

**Appendix M – Phase II ESA: Liberty Island Ranch [Liberty Farms Property],
Blackburn Consulting, September 2017.**

This page intentionally left blank.

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Liberty Island Ranch

APNs:

042-140-070

042-140-110

042-140-120

042-140-140

042-140-230

042-140-240

042-140-250

042-160-170

042-160-180

Solano County, California

Prepared by:

BLACKBURN CONSULTING

2491 Boatman Avenue,
West Sacramento, CA 95691

September 2017

Prepared for:

Ecosystem Investment Partners

5550 Newbury Street, Suite B
Baltimore, MD 21209

This Page Intentionally Left Blank

West Sacramento Office:

2491 Boatman Ave. ▪ West Sacramento, CA 95691
(916) 375-8706 ▪ Fax (916) 375-8709



Main Auburn Office: (530) 887-1494
Fresno Office: (559) 438-8411

Geotechnical ▪ Geo-Environmental ▪ Construction Services ▪ Forensics

BCI File No. 3195.X
September 28, 2017

Mr. David Urban
Ecosystem Investment Partners
5550 Newbury Street, Suite B
Baltimore, MD 21209

Subject: **PHASE II ENVIRONMENTAL SITE ASSESSMENT**
APNs 042-140-070, -110, -120, -140, -230, -250, 042-160-170, and -180
Liberty Island Ranch
Dixon, California

Dear Mr. Urban,

Blackburn Consulting (BCI) prepared this Draft Phase II Soil Assessment for Assessor Parcel Numbers (APNs) 042-140-070, -110, -120, -140, -230, -240, -250, and APNs 042-160-170 and -180 located at the Liberty Island Ranch in Dixon, California.

This report presents the findings of our assessment of the acquisition parcels with regards to potential hazardous materials impacts. This assessment was performed in accordance with our proposal dated June 29, 2017.

Thank you for including BCI on your team for this important project. Please call if you have questions or require additional information.

Sincerely,

BLACKBURN CONSULTING

Ryan Schmidt
Project Engineer

Jason R. Paul, PG
Senior Project Manager

This Page Intentionally Left Blank

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT
Liberty Island Ranch
Dixon, California

TABLE OF CONTENTS

| | |
|--|-----------|
| 1. INTRODUCTION | 1 |
| 2. PROJECT DESCRIPTION..... | 1 |
| 3. PROJECT BACKGROUND | 1 |
| 3.1 Physical Description..... | 2 |
| 4. PHASE II APPROACH AND METHODOLOGY | 4 |
| 4.1 Sample Collection..... | 5 |
| 4.2 General Soil Conditions..... | 5 |
| 4.3 Sample Analysis..... | 5 |
| 5. ANALYTICAL RESULTS AND DISCUSSION..... | 5 |
| 5.1 Analytical Results..... | 5 |
| 5.2 Analytical Results Discussion..... | 8 |
| 5.3 Risk to Human Health and the Environment..... | 9 |
| 6. CONCLUSIONS AND RECOMMENDATIONS | 9 |
| 7. LIMITATIONS..... | 10 |

FIGURES

Figure 1 – Vicinity Map

Figure 2 – Parcel Map Showing Sample Locations

APPENDIX A – Sample Locations, GPS Coordinates

APPENDIX B – Analytical Laboratory Results and Chain of Custody

This Page Intentionally Left Blank

1. INTRODUCTION

This report documents the methodology and findings of the Phase II Environmental Site Assessment (Phase II) completed by Blackburn Consulting (BCI) at Assessor Parcel Numbers (APNs) 042-140-240 and -250 located at the Liberty Island Ranch in Dixon, California. The Phase II was conducted to evaluate whether residual organochlorine pesticides, arsenic, lead, total petroleum hydrocarbons as diesel (TPH-d) or motor oil (TPH-mo), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), and/or Methyl Tertiary Butyl ether (MTBE) are present in shallow surface soils at concentrations above Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs).

WRA, Inc. (WRA) previously prepared a Phase I Environmental Site Assessment (ESA) dated June 2017, to assess whether potential sources or indications of hazardous materials conditions exist within the proposed acquisition parcels. WRA completed the ESA in general accordance with ASTM E1527-05 “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” requirements. WRA concluded that previous land use constituted Recognized Environmental Conditions¹ (RECs).

WRA requested BCI prepare a Phase II for the subject parcels based on the RECs identified in the ESA. The intent of the Phase II is to further define identified hazardous material issues that can affect property acquisition as well as project planning, design, and/or construction. BCI conducted the Phase II in accordance with ASTM E1903-11 “Standard Practice for Environmental Site Assessment: Phase II Environmental Site Assessment Process” requirements.

2. PROJECT DESCRIPTION

The parcels are sought for acquisition by Environmental Investment Partners (EIP) and include approximately 1,675 acres. Ultimately the site will be restored to its natural habitat (Delta Smelt habitat). The site is bordered by Bowlsbey Ranch to the north and west, Liberty Island Road to the east, and Malcolm Lane to the east and south. The site is mostly undeveloped marsh with several residential and agricultural structures along the eastern edge of the project area. Figure 1 is a Vicinity Map and Figure 2 is a Parcel Map showing sample locations.

3. PROJECT BACKGROUND

The ESA identified the following RECs at the site:

¹ BCI uses the term Recognized Environmental Condition (REC) in general compliance with ASTM E1527-13, which defines the meaning as “The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property (1) due to any release to the environment, (2) under conditions indicative of a release to the environment or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include de minimus conditions that generally do not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of the appropriate regulatory agencies. Conditions determined to be de minimus are not recognized environmental conditions.”

- The subject property was used for agricultural purposes from approximately 1920 until 2006. A pesticide application permit was issued to the site for the use and application of pesticides.
- Three above-ground storage tanks (ASTs) used for dispensing and storing diesel and unleaded fuel were located on site when the ESA was completed. No secondary containment was in use. In addition, two 55-gallon drums were observed. The contents were not indicated on the drums (although one is believed to contain used motor oil) and no secondary containment was in use.

The potential for spills and leaks of these chemicals to have occurred is interpreted to be a REC. To address the REC identified above, BCI prepared the scope of work detailed in the following sections.

In addition to the above RECs, several Historical Recognized Environmental Condition (HREC) and Business Environmental Risks (BER) were identified in the ESA. The HREC and BERs identified in connection with the site do not warrant intrusive investigation, however one BER identified that concentrations of residual mercury in Bay-Delta sediments are known to regionally exist. Restoration projects that disturb soils containing mercury may be subject to regulatory oversight. Although a regional concern for mercury in Bay-Delta sediments exists, BCI did not test for mercury at the site since no potential on-site source was noted in the ESA and during BCI's review of site information.

3.1 Physical Description

3.1.1 Geology and Hydrogeology

The site is located in a rural area near the Sacramento Deep Water Ship Channel about 10 miles upstream of Rio Vista, California in the Sacramento, San Joaquin Delta (Delta). California geology is separated into eleven geomorphic provinces or regions. The Delta is located in the Great Valley Geomorphic Province.

The Great Valley Province is a broad alluvial plane extending from the northern part of the Sacramento Valley to the southern part of the San Joaquin Valley. This province is approximately 50 miles wide and 400 miles in length. The Delta is located at the confluence of the Sacramento and San Joaquin Rivers in the west-central portion of the Province.

The Great Valley Province is a trough in which sedimentation has been occurring since the Jurassic Period (about 208 to 144 million years ago). However, most of the sedimentation in the Great Valley Province occurred in the Cenozoic Era. These sediments average approximately 2,400 feet in thickness in the Great Valley Province. The upper sediments range from the recent Holocene Epoch to Oligocene Epoch. The lower sediments are composed of marine rocks of the Pliocene Epoch to Eocene Epoch. The Delta is an inverse delta in which recent sedimentation has occurred resultant of the sea level changes and outflow limitations of a narrow strait for egress of freshwater from the Sacramento and San Joaquin Rivers.

According to the WRA ESA: soils near the subject property are identified by the U.S. Department of Agriculture Natural Resources Conservation Service as Sacramento clay. Sacramento clays are Class D soils with very slow infiltration rates. These soils typically extend to a depth of twenty to thirty feet below ground surface (bgs). Quaternary age stratigraphic units underlie the Sacramento Clay unit.

The site is located in the Yolo Sub-Basin of the Sacramento Valley Groundwater Basin. The Yolo Sub-Basin is in the southern portion of the Sacramento Valley Basin and includes the majority of Yolo County. The northern, eastern, and southern boundaries are predominately defined by the Colusa, Sacramento, and Solano County lines, respectively. The basin extends to the coast range on the west.

DWR maps for Spring 2017 (DWR, 2017) indicate groundwater depth at less than 10 feet bgs. The WRA ESA also indicates that groundwater depth at a nearby site was approximately 3 to 12 feet below ground surface (bgs) (Delta Environmental Consultants 1997, URS 2016). Groundwater flow direction measured in the vicinity is northeast to northwest and is tidally influenced (URS 2016).

3.1.2 Topography/Drainage

Overall site topography is flat. The levees along the property perimeter to the east and south are approximately twelve feet higher than the overall ground elevation of the property. Drainage is controlled using various irrigation ditches and canals located throughout the parcels, draining toward the Shag, Cache, and Lookout sloughs.

3.1.3 Site Features

Most of the site is undeveloped marsh. A cluster of residences, storage buildings, and other development are located along the eastern border of parcels APN 042-140-230 and -240. Figure 2 depicts the site and contains the structures and areas used to determine sample locations. A list of those improvements/features are summarized below.

APN 042-140-230:

- A white barn (approximately 1,700 square feet) located along the east edge of the parcel, approximately 2,500 feet north of the southeast corner of the parcel. It is the northernmost structure on the parcels other than the two residences.
- A storage building (approximately 3,900 square feet) adjacent to the south of the white barn.
- Stained area of soil approximately fifty feet south of the southeast corner of the storage building, and adjacent to the northeast corner of an even larger warehouse.
- A large metal warehouse (approximately 7,500 square feet) is located south of the soil stain, white barn, and storage building.

- An aboveground storage tank (approximately 100 gallons) is located directly southeast of the soil staining area and is also adjacent to the southern edge of the large metal warehouse.
- The WRA ESA noted an area south of the large warehouse that previously contained Herbicide Applicator Tanks. The tanks were not present at the time of our investigation
- A storage pile containing tires, scrap wood, and metal roofing materials was located along the east edge of the parcel approximately 450 feet north of the southern border of the parcel.
- The WRA ESA described an aboveground storage tank of unknown use, approximately 280 feet north and 220 feet west of the southeast corner of the parcel. The tank was not present at the time of our investigation.
- A storage building (approximately 3750 square feet) extending east/west was located 150 feet south of the previously existing aboveground storage tank.

APN 042-140-240:

- A storage building (approximately 3700 square feet) comprised of multiple attached structures was located in the northeast corner of the parcel.

4. PHASE II APPROACH AND METHODOLOGY

The objective of this Phase II assessment is to screen for the presence of contaminants of concern (COCs) using data collected from sixteen sample locations. BCI selected boring locations based on the locations of barns, storage areas, visible soil stains (possible former agricultural chemical storage and handling areas), and the former locations of the aboveground storage tanks noted in the ESA. One sample was collected in the proximity of a white barn (sample denoted with a “B”). Nine samples were collected in the proximity of the storage areas (samples denoted with “STG”). Two samples were collected within an area of visible ground staining (samples denoted with “STN”). Five samples were collected in the proximity of previously existing aboveground storage tanks (samples denoted with a “T”). Eight samples were collected in the proximity of the former herbicide applicator tanks locations (samples denoted by “HT”). Figure 2 identifies the approximate boring locations and Appendix A presents the GPS coordinates for each boring.

The “*User’s Guide: Derivation and Application of Environmental Screening Levels (ESLs), Interim Final, California Regional Water Quality Control Board (RWQCB), February 2016*” screening level publication was used for comparison to analytical results for this project to aid in making determinations related to the need for additional assessment at the site. RWQCB ESLs were selected due to the proposed final use of the property as a Delta Smelt habitat marsh complex. The Tier 1 RWQCB ESLs (ESLs) are presented in Table 1.

4.1 Sample Collection

On August 24, 2017, BCI collected soil samples at 16 locations between zero to four (0 -4") inches below ground surface (bgs). Nine of the borings were further advanced to a depth of twelve (12") inches bgs using a hand auger or hand trowel.

Samples were collected in 4-ounce glass jars, capped, labelled, and temporarily stored in a cooled ice chest pending delivery under continuous chain-of-custody to SunStar Laboratory, a certified California Environmental Laboratory Accreditation Program (ELAP) analytical laboratory for testing. BCI backfilled the borings with auger cuttings. Sampling equipment was decontaminated between sample locations using a solution of Alconox and rinsing with distilled water. Samples were observed for general soil conditions and field indicators of contamination (odors and discoloration) during sample retrieval.

4.2 General Soil Conditions

The general soil profile consists of sandy clays and fat clays to a depth of 12" bgs (maximum depth explored). Hardpan consisting of cemented clays and silts was encountered at varying depths throughout sampling and led to auger/sampling refusal. The colors of the soil changed from light browns to yellowish browns. Soil staining was minimal and in isolated locations.

4.3 Sample Analysis

BCI submitted twenty-five (25) soil samples to SunStar Laboratory. Samples were analyzed for one or more of the following constituents:

- Organochlorine Pesticides (OCPs) (EPA Method 8081)
- Total Lead and Arsenic (EPA Method 6010)
- Volatile Organic Compounds (VOCs) (EPA Method 8260)
- Total Petroleum Hydrocarbons (TPH) as Diesel/Motor oil (EPA Method 8015)

SunStar performed Quality Assurance/Quality Control (QA/QC) procedures for each method of analysis. Laboratory QA/QC procedures include method blanks, spiked, and duplicate spiked samples.

5. ANALYTICAL RESULTS AND DISCUSSION

5.1 Analytical Results

A summary including analytical results and applicable regulatory screening level concentrations are presented in Table 1. The complete SunStar Laboratory analytical report and chain of custody are attached as Appendix B. QA/QC method spikes were not within the acceptable ranges of recovery for the OCP analyses. BCI contacted Sunstar Labs regarding the recovery issues. Sunstar stated that the spiked matrix recovery concentrations did not affect the OCP results due to the integrity of the other QA/QC methods.

Phase II Environmental Soil Assessment Report
Liberty Island Ranch
Dixon, California

BCI File No. 3195.X
September 28, 2017

| Table 1: Summary of Analytical Results | | | | | | | | | | | | | | | | | | | | | |
|---|-----------|------------|----------------------|------|--------------|-----------|------------|--------------------|-----------------|-----------------|----------|------------|-----------------|----------|----------|----------|--------------|---------------|----------|--------------|-----------|
| | Sample ID | Depth (in) | CAM17 Metals (mg/kg) | | OCPs (µg/kg) | | | | | | | | | | | | | | VOCs | TPHs (mg/kg) | |
| | | | EPA 6010B | | EPA 8081A | | | | | | | | | | | | | | EPA 8260 | EPA 8015 | |
| | | | Arsenic | Lead | gamma-BHC | delta-BHC | Heptachlor | Heptachlor epoxide | gamma-Chlordane | alpha-Chlordane | Dieldrin | Endrin | Endrin aldehyde | 4,4'-DDE | 4,4'-DDD | 4,4'-DDT | Endosulfan I | Endosulfan II | All | Diesel | Motor Oil |
| APNs 042-140-070 042-140-110 042-140-120 042-140-140 042-140-230 042-140-240 042-140-250 042-160-170 042-160-180 | B-1 | (0-4) | ND | 18 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | STG-1 | (0-4) | ND | 33 | 670 | ND | 7.0 | ND | 240 | 380 | ND | ND | ND | 9.2 | 6.7 | 37 | ND | 9.4 | - | - | - |
| | STG-1 | (8-12) | ND | 32 | 130 | ND | 42 | ND | 580 | 850 | 23 | 18 | ND | ND | ND | 20 | ND | ND | - | - | - |
| | STG-2 | (0-4) | ND | 43 | 8.0 | 7.7 | ND | 15 | 280 | 430 | 12 | 57 | ND | 13 | 13 | 80 | 10 | 6.2 | - | - | - |
| | STG-2 | (8-12) | 6.6 | ND | ND | ND | ND | ND | 20 | 29 | ND | ND | 15 | ND | ND | ND | ND | ND | - | - | - |
| | STG-3 | (0-4) | ND | 27 | ND | ND | ND | ND | 10 | 17 | ND | ND | ND | 6.0 | ND | ND | ND | ND | ND | 120 | 440 |
| | STG-4 | (0-4) | ND | 24 | ND | ND | ND | ND | ND | ND | ND | ND | ND | 14 | ND | ND | ND | ND | ND | 50 | 350 |
| | STG-5 | (0-4) | ND | 14 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 43 | 330 | ND | ND | - | - | - |
| | STG-6 | (0-4) | 5.3 | 49 | ND | 100 | ND | ND | ND | 6.1 | 21 | 11 | ND | 16 | 75 | 470 | ND | ND | - | - | - |
| | STG-7 | (0-4) | 5.8 | 260 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 22 | ND | ND | ND | ND | 1300 | 1500 |
| | STN-1 | (0-4) | ND | 35 | ND | ND | ND | ND | ND | 8.7 | ND | ND | ND | ND | 7.9 | ND | ND | ND | ND | 370 | 900 |
| | STN-1 | (8-12) | ND | 35 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 8.8 | 6.6 | ND | ND | ND | 370 | 900 |
| | T-1 | (0-4) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ND | 15000 | 1800 |
| | T-1 | (8-12) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ND | 8400 | 520 |
| | T-2 | (0-4) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ND | 30 | 530 |
| | T-2 | (8-12) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ND | 43 | 130 |
| | T-3 | (0-4) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ND | 60 | 240 |
| | HT-1 | (0-4) | ND | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - |
| | HT-1 | (8-12) | ND | 21 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - |
| | HT-2 | (0-4) | ND | 25 | ND | ND | ND | ND | 8.7 | 8.7 | 5.6 | ND | ND | 5.1 | ND | 6.2 | ND | ND | - | - | - |
| | HT-2 | (8-12) | ND | 18 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - |
| | HT-3 | (0-4) | ND | 18 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - |
| | HT-3 | (8-12) | ND | 19 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | - | - | - |
| | HT-4 | (0-4) | ND | 21 | ND | ND | ND | ND | 5.7 | 8.6 | ND | ND | ND | 21 | 36 | 50 | ND | ND | - | - | - |
| | HT-4 | (8-12) | ND | 23 | ND | ND | ND | ND | ND | ND | ND | ND | ND | 21 | ND | 8.7 | ND | ND | - | - | - |
| Reporting Limit | | | 5.0 | 3.0 | 50.0 | 5.0 | 5.0 | 5.0 | 50.0 | 50.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | - | 10.0 | 10.0 | |
| RWQCB ESLs* | | | 0.067 | 80 | 9.8 | - | 0.77 | 0.42 | 480 Total | | 0.17 | 0.65 Total | | 1,900 | 2,700 | 1,900 | 4.6 Total | | - | 230 | 5,100 |

Notes

- mg/kg = milligrams per kilogram
- µg/kg = micrograms per kilogram
- B-1 = Barn Sample ("B") Location ("1")
- STG-1 = Storage Sample ("STG") Location ("1")
- STN-1 = Stain Sample ("STN") Location ("1")
- T-1 = Tank Sample ("T") Location ("1")
- HT-1 = Herbicide Tank ("HT") Location ("1")
- ND = Not Detected at or above Reporting Limit
- RWQCB = Regional Water Quality Control Board
- ESLs = Environmental Screening Levels
- * ESLs are Tier 1 Screening Levels.

Metals

Analytical results above reporting limits were identified for the following metals in the indicated concentration ranges.

- Arsenic was reported in three samples at concentrations ranging from 5.3 mg/kg to a peak concentration of 6.6 mg/kg (STG-2 (8-12)). Arsenic was detected in all three samples in concentrations above the ESL.
- Lead was reported in all but one sample analyzed (STG-2 (8-12)) at concentrations ranging from 14 mg/kg to a peak concentration of 260 mg/kg (STG-7 (0-4)). Lead was detected in one sample (STG-7 (0-4)) above the ESL.

Organochlorine Pesticides (OCPs)

Analytical results above reporting limits were identified for the following OCPs in the indicated concentration ranges.

- γ -BHC (Lindane) was reported in three samples at concentrations ranging from 8.0 $\mu\text{g/kg}$ to a peak of 670 $\mu\text{g/kg}$ (STG-1 (0-4)). Two samples STG-1 (0-4) and STG-1 (8-12) contained concentrations of Lindane above the ESL.
- δ -BHC was reported in two samples at concentrations of 7.7 $\mu\text{g/kg}$ (STG-2 (0-4)) and 100 $\mu\text{g/kg}$ (STG-6 (0-4)). The RWQCB does not have a specific screening level for δ -BHC.
- Heptachlor was reported in two samples at concentrations of 7.0 $\mu\text{g/kg}$ (STG-1 (0-4)) and 42 $\mu\text{g/kg}$ (STG-1 (8-12)). Both samples contained Heptachlor in concentrations above the ESL.
- Heptachlor Epoxide was reported in one sample at a concentration of 15 $\mu\text{g/kg}$ (STG-2 (0-4)). This sample contained a concentration of Heptachlor Epoxide above the ESL.
- Chlordane was reported in eight samples at concentrations ranging from 6.1 $\mu\text{g/kg}$ to a peak concentration of 1,430 $\mu\text{g/kg}$ (STG-1 (8-12)). Chlordane was detected in three samples (STG-1 (0-4), STG-1 (8-12), and STG-2 (0-4)) above the ESL.
- Dieldrin was reported in four samples at concentrations ranging from 5.6 $\mu\text{g/kg}$ to a peak concentration of 23 $\mu\text{g/kg}$ (STG-1 (8-12)). Dieldrin was detected in all four samples above the ESL.
- Endrin was reported in four samples at concentrations ranging from 11 $\mu\text{g/kg}$ to a peak concentration of 57 $\mu\text{g/kg}$ (STG-2 (0-4)). Endrin was detected in all four samples above the ESL.
- Endosulfan was reported in two samples at total concentrations of 9.4 $\mu\text{g/kg}$ (STG-1 (0-4)) and 16.2 $\mu\text{g/kg}$ (STG-2 (0-4)). Both sample contained Endosulfan in concentrations above the ESL.

Volatile Organic Compounds (VOCs)

VOCs were not detected above the respective reporting limits.

Total Petroleum Hydrocarbons as Diesel (TPH-d) and Motor Oil (TPH-mo)

Analytical results above reporting limits were identified for the following TPHs in the indicated concentration ranges.

- TPH-d was reported in ten samples at concentrations ranging from 30 mg/kg to a peak concentration of to 15,000 mg/kg (T-1 (0-4)). TPH-d was detected in five samples above the ESL.
- TPH-mo was reported in ten samples ranging from 130 mg/kg to a peak concentration of 1,800 mg/kg (T-1 (0-4)). TPH-mo was not detected above the ESL in any of the samples

5.2 Analytical Results Discussion

BCI reviewed reasonably ascertainable information to determine which areas within the site to investigate. Samples were collected from areas that may have been associated with former storage and handling of pesticides and above-ground fuel storage. One sample was collected adjacent to a white barn (sample denoted with a “B”). Nine samples were collected in the proximity of the storage areas (samples denoted with “STG”). Two samples were collected within an area of visible ground staining (samples denoted with “STN”). Five samples were collected in the proximity of previously existing aboveground storage tanks located using WRA, Inc.’s ESA (samples denoted with a “T”). Eight samples were collected in the proximity of the herbicide applicator tanks (samples denoted by “HT”).

Samples STG-1 and STG-2 were located within a storage building in the northern section of the developed area (APN 042-140-230). Analytical results indicated exceedance of the ESLs for multiple OCP contaminants at both sample locations and sample depths. Tested concentrations were above ESLs to a depth of 1-foot bgs (maximum depth sampled). The vertical and lateral extent of the contaminants was not defined.

- STG-1 (0-4) contained concentrations of γ -BHC (Lindane), Heptachlor, Chlordane, and Endosulfan above their respective ESLs.
- STG-1 (8-12) contained concentrations of γ -BHC (Lindane), Heptachlor, Chlordane, Dieldrin, and Endrin above their respective ESLs.
- STG-2 (0-4) contained concentrations of Heptachlor Epoxide, Chlordane, Dieldrin, Endrin, and Endosulfan above their respective ESLs.
- STG-2 (8-12) contained concentrations of Arsenic and Endrin Aldehyde above their respective ESLs.

Samples STG-6 and STG-7 were located in two separate, storage buildings at the southern end of the developed area. STG-6 is located at the southern edge of APN 042-140-230, while STG-7 is located at the northern edge of APN 042-140-240. Analytical results indicated exceedance

of the ESLs for Arsenic, Lead, and two OCPs (Dieldrin and Endrin). The samples were only advanced to a depth of four inches bgs due to refusal at four inches.

- STG-6 (0-4) contained concentrations of Arsenic, Dieldrin, and Endrin above their respective ESLs.
- STG-7 (0-4) contained concentrations of Arsenic and Lead above their respective ESLs.

Sample HT-2 was located at an area identified in the ESA as *former herbicide applicator tanks* (APN 042-140-230). Analytical results indicated exceedance of the ESL for Dieldrin. Samples were advanced to a depth of 1-foot bgs, however Dieldrin was only reported in the 0-4-inch sample.

- HT-2 (0-4) contained concentrations of Dieldrin above the ESL.

STN-1 and T-1 are located adjacent to a large storage building located at the northern end of the developed area (APN 042-140-230). STG-7 is in a storage building located at the south end of the developed area. Samples collected at STN-1, T-1, and STG-7 contained concentrations of TPH-d above the ESL. STN-1 and T-1 were advanced to a depth of 1-foot bgs. STG-7 was advanced only to a depth of 4-inches bgs. Concentrations of TPH-d were found at both sample depths.

- STG-7 (0-4), STN-1 (0-4), STN-1 (8-12), T-1 (0-4), and T-1 (8-12) all contained concentrations of TPH-d above the ESL.

5.3 Risk to Human Health and the Environment

Based on the proposed restoration of the site to its former use as a Delta Smelt habitat/marsh land, it is appropriate to compare the analytical results to the Tier 1 RWQCB ESLs. Exceedance of the ESLs do not automatically trigger a response action or suggest that a significant risk to human health exists. If the ESLs are exceeded, it may be appropriate to evaluate potential risks posed by site contaminants.

6. CONCLUSIONS AND RECOMMENDATIONS

The ESA previously completed for the site identified the following RECs:

- The subject property was used for agricultural purposes from approximately 1920 until 2006. A pesticide application permit was issued to the site for use and application of pesticides.
- Three above-ground storage tanks (ASTs) used for dispensing and storing diesel and unleaded fuel were located on site. No secondary containment was in use. In addition, two 55-gallon drums were observed. The contents were not indicated on the drums (although one is believed to contain used motor oil) and no secondary containment was in use.

BCI did not identify additional RECs associated with the site. This Phase II was completed to evaluate the RECs listed above. The Phase II included the collection of soil samples from sixteen locations across the site from depths of 0-4" and 1-foot bgs. Samples were analyzed for OCPs, Arsenic, Lead, BTEX, MTBE, TPH-d and/or TPH-mo.

Analytical test results did not indicate the presence of BTEX, MTBE, or TPH-mo above the laboratory reporting limits. Levels were detected above reporting limits for a variety of OCPs, lead, arsenic, and TPH-d.

The OCPs reported above the ESLs belong to the organochlorine insecticide group. These chemicals were used as a general insecticide for crops, soils, and buildings from the 1940s to 1980. Elevated levels above the ESLs were primarily located within and around the existing storage buildings.

The TPH-d results reported above the ESL are in the general area of the former fuel ASTs.

The results of this investigation indicate moderate impacts to soil at this site, however, based on results of the field and laboratory investigation, and the widespread extent of impacts, BCI recommends additional assessment to determine the extent of impacts and potential risk in relation to the proposed rehabilitation of the site to a marsh land. All additional assessments should be conducted under regulatory oversight. BCI anticipates the RWQCB would provide oversight for this project.

An appropriate soil management plan may be required to mitigate surface soil impacts including OCPs and TPH-d.

7. LIMITATIONS

BCI performed these services in accordance with generally accepted environmental engineering principles and practices currently used in Northern California. We do not warranty our services. Our scope does not include evaluation of hazardous materials or a determination of their potential presence on site, other than as specified herein. Testing of groundwater was not within the scope of this investigation. This report is not a comprehensive site characterization and shall not be so construed. We base the findings presented in this report on limited soil sampling and laboratory analyses. This report is not intended to fully characterize the site for future development.

Liberty Island Ranch Phase II Site Assessment

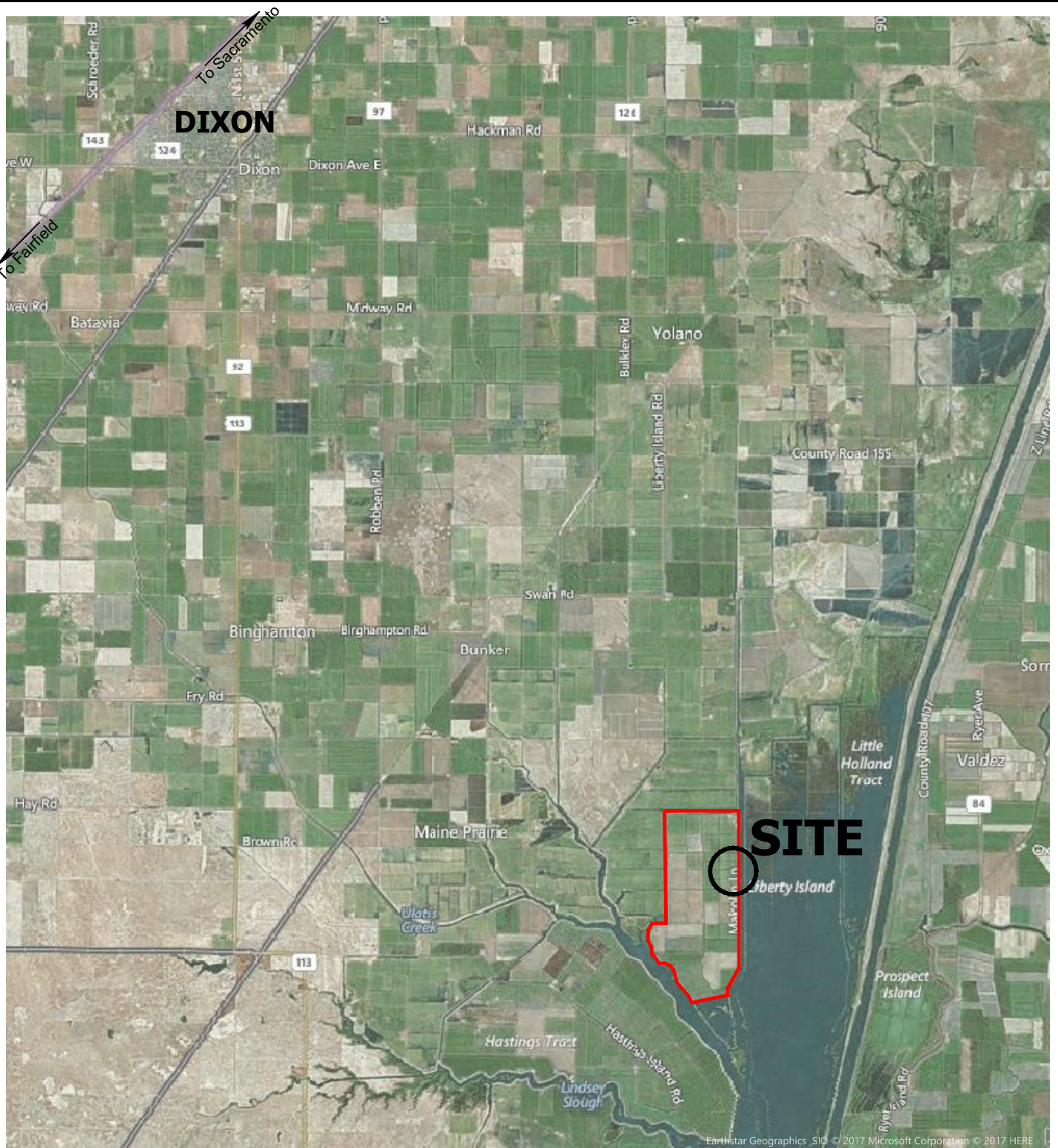
FIGURES

Vicinity Map

Parcel Map Showing Sample Locations



This Page Intentionally Left Blank





NO SCALE

This Page Intentionally Left Blank

9/11/2017 3195.x Fig2 Liberty Island Ranch Phase II.dwg



LEGEND

-  Approximate Sample Location
- B = Barn
- STG = Storage
- STN = Stain
- T = Tank
- HT = Herbicide Applicator Tank
-  APN Boundary



blackburn
consulting

2491 Boatman Avenue
West Sacramento, CA 95691
Phone: (916) 375-8706
Fax: (916) 375-8709
www.blackburnconsulting.com

SITE PLAN
Liberty Island Ranch
Phase II Soil Assessment
Solano, California

| |
|-----------------|
| File No. 3195.x |
| September 2017 |
| Figure 2 |

This Page Intentionally Left Blank

Liberty Island Ranch Phase II Site Assessment

APPENDIX A

Sample Locations, GPS Coordinates



This Page Intentionally Left Blank

West Sacramento Office:
 2491 Boatman Avenue
 West Sacramento, CA 95691 • (916) 375-8706



Main Auburn Office: (530) 887-1494
 Fresno Office: (559) 438-8411

| Sample Location Coordinates | | | |
|-----------------------------|------------|--------------|------------|
| Boring ID | Latitude | Longitude | Depth (in) |
| B-1 | 38.305549° | -121.694062° | 4.0 |
| STG-1 | 38.305304° | -121.694137° | 12.0 |
| STG-2 | 38.305195° | -121.694132° | 12.0 |
| STG-3 | 38.299934° | -121.693936° | 4.0 |
| STG-4 | 38.299777° | -121.693942° | 4.0 |
| STG-5 | 38.299009° | -121.694248° | 4.0 |
| STG-6 | 38.299009° | -121.694117° | 4.0 |
| STG-7 | 38.298456° | -121.694047° | 4.0 |
| STN-1 | 38.304993° | -121.694114° | 12.0 |
| T-1 | 38.304921° | -121.694046° | 12.0 |
| T-2 | 38.299468° | -121.694356° | 12.0 |
| T-3 | 38.299441° | -121.694292° | 4.0 |
| HT-1 | 38.304531° | -121.694261° | 12.0 |
| HT-2 | 38.304526° | -121.694135° | 12.0 |
| HT-3 | 38.304429° | -121.694258° | 12.0 |
| HT-4 | 38.304440° | -121.694146° | 12.0 |

This Page Intentionally Left Blank

**Liberty Island Ranch
Phase II Site Assessment**

APPENDIX B

Analytical Laboratory Results and Chain of Custody



This Page Intentionally Left Blank



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

01 September 2017

Ryan Schmidt
Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento, CA -
RE: Liberty Island Ranch Phase II

Enclosed are the results of analyses for samples received by the laboratory on 08/25/17 13:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Nguyen
Project Manager Assistant

This Page Intentionally Left Blank

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -


Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-------------------------|---------------|--------|----------------|----------------|
| Barn 1 (0-4) | T172215-01 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 1 (0-4) | T172215-02 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 1 (8-12) | T172215-03 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 2 (0-4) | T172215-04 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 2 (8-12) | T172215-05 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 3 (0-4) | T172215-06 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 4 (0-4) | T172215-07 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 5 (0-4) | T172215-08 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 6 (0-4) | T172215-09 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Storage 7 (0-4) | T172215-10 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Stain 1 (0-4) | T172215-11 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Stain 1 (8-12) | T172215-12 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Tank 1 (0-4) | T172215-13 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Tank 1 (8-12) | T172215-14 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Tank 2 (0-4) | T172215-15 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Tank 2 (8-12) | T172215-16 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Tank 3 (0-4) | T172215-17 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 1 (0-4) | T172215-18 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 1 (8-12) | T172215-19 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 2 (0-4) | T172215-20 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 2 (8-12) | T172215-21 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 3 (0-4) | T172215-22 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 3 (8-12) | T172215-23 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 4 (0-4) | T172215-24 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |
| Herbicide Tank 4 (8-12) | T172215-25 | Soil | 08/24/17 00:00 | 08/25/17 13:45 |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

DETECTIONS SUMMARY

Sample ID: Barn 1 (0-4)

Laboratory ID: T172215-01

| Analyte | Reporting | | Units | Method | Notes |
|---------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 18 | 3.0 | mg/kg | EPA 6010B | |

Sample ID: Storage 1 (0-4)

Laboratory ID: T172215-02

| Analyte | Reporting | | Units | Method | Notes |
|---------------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 33 | 3.0 | mg/kg | EPA 6010B | |
| gamma-BHC (Lindane) | 670 | 50 | ug/kg | EPA 8081A | |
| Heptachlor | 7.0 | 5.0 | ug/kg | EPA 8081A | |
| gamma-Chlordane | 240 | 50 | ug/kg | EPA 8081A | |
| alpha-Chlordane | 380 | 50 | ug/kg | EPA 8081A | |
| 4,4'-DDE | 9.2 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDD | 6.7 | 5.0 | ug/kg | EPA 8081A | |
| Endosulfan II | 9.4 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 37 | 5.0 | ug/kg | EPA 8081A | |

Sample ID: Storage 1 (8-12)

Laboratory ID: T172215-03

| Analyte | Reporting | | Units | Method | Notes |
|---------------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 32 | 3.0 | mg/kg | EPA 6010B | |
| gamma-BHC (Lindane) | 130 | 50 | ug/kg | EPA 8081A | |
| Heptachlor | 42 | 5.0 | ug/kg | EPA 8081A | |
| gamma-Chlordane | 580 | 50 | ug/kg | EPA 8081A | |
| alpha-Chlordane | 850 | 50 | ug/kg | EPA 8081A | |
| Dieldrin | 23 | 5.0 | ug/kg | EPA 8081A | |
| Endrin | 18 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 20 | 5.0 | ug/kg | EPA 8081A | |

Sample ID: Storage 2 (0-4)

Laboratory ID: T172215-04

| Analyte | Reporting | | Units | Method | Notes |
|---------|-----------|-------|-------|--------|-------|
| | Result | Limit | | | |

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Sample ID: Storage 2 (0-4)

Laboratory ID: T172215-04

| Analyte | Result | Reporting | | Units | Method | Notes |
|---------------------|--------|-----------|--|-------|-----------|-------|
| | | Limit | | | | |
| Lead | 43 | 3.0 | | mg/kg | EPA 6010B | |
| gamma-BHC (Lindane) | 8.0 | 5.0 | | ug/kg | EPA 8081A | |
| delta-BHC | 7.7 | 5.0 | | ug/kg | EPA 8081A | |
| Heptachlor epoxide | 15 | 5.0 | | ug/kg | EPA 8081A | |
| gamma-Chlordane | 280 | 5.0 | | ug/kg | EPA 8081A | |
| alpha-Chlordane | 430 | 5.0 | | ug/kg | EPA 8081A | |
| Endosulfan I | 9.6 | 5.0 | | ug/kg | EPA 8081A | |
| 4,4'-DDE | 13 | 5.0 | | ug/kg | EPA 8081A | |
| Dieldrin | 12 | 5.0 | | ug/kg | EPA 8081A | |
| Endrin | 57 | 5.0 | | ug/kg | EPA 8081A | |
| 4,4'-DDD | 13 | 5.0 | | ug/kg | EPA 8081A | |
| Endosulfan II | 6.2 | 5.0 | | ug/kg | EPA 8081A | |
| 4,4'-DDT | 80 | 5.0 | | ug/kg | EPA 8081A | |

Sample ID: Storage 2 (8-12)

Laboratory ID: T172215-05

| Analyte | Result | Reporting | | Units | Method | Notes |
|-----------------|--------|-----------|--|-------|-----------|-------|
| | | Limit | | | | |
| Arsenic | 6.6 | 5.0 | | mg/kg | EPA 6010B | |
| gamma-Chlordane | 20 | 5.0 | | ug/kg | EPA 8081A | |
| alpha-Chlordane | 29 | 5.0 | | ug/kg | EPA 8081A | |
| Endrin aldehyde | 15 | 5.0 | | ug/kg | EPA 8081A | |

Sample ID: Storage 3 (0-4)

Laboratory ID: T172215-06

| Analyte | Result | Reporting | | Units | Method | Notes |
|-----------------|--------|-----------|--|-------|-----------|-------|
| | | Limit | | | | |
| C13-C28 (DRO) | 120 | 10 | | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 440 | 10 | | mg/kg | EPA 8015B | |
| Lead | 27 | 3.0 | | mg/kg | EPA 6010B | |
| gamma-Chlordane | 9.8 | 5.0 | | ug/kg | EPA 8081A | |
| alpha-Chlordane | 17 | 5.0 | | ug/kg | EPA 8081A | |
| 4,4'-DDE | 6.0 | 5.0 | | ug/kg | EPA 8081A | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Sample ID: Storage 4 (0-4)

Laboratory ID: T172215-07

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 50 | 40 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 350 | 40 | mg/kg | EPA 8015B | |
| Lead | 24 | 3.0 | mg/kg | EPA 6010B | |
| 4,4'-DDE | 15 | 9.8 | ug/kg | EPA 8081A | |

Sample ID: Storage 5 (0-4)

Laboratory ID: T172215-08

| Analyte | Reporting | | Units | Method | Notes |
|----------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 14 | 3.0 | mg/kg | EPA 6010B | |
| 4,4'-DDD | 43 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 330 | 50 | ug/kg | EPA 8081A | |

Sample ID: Storage 6 (0-4)

Laboratory ID: T172215-09

| Analyte | Reporting | | Units | Method | Notes |
|-----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Arsenic | 5.3 | 5.0 | mg/kg | EPA 6010B | |
| Lead | 49 | 3.0 | mg/kg | EPA 6010B | |
| delta-BHC | 100 | 5.0 | ug/kg | EPA 8081A | |
| alpha-Chlordane | 6.1 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDE | 16 | 5.0 | ug/kg | EPA 8081A | |
| Dieldrin | 21 | 5.0 | ug/kg | EPA 8081A | |
| Endrin | 11 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDD | 75 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 470 | 50 | ug/kg | EPA 8081A | |

Sample ID: Storage 7 (0-4)

Laboratory ID: T172215-10

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 1300 | 10 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 1500 | 10 | mg/kg | EPA 8015B | |
| Arsenic | 5.8 | 5.0 | mg/kg | EPA 6010B | |
| Lead | 260 | 3.0 | mg/kg | EPA 6010B | |
| 4,4'-DDD | 22 | 5.0 | ug/kg | EPA 8081A | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Sample ID: Stain 1 (0-4)

Laboratory ID: T172215-11

| Analyte | Reporting | | Units | Method | Notes |
|-----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 370 | 10 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 900 | 10 | mg/kg | EPA 8015B | |
| Lead | 35 | 3.0 | mg/kg | EPA 6010B | |
| alpha-Chlordane | 8.7 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDD | 7.9 | 5.0 | ug/kg | EPA 8081A | |

Sample ID: Stain 1 (8-12)

Laboratory ID: T172215-12

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 250 | 10 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 620 | 10 | mg/kg | EPA 8015B | |
| Lead | 35 | 3.0 | mg/kg | EPA 6010B | |
| 4,4'-DDD | 8.8 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 6.6 | 5.0 | ug/kg | EPA 8081A | |

Sample ID: Tank 1 (0-4)

Laboratory ID: T172215-13

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 15000 | 100 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 1800 | 10 | mg/kg | EPA 8015B | |

Sample ID: Tank 1 (8-12)

Laboratory ID: T172215-14

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 8400 | 50 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 520 | 10 | mg/kg | EPA 8015B | |

Sample ID: Tank 2 (0-4)

Laboratory ID: T172215-15

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 30 | 10 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 530 | 10 | mg/kg | EPA 8015B | |

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Sample ID: Tank 2 (8-12)

Laboratory ID: T172215-16

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 43 | 10 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 130 | 10 | mg/kg | EPA 8015B | |

Sample ID: Tank 3 (0-4)

Laboratory ID: T172215-17

| Analyte | Reporting | | Units | Method | Notes |
|----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| C13-C28 (DRO) | 60 | 10 | mg/kg | EPA 8015B | |
| C29-C40 (MORO) | 240 | 10 | mg/kg | EPA 8015B | |

Sample ID: Herbicide Tank 1 (0-4)

Laboratory ID: T172215-18

| Analyte | Reporting | | Units | Method | Notes |
|---------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 30 | 3.0 | mg/kg | EPA 6010B | |

Sample ID: Herbicide Tank 1 (8-12)

Laboratory ID: T172215-19

| Analyte | Reporting | | Units | Method | Notes |
|---------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 21 | 3.0 | mg/kg | EPA 6010B | |

Sample ID: Herbicide Tank 2 (0-4)

Laboratory ID: T172215-20

| Analyte | Reporting | | Units | Method | Notes |
|-----------------|-----------|-------|-------|-----------|-------|
| | Result | Limit | | | |
| Lead | 25 | 3.0 | mg/kg | EPA 6010B | |
| gamma-Chlordane | 8.7 | 5.0 | ug/kg | EPA 8081A | |
| alpha-Chlordane | 8.7 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDE | 5.1 | 5.0 | ug/kg | EPA 8081A | |
| Dieldrin | 5.6 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 6.2 | 5.0 | ug/kg | EPA 8081A | |

Sample ID: Herbicide Tank 2 (8-12)

Laboratory ID: T172215-21

| Analyte | Reporting | | Units | Method | Notes |
|---------|-----------|-------|-------|--------|-------|
| | Result | Limit | | | |

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Sample ID: Herbicide Tank 2 (8-12)

Laboratory ID: T172215-21

| Analyte | Result | Reporting | Units | Method | Notes |
|---------|--------|-----------|-------|-----------|-------|
| | | Limit | | | |
| Lead | 23 | 3.0 | mg/kg | EPA 6010B | |

Sample ID: Herbicide Tank 3 (0-4)

Laboratory ID: T172215-22

| Analyte | Result | Reporting | Units | Method | Notes |
|---------|--------|-----------|-------|-----------|-------|
| | | Limit | | | |
| Lead | 18 | 3.0 | mg/kg | EPA 6010B | |

Sample ID: Herbicide Tank 3 (8-12)

Laboratory ID: T172215-23

| Analyte | Result | Reporting | Units | Method | Notes |
|---------|--------|-----------|-------|-----------|-------|
| | | Limit | | | |
| Lead | 19 | 3.0 | mg/kg | EPA 6010B | |

Sample ID: Herbicide Tank 4 (0-4)

Laboratory ID: T172215-24

| Analyte | Result | Reporting | Units | Method | Notes |
|-----------------|--------|-----------|-------|-----------|-------|
| | | Limit | | | |
| Lead | 21 | 3.0 | mg/kg | EPA 6010B | |
| gamma-Chlordane | 5.7 | 5.0 | ug/kg | EPA 8081A | |
| alpha-Chlordane | 8.6 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDE | 21 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDD | 36 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 50 | 5.0 | ug/kg | EPA 8081A | |

Sample ID: Herbicide Tank 4 (8-12)

Laboratory ID: T172215-25

| Analyte | Result | Reporting | Units | Method | Notes |
|----------|--------|-----------|-------|-----------|-------|
| | | Limit | | | |
| Lead | 23 | 3.0 | mg/kg | EPA 6010B | |
| 4,4'-DDE | 21 | 5.0 | ug/kg | EPA 8081A | |
| 4,4'-DDT | 8.7 | 5.0 | ug/kg | EPA 8081A | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Barn 1 (0-4)
T172215-01 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 18 | 3.0 | " | " | " | " | " | " |

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 1 (0-4)
T172215-02 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 33 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|----------------------------|------------|-----|-------|----|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | 670 | 50 | " | 10 | " | " | " | " |
| beta-BHC | ND | 5.0 | " | 1 | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | 7.0 | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | 240 | 50 | " | 10 | " | " | " | " |
| alpha-Chlordane | 380 | 50 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | 1 | " | " | " | " |
| 4,4'-DDE | 9.2 | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | 6.7 | 5.0 | " | " | " | " | " | " |
| Endosulfan II | 9.4 | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 37 | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 56.1 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 75.1 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 1 (8-12)
T172215-03 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 32 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|----------------------------|------------|-----|-------|----|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | 130 | 50 | " | 10 | " | " | " | " |
| beta-BHC | ND | 5.0 | " | 1 | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | 42 | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | 580 | 50 | " | 10 | " | " | " | " |
| alpha-Chlordane | 850 | 50 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | 1 | " | " | " | " |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " |
| Dieldrin | 23 | 5.0 | " | " | " | " | " | " |
| Endrin | 18 | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 20 | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 72.6 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 93.1 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 2 (0-4)
T172215-04 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 43 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|------------------------------------|------------|--------|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | 8.0 | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | 7.7 | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | 15 | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | 280 | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | 430 | 5.0 | " | " | " | " | " | " |
| Endosulfan I | 9.6 | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | 13 | 5.0 | " | " | " | " | " | " |
| Dieldrin | 12 | 5.0 | " | " | " | " | " | " |
| Endrin | 57 | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | 13 | 5.0 | " | " | " | " | " | " |
| Endosulfan II | 6.2 | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 80 | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |
| Surrogate: Tetrachloro-meta-xylene | 60.4 % | 35-140 | " | " | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 83.1 % | 35-140 | " | " | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 2 (8-12)
T172215-05 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|----------------|------------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | 6.6 | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | ND | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|------------------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | 20 | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | 29 | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | 15 | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

Surrogate: Tetrachloro-meta-xylene

75.3 % 35-140

" " " "

Surrogate: Decachlorobiphenyl

76.2 % 35-140

" " " "

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 3 (0-4)
T172215-06 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|-------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 120 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 440 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 103 % | 65-135 | | " | " | " | " | |

Metals by EPA 6010B

| | | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 27 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---|------------|--------|--------|---|---------|----------|----------|-----------|--|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " | |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " | |
| Aldrin | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " | |
| gamma-Chlordane | 9.8 | 5.0 | " | " | " | " | " | " | |
| alpha-Chlordane | 17 | 5.0 | " | " | " | " | " | " | |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDE | 6.0 | 5.0 | " | " | " | " | " | " | |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " | |
| Endrin | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " | |
| Methoxychlor | ND | 10 | " | " | " | " | " | " | |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " | |
| Toxaphene | ND | 200 | " | " | " | " | " | " | |
| <i>Surrogate: Tetrachloro-meta-xylene</i> | | 52.9 % | 35-140 | | " | " | " | " | |
| <i>Surrogate: Decachlorobiphenyl</i> | | 92.4 % | 35-140 | | " | " | " | " | |

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 3 (0-4)
T172215-06 (Soil)


| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|---------------------------------|----|--------|----------|---|---------|----------|----------|-----------|------|
| Benzene | ND | 10 | ug/kg | 2 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | R-07 |
| Toluene | ND | 10 | " | " | " | " | " | " | R-07 |
| Ethylbenzene | ND | 10 | " | " | " | " | " | " | R-07 |
| m,p-Xylene | ND | 20 | " | " | " | " | " | " | R-07 |
| o-Xylene | ND | 10 | " | " | " | " | " | " | R-07 |
| Methyl tert-butyl ether | ND | 40 | " | " | " | " | " | " | R-07 |
| Surrogate: 4-Bromofluorobenzene | | 94.4 % | 81.2-123 | | " | " | " | " | |
| Surrogate: Dibromofluoromethane | | 107 % | 95.7-135 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 102 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 4 (0-4)
T172215-07 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|-------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 50 | 40 | mg/kg | 2 | 7082523 | 08/25/17 | 08/29/17 | EPA 8015B | |
| C29-C40 (MORO) | 350 | 40 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 110 % | 65-135 | | " | " | " | " | |

Metals by EPA 6010B

| | | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 24 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---|-----------|--------|--------|---|---------|----------|----------|-----------|--|
| alpha-BHC | ND | 9.8 | ug/kg | 1 | 7082830 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 9.8 | " | " | " | " | " | " | |
| beta-BHC | ND | 9.8 | " | " | " | " | " | " | |
| delta-BHC | ND | 9.8 | " | " | " | " | " | " | |
| Heptachlor | ND | 9.8 | " | " | " | " | " | " | |
| Aldrin | ND | 9.8 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 9.8 | " | " | " | " | " | " | |
| gamma-Chlordane | ND | 9.8 | " | " | " | " | " | " | |
| alpha-Chlordane | ND | 9.8 | " | " | " | " | " | " | |
| Endosulfan I | ND | 9.8 | " | " | " | " | " | " | |
| 4,4'-DDE | 15 | 9.8 | " | " | " | " | " | " | |
| Dieldrin | ND | 9.8 | " | " | " | " | " | " | |
| Endrin | ND | 9.8 | " | " | " | " | " | " | |
| 4,4'-DDD | ND | 9.8 | " | " | " | " | " | " | |
| Endosulfan II | ND | 9.8 | " | " | " | " | " | " | |
| 4,4'-DDT | ND | 9.8 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 9.8 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 9.8 | " | " | " | " | " | " | |
| Methoxychlor | ND | 20 | " | " | " | " | " | " | |
| Endrin ketone | ND | 9.8 | " | " | " | " | " | " | |
| Toxaphene | ND | 390 | " | " | " | " | " | " | |
| <i>Surrogate: Tetrachloro-meta-xylene</i> | | 78.1 % | 35-140 | | " | " | " | " | |
| <i>Surrogate: Decachlorobiphenyl</i> | | 109 % | 35-140 | | " | " | " | " | |

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 4 (0-4)
T172215-07 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|---------------------------------|----|--------|----------|---|---------|----------|----------|-----------|------|
| Benzene | ND | 25 | ug/kg | 5 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | R-07 |
| Toluene | ND | 25 | " | " | " | " | " | " | R-07 |
| Ethylbenzene | ND | 25 | " | " | " | " | " | " | R-07 |
| m,p-Xylene | ND | 50 | " | " | " | " | " | " | R-07 |
| o-Xylene | ND | 25 | " | " | " | " | " | " | R-07 |
| Methyl tert-butyl ether | ND | 100 | " | " | " | " | " | " | R-07 |
| Surrogate: 4-Bromofluorobenzene | | 82.2 % | 81.2-123 | | " | " | " | " | |
| Surrogate: Dibromofluoromethane | | 104 % | 95.7-135 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 98.9 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 5 (0-4)
T172215-08 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 14 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|---------------------|------------|-----|-------|----|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | 43 | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 330 | 50 | " | 10 | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | 1 | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 69.6 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 101 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 6 (0-4)
T172215-09 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|----------------|------------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | 5.3 | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 49 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|------------------------|------------|-----|-------|----|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | 100 | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | 6.1 | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | 16 | 5.0 | " | " | " | " | " | " |
| Dieldrin | 21 | 5.0 | " | " | " | " | " | " |
| Endrin | 11 | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | 75 | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 470 | 50 | " | 10 | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | 1 | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 75.0 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 98.8 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 7 (0-4)
T172215-10 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|-------------|--------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 1300 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 1500 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 83.7 % | 65-135 | | " | " | " | " | |

Metals by EPA 6010B

| | | | | | | | | | |
|----------------|------------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | 5.8 | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 260 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---|-----------|--------|--------|---|---------|----------|----------|-----------|--|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " | |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " | |
| Aldrin | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " | |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " | |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " | |
| Endrin | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDD | 22 | 5.0 | " | " | " | " | " | " | |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " | |
| Methoxychlor | ND | 10 | " | " | " | " | " | " | |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " | |
| Toxaphene | ND | 200 | " | " | " | " | " | " | |
| <i>Surrogate: Tetrachloro-meta-xylene</i> | | 111 % | 35-140 | | " | " | " | " | |
| <i>Surrogate: Decachlorobiphenyl</i> | | 61.1 % | 35-140 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Storage 7 (0-4)
T172215-10 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | |
|---------------------------------|----|--------|----------|---|---------|----------|----------|-----------|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B |
| Toluene | ND | 5.0 | " | " | " | " | " | " |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " |
| Surrogate: 4-Bromofluorobenzene | | 98.1 % | 81.2-123 | | " | " | " | " |
| Surrogate: Dibromofluoromethane | | 103 % | 95.7-135 | | " | " | " | " |
| Surrogate: Toluene-d8 | | 101 % | 85.5-116 | | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Stain 1 (0-4)
T172215-11 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|--------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 370 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 900 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 83.9 % | 65-135 | | " | " | " | " | |

Metals by EPA 6010B

| | | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 35 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---|------------|--------|--------|---|---------|----------|----------|-----------|------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " | |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " | |
| Aldrin | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " | |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| alpha-Chlordane | 8.7 | 5.0 | " | " | " | " | " | " | |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " | |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " | |
| Endrin | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDD | 7.9 | 5.0 | " | " | " | " | " | " | |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " | |
| Methoxychlor | ND | 10 | " | " | " | " | " | " | |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " | |
| Toxaphene | ND | 200 | " | " | " | " | " | " | |
| <i>Surrogate: Tetrachloro-meta-xylene</i> | | 66.3 % | 35-140 | | " | " | " | " | |
| <i>Surrogate: Decachlorobiphenyl</i> | | 350 % | 35-140 | | " | " | " | " | S-GC |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Stain 1 (0-4)
T172215-11 (Soil)


| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | |
|---------------------------------|----|--------|----------|---|---------|----------|----------|-----------|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B |
| Toluene | ND | 5.0 | " | " | " | " | " | " |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " |
| Surrogate: 4-Bromofluorobenzene | | 95.2 % | 81.2-123 | | " | " | " | " |
| Surrogate: Dibromofluoromethane | | 102 % | 95.7-135 | | " | " | " | " |
| Surrogate: Toluene-d8 | | 101 % | 85.5-116 | | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Stain 1 (8-12)
T172215-12 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|--------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 250 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 620 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 91.4 % | 65-135 | | " | " | " | " | |

Metals by EPA 6010B

| | | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 35 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---|------------|--------|--------|---|---------|----------|----------|-----------|--|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " | |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " | |
| Aldrin | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " | |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " | |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " | |
| Endrin | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDD | 8.8 | 5.0 | " | " | " | " | " | " | |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDT | 6.6 | 5.0 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " | |
| Methoxychlor | ND | 10 | " | " | " | " | " | " | |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " | |
| Toxaphene | ND | 200 | " | " | " | " | " | " | |
| <i>Surrogate: Tetrachloro-meta-xylene</i> | | 71.0 % | 35-140 | | " | " | " | " | |
| <i>Surrogate: Decachlorobiphenyl</i> | | 95.3 % | 35-140 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Stain 1 (8-12)
T172215-12 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | |
|---------------------------------|----|--------|----------|---|---------|----------|----------|-----------|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B |
| Toluene | ND | 5.0 | " | " | " | " | " | " |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " |
| Surrogate: 4-Bromofluorobenzene | | 93.1 % | 81.2-123 | | " | " | " | " |
| Surrogate: Dibromofluoromethane | | 102 % | 95.7-135 | | " | " | " | " |
| Surrogate: Toluene-d8 | | 101 % | 85.5-116 | | " | " | " | " |

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Tank 1 (0-4)
T172215-13 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|--------------|-------|--------|----|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 15000 | 100 | mg/kg | 10 | 7082513 | 08/25/17 | 08/28/17 | EPA 8015B | |
| C29-C40 (MORO) | 1800 | 10 | " | 1 | " | " | 08/26/17 | " | |
| <i>Surrogate: p-Terphenyl</i> | | 100 % | 65-135 | | " | " | " | " | |

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|--|----|--------|----------|---|---------|----------|----------|-----------|--|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " | |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | 101 % | 81.2-123 | | " | " | " | " | |
| <i>Surrogate: Dibromofluoromethane</i> | | 104 % | 95.7-135 | | " | " | " | " | |
| <i>Surrogate: Toluene-d8</i> | | 99.5 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Tank 1 (8-12)
T172215-14 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|-------------|-------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 8400 | 50 | mg/kg | 5 | 7082513 | 08/25/17 | 08/28/17 | EPA 8015B | |
| C29-C40 (MORO) | 520 | 10 | " | 1 | " | " | 08/26/17 | " | |
| <i>Surrogate: p-Terphenyl</i> | | 100 % | 65-135 | | " | " | " | " | |

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|--|----|-------|----------|---|---------|----------|----------|-----------|--|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " | |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | 107 % | 81.2-123 | | " | " | " | " | |
| <i>Surrogate: Dibromofluoromethane</i> | | 101 % | 95.7-135 | | " | " | " | " | |
| <i>Surrogate: Toluene-d8</i> | | 101 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Tank 2 (0-4)
T172215-15 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|--------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 30 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 530 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 93.8 % | 65-135 | | " | " | " | " | |

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|--|----|-------|----------|---|---------|----------|----------|-----------|--|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " | |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | 104 % | 81.2-123 | | " | " | " | " | |
| <i>Surrogate: Dibromofluoromethane</i> | | 108 % | 95.7-135 | | " | " | " | " | |
| <i>Surrogate: Toluene-d8</i> | | 102 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Tank 2 (8-12)
T172215-16 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.


Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|--------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 43 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 130 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 92.5 % | 65-135 | | " | " | " | " | |

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|--|----|--------|----------|---|---------|----------|----------|-----------|--|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " | |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | 99.1 % | 81.2-123 | | " | " | " | " | |
| <i>Surrogate: Dibromofluoromethane</i> | | 104 % | 95.7-135 | | " | " | " | " | |
| <i>Surrogate: Toluene-d8</i> | | 103 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Tank 3 (0-4)
T172215-17 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015B

| | | | | | | | | | |
|-------------------------------|------------|--------|--------|---|---------|----------|----------|-----------|--|
| C13-C28 (DRO) | 60 | 10 | mg/kg | 1 | 7082513 | 08/25/17 | 08/26/17 | EPA 8015B | |
| C29-C40 (MORO) | 240 | 10 | " | " | " | " | " | " | |
| <i>Surrogate: p-Terphenyl</i> | | 93.4 % | 65-135 | | " | " | " | " | |

Volatile Organic Compounds by EPA Method 8260B

| | | | | | | | | | |
|--|----|--------|----------|---|---------|----------|----------|-----------|--|
| Benzene | ND | 5.0 | ug/kg | 1 | 7082508 | 08/25/17 | 08/25/17 | EPA 8260B | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 10 | " | " | " | " | " | " | |
| o-Xylene | ND | 5.0 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 20 | " | " | " | " | " | " | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | 96.8 % | 81.2-123 | | " | " | " | " | |
| <i>Surrogate: Dibromofluoromethane</i> | | 100 % | 95.7-135 | | " | " | " | " | |
| <i>Surrogate: Toluene-d8</i> | | 103 % | 85.5-116 | | " | " | " | " | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 1 (0-4)
T172215-18 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 30 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---------------------|----|-----|-------|---|---------|----------|----------|-----------|--|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " | |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " | |
| Aldrin | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " | |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " | |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " | |
| Endrin | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " | |
| Methoxychlor | ND | 10 | " | " | " | " | " | " | |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " | |
| Toxaphene | ND | 200 | " | " | " | " | " | " | |

Surrogate: Tetrachloro-meta-xylene

99.5 % 35-140

" " " "

Surrogate: Decachlorobiphenyl

141 % 35-140

" " " "

S-GC

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 1 (8-12)
T172215-19 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|--|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B | |
| Lead | 21 | 3.0 | " | " | " | " | " | " | |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | | |
|---------------------|----|-----|-------|---|---------|----------|----------|-----------|--|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A | |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " | |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " | |
| Aldrin | ND | 5.0 | " | " | " | " | " | " | |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " | |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " | |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " | |
| Endrin | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " | |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " | |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " | |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " | |
| Methoxychlor | ND | 10 | " | " | " | " | " | " | |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " | |
| Toxaphene | ND | 200 | " | " | " | " | " | " | |

Surrogate: Tetrachloro-meta-xylene

109 % 35-140

"

"

"

"

Surrogate: Decachlorobiphenyl

172 % 35-140

"

"

"

"

S-GC

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 2 (0-4)
T172215-20 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 25 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|------------------------|------------|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | 8.7 | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | 8.7 | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | 5.1 | 5.0 | " | " | " | " | " | " |
| Dieldrin | 5.6 | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 6.2 | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

Surrogate: Tetrachloro-meta-xylene

110 %

35-140

"

"

"

"

Surrogate: Decachlorobiphenyl

138 %

35-140

"

"

"

"

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 2 (8-12)
T172215-21 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 23 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|---------------------|----|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 39.7 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 51.9 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 3 (0-4)
T172215-22 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 18 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|---------------------|----|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 67.1 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 92.2 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 3 (8-12)
T172215-23 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 19 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|---------------------|----|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | ND | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | ND | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 66.2 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 97.7 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 4 (0-4)
T172215-24 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 21 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|------------------------|------------|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | 5.7 | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | 8.6 | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | 21 | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | 36 | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 50 | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

Surrogate: Tetrachloro-meta-xylene

86.0 % 35-140

" " " "

Surrogate: Decachlorobiphenyl

102 % 35-140

" " " "

SunStar Laboratories, Inc.

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.



Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Herbicide Tank 4 (8-12)
T172215-25 (Soil)

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|--------|-------|

SunStar Laboratories, Inc.

Metals by EPA 6010B

| | | | | | | | | |
|-------------|-----------|-----|-------|---|---------|----------|----------|-----------|
| Arsenic | ND | 5.0 | mg/kg | 1 | 7082911 | 08/29/17 | 08/29/17 | EPA 6010B |
| Lead | 23 | 3.0 | " | " | " | " | " | " |

Organochlorine Pesticides by EPA Method 8081A

| | | | | | | | | |
|---------------------|------------|-----|-------|---|---------|----------|----------|-----------|
| alpha-BHC | ND | 5.0 | ug/kg | 1 | 7082829 | 08/28/17 | 08/30/17 | EPA 8081A |
| gamma-BHC (Lindane) | ND | 5.0 | " | " | " | " | " | " |
| beta-BHC | ND | 5.0 | " | " | " | " | " | " |
| delta-BHC | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor | ND | 5.0 | " | " | " | " | " | " |
| Aldrin | ND | 5.0 | " | " | " | " | " | " |
| Heptachlor epoxide | ND | 5.0 | " | " | " | " | " | " |
| gamma-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| alpha-Chlordane | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan I | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDE | 21 | 5.0 | " | " | " | " | " | " |
| Dieldrin | ND | 5.0 | " | " | " | " | " | " |
| Endrin | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDD | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan II | ND | 5.0 | " | " | " | " | " | " |
| 4,4'-DDT | 8.7 | 5.0 | " | " | " | " | " | " |
| Endrin aldehyde | ND | 5.0 | " | " | " | " | " | " |
| Endosulfan sulfate | ND | 5.0 | " | " | " | " | " | " |
| Methoxychlor | ND | 10 | " | " | " | " | " | " |
| Endrin ketone | ND | 5.0 | " | " | " | " | " | " |
| Toxaphene | ND | 200 | " | " | " | " | " | " |

| | | | | | | |
|------------------------------------|--------|--------|---|---|---|---|
| Surrogate: Tetrachloro-meta-xylene | 72.2 % | 35-140 | " | " | " | " |
| Surrogate: Decachlorobiphenyl | 104 % | 35-140 | " | " | " | " |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch 7082513 - EPA 3550B GC

Blank (7082513-BLK1)

Prepared: 08/25/17 Analyzed: 08/26/17

| | | | | | | | | | | |
|--------------------------------|-----|----|-------|-----|--|-----|--------|--|--|--|
| C13-C28 (DRO) | ND | 10 | mg/kg | | | | | | | |
| C29-C40 (MORO) | ND | 10 | " | | | | | | | |
| Surrogate: <i>p</i> -Terphenyl | 102 | | " | 100 | | 102 | 65-135 | | | |

LCS (7082513-BS1)

Prepared: 08/25/17 Analyzed: 08/26/17

| | | | | | | | | | | |
|--------------------------------|-----|----|-------|-----|--|-----|--------|--|--|--|
| C13-C28 (DRO) | 580 | 10 | mg/kg | 500 | | 116 | 75-125 | | | |
| Surrogate: <i>p</i> -Terphenyl | 105 | | " | 100 | | 105 | 65-135 | | | |

Matrix Spike (7082513-MS1)

Source: T172213-01

Prepared: 08/25/17 Analyzed: 08/26/17

| | | | | | | | | | | |
|--------------------------------|-----|----|-------|-----|----|------|--------|--|--|--|
| C13-C28 (DRO) | 500 | 10 | mg/kg | 500 | 21 | 96.0 | 75-125 | | | |
| Surrogate: <i>p</i> -Terphenyl | 102 | | " | 100 | | 102 | 65-135 | | | |

Matrix Spike Dup (7082513-MSD1)

Source: T172213-01

Prepared: 08/25/17 Analyzed: 08/26/17

| | | | | | | | | | | |
|--------------------------------|-----|----|-------|-----|----|-----|--------|------|----|--|
| C13-C28 (DRO) | 590 | 10 | mg/kg | 500 | 21 | 114 | 75-125 | 16.1 | 20 | |
| Surrogate: <i>p</i> -Terphenyl | 108 | | " | 100 | | 108 | 65-135 | | | |

Batch 7082523 - EPA 3550B GC

Blank (7082523-BLK1)

Prepared: 08/25/17 Analyzed: 08/29/17

| | | | | | | | | | | |
|--------------------------------|------|----|-------|-----|--|------|--------|--|--|--|
| C13-C28 (DRO) | ND | 10 | mg/kg | | | | | | | |
| C29-C40 (MORO) | ND | 10 | " | | | | | | | |
| Surrogate: <i>p</i> -Terphenyl | 92.0 | | " | 101 | | 91.1 | 65-135 | | | |

LCS (7082523-BS1)

Prepared: 08/25/17 Analyzed: 08/29/17

| | | | | | | | | | | |
|--------------------------------|------|----|-------|-----|--|------|--------|--|--|--|
| C13-C28 (DRO) | 540 | 10 | mg/kg | 505 | | 107 | 75-125 | | | |
| Surrogate: <i>p</i> -Terphenyl | 86.8 | | " | 101 | | 85.9 | 65-135 | | | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch 7082523 - EPA 3550B GC

LCS Dup (7082523-BSD1)

Prepared: 08/25/17 Analyzed: 08/29/17

| | | | | | | | | | | |
|--------------------------------|------|----|-------|-----|--|------|--------|------|----|--|
| C13-C28 (DRO) | 570 | 10 | mg/kg | 510 | | 111 | 75-125 | 4.36 | 20 | |
| Surrogate: <i>p</i> -Terphenyl | 90.4 | | " | 102 | | 88.6 | 65-135 | | | |

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch 7082911 - EPA 3051

Blank (7082911-BLK1)

Prepared & Analyzed: 08/29/17

| | | | | | | | | | | |
|---------|----|-----|-------|--|--|--|--|--|--|--|
| Arsenic | ND | 5.0 | mg/kg | | | | | | | |
| Lead | ND | 3.0 | " | | | | | | | |

LCS (7082911-BS1)

Prepared & Analyzed: 08/29/17

| | | | | | | | | | | |
|---------|-----|-----|-------|-----|--|-----|--------|--|--|--|
| Arsenic | 108 | 5.0 | mg/kg | 100 | | 108 | 75-125 | | | |
| Lead | 116 | 3.0 | " | 100 | | 116 | 75-125 | | | |

Matrix Spike (7082911-MS1)

Source: T172215-01

Prepared & Analyzed: 08/29/17

| | | | | | | | | | | |
|---------|-----|-----|-------|------|------|------|--------|--|--|--|
| Arsenic | 103 | 5.0 | mg/kg | 98.0 | 2.51 | 103 | 75-125 | | | |
| Lead | 114 | 3.0 | " | 98.0 | 18.4 | 97.2 | 75-125 | | | |

Matrix Spike Dup (7082911-MSD1)

Source: T172215-01

Prepared & Analyzed: 08/29/17

| | | | | | | | | | | |
|---------|-----|-----|-------|------|------|-----|--------|------|----|--|
| Arsenic | 100 | 5.0 | mg/kg | 96.2 | 2.51 | 102 | 75-125 | 3.00 | 20 | |
| Lead | 117 | 3.0 | " | 96.2 | 18.4 | 102 | 75-125 | 2.52 | 20 | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 7082829 - EPA 3550 ECD/GCMS

Blank (7082829-BLK1)

Prepared: 08/28/17 Analyzed: 08/30/17

| | | | | | | | | | | |
|------------------------------------|------|-----|-------|------|--|------|--------|--|--|--|
| alpha-BHC | ND | 5.0 | ug/kg | | | | | | | |
| gamma-BHC (Lindane) | ND | 5.0 | " | | | | | | | |
| beta-BHC | ND | 5.0 | " | | | | | | | |
| delta-BHC | ND | 5.0 | " | | | | | | | |
| Heptachlor | ND | 5.0 | " | | | | | | | |
| Aldrin | ND | 5.0 | " | | | | | | | |
| Heptachlor epoxide | ND | 5.0 | " | | | | | | | |
| gamma-Chlordane | ND | 5.0 | " | | | | | | | |
| alpha-Chlordane | ND | 5.0 | " | | | | | | | |
| Endosulfan I | ND | 5.0 | " | | | | | | | |
| 4,4'-DDE | ND | 5.0 | " | | | | | | | |
| Dieldrin | ND | 5.0 | " | | | | | | | |
| Endrin | ND | 5.0 | " | | | | | | | |
| 4,4'-DDD | ND | 5.0 | " | | | | | | | |
| Endosulfan II | ND | 5.0 | " | | | | | | | |
| 4,4'-DDT | ND | 5.0 | " | | | | | | | |
| Endrin aldehyde | ND | 5.0 | " | | | | | | | |
| Endosulfan sulfate | ND | 5.0 | " | | | | | | | |
| Methoxychlor | ND | 10 | " | | | | | | | |
| Endrin ketone | ND | 5.0 | " | | | | | | | |
| Toxaphene | ND | 200 | " | | | | | | | |
| Surrogate: Tetrachloro-meta-xylene | 7.66 | | " | 10.0 | | 76.6 | 35-140 | | | |
| Surrogate: Decachlorobiphenyl | 9.00 | | " | 10.0 | | 90.0 | 35-140 | | | |

LCS (7082829-BS1)

Prepared: 08/28/17 Analyzed: 08/30/17

| | | | | | | | | | | |
|------------------------------------|------|-----|-------|------|--|------|--------|--|--|--|
| gamma-BHC (Lindane) | 26.8 | 5.0 | ug/kg | 39.6 | | 67.6 | 40-120 | | | |
| Heptachlor | 27.1 | 5.0 | " | 39.6 | | 68.4 | 40-120 | | | |
| Aldrin | 25.3 | 5.0 | " | 39.6 | | 63.8 | 40-120 | | | |
| Dieldrin | 24.9 | 5.0 | " | 39.6 | | 62.9 | 40-120 | | | |
| Endrin | 25.5 | 5.0 | " | 39.6 | | 64.5 | 40-120 | | | |
| 4,4'-DDT | 26.8 | 5.0 | " | 39.6 | | 67.6 | 33-147 | | | |
| Surrogate: Tetrachloro-meta-xylene | 6.56 | | " | 9.90 | | 66.2 | 35-140 | | | |
| Surrogate: Decachlorobiphenyl | 7.47 | | " | 9.90 | | 75.5 | 35-140 | | | |

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch 7082829 - EPA 3550 ECD/GCMS

| Matrix Spike (7082829-MS1) | | Source: T172215-03 | | | Prepared: 08/28/17 Analyzed: 08/30/17 | | | | | |
|------------------------------------|------|--------------------|-------|------|---------------------------------------|------|--------|--|--|-------|
| gamma-BHC (Lindane) | 202 | 50 | ug/kg | 40.0 | 131 | 179 | 30-120 | | | QM-05 |
| Heptachlor | 94.9 | 50 | " | 40.0 | 41.6 | 133 | 30-120 | | | QM-05 |
| Aldrin | 20.2 | 5.0 | " | 40.0 | ND | 50.6 | 30-120 | | | |
| Dieldrin | 25.1 | 5.0 | " | 40.0 | 22.8 | 5.73 | 30-120 | | | QM-05 |
| Endrin | 26.6 | 5.0 | " | 40.0 | 18.4 | 20.5 | 30-120 | | | QM-05 |
| 4,4'-DDT | 38.3 | 5.0 | " | 40.0 | 19.9 | 46.1 | 30-120 | | | |
| Surrogate: Tetrachloro-meta-xylene | 5.02 | | " | 10.0 | | 50.2 | 35-140 | | | |
| Surrogate: Decachlorobiphenyl | 5.63 | | " | 10.0 | | 56.3 | 35-140 | | | |

| Matrix Spike Dup (7082829-MSD1) | | Source: T172215-03 | | | Prepared: 08/28/17 Analyzed: 08/30/17 | | | | | |
|------------------------------------|------|--------------------|-------|------|---------------------------------------|------|--------|------|----|-------|
| gamma-BHC (Lindane) | 430 | 50 | ug/kg | 40.0 | 131 | 749 | 30-120 | 123 | 30 | QM-05 |
| Heptachlor | 101 | 5.0 | " | 40.0 | 41.6 | 148 | 30-120 | 10.3 | 30 | QM-05 |
| Aldrin | 34.5 | 5.0 | " | 40.0 | ND | 86.3 | 30-120 | 52.2 | 30 | QM-05 |
| Dieldrin | 24.0 | 5.0 | " | 40.0 | 22.8 | 2.98 | 30-120 | 63.1 | 30 | QM-05 |
| Endrin | 47.2 | 5.0 | " | 40.0 | 18.4 | 72.0 | 30-120 | 111 | 30 | QM-05 |
| 4,4'-DDT | 56.8 | 5.0 | " | 40.0 | 19.9 | 92.3 | 30-120 | 66.8 | 30 | QM-05 |
| Surrogate: Tetrachloro-meta-xylene | 7.34 | | " | 10.0 | | 73.4 | 35-140 | | | |
| Surrogate: Decachlorobiphenyl | 8.63 | | " | 10.0 | | 86.3 | 35-140 | | | |

Batch 7082830 - EPA 3550 ECD/GCMS

| Blank (7082830-BLK1) | | Prepared: 08/28/17 Analyzed: 08/30/17 | | | | | | | | |
|----------------------|----|---------------------------------------|-------|--|--|--|--|--|--|--|
| alpha-BHC | ND | 5.0 | ug/kg | | | | | | | |
| gamma-BHC (Lindane) | ND | 5.0 | " | | | | | | | |
| beta-BHC | ND | 5.0 | " | | | | | | | |
| delta-BHC | ND | 5.0 | " | | | | | | | |
| Heptachlor | ND | 5.0 | " | | | | | | | |
| Aldrin | ND | 5.0 | " | | | | | | | |
| Heptachlor epoxide | ND | 5.0 | " | | | | | | | |
| gamma-Chlordane | ND | 5.0 | " | | | | | | | |
| alpha-Chlordane | ND | 5.0 | " | | | | | | | |
| Endosulfan I | ND | 5.0 | " | | | | | | | |
| 4,4'-DDE | ND | 5.0 | " | | | | | | | |
| Dieldrin | ND | 5.0 | " | | | | | | | |
| Endrin | ND | 5.0 | " | | | | | | | |
| 4,4'-DDD | ND | 5.0 | " | | | | | | | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|----------------|-----|--------------|-------|

Batch 7082830 - EPA 3550 ECD/GCMS

Blank (7082830-BLK1)

Prepared: 08/28/17 Analyzed: 08/30/17

| | | | | | | | | | |
|------------------------------------|------|-----|-------|------|--|------|--------|--|--|
| Endosulfan II | ND | 5.0 | ug/kg | | | | | | |
| 4,4'-DDT | ND | 5.0 | " | | | | | | |
| Endrin aldehyde | ND | 5.0 | " | | | | | | |
| Endosulfan sulfate | ND | 5.0 | " | | | | | | |
| Methoxychlor | ND | 10 | " | | | | | | |
| Endrin ketone | ND | 5.0 | " | | | | | | |
| Toxaphene | ND | 200 | " | | | | | | |
| Surrogate: Tetrachloro-meta-xylene | 7.85 | | " | 10.0 | | 78.5 | 35-140 | | |
| Surrogate: Decachlorobiphenyl | 8.72 | | " | 10.0 | | 87.2 | 35-140 | | |

LCS (7082830-BS1)

Prepared: 08/28/17 Analyzed: 08/30/17


| | | | | | | | | | |
|------------------------------------|------|-----|-------|------|--|------|--------|--|--|
| gamma-BHC (Lindane) | 33.0 | 5.0 | ug/kg | 39.6 | | 83.3 | 40-120 | | |
| Heptachlor | 33.5 | 5.0 | " | 39.6 | | 84.6 | 40-120 | | |
| Aldrin | 30.5 | 5.0 | " | 39.6 | | 77.1 | 40-120 | | |
| Dieldrin | 31.1 | 5.0 | " | 39.6 | | 78.5 | 40-120 | | |
| Endrin | 31.7 | 5.0 | " | 39.6 | | 80.0 | 40-120 | | |
| 4,4'-DDT | 36.3 | 5.0 | " | 39.6 | | 91.6 | 33-147 | | |
| Surrogate: Tetrachloro-meta-xylene | 7.76 | | " | 9.90 | | 78.4 | 35-140 | | |
| Surrogate: Decachlorobiphenyl | 8.31 | | " | 9.90 | | 83.9 | 35-140 | | |

LCS Dup (7082830-BSD1)

Prepared: 08/28/17 Analyzed: 08/30/17

| | | | | | | | | | |
|------------------------------------|------|-----|-------|------|--|------|--------|------|----|
| gamma-BHC (Lindane) | 34.0 | 5.0 | ug/kg | 40.0 | | 84.9 | 40-120 | 1.87 | 30 |
| Heptachlor | 34.8 | 5.0 | " | 40.0 | | 87.1 | 40-120 | 2.94 | 30 |
| Aldrin | 31.8 | 5.0 | " | 40.0 | | 79.5 | 40-120 | 2.98 | 30 |
| Dieldrin | 32.7 | 5.0 | " | 40.0 | | 81.7 | 40-120 | 3.92 | 30 |
| Endrin | 33.3 | 5.0 | " | 40.0 | | 83.2 | 40-120 | 3.98 | 30 |
| 4,4'-DDT | 39.2 | 5.0 | " | 40.0 | | 98.0 | 33-147 | 6.80 | 30 |
| Surrogate: Tetrachloro-meta-xylene | 7.82 | | " | 10.0 | | 78.2 | 35-140 | | |
| Surrogate: Decachlorobiphenyl | 8.73 | | " | 10.0 | | 87.3 | 35-140 | | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 7082508 - EPA 5030 GCMS

Blank (7082508-BLK1)

Prepared & Analyzed: 08/25/17

| | | | |
|-----------------------------|----|-----|-------|
| Bromobenzene | ND | 5.0 | ug/kg |
| Bromochloromethane | ND | 5.0 | " |
| Bromodichloromethane | ND | 5.0 | " |
| Bromoform | ND | 5.0 | " |
| Bromomethane | ND | 5.0 | " |
| n-Butylbenzene | ND | 5.0 | " |
| sec-Butylbenzene | ND | 5.0 | " |
| tert-Butylbenzene | ND | 5.0 | " |
| Carbon tetrachloride | ND | 5.0 | " |
| Chlorobenzene | ND | 5.0 | " |
| Chloroethane | ND | 5.0 | " |
| Chloroform | ND | 5.0 | " |
| Chloromethane | ND | 5.0 | " |
| 2-Chlorotoluene | ND | 5.0 | " |
| 4-Chlorotoluene | ND | 5.0 | " |
| Dibromochloromethane | ND | 5.0 | " |
| 1,2-Dibromo-3-chloropropane | ND | 10 | " |
| 1,2-Dibromoethane (EDB) | ND | 5.0 | " |
| Dibromomethane | ND | 5.0 | " |
| 1,2-Dichlorobenzene | ND | 5.0 | " |
| 1,3-Dichlorobenzene | ND | 5.0 | " |
| 1,4-Dichlorobenzene | ND | 5.0 | " |
| Dichlorodifluoromethane | ND | 5.0 | " |
| 1,1-Dichloroethane | ND | 5.0 | " |
| 1,2-Dichloroethane | ND | 5.0 | " |
| 1,1-Dichloroethene | ND | 5.0 | " |
| cis-1,2-Dichloroethene | ND | 5.0 | " |
| trans-1,2-Dichloroethene | ND | 5.0 | " |
| 1,2-Dichloropropane | ND | 5.0 | " |
| 1,3-Dichloropropane | ND | 5.0 | " |
| 2,2-Dichloropropane | ND | 5.0 | " |
| 1,1-Dichloropropene | ND | 5.0 | " |
| cis-1,3-Dichloropropene | ND | 5.0 | " |
| trans-1,3-Dichloropropene | ND | 5.0 | " |
| Hexachlorobutadiene | ND | 5.0 | " |
| Isopropylbenzene | ND | 5.0 | " |

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 7082508 - EPA 5030 GCMS

Blank (7082508-BLK1)

Prepared & Analyzed: 08/25/17

| | | | | | | | | | | |
|---------------------------------|------|-----|-------|------|--|-----|----------|--|--|--|
| p-Isopropyltoluene | ND | 5.0 | ug/kg | | | | | | | |
| Methylene chloride | ND | 5.0 | " | | | | | | | |
| Naphthalene | ND | 5.0 | " | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | |
| Tetrachloroethene | ND | 5.0 | " | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | |
| Trichloroethene | ND | 5.0 | " | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | |
| Vinyl chloride | ND | 5.0 | " | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | |
| Ethylbenzene | ND | 5.0 | " | | | | | | | |
| m,p-Xylene | ND | 10 | " | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | |
| Tert-amyl methyl ether | ND | 20 | " | | | | | | | |
| Tert-butyl alcohol | ND | 50 | " | | | | | | | |
| Di-isopropyl ether | ND | 20 | " | | | | | | | |
| Ethyl tert-butyl ether | ND | 20 | " | | | | | | | |
| Methyl tert-butyl ether | ND | 20 | " | | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 40.4 | | " | 40.0 | | 101 | 81.2-123 | | | |
| Surrogate: Dibromofluoromethane | 40.4 | | " | 40.0 | | 101 | 95.7-135 | | | |
| Surrogate: Toluene-d8 | 42.2 | | " | 40.0 | | 106 | 85.5-116 | | | |

SunStar Laboratories, Inc.

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.

Lisa Nguyen, Project Manager Assistant

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch 7082508 - EPA 5030 GCMS

LCS (7082508-BS1)

Prepared & Analyzed: 08/25/17

| | | | | | | | | | | |
|---------------------------------|------|-----|-------|------|--|------|----------|--|--|------|
| Chlorobenzene | 80.6 | 5.0 | ug/kg | 99.6 | | 80.9 | 75-125 | | | |
| 1,1-Dichloroethene | 77.3 | 5.0 | " | 99.6 | | 77.6 | 75-125 | | | |
| Trichloroethene | 75.5 | 5.0 | " | 99.6 | | 75.9 | 75-125 | | | |
| Benzene | 86.6 | 5.0 | " | 99.6 | | 86.9 | 75-125 | | | |
| Toluene | 81.6 | 5.0 | " | 99.6 | | 81.9 | 75-125 | | | |
| Surrogate: 4-Bromofluorobenzene | 52.8 | | " | 39.8 | | 133 | 81.2-123 | | | S-GC |
| Surrogate: Dibromofluoromethane | 53.6 | | " | 39.8 | | 134 | 95.7-135 | | | |
| Surrogate: Toluene-d8 | 51.6 | | " | 39.8 | | 130 | 85.5-116 | | | S-GC |

LCS Dup (7082508-BSD1)

Prepared & Analyzed: 08/25/17

| | | | | | | | | | | |
|---------------------------------|------|-----|-------|------|--|------|----------|-------|----|--|
| Chlorobenzene | 80.9 | 5.0 | ug/kg | 99.4 | | 81.4 | 75-125 | 0.417 | 20 | |
| 1,1-Dichloroethene | 74.7 | 5.0 | " | 99.4 | | 75.2 | 75-125 | 3.47 | 20 | |
| Trichloroethene | 76.3 | 5.0 | " | 99.4 | | 76.8 | 75-125 | 0.981 | 20 | |
| Benzene | 86.1 | 5.0 | " | 99.4 | | 86.7 | 75-125 | 0.545 | 20 | |
| Toluene | 80.3 | 5.0 | " | 99.4 | | 80.8 | 75-125 | 1.61 | 20 | |
| Surrogate: 4-Bromofluorobenzene | 43.9 | | " | 39.8 | | 110 | 81.2-123 | | | |
| Surrogate: Dibromofluoromethane | 45.9 | | " | 39.8 | | 116 | 95.7-135 | | | |
| Surrogate: Toluene-d8 | 42.2 | | " | 39.8 | | 106 | 85.5-116 | | | |

SunStar Laboratories, Inc.



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.

Lisa Nguyen, Project Manager Assistant



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

Blackburn Consulting-West Sac.
2491 Boatman Ave.
West Sacramento CA, -

Project: Liberty Island Ranch Phase II
Project Number: 3281.X
Project Manager: Ryan Schmidt

Reported:
09/01/17 16:48

Notes and Definitions

| | |
|-------|---|
| S-GC | Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s). |
| R-07 | Reporting limit for this compound(s) has been raised to account for dilution necessary due to high levels of interfering compound(s) and/or matrix affect. |
| QM-05 | The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected. |
| 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.

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.

Lisa Nguyen, Project Manager Assistant

Chain of Custody Record

[illegible]

COC 130706

Chain of Custody Record

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

Client: Blackburn Consulting
Address: 2901 Boatman Ave, West Sac, CA
Phone: _____ Fax: _____
Project Manager: Ryan Schmidt ryans@blackburnconsulting.com

Date: 8/24/17 Page: 2 of 2
Project Name: Liberty Island Ranch Phase II
Collector: _____ Client Project #: 3281.X
Batch #: 71722215 EDF #: _____

| Sample ID | Date Sampled | Time | Sample Type | Container Type | 8260 | 8260 + OXY | 8260 BTEX, OXY only | 8270 | 8021 BTEX | 8015M (gasoline) | 8015M (diesel) | 8015M Ext./Carbon Chain | 6010/7000 Title 22 Metals (Pb, As) | OCP | Laboratory ID # | Comments/Preservative | Total # of containers |
|------------------------------|--------------|--------|--------------------------|----------------|-------|------------|---------------------|------|-----------|------------------|----------------|-------------------------|------------------------------------|-----|-----------------|-----------------------|-----------------------|
| Tank 1 (0-4) | 8/24 | | soil | glass | /// | | | | | /// | /// | /// | /// | /// | 13 | | 1 |
| Tank 2 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 14 | | 1 |
| Tank 3 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 15 | | 1 |
| Herbicide Tank 1 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 16 | | 1 |
| Herb Tank 2 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 17 | | 1 |
| Herb Tank 3 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 18 | | 1 |
| Herb Tank 4 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 19 | | 1 |
| Herb Tank 5 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 20 | | 1 |
| Herb Tank 6 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 21 | | 1 |
| Herb Tank 7 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 22 | | 1 |
| Herb Tank 8 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 23 | | 1 |
| Herb Tank 9 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 24 | | 1 |
| Herb Tank 10 (0-4) | | | | | | | | | | /// | /// | /// | /// | /// | 25 | | 1 |
| Relinquished by: (signature) | | | | | | | | | | | | | | | | | |
| Relinquished by: (signature) | 8-24-17 | 3:36pm | Received by: (signature) | 8/24/17 | 1536 | | | | | | | | | | 25 | | |
| Relinquished by: (signature) | 8/25/17 | 13:45 | Received by: (signature) | 8/25/17 | 13:45 | | | | | | | | | | 30 | | |
| Relinquished by: (signature) | | | Received by: (signature) | | | | | | | | | | | | | | |

Turn around time: _____

Total # of containers
Chain of Custody seals Y/N/A
Seals intact? Y/N/A
Received good condition/cold

Notes

Sample disposal Instructions: Disposal @ \$2.00 each _____

Return to client _____

Pickup _____

COC 130707



SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #: T172215

Client Name: BLACKBURN CONG. Project: LIBERTY ISLAND RANCH PHASE II

Delivered by: ☐ Client ☐ SunStar Courier ☐ GSO ☐ FedEx ☐ Other

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

Lab Received by: Brian Date/Time Lab Received: 8/23/17 13:45

Total number of coolers received: 1

| | | |
|--|---|--|
| Temperature: Cooler #1 <u>3.2</u> | °C +/- the CF (- 0.2°C) = <u>3.0</u> | °C corrected temperature |
| Temperature: Cooler #2 | °C +/- the CF (- 0.2°C) = | °C corrected temperature |
| Temperature: Cooler #3 | °C +/- the CF (- 0.2°C) = | °C corrected temperature |
| Temperature criteria = ≤ 6°C (no frozen containers) | | Within criteria? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| If NO: | | |
| Samples received on ice? | <input type="checkbox"/> Yes | <input type="checkbox"/> No → Complete Non-Conformance Sheet |
| If on ice, samples received same day collected? | <input type="checkbox"/> Yes → Acceptable | <input type="checkbox"/> 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: BC 8/23/17

Comments: _____

Lisa

From: Ryan Schmidt [ryans@blackburnconsulting.com]
Sent: Friday, August 25, 2017 3:56 PM
To: Lisa
Subject: Re: [Response Requested] Liberty Island Ranch Phase II (T172215)

Let her know we are not testing for VOC, just BTEX/MTBE

Get [Outlook for Android](#)

From: Lisa
Sent: Friday, August 25, 3:44 PM
Subject: [Response Requested] Liberty Island Ranch Phase II (T172215)
To: Ryan Schmidt

Hello Ryan,

Attached to this email is the work order and chain-of-custody received 08/25/17 at 1345

Project: Liberty Island Ranch Phase II
Project Number: 3281.x

TAT requested: standard
Results are scheduled to be delivered by COB on: 09/01/17

For the 8260 analysis, would you like the full VOC to be reported along with MTBE or just the BTEX/MTBE to be reported?

Please carefully review the attachments and feel free to contact me if you have any questions or concerns.
Thank you for choosing



Sunstar Laboratories.

Lisa Nguyen
Project Manager Assistant

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

WORK ORDER

T172215

Client: Blackburn Consulting-West Sac.

Project Manager: Lisa Nguyen

Project: Liberty Island Ranch Phase II

Project Number: 3281.X

Report To:

Blackburn Consulting-West Sac.

Ryan Schmidt

2491 Boatman Ave.

West Sacramento, CA -

Date Due: 09/01/17 17:00 (5 day TAT)

Received By: Brian Charon

Date Received: 08/25/17 13:45

Logged In By: Brian Charon

Date Logged In: 08/25/17 13:54

Samples Received at: 3°C

Custody Seals Yes Received On Ice Yes

Containers Intact Yes

COC/Labels Agree Yes

Preservation Confir No

| Analysis | Due | TAT | Expires | Comments |
|----------|-----|-----|---------|----------|
|----------|-----|-----|---------|----------|

T172215-01 Barn 1 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US &

| | | | | |
|------------------------|----------------|---|----------------|-------|
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
|------------------------|----------------|---|----------------|-------|

T172215-02 Storage 1 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US &

| | | | | |
|------------------------|----------------|---|----------------|-------|
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
|------------------------|----------------|---|----------------|-------|

| | | | | |
|-----------------|----------------|---|----------------|--|
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
|-----------------|----------------|---|----------------|--|

T172215-03 Storage 1 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US &

| | | | | |
|------------------------|----------------|---|----------------|-------|
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
|------------------------|----------------|---|----------------|-------|

| | | | | |
|-----------------|----------------|---|----------------|--|
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
|-----------------|----------------|---|----------------|--|

T172215-04 Storage 2 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US &

| | | | | |
|------------------------|----------------|---|----------------|-------|
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
|------------------------|----------------|---|----------------|-------|

| | | | | |
|-----------------|----------------|---|----------------|--|
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
|-----------------|----------------|---|----------------|--|

T172215-05 Storage 2 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US &

| | | | | |
|------------------------|----------------|---|----------------|-------|
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
|------------------------|----------------|---|----------------|-------|

| | | | | |
|-----------------|----------------|---|----------------|--|
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
|-----------------|----------------|---|----------------|--|

WORK ORDER

T172215

Client: Blackburn Consulting-West Sac.

Project Manager: Lisa Nguyen

Project: Liberty Island Ranch Phase II

Project Number: 3281.X

| Analysis | Due | TAT | Expires | Comments |
|--|----------------|-----|----------------|----------------|
| T172215-06 Storage 3 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-07 Storage 4 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-08 Storage 5 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-09 Storage 6 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-10 Storage 7 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-11 Stain 1 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |

WORK ORDER

T172215

Client: Blackburn Consulting-West Sac.

Project Manager: Lisa Nguyen

Project: Liberty Island Ranch Phase II

Project Number: 3281.X

| Analysis | Due | TAT | Expires | Comments |
|--|----------------|-----|----------------|----------------|
| T172215-12 Stain 1 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-13 Tank 1 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-14 Tank 1 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-15 Tank 2 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-16 Tank 2 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-17 Tank 3 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 8015 CC (D/MO) | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| 8260 | 09/01/17 15:00 | 5 | 09/07/17 00:00 | BTEX,MTBE only |
| T172215-18 Herbicide Tank 1 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-19 Herbicide Tank 1 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |

WORK ORDER

T172215

Client: Blackburn Consulting-West Sac.

Project Manager: Lisa Nguyen

Project: Liberty Island Ranch Phase II

Project Number: 3281.X

| Analysis | Due | TAT | Expires | Comments |
|--|----------------|-----|----------------|----------|
| T172215-20 Herbicide Tank 2 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-21 Herbicide Tank 2 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-22 Herbicide Tank 3 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-23 Herbicide Tank 3 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-24 Herbicide Tank 4 (0-4) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |
| T172215-25 Herbicide Tank 4 (8-12) [Soil] Sampled 08/24/17 00:00 (GMT-08:00) Pacific Time (US & | | | | |
| 6010 Individual Metals | 09/01/17 15:00 | 5 | 02/20/18 00:00 | Pb,As |
| 8081 Pesticides | 09/01/17 15:00 | 5 | 09/07/17 00:00 | |