
Copper	50.5	47.2		mg/Kg		94	80 - 120	2	20
Molybdenum	50.5	47.8		mg/Kg		95	80 - 120	1	20
Nickel	50.5	47.6		mg/Kg		94	80 - 120	1	20
Antimony	50.5	51.6		mg/Kg		102	80 - 120	1	20
Selenium	50.5	44.4		mg/Kg		88	80 - 120	1	20
Thallium	50.5	47.0		mg/Kg		93	80 - 120	1	20
Vanadium	50.5	46.7		mg/Kg		92	80 - 120	1	20
Zinc	50.5	46.6		mg/Kg		92	80 - 120	1	20
Lead	50.5	47.2		mg/Kg		94	80 - 120	2	20

Lab Sample ID: 570-126466-A-26-B MS ^5
Matrix: Solid
Analysis Batch: 302021

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 301658

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	ND		25.5	23.5		mg/Kg		92	75 - 125
Arsenic	ND		51.0	49.1		mg/Kg		91	75 - 125
Barium	21		51.0	72.2		mg/Kg		101	75 - 125
Beryllium	ND		51.0	47.2		mg/Kg		92	75 - 125
Cadmium	ND		51.0	46.6		mg/Kg		91	75 - 125
Cobalt	1.4		51.0	48.3		mg/Kg		92	75 - 125
Chromium	11		51.0	59.3		mg/Kg		94	75 - 125
Copper	ND		51.0	50.7		mg/Kg		96	75 - 125
Molybdenum	ND		51.0	47.3		mg/Kg		93	75 - 125
Nickel	7.7		51.0	55.7		mg/Kg		94	75 - 125
Antimony	ND	F1	51.0	35.3	F1	mg/Kg		69	75 - 125
Selenium	ND		51.0	46.1		mg/Kg		90	75 - 125
Thallium	ND		51.0	47.1		mg/Kg		92	75 - 125
Vanadium	6.2		51.0	54.5		mg/Kg		95	75 - 125
Zinc	6.2		51.0	52.6		mg/Kg		91	75 - 125
Lead	ND		51.0	48.3		mg/Kg		92	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 570-126466-A-26-C MSD ^5
Matrix: Solid
Analysis Batch: 302021

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 301658

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	ND		25.3	22.7		mg/Kg		90	75 - 125	4	20
Arsenic	ND		50.5	47.4		mg/Kg		89	75 - 125	4	20
Barium	21		50.5	68.9		mg/Kg		95	75 - 125	5	20
Beryllium	ND		50.5	45.5		mg/Kg		90	75 - 125	4	20
Cadmium	ND		50.5	44.8		mg/Kg		89	75 - 125	4	20
Cobalt	1.4		50.5	46.6		mg/Kg		90	75 - 125	4	20
Chromium	11		50.5	57.7		mg/Kg		92	75 - 125	3	20
Copper	ND		50.5	48.7		mg/Kg		93	75 - 125	4	20
Molybdenum	ND		50.5	45.3		mg/Kg		90	75 - 125	4	20
Nickel	7.7		50.5	53.5		mg/Kg		91	75 - 125	4	20
Antimony	ND	F1	50.5	33.5	F1	mg/Kg		66	75 - 125	5	20
Selenium	ND		50.5	43.5		mg/Kg		86	75 - 125	6	20
Thallium	ND		50.5	45.7		mg/Kg		90	75 - 125	3	20
Vanadium	6.2		50.5	52.6		mg/Kg		92	75 - 125	3	20
Zinc	6.2		50.5	51.1		mg/Kg		89	75 - 125	3	20
Lead	ND		50.5	46.6		mg/Kg		89	75 - 125	3	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 570-302294/1-A
Matrix: Solid
Analysis Batch: 302557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302294

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.082		mg/Kg		02/08/23 17:23	02/09/23 13:07	1

Lab Sample ID: LCS 570-302294/2-A
Matrix: Solid
Analysis Batch: 302557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302294

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.408	0.443		mg/Kg		109	80 - 120		

Lab Sample ID: LCSD 570-302294/3-A
Matrix: Solid
Analysis Batch: 302557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 302294

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			0.392	0.427		mg/Kg		109	80 - 120	4	10

Lab Sample ID: 570-126774-E-17-E MS
Matrix: Solid
Analysis Batch: 302557

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 302294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	ND		0.408	0.513		mg/Kg		114	80 - 120		

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 570-126774-E-17-F MSD
Matrix: Solid
Analysis Batch: 302557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 302294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.392	0.446		mg/Kg		102	80 - 120	14	20

QC Association Summary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

GC VOA

Analysis Batch: 301354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	8015B	301382
MB 570-301382/3-A	Method Blank	Total/NA	Solid	8015B	301382
LCS 570-301382/1-A	Lab Control Sample	Total/NA	Solid	8015B	301382
LCSD 570-301382/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B	301382
570-126373-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B	301382
570-126373-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	301382

Prep Batch: 301382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	5030C	
MB 570-301382/3-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-301382/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 570-301382/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
570-126373-A-1-F MS	Matrix Spike	Total/NA	Solid	5030C	
570-126373-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 301060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1 - DL	LTU #4	Total/NA	Solid	3550C	
MB 570-301060/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-301060/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-301060/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-126256-G-3-B MS	Matrix Spike	Total/NA	Solid	3550C	
570-126256-G-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	

Analysis Batch: 301403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-301060/1-A	Method Blank	Total/NA	Solid	8015B	301060
LCS 570-301060/2-A	Lab Control Sample	Total/NA	Solid	8015B	301060
LCSD 570-301060/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	301060
570-126256-G-3-B MS	Matrix Spike	Total/NA	Solid	8015B	301060
570-126256-G-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	301060

Analysis Batch: 301981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1 - DL	LTU #4	Total/NA	Solid	8015B	301060

Prep Batch: 305349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	3550C	
MB 570-305349/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-305349/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-305349/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-126382-1 MS	LTU #4	Total/NA	Solid	3550C	
570-126382-1 MSD	LTU #4	Total/NA	Solid	3550C	

Analysis Batch: 305391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	8015B	305349

GC Semi VOA (Continued)

Analysis Batch: 305391 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-305349/1-A	Method Blank	Total/NA	Solid	8015B	305349
LCS 570-305349/2-A	Lab Control Sample	Total/NA	Solid	8015B	305349
LCSD 570-305349/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	305349
570-126382-1 MS	LTU #4	Total/NA	Solid	8015B	305349
570-126382-1 MSD	LTU #4	Total/NA	Solid	8015B	305349

Metals

Prep Batch: 301658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	3050B	
MB 570-301658/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 570-301658/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 570-301658/3-A ^5	Lab Control Sample Dup	Total/NA	Solid	3050B	
570-126466-A-26-B MS ^5	Matrix Spike	Total/NA	Solid	3050B	
570-126466-A-26-C MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 302021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	6010B	301658
MB 570-301658/1-A ^5	Method Blank	Total/NA	Solid	6010B	301658
LCS 570-301658/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	301658
LCSD 570-301658/3-A ^5	Lab Control Sample Dup	Total/NA	Solid	6010B	301658
570-126466-A-26-B MS ^5	Matrix Spike	Total/NA	Solid	6010B	301658
570-126466-A-26-C MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	6010B	301658

Prep Batch: 302294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	7471A	
MB 570-302294/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 570-302294/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 570-302294/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
570-126774-E-17-E MS	Matrix Spike	Total/NA	Solid	7471A	
570-126774-E-17-F MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	

Analysis Batch: 302557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-126382-1	LTU #4	Total/NA	Solid	7471A	302294
MB 570-302294/1-A	Method Blank	Total/NA	Solid	7471A	302294
LCS 570-302294/2-A	Lab Control Sample	Total/NA	Solid	7471A	302294
LCSD 570-302294/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	302294
570-126774-E-17-E MS	Matrix Spike	Total/NA	Solid	7471A	302294
570-126774-E-17-F MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	302294

Accreditation/Certification Summary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B	3550C	Solid	1,1'-Biphenyl
8015B	3550C	Solid	Benzene, 1,1'-oxybis-

Method Summary

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

Job ID: 570-126382-1
SDG: Genesis Solar, LLC

Method	Method Description	Protocol	Laboratory
8015B	Gasoline Range Organics - (GC)	SW846	EET CAL 4
8015B	Diesel Range Organics (DRO) (GC)	SW846	EET CAL 4
6010B	Metals (ICP)	SW846	EET CAL 4
7471A	Mercury (CVAA)	SW846	EET CAL 4
3050B	Preparation, Metals	SW846	EET CAL 4
3550C	Ultrasonic Extraction	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4
7471A	Preparation, Mercury	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 Recor

570-126382 Chain of Custody

eurofins | Enviro Americ...

Loc: 570
126382

Client Information	Sampler: Mr Ralph DeLaParra	Lab PM: Sheri Fama	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:			Job #:
Address: 26225 Enterprise Court	Due Date Requested			
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 #: 570-13297			
Site: Genesis Solar, LLC	SSOW#:			

Analysis 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:

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	8015B Gasoline + Diesel + Motor Oil	Title 22 Metals	Mercury	Total Number of containers	Special Instructions/Note. EDF file NOT required
			Preservation Code:				1	1	1	1		
~~LTU #1~~												
~~LTU #2~~												
~~LTU #3~~												
LTU #4	2-2-23	0920	C	S			X	X	X	X	3	

Possible Hazard Identification
[X] 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 [X] 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: 2-2-23 @ 1801	Company: NORTHSTAR	Received by:	Date/Time: 2-2-23 18:01	Company: EC
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 1.9/1.9 SCII

Ver: 01/16/2019

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2/21/2023

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 570-126382-1
SDG Number: Genesis Solar, LLC

Login Number: 126382
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.	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: Arlin Brewster
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

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JOB DESCRIPTION

GSEP LTU & Ponds
SDG NUMBER Genesis Solar, LLC

JOB NUMBER

570-132948-2

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

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

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4/14/2023 5:19:22 PM

Authorized for release by
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Designee for
Sheri Fama, Project Manager I
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Table of Contents

Definitions/Glossary

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

Job ID: 570-132948-2
SDG: Genesis Solar, LLC

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
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: 570-132948-2
SDG: Genesis Solar, LLC

Job ID: 570-132948-2

Laboratory: Eurofins Calscience

Narrative

570-132948-2

Comments
No additional comments.

Receipt
The samples were received on 3/29/2023 4:00 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 2.7º C.

GC Semi VOA
Method 8015B: Surrogate recovery for the following samples were outside control limits: LTU #1 (570-132948-1), LTU #2 (570-132948-2) and LTU #3 (570-132948-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Organic Prep
Method 8015B: The matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-316563 and analytical batch 570-320013 was not reported. The MS/MSD was not performed at the same dilution as the sample. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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

Sample Summary

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

Job ID: 570-132948-2
SDG: Genesis Solar, LLC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-132948-1	LTU #1	Solid	03/29/23 08:28	03/29/23 16:00
570-132948-2	LTU #2	Solid	03/29/23 08:30	03/29/23 16:00
570-132948-3	LTU #3	Solid	03/29/23 08:32	03/29/23 16:00

Detection Summary

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

Job ID: 570-132948-2
SDG: Genesis Solar, LLC

Client Sample ID: LTU #1 — Lab Sample ID: 570-132948-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis- - DL2	25000		490		mg/Kg	100		8015B	Total/NA
1,1'-Biphenyl - DL2	8000		490		mg/Kg	100		8015B	Total/NA

Client Sample ID: LTU #2 — Lab Sample ID: 570-132948-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis- - DL2	27000		490		mg/Kg	100		8015B	Total/NA
1,1'-Biphenyl - DL2	9000		490		mg/Kg	100		8015B	Total/NA

Client Sample ID: LTU #3 — Lab Sample ID: 570-132948-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene, 1,1'-oxybis- - DL	22000		490		mg/Kg	100		8015B	Total/NA
1,1'-Biphenyl - DL	6900		490		mg/Kg	100		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: 570-132948-2
SDG: Genesis Solar, LLC

Client Sample ID: LTU #1

Lab Sample ID: 570-132948-1

Date Collected: 03/29/23 08:28
Date Received: 03/29/23 16:00

Matrix: Solid

Method: SW846 8015B - Diesel Range Organics (DRO) (GC) - DL2

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	25000		490		mg/Kg		03/31/23 15:20	04/14/23 13:05	100
1,1'-Biphenyl	8000		490		mg/Kg		03/31/23 15:20	04/14/23 13:05	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*161*	*S1+*	*60 - 138*	*03/31/23 15:20*	*04/14/23 13:05*	*100*

Client Sample ID: LTU #2

Lab Sample ID: 570-132948-2

Date Collected: 03/29/23 08:30
Date Received: 03/29/23 16:00

Matrix: Solid

Method: SW846 8015B - Diesel Range Organics (DRO) (GC) - DL2

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	27000		490		mg/Kg		03/31/23 15:20	04/14/23 13:29	100
1,1'-Biphenyl	9000		490		mg/Kg		03/31/23 15:20	04/14/23 13:29	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*307*	*S1+*	*60 - 138*	*03/31/23 15:20*	*04/14/23 13:29*	*100*

Client Sample ID: LTU #3

Lab Sample ID: 570-132948-3

Date Collected: 03/29/23 08:32
Date Received: 03/29/23 16:00

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	22000		490		mg/Kg		03/31/23 15:20	04/14/23 12:15	100
1,1'-Biphenyl	6900		490		mg/Kg		03/31/23 15:20	04/14/23 12:15	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*162*	*S1+*	*60 - 138*	*03/31/23 15:20*	*04/14/23 12:15*	*100*

Surrogate Summary

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

Job ID: 570-132948-2
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)**
570-132948-1 - DL2	LTU #1	161 S1+
570-132948-2 - DL2	LTU #2	307 S1+
570-132948-3 - DL	LTU #3	162 S1+
LCS 570-316563/30-A	Lab Control Sample	106
LCSD 570-316563/31-A	Lab Control Sample Dup	96
MB 570-316563/1-A	Method Blank	94

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Lab Chronicle

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

Job ID: 570-132948-2
SDG: Genesis Solar, LLC

Client Sample ID: LTU #1

Date Collected: 03/29/23 08:28
Date Received: 03/29/23 16:00

Lab Sample ID: 570-132948-1

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	DL2		10.21 g	10 mL	316563	03/31/23 15:20	KH3Z	EET CAL 4
Total/NA	Analysis	8015B	DL2	100	1 mL	1 mL	320013	04/14/23 13:05	SP9M	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: LTU #2

Date Collected: 03/29/23 08:30
Date Received: 03/29/23 16:00

Lab Sample ID: 570-132948-2

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	DL2		10.28 g	10 mL	316563	03/31/23 15:20	KH3Z	EET CAL 4
Total/NA	Analysis	8015B	DL2	100	1 mL	1 mL	320013	04/14/23 13:29	SP9M	EET CAL 4
	Instrument ID: GC70B									

Client Sample ID: LTU #3

Date Collected: 03/29/23 08:32
Date Received: 03/29/23 16:00

Lab Sample ID: 570-132948-3

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	DL		10.24 g	10 mL	316563	03/31/23 15:20	KH3Z	EET CAL 4
Total/NA	Analysis	8015B	DL	100	1 mL	1 mL	320013	04/14/23 12:15	SP9M	EET CAL 4
	Instrument ID: GC70B									

Laboratory References:

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

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

Lab Sample ID: MB 570-316563/1-A
Matrix: Solid
Analysis Batch: 320013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 316563

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene, 1,1'-oxybis-	ND		5.0		mg/Kg		03/31/23 15:20	04/14/23 00:23	1
1,1'-Biphenyl	ND		5.0		mg/Kg		03/31/23 15:20	04/14/23 00:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*94*		*60 - 138*	*03/31/23 15:20*	*04/14/23 00:23*	*1*

Lab Sample ID: LCS 570-316563/30-A
Matrix: Solid
Analysis Batch: 320013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 316563

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene, 1,1'-oxybis-			100	116		mg/Kg		116	68 - 120		
1,1'-Biphenyl			100	84.9		mg/Kg		85	57 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*60 - 138*

Lab Sample ID: LCSD 570-316563/31-A
Matrix: Solid
Analysis Batch: 320013

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 316563

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene, 1,1'-oxybis-			100	117		mg/Kg		117	68 - 120	1	20
1,1'-Biphenyl			100	85.9		mg/Kg		86	57 - 120	1	20

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

QC Association Summary

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

Job ID: 570-132948-2
SDG: Genesis Solar, LLC

GC Semi VOA

Prep Batch: 316563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-132948-1 - DL2	LTU #1	Total/NA	Solid	3550C	
570-132948-2 - DL2	LTU #2	Total/NA	Solid	3550C	
570-132948-3 - DL	LTU #3	Total/NA	Solid	3550C	
MB 570-316563/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-316563/30-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-316563/31-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Analysis Batch: 320013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-132948-1 - DL2	LTU #1	Total/NA	Solid	8015B	316563
570-132948-2 - DL2	LTU #2	Total/NA	Solid	8015B	316563
570-132948-3 - DL	LTU #3	Total/NA	Solid	8015B	316563
MB 570-316563/1-A	Method Blank	Total/NA	Solid	8015B	316563
LCS 570-316563/30-A	Lab Control Sample	Total/NA	Solid	8015B	316563
LCSD 570-316563/31-A	Lab Control Sample Dup	Total/NA	Solid	8015B	316563

Accreditation/Certification Summary

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

Job ID: 570-132948-2
SDG: Genesis Solar, LLC

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B	3550C	Solid	1,1'-Biphenyl
8015B	3550C	Solid	Benzene, 1,1'-oxybis-

Method Summary

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

Job ID: 570-132948-2
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

eurofins | Environment Testing America

Loc: 570
132948

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:			Job #:
Address: 26225 Enterprise Court	Due Date Requested:			
City: Lake Forest	TAT Requested (days): 10 business days VOCs - ASAP Rush			
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#:			

Analysis 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:

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	8015B Gasoline + Diesel + Motor Oil	Title 22 Metals	Mercury	8260 VOCs Full Scan	Total Number of containers	Special Instructions/Note: EDF file NOT required
			Preservation Code:				I	I	I	I			
LTU #1	03/29/23	0828	C	S			X					1	
LTU #2		0830	C	S			X					1	
LTU #3		0832	C	S			X					1	
LTU #4		0834	C	S							X	1	Rush analysis - ASAP

Please report VOCs ASAP

570-132948 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
	3/29/23 @ 1600	Northstar		3/29/23 1600	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.7/2.7 SC 11

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 570-132948-2
SDG Number: Genesis Solar, LLC

Login Number: 132948
List Number: 1
Creator: Ortiz-Luis, Michael

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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ANALYTICAL REPORT

PREPARED FOR

Attn: Arlin Brewster
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Generated 3/30/2023 12:07:48 PM

JOB DESCRIPTION

GSEP LTU & Ponds
SDG NUMBER Genesis Solar, LLC

JOB NUMBER

570-132948-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

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
3/30/2023 12:07:48 PM

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

Table of Contents

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: 570-132948-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-132948-1

Receipt
The samples were received on 3/29/2023 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C

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

Sample Summary

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-132948-4	LTU #4	Solid	03/29/23 08:34	03/29/23 16:00

Detection Summary

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Client Sample ID: LTU #4

Lab Sample ID: 570-132948-4

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Client Sample ID: LTU #4
Date Collected: 03/29/23 08:34
Date Received: 03/29/23 16:00

Lab Sample ID: 570-132948-4
Matrix: Solid

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1,1-Trichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1,2-Trichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1-Dichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1-Dichloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,1-Dichloropropene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2,3-Trichlorobenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2,3-Trichloropropane	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2,4-Trichlorobenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2,4-Trimethylbenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2-Dibromoethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2-Dichlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2-Dichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,2-Dichloropropane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,3,5-Trimethylbenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,3-Dichlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,3-Dichloropropane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
1,4-Dichlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
2,2-Dichloropropane	ND		5.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
2-Butanone	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
2-Chlorotoluene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
2-Hexanone	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
4-Chlorotoluene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
4-Methyl-2-pentanone	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Acetone	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Benzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Bromobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Bromochloromethane	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Bromodichloromethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Bromoform	ND		5.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Bromomethane	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
cis-1,2-Dichloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
cis-1,3-Dichloropropene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Carbon disulfide	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Carbon tetrachloride	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Chlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Chloroethane	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Chloroform	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Chloromethane	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Dibromochloromethane	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Dibromomethane	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Dichlorodifluoromethane	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Di-isopropyl ether (DIPE)	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Ethanol	ND		250		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Ethylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Ethyl-t-butyl ether (ETBE)	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Client Sample ID: LTU #4
Date Collected: 03/29/23 08:34
Date Received: 03/29/23 16:00

Lab Sample ID: 570-132948-4
Matrix: Solid

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Methylene Chloride	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Methyl-t-Butyl Ether (MTBE)	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Naphthalene	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
n-Butylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
N-Propylbenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
o-Xylene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
m,p-Xylene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
p-Isopropyltoluene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
sec-Butylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Styrene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
trans-1,3-Dichloropropene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Tert-amyl-methyl ether (TAME)	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
tert-Butyl alcohol (TBA)	ND		20		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
tert-Butylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Tetrachloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Toluene	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Trichloroethene	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Trichlorofluoromethane	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Vinyl acetate	ND		10		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Vinyl chloride	ND		1.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1
Xylenes, Total	ND		2.0		ug/Kg		03/29/23 16:30	03/30/23 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*32 - 179*	*03/29/23 16:30*	*03/30/23 00:38*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*03/29/23 16:30*	*03/30/23 00:38*	*1*
Dibromofluoromethane (Surr)	*101*		*58 - 147*	*03/29/23 16:30*	*03/30/23 00:38*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*03/29/23 16:30*	*03/30/23 00:38*	*1*

Surrogate Summary

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(32-179)	(80-120)	(58-147)	(80-120)
570-132818-A-2-C MS	Matrix Spike	104	102	101	101
570-132818-A-2-D MSD	Matrix Spike Duplicate	106	99	100	99
570-132948-4	LTU #4	105	103	101	103
LCS 570-315949/1-A	Lab Control Sample	103	100	104	102
LCSD 570-315949/2-A	Lab Control Sample Dup	102	99	100	102
MB 570-315949/5-A	Method Blank	101	102	102	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Lab Chronicle

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Client Sample ID: LTU #4

Date Collected: 03/29/23 08:34
Date Received: 03/29/23 16:00

Lab Sample ID: 570-132948-4

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	5030C			4.96 g	5 mL	315949	03/29/23 16:30	AJ4K	EET CAL 4
Total/NA	Analysis	8260B		1	5 g	5 mL	315901	03/30/23 00:38	N1A	EET CAL 4
	Instrument ID: GCMSCC									

Laboratory References:

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

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-315949/5-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315949

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1,1-Trichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1,2-Trichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1-Dichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1-Dichloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,1-Dichloropropene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2,3-Trichlorobenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2,3-Trichloropropane	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2,4-Trichlorobenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2,4-Trimethylbenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2-Dibromoethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2-Dichlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2-Dichloroethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,2-Dichloropropane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,3,5-Trimethylbenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,3-Dichlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,3-Dichloropropane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
1,4-Dichlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
2,2-Dichloropropane	ND		5.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
2-Butanone	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
2-Chlorotoluene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
2-Hexanone	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
4-Chlorotoluene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
4-Methyl-2-pentanone	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Acetone	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Benzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Bromobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Bromochloromethane	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Bromodichloromethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Bromoform	ND		5.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Bromomethane	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
cis-1,2-Dichloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
cis-1,3-Dichloropropene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Carbon disulfide	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Carbon tetrachloride	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Chlorobenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Chloroethane	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Chloroform	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Chloromethane	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Dibromochloromethane	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Dibromomethane	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Dichlorodifluoromethane	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Di-isopropyl ether (DIPE)	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Ethanol	ND		250		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Ethylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-315949/5-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315949

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethyl-t-butyl ether (ETBE)	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Isopropylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Methylene Chloride	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Methyl-t-Butyl Ether (MTBE)	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Naphthalene	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
n-Butylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
N-Propylbenzene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
o-Xylene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
m,p-Xylene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
p-Isopropyltoluene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
sec-Butylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Styrene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
trans-1,2-Dichloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
trans-1,3-Dichloropropene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Tert-amyl-methyl ether (TAME)	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
tert-Butyl alcohol (TBA)	ND		20		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
tert-Butylbenzene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Tetrachloroethene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Toluene	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Trichloroethene	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Trichlorofluoromethane	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Vinyl acetate	ND		10		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Vinyl chloride	ND		1.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1
Xylenes, Total	ND		2.0		ug/Kg		03/29/23 16:30	03/29/23 21:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*32 - 179*	*03/29/23 16:30*	*03/29/23 21:50*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*03/29/23 16:30*	*03/29/23 21:50*	*1*
Dibromofluoromethane (Surr)	*102*		*58 - 147*	*03/29/23 16:30*	*03/29/23 21:50*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*03/29/23 16:30*	*03/29/23 21:50*	*1*

Lab Sample ID: LCS 570-315949/1-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	56.4		ug/Kg		113	80 - 125
1,1,1-Trichloroethane	50.0	52.2		ug/Kg		104	78 - 130
1,1,2,2-Tetrachloroethane	50.0	49.3		ug/Kg		99	80 - 124
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.5		ug/Kg		97	73 - 130
1,1,2-Trichloroethane	50.0	49.5		ug/Kg		99	80 - 123
1,1-Dichloroethane	50.0	50.9		ug/Kg		102	79 - 124
1,1-Dichloroethene	50.0	48.9		ug/Kg		98	74 - 132
1,1-Dichloropropene	50.0	47.8		ug/Kg		96	78 - 130
1,2,3-Trichlorobenzene	50.0	53.9		ug/Kg		108	80 - 123
1,2,3-Trichloropropane	50.0	52.8		ug/Kg		106	79 - 120
1,2,4-Trichlorobenzene	50.0	57.3		ug/Kg		115	80 - 125
1,2,4-Trimethylbenzene	50.0	49.6		ug/Kg		99	80 - 124

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-315949/1-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	50.0	49.1		ug/Kg		98	67 - 120
1,2-Dibromoethane	50.0	53.4		ug/Kg		107	80 - 120
1,2-Dichlorobenzene	50.0	52.2		ug/Kg		104	80 - 120
1,2-Dichloroethane	50.0	54.1		ug/Kg		108	77 - 120
1,2-Dichloropropane	50.0	49.6		ug/Kg		99	80 - 126
1,3,5-Trimethylbenzene	50.0	51.6		ug/Kg		103	80 - 121
1,3-Dichlorobenzene	50.0	52.2		ug/Kg		104	80 - 120
1,3-Dichloropropane	50.0	53.4		ug/Kg		107	80 - 120
1,4-Dichlorobenzene	50.0	52.3		ug/Kg		105	80 - 120
2,2-Dichloropropane	50.0	51.6		ug/Kg		103	73 - 135
2-Butanone	50.0	49.2		ug/Kg		98	67 - 136
2-Chlorotoluene	50.0	51.2		ug/Kg		102	80 - 120
2-Hexanone	50.0	50.9		ug/Kg		102	70 - 137
4-Chlorotoluene	50.0	49.8		ug/Kg		100	80 - 121
4-Methyl-2-pentanone	50.0	48.8		ug/Kg		98	74 - 124
Acetone	50.0	45.7		ug/Kg		91	61 - 142
Benzene	50.0	49.7		ug/Kg		99	80 - 120
Bromobenzene	50.0	53.6		ug/Kg		107	80 - 120
Bromochloromethane	50.0	53.2		ug/Kg		106	80 - 120
Bromodichloromethane	50.0	55.2		ug/Kg		110	80 - 125
Bromoform	50.0	53.7		ug/Kg		107	74 - 138
Bromomethane	50.0	48.7		ug/Kg		97	58 - 136
cis-1,2-Dichloroethene	50.0	50.5		ug/Kg		101	80 - 124
cis-1,3-Dichloropropene	50.0	48.8		ug/Kg		98	80 - 123
Carbon disulfide	50.0	42.6		ug/Kg		85	68 - 128
Carbon tetrachloride	50.0	53.8		ug/Kg		108	75 - 140
Chlorobenzene	50.0	50.9		ug/Kg		102	80 - 120
Chloroethane	50.0	51.3		ug/Kg		103	76 - 137
Chloroform	50.0	48.2		ug/Kg		96	80 - 121
Chloromethane	50.0	47.9		ug/Kg		96	74 - 133
Dibromochloromethane	50.0	56.2		ug/Kg		112	80 - 132
Dibromomethane	50.0	55.5		ug/Kg		111	80 - 120
Dichlorodifluoromethane	50.0	51.6		ug/Kg		103	63 - 146
Di-isopropyl ether (DIPE)	50.0	53.9		ug/Kg		108	73 - 132
Ethanol	500	584		ug/Kg		117	46 - 159
Ethylbenzene	50.0	49.6		ug/Kg		99	80 - 120
Ethyl-t-butyl ether (ETBE)	50.0	50.4		ug/Kg		101	77 - 129
Isopropylbenzene	50.0	55.6		ug/Kg		111	80 - 122
Methylene Chloride	50.0	49.3		ug/Kg		99	74 - 120
Methyl-t-Butyl Ether (MTBE)	50.0	53.6		ug/Kg		107	79 - 123
Naphthalene	50.0	51.3		ug/Kg		103	79 - 121
n-Butylbenzene	50.0	50.1		ug/Kg		100	79 - 131
N-Propylbenzene	50.0	52.1		ug/Kg		104	80 - 122
o-Xylene	50.0	50.5		ug/Kg		101	80 - 120
m,p-Xylene	100	101		ug/Kg		101	80 - 120
p-Isopropyltoluene	50.0	50.1		ug/Kg		100	80 - 126
sec-Butylbenzene	50.0	50.5		ug/Kg		101	80 - 125
Styrene	50.0	52.5		ug/Kg		105	80 - 120
trans-1,2-Dichloroethene	50.0	48.6		ug/Kg		97	75 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-315949/1-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315949

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
trans-1,3-Dichloropropene			50.0	54.8		ug/Kg		110	80 - 124		
Tert-amyl-methyl ether (TAME)			50.0	50.7		ug/Kg		101	80 - 120		
tert-Butyl alcohol (TBA)			250	254		ug/Kg		102	74 - 123		
tert-Butylbenzene			50.0	50.2		ug/Kg		100	80 - 124		
Tetrachloroethene			50.0	52.9		ug/Kg		106	80 - 122		
Toluene			50.0	48.5		ug/Kg		97	80 - 120		
Trichloroethene			50.0	51.2		ug/Kg		102	80 - 127		
Trichlorofluoromethane			50.0	57.7		ug/Kg		115	70 - 144		
Vinyl acetate			50.0	47.4		ug/Kg		95	71 - 125		
Vinyl chloride			50.0	46.2		ug/Kg		92	79 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*32 - 179*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*58 - 147*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: LCSD 570-315949/2-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 315949

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	53.9		ug/Kg		108	80 - 125	5	20
1,1,1-Trichloroethane			50.0	47.5		ug/Kg		95	78 - 130	9	20
1,1,2,2-Tetrachloroethane			50.0	49.6		ug/Kg		99	80 - 124	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane			50.0	40.7		ug/Kg		81	73 - 130	17	20
1,1,2-Trichloroethane			50.0	51.7		ug/Kg		103	80 - 123	4	20
1,1-Dichloroethane			50.0	43.5		ug/Kg		87	79 - 124	16	20
1,1-Dichloroethene			50.0	42.3		ug/Kg		85	74 - 132	15	20
1,1-Dichloropropene			50.0	43.5		ug/Kg		87	78 - 130	9	20
1,2,3-Trichlorobenzene			50.0	52.5		ug/Kg		105	80 - 123	3	20
1,2,3-Trichloropropane			50.0	51.0		ug/Kg		102	79 - 120	4	20
1,2,4-Trichlorobenzene			50.0	53.3		ug/Kg		107	80 - 125	7	20
1,2,4-Trimethylbenzene			50.0	47.4		ug/Kg		95	80 - 124	5	20
1,2-Dibromo-3-Chloropropane			50.0	50.4		ug/Kg		101	67 - 120	2	20
1,2-Dibromoethane			50.0	54.4		ug/Kg		109	80 - 120	2	20
1,2-Dichlorobenzene			50.0	51.2		ug/Kg		102	80 - 120	2	20
1,2-Dichloroethane			50.0	51.4		ug/Kg		103	77 - 120	5	20
1,2-Dichloropropane			50.0	47.9		ug/Kg		96	80 - 126	3	20
1,3,5-Trimethylbenzene			50.0	49.5		ug/Kg		99	80 - 121	4	20
1,3-Dichlorobenzene			50.0	48.9		ug/Kg		98	80 - 120	6	20
1,3-Dichloropropane			50.0	50.3		ug/Kg		101	80 - 120	6	20
1,4-Dichlorobenzene			50.0	49.8		ug/Kg		100	80 - 120	5	20
2,2-Dichloropropane			50.0	47.4		ug/Kg		95	73 - 135	9	20
2-Butanone			50.0	47.1		ug/Kg		94	67 - 136	5	20
2-Chlorotoluene			50.0	49.3		ug/Kg		99	80 - 120	4	20
2-Hexanone			50.0	51.8		ug/Kg		104	70 - 137	2	20
4-Chlorotoluene			50.0	47.6		ug/Kg		95	80 - 121	5	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-315949/2-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 315949

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Methyl-2-pentanone			50.0	50.6		ug/Kg		101	74 - 124	4	20
Acetone			50.0	44.7		ug/Kg		89	61 - 142	2	23
Benzene			50.0	45.8		ug/Kg		92	80 - 120	8	20
Bromobenzene			50.0	51.0		ug/Kg		102	80 - 120	5	20
Bromochloromethane			50.0	47.2		ug/Kg		94	80 - 120	12	20
Bromodichloromethane			50.0	49.4		ug/Kg		99	80 - 125	11	20
Bromoform			50.0	52.7		ug/Kg		105	74 - 138	2	20
Bromomethane			50.0	45.8		ug/Kg		92	58 - 136	6	20
cis-1,2-Dichloroethene			50.0	46.0		ug/Kg		92	80 - 124	9	20
cis-1,3-Dichloropropene			50.0	45.7		ug/Kg		91	80 - 123	7	20
Carbon disulfide			50.0	34.7		ug/Kg		69	68 - 128	20	20
Carbon tetrachloride			50.0	48.8		ug/Kg		98	75 - 140	10	20
Chlorobenzene			50.0	48.5		ug/Kg		97	80 - 120	5	20
Chloroethane			50.0	48.5		ug/Kg		97	76 - 137	6	20
Chloroform			50.0	46.4		ug/Kg		93	80 - 121	4	20
Chloromethane			50.0	50.0		ug/Kg		100	74 - 133	4	20
Dibromochloromethane			50.0	55.2		ug/Kg		110	80 - 132	2	20
Dibromomethane			50.0	53.7		ug/Kg		107	80 - 120	3	20
Dichlorodifluoromethane			50.0	52.4		ug/Kg		105	63 - 146	1	20
Di-isopropyl ether (DIPE)			50.0	48.6		ug/Kg		97	73 - 132	10	20
Ethanol			500	616		ug/Kg		123	46 - 159	5	30
Ethylbenzene			50.0	47.9		ug/Kg		96	80 - 120	3	20
Ethyl-t-butyl ether (ETBE)			50.0	48.0		ug/Kg		96	77 - 129	5	20
Isopropylbenzene			50.0	53.0		ug/Kg		106	80 - 122	5	20
Methylene Chloride			50.0	43.1		ug/Kg		86	74 - 120	13	20
Methyl-t-Butyl Ether (MTBE)			50.0	47.9		ug/Kg		96	79 - 123	11	20
Naphthalene			50.0	51.5		ug/Kg		103	79 - 121	0	20
n-Butylbenzene			50.0	47.9		ug/Kg		96	79 - 131	4	20
N-Propylbenzene			50.0	48.9		ug/Kg		98	80 - 122	6	20
o-Xylene			50.0	48.1		ug/Kg		96	80 - 120	5	20
m,p-Xylene			100	96.2		ug/Kg		96	80 - 120	5	20
p-Isopropyltoluene			50.0	48.6		ug/Kg		97	80 - 126	3	20
sec-Butylbenzene			50.0	48.1		ug/Kg		96	80 - 125	5	20
Styrene			50.0	50.1		ug/Kg		100	80 - 120	5	20
trans-1,2-Dichloroethene			50.0	42.8		ug/Kg		86	75 - 123	13	20
trans-1,3-Dichloropropene			50.0	53.7		ug/Kg		107	80 - 124	2	20
Tert-amyl-methyl ether (TAME)			50.0	48.9		ug/Kg		98	80 - 120	4	20
tert-Butyl alcohol (TBA)			250	279		ug/Kg		112	74 - 123	10	20
tert-Butylbenzene			50.0	48.9		ug/Kg		98	80 - 124	3	20
Tetrachloroethene			50.0	49.7		ug/Kg		99	80 - 122	6	20
Toluene			50.0	45.6		ug/Kg		91	80 - 120	6	20
Trichloroethene			50.0	48.0		ug/Kg		96	80 - 127	7	20
Trichlorofluoromethane			50.0	58.4		ug/Kg		117	70 - 144	1	20
Vinyl acetate			50.0	41.7		ug/Kg		83	71 - 125	13	20
Vinyl chloride			50.0	46.3		ug/Kg		93	79 - 133	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*32 - 179*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-315949/2-A
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 315949

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	100		58 - 147
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 570-132818-A-2-C MS
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	ND		49.8	46.8		ug/Kg		94	61 - 129
1,1,1-Trichloroethane	ND		49.8	45.3		ug/Kg		91	67 - 125
1,1,2,2-Tetrachloroethane	ND		49.8	47.2		ug/Kg		95	20 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		49.8	44.2		ug/Kg		89	62 - 125
1,1,2-Trichloroethane	ND		49.8	45.9		ug/Kg		92	52 - 134
1,1-Dichloroethane	ND		49.8	45.0		ug/Kg		90	66 - 125
1,1-Dichloroethene	ND		49.8	42.8		ug/Kg		86	60 - 125
1,1-Dichloropropene	ND		49.8	41.6		ug/Kg		84	69 - 125
1,2,3-Trichlorobenzene	ND		49.8	42.8		ug/Kg		86	20 - 145
1,2,3-Trichloropropane	ND		49.8	46.5		ug/Kg		93	53 - 128
1,2,4-Trichlorobenzene	ND		49.8	46.4		ug/Kg		93	20 - 146
1,2,4-Trimethylbenzene	ND		49.8	41.8		ug/Kg		84	51 - 129
1,2-Dibromo-3-Chloropropane	ND		49.8	41.5		ug/Kg		83	33 - 126
1,2-Dibromoethane	ND		49.8	47.0		ug/Kg		94	65 - 125
1,2-Dichlorobenzene	ND		49.8	43.8		ug/Kg		88	47 - 130
1,2-Dichloroethane	ND		49.8	47.5		ug/Kg		95	66 - 127
1,2-Dichloropropane	ND		49.8	44.7		ug/Kg		90	70 - 125
1,3,5-Trimethylbenzene	ND		49.8	44.6		ug/Kg		90	50 - 132
1,3-Dichlorobenzene	ND		49.8	43.6		ug/Kg		88	48 - 128
1,3-Dichloropropane	ND		49.8	46.7		ug/Kg		94	66 - 125
1,4-Dichlorobenzene	ND		49.8	44.0		ug/Kg		88	47 - 127
2,2-Dichloropropane	ND		49.8	46.9		ug/Kg		94	61 - 128
2-Butanone	ND		49.8	41.6		ug/Kg		84	48 - 134
2-Chlorotoluene	ND		49.8	42.9		ug/Kg		86	54 - 127
2-Hexanone	ND		49.8	43.8		ug/Kg		88	48 - 136
4-Chlorotoluene	ND		49.8	40.9		ug/Kg		82	54 - 125
4-Methyl-2-pentanone	ND		49.8	44.5		ug/Kg		89	55 - 133
Acetone	ND		49.8	43.2		ug/Kg		87	30 - 175
Benzene	ND		49.8	43.5		ug/Kg		87	70 - 125
Bromobenzene	ND		49.8	45.6		ug/Kg		92	57 - 129
Bromochloromethane	ND		49.8	47.6		ug/Kg		96	67 - 125
Bromodichloromethane	ND		49.8	46.0		ug/Kg		92	64 - 130
Bromoform	ND		49.8	44.3		ug/Kg		89	49 - 133
Bromomethane	ND		49.8	45.3		ug/Kg		91	30 - 149
cis-1,2-Dichloroethene	ND		49.8	47.2		ug/Kg		95	71 - 125
cis-1,3-Dichloropropene	ND		49.8	42.8		ug/Kg		86	63 - 126
Carbon disulfide	ND		49.8	33.9		ug/Kg		68	53 - 125
Carbon tetrachloride	ND		49.8	45.1		ug/Kg		91	60 - 130
Chlorobenzene	ND		49.8	44.2		ug/Kg		89	65 - 125

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-132818-A-2-C MS
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloroethane	ND		49.8	46.1		ug/Kg		93	51 - 131
Chloroform	ND		49.8	44.2		ug/Kg		89	70 - 125
Chloromethane	ND		49.8	45.4		ug/Kg		91	43 - 125
Dibromochloromethane	ND		49.8	47.6		ug/Kg		96	56 - 132
Dibromomethane	ND		49.8	49.3		ug/Kg		99	67 - 127
Dichlorodifluoromethane	ND		49.8	46.3		ug/Kg		93	47 - 127
Di-isopropyl ether (DIPE)	ND		49.8	48.0		ug/Kg		96	62 - 125
Ethanol	ND		498	500		ug/Kg		100	21 - 168
Ethylbenzene	ND		49.8	43.2		ug/Kg		87	64 - 125
Ethyl-t-butyl ether (ETBE)	ND		49.8	47.3		ug/Kg		95	61 - 125
Isopropylbenzene	ND		49.8	47.7		ug/Kg		96	59 - 129
Methylene Chloride	ND		49.8	44.9		ug/Kg		90	60 - 125
Methyl-t-Butyl Ether (MTBE)	ND		49.8	49.1		ug/Kg		99	61 - 125
Naphthalene	ND		49.8	42.0		ug/Kg		84	25 - 136
n-Butylbenzene	ND		49.8	42.0		ug/Kg		84	35 - 135
N-Propylbenzene	ND		49.8	44.8		ug/Kg		90	52 - 131
o-Xylene	ND		49.8	43.5		ug/Kg		87	59 - 128
m,p-Xylene	ND		99.6	85.4		ug/Kg		86	60 - 125
p-Isopropyltoluene	ND		49.8	41.9		ug/Kg		84	46 - 132
sec-Butylbenzene	ND		49.8	42.2		ug/Kg		85	47 - 131
Styrene	ND		49.8	44.8		ug/Kg		90	58 - 128
trans-1,2-Dichloroethene	ND		49.8	44.5		ug/Kg		89	67 - 125
trans-1,3-Dichloropropene	ND		49.8	46.7		ug/Kg		94	59 - 132
Tert-amyl-methyl ether (TAME)	ND		49.8	44.7		ug/Kg		90	66 - 127
tert-Butyl alcohol (TBA)	ND		249	237		ug/Kg		95	50 - 142
tert-Butylbenzene	ND		49.8	42.1		ug/Kg		84	53 - 126
Tetrachloroethene	ND		49.8	45.1		ug/Kg		90	62 - 129
Toluene	ND		49.8	42.5		ug/Kg		85	68 - 125
Trichloroethene	ND		49.8	44.1		ug/Kg		89	41 - 169
Trichlorofluoromethane	ND		49.8	57.0		ug/Kg		115	63 - 128
Vinyl acetate	ND		49.8	38.1		ug/Kg		77	20 - 154
Vinyl chloride	ND		49.8	45.0		ug/Kg		90	59 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*32 - 179*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*58 - 147*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 570-132818-A-2-D MSD
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		49.2	50.0		ug/Kg		102	61 - 129	7	23
1,1,1-Trichloroethane	ND		49.2	47.3		ug/Kg		96	67 - 125	4	20
1,1,2,2-Tetrachloroethane	ND		49.2	47.4		ug/Kg		96	20 - 164	1	40
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		49.2	41.1		ug/Kg		83	62 - 125	7	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-132818-A-2-D MSD
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,2-Trichloroethane	ND		49.2	47.1		ug/Kg		96	52 - 134	3	25
1,1-Dichloroethane	ND		49.2	44.7		ug/Kg		91	66 - 125	1	20
1,1-Dichloroethene	ND		49.2	41.3		ug/Kg		84	60 - 125	4	20
1,1-Dichloropropene	ND		49.2	43.6		ug/Kg		89	69 - 125	4	20
1,2,3-Trichlorobenzene	ND		49.2	43.8		ug/Kg		89	20 - 145	2	39
1,2,3-Trichloropropane	ND		49.2	46.9		ug/Kg		95	53 - 128	1	25
1,2,4-Trichlorobenzene	ND		49.2	46.2		ug/Kg		94	20 - 146	0	38
1,2,4-Trimethylbenzene	ND		49.2	44.5		ug/Kg		90	51 - 129	6	27
1,2-Dibromo-3-Chloropropane	ND		49.2	43.3		ug/Kg		88	33 - 126	4	29
1,2-Dibromoethane	ND		49.2	48.6		ug/Kg		99	65 - 125	3	21
1,2-Dichlorobenzene	ND		49.2	46.2		ug/Kg		94	47 - 130	5	29
1,2-Dichloroethane	ND		49.2	46.9		ug/Kg		95	66 - 127	1	20
1,2-Dichloropropane	ND		49.2	44.1		ug/Kg		90	70 - 125	1	20
1,3,5-Trimethylbenzene	ND		49.2	46.7		ug/Kg		95	50 - 132	5	29
1,3-Dichlorobenzene	ND		49.2	45.8		ug/Kg		93	48 - 128	5	28
1,3-Dichloropropane	ND		49.2	48.1		ug/Kg		98	66 - 125	3	20
1,4-Dichlorobenzene	ND		49.2	45.8		ug/Kg		93	47 - 127	4	28
2,2-Dichloropropane	ND		49.2	47.7		ug/Kg		97	61 - 128	2	20
2-Butanone	ND		49.2	39.2		ug/Kg		80	48 - 134	6	24
2-Chlorotoluene	ND		49.2	44.9		ug/Kg		91	54 - 127	4	27
2-Hexanone	ND		49.2	46.9		ug/Kg		95	48 - 136	7	28
4-Chlorotoluene	ND		49.2	44.5		ug/Kg		90	54 - 125	8	26
4-Methyl-2-pentanone	ND		49.2	44.9		ug/Kg		91	55 - 133	1	23
Acetone	ND		49.2	37.6		ug/Kg		76	30 - 175	14	30
Benzene	ND		49.2	44.8		ug/Kg		91	70 - 125	3	20
Bromobenzene	ND		49.2	47.8		ug/Kg		97	57 - 129	5	26
Bromochloromethane	ND		49.2	47.7		ug/Kg		97	67 - 125	0	20
Bromodichloromethane	ND		49.2	47.5		ug/Kg		97	64 - 130	3	20
Bromoform	ND		49.2	46.7		ug/Kg		95	49 - 133	5	27
Bromomethane	ND		49.2	44.7		ug/Kg		91	30 - 149	1	31
cis-1,2-Dichloroethene	ND		49.2	46.0		ug/Kg		94	71 - 125	2	20
cis-1,3-Dichloropropene	ND		49.2	42.8		ug/Kg		87	63 - 126	0	20
Carbon disulfide	ND		49.2	31.5		ug/Kg		64	53 - 125	7	20
Carbon tetrachloride	ND		49.2	47.4		ug/Kg		96	60 - 130	5	20
Chlorobenzene	ND		49.2	45.6		ug/Kg		93	65 - 125	3	22
Chloroethane	ND		49.2	45.6		ug/Kg		93	51 - 131	1	21
Chloroform	ND		49.2	45.0		ug/Kg		91	70 - 125	2	20
Chloromethane	ND		49.2	47.1		ug/Kg		96	43 - 125	4	21
Dibromochloromethane	ND		49.2	50.4		ug/Kg		102	56 - 132	6	24
Dibromomethane	ND		49.2	49.9		ug/Kg		101	67 - 127	1	20
Dichlorodifluoromethane	ND		49.2	48.1		ug/Kg		98	47 - 127	4	20
Di-isopropyl ether (DIPE)	ND		49.2	46.3		ug/Kg		94	62 - 125	4	20
Ethanol	ND		492	491		ug/Kg		100	21 - 168	2	40
Ethylbenzene	ND		49.2	45.6		ug/Kg		93	64 - 125	5	22
Ethyl-t-butyl ether (ETBE)	ND		49.2	46.0		ug/Kg		93	61 - 125	3	20
Isopropylbenzene	ND		49.2	49.8		ug/Kg		101	59 - 129	4	26
Methylene Chloride	ND		49.2	41.6		ug/Kg		85	60 - 125	8	20
Methyl-t-Butyl Ether (MTBE)	ND		49.2	47.0		ug/Kg		95	61 - 125	4	20
Naphthalene	ND		49.2	44.1		ug/Kg		90	25 - 136	5	32

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-132818-A-2-D MSD
Matrix: Solid
Analysis Batch: 315901

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 315949

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
n-Butylbenzene	ND		49.2	43.8		ug/Kg		89	35 - 135	4	35
N-Propylbenzene	ND		49.2	46.1		ug/Kg		94	52 - 131	3	27
o-Xylene	ND		49.2	46.3		ug/Kg		94	59 - 128	6	24
m,p-Xylene	ND		98.4	90.4		ug/Kg		92	60 - 125	6	24
p-Isopropyltoluene	ND		49.2	44.3		ug/Kg		90	46 - 132	5	30
sec-Butylbenzene	ND		49.2	45.2		ug/Kg		92	47 - 131	7	30
Styrene	ND		49.2	47.1		ug/Kg		96	58 - 128	5	24
trans-1,2-Dichloroethene	ND		49.2	42.2		ug/Kg		86	67 - 125	5	20
trans-1,3-Dichloropropene	ND		49.2	49.9		ug/Kg		101	59 - 132	7	22
Tert-amyl-methyl ether (TAME)	ND		49.2	45.3		ug/Kg		92	66 - 127	1	20
tert-Butyl alcohol (TBA)	ND		246	228		ug/Kg		92	50 - 142	4	27
tert-Butylbenzene	ND		49.2	45.2		ug/Kg		92	53 - 126	7	28
Tetrachloroethene	ND		49.2	48.2		ug/Kg		98	62 - 129	7	21
Toluene	ND		49.2	44.1		ug/Kg		90	68 - 125	4	20
Trichloroethene	ND		49.2	47.1		ug/Kg		96	41 - 169	6	21
Trichlorofluoromethane	ND		49.2	55.9		ug/Kg		114	63 - 128	2	20
Vinyl acetate	ND		49.2	34.1		ug/Kg		69	20 - 154	11	40
Vinyl chloride	ND		49.2	46.3		ug/Kg		94	59 - 125	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*32 - 179*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*58 - 147*
Toluene-d8 (Surr)	*99*		*80 - 120*

QC Association Summary

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

GC/MS VOA

Analysis Batch: 315901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-132948-4	LTU #4	Total/NA	Solid	8260B	315949
MB 570-315949/5-A	Method Blank	Total/NA	Solid	8260B	315949
LCS 570-315949/1-A	Lab Control Sample	Total/NA	Solid	8260B	315949
LCSD 570-315949/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	315949
570-132818-A-2-C MS	Matrix Spike	Total/NA	Solid	8260B	315949
570-132818-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	315949

Prep Batch: 315949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-132948-4	LTU #4	Total/NA	Solid	5030C	
MB 570-315949/5-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-315949/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 570-315949/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
570-132818-A-2-C MS	Matrix Spike	Total/NA	Solid	5030C	
570-132818-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B	5030C	Solid	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B	5030C	Solid	1,1-Dichloropropene
8260B	5030C	Solid	1,2,3-Trichlorobenzene
8260B	5030C	Solid	1,2,4-Trimethylbenzene
8260B	5030C	Solid	1,3,5-Trimethylbenzene
8260B	5030C	Solid	1,3-Dichloropropane
8260B	5030C	Solid	2,2-Dichloropropane
8260B	5030C	Solid	2-Butanone
8260B	5030C	Solid	2-Chlorotoluene
8260B	5030C	Solid	2-Hexanone
8260B	5030C	Solid	Acetone
8260B	5030C	Solid	Ethanol
8260B	5030C	Solid	Isopropylbenzene
8260B	5030C	Solid	p-Isopropyltoluene
8260B	5030C	Solid	Vinyl acetate

Method Summary

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

Job ID: 570-132948-1
SDG: Genesis Solar, LLC

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
5030C	Purge and Trap	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

eurofins | Environment Testing America

Loc: 570
132948

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:			Job #:
Address: 26225 Enterprise Court	Due Date Requested:			
City: Lake Forest	TAT Requested (days): 10 business days VOCs - ASAP Rush			
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#:			

Analysis 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:

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	8015B Gasoline + Diesel + Motor Oil	Title 22 Metals	Mercury	8260 VOCs Full Scan	Total Number of containers	Special Instructions/Note: EDF file NOT required Please report VOCs ASAP
			Preservation Code:				I	I	I	I			
LTU #1	03/29/23	0828	C	S			X					1	
LTU #2		0830	C	S			X					1	
LTU #3		0832	C	S			X					1	
LTU #4		0834	C	S							X	1	Rush analysis - ASAP

570-132948 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
	3/29/23 @ 1600	Northstar		3/29/23 1600	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.7/2.7 SC 11

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 570-132948-1
SDG Number: Genesis Solar, LLC

Login Number: 132948
List Number: 1
Creator: Ortiz-Luis, Michael

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	