Drainage, Hydrology, and Water Quality Analysis Report for the California Renewable Carbon Williams Production Facility

Colusa County, California

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July 2021

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1.0 INTRODUCTION

This Drainage, Hydrology and Water Quality Assessment Report has been prepared for California Renewable Carbon, LLC (CRC) for the proposed Williams Production Facility (the "Project") in Colusa County, California (Figure 1-1). The overall Project entails the installation and operation of a biocarbon production facility using renewable biomass on an existing approximately 49-acre industrial site at 6229 Myers Road in Williams, California.

CRC is a leader in environmental technology with more than 185 issued and pending patents around processes and products engineered to improve the environment. CRC proposes to repurpose an existing facility in Colusa County to construct a new renewable biocarbon production facility. The new facility will use CRC's patented non combustion technology to convert sustainably sourced biomass into renewable biocarbon products. The new facility will use self-generated renewable biogas for process energy as well as generate and export renewable electricity to the grid. The new biocarbon process will be net water positive and carbon negative on a lifecycle basis. The facility also will significantly reduce regional air emissions by thousands of tons per year by converting locally sourced biomass such as orchard rotations and trimmings, that otherwise undergo open burning or land disposal, into renewable biocarbon products. CRC's products will be used to displace fossil-based products and reduce environmental impacts from metals production, energy generation, and crop production, and to purify the air and water. CRC will create more than 65 direct clean-tech jobs working toward environmental improvement.

The Project Site is in unincorporated Colusa County, approximately 1.4 miles south of Williams, California (see Figure 1-1). The site at the northeast corner of the intersection of Myers Road and Frontage Road would be the location of the CRC Williams facility. The site currently accommodates the existing Olam Tomato Processing facility, comprising approximately 161,000 square feet of existing buildings, an existing rail spur, and two existing water wells, as shown on the Site Plan for the Project dated June 30, 2021. The site is bound by the Wadham Energy Company facility just north of the Project Site with agricultural lands north of the Wadham facility, and agricultural land and residences to the east and south. The Union Pacific Railroad (UPRR) tracks and Frontage Road run west of the site then Interstate-5 (I-5) further west. Orchard land with a single-family residence on a parcel zoned for Heavy Industrial (M-2) is located between Frontage Road and I-5 approximately 150 feet from the western boundary of the site. The site is located approximately 1,000 feet (0.3 mile) from I-5.

The purpose of the Project is to use renewable biomass, primarily in the form of orchard rotations and trimmings, to produce a biocarbon product using a net water positive, non-combustion process involving thermal conversion of biomass. The process will use self-generated biogas for process energy and will provide net electric power for export sale to Pacific Gas and Electric (PG&E) through interconnection to either a PG&E 12 kilovolt (kV) distribution line or PG&E's Wadham 60 kV power line to PG&E's Williams Generating Station. The project will also include improvements to, and extension of, an existing rail spur system on the property which interconnects with the Union Pacific Railroad tracks adjacent to the property.

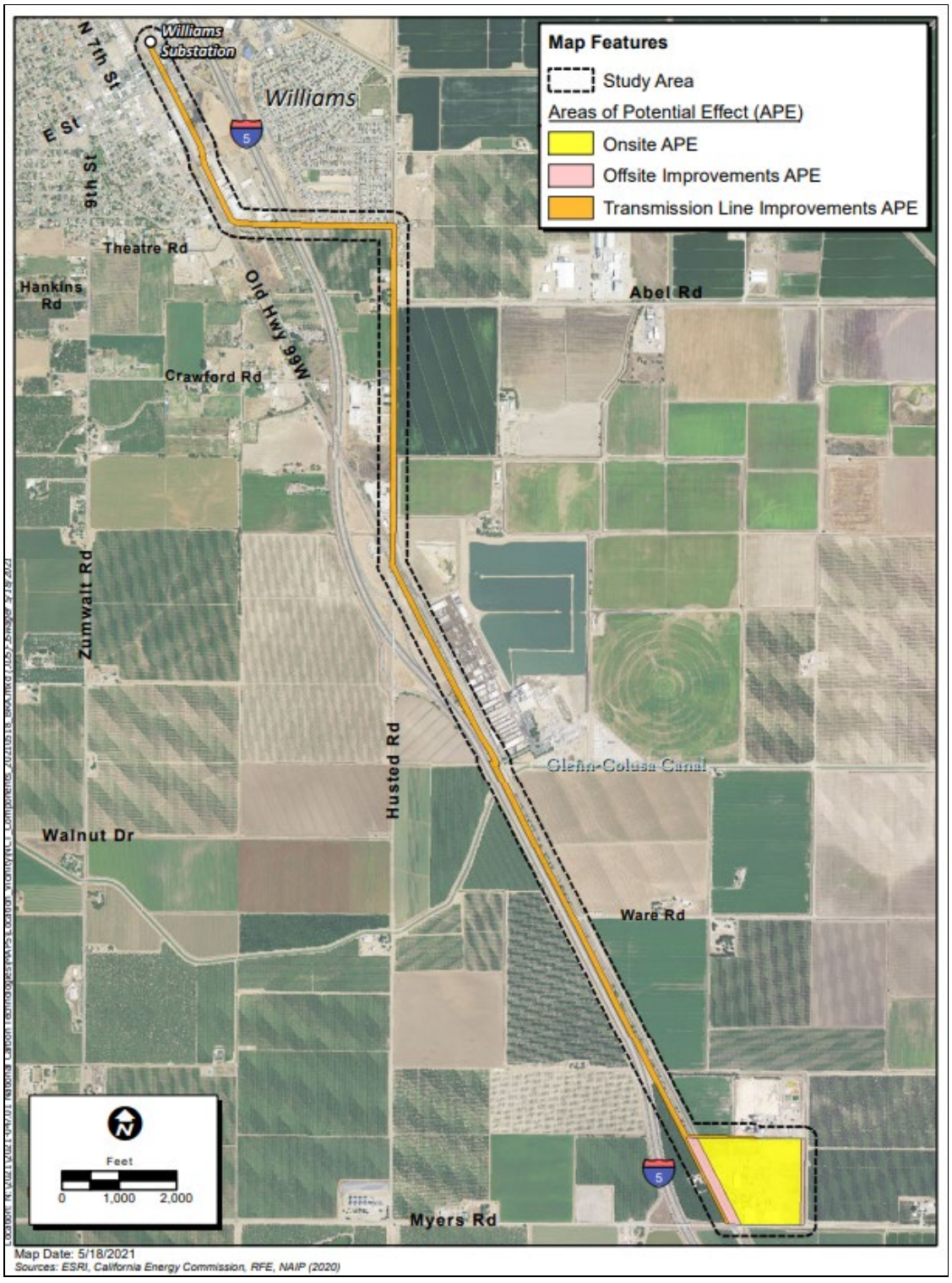

Figure 1-1. Project Location and Vicinity

The process at the CRC Williams facility would involve the following components discussed in more detail:

- Biomass receiving and sizing;

- Biomass drying;
- Non-combustion thermal conversion;
- Pelletizing;
- Pellet finishing and shipping; and
- Cogeneration.

CRC would utilize all existing buildings onsite and would construct several smaller support structures for the process. A new paved access road into the northeast corner of the facility would be constructed as well as a new drainage basin and other drainage improvements. New process equipment, tanks, pipe bridges, and conveyor belts would be installed outdoors in the central portion of the site in and around existing buildings.

The Project would involve improvements to, and extension of, an existing rail spur system on the property that interconnects to the UPRR tracks that run adjacent to the Project Site and along I-5. Improvements to the existing rail spur may involve improvements to the rail spur track (i.e., new ballast, ties, rail), signal improvements, and/or improvements to utility lines along the rail spur (electrical lines, fiber optic lines, etc.). Improvements to the UPRR tracks may be requested by UPRR, including potentially new ballast, ties, rail, and/or signal or utility line improvements on or near the UPRR tracks. Extension of the rail spur is also proposed along the eastern boundary of the CRC Williams facility property. New track, signal facilities, and utility lines will be installed in this area in support of the rail spur. Finally, a new rail spur loadout area would be constructed adjacent to the new rail spur.

Biogas from the process would be used in a new cogeneration system for generation of electricity. The process would provide net electric power for export sale to PG&E through interconnection to either PG&E's Williams 1101 12 kV distribution line or PG&E's Wadham 60 kV power line to PG&E's Williams Generating Station. Both existing lines are located on the same power poles along Frontage Road running north to the PG&E Williams Generating Station in Williams. It is assumed that PG&E will require reconductoring along this route and may require replacement of some or all of the power poles along this route. For interconnection to the 12 kV distribution line, a new transformer or circuit breaker may be required at the PG&E Williams Generating Station (within the station facility). Alternatively, for interconnection to the Wadham 60 kV power line, a new 60 kV gentie line would be required on the CRC Williams facility that would interconnect with the Wadham 60 kV line with a new three-breaker ring bus that would be located on the northwest corner of the CRC Williams facility. Improvements at the Williams Generation Station are not anticipated for interconnection to the 60 kV power line.

Grading would be required for new foundations, for paving of the new internal access roads, and drainage improvements on the CRC Williams facility. Construction at the CRC Williams facility, including offsite improvements required for the interconnection to PG&E's electrical system and any improvements to the interconnection to the UPRR tracks, is expected to take 14 months to complete using approximately 42 construction workers.

The CRC Williams facility can process up to 750,000 gross wet tons of renewable feedstock per year. The source locations for renewable feedstock would primarily comprise orchards in the region, and primarily

within Colusa County. Approximately 125 heavy truck trips per day would be utilized to deliver renewable feedstock to the CRC Williams facility. Source locations for the renewable feedstock are expected to be primarily within 75 miles of the CRC Williams facility. Heavy trucks would utilize local area roadways to access I-5, to travel either north or south along I-5 to the CRC Williams facility. Heavy trucks would either utilize the I-5/Husted Road interchange to then travel southbound on the two-lane Frontage Road to the facility or utilize the I-5/Hahn Road interchange to travel northbound on the two-lane Frontage Road to the facility.

Rail cars would be loaded with biocarbon product at the proposed rail car loadout area. A new electric switching locomotive would be utilized on the property to move cars along the rail spur system. Approximately 50 rail cars per week would be utilized to transport biocarbon product on UPRR tracks to one or more major ports in California and/or Oregon for ultimate transport of the biocarbon product via Handymax class vessels.

2.0 ENVIRONMENTAL SETTING

The evaluations presented in this report are consistent with the California Environmental Quality Act (CEQA) Guidelines, Appendix G, as modified on December 28, 2018. The environmental setting consists of the existing hydrologic conditions in the region and at the Project site. Existing conditions are described below for both surface water and groundwater, and for water quality. The existing conditions define the baseline for the evaluation of potential environmental impacts. In Section 5.0, the identified baseline conditions are compared with the anticipated Project effects discussed in Section 3.0 to assess the level of significance of any potential impacts.

2.1 Climate

The Project site is in the western part of the Sacramento Valley. The Sacramento Valley has a Mediterranean climate with cool, wet winters and hot, dry summers. Regionally, temperature and precipitation vary with elevation, with the lower temperatures and higher precipitation typically occurring at higher elevations.

The nearest meteorological station to the Project site from which long-term precipitation data are available is the Colusa 2SSW station, located 7.5 miles to the northeast. This location is also designated as Station 041948 as part of the National Weather Service Cooperative Network (WRCC 2021). The average annual high temperature is 75 degrees Fahrenheit (deg F) but monthly average high temperatures can range from 54 deg F in January to 95 deg F in July. The average annual low temperature is 48 deg F, with monthly average low temperatures ranging from 37 degrees in January and December to 59 degrees in July.

Rainfall data are available from October 1948 through April 2021 from the Colusa 2SSW station. In the discussions in this report, the rainfall data are presented for a water year. A water year in this region of California begins on October 1 and extends through September 30 of the subsequent calendar year. A water year better represents rainfall and hydrologic patterns than a calendar year does. In the discussions

below, water years are designated by the year in which they end. For example, the 2019 water year began on October 1, 2018 and ended on September 30, 2019.

The average annual rainfall from 1949 to 2021 is 15.58 inches. Figure 2-1 presents the annual water year rainfall based on the Sacramento Valley Water Year Hydrologic Classification Index (DWR 2021b). This index was developed based on total discharge through the Sacramento River system. However, for this analysis, it has been applied specifically to the water year rainfall (see ECORP 2021 for additional details).

As shown on Figure 2-1, the two wettest years on record were 1995 and 1998, with 32.78 inches and 32.75 inches of rain, respectively. The driest complete water year was 1976, with 5.51 inches of rain. While the 2021 water year is not yet complete, the total rainfall through April 30 has been 5.31 inches. If no significant additional precipitation occurs this water year, then 2021 will be the driest year on record. As can be seen on Figure 2-1, multi-year periods of below normal rainfall occurred from 1987 through 1991, 2007 through 2009, 2012 through 2016[1], and 2020 through 2021. In contrast, wet periods with three or more successive years of above normal rainfall only occurred twice since 1949, from 1982 to 1984 and from 2002 to 2006.

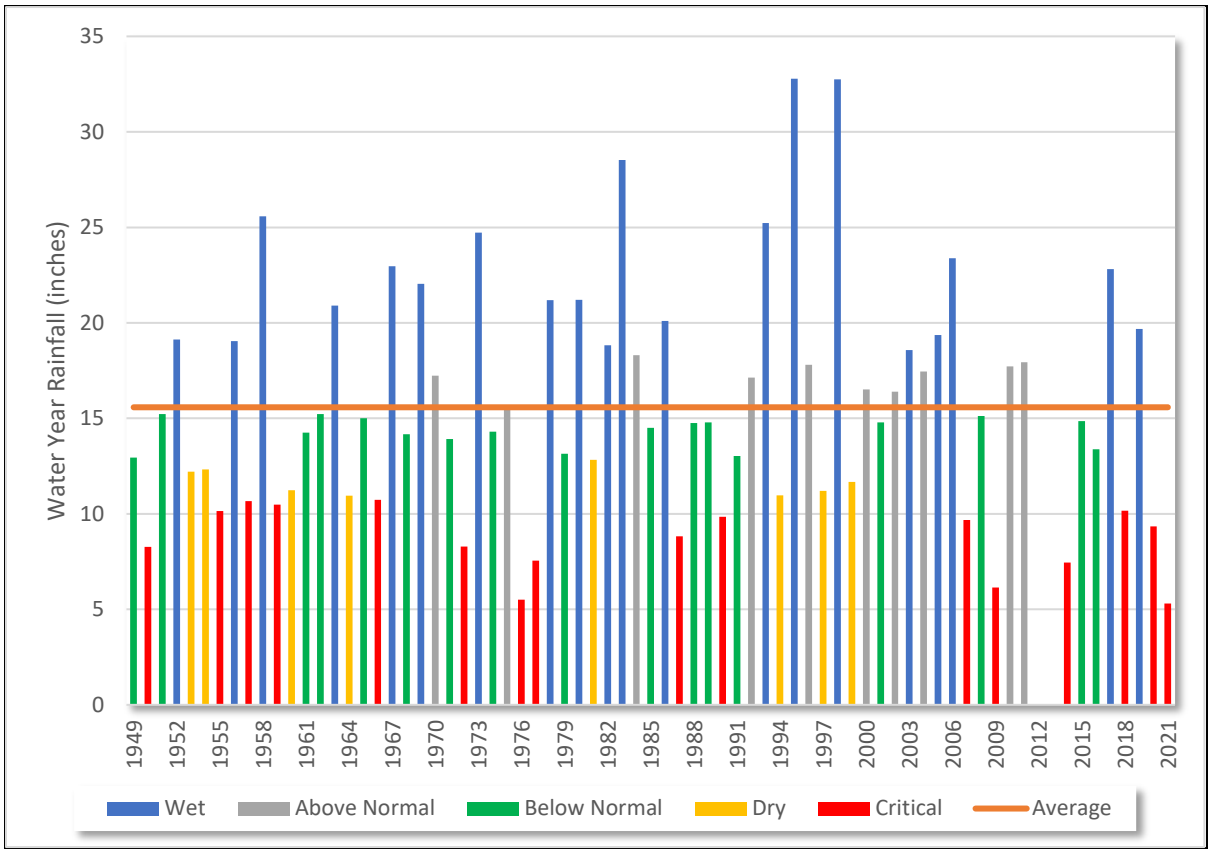

Figure 2-1. Annual Rainfall by Water Year Index

[1] While insufficient data are available from the Colusa 2SSW station for 2012 and 2013, data from other sources confirms that these were below normal years.

2.2 Surface Water

This section describes the environmental setting, or existing conditions, related to surface water, including both surface water occurrence and surface water quality.

2.2.1 Regional Conditions

The Project site is located in the western part of the Sacramento Valley (referred to below as the "valley"). There are two primary natural waterways that affect the hydrology of the western part of the valley, the Sacramento River and Stony Creek. Many smaller intermittent streams drain the foothills that abut the Coast Ranges west of the Sacramento Valley.

The Sacramento River flows north to south along the center of the valley. The Sacramento River provides approximately 80 percent of the inflow to the Sacramento-San Joaquin Delta and is the largest and most important riverine ecosystem in the State of California (DWR 2009). The Sacramento River is also the primary surface water source for irrigation water suppliers on the west side of the valley. Mean daily stream flows on the Sacramento River at Colusa have ranged from less than 4,000 cfs to over 50,000 cfs since 1985, as depicted on Figure 2-2 (USGS 2021). Flows on the Sacramento River also generally vary consistent with the wet and dry climatic periods described in Section 2.1, above. The total drainage area of the Sacramento River above Colusa is over 12,000 square miles.

The Upper Stony Creek watershed drains an approximately 770 square mile area of the Coast Range, foothills, and uplands, most of which is west of the Sacramento Valley.

There are also several major water conveyance features that deliver water to and remove excess drainage from agricultural lands in the western part of the valley, referred to as the Tehama-Colusa Canal, the Glenn-Colusa Canal, and the Colusa Basin Drainage Canal system, otherwise known as the Colusa Basin Drain. Smaller canal and channel systems transport water between the natural waterways and conveyance structures.

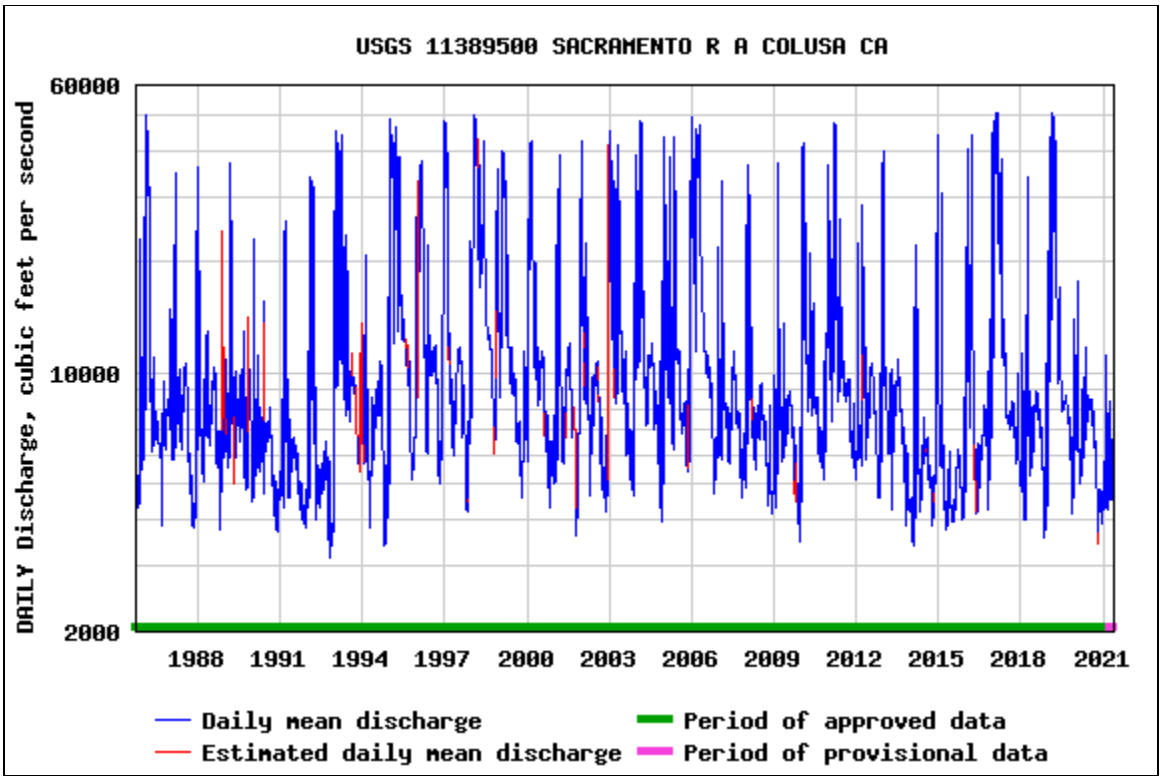

Figure 2-2. Mean Daily Discharge on the Sacramento River at Colusa, October 1, 1985 through May 23, 2021

2.2.2 Site-Specific Conditions

The elevation of the Project site varies from approximately 98 feet above mean sea level (ft msl) along the north property line to approximately 91 ft msl in the southeast and southwest corners of the site. Runoff in unimproved areas of the site occurs by sheet flow. In paved and developed parts of the site, runoff was collected in drop inlets and small box culverts covered with grates and routed to a central collection point, where it may have been pumped to an onsite process water pond for reuse in the former tomato processing operations.

Table 2-1 summarizes the rainfall totals for a range of potential design storm events based on precipitation frequency estimates for the site location (NOAA 2021).

Table 2-1. Rainfall Totals for Design Storm Events

Return Period (years)	Duration (hours)	Rainfall (inches)
10	1	0.675
25	1	0.825
100	1	1.06

10	24	2.97
25	24	3.56
100	24	4.48

The Project site is in an area of minimal flood hazard risk and is not in or near a 100-year floodplain, as shown on Figure 2-3 (FEMA 2021).

ECORP made field observations during a site reconnaissance on May 7, 2021 related to water infrastructure and drainage features at the site under existing, baseline conditions. The northern 20.538 acres of the approximately 48.538-acre property are referred to as Parcel 3 (see ALTA Survey maps in Appendix A). The west and north boundaries of Parcel 3 have berms that prevent any onsite or offsite flow of stormwater runoff. The eastern boundary of Parcel 3 allows stormwater runoff to move by sheet flow to a small offsite drainage swale. The offsite drainage swale flows toward the north to a corrugated metal pipe drainage inlet, which conveys the runoff across the adjacent driveway into an irrigation drain that flows toward the south parallel to the eastern site boundary. Most of Parcel 3 is undeveloped, exposed ground except for a concrete pad area in the central part of the south area of this parcel. Except for the eastern area, runoff from Parcel 3 moves by sheet flow toward the south.

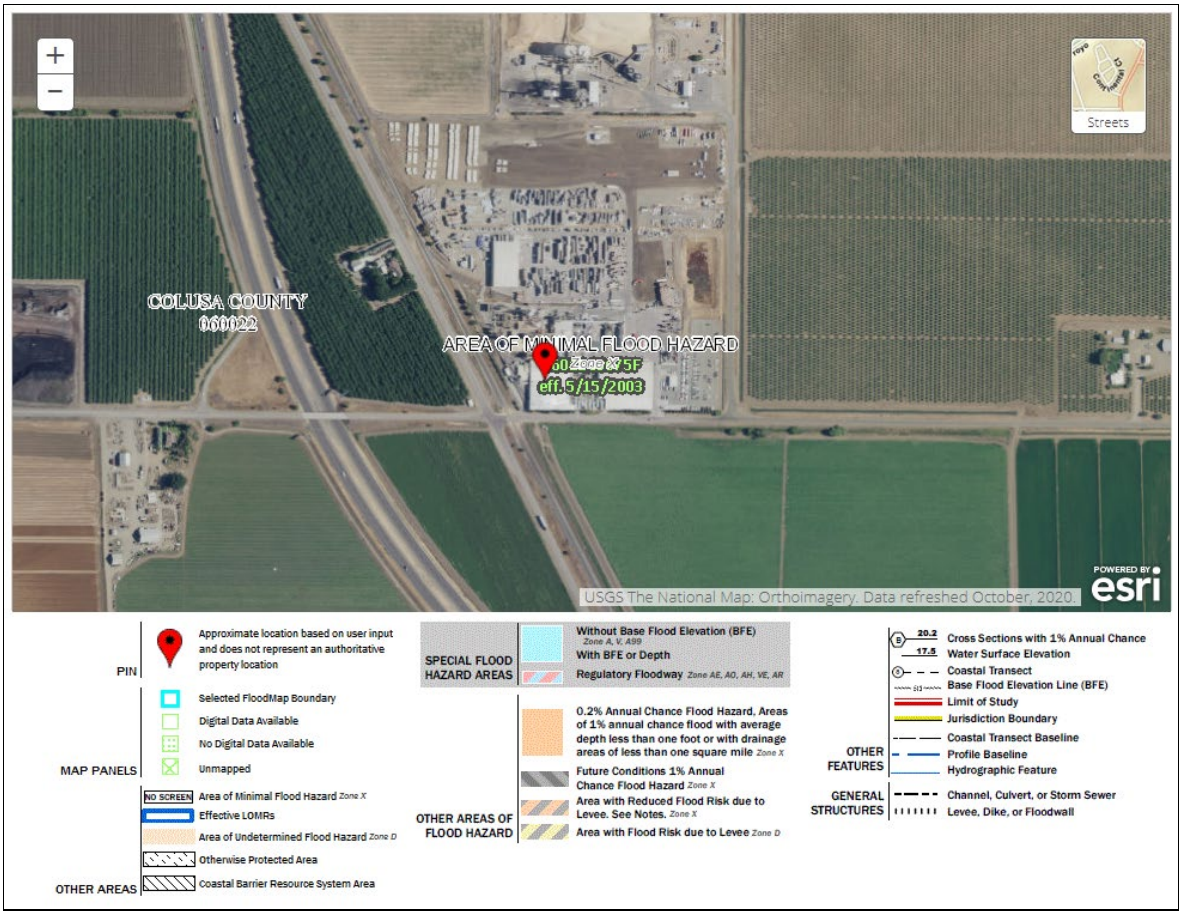

Figure 2-3. FEMA Floodplain Map (FEMA 2021)

The central 5.717 acres of the property are referred to as Parcel 2. A berm is present along the western boundary of Parcel 2, which prevents onsite or offsite flow of stormwater runoff. The eastern boundary of Parcel 2 includes the northern part of a wastewater pond. The berms for the wastewater pond extend approximately five feet above the natural grade. Runoff from the east berm of the pond flows into the shallow drainage swale that directs stormwater to the north toward the drainage inlet described above. The central part of Parcel 2 includes concrete pads and a large warehouse building. There are several drainage inlets and drainage culverts associated with the concrete pads and building that are reported to convey stormwater to a sump in the eastern part of Parcel 1 (RWQCB 2018). Stormwater from undeveloped areas of Parcel 2 flows by sheet flow primarily to the south.

The southern 22.283 acres of the property are referred to as Parcel 1. The western two-thirds of this parcel consists of the former tomato processing plant equipment, a rail spur, and related facilities. This part of Parcel 1 is paved and contains numerous buildings. Stormwater is collected in several drainage inlets and culverts that reportedly convey the runoff to a sump in the eastern part of the parcel (RWQCB 2018). Runoff from the paved plant area along the south boundary of the site flows offsite onto Myers Road. The eastern part of Parcel 1 includes the southern part of the former wastewater sump and a gravel parking lot that overlies a septic leach field. Runoff from the east berm of the pond and the gravel parking lot is conveyed by sheet flow to a shallow drainage swale just east of the property boundary that flows south along a paved driveway to Myers Road. There was no apparent drainage inlet or other collection or conveyance feature observed at the south end of this shallow drainage swale.

According to RWQCB (2018), the former wastewater pond has a 12-inch low-permeability liner constructed from a 50 percent mixture of imported clay and native onsite soil. With two feet of freeboard, the pond has a reported capacity of 2.7 million gallons (approximately 8.25 acre-feet). The freeboard space has an additional volume capacity of approximately 3.1 acre-feet. An inactive pumping station and pipelines to discharge water to and pump water from the wastewater pond are present at the site. As described above, the berm surrounding the pond is approximately five feet higher than the surrounding native ground elevation. The bottom of the pond is approximately six feet below the surrounding native ground elevation.

The facilities to be installed as part of the Project would combine the Parcel 2 and Parcel 3 areas into the north area of the site while Parcel 1 would constitute the south area of the site with respect to stormwater runoff. CRC has provided ECORP with estimates prepared by an engineering consultant for peak stormwater flows for various design storm events and the runoff volume for a 100-year, 24-hour storm event. Table -2-2 summarizes the peak runoff rates, in cubic feet per second, provided by CRC for the north part of the Project site. Table 2-3 summarizes the peak runoff rates, in cubic feet per second, for the south part of the site. In general, the peak runoff for a 100-year storm is twice that for the 10-year event for each parcel.

The effects of the new facilities and proposed Project conditions on the peak runoff rates are discussed in Section 3.1.

Table 2-2. North Area Peak Stormwater Runoff							
	Peak Outflow (cubic feet per second)						
Storm Frequency	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Existing Conditions	13.52	20.36	29.68	37.48	48.08	56.39	64.72
With New Facilities	21.66	31.94	45.66	57.03	72.38	84.36	96.34
Proposed Project Conditions with New Retention Pond	0.00	0.00	0.00	3.729	25.44	44.33	62.95

Table 2-3 South Area Peak Stormwater Runoff							
	Peak Outflow (cubic feet per second)						
Storm Frequency	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Existing Conditions	14.7	21.72	31.18	39.04	49.67	57.98	66.29
Proposed Project Conditions	14.7	21.72	31.18	39.04	49.67	57.98	66.29

In addition to the peak runoff rates, CRC also provided ECORP with engineering estimates of the peak runoff volumes for a 100-year, 24-hour storm event. The peak runoff volumes are shown, in acre-feet, for the north area and the south area in Tables 2-4 and 2-5, respectively. The effects of the new facilities and proposed Project conditions on the peak runoff volumes are discussed in Section 3.1.

Table 2-4. North Area Total Runoff Volume (acre-feet) 100-yr, 24-hr Storm	
Existing Conditions	6.8
With New Facilities	7.1
Proposed Project Conditions with New Retention Pond	2.4

Table 2-5. South Area Total Runoff Volume (acre-feet) 100-yr, 24-hr Storm	
Existing Conditions	6.7
Proposed Project Conditions	6.7

2.2.3 Existing Surface Water Quality

Because most of the stormwater runoff from the existing site was collected and routed to the wastewater pond, stormwater monitoring was not conducted as part of the former tomato processing operation. As a result, there are no readily available data for existing surface water quality at the Project site.

2.3 Groundwater

This section describes the environmental setting, or existing conditions, related to groundwater, including both groundwater occurrence and groundwater quality.

2.3.1 Regional Conditions

The proposed CRC Williams Facility is located within the Colusa Subbasin within the larger Sacramento Valley Groundwater Basin. The Colusa Subbasin is designated as basin number 5-021.52 by the California Department of Water Resources (DWR 2006). The subbasin area is shown on Figure 2-4. The basin encompasses most of Colusa and Glenn Counties east of the Coast Ranges and west of the Sacramento River, with an area of approximately 1,131 square miles, or 723,823 acres (Colusa GSA and Glenn GSA 2021). The bottom of the subbasin is defined either by crystalline bedrock or the base of freshwater, below which saline water is present in the porous sediments that make up the groundwater aquifers.

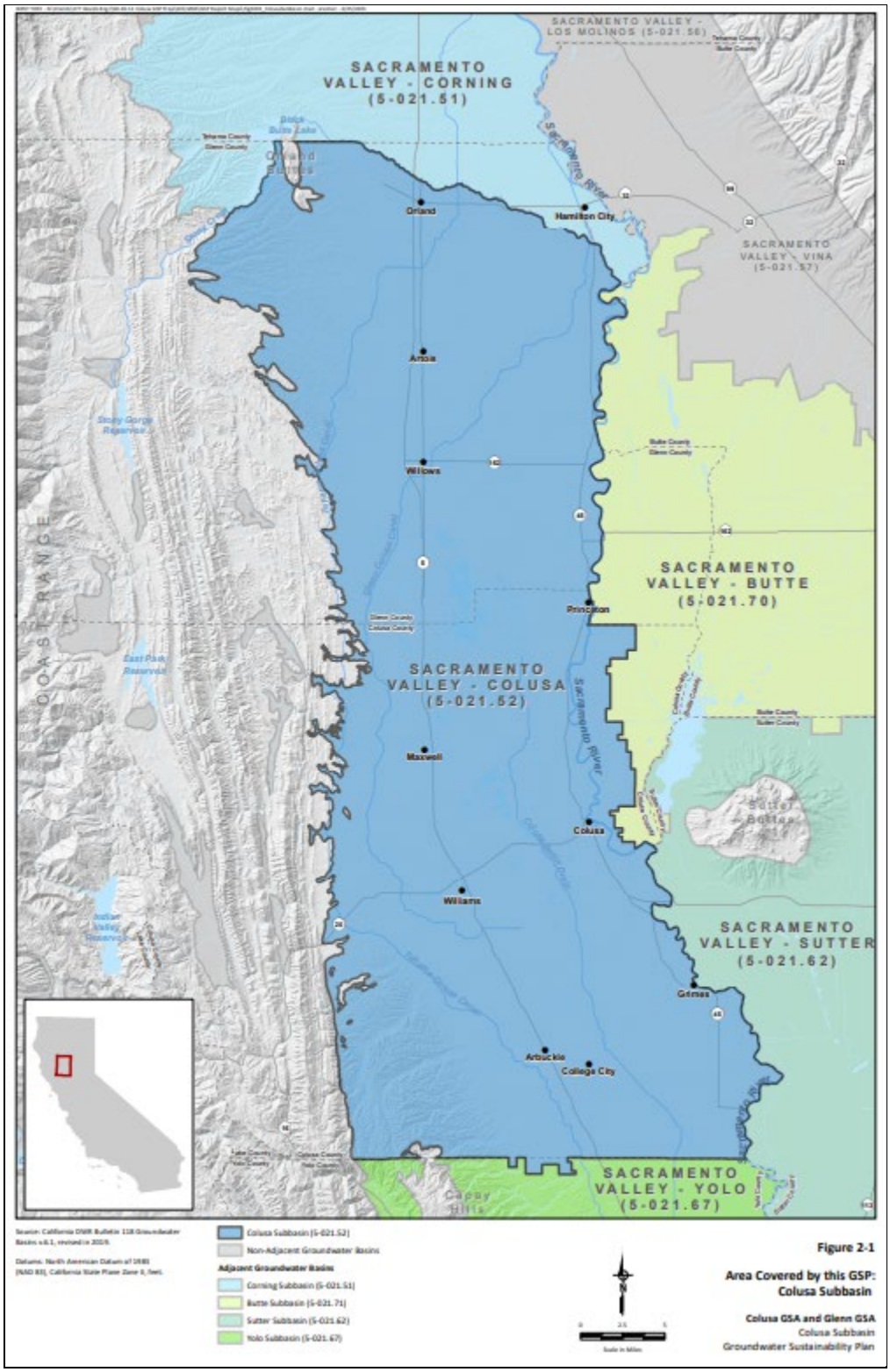

Figure 2-4. Colusa Subbasin

The primary aquifer in the Project area is the Tehama Formation. Groundwater in the Colusa Subbasin occurs under semiconfined to confined conditions within interconnected channels and lenses of high-

permeability sand and gravel interbedded with thick low-permeability sediments such as silts and clays (Colusa GSA and Glenn GSA 2021). While there are no defined continuous aquitard units within the subbasin, the fine-grained sediments tend to impede vertical movement of groundwater and may limit deep recharge of the channels and lenses of coarser sediments that comprise the water-bearing aquifer deposits.

Based on groundwater contour maps provided in the draft Groundwater Sustainability Plan (GSP) (Appendix 3B in Colusa GSA and Glenn GSA 2021), groundwater in the subbasin generally flows eastward from the edge of the Coast Ranges on the west toward the Sacramento River on the east, and from north to south parallel to the Sacramento River.

In general, groundwater levels within the Colusa Subbasin fluctuate seasonally due to increased pumping demand in the summer and increased recharge during the winter and spring. In addition, groundwater levels fluctuate due to longer climatic cycles consisting of wet periods and drought periods, as indicated by the hydrograph shown on Figure 2-5. The well location for this hydrograph is just southwest of College City, approximately nine miles southeast of the Project site.

As indicated by the water levels shown on Figure 2-5, prior to the 2012-2016 drought, past dry periods primarily affected the summer season low groundwater elevations but did not substantially affect the winter season high groundwater elevations. For example, during the 1987-1991 drought, the seasonal peak groundwater elevations were between 40 and 45 feet below the surface, which is comparable to the high groundwater elevations in the five years prior to and after the drought period. However, as the drought progressed, the summer low elevation became progressively lower, eventually dropping to approximately -20 feet (20 feet below sea level) in 1991, whereas the groundwater lows prior to and after this drought period were at least 35 feet higher. However, this pattern appears to have changed with recent drought periods, with both the seasonal high and low groundwater elevations dropping appreciably beginning in 2012, as shown on Figure 2-5, due to reduced rainfall available for recharge and potentially increased groundwater pumping due to curtailment of surface water deliveries for irrigation.

The current volume of groundwater within the Colusa Subbasin, above crystalline bedrock and the base of freshwater, is estimated to be between 26 million acre-feet to 140 million acre-feet (Colusa GSA and Glenn GSA 2021). Current groundwater pumping is approximately 499,000 acre-feet per year and is projected to increase to as much as 559,000 acre-feet per year by 2070. The sustainable yield[2] is estimated to be 500,000 acre-feet per year currently and is projected to increase to 551,000 acre-feet per year by 2070.

[2] Sustainable yield refers to the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin, that can be withdrawn annually from the groundwater subbasin without causing an undesirable result (see additional discussion in Sections 4.3 and 4.4 of the Water Supply Assessment [ECORP 2021]).

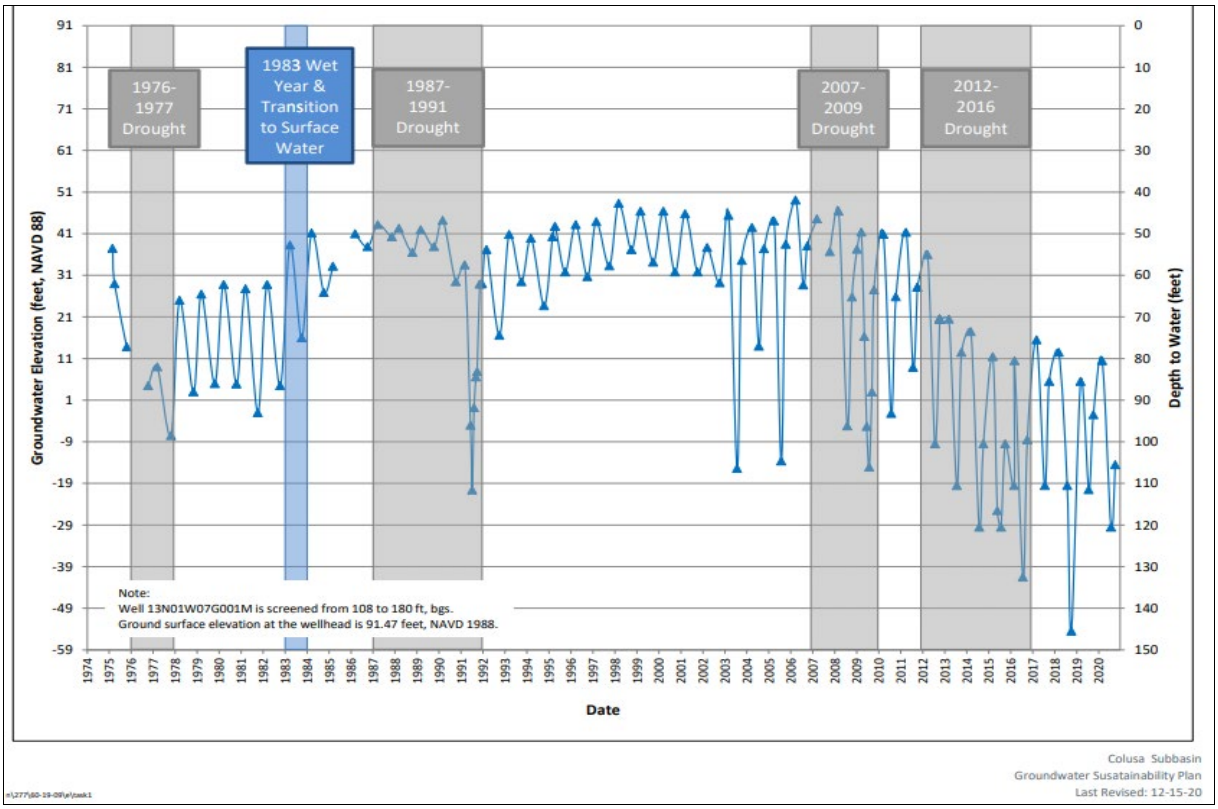

Figure 2-5. Hydrograph showing effects of drought and non-drought conditions on groundwater levels in the Colusa Subbasin

2.3.2 Site-Specific Conditions

In the Project vicinity, groundwater flows toward the northeast. At the Project location, the hydraulic gradient, or slope of the groundwater surface, averages approximately 10 feet per mile, which is equivalent to a gradient of about 0.002 ft/ft.

Appendix 3A of the draft GSP for the Colusa Subbasin (Colusa GSA and Glenn GSA 2021) provides hydrographs showing the change in the groundwater elevations and depth to groundwater in the Project vicinity. The two nearest wells to the Project site presented in Appendix 3A of the draft GSP are designated by State Well Numbers 14N02W13N001M (referred to herein as Well 13N) and 15N02W19E001M (referred to herein as Well 19E). Well 13N is located approximately four miles southeast of the Project site and Well 19E is located approximately three miles northwest of the Project site. The water level data from these two wells are shown on Figures 2-6 and 2-7.

At Well 13N, located to the southeast, the depth to groundwater has varied from approximately 20 feet below ground surface (ft bgs) to approximately 50 ft bgs since the 1950s, as shown on Figure 2-6. Seasonal fluctuations average approximately 15 feet. The depth to groundwater generally varies in response to wet and dry climatic cycles, similar to those depicted on Figure 2-5. (Colusa GSA and Glenn GSA 2021).

At Well 19E, located to the northwest, groundwater levels were generally 20 to 30 feet bgs prior to the 1980s. However, in approximately 1983, irrigation in some parts of the Colusa Subbasin transitioned from groundwater to imported surface water (Colusa GSA and Glenn GSA 2021). As a result of this transition, the depth to groundwater at Well 19E increased to approximately 10 to 15 ft bgs and remained relatively stable in that range until 2020, and seasonal fluctuations averaged less than 10 feet. However, the current dry conditions and reduced availability of surface water have caused the water level at Well 19E to drop recently to approximately 35 ft bgs, as indicated on Figure 2-7.

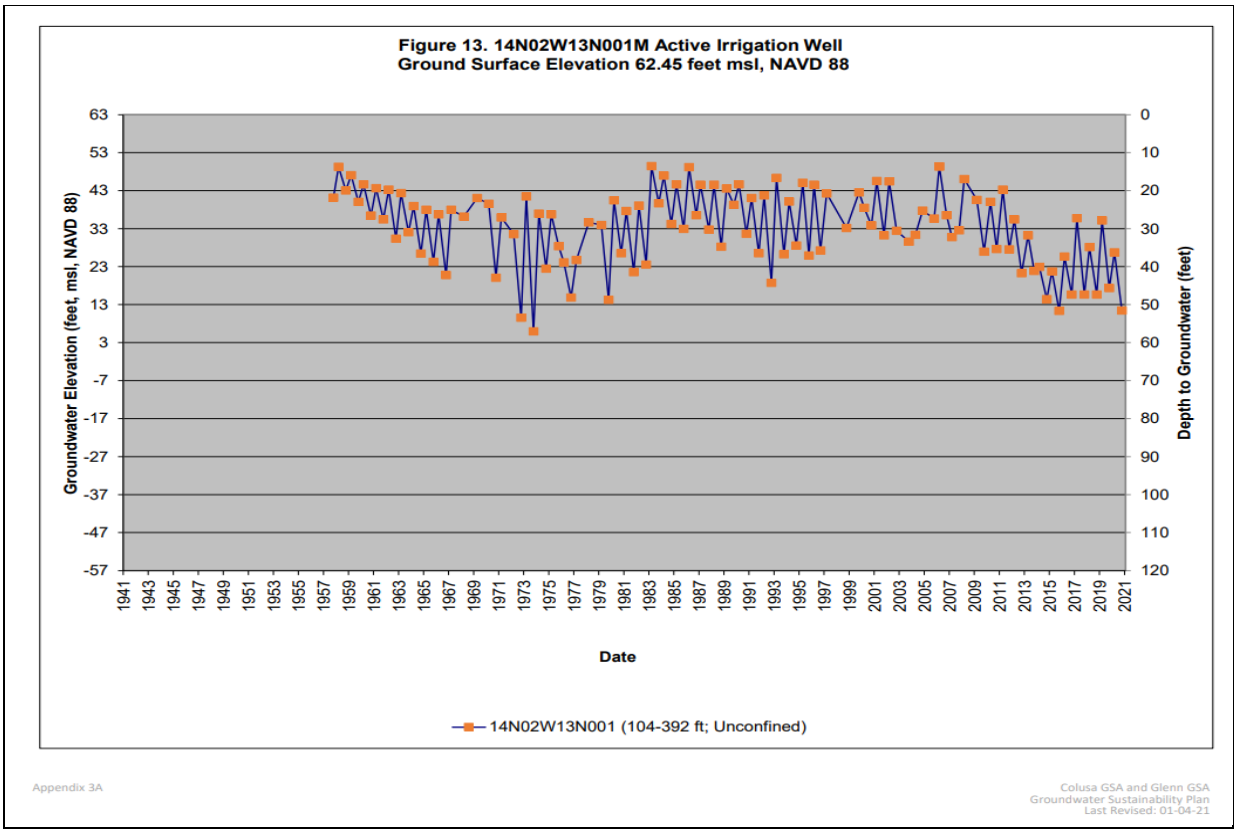

Figure 2-6. Hydrograph for Well 13N

Three groundwater supply wells have previously been drilled at the site, at the locations designated as Wells #1 through #3 on the Site Plan for the Project dated June 30, 2021. Well #1 has been abandoned and plugged. Well #2 and Well #3 were used to supply the former Olam Tomato Processing facility and will be used to supply water for the Project.

Well #2 was drilled in 1981 to a total depth of 500 feet. The predominant materials encountered throughout the borehole were sand and sandy clay. Coarse-grained aquifer deposits were identified from 308 ft bgs to 316 ft bgs, from 370 ft bgs to 390 ft bgs, and from 420 ft bgs to 440 ft bgs. The well was completed with a 16-inch steel casing to 440 ft bgs, with the perforated interval (i.e. the interval that allows groundwater to flow into the well) from 360 ft bgs to 440 ft bgs. Gravel was placed in the annulus between the casing and the wall of the borehole from 50 ft bgs to 440 ft bgs. A sanitary seal was installed

to a depth of 50 ft bgs. The depth to water and the production capacity of Well #2 were not reported at the time the well was drilled. The Well Completion Report for Well #2 is provided in Appendix B.

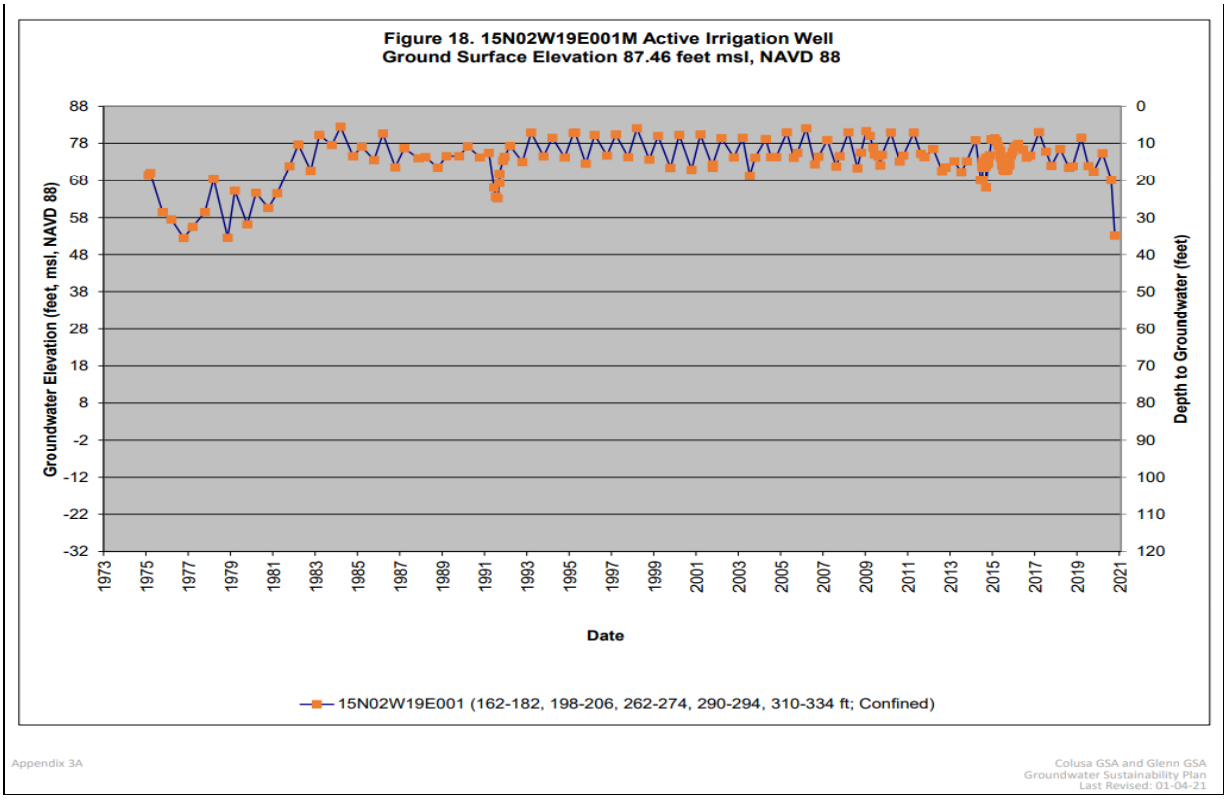

Figure 2-7. Hydrograph for Well 19E

Well #3 was drilled in 2016 to a total depth of 800 feet. The predominant material encountered throughout the borehole was a brown clay. Coarse-grained aquifer deposits were identified from 310 ft bgs to 350 ft bgs and from 370 ft bgs to 440 ft bgs. The well was backfilled to 470 feet and completed with a 16-inch steel casing to that depth, with perforated intervals from 300 ft bgs to 350 ft bgs and from 370 ft bgs to 420 ft bgs. The gravel pack was placed in the annulus between the casing and the wall of the borehole from 240 ft bgs to 470 ft bgs, with a 10-foot bentonite seal above the gravel pack. A sanitary seal was installed to a depth of 230 ft bgs. The depth to water at the time the well was installed was reported to be 57 ft bgs. During a six-hour production test, Well #3 was reported to yield 2,050 gallons per minute (gpm) with a drawdown of 43 feet, yielding a specific capacity of 47.7 gpm/ft. Based on the specific capacity and the screened interval, the aquifer at the Well #3 location may have a transmissivity of 11,000 ft^2/day and a hydraulic conductivity of 110 ft/day (equivalent to 4 X 10^{-2} cm/sec) (Thomasson et al., 1960). The Well Completion Report for Well #3 is provided in Appendix B.

According to information provided to CRC from Olam, the two existing onsite wells are set up to pump 900 gpm each. For 2019, approximately 29 million gallons of groundwater were produced each month during the summer tomato processing season while during the off-season, approximately 5 million gallons of groundwater were produced each month. The total groundwater production in 2019 is reported to have been 179 million gallons, or approximately 550 acre-feet. From 2012 through 2016, total

groundwater production is reported to have ranged from 166 million gallons (509 acre-feet) to 222 million gallons (681 acre-feet) (RWQCB 2018).

2.3.3 Groundwater Quality

Table 2-6 provides the data from Well #2 for samples collected in May 2019 as part of the monitoring requirements for Olam's potable water system permit along with typical water quality standards. Olam's groundwater sample results are also contained in Appendix C. These standards consist of primary and secondary drinking water maximum contaminant levels and Regional Water Quality Control Board Basin Plan limits for discharge to surface waters. Based on the information presented in Table 2-6, the existing baseline groundwater quality meets water quality standards.

Table 2-6. Water Quality Data from Well #2 Sampled on May 30, 2019 For Potable Water System Permit Monitoring Requirements

Parameters	Units	Result	Water Quality Standard
ORGANIC COMPOUNDS			
Volatile Organics by EPA Method 524.2	µg/L	All ND	Varies
Dibromochloropropane by EPA Method 504.1	µg/L	ND (>0.01)	0.2
Ethylene Dibromide by EPA Method 504.1	µg/L	ND (>0.02)	0.05
Additional Organics by EPA Method 552.2	µg/L	All ND	Varies
GENERAL MINERAL AND PHYSICAL PARAMETERS			
Total Hardness as Calcium Carbonate (CaCO3)	mg/L	195	
Calcium	mg/L	42	
Magnesium	mg/L	22	
Sodium	mg/L	55	
Potassium	mg/L	1	
Total Alkalinity as $CaCO_3$	mg/L	210	
Hydroxide	mg/L	ND (<10)	
Carbonate	mg/L	ND (<10)	
Bicarbonate	mg/L	250	
Sulfate	mg/L	63.7	250
Chloride	mg/L	43	250
Nitrate as NO_3	mg/L	15.5	45
Fluoride	mg/L	0.2	2
pH	standard units	6.7	
Specific Conductance	µmhos/cm	703	900
Total Dissolved Solids	mg/L	420	500
Apparent Color	color units	ND (<5)	15
Odor Threshold	TON	ND (<1)	3
Turbidity (lab)	NTU	0.1	5

Table 2-6. Water Quality Data from Well #2 Sampled on May 30, 2019 For Potable Water System Permit Monitoring Requirements

Parameters	Units	Result	Water Quality Standard
MBAS	mg/L	ND (<0.05)	0.5
METALS			
Aluminum	µg/L	ND (<50)	1000
Antimony	µg/L	ND (<6)	6
Arsenic	µg/L	2	10
Barium	µg/L	ND (<100)	1000
Beryllium	µg/L	ND (<1)	4
Cadmium	µg/L	ND (<1)	5
Chromium (total)	µg/L	11	50
Copper	µg/L	ND (<50)	1000
Iron	µg/L	ND (<100)	300
Lead	µg/L	ND (<5)	15
Manganese	µg/L	ND (<20)	50
Mercury	µg/L	ND (<1)	2
Nickel	µg/L	ND (<10)	100
Selenium	µg/L	ND (<5)	50
Silver	µg/L	ND (<10)	100
Thallium	µg/L	ND (<1)	2
Zinc	µg/L	ND (<50)	
OTHER INORGANICS			
Boron	µg/L	200	1000
Bromide	mg/L	ND (<0.5)	
Cyanide	µg/L	ND (<4)	150
Langelier Index at 20 degrees Celsius	mg/L	-0.8	
Molybdenum	µg/L	ND (<0.5)	
Nitrate as Nitrogen (N)	mg/L	3.5	10
Nitrate + Nitrite as N	mg/L	3.5	10
Nitrite as N	mg/L	ND (<0.4)	1
Hexavalent Chromium	µg/L	8.1	
Sodium Adsorption Ratio (SAR)	mg/L	1.7	
Silica	mg/L	24	
Vanadium	µg/L	8	
Aggressiveness Index		11	
Perchlorate	µg/L	ND (<4)	6
Uranium	pCi/L	0.6	0.7

Table 2-6. Water Quality Data from Well #2 Sampled on May 30, 2019 For Potable Water System Permit Monitoring Requirements

Parameters	Units	Result	Water Quality Standard
RADIOLOGICAL			
Gross Alpha	pCi/L	2.28 +/-1.75	15
Gross Beta	pCi/L	1.49 +/-1.20	
Total Alpha (Radium 226)	pCi/L	0.043 +/-0.132	5
Radium 228	pCi/L	0.000 +/-0.536	5

Notes:
µmhos/cm microohms per centimeter
µg/L micrograms per liter
mg/L milligrams per liter
MBAS methylene blue active substances
ND not detected; number in parentheses indicates the detection limit
NTU Nephelometric Turbidity Unit
pCi/L picocuries per liter
TON threshold odor number

3.0 ANTICIPATED PROJECT CONDITIONS

The Project will result in various changes to the existing environmental setting. From the perspective of drainage, hydrology, and water quality, these effects include changes in runoff patterns and stormwater management practices, changes in the amount of groundwater used, and other potential changes. The discussion below identifies the likely changes and disturbances and, where possible, provides some quantification of the magnitude of the effects.

3.1 Surface Water

Construction activities are anticipated to include modification of the existing rail spur and construction of additional rail spurs, building modifications, and the installation of paved areas and processing equipment in the currently undeveloped parts of Parcel 3. These construction and soil disturbance activities would need to be conducted in accordance with the requirements of a construction stormwater pollution prevention plan (C-SWPPP). CRC would need to file a Notice of Intent (NOI) to comply with the construction general permit. The C-SWPPP would identify potential locations and operations where construction activities could pollute storm water runoff. Best Management Practices (BMPs) and appropriate monitoring requirements would also be described in the C-SWPPP.

In the north part of the site, a stormwater retention basin will be added to capture part of the peak stormwater flows. The basin will include an overflow weir that will allow flows that exceed the basin volume to discharge from the east side of the site in a manner similar to current conditions. As indicated in Table 2-4, the basin will completely capture the runoff from small storm events (1-year, 2-year, and 5-year storms) and will attenuate the peak runoff from larger events so that the peak flow rates would be less than under existing conditions. Table 2-4 shows that the retention pond will appreciably reduce the

volume of stormwater that would be discharged from the site. The retained stormwater would either be used as process water, offsetting the need to pump an equivalent amount of groundwater, or would be allowed to percolate to the subsurface, recharging the groundwater aquifer. CRC would need to file a Notice of Intent (NOI) to comply with the industrial general stormwater permit and prepare an industrial SWPPP (I-SWPPP). The I-SWPPP would identify potential locations and operations where operational activities could pollute storm water runoff. Best Management Practices (BMPs) and appropriate monitoring requirements would also be described in the I-SWPPP.

As indicated in Tables 2-3 and 2-5, above, peak runoff rates and runoff volumes from the south area would not change as a result of the Project.

3.2 Groundwater

The primary source of water for the Project would be the two existing supply wells, Well #2 and Well #3. Project water demand includes water used in the process for cooling, pellet mixing, and boiler feedwater for the cogeneration system. CRC estimates that net annual industrial process water demand for the cogeneration system will be approximately 1,004 acre-feet. Additional process water demand will be met by water recovered and recycled from the biomass drying process. The anticipated potable demand for employees is anticipated to be 1,000 gallons per day, which is about one acre-foot per year. Approximately 17 acre-feet per year will be used for dust control in the raw material storage areas on the north part of the site. Annual fire water storage and maintenance will be approximately three acre-feet per year. Thus, the annual water demand is anticipated to be 1,025 acre-feet per year. Further details regarding the water demand are available in the Water Supply Assessment (ECORP 2021).

It is anticipated that the facility will operate continuously throughout the year. Thus, the 1,025 acre-foot annual water demand is equivalent to a groundwater pumping rate of approximately 635 gpm. As noted in Section 2.3.2, above, each well at the site is currently set up to pump at up to 900 gpm, while the full capacity of each well may be more than 2,000 gpm. Thus, the existing wells have more than adequate capacity to meet the project water demand.

During the May 7, 2021 field reconnaissance, offsite groundwater supply wells were noted just southeast of the intersection of Frontage Road and Myers Road, to the east of the property on the west side of the orchard located east of the Project site, and at a residence located west of Frontage Road near the rail spur location. Table 3-1 shows the distances from these wells to onsite Wells #2 and #3.

For this analysis, ECORP prepared an analytical model to simulate the drawdown that would occur due to pumping of the supply wells for the Project. The analytical model is based on the Theis equation (Domenico and Schwartz 1990). Verification of the analytical model was conducted using the Thiem equation (Domenico and Schwartz 1990). If the aquifer properties (transmissivity and storativity) are known, along with the pumping rate, then the Theis Equation can provide the total drawdown at any distance from the pumping source at any time during the simulation period. This allows the actual drawdown cone to be identified. In contrast, for the same known parameters and pumping rate, the Thiem Equation provides the difference between the drawdowns at any two specified locations away from the pumping source once equilibrium is reached.

Using the aquifer properties described in Section 2.3.2, the predicted drawdown cone from pumping either of the two site wells continuously at 635 gpm for one year is shown on Figure 3-1. Note that the predicted drawdowns over-estimate the actual potential drawdown because the pumping would be allocated between two wells. Table 3-1 shows the predicted drawdowns at the offsite wells from pumping at either of the two onsite wells, and also the effect at each of the onsite wells from pumping of the other well. The maximum drawdown at either site well during pumping would be 18.2 feet after one year of continuous pumping at 635 gpm. At the offsite well locations, the maximum drawdown is estimated to be 8.0 feet or less after one year of pumping from either onsite supply well at 635 gpm. The drawdown values at the offsite wells are two percent or less of the total water column in the supply wells, which is at least 400 feet. The drawdown values are also less than the normal seasonal fluctuations in groundwater elevations and the longer-term fluctuations due to climatic cycles, as discussed in Section 2.3.1 and shown on Figures 2-5, 2-6, and 2-7.

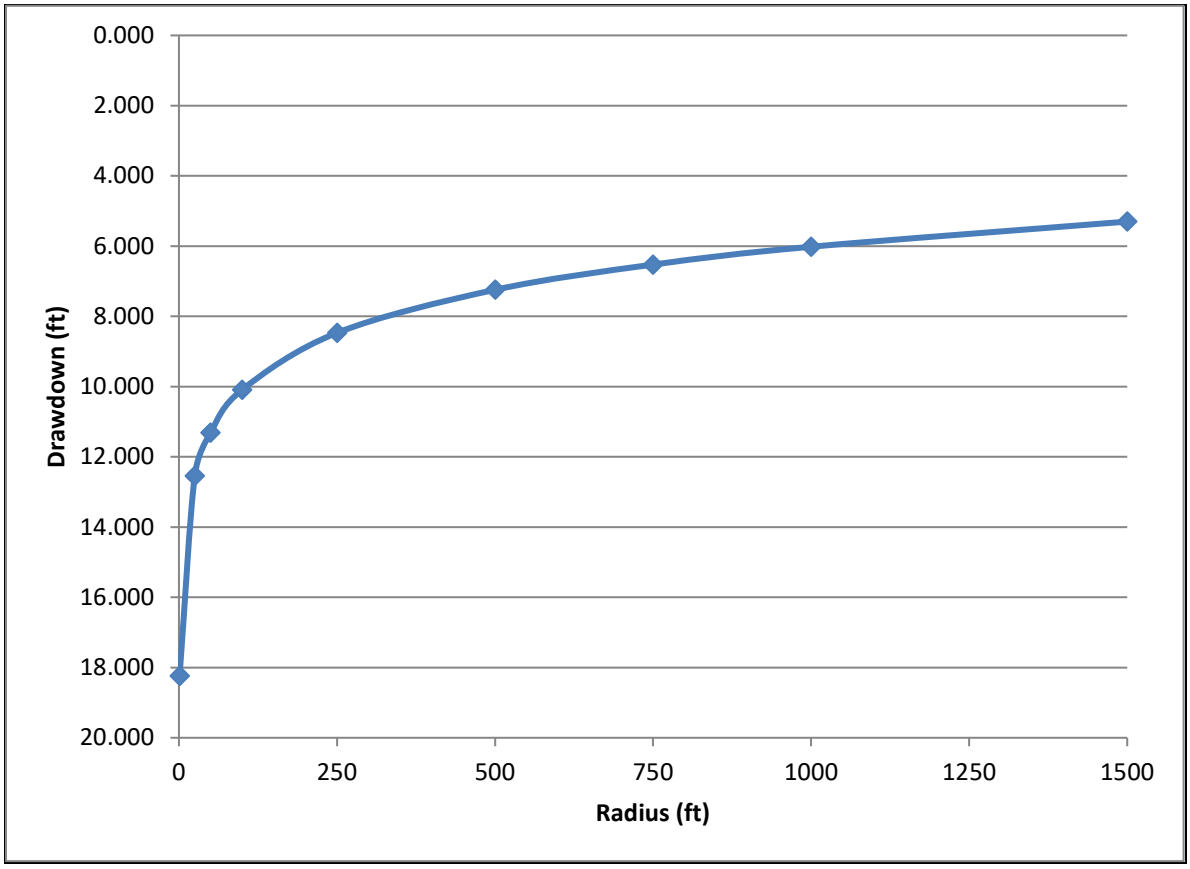

Figure 3-1. Drawdown Profile for 635 GPM for 1 Year

Table 3-1. Projected Drawdown at Nearby Wells Due to Pumping at 635 GPM from One Well

Well Location	Well #2		Well #3	
	Distance	Drawdown	Distance	Drawdown
SE Corner of Frontage and Myers	330	8.0	725	6.3

Orchard to East	1350	5.5	1535	5.3
Residence to West	1100	5.9	450	7.4
Well #2	0	18.2	640	6.8
Well #3	640	6.8	0	18.2

All values shown are in feet

As noted above, the Thiem equation was used to verify the results of the Theis simulations. The Theis drawdown curve indicates that the drawdown after pumping at 635 gpm for one year would be 18.2 feet at the well location while the drawdown at a point 100 feet from the well location would be 10.1 feet, resulting in a difference of 8.1 feet. The Thiem equation predicts that the difference between the drawdown at these two points at equilibrium for a pumping rate of 635 gpm would be 8.2 feet. The Theis analysis indicates that the drawdown after pumping at 635 gpm for one year would be 10.1 feet at a distance of 100 feet from the well location while the drawdown at a point 1,000 feet from the well location would be 6.0 feet, resulting in a difference of 4.1 feet. The Thiem equation predicts that the difference between the drawdown at these two points at equilibrium for a pumping rate of 625 gpm would be 4.1 feet. Thus, these two different methods for estimating drawdown due to pumping yield identical results. Based on this verification, the estimated drawdowns are considered to be appropriately accurate for the empirically-estimated aquifer properties.

ECORP also estimated the capture zone and appropriate wellhead protection area around the supply wells using a volumetric flow calculation developed by the U.S. Environmental Protection Agency (USEPA 1987). Based on a pumping rate of 635 gpm for one year, the calculated capture zone would extend 690 feet from the well. For both wells, most of this zone would exist under the Project site. For Well #2, the southern extent of this zone would reach beyond Myers Road and extend beneath the agricultural field to the south. For Well #3, the western extent of this zone would reach beyond Frontage Road and extend beneath the orchard and residence to the west of the road.

It is anticipated that the water used for industrial and potable uses would be treated prior to use to meet process specifications and drinking water criteria. Potential treatment methods include reverse osmosis (RO) and granular activated carbon (GAC). Potential waste streams, including RO reject and spent GAC, would be contained onsite prior to transport to appropriate offsite facilities for treatment, disposal, or regeneration.

3.3 Project Permit Needs

In addition to the County use permit and related construction permits, the following additional permit requirements related to hydrology and water quality are anticipated to apply to the Project.

3.3.1 Stormwater Management

Prior to commencing any disturbance, a NOI to comply with the construction general stormwater permit would need to be filed with the State Water Resources Control Board and the Regional Water Quality Control Board and a C-SWPPP would need to be prepared.

For on-going operations after construction is completed, a NOI to comply with the industrial general stormwater permit would need to be filed with the State Water Resources Control Board and the Regional Water Quality Control Board and an I-SWPPP would need to be prepared.

The NOIs, and SWPPPs would need to be filed through the State's Storm Water Multiple Application and Report Tracking System (SMARTS) web portal: (https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml).

3.3.2 Well Permit

If any modifications are made to the existing onsite supply wells, if either well is to be abandoned, or if any new wells are to be drilled, then a permit would be required from the Colusa County Environmental Health Division within the Community Development Department. Well permits are ministerial in Colusa County, not discretionary, so they do not require CEQA review.

3.3.3 WDRs and Groundwater Monitoring

If process water is to be stored or discharged to the land surface, then Waste Discharge Requirements permit (WDRs) would need to be obtained from the California Regional Water Quality Control Board, Central Valley Region (RWQCB). To obtain WDRs, a Report of Waste Discharge (ROWD) would need to be submitted to RWQCB. The ROWD would include a completed Form 200 and a Technical Report providing appropriate information about the onsite process, waste characterization, and site-specific conditions.

The WDRs would also include a Monitoring and Reporting Program (MRP) to verify that groundwater quality would not be degraded. To ensure timely processing, the ROWD should be submitted at least six to nine months prior to the initiation of any planned discharge of process water to the land surface, whether in the existing pond or at an alternate location.

3.3.4 Potable Water System Permit

Since there will be more than 25 employees at the facility, a permit for a non-community non-transient water system will need to be obtained from the State Water Resources Control Board Division of Drinking Water after receiving the use permit from Colusa County but before operations can begin. It may be possible to transfer the existing potable water system permit to the new facility owner.

This permit requirement applies exclusively to the domestic supply for employee use (restrooms, kitchen facilities, eye wash and other safety station water needs). It does not apply to the industrial process use.

4.0 CEQA EVALUATION CRITERIA

Section 5.0 of this report evaluates the proposed Project based on the CEQA evaluation criteria for Hydrology and Water Quality. The CEQA Guidelines (CCR Title 14, Division 6, Chapter 3) list five criteria related to Hydrology and Water Quality. These criteria address whether a Project would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

c) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. Result in substantial erosion or siltation on- or off-site;

   ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site;

   iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

   iv. Impede or redirect flood flows.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.0 EVALUATION OF POTENTIAL IMPACTS

Evaluation of the potential impacts of the proposed Project is presented below based on the five CEQA evaluation criteria for Hydrology and Water Quality.

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed Project is a new use on an existing industrial site. Prior to conducting any demolition, grading, or construction activities, CRC would need to file a NOI to comply with the construction general stormwater permit with the State Water Resources Control Board and the Regional Water Quality Control Board and a C-SWPPP would need to be prepared.

The total disturbance area on the Project site would not change but additional paved areas, processing equipment, and buildings would be added to the site. However, installation of a stormwater retention basin would reduce the peak runoff rate and volume of stormwater from the site due to the project to levels that would be less than under current conditions. A NOI to comply with the industrial general stormwater permit would need to be filed with the State Water Resources Control Board and the Regional Water Quality Control Board and an I-SWPPP would need to be prepared.

Implementation of the measures identified in the NOIs and SWPPPs would preclude polluted runoff from leaving the site, preventing any violation of water quality standards and related degradation of surface

water. Since the volume of runoff would be less than under current conditions and water quality would be protected, there would not be any potentially significant impacts related to water quality from stormwater. Thus, mitigation measures would be inapplicable but as part of the County permitting process, preparation and submittal of the relevant documents could be addressed through Conditions of Approval as part of the County's discretionary approval of the use permit application.

Groundwater would be used for industrial process water and for employee potable supply needs. As noted in Table 2-6, the groundwater meets water quality standards. Pumped groundwater may be treated prior to use as process water or potable supply for employees. Treatment residuals such as RO reject or spent GAC would need to be contained onsite before transport offsite for treatment or disposal.

It is unknown at this time whether the industrial processes used at the site would alter the water quality, resulting in any exceedances of water quality standards. However, any process water that is not retained within tanks or vessels and that would potentially be discharged to the ground or stored in ponds (both lined and unlined) would require submittal of a ROWD for a WDR permit. The WDRs would include discharge limitations to prevent degradation of both surface water and groundwater quality, along with a MRP to verify that water quality standards would not be exceeded.

Preparation and submittal of the ROWD and compliance with the requirements of the WDRs, including the MRP, would prevent violations of water quality standards and related degradation of surface water and groundwater. Submittal of the relevant documents could be addressed through mitigation measures in the CEQA document or could be made Conditions of Approval as part of the County's discretionary approval process for the use permit application.

Implementation of the measures described above related to stormwater management and WDRs would result in any potential impacts related to water quality standards, waste discharge requirements, or water quality degradation being less than significant.

b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Groundwater use at the site in the past has ranged from 509 acre-feet per year to 681 acre-feet per year from 2012 through 2016 and was 550 acre-feet per year in 2019. Groundwater demand for the Project is estimated to be 1,025 acre-feet per year. For comparison, the volume of groundwater in storage in the Colusa Subbasin is estimated to be between 26 million acre-feet and 140 million acre-feet. Current groundwater pumping in the subbasin is approximately 499,000 acre-feet per year and is projected to increase to 559,000 acre-feet per year by 2070. The sustainable yield of the Colusa Subbasin is estimated to be 500,000 acre-feet per year currently and is projected to increase to 551,000 acre-feet per year by 2070. While the 2070 estimated groundwater pumping slightly exceeds the projected sustainable yield, the Colusa GSA and Glenn GSA (2021) indicate that future management actions and programs are anticipated to maintain sustainable management of the Colusa Subbasin.

Overall, the Project water demand represents an extremely small percentage of the volume of groundwater in storage, the current and future annual groundwater pumping, and the current and future

sustainable yield. For example, the 1,025 acre-foot per year Project demand is approximately 0.2 percent of the current and future sustainable yield estimates of 500,000 acre-feet per year and 551,000 acre-feet per year for the Colusa Subbasin (ECORP 2021).

Estimates of the drawdown caused by pumping of the onsite supply wells to meet the Project demand indicate that water levels in the nearest offsite wells would decline by no more than 8 feet after one year of continuous pumping. In comparison, seasonal fluctuations in groundwater levels in this part of the Colusa Subbasin range from 10 feet to 15 feet per year while longer-term fluctuations due to climatic cycles are in the range of 30 feet. The estimated drawdown in the nearest offsite wells is also a very small fraction (2 percent) of the 400-foot total water column in the local aquifer, as indicated by the data from the onsite supply wells.

While additional pavement and buildings may be added to the site as part of the Project, it is anticipated that stormwater would be retained onsite and either be used to supplement the process water supply or be allowed to percolate and recharge the groundwater aquifer. Thus, the Project would not interfere with groundwater recharge but would instead enhance the volume of recharge or offset groundwater pumping by an equivalent amount.

Overall, the Project would not cause any measurable decrease in groundwater supplies and would not interfere with or reduce groundwater recharge. In fact, the Project could enhance recharge through conjunctive use of stormwater, or by allowing the retained stormwater to percolate into the subsurface. The Project would not impede sustainable management of the groundwater basin. Therefore, there would be no impacts from the Project related to groundwater supplies, groundwater recharge, or sustainable groundwater management.

c) Would the Project substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. Result in substantial erosion or siltation on- or off-site;

   ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site;

   iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

   iv. Impede or redirect flood flows?

The Project would result in only minor changes to the ground surface, by adding additional pavement and buildings. However, the site is already intensely developed and contains large areas of existing impervious surfaces. Drainage patterns would only be altered in very minor ways.

The current and proposed stormwater management systems prevent any substantial erosion. Use of a retention basin would reduce the peak runoff rates and the total runoff volume to values that are less than existing baseline conditions. Onsite retention of stormwater would also minimize any contribution

from the site to existing or planned stormwater drainage systems. The Project site does not exist in an area prone to flooding.

Preparation and implementation of the appropriate NOIs and SWPPPs, as discussed above, would minimize or avoid any potential impacts related to drainage, erosion, and runoff. As previously stated, submittal of the relevant documents could be addressed through Conditions of Approval as part of the County's discretionary approval process for the use permit application. Implementation of those measures would either eliminate any impacts related to drainage, erosion, and runoff, or would make them less than significant.

d) In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation?

The Project site is not located within a flood hazard, tsunami, or seiche zone. Thus, there would be no potential impact related to this criterion.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The purpose of WDRs is to support the applicable water quality control plan for the basin in which a site is located. Thus, the WDRs that would be issued for the Project would be consistent with and developed to support implementation of the Water Quality Control Plan for the Sacramento and San Joaquin River Basins. Thus, the Project would be consistent with and not conflict with or obstruct implementation of a water quality control plan.

The proposed groundwater use for the project is extremely small compared to the available groundwater supply and existing groundwater uses in the Colusa Subbasin. Groundwater demand would be further reduced by retention of stormwater, which would either be used to supplement process water to reduce groundwater demand or would be allowed to percolate to the subsurface to recharge the aquifer. Thus, the Project would not conflict with or obstruct sustainable groundwater management in the subbasin.

Since the Project would be consistent with applicable water quality control and sustainable groundwater management plans, there would be no potential impact related to this criterion.

6.0 CONCLUSION

The proposed CRC Project would be developed at an existing industrial facility with significant ground disturbance already present. The Project is designed to minimize or avoid any potential future impacts related to drainage, hydrology, and water quality. Use of a stormwater retention basin would reduce peak runoff rates and runoff volumes to values less than current conditions. Thus, while additional impervious surfaces would be added to parts of the site, these would not contribute to any offsite drainage. As a result, any impacts related to stormwater quality, drainage, and erosion would be avoided or eliminated.

Groundwater demand for the Project is a small fraction of the total groundwater usage in the groundwater subbasin. Percolation of the retained stormwater, or its use in the process water supply, would further reduce the net demand for groundwater from the Colusa Subbasin. The anticipated

groundwater pumping rates would have no measurable effect on the available groundwater supply at the nearest offsite supply well locations. Therefore, the Project would have no impacts related to depletion of groundwater or interference with groundwater recharge and would be consistent with sustainable management of the groundwater subbasin.

Any water treatment residuals would be transported offsite for appropriate disposal or regeneration. If storage of process water occurs in ponds or any other discharge to the land surface is possible, then WDRs would be obtained to determine the measures necessary to protect water quality and prevent violations of water quality standards. The WDRs would be consistent with, and assist in implementation of, the applicable water quality control plan.

By submitting applications for the appropriate stormwater and WDR permits and implementing those programs as part of the Project, any impacts related to drainage, hydrology, and water quality would be avoided or reduced to less than significant.

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LIST OF APPENDICES

APPENDIX A.

Alta Survey Maps

ALTA - NSPS LAND TITLE SURVEY

APN:017-090-062 & 070
6229 MYERS ROAD
WILLIAMS, CA 95987-5803
COLUSA COUNTY, STATE OF CALIFORNIA
APRIL, 2021
RFE ENGINEERING, INC.
SHEET 1 OF 6

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA, IN THE COUNTY OF COLUSA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 1:

PARCEL NO. 1 AS SHOWN ON THAT CERTAIN PARCEL MAP OF A PORTION OF SECTION 32, T. 15 N., R. 2 W., M.D.B. & M., SAID PARCEL MAP BEING FILED JUNE 6, 1975, IN BOOK 1 OF PARCEL MAPS, AT PAGE 130, COLUSA COUNTY RECORDS.

EXCEPTING FROM THE ABOVE DESCRIBED PARCEL THE FOLLOWING:

A PORTION OF SECTION 32, TOWNSHIP 15 NORTH, RANGE 2 WEST, M.D.B. & M., COLUSA COUNTY, CALIFORNIA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF PARCEL NO. 1 OF PARCEL MAP FILED IN BOOK 1 OF PARCEL MAPS, AT PAGE 130, COLUSA COUNTY RECORDS, SAID POINT BEING ON THE SOUTHERLY LINE OF SECTION 32, TOWNSHIP 15 NORTH, RANGE 2 WEST, M.D.B. & M.; THENCE FROM POINT OF BEGINNING AND ALONG THE SOUTHERLY LINE OF SAID PARCEL NO. 1, NORTH 89° 53' 41" WEST 39.88 FEET; THENCE LEAVING SAID SOUTHERLY LINE OF PARCEL NO. 1 NORTH 00° 08' 19" WEST 781.79 FEET; THENCE SOUTH 89° 53' 41" EAST 39.88 FEET; THENCE SOUTH 00° 08' 19" WEST 781.79 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 2:

A PORTION OF SECTION 32, TOWNSHIP 15 NORTH, RANGE 2 WEST, M.D.B. & M., COLUSA COUNTY, CALIFORNIA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWESTERLY CORNER OF PARCEL NO. 2 OF PARCEL MAP FILED IN BOOK 1 OF PARCEL MAPS, AT PAGE 130, COLUSA COUNTY RECORDS, SAID POINT BEING ON THE EASTERLY RIGHT OF WAY OF THE SOUTHERN PACIFIC RAILROAD; THENCE FROM SAID POINT OF BEGINNING AND ALONG SAID EASTERLY RIGHT OF WAY OF THE SOUTHERN PACIFIC RAILROAD, NORTH 27° 30' 05" WEST 188.82 FEET; THENCE LEAVING SAID EASTERLY RIGHT OF WAY OF THE SOUTHERN PACIFIC RAILROAD, SOUTH 89° 53' 41" EAST 1523.71 FEET; THENCE SOUTH 00° 08' 19" WEST 167.13 FEET TO THE NORTHERLY LINE OF PARCEL NO. 1 OF SAID PARCEL MAP FILED IN BOOK 1 OF PARCEL MAPS, AT PAGE 130; THENCE ALONG SAID NORTHERLY LINE OF PARCEL NO. 1 NORTH 89° 43' 41" WEST, 1446.20 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM ALL OIL, GAS, MINERALS AND OTHER HYDROCARBON SUBSTANCES UNDERLYING AND WITHIN THE BOUNDARIES OF SAID PROPERTY, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS TO OBTAIN AND REMOVE SAME, AS RESERVED IN DEED FROM CLAIRE LOUISE REYNOLDS, TRUSTEE OF THE FLOYD MYERS MARSH TRUST, UNDER TRUST AGREEMENT DATED DECEMBER 10, 1976 AND AMENDMENT THERETO DATED APRIL 15, 1977, RECORDED FEBRUARY 28, 1983 IN BOOK 326, PAGE 404, OF COLUSA COUNTY RECORDS.

PARCEL NO. 3:

PARCEL NO. 4 AS SHOWN ON THAT CERTAIN PARCEL MAP TRACT NO. 82-11-3 FILED IN THE OFFICE OF THE RECORDER IN THE COUNTY OF COLUSA, STATE OF CALIFORNIA IN BOOK 2 OF PARCEL MAPS, PAGE 174.

EXCEPTING THEREFROM ALL OIL, GAS AND MINERALS AS RESERVED IN

(A) DEED OF CHARLES MYERS MARSH, ET UX TO LESLIE RAYMOND MARSH, ET AL, RECORDED FEBRUARY 11, 2002, RECORDER'S SERIAL NO. 02-0581 AND

(B) DEED OF LESLIE RAYMOND MARSH, ET AL TO MYERS MARSH LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, RECORDED SEPTEMBER 20, 2002, RECORDER'S SERIAL NO. 02-4131

PARCEL NO. 4:

A NON-EXCLUSIVE EASEMENT FOR AN EXISTING AGRICULTURAL WASTER WATER PIPELINE AND ACROSS A STRIP OF LAND 20 FEET IN WIDTH AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PORTION OF PARCELS NOS. 1 AND 2 OF PARCEL MAP FOR FLOYD MYERS MARSH FILED IN BOOK 1 OF PARCEL MAPS, AT PAGE 130, COLUSA COUNTY RECORDS, BEING IN SECTION 32, TOWNSHIP 15 NORTH, RANGE 2 WEST, M.D.B. & M., COLUSA COUNTY CALIFORNIA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT THAT IS SITUATED N. 00° 08' 19" E., 632.21 FEET FROM THE SOUTHEASTERLY CORNER OF PARCEL NO. 2 AS SHOWN ON THAT CERTAIN MAP FILED IN BOOK 1 OF PARCEL MAPS, AT PAGE 130, COLUSA COUNTY RECORDS; THENCE FROM SAID POINT OF BEGINNING, SAID POINT BEING ON THE EASTERLY LINE OF SAID PARCEL NO. 2, S. 49° 32' 49" W., 131.69 FEET; THENCE N. 00° 08' 19" E., 26.34 FEET; THENCE N. 49° 32' 49" E., 131.69 FEET TO THE SAID EASTERLY LINE OF PARCEL NO. 2; THENCE ALONG SAID EASTERLY LINE OF PARCEL NO. 2 S. 00° 08' 19" W., 26.34 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 5:

A NON-EXCLUSIVE EASEMENT FOR ACCESS AND TRAVEL BY PERSONS, VEHICLES AND EQUIPMENT ACROSS A STRIP OF LAND 60 FEET IN WIDTH AND THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON MYERS ROAD WHICH IS 70 FEET WESTERLY OF THE SOUTHEASTERLY CORNER OF PARCEL NO. 3 (AS PARCEL NO. 3 IS SHOWN ON PARCEL MAP NO. 82-11-3 WHICH WAS FILED ON MARCH 3, 1983 IN BOOK 2 OF PARCEL MAPS AT PAGE 174 THEREOF, RECORDS OF COLUSA COUNTY, AS CORRECTED BY THAT CERTIFICATE OF CORRECTION FOR PARCEL MAPS WHICH WAS FILED WITH THE COLUSA COUNTY RECORDER ON SEPTEMBER 15, 1987, IN BOOK 586, AT PAGE 478 THEREOF, RECORDS OF COLUSA COUNTY) AND WHICH POINT OF BEGINNING IS ALSO ON THE SOUTHERLY BOUNDARY OF A PORTION OF SAID PARCEL NO. 3, AND EXTENDING PARALLEL TO THE EASTERLY BOUNDARY OF SAID PARCEL NO. 3 IN A NORTHERLY DIRECTION TO A POINT WHICH IS ONE THOUSAND FOUR HUNDRED EIGHTY-THREE AND 84/100 (1,483.84) FEET NORTHERLY OF SAID POINT OF BEGINNING.

PARCEL NO. 6:

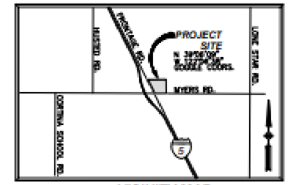
A 10 FOOT NONEXCLUSIVE EASEMENT FOR UTILITIES AS SHOWN AND DESCRIBED IN SECTION 3.01(B) OF DEED RESERVING EASEMENTS AND GRANT OF EASEMENTS APPURTENANT, RECORDED DECEMBER 22, 1997 AS DOCUMENT NO. 4669.

PARCEL NO. 7:

A 60 FOOT NONEXCLUSIVE EASEMENT FOR ACCESS AS SHOWN AND DESCRIBED IN SECTION 3.01(B) OF DEED RESERVING EASEMENTS AND GRANT OF EASEMENTS APPURTENANT, RECORDED DECEMBER 22, 1997 AS DOCUMENT NO. 4669.

TITLE REPORT EXCEPTIONS:

1. PROPERTY TAXES, WHICH ARE A LIEN NOT YET DUE AND PAYABLE, INCLUDING ANY ASSESSMENTS COLLECTED WITH TAXES TO BE LEVIED FOR THE FISCAL YEAR 2021-2022.
(NOT A SURVEY ITEM)
2. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES ARE AS FOLLOWS:
CODE AREA: 071-035
TAX IDENTIFICATION NO.: 017-090-062
FISCAL YEAR: 2020-2021
1ST INSTALLMENT: $93,812.16, PAID
2ND INSTALLMENT: $93,812.16, OPEN
LAND: $800,000.00
IMPROVEMENTS: $14,329,264.00
PERSONAL PROPERTY: $2,576,831.00
(NOT A SURVEY ITEM)
3. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES ARE AS FOLLOWS:
CODE AREA: 071-035
TAX IDENTIFICATION NO.: 017-090-070
FISCAL YEAR: 2020-2021
1ST INSTALLMENT: $1,266.97, PAID
2ND INSTALLMENT: $1,266.97, OPEN
PERSONAL PROPERTY: $236,032.00
(NOT A SURVEY ITEM)
4. PRIOR TO CLOSE OF ESCROW, PLEASE CONTACT THE TAX COLLECTOR'S OFFICE TO CONFIRM ALL AMOUNTS OWING, INCLUDING CURRENT FISCAL YEAR TAXES, SUPPLEMENTAL TAXES, ESCAPED ASSESSMENTS AND ANY DELINQUENCIES.
(NOT A SURVEY ITEM)
5. THE LIEN OF SUPPLEMENTAL OR ESCAPED ASSESSMENTS OF PROPERTY TAXES, IF ANY, MADE PURSUANT TO THE PROVISIONS OF CHAPTER 3.5 (COMMENCING WITH SECTION 75) OR PART 2, CHAPTER 3, ARTICLES 3 AND 4, RESPECTIVELY, OF THE REVENUE AND TAXATION CODE OF THE STATE OF CALIFORNIA AS A RESULT OF THE TRANSFER OF TITLE TO THE ESTEEM NAMED IN SCHEDULE A OR AS A RESULT OF CHANGES IN OWNERSHIP OR NEW CONSTRUCTION OCCURRING PRIOR TO DATE OF POLICY.
(NOT A SURVEY ITEM)
6. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
(NOT A PLOTTABLE ITEM)
7. RIGHTS OF THE PUBLIC TO ANY PORTION OF THE LAND LYING WITHIN THE AREA COMMONLY KNOWN AS MYERS ROAD.
(AS SHOWN ON THIS MAP)
8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: SUNSET TELEPHONE AND TELEGRAPH COMPANY
PURPOSE: POLE LINE
RECORDING DATE: DECEMBER 24, 1908
RECORDING NO: BOOK 63, PAGE 203, OF DEEDS
AFFECTS: A WESTERLY PORTION OF SAID LANDS
(THIS DOCUMENT WAS NOT AVAILABLE FROM THIS TITLE COMPANY)(LOCATION PLACED PER 2 PM 174)
9. ANY RIGHTS INCIDENTAL TO THE OWNERSHIP AND DEVELOPMENT OF THE MINERAL INTEREST EXCEPTED OR RESERVED IN THE DOCUMENT
ENTITLED: GRANT DEED
DATED: FEBRUARY 4, 1983
RECORDING DATE: FEBRUARY 28, 1983
RECORDING NO: BOOK 326, PAGE 404, OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND
(NOT A SURVEY ITEM)
10. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: WADHAM ENERGY LIMITED PARTNERSHIP
PURPOSE: UTILITIES, DRAINAGE AND ACCESS
RECORDING DATE: DECEMBER 22, 1997
RECORDING NO: BOOK 603, PAGE 292, OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND
(AS SHOWN ON THIS MAP)
11. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: MAINTENANCE AGREEMENT
DATED: NOVEMBER 18, 1997
EXECUTED BY: CLAIRE LOUISE REYNOLDS, AS TRUSTEE OF THE FLOYD MYERS MARSH TRUST AND WADHAM ENERGY LIMITED PARTNERSHIP
RECORDING DATE: DECEMBER 22, 1997
RECORDING NO: BOOK 603, PAGE 328, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(AS SHOWN ON THIS MAP)
12. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: GRANT OF EASEMENTS AND MAINTENANCE AGREEMENT
DATED: NOVEMBER 18, 1997
EXECUTED BY: HELEN M. MARSH AND WADHAM ENERGY LIMITED PARTNERSHIP
RECORDING DATE: DECEMBER 22, 1997
RECORDING NO: BOOK 603, PAGE 383, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(SEE OFFICIAL DOCUMENT FOR EXTENT OF AGREEMENT)
13. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: RECIPROCAL GRANT OF EASEMENTS AND MAINTENANCE AGREEMENT
DATED: NOVEMBER 18, 1997
EXECUTED BY: HELEN MYERS MARSH AND WADHAM ENERGY LIMITED PARTNERSHIP
RECORDING DATE: DECEMBER 22, 1997
RECORDING NO: BOOK 603, PAGE 408, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(SEE OFFICIAL DOCUMENT FOR EXTENT OF AGREEMENT)
14. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: CONSENT AGREEMENT
DATED: NOVEMBER 20, 1997
EXECUTED BY: WADHAM ENERGY LIMITED PARTNERSHIP AND MYERS-MARSH MUTUAL WATER COMPANY
RECORDING DATE: DECEMBER 22, 1997
RECORDING NO: BOOK 603, PAGE 467, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(AS SHOWN ON THIS MAP)
15. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: PACIFIC GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES
RECORDING DATE: JULY 17, 1989
RECORDING NO: BOOK 633, PAGE 41, OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND
(AS SHOWN ON THIS MAP)
16. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: RIGHT TO FARM ORDINANCE
DATED: FEBRUARY 6, 1990
EXECUTED BY: COLUSA COUNTY BOARD OF SUPERVISORS
RECORDING DATE: NOVEMBER 19, 1990
RECORDING NO: BOOK 670, PAGE 80, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(NOT A SURVEY ITEM)
17. AN OIL AND GAS LEASE FOR THE TERM THEREIN PROVIDED WITH CERTAIN COVENANTS, CONDITIONS AND PROVISIONS, TOGETHER WITH EASEMENTS, IF ANY, AS SET FORTH THEREIN.
DATED: APRIL 8, 1997
DATED: CHARLES MYERS MARSH, ET AL
DATED: PETROGULF CORPORATION
RECORDING DATE: DECEMBER 19, 1997
RECORDING NO: 97-005065, OF OFFICIAL RECORDS
NO ASSURANCE IS MADE AS TO THE PRESENT OWNERSHIP OF THE LEASEHOLD CREATED BY SAID LEASE, NOR AS TO OTHER MATTERS AFFECTING THE RIGHTS OR INTERESTS OF THE LESSOR OR LESSEE IN SAID LEASE.
(NOT A SURVEY ITEM)
18. ANY RIGHTS INCIDENTAL TO THE OWNERSHIP AND DEVELOPMENT OF THE MINERAL INTEREST EXCEPTED OR RESERVED IN THE DOCUMENT
ENTITLED: GRANT DEED
DATED: DECEMBER 14, 2001
RECORDING DATE: FEBRUARY 11, 2002
RECORDING NO: 02-0581, OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND
(NOT A SURVEY ITEM)
19. ANY RIGHTS INCIDENTAL TO THE OWNERSHIP AND DEVELOPMENT OF THE MINERAL INTEREST EXCEPTED OR RESERVED IN THE DOCUMENT
ENTITLED: GRANT DEED
DATED: AUGUST 19, 2002
RECORDING DATE: SEPTEMBER 20, 2002
RECORDING NO: 02-4131, OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND
(NOT A SURVEY ITEM)
20. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: ENCROACHMENT AGREEMENT
DATED: FEBRUARY 15, 2005
EXECUTED BY: COUNTY OF COLUSA AND SK FOODS - COLUSA CANNING
RECORDING DATE: FEBRUARY 28, 2005
RECORDING NO: 2005-0001238, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(NOT A SURVEY ITEM)
21. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: ENCROACHMENT AGREEMENT
DATED: MAY 2, 2006
EXECUTED BY: COUNTY OF COLUSA AND SK FOODS - COLUSA CANNING
RECORDING DATE: MAY 2, 2006
RECORDING NO: 2006-0002532, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(NOT A SURVEY ITEM)
22. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT
ENTITLED: ENCROACHMENT PERMIT
DATED: OCTOBER 28, 2006
EXECUTED BY: COUNTY OF COLUSA AND SK FOODS - COLUSA CANNING
RECORDING DATE: OCTOBER 31, 2006
RECORDING NO: 2006-0006400, OF OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
(NOT A SURVEY ITEM)
23. DISCREPANCIES, CONFLICTS IN BOUNDARY LINES, SHORTAGE IN AREA, ENCROACHMENTS, OR ANY OTHER MATTERS WHICH A CORRECT SURVEY WOULD DISCLOSE AND WHICH ARE NOT SHOWN BY THE PUBLIC RECORDS.
(NOT A SURVEY ITEM)
24. ANY EASEMENTS NOT DISCLOSED BY THE PUBLIC RECORDS AS TO MATTERS AFFECTING TITLE TO REAL PROPERTY, WHETHER OR NOT SAID EASEMENTS ARE VISIBLE AND APPARENT.
(NOT A SURVEY ITEM)
25. ANY RIGHTS OF THE PARTIES IN POSSESSION OF A PORTION OF, OR ALL OF, SAID LAND, WHICH RIGHTS ARE NOT DISCLOSED BY THE PUBLIC RECORDS. THE COMPANY WILL REQUIRE, FOR REVIEW, A FULL AND COMPLETE COPY OF ANY UNRECORDED AGREEMENT, CONTRACT, LICENSE AND/OR LEASE, TOGETHER WITH ALL SUPPLEMENTS, ASSIGNMENTS AND AMENDMENTS THERETO, BEFORE ISSUING ANY POLICY OF TITLE INSURANCE WITHOUT EXCEPTING THIS ITEM FROM COVERAGE. THE COMPANY RESERVES THE RIGHT TO EXCEPT ADDITIONAL ITEMS AND/OR MAKE ADDITIONAL REQUIREMENTS AFTER REVIEWING SAID DOCUMENTS.
(NOT A SURVEY ITEM)



VICINITY MAP
NOT TO SCALE

26. MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION AND/OR BY A CORRECT ALTA/NSPS LAND TITLE SURVEY OF SAID LAND THAT IS SATISFACTORY TO THE COMPANY, AND/OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.
(NOT A SURVEY ITEM)
27. THE COMPANY WILL REQUIRE THAT AN OWNER'S AFFIDAVIT BE COMPLETED BY THE PARTY(S) NAMED BELOW BEFORE THE ISSUANCE OF ANY POLICY OF TITLE INSURANCE.
PARTY(S): OLAM TOMATO PROCESSORS, INC., A DELAWARE CORPORATION
THE COMPANY RESERVES THE RIGHT TO ADD ADDITIONAL ITEMS OR MAKE FURTHER REQUIREMENTS AFTER REVIEW OF THE REQUESTED AFFIDAVIT.
(NOT A SURVEY ITEM)
28. THIS TRANSACTION REQUIRES HIGH LIABILITY APPROVAL PRIOR TO CLOSE OF ESCROW TOGETHER WITH AN INSPECTION OF THE SUBJECT PROPERTY.
PLEASE ADVISE TITLE DEPARTMENT WITH AN ESTIMATED DATE THAT YOUR TRANSACTION WILL CLOSE SO WE CAN SCHEDULE THE NECESSARY APPROVALS AND INSPECTIONS.
(NOT A SURVEY ITEM)
29. THE COMPANY WILL REQUIRE THE FOLLOWING DOCUMENTS FOR REVIEW PRIOR TO THE ISSUANCE OF ANY TITLE INSURANCE PREDICATED UPON A CONVEYANCE OR ENCUMBRANCE BY THE CORPORATION NAMED BELOW:
NAME OF CORPORATION: OLAM TOMATO PROCESSORS, INC., A DELAWARE CORPORATION
a) A COPY OF THE CORPORATION BY-LAWS AND ARTICLES OF INCORPORATION
b) AN ORIGINAL OR CERTIFIED COPY OF A RESOLUTION AUTHORIZING THE TRANSACTION CONTEMPLATED HEREIN
c) IF THE ARTICLES AND/OR BY-LAWS REQUIRE APPROVAL BY A "PARENT" ORGANIZATION, A COPY OF THE ARTICLES AND BY-LAWS OF THE PARENT
THE COMPANY RESERVES THE RIGHT TO ADD ADDITIONAL ITEMS OR MAKE FURTHER REQUIREMENTS AFTER REVIEW OF THE REQUESTED DOCUMENTATION.
(NOT A SURVEY ITEM)
30. PLEASE BE ADVISED THAT OUR SEARCH DID NOT DISCLOSE ANY OPEN DEEDS OF TRUST OF RECORD. IF YOU SHOULD HAVE KNOWLEDGE OF ANY OUTSTANDING OBLIGATION, PLEASE CONTACT THE TITLE DEPARTMENT IMMEDIATELY FOR FURTHER REVIEW PRIOR TO CLOSING.
(NOT A SURVEY ITEM)

NOTES:

1. THE TITLE REPORT USED FOR THIS ALTA WAS FURNISHED BY CHICAGO TITLE INSURANCE COMPANY, NUMBERED 45002911-430-SM-MW-1 AND DATED MARCH 30, 2021.
2. THE ADDRESS OF THIS PARCEL IS 6229 MYERS ROAD, WILLIAMS, CA 95987. (ALTA/NSPS TABLE A, ITEM 2)
3. THE FEMA FLOOD ZONE DESIGNATION FOR THIS PARCEL IS IN ZONE "X" WITH A 0.2% ANNUAL CHANCE FLOOD HAZARD, WHICH IS AN AREA OF 1% ANNUAL CHANCE FLOOD WITH AN AVERAGE DEPTH OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE. THE FEMA REFERENCE PANEL IS 06011C0675, DATED MAY 15, 2003. (ALTA/NSPS TABLE A, ITEM 3)
4. THE GROSS LAND AREA OF THE PARCEL IS 49.258 ACRES. (ALTA/NSPS TABLE A, ITEM 4)
PARCEL 1 IS 22.283 ACRES.
PARCEL 2 IS 5.717 ACRES.
PARCEL 3 IS 20.538 ACRES.
PARCEL 4 IS ONLY AN EASEMENT.
PARCEL 5 IS ONLY AN EASEMENT.
PARCEL 6 IS ONLY AN EASEMENT.
PARCEL 7 IS ONLY AND EASEMENT.
5. SEE SHEET 2 FOR BASIS OF ELEVATION FOR THIS SURVEY. (ALTA/NSPS TABLE A, ITEM 5)
6. THE EXTERIOR DIMENSIONS OF THE BUILDING AT GROUND LEVEL CAN BE SEEN ON SHEET 2. (ALTA/NSPS TABLE A, ITEM 7A)
7. SEE SHEETS 2- FOR TOPOGRAPHIC FEATURES. (ALTA/NSPS TABLE A, ITEM 8)
8. SITE TOPOGRAPHY INFORMATION WAS PROVIDED BY:
PoinT Co.
Photogrammetric Services
Fair Oaks, California
(916) 536-9187
9. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION ONLY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. (ALTA/NSPS TABLE A, ITEM 11)
10. NAMES OF ADJOINING OWNERS PER THE CURRENT TAX RECORDS HAVE BEEN NOTED ON THIS MAP. (ALTA/NSPS TABLE A, ITEM 13)
11. STREETS ADJOINING THESE PARCELS HAVE BEEN NOTED ON THIS MAP. (ALTA/NSPS TABLE A, ITEM 14)
12. THERE IS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK. (ALTA/NSPS TABLE A, ITEM 16)
13. THERE ARE NO KNOWN FORTHCOMING CHANGES FOR THE RIGHT-OF-WAY SECTION SHOWN. (ALTA/NSPS TABLE A, ITEM 17)
14. NO WETLAND DELINEATION MARKERS WERE OBSERVED ON THIS SURVEY. (ALTA/NSPS TABLE A, ITEM 18)
15. ALL PLOTTABLE EASEMENTS HAVE BEEN SHOWN ON THIS SURVEY. (ALTA/NSPS TABLE A, ITEM 19)

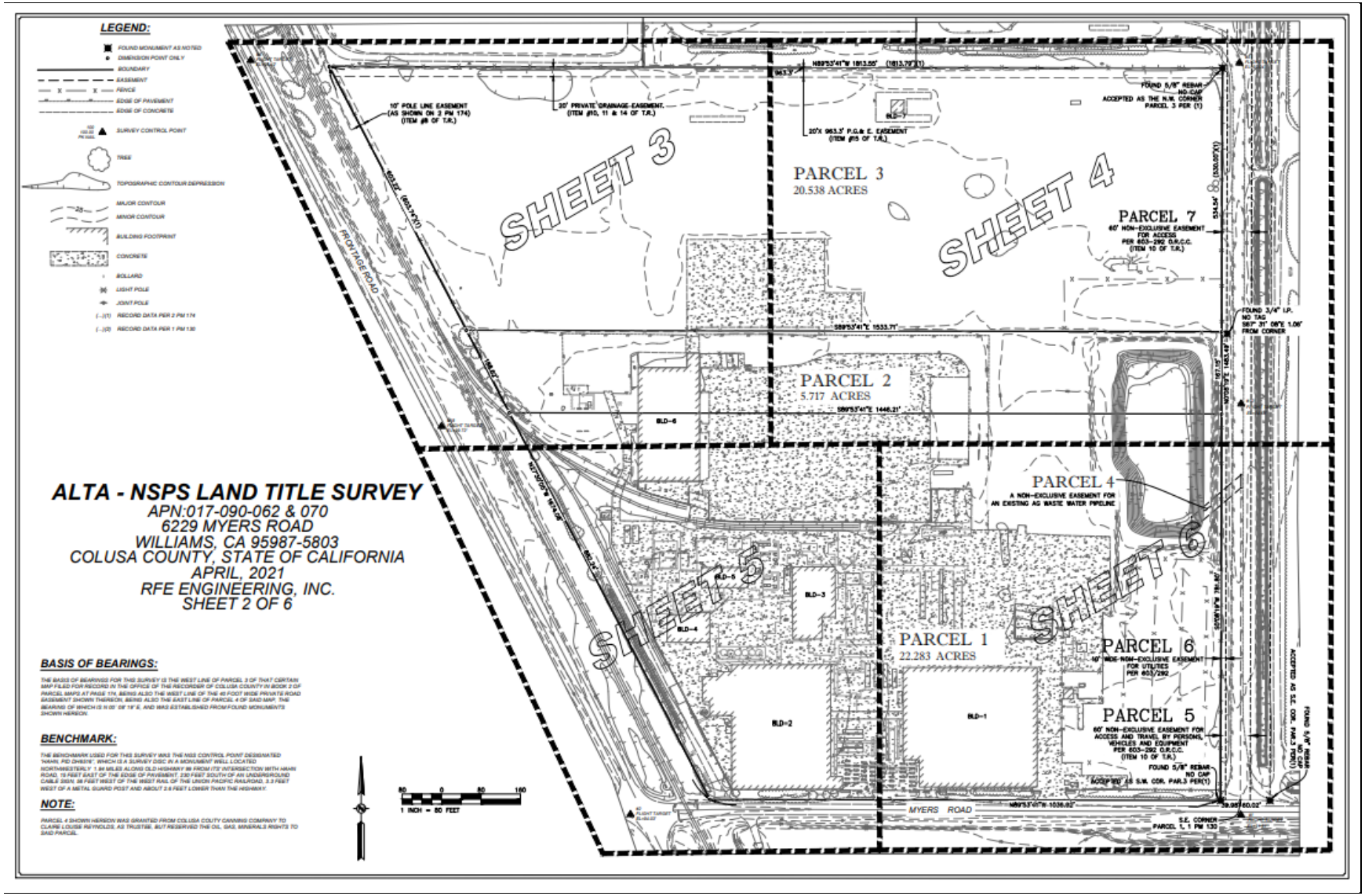
SURVEYOR'S STATEMENT:

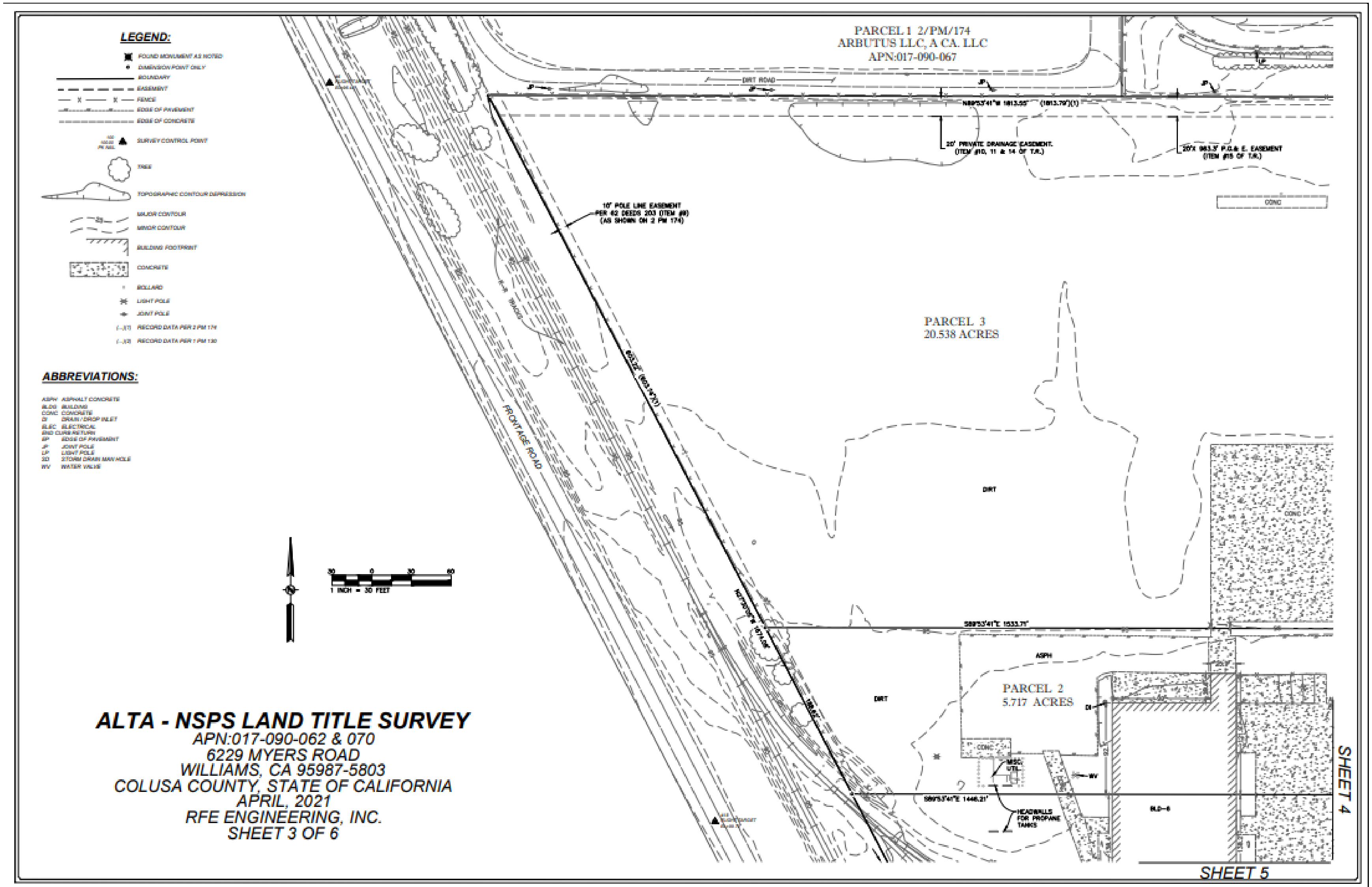
TO: OLAM TOMATO PROCESSORS, INC., A DELAWARE CORPORATION, NATIONAL CARBON TECHNOLOGIES AND CHICAGO TITLE INSURANCE COMPANY:

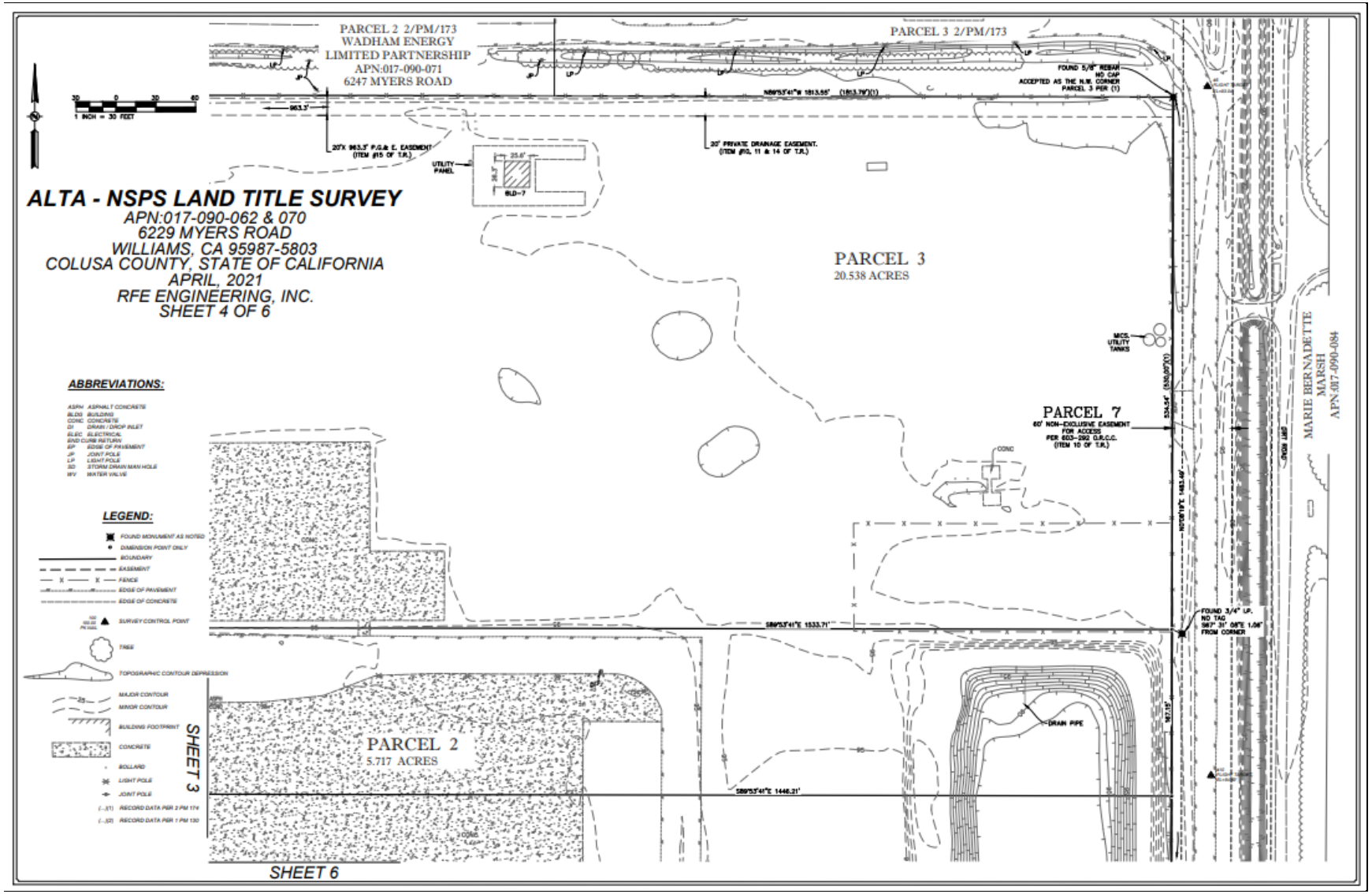
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH LAWS REGULATING SURVEYING IN THE STATE OF CALIFORNIA AND WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES TABLE A ITEMS 2, 3, 4, 5, 7a, 8, 11 AND 13-20.

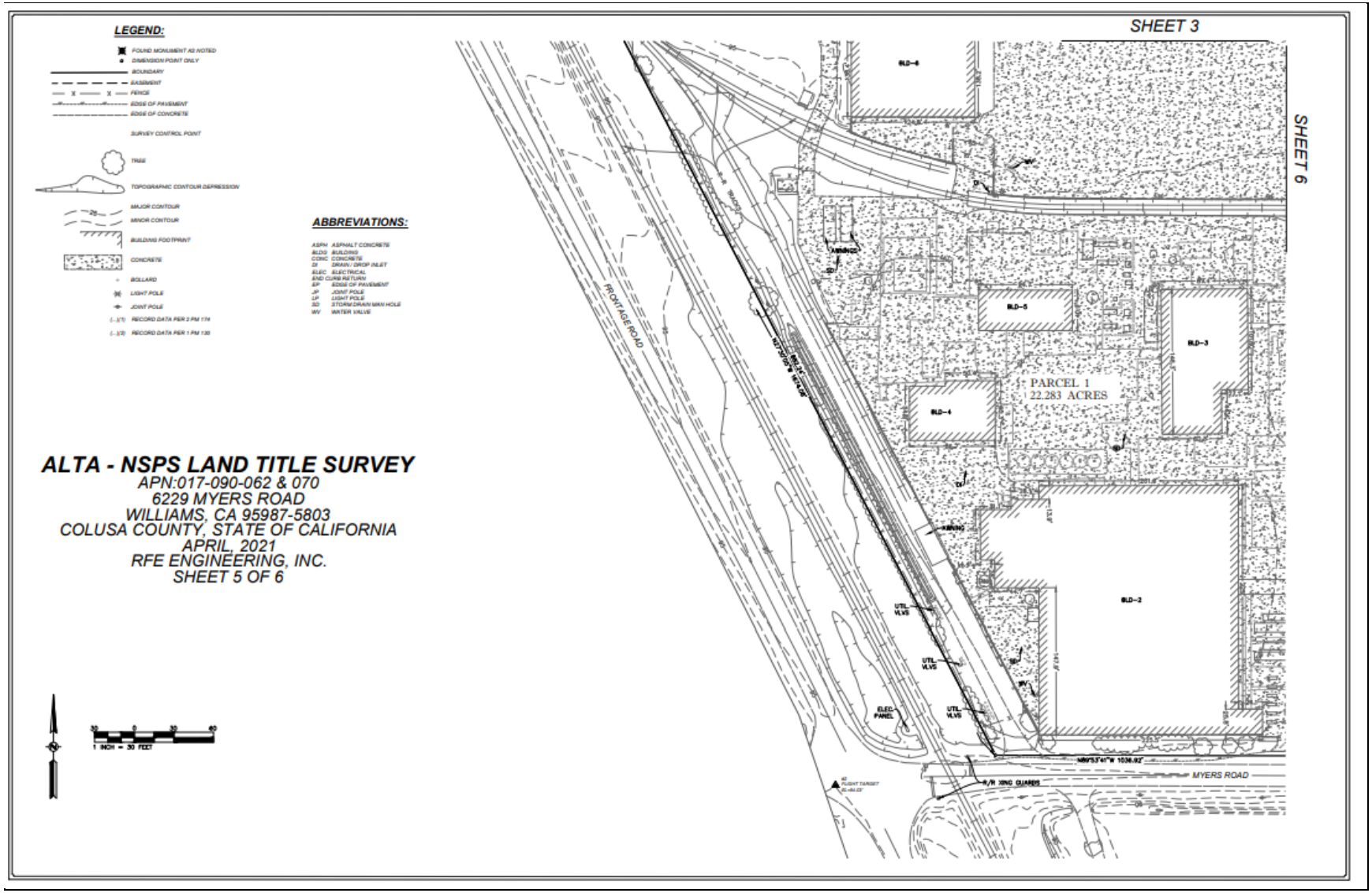
WILLIAM F. MCKINNEY, PLS 4715 EXPIRES SEP 30, 2021 RFE ENGINEERING, INC.

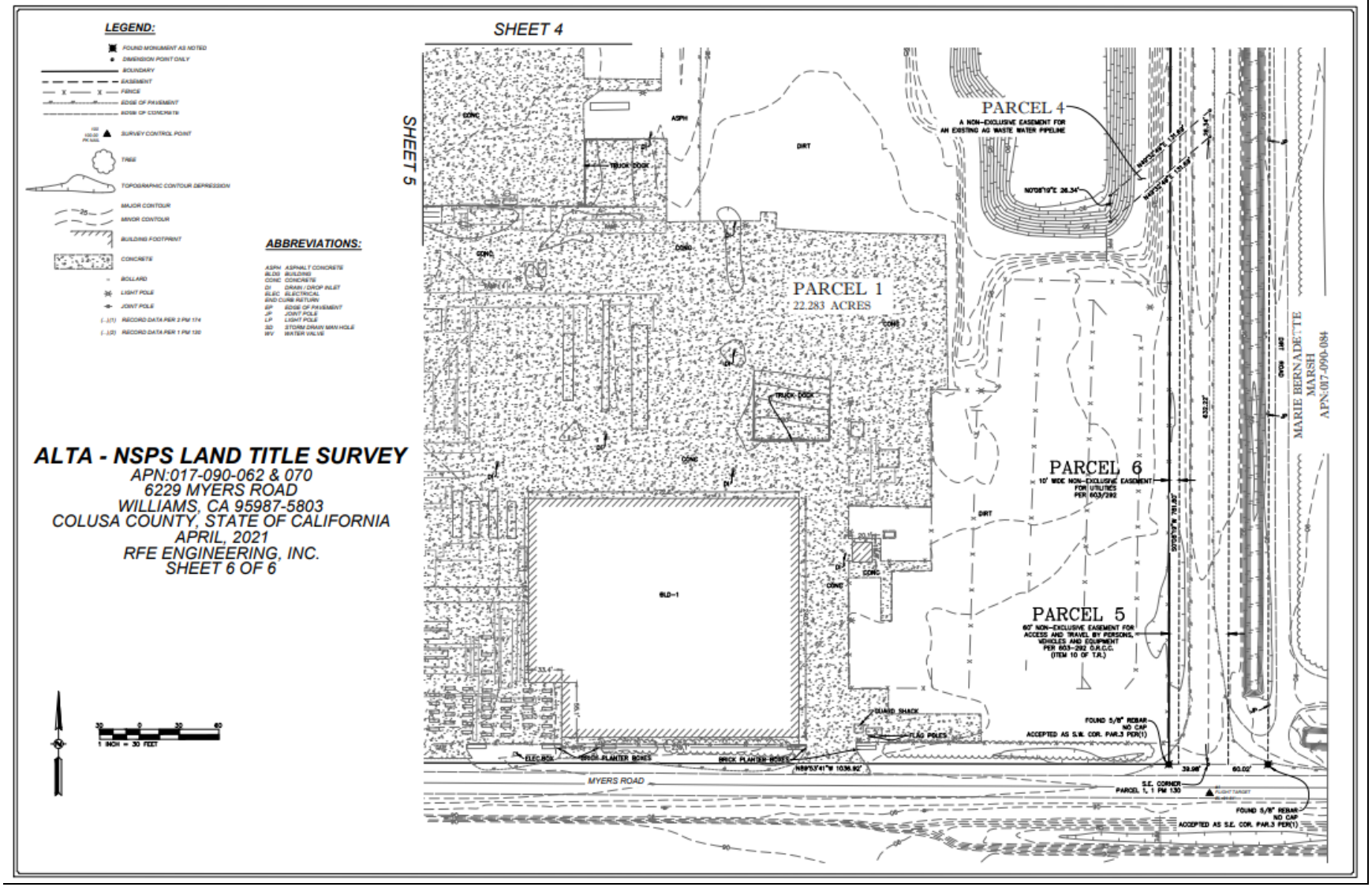
PROFESSIONAL LAND SURVEYOR
WILLIAM F. MCKINNEY
No. 4715
Exp. 09-30-21
STATE OF CALIFORNIA


LEGEND:
FOUND MONUMENT AS NOTED
DIMENSION POINT ONLY
BOUNDARY
EASEMENT
FENCE
EDGE OF PAVEMENT
EDGE OF CONCRETE
SURVEY CONTROL POINT
TREE
TOPOGRAPHIC CONTOUR DEPRESSION
MAJOR CONTOUR
MINOR CONTOUR
BUILDING FOOTPRINT
CONCRETE
BOLLARD
LIGHT POLE
JOINT POLE
RECORD DATA PER 2 PM 174
RECORD DATA PER 1 PM 130
ALTA - NSPS LAND TITLE SURVEY
APN:017-090-062 & 070
6229 MYERS ROAD
WILLIAMS, CA 95987-5803
COLUSA COUNTY, STATE OF CALIFORNIA
APRIL, 2021
RFE ENGINEERING, INC.
SHEET 2 OF 6
BASIS OF BEARINGS:
BENCHMARK:
NOTE:
PARCEL 3
20.538 ACRES
PARCEL 2
5.717 ACRES
PARCEL 1
22.283 ACRES
PARCEL 4
A NON-EXCLUSIVE EASEMENT FOR AN EXISTING AG WASTE WATER PIPELINE
PARCEL 5
PARCEL 6
PARCEL 7
SHEET 3
SHEET 4
SHEET 5
SHEET 6
FRONTAGE ROAD
MYERS ROAD
1 INCH = 80 FEET


LEGEND:
ABBREVIATIONS:
PARCEL 1 2/PM/174
ARBUTUS LLC, A CA. LLC
APN:017-090-067
PARCEL 3
20.538 ACRES
PARCEL 2
5.717 ACRES
FRONTAGE ROAD
DIRT
ASPH
SHEET 4
SHEET 5
ALTA - NSPS LAND TITLE SURVEY
APN:017-090-062 & 070
6229 MYERS ROAD
WILLIAMS, CA 95987-5803
COLUSA COUNTY, STATE OF CALIFORNIA
APRIL, 2021
RFE ENGINEERING, INC.
SHEET 3 OF 6


ALTA - NSPS LAND TITLE SURVEY
APN:017-090-062 & 070
6229 MYERS ROAD
WILLIAMS, CA 95987-5803
COLUSA COUNTY, STATE OF CALIFORNIA
APRIL, 2021
RFE ENGINEERING, INC.
SHEET 4 OF 6
PARCEL 2 2/PM/173
WADHAM ENERGY
LIMITED PARTNERSHIP
APN:017-090-071
6247 MYERS ROAD
PARCEL 3 2/PM/173
PARCEL 3
20.538 ACRES
PARCEL 7
60' NON-EXCLUSIVE EASEMENT
FOR ACCESS
PER 603-292 O.R.C.C.
(ITEM 10 OF T.R.)
PARCEL 2
5.717 ACRES
MARIE BERNADETTE
MARSH
APN:017-090-084
ABBREVIATIONS:
LEGEND:
SHEET 3
SHEET 6


LEGEND:
FOUND MONUMENT AS NOTED
DIMENSION POINT ONLY
BOUNDARY
EASEMENT
FENCE
EDGE OF PAVEMENT
EDGE OF CONCRETE
SURVEY CONTROL POINT
TREE
TOPOGRAPHIC CONTOUR DEPRESSION
MAJOR CONTOUR
MINOR CONTOUR
BUILDING FOOTPRINT
CONCRETE
BOLLARD
LIGHT POLE
JOINT POLE
RECORD DATA PER 2 PM 174
RECORD DATA PER 1 PM 130
ABBREVIATIONS:
ASPH ASPHALT CONCRETE
BLDG BUILDING
CONC CONCRETE
DI DRAIN / DROP INLET
ELEC ELECTRICAL
END CURB RETURN
EP EDGE OF PAVEMENT
JP JOINT POLE
LP LIGHT POLE
SD STORM DRAIN MAN HOLE
WV WATER VALVE
ALTA - NSPS LAND TITLE SURVEY
APN:017-090-062 & 070
6229 MYERS ROAD
WILLIAMS, CA 95987-5803
COLUSA COUNTY, STATE OF CALIFORNIA
APRIL, 2021
RFE ENGINEERING, INC.
SHEET 5 OF 6
1 INCH = 30 FEET
SHEET 3
SHEET 6
PARCEL 1
22.283 ACRES
BLD-1
BLD-2
BLD-3
BLD-4
BLD-5
BLD-6
FRONTAGE ROAD
MYERS ROAD
AWNING
UTIL VLVS
ELEC PANEL
R/R XING GUARDS


LEGEND:
FOUND MONUMENT AS NOTED
DIMENSION POINT ONLY
BOUNDARY
EASEMENT
FENCE
EDGE OF PAVEMENT
EDGE OF CONCRETE
SURVEY CONTROL POINT
TREE
TOPOGRAPHIC CONTOUR DEPRESSION
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MINOR CONTOUR
BUILDING FOOTPRINT
CONCRETE
BOLLARD
LIGHT POLE
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RECORD DATA PER 2 PM 174
RECORD DATA PER 1 PM 130
ABBREVIATIONS:
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APN:017-090-062 & 070
6229 MYERS ROAD
WILLIAMS, CA 95987-5803
COLUSA COUNTY, STATE OF CALIFORNIA
APRIL, 2021
RFE ENGINEERING, INC.
SHEET 6 OF 6
1 INCH = 30 FEET
SHEET 4
SHEET 5
PARCEL 4
A NON-EXCLUSIVE EASEMENT FOR AN EXISTING AG WASTE WATER PIPELINE
PARCEL 1
22.283 ACRES
PARCEL 6
10' WIDE NON-EXCLUSIVE EASEMENT FOR UTILITIES PER 603/292
PARCEL 5
60' NON-EXCLUSIVE EASEMENT FOR ACCESS AND TRAVEL BY PERSONS, VEHICLES AND EQUIPMENT PER 603-292 O.R.C.C. (ITEM 10 OF T.A.)
MARIE BERNADETTE MARSH
APN:017-090-084
MYERS ROAD
TRUCK DOCK
DIRT
CONC
ASPH
BLD-1
GUARD SHACK
LAG POLES
ELEC BOX
BRICK PLANTER BOXES
FOUND 5/8" REBAR NO CAP ACCEPTED AS S.W. COR. PAR.3 PER(1)
S.E. CORNER PARCEL 1, 1 PM 130
FOUND 5/8" REBAR NO CAP ACCEPTED AS S.E. COR. PAR.3 PER(1)

APPENDIX B

Well Completion Reports or Well #2 and Well #3

TRIPLICATE
Owner's Copy

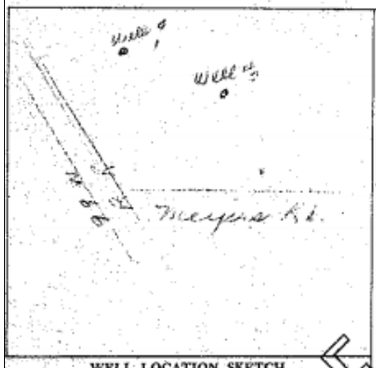
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 072778

Notice of Intent No.
Local Permit No. or Date
Well 2
State Well No.
Other Well No.

(1) OWNER: Name Naas Foods (P. O. #8880)
Address P. O. Box 1029
City Portland, Indiana Zip 47371

(2) LOCATION OF WELL (See instructions): 7T-795-2
County Colusa Owner's Well Number W-3713
Well address if different from above
Township 15N Range 2W Section 32 SW qtr
Distance from cities, roads, railroads, fences, etc.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☒
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☐ Reverse ☒
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size Birdseye
Diameter of bore 50-440 28"
Packed from 50 to 440 ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	440	16"IDx ¼	
collared			
0	50	30"	x ¼ wall conductor

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
360	440	.090
		Ful-Flo

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing conductor cemented

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Flow to water at start of test ft. At end of test ft.
Large gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made? Yes ☒ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 500 ft. Depth of completed well 440 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	18	top soil and sand
18	28	sandy clay
28	36	sand and gravel
36	44	sandy clay
44	53	gravel
53	86	sand and sandy clay
86	148	gravel, sand and clay streaks
148	276	clay and sandy clay
276	282	sand
282	290	sandy clay
290	308	clay
308	316	gravel
316	362	clay and sandy clay
362	370	sandy clay
370	390	gravel
390	420	clay and sandy clay
420	424	gravel
424	440	sand and gravel
440	500	clay and sandy clay

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)
NAME Eaton Drilling Co. Inc. (Person, firm, or corporation) (Typed or printed)
Address P. O. Box 975
City Woodland, California Zip 95695
License No. 133783C57 Date of this report 12-14-1981

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

File Original with DWR

Page 1 of 1

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. E0307136

DWR Use Only - Do Not Fill In

State Well Number/Site Number

Latitude N | Longitude W

APN/TRS/Other

Owner's Well Number 8967

Date Work Began 2/22/2016 Date Work Ended 2/25/2016

Local Permit Agency Colusa County Environmental Health Dept

Permit Number WP0000815 Permit Date 9/25/2015

Geologic Log

Orientation ☑ Verticle ☐ Horizontal ☐ Angle Specify

Drilling Method Reverse Circulation Rotary Drilling Fluid Water

Depth from Surface Feet	to Feet	Description (Describe material, grain size, color, etc)
0	120	Brown Clay
120	150	Sand And Brown Clay
150	310	Brown Clay
310	350	Gravel And Sand
350	370	Brown Clay
370	440	Gravel And Sand
440	800	Brown Clay

Total Depth of Boring 470 Feet

Total Depth of Completed Well 450 Feet

Well Owner

Name Olam Spices & Vegetable Ingredients

Mailing Address 205 E. River Park Circle, Suite 310

City Fresno State CA Zip 93720

Well Location

Address .11 Mi Nof Myers Rd & 185' Eof Frontage Rd

City County Colusa

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

Datum Decimal Lat. Decimal Long.

APN Book 017 Page 090 Parcel 062

Township 15 N Range 2 W Section 31

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

West East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. **Please be accurate and complete.**

Activity

☑ New Well

☐ Modification/Repair

☐ Deepen

☐ Other

☐ Destroy Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

☑ Water Supply

☐ Domestic ☐ Public

☑ Irrigation ☐ Industrial

☐ Cathodic Protection

☐ Dewatering

☐ Heat Exchange

☐ Injection

☐ Monitoring

☐ Remediation

☐ Sparging

☐ Test Well

☐ Vapor Extraction

☐ Other

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Outside Diameter (inches)	Wall Thickness (inches)	Screen Type	Slot Size if Any (inches)
0	235	28	Access TB	Mild Steel	3	SCH 40		
0	365	28	Gravel CHT	Mild Steel	2	SCH 40		
0	280	28	Blank	Mild Steel	16	0.375		
280	300	28	Comp. Sec.	Mild Steel	16	0.375		
300	350	28	Screen	Mild Steel	16	0.375	Triple Millslot	0.060
350	370	28	Blank	Mild Steel	16	0.375		
370	420	28	Screen	Mild Steel	16	0.375	Triple Millslot	0.060
420	450	28	Blank	Mild Steel	16	0.375		

Water Level and Yield of Completed Well

Depth to First Water (Feet below surface)

Depth to Static

Water Level 57 (Ft) Date Measured 3/18/2016

Est. Yield * 2,050 (GPM) Test Type Constant

Test Length 6 (Hrs) Total Drawdown 43 (Ft)

*May not be representative of a well's long term yield.

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	230	Cement	Sand Slurry
230	240	Bentonite	Bentonite Chips
240	470	Fill	#8 Graded Sand

Attachments

☐ Geologic Log

☐ Well Construction Diagram

☐ Geophysical Log(s)

☐ Soil/Water Chemical Analyses

☐ Other

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name Eaton Drilling Co., Inc. (Person, Firm or Corporation)

2 West Kentucky Ave (Address) Woodland (City) CA (State) 95695 (Zip)

Signed (C-57 Licensed Water Well Contractor) 4/15/2016 (Date Signed) C57A 133783 (C-57 License Number)

APPENDIX C

Olam Groundwater Sample Results

July 1, 2019

Olam Spices & Vegetable Ingredients
Attn: [redacted]
6229 Myers Rd
Williams, CA 95987

Lab ID : CH 1973872
Customer : 7-11604

Laboratory Report

Introduction: This report package contains total of 36 pages divided into 4 sections:

Case Narrative	(4 pages)	: An overview of the work performed at FGL.
Sample Results	(8 pages)	: Results for each sample submitted.
Sample Results	(8 pages)	: Results for each sample submitted.
Quality Control	(16 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Travel Blank	05/30/2019	05/30/2019	CH 1973872-000	LBW
Well 02	05/30/2019	05/30/2019	CH 1973872-001	GW

Sampling and Receipt Information: All samples were received, prepared and analyzed within the method specified holding except those as listed in the table below.

Lab ID	Analyte/Method	Required Holding Time	Actual Holding Time
CH 1973872-001	Chlorine, Free Available	15	547.8 Minutes
CH 1973872-001	Chlorine, Total	15	541.2 Minutes

All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Metals QC

200.7	06/07/2019:208468 All analysis quality controls are within established criteria.
	06/06/2019:206324 All preparation quality controls are within established criteria, except: The following note applies to Boron, Calcium, Copper, Iron, Potassium, Magnesium, Manganese, Silicon, Zinc: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to Boron, Calcium, Copper, Iron, Potassium, Magnesium, Manganese, Sodium, Silicon, Zinc: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Santa Paula, CA 93060
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FAX: (559)734-8435
CA ELAP Certification No. 2810

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Inorganic - Metals QC

200.8	06/04/2019:208312 All analysis quality controls are within established criteria.
	06/04/2019:206207 All preparation quality controls are within established criteria.
245.1	06/19/2019:209144 All analysis quality controls are within established criteria.
	06/19/2019:206890 All preparation quality controls are within established criteria.

Organic QC

504	06/10/2019:206448 All preparation quality controls are within established criteria.
504.1	06/11/2019:208600 All analysis quality controls are within established criteria.
524.2	06/07/2019:208465 All analysis quality controls are within established criteria, except: The following note applies to 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Isopropyl Ether, Naphthalene: 360 CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.
	06/06/2019:206399 All preparation quality controls are within established criteria, except: The following note applies to 1,2,3-Trichlorobenzene, Naphthalene: 210 The method blank was positive. However, samples reported were either ten times greater than the blank concentration or non detect and accepted. The following note applies to 1,2,3-Trichlorobenzene, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, Bromobenzene, Dichloromethane, TAME: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane(TCA), 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroeth: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
552	06/11/2019:206495 All preparation quality controls are within established criteria, except: The following note applies to Trichloroacetic Acid, Monochloroacetic Acid: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
552.2	06/12/2019:208671 All analysis quality controls are within established criteria, except: The following note applies to Dibromoacetic Acid, Dichloroacetic Acid: 360 CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.
	06/12/2019:208750 All analysis quality controls are within established criteria.
	06/13/2019:209121 All analysis quality controls are within established criteria.

July 1, 2019
Olam Spices & Vegetable Ingredients

Lab ID : CH 1973872
Customer : 7-11604

Radio QC

900.0	06/12/2019:208711 All analysis quality controls are within established criteria.
	06/06/2019:206293 All preparation quality controls are within established criteria, except: The following note applies to Gross Beta: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
903.0	06/28/2019:209654 All analysis quality controls are within established criteria.
	06/19/2019:206899 All preparation quality controls are within established criteria.
Ra - 05	06/17/2019:209079 All analysis quality controls are within established criteria.
	06/09/2019:206240 All preparation quality controls are within established criteria.

Inorganic - Wet Chemistry QC

2120B	05/30/2019:710897 All analysis quality controls are within established criteria.
	05/30/2019:710681 All preparation quality controls are within established criteria.
2130B	05/30/2019:710896 All analysis quality controls are within established criteria.
	05/30/2019:710680 All preparation quality controls are within established criteria.
2150B	05/30/2019:710682 All preparation quality controls are within established criteria.
218.6	06/07/2019:208482 All analysis quality controls are within established criteria.
	06/07/2019:206407 All preparation quality controls are within established criteria.
2320B	06/06/2019:208515 All analysis quality controls are within established criteria.
	06/06/2019:206320 All preparation quality controls are within established criteria.
2510B	06/03/2019:208153 All analysis quality controls are within established criteria.
	06/03/2019:206166 All preparation quality controls are within established criteria.
2540CE	06/03/2019:206133 All preparation quality controls are within established criteria.
300.0	05/31/2019:208189 All analysis quality controls are within established criteria.

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Inorganic - Wet Chemistry QC

300.0	05/31/2019:206186 All preparation quality controls are within established criteria.
314.0	06/04/2019:207576 All analysis quality controls are within established criteria.
	06/03/2019:205695 All preparation quality controls are within established criteria.
4500Cl G	05/30/2019:700006 All preparation quality controls are within established criteria.
4500ClG	05/30/2019:700005 All analysis quality controls are within established criteria.
	05/30/2019:700006 All analysis quality controls are within established criteria.
	05/30/2019:700005 All preparation quality controls are within established criteria.
4500CNCE	06/03/2019:208069 All analysis quality controls are within established criteria.
	06/01/2019:206104 All preparation quality controls are within established criteria.
5540C	05/31/2019:208124 All analysis quality controls are within established criteria.
	05/31/2019:206137 All preparation quality controls are within established criteria, except: The following note applies to MBAS Extraction: 410 Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.

Certification:: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:CEA

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2019-07-02

ORGANIC CHEMICALS ANALYSIS

Date of Report	:	July 01, 2019	Sample ID	:	CH 1973872-000
Laboratory Name	:	**FGL Environmental**	Approved By		**Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2019-07-02
Sampled On	:	05/30/2019-07:15			
Received On	:	05/30/2019-14:40	Sampler	:	[redacted]
Completed On	:	06/11/2019	Employed By	:	Olam Spices & Vegeta

System Name : OLAM SPICES AND VEGETABLE INGREDIENTS Number : 0600061

Name Or Number of Sample Source : TRAVEL BLANK

User ID	:		Station Number	:	
Date/Time of Sample	:	1905300715 YYMMDDTTTT	Laboratory Code	:	5 8 6 7
Submitted By	:	**FGL Environmental**	Phone #	:	(805) 392-2000

REGULATED ORGANICS CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
504.1	Dibromochloropropane (DBCP)	38761	ND	0.2	0.01
504.1	Ethylene Dibromide (EDB)	77651	ND	0.05	0.02

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR

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INORGANIC CHEMICALS ANALYSIS

Date of Report : July 01, 2019
Laboratory Name : **FGL Environmental**
Sampled On : 05/30/2019-07:15
Received On : 05/30/2019-14:40
Completed On : 06/19/2019

Sample ID : CH 1973872-001
Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2019-07-02
Sampler : [redacted]
Employed By : Olam Spices & Vegeta

System Name : OLAM SPICES AND VEGETABLE INGREDIENTS Number : 0600061-003 **EDT**

Name Or Number of Sample Source : WELL 02

User ID : BUG
Date/Time of Sample : 1905300715 YYMMDDTTTT
Submitted By : **FGL Environmental**
Station Number : 0600061-003
Laboratory Code : 5 8 6 7
Phone # : (805) 392-2000

GENERAL MINERAL & PHYSICAL

MCL	UNITS	CHEMICALS	ENTRY	RESULT	DLR
	mg/L	Total Hardness (as CaCO3)	00900	195	1
	mg/L	Calcium (Ca)	00916	42	1
	mg/L	Magnesium (Mg)	00927	22	1
	mg/L	Sodium (Na)	00929	55	1
	mg/L	Potassium (K)	00937	1	1
	meq/L	Total Cations		6.3	
	mg/L	Total Alkalinity (as CaCO3)	00410	210	10
	mg/L	Hydroxide (OH)	71830	ND	10
	mg/L	Carbonate (CO3)	00445	ND	10
	mg/L	Bicarbonate (HCO3)	00440	250	10
* [2]	mg/L	Sulfate (SO4)	00945	63.7	0.5
* [2]	mg/L	Chloride (Cl)	00940	43	1
45	mg/L	Nitrate (NO3)	71850	15.5	2
2	mg/L	Fluoride (F)	00951	0.2	0.1
	meq/L	Total Anions		6.9	
	Std Units	pH	00403	6.7	
** [2]	umhos/cm2	Specific Conductance (E.C.)	00095	703	1
*** [2]	mg/L	Total Filterable Residue	70300	420	40
15 [2]	Units	Apparent Color (Unfiltered)	00081	ND	5

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
[2] Indicates Secondary Drinking Water Standards(Recommended-Upper-Short Term) * 250-500-600 ** 900-1600-2200 *** 500-1000-1500

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GENERAL MINERAL & PHYSICAL

MCL	UNITS	CHEMICALS	ENTRY	RESULT	DLR
3 [2]	TON	Odor Threshold at 60 °C	00086	ND	1
5	NTU	Lab Turbidity	82079	0.1	0.1
0.5 [2]	mg/L	MBAS	38260	ND	0.05

REGULATED INORGANIC

MCL	UNITS	CHEMICALS	ENTRY	RESULT	DLR
1000	ug/L	Aluminum	01105	ND	50
6	ug/L	Antimony	01097	ND	6
10	ug/L	Arsenic	01002	2	2
1000	ug/L	Barium	01007	ND	100
4	ug/L	Beryllium	01012	ND	1
5	ug/L	Cadmium	01027	ND	1
50	ug/L	Chromium (Total Cr)	01034	11	10
1000 [2]	ug/L	Copper	01042	ND	50
300 [2]	ug/L	Iron	01045	ND	100
15	ug/L	Lead	01051	ND	5
50 [2]	ug/L	Manganese	01055	ND	20
2	ug/L	Mercury	71900	ND	1
100	ug/L	Nickel	01067	ND	10
50	ug/L	Selenium	01147	ND	5
100 [2]	ug/L	Silver	01077	ND	10
2	ug/L	Thallium	01059	ND	1
	ug/L	Zinc	01092	ND	50

ADDITIONAL INORGANIC

MCL	UNITS	CHEMICALS	ENTRY	RESULT	DLR
---	ug/L	Boron	01020	200	100
	mg/L	Bromide	82298	ND	0.5
150	ug/L	Cyanide, Total	01291	ND	4
		Langelier Index at 20 °C	71814	-0.8	
	ug/L	Molybdenum	01062	ND	0.5
10	mg/L	Nitrate as N (Nitrogen)	00618	3.5	0.4
10	mg/L	Nitrate + Nitrite as N	A-029	3.5	0.2
1	mg/L	Nitrite as N (Nitrogen)	00620	ND	0.4
	ug/L	Chromium, Hexavalent	01032	8.1	1
	mg/L	Sodium Adsorption Ratio (SAR)	00931	1.7	1

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
[2] Indicates Secondary Drinking Water Standards(Recommended-Upper-Short Term)

Date of Report : July 01, 2019 Sample ID : CH 1973872-001

ADDITIONAL INORGANIC

MCL	UNITS	CHEMICALS	ENTRY	RESULT	DLR
	mg/L	Silica	00955	24	1
---	ug/L	Vanadium	01087	8	3
		Aggressiveness Index	82383	11.0	
6	ug/L	Perchlorate	A-031	ND	4
20.0	pCi/L	Uranium	28012	0.6	0.7

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
Composite of also reported as sampled on - Reason:Source-Other

ORGANIC CHEMICALS ANALYSIS

Date of Report : July 01, 2019
Laboratory Name : **FGL Environmental**
Sampled On : 05/30/2019-07:15
Received On : 05/30/2019-14:40
Completed On : 06/13/2019

Sample ID : CH 1973872-001
Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2019-07-02
Sampler : [redacted]
Employed By : Olam Spices & Vegeta

System Name : OLAM SPICES AND VEGETABLE INGREDIENTS
Number : 0600061-003 **EDT**

Name Or Number of Sample Source : WELL 02

User ID : BUG
Date/Time of Sample : 1905300715 YYMMDDTTTT
Submitted By : **FGL Environmental**
Station Number : 0600061-003
Laboratory Code : 5 8 6 7
Phone # : (805) 392-2000

REGULATED ORGANICS CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Bromodichloromethane	32101	ND	---	1
524.2	Bromoform	32104	ND	---	1
524.2	Chloroform (Trichloromethane)	32106	ND	---	1
524.2	Dibromochloromethane	32105	ND	---	1
524.2	Total Trihalomethanes (THM'S/TTHM)	82080	ND	80	
524.2	Benzene	34030	ND	1	0.5
524.2	Carbon Tetrachloride	32102	ND	0.5	0.5
524.2	1,2-Dichlorobenzene (o-DCB)	34536	ND	600	0.5
524.2	1,4-Dichlorobenzene (p-DCB)	34571	ND	5	0.5
524.2	1,1-Dichloroethane (1,1-DCA)	34496	ND	5	0.5
524.2	1,2-Dichloroethane (1,2-DCA)	34531	ND	0.5	0.5
524.2	1,1-Dichloroethylene (1,1-DCE)	34501	ND	6	0.5
524.2	cis-1,2-Dichloroethylene	77093	ND	6	0.5
524.2	trans-1,2-Dichloroethylene	34546	ND	10	0.5
524.2	Dichloromethane (Methylene Chloride)	34423	ND	5	0.5
524.2	1,2-Dichloropropane	34541	ND	5	0.5
524.2	Total 1,3-Dichloropropene	34561	ND	0.5	0.5
524.2	Ethyl Benzene	34371	ND	300	0.5
524.2	Monochlorobenzene (Chlorobenzene)	34301	ND	70	0.5

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR

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Date of Report : July 01, 2019 Sample ID : CH 1973872-001

REGULATED ORGANICS CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Styrene	77128	ND	100	0.5
524.2	1,1,2,2-Tetrachloroethane	34516	ND	1	0.5
524.2	Tetrachloroethylene (PCE)	34475	ND	5	0.5
524.2	Toluene	34010	ND	150	0.5
524.2	1,2,4-Trichlorobenzene	34551	ND	5	0.5
524.2	1,1,1-Trichloroethane (1,1,1-TCA)	34506	ND	200	0.5
524.2	1,1,2-Trichloroethane (1,1,2-TCA)	34511	ND	5	0.5
524.2	Trichloroethylene (TCE)	39180	ND	5	0.5
524.2	Trichlorofluoromethane (Freon 11)	34488	ND	150	5
524.2	Trichlorotrifluoroethane (Freon 113)	81611	ND	1200	10
524.2	Vinyl Chloride (VC)	39175	ND	0.5	0.5
524.2	m,p-Xylenes	A-014	ND	1750	0.5
524.2	o-Xylene	77135	ND	1750	0.5
524.2	Total Xylenes (m,p & o)	81551	ND	1750	0.5
504.1	Dibromochloropropane (DBCP)	38761	ND	0.2	0.01
504.1	Ethylene Dibromide (EDB)	77651	ND	0.05	0.02
524.2	Methyl tert-Butyl Ether (MTBE)	46491	ND	13	3.0
524.2	cis-1,3-Dichloropropene	34704	ND	0.5	0.5
524.2	trans-1,3-Dichloropropene	34699	ND	0.5	0.5

UNREGULATED ORGANICS CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Bromobenzene	81555	ND	---	0.5
524.2	Bromochloromethane	A-012	ND	---	0.5
524.2	Bromomethane (Methyl Bromide)	34413	ND	---	0.5
524.2	n-Butylbenzene	A-010	ND	---	0.5
524.2	sec-Butylbenzene	77350	ND	---	0.5
524.2	tert-Butylbenzene	77353	ND	---	0.5
524.2	Chloroethane	34311	ND	---	0.5
524.2	Chloromethane (Methyl Chloride)	34418	ND	---	0.5
524.2	2-Chlorotoluene	A-008	ND	---	0.5
524.2	4-Chlorotoluene	A-009	ND	---	0.5
524.2	Dibromomethane	77596	ND	---	0.5
524.2	1,3-Dichlorobenzene (m-DCB)	34566	ND	---	0.5
524.2	Dichlorodifluoromethane	34668	ND	---	0.5
524.2	1,3-Dichloropropane	77173	ND	---	0.5
524.2	2,2-Dichloropropane	77170	ND	---	0.5
524.2	1,1-Dichloropropene	77168	ND	---	0.5

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR

UNREGULATED ORGANICS CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
524.2	Hexachlorobutadiene	34391	ND	---	0.5
524.2	Isopropylbenzene (Cumene)	77223	ND	---	0.5
524.2	p-Isopropyltoluene	A-011	ND	---	0.5
524.2	Naphthalene	34696	ND	---	0.5
524.2	n-Propylbenzene	77224	ND	---	0.5
524.2	1,1,1,2-Tetrachloroethane	77562	ND	---	0.5
524.2	1,2,3-Trichlorobenzene	77613	ND	---	0.5
524.2	1,2,4-Trimethylbenzene	77222	ND	---	0.5
524.2	1,3,5-Trimethylbenzene	77226	ND	---	0.5

ADDITIONAL ORGANICS CHEMICALS

TEST METHOD	CHEMICAL ALL CHEMICALS REPORTED ug/L	ENTRY #	ANALYSES RESULTS	MCL ug/L	DLR ug/L
552.2	Dibromoacetic Acid	82721	ND	---	1
552.2	Dichloroacetic Acid	77288	ND	---	1
524.2	Ethyl tert-Butyl Ether (ETBE)	A-033	ND	---	3
552.2	Monobromoacetic Acid	A-041	ND	---	1
552.2	Monochloroacetic Acid	A-042	ND	---	2
552.2	Trichloroacetic Acid	82723	ND	---	1
524.2	Tert-amyl-methyl Ether (TAME)	A-034	ND	---	3
552.2	Haloacetic acids (five)	A-049	ND	60	
524.2	Diisopropyl Ether (DIPE)	A-036	ND	---	3

MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
Composite of also reported as sampled on - Reason:Source-Other

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

RADIO CHEMICALS ANALYSIS

Date of Report	:	July 01, 2019	Sample ID	:	CH 1973872-001
Laboratory Name	:	**FGL Environmental**	Approved By		**Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2019-07-02
Sampled On	:	05/30/2019-07:15			
Received On	:	05/30/2019-14:40	Sampler	:	[redacted]
Completed On	:	06/28/2019	Employed By	:	Olam Spices & Vegeta

System Name : OLAM SPICES AND VEGETABLE INGREDIENTS Number : 0600061-003 **EDT**

Name Or Number of Sample Source : WELL 02

User ID	:	BUG	Station Number	:	0600061-003
Date/Time of Sample	:	1905300715 YYMMDDTTTT	Laboratory Code	:	5 8 6 7
Submitted By	:	**FGL Environmental**	Phone #	:	(805) 392-2000

RADIOLOGICAL

MCL	UNITS	CHEMICALS	ENTRY	RESULT	DLR
15 □	pCi/L	Gross Alpha	01501	2.28	3
	pCi/L	Gross Alpha Counting Error	01502	± 1.75	
	pCi/L	Gross Alpha MDA95	A-072	1.68	
50	pCi/L	Gross Beta	03501	1.49	4
	pCi/L	Gross Beta Counting Error	03502	± 1.20	
	pCi/L	Gross Beta MDA95	A-077	1.27	
2	pCi/L	Radium 228	11501	0.000	1
	pCi/L	Radium 228 Counting Error	11502	± 0.536	
	pCi/L	Radium 228 MDA95	A-075	0.408	
3	pCi/L	Ra-226 or Total Ra by 903.0	09501	0.043	1
	pCi/L	Ra-226 or Total Ra by 903.0 C.E.	09502	± 0.132	
	pCi/L	Ra-226 or Total Ra by 903.0 MDA95	A-074	0.418	

□ Including Radium But excluding Uranium. (Ref. Title 22 sec. 64442.)
MCL - Maximum Contaminant Level, DLR -Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
Composite of Gross_A;Gross_B;Ra_228;Tot_Ra; also reported as sampled on - Reason:Source-Other

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July 1, 2019

Olam Spices & Vegetable Ingredients
Attn: [redacted]
6229 Myers Rd
Williams, CA 95987

Description : Travel Blank
Project : Well 2 Monitoring

Lab ID : CH 1973872-000
Customer ID : 7-11604

Sampled On : May 30, 2019 07:15
Sampled By : [redacted]
Received On : May 30, 2019-14:40
Matrix : Lab. Blank Water

Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
EPA 504.1								
1,3-Dibromopropane‡	93.3	70-130	%		504	06/10/19:206448	504.1	06/11/19:208600
DBCP	ND	0.01	ug/L		504	06/10/19:206448	504.1	06/11/19:208600
EDB	ND	0.02	ug/L		504	06/10/19:206448	504.1	06/11/19:208600

ND=Non-Detected. PQL=Practical Quantitation Limit. ‡Surrogate. * PQL adjusted for dilution.

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July 1, 2019

Olam Spices & Vegetable Ingredients
Attn: [redacted]
6229 Myers Rd
Williams, CA 95987

Description : Well 02
Project : Well 2 Monitoring

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sampled On : May 30, 2019-07:15
Sampled By : [redacted]
Received On : May 30, 2019-14:40
Matrix : Ground Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
General Mineral								
Total Hardness as CaCO3	195	--	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Calcium	42	1	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Magnesium	22	1	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Potassium	1	1	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Sodium	55	1	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Total Cations	6.3	--	meq/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Boron	0.2	0.1	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Copper	ND	10	ug/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Iron	30	30	ug/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Manganese	ND	10	ug/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Zinc	ND	20	ug/L		200.7	06/06/19:206324	200.7	06/07/19:208468
SAR	1.7	--	--		200.7	06/06/19:206324	200.7	06/07/19:208468
Total Alkalinity (as CaCO3)	210	10	mg/L		2320B	06/06/19:206320	2320B	06/06/19:208515
Hydroxide as OH	ND	10	mg/L		2320B	06/06/19:206320	2320B	06/06/19:208515
Carbonate as CO3	ND	10	mg/L		2320B	06/06/19:206320	2320B	06/06/19:208515
Bicarbonate as HCO3	250	10	mg/L		2320B	06/06/19:206320	2320B	06/06/19:208515
Sulfate	63.7	0.5	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Chloride	43	1	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Nitrate as NO3	15.5	0.4	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Nitrite as N	ND	0.2	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Nitrate + Nitrite as N	3.5	0.1	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Fluoride	0.2	0.1	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Total Anions	6.9	--	meq/L		2320B	06/06/19:206320	2320B	06/06/19:208515
pH (Field)	6.7	--	units		4500-H B	05/30/19:206116	4500HB	05/30/19:208078
Specific Conductance	703	1	umhos/cm		2510B	06/03/19:206166	2510B	06/03/19:208153
Total Dissolved Solids	420	20	mg/L		2540CE	06/03/19:206133	2540C	06/04/19:208180
MBAS Extraction	ND	0.1	mg/L		5540C	05/31/19:206137	5540C	05/31/19:208124
Aggressiveness Index	11.0	--	--		4500-H B	05/30/19:206116	4500HB	05/30/19:208078
Langelier Index (20°C)	-0.8	--	--		4500-H B	05/30/19:206116	4500HB	05/30/19:208078
Nitrate Nitrogen	3.5	0.1	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Metals, Total								
Aluminum	ND	10	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Antimony	ND	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Arsenic	2	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Barium	86.4	0.2	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312

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July 1, 2019
Description : Well 02

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Total								
Beryllium	ND	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Cadmium	ND	0.2	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Chromium	11	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Lead	ND	0.5	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Mercury	0.02	0.01	ug/L		245.1	06/19/19:206890	245.1	06/19/19:209144
Molybdenum	ND	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Nickel	ND	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Selenium	2	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Silica	24	1	mg/L		200.7	06/06/19:206324	200.7	06/07/19:208468
Silver	ND	1	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Thallium	ND	0.2	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Uranium	0.9	0.2	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Vanadium	8	2	ug/L		200.8	06/04/19:206207	200.8	06/04/19:208312
Wet Chemistry								
Bromide	0.19	0.03	mg/L		300.0	05/31/19:206186	300.0	05/31/19:208189
Chloramines, Total	ND	--	mg/L		4500ClG	05/30/19:700005	4500ClG	05/30/19:700005
Chlorine, Total	ND	0.1	mg/L		4500ClG	05/30/19:700005	4500ClG	05/30/19:700005
Chlorine, Free Available	ND	0.1	mg/L		4500Cl G	05/30/19:700006	4500ClG	05/30/19:700006
Chromium VI	8.1	0.1	ug/L		218.6	06/07/19:206407	218.6	06/07/19:208482
Color	ND	5	units		2120B	05/30/19:710681	2120B	05/30/19:710897
Cyanide, Total	ND	0.004	mg/L		4500CNCE	06/01/19:206104	4500CNCE	06/03/19:208069
Odor	ND	1	TON		2150B	05/30/19:710682	2150B	05/30/19:710898
Turbidity	0.1	0.1	NTU		2130B	05/30/19:710680	2130B	05/30/19:710896
Perchlorate	ND	2	ug/L		314.0	06/03/19:205695	314.0	06/04/19:207576

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

July 1, 2019

Olam Spices & Vegetable Ingredients
Attn: [redacted]
6229 Myers Rd
Williams, CA 95987

Description : Well 02
Project : Well 2 Monitoring

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sampled On : May 30, 2019-07:15
Sampled By : [redacted]
Received On : May 30, 2019-14:40
Matrix : Ground Water

Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
EPA 504.1								
1,3-Dibromopropane‡	89.2	70-130	%		504	06/10/19:206448	504.1	06/11/19:208600
DBCP	ND	0.01	ug/L		504	06/10/19:206448	504.1	06/11/19:208600
EDB	ND	0.02	ug/L		504	06/10/19:206448	504.1	06/11/19:208600
EPA 524.2								
4-Bromofluorobenzene‡	97.1	70-130	%		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2-Dichlorobenzene-d4‡	90.0	70-130	%		524.2	06/06/19:206399	524.2	06/07/19:208465
Benzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Bromobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Bromochloromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Bromodichloromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Bromoform	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Bromomethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
n-Butylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
sec-Butylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
tert-Butylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Carbon Tetrachloride	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Chlorobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Chloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Chloroform	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Chloromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
2-Chlorotoluene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
4-Chlorotoluene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Dibromochloromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Dibromomethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2-Dichlorobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,3-Dichlorobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,4-Dichlorobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Dichlorodifluoromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1-Dichloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2-Dichloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1-Dichloroethylene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
cis-1,2-Dichloroethylene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
trans-1,2-Dichloroethylene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2-Dichloropropane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,3-Dichloropropane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465

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July 1, 2019
Description : Well 02

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
EPA 524.2								
Dichloromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
2,2-Dichloropropane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1-Dichloropropene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,3-Dichloropropene (Total)	ND	--	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
cis-1,3-Dichloropropene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
trans-1,3-Dichloropropene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Di-isopropyl ether (DIPE)	ND	3	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Ethyl Benzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Ethyl tert-Butyl Ether (ETBE)	ND	3	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Hexachlorobutadiene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Isopropylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
p-Isopropyltoluene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Methyl tert-Butyl Ether (MTBE)	ND	1	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Naphthalene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
n-Propylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Styrene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Tert-amyl-methyl Ether (TAME)	ND	3	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Tetrachloroethylene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Toluene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2,3-Trichlorobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2,4-Trichlorobenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1,1-Trichloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1,2-Trichloroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Trichloroethylene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Trichlorofluoromethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,1,2-Trichlorotrifluoroethane	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,2,4-Trimethylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
1,3,5-Trimethylbenzene	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Vinyl Chloride	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Xylenes (Total)	ND	--	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Xylenes m,p	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Xylenes o	ND	0.5	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
Total Trihalomethanes	ND	--	ug/L		524.2	06/06/19:206399	524.2	06/07/19:208465
EPA 552.2								
2,3-Dibromopropionic Acid‡	101	70-130	%		552	06/11/19:206495	552.2	06/12/19:208671
Bromoacetic Acid	ND	1	ug/L		552	06/11/19:206495	552.2	06/12/19:208750

July 1, 2019
Description : Well 02

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
EPA 552.2								
Chloroacetic Acid	ND	2	ug/L		552	06/11/19:206495	552.2	06/13/19:209121
Dibromoacetic Acid	ND	1	ug/L		552	06/11/19:206495	552.2	06/12/19:208671
Dichloroacetic Acid	ND	1	ug/L		552	06/11/19:206495	552.2	06/12/19:208671
Trichloroacetic Acid	ND	1	ug/L		552	06/11/19:206495	552.2	06/13/19:209121
Haloacetic acids (five)	ND	--	ug/L		552	06/11/19:206495	552.2	06/12/19:208750

ND=Non-Detected. PQL=Practical Quantitation Limit. ‡Surrogate. * PQL adjusted for dilution.

July 1, 2019

Olam Spices & Vegetable Ingredients
Attn: [redacted]
6229 Myers Rd
Williams, CA 95987

Description : Well 02
Project : Well 2 Monitoring

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sampled On : May 30, 2019-07:15
Sampled By : [redacted]
Received On : May 30, 2019-14:40
Matrix : Ground Water

Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Radio Chemistry								
Gross Alpha	2.28 ± 1.75	1.68	pCi/L		900.0	06/06/19-08:38 2P1906293	900.0	06/12/19-11:08 2A1908711
Gross Beta	1.49 ± 1.20	1.27	pCi/L		900.0	06/06/19-08:38 2P1906293	900.0	06/12/19-11:08 2A1908711
Total Alpha Radium (226)	0.043 ± 0.132	0.418	pCi/L		903.0	06/19/19-17:40 2P1906899	903.0	06/28/19-08:36 2A1909654
Ra 228	0.000 ± 0.536	0.408	pCi/L		Ra - 05	06/09/19-18:00 2P1906240	Ra - 05	06/17/19-18:50 2A1909079

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference.
MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV).
AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following
If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:
Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L
Uranium is less than or equal to 20 pCi/L
Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

July 1, 2019

Olam Spices & Vegetable Ingredients
Attn: [redacted]
6229 Myers Rd
Williams, CA 95987

Description : Well 02
Project : Well 2 Monitoring

Lab ID : CH 1973872-001
Customer ID : 7-11604

Sampled On : May 30, 2019-07:15
Sampled By : [redacted]
Received On : May 30, 2019-14:40
Matrix : Ground Water

Sample Result - Support

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Field Test								
pH (Field)	6.73		units			05/30/19 07:15	4500-H B	05/30/19 07:15

ND=Non-Detected. PQL=Practical Quantitation Limit. * PQL adjusted for dilution.

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
1,2-Dibromoethane(EDB)	504	06/10/19:206448BJW	Blank	ug/L		ND	<0.02	
			LCS	ug/L	0.2510	100 %	70-130	
			LCS	ug/L	0.2510	99.1 %	70-130	
			MS	ug/L	0.2510	87.4 %	70-130	
		(STK1937863-001)	MSD	ug/L	0.2510	98.2 %	70-130	
			MSRPD	ug/L	0.5868	11.6%	≤30	
1,3-Dibromopropane	504	06/10/19:206448BJW	Blank	ug/L	0.5868	94.4 %	70-130	
			LCS	ug/L	0.5868	111 %	70-130	
			LCS	ug/L	0.5868	107 %	70-130	
			MS	ug/L	0.5868	95.8 %	70-130	
		(STK1937863-001)	MSD	ug/L	0.5868	107 %	70-130	
			MSRPD	ug/L	0.5868	11.0%	≤30	
DBCP	504	06/10/19:206448BJW	Blank	ug/L		ND	<0.01	
			LCS	ug/L	0.2509	117 %	70-130	
			LCS	ug/L	0.2509	117 %	70-130	
			MS	ug/L	0.2509	107 %	70-130	
		(STK1937863-001)	MSD	ug/L	0.2509	111 %	70-130	
			MSRPD	ug/L	0.5868	3.4%	≤30	
13DBP	504.1	06/11/19:208600BJW	CCV	ug/L	9.975	93.8 %	70-130	
			CCV	ug/L	7.481	90.6 %	70-130	
DBCP	504.1	06/11/19:208600BJW	CCV	ug/L	5.018	98.0 %	70-130	
			CCV	ug/L	2.007	91.7 %	70-130	
EDB	504.1	06/11/19:208600BJW	CCV	ug/L	5.020	91.4 %	70-130	
			CCV	ug/L	2.008	90.1 %	70-130	
1,1,1,2-Tetrachloroethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	88.8 %	12-178	
		(SP 1906855-001)	MSD	ug/L	10.00	19.8 %	12-178	
			MSRPD	ug/L	10.00	127%	≤39	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.890	116 %	70-130	
1,1,1-Trichloroethane(TCA)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	89.3 %	9-176	
		(SP 1906855-001)	MSD	ug/L	10.00	20.6 %	9-176	
			MSRPD	ug/L	10.00	125%	≤33	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.945	109 %	70-130	
1,1,2,2-Tetrachloroethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	72.3 %	23-180	
		(SP 1906855-001)	MSD	ug/L	10.00	17.9 %	23-180	435
			MSRPD	ug/L	10.00	121%	≤34	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.830	106 %	70-130	
1,1,2-Trichloroethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	77.1 %	25-173	
		(SP 1906855-001)	MSD	ug/L	10.00	18.7 %	25-173	435
			MSRPD	ug/L	10.00	122%	≤29	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.860	106 %	70-130	
1,1-Dichloroethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	76.0 %	15-161	
		(SP 1906855-001)	MSD	ug/L	10.00	17.6 %	15-161	
			MSRPD	ug/L	10.00	125%	≤36	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.02	94.2 %	70-130	
1,1-Dichloroethylene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	67.0 %	0-162	
		(SP 1906855-001)	MSD	ug/L	10.00	15.5 %	0-162	
			MSRPD	ug/L	10.00	125%	≤33	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.920	81.8 %	70-130	
1,1-Dichloropropene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	

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Office & Laboratory
563 E. Lindo Avenue
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3442 Empresa Drive, Suite D
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July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
1,1-Dichloropropene	524.2		MS	ug/L	10.00	80.1 %	0-171	
		(SP 1906855-001)	MSD	ug/L	10.00	18.7 %	0-171	
			MSRPD	ug/L	10.00	124%	≤31	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	96.3 %	70-130	
1,2,3-Trichlorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		1.676	0.5	210
			MS	ug/L	10.00	331 %	14-181	435
		(SP 1906855-001)	MSD	ug/L	10.00	118 %	14-181	
			MSRPD	ug/L	10.00	95.1%	≤34	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.975	417 %	70-130	360
1,2,4-Trichlorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	114 %	10-180	
		(SP 1906855-001)	MSD	ug/L	10.00	33.2 %	10-180	
			MSRPD	ug/L	10.00	110%	≤32	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	160 %	70-130	360
1,2,4-Trimethylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	83.7 %	2-192	
		(SP 1906855-001)	MSD	ug/L	10.00	19.1 %	2-192	
			MSRPD	ug/L	10.00	126%	≤39	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.825	112 %	70-130	
1,2-Dichlorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	84.0 %	13-191	
		(SP 1906855-001)	MSD	ug/L	10.00	21.2 %	13-191	
			MSRPD	ug/L	10.00	119%	≤35	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.890	113 %	70-130	
1,2-Dichlorobenzene-d4	524.2	06/06/19:206399VRG	Blank	ug/L	10.04	90.3 %	70-130	
			MS	ug/L	10.04	92.1 %	70-130	
		(SP 1906855-001)	MSD	ug/L	10.04	90.4 %	70-130	
			MSRPD	ug/L	10.00	1.9%	≤20	
	524.2	06/07/19:208465VRG	CCV	ug/L	10.04	97.1 %	70-130	
1,2-Dichloroethane (EDC)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	78.0 %	18-162	
		(SP 1906855-001)	MSD	ug/L	10.00	19.1 %	18-162	
			MSRPD	ug/L	10.00	121%	≤33	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.980	109 %	70-130	
1,2-Dichloropropane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	82.5 %	10-163	
		(SP 1906855-001)	MSD	ug/L	10.00	19.1 %	10-163	
			MSRPD	ug/L	10.00	125%	≤34	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.950	114 %	70-130	
1,3,5-Trimethylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	94.6 %	0-210	
		(SP 1906855-001)	MSD	ug/L	10.00	21.7 %	0-210	
			MSRPD	ug/L	10.00	125%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.815	126 %	70-130	
1,3-Dichlorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	79.3 %	17-182	
		(SP 1906855-001)	MSD	ug/L	10.00	19.9 %	17-182	
			MSRPD	ug/L	10.00	120%	≤39	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	110 %	70-130	
1,3-Dichloropropane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	81.2 %	0-178	
		(SP 1906855-001)	MSD	ug/L	10.00	18.2 %	0-178	
			MSRPD	ug/L	10.00	127%	≤29	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	110 %	70-130	

July 1, 2019
Olam Spices & Vegetable Ingredients

Lab ID : CH 1973872
Customer : 7-11604

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
1,4-Dichlorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	85.4 %	19-183	
		(SP 1906855-001)	MSD	ug/L	10.00	21.0 %	19-183	
			MSRPD	ug/L	10.00	121%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	114 %	70-130	
2,2-Dichloropropane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	70.9 %	0-288	
		(SP 1906855-001)	MSD	ug/L	10.00	18.8 %	0-288	
			MSRPD	ug/L	10.00	116%	≤33	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	87.5 %	70-130	
2-Chlorotoluene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	91.1 %	17-180	
		(SP 1906855-001)	MSD	ug/L	10.00	21.3 %	17-180	
			MSRPD	ug/L	10.00	124%	≤38	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	116 %	70-130	
4-Bromofluorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L	10.05	97.9 %	70-130	
			MS	ug/L	10.05	93.7 %	70-130	
		(SP 1906855-001)	MSD	ug/L	10.05	100 %	70-130	
			MSRPD	ug/L	10.00	7.0%	≤30	
4-Bromofluorobenzene (BFB)	524.2	06/07/19:208465VRG	CCV	ug/L	10.05	96.0 %	70-130	
4-Chlorotoluene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	85.2 %	11-177	
		(SP 1906855-001)	MSD	ug/L	10.00	19.0 %	11-177	
			MSRPD	ug/L	10.00	127%	≤41	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.825	119 %	70-130	
Benzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	83.6 %	12-158	
		(SP 1906855-001)	MSD	ug/L	10.00	19.9 %	12-158	
			MSRPD	ug/L	10.00	123%	≤36	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	107 %	70-130	
Bromobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	84.1 %	23-177	
		(SP 1906855-001)	MSD	ug/L	10.00	19.5 %	23-177	435
			MSRPD	ug/L	10.00	125%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	116 %	70-130	
Bromochloromethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	82.1 %	4-186	
		(SP 1906855-001)	MSD	ug/L	10.00	19.2 %	4-186	
			MSRPD	ug/L	10.00	124%	≤30	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.925	112 %	70-130	
Bromodichloromethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	73.6 %	11-164	
		(SP 1906855-001)	MSD	ug/L	10.00	19.6 %	11-164	
			MSRPD	ug/L	10.00	116%	≤34	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	101 %	70-130	
Bromoform	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	68.4 %	0-235	
		(SP 1906855-001)	MSD	ug/L	10.00	20.2 %	0-235	
			MSRPD	ug/L	10.00	109%	≤39	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.940	103 %	70-130	
Bromomethane (Methyl Bromide)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	111 %	0-196	
		(SP 1906855-001)	MSD	ug/L	10.00	20.3 %	0-196	
			MSRPD	ug/L	10.00	138%	≤40	435

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Bromomethane (Methyl Bromide)	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	121 %	70-130	
Carbon Tetrachloride	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	87.6 %	5-175	
		(SP 1906855-001)	MSD	ug/L	10.00	19.2 %	5-175	
			MSRPD	ug/L	10.00	128%	≤32	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	106 %	70-130	
Chlorobenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	85.8 %	14-175	
		(SP 1906855-001)	MSD	ug/L	10.00	20.7 %	14-175	
			MSRPD	ug/L	10.00	122%	≤35	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.975	115 %	70-130	
Chloroethane (Ethyl Chloride)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	131 %	0-184	
		(SP 1906855-001)	MSD	ug/L	10.00	19.7 %	0-184	
			MSRPD	ug/L	10.00	148%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	127 %	70-130	
Chloroform	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	87.9 %	15-163	
		(SP 1906855-001)	MSD	ug/L	10.00	20.8 %	15-163	
			MSRPD	ug/L	10.00	124%	≤36	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.02	115 %	70-130	
Chloromethane(Methyl Chloride)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	121 %	0-224	
		(SP 1906855-001)	MSD	ug/L	10.00	25.4 %	0-224	
			MSRPD	ug/L	10.00	131%	≤39	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	119 %	70-130	
cis-1,2-Dichloroethylene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	74.7 %	16-172	
		(SP 1906855-001)	MSD	ug/L	10.00	18.2 %	16-172	
			MSRPD	ug/L	10.00	122%	≤34	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.935	102 %	70-130	
cis-1,3-Dichloropropene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	9.550	79.6 %	5-158	
		(SP 1906855-001)	MSD	ug/L	9.550	16.4 %	5-158	
			MSRPD	ug/L	10.00	132%	≤38	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.18	104 %	70-130	
Dibromochloromethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	87.4 %	1-180	
		(SP 1906855-001)	MSD	ug/L	10.00	19.6 %	1-180	
			MSRPD	ug/L	10.00	127%	≤34	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.845	118 %	70-130	
Dibromomethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	78.6 %	11-168	
		(SP 1906855-001)	MSD	ug/L	10.00	18.0 %	11-168	
			MSRPD	ug/L	10.00	126%	≤28	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.915	107 %	70-130	
Dichlorodifluoromethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	91.7 %	0-334	
		(SP 1906855-001)	MSD	ug/L	10.00	12.5 %	0-334	
			MSRPD	ug/L	10.00	152%	≤39	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	70.0 %	70-130	
Dichloromethane	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	67.8 %	20-157	
		(SP 1906855-001)	MSD	ug/L	10.00	15.8 %	20-157	435

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Dichloromethane	524.2	06/06/19:206399VRG	MSRPD	ug/L	10.00	117%	≤36	435
Ethyl tert-Butyl Ether	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<3	
			MS	ug/L	10.00	55.3 %	11-165	
		(SP 1906855-001)	MSD	ug/L	10.00	12.1 %	11-165	
			MSRPD	ug/L	10.00	4.3	≤3	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	71.7 %	70-130	
Ethylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	81.2 %	9-174	
		(SP 1906855-001)	MSD	ug/L	10.00	18.3 %	9-174	
			MSRPD	ug/L	10.00	126%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.995	112 %	70-130	
Freon-11	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	117 %	0-232	
		(SP 1906855-001)	MSD	ug/L	10.00	16.3 %	0-232	
			MSRPD	ug/L	10.00	151%	≤35	435
Hexachlorobutadiene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	96.7 %	14-200	
		(SP 1906855-001)	MSD	ug/L	10.00	23.7 %	14-200	
			MSRPD	ug/L	10.00	121%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.800	121 %	70-130	
Isopropyl Ether	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<3	
			MS	ug/L	10.00	104 %	8-165	
		(SP 1906855-001)	MSD	ug/L	10.00	21.3 %	8-165	
			MSRPD	ug/L	10.00	8.2	≤3	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	131 %	70-130	360
Isopropylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	86.4 %	4-159	
		(SP 1906855-001)	MSD	ug/L	10.00	20.3 %	4-159	
			MSRPD	ug/L	10.00	124%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	112 %	70-130	
Methyl tert-Butyl Ether	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	70.7 %	70-130	
Methyl tert-Butyl Ether (MTBE)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<1.0	
			MS	ug/L	10.00	52.3 %	11-168	
		(SP 1906855-001)	MSD	ug/L	10.00	12.7 %	11-168	
			MSRPD	ug/L	10.00	4.0	≤1.0	435
Methylene Chloride	524.2	06/07/19:208465VRG	CCV	ug/L	10.02	117 %	70-130	
Naphthalene	524.2	06/06/19:206399VRG	Blank	ug/L		0.700	0.5	210
			MS	ug/L	10.00	111 %	0-189	
		(SP 1906855-001)	MSD	ug/L	10.00	41.0 %	0-189	
			MSRPD	ug/L	10.00	92.1%	≤32	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.860	150 %	70-130	360
n-Butylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	78.8 %	4-186	
		(SP 1906855-001)	MSD	ug/L	10.00	18.7 %	4-186	
			MSRPD	ug/L	10.00	123%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.920	99.2 %	70-130	
n-Propylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	82.9 %	0-174	
		(SP 1906855-001)	MSD	ug/L	10.00	18.9 %	0-174	
			MSRPD	ug/L	10.00	126%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	107 %	70-130	
p-Isopropyltoluene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	83.3 %	0-193	
		(SP 1906855-001)	MSD	ug/L	10.00	19.3 %	0-193	

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
p-Isopropyltoluene	524.2	06/06/19:206399VRG	MSRPD	ug/L	10.00	125%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	106 %	70-130	
sec-Butylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	85.5 %	0-177	
		(SP 1906855-001)	MSD	ug/L	10.00	20.5 %	0-177	
			MSRPD	ug/L	10.00	123%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	105 %	70-130	
Styrene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	78.7 %	0-198	
		(SP 1906855-001)	MSD	ug/L	10.00	16.5 %	0-198	
			MSRPD	ug/L	10.00	131%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	107 %	70-130	
TAME	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<3	
			MS	ug/L	10.00	51.9 %	15-162	
		(SP 1906855-001)	MSD	ug/L	10.00	12.5 %	15-162	435
			MSRPD	ug/L	10.00	3.9	≤3	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	71.4 %	70-130	
tert-Butylbenzene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	88.4 %	9-179	
		(SP 1906855-001)	MSD	ug/L	10.00	20.5 %	9-179	
			MSRPD	ug/L	10.00	125%	≤38	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.01	114 %	30-130	
Tetrachloroethylene (PCE)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	84.9 %	14-186	
		(SP 1906855-001)	MSD	ug/L	10.00	19.5 %	14-186	
			MSRPD	ug/L	10.00	125%	≤33	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.955	112 %	70-130	
Toluene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	83.3 %	3-174	
		(SP 1906855-001)	MSD	ug/L	10.00	18.8 %	3-174	
			MSRPD	ug/L	10.00	126%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	109 %	30-130	
trans-1,2-Dichloroethylene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	68.2 %	5-165	
		(SP 1906855-001)	MSD	ug/L	10.00	15.6 %	5-165	
			MSRPD	ug/L	10.00	126%	≤40	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.02	81.4 %	70-130	
trans-1,3-Dichloropropene	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	9.200	82.6 %	0-169	
		(SP 1906855-001)	MSD	ug/L	9.200	16.7 %	0-169	
			MSRPD	ug/L	10.00	133%	≤31	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.820	107 %	70-130	
Trichloroethylene (TCE)	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	82.3 %	11-167	
		(SP 1906855-001)	MSD	ug/L	10.00	19.5 %	11-167	
			MSRPD	ug/L	10.00	123%	≤35	435
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	108 %	70-130	
Trichlorofluoromethane F-11	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	91.8 %	70-130	
Trichlorotrifluoroethane F-113	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	74.5 %	70-130	
Vinyl Chloride	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	106 %	0-208	
		(SP 1906855-001)	MSD	ug/L	10.00	16.3 %	0-208	
			MSRPD	ug/L	10.00	147%	≤40	435

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Vinyl Chloride	524.2	06/07/19:208465VRG	CCV	ug/L	10.00	97.0 %	30-130	
Xylenes m,p	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	20.00	84.9 %	0-193	
		(SP 1906855-001)	MSD	ug/L	20.00	20.0 %	0-193	
			MSRPD	ug/L	10.00	124%	≤37	435
	524.2	06/07/19:208465VRG	CCV	ug/L	19.99	108 %	70-130	
Xylenes o	524.2	06/06/19:206399VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	88.7 %	0-188	
		(SP 1906855-001)	MSD	ug/L	10.00	19.8 %	0-188	
			MSRPD	ug/L	10.00	127%	≤36	435
	524.2	06/07/19:208465VRG	CCV	ug/L	9.855	118 %	70-130	
2,3-Dibromopropionic Acid	552	06/11/19:206495BJW	Blank	ug/L	5.000	71.4 %	70-130	
			LCS	ug/L	5.000	93.1 %	70-130	
			MS	ug/L	5.000	106 %	70-130	
		(SP 1906916-001)	MSD	ug/L	5.000	119 %	70-130	
			MSRPD	ug/L	5.000	11.3%	≤20.0	
Dibromoacetic Acid	552	06/11/19:206495BJW	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	105 %	70-130	
			MS	ug/L	10.00	114 %	70-130	
		(SP 1906916-001)	MSD	ug/L	10.00	120 %	70-130	
			MSRPD	ug/L	5.000	5.3%	≤20.0	
Dichloroacetic Acid	552	06/11/19:206495BJW	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	95.0 %	70-130	
			MS	ug/L	10.00	101 %	70-130	
		(SP 1906916-001)	MSD	ug/L	10.00	107 %	70-130	
			MSRPD	ug/L	5.000	5.5%	≤20.0	
Monobromoacetic Acid	552	06/11/19:206495BJW	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	79.8 %	70-130	
			MS	ug/L	10.00	91.0 %	70-130	
		(SP 1906916-001)	MSD	ug/L	10.00	93.4 %	70-130	
			MSRPD	ug/L	5.000	2.6%	≤20.0	
Monochloroacetic Acid	552	06/11/19:206495BJW	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	115 %	70-130	
			MS	ug/L	10.00	139 %	70-130	435
		(SP 1906916-001)	MSD	ug/L	10.00	141 %	70-130	435
			MSRPD	ug/L	5.000	1.4%	≤20.0	
Trichloroacetic Acid	552	06/11/19:206495BJW	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	121 %	70-130	
			MS	ug/L	10.00	141 %	70-130	435
		(SP 1906916-001)	MSD	ug/L	10.00	155 %	70-130	435
			MSRPD	ug/L	5.000	9.6%	≤20.0	
2,3-Dibromopropionic Acid	552.2	06/12/19:208671BJW	CCV	ug/L	75.00	97.8 %	70-130	
			CCV	ug/L	50.00	91.1 %	70-130	
Dibromoacetic Acid	552.2	06/12/19:208671BJW	CCV	ug/L	150.0	441 %	70-130	360
			CCV	ug/L	100.0	365 %	70-130	360
Dichloroacetic Acid	552.2	06/12/19:208671BJW	CCV	ug/L	150.0	192 %	70-130	360
			CCV	ug/L	100.0	196 %	70-130	360
Monobromoacetic Acid	552.2	06/12/19:208750BJW	CCV	ug/L	150.0	88.8 %	70-130	
			CCV	ug/L	100.0	82.7 %	70-130	
Monochloroacetic Acid	552.2	06/13/19:209121BJW	CCV	ug/L	150.0	102 %	70-130	
			CCV	ug/L	100.0	110 %	70-130	
Trichloroacetic Acid	552.2	06/13/19:209121BJW	CCV	ug/L	150.0	100 %	70-130	
			CCV	ug/L	100.0	99.8 %	70-130	

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Quality Control - Organic

Definition	
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.
Explanation	
210	: The method blank was positive. However, samples reported were either ten times greater than the blank concentration or non detect and accepted.
360	: CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Boron	200.7	(VI 1942420-001)	MS	mg/L	4.000	25.0 %	75-125	435
			MSD	mg/L	4.000	112 %	75-125	
			MSRPD	mg/L	4000	123%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	5.000	93.4 %	90-110	
			CCB	ppm		0.024	0.1	
			CCV	ppm	5.000	83.1 %	90-110	
			CCB	ppm		0.010	0.1	
Calcium	200.7	(VI 1942420-001)	MS	mg/L	12.00	-65.0 %	75-125	435
			MSD	mg/L	12.00	112 %	75-125	
			MSRPD	mg/L	4000	105%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	25.00	95.3 %	90-110	
			CCB	ppm		0.009	1	
			CCV	ppm	25.00	86.3 %	90-110	
			CCB	ppm		0.04	1	
Copper	200.7	(VI 1942420-001)	MS	ug/L	800.0	25.3 %	75-125	435
			MSD	ug/L	800.0	109 %	75-125	
			MSRPD	ug/L	4000	125%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	1.000	98.3 %	90-110	
			CCB	ppm		-0.0023	0.01	
			CCV	ppm	1.000	91.4 %	90-110	
			CCB	ppm		-0.0021	0.01	
Iron	200.7	(VI 1942420-001)	MS	ug/L	4000	27.0 %	75-125	435
			MSD	ug/L	4000	115 %	75-125	
			MSRPD	ug/L	4000	124%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	5.000	94.5 %	90-110	
			CCB	ppm		0.0007	0.03	
			CCV	ppm	5.000	86.7 %	90-110	
			CCB	ppm		0.0079	0.03	
Magnesium	200.7	(VI 1942420-001)	MS	mg/L	12.00	28.0 %	75-125	435
			MSD	mg/L	12.00	122 %	75-125	
			MSRPD	mg/L	4000	124%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	25.00	95.4 %	90-110	
			CCB	ppm		0.0003	1	
			CCV	ppm	25.00	84.1 %	90-110	
			CCB	ppm		0.0004	1	
Manganese	200.7	(VI 1942420-001)	MS	ug/L	800.0	27.2 %	75-125	435
			MSD	ug/L	800.0	115 %	75-125	
			MSRPD	ug/L	4000	124%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	1.000	95.4 %	90-110	
			CCB	ppm		-0.0019	0.01	
			CCV	ppm	1.000	88.7 %	90-110	
			CCB	ppm		-0.0068	0.01	
Potassium	200.7	(VI 1942420-001)	MS	mg/L	12.00	22.2 %	75-125	435
			MSD	mg/L	12.00	123 %	75-125	
			MSRPD	mg/L	4000	122%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	25.00	98.1 %	90-110	
			CCB	ppm		-0.01	1	
			CCV	ppm	25.00	90.4 %	90-110	
			CCB	ppm		0.03	1	
Silicon	200.7	(VI 1942420-001)	MS	mg/L	2.400	21.2 %	75-125	435
			MSD	mg/L	2.400	98.6 %	75-125	
			MSRPD	mg/L	4000	22.1%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	5.000	97.7 %	90-110	
			CCB	ppm		-0.002	1	
			CCV	ppm	5.000	94.1 %	90-110	

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Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Silicon	200.7	06/07/19:208468AC	CCB	ppm		-0.002	1	
Sodium	200.7	(VI 1942420-001)	MS	mg/L	12.00	-264 %	<¼	
			MSD	mg/L	12.00	104 %	75-125	
			MSRPD	mg/L	4000	98.8%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	25.00	95.7 %	90-110	
			CCB	ppm		-0.02	1	
			CCV	ppm	25.00	83.0 %	90-110	
			CCB	ppm		-0.02	1	
Zinc	200.7	(VI 1942420-001)	MS	ug/L	800.0	24.9 %	75-125	435
			MSD	ug/L	800.0	103 %	75-125	
			MSRPD	ug/L	4000	122%	≤20.0	435
	200.7	06/07/19:208468AC	CCV	ppm	1.000	99.8 %	90-110	
			CCB	ppm		0.0002	0.02	
			CCV	ppm	1.000	92.8 %	90-110	
			CCB	ppm		-0.00002	0.02	
Aluminum	200.8	(VI 1942343-001)	MS	ug/L	5.000	95.2 %	75-125	
			MSD	ug/L	5.000	113 %	75-125	
			MSRPD	ug/L	5.000	0.88	≤10	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	99.8 %	90-110	
			CCB	ppb		-0.03	10	
			CCV	ppb	120.0	102 %	90-110	
			CCB	ppb		0.002	10	
Antimony	200.8	(VI 1942343-001)	MS	ug/L	5.000	96.2 %	75-125	
			MSD	ug/L	5.000	109 %	75-125	
			MSRPD	ug/L	5.000	12.4%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	96.6 %	90-110	
			CCB	ppb		0.05	1	
			CCV	ppb	120.0	97.2 %	90-110	
			CCB	ppb		0.06	1	
Arsenic	200.8	(VI 1942343-001)	MS	ug/L	5.000	95.9 %	75-125	
			MSD	ug/L	5.000	111 %	75-125	
			MSRPD	ug/L	5.000	6.5%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	99.1 %	90-110	
			CCB	ppb		0.04	1	
			CCV	ppb	120.0	98.9 %	90-110	
			CCB	ppb		-0.006	1	
Barium	200.8	(VI 1942343-001)	MS	ug/L	5.000	96.9 %	75-125	
			MSD	ug/L	5.000	113 %	75-125	
			MSRPD	ug/L	5.000	5.9%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	98.6 %	90-110	
			CCB	ppb		0.004	0.2	
			CCV	ppb	120.0	99.1 %	90-110	
			CCB	ppb		0.01	0.2	
Beryllium	200.8	(VI 1942343-001)	MS	ug/L	5.000	86.2 %	75-125	
			MSD	ug/L	5.000	97.7 %	75-125	
			MSRPD	ug/L	5.000	0.58	≤1	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	91.9 %	90-110	
			CCB	ppb		-0.002	0.2	
			CCV	ppb	120.0	94.2 %	90-110	
			CCB	ppb		-0.002	0.2	
Cadmium	200.8	(VI 1942343-001)	MS	ug/L	5.000	94.8 %	75-125	
			MSD	ug/L	5.000	110 %	75-125	
			MSRPD	ug/L	5.000	14.8%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	98.8 %	90-110	

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Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Cadmium	200.8	06/04/19:208312AC	CCB	ppb		-0.015	0.2	
			CCV	ppb	120.0	98.3 %	90-110	
			CCB	ppb		-0.014	0.2	
Chromium	200.8		MS	ug/L	5.000	83.8 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	98.7 %	75-125	
			MSRPD	ug/L	5.000	11.5%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	96.0 %	90-110	
			CCB	ppb		-0.04	1	
			CCV	ppb	120.0	95.5 %	90-110	
			CCB	ppb		-0.02	1	
Lead	200.8		MS	ug/L	5.000	92.5 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	104 %	75-125	
			MSRPD	ug/L	5.000	10.1%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	93.0 %	90-110	
			CCB	ppb		-0.006	0.5	
			CCV	ppb	120.0	92.5 %	90-110	
			CCB	ppb		-0.005	0.5	
Molybdenum	200.8		MS	ug/L	5.000	78.4 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	101 %	75-125	
			MSRPD	ug/L	5.000	2.6%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	96.1 %	90-110	
			CCB	ppb		0.07	1	
			CCV	ppb	120.0	93.6 %	90-110	
			CCB	ppb		0.07	1	
Nickel	200.8		MS	ug/L	5.000	90.0 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	104 %	75-125	
			MSRPD	ug/L	5.000	13.6%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	97.5 %	90-110	
			CCB	ppb		0.01	1	
			CCV	ppb	120.0	96.6 %	90-110	
			CCB	ppb		0.04	1	
Selenium	200.8		MS	ug/L	5.000	101 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	113 %	75-125	
			MSRPD	ug/L	5.000	9.6%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	100 %	90-110	
			CCB	ppb		0.19	1	
			CCV	ppb	120.0	98.5 %	90-110	
			CCB	ppb		0.12	1	
Silver	200.8		MS	ug/L	5.000	94.6 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	108 %	75-125	
			MSRPD	ug/L	5.000	12.9%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	99.2 %	90-110	
			CCB	ppb		-0.001	1	
			CCV	ppb	120.0	98.6 %	90-110	
			CCB	ppb		0.00	1	
Thallium	200.8		MS	ug/L	5.000	93.2 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	105 %	75-125	
			MSRPD	ug/L	5.000	11.5%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	93.6 %	90-110	
			CCB	ppb		-0.001	0.2	
			CCV	ppb	120.0	93.1 %	90-110	
			CCB	ppb		0.000	0.2	
Uranium	200.8		MS	ug/L	5.000	92.4 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	102 %	75-125	

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Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Uranium	200.8	06/04/19:206207AC	MSRPD	ug/L	5.000	2.1%	≤20	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	93.1 %	90-110	
			CCB	ppb		0.000	0.2	
			CCV	ppb	120.0	92.8 %	90-110	
			CCB	ppb		0.000	0.2	
Vanadium	200.8		MS	ug/L	5.000	87.8 %	75-125	
		(VI 1942343-001)	MSD	ug/L	5.000	100 %	75-125	
			MSRPD	ug/L	5.000	0.62	≤2	
	200.8	06/04/19:208312AC	CCV	ppb	120.0	95.0 %	90-110	
			CCB	ppb		-0.008	2	
			CCV	ppb	120.0	94.8 %	90-110	
			CCB	ppb		-0.02	2	
Mercury	245.1	06/19/19:206890AC	Blank	ug/L		ND	<0.01	
			LCS	ug/L	0.2000	108 %	85-115	
			MS	ug/L	0.2000	101 %	75-125	
		(CH 1973872-001)	MSD	ug/L	0.2000	101 %	75-125	
			MSRPD	ug/L	0.2000	0.5%	≤20	
	245.1	06/19/19:209144AC	ICV	ppt	200.0	99.8 %	90-110	
			ICB	ppt		-3.4	20	
			CCV	ppt	200.0	101 %	90-110	
			CCB	ppt		-3.5	20	
Wet Chem								
Color	2120B	(CH 1973872-001)	Dup	units		0.0	5	
	2120B	05/30/19:710897SMK	ICV		10.00	100%		
			CCV		10.00	100%		
			CCB	units		0.00		
Turbidity	2130B	(CH 1973872-001)	Dup	NTU		0.010	0.1	
	2130B	05/30/19:710896SMK	ICV	NTU	10.0000	94.8%	N/A	
			ICB	NTU		0.09	0.2	
			CCV	NTU	10.0000	96.%	90-110	
			CCB	NTU		0.09	0.2	
Odor	2150B	(CH 1973872-001)	Dup	TON		0.0	1	
Chromium VI	218.6	06/07/19:206407JDD	Blank	ug/L		ND	<0.1	
			LCS	ug/L	2.000	104 %	90-110	
			MS	ug/L	2.000	98.3 %	75-125	
		(SP 1906998-001)	MSD	ug/L	2.000	97.8 %	75-125	
			MSRPD	ug/L	2.000	0.5%	≤20	
			MS	ug/L	2.000	98.5 %	75-125	
		(SP 1907012-001)	MSD	ug/L	2.000	101 %	75-125	
			MSRPD	ug/L	2.000	2.1%	≤20	
		(SP 1906998-001)	Dup	ug/L		0.0	0.1	
	218.6	06/07/19:208482JDD	CCB	ppb		0.009	0.1	
			CCV	ppb	5.000	104 %	95-105	
			CCB	ppb		0.022	0.1	
			CCV	ppb	5.000	104 %	95-105	
Alkalinity (as CaCO3)	2320B	(SP 1907013-001)	Dup	mg/L		2.3%	10	
	2320B	06/06/19:208515AMM	CCV	mg/L	234.9	105 %	90-110	
			CCV	mg/L	234.9	107 %	90-110	
Bicarbonate	2320B	(SP 1907013-001)	Dup	mg/L		2.3%	10	
Carbonate	2320B	(SP 1907013-001)	Dup	mg/L		0.0	10	
Hydroxide	2320B	(SP 1907013-001)	Dup	mg/L		0.0	10	
Conductivity	2510B	06/03/19:208153CTL	ICB	umhos/cm		0.16	1	
			ICV	umhos/cm	1000	103 %	95-105	
			CCV	umhos/cm	1000	103 %	95-105	

July 1, 2019 Lab ID : CH 1973872
Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2510B	06/03/19:206166CTL	Blank	umhos/cm		ND	<1	
		(CH 1974029-004)	Dup	umhos/cm		0.09%	5	
Total Dissolved Solids (TFR)	2540CE	06/03/19:206133CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.1	97.7 %	90-110	
		(CH 1974029-004)	Dup	mg/L		1.3%	5	
		(CH 1974029-006)	Dup	mg/L		0.5%	5	
Bromide	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.03	
			LCS	mg/L	5.000	101 %	90-110	
			MS	mg/L	10.00	104 %	86-118	
		(VI 1942521-002)	MSD	mg/L	10.00	102 %	86-118	
			MSRPD	mg/L	10.00	1.7%	≤11	
			MS	mg/L	10.00	103 %	86-118	
		(VI 1942521-003)	MSD	mg/L	10.00	101 %	86-118	
			MSRPD	mg/L	10.00	1.9%	≤11	
	300.0	05/31/19:208189MCA	ICB	mg/L		0.0	30	
			ICV	mg/L	5.000	97.9 %	90-110	
			CCB	mg/L		0.0	30	
			CCV	mg/L	5.000	98.7 %	90-110	
Chloride	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	99.2 %	85-121	
		(VI 1942521-002)	MSD	mg/L	50.00	98.4 %	85-121	
			MSRPD	mg/L	10.00	0.7%	≤19	
			MS	mg/L	50.00	99.6 %	85-121	
		(VI 1942521-003)	MSD	mg/L	50.00	98.9 %	85-121	
			MSRPD	mg/L	10.00	0.7%	≤19	
	300.0	05/31/19:208189MCA	ICB	mg/L		0.00	1	
			ICV	mg/L	25.00	97.8 %	90-110	
			CCB	mg/L		0.00	1	
			CCV	mg/L	25.00	98.1 %	90-110	
Fluoride	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.1	
			LCS	mg/L	2.500	103 %	90-110	
			MS	mg/L	5.000	104 %	87-120	
		(VI 1942521-002)	MSD	mg/L	5.000	102 %	87-120	
			MSRPD	mg/L	10.00	1.7%	≤16	
			MS	mg/L	5.000	103 %	87-120	
		(VI 1942521-003)	MSD	mg/L	5.000	101 %	87-120	
			MSRPD	mg/L	10.00	2.1%	≤16	
	300.0	05/31/19:208189MCA	ICB	mg/L		0.000	0.1	
			ICV	mg/L	2.500	101 %	90-110	
			CCB	mg/L		0.000	0.1	
			CCV	mg/L	2.500	100 %	90-110	
Nitrate	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	102 %	90-110	
			MS	mg/L	40.00	103 %	85-119	
		(VI 1942521-002)	MSD	mg/L	40.00	102 %	85-119	
			MSRPD	mg/L	10.00	1.0%	≤19	
			MS	mg/L	40.00	103 %	85-119	
		(VI 1942521-003)	MSD	mg/L	40.00	102 %	85-119	
			MSRPD	mg/L	10.00	1.0%	≤19	
	300.0	05/31/19:208189MCA	ICB	mg/L		0.000	0.5	
			ICV	mg/L	20.00	99.0 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	20.00	99.7 %	90-110	

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Olam Spices & Vegetable Ingredients Customer : 7-11604

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Nitrate + Nitrite as N	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.1	
Nitrate Nitrogen	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.1	
Nitrite	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	15.00	101 %	90-110	
			MS	mg/L	30.00	102 %	74-126	
		(VI 1942521-002)	MSD	mg/L	30.00	103 %	74-126	
			MSRPD	mg/L	10.00	0.2%	≤20	
			MS	mg/L	30.00	103 %	74-126	
		(VI 1942521-003)	MSD	mg/L	30.00	102 %	74-126	
			MSRPD	mg/L	10.00	0.4%	≤20	
	300.0	05/31/19:208189MCA	ICB	mg/L		0.000	0.5	
			ICV	mg/L	15.00	99.7 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	15.00	99.5 %	90-110	
Nitrite Nitrogen	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.2	
Sulfate	300.0	05/31/19:206186MCA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	102 %	90-110	
			MS	mg/L	100.0	99.9 %	82-124	
		(VI 1942521-002)	MSD	mg/L	100.0	99.7 %	82-124	
			MSRPD	mg/L	10.00	0.2%	≤23	
			MS	mg/L	100.0	94.7 %	82-124	
		(VI 1942521-003)	MSD	mg/L	100.0	95.1 %	82-124	
			MSRPD	mg/L	10.00	0.2%	≤23	
	300.0	05/31/19:208189MCA	ICB	mg/L		0.000	0.5	
			ICV	mg/L	50.00	101 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	50.00	101 %	90-110	
Perchlorate	314.0	06/03/19:205695MCA	Blank	ug/L		ND	<2	
			LCS	ug/L	25.00	101 %	85-115	
			MS	ug/L	25.00	87.0 %	80-120	
		(SP 1907013-001)	MSD	ug/L	25.00	86.9 %	80-120	
			MSRPD	ug/L	25.00	0.08%	≤15	
		(SP 1907013-001)	Dup	ug/L		0.0	2	
	314.0	06/04/19:207576MCA	CCB	ppb		0.00	2.0	
			CCV	ppb	10.00	101 %	85-115	
			CCB	ppb		0.00	2.0	
			CCV	ppb	20.00	99.5 %	85-115	
Chlorine	4500Cl G	(CH 1973872-001)	Dup	mg/L		0.0	0.1	
	4500ClG	05/30/19:700005SMK	CCV	mg/L	1.350	99.3 %	90-110	
			CCB	mg/L		0.000	0.1	
			CCV	mg/L	1.350	99.3 %	90-110	
			CCB	mg/L		0.000	0.1	
	4500ClG	05/30/19:700006SMK	CCV	mg/L	1.350	101 %	90-110	
			CCB	mg/L		0.000	0.1	
			CCV	mg/L	1.350	101 %	90-110	
			CCB	mg/L		0.000	0.1	
Chlorine, Residual	4500ClG	(CH 1973872-001)	Dup	mg/L		0.0	0.1	
Cyanide	4500CNCE	06/03/19:208069AMM	CCV	mg/L	0.1000	97.9 %	90-110	
			CCB	mg/L		-0.00028	0.004	
			CCV	mg/L	0.1000	99.6 %	90-110	
			CCB	mg/L		-0.00028	0.004	
Cyanide, Total	4500CNCE	06/01/19:206104AMM	Blank	mg/L		ND	<0.004	
			LCS	mg/L	0.1000	102 %	90-110	
			LCS	mg/L	0.4000	95.6 %	90-110	

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Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Cyanide, Total	4500CNCE	(SP 1906823-002)	MS	mg/L	0.05000	155 %	26-226	
			MSD	mg/L	0.05000	151 %	26-226	
			MSRPD	mg/L	0.05000	2.2%	≤36	
MBAS	5540C	05/31/19:208124jba	CCB	mg/L		-0.0356	0.25	
			CCV	mg/L	1.000	104 %	90-110	
			CCB	mg/L		-0.0312	0.25	
			CCV	mg/L	1.000	105 %	90-110	
MBAS Extraction	5540C	05/31/19:206137jba	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	105 %	86-114	
			BS	mg/L	0.5000	94.8 %	86-114	
			BSD	mg/L	0.5000	109 %	86-114	
			BSRPD	mg/L	0.5000	13.5%	≤5	410

Definition

ICV	: Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
ICB	: Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
BS	: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.
BSD	: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
BSRPD	: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
<¼	: High Sample Background - Spike concentration was less than one forth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation

410	: Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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Quality Control - Radio

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	06/12/19:208711IWC	CCV	cpm	7882	43.1 %	35-47	
			CCB	cpm		0.1600	0.21	
Beta	900.0	06/12/19:208711IWC	CCV	cpm	7882	92.9 %	83-94	
			CCB	cpm		0.4000	0.51	
Gross Alpha	900.0	06/06/19:206293iwc	Blank	pCi/L		1.12	3	
			LCS	pCi/L	130.0	93.5 %	75-125	
			MS	pCi/L	173.4	140 %	60-140	
		(SP 1907086-001)	MSD	pCi/L	173.4	126 %	60-140	
			MSRPD	pCi/L	173.4	10.1%	≤30	
Gross Beta	900.0	06/06/19:206293iwc	Blank	pCi/L		0.74	4	
			LCS	pCi/L	26.62	152 %	84-160	
			MS	pCi/L	35.49	64.4 %	80-130	435
		(SP 1907086-001)	MSD	pCi/L	35.49	70.1 %	80-130	435
			MSRPD	pCi/L	173.4	8.1%	≤30	
Alpha	903.0	06/28/19:209654JCA	CCV	cpm	8225	37.5 %	37-46	
			CCB	cpm		0.0800	0.16	
Total Alpha Radium (226)	903.0	06/19/19:206899emv	RgBlk	pCi/L		0.05	2	
			LCS	pCi/L	23.33	63.8 %	52-107	
			BS	pCi/L	23.33	73.3 %	43-111	
			BSD	pCi/L	23.33	70.0 %	43-111	
			BSRPD	pCi/L	23.33	4.6%	≤35.5	
Beta	Ra - 05	06/17/19:209079emv	CCV	cpm	8232	89.4 %	84-94	
			CCB	cpm		0.3200	0.51	
Ra 228	Ra - 05	06/09/19:206240emv	RgBlk	pCi/L		0.04	3	
			LRS	pCi/L	11.70	74.3 %	65-108	
			BS	pCi/L	11.70	96.4 %	75-125	
			BSD	pCi/L	11.70	88.6 %	75-125	
			BSRPD	pCi/L	11.70	0.92	≤3	

Definition

CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
RgBlk	: Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
LRS	: Laboratory Recovery Standard - Prepared to establish the batch recovery factor used in result calculations.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
BS	: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.
BSD	: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
BSRPD	: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation and analysis.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation

435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.