ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

May 24, 2016

City of Hanford
Attn: April Engen-Garza
900 S.10th Ave.
Hanford, CA 93230

VI 1641244:1 **COLIFORM BACTERIA ANALYSIS**
Customer ID : 4-15877

System Number :
Project Name : Sludge Monitoring

Sample Handling Information

ID	Sample Number	Sample Description	Sample Type/Reason	Sampled By	Employed By	Sampled	Started	Finished
1	VI 1641244-001	Sludge Stockpile	Waste-Other	Neil Jessup	FGL Environmental	04/25/2016 12:15	04/26/2016 11:59 LM	04/30/2016 RRH

Analytical Results

ID	Sample Description	Chlorine Total/Free	Temp °C	Method	Units	Total	Fecal	E. Coli	Person Notified ‡	Date ‡ Notified	Time ‡ Notified	Foot Note
1	Sludge Stockpile	---	---	SM 9221B	MPN/g	781	<0.003	---	N/R			

N/R Not Required. MPN Most Probable Number A/P Absence/Presence Results in Dry Weight Basis. ‡ Client Notification details.

Analyses were performed using Standard Methods 22nd edition. If you have any questions regarding your results, please call.

RRH:SMH

Reviewed and Approved By **Raquel R. Harvey** Digitally signed by Raquel R. Harvey
Title: Tech Director Microbiology
Date: 2016-05-24

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

June 1, 2016

City of Hanford
Attn: April Engen-Garza
900 S.10th Ave.
Hanford, CA 93230

Lab ID : VI 1641244
Customer : 4-15877

Laboratory Report

Introduction: This report package contains total of 8 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	(5 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
Sludge Stockpile	04/25/2016	04/25/2016	VI 1641244-001	Slg

Sampling and Receipt Information: The sample was performed by FGL using the following methods (where applicable):

Bacteriological Sampling	- SOP:200900141
Grab sampling for liquids	- SOP:200900137
Composite sampling for liquids	- SOP:200900139
Grab sampling for solids	- SOP:200900142
Composite sampling for solids	- SOP:200900143

All samples were received, prepared and analyzed within the method specified holding times. 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	05/07/2016:206354 All analysis quality controls are within established criteria
	05/09/2016:206409 All analysis quality controls are within established criteria
245.1	05/26/2016:207447 All analysis quality controls are within established criteria
3050	05/04/2016:205099 All preparation quality controls are within established criteria

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

June 1, 2016 Lab ID : VI 1641244
City of Hanford Customer : 4-15877

Inorganic - Metals QC

7471	05/09/2016:205377 All preparation quality controls are within established criteria

Inorganic - Wet Chemistry QC

2540G	04/27/2016:204828 All preparation quality controls are within established criteria
300	04/26/2016:203550 All preparation quality controls are within established criteria
300.0	04/27/2016:205839 All analysis quality controls are within established criteria
351.2	05/07/2016:205276 All preparation quality controls are within established criteria
4500HB	05/02/2016:206082 All analysis quality controls are within established criteria
4500NH3B	04/28/2016:204448 All preparation quality controls are within established criteria
4500NH3G	04/29/2016:205988 All analysis quality controls are within established criteria
9045C	05/02/2016:205038 All preparation quality controls are within established criteria
EPA351.2	05/10/2016:206410 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: 2016-06-01

June 1, 2016

City of Hanford
Attn: April Engen-Garza
900 S.10th Ave.
Hanford, CA 93230

Description : Sludge Stockpile
Project : Sludge Monitoring

Lab ID : VI 1641244-001
Customer ID : 4-15877

Sampled On : April 25, 2016-12:15
Sampled By : Neil Jessup
Received On : April 25, 2016-15:50
Matrix : Sludge

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Metals, Total[G:1]								
Antimony	1.57	1.6*	mg/kg		3050	05/04/16:205099	200.7	05/09/16:206409
Arsenic	17.1	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Barium	306	1.6	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Beryllium	ND	0.47	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Cadmium	1.82	0.47	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Chromium	20.1	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Cobalt	4.92	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Copper	706	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Lead	29.7	3.1	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Mercury	5.05	0.23*	mg/kg		7471	05/09/16:205377	245.1	05/26/16:207447
Molybdenum	17.3	1.6	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Nickel	21.0	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Selenium	8.05	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Silver	5.54	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Thallium	ND	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Vanadium	19.3	0.78	mg/kg		3050	05/04/16:205099	200.7	05/07/16:206354
Zinc	1110	3.1*	mg/kg		3050	05/04/16:205099	200.7	05/09/16:206409
Wet Chemistry[G:1]								
Nitrate Nitrogen	862	7.8*	mg/kg		300	04/26/16:203550	300.0	04/27/16:205839
Nitrogen, Organic	33700	--	mg/kg		4500NH3B	04/28/16:204448	4500NH3G	04/29/16:205988
Ammonia Nitrogen	4540	25*	mg/kg		4500NH3B	04/28/16:204448	4500NH3G	04/29/16:205988
Kjeldahl Nitrogen	38200	2700*	mg/kg		351.2	05/07/16:205276	EPA351.2	05/10/16:206410
Nitrogen, Total as Nitrogen	39100	--	mg/kg		351.2	05/07/16:205276	EPA351.2	05/10/16:206410
Nitrate + Nitrite as N	862	7.8*	mg/kg		300	04/26/16:203550	300.0	04/27/16:205839
Kjeldahl Nitrogen	38200	2700*	mg/kg		351.2	05/07/16:205276	EPA351.2	05/10/16:206410
pH	6.5	--	units		9045C	05/02/16:205038	4500HB	05/02/16:206082
% Solids	64.0	0.1	%		2540G	04/27/16:204828	2540B	04/28/16:205925

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

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

June 1, 2016 Lab ID : VI 1641244
City of Hanford Customer : 4-15877

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Antimony	200.7	05/09/16:206409AC	CCV	ppm	1.000	91.7 %	90-110	
			CCB	ppm		-0.0011	0.01	
			CCV	ppm	1.000	91.5 %	90-110	
			CCB	ppm		-0.0015	0.01	
Arsenic	200.7	05/07/16:206354AC	CCV	ppm	1.000	99.2 %	90-110	
			CCB	ppm		-0.0001	0.01	
			CCV	ppm	1.000	97.8 %	90-110	
			CCB	ppm		0.0009	0.01	
Barium	200.7	05/07/16:206354AC	CCV	ppm	1.000	96.9 %	90-110	
			CCB	ppm		-0.0002	0.03	
			CCV	ppm	1.000	96.3 %	90-110	
			CCB	ppm		-0.0003	0.03	
Beryllium	200.7	05/07/16:206354AC	CCV	ppm	1.000	99.4 %	90-110	
			CCB	ppm		0.00004	0.005	
			CCV	ppm	1.000	98.2 %	90-110	
			CCB	ppm		0.00005	0.005	
Cadmium	200.7	05/07/16:206354AC	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		-0.00003	0.005	
			CCV	ppm	1.000	98.6 %	90-110	
			CCB	ppm		0.00005	0.005	
Chromium	200.7	05/07/16:206354AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.0002	0.01	
			CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		-0.0006	0.01	
Cobalt	200.7	05/07/16:206354AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.001	0.01	
			CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.0003	0.01	
Copper	200.7	05/07/16:206354AC	CCV	ppm	1.000	98.9 %	90-110	
			CCB	ppm		0.0004	0.01	
			CCV	ppm	1.000	97.5 %	90-110	
			CCB	ppm		0.0003	0.01	
Lead	200.7	05/07/16:206354AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.00008	0.01	
			CCV	ppm	1.000	99.7 %	90-110	
			CCB	ppm		0.0002	0.01	
Molybdenum	200.7	05/07/16:206354AC	CCV	ppm	1.000	96.3 %	90-110	
			CCB	ppm		0.0039	0.01	
			CCV	ppm	1.000	92.4 %	90-110	
			CCB	ppm		0.0059	0.01	
Nickel	200.7	05/07/16:206354AC	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.0002	0.01	
			CCV	ppm	1.000	99.1 %	90-110	
			CCB	ppm		-0.0006	0.01	
Selenium	200.7	05/07/16:206354AC	CCV	ppm	1.000	97.4 %	90-110	
			CCB	ppm		0.0043	0.01	
			CCV	ppm	1.000	97.0 %	90-110	
			CCB	ppm		0.0071	0.01	
Silver	200.7	05/07/16:206354AC	CCV	ppm	1.000	103 %	90-110	
			CCB	ppm		0.0056	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0050	0.01	
Thallium	200.7	05/07/16:206354AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0002	0.01	
			CCV	ppm	1.000	99.5 %	90-110	

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

June 1, 2016 Lab ID : VI 1641244
City of Hanford Customer : 4-15877

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Thallium	200.7	05/07/16:206354AC	CCB	ppm		0.0013	0.01	
Vanadium	200.7	05/07/16:206354AC	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		-0.0001	0.01	
			CCV	ppm	1.000	98.6 %	90-110	
			CCB	ppm		0.0002	0.01	
Zinc	200.7	05/09/16:206409AC	CCV	ppm	1.000	95.0 %	90-110	
			CCB	ppm		-0.0004	0.02	
			CCV	ppm	1.000	94.8 %	90-110	
			CCB	ppm		-0.0003	0.02	
Mercury	245.1	05/26/16:207447AC	ICV	ppb	4.000	100 %	90-110	
			ICB	ppb		-0.08	20	
			CCV	ppb	4.000	99.2 %	90-110	
			CCB	ppb		-0.08	20	
Antimony	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	24.00	106 %	85-115	
			MS	mg/kg	24.00	102 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	24.00	110 %	75-125	
			MSRPD	mg/kg	200.0	7.6%	≤20	
			PDS	mg/kg	24.00	102 %	75-125	
Arsenic	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	91.8 %	85-115	
			MS	mg/kg	40.00	92.0 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	95.7 %	75-125	
			MSRPD	mg/kg	200.0	3.9%	≤20	
			PDS	mg/kg	40.00	91.8 %	75-125	
Barium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<1	
			LCS	mg/kg	40.00	91.1 %	85-115	
			MS	mg/kg	40.00	99.4 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	107 %	75-125	
			MSRPD	mg/kg	200.0	6.3%	≤20	
			PDS	mg/kg	40.00	98.6 %	75-125	
Beryllium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.3	
			LCS	mg/kg	40.00	92.1 %	85-115	
			MS	mg/kg	40.00	92.2 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	96.1 %	75-125	
			MSRPD	mg/kg	200.0	4.2%	≤20	
			PDS	mg/kg	40.00	92.5 %	75-125	
Cadmium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.3	
			LCS	mg/kg	40.00	91.4 %	85-115	
			MS	mg/kg	40.00	91.1 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	94.5 %	75-125	
			MSRPD	mg/kg	200.0	3.6%	≤20	
			PDS	mg/kg	40.00	91.3 %	75-125	
Chromium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	95.8 %	85-115	
			MS	mg/kg	40.00	94.9 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	99.1 %	75-125	
			MSRPD	mg/kg	200.0	4.4%	≤20	
			PDS	mg/kg	40.00	94.9 %	75-125	
Cobalt	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	95.1 %	85-115	
			MS	mg/kg	40.00	94.7 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	98.6 %	75-125	
			MSRPD	mg/kg	200.0	4.1%	≤20	

June 1, 2016 Lab ID : VI 1641244
City of Hanford Customer : 4-15877

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Cobalt	3050	05/04/16:205099amb	PDS	mg/kg	40.00	95.2 %	75-125	
Copper	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	92.9 %	85-115	
			MS	mg/kg	40.00	101 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	113 %	75-125	
			MSRPD	mg/kg	200.0	10.3%	≤20	
			PDS	mg/kg	40.00	103 %	75-125	
Lead	3050	05/04/16:205099amb	Blank	mg/kg		ND	<2	
			LCS	mg/kg	40.00	94.1 %	85-115	
			MS	mg/kg	40.00	93.0 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	96.6 %	75-125	
			MSRPD	mg/kg	200.0	3.8%	≤20	
			PDS	mg/kg	40.00	93.4 %	75-125	
Molybdenum	3050	05/04/16:205099amb	Blank	mg/kg		ND	<1	
			LCS	mg/kg	24.00	100 %	85-115	
			MS	mg/kg	24.00	97.2 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	24.00	105 %	75-125	
			MSRPD	mg/kg	200.0	7.5%	≤20	
			PDS	mg/kg	24.00	97.5 %	75-125	
Nickel	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	93.9 %	85-115	
			MS	mg/kg	40.00	92.9 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	97.2 %	75-125	
			MSRPD	mg/kg	200.0	4.5%	≤20	
			PDS	mg/kg	40.00	93.3 %	75-125	
Selenium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	91.8 %	85-115	
			MS	mg/kg	40.00	91.8 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	95.4 %	75-125	
			MSRPD	mg/kg	200.0	3.8%	≤20	
			PDS	mg/kg	40.00	91.7 %	75-125	
Silver	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	114 %	85-115	
			MS	mg/kg	40.00	124 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	121 %	75-125	
			MSRPD	mg/kg	200.0	2.1%	≤20	
			PDS	mg/kg	40.00	109 %	75-125	
Thallium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	93.6 %	85-115	
			MS	mg/kg	40.00	92.4 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	96.1 %	75-125	
			MSRPD	mg/kg	200.0	3.9%	≤20	
			PDS	mg/kg	40.00	93.1 %	75-125	
Vanadium	3050	05/04/16:205099amb	Blank	mg/kg		ND	<0.5	
			LCS	mg/kg	40.00	94.2 %	85-115	
			MS	mg/kg	40.00	94.4 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	98.2 %	75-125	
			MSRPD	mg/kg	200.0	3.9%	≤20	
			PDS	mg/kg	40.00	94.5 %	75-125	
Zinc	3050	05/04/16:205099amb	Blank	mg/kg		ND	<1	
			LCS	mg/kg	40.00	94.1 %	85-115	
			MS	mg/kg	40.00	103 %	75-125	
		(CC 1681232-001)	MSD	mg/kg	40.00	116 %	75-125	
			MSRPD	mg/kg	200.0	10.2%	≤20	

June 1, 2016 Lab ID : VI 1641244
City of Hanford Customer : 4-15877

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Zinc	3050	05/04/16:205099amb	PDS	mg/kg	40.00	108 %	75-125	
Mercury	7471	05/09/16:205377ac	Blank	mg/kg		ND	<0.03	
			LCS	mg/kg	0.2500	96.6 %	85-115	
			MS	mg/kg	0.2500	84.4 %	75-125	
		(SP 1604986-001)	MSD	mg/kg	0.2500	92.8 %	75-125	
			MSRPD	mg/kg	0.2500	8.0%	≤20	
Wet Chem								
% Solids	2540G	04/27/16:204828jmg	Blank	%		ND	<0.1	
		(VI 1641244-001)	Dup	%		11.1%	23.9	
Nitrate	300	04/26/16:203550MCA	Blank	mg/kg		ND	<4	
			LCS	mg/kg	200.0	93.6 %	85-115	
			MS	mg/kg	393.7	-122 %	<¼	
	300.0	04/27/16:205839MCA	CCB	ppm		0.000	0.5	
			CCV	ppm	20.00	93.8 %	90-110	
			CCB	ppm		0.000	0.5	
			CCV	ppm	20.00	93.3 %	90-110	
Nitrogen, Total Kjeldahl	351.2	05/07/16:205276jmg	Blank	mg/kg		ND	<50	
			LCS	mg/kg	600.0	98.2 %	31-149	
			MS	mg/kg	468.8	-411 %	<¼	
		(CC 1681179-001)	MSD	mg/kg	500.0	-1030 %	<¼	
			MSRPD	mg/kg	500.0	21.1%	≤80	
pH	4500HB	05/02/16:206082JBA	CCV	units	8.000	101 %	95-105	
			CCV	units	8.000	101 %	95-105	
Ammonia Nitrogen	4500NH3B	04/28/16:204448NMRP	Blank	mg/kg		ND	<0.8	
			LCS	mg/kg	148.5	79.4 %	75-127	
			MS	mg/kg	148.5	75.2 %	75-125	
		(SP 1603872-001)	MSD	mg/kg	150.0	78.3 %	75-125	
			MSRPD	mg/kg	150.0	4.3%	≤26.5	
	4500NH3G	04/29/16:205988AMB	CCB	mg/L		-0.151	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	106 %	90-110	
pH	9045C	(SP 1604661-001)	Dup	units		0.3%	5.84	
Nitrogen, Total Kjeldahl	EPA351.2	05/10/16:206410AMB	ICB	mg/L		0.000	0.5	
			ICV	mg/L	5.000	97.1 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	103 %	90-110	

Definition

PDS	: PDS failed, matrix - Post Digestion Spike (PDS) not within Acceptance Range (AR) because of matrix interferences affecting this analyte. Data was accepted based on the LCS recovery.
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 analyted. 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.

June 1, 2016 Lab ID : VI 1641244

City of Hanford Customer : 4-15877

Quality Control - Inorganic

Definition	
ND	: Non-detect - Result was below the DQO listed for the analyte.
<¼	: High Sample Background - Spike concentration was less than one forth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

Quarterly

CHAIN OF CUSTODY

www.fglinc.com

Laboratory Copy (1 of 3)

40524:04/11/2016

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

Client: **City of Hanford - Wastewater Treatment**
Address: City of Hanford
Attn: April Engen-Garza
900 S.10th Ave.
Hanford, CA 93230

Phone: (559)585-2576 Fax: (559)584-8633

Contact Person: April Engen-Garza

Project Name: **Sludge Monitoring**

Purchase Order Number:

Quote Number: VI20071009_01

Sampler(s) Neil Jessup

Sampling Fee: $30.00 Pickup Fee: _____

Compositor Setup Date: ___/___/___ Time: ___/___

Lab Number: VI 1641244 4-15877

Samp Num	Location Description	Date Sampled	Time Sampled	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)	Coliform LTB-Series 35 Tube MPN/gm ***24 hour H/T***	NOTE: Please notify SP Bacti Lab prior to sampling 8oz(G)	Metals, Total-Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Hg,Mo,Ni,Se,Ag,Tl,V,Zn 8oz(G)	Wet Chemistry-NH3-N,NO3-N,N-Organic,Total N,pH 8oz(G)	Sampling Fee - See Quote	Wet Chemistry-% Solids 8oz(G)
1	Sludge Stockpile	4/25/16	1215	G	Slg	NP	W	Rout	1	1	1	X	1

Remarks:
NOTE: Please notify SP Bacti Lab prior to sampling

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
Neil Jessup	4/25/16	1550	[illegible]	4/25/16	1730	[illegible]		
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
[illegible]	4/25/16	1550	[illegible]	4/25/16	1730	[illegible]	4/26/16	11:30

15°

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)

Sample Receipt at: STK CC CH VI

1. Number of ice chests/packages received: 1 Shipping tracking # OTC
2. Were samples received in a chilled condition? Temps: 15C / ____ / ____ / ____ / ____
   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 and sampler name	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): MM

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 2 / ____ / ____ / ____ / ____
   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: D1007103379014

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? [Exception: Oil & Grease, VOA and CrVI verified in lab]	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	
6. Were all analyses within holding times at time of receipt?	Yes	No		

Attach labels to the containers and include a copy of the COC for lab delivery.
Sample Receipt, Login and Verification completed by (initials): [illegible]

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:

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

IV-04/25/2016-15:40:23
VI 1641244
City of Hanford - Wastewater Treatment
(4-15877)