

*2012 First Semi-Annual Monitoring Report*  
**FORMER SPRECKELS SUGAR FACILITY**  
Woodland, California  
**WKA No. 7864.19**  
June 25, 2012

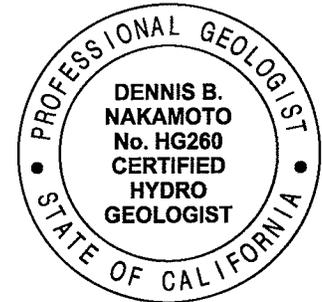
*Prepared for:*  
Mr. Ryan Nakken  
Clark Pacific  
1980 South River Road  
West Sacramento, California 95691

*Prepared By:*  
Wallace-Kuhl & Associates  
3050 Industrial Boulevard  
West Sacramento, California 95691

*2012 First Semi-Annual Monitoring Report*  
**FORMER SPRECKELS SUGAR FACILITY**  
Woodland, California  
WKA 7864.19

This 2012 Semi Annual Monitoring Report for the Former Spreckels Sugar Facility located at 40600 County Road 18C in Woodland, California was prepared by Wallace-Kuhl & Associates on behalf of Clark Pacific in a manner consistent with the level of care and skill ordinarily exercised by professional geologists and environmental scientists. This Semi Annual Monitoring Report was prepared under the technical direction of a California Professional Geologist.

**WALLACE-KUHL & ASSOCIATES**



Christopher Kadi, G.I.T.  
Staff Geologist

Dennis B. Nakamoto, P.G., CEG, CHG  
Senior Hydrogeologist

*2012 First Semi-Annual Monitoring Report*  
**FORMER SPRECKELS SUGAR FACILITY**

**TABLE OF CONTENTS**

1.0	INTRODUCTION .....	1
2.0	PURPOSE AND SCOPE.....	1
3.0	SITE DESCRIPTION .....	2
4.0	MONITORING AND SAMPLING.....	2
4.1	Groundwater Monitoring .....	3
4.2	Groundwater Sampling .....	4
5.0	RESULTS OF MONITORING ACTIVITIES .....	5
5.1	Site Groundwater Conditions.....	5
5.2	Site Water Quality Conditions .....	6
5.3	Data Quality .....	6
6.0	PRECIPITATED CALCIUM CARBONATE (PCC) STATUS .....	7
7.0	SUMMARY .....	8
8.0	LIMITATIONS .....	9
9.0	REFERENCES .....	10

**Figures**

- 1 – Vicinity Map
- 2 – Site Plan
- 3 – Potentiometric Surface Map

**Tables**

- 1 – Summary of Groundwater Elevation Data
- 2 – Summary of Analytical Results for Groundwater Samples

**Appendices**

- A – Groundwater Monitoring Field Data
- B – Laboratory Analytical Reports
- C – Precipitated Calcium Carbonate (PCC), Weekly Observation Reports



## ABBREVIATIONS AND ACRONYMS

APHA	American Public Health Association
bgs	below grade surface/below ground surface
btoc	below top of casing
CaCO <sub>3</sub>	calcium carbonate
DTW	depth-to-water
EPA	United States Environmental Protection Agency
FDS	fixed dissolved solids
GWE	groundwater elevation
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
MRP	Monitoring and Reporting Program
msl	mean sea level
MW	monitoring well
NAD83	North American Vertical Datum of 1983
No.	Number
NTU	nephelometric turbidity units
PCC	precipitated calcium carbonate
pH	potential of Hydrogen
RWQCB	California Regional Water Quality Control Board
SAMR	Semi-Annual Groundwater Monitoring Report
TDS	total dissolved solids
TOC	top-of-casing
µmhos/cm	microSiemens per centimeter
WDR	Waste Discharge Requirements



*2012 First Semi-Annual Monitoring Report*  
**FORMER SPRECKELS SUGAR FACILITY**  
Woodland, California  
WKA 7864.19

## 1.0 INTRODUCTION

This Semi Annual Monitoring Report (SAMR) presents the results of groundwater monitoring, sampling, and analysis for the Former Spreckels Sugar Facility located in Woodland, California (Figure 1). This work was completed in accordance with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements (WDR) dated March 1, 1991, Monitoring and Reporting Program (MRP) No. R5-2003-0047 dated May 6, 2008, both issued by the Central Valley Region Water Quality Control Board (RWQCB), and the *Addenda to Semi-Annual Groundwater Monitoring Sampling and Analysis Plan* dated June 8, 2009 that was prepared by Wallace-Kuhl & Associates (WKA).

## 2.0 PURPOSE AND SCOPE

The purpose of the monitoring activity is to evaluate shallow groundwater conditions in the vicinity of stockpiled precipitated calcium carbonate (PCC), which was generated as a result of sugar manufacturing at the Spreckels Facility from 1937 to 2000 (Figure 2). As required by MRP No. R5-2003-0047, the following parameters and measurements were obtained from seven groundwater-monitoring wells (MWs) at the site on May 3, 2012:

- Measure total depth of well, depth-to-groundwater (DTW), and calculate groundwater elevations for ten groundwater monitoring wells: MW1, MW1A, MW9, MW9A, MW10, MW11, MW12, MW13, MW14, and MW15;
- Collect groundwater samples from seven monitoring wells (MW1, MW1A, MW9, MW9A, MW10, MW14, and MW15) using HydraSleeves;
- Submit samples to California certified laboratory for analysis of conventional chemistry parameters by American Public Health Association/United States Environmental Protection Agency (APHA/EPA) Methods and metals (calcium and sodium) by EPA 200 Series Methods;
- Prepare groundwater monitoring report including:



- A discussion of the monitoring results and compliance with the MRP and the WDR;
- Tabulated cumulative monitoring data including depth to groundwater measurements, groundwater elevations above mean sea level (msl), and groundwater analytical data;
- Groundwater contour map that displays the hydraulic gradient, flow direction and estimated flow velocity;
- Copy of the laboratory analytical reports and chain-of-custody;
- Status of the PCC material still remaining on-site and the amount removed since the previous semi-annual report.

### **3.0 SITE DESCRIPTION**

The former Spreckels Sugar Facility site is located at 40600 County Road 18C, approximately 2.5 miles northeast of Woodland, Yolo County, California. The site is comprised of portions of Yolo County Assessor's Parcel Numbers (APNs) 027-250-05, 027-250-06, and 027-250-19 totaling approximately 246 acres of land. The historic land uses consisted of commercial, agricultural, and fallow land, at an elevation of approximately 45 feet mean sea level (msl). The site contains several buildings, agricultural fields, and wastewater treatment plant features associated with the manufacturing of sugar from sugar beets from previous sugar processing activities. A large stockpile of PCC is a by-product of the sugar manufacturing process.

Sugar processing began in 1937 and continued until 2000, when the operations were dismantled. In July 2008, Clark Pacific began manufacturing pre-cast concrete products at the facility. Some PCC stockpiles remnants of the sugar processing operations have been removed to an offsite facility. The former mud ponds in the northeast section of the site have been graded to blend with the surrounding land surface.

### **4.0 MONITORING AND SAMPLING**

Ten groundwater monitoring wells are located on the site (MW1, MW1A, MW9, MW9A, MW10, MW11, MW12, MW13, MW14, and MW15). From March 2001 to November 2006 Kwest Engineering, Inc. of Yuba City, California, coordinated groundwater monitoring activities



for Sugarland Farms, LLC. Groundwater monitoring at the facility currently includes seven of the ten monitoring wells at the facility. Monitoring wells MW11, MW12, and MW13, pursuant to MRP No. R5-2003-0047, are not monitored. Five of the monitoring wells being sampled, MW1, MW1A, MW9, MW9A, and MW10, are on the eastern portion of the site where the remaining PCC stockpile is located. Monitoring wells MW14 and MW15 are located near the railroad tracks on the northwestern section of the site (Figure 2).

The top-of-casing (TOC) elevations for each well, as reported by Kwest Engineering, Inc. (Kwest) for the years 2001 to 2007, are presented on Table 1. On August 20 and 21, 2008, Laugenour and Meikle, a California-licensed Professional Land Surveyor, conducted a survey of the location and TOC elevations for each well in accordance with the State Water Resources Control Board's GeoTracker database requirements. The results of the survey are also presented in Table 1.

Eight of the groundwater monitoring wells, MW1, MW9, MW9A, MW10, MW11, MW12, MW13, and MW15 are completed in the shallow water-bearing zone. Screened zones are approximately 40 to 60 feet below grade surface (bgs). MW15 is considered a background monitoring well for comparison purposes. The remaining two groundwater monitoring wells are completed in a deeper water-bearing zone, one downgradient from the former PCC ponds (MW1A), and one for background conditions (MW14). These wells are screened from approximately 70 to 100 feet bgs.

#### **4.1 Groundwater Monitoring**

Groundwater monitoring and sampling was conducted at the site on May 3, 2012. Well monitoring consisted of measuring the total depth of the well and DTW from each well. Total depth and DTW measurements were obtained using an electronic sounder with a tape graduated in 1/100 of a foot from a reference point on the north side of the top of the well casing.

Table 1 includes the total depth, DTW, and calculated groundwater elevations obtained from this monitoring event (May 3, 2012), along with previous groundwater monitoring events. Table 1 also includes a compilation of historical DTW and groundwater elevations based on the available survey results. Calculated groundwater elevations are presented in feet above msl. Appendix A contains the field records of measurements taken during monitoring and sampling.



The electric sounder and tape were cleaned prior to use in each well, using a solution of distilled water and Alconox, a concentrated, anionic detergent used for manual cleaning. Equipment was rinsed using distilled water following contact with the Alconox cleaning solution.

## 4.2 Groundwater Sampling

Seven monitoring wells were sampled in accordance with the *Addenda to Semi-Annual and Annual Groundwater Sampling and Analysis Plan*, dated June 8, 2009. HydraSleeve samplers were placed in monitoring wells MW1, MW1A, MW9, MW9A, MW10, MW14, and MW15 on MY 3, 2012 during the Annual Monitoring event.

Groundwater samples were obtained by pulling the HydraSleeves upward through the sample zone. The reed-valve at the top of the sleeve opens and the sleeve expands to collect the groundwater sample. Once the sleeve is full, the self-sealing reed-valve closes, preventing loss of the sample or entry of extraneous fluid as the HydraSleeve is recovered. At the surface the HydraSleeve was punctured with a new disposable pointed discharge straw and the samples were transferred to suitable containers for transport to the laboratory. One new one-liter HydraSleeve was attached to the shallow and deep anchors on the dedicated tethers in each groundwater monitoring well for retrieval during the next groundwater monitoring event.

All groundwater samples were transferred into laboratory-preserved, analyte-specific, sampling containers provided by the analytical laboratory. Samples were immediately placed in an ice-chest containing ice and submitted under chain-of-custody documentation to California Laboratory Services (CLS), Inc. of Rancho Cordova, a California Department of Health Services-certified laboratory, for analysis as follows:

- Total alkalinity, bicarbonate, carbonate, and hydroxide (EPA Method SM2320B);
- Ammonia as nitrogen (EPA Method SM4500-NH<sub>3</sub>C);
- Chloride and nitrate as nitrogen (EPA Method 300.0);
- Conductivity (EPA Method SM2510B);
- Total Hardness (EPA Method SM2340B);
- Calcium, magnesium, and sodium (EPA Method 200.7)
- pH (EPA Method SM4500-H+)
- Total fixed dissolved solids (FDS) (EPA Method 160.4);
- Total dissolved solids (TDS) (EPA Method SM2540C);



- Total organic carbon (EPA Method SM5310B); and
- Turbidity (EPA Method SM2310B).

Field measurements for turbidity, temperature, potential of hydrogen (pH), conductivity, total dissolved solids, dissolved oxygen, and oxidation-reduction potential were not recorded during this sampling event as a result of using the HydraSleeve sampling device.

## 5.0 RESULTS OF MONITORING ACTIVITIES

### 5.1 Site Groundwater Conditions

As measured during the May 3, 2012 monitoring event, groundwater DTW at the site ranged from 15.82 feet below-top-of-casing (btoc) in monitoring well MW1 to 22.34 feet btoc in monitoring wells MW12. Calculated groundwater elevations (GWE) in the shallow interval wells, based on the DTW measurements and measured TOC elevations, ranged from 34.07 feet msl in MW9 to 39.47 feet msl in MW15. Based on the calculated groundwater elevations in site monitoring wells, the groundwater flow direction for the shallow groundwater interval at the time of monitoring and sampling was to the east with an average gradient of approximately 0.002.

The groundwater flow velocity was calculated based on variable soil conditions across the site. Based on available soil lithologic logs for the site, the types of soils where groundwater is encountered at the site include silty clays, silty sands, and gravelly sands (WKA, 2008). It should be noted that soil types other than these soil types listed may be present at the site where groundwater is encountered. The groundwater flow velocity for these three soil types were calculated based on their properties using the equation below:

*Groundwater flow velocity equation:*

- $v = (Kdh / n_e dl)$ 
  - $v$  = velocity,
  - $K$  = hydraulic conductivity,
  - $dh/dl$  = hydraulic gradient, and
  - $n_e$  = porosity.



*Soil type and estimated flow velocity:*

- Silty clays =  $6.7 \times 10^{-9}$  ft/day,
- Silty sands =  $2.0 \times 10^{-4}$  ft/day, and
- Gravelly sands = 100 ft/day.

Figure 3, Potentiometric Surface Map, depicts groundwater surface elevation at the site for the May 3, 2012 monitoring event.

## 5.2 Site Water Quality Conditions

Groundwater quality in the shallower interval monitoring well network is summarized as follows:

- TDS concentrations ranged from 890 milligrams per liter (mg/L) (MW15) to 1,500 mg/L (MW1 and MW9);
- FDS concentrations ranged from 580 mg/L (MW15) to 1,100 mg/L (MW1); and
- Nitrate as nitrogen ranged from below the laboratory reporting limit of <0.40 mg/L in wells MW9A and MW10 to 9.4 mg/L in well MW15.

Groundwater quality in the two deeper-interval monitoring wells is summarized as follows:

- TDS concentrations were reported at 820 mg/L in monitoring well MW14 and 1,400 mg/L in monitoring well MW1A;
- FDS concentrations were reported at 570 mg/L in monitoring well MW14 and 1,000 mg/L in monitoring well MW1A; and
- Nitrate as nitrogen ranged from 3.1 mg/L in well MW1A to 12.0 mg/L in well MW14.

Analytical results for the May 3, 2012 monitoring event and historical groundwater analytical results are included in Table 2. Appendix B includes the laboratory report for this sampling event and a copy of the chain-of-custody.

## 5.3 Data Quality

All groundwater samples were received by the laboratory under documented chain-of-custody. United States Environmental Protection Agency SW-846 (EPA 2000) protocols for sample storage and preservation were followed.



Based on the results of laboratory analyses and review of sampling procedures, laboratory quality assurance and quality control, and review of historical analytical results, the data appears adequate for the use intended.

## 6.0 PRECIPITATED CALCIUM CARBONATE (PCC) STATUS

Prior to the end of 2000, the former owner/operator, Spreckels Sugar Company, generated wastewater from the sugar manufacturing process and discharged it to land on-site. The primary wastewater streams were generated from beet wash water and from slurried, precipitated, calcium carbonate resulting from sugar refining. This process was discontinued before the current ownership of the property. A third party contractor, Jack Spence, Inc., has purchased the PCC and continues to remove the product off-site.

In June 2008, the RWQCB approved the *Precipitated Calcium Carbonate (PCC) Operations and Removal Plan* (Plan) submitted by Clark Pacific. As part of the plan, Clark Pacific conducts weekly inspections of the PCC removal operations and documented observations on a weekly report sheet. Copies of the Weekly Observation Reports are included in Appendix C.

On April 30, 2012, the CRWQCB issued a Notice of Violation for non-compliance with WDRs R5-2003-0047, and required a workplan containing and updated PCC removal and cleanup schedule.

On May 18, 2012, Clark Pacific issued a "Work Plan for Final Removal of PCC at the Former Spreckels Sugar Facility in Woodland, CA". This Work Plan contained an updated PCC estimate of 204,985 cubic yards, or 212,233 tons. The Work Plan also committed Clark Pacific to remove the remaining PCC at an updated rate of 60,000 tons per year. At that rate it is anticipated that all PCC will be removed by December 31, 2015.

In June, 2012, the CRWQCB issued a draft Cease and Desist Order (CDO) containing an extended time schedule to comply with WDRs R5-2003-0047 and to remove the remaining PCC. The draft CDO specifies that the PCC shall be removed at a rate not less than 60,000 tons per year, and that ongoing PCC removal reports, soil sampling reports, and monthly progress reports shall be submitted to the CRWQCB. The CDO is to be considered at a CRWQCB hearing scheduled for August 1-3, 2012.



PCC removal totals for the first half of 2012 were unavailable as of June 25, 2012. PCC removal is ongoing, and will continue at the site during the second half of the year.

## 7.0 SUMMARY

Semi-annual groundwater monitoring of the groundwater monitoring well network was conducted on May 3, 2012 at the Former Spreckels Sugar Facility. The shallow interval DTW and GWE at the time of monitoring ranged between 15.82 and 34.07 feet btoC to 22.34 and 39.47 feet msl, respectively. The direction of shallow groundwater flow is to the east at a gradient of 0.002 feet per foot. This gradient is the second greatest detected at the site since groundwater monitoring began in November 2007. The groundwater gradient may be influenced, at least temporarily, by nearby agricultural groundwater pumping, seasonal variations, and stage fluctuation of local creeks and drainage canals.

Groundwater monitoring activities were modified during the second quarter 2008 converting traditional purge and sampling methodology to the use of in-situ HydraSleeve groundwater collection. Based on comparisons of the historical analytical data to the June 12, 2009 through May 3, 2012 analytical data, the corresponding results are similar in detected concentrations.

Based on the May 3, 2012 analytical data, the two background wells, MW14 (deeper zone) and MW15 (shallow zone), continue to contain generally lower concentrations of total dissolved solids than the monitoring wells that are located in closer proximity of the PCC stockpile and former PCC ponds. Semi-annual groundwater monitoring will continue during the fourth quarter of 2012 at the site.

PCC removal totals for the first half of 2012 were unavailable as of June 25, 2012. Updated PCC removal totals will be included in the second semi-annual monitoring report, to be issued during the 4<sup>th</sup> quarter of 2012

The rate of PCC removal is scheduled to increase to at least 60,000 tons per year, pursuant to the Clark-Pacific Work Plan issued May 18, 2012. Additionally, a CVRWQCB hearing regarding the draft CDO is scheduled to take place August 1-3, 2012.



## 8.0 LIMITATIONS

The statements and conclusions in this report are based upon the scope of work described above and on observations made on the dates of our fieldwork. The work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. No recommendation is made as to the suitability of the property for any purpose. The results of our investigation do not preclude the possibility that materials currently, or in the future, defined as hazardous are present on the property. This report is applicable only to the investigated property and should not be used for any other property. No warranty is expressed or implied.



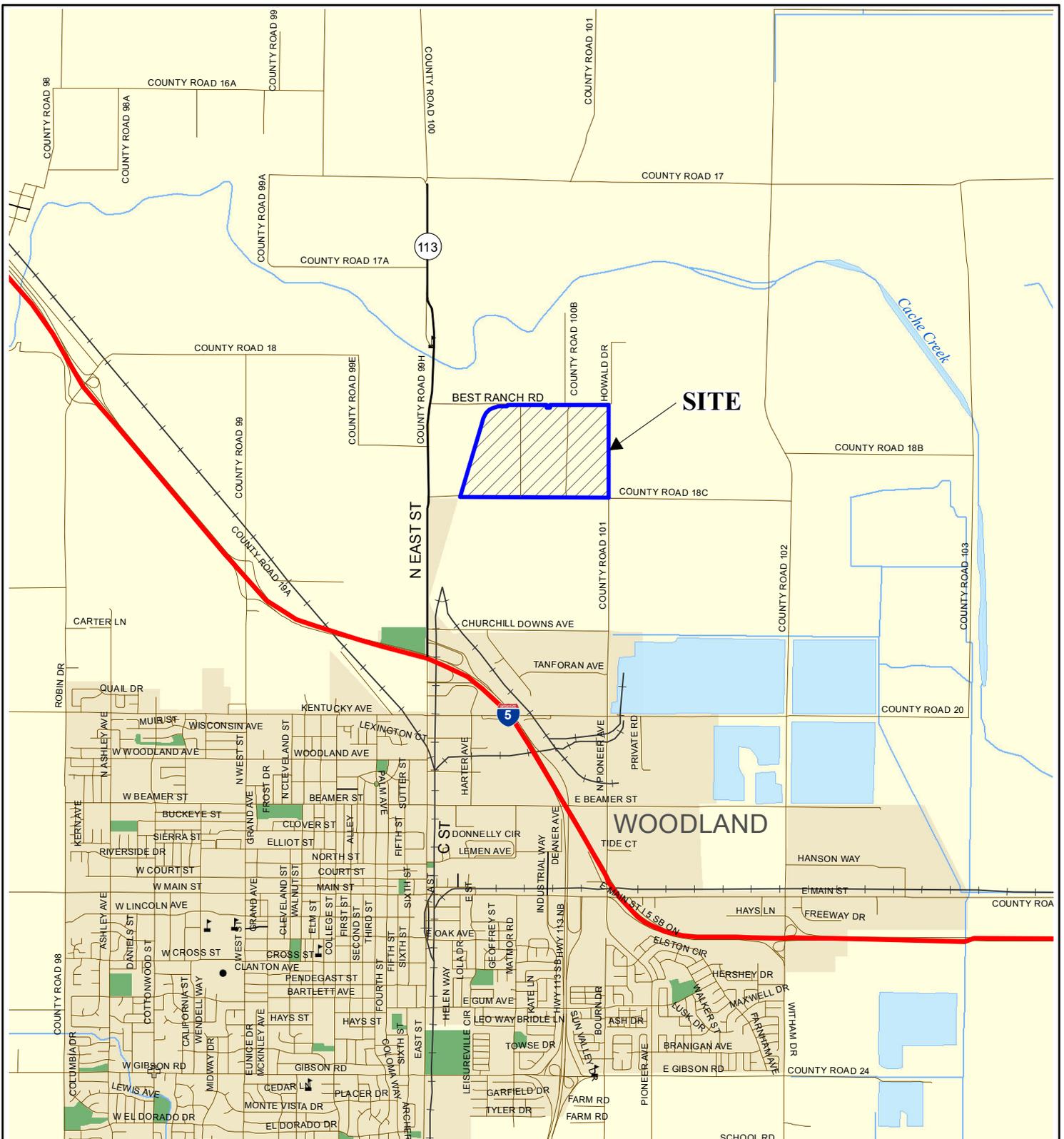
## 9.0 REFERENCES

- California Regional Water Quality Control Board – Central Valley Region, 2008. *Monitoring and Reporting Program No. R5-2003-0047*, 6 May 2008.
- California Regional Water Quality Control Board – Central Valley Region, 1991. Standard Provisions and Reporting Requirements For Waste Discharge Requirements, 1 March 1991.
- Second Semi-Annual 2007 Groundwater Monitoring and Sampling Report, Former Spreckels Sugar Company Facility, (MRP Order No. R5-2003-0047), Yolo County.* Kwest Engineering. December 18, 2007.
- Subsurface Investigation Report of Finding, Former Spreckels Agricultural Repair Shop, Woodland, California, Wallace-Kuhl & Associates, Inc. WKA No. 7864.05.* February 28, 2008.
- 2009 Annual Monitoring Report, Former Spreckels Sugar Facility, Woodland, California, Wallace-Kuhl & Associates, Inc. WKA No. 7864.15.* January 8, 2010.
- Request for Modification to Groundwater Monitoring Requirements, Former Spreckels Sugar Facility, Wallace-Kuhl & Associates, Inc. WKA No. 7864.08.* May 4, 2009.
- Work Plan for Final Removal of PCC at the Former Spreckels Sugar Facility in Woodland, CA, Clark-Pacific Corporation, May 18, 2012*
- Cease and Desist Order R5-2012-XXX – Draft, California Regional Water Quality Control Board*

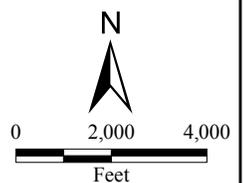


## FIGURES





Adapted from Data Provided By Yolo County, 2007  
 Projection: NAD 83, California State Plane, Zone II



**VICINITY MAP**  
**FORMER SPRECKELS SUGAR FACILITY WDR**  
 Woodland, California

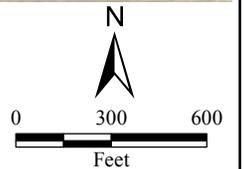
<b>FIGURE 1</b>	
DRAWN BY	TJC
CHECKED BY	CJK
PROJECT MGR	DBN
DATE	6/12
<b>WKA NO. 7864.19</b>	



Adapted from a Google Earth aerial photograph,  
 dated October 31, 2011.  
 Projection: NAD 83, California State Plane, Zone II

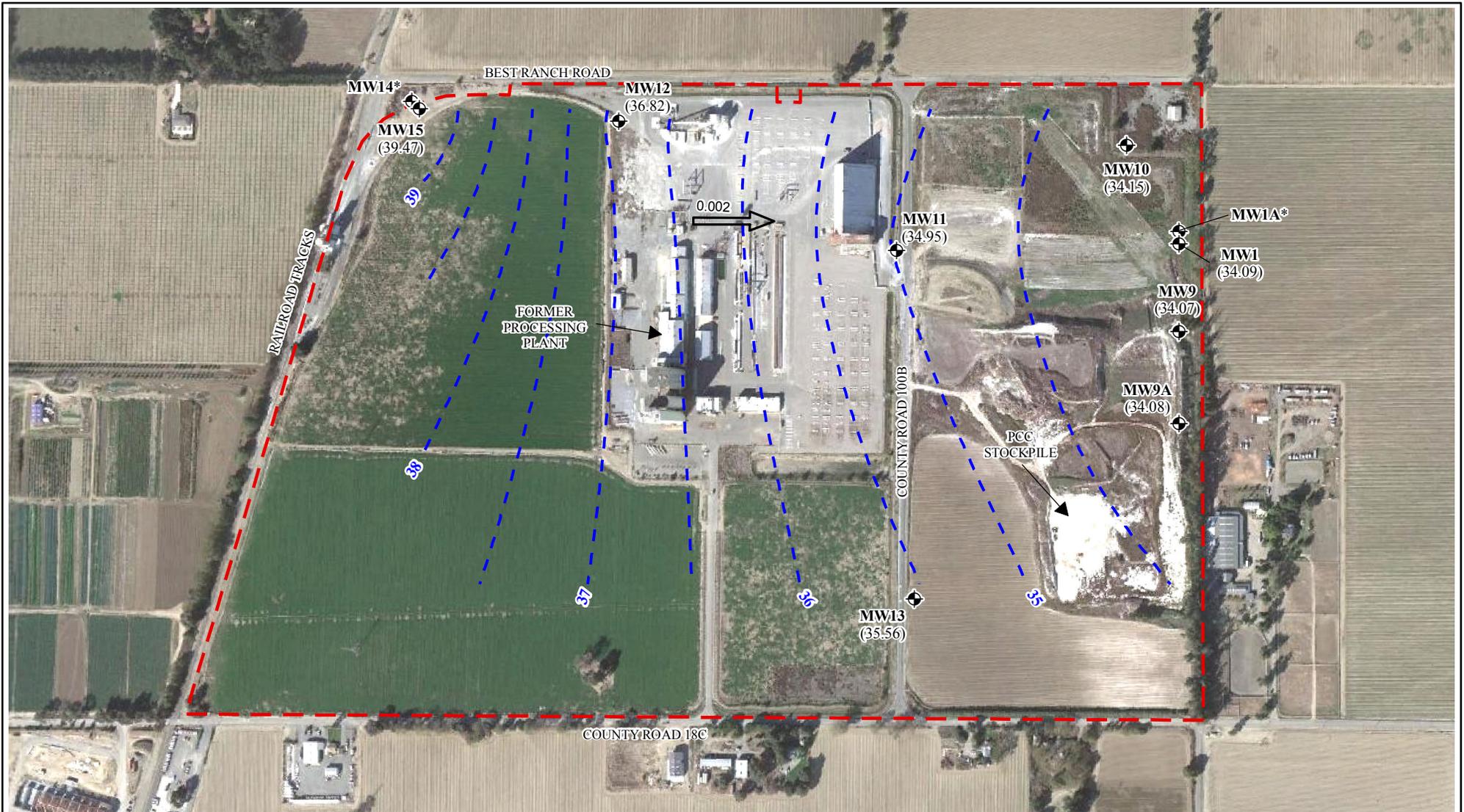
**Legend**

- Approximate site boundary
- Approximate location of monitoring well
- PCC Precipitated calcium carbonate



**SITE PLAN**  
 FORMER SPRECKELS SUGAR FACILITY WDR  
 Woodland, California

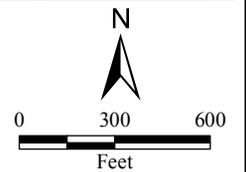
<b>FIGURE 2</b>	
DRAWN BY	TJC
CHECKED BY	CJK
PROJECT MGR	DBN
DATE	6/12
<b>WKA NO. 7864.19</b>	



Adapted from a Google Earth aerial photograph, dated October 31, 2011.  
 Projection: NAD 83, California State Plane, Zone II

**Legend**

- ◆ Monitoring well location
- Groundwater elevation contour line  
(31.76) Groundwater elevation in feet above mean sea level
- ↗ PCC Precipitated calcium carbonate
- \* Not used in contouring



**POTENTIOMETRIC SURFACE MAP**  
 May 3, 2012  
**FORMER SPRECKELS SUGAR FACILITY WDR**  
 Woodland, California

<b>FIGURE 3</b>	
DRAWN BY	TJC
CHECKED BY	CJK
PROJECT MGR	DBN
DATE	6/12
<b>WKA NO. 7864.19</b>	

## TABLES



**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Monitoring Date	MW-1 Shallow Aquifer Well TOC Elev = 50.56		MW-1A Deep Aquifer Well TOC Elev = 50.81		MW-9 Shallow Aquifer Well TOC Elev = 52.76		MW-9A Shallow Aquifer Well TOC Elev = 51.53		MW-10 Shallow Aquifer Well TOC Elev = 50.79		MW-11 Shallow Aquifer Well TOC Elev = 55.37		MW12 Shallow Aquifer Well TOC Elev = nm		MW-13 Shallow Aquifer Well TOC Elev = 52.69		MW-14 Deep Aquifer Well TOC Elev = 59.91		MW-15 Shallow Aquifer Well TOC Elev = 60.19	
	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev	DTW (ft)	GW Elev
3/2001	15.51	35.05	15.70	35.11	17.57	35.19	16.16	35.37	15.66	35.13	19.60	35.77	well not included	15.91	36.78	23.52	36.39	23.55	36.64	
5/2001	17.29	33.27	17.54	33.27	19.28	33.48	17.57	33.96	17.57	33.22	21.51	33.86	well not included	17.58	35.11	24.65	35.26	23.31	36.88	
8/2001	18.73	31.83	19.00	31.81	20.82	31.94	19.43	32.10	18.82	31.97	22.21	33.16	well not included	18.23	34.46	23.93	35.98	21.63	38.56	
2/2002	16.53	34.03	16.74	34.07	18.81	33.95	17.73	33.80	16.61	34.18	20.66	34.71	well not included	17.83	34.86	24.40	35.51	24.62	35.57	
12/2002	19.44	31.12	19.65	31.16	21.68	31.08	20.59	30.94	19.41	31.38	23.08	32.29	well not included	20.57	32.12	26.68	33.23	26.74	33.45	
1/2003	16.94	33.62	17.13	33.68	19.08	33.68	18.42	33.11	16.80	33.99	20.42	34.95	well not included	19.03	33.66	23.99	35.92	23.92	36.27	
11/2003	19.33	31.23	nm	nm	21.56	31.20	20.43	31.10	19.37	31.42	23.59	31.78	well not included	21.02	31.67	27.91	32.00	27.28	32.91	
5/2004	14.82	35.74	15.00	35.81	16.78	35.98	14.93	36.60	15.41	35.38	20.25	35.12	well not included	16.86	35.83	24.95	34.96	22.68	37.51	
12/2004	19.65	30.91	19.83	30.98	21.82	30.94	20.64	30.89	19.70	31.09	23.49	31.88	well not included	21.04	31.65	27.42	32.49	27.36	32.83	
5/2005	14.82	35.74	15.00	35.81	17.05	35.71	15.93	35.60	15.03	35.76	20.38	34.99	well not included	16.90	35.79	24.01	35.90	22.55	37.64	
12/2005	18.01	32.55	18.21	32.60	20.23	32.53	19.04	32.49	18.10	32.69	21.71	33.66	well not included	19.55	33.14	25.93	33.98	25.93	34.26	
5/2006	10.17	40.39	10.32	40.49	12.58	40.18	11.79	39.74	10.10	40.69	14.23	41.14	well not included	10.82	41.87	17.06	42.85	16.10	44.09	
12/2006	16.77	33.79	16.98	33.83	18.96	33.80	17.69	33.84	16.86	33.93	20.80	34.57	well not included	18.07	34.62	24.56	35.35	24.55	35.64	
5/2007	16.51	34.05	16.70	34.11	18.48	34.28	16.76	34.77	17.12	33.67	21.80	33.57	well not included	17.72	34.97	23.56	36.35	21.45	38.74	
11/18/2007	20.00	30.56	20.20	30.61	22.27	30.49	20.95	30.58	20.07	30.72	24.01	31.36	well not included	21.42	31.27	27.91	32.00	27.70	32.49	
6/10/2008*	15.47	35.09	15.63	35.18	17.56	35.20	16.12	35.41	15.91	34.88	well not included	well not included	well not included	well not included	28.36	31.55	25.82	34.37		
8/22/2008**	TOC Elev = 49.91	TOC Elev = 50.09	TOC Elev = 52.13	TOC Elev = 50.93	TOC Elev = 50.14	TOC Elev = 54.68	TOC Elev = 59.16	TOC Elev = 52.08	TOC Elev = 59.05	TOC Elev = 59.28										
12/4/2008	21.53	28.38	21.74	28.35	23.66	28.47	23.38	27.55	21.67	28.47	25.48	29.20	28.89	30.27	22.39	29.69	29.26	29.79	29.12	30.16
6/12/2009	18.29	31.62	18.45	31.64	20.39	31.74	18.75	32.18	18.71	31.43	well not included	well not included	well not included	well not included	30.19	28.86	27.37	31.91		
11/10/2009	23.69	26.22	23.91	26.18	25.43	26.70	24.25	26.68	23.98	26.16	28.02	26.66	32.52	26.64	24.80	27.28	32.61	26.44	32.17	27.11
4/23/2010	17.41	32.50	17.52	32.57	19.81	32.32	18.97	31.96	17.42	32.72	21.49	33.19	25.28	33.88	19.84	32.24	25.98	33.07	25.98	33.30
10/27/2010	21.76	28.15	21.98	28.11	23.87	28.26	22.54	28.39	22.05	28.09	26.01	28.67	30.46	28.70	22.74	29.34	30.39	28.66	29.86	29.42
4/26/2011	12.28	37.63	12.12	37.97	14.60	37.53	13.91	37.02	12.22	37.92	16.65	38.03	21.08	38.08	14.2	37.88	20.79	38.26	20.68	38.60
10/14/11	18.15	31.76	18.35	31.74	20.19	31.94	18.80	32.13	18.3	31.84	well not included	well not included	well not included	18.75	33.33	26.31	32.74	25.77	33.51	
5/3/12	15.82	34.09	16.00	34.09	18.06	34.07	16.85	34.08	15.99	34.15	19.73	34.95	22.34	36.82	16.52	35.56	21.17	37.88	19.81	39.47

Notes:

TOC = Top of Casing (measured on the northerly side of well)

Elev = Elevation (feet above mean sea level)

DTW = Depth to Groundwater (feet below ground surface)

GW = Groundwater

Data collected and tabulated by Kwest Engineering, Inc. from March 2001 to November 2007

\* = Monitoring begun by Wallace-Kuhl & Associates, Inc. using Kwest Engineering, Inc. survey data

\*\* = Survey completed by Laugenour and Meikle (August 2008)

↖ Flow Velocity recalculated from previous report

nm = Not Measured

ft = feet

ft/day = feet per day

na = not available

Monitoring Date	GW Gradient	GW Flow Direction	Estimated Groundwater Flow Velocity (ft/day)		
			Silty Clays	Silty Sands	Gravelly Sands
11/18/2007*	0.00075	E	na	na	na
6/10/2008*	0.00029	NW	9.7 x 10 <sup>-10</sup>	2.9 x 10 <sup>-5</sup>	14.5
12/4/2008	0.0033	SE	1.1 x 10 <sup>-8</sup>	3.3 x 10 <sup>-4</sup>	165
6/15/2009	0.0007	N/NE	2.3 x 10 <sup>-9</sup>	7.0 x 10 <sup>-5</sup>	35
11/10/2009	0.0006	NE	2.0 x 10 <sup>-9</sup>	6.0 x 10 <sup>-5</sup>	30
4/23/2010	0.0007	SE	2.3 x 10 <sup>-9</sup>	7.0 x 10 <sup>-5</sup>	35
10/27/2010	0.0005	NE	1.7 x 10 <sup>-9</sup>	5.0 x 10 <sup>-5</sup>	25
4/26/2011	0.0004	SE	1.3 x 10 <sup>-9</sup>	4.0 x 10 <sup>-5</sup>	20
10/14/2011	0.0007	NE	2.3 x 10 <sup>-9</sup>	7.0 x 10 <sup>-5</sup>	35
5/3/2012	0.002	E	6.7 x 10 <sup>-9</sup>	2.0 x 10 <sup>-4</sup>	100

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH*	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon
			µmhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>MW-1 Shallow Well</b>	3/2001*	7.10	2,141	7.2	ND	1,300	1,300	96	210	1,000	ND	210	1,700	1,200	40
	5/2001*	6.88	1,910	NA	ND	1,300	1,300	97	190	250	ND	200	1,700	1,300	23
	8/2001*	7.03	1,577	8.8	ND	1,300	1,300	110	200	1,100	ND	220	1,700	1,100	22
	2/2002*	6.76	1,250	18	ND	970	970	96	200	1,000	ND	200	1,600	1,100	22
	12/2002*	7.12	1,342	28	ND	1,300	1,300	100	180	1,100	ND	220	1,400	1,100	23
	1/2003*	7.40	2,341	22	ND	1,300	1,300	94	180	1,000	ND	210	1,600	1,200	3.2
	11/2003*	7.40	1,928	10.2	ND	1,400	1,400	100	190	1,100	ND	140	1,600	1,200	20
	5/2004*	7.12	2,228	14	ND	1,400	1,400	110	120	1,200	0.40	220	1,700	1,100	17
	12/2004*	6.82	3,348	4.0	ND	1,400	1,400	120	190	1,300	ND	220	1,600	1,200	18
	5/2005*	6.83	3,158	7.0	ND	1,500	1,500	110	190	1,200	ND	230	1,600	1,200	18
	12/2005*	8.59	2,830	22.1	ND	1,400	1,400	57	240	1,000	1.2	220	1,700	1,400	23
	5/2006*	7.54	2,692	4.8	ND	1,400	1,400	110	240	1,100	1.1	210	1,600	1,500	143
	12/2006*	7.40	1,920	12	ND	1,400	1,400	140	175	1,600	0.60	320	1,600	1,600	20
	5/2007*	7.24	2,075	32.89	ND	1,400	1,400	110	200	1,400	ND	230	1,600	1,400	38
	11/18/2007*	7.31	1,972	5.0	ND	1,300	1,300	110	180	1,200	1.0	210	1,500	1,200	40
	6/10/2008	7.51	2,700	4.0	<0.10	1,200	1,200	100	180	190	5.8	170	1,500	1,200	37
	12/4/2008	6.89	3,010	1.6	<0.10	1,200	1,200	110	170	1,200	1.6	190	1,500	1,200	23
	6/12/2009	mnt	mnt	mnt	0.47	1,300	1,300	100	180	1,000	2.9	160	1,600	1,200	16
	11/10/2009	6.84	mnt	mnt	<0.10	1,200	1,200	110	180	1,200	3.7	200	1,500	1,200	75
	4/23/2010	6.96	mnt	mnt	0.11	1,300	1,300	110	190	1,200	1.3	210	1,600	1,200	14
10/27/2010	6.96	mnt	mnt	<0.10	990	990	100	170	1,100	9.7	150	1,400	1,100	38	
4/26/2011	6.95	mnt	mnt	0.26	1,100	1,100	100	180	1,100	9.0	150	1,500	1,100	12	
10/14/2011	6.82	mnt	mnt	0.64	1,200	1,200	130	170	1,400	2.9	200	1,500	1,100	12	
5/3/2012	7.03	2,500	1.1	<0.20	1,300	1,300	120	180	1,290	0.91	210	1,500	1,100	13.8	

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon	
			µmhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1A Deep Well	3/2001*	7.19	2,180	7.3	ND	1,400	1,400	120	200	1,100	ND	230	1,700	1,400	11	
	5/2001*	6.97	1,940	NA	ND	1,400	1,400	120	220	1,100	ND	220	1,800	1,400	15	
	8/2001*	7.10	1,638	4.2	ND	1,400	1,400	130	220	1,200	ND	240	1,800	1,400	10	
	2/2002*	6.90	1,322	6.0	ND	1,100	1,100	110	220	1,000	ND	220	1,700	1,400	8.7	
	12/2002*	7.17	1,430	7.0	ND	1,200	1,200	120	190	1,200	ND	250	1,700	1,400	8.9	
	1/2003*	7.41	2,396	10	ND	1,300	1,300	110	200	1,000	ND	220	1,700	1,300	8.4	
	11/2003*	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	5/2004*	7.06	2,265	11	ND	1,400	1,400	120	190	1,100	0.90	240	1,700	1,200	9.4	
	12/2004*	6.89	3,368	7.0	ND	1,400	1,400	130	190	1,200	ND	240	1,700	1,300	9.9	
	5/2005*	6.83	3,109	7.0	ND	1,500	1,500	130	190	1,200	ND	250	1,600	1,300	9.7	
	12/2005*	8.49	2,846	19	ND	1,400	1,400	76	240	1,100	1.0	230	1,700	1,300	14	
	5/2006*	7.63	2,604	10	ND	1,300	1,300	110	230	970	1.0	220	1,600	1,500	4.2	
	12/2006*	7.29	2,605	8.0	ND	1,400	1,400	210	176	920	0.60	160	1,700	1,600	10	
	5/2007*	7.41	2,127	7.9	ND	1,300	1,300	120	180	1,100	ND	220	1,600	1,500	72	
	11/18/2007*	7.37	1,870	4.0	ND	1,200	1,200	110	180	1,100	3.8	230	1,400	1,200	80	
	6/10/2008	7.23	2,500	5.0	<0.10	1,200	1,200	110	160	930	2.2	210	1,600	1,200	43	
	12/4/2008	7.00	2,860	6.2	<0.10	1,200	1,200	110	150	1,100	1.6	210	1,500	1,200	18	
	6/12/2009	mnt	mnt	mnt	<0.10	1,200	1,200	99	160	950	1.0	160	1,500	1,200	29	
	11/10/2009	6.97	mnt	mnt	0.14	1,300	1,300	110	170	1,100	1.9	220	1,500	1,100	62	
	4/23/2010	7.29	mnt	mnt	0.21	1,200	1,200	92	170	1,000	<0.50	220	1,500	1,200	20	
10/27/2010	7.01	mnt	mnt	<0.10	1,100	1,100	100	170	1,000	5.1	180	1,400	1,100	17		
4/26/2011	7.02	mnt	mnt	<0.10	1,000	1,000	100	170	1,000	5.5	150	1,400	1,100	8		
10/14/2011	6.87	mnt	mnt	0.33	1,100	1,100	130	170	1,200	5.2	220	1,300	940	11		
5/3/2012	7.23	2,400	2.3	<0.20	1,200	1,200	130	160	1,200	3.1	210	1,400	1,000	7.46		

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon
			µmhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-9 Shallow Well	3/2001*	7.34	2,000	15.7	34	1,300	1,300	96	140	1,100	ND	140	1,500	1,100	7.8
	5/2001*	7.06	1,578	NA	12	1,300	1,300	95	140	1,000	ND	130	1,600	1,200	7.5
	8/2001*	7.16	1,646	4.5	18	1,300	1,300	100	180	1,100	ND	140	1,600	1,200	8.3
	2/2002*	6.95	1,275	7.0	21	1,100	1,100	94	150	1,000	ND	130	1,600	1,200	7.9
	12/2002*	7.23	1,529	9.0	20	1,400	1,400	100	140	1,200	ND	150	1,500	1,200	7.2
	1/2003*	7.47	2,399	27	14	1,300	1,300	92	150	1,000	ND	140	1,600	1,200	7.3
	11/2003*	7.44	2,171	7.0	ND	1,400	1,400	100	140	860	ND	160	1,600	1,100	8.1
	5/2004*	6.89	2,065	9.0	15	1,400	1,400	110	140	1,200	0.70	150	1,000	1,000	8.2
	12/2004*	6.96	3,308	5.0	86	1,400	1,400	100	140	1,200	ND	150	1,500	1,200	7.9
	5/2005*	6.99	3,006	10	18	1,500	1,500	110	140	1,200	ND	150	1,600	1,100	7.8
	12/2005*	8.42	2,792	33.14	19	1,400	1,400	55	180	1,000	1.0	140	1,500	1,300	12.0
	5/2006*	7.60	2,638	14.2	19	1,300	1,300	95	170	1,000	0.80	140	1,500	1,400	7.1
	12/2006*	7.20	2,102	15	ND	1,400	1,400	10	123	970	ND	120	1,600	1,500	8.8
	5/2007*	7.15	2,140	12.28	ND	1,400	1,400	57	130	970	1.2	140	1,500	1,400	33
	11/18/2007*	7.44	2,080	6.0	ND	1,400	1,400	71	110	1,700	ND	160	1,400	1,200	62
	6/10/2008	7.01	3,200	4.0	15	1,200	1,200	100	140	190	<0.50	150	1,600	1,200	45
	12/4/2008	6.93	3,290	1.1	22	1,400	1,400	100	160	1,200	<0.50	160	1,500	1,200	48
	6/12/2009	mnt	mnt	mnt	18	1,400	1,400	97	140	1,100	<0.50	130	1,600	1,200	36
	11/10/2009	7.02	mnt	mnt	34	1,400	1,400	90	160	1,100	<0.50	160	1,500	1,200	68
	4/23/2010	7.30	mnt	mnt	38	1,400	1,400	94	150	1,100	<0.50	160	1,800	1,400	24
10/27/2010	7.10	mnt	mnt	16	1,400	1,400	89	160	1,200	<0.50	160	1,500	1,200	17	
4/26/2011	7.09	mnt	mnt	21	1,500	1,500	91	170	1,100	0.80	140	1,600	1,200	29	
10/14/2011	6.99	mnt	mnt	29	1,400	1,400	110	180	1,300	1.90	170	1,400	1,000	<10	
5/3/2012	7.22	2,700	7.0	27	1,400	1,400	110	160	1,320	1.70	170	1,500	1,000	8.42	

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon
			umhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-9A Shallow Well	3/2001*	7.40	1,857	7.3	78	1,000	1,000	38	120	1,100	ND	93	1,100	840	12
	5/2001*	7.16	1,810	NA	28	1,200	1,200	49	120	1,000	ND	99	1,300	910	16
	8/2001*	7.24	1,780	8.8	54	1,200	1,200	55	120	1,100	ND	110	5,700	2,200	20
	2/2002*	7.20	1,247	18	50	740	740	33	100	1,000	ND	110	970	700	9.6
	12/2002*	7.33	1,611	28	76	1,100	1,100	50	110	1,200	ND	110	1,200	930	14
	1/2003*	7.60	1,976	10	44	980	980	37	110	1,000	ND	91	1,100	730	2.7
	11/2003*	7.62	2,042	7.1	40	1,200	1,200	49	120	860	ND	110	1,200	800	17
	5/2004*	7.30	1,613	5.0	37	930	930	40	100	640	0.40	97	960	700	8.8
	12/2004*	7.08	3,097	5.0	64	1,200	1,200	51	110	910	ND	110	1,200	900	17
	5/2005*	7.17	2,315	8.0	50	1,000	1,000	42	100	680	ND	100	1,000	720	9.6
	12/2005*	8.48	2,480	35.11	49	1,100	1,100	49	130	820	ND	110	1,200	1,000	18
	5/2006*	7.71	1,888	9.6	35	830	830	36	110	540	ND	90	820	870	3.7
	12/2006*	7.40	1,920	12	ND	1,200	1,200	49	114	900	ND	120	1,200	1,100	45
	5/2007*	7.35	1,785	5.29	ND	1,300	1,300	33	120	700	1.1	94	1,400	880	31
	11/18/2007*	7.46	2,075	5.0	ND	1,300	1,300	43	95	1,100	1.6	120	1,300	960	52
	6/10/2008	6.89	2,500	5.0	46	1,000	1,000	46	100	730	<0.50	110	1,200	840	37
	12/4/2008	7.10	3,080	-1.0	52	1,200	1,200	55	220	1,000	<0.50	120	1,400	1,000	61
	6/12/2009	mnt	mnt	mnt	57	1,400	1,400	51	100	950	<0.50	95	1,500	1,100	34
	11/10/2009	7.03	mnt	mnt	56	1,400	1,400	62	110	1,200	<0.50	120	1,600	1,100	63
	4/23/2010	7.30	mnt	mnt	54	1,000	1,000	44	110	780	<0.50	100	1,200	1,200	18
10/27/2010	7.08	mnt	mnt	3.3	1,200	1,200	52	110	980	0.69	110	1,300	1,000	14	
4/26/2011	7.21	mnt	mnt	34	990	990	48	110	830	0.94	100	1,200	840	21	
10/14/2011	6.96	mnt	mnt	54	1,300	1,300	66	120	1,300	0.62	130	1,400	1,000	32	
5/3/2012	7.41	1,900	1.2	47	900	900	42	98	733	<0.40	98	940	640	11.1	

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L, unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon
			µmhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>MW-10 Shallow Well</b>	3/2001*	7.46	1,846	8.1	ND	1,200	1,200	100	150	990	ND	110	1,400	980	7.8
	5/2001*	7.00	1,657	NA	ND	1,200	1,200	120	140	1,100	33	110	1,400	1,000	19
	8/2001*	7.59	1,319	8.0	ND	1,200	1,200	120	160	1,200	ND	120	1,400	1,100	8
	2/2002*	6.82	1,062	9.0	ND	670	670	100	150	990	0.20	110	1,300	920	5.8
	12/2002*	7.10	1,100	8.0	ND	1,100	1,100	120	160	1,100	ND	120	1,400	1,000	6.8
	1/2003*	7.64	2,053	8.0	ND	1,100	1,100	110	160	1,000	ND	120	1,400	1,000	6.3
	11/2003*	7.55	1,870	4.8	ND	1,200	1,200	120	150	1,200	ND	130	1,300	1,300	6.4
	5/2004*	6.81	1,942	14	ND	1,200	1,200	110	140	1,100	0.40	120	1,300	940	5.8
	12/2004*	7.24	2,632	7.0	ND	1,200	1,200	110	220	1,100	ND	120	1,300	1,000	6.0
	5/2005*	6.97	2,518	7.0	ND	1,200	1,200	110	140	1,000	ND	120	1,300	960	5.6
	12/2005*	8.23	2,287	25	ND	1,100	1,100	72	170	960	1.2	110	1,300	1,000	6.9
	5/2006*	7.52	2,162	10.9	ND	1,100	1,100	110	170	1,000	1.1	120	1,300	1,100	4.6
	12/2006*	7.48	1,723	44.1	ND	1,100	1,100	110	127	1,100	ND	120	1,300	1,200	5.9
	5/2007*	7.40	1,752	14.1	ND	1,000	1,000	100	130	1,000	ND	120	1,200	1,100	33
	11/18/2007*	7.43	1,739	7.0	ND	1,100	1,100	81	130	1,200	ND	120	1,200	990	32
	6/10/2008	7.28	2,390	13	<0.10	1,100	1,100	100	140	970	<0.50	120	1,300	970	16
	12/4/2008	7.00	2,580	0	<0.10	1,100	1,100	120	130	1,200	<0.50	120	1,300	1,000	37
	6/12/2009	mnt	mnt	mnt	<0.10	1,100	1,100	100	140	970	<0.50	96	1,300	950	30
	11/10/2009	7.34	mnt	mnt	0.11	1,100	1,100	110	140	1,100	<0.50	130	1,300	950	43
	4/23/2010	7.27	mnt	mnt	0.25	1,100	1,100	110	150	1,000	<0.50	120	1,300	980	15
10/27/2010	7.01	mnt	mnt	0.30	1,100	1,100	110	150	1,200	<0.50	110	1,400	1,000	17	
4/26/2011	7.10	mnt	mnt	<0.10	1,100	1,100	100	150	1,000	<0.50	100	1,200	960	9.4	
10/14/2011	6.90	mnt	mnt	0.24	1,200	1,200	130	160	1,300	<0.50	120	1,100	820	<5.0	
5/3/2012	7.44	2,200	10	<0.20	1,100	1,100	130	150	1,210	<0.40	120	1,300	840	5.39	

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon	
			µmhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-11 Shallow Well	3/2001*	7.30	1,648	10.3	1.0	890	890	98	120	820	13	140	1,200	900	2.8	
	5/2001*	7.16	1,417	NA	ND	850	850	97	120	780	13	130	1,200	890	3.1	
	8/2001*	7.34	1,231	7.8	ND	840	840	100	120	830	15	140	1,200	900	2.7	
	2/2002*	6.93	1,032	28	ND	690	690	91	140	760	15	140	1,200	910	2.8	
	12/2002*	7.26	1,061	18	1.0	820	820	98	120	820	15	140	1,200	960	2.7	
	1/2003*	7.67	1,750	19	ND	820	820	93	140	770	17	130	1,200	870	2.6	
	11/2003*	7.56	1,942	15.1	ND	890	890	100	130	830	14	140	1,200	830	0.20	
	5/2004*	6.50	1,659	8.0	ND	900	900	100	130	830	14	140	1,100	840	3.1	
	12/2004*	7.54	2,349	5.0	ND	880	880	100	130	830	16	130	1,200	870	3.0	
	5/2005*	7.02	2,312	6.0	ND	910	910	100	130	830	16	130	1,200	860	2.8	
	12/2005*	8.41	2,085	30.87	0.42	850	850	94	160	810	87	130	1,200	950	3.8	
	5/2006*	7.61	2,093	35	0.47	860	860	90	160	760	70	130	1,200	1,000	2.3	
	12/2006*	7.41	1,518	11.6	ND	820	820	96	110	860	64	150	1,100	1,000	2.7	
	5/2007*	7.54	1,553	7.0	ND	720	720	120	120	880	76	110	1,200	1,100	30	
	11/18/2007*	7.50	1,509	8.0	ND	780	780	73	130	800	85	130	1,100	880	22	
	6/10/2008	Well not sampled														
	12/4/2008	Well not sampled														
	6/12/2009	Well not sampled														
	11/10/2009	Well not sampled														
	4/23/2010	Well not sampled														
10/27/2010	Well not sampled															
4/26/2011	Well not sampled															
10/14/2011	Well not sampled															
5/3/2012	Well not sampled															

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon	
			µmhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-13 Shallow Well	3/2001*	7.44	1,437	5.5	ND	840	840	98	160	780	ND	92	1,200	800	1.8	
	5/2001*	7.18	1,198	NA	ND	760	890	97	150	770	5.3	94	1,200	890	1.1	
	8/2001*	7.41	1,054	7.2	ND	660	880	100	140	850	26	90	1,200	800	1.7	
	2/2002*	6.99	891	12	ND	520	660	91	150	740	26	92	1,200	810	1.7	
	12/2002*	7.32	961	7.0	ND	670	630	98	150	780	27	94	1,200	860	1.8	
	1/2003*	7.70	1,583	8.0	ND	660	660	98	160	780	23	94	1,200	800	1.4	
	11/2003*	7.56	1,741	4.0	ND	710	710	110	160	890	28	110	1,200	790	1.3	
	5/2004*	6.97	1,601	7.0	ND	720	720	120	160	880	25	96	1,100	780	1.1	
	12/2004*	7.47	2,130	5.0	ND	710	710	110	160	850	25	100	1,100	800	1.3	
	5/2005*	7.11	2,140	7.0	ND	720	720	110	170	850	27	100	1,100	760	1.4	
	12/2005*	8.44	1,926	52.1	ND	670	670	74	200	760	150	95	1,100	830	2.1	
	5/2006*	7.55	1,837	34.5	ND	640	640	100	190	780	140	95	1,100	920	1.1	
	12/2006*	7.50	1,397	10.1	ND	660	660	110	146	890	115	110	1,200	990	1.3	
	5/2007*	7.61	1,451	31.59	ND	620	620	110	120	850	120	94	1,100	1,100	11	
	11/18/2007*	7.58	1,421	14	ND	650	650	78.00	150	810	97	110	1,990	760	26	
	6/10/2008															Well not sampled
	12/4/2008															Well not sampled
	6/12/2009															Well not sampled
	11/10/2009															Well not sampled
	4/23/2010															Well not sampled
10/27/2010															Well not sampled	
4/26/2011															Well not sampled	
10/14/2011															Well not sampled	
5/3/2012															Well not sampled	

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance	Turbidity	Ammonia as Nitrogen	Total Alkalinity	Bicarbonate as CaCO <sub>3</sub>	Calcium	Chloride	Hardness as CaCO <sub>3</sub>	Nitrate as Nitrogen	Sodium	Total Dissolved Solids	Total Fixed Dissolved Solids	Total Organic Carbon
			umhos/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-14 Deep Well	3/2001*	7.79	1,084	NA	ND	520	520	80	75	540	13	74	830	630	0.90
	5/2001*	7.56	1,020	NA	ND	520	520	82	89	550	13	73	840	600	0.90
	8/2001*	7.55	870	5.2	ND	500	500	90	84	600	15	79	850	610	0.70
	2/2002*	6.29	758	9.0	ND	440	440	78	86	530	15	77	800	480	1.1
	12/2002*	7.64	773	10	ND	440	440	85	80	570	15	78	810	600	1.0
	1/2003*	7.91	1,227	10	ND	530	530	83	100	580	17	79	880	650	1.1
	11/2003*	7.84	1,361	10	ND	600	600	90	100	630	14	88	860	620	0.90
	5/2004*	7.05	1,175	7.0	ND	600	600	96	99	640	13	81	850	600	0.92
	12/2004*	7.64	1,635	4.0	ND	590	590	92	100	640	13	85	850	640	1.1
	5/2005*	7.20	1,690	63	ND	630	630	90	100	620	12	87	890	640	1.1
	12/2005*	8.48	1,477	29.07	ND	590	590	58	120	540	67	80	860	660	1.4
	5/2006*	7.82	1,450	20.9	ND	580	580	89	120	610	54	84	860	720	ND
	12/2006*	7.71	1,095	175	ND	610	610	89	90	680	45	97	810	740	1.2
	5/2007*	7.88	1,102	57.66	ND	550	550	90	88	640	48	69	790	690	1.2
	11/18/2007*	7.83	1,100	5.0	ND	600	600	61	170	610	52	95	650	620	13
	6/10/2008	7.23	1,700	21	<0.10	530	530	89	85	590	12	84	840	650	13
	12/4/2008	7.34	1,670	6.9	0.13	570	570	89	190	640	11	90	800	660	23
	6/12/2009	mnt	mnt	mnt	<0.10	620	620	81	86	560	10	69	860	680	<10
	11/10/2009	7.38	mnt	mnt	<0.10	600	600	89	93	640	11	91	820	660	29
	4/23/2010	7.43	mnt	mnt	<0.10	560	560	90	94	620	11.0	89	850	660	31
10/27/2010	7.37	mnt	mnt	<0.10	560	560	85	90	630	11.0	85	860	690	5.7	
4/26/2011	7.46	mnt	mnt	0.14	550	550	87	91	630	11.0	83	840	670	5.7	
10/14/2011	7.31	mnt	mnt	0.38	620	620	99	97	730	12.0	96	820	600	5.5	
5/3/2012	7.66	1,400	1.5	<0.20	580	580	100	86	687	12.0	95	820	570	<1.00	

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**FORMER SPRECKELS SUGAR FACILITY**  
**WOODLAND, CALIFORNIA**  
**WKA No. 7864.19**

Reported in mg/L unless noted otherwise

Sample ID	Date Sampled	pH <sup>a</sup>	Specific Conductance µmhos/cm	Turbidity NTU	Ammonia as Nitrogen mg/L	Total Alkalinity mg/L	Bicarbonate as CaCO <sub>3</sub> mg/L	Calcium mg/L	Chloride mg/L	Hardness as CaCO <sub>3</sub> mg/L	Nitrate as Nitrogen mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Dissolved Solids mg/L	Total Organic Carbon mg/L
MW-15 Shallow Well	3/2001*	7.45	1,471	34.8	ND	840	840	60	140	780	5.6	84	930	630	0.90
	5/2001*	7.18	1,416	NA	ND	890	890	62	140	850	ND	83	940	600	0.90
	8/2001*	7.41	1,130	65.2	ND	880	880	60	150	910	6.0	89	950	610	0.70
	2/2002*	6.99	890	14	ND	660	660	68	140	740	7.4	87	900	480	1.1
	12/2002*	7.32	915	12	ND	630	630	65	110	790	7.5	88	910	600	1.0
	1/2003*	7.86	1,346	12	ND	650	650	68	99	620	7.0	84	930	670	1.3
	11/2003*	7.71	1,363	13	ND	660	660	72	94	670	7.2	92	850	600	1.3
	5/2004*	7.47	1,190	10	ND	650	650	74	86	640	7.2	82	820	580	0.97
	12/2004*	7.65	1,561	5.0	ND	630	630	69	81	620	8.1	82	810	580	1.3
	5/2005*	7.22	1,500	50	ND	620	620	64	76	570	7.9	84	820	580	1.1
	12/2005*	8.59	1,354	90.81	ND	580	580	58	85	560	4.4	70	770	660	1.7
	5/2006*	7.82	1,308	170	ND	580	580	62	96	560	3.9	76	760	660	ND
	12/2006*	7.77	946	615.8	ND	540	540	59	52	600	3.5	85	670	300	1.2
	5/2007*	7.82	953	57.66	ND	490	490	63	85	550	3.6	56	650	730	10
	11/18/2007*	7.80	970	16	ND	510	510	41	120	510	4.6	80	610	520	4.9
6/10/2008	7.85	1,500	29.1	<0.10	530	530	64	68	540	10	74	750	560	9	
12/4/2008	7.33	1,510	48.2	<0.10	540	540	65	75	620	11	83	720	580	6.6	
6/12/2009	mnt	mnt	mnt	<0.10	580	580	56	70	510	12	56	760	570	<10	
11/10/2009	7.31	mnt	mnt	<0.10	590	590	64	81	610	10	76	780	600	2.5	
4/23/2010	7.43	mnt	mnt	<0.10	550	550	64	79	580	9.2	76	760	590	2.6	
10/27/2010	7.34	mnt	mnt	<0.10	560	560	65	87	640	8.5	71	810	600	6	
4/26/2011	7.33	mnt	mnt	<0.10	560	560	68	91	650	8.2	68	830	610	<5.0	
10/14/2011	7.23	mnt	mnt	0.25	570	570	81	110	780	1.2	80	940	620	<5.0	
5/3/2012	7.57	1,400	12.0	<0.20	580	580	82	100	744	9.4	78	890	580	<1.00	
Primary MCL	---	---	1,600	---	---	---	---	---	---	---	45,000	---	---	---	---
Secondary MCL	6.5 to 8.5	---	900	---	---	---	---	---	250,000	---	---	---	500	---	---

**Notes:**

- \* Data collected by Kwest Engineering, Inc.
- NTU = nephelometric turbidity units
- µmhos/cm = microSiemens per centimeter
- mg/L = milligrams per liter
- ND = below method reporting limit (as reported by Kwest)
- < = below method reporting limit
- na = not available (as reported by Kwest)
- MCL = Maximum Contaminant Level
- CaCO<sub>3</sub> = calcium carbonate
- mnt = measurement not taken
- = not established

## **APPENDIX A**

### Groundwater Monitoring Field Data









## **APPENDIX B**

Laboratory Analytical Reports





*alpha*

Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

ELAP Certificate Numbers 1551 and 2728

16 May 2012

Clark Pacific

Attn: Ryan Nakken

1980 South River Road

West Sacramento, CA 95691

RE: Former Spreckels Sugar Facility GW Wells x7

Work Order: 12E0247

Enclosed are the results of analyses for samples received by the laboratory on 05/03/12 20:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Sheri Speaks*

Sheri L. Speaks For Clint T. Ostenberg  
Project Manager



Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

**CHEMICAL EXAMINATION REPORT**

Page 1 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

<u>Order Number</u>	<u>Receipt Date/Time</u>	<u>Client Code</u>	<u>Client PO/Reference</u>
12E0247	05/03/2012 20:35	CV CLARKPACIFIC	

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW1	12E0247-01	Water	05/03/12 12:24	05/03/12 20:35
MW1A	12E0247-02	Water	05/03/12 12:37	05/03/12 20:35
MW9	12E0247-03	Water	05/03/12 13:04	05/03/12 20:35
MW9A	12E0247-04	Water	05/03/12 13:30	05/03/12 20:35
MW10	12E0247-05	Water	05/03/12 11:51	05/03/12 20:35
MW14	12E0247-06	Water	05/03/12 11:07	05/03/12 20:35
MW15	12E0247-07	Water	05/03/12 10:50	05/03/12 20:35

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

Bruce Gove  
Laboratory Director

5/16/2012



# Alpha

Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 2 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number                      Receipt Date/Time                      Client Code                      Client PO/Reference  
12E0247                      05/03/2012 20:35                      CV CLARKPACIFIC

### Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>MW1 (12E0247-01)</b>			<b>Sample Type: Water</b>		<b>Sampled: 05/03/12 12:24</b>			
<b>Metals by EPA 200 Series Methods</b>								
Calcium	EPA 200.7	AE20416	05/07/12 11:19	05/08/12 13:50	1	120 mg/l	1.0	
Magnesium	"	"	"	"	"	240 "	1.0	
Sodium	"	"	"	"	"	210 "	1.0	
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>								
Ammonia as N	SM4500NH3C	AE20742	05/07/12 09:51	05/07/12 16:00	1	ND mg/l	0.20	
Bicarbonate	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	1500 "	5.0	
Bicarbonate Alkalinity as CaCO3	"	"	"	"	"	1300 "	5.0	
Carbonate	"	"	"	"	"	ND "	5.0	
Hardness, Total	SM2340B	AE20416	05/07/12 11:19	05/08/12 13:50	"	1290 "	5	
Hydroxide	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	1.0	
pH	SM4500-H+ B	"	"	"	"	7.03 pH Units	1.00	T-14
Specific Conductance (EC)	SM2510B	"	"	"	"	2500 umhos/cm	20	
Total Dissolved Solids	SM2540C	AE20823	05/08/12 08:30	05/11/12 16:00	"	1500 mg/l	10	
Turbidity	SM2310B	AE20414	05/04/12 08:47	05/04/12 17:00	"	1.1 NTU	0.10	
Carbonate Alkalinity as CaCO3	SM2320B	"	"	"	"	ND mg/l	5.0	
Fixed Dissolved Solids	EPA 160.4	AE20824	05/10/12 15:00	05/11/12 15:00	"	1100 "	10	
Total Organic Carbon	SM5310C	AE20734	05/07/12 08:43	05/08/12 16:10	"	13.8 "	1.00	
Hydroxide Alkalinity as CaCO3	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	5.0	
Total Alkalinity as CaCO3	"	"	"	"	"	1300 "	5.0	
<b>Anions by EPA Method 300.0</b>								
Chloride	EPA 300.0	AE20417	05/04/12 11:51	05/05/12 03:33	50	180 mg/l	25	
Nitrate as N	"	"	"	05/05/12 03:48	2	0.91 "	0.40	
<b>MW1A (12E0247-02)</b>			<b>Sample Type: Water</b>		<b>Sampled: 05/03/12 12:37</b>			
<b>Metals by EPA 200 Series Methods</b>								
Calcium	EPA 200.7	AE20416	05/07/12 11:19	05/08/12 13:58	1	130 mg/l	1.0	
Magnesium	"	"	"	"	"	210 "	1.0	

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 3 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>MW1A (12E0247-02)</b>			<b>Sample Type: Water</b>			<b>Sampled: 05/03/12 12:37</b>		
<b>Metals by EPA 200 Series Methods (cont'd)</b>								
Sodium	EPA 200.7	"	"	05/08/12 13:58	"	210 "	1.0	
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>								
Ammonia as N	SM4500NH3C	AE20742	05/07/12 09:51	05/07/12 16:00	1	ND mg/l	0.20	
Bicarbonate	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	1400 "	5.0	
Bicarbonate Alkalinity as CaCO3	"	"	"	"	"	1200 "	5.0	
Carbonate	"	"	"	"	"	ND "	5.0	
Hardness, Total	SM2340B	AE20416	05/07/12 11:19	05/08/12 13:58	"	1200 "	5	
Hydroxide	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	1.0	
pH	SM4500-H+ B	"	"	"	"	7.23 pH Units	1.00	T-14
Specific Conductance (EC)	SM2510B	"	"	"	"	2400 umhos/cm	20	
Total Dissolved Solids	SM2540C	AE20823	05/08/12 08:30	05/11/12 16:00	"	1400 mg/l	10	
Turbidity	SM2310B	AE20414	05/04/12 08:47	05/04/12 17:00	"	2.3 NTU	0.10	
Carbonate Alkalinity as CaCO3	SM2320B	"	"	"	"	ND mg/l	5.0	
Fixed Dissolved Solids	EPA 160.4	AE20824	05/10/12 15:00	05/11/12 15:00	"	1000 "	10	
Total Organic Carbon	SM5310C	AE20734	05/07/12 08:43	05/08/12 16:27	"	7.46 "	1.00	
Hydroxide Alkalinity as CaCO3	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	5.0	
Total Alkalinity as CaCO3	"	"	"	"	"	1200 "	5.0	
<b>Anions by EPA Method 300.0</b>								
Chloride	EPA 300.0	AE20417	05/04/12 11:51	05/05/12 04:04	50	160 mg/l	25	
Nitrate as N	"	"	"	05/05/12 04:19	2	3.1 "	0.40	
<b>MW9 (12E0247-03)</b>			<b>Sample Type: Water</b>			<b>Sampled: 05/03/12 13:04</b>		
<b>Metals by EPA 200 Series Methods</b>								
Calcium	EPA 200.7	AE20416	05/07/12 11:19	05/08/12 14:06	1	110 mg/l	1.0	
Magnesium	"	"	"	"	"	250 "	1.0	
Sodium	"	"	"	"	"	170 "	1.0	

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 4 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Alpha Analytical Laboratories, Inc.

Table with columns: METHOD, BATCH, PREPARED, ANALYZED, DILUTION, RESULT, PQL, NOTE. Includes sections for MW9 (12E0247-03) and MW9A (12E0247-04) with various chemical parameters and their results.

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 5 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Alpha Analytical Laboratories, Inc.

Table with columns: METHOD, BATCH, PREPARED, ANALYZED, DILUTION, RESULT, PQL, NOTE. Includes sections for MW9A (12E0247-04) and MW10 (12E0247-05) with various chemical parameters and their results.

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

*Bruce Gove*

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 6 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Alpha Analytical Laboratories, Inc.

Table with columns: METHOD, BATCH, PREPARED, ANALYZED, DILUTION, RESULT, PQL, NOTE. Contains data for MW10 (12E0247-05) and MW14 (12E0247-06) including parameters like Ammonia, Bicarbonate, pH, and Chloride.

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

*Bruce L. Gove*

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 7 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>MW14 (12E0247-06)</b>							
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>							
Ammonia as N	SM4500NH3C	AE20742	05/08/12 09:51	05/08/12 16:00	1	ND mg/l	0.20
Bicarbonate	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	700 "	5.0
Bicarbonate Alkalinity as CaCO3	"	"	"	"	"	580 "	5.0
Carbonate	"	"	"	"	"	ND "	5.0
Hardness, Total	SM2340B	AE20416	05/07/12 11:19	05/08/12 14:21	"	687 "	5
Hydroxide	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	1.0
pH	SM4500-H+ B	"	"	"	"	7.66 pH Units	1.00 T-14
Specific Conductance (EC)	SM2510B	"	"	"	"	1400 umhos/cm	20
Total Dissolved Solids	SM2540C	AE20823	05/08/12 08:30	05/11/12 16:00	"	820 mg/l	10
Turbidity	SM2310B	AE20414	05/04/12 08:47	05/04/12 17:00	"	1.5 NTU	0.10
Carbonate Alkalinity as CaCO3	SM2320B	"	"	"	"	ND mg/l	5.0
Fixed Dissolved Solids	EPA 160.4	AE20824	05/10/12 15:00	05/11/12 15:00	"	570 "	10
Total Organic Carbon	SM5310C	AE20734	05/07/12 08:43	05/08/12 17:28	"	ND "	1.00
Hydroxide Alkalinity as CaCO3	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	5.0
Total Alkalinity as CaCO3	"	"	"	"	"	580 "	5.0
<b>Anions by EPA Method 300.0</b>							
Chloride	EPA 300.0	AE20417	05/04/12 11:51	05/05/12 06:34	25	86 mg/l	12
Nitrate as N	"	"	"	05/05/12 06:50	"	12 "	5.0
<b>MW15 (12E0247-07)</b>							
<b>Metals by EPA 200 Series Methods</b>							
Calcium	EPA 200.7	AE20416	05/07/12 11:19	05/08/12 14:40	1	82 mg/l	1.0
Magnesium	"	"	"	"	"	130 "	1.0
Sodium	"	"	"	"	"	78 "	1.0

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 8 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>MW15 (12E0247-07)</b>							
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>							
Ammonia as N	SM4500NH3C	AE20742	05/08/12 09:51	05/08/12 16:00	1	ND mg/l	0.20
Bicarbonate	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	710 "	5.0
Bicarbonate Alkalinity as CaCO3	"	"	"	"	"	580 "	5.0
Carbonate	"	"	"	"	"	ND "	5.0
Hardness, Total	SM2340B	AE20416	05/07/12 11:19	05/08/12 14:40	"	744 "	5
Hydroxide	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	1.0
pH	SM4500-H+ B	"	"	"	"	7.57 pH Units	1.00 T-14
Specific Conductance (EC)	SM2510B	"	"	"	"	1400 umhos/cm	20
Total Dissolved Solids	SM2540C	AE20823	05/08/12 08:30	05/11/12 16:00	"	890 mg/l	10
Turbidity	SM2310B	AE20414	05/04/12 08:47	05/04/12 17:00	"	12 NTU	0.10
Carbonate Alkalinity as CaCO3	SM2320B	"	"	"	"	ND mg/l	5.0
Fixed Dissolved Solids	EPA 160.4	AE20824	05/10/12 15:00	05/11/12 15:00	"	580 "	10
Total Organic Carbon	SM5310C	AE20734	05/07/12 08:43	05/08/12 17:41	"	ND "	1.00
Hydroxide Alkalinity as CaCO3	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	5.0
Total Alkalinity as CaCO3	"	"	"	"	"	580 "	5.0
<b>Anions by EPA Method 300.0</b>							
Chloride	EPA 300.0	AE20417	05/04/12 11:51	05/05/12 07:05	25	100 mg/l	12
Nitrate as N	"	"	"	05/05/12 07:20	1	9.4 "	0.20

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 9 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number: 12E0247      Receipt Date/Time: 05/03/2012 20:35      Client Code: CV CLARKPACIFIC      Client PO/Reference:

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AE20416 - Metals Digest</b>										
<b>Blank (AE20416-BLK1)</b>				Prepared: 05/04/12 Analyzed: 05/08/12						
Calcium	ND	1.0	mg/l							
Magnesium	ND	1.0	"							
Sodium	ND	1.0	"							
<b>LCS (AE20416-BS1)</b>				Prepared: 05/04/12 Analyzed: 05/08/12						
Calcium	8.19	1.0	mg/l	8.00		102	85-115			
Magnesium	8.51	1.0	"	8.00		106	85-115			
Sodium	7.99	1.0	"	8.00		99.9	85-115			
<b>Duplicate (AE20416-DUP1)</b>				Source: 12E0167-02 Prepared: 05/04/12 Analyzed: 05/08/12						
Calcium	23.9	1.0	mg/l		24.8			3.57	20	
Magnesium	14.8	1.0	"		15.0			1.14	20	
Sodium	76.8	1.0	"		77.3			0.610	20	
<b>Matrix Spike (AE20416-MS1)</b>				Source: 12E0167-02 Prepared: 05/04/12 Analyzed: 05/08/12						
Calcium	35.4	1.0	mg/l	8.00	24.8	133	70-130			QM-01
Magnesium	24.5	1.0	"	8.00	15.0	119	70-130			
Sodium	90.4	1.0	"	8.00	77.3	163	70-130			QM-4X
<b>Matrix Spike (AE20416-MS2)</b>				Source: 12E0247-04 Prepared: 05/07/12 Analyzed: 05/08/12						
Calcium	52.2	1.0	mg/l	8.00	42.0	128	70-130			
Magnesium	165	1.0	"	8.00	152	157	70-130			QM-4X
Sodium	107	1.0	"	8.00	98.1	108	70-130			
<b>Matrix Spike Dup (AE20416-MSD1)</b>				Source: 12E0167-02 Prepared: 05/04/12 Analyzed: 05/08/12						
Calcium	36.8	1.0	mg/l	8.00	24.8	151	70-130	3.98	20	QM-01
Magnesium	24.8	1.0	"	8.00	15.0	122	70-130	1.03	20	

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

**CHEMICAL EXAMINATION REPORT**

Page 10 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number                      Receipt Date/Time                      Client Code                      Client PO/Reference  
12E0247                              05/03/2012 20:35                      CV CLARKPACIFIC

**Metals by EPA 200 Series Methods - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AE20416 - Metals Digest</b>										
<b>Matrix Spike Dup (AE20416-MSD1)</b>										
Source: 12E0167-02                      Prepared: 05/04/12 Analyzed: 05/08/12										
Sodium	94.1	1.0	"	8.00	77.3	210	70-130	4.05	20	QM-4X

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

Bruce Gove  
Laboratory Director

5/16/2012



# Alpha

Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

## CHEMICAL EXAMINATION REPORT

Page 11 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number                      Receipt Date/Time                      Client Code                      Client PO/Reference  
12E0247                                  05/03/2012 20:35                      CV CLARKPACIFIC

### Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AE20414 - General Preparation</b>										
<b>Duplicate (AE20414-DUP1)</b>		<b>Source: 12E0247-06</b>			<b>Prepared &amp; Analyzed: 05/04/12</b>					
Turbidity	1.25	0.10	NTU		1.48			16.8	30	
Hydroxide	ND	1.0	mg/l		ND				5	
Specific Conductance (EC)	1340	20	umhos/cm		1360			1.19	10	
pH	7.90	1.00	pH Units		7.66			3.08	20	
Carbonate	ND	5.0	mg/l		ND				200	
Bicarbonate	683	5.0	"		702			2.64	20	
Bicarbonate Alkalinity as CaCO3	560	5.0	"		575			2.64	20	
Carbonate Alkalinity as CaCO3	ND	5.0	"		ND				20	
Hydroxide Alkalinity as CaCO3	ND	5.0	"		ND				20	
Total Alkalinity as CaCO3	560	5.0	"		575			2.64	20	

### Batch AE20416 - Metals Digest

<b>Duplicate (AE20416-DUP1)</b>		<b>Source: 12E0167-02</b>			<b>Prepared: 05/04/12 Analyzed: 05/08/12</b>					
Hardness, Total	121	5	mg/l		124			2.35	20	

### Batch AE20734 - General Prep

<b>Blank (AE20734-BLK1)</b>					<b>Prepared: 05/07/12 Analyzed: 05/08/12</b>					
Total Organic Carbon	ND	1.00	mg/l							
<b>LCS (AE20734-BS1)</b>					<b>Prepared: 05/07/12 Analyzed: 05/08/12</b>					
Total Organic Carbon	10.3	1.00	mg/l		10.0		103	85-115		
<b>LCS Dup (AE20734-BSD1)</b>					<b>Prepared: 05/07/12 Analyzed: 05/08/12</b>					
Total Organic Carbon	10.2	1.00	mg/l		10.0		102	85-115	1.41	20

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 12 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AE20734 - General Prep</b>										
<b>Duplicate (AE20734-DUP1)</b>										
Total Organic Carbon	4.12	1.00	mg/l		4.15			0.726	20	
<b>Matrix Spike (AE20734-MS1)</b>										
Total Organic Carbon	24.1	2.00	mg/l	20.0	4.50	98.1	70-130			
<b>Matrix Spike Dup (AE20734-MSD1)</b>										
Total Organic Carbon	24.2	2.00	mg/l	20.0	4.50	98.4	70-130	0.273	20	
<b>Batch AE20742 - General Preparation</b>										
<b>Blank (AE20742-BLK1)</b>										
Ammonia as N	ND	0.20	mg/l							
<b>LCS (AE20742-BS1)</b>										
Ammonia as N	3.92	0.20	mg/l	4.00		98.0	90-110			
<b>LCS Dup (AE20742-BSD1)</b>										
Ammonia as N	3.99	0.20	mg/l	4.00		99.8	90-110	1.77	10	
<b>Matrix Spike (AE20742-MS1)</b>										
Ammonia as N	4.03	0.20	mg/l	4.00	ND	101	70-130			
<b>Batch AE20823 - General Preparation</b>										
<b>Blank (AE20823-BLK1)</b>										
Total Dissolved Solids	ND	10	mg/l							

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 13 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number 12E0247      Receipt Date/Time 05/03/2012 20:35      Client Code CV CLARKPACIFIC      Client PO/Reference

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AE20823 - General Preparation</b>										
<b>Duplicate (AE20823-DUP1)</b> <b>Source: 12E0247-02</b> Prepared: 05/08/12 Analyzed: 05/11/12										
Total Dissolved Solids	1460	10	mg/l		1440			1.38	30	
<b>Batch AE20824 - General Preparation</b>										
<b>Blank (AE20824-BLK1)</b> Prepared: 05/10/12 Analyzed: 05/11/12										
Fixed Dissolved Solids	ND	10	mg/l							
<b>Duplicate (AE20824-DUP1)</b> <b>Source: 12E0247-02</b> Prepared: 05/10/12 Analyzed: 05/11/12										
Fixed Dissolved Solids	1030	10	mg/l		1020			0.781	30	

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Page 14 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

Order Number: 12E0247      Receipt Date/Time: 05/03/2012 20:35      Client Code: CV CLARKPACIFIC      Client PO/Reference:

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AE20417 - General Preparation</b>										
<b>Blank (AE20417-BLK1)</b>				Prepared & Analyzed: 05/04/12						
Nitrate as N	ND	0.20	mg/l							
Chloride	ND	0.50	"							
<b>LCS (AE20417-BS1)</b>				Prepared & Analyzed: 05/04/12						
Chloride	11.0	0.50	mg/l	11.1		99.4	90-110			
Nitrate as N	5.51	0.20	"	5.56		99.2	90-110			
<b>Duplicate (AE20417-DUP1)</b>				Source: 12E0154-01      Prepared: 05/04/12      Analyzed: 05/05/12						
Chloride	10.4	0.50	mg/l		10.5			0.535	20	
Nitrate as N	0.299	0.20	"		0.301			0.451	20	
<b>Matrix Spike (AE20417-MS1)</b>				Source: 12E0154-01      Prepared: 05/04/12      Analyzed: 05/05/12						
Chloride	21.2	2.5	mg/l	11.1	10.5	96.3	80-120			
Nitrate as N	5.63	1.0	"	5.56	ND	96.0	80-120			
<b>Matrix Spike (AE20417-MS2)</b>				Source: 12E0247-06      Prepared: 05/04/12      Analyzed: 05/05/12						
Chloride	98.0	12	mg/l	11.1	86.0	108	80-120			
Nitrate as N	16.8	5.0	"	5.56	11.5	95.4	80-120			
<b>Matrix Spike Dup (AE20417-MSD1)</b>				Source: 12E0154-01      Prepared: 05/04/12      Analyzed: 05/05/12						
Chloride	21.0	2.5	mg/l	11.1	10.5	94.2	80-120	1.08	20	
Nitrate as N	5.58	1.0	"	5.56	ND	95.0	80-120	0.984	20	

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267  
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

**CHEMICAL EXAMINATION REPORT**

Page 15 of 15

Clark Pacific  
1980 South River Road  
West Sacramento, CA 95691  
Attn: Ryan Nakken

Report Date: 05/16/12 10:05  
Project No: Former Spreckels Sugar Facility GW Wells  
Project ID: Former Spreckels Sugar Facility GW Wells

<u>Order Number</u>	<u>Receipt Date/Time</u>	<u>Client Code</u>	<u>Client PO/Reference</u>
12E0247	05/03/2012 20:35	CV CLARKPACIFIC	

**Notes and Definitions**

- QM-01 The spike recovery for this QC sample is outside of established control limits possibly due to a sample matrix interference.
- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- T-14 Residual chlorine, dissolved oxygen, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time. Sample was received and analyzed outside of this "window."
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- PQL Practical Quantitation Limit

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

Bruce Gove  
Laboratory Director

5/16/2012



Alpha Analytical Laboratories Inc.  
e-mail: clientservices@alphalabs.com

Laboratory & Corporate: 208 Mason Street, Ukiah, CA 95492  
707-468-0401 Fax: 707-468-5287  
Service Center & Micro Lab: 6398 Dougherty Rd, Ste 35, Dublin, CA 94568  
925-928-5226 Fax: 925-928-4309

# Chain of Custody Record

Reports and Invoices will be delivered by email in .pdf format.

Lab No. 12E0247 Page      of     

Report to: Company: Clark Pacific  
Address: Ryan Nakken  
1980 South River Road  
West Sacramento CA 95961  
Phone/Fax: 916.275.3752  
Email Address: makken@clarkpacfic.com

Invoice to (if different): Company:   
Project ID: Former Spreckels Sugar Facility GW Wells x7

Signature below authorizes work under terms stated on reverse side.

Analyses Requested

TAT: 10 days (selected), 5 days, 48 hours, Other: 3 days  
RUSH:  10 days,  5 days,  48 hours,  Other: 3 days

Sample Notes (lab use only): Temperature: 31 deg. C  
Shipment Method:   
Custody Seals: Y / N

PO/Reference:

Container: 40ml VOA ←, Polycarbonate, Amber, Soil jar, 1L POLY, HCL, HNO3, H2SO4, H3PO4, None, Water, Soil, Other

Preservative: Matrix:

Total Number of Containers

Sample Notes or CDPH Source Numbers:

Sample Identification	Sampled: Date	Time	Container	Preservative	Matrix	Alkalinity, Total	Bicarbonate / Carbonate / Hydroxide	Chloride / Nitrate as N	Conductivity	pH	TDS and FDS	Turbidity	Hardness, Total / Na Total 200.7	Ammonia as N	TOC
MW1	5/9/12	1227	40ml VOA		X	X	X	X	X	X	X	X	X	X	X
MW1A	1237	21			X	X	X	X	X	X	X	X	X	X	X
MW9	1304	21			X	X	X	X	X	X	X	X	X	X	X
MW9A	1330	21			X	X	X	X	X	X	X	X	X	X	X
MW10	1151	21			X	X	X	X	X	X	X	X	X	X	X
MW14	1107	21			X	X	X	X	X	X	X	X	X	X	X
MW15	1050	21			X	X	X	X	X	X	X	X	X	X	X

Relinquished by: [Signature]

Received by: [Signature]

Date: 5/3-12 Time: 20:35

CDPH Write On EDT Transmission?  Yes  No

State System Number: 53-12-17120  
If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report?  Yes  No

Global ID: 53-12-20135  
EDF to (Email Address): LAB R. WATZ  
Travel and Site Time: 5/3-12 20:35  
Sampling Company Log Code: 53-12-20135  
Package:       
Field Supplies:

## **APPENDIX C**

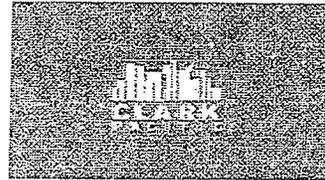
Precipitate Calcium Carbonate (PCC)

Weekly Observation Reports



Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California  
 Site Conditions/Weather:  
 Date: *cloudy*

Page 180 of     

Date: 1-4-12

Day: M T  Th F S S

Staff: Ryan

<input checked="" type="radio"/>	NO	An operable water truck on site
<input type="radio"/>	<del>NO</del>	Access road sprayed
<input checked="" type="radio"/>	NO	Truck staging area located near PCC loading area
<input type="radio"/>	<del>NO</del>	Staging and loading area sprayed with water to minimize dust
<input checked="" type="radio"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="radio"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="radio"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input type="radio"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <input checked="" type="radio"/> <del>NO</del>
<input checked="" type="radio"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="radio"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="radio"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="radio"/>	<del>NO</del>	Trucks observed on designated route
<input type="radio"/>	<del>NO</del>	Trucks observed on alternate route
<input type="radio"/>	<del>NO</del>	Copy of ORP located in truck

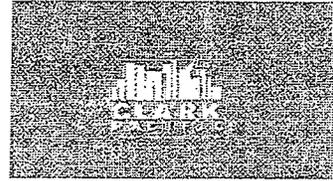
Notes:

- Observed
- Not Observed

*site is wet. No loadings*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
PCC Operations and Removal Plan



Weekly Field Report  
Location: 40600 County Road 18C, Woodland, California  
Site Conditions/Weather:  
Date: Sunny, warm

Page 161 of \_\_\_\_\_  
Date: 1-12-12  
Day: M T W ~~Th~~ F S S  
Staff: Ryan

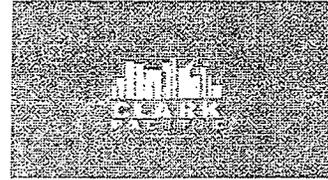
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle inplace on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible V <u>NV</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	NO	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

- Observed
- NO Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather:

Date: Rain

Page 180 of \_\_\_\_\_

Date: 1-20-12

Day: M T W Th ~~S~~ S

Staff: Ryan

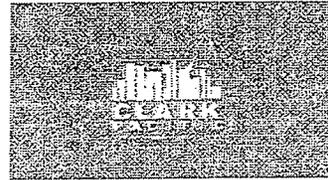
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input type="checkbox"/>	<del>NO</del>	Access road sprayed
<input type="checkbox"/>	<del>NO</del>	Truck staging area located near PCC loading area
<input type="checkbox"/>	<del>NO</del>	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input type="checkbox"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <u>NV</u>
<input type="checkbox"/>	<del>NO</del>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input type="checkbox"/>	<del>NO</del>	Copy of ORP located in truck

Notes:

- Observed
- NO Not Observed

*Heavy rain, All runoff is contained.*

Former Spreckels Sugar Facility



WDR Order No. R5-2003-0047  
 PCC Operationas and Removal Plan

Page 1/23 of       

Date: 1-23-02

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Day:  T  W  Th  F  S  S

Site Conditions/Weather:

Staff: Ryan

Date: Rain

<input checked="" type="radio"/>	<del>NO</del>	An operable water truck on site
<input checked="" type="radio"/>	<del>NO</del>	Access road sprayed
<input checked="" type="radio"/>	<del>NO</del>	Truck staging area located near PCC loading area
<input type="radio"/>	<del>NO</del>	Staging and loading area sprayed with water to minimize dust
<input type="radio"/>	<del>NO</del>	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="radio"/>	<del>NO</del>	Stabilized entry consisting of a 4 inch+/- crushed rock
<input type="radio"/>	<del>NO</del>	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input type="radio"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <del>V</del> <u>NV</u>
<input type="radio"/>	<del>NO</del>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="radio"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="radio"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="radio"/>	<del>NO</del>	Trucks observed on designated route
<input type="radio"/>	<del>NO</del>	Trucks observed on alternate route
<input type="radio"/>	<del>NO</del>	Copy of ORP located in truck

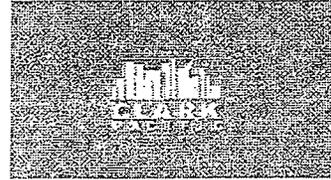
Notes:

- Observed
- Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operations and Removal Plan



Page 18 of 4

Date: 1-31-12

Day: M W Th F S S

Staff: Ryan

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather:

Date: cloudy

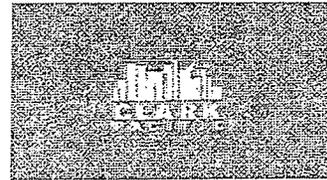
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Roadway sprayed with water if tracking is visible <u>NO</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trucks observed on designated route
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trucks observed on alternate route
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of ORP located in truck

Notes:

- Observed
- Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Page 185 of \_\_\_\_\_

Date: 2-7-12

Day: M O W Th F S S

Staff: Ryan

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather:

Date: Rain

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input type="checkbox"/>	<del>NO</del>	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input type="checkbox"/>	<del>NO</del>	Staging and loading area sprayed with water to minimize dust
<input type="checkbox"/>	<del>NO</del>	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input type="checkbox"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <u>Y</u>
<input type="checkbox"/>	<del>NO</del>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input type="checkbox"/>	<del>NO</del>	Copy of ORP located in truck

Notes:

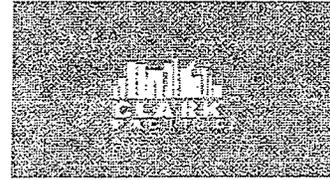
- O Observed
- NO Not Observed

*No runoff*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather:

Date: *Sunny warm*

Page 180 of \_\_\_\_\_

Date: 2-17-12

Day: M T W Th Ⓟ S S

Staff: Ryan

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> <del>fair</del> good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible <u>✓</u> NV
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input checked="" type="checkbox"/>	NO	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

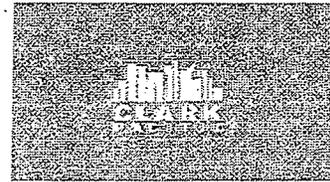
Notes:

- Observed
- NO Not Observed

*loading, no dust. some track out. cleaned up*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather:

Date: Sunny Warm

Page 187 of \_\_\_\_\_

Date: 2-22-12

Day: M T W Th F S S

Staff: Ryan

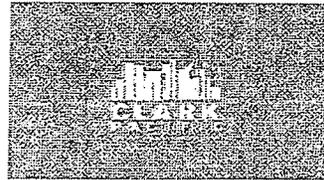
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input type="checkbox"/>	<del>NO</del>	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles poor      fair      good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible V    NV
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input type="checkbox"/>	<del>NO</del>	Copy of ORP located in truck

Notes:

- O    Observed
- NO   Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Page 184 of \_\_\_\_\_

Date: 2-29-12

Day: M T W Th F S S

Staff: Rya

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather:

Date: Rain

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	An operable water truck on site
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Access road sprayed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Truck staging area located near PCC loading area
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Roadway sprayed with water if tracking is visible <u>NV</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trucks observed on designated route
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trucks observed on alternate route
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of ORP located in truck

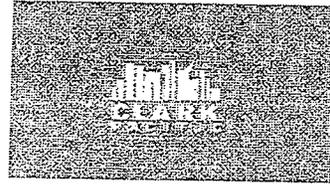
Notes:

- Observed
- Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: *cloudy, cool*

Date:

Page 149 of       

Date: 3-6-17

Day: M ~~P~~W Th F S S

Staff: Ryan

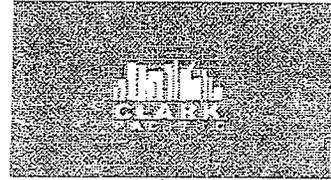
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch +/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <i>poor</i> fair good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible V NV
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input checked="" type="checkbox"/>	NO	Trucks observed on designated route
<input type="checkbox"/>	NO	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

- Observed
- NO Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: *Shower*

Date:

Page 690 of         

Date: 3-15-12

Day: M T W ~~Th~~ F S S

Staff: Ryan

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input type="checkbox"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <del>V</del> NV
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

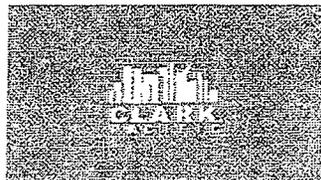
Notes:

- Observed
- Not Observed

*Equipment on site to relocate pile from Property Boundary to load out area. No dust observed.*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operationas and Removal Plan



Page 191 of \_\_\_\_\_

Date: 3-19-12

Day:  T  W  Th  F  S  S

Staff: Ryan

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: Cloudy, cool

Date:

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible <u>NV</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input checked="" type="checkbox"/>	NO	Trucks observed on designated route
<input type="checkbox"/>	NO	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

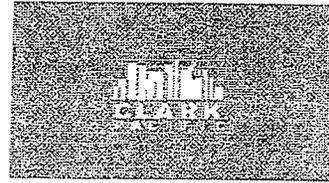
- Observed
- NO Not Observed

Pile relocation on going. No dust. 2 water trucks on site. line is wet from rains. Pile needs to be moved so that it can be loaded into trucks during summer months

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: *Cloudy, 11-18 mph*

Date:

Page 192 of \_\_\_\_\_

Date: 3-30-12

Day: M T W Th  S S

Staff: Ryan

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch +/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible V NV
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

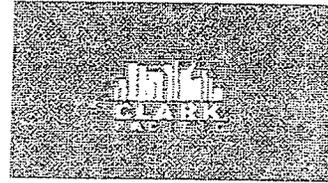
Notes:

- Observed
- NO Not Observed

*Relocation on going. Piles in southern portion of pile*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California  
 Site Conditions/Weather: *Sunny warm*  
 Date:

Page 193 of     

Date: 4-2-12

Day: M T W Th F S S

Staff: Ryan

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible <u>(NY)</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

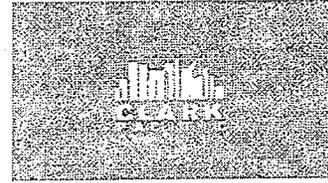
- Observed
- NO Not Observed

*Relocation on going. Working North portion of pile  
 line is wet from rain*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operations and Removal Plan



Page 194 of       

Date: 4-13-12

Day: M T W Th F S S

Staff: Ryan

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: Rain

Date:

<input type="checkbox"/>	<input checked="" type="checkbox"/>	An operable water truck on site
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Access road sprayed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	<input type="checkbox"/>	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Roadway sprayed with water if tracking is visible v <u>NV</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trucks observed on designated route
<input type="checkbox"/>	<input type="checkbox"/>	Trucks observed on alternate route
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of ORP located in truck

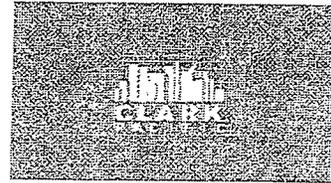
Notes:

- Observed
- Not Observed

*Relocation Complete*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Page 105 of     

Date: 4-18-12

Day: M T  Th F S S

Staff: Ryan

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: Sunny warm

Date:

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible <u>NO</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	NO	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input checked="" type="checkbox"/>	NO	Trucks observed on designated route
<input checked="" type="checkbox"/>	NO	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

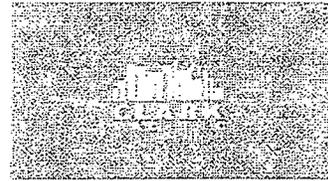
- O Observed
- NO Not Observed

*Load out. No dust.*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: *Cloudy*

Date:

Page 196 of \_\_\_\_\_

Date: 4-26-12

Day: M T W TR F S S

Staff: \_\_\_\_\_

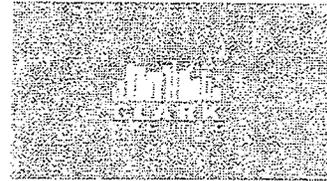
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input type="checkbox"/>	<del>NO</del>	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input type="checkbox"/>	<del>NO</del>	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input type="checkbox"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <del>V</del> <i>NV</i>
<input type="checkbox"/>	<del>NO</del>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

- Observed
- NO Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Page 147 of       

Date: 5-3-12

Day: M T W (T) F S S

Staff: Ryan

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: Rain & hazy

Date:

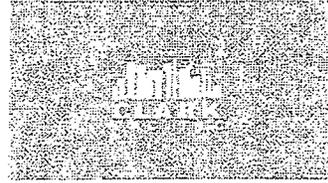
<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input type="checkbox"/>	<del>NO</del>	Access road sprayed
<input type="checkbox"/>	<del>NO</del>	Truck staging area located near PCC loading area
<input type="checkbox"/>	<del>NO</del>	Staging and loading area sprayed with water to minimize dust
<input type="checkbox"/>	<del>NO</del>	Loading/excavating taking place from the inside of the piles outward
<input type="checkbox"/>	<del>NO</del>	Stabilized entry consisting of a 4 inch +/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles poor <u>fair</u> good
<input type="checkbox"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <u>NO</u>
<input type="checkbox"/>	<del>NO</del>	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input type="checkbox"/>	<del>NO</del>	Copy of ORP located in truck

Notes:

- Observed
- Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Page 198 of       

Date: 5-8-12

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: Sunny, hot

Day: M ⊕ W Th F S S

Staff: Ryan

Date:

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input type="checkbox"/>	<del>NO</del>	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <del>poor</del> fair good
<input type="checkbox"/>	<del>NO</del>	Roadway sprayed with water if tracking is visible <u>NO</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<del>NO</del>	Observed operation prior to 6:30 AM
<input type="checkbox"/>	<del>NO</del>	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input type="checkbox"/>	<del>NO</del>	Trucks observed on designated route
<input type="checkbox"/>	<del>NO</del>	Trucks observed on alternate route
<input type="checkbox"/>	<del>NO</del>	Copy of ORP located in truck

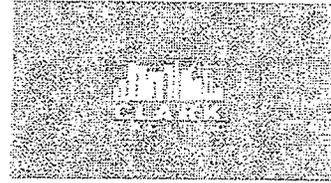
Notes:

- Observed
- NO Not Observed

*No activity*

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047  
 PCC Operations and Removal Plan



Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: *Sunny, warm*

Date:

Page 199 of     

Date: 5-18-12

Day: M T W ~~TH~~ F S S

Staff: Ryan

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input checked="" type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to minimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle in place on each side of the entry
		Condition of wattles <u>poor</u> fair      good
<input checked="" type="checkbox"/>	NO	Roadway sprayed with water if tracking is visible <u>Y</u> <u>NV</u>
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input checked="" type="checkbox"/>	NO	Observed operation prior to 6:30 AM
<input checked="" type="checkbox"/>	NO	Observed operation after 5:00 PM
		Trucking route to and from the property shall be 100B to county Road 18C to Highway 113
<input checked="" type="checkbox"/>	NO	Trucks observed on designated route
<input checked="" type="checkbox"/>	NO	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

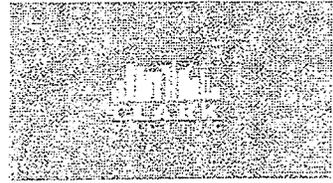
Notes:

- Observed
- Not Observed

Former Spreckels Sugar Facility

WDR Order No. R5-2003-0047

PCC Operationas and Removal Plan



Page 200 of 200

Date: 5-25-12

Day: M T W Th ES S

Staff: Rym

Weekly Field Report

Location: 40600 County Road 18C, Woodland, California

Site Conditions/Weather: Rain

Date:

<input checked="" type="checkbox"/>	NO	An operable water truck on site
<input type="checkbox"/>	NO	Access road sprayed
<input checked="" type="checkbox"/>	NO	Truck staging area located near PCC loading area
<input checked="" type="checkbox"/>	NO	Staging and loading area sprayed with water to mimimize dust
<input checked="" type="checkbox"/>	NO	Loading/excavating taking place from the inside of the piles outward
<input checked="" type="checkbox"/>	NO	Stabilized entry consisting of a 4 inch+/- crushed rock
<input checked="" type="checkbox"/>	NO	BMPs consisting of straw wattle inplace on each side of the entry
		Condition of wattles <input checked="" type="checkbox"/> fair <input type="checkbox"/> good
<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Roadway sprayed with water if tracking is visible <input checked="" type="checkbox"/> NV
<input checked="" type="checkbox"/>	NO	Water truck supplied by the well fed fire hydtrant located inside the fence line, north of the truck scales
		Hours of operation are from 6:30 AM to 5:00 PM
<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Obsreved operation prior to 6:30 AM
<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Obsreved operation after 5:00 PM
		Trucking route to and rom the property shall be 100B to county Road 18C to Highway 113
<input checked="" type="checkbox"/>	NO	Trucks observed on designated route
<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Trucks observed on alternate route
<input checked="" type="checkbox"/>	NO	Copy of ORP located in truck

Notes:

- Observed
- NO Not Observed

Some loading. Minor track out found. Notified Daryl and he took care of it.

**Monthly Monitoring & Progress Report**  
 Former Spreckels Sugar Facility  
 PCC Removal Operations  
 WDR Order No. R5-2003-0047

Year: 2012  
 Month: June

PCC Removed (tons): 2661  
 Total Year to Date (tons): 15,967

Weekly Site Inspections

	Week 1	Week 2	Week 3	Week 4	Week 5
Date	6/1/12	6/6/12	6/14/12	6/19/12	6/25/12
Weather	Sunny, hot 5 mph S wind	Sunny, warm NW wind 15 mph	Sunny, hot S wind 7 mph	Sunny, warm NW wind 5 mph	Sunny, cool Calm wind
Describe On Site Operations and Location	No activity	Equipment on site to clean area A. ①	(2) scrapers, (3) water truck, (2) loaders, (2) dozers ③	continuing with cleanup of area A. Loading some trucks	Cleanup of area A ongoing
Have BMPs Been Implemented?	Yes	Yes	Yes	Yes	Yes
Are BMPs Effective?	Yes	Yes	Yes	Yes	Yes
Are BMP Revisions Required?	No	No	No	No	No
Describe New BMPs	-	-	-	-	-
Any Visible Emissions?	No	No	No	No	No
Any Trackout on County Roads?	No	No	No	Yes, Fixed	No
Has any Run Off Occurred?	No	No ②	No	No	No
Describe Run Off Characteristics	-	-	-	-	-

Notes: ① Cleanup of Area A will begin once wind is calm.

② It rained on 6/14. There was no run off

③ Equipment remaining remaining in area A