



CITY OF EL PASO DE ROBLES

"The Pass of the Oaks"

January 30, 2015

Mrs. Katie DiSimone
California Regional Water Quality Control Board, Central Coast Region
895 Aerovista Place, Suite 100
San Luis Obispo, CA 93401

Dear Mrs. DiSimone:

Re: 2014 Annual Operations Report

Enclosed please find the 2014 Annual Operations report for the City of Paso Robles. The Annual Report provides data and laboratory analysis as required by our Waste Discharge Requirements Order No. R3-2011-0002 and NPDES Permit No. CA0047953.

With the Wastewater Treatment Plant Upgrade Project 20 months into construction, we will be starting up the with new Biological Nutrient Removal (BNR) treatment process in late February 2015. Staff moved into the new Operations/Administration building the middle of October 2014. The City hired a full time Laboratory Technician in September of 2014. He has been busy working to set up lab in preparation for Environmental Laboratory Accreditation Program certification. The Santa Clara / San Jose Regional Wastewater Treatment Facility has graciously allowed us to obtain seed sludge from their facility for our system start-up. Most of the equipment is installed. The electrical contractor and programming contractor are busy testing for SCADA control of new facility. Once online with the new process, the contractor will then demolish the rest of the old treatment process and construct a third secondary clarifier, and then complete drainage and site work. The upgrade project will be complete in October 2015.

Treatment Plant Operations staff accomplished numerous tasks besides keeping the old plant running. Staff in conjunction with the contractor carried out a total of 18 system outages to replace or tie in new equipment or lines throughout the year. All of these outages were carried out without any significant issues or problems. During the second half of the year, staff struggled with process trying to meet the discharge limits in our permit. Most of the issues are due to increased influent strength to due to necessary water conservation. Influent flows have decrease from 3.1 MGD in 2007 to currently 2.5 MGD. Other issues include increased influent loading, construction dust and dirt due to no rain, and trying to function on half of existing plant in combination with the higher influent loadings. We look forward to resuming compliance with our existing permit and new permit at a level better than ever before here at the Wastewater Treatment Plant.

With the continuing drought intensifying water issues within our region and the entire state, the City has moved forward with preliminary design of tertiary treatment facilities, so that the City is prepared to supply recycled water in the future. Black & Veatch is doing the preliminary design. The additional facilities will likely include flow equalization storage, cloth media filters, ultraviolet light disinfection, day storage, and a recycled water pump station.

Industrial Waste and Stormwater staff worked with several industrial dischargers to improve their pretreatment systems. Staff continued working with food service establishments to reduce grease discharges to our system. In September, the City hired a full-time Stormwater Manager, David LaCaro, to implement the City's stormwater program. This will allow the Industrial Waste Manager to focus her efforts on industrial waste control.

The Collections Department and/or Capital Projects Engineer completed several good projects, including:

- Repair or replacement of numerous manhole covers and collars.
- Replaced front head on Pump #1 at Lift Station #1.
- Replaced sewer mains crossing Spring St. at 17th and 23rd Streets.

For 2014, the City had two reportable sanitary sewer overflows from its collection system.

The Collections Department was back at full staff in February 2014. This allowed us to get back on schedule to satisfy all requirements of the Sewer System Management Plan. The City updated its Sewer System Management Plan in December 2014.

All staff attended weekly safety meetings, City-sponsored safety training, Certification review classes, and numerous training classes for contact hours to maintain State issued certifications. Mandatory and non-mandatory educational hours per staff member for 2014 totaled 28 hours each.

Our contract Lab for 2014 is FGL (Fruit Growers Laboratories) in Ventura.

We look forward to continued progress in 2015.

Please feel free to call me if you have any questions, concerns or comments at 805-237-3865.

Regards,



Chris Slater
Wastewater Division Supervisor
City of Paso Robles

cc: Christine Halley, Interim Public Works Director, City of Paso Robles
Matt Thompson, Wastewater Resources Manager
Patti Gwathmey, Industrial Waste Manage

Wastewater Division 2014 Annual Report



City of El Paso de Robles
Wastewater Treatment Plant
3200 Sulphur Springs Road
Paso Robles, California 93446

Wastewater Division 2014 Annual Report



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City of El Paso de Robles
Wastewater Division
2014 Annual Report

Table of Contents

SECTION I: DESCRIPTION OF PROCESS	2
SECTION II: WASTEWATER DIVISION STAFFING	6
SECTION III: PRETREATMENT PROGRAM	8
SECTION IV: ANNUAL TREATMENT SUMMARY	10
SECTION V: BIOSOLIDS – SLUDGE TABLES.....	14
SECTION VI: 2014 WASTEWATER TREATMENT PLANT NON COMPLIANCE	78
SECTION VII: LABORATORY INFORMATION.....	79
SECTION VIII: TABULAR & GRAPHICAL INFORMATION.....	88
SECTION IX: APPENDICES.....	104

SECTION I: DESCRIPTION OF PROCESS

Purpose of Treatment Facilities

The purpose of the Paso Robles Wastewater Treatment Plant is to treat municipal sewage to such a degree that its disposal will not endanger public health nor degrade water quality. The degree of treatment has been set by discharge requirements established by the Central Coast Regional Water Quality Control Board (RWQCB). The plant operates under WDR Order No. R3-2011-0002(Effective 6/2011) and NPDES Permit No. CA00047953.

The treatment and disposal facilities are located at 3200 Sulphur Springs Road, Paso Robles, San Luis Obispo County, California.

The wastewater flow entering the collection system and treatment facilities is predominately domestic in origin, although there is some industrial/commercial base which increases the loading on the wastewater treatment plant. Table 1 describes the flow and plant loading.

Table 1: Design Parameters for Flow and Plant Loadings

WASTEWATER CHARACTERISTICS	
FLOW	
Design Average Day Maximum Month Flow, MGD	4.9 MGD
Hydraulic Capacity, MGD	8.0 MGD
PLANT LOADING	
BOD ₅ mg/l (Influent)	270 mg/l
Total Suspended Solids (TSS), mg/l (Influent)	220 mg/l
BOD ₅ loading, lbs./day	11,259 lbs/day
TSS Loading, lbs/day	9,174 lbs/day

Treatment Facilities Summary

A brief description of each unit process in the treatment plant is given below in the generalized order in which wastewater flows through the plant. Table 2 contains the design criteria for the treatment process.

Preliminary treatment consists of screening and grit removal. At the headworks, the influent wastewater is split into two channels, each providing for the screening of large objects. After screening, the sewage flows into two grit chambers to continuously remove inorganic grit and sand particles. This grit is removed and collected for disposal. The wastewater flows from the grit chamber into primary treatment.

Primary treatment consists of primary sedimentation and primary sludge pumping facilities. Wastewater flows from the primary distribution compartment by gravity to primary sedimentation basins. Basins are equipped with rotating sludge scrapers, baffles and skimmers to remove settled solids and floating scum. The collected sludge and scum is pumped to the digesters by the primary sludge pumps. Effluent from the basins collects at a junction box and flows to the primary recirculation structure in the wetwell for the primary trickling filter pumps.

Biological (secondary) treatment is provided by two cross flow plastic media primary trickling filters. Secondary trickling filter effluent flows to the secondary sedimentation basins. There are three secondary sedimentation basins. Secondary sludge is collected and pumped either directly to the digesters or to the primary distribution compartment for removal in the primary clarifiers. The secondary clarifiers do not have scum removal.

Effluent from the secondary sedimentation basins flow into the chlorine contact basin. Chlorine is added at the head of the basin and the flow of treated effluent is metered at a Parshall flume, using an ultrasonic device. Sodium Bisulfite is continuously injected at the end of the chlorine contact chamber to dechlorinate the water. The treated effluent is discharged into six ponds for retention and evaporation. Only three ponds (nos. 4,5, and 6) are presently used due to construction of the treatment plant upgrade. Overflow from the last pond (pond No. 6) is discharged to the Salinas River via outfall "001B".

Primary sludge is pumped to the digesters. Secondary sludge can be pumped either directly to the digesters, or to the primary clarifiers for co-settling with primary sludge in the primary sedimentation basins.

Table 2: Design Criteria

DESIGN CRITERIA	
HEADWORKS	
Bar Screens	
Number	2
Average Capacity Each	5.0 MGD

Table 2: Design Criteria (continued)

AERATED GRIT CHAMBERS	
Detention Time (minutes @ 5.0MGD)	15 minutes
Overflow Rate (gpd/sf @ 5.0 MGD)	7600 gallons per day (gpd)
PRIMARY SEDIMENTATION BASINS	
Number of Units	2
Diameter, feet	75 feet
Sidewater Depth, feet	9 feet
Overflow Rate, gpd/sf @ 5.0 MGD	565 gpd/sf
PRIMARY TRICKLING FILTERS	
Number	2
Diameter, feet	95
Depth, feet	14 feet
Recirculation Ratio	1:1
BOD Loading (lbs/day/1,000 cf)	34 lbs/day/1000cf
RECIRCULATION PUMPS	
Primary Trickling Filter Recirculation Pumps	
Number	3
Capacity Each, MGD	2.2, 3.3, 4.4
Secondary Trickling Filter Recirculation Pumps	
Number	3
Capacity Each, MGD	2.2, 3.3, 4.4
SECONDARY SEDIMENTATION BASINS	
Number	2 (circular), 1 (rectangular)
Diameter, feet (circular)	65 feet
Length and Width, feet (rectangular)	31 x 55 feet
Sidewater Depth, feet (all)	9 feet
Overflow Rate (@ 5 MGD)	500 gpd/sf
CHLORINE CONTACT BASINS	
Detention Time (@ 5.0 MGD)	50 minutes
Chlorinator Capacity (lbs/day)	2000 lbs/day
DIGESTERS	
Number	3
Diameter, feet	50 feet
Depth, feet	25 feet
Detention Time, days	25 days
Solids Loading (lbs VSS/cf/day)	0.07 lbs/VSS/cf/day
PRIMARY SLUDGE PUMPS	
Number	2
Capacity Each, gpm	100 gpm

Table 2: Design Criteria *(continued)*

SECONDARY SLUDGE PUMPS	
Number	4
Capacity Each, gpm	100 gpm
BELT FILTER PRESS	
Number	1
Size	2 meters wide
Capacity, gpm	120 gpm

Temperature, settleable solids, pH, and total suspended solids are tested at the WWTP laboratory. Other samples are tested by Fruit Growers Laboratories (FGL), a state-certified lab in Ventura, California.

SECTION II: WASTEWATER DIVISION STAFFING

Matt Thompson, PE – Wastewater Resources Manager

Patti Gwathmey – Industrial Waste Manager

OPERATIONS STAFF

Chris Slater – Wastewater Division Supervisor
SWRCB Grade III Plant Operator – Certificate No. 8852

Nick Kamp – Plant Technician III
SWRCB Grade III Plant Operator – Certificate No. III-9706

Doug Chase – Plant Technician II
SWRCB Grade II Plant Operator – Certificate No. II- 10805

Craig Rambo – Plant Technician Grade I
SWRCB Grade II Plant Operator – Certificate No. I 10203

Kim Haines – Plant Technician II
SWRCB Grade II Plant Operator – Certificate No. 40166

Joel Jackson – Plant Technician II
SWRCB OIT Grade II– Certificate 39286

Ernie Valenzuela – Plant Technician II
SWRCB OIT Grade II– OIT Certificate

Ben Eastin – Plant Technician II
SWRCB Grade III Plant Operator – Certificate No. 27909

Mark Scandalis – Lab Analyst (Technician II)
CWEA Grade III Lab Analyst– Certificate 1308210879

COLLECTIONS STAFF

Richard Almendarez – Collection System Maintenance Specialist III
CWEA Grade III Collections Maintenance – Certificate No. 01072180

Jared Pickens – Collection System Maintenance Specialist II
CWEA Grade III Collections Maintenance – Certificate No. 080721025

Vince Gaita – Collection System Maintenance Specialist II
CWEA Grade I Collections Maintenance – Certificate No. 090221024

Dale Hubbard – Collections System Maintenance Specialist I
CWEA Grade I Collections Maintenance – Certificate No. 1308210039

Casey Shepherd – Collections Maintenance Specialist II
CWEA Grade II Collections Maintenance – Certificate No. 1308210078

Nick Ferguson – Collections Maintenance Specialist I
CWEA Grade I Collections Maintenance – Certificate No. 1308211493

Michael Hendry – Water Quality Specialist, Industrial Waste Division

SECTION III: PRETREATMENT PROGRAM

The City's NPDES Permit does not require a Pretreatment Program, however the City has a voluntary pretreatment program that has been staffed by an Industrial Waste Manager and one staff person who had split their time between the Stormwater and Wastewater programs. Due to the increased workload involved in the Stormwater program, the City hired a Stormwater Manager in September 2014. This now allows the Industrial Waste Manager to concentrate full time on the Pretreatment Program. The Industrial Waste Manager inspects the Significant Industrial Users (SIUs) regulated under 40 CFR 403 per the City Ordinance and issues Industrial Wastewater Discharge Permits. The Water Quality Specialist conducts Fats, Oil, and Grease inspections and works with the Collections Department on private sewage spills.

Fats, Oils, and Grease Program

The Water Quality Specialist conducts Fats, Oils, and Grease inspections at restaurants and commercial kitchens located within the City limits. Inspections are done to ensure that grease removal devices are being maintained correctly and the fry oil is properly disposed of. He also coordinates with the Building Department to ensure that grease interceptors are properly sized and installed in new facilities and remodels. The City conducted 124 FOG inspections during 2014.

Permits and Compliance Schedules Issued

Sunbank:

Sunbank discharges to the City under a two part Categorical Industrial Permit which was revised and issued on June 13, 2013. The Part 1 of the permit is a Zero Discharge Permit for the wastewater from the tumbling operation which is hauled off site. Part 2 of the permit is for treated wastewater from the plating lines. Sunbank did not have any discharge violations in 2014.

Lubrizol Advanced Materials, Inc.

The City issued a two part permit to Lubrizol. The Part 1 is a Zero Discharge Permit for the categorical regulated Neutar Line. Part 2 is for the wastewater from the non-categorical processes. Lubrizol modified their pretreatment unit in 2012 to include an reverse osmosis unit, however they are still having problems meeting the local limits. The company will be replacing part of their pretreatment unit in 2015 in order to come into compliance.

Paso Robles Wine Services

The upgrade to their pretreatment unit in August 2013 which included adding an membrane bioreactor unit has been successful in eliminating BOD violations. However the BMPs implemented to reduce the levels of TDS have not eliminated violations of the local limit. PRWS is currently in the process of applying for a permit to discharge their treated wastewater to the land under the WDR for Discharges of Winery Waste, in order

to eliminate discharge violations. If the facility is unable to obtain this permit then a compliance order will be issued to install additional treatment to meet the TDS limit.

Firestone Walker Brewing Company

The City issued a Significant Industrial User Permit to Firestone Walker Brewing Company on June 19, 2013, due to a discharge greater than 25,000 gallons of wastewater per day. The brewery completed the construction of the wastewater treatment ponds to achieve compliance with the BOD limit. All process water is currently being diverted to the first treatment pond which is expected to take 5 to 6 months to fill. A temporary Zero Discharge Permit was issued to the Brewery.

Paris Precision

A Categorical Industrial User Permit was issued to Paris Precision on June 16, 2013, for their categorically regulated discharge from the metal finishing processes. The facility was inspected on October 29, 2014. The parent company of Paris Precision has stepped in order to get the facility into compliance with the various environmental programs. Changes have been made to the wastewater treatment unit to automate the chemical additions in an attempt to lower the salts in the discharge.

Weatherby Inc.

A Zero Discharge Categorical Industrial Permit was issued to Weatherby on February 1, 2012 for the black oxide line.

Pass-through and Interference

There were not any incidents of pass-through, or treatment interference caused by industrial discharges in 2014.

Mandate for Pretreatment Program

On November 22, 2013, RWQCB staff notified the City it intends to mandate a Pretreatment Program in compliance with 40 CFR 402 through reissuance of the City's NPDES Permit in 2015 or 2016.

SECTION IV: 2014 WASTEWATER TREATMENT PLANT SUMMARY

The City of Paso Robles is currently 21 months into construction of a major wastewater treatment plant upgrade. The project is approximately 87% complete. All major work has been completed, including new headworks, restoration of primary clarifiers, new primary effluent pump station, biological nutrient removal process and associated blower building, two of three new secondary clarifiers, ammonium sulfate and ferric chloride storage facilities, a W3 water pump station, an effluent polishing channel, and a cogeneration system. All of these processes are currently going through electrical and SCADA Control checks prior to start up.

This year 2014 has proven difficult for consistently meeting discharge requirements, specifically BOD, MPN and salts. One of the biggest challenges has been keeping old equipment running and dealing with lower plant flows and increasing concentrations. One of the other challenges has been the amount of dust created by the construction. It has been impacting the electrical components so maintenance of these has become much more frequent to head off issues of failure. Staff assisted the contractor in eighteen bypass/shutdowns successfully without incident.

An additional Operator was brought on at the beginning of 2015 to make total number of Operators seven, with one out on medical leave. About mid-February 2015, shift changes will be made to accommodate the new treatment facility which will be manned seven days per week and from 6:00am to till 8:30 pm with two shifts each day. An additional part time lab technician is planned for the near future, to help out with startup of the wastewater treatment plant. Maintenance Technicians for the plant are also planned for the near future.

Re: N.P.D.E.S. Permit No. CA0047953

Results for the calendar year 2014

Total treated flow for 2014	972.02MG
Average Daily flow for 2014	2.66 MGD
Peak Effluent Flow (March)	87.01 MG

Influent BOD avg.	414.5 mg/l avg.
Effluent BOD avg.	29 mg/l avg.
Influent Suspended Solids	294.4mg/l avg.
Effluent Suspended Solids	17 mg/l avg.

% Removal Efficiencies

BOD avg.	92 % removal
Suspended Solids avg.	93 % removal

Bio-solids to Landfill for 2014

Belt Press & Pond Solids	1100.39 (wet tons)
	593.32 (dry tons)

2014 Chemical Usage

Sodium Hypochlorite- (disinfection)	210,277.43 gallons	\$189,249.68
Sodium Bisulfite- (de-chlorination)	33,863 gallons	\$ 40,974.00
Ferric Chloride-(H ₂ S control, odor)*	167,780 lbs.	\$ 30,200.40
Polymer- (belt press de-water)	4- 250 gal. totes	\$ 11,227.68
Polymer- (flocculent)	4- 55gal. barrels	\$ <u>2,235.60</u>
Total Chemical Costs:		\$273,887.36

*= Ferric Chloride is used for H₂S control in the digesters and odor and settling aid in the WWTP. Loads are split with Collections and delivered to some Lift Stations for H₂S control and odor control at stations.

Plant Operations and Maintenance Summary 2014

January, 2014

Plant Maintenance: 12 work orders were completed.
Plant Operations: Quarterly permit sampling, monthly sampling were completed.
6 chemical loads were received.

February, 2014

Plant Maintenance: 7 work orders were completed.
Plant Operations: Monthly permit sampling, hauled sludge to landfill. Plant Power fail for 8.5 hours. Power fail burnt wiring to Primary Clarifiers which was replaced. 2 chemical deliveries and 1 polymer delivery.

March, 2014

Plant Maintenance: 5 work orders were completed.
Plant Operations: Monthly permit sampling, calibrated flow meter, Replaced primer pump on stand-by generator and valve. 4 chemical deliveries.

April, 2014

Plant Maintenance: 7 work orders completed.
Plant Operations: Quarterly permit sampling and monthly sampling. Replaced all galvanize piping on digester mixer with copper piping. Serviced sludge pumps and motors. 4 chemical deliveries.

May, 2014

Plant Maintenance: 5 work orders completed.
Plant Operations: Monthly permit sampling. Vacuumed chlorine basin of solids. Submitted DMR QA testing. 4 chemical deliveries.

June, 2014

Plant Maintenance: 4 work orders completed.
Plant Operations: Monthly permit sampling. Hoist/Crane is Mechanical Maint. shop serviced and certified. Re-circulation valve failed. Replaced pin and placed back in service. 3 chemical deliveries.

July, 2014

Plant Maintenance: 5 work orders completed.
Plant Operations: Monthly and Quarterly permit sampling. APCD inspection. Installed new ferric tank and eye wash station. Started polymer dosing at secondary distribution-box for coagulation. Exceeded hydrogen sulfide limit out of Digesters, notified APCD. 4 chemical deliveries.

August, 2014

Plant Maintenance: 8 work orders completed.
Plant Operations: Monthly permit sampling. Hauled biosolids. 4 chemical deliveries. Replace tensioner cable on #1 Trickling Filter. Serviced T.F. pump motors on #2 and #3 filters. Pumped down #1 primary.

September, 2014

Plant Maintenance: 7 work orders completed.
Plant Operations: Monthly permit sampling. Hauled biosolids. Installed new decant pump and serviced belt press conveyor. 4 chemical deliveries.

October, 2014

Plant Maintenance: 4 work orders completed.
Plant Operations: Monthly, Quarterly and semi-annual permit sampling. Serviced #2 and #3 trickling filter pump motors. Serviced 8 inch portable pump. 5 chemical deliveries.

November, 2014

Plant Maintenance: 6 work orders completed.
Plant Operations: Monthly permit sampling. Control panel screen failure at chlorine contact basin, adjusted all connections and returned to service. Replaced regulator on Boiler #3. Called Gas Co. about leak at meter, came out and fixed. 5 chemical deliveries.

December, 2014

Plant Maintenance: 5 work orders completed.
Plant Operations: Monthly permit sampling. All plant piping covered for cold weather. Adjusted both trickling filter pumps. Sodium hypochlorite pump fail, replaced tube roller. Tested HHR alarms at chlorine contact basin. Replaced blower at headworks. 5 chemical deliveries.

SECTION V: BIOSOLIDS / SLUDGE HANDLING PROCESS

Organic matter (sludge) settled at the primary and secondary sedimentation basins are pumped to the anaerobic digesters. The sludge is mixed and heated to 100 degrees Fahrenheit to increase the rate of digestion. The sludge is anaerobically digested in three digesters. Each digester is 50 feet in diameter and has a side water depth of 25 feet. Each digester has a mixing system and an external sludge heating system. Gas produced by the digestion process is drawn off at the top of the digesters and is burned at an automatic waste gas burner. After 30-45 days of digestion, the sludge is routed to a belt press for dewatering.

The biosolids are then stored in the concrete lined biosolids drying bed, where it dries further and samples are taken. All of these biosolids are then periodically trucked off to City of Paso Robles Landfill, located 9 miles east of the WWTP, where it is used as alternative daily cover. The City of Paso Robles Landfill is a Class III solid waste disposal site and is subject to Waste Discharge Requirements Order No. R3-2008-0050.

Testing for % solids, pH, Alkalinity, % cake, and Total VSR's were done several times per month in 2014. Results for that testing were as follows:

Digester Influent % volatile solids avg. for year =	3.47 %
Digester Effluent % volatile solids avg. for year =	1.11 %
Digester Effluent pH avg. for year =	7.2
Digester Effluent Alkalinity for year =	2966 mg/l
Belt Press Cake % solids for year =	17.4 %
Total Overall Volatile Percent Reduction For year =	66.14 %

Ponds 1, 2 and 3 have been out of service for duration of construction of the treatment plant upgrade. Pond #3 is currently being converted to a polishing channel, so that "Outfall C" will become the City's primary discharge location.

In total, the Paso Robles Wastewater Treatment Plant (WWTP) produced 1100.39 wet tons of biosolids and 593.32 dry tons of biosolids.

Lindemans Trucking and Construction is the contractor for hauling of biosolids for the next year (2015) to the City of Paso Robles Landfill.

Laboratory results attached showed constituents tested within acceptable EPA limits for unclassified bio-solids. All bio-solids were tested prior to each hauling.

Biosolids Laboratory Results 2014

City of Paso Robles
Wastewater Facility
Digester and Biosolids Testing Results 2014

Table 5: Biosolids Results / Biosolids hauled to City of Paso Robles Landfill

Constituents	Units	January 14	April 14	July 14	October 14	
Percent Moisture	%	49.7	53.5	38.7	38.4	
T. Ammonia as N	mg/Kg	1390	3870	3510	6130	
Nitrate as N	mg/Kg	ND	ND	6.53	1.6	
pH	units	6.9	7.1	6.6	6.6	
T. Phosphorus as P	mg/Kg	20600	22300	22700	25600	
Total Kjeldahl Nitrogen	mg/Kg	15000	35600	34900	30700	
Boron	mg/Kg	55.3	36.1	45.3	49.2	
Mercury	mg/Kg	0.27	0.477	0.717	0.04	
Arsenic	mg/Kg	2.99	7.38	3.45	2.59	
Cadmium	mg/Kg	3.24	3.05	2.85	3.48	
Chromium	mg/Kg	30.2	33	30.8	34.7	
Copper	mg/Kg	956	981	978	1170	
Lead	mg/Kg	18.1	17.2	15.0	17.5	
Molybdenum	mg/Kg	28.7	34.2	32.3	35.5	
Nickel	mg/Kg	18	14.6	15.5	16.8	
Selenium	mg/Kg	23.7	23.2	26.2	26.2	
Zinc	mg/Kg	1070	1190	1120	1270	
Oil & Grease	mg/Kg	7510	7920	7360	1270	
Gallons of sludge pressed		616,663	642,091	556,779	557,604	Totals wt. ton/dry ton
Total tons hauled (wet)	lbs.	334.48	291.76	211.89	262.26	1100.39
Total tons hauled (dry)	lbs.	166.23	135.66	129.88	161.55	593.32
		Biosolids	Biosolids	Biosolids	Biosolids	

City of Paso Robles
Wastewater Facility
Digester and Biosolids Testing Results 2014

**Table 6: Digester VSR's / Gas Production
Monthly Averages**

	Digester Inf. % Solids	Total VSR	Alkalinity Dig. Eff.	% Cake	Gas Production Avg./Day/Month in 100 cu. Ft.	Total Gas Production for Month in cu. Ft.
January	3.16	71.2	2800	17.28	718	2,225,800
Febuary	3.37	66.3	2860	16.7	735	2,058,000
March	3.2	59.9	3030	16.3	736	2,281,600
April	3.7	63.6	3075	18.5	802	2,406,000
May	3.9	67.4	2980	16.95	759	2,352,900
June	3.65	66.5	2900	16.95	747	2,241,000
July	3.88	64.6	2984	18.6	773	2,396,300
August	3.5	63.5	3120	18.8	741	2,297,100
September	3.05	66.6	3000	17.4	732	2,196,000
October	3.28	66.5	2926	17.4	727	2,253,700
November	3.9	70	3040	17.4	757	2,271,000
December	3.12	67.6	2880	16.5	704	2,182,400
Year 2014						
	Results are average per month					

January 31, 2014

City of El Paso de Robles
 Attn: Chris Slater - Wastewater Division
 3200 Sulpher Springs Rd.
 Paso Robles, CA 93446

Lab ID : CC 1480123
 Customer : 8-322

Laboratory Report

Introduction: This report package contains total of 7 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.
 Sample Results (1 page) : Results for each sample submitted.
 Quality Control (4 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Biosolid	01/09/2014	01/09/2014	CC 1480123-001	Bio

Sampling and Receipt Information: The sample was received, prepared and analyzed within the method specified holding times. The holding time for pH is listed as immediate. Logistically this is very difficult to obtain. FGL policy is to analyze all samples requiring pH on the same day of receipt at the laboratory. If this presents any problem please call. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

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

Inorganic - Metals QC

200.7	01/14/2014:200610 All analysis quality controls are within established criteria.
	01/24/2014:201141 All analysis quality controls are within established criteria.
245.1	01/14/2014:200566 All analysis quality controls are within established criteria.
3050	01/14/2014:200436 All preparation quality controls are within established criteria, except: The following note applies to Chromium, Molybdenum: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to Copper, Zinc: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to Copper, Molybdenum, Phosphorus, Zinc: 430 Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.



January 31, 2014
City of El Paso de Robles

Lab ID : CC 1480123
Customer : 8-322

Inorganic - Metals QC

7471	01/14/2014:200442 All preparation quality controls are within established criteria.
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Inorganic - Wet Chemistry QC

2540G	01/13/2014:200386 All preparation quality controls are within established criteria.
300	01/13/2014:200374 All preparation quality controls are within established criteria.
300.0	01/13/2014:200565 All analysis quality controls are within established criteria.
351.2	01/13/2014:200399 All preparation quality controls are within established criteria.
4500HB	01/13/2014:200538 All analysis quality controls are within established criteria.
4500NH3B	01/14/2014:200462 All preparation quality controls are within established criteria.
4500NH3G	01/15/2014:200608 All analysis quality controls are within established criteria.
9045C	01/13/2014:200418 All preparation quality controls are within established criteria.
EPA351.2	01/14/2014:200546 All analysis quality controls are within established criteria.

Discussion of Analytical Results: Case Narrative

Results reported on a dry weight basis.

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

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2014-01-31



ENVIRONMENTAL AGRICULTURAL

Analytical Chemists

January 31, 2014

Lab ID : CC 1480123-001

Customer ID : 8-322

City of El Paso de Robles

Attn: Chris Slater - Wastewater Division

3200 Sulpher Springs Rd.

Paso Robles, CA 93446

Sampled On : January 9, 2014-07:45

Sampled By : J Jackson

Received On : January 9, 2014-17:00

Matrix : Biosolids

Description : Biosolid

Project : Biosolid Monitoring

Sample Result - Inorganic

Table with 9 columns: Constituent, Result, PQL, Units, Note, Sample Preparation Method, Sample Preparation Date/ID, Sample Analysis Method, Sample Analysis Date/ID. Rows include Metals (Arsenic, Boron, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Phosphorus, Selenium, Zinc) and Wet Chemistry (Ammonia Nitrogen, % Moisture, Nitrate Nitrogen, Nitrogen, Total as Nitrogen, Nitrate + Nitrite as N, Kjeldahl Nitrogen, pH).

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (G) Glass Jar Preservatives: N/A ‡Surrogate. * PQL adjusted for dilution.



January 31, 2014
 City of El Paso de Robles

Lab ID : CC 1480123
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Arsenic	200.7	01/14/14:200610AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0022	0.01	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0037	0.01	
Boron	200.7	01/24/14:201141AC	CCV	ppm	5.000	106 %	90-110	
			CCB	ppm		0.055	0.1	
			CCV	ppm	5.000	105 %	90-110	
			CCB	ppm		0.033	0.1	
Cadmium	200.7	01/14/14:200610AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.00033	0.005	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.00009	0.005	
Chromium	200.7	01/14/14:200610AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0003	0.01	
			CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.0003	0.01	
Copper	200.7	01/14/14:200610AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.00003	0.01	
			CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.0004	0.01	
Lead	200.7	01/14/14:200610AC	CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		0.0018	0.01	
			CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		0.0006	0.01	
Molybdenum	200.7	01/24/14:201141AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0044	0.01	
			CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.0031	0.01	
Nickel	200.7	01/14/14:200610AC	CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.0007	0.01	
			CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		0.0003	0.01	
Phosphorus	200.7	01/14/14:200610AC	CCV	ppm	5.000	103 %	90-110	
			CCB	ppm		0.000008	0.1	
			CCV	ppm	5.000	104 %	90-110	
			CCB	ppm		0.007	0.1	
Selenium	200.7	01/14/14:200610AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.0035	0.01	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0039	0.01	
Zinc	200.7	01/14/14:200610AC	CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		-0.0012	0.02	
			CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.0007	0.02	
Mercury	245.1	01/14/14:200566AC	ICV	ppb	4.000	101 %	90-110	
			ICB	ppb		0.05	20	
			CCV	ppb	4.000	102 %	90-110	
			CCB	ppb		-0.06	20	
Arsenic	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	91.2 %	85-115	
			MS	mg/kg	40.00	90.3 %	75-125	
			MSD	mg/kg	40.00	91.5 %	75-125	
			MSRPD	mg/kg	40.02	1.3 %	≤20	
			PDS	mg/kg	40.00	94.5 %	75-125	
Boron	3050	01/14/14:200436amb	Blank	mg/kg		ND	<5	



Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Boron	3050	01/14/14:200436amb (CC 1480123-001)	LCS	mg/kg	200.0	93.0 %	85-115	
			MS	mg/kg	200.0	99.6 %	75-125	
			MSD	mg/kg	200.0	109 %	75-125	
			MSRPD	mg/kg	40.02	8.2%	≤20	
			PDS	mg/kg	200.0	107 %	75-125	
Cadmium	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.3	
			LCS	mg/kg	40.00	85.2 %	85-115	
			MS	mg/kg	40.00	89.2 %	75-125	
			MSD	mg/kg	40.00	92.1 %	75-125	
			MSRPD	mg/kg	40.02	3.1%	≤20	
PDS	mg/kg	40.00	95.5 %	75-125				
Chromium	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	86.6 %	85-115	
			MS	mg/kg	40.00	74.1 %	75-125	435
			MSD	mg/kg	40.00	72.2 %	75-125	435
			MSRPD	mg/kg	40.02	1.7%	≤20	
PDS	mg/kg	40.00	79.5 %	75-125				
Copper	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	87.7 %	85-115	
			MS	mg/kg	40.00	-408 %	<¼	
			MSD	mg/kg	40.00	-593 %	<¼	
			MSRPD	mg/kg	40.02	26.4%	≤20	435
PDS	mg/kg	40.00	-430 %	75-125	430			
Lead	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	87.3 %	85-115	
			MS	mg/kg	40.00	78.6 %	75-125	
			MSD	mg/kg	40.00	79.3 %	75-125	
			MSRPD	mg/kg	40.02	0.6%	≤20	
PDS	mg/kg	40.00	82.5 %	75-125				
Molybdenum	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	24.00	92.1 %	85-115	
			MS	mg/kg	24.00	66.5 %	75-125	435
			MSD	mg/kg	24.00	72.7 %	75-125	435
			MSRPD	mg/kg	40.02	4.7%	≤20	
PDS	mg/kg	24.00	70.1 %	75-125	430			
Nickel	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	87.9 %	85-115	
			MS	mg/kg	40.00	81.1 %	75-125	
			MSD	mg/kg	40.00	80.6 %	75-125	
			MSRPD	mg/kg	40.02	0.4%	≤20	
PDS	mg/kg	40.00	85.0 %	75-125				
Phosphorus	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<5	
			LCS	mg/kg	200.0	86.7 %	80-120	
			MS	mg/kg	200.0	-1900 %	<¼	
			MSD	mg/kg	200.0	-2750 %	<¼	
			MSRPD	mg/kg	40.02	30.0%	≤30	
PDS	mg/kg	200.0	-2120 %	75-125	430			
Selenium	3050	01/14/14:200436amb (CC 1480123-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	86.3 %	85-115	
			MS	mg/kg	40.00	84.6 %	75-125	
			MSD	mg/kg	40.00	81.0 %	75-125	
			MSRPD	mg/kg	40.02	3.1%	≤20	
PDS	mg/kg	40.00	89.3 %	75-125				
Zinc	3050	01/14/14:200436amb	Blank	mg/kg		ND	<1	

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Zinc	3050	01/14/14:200436amb (CC 1480123-001)	LCS	mg/kg	40.00	86.9 %	85-115	
			MS	mg/kg	40.00	-446 %	<¼	
			MSD	mg/kg	40.00	-657 %	<¼	
			MSRPD	mg/kg	40.02	26.6%	≤20	435
			PDS	mg/kg	40.00	-501 %	75-125	430
Mercury	7471	01/14/14:200442ac (CC 1384658-001)	Blank	mg/kg		ND	<0.03	
			LCS	mg/kg	0.2500	113 %	85-115	
			MS	mg/kg	0.2500	86.5 %	75-125	
			MSD	mg/kg	0.2500	82.3 %	75-125	
			MSRPD	mg/kg	0.2500	4.7%	≤20	
Wet Chem								
% Solids	2540G	01/13/14:200386AMM (VI 1440049-001)	Blank Dup	% %		ND 0.9%	<0.1 23.9	
Nitrate	300	01/13/14:200374CHL (CC 1480123-001)	Blank	mg/kg		ND	<4	
			LCS	mg/kg	200.0	105 %	85-115	
			MS	mg/kg	394.5	77.2 %	19-212	
			MSD	mg/kg	396.8	84.2 %	19-212	
			MSRPD	mg/kg	99.21	9.2%	≤33	
	300.0	01/13/14:200565CHL	CCV	ppm	20.00	102 %	90-110	
			CCV	ppm	20.00	105 %	90-110	
Nitrogen, Total Kjeldahl	351.2	01/13/14:200399CJJ (CC 1480123-001)	Blank	mg/kg		ND	<50	
			LCS	mg/kg	600.0	88.5 %	31-149	
			MS	mg/kg	306.1	419 %	<¼	
			MSD	mg/kg	288.5	-256 %	<¼	
			MSRPD	mg/kg	288.5	13.2%	≤80	
pH	4500HB	01/13/14:200538CJJ	CCV	units	8.000	99.9 %	95-105	
			CCV	units	8.000	100 %	95-105	
Ammonia Nitrogen	4500NH3B	01/14/14:200462CJJ (CC 1480009-001)	Blank	mg/kg		ND	<0.8	
			LCS	mg/kg	15.00	112 %	75-127	
			MS	mg/kg	148.5	99.6 %	75-125	
			MSD	mg/kg	148.5	92.3 %	75-125	
			MSRPD	mg/kg	148.5	5.1%	≤26.5	
	4500NH3G	01/15/14:200608AMB	CCB	mg/L		0.119	0.2	
			CCV	mg/L	2.000	106 %	90-110	
			CCB	mg/L		-0.143	0.2	
			CCV	mg/L	2.000	108 %	90-110	
pH	9045C	(CC 1480123-001)	Dup	units		0.3%	5.84	
Nitrogen, Total Kjeldahl	EPA351.2	01/14/14:200546AMB	CCB	mg/L		-0.175	0.5	
			CCV	mg/L	1.000	107 %	90-110	
			CCB	mg/L		-0.141	0.5	
			CCV	mg/L	1.000	109 %	90-110	
Definition	PDS : PDS failed, matrix - Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte. ICV : Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria. ICB : Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria. CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria. CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria. Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples. LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery. MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery. MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							

January 31, 2014
City of El Paso de Robles

Lab ID : CC 1480123
Customer : 8-322

Quality Control - Inorganic

Definition	
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
<¼	: High Sample Background - Spike concentration was less than one fourth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.
Explanation	
430	: Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



January 29, 2014

City of El Paso de Robles
Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Subject: Subcontract Analysis for FGL Lab No. CC 1480123

Enclosed please find results for the following sample(s) which were received by FGL.

- Sub Contracted-Oil & Grease Report

Please note that this analysis was performed by Babcock & Sons, Inc. (NELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

Cindy Aguirre  Digitally signed by Cindy Aguirre
Title: Customer Service Rep
Date: 2014.01.29

Enclosure



BABCOCK Laboratories, Inc.

The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 1 of 5
Project Name: No Project
Project Number: CC1480123 - (8-322)

Report Date: 21-Jan-2014

Work Order Number: B4A0961

Received on Ice (Y/N): Yes Temp: 6 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
B4A0961-01	CC1480123 - (8-322) 1 Biosolid Grab	Sludge	01/09/14 07:45	J. Jackson	01/10/14 10:00	Courier (OnTrac)

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
www.babcocklabs.com

NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 2 of 5
Project Name: No Project
Project Number: CC1480123 - (8-322)

Report Date: 21-Jan-2014

Work Order Number: **B4A0961**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number
B4A0961-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
CC1480123 - (8-322) 1 Biosolid	Sludge	01/09/14 07:45	01/10/14 10:00

<u>Analyte(s)</u>	<u>Result</u>	<u>RDL</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>Flag</u>
Solids							
Total Solids	37	0.10	%	SM 2540G	01/13/14 11:45	mal	
Aggregate Organic Compounds							
Oil & Grease (HEM)	0.75	0.10	%	EPA 9071B	01/20/14 09:45	hgg	NMout



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 3 of 5
 Project Name: No Project
 Project Number: CC1480123 - (8-322)

Report Date: 21-Jan-2014

Work Order Number: B4A0961

Received on Ice (Y/N): Yes Temp: 6 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 14A1326 - Analyzed as received										
Blank (14A1326-BLK1)				Prepared & Analyzed: 01/13/14						
Total Solids	ND	0.10	%							
Duplicate (14A1326-DUP1)				Source: B4A0980-01 Prepared & Analyzed: 01/13/14						
Total Solids	6.1	0.10	%		6.1			0.164	25	



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 4 of 5
 Project Name: No Project
 Project Number: CC1480123 - (8-322)

Report Date: 21-Jan-2014

Work Order Number: B4A0961
 Received on Ice (Y/N): Yes Temp: 6 °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 14A1415 - Solvent Extraction.										
Blank (14A1415-BLK1)				Prepared: 01/14/14 Analyzed: 01/20/14						
Oil & Grease (HEM)	ND	0.10	%							
LCS (14A1415-BS1)				Prepared: 01/14/14 Analyzed: 01/20/14						
Oil & Grease (HEM)	0.379	0.10	%	0.400		94.8	60-140			
Duplicate (14A1415-DUP1)				Source: B4A0961-01 Prepared: 01/14/14 Analyzed: 01/20/14						
Oil & Grease (HEM)	0.683	0.10	%		0.751			9.48	20	
Matrix Spike (14A1415-MS1)				Source: B4A0961-01 Prepared: 01/14/14 Analyzed: 01/20/14						
Oil & Grease (HEM)	1.45	0.10	%	0.400	0.751	175	60-140			QMout



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 5 of 5
Project Name: No Project
Project Number: CC1480123 - (8-322)

Report Date: 21-Jan-2014

Work Order Number: B4A0961

Received on Ice (Y/N): Yes Temp: 6 °C

Notes and Definitions

- NMout The matrix spike and/or matrix spike duplicate performed on this sample did not meet laboratory acceptance criteria.
- QMout MS and/or MSD recovery did not meet laboratory acceptance criteria.
- ND: Analyte NOT DETECTED at or above the Method Detection Limit (**if MDL is reported**), otherwise at or above the Reportable Detection Limit (RDL)
- NR: Not Reported
- RDL: Reportable Detection Limit
- MDL: Method Detection Limit
- * / " : NELAP does not offer accreditation for this analyte/method/matrix combination

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted. Babcock Laboratories and its officers and employees assume no responsibility and make no warranty, express or implied, for uses or interpretations made by any recipients, intended or unintended, of this report.

Digitally signed by: Cindy Waddell
DN: CN = Cindy Waddell C = US O = Babcock Laboratories OU = Project Manager Assistant
Date: 2014.01.28 14:48:54 -07'00'

cc:

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P.O. Box 432
Riverside, CA 92502-0432

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Riverside, CA 92507-0704

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e-Standard.rpt
NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102



April 30, 2014

City of El Paso de Robles
Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Lab ID : CC 1481085
Customer : 8-322

Laboratory Report

Introduction: This report package contains total of 7 pages divided into 3 sections:

- Case Narrative (2 pages) : An overview of the work performed at FGL.
Sample Results (1 page) : Results for each sample submitted.
Quality Control (4 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Table with 5 columns: Sample Description, Date Sampled, Date Received, FGL Lab ID #, Matrix. Row 1: Biosolid, 04/02/2014, 04/03/2014, CC 1481085-001, Bio

Sampling and Receipt Information: The sample was received, prepared and analyzed within the method specified holding times. The holding time for pH is listed as immediate. Logistically this is very difficult to obtain. FGL policy is to analyze all samples requiring pH on the same day of receipt at the laboratory. If this presents any problem please call. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

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

Inorganic - Metals QC

Table with 2 columns: Sample ID, Description. Rows include 200.7, 245.1, 3050, 7471 with detailed analysis notes for each.

April 30, 2014
 City of El Paso de Robles

Lab ID : CC 1481085
 Customer : 8-322

Inorganic - Metals QC

RCRA	04/28/2014:204774 All preparation quality controls are within established criteria, except: The following note applies to Selenium: 430 Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.
------	---

Inorganic - Wet Chemistry QC

2540G	04/07/2014:203856 All preparation quality controls are within established criteria.
300	04/29/2014:204796 All preparation quality controls are within established criteria.
300.0	04/29/2014:206174 All analysis quality controls are within established criteria.
351.2	04/15/2014:204213 All preparation quality controls are within established criteria.
4500HB	04/07/2014:204900 All analysis quality controls are within established criteria.
4500NH3B	04/16/2014:204295 All preparation quality controls are within established criteria.
4500NH3G	04/23/2014:205748 All analysis quality controls are within established criteria.
9045C	04/07/2014:203865 All preparation quality controls are within established criteria.
EPA351.2	04/25/2014:205971 All analysis quality controls are within established criteria.

Discussion of Analytical Results: Case Narrative

Results reported on a dry weight basis.

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

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.
 Title: Laboratory Director
 Date: 2014-04-30

April 30, 2014

Lab ID : CC 1481085-001

Customer ID : 8-322

City of El Paso de Robles

Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Sampled On : April 2, 2014-07:30

Sampled By : C. Rambo

Received On : April 3, 2014-17:00

Matrix : Biosolids

Description : Biosolid

Project : Biosolid Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, STLC^{G:1}								
Copper	0.17	0.05*	mg/L		RCRA	04/28/14:204774	200.7	04/28/14:206072
Selenium	0.2	0.1*	mg/L		RCRA	04/28/14:204774	200.7	04/28/14:206072
Metals, Total^{G:1}								
Arsenic	7.38	1.1	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Boron	36.1	11	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Cadmium	3.05	0.65	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Chromium	33.0	1.1	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Copper	981	1.1	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Lead	17.2	1.1	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Mercury	0.477	0.065	mg/kg		7471	04/16/14:204300	245.1	04/16/14:205437
Molybdenum	34.2	2.2	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Nickel	14.6	1.1	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Phosphorus	22300	11	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Selenium	23.2	1.1	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Zinc	1190	2.2	mg/kg		3050	04/08/14:203895	200.7	04/08/14:204998
Wet Chemistry^{G:1}								
Ammonia Nitrogen	3870	320*	mg/kg		4500NH3B	04/16/14:204295	4500NH3G	04/23/14:205748
% Moisture	53.5	--	%		2540G	04/07/14:203856	2540B	04/08/14:204935
Nitrate Nitrogen	ND	2.2	mg/kg		300	04/29/14:204796	300.0	04/29/14:206174
Nitrogen, Total as Nitrogen	35600	--	mg/kg		351.2	04/15/14:204213	EPA351.2	04/25/14:205971
Nitrate + Nitrite as N	ND	2.2	mg/kg		300	04/29/14:204796	300.0	04/29/14:206174
Kjeldahl Nitrogen	35600	3600*	mg/kg		351.2	04/15/14:204213	EPA351.2	04/25/14:205971
pH	7.1	--	units		9045C	04/07/14:203865	4500HB	04/07/14:204900

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (G) Glass Jar Preservatives: N/A ‡Surrogate. * PQL adjusted for dilution.



April 30, 2014
 City of El Paso de Robles

Lab ID : CC 1481085
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Arsenic	200.7	04/08/14:204998AC	CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.0020	0.01	
			CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		0.0006	0.01	
Boron	200.7	04/08/14:204998AC	CCV	ppm	5.000	103 %	90-110	
			CCB	ppm		0.020	0.1	
			CCV	ppm	5.000	104 %	90-110	
			CCB	ppm		0.026	0.1	
Cadmium	200.7	04/08/14:204998AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.00003	0.005	
			CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.00018	0.005	
Chromium	200.7	04/08/14:204998AC	CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.0005	0.01	
			CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		-0.00005	0.01	
Copper	200.7	04/08/14:204998AC	CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		-0.0001	0.01	
			CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		-0.0001	0.01	
	200.7	04/28/14:206072AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0016	0.01	
			CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		0.0009	0.01	
Lead	200.7	04/08/14:204998AC	CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.0003	0.01	
			CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.001	0.01	
Molybdenum	200.7	04/08/14:204998AC	CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.0005	0.01	
			CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.0011	0.01	
Nickel	200.7	04/08/14:204998AC	CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		-0.0002	0.01	
			CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		0.0005	0.01	
Phosphorus	200.7	04/08/14:204998AC	CCV	ppm	5.000	104 %	90-110	
			CCB	ppm		0.003	0.1	
			CCV	ppm	5.000	102 %	90-110	
			CCB	ppm		0.005	0.1	
Selenium	200.7	04/08/14:204998AC	CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		0.0004	0.01	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.00004	0.01	
	200.7	04/28/14:206072AC	CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.0047	0.01	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.0037	0.01	
Zinc	200.7	04/08/14:204998AC	CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		-0.0006	0.02	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.001	0.02	
Mercury	245.1	04/16/14:205437AC	ICV	ppb	4.000	105 %	90-110	
			ICB	ppb		0.06	20	
			CCV	ppb	4.000	106 %	90-110	

April 30, 2014
 City of El Paso de Robles

Lab ID : CC 1481085
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Mercury	245.1	04/16/14:205437AC	CCB	ppb		0.06	20	
Arsenic	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 40.02 40.00	ND 99.0 % 83.5 % 71.2 % 10.8% 75.9 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435
Boron	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 200.0 200.0 200.0 40.02 200.0	ND 96.4 % 83.8 % 87.4 % 4.1% 83.5 %	<5 85-115 75-125 75-125 ≤20 75-125	
Cadmium	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 40.02 40.00	ND 98.3 % 88.8 % 89.3 % 0.4% 87.9 %	<0.3 85-115 75-125 75-125 ≤20 75-125	
Chromium	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 40.02 40.00	ND 103 % 72.9 % 80.7 % 4.3% 73.4 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435 430
Copper	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 40.02 40.00	ND 102 % 129 % 104 % 15.6% 114 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435
Lead	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 40.02 40.00	ND 98.3 % 87.5 % 85.8 % 1.7% 85.0 %	<0.5 85-115 75-125 75-125 ≤20 75-125	
Molybdenum	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 24.00 24.00 24.00 40.02 24.00	ND 102 % 84.6 % 89.2 % 4.8% 83.6 %	<1 85-115 75-125 75-125 ≤20 75-125	
Nickel	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 40.02 40.00	ND 102 % 70.3 % 77.2 % 3.8% 69.2 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435 430
Phosphorus	3050	04/08/14:203895ac (CC 1481037-001)	Blank LCS MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg	 200.0 200.0 200.0 40.02	ND 97.3 % 8.8 % 45.0 % 2.8%	<5 80-120 <¼ <¼ ≤30	

April 30, 2014
 City of El Paso de Robles

Lab ID : CC 1481085
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Phosphorus	3050	04/08/14:203895ac	PDS	mg/kg	200.0	0.05 %	75-125	430
Selenium	3050	04/08/14:203895ac (CC 1481037-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	99.2 %	85-115	
			MS	mg/kg	40.00	87.9 %	75-125	
			MSD	mg/kg	40.00	88.5 %	75-125	
			MSRPD	mg/kg	40.02	0.7%	≤20	
PDS	mg/kg	40.00	85.5 %	75-125				
Zinc	3050	04/08/14:203895ac (CC 1481037-001)	Blank	mg/kg		ND	<1	
			LCS	mg/kg	40.00	98.5 %	85-115	
			MS	mg/kg	40.00	63.7 %	75-125	435
			MSD	mg/kg	40.00	62.0 %	75-125	435
			MSRPD	mg/kg	40.02	0.7%	≤20	
PDS	mg/kg	40.00	61.3 %	75-125	430			
Mercury	7471	04/16/14:204300ac (SP 1403751-001)	Blank	mg/kg		ND	<0.03	
			LCS	mg/kg	0.2500	94.2 %	85-115	
			MS	mg/kg	0.2500	109 %	75-125	
			MSD	mg/kg	0.2500	114 %	75-125	
			MSRPD	mg/kg	0.2500	3.1%	≤20	
Copper	RCRA	04/28/14:204774AC	ExBlk	mg/L		-0.0037	0.05	
PDS	mg/L	4.000	121 %	75-125				
Selenium	RCRA	04/28/14:204774AC	ExBlk	mg/L		0.051	0.1	
			PDS	mg/L	4.000	128 %	75-125	430
Wet Chem								
% Solids	2540G	04/07/14:203856jmg (CC 1481037-001)	Blank Dup	% %		ND 3.9%	<0.1 23.9	
Nitrate	300	04/29/14:204796CHL (CH 1472037-001)	Blank	mg/kg		ND	<4	
			LCS	mg/kg	200.0	97.9 %	85-115	
			MS	mg/kg	398.4	101 %	19-212	
			MSD	mg/kg	396.0	113 %	19-212	
			MSRPD	mg/kg	99.01	6.6%	≤33	
	300.0	04/29/14:206174CHL	CCV CCV	ppm ppm	20.00 20.00	102 % 101 %	90-110 90-110	
Nitrogen, Total Kjeldahl	351.2	04/15/14:204213jmg (SP 1403751-001)	Blank	mg/kg		ND	<50	
			LCS	mg/kg	600.0	91.8 %	31-149	
			MS	mg/kg	468.8	-240 %	<¼	
			MSD	mg/kg	500.0	-103 %	<¼	
			MSRPD	mg/kg	500.0	5.9%	≤80	
pH	4500HB	04/07/14:204900JMG	CCV	units	8.000	100 %	95-105	
			CCV	units	8.000	101 %	95-105	
Ammonia Nitrogen	4500NH3B	04/16/14:204295CJJ (CC 1481085-001)	Blank	mg/kg		ND	<7.62	
			LCS	mg/kg	140.2	92.4 %	75-127	
			MS	mg/kg	150.0	532 %	<¼	
			MSD	mg/kg	150.0	374 %	<¼	
			MSRPD	mg/kg	150.0	9.5%	≤26.5	
	4500NH3G	04/23/14:205748AMB	CCB CCV CCB CCV	mg/L mg/L mg/L mg/L	2.000 2.000 2.000 2.000	0.000 98.2 % 0.000 95.6 %	0.2 90-110 0.2 90-110	
pH	9045C	(CC 1481037-001)	Dup	units		0.6%	5.84	
Nitrogen, Total Kjeldahl	EPA351.2	04/25/14:205971AMB	CCV	mg/L	1.000	90.4 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCB	mg/L		0.403	0.5	
			CCV	mg/L	1.000	106 %	90-110	

Quality Control - Inorganic

Definition	
PDS	: PDS failed, matrix - Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.
ICV	: Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
ICB	: Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
ExBlk	: TCLP/STLC Extraction Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
<¼	: High Sample Background - Spike concentration was less than one fourth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.
Explanation	
430	: Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



April 23, 2014

City of El Paso de Robles
Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Subject: Subcontract Analysis for FGL Lab No. CC 1481085

Enclosed please find results for the following sample(s) which were received by FGL.

- Sub Contracted-Oil & Grease

Please note that this analysis was performed by Babcock & Sons, Inc. (ELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

Cindy Aguirre Digitally signed by Cindy Aguirre
Title: Customer Service Rep
Date: 2014-04-23

Enclosure



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 1 of 5
Project Name: No Project
Project Number: CC1481085 - (8-322)

Report Date: 21-Apr-2014

Work Order Number: B4D0520
Received on Ice (Y/N): Yes Temp: 5 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
B4D0520-01	CC1481085 - (8-322) 1 Biosolid Grab	Sludge	04/02/14 07:30	C. Rambo	04/04/14 10:05	Courier (OnTrac)

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
www.babcocklabs.com

NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102



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Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 2 of 5
 Project Name: No Project
 Project Number: CC1481085 - (8-322)

Report Date: 21-Apr-2014

Work Order Number: B4D0520

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number
B4D0520-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
CC1481085 - (8-322) 1 Biosolid	Sludge	04/02/14 07:30	04/04/14 10:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Solids							
Total Solids	43	0.10	%	SM 2540G	04/07/14 09:30	lfs	
Aggregate Organic Compounds							
Oil & Grease (HEM)	1.8	0.23	% dry	EPA 9071B	04/15/14 09:10	hgg	

mailing
 P.O. Box 432
 Riverside, CA 92502-0432

location
 6100 Quail Valley Court
 Riverside, CA 92507-0704

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 F 951 653 1662
 www.babcocklabs.com

NELAP no. 02101CA
 CA Elap no. 2698
 EPA no. CA00102



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The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 3 of 5
 Project Name: No Project
 Project Number: CC1481085 - (8-322)

Report Date: 21-Apr-2014

Work Order Number: B4D0520
 Received on Ice (Y/N): Yes Temp: 5 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 14D0711 - Analyzed as received										
Blank (14D0711-BLK1)				Prepared & Analyzed: 04/07/14						
Total Solids	ND	0.10	%							
Duplicate (14D0711-DUP1)				Source: B4D0204-01RE Prepared & Analyzed: 04/07/14						
Total Solids	22.7	0.10	%		22.5			0.840	25	
Duplicate (14D0711-DUP2)				Source: B4D0587-01 Prepared & Analyzed: 04/07/14						
Total Solids	2.8	0.10	%		2.8			0.351	25	

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 P.O. Box 432
 Riverside, CA 92502-0432

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 6100 Quail Valley Court
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NELAP no. 02101CA
 CA Elap no. 2698
 EPA no. CA00102



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Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 4 of 5
 Project Name: No Project
 Project Number: CC1481085 - (8-322)

Report Date: 21-Apr-2014

Work Order Number: B4D0520

Received on Ice (Y/N): Yes Temp: 5 °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 14D1302 - Solvent Extraction.										
Blank (14D1302-BLK1) Prepared: 04/13/14 Analyzed: 04/15/14										
Oil & Grease (HEM)	ND	0.10	% wet							
LCS (14D1302-BS1) Prepared: 04/13/14 Analyzed: 04/15/14										
Oil & Grease (HEM)	0.402	0.10	% wet	0.400		100	70-130			
Duplicate (14D1302-DUP1) Source: B4D0520-01 Prepared: 04/13/14 Analyzed: 04/15/14										
Oil & Grease (HEM)	1.50	0.23	% dry		1.82			19.2	60	
Matrix Spike (14D1302-MS1) Source: B4D0520-01 Prepared: 04/13/14 Analyzed: 04/15/14										
Oil & Grease (HEM)	2.88	0.23	% dry	0.921	1.82	115	45-187			

mailing
 P.O. Box 432
 Riverside, CA 92502-0432

location
 6100 Quail Valley Court
 Riverside, CA 92507-0704

P 951 653 3351
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 www.babcocklabs.com

NELAP no. 02101CA
 CA Elap no. 2698
 EPA no. CA00102



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Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 5 of 5
Project Name: No Project
Project Number: CC1481085 - (8-322)

Report Date: 21-Apr-2014

Work Order Number: B4D0520
Received on Ice (Y/N): Yes Temp: 5 °C

Notes and Definitions

- ND: Analyte NOT DETECTED at or above the Method Detection Limit (if MDL is reported), otherwise at or above the Reportable Detection Limit (RDL)
- NR: Not Reported
- RDL: Reportable Detection Limit
- MDL: Method Detection Limit
- * / " : NELAP does not offer accreditation for this analyte/method/matrix combination

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted. Babcock Laboratories and its officers and employees assume no responsibility and make no warranty, express or implied, for uses or interpretations made by any recipients, intended or unintended, of this report.

Digitally signed by: Cindy Waddell
DN: CN = Cindy Waddell C = US O = Babcock
Laboratories OU = Project Manager Assistant
Date: 2014.04.22 18:09:24 -07'00'

cc:

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

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F 951 653 1662
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e-Standard.rpt
NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102

				80316:04/07/2014				TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information																						
Client: City of El Paso de Robles Address: Attn: Chris Slater - Wastewater Division 3200 Sulpher Springs Rd. Paso Robles, CA 93446 Phone: (805)237-3865 Fax: (805)237-3886 Contact Person: Chris Slater Project Name: Biosolid Monitoring Purchase Order Number: Quote Number:																Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Metals, Total-As,B,Cd,Cr,Cu,Pb,Hg,Mo,Ni,P,Se,Zn	NOTE: Run STLC on any TTLC failures 8oz(G)	Wet Chemistry-NH3-N, % Moisture, NO3-N, Total N, TKN, pH 8oz(G)	Sub Contracted-Oil & Grease Report Dry Weight 8oz(G)						
Sampler(s): <i>CR Rambo</i> Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___/___																														
Lab Number: CC/481085 8-322																														
Samp Num	Location Description	Date Sampled	Time Sampled																											
1	Biosolid	4-2-14	7:30	G	Bio	NP	W	1	1	Sub-1																				
Remarks:				Relinquished Date: Time: <i>4-2-14 1307</i> Received By: <i>CR Rambo</i>				Relinquished Date: Time: <i>4/10/14 1700</i> Received By: <i>OUTSIDE</i>				Relinquished Date: Time: <i>4/14/14 1155</i> Received By: <i>CLM</i>																		

Corporate Offices & Laboratory
 853 Corporation Street
 Santa Paula, CA 93060
 Phone: (805) 392-2000
 Env Fax: (805) 525-4172 / Ag Fax: (805) 392-2063

Office & Laboratory
 2500 Stagecoach Road
 Stockton, CA 95215
 Phone: (209) 942-0182
 Fax: (209) 942-0423

Office & Laboratory
 563 E. Lindo
 Chico, CA 95926
 Phone: (530) 343-5818
 Fax: (530) 343-3807

Office & Laboratory
 3442 Empresa Drive, Suite D
 San Luis Obispo, CA 93401
 Phone: (805) 783-2940
 Fax: (805) 783-2912

Office & Laboratory
 9415 W. Goshen Avenue
 Visalia, CA 93291
 Phone: (559) 734-9473
 Fax: (559) 734-8435

Inter-Laboratory Condition Upon Receipt (Attach to COC) CC1481085

Sample Receipt at: **STK** CC **CH VI**

1. Number of ice chests/packages received: 1 Shipping tracking # _____

2. Were samples received in a chilled condition? Temps: 50 / _____ / _____ / _____ / _____
Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

- 3. Do the number of bottles received agree with the COC? Yes No N/A
- 4. Were samples received intact? (i.e. no broken bottles, leaks etc.) Yes No
- 5. VOAs checked for Headspace? Yes No N/A
- 6. Were sample custody seals intact? Yes No N/A
- 7. If required, was sample split for pH analysis? Yes No N/A
- 8. Were all analyses within holding times at time of receipt? Yes No
- 9. Verify sample date, time sampler Yes No

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.

Sample Receipt Review completed by (initials): [Signature]

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 5 / 4 / 6 / _____ / _____
Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/

2. Shipping tracking numbers:
D1001067184243, D10010671191818 + D10010671173509

- 3. Do the number of bottles received agree with the COC? Yes No N/A
- 4. Were samples received intact? (i.e. no broken bottles, leaks etc.) Yes No
- 5. Were sample custody seals intact? Yes No N/A

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

- 1. Were all requested analyses understood and acceptable? Yes No
- 2. Did bottle labels correspond with the client's ID's? Yes No
- 3. Were all bottles requiring sample preservation properly preserved? Yes No N/A FGL
- 4. VOAs checked for Headspace? Yes No N/A
- 5. Have rush or project due dates been checked and accepted? Yes No N/A

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): [Signature]

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
Initiated By: _____ Date: _____
Problem:
Resolution:

2. Person Contacted: _____ Phone Number: _____
Initiated By: _____
Problem:
Resolution:

(8-322)
City of El Paso de Robles
CC 1481085

(Please use the back of this sheet for additional comment contacts)

August 8, 2014

City of El Paso de Robles
 Attn: Chris Slater - Wastewater Division
 3200 Sulpher Springs Rd.
 Paso Robles, CA 93446

Lab ID : CC 1482419
 Customer : 8-322

Laboratory Report

Introduction: This report package contains total of 7 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.
 Sample Results (1 page) : Results for each sample submitted.
 Quality Control (4 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Biosolid	07/10/2014	07/10/2014	CC 1482419-001	Bio

Sampling and Receipt Information: The sample was received, prepared and analyzed within the method specified holding times. The holding time for pH is listed as immediate. Logistically this is very difficult to obtain. FGL policy is to analyze all samples requiring pH on the same day of receipt at the laboratory. If this presents any problem please call. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

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

Inorganic - Metals QC

200.7	07/22/2014:210955 All analysis quality controls are within established criteria.
	07/24/2014:211008 All analysis quality controls are within established criteria.
	08/04/2014:211517 All analysis quality controls are within established criteria.
245.1	07/24/2014:211007 All analysis quality controls are within established criteria.
3050	07/21/2014:208436 All preparation quality controls are within established criteria, except: The following note applies to Arsenic, Boron, Cadmium, Chromium, Copper, Molybdenum, Nickel, Lead, Selenium, Zinc: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to Copper, Phosphorus: 430 Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.

August 8, 2014
City of El Paso de Robles

Lab ID : CC 1482419
Customer : 8-322

Inorganic - Metals QC

7471	07/24/2014:208614 All preparation quality controls are within established criteria, except: The following note applies to Mercury: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
RCRA	08/04/2014:208997 All preparation quality controls are within established criteria.

Inorganic - Wet Chemistry QC

2540G	07/15/2014:208204 All preparation quality controls are within established criteria.
300	07/29/2014:208731 All preparation quality controls are within established criteria.
300.0	07/29/2014:211289 All analysis quality controls are within established criteria.
351.2	07/31/2014:208815 All preparation quality controls are within established criteria.
4500HB	07/11/2014:210315 All analysis quality controls are within established criteria.
4500NH3B	07/23/2014:208539 All preparation quality controls are within established criteria.
4500NH3G	07/30/2014:211240 All analysis quality controls are within established criteria.
9045C	07/11/2014:208081 All preparation quality controls are within established criteria.
EPA351.2	08/07/2014:211708 All analysis quality controls are within established criteria.

Discussion of Analytical Results: Case Narrative

Results reported on a dry weight basis.

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

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**

 Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2014-08-08



ENVIRONMENTAL AGRICULTURAL

Analytical Chemists

August 8, 2014

Lab ID : CC 1482419-001

Customer ID : 8-322

City of El Paso de Robles

Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Sampled On : July 10, 2014-08:00

Sampled By : J Jackson

Received On : July 10, 2014-17:00

Matrix : Biosolids

Description : Biosolid

Project : Biosolid Monitoring

Sample Result - Inorganic

Table with 7 columns: Constituent, Result, PQL, Units, Note, Sample Preparation (Method, Date/ID), Sample Analysis (Method, Date/ID). Rows include Metals, STLC, Metals, Total, and Wet Chemistry.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (G) Glass Jar Preservatives: N/A ‡Surrogate. * PQL adjusted for dilution.



ENVIRONMENTAL AGRICULTURAL

Analytical Chemists

August 8, 2014
City of El Paso de Robles

Lab ID : CC 1482419
Customer : 8-322

Quality Control - Inorganic

Table with 9 columns: Constituent, Method, Date/ID, Type, Units, Conc., QC Data, DQO, Note. Rows include various metals like Arsenic, Boron, Cadmium, Chromium, Copper, Lead, Molybdenum, Nickel, Phosphorus, Selenium, Zinc, and Mercury with their respective test results.

August 8, 2014
City of El Paso de Robles

Lab ID : CC 1482419
Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Mercury	245.1	07/24/14:211007AC	CCB	ppb		0.03	20	
Arsenic	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	40.00 40.00 40.00 40.02 40.00	ND 100 % 140 % 140 % 0.3% 109 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435 435
Boron	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	200.0 200.0 200.0 40.02 200.0	ND 103 % 137 % 140 % 1.6% 108 %	<5 85-115 75-125 75-125 ≤20 75-125	435 435
Cadmium	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	40.00 40.00 40.00 40.02 40.00	ND 102 % 137 % 138 % 0.7% 110 %	<0.3 85-115 75-125 75-125 ≤20 75-125	435 435
Chromium	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	40.00 40.00 40.00 40.02 40.00	ND 108 % 165 % 155 % 3.5% 120 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435 435
Copper	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	40.00 40.00 40.00 40.02 40.00	ND 107 % 177 % 168 % 2.8% 140 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435 435 430
Lead	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	40.00 40.00 40.00 40.02 40.00	ND 104 % 129 % 125 % 2.3% 99.7 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435
Molybdenum	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	24.00 24.00 24.00 40.02 24.00	ND 106 % 135 % 137 % 1.7% 109 %	<1 85-115 75-125 75-125 ≤20 75-125	435 435
Nickel	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	40.00 40.00 40.00 40.02 40.00	ND 106 % 147 % 140 % 2.3% 105 %	<0.5 85-115 75-125 75-125 ≤20 75-125	435 435
Phosphorus	3050	07/21/14:208436amb (CC 1482412-001)	Blank LCS MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg	200.0 200.0 200.0 40.02	ND 101 % 171 % 361 % 9.0%	<5 80-120 <¼ <¼ ≤30	

August 8, 2014
 City of El Paso de Robles

Lab ID : CC 1482419
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Phosphorus	3050	07/21/14:208436amb	PDS	mg/kg	200.0	258 %	75-125	430
Selenium	3050	07/21/14:208436amb (CC 1482412-001)	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	102 %	85-115	
			MS	mg/kg	40.00	142 %	75-125	435
			MSD	mg/kg	40.00	145 %	75-125	435
			MSRPD	mg/kg	40.02	2.0%	≤20	
Zinc	3050	07/21/14:208436amb (CC 1482412-001)	Blank	mg/kg		ND	<1	
			LCS	mg/kg	40.00	104 %	85-115	
			MS	mg/kg	40.00	136 %	75-125	435
			MSD	mg/kg	40.00	141 %	75-125	435
			MSRPD	mg/kg	40.02	1.2%	≤20	
Mercury	7471	07/24/14:208614AC (CC 1482419-001)	Blank	mg/kg		ND	<0.03	
			LCS	mg/kg	0.2500	97.2 %	85-115	
			MS	mg/kg	0.2500	149 %	75-125	435
			MSD	mg/kg	0.2500	145 %	75-125	435
			MSRPD	mg/kg	0.2500	1.3%	≤20	
Copper	RCRA	08/04/14:208997AC	ExBlk	mg/L		-0.0166	0.05	
Selenium	RCRA	08/04/14:208997AC	PDS	mg/L	4.000	107 %	75-125	
			PDS	mg/L	4.000	113 %	75-125	
Wet Chem								
% Solids	2540G	07/15/14:208204jmg (CC 1482412-001)	Blank Dup	% %		ND 1.5%	<0.1 23.9	
Nitrate	300	07/29/14:208731CHL (SP 1408319-001)	Blank	mg/kg		ND	<4	
			LCS	mg/kg	200.0	96.5 %	85-115	
			MS	mg/kg	394.5	43.6 %	19-212	
			MSD	mg/kg	396.0	36.8 %	19-212	
			MSRPD	mg/kg	99.01	0.8%	≤33	
	300.0	07/29/14:211289CHL	CCV	ppm	20.00	101 %	90-110	
			CCV	ppm	20.00	100 %	90-110	
Nitrogen, Total Kjeldahl	351.2	07/31/14:208815jmg (CC 1482462-001)	Blank	mg/kg		ND	<50	
			LCS	mg/kg	600.0	99.4 %	31-149	
			MS	mg/kg	500.0	724 %	<¼	
			MSD	mg/kg	517.2	1910 %	<¼	
			MSRPD	mg/kg	517.2	22.1%	≤80	
pH	4500HB	07/11/14:210315CJJ	CCV	units	8.000	99.5 %	95-105	
			CCV	units	8.000	99.5 %	95-105	
Ammonia Nitrogen	4500NH3B	07/23/14:208539CJJ (CC 1482333-001)	Blank	mg/kg		ND	<7.69	
			LCS	mg/kg	144.2	96.0 %	75-127	
			MS	mg/kg	145.6	278 %	<¼	
			MSD	mg/kg	150.0	152 %	<¼	
			MSRPD	mg/kg	150.0	14.6%	≤26.5	
	4500NH3G	07/30/14:211240AMB	CCB	mg/L		-0.123	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		-0.120	0.2	
			CCV	mg/L	2.000	102 %	90-110	
pH	9045C	(CC 1482341-001)	Dup	units		1.0%	5.84	
Nitrogen, Total Kjeldahl	EPA351.2	08/07/14:211708AMB	CCB	mg/L		0.334	0.5	
			CCV	mg/L	5.000	107 %	90-110	
			CCB	mg/L		0.227	0.5	
			CCV	mg/L	5.000	105 %	90-110	

August 8, 2014
City of El Paso de Robles

Lab ID : CC 1482419
Customer : 8-322

Quality Control - Inorganic

Definition	
PDS	: PDS failed, matrix - Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.
ICV	: Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
ICB	: Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
ExBlk	: TCLP/STLC Extraction Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
<¼	: High Sample Background - Spike concentration was less than one fourth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.
Explanation	
430	: Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



July 31, 2014

City of El Paso de Robles
Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Subject: Subcontract Analysis for FGL Lab No. CC 1482419

Enclosed please find results for the following sample(s) which were received by FGL.

- Sub Contracted-Oil & Grease

Please note that this analysis was performed by Babcock & Sons, Inc. (ELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

Cindy Aguirre  Digitally signed by Cindy Aguirre
Title: Customer Service Rep
Date: 2014-07-31

Enclosure



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 1 of 5
Project Name: No Project
Project Number: CC1482419-(8-322)

Report Date: 28-Jul-2014

Work Order Number: B4G1263
Received on Ice (Y/N): Yes Temp: 6 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
B4G1263-01	CC 1482419- (8-322)	Biosolids Composite Sludge	07/10/14 08:00	J. Jackson	07/11/14 11:30	Ontrac

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
www.babcocklabs.com

NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102



BABCOCK Laboratories, Inc.
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Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 2 of 5
 Project Name: No Project
 Project Number: CC1482419-(8-322)

Report Date: 28-Jul-2014

Work Order Number: B4G1263
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number
B4G1263-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
CC 1482419- (8-322) Biosolids	Sludge	07/10/14 08:00	07/11/14 11:30

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Solids							
Total Solids	55	0.10	%	SM 2540G	07/14/14 11:45	lfs	
Aggregate Organic Compounds							
Oil & Grease (HEM)	1.3	0.18	% dry	EPA 9071B	07/24/14 14:35	hgg	



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Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 3 of 5
Project Name: No Project
Project Number: CC1482419-(8-322)

Report Date: 28-Jul-2014

Work Order Number: B4G1263

Received on Ice (Y/N): Yes Temp: 6 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 14G1424 - Analyzed as received										
Blank (14G1424-BLK1)				Prepared & Analyzed: 07/14/14						
Total Solids	ND	0.10	%							
Duplicate (14G1424-DUP1)				Source: B4G1388-03 Prepared & Analyzed: 07/14/14						
Total Solids	2.5	0.10	%		2.5			1.21	25	



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Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 4 of 5
 Project Name: No Project
 Project Number: CC1482419-(8-322)

Report Date: 28-Jul-2014

Work Order Number: B4G1263

Received on Ice (Y/N): Yes Temp: 6 °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Flag
Batch 14G2002 - Solvent Extraction.										
Blank (14G2002-BLK1) Prepared: 07/20/14 Analyzed: 07/24/14										
Oil & Grease (HEM)	ND	0.10	% wet							
LCS (14G2002-BS1) Prepared: 07/20/14 Analyzed: 07/24/14										
Oil & Grease (HEM)	0.380	0.10	% wet	0.400		95.0	70-130			
Duplicate (14G2002-DUP1) Source: B4G1263-01 Prepared: 07/20/14 Analyzed: 07/24/14										
Oil & Grease (HEM)	1.70	0.18	% dry		1.34			23.3	60	
Matrix Spike (14G2002-MS1) Source: B4G1263-01 Prepared: 07/20/14 Analyzed: 07/24/14										
Oil & Grease (HEM)	2.12	0.18	% dry	0.731	1.34	106	45-187			



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 5 of 5
Project Name: No Project
Project Number: CC1482419-(8-322)

Report Date: 28-Jul-2014

Work Order Number: **B4G1263**
Received on Ice (Y/N): Yes Temp: 6 °C

Notes and Definitions

- ND: Analyte NOT DETECTED at or above the Method Detection Limit (if MDL is reported), otherwise at or above the Reportable Detection Limit (RDL)
- NR: Not Reported
- RDL: Reportable Detection Limit
- MDL: Method Detection Limit
- * / " : NELAP does not offer accreditation for this analyte/method/matrix combination

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted. Babcock Laboratories and its officers and employees assume no responsibility and make no warranty, express or implied, for uses or interpretations made by any recipients, intended or unintended, of this report.

Taylor Cariaga
CN = Taylor Cariaga C = US O = Babcock Laboratories OU =
Project Manager
2014.07.30 10:59:27 -07'00'

cc:

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
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NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 1 of 1
Project Name: No Project
Project Number: CC1482419-(8-322)

Report Date: 28-Jul-2014

Work Order Number: B4G1263

Received on Ice (Y/N): Yes Temp: 6 °C

CHAIN OF CUSTODY
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Laboratory Copy (1 of 3)

Quarterly Subcontract to
Babcock & Sons, Inc.

Form with columns: TEST DESCRIPTION, Date, Time, Relinquished, Date, Time, Received By, Date, Time. Includes handwritten notes and dates like JUL 11 2014.

Client: FGL Environmental, Inc.
Address: 853 Corporation St.
Santa Paula, CA 93060-3005
Phone: (805) 392-2039 Fax: (805) 392-2064
Contact Person: Cindy Aguirre
Project Name: CC1482419 - (8-322)
Purchase Order Number:
Quote Number:
Shipper(s): T. Jackson
Sampling Fee: Pickup Fee:
Compositor Soap Date: Time:
Lab Number:
Date Sampled: 7-10-14 5:50 G Bto
Location Description:
Remarks: 6°
Relinquished: 07/10/14 11:00 Cindy Aguirre
Received By: ONTRK
Date: 7/11/14 11:53

Corporate Office & Laboratory
853 Corporation Street
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Chico, CA 95926
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NELAP no. 02101CA
CA Elap no. 2698
EPA no. CA00102

November 3, 2014

City of El Paso de Robles
Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Lab ID : CC 1483551
Customer : 8-322

Laboratory Report

Introduction: This report package contains total of 7 pages divided into 3 sections:

- Case Narrative (2 pages) : An overview of the work performed at FGL.
- Sample Results (1 page) : Results for each sample submitted.
- Quality Control (4 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Biosolid	10/02/2014	10/02/2014	CC 1483551-001	Bio

Sampling and Receipt Information: All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples arrived on ice. All samples were prepared and analyzed within the method specified hold time. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

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

Inorganic - Metals QC

200.7	10/06/2014:215271 All analysis quality controls are within established criteria.
	10/30/2014:216555 All analysis quality controls are within established criteria.
245.1	10/07/2014:215280 All analysis quality controls are within established criteria.
3050	10/06/2014:211729 All preparation quality controls are within established criteria, except: The following note applies to Arsenic, Boron, Copper, Molybdenum, Selenium: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to Copper, Molybdenum, Selenium, Zinc: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to Phosphorus, Selenium, Zinc: 430 Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.

November 3, 2014
City of El Paso de Robles

Lab ID : CC 1483551
 Customer : 8-322

Inorganic - Metals QC

7471	10/06/2014:211775 All preparation quality controls are within established criteria, except: The following note applies to Mercury: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
RCRA	10/30/2014:212813 All preparation quality controls are within established criteria.

Inorganic - Wet Chemistry QC

2540G	10/07/2014:211821 All preparation quality controls are within established criteria.
300	10/06/2014:211804 All preparation quality controls are within established criteria, except: The following note applies to Nitrate: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
300.0	10/06/2014:215498 All analysis quality controls are within established criteria.
351.2	10/28/2014:212656 All preparation quality controls are within established criteria.
4500HB	10/08/2014:215388 All analysis quality controls are within established criteria.
4500NH3B	10/22/2014:212483 All preparation quality controls are within established criteria.
4500NH3G	10/23/2014:216588 All analysis quality controls are within established criteria.
9045C	10/08/2014:211926 All preparation quality controls are within established criteria.
EPA351.2	10/29/2014:216475 All analysis quality controls are within established criteria.

Discussion of Analytical Results: Case Narrative

Results reported on a dry weight basis.

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

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**

 Digitally signed by Kelly A. Dunnahoo, B.S.
 Title: Laboratory Director
 Date: 2014-11-03

November 3, 2014

Lab ID : CC 1483551-001

Customer ID : 8-322

City of El Paso de Robles

Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Sampled On : October 2, 2014-08:41

Sampled By : J. Jackson

Received On : October 2, 2014-17:00

Matrix : Biosolids

Description : Biosolid

Project : Biosolid Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, STLC^{G:1}								
Copper	1.10	0.05*	mg/L		RCRA	10/30/14:212813	200.7	10/30/14:216555
Selenium	ND	0.1*	mg/L		RCRA	10/30/14:212813	200.7	10/30/14:216555
Metals, Total^{G:1}								
Arsenic	2.59	0.81	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Boron	49.2	8.1	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Cadmium	3.48	0.49	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Chromium	34.7	0.81	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Copper	1170	0.81	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Lead	17.5	0.81	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Mercury	0.04	0.03	mg/kg		7471	10/06/14:211775	245.1	10/07/14:215280
Molybdenum	35.5	1.6	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Nickel	16.8	0.81	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Phosphorus	25600	8.1	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Selenium	26.2	0.81	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Zinc	1270	1.6	mg/kg		3050	10/06/14:211729	200.7	10/06/14:215271
Wet Chemistry^{G:1}								
Ammonia Nitrogen	6130	250*	mg/kg		4500NH3B	10/22/14:212483	4500NH3G	10/23/14:216588
% Moisture	38.4	--	%		2540G	10/07/14:211821	2540B	10/08/14:215323
Nitrate Nitrogen	1.6	1.6	mg/kg		300	10/06/14:211804	300.0	10/06/14:215498
Nitrogen, Total as Nitrogen	30700	--	mg/kg		351.2	10/28/14:212656	EPA351.2	10/29/14:216475
Nitrate + Nitrite as N	1.6	1.6	mg/kg		300	10/06/14:211804	300.0	10/06/14:215498
Kjeldahl Nitrogen	30700	2700*	mg/kg		351.2	10/28/14:212656	EPA351.2	10/29/14:216475
pH	6.6	--*	units		9045C	10/08/14:211926	4500HB	10/08/14:215388

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (G) Glass Jar Preservatives: N/A ‡Surrogate. * PQL adjusted for dilution.

November 3, 2014
 City of El Paso de Robles

Lab ID : CC 1483551
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Arsenic	200.7	10/06/14:215271AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.0013	0.01	
			CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		-0.0021	0.01	
Boron	200.7	10/06/14:215271AC	CCV	ppm	5.000	101 %	90-110	
			CCB	ppm		0.041	0.1	
			CCV	ppm	5.000	99.0 %	90-110	
			CCB	ppm		0.068	0.1	
Cadmium	200.7	10/06/14:215271AC	CCV	ppm	1.000	99.8 %	90-110	
			CCB	ppm		0.00014	0.005	
			CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.00003	0.005	
Chromium	200.7	10/06/14:215271AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0005	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0006	0.01	
Copper	200.7	10/06/14:215271AC	CCV	ppm	1.000	99.0 %	90-110	
			CCB	ppm		-0.00005	0.01	
	200.7	10/30/14:216555AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.00007	0.01	
Lead	200.7	10/06/14:215271AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.0004	0.01	
			CCV	ppm	1.000	99.4 %	90-110	
			CCB	ppm		0.0014	0.01	
Molybdenum	200.7	10/06/14:215271AC	CCV	ppm	1.000	99.3 %	90-110	
			CCB	ppm		0.0028	0.01	
			CCV	ppm	1.000	99.2 %	90-110	
			CCB	ppm		0.0019	0.01	
Nickel	200.7	10/06/14:215271AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.0005	0.01	
			CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.0002	0.01	
Phosphorus	200.7	10/06/14:215271AC	CCV	ppm	5.000	102 %	90-110	
			CCB	ppm		0.0003	0.1	
			CCV	ppm	5.000	101 %	90-110	
			CCB	ppm		0.004	0.1	
Selenium	200.7	10/06/14:215271AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0067	0.01	
	200.7	10/30/14:216555AC	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.0043	0.01	
Zinc	200.7	10/06/14:215271AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.0002	0.02	
			CCV	ppm	1.000	99.4 %	90-110	
			CCB	ppm		-0.0047	0.02	
Mercury	245.1	10/07/14:215280AC	ICV	ppb	4.000	99.8 %	90-110	
			ICB	ppb		-0.03	20	
			CCV	ppb	4.000	98.8 %	90-110	

November 3, 2014
 City of El Paso de Robles

Lab ID : CC 1483551
 Customer : 8-322

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Mercury	245.1	10/07/14:215280AC	CCB	ppb		-0.03	20	
Arsenic	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 94.0 % 112 % 138 % 19.1% 113 %	 <0.5 85-115 75-125 75-125 ≤20 75-125	 435
Boron	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 200.0 200.0 200.0 200.0 200.0	 ND 93.6 % 106 % 136 % 19.9% 103 %	 <5 85-115 75-125 75-125 ≤20 75-125	 435
Cadmium	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 92.9 % 106 % 125 % 16.0% 106 %	 <0.3 85-115 75-125 75-125 ≤20 75-125	
Chromium	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 97.3 % 103 % 125 % 15.0% 101 %	 <0.5 85-115 75-125 75-125 ≤20 75-125	
Copper	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 96.1 % 89.3 % 180 % 21.9% 81.8 %	 <0.5 85-115 75-125 75-125 ≤20 75-125	 435 435
Lead	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 94.2 % 98.7 % 116 % 15.4% 99.3 %	 <0.5 85-115 75-125 75-125 ≤20 75-125	
Molybdenum	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 24.00 24.00 24.00 200.0 24.00	 ND 97.9 % 95.9 % 133 % 23.0% 105 %	 <1 85-115 75-125 75-125 ≤20 75-125	 435 435
Nickel	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 96.1 % 97.8 % 124 % 18.4% 100 %	 <0.5 85-115 75-125 75-125 ≤20 75-125	
Phosphorus	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg	 200.0 200.0 200.0 200.0	 ND 94.1 % -357 % 1860 % 25.2%	 <5 80-120 <¼ <¼ ≤30	

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Phosphorus	3050	10/06/14:211729amb	PDS	mg/kg	200.0	-179 %	75-125	430
Selenium	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 94.6 % 122 % 157 % 21.3% 126 %	 <0.5 85-115 75-125 75-125 ≤20 75-125	 435 435 430
Zinc	3050	10/06/14:211729amb (VI 1443598-001)	Blank LCS MS MSD MSRPD PDS	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 40.00 40.00 40.00 200.0 40.00	 ND 94.9 % 4.8 % 166 % 24.7% 17.2 %	 <1 85-115 <¼ <¼ ≤20 75-125	 435 430
Mercury	7471	10/06/14:211775AC (CC 1483492-001)	Blank LCS MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg	 0.2500 0.2500 0.2500 0.2500	 ND 108 % 9.4 % 5.2 % 0.010	 <0.03 85-115 75-125 75-125 ≤0.03	 435 435
Copper	RCRA	10/30/14:212813AC	ExBlk PDS	mg/L mg/L	 4.000	 -0.0114 115 %	 0.05 75-125	
Selenium	RCRA	10/30/14:212813AC	ExBlk PDS	mg/L mg/L	 4.000	 0.036 117 %	 0.1 75-125	
Wet Chem								
% Solids	2540G	10/07/14:211821jmg (CC 1483551-001)	Blank Dup	% %	 	 ND 19.7%	 <0.1 23.9	
Nitrate	300	10/06/14:211804mca (CC 1483513-001) (CC 1483551-001)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	 200.0 396.8 399.2 99.80 400.0 398.4 99.60	 ND 92.4 % 46.4 % 79.4 % 52.1 % 78.8 % 110 % 31.9%	 <4 85-115 19-212 19-212 ≤33 19-212 19-212 ≤33	 435
	300.0	10/06/14:215498SBL	CCV CCV	ppm ppm	20.00 20.00	93.6 % 92.7 %	90-110 90-110	
Nitrogen, Total Kjeldahl	351.2	10/28/14:212656jmg (CC 1483613-001)	Blank LCS MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg	 600.0 483.9 500.0 500.0	 ND 90.9 % -352 % -110 % 8.7%	 <50 31-149 <¼ <¼ ≤80	
pH	4500HB	10/08/14:215388CJJ	CCV CCV	units units	8.000 8.000	99.9 % 100 %	95-105 95-105	
Ammonia Nitrogen	4500NH3B	10/22/14:212483CJJ (CC 1483513-001)	Blank LCS MS MSD MSRPD	mg/kg mg/kg mg/kg mg/kg mg/kg	 141.5 148.5 147.1 147.1	 ND 91.2 % 121 % 437 % 9.1%	 <7.55 75-127 75-125 <¼ ≤26.5	
	4500NH3G	10/23/14:216588AMB	CCB CCV CCB CCV	mg/L mg/L mg/L mg/L	 2.000 2.000	 0.080 107 % 0.136 103 %	 0.2 90-110 0.2 90-110	
pH	9045C	(CC 1483551-001)	Dup	units		0.3%	5.84	
Nitrogen, Total Kjeldahl	EPA351.2	10/29/14:216475AMB	CCB CCV	mg/L mg/L	 5.000	 0.420 95.1 %	 0.5 90-110	

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem Nitrogen, Total Kjeldahl	EPA351.2	10/29/14:216475AMB	CCB CCV	mg/L mg/L	5.000	0.398 92.5 %	0.5 90-110	
Definition								
PDS	: PDS failed, matrix - Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.							
ICV	: Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.							
ICB	: Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.							
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.							
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.							
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.							
ExBlk	: TCLP/STLC Extraction Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.							
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.							
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.							
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.							
ND	: Non-detect - Result was below the DQO listed for the analyte.							
<¼	: High Sample Background - Spike concentration was less than one fourth of the sample concentration.							
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.							
Explanation								
430	: Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte.							
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.							



October 20, 2014

City of El Paso de Robles
Attn: Chris Slater - Wastewater Division
3200 Sulpher Springs Rd.
Paso Robles, CA 93446

Subject: Subcontract Analysis for FGL Lab No. CC 1483551

Enclosed please find results for the following sample(s) which were received by FGL.

- Sub Contracted-Oil & Grease

Please note that this analysis was performed by Babcock & Sons, Inc. (ELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

Cindy Aguirre  Digitally signed by Cindy Aguirre
Title: Customer Service Rep
Date: 2014-10-20

Enclosure



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 1 of 5
Project Name: No Project
Project Number: CC1483551-(8-322)

Report Date: 17-Oct-2014

Work Order Number: B4J0327
Received on Ice (Y/N): No Temp: °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>	
B4J0327-01	CC 1483551- (8-322)	Biosolid Composite	Sludge	10/02/14 08:41	J. Jackson	10/03/14 09:50	Ontrac

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
www.babcocklabs.com

CA ELAP No. 2698
EPA no. CA00102
LACSD No., 10119



BABCOCK Laboratories, Inc.

The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 2 of 5
Project Name: No Project
Project Number: CC1483551-(8-322)

Report Date: 17-Oct-2014

Work Order Number: B4J0327
Received on Ice (Y/N): No Temp: °C

Laboratory Reference Number

B4J0327-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
CC 1483551- (8-322) Biosolid	Sludge	10/02/14 08:41	10/03/14 9:50

<u>Analyte(s)</u>	<u>Result</u>	<u>RDL</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>Flag</u>
Solids							
Total Solids	48	0.10	%	SM 2540G	10/06/14 08:30	hgg	
Aggregate Organic Compounds							
Oil & Grease (HEM)	2.6	0.21	% dry	EPA 9071B	10/15/14 09:25	hgg	



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 3 of 5
 Project Name: No Project
 Project Number: CC1483551-(8-322)

Report Date: 17-Oct-2014

Work Order Number: B4J0327

Received on Ice (Y/N): No Temp: °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 14J0602 - Analyzed as received										
Blank (14J0602-BLK1)				Prepared & Analyzed: 10/06/14						
Total Solids	ND	0.10	%							
Duplicate (14J0602-DUP1)				Source: B4J0354-01 Prepared & Analyzed: 10/06/14						
Total Solids	9.5	0.10	%		9.3			1.38	25	



BABCOCK Laboratories, Inc.
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Client Name: FGL Environmental, Inc.
 Contact: Cindy Aguirre
 Address: 853 Corporation Street
 Santa Paula, CA 93060

Analytical Report: Page 4 of 5
 Project Name: No Project
 Project Number: CC1483551-(8-322)

Work Order Number: B4J0327

Report Date: 17-Oct-2014

Received on Ice (Y/N): No Temp: °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD Limit	Flag
Batch 14J0648 - Solvent Extraction.									
Blank (14J0648-BLK1)				Prepared & Analyzed: 10/15/14					
Oil & Grease (HEM)	ND	0.10	% wet						
LCS (14J0648-BS1)				Prepared & Analyzed: 10/15/14					
Oil & Grease (HEM)	0.388	0.10	% wet	0.400		97.0	70-130		
Duplicate (14J0648-DUP1)				Source: B4J0327-01 Prepared & Analyzed: 10/15/14					
Oil & Grease (HEM)	2.59	0.21	% dry		2.64			1.75	60
Matrix Spike (14J0648-MS1)				Source: B4J0327-01 Prepared & Analyzed: 10/15/14					
Oil & Grease (HEM)	4.06	0.21	% dry	0.830	2.64	172	45-187		



BABCOCK Laboratories, Inc.
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Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 5 of 5
Project Name: No Project
Project Number: CC1483551-(8-322)

Report Date: 17-Oct-2014

Work Order Number: B4J0327
Received on Ice (Y/N): No Temp: °C

Notes and Definitions

- ND: Analyte NOT DETECTED at or above the Method Detection Limit (if MDL is reported), otherwise at or above the Reportable Detection Limit (RDL)
- NR: Not Reported
- RDL: Reportable Detection Limit
- MDL: Method Detection Limit
- * / " : NELAP does not offer accreditation for this analyte/method/matrix combination

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted. Babcock Laboratories and its officers and employees assume no responsibility and make no warranty, express or implied, for uses or interpretations made by any recipients, intended or unintended, of this report.

Digitally signed by: Cindy Waddell
DN: CN = Cindy Waddell C = US O = Babcock
Laboratories OU = Project Manager Assistant
Date: 2014.10.20 09:47:35 -07'00'

cc:

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
www.babcocklabs.com

e-Standard.rpt
CA ELAP No. 2698
EPA no. CA00102
LACSD No., 10119



BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: FGL Environmental, Inc.
Contact: Cindy Aguirre
Address: 853 Corporation Street
Santa Paula, CA 93060

Analytical Report: Page 1 of 1
Project Name: No Project
Project Number: CC1483551-(8-322)

Work Order Number: B4J0327

Report Date: 17-Oct-2014

Received on Ice (Y/N): No Temp: °C

CHAIN OF CUSTODY
www.fglinc.com
Laboratory Copy (1 of 3)

Quarterly Subcontract to
Babcock & Sons, Inc.

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

803161006/2014

Client: First Growers Laboratory, Inc.
Address: PG Environmental, Inc.
851 Corporation St.
Santa Paula, CA 93060-3005
Phone: (805) 392-2039 Fax: (805) 325-4264
Contact Person:
Project Name: CC1483551 (8-322)
Purchase Order Number:
Quote Number:
Sample(s): J. JACKSON
Sampling Fee: _____ Pickup Fee: _____
Container Keep Date: / / Time: / /

Method of Sampling: Composite (C) Grab (G) _____
Type of Sample: Non-Food (NF) Ag Water (A/W)
Bact Type: Other (O) System (SYS) Source (SR) Waste (W) _____
Bact Reason: Routine (ROUT) Repeat (RP) Replac (RPL) _____
Other (O) Special (SPL) _____
Sub Contained Oil & Grease _____
Report Dry Weight _____
Box (G) _____

Step	Location Description	Date Sampled	Time Sampled
1	Bayshore	10/13/14	10:54

Remarks: No temp SWd 10/13/14 W
10/13/14 17:00 On-site
10/14/14 9:50
10/15/14 9:50

Received By: CINTELA Date: 10/15/14 Time: 9:50
Received By: JW Date: 10/15/14 Time: 9:50

Office & Laboratory: 853 Corporation Street, Santa Paula, CA 93060, Phone: (805) 392-2000, Fax: (805) 325-4172 / Ag Fax: (805) 392-2063
Office & Laboratory: 2500 Stepanoch Road, Stockton, CA 95215, Phone: (209) 942-0182, Fax: (209) 942-0423
Office & Laboratory: 563 E. Linn, Chico, CA 95926, Phone: (530) 343-5818, Fax: (530) 343-3807
Office & Laboratory: 3442 Empress Drive, Suite D, San Luis Obispo, CA 93401, Phone: (805) 783-2940, Fax: (805) 783-2912
Office & Laboratory: 9415 W. Cochen Avenue, Visalia, CA 93291, Phone: (559) 734-9473, Fax: (559) 734-9435

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
F 951 653 1662
www.babcocklabs.com

CA ELAP No. 2698
EPA no. CA00102
LACSD No., 10119

Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC 1483551 CH VI

1. Number of ice chests/packages received: _____ Shipping tracking # _____

2. Were samples received in a chilled condition? Temps: 70 / _____ / _____ / _____ / _____
Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

- 3. Do the number of bottles received agree with the COC? Yes No N/A
- 4. Were samples received intact? (i.e. no broken bottles, leaks etc.) Yes No
- 5. VOAs checked for Headspace? Yes No N/A
- 6. Were sample custody seals intact? Yes No N/A
- 7. If required, was sample split for pH analysis? Yes No N/A
- 8. Were all analyses within holding times at time of receipt? Yes No
- 9. Verify sample date, time sampler Yes No

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.

Sample Receipt Review completed by (initials): [Signature]

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: _____ / _____ / _____ / _____ / _____

Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/

2. Shipping tracking numbers:

D10010720325673/514

- 3. Do the number of bottles received agree with the COC? Yes No N/A
- 4. Were samples received intact? (i.e. no broken bottles, leaks etc.) Yes No
- 5. Were sample custody seals intact? Yes No N/A

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

- 1. Were all requested analyses understood and acceptable? Yes No
- 2. Did bottle labels correspond with the client's ID's? Yes No
- 3. Were all bottles requiring sample preservation properly preserved? Yes No N/A FGL
- 4. VOAs checked for Headspace? Yes No N/A
- 5. Have rush or project due dates been checked and accepted? Yes No N/A

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): [Signature]

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
Initiated By: _____ Date: _____
Problem: _____
Resolution: _____

2. Person Contacted: _____
Initiated By: _____
Problem: _____
Resolution: _____

(8-322)
City of El Paso de Robles
CC 1483551

SRP-10/03/2014-12:10:38

(Please use the back of this sheet for additional con-
contacts)

ere

SECTION VI: 2014 NON-COMPLIANCE SUMMARY

Treatment

In 2014 removal efficiencies for BOD₅ and Suspended Solids were typically greater than ninety (90) percent. Due to water conservation, influent organic strength now exceeds the original design parameters of the plant for the current flow. The City has a very hard and salty water supply. The current trickling filter plant does not remove nitrogen, so the existing plant is not capable of complying with the City’s new Total Nitrogen effluent limit. The City is in the 21st month of a 30 month construction project and is running on two plastic media trickling filters. During the summer months it has been difficult to meet the BOD requirements for effluent discharge. The addition of polymer to the secondary clarifiers for coagulation has helped some. Also during construction the project has undergone several bypass shutdowns for flow diversion to enable construction of the new plant. This has caused some issues with disinfection for MPN’s. The City had the following effluent violations in 2014:

Monthly Effluent Violations - 2014

Sodium (CAT 1)	8 events	May, June, July, Aug., Sept., Oct., Nov., Dec.
TDS (CAT 1)	6 events	May, July, Aug., Sept., Oct., Nov.
Chloride	1 event	October
BOD (CAT 1)	22 events	May thru Dec. Average Monthly Weekly Daily Max, % Removal
MPN 23/100ml	36 events	May (2) July(2), Aug.(4), Sept.(4), Oct.(7) Nov. (7), Dec. (10)

Quarterly Violations – 2014

January, April, July, October

Copper (CAT 2)	4 events	Jan., April, July, August
Acute Toxicity	4 events	Jan., April, July, August
Chronic Toxicity	4 events	Jan., April, July, August

SECTION VII: LABORATORY INFORMATION

Under California State laws governing environmental laboratories which report results to the State, E.P.A., Regional Water Quality Control Board and various other regulatory agencies, the City of Paso Robles utilized services of Fruit Growers Laboratories (FGL) of Ventura, California for the year 2014. DMR-QA 33 WP-231 Pollution Proficiency Testing report was done for 2014 through ERA. This testing will no longer be required by the State but will continue to be done on a voluntary basis for quality control.

The selected clinical laboratory Fruit Growers Laboratory (FGL) provided quality wastewater analysis and is accredited in the State of California, Department of Health Services Environmental Laboratory Accreditation Program (ELAP). Analytical reporting includes results, detection limits for reporting (DLR), methods utilized, and the start / completion dates of the analyses.

FGL

Santa Paula,	CA NELAP: No. 01110CA
San Luis Obispo	CA ELAP: No. 2775

Fruit Growers Laboratories subcontracted out the whole effluent toxicity to Aquatic Bioassay & Consulting Laboratories, Inc. of Ventura, California. Copies of those reports are attached.

Copies of the Monthly, Quarterly, and Semi Annual Reports for 2014 are on file with the E.P.A. and Central Coast RWQCB (CIWQS). All reports were submitted complete and on time.

On September 17, 2014, the City's hired a full time Laboratory Analyst to head up the new Wastewater Treatment Plant Laboratory. Mark Scandalis is a Grade III Lab Technician and has been busy setting up the new equipment, calibrating all equipment, writing standard operating procedures for all Laboratory procedures in preparation for ELAP Certification process. Vince Gaita acquired his Lab Analyst Grade I certification. The City is planning to move him into the laboratory in 2015 to help cover the lab seven days per week. When the City's lab becomes ELAP certified, the City will conduct most of its testing in house. The remaining testing will still be sent out to FGL for analysis.

Nick Kamp
Paso Robles Wastewater Plant
3200 Sulphur Springs Rd.
Paso Robles, CA 93446
USA

WP-231  **Final Report**

WatR™ Pollution Proficiency Testing

WatR™ Pollution Study

Open Date: 04/14/14

Close Date: 05/29/14

Report Issued Date: 06/02/14



A Waters Company

June 2, 2014

Nick Kamp
Paso Robles Wastewater Plant
3200 Sulphur Springs Rd.
Paso Robles, CA 93446

Enclosed is your final report for ERA's WP-231 WatR™ Pollution Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WP-231 WatR™ Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the current TNI Fields of Proficiency Testing (FoPT) tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the current TNI FoPT tables. If the analyte is not included in the TNI FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have many years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be useful in helping you work through your technical issues.

At the request of the TNI Accreditation Council, we have included a Laboratory Exception Report that includes a list of all analytes reported with less than qualifiers when the assigned value was greater than "0." In addition, because we have received many requests from laboratories, this report also includes a list of all analytes with "Not Acceptable" evaluations.

Some states have elected not to convert to the 2009 TNI Standards at this time. If you have released your results to a state that has retained the 2003 NELAC Evaluation Criteria, your final report will include a section that evaluates the results according to the 2003 Standard in addition to the 2009 TNI Standards.

Thank you for your participation in ERA's WP-231 WatR™ Pollution Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink, appearing to read "Kristina Sanchez", is written over a faint, circular watermark or stamp.

Kristina Sanchez
Quality Officer

attachments



A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type	Evaluation Type
California WRB (DMRQA)	Renee Spears / 916-341-5583	All Analytes	2009 TNI
EPA Region 9	Andrew Lincoff / 510-412-2330	All Analytes	2009 TNI

Study # : WP-231

WP-231 Definitions & Study Discussion

Study Dates: 04/14/14 - 05/29/14

Report Issued: 06/02/14

WP Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current TNI Fields of Proficiency Testing (FoPT) tables. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2009 TNI Standards. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current USEPA/NELAC FoPT tables, or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.

- Not Acceptable = Reported Value falls outside the Acceptance Limits.

- No Evaluation = Reported Value cannot be evaluated.

- Not Reported = No Value reported.

The Method Description is the method the laboratory reported to ERA.

WP Study Discussion

ERA's WP-231 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) tables.

ERA's WP-231 WatR™Pollution study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2009 TNI PT Standard and the criteria contained in the most current TNI FoPT tables.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WP-231 WatR™Pollution study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™Pollution Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.



A Waters Company

WP-231 Laboratory Exception Report

Nick Kamp
Plant Operator
Paso Robles Wastewater Plant
3200 Sulphur Springs Rd.
Paso Robles, CA 93446
(805) 237-3865

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

CA01189
C443301
06/02/14
04/14/14 - 05/29/14

2009 TNI Evaluation Checks

There are no values reported with < where the assigned value was greater than 0.

2009 TNI Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01
16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Page 1 of 1
Study # : WP-231





Final Report Results For Laboratory Paso Robles Wastewater Plant



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Page 1 of 1
Study #: W/P-23 



2009 TNI Evaluation Report

Study: **WP-231**

ERA Customer Number: **C443301**

Laboratory Name: **Paso Robles Wastewater
Plant**

Inorganic Results





A Waters Company

WP-231 2009 TNI Evaluation Final Complete Report

Nick Kamp
Plant Operator
Paso Robles Wastewater Plant
3200 Sulphur Springs Rd.
Paso Robles, CA 93446
(805) 237-3865

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

CA01189
C443301
06/02/14
04/14/14 - 05/29/14

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Hardness (cat# 580)

1980	Total Suspended Solids	mg/L	49.6	55.2	43.4 - 62.8	Acceptable		4/21/2014	-0.574	51.7	3.89	
1035	Calcium	mg/L		45.3	38.5 - 52.1	Not Reported				44.8	1.98	
1085	Magnesium	mg/L		5.79	4.92 - 6.66	Not Reported				5.70	0.282	
1550	Calcium Hardness as CaCO3	mg/L		113	96.0 - 130	Not Reported				112	5.94	
1755	Total Hardness as CaCO3	mg/L		137	116 - 158	Not Reported				135	5.96	

WP pH (cat# 577)

1900	pH	S.U.	7.00	6.94	6.74 - 7.14	Acceptable		4/21/2014	1.29	6.93	0.0505	
------	----	------	------	------	-------------	------------	--	-----------	------	------	--------	--

WP Demand (cat# 578)

1530	BOD	mg/L	45.0	39.4	20.1 - 68.8	Acceptable		4/30/2014	0.869	39.1	6.82	
1555	CBOD	mg/L		35.7	15.3 - 56.1	Not Reported				36.6	7.08	
1565	COD	mg/L	71.0	83.4	44.8 - 79.4	Acceptable		4/30/2014	1.28	62.2	6.85	
2040	TOC	mg/L		25.0	20.4 - 29.6	Not Reported				24.8	1.60	

WP Total Residual Chlorine (cat# 587)

1940	Total Residual Chlorine	mg/L	1.20	1.29	0.957 - 1.53	Acceptable		4/21/2014	-0.444	1.24	0.0679	
------	-------------------------	------	------	------	--------------	------------	--	-----------	--------	------	--------	--



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01
16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Page 3 of 3
Study #: WP-231



SECTION VIII: TABULAR & GRAPHICAL INFORMATION

**City of Paso Robles Wastewater
2014 Annual Report
Influent and Final Effluent**

Figure A - 2014 Annual Overall Report, (Averages)

Date	Inf. Flow/Mo.	Inf. Flow day avg.	Inf. BOD	Eff. Sett. Solids	Eff. Total Coliform	Eff. Temp.	Eff. Min. D.O.	Eff. pH Min.	Eff. pH Max.	Eff. BOD	Eff. TSS	Eff. Sulfate	Eff. Sodium	Eff. Chloride	Eff. TDS	Eff. O&G	BOD % Removal	SS % Removal	lbs. of Cl2 / day
2014	MG	MG	mg/L	ML/L	Mo. Avg. of MPN	*F	mg/L	units	units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	%	lbs.
Jan	85.38	2.75	340	<.1	12	55	3.6	7.3	7.6	10	9	126	233	312	1000	ND	97	96	551
Feb	79.21	2.82	326	<.1	17	59	3.6	6.9	7.6	14	8	140	248	314	1040	ND	95	97	597
Mar	87.01	2.8	360	<.1	8	63	2.4	7	7.6	15	8	129	224	287	980	ND	96	97	596
Apr	78.67	2.63	416	<.1	10	65	2.6	7.5	7.8	21	11	134	244	329	1050	ND	94	96	551
May	81.71	2.63	500	<.1	18	68	2.9	7	7.6	33	11	155	267	320	1130	4	93	95	601
Jun	79.67	2.65	454	<.1	15	71	2.1	7.6	7.8	31	15	146	256	300	1080	5	92	94	651
Jul	82.95	2.69	363	<.1	20	74	2.4	7.4	7.8	32	22	125	284	340	1160	5	91	90	780
Aug	81.49	2.63	533	<.1	22	72	2.7	7.6	7.8	36	23	149	261	350	1130	4	93	91	794
Sep	79.35	2.64	398	<.1	52	71	2.1	7.1	7.4	31	19	143	280	320	1160	5	92	94	822
Oct	80.64	2.59	365	<.1	67	67	0	7.2	8	44	27	130	291	370	1170	7	88	87	884
Nov	75.81	2.52	627	<.1	42	62	1.1	7.2	7.9	37	21	132	286	350	1140	4	92	93	894
Dec	80.13	2.58	293	<.1	88	60	2.2	7	7.9	44	30	133	282	320	1110	5	84	91	923

Raw Influent Monthly Averages - 2014

Effluent 2014

Date	Raw Influent Grab		Raw Influent Composite			NH3 mg/l	Un-ionized NH3		Toxicity	
	pH		NH3	Inf. TSS	BOD		NH3	Acute	Chronic	
	Min.	Max.	mg/L	mg/L	mg/L		mg/l	TUa	TUa	
Jan	7.3	8.1	40	247	340	20.6	0.124	Fail	>1.00	
Feb	7.2	7.9	46	285	326					
Mar	7	7.7	53	394	360					
Apr	7.4	8.2	43	331	416	23.9	0.232	Fail	>1.00	
May	7.3	7.9	no samples	283	500					
Jun	7.6	7.8	32	306	454					
Jul	7.3	7.7	34	281	363	38	1.04	Fail	>1.00	
Aug	7.3	7.8	40	267	533					
Sep	7.3	7.8	39	298	398					
Oct	7.2	8	33	258	365	45	0.914	Fail	>1.00	
Nov	7.3	7.8	43	365	627					
Dec	7.4	7.8	51	332	293					

**City of Paso Robles Wastewater
2014 Annual Report
Influent and Final Effluent**

Figure B

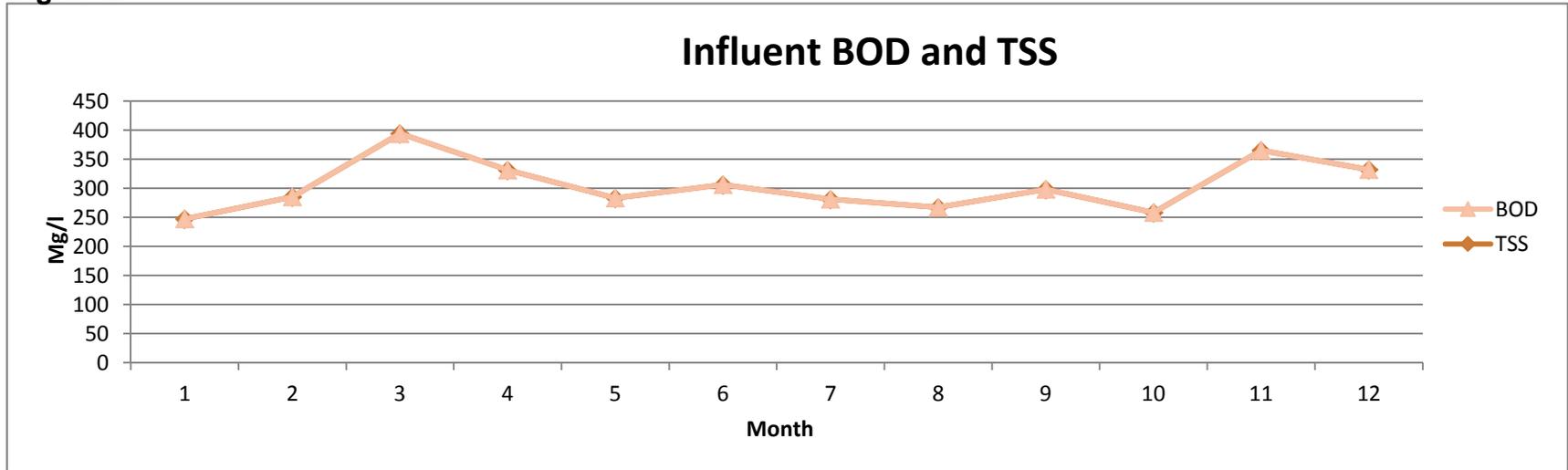
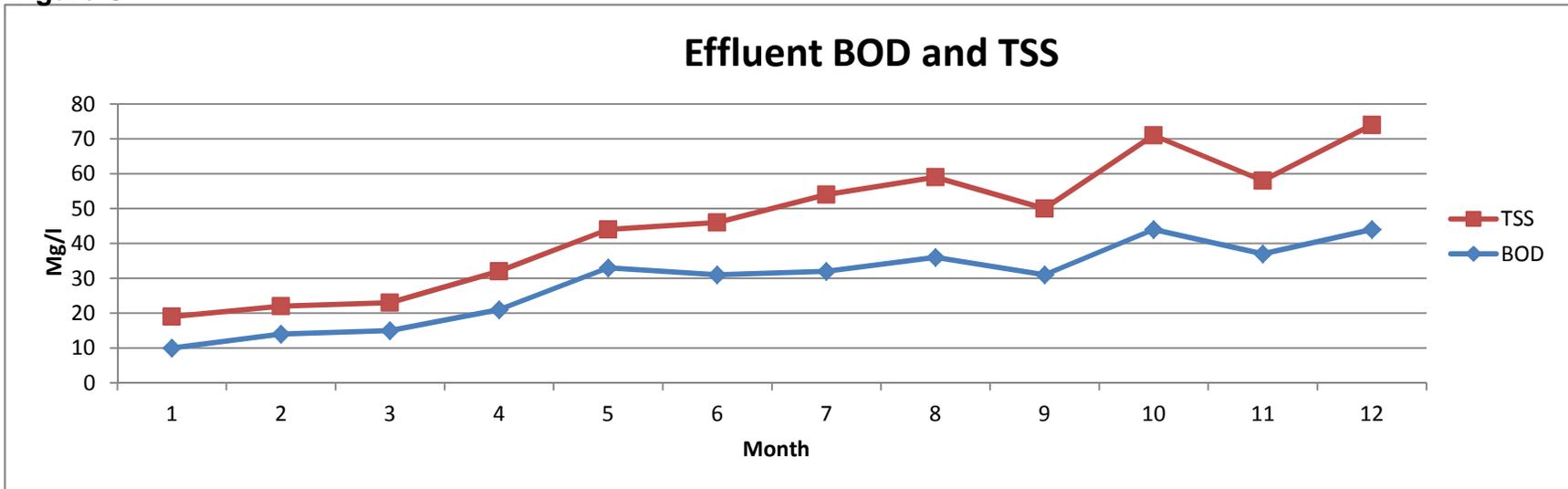
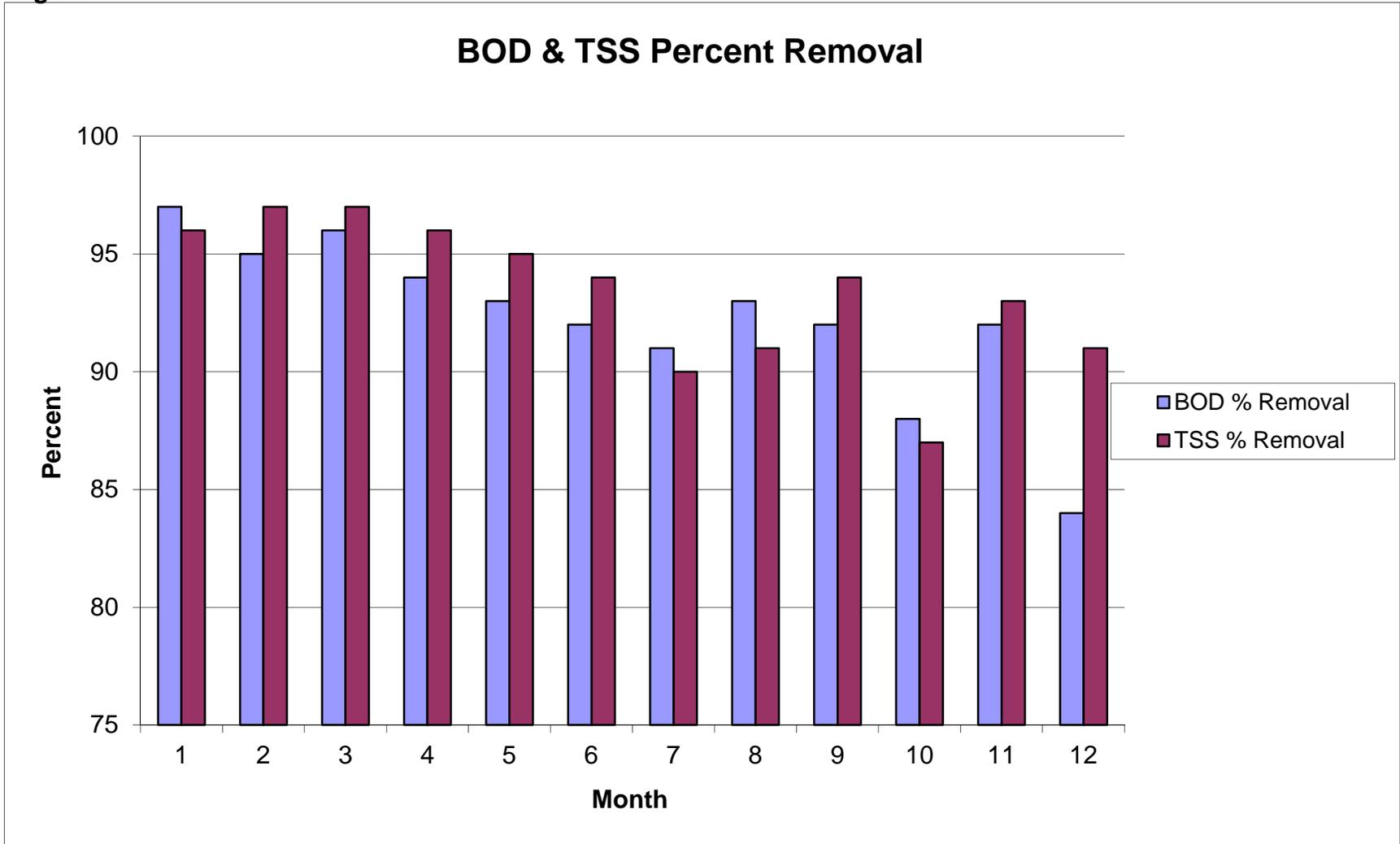


Figure C



**City of Paso Robles Wastewater
2014 Annual Report
Influent and Final Effluent**

Figure D



**City of Paso Robles Wastewater
2014 Annual Report
Influent and Final Effluent**

Figure E

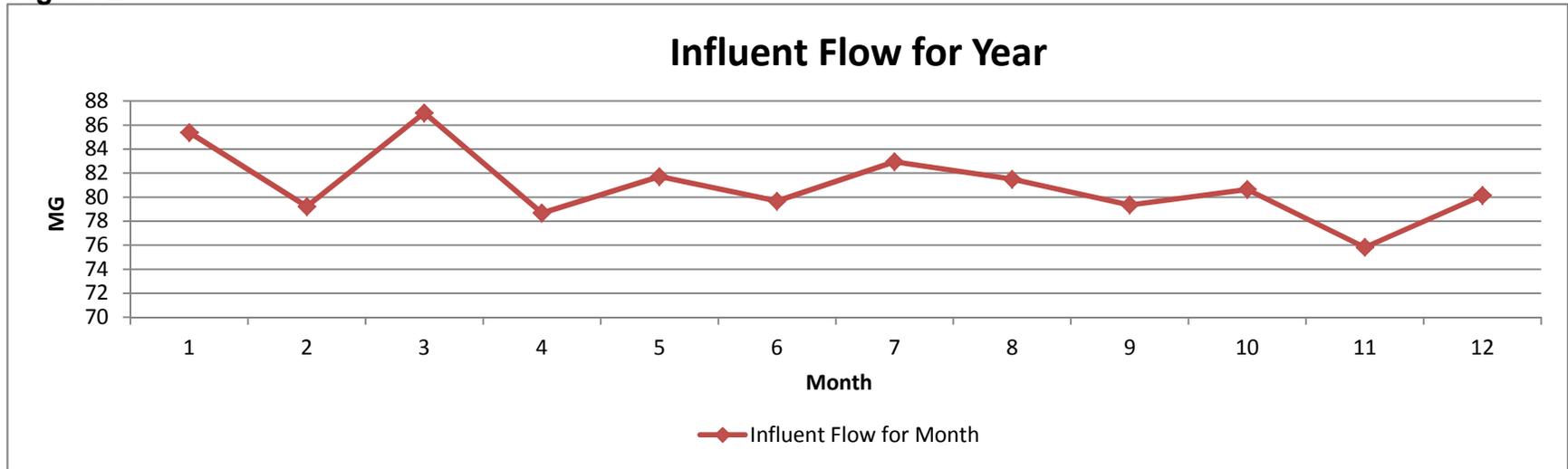
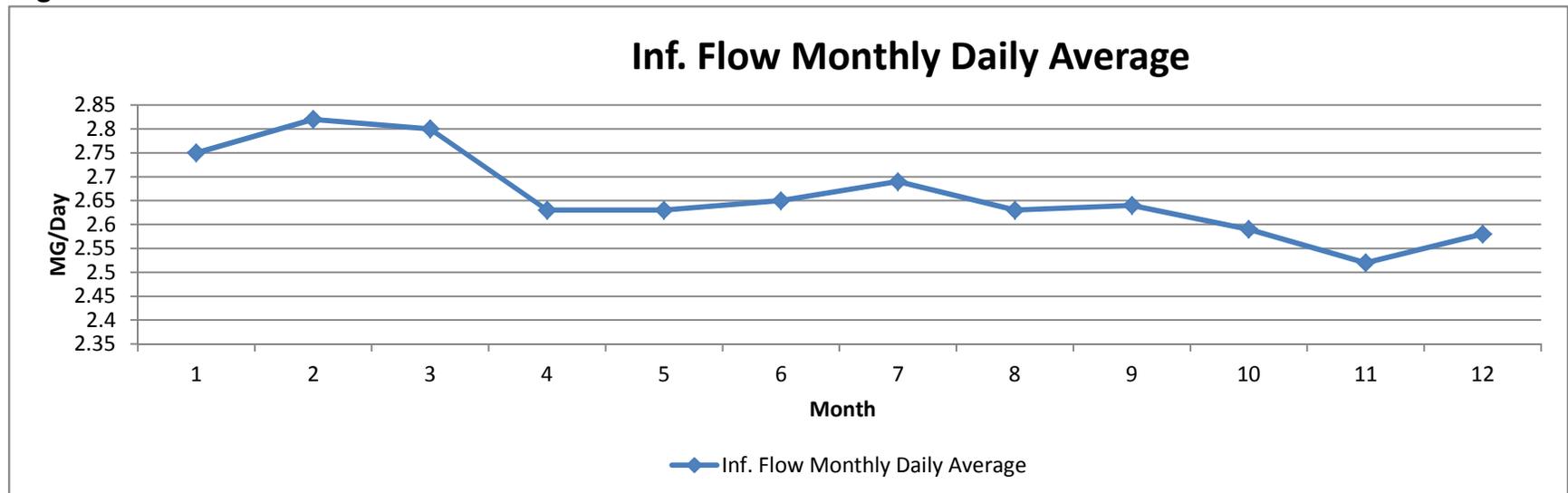


Figure F



**City of Paso Robles Wastewater
2014 Annual Report
Influent and Final Effluent**

Figure G

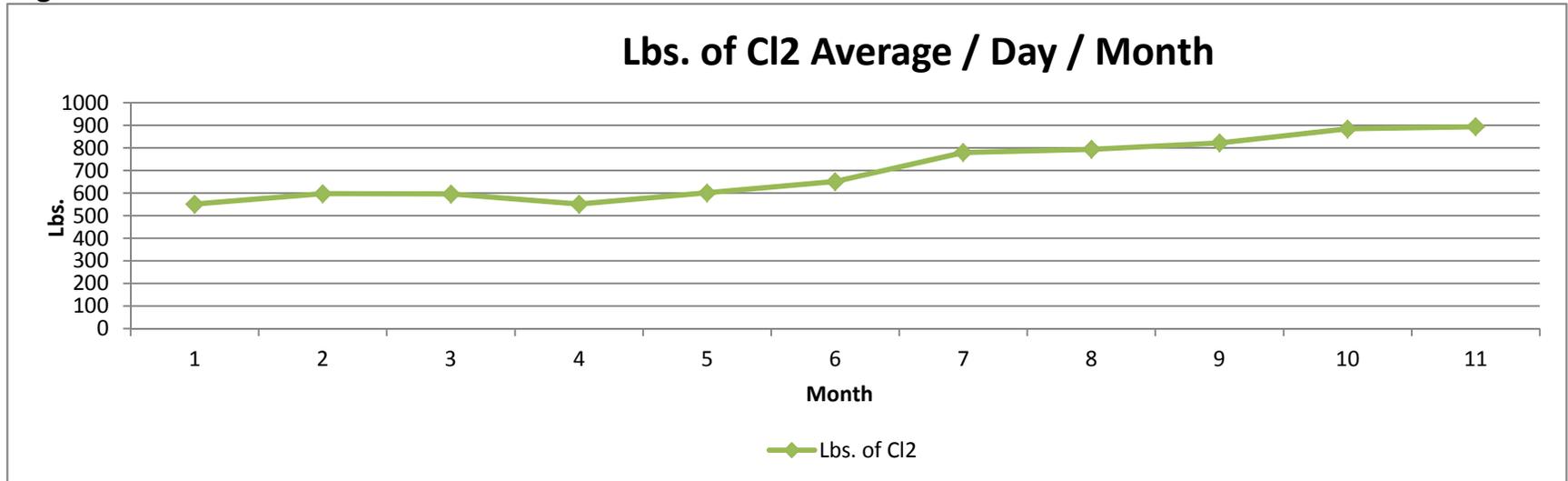


Figure H

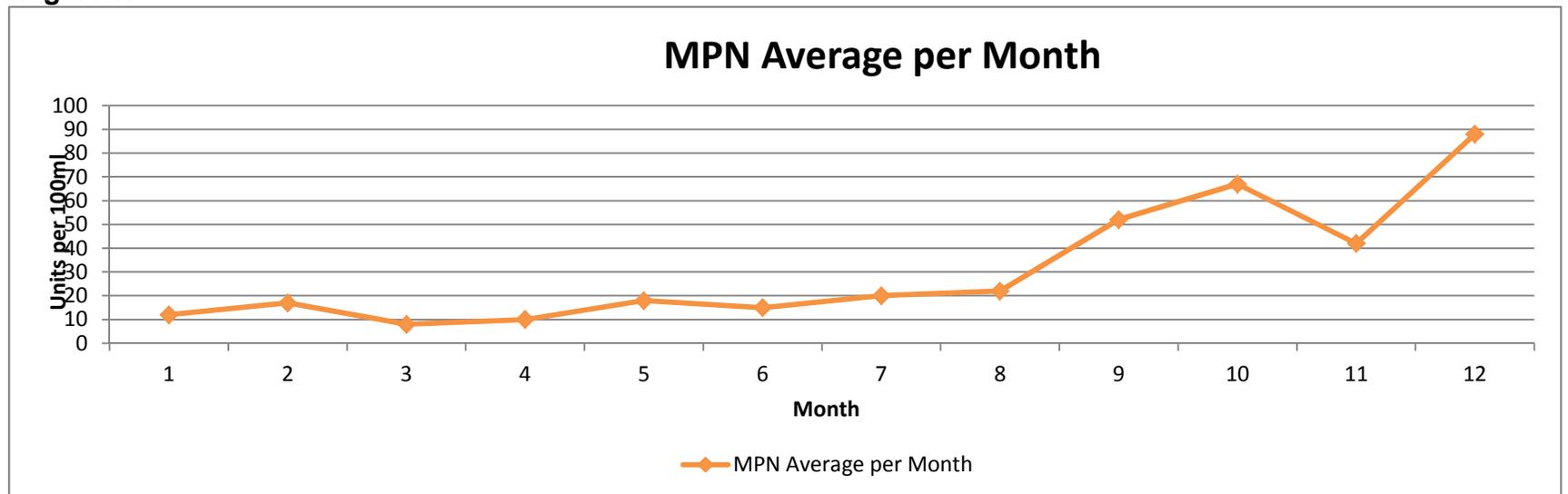


Figure I - Salts Monitoring Results

Year: 2014													
Constituent (mg/l)	Eff. Limit	Month											
		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Effluent Readings													
TDS	1115	1000	1040	980	1050	1130	1080	1160	1130	1160	1170	1140	1110
SODIUM	255	233	248	224	244	267	256	284	261	280	291	286	282
CHLORIDE	355	312	314	287	329	320	300	340	350	320	370	350	320
SULFATE	200	126	140	129	134	155	146	125	149	143	130	132	133

Downstream Monitoring Well GW 2 Quarterly Results 2014													
TDS		970			1390			1000			1200		
SODIUM		177			199			143			283		
CHLORIDE		151			190			149			360		
SULFATE		199			409			199			72		

Upstream Monitoring Well GW 1 Quarterly Results 2014													
TDS		730			740			870			890		
SODIUM		118			11			115			140		
CHLORIDE		102			108			121			132		
SULFATE		150			165			192			194		

Red = Indicates result over effluent discharge limit.

Figure J - Effluent Readings

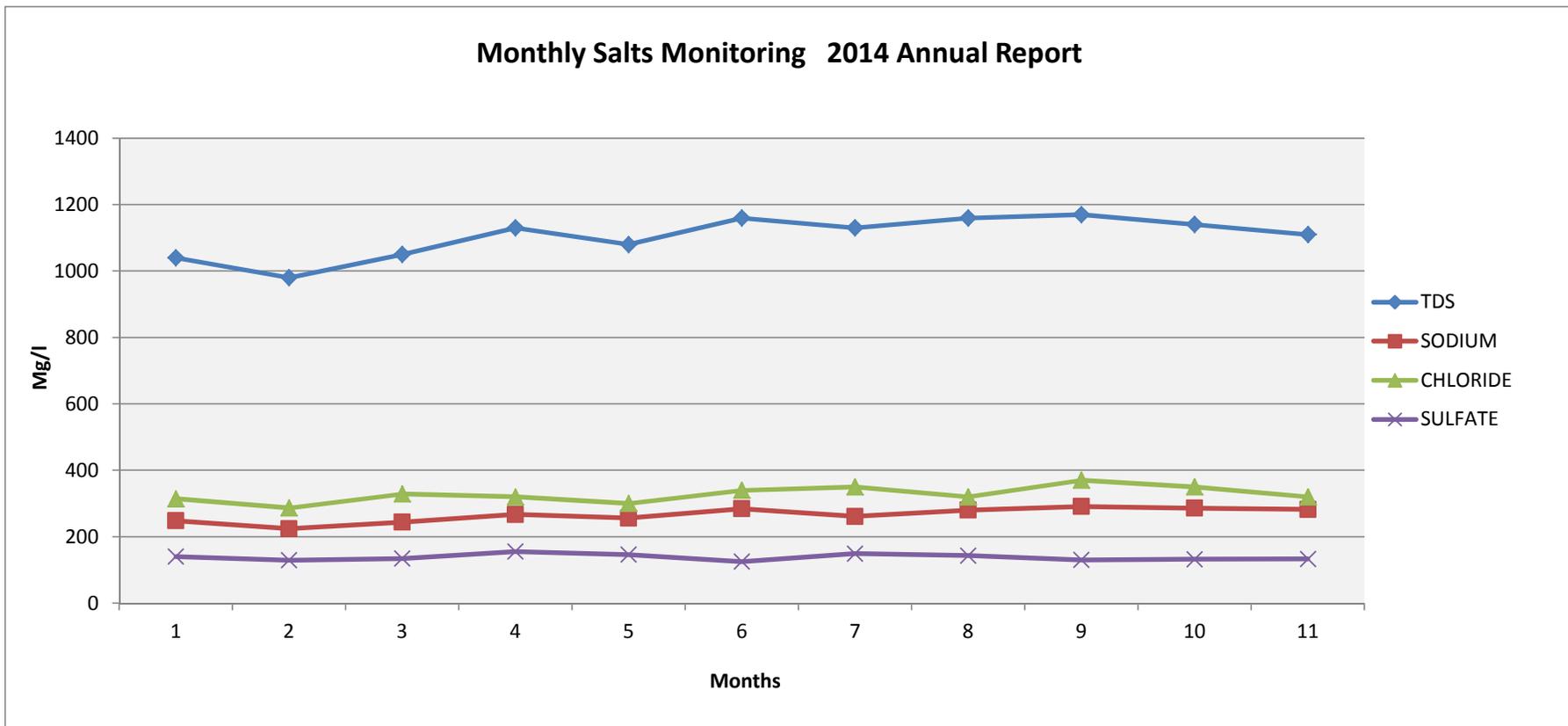


Figure K - Downstream Monitoring Well GW 2 Quarterly Results

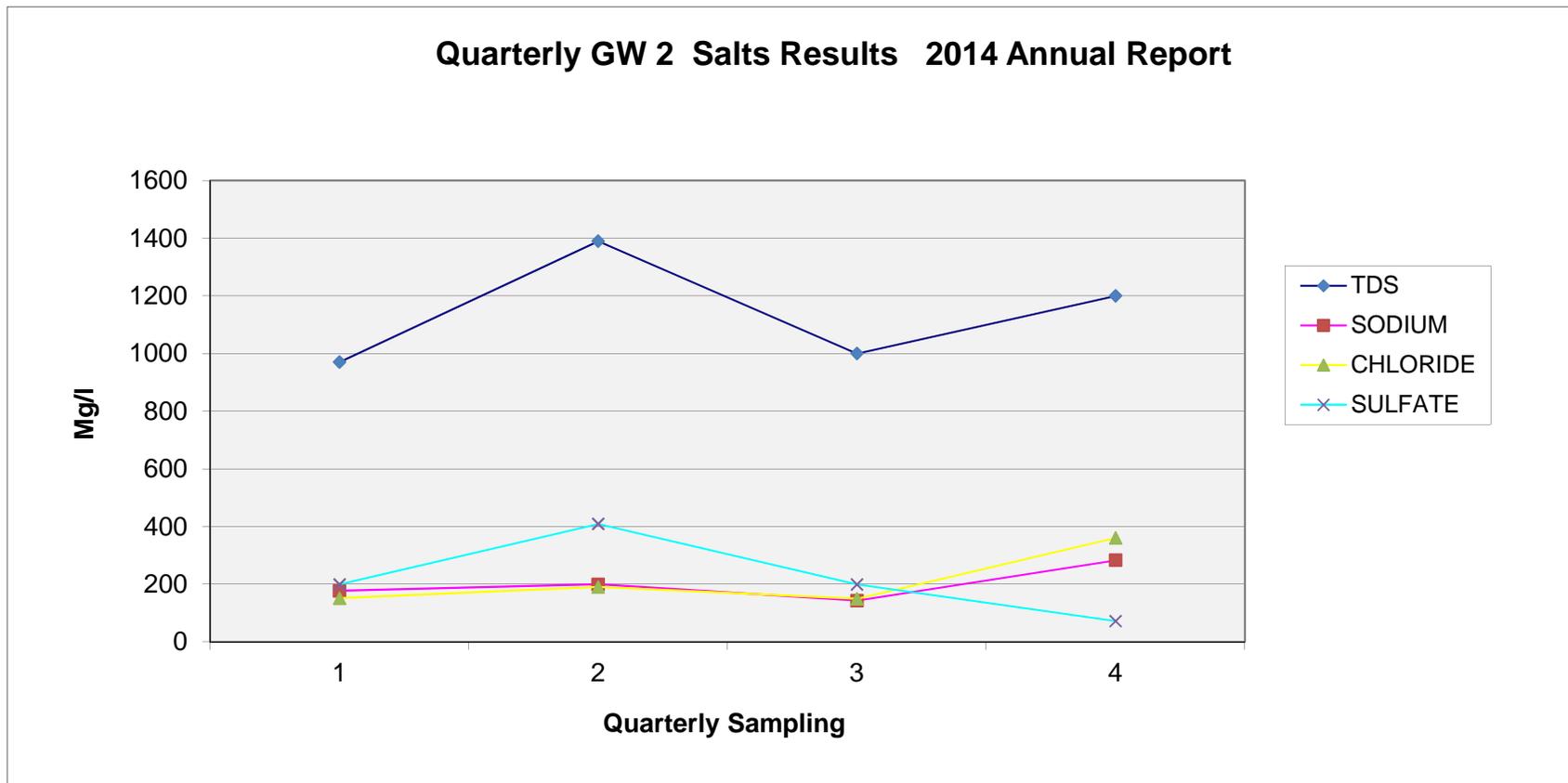


Figure L: Upstream Monitoring Well GW 1 Quarterly Results

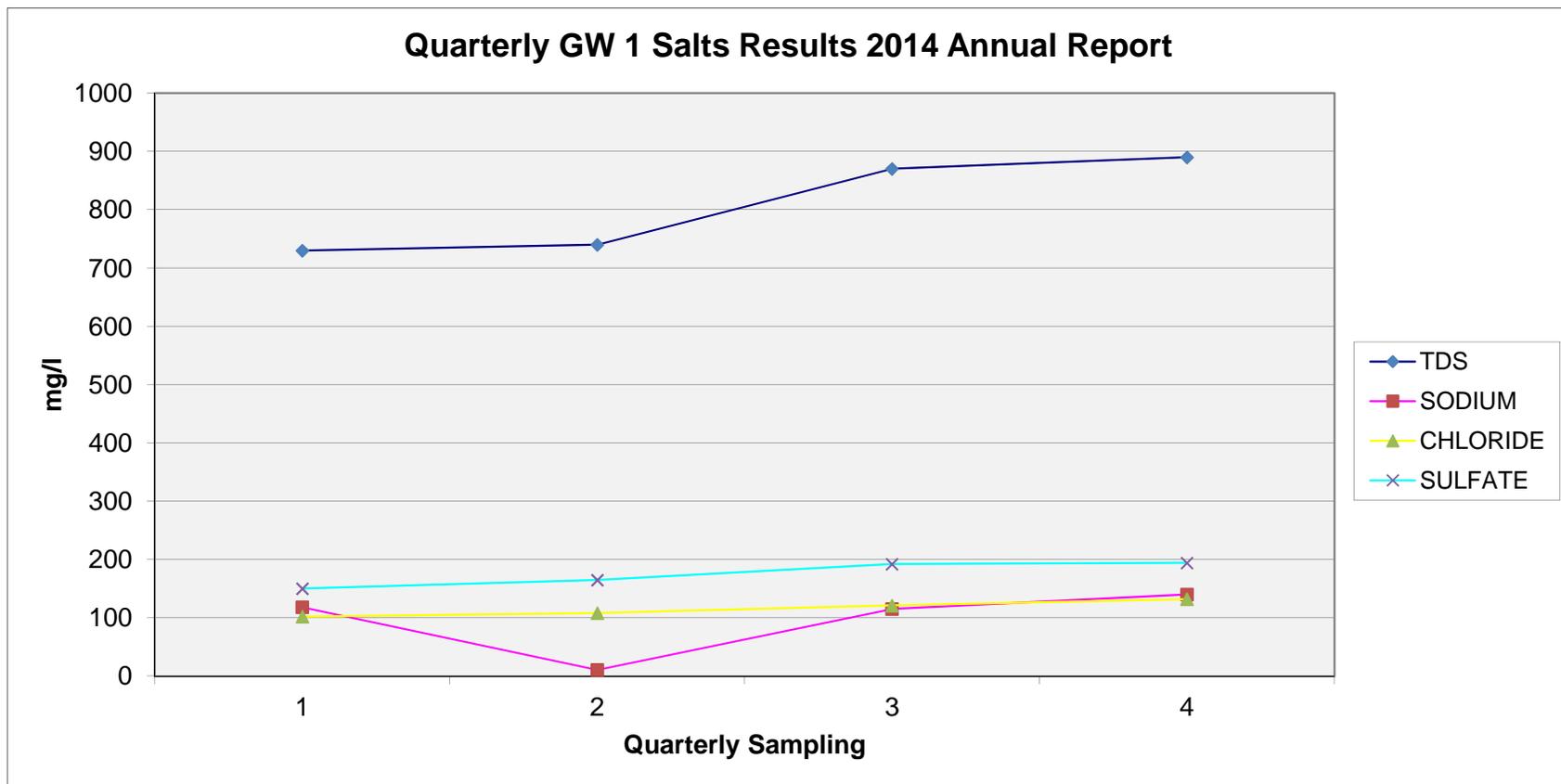


Figure M - 2014 QUARTERLY CONSTITUENT REPORT

Toxic Pollutants

CONSTITUENT ug/L	Final Effluent Limits		MONTH			
	LIMIT	LIMIT	JAN.	APRIL	JULY	OCT.
EFFLUENT READINGS	AMEL ug/l**	MDEL ug/l**				
COPPER	21	39	24	30	41	55
SELENIUM	4	8.6	4	ND	3	4
NITROGEN, TOTAL	59	59(interim)	26	40	48	39
BROMOFORM	4.3	8.6	ND	ND	ND	ND
CHLORODIBROMO-METHANE	0.4	0.8	ND	ND	ND	ND
DICHLOROBROMO-METHANE	0.56	1.6	ND	ND	ND	ND
BIS (2-ETHYLHEXYL) PHTHALATE	1.8	5.4	ND	ND	ND	ND
TOXIC CHRONIC	>1TUc		>1	>1	>1	>1
TOXIC ACUTE	Pass/Fail		fail	fail	fail	fail

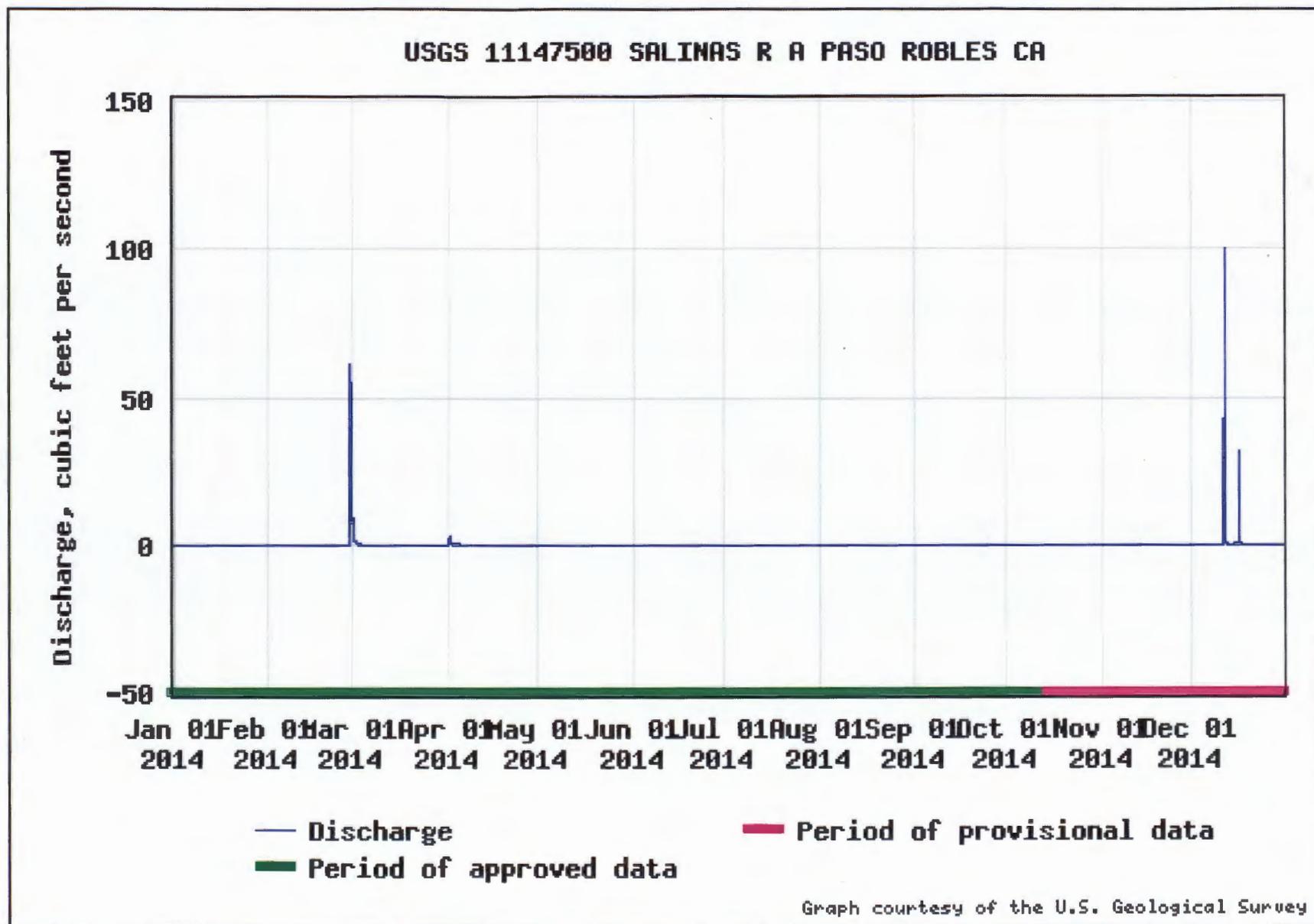
**City of Paso Robles
Wastewater Treatment Plant
2014**

Figure N - Monthly Average Daily Flows

YEAR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
MONTH	MGD	MGD	MGD	MGD	MGD						
JANUARY	3.3007	3.2060	3.0733	2.9486	3.2809	2.9077	3.0777	2.9400	2.7993	2.8013	2.7587
FEBRUARY	2.8441	3.1878	2.8882	3.0077	3.0627	2.9652	3.0027	2.9200	2.7967	2.7682	2.8272
MARCH	2.7434	3.1130	3.0060	3.0345	2.9780	2.9216	2.9271	3.1000	2.8251	2.7986	2.8097
APRIL	2.7315	2.9341	3.0881	3.0067	2.9448	2.8760	2.8890	2.8900	2.8446	2.8298	2.6331
MAY	2.7530	2.9111	2.9742	2.9275	2.9670	2.8858	2.8498	2.8800	2.8110	2.8937	2.6365
JUNE	2.7251	2.8768	2.9978	3.0480	2.9764	2.8602	2.8825	2.8800	2.8573	2.8592	2.6546
JULY	2.7843	2.8451	2.9842	3.0274	3.0095	2.8820	2.9838	2.9200	2.9214	3.0426	2.6934
AUGUST	2.8495	3.0025	3.0465	3.0155	2.9860	2.8767	2.9805	2.8500	2.8779	2.8662	2.6370
SEPTEMBER	2.7829	2.8815	2.9823	3.0005	2.9851	2.8682	2.8890	2.8400	2.8785	2.8550	2.6441
OCTOBER	2.8964	2.8564	2.9781	2.9855	2.9904	2.9844	2.9243	2.8700	2.8778	2.8366	2.5999
NOVEMBER	2.8707	2.8338	2.9504	3.0015	2.9547	2.8750	2.8850	2.8500	2.8021	2.8068	2.5023
DECEMBER	2.9851	2.8602	2.8932	2.9710	2.9195	2.9312	3.0276	2.7500	2.8172	2.8026	2.5839
Yearly DAF	2.8556	2.9590	2.9885	2.9978	3.0045	2.9028	2.9432	2.89	2.8424	2.8467	2.6650

**City of Paso Robles Wastewater Division
2014 Annual Report**

Figure O		Surface and Ground Water Quarterly Sampling								Reporting Year 2014			
Constituents		2014 / 1st.	2014 / 2nd.	2014 / 3rd.	2014 / 4th.	2015 / 1st.	2015 / 2nd.	2015 / 3rd.	2015 / 4th.	2016 / 1st.	2016 / 2nd.	2016 / 3rd.	2016 / 4th.
SW 1													
pH	units	No flow	No flow	No flow	No flow								
Color	units	No flow	No flow	No flow	No flow								
Turbidity	NTU	No flow	No flow	No flow	No flow								
T. Hardness	mg/L	No flow	No flow	No flow	No flow								
T. Nitrogen	mg/L	No flow	No flow	No flow	No flow								
Diss. Oxygen	mg/L	No flow	No flow	No flow	No flow								
Temp.	F	No flow	No flow	No flow	No flow								
SW 2													
pH	units	No flow	No flow	No flow	No flow								
Color	units	No flow	No flow	No flow	No flow								
Turbidity	NTU	No flow	No flow	No flow	No flow								
T. Hardness	mg/L	No flow	No flow	No flow	No flow								
T. Nitrogen	mg/L	No flow	No flow	No flow	No flow								
Diss. Oxygen	mg/L	No flow	No flow	No flow	No flow								
Temp.	F	No flow	No flow	No flow	No flow								
GW 1													
pH	units	7	7	6.7	6.9								
TDS	mg/L	730	740	870	890								
Sodium	mg/L	118	11	115	140								
Chloride	mg/L	102	108	121	132								
Sulfate	mg/L	150	165	192	194								
T. Hardness	mg/L	370	322	358	470								
T. Nitrogen	mg/L	ND	ND	ND	ND								
GW 2													
pH	units	6.5	7	7.2	6.9								
TDS	mg/L	970	1390	1000	1200								
Sodium	mg/L	177	199	143	283								
Chloride	mg/L	151	190	149	360								
Sulfate	mg/L	199	409	199	72								
T. Hardness	mg/L	455	702	563	481								
T. Nitrogen	mg/L	ND	1	ND	1								



USGS	11147500	00060	1	2008	61.7
USGS	11147500	00060	1	2009	0.659
USGS	11147500	00060	1	2010	115.6
USGS	11147500	00060	1	2011	223.1
USGS	11147500	00060	1	2012	10.5
USGS	11147500	00060	1	2013	7.72
USGS	11147500	00060	1	2014	0.126

SECTION IX: APPENDICES

		1st. Q. 2012	2nd. Q. 2012	3rd. Q. 2012	4th. Q. 2012	1st. Q. 2013	2nd. Q. 2013	3rd. Q. 2013	4th. Q. 2013	1st. Q. 2014	2nd Q. 2014	3rd Q. 2014	4th Q. 2014
Sample Point		001B	001B	001C	001B	001B	001B	001B	001B	001B	001B	001B	001B
Sample Date		01/10/2012	04/10/2012	07/17/2012	10/09/2012	01/08/2013	04/09/2013	07/16/2013	10/08/2013	01/14/2014	04/08/2014	07/08/2014	10/07/2014
Test Species													
Acute 96 Hour Fathead Minnow	Survival %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Growth TUa	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00
Chronic Fathead Larvae	NOEC	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%
	TUc	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00
Survival	IC25	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
	IC50	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Chronic Fathead Larvae	NOEC	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%
	TUc	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00
Growth	IC25	25%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
	IC50	50%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Acute 96 Ceriodaphnia	Survival %												
	Growth TUa												
Chronic Ceriodaphnia	NOEC	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%
	TUc	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00
Survival	IC25	41.67%	25%	25%	25.00%	32.14%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
	IC50	83.33%	50%	50%	50.00%	64.29%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Chronic Ceriodaphnia	NOEC	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%	<100%
	TUc	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00	>1.00
Reproduction	IC25	26.31%	25.13%	25%	25.00%	25.75%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
	IC50	52.62%	50.26	50%	50.00%	51.50%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Chronic Selenastrum Algae	NOEC	<100.00%	<100.00%	<100.00%	<100.00%	<100.00%	<100.00	<100.00	<100.00%	<100.01	<100.00%	<100.02	<100.00%
	TUc	>1.00	>1.00	>1.00	>1.00	>1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
	IC25	55.55%	64.72%	52.70%	52.69%	84.33%	59.58%	51.08%	>100.00	77.74%	40.48%	35.51%	35.27%
	IC50	>100.00%	>100.00%	>100.00%	>100.00%	>100.00%	>100.00	>100.00	>100.00	>100.00	>100.00	>100.00	>100.00