PIMA COUNTY

ANNUAL BIOSOLIDS REPORT

CALENDAR YEAR 2012

REGIONAL WASTEWATER RECLAMATION DEPARTMENT

TREATMENT DIVISION

PIMA COUNTY
TUCSON, ARIZONA

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

Pima County
Regional Wastewater Reclamation Department
201 North Stone Avenue
Tucson, Arizona 85701-1207

Jackson Jenkins
Director

Phone (520)740-6500
Fax (520) 620-0135

February 15, 2013

BIO-SOLIDS COORDINATOR - ADEQ
WATER QUALITY COMPLIANCE ASSURANCE UNIT (MO5415B-1)
1110 West Washington Street
Phoenix, Arizona 85007

Dear Robert Phalen, Biosolids Coordinator, Water Quality Compliance Assurance Unit - ADEQ

RE: BIOSOLIDS ANNUAL REPORT 2012

As required by AAC R18-9-1014(F), and/or in accordance with the Arizona Pollutant Discharge Elimination System (AZPDES) Permits issued to the following facilities, we are transmitting herewith the Pima County Regional Wastewater Reclamation Department's Biosolids Annual Report for Calendar Year 2012.

- Ina Road Wastewater Reclamation Facility, AZPDES Permit No. AZ0020001
- Green Valley Biological Nutrient Removal Oxidation Ditch, AZPDES Permit No. AZ0024937
- Avra Valley WRF, AZPDES Permit No. AZ0024121

The Roger Road Wastewater Reclamation Facility (WRF), AZPDES Permit No. AZ0020923, pumped its digested sludge via the sludge pipeline to the Ina Road Wastewater Reclamation Facility WRF Centrifuge Building for thickening after mixing with the digested sludge from Ina Road Wastewater Reclamation Facility.

The Avra Valley WRF, AZPDES Permit No. AZ0024121 and the Corona de Tucson WRF, APP Permit No. P-100644 trucked their solids to the Wastewater Collection System of Roger Road WRF. The Randolph Park WRF, APP Permit No. P-100635, discharged its solids into the Collection System of Roger Road WRF.

The Mt. Lemmon WRF, AZPDES Permit No. AZ0022250 trucked their solids to the Wastewater Collection System of Ina Road WRF. The Town of Marana sent sludge from its WRF to the collection system of Ina Road WRF during the period January thru April 2012.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

As you review this report, if you have any questions, please contact Jeff Prevatt, Program Manager, Compliance and Regulatory Affairs Office at (520)724-6200.

Sincerely,

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT

Jeff Prevatt, Program Manager
Compliance and Regulatory Affairs Office

FJP: hbe
Attachment – Annual Biosolids Report 2012
Electronic copy:

John Sherlock, Deputy Director, Treatment Division
Charles Wesselhoft, Deputy County Attorney, Civil Division
Harlan Agnew, Deputy County Attorney, Civil Division
Jim Doyle, Wastewater Treatment Plant Manager, ROMP Liaison
Frank Gall, Wastewater Treatment Plant Manager, Roger Road WRF
Ken Weber, Wastewater Treatment Plant Manager, Sub-Regional Facilities
Douglas Kirkland, Permit and Regulatory Compliance Officer, IWC

CONTENTS

1. Preparer Forms: Ina Road WRF AZPDES No. AZ0020001; Roger Road WRF, AZPDES No. AZ0020923; Randolph Park WRF, APP No. P - 100635; Corona de Tucson WRF, APP No. AZ100644; Avra Valley WRF, AZPDES No. AZ0024121; Mt. Lemmon WRF, AZPDES No. AZ0022250

2. Ina Road WRF and Roger Road WRF Vector Attraction Reduction, Pathogen Reduction and Pollutant Concentration

3. Ina Road WRF Sampling and Analysis Priority Pollutants, TCLP and Hazardousness

4. Land Application Events, Land Application Contractor

5. Roger Road WRF Quarterly Sludge Sampling and Analyses

6. Avra Valley WRF Sampling and Analyses Priority Pollutants, TCLP and Hazardousness

7. Preparer Form Green Valley BNROD, AZPDES No. AZ0024937

8. Green Valley BNROD Sampling and Analyses Priority Pollutants, TCLP, Hazardousness and Dioxin

9. Green Valley BNROD Biosolids April 2012 Batch

BIOSOLIDS ANNUAL REPORT 2012

SECTION 1

PREPARER FORMS

INA ROAD WRF AZPDES NO. AZ0020001

ROGER ROAD WRF, AZPDES NO. AZ0020923

RANDOLPH PARK WRF, APP NO. P - 100635

CORONA DE TUCSON WRF, APP NO. P - 100644

AVRA VALLEY WRF, AZPDES NO. AZ0024121

MT. LEMMON WRF, AZPDES NO. AZ0022250

BIOSOLIDS ANNUAL REPORT 2012

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/ year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/14/2013	20001	100630	Pima County Ina Road WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	344872	P	3035	W. El Camino del Cerro
										7101	N. Casa Grande Hwy

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Tucson	85743	5204436100									

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
	10208										
		4559	Pima County Roger Road WRF					Pipeline			
		34.9	Pima County Marana WRF					Old Pueblo Septic &	5207441100		
		0.93	Pima County Mt. Lemmon WRF					Pima County RWRD Truck-	5205498195		

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill									
Landfill									
Landfill									
Composting									
Composting									
Land Apply	8333	B	5	1		Avra Gro Systems, Inc.	Avra Gro Systems, Inc.	5202717736	Kai Farms, TNT Farms,
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director

3F

Application Site/ Loaction	Field ID	Amount of Biosolids Applied (DT) (MDT)	Preparer	Pathogen Treatment	Vector Attraction Reduction Method	Loading Rate DT/acre Kg/H	Nitrogen Conc lb/a Kg/H	Type of Crop Grown after Application	Agronomic Rate of Crop Grown (lb/acre)	Cumulative Concentration of Pollutants (MG/Kg) in Soil									
										As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
Kai Farms, Marana, Az	JK-4	750.95	Pima Co.	Class B, Alt 2	Option 1	5	335	Wheat	360	0.3647	0.1351	1.9716	24.483	1.4644	0.105	0.902	1.1601	0.3233	50.347
		585.6				11187	376												
Kai Farms, Marana, Az	JK-5	275.36	Pima Co.	Class B, Alt 2	Option 1	1.25	84	Wheat	360	0.8148	0.3255	4.0123	49.4798	3.2906	0.1896	1.8212	2.5992	0.7036	90.3728
		249.76				2805	94												
Kai Farms, Marana, Az	JK-6	172.72	Pima Co.	Class B, Alt 2	Option 1	2.98	182	Cotton	380	0.4985	0.1704	2.2467	31.363	2.3939	0.0916	1.0962	1.4925	0.4378	58.7797
		156.65				6674	204												
Kai Farms, Marana, Az	JK-7	688.14	Pima Co.	Class B, Alt 2	Option 1	3.6	239	Wheat	360	0.8095	0.513	6.9315	80.2757	6.4241	0.2294	2.0288	3.7315	0.6411	144.127
		624.51				8075	268												
Kai Farms, Marana, Az	JK-8	204.39	Pima Co.	Class B, Alt 2	Option 1	1.34	88.5	Cotton	380	0.686	0.3637	4.6777	67.3234	4.4579	0.2065	2.4868	3.1927	0.6805	116.786
		185.38				2994	99												
Kai Farms, Marana, Az	JK-9	117.45	Pima Co.	Class B, Alt 2	Option 1	0.63	44	Wheat	360	0.275	0.1326	1.946	23.4926	2.0338	0.0828	0.5317	0.9214	0.2118	46.027
		106.53				1407	49												
Kai Farms, Marana, Az	JK-11	145.88	Pima Co.	Class B, Alt 2	Option 1	145.88	60.3	Barley	300	0.8823	0.3668	4.7871	70.5509	5.3636	0.2632	2.6366	3.2767	0.0715	130.89
		132.32				2056.44	67												
Kai Farms, Marana, Az	JK-13	378.89	Pima Co.	Class B, Alt 2	Option 1	2.46	152	Corn Sillage	400	1.1245	0.4227	6.0258	67.9137	4.4977	0.2409	2.5074	3.4146	0.8115	122.879
		343.39				5514	170												
Kai Farms, Marana, Az	JK-14	117.8	Pima Co.	Class B, Alt 2	Option 1	0.84	55	Wheat	360	0.8838	0.3896	5.428	64.4958	4.7932	0.2215	2.4194	2.9626	0.5526	129.106
		106.85				1872	61												
Kai Farms, Marana, Az	JK-15	21.9	Pima Co.	Class B, Alt 2	Option 1	21.9	5.6	Wheat	360	0.8642	0.4154	4.288	57.6256	4.5944	0.2215	1.9945	2.5442	0.6355	94.9905
		19.86				217	6.3												
Kai Farms, Marana, Az	JK-18	114.54	Pima Co.	Class B, Alt 2	Option 1	1.97	115	Cotton	380	0.4714	0.2716	3.3109	44.2167	3.0801	0.2366	0.9886	1.6595	0.4602	78.6798
		103.98				4426	129												
Kai Farms, Marana, Az	JK-21C	213.93	Pima Co.	Class B, Alt 2	Option 1	3.86	224.4	Wheat	360	0.6728	0.2488	3.9183	45.7001	3.3156	0.1576	1.3887	1.9838	0.5263	93.4199
		194.03				8654	251												
Kai Farms, Marana, Az	JK-21D	66.86	Pima Co.	Class B, Alt 2	Option 1	3.18	185	Cotton	380	0.787	0.378	5.2697	62..3308	4.7366	0.24	1.8481	2.9723	0.6156	124.215
		60.64				7136	207												
Kai Farms, Marana, Az	JK-26	293.62	Pima Co.	Class B, Alt 2	Option 1	1.27	82.6	Cotton	380	0.4814	0.2494	4.0736	41.3228	2.9576	0.1252	1.3699	2.2938	0.4013	79.0896
		266.31				2836	92.5												
Kai Farms, Marana, Az	JK-27	250.15	Pima Co.	Class B, Alt 2	Option 1	1.35	64.8	Cotton	380	0.5796	0.2306	2.7256	38.6665	2.9312	0.1429	1.3118	1.8396	0.4291	64.0761
		226.90				3030	95												

The vector attraction reduction: R18-9-1010-A.1; 40 CFR 503.33(b)(1)Alternative 1
The pathogen reduction, Class B: R18-9-1006-E Alternative 5;
40 CFR 503.32(b)(3) Appendix B, No. 3 Alternative 2

Application Site/ Loaction	Field ID	Amount of Biosolids Applied (DT) (MDT)	Preparer	Pathogen Treatment	Vector Attraction Reduction Method	Loading Rate DT/acre Kg/H	Nitrogen Conc lb/a Kg/H	Type of Crop Grown after Application	Agronomic Rate of Crop Grown (lb/acre)	Cumulative Concentration of Pollutants (MG/Kg) in Soil									
										As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
Kai Farms, Marana, Az	JK-29	204.86	Pima Co.	Class B, Alt 2	Option 1	1.22	73.1	Cotton	380	0.4859	0.1837	2.6038	36.0903	2.0054	0.126	1.4108	1.8977	0.3677	60.8019
		185.60				2733	81.9												
Kai Farms, Marana, Az	JK-30	172.35	Pima Co.	Class B, Alt 2	Option 1	1.16	72.1	Cotton	380	0.6819	0.3294	4.5665	55.6206	4.1714	0.1741	1.8811	2.4605	0.5073	104.843
		156.32				2610	80.8												
Kai Farms, Marana, Az	JK-33	336.6	Pima Co.	Class B, Alt 2	Option 1	2.61	172.1	Barley	300	0.4451	0.265	4.0213	37.5817	4.2086	0.1212	0.6676	1.5936	0.2517	69.9768
		305.29				5848	192.9												
Kai Farms, Marana, Az	JK-34	180.74	Pima Co.	Class B, Alt 2	Option 1	1.28	84.5	Milo	300	0.3546	0.2905	2.6309	38.8262	3.6099	0.1153	0.7138	1.5967	0.2895	65.0618
		163.93				2873	94.7												
Kai Farms, Marana, Az	JK-35	372.42	Pima Co.	Class B, Alt 2	Option 1	9.3	649	Wheat-Milo	660	0.2394	0.0516	0.8261	10.983	0.4063	0.0352	0.3646	0.5119	0.178	25.4839
		337.79				20867	728												
Kai Farms, Marana, Az	JK-37	715.42	Pima Co.	Class B, Alt 2	Option 1	5.96	394	Cotton-Wheat	394	0.4437	0.3123	3.2017	44.1459	4.1135	0.1196	0.7771	2.02	0.4089	72.7858
		648.90				13362	441												
TNT Farms	GL-1	197.47	Pima Co.	Class B, Alt 2	Option 1	0.97	56.3	Cotton	380	0.4852	0.2573	3.897	41.5009	3.812	0.1482	1.1868	1.9489	0.3569	71.3278
		179.11				2120	63.1												
Lim` Farms	LIM-2	318.46	Pima Co.	Class B, Alt 2	Option 1	4.68	314	Cotton	380	0.9514	0.4597	6.0162	73.693	5.9992	0.2474	2.55	3.8091	0.8312	157.089
		288.85				10497	352												
Toone Farms	AJ-1	306.99	Pima Co.	Class B, Alt 2	Option 1	2.47	163.6	Barley	300	0.6178	0.2214	2.8282	33.116	2.2858	0.1116	0.8949	1.8414	0.4771	60.6538
		278.45				5526	183.4												
Toone Farms	AJ-2	389.59	Pima Co.	Class B, Alt 2	Option 1	2.57	172.1	Cotton	380	0.6957	0.2067	2.6511	37.5211	2.1056	0.1178	1.1626	1.9151	0.5705	67.6706
		353.36				5756	192.8												
Tom Hum Farms	TH-3	538.72	Pima Co.	Class B, Alt 2	Option 1	3.72	256.9	Wheat-Cotton	740	0.255	0.0982	1.2208	18.5166	1.4475	0.0748	0.6941	0.9211	0.1802	38.3436
		488.97				8327	288												
Tom Hum Farms	TH-4	358.45	Pima Co.	Class B, Alt 2	Option 1	2.52	170	Wheat-Cotton	740	0.2385	0.0815	0.9325	20.4514	1.5556	0.0509	0.6053	0.9677	0.1837	29.8692
		325.12				5657	190.7												
Tom Hum Farms	TH-5	497.99	Pima Co.	Class B, Alt 2	Option 1	2.19	130	Cotton	380	0.3054	0.1008	1.3285	24.6185	2.0521	0.0569	0.6724	0.991	0.2353	44.6202
		451.68				4916	145												
Tom Hum Farms	TH-11N	364.16	Pima Co.	Class B, Alt 2	Option 1	4.8	318	Cotton	380	0.4549	0.1397	1.8601	26.3332	1.5081	0.0859	1.108	1.2107	0.3747	48.7031
		330.30				10739	356												

8766.80 DT

7856.38 MDT

MDT = metric dry metric tons

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/14/2013	20923	100655	Pima County Roger Road WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	344872	P	3035	3035 W. El Camino del Cerro
										2600	W. Sweetwater Drive

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Tucson	85705	5204436400									

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
	12657			4559	Pima County Ina Road			Pipeline			
		382	Pima County Avra Valley WRF					Pima County RWRD Truck-	5204191958		
		90	Pima County Corona de Tucson WRF					Pima County RWRD Truck-	5204191958		
		304	Pima County Randolph Park WRF					Pipeline			

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill									
Landfill									
Landfill									
Composting									
Composting									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/ year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/14/2013		100635	Pima County Randolph Park WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	30011	P	3035	W. El Camino del Cerro
										3755	E. 22nd Street

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Corona de Tucson	85711	5204436170									

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
	821			304	Pima County Roger Road			Pima County (	5205498195		

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill									
Landfill									
Landfill									
Composting									
Composting									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name:

Title: Deputy Director

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/14/2013		100644	Pima County Corona de Tucson WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	3460	P	3035	W. El Camino del Cerro
										1100	W. Sahuarita Road

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Corona de Tucson	85711	5204436170									

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
	86			90	Pima County Roger Road			Pima County	5205498195		

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill									
Landfill									
Landfill									
Composting									
Composting									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/14/2013	24121	100642	Pima County Avra Valley WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	12319	P	3035	W. El Camino del Cerro
										10000	W. Snyder Hill Road

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Tucson	85735	5204436170									

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
	611			382	Pima County Roger Road			Pima County	5205498195		

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill									
Landfill									
Landfill									
Composting									
Composting									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/12/2013	22250	100345	Pima County Mt. Lemmon WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	22	P	3035	W. El Camino Del Cerro
										12633	N Sabino Canyon Park

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Corona de Tucson	85711	5204436170									

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
	0.91			0.93	Pima County Ina Road			Pima County	5205498195		

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

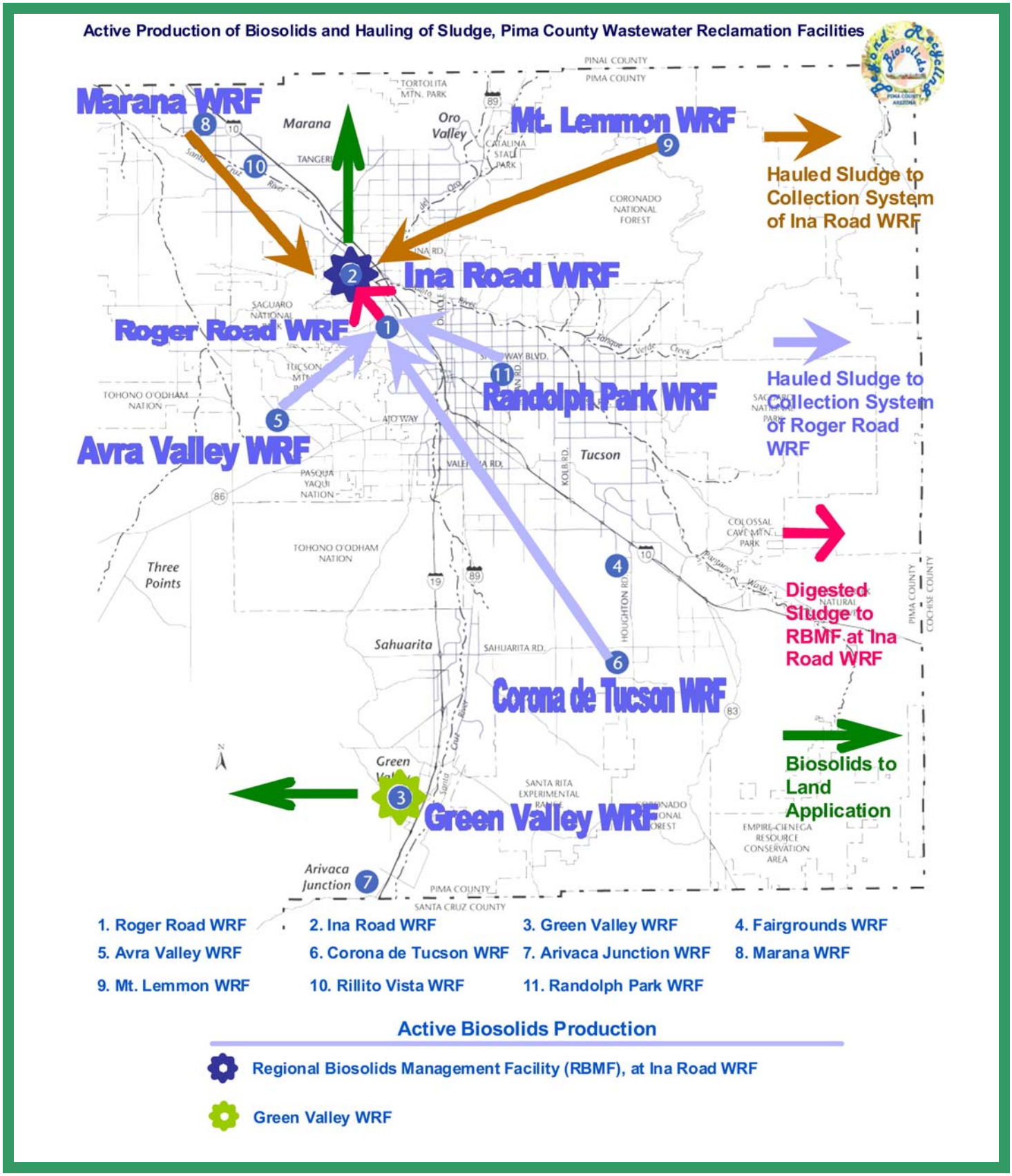
Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill									
Landfill									
Landfill									
Composting									
Composting									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director

ANNUAL BIOSOLIDS REPORT 2012; PIMA COUNTY RWRD



SECTION 2

PREPARATION OF BIOSOLIDS

INA ROAD WRF AZPDES NO. AZ0020001
ROGER ROAD WRF, AZPDES NO. AZ0020923

VECTOR ATTRACTION REDUCTION

A.A.C. RULE 18.9.1010.A.1

PATHOGEN REDUCTION

A.A.C. RULE 18.9.1006.E ALTERNATIVE 5

POLLUTANT CONCENTRATION

A.A.C. RULE 18.9.1005 METALS

ANNUAL BIOSOLIDS REPORT 2012

VECTOR ATTRACTION REDUCTION - LAND APPLICATION
ALTERNATIVE 1 IN 40 CFR 503.33(b) (1)
R18-9-1010-A.1

Facility Name: Pima County Regional Biosolids Management Facility
Address: 7101 North Casa Grande Highway
Tucson, Arizona 85743

Facility Owner's Name: Pima County Regional Wastewater Reclamation Department
Address: 201 North Stone Avenue
Tucson, Arizona 85701

Monitoring Period: From 12/01/12 Through 12/31/12

Reporting Period: From 12/01/12 Through 12/31/12

NPDES Permit Number: AZ0020001/AZ0020923 Sludge Permit Number: N/A

Facility Latitude: 32° 20' 06" N Facility Longitude: 111°04' 16" W

Site Map Attached? ☐ Yes ☒ No

The biosolids generated from the Ina Road WRF and Roger Road WRF are pumped to the Regional Biosolids Management Facility. After moisture reduction, the biosolids are placed into the temporary storage basin. From the basin, the contractor removes the biosolids for application as soil amendment on local area farms.

The vector attraction reduction is achieved at each wastewater reclamation facility prior to receipt at the Regional Biosolids Management Facility through the use of Alternative 1 [40 CFR 503.33(b)(1)] Method, equivalently R18-9-1010-A.1; the latter states: "Reducing the mass of volatile solids by a minimum of 38% using the calculation procedures established in "Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge," EPA/625/R-92-013, published by the U.S. Environmental Protection Agency, Cincinnati, Ohio 45268, 1999 Edition." To demonstrate the achievement of this requirement, biosolids data from both Ina Road WRF and Roger Road WRF are provided for each plant. Tables 1 and 2 are Volatile Solids Reduction (%) at the Ina Road WRF and Roger Road WRF.

TABLE 1 - MONTHLY AVERAGE VOLATILE SOLIDS REDUCTION (%) AT INA ROAD WRF

INA ROAD WRF YEAR 2012	Volatile Solids Reduction (%)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	67	65	64	58	55	57	47	54	52	**O/S	O/S	O/S
Digester #2	64	63	65	55	51	58	47	53	48	53	50	43
Digester #3	66	*69	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #4	68	66	67	58	57	58	49	55	53	55	50	43
Digester #5	N/A	N/A	O/S	O/S	O/S	O/S	O/S	O/S	66	53	38	45
Digester #6	N/A	N/A	73	60	57	62	48	53	52	54	48	44

*Digester #3 for Ina Road WRF was taken Out of Service on February 7th, 2012.
**Digester #1 for Ina Road WRF was taken Out of Service on September 25th, 2012.

The mass of volatile solids of the Ina Road WRF biosolids was reduced by at least 38 percent.

TABLE 2 – MONTHLY AVERAGE VOLATILE SOLIDS REDUCTION (%) AT ROGER ROAD WRF

ROGER ROAD WRF YEAR 2012	Volatile Solids Reduction (%)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	60.2	56.8	55.8	57.5	56.0	56.6	53.0	57.2	55.1	57.8	57.9	56
Digester #2	58.3	*59.5	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #3	56.8	57.2	55.3	57.8	56.4	56.2	53.4	56.6	57.8	57.2	59.0	57.6
Digester #5	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #6	60.1	61.1	57.4	55.4	54.8	53.2	54.2	56.3	53.0	54.8	58.9	56.9

O/S = Out of Service
*Digester #2 for Roger Road WRF was taken Out of Service on February 16th, 2012.

The mass of volatile solids of the Roger Road WRF biosolids has been reduced by at least 38 percent.

The volatile solids reduction is greater than 38% at each plant. No further treatment is provided at the Regional Biosolids Management Facility, and the biosolids are routinely applied to the land within 48 hours of discharge from the digester. Therefore, the combined solids will meet Alternative 1.

The volatile solids reduction is measured at least two times per week at each digester.

CERTIFICATION [503.17 (a)(4)(i)(B)]

I certify, under penalty of law, that the information that will be used to determine compliance with the vector attraction reduction requirement in § 503.33(b)(1) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name and Official Title (type or print)	Area Code and Phone
John W. Sherlock, Deputy Director Treatment Division Regional Wastewater Reclamation Department	(520) 443-6100
Signature	Date Signed

PATHOGEN REDUCTION - CLASS B
ALTERNATIVE 2 IN 40 CFR 503.32(b)(3)
R18-9-1006-E ALTERNATIVE 5

Facility Name: Pima County Regional Biosolids Management Facility
Address: 7101 North Casa Grande Highway
Tucson, Arizona 85743

Facility Owner's Name: Pima County Regional Wastewater Reclamation Department
Address: 201 North Stone Avenue
Tucson, Arizona 85701

Monitoring Period: From 12/01/12 Through 12/31/12

Reporting Period: From 12/01/12 Through 12/31/12

NPDES Permit Number: AZ0020001/AZ0020923 Sludge Permit Number: N/A

Facility Latitude: 32° 20' 06" N Facility Longitude: 111° 04' 16" W

Site Map Attached? ☐ Yes ☒ No

The biosolids generated from the Ina Road WRF and Roger Road WRF are pumped to the Regional Biosolids Management Facility. After moisture reduction, the biosolids are placed into the temporary storage basin. From the basin, the contractor removes the biosolids for application as soil amendment on local area farms. Biosolids are routinely applied to the land within 48 hours of discharge from the digester.

The pathogen reduction is achieved at each treatment plant prior to transfer to the Regional Biosolids Management Facility through the use of Class B, Alternative 2 [40 CFR 503.32(b)(3) Appendix B, No. 3] Methods equivalently R18-9-1006-E Alternative 5. Pathogen reduction is accomplished by the anaerobic digestion process to achieve a residence time of greater than 15 days at a minimum temperature of 35°C. To demonstrate the achievement of the requirements under this alternative, biosolids data from both Ina Road WRF and Roger Road WRF are provided for each plant in the following Tables No. 3 and 4.

Other than the exception noted below, the temperature in each digester was greater than or equal to 35°C and the detention time always exceeded 15 days. The operating temperature of the digester is measured at a frequency of at least two (2) times per day. For this reporting period, the average detention time and digester operating temperature are as follows:

TABLE 3 - AVERAGE DIGESTER DETENTION TIME AT INA ROAD WRF AND ROGER ROAD WRF

INA ROAD WRF YEAR 2012	AVERAGE DETENTION TIME (Days)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	26.32	25.52	27.27	28.84	27.02	35.28	34.01	44.87	55.01	*** O/S	O/S	O/S
Digester #2	27.49	32.81	34.73	38.37	35.24	42.05	38.37	48.62	69.91	57.07	41.34	31.31
Digester #3	32.38	*36.38	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #4	28.25	29.92	30.17	29.96	28.16	38.41	37.89	49.82	56.26	60.81	37.66	27.37
Digester #5	N/A	N/A	O/S	O/S	O/S	O/S	O/S	O/S	59.84	75.46	52.28	39.20
Digester #6	N/A	N/A	38.54	33.28	34.45	45.23	51.47	59.90	**85.75	82.19	54.80	39.17

* Digester #3 for Ina Road WRF was taken Out of Service on February 7th, 2012.
** Low feed volumes were introduced on September 13th and 14th, resulting in greater calculated average detention time.
***Digester #1 for Ina Road WRF was taken Out of Service on September 25th, 2012.

TABLE 3 - AVERAGE DIGESTER DETENTION TIME AT INA ROAD WRF AND ROGER ROAD WRF

(Continued)

ROGER ROAD WRF YEAR 2012	AVERAGE DETENTION TIME (Days)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	22.8	17.0	17.6	17.5	17.6	19.0	19.0	16.5	16.1	16.8	16.7	31.6
Digester #2	22.7	*917.4	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #3	22.7	17.2	17.5	17.4	17.7	18.9	19.1	16.3	16.1	16.8	16.7	40.8
Digester #5	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #6	22.8	17.5	17.7	17.6	17.7	18.8	19.0	16.4	15.8	16.7	16.3	31.9

O/S = Out of Service

*Digester #2 for Roger Road WRF was taken Out of Service on February 16th, 2012. The value of 917.4 for the average detention time for Digester #2 only reflects the days that this digester was operational, which was from February 1, 2012 through February 15th, 2012.

TABLE 4 - AVERAGE DIGESTER OPERATING TEMPERATURE AT INA ROAD WRF AND ROGER ROAD WRF

INA ROAD WRF YEAR 2012	AVERAGE TEMPERATURE (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	36.21	36.11	36.61	36.66	36.11	36.84	36.19	36.89	36.63	**** O/S	O/S	O/S
Digester #2	35.98	36.27	36.85	36.90	36.28	36.88	36.32	37.00	36.56	36.45	36.59	36.09
Digester #3	*35.78	36.52	**O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #4	35.68	35.96	36.43	36.17	36.34	36.55	35.92	36.77	36.53	36.59	36.23	36.10
Digester #5	N/A	N/A	O/S	O/S	O/S	O/S	O/S	O/S	36.14	36.31	36.02	36.15
Digester #6	N/A	N/A	***36.09	35.91	36.31	36.54	36.41	36.49	36.51	36.49	36.02	36.31

* Digester #3 for Ina Road WRF was taken Out of Service on February 7th, 2012.
** The Average Temperature for March 2012 for Ina Road's Digester 3 should have been reported as O/S, not 35.65 °C in previous report.
*** The Average Temperature for March 2012 for Ina Road's Digester 6 was incorrectly reported in previous report. The original value was entered as 34.34 °C.

****Digester #1 for Ina Road WRF was taken Out of Service on September 25th, 2012.

TABLE 4 - AVERAGE DIGESTER OPERATING TEMPERATURE AT INA ROAD WRF AND ROGER ROAD WRF (cont.)

ROGER ROAD WRF YEAR 2012	AVERAGE TEMPERATURE (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	36.7	36.6	37.0	37.1	37.0	36.9	37.1	37.0	37.1	36.9	37.0	37.1
Digester #2	36.7	*36.4	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	N/A
Digester #3	35.6	35.2	36.2	37.4	37.0	37.0	37.1	37.2	37.1	37.2	36.9	37.4
Digester #5	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	N/A
Digester #6	36.6	36.8	37.2	37.1	36.9	37.1	37.1	37.0	37.2	37.1	37.1	37.4

O/S = Out of Service
* Digester #2 for Roger Road WRF was taken Out of Service on February 16th, 2012.

CERTIFICATION [503.17 (a)(4)(i)(B)]

I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in § 503.32(b)(3) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name and Official Title (type or print)	Area Code and Phone
John W. Sherlock, Deputy Director Treatment Division Regional Wastewater Reclamation Department	(520) 443-6100
Signature	Date Signed 2-15-13

NITROGEN IN BIOSOLIDS

Combined biosolids generated from the Ina Road WRF and Roger Road WRF is analyzed for Total Nitrogen. Table 5 shows the analyses results of samples collected from the combined biosolids generated from both reclamation facilities.

TABLE 5 - TOTAL NITROGEN IN COMBINED BIOSOLIDS (Units in mg/kg)

YEAR 2012	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
Nitrogen (T)	* 36000	56647	58832	62475.9	56870.6	51000.0	47300.0	48200.0	57100.0	58200.0	68000.0	72400.0

*Analyses were subcontracted out to TestAmerica; ADHS# AZ0728.

The nitrogen (total) analysis result, 36,000 mg/kg, is outside the normal range. Our monthly value averages at 60,000 mg/kg. The 48-hr holding time on our January 10, 2012 sample, 2012010585, was exceeded by 96 hours.

The Avra Gro analysis results, mg/Kg, for the month of January 2012 were as follows:

Nitrogen, Total = 80,928 mg/Kg
From Avra Gro Testing by A&L Eastern Laboratories, ADHS-certified

Sample Date	Nitrogen, Total	TKN	Ammonia	Nitrate	% Solids
January 10, 2012	82,334	82,300	28,200	33.9	5.3 %
January 24, 2012	79,522	79,500	22,700	22.5	6.2 %

Metals Samples Analysis Results, R18-9-1005
Pima County Biosolids Land Application, February 2012
Sampled by Avra Gro Systems, Inc.
Analysis by A&L Eastern Laboratories, Inc. ADHS Certification #0629

	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Zinc
2/2/2012	**11**	**2.0**	**39**	**457**	**19**	**1.6**	**16**	**28**	**8**	**1130**
2/17/2012	**11**	**2.0**	**38**	**475**	**20**	**1.3**	**18**	**28**	**8**	**1170**
Table 1	75	85	3000	4300	840	57	75	420	100	7500
Table 2	41	39		1500	300	17		420	100	2800

BIOSOLIDS POLLUTANT CONCENTRATION AND DIGESTER OPERATING PARAMETERS, 2012

METALS IN BIOSOLIDS PRODUCED AT THE RBMF, 2012

	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
Regulatory Requirement, [mg/kg]										
40 CFR, 503.13 Table 1	75	85	3000	4300	840	57	75	420	100	7500
40 CFR, 503.13 Table 3	41	39	N/A *(a)*	1500	300	17	N/A	420	100	2800
R18-9-1005, Table 1	75	85	3000	4300	840	57	75	420	100	7500
R18-9-1005, Table 2	41	39	N/A	1500	300	17	N/A	420	100	2800
Compilation Code *(b)*	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0	12 / 0 / 0
	Measured Concentration, [mg/kg]									
	As	**Cd**	**Cr**	**Cu**	**Pb**	**Hg**	**Mo**	**Ni**	**Se**	**Zn**
Jan-2012	< 69	< 6.9	46	720	< 69	< 1.4	< 28	34	< 69	1700
Feb-2012	< 71	< 7.1	28	470	< 71	1.18	< 28	< 28	< 71	1100
Mar-2012	< 70	< 7	29	440	< 70	1.29	< 28	< 28	< 70	1100
Apr-2012	11	1.8	26	480	18	1.26	15	20	6.1	1100
May-2012	< 18	< 7.18	29.5	449	23.6	1.16	18	< 18	< 17.96	1064
Jun-2012	< 18	< 7.10	30.2	475	18.9	1.41	19	19.1	< 17.74	1070
Jul-2012	< 17	< 6.82	30.1	490	17.8	1.38	17	21.7	< 17.05	1000
Aug-2012	< 15.5	< 6.19	31.5	497	25.1	1.38	18	< 15.5	< 6.26	1070
Sep-2012	< 16.7	< 6.67	31.7	521	24	1.69	16	19.9	< 6.75	1140
Oct-2012	< 19.6	< 7.86	33.4	510	31.7	1.96	16	22.1	< 7.96	1050
Nov-2012	< 9.4	< 9.75	38.8	592	34.1	1.86	21	28.9	< 9.87	1220
Dec-2012	< 19.0	< 7.60	23.8	466	<19.0	1.24	13	< 19.0	< 19.0	762
ANNUAL AVERAGE	*< 29.5*	*< 6.8*	*31.5*	*509*	*< 36.7*	*< 1.4*	*< 19.7*	*< 22.9*	*< 26.6*	*1115*
ANNUAL MAXIMUM	*< 71.0*	*< 9.8*	*46*	*720*	*< 71.0*	*1.96*	*< 28.0*	*34*	*< 71.0*	*1700*
	As	**Cd**	**Cr**	**Cu**	**Pb**	**Hg**	**Mo**	**Ni**	**Se**	**Zn**

BIOSOLIDS POLLUTANT CONCENTRATION AND DIGESTER OPERATING PARAMETERS, 2012

OPERATING PARAMETERS (c) OF DIGESTERS AT INA ROAD WPCF, 2012

	VOLATILE SOLIDS REDUCTION (%)			DETENTION TIME (Days)			TEMPERATURE (°C)		
Regulatory Requirements	38%, (d)			15 Days, (e)			35 - 55 (°C), (e)		
Measured Parameters	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min
Digester #1	67	58	47	55	34	26	36.9	36.5	36.1
***Digester #2**	65	54	43	70	41	27	37.0	36.5	36.0
Digester #3	69	68	66	32	32	32	36.5	36.2	35.8
Digester #4	68	57	43	61	38	27	36.8	36.3	35.7
Digester #5	66	51	38	75	57	39	36.3	36.2	36.0
Digester #6	73	55	44	86	52	33	36.5	36.3	35.9

OPERATING PARAMETERS (c) OF DIGESTERS AT ROGER ROAD WWTP, 2012

	VOLATILE SOLIDS REDUCTION (%)			DETENTION TIME (Days)			TEMPERATURE (°C)		
Regulatory Requirements	38%, (d)			15 Days, (e)			35 - 55 (°C), (e)		
Measured Parameters	Max	Mean	Min	Max	Mean	Min	**Max**	**Mean**	**Min**
Digester #1	60	57	53	32	19	16	37.1	37.0	36.6
Digester #2	60	59	58	23	23	23	36.7	36.6	36.4
Digester #3	59	57	53	41	20	16	37.4	36.8	35.2
Digester #5	O/S (f)	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
Digester #6	61	56	53	32	19	16	37.4	37.1	36.6

(a) N/A means Not Applicable

(b) The data compilation code represents: Number of samples / number of samples above R18-9-1005, Table 1 / number of samples above R18-9-1005, Table 2
The data compilation code represents: Number of samples / number of samples above 40 CFR, 503.13 Table 1 / number
of samples above 40 CFR, 503.13 Table 3

(c) Summary statistics derived from the monthly average results presented in this report

(d) R18-9-1010-A.1; 40 CFR 503.33(b)(1)

(e) R18-9-1006-E Alternative 5; 40 CFR 503.32(b)(3) Appendix B, No. 3

(f) O/S – Out of Service

The high values of MDL and PQL in the first quarter for Arsenic, Lead, Molybdenum and Selenium occurred at the contract laboratory. The actual analysis results of the biosolids sampled by the Land Applier were significantly lower than both the regulatory limits and the MDL and PQL values.

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: January 1, 2012 through January 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)					
			Average		Units	Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement	*** < 69**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement	*** < 6.9**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	*** 46**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 720**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement	*** < 69**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement	*** < 1.4**		mg/kg	1/31 days	Composite	EPA 7471A
		Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement	*** < 28**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 34**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement	*** < 69**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 1700**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

* Analyses were subcontracted out to TestAmerica; ADHS# AZ0728.

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 4-3-2012

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 3/12/2012 13:45:14
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
January 2012

Data Qualifiers:

None

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **See Attached.**

Notes:

Total Solids analysis was conducted at the CRAO Laboratory new location at 3035 W. El Camino del Cerro, Tucson AZ 85745.

2012010585 Sample sent to Test America for analyses.

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Escobar

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

03/13/12
Date

Regional Biosolids Management Facility

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
pour off											
2012010585	C	Miscellaneous Note	1/10/12 23:59	None		Subcontracted					
2012010585	C	Solids, Total	1/10/12 23:59	SM 2540G	01/11/12 12:51	6.96	%		0.01		aellert

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0850-05 (2011120868 - Soil)				**Sampled: 12/16/11**				
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0729	6.2	ND	0.993	1/20/2012	1/22/2012	
Arsenic	EPA 6010B	12A0729	6.2	**8.6**	0.993	1/20/2012	1/22/2012	
Beryllium	EPA 6010B	12A0729	0.62	ND	0.993	1/20/2012	1/22/2012	
Cadmium	EPA 6010B	12A0729	0.62	**0.94**	0.993	1/20/2012	1/23/2012	
Chromium	EPA 6010B	12A0729	2.5	**13**	0.993	1/20/2012	1/22/2012	
Copper	EPA 6010B	12A0729	6.2	**370**	0.993	1/20/2012	1/22/2012	
Lead	EPA 6010B	12A0729	6.2	**12**	0.993	1/20/2012	1/22/2012	
Mercury	EPA 7471A	12A0596	0.12	**1.6**	1.07	1/23/2012	1/23/2012	H3
Molybdenum	EPA 6010B	12A0729	2.5	**12**	0.993	1/20/2012	1/22/2012	
Nickel	EPA 6010B	12A0729	2.5	**11**	0.993	1/20/2012	1/22/2012	
Selenium	EPA 6010B	12A0729	6.2	**7.5**	0.993	1/20/2012	1/22/2012	
Silver	EPA 6010B	12A0729	3.1	**3.6**	0.993	1/20/2012	1/22/2012	
Thallium	EPA 6010B	12A0729	6.2	ND	0.993	1/20/2012	1/22/2012	
Zinc	EPA 6010B	12A0729	12	**500**	0.993	1/20/2012	1/22/2012	
Sample ID: PVA0850-11 (2012010585 - Soil)				**Sampled: 01/10/12**				
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Arsenic	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Beryllium	EPA 6010B	12A0729	6.9	ND	0.995	1/20/2012	1/22/2012	
Cadmium	EPA 6010B	12A0729	6.9	ND	0.995	1/20/2012	1/23/2012	
Chromium	EPA 6010B	12A0729	28	**46**	0.995	1/20/2012	1/22/2012	
Copper	EPA 6010B	12A0729	69	**720**	0.995	1/20/2012	1/22/2012	
Lead	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Mercury	EPA 7471A	12A0596	1.4	ND	0.971	1/23/2012	1/23/2012	
Molybdenum	EPA 6010B	12A0729	28	ND	0.995	1/20/2012	1/22/2012	
Nickel	EPA 6010B	12A0729	28	**34**	0.995	1/20/2012	1/22/2012	
Selenium	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Silver	EPA 6010B	12A0729	35	ND	0.995	1/20/2012	1/22/2012	
Thallium	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Zinc	EPA 6010B	12A0729	140	**1700**	0.995	1/20/2012	1/22/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #20
Report Number: PVA0787

Sampled: 01/10/12-12/30/11
Received: 01/12/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: mg/kg dry									
Mercury	EPA 7471A	12A0596	N/A	1.4	ND	1.06	01/23/12	01/23/12	
Sample ID: PVA0787-01 (2011111093 - Water)					**Sampled: 11/18/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**240**	1	01/15/12	01/16/12	
Sample ID: PVA0787-02 (2011111355 - Water)					**Sampled: 11/23/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**430**	1	01/15/12	01/16/12	
Sample ID: PVA0787-03 (2011111413 - Water)					**Sampled: 11/25/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	01/15/12	01/16/12	
Sample ID: PVA0787-04 (2011120097 - Water)					**Sampled: 12/02/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	01/15/12	01/16/12	
Sample ID: PVA0787-05 (2011120470 - Water)					**Sampled: 12/09/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	01/15/12	01/16/12	
Sample ID: PVA0787-06 (2011120715 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**170**	1	01/15/12	01/16/12	
Sample ID: PVA0787-07 (2011120722 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**170**	1	01/15/12	01/16/12	
Sample ID: PVA0787-08 (2011120718 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**210**	1	01/15/12	01/16/12	
Sample ID: PVA0787-09 (2011120723 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**200**	1	01/15/12	01/16/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #20
Report Number: PVA0787

Sampled: 01/10/12-12/30/11
Received: 01/12/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	**7.3**	1	01/16/12	01/16/12	
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: mg/kg dry									
Nitrogen, Total	[CALC]	[CALC]	N/A	84	**36000**	1	01/18/12	01/19/12	
Ammonia-N	SM 4500NH3-D MOD	12A0882	N/A	690	**15000**	9.92	01/24/12	01/24/12	
Nitrate-N	EPA 9056	12A0517	N/A	27	ND	1	01/16/12	01/16/12	
Nitrite-N	EPA 9056	12A0517	N/A	27	ND	1	01/16/12	01/16/12	
Total Kjeldahl Nitrogen	SM 4500-NH3 D (mod)	12A0622	N/A	1100	**36000**	3.2	01/18/12	01/19/12	
Sample ID: PVA0787-16 (2012010578 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Fluoride	EPA 300.0	12A0397	N/A	0.40	**0.43**	1	01/12/12	01/12/12	
Nitrate-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/12/12	
Nitrite-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/12/12	
Orthophosphate - P	EPA 300	12A0397	N/A	0.20	**3.8**	1	01/12/12	01/12/12	
Phosphorus,Total - P	SM 4500-P B, E	12A0665	N/A	1.0	**8.3**	10	01/19/12	01/20/12	
Sulfate	EPA 300.0	12A0397	N/A	2.0	**140**	1	01/12/12	01/12/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**56**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**56**	1	01/24/12	01/25/12	
Sample ID: PVA0787-17 (2012010579 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Nitrate-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/13/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**58**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**58**	1	01/24/12	01/25/12	
Sample ID: PVA0787-18 (2012010580 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Nitrate-N	EPA 300.0	12A0408	N/A	0.20	**0.30**	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0408	N/A	0.20	ND	1	01/12/12	01/13/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**42**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**42**	1	01/24/12	01/25/12	
Sample ID: PVA0787-19 (2012010582 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Chloride	EPA 300.0	12A0408	N/A	20	**160**	10	01/12/12	01/13/12	
Fluoride	EPA 300.0	12A0408	N/A	0.40	**0.44**	1	01/12/12	01/13/12	
Nitrate-N	EPA 300.0	12A0408	N/A	0.20	**2.0**	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0408	N/A	0.20	**0.25**	1	01/12/12	01/13/12	
Orthophosphate - P	EPA 300	12A0408	N/A	0.20	**3.7**	1	01/12/12	01/13/12	
Phosphorus,Total - P	SM 4500-P B, E	12A0665	N/A	1.0	**4.2**	10	01/19/12	01/20/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012010585

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 01/10/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 01/10/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ AZPDES ☐ IWC ☐ Investigative ☐ Reuse ☐ USFS ■ 503 ☐ Process Control ☐ Other

Sample Matrix: ■ Biosolids ☐ Groundwater ☐ Industrial ☐ Soil ☐ Stormwater ☐ Surface Water ☐ Wastewater ☐ Other

INORGANIC CHEMISTRY

METALS	D	C
Aluminum		
Antimony		
Arsenic		
Barium		
Beryllium		
Boron		
Cadmium		
Calcium		
Chromium		
Cobalt		
Copper		
Hardness		
Iron		
Lead		
Magnesium		
Manganese		
Mercury		
Molybdenum		
Nickel		
Potassium		
Selenium		
Silver (Contract lab)		■
Sodium		
Strontium		
Thallium		
Tin		

METALS	D	C
Titanium		
Vanadium		
Zinc		
Priority Pollutant Metals *		
TCLP Metals Hg (Contract lab)		
503 Metals ** (Contract lab)		■
Chromium, Hexavalent		
Chromium, Trivalent		

WET METHODS	D	C
Ammonia as N (Contract lab)		■
Chloride		
Cyanide, Total		
Cyanide, Amenable		
Fluoride		
Ignitability		
Nitrate as N (Contract lab)		■
Nitrite as N (Contract lab)		■
Nitrate/Nitrite as N		
Nitrogen, Total Kjeldahl		
Nitrogen, Total as N (Contract lab)		■
Orthophosphate as P		
Phosphorus, Total as P		
Sulfate		
Sulfide		
Turbidity		

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile		
Dioxin GC/SIM/MS Scan		
Organochlorine Pesticides & PCBs		
Purgeable Organics (GCMS)		
Semivolatile Organics (GCMS)		
Other		

MISCELLANEOUS METHODS	D	C
4,4-DDE		
Bis(2-ethylhexyl) phthalate		
Digester Gas		
Oil and Grease		
Organic Carbon, Total		
Organic Carbon, Dissolved		
TCLP Herbicides (Contract Lab)		
TCLP Pesticides		
TCLP Semivolatile Organics		
TCLP Volatile Organics		
Total Petroleum Hydrocarbons		
Volatile Acids		

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*		
Chronic *C. dubia*		
Chronic *Selenastrum capricornutum*		
Other		

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity		
BOD		
COD		
Coliform, Fecal		
Coliform, Total		
Conductivity		
E. coli		
Oxygen, Dissolved		
pH		
Solids, Settleable		
Solids, Total ½ (Contract lab)		■
Solids, Total Dissolved		
Solids, Total Suspended		
Solids, Total Volatile		
Solids, Volatile Suspended		
Other		

OTHER	D	C

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Samples sent to Test America. GOS 01-11-12 GOS DO#12-24969 Metals sent to Test America, GOS 01-12-12 DO#12-25242

# of Bottles Delivered: 1 [illegible] 1/11/12

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature] Refrig. #23		1/10/12	2359
Refrig #23	[signature]	1/11/12	0500
[signature]	[signature]	01/11/12	0620
[signature]	[signature]	1/12/12	9:45
[signature] (metals)	[signature]	1/12/12	14:24

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	6.2	°C
Initials:	JH	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	✓		
Sample labels match Chain of Custody?	✓		
Correct number of samples were delivered?	✓		
Custody seals intact?			✓
Within holding time?	✓		
Sufficient sample volume for analysis?	✓		
Samples are in proper containers?	✓		
Sample containers damaged/leaking/frozen?		✓	
40 ml vials headspace, > pea-sized air bubble?			✓
Received from a refrigerator?		✓	

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County CRAO Lab, 3075 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group #20, PO# 12-24969

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required: Total nitrogen mg/kg; Nitrite (RUSH) mg/kg; Nitrate mg/kg; Ammonia mg/kg; Mercury mg/kg; Total solids % for mg/kg calcs

BS = biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total nitrogen mg/kg	Nitrite (RUSH) mg/kg	Nitrate mg/kg	Ammonia mg/kg	Mercury mg/kg	Total solids % for mg/kg calcs				Special Instructions
Thickener to Aura Gro	BS	glass	3	01-10-12	2359	H_2SO_4 and none	X	X	X	X	X	X				composite
20002-0200 2012010585																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	01-12-12 0945		1/12/12 9:45	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ____
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name / Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project / PO Number: Sample group #21, PO# 12-25242

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	503 metals + Ag mg/kg (in mg)	Total solid % for mg/kg								Special Instructions
Thickened sludge to Avra Gro	BS	01-10-12	1	01-10-12	2359	none	X	X								composite ~~RUSH~~
20002-0200 20120105 85																

Relinquished By:	Date / Time:	Received By:	Date / Time:	Turnaround Time: (Check)
for samplers	01-12-12 1424		1/12/12 14:24	same day ____ 72 hours ____
Relinquished By:	Date / Time:	Received By:	Date / Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date / Time:	Received in Lab By:	Date / Time:	Sample Integrity: (Check)
				intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: Sample Group #20

Sampled: 01/10/12-12/30/11
Received: 01/12/12
Revised: 02/02/12 14:42

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVA0787-01	2011111093	Water
PVA0787-02	2011111355	Water
PVA0787-03	2011111413	Water
PVA0787-04	2011120097	Water
PVA0787-05	2011120470	Water
PVA0787-06	2011120715	Water
PVA0787-07	2011120722	Water
PVA0787-08	2011120718	Water
PVA0787-09	2011120723	Water
PVA0787-10	2011120840	Water
PVA0787-11	2011121222	Water
PVA0787-12	2011121243	Water
PVA0787-13	2011121726	Water
PVA0787-14	2011121737	Water
PVA0787-15	2011121837	Water
PVA0787-16	2012010578	Water
PVA0787-17	2012010579	Water
PVA0787-18	2012010580	Water
PVA0787-19	2012010582	Water
PVA0787-20	2012010585	Soil

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

PVA 0787

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address:
Pima County CRAD Lab
3035 W El Camino Del Cerro
Tucson AZ 85745

Project/PO Number:
Sample group #20
PO# 12-24969

Project Manager:
Nancy Powell

Phone Number:
520-724-6183

Sampler:
various

Fax Number:
520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total nitrogen mg/kg	Nitrite (RUSH) mg/kg	Nitrate mg/kg	Ammonia mg/kg	Mercury mg/kg	Total solids % for mg/kg calcs				Special Instructions
																BS~ biosolids
Thickener to Aura Gro	BS	glass	3	01-10-12	2359	H2SO4 and none	X	X	X	X	X	X		–	20	composite
20002-0200 2012010585																

Relinquished By: for samplers — Date/Time: 01-12-12 0945
Received By: — Date/Time: 1/12/12 9:45

Relinquished By: — Date/Time: 1/12/12 11:00
Received By: — Date/Time:

Relinquished By: — Date/Time:
Received in Lab By: — Date/Time: 1/12/12 1515

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ____

Sample Integrity: (Check)
intact ✓ on ice ✓ 3.0°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: Sample group #21 DO# 12-25242

Sampled: 01/10/12-12/16/11
Received: 01/13/12
Revised: 03/12/12 09:34

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVA0850-01	2012010659	Water
PVA0850-02	2012010662	Water
PVA0850-03	2012010664	Water
PVA0850-04	2012010663	Water
PVA0850-05	2011120868	Soil
PVA0850-06	2012010621	Water
PVA0850-07	2012010622	Water
PVA0850-08	2012010596	Water
PVA0850-09	2012010598	Water
PVA0850-10	2012010599	Water
PVA0850-11	2012010585	Soil

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

SAMPLE RECEIPT:	Samples were received intact, at 2°C, on ice and with chain of custody documentation.
HOLDING TIMES:	Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
	N1 - Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.
ADDITIONAL INFORMATION:	2/23/12 - The report was revised to add Copper and Chromium data for sample PVA0850-05 at the clients request.
	3/12/12 - The report was revised to add Copper and Chromium data for sample PVA0850-11 at the clients request.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0850-04 (2012010663 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	12A0485	2.0	ND	5	1/15/2012	1/15/2012	D1
Nitrogen, Total (300.0 Pres. auto calc)	Calculation	[CALC]	3.0	ND	5	1/28/2012	1/28/2012	
Sample ID: PVA0850-04RE1 (2012010663 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A1091	1.0	ND	1	1/28/2012	1/28/2012	
Sample ID: PVA0850-05 (2011120868 - Soil)					**Sampled: 12/16/11**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12A0559	0.10	**80**	1	1/16/2012	1/16/2012	H3
Sample ID: PVA0850-06 (2012010621 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12A0865	0.50	**35**	1	1/24/2012	1/24/2012	
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**280**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-07 (2012010622 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12A0865	0.50	**32**	1	1/24/2012	1/24/2012	
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**23**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-08 (2012010596 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**300**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-09 (2012010598 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	12A0485	2.0	ND	5	1/15/2012	1/15/2012	D1
Sample ID: PVA0850-10 (2012010599 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**17**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-11 (2012010585 - Soil)					**Sampled: 01/10/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12A0559	0.10	**7.2**	1	1/16/2012	1/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
Calculation	Water		N/A
EPA 300.0	Water		X
EPA 6010B	Soil	N/A	X
EPA 7471A	Soil		X
SM 2540G	Soil		X
SM 4500NH3-D	Water		X
SM 5210B	Water		X
SM4500-NH3 D	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

PVA 0850

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group #21, PO# 12-25242

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	503 metals + Ag mg/kg (no Hg)	Total solid % for mg/kg								Special Instructions
Thickened sludge to Avra Gvo	BS	01-10-12	1	01-10-12	2359	none	X	X								composite ~~PM571~~
20002-0200 2012010585																

Relinquished By: for samplers — Date/Time: 01-12-12 1424
Received By: — Date/Time: 1/12/12 1424

Relinquished By: — Date/Time: 1/12/12 1530
Received By: — Date/Time:

Relinquished By: — Date/Time:
Received in Lab By: — Date/Time: 1/13/12 1020

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1 of 2

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: February 1, 2012 through February 29, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement			Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
				Average		Units			
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement		* < 71		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement		* < 7.1		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement		* 28		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1		3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement		* 470		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement		* < 71		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement		1.18		mg/kg	1/29 days	Composite	EPA 7471A
		Table 1	Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement		* < 28		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1		75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement		* < 28		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement		* < 71		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement		* 1100		mg/kg	1/29 days	Composite	EPA 6010B
		Table 1	Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

* Analyses were subcontracted out to TestAmerica; ADHS# AZ0728.

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 04/25/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 4/4/2012 09:43:24
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
February 2012

Data Qualifiers:

None

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

Ammonia, Mercury, Nitrate, Nitrate/Nitrite, Nitrite, Total Kjeldahl Nitrogen, Total Nitrogen and Total Solids analyses were conducted at the CRAO Laboratory new location at 3035 W. El Camino del Cerro, Tucson, AZ.

2012020836 Sample sent to Test America for analysis. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Esquivel

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

04/23/12
Date

Regional Biosolids Management Facility

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
2012020836	C	Miscellaneous Note	2/14/12 23:59	None		Subcontracted					Other
2012020836	C	Ammonia	2/14/12 23:59	EPA 350.1	02/21/12 10:27	11686.4	mg/Kg	148.8	676.3		aklos
2012020836	C	Mercury	2/14/12 23:59	EPA 7471A	02/16/12 9:46	1.18	mg/Kg	0.0036	0.27		khowell
2012020836	C	Nitrate	2/14/12 23:59	EPA 353.2	02/29/12 11:33	ND	mg/Kg	0.2	0.5		khowell
2012020836	C	Nitrate/Nitrite	2/14/12 23:59	EPA 353.2	02/29/12 11:33	Trace	mg/Kg	1.8	10.9		khowell
2012020836	C	Nitrite	2/14/12 23:59	SM 4500-NO2	02/15/12 14:12	Trace	mg/Kg	0.546	10.929		aklos
2012020836	C	Nitrogen, Total Kjeldahl	2/14/12 23:59	EPA 351.2	02/24/12 14:13	56644.8	mg/Kg	309.4	1302.9		aklos
2012020836	C	Nitrogen, Total	2/14/12 23:59	Calculated	02/29/12 11:33	56647.1	mg/Kg		0.8		khowell
2012020836	C	Solids, Total	2/14/12 23:59	SM 2540G	02/15/12 13:00	7.32	%		0.01		snevius

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012020836

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 02/14/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 02/14/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals ** contract	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	☐	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver contract	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total 1 of 2 contract	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Metals and % solids sent to Test America
COS 02-15-12 DOH 12-29301
Poured off the daily sample 2012020798

# of Bottles Delivered: 3 (JM 2-15-12)

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Refrig. #23	2/14/12	2359
Refrig. #23	[signature]	2-15-12	0615
[signature]	Shaunee Michaud	2-15-12	0630
Shaunee Michaud	[signature]	2/15/12	13:25

LAB USE ONLY

Sample Integrity/Preservation:

Temperature: 7.4 °C

Initials: JM

Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	✓	☐	☐
Sample labels match Chain of Custody?	✓	☐	☐
Correct number of samples were delivered?	✓	☐	☐
Custody seals intact?	☐	☐	✓
Within holding time?	✓	☐	☐
Sufficient sample volume for analysis?	✓	☐	☐
Samples are in proper containers?	✓	☐	☐
Sample containers damaged/leaking/frozen?	☐	✓	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	✓
Received from a refrigerator?	✓	☐	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: Sample Group #32 12-29301

Sampled: 02/14/12-02/15/12
Received: 02/16/12
Revised: 03/19/12 11:17

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVB1125-01	2012020766	Water
PVB1125-02	2012020782	Water
PVB1125-03	2012020785	Water
PVB1125-04	2012020836	Soil
PVB1125-05	2012020840	Water
PVB1125-06	2012020831	Water
PVB1125-07	2012020835	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #32 12-29301
Report Number: PVB1125

Sampled: 02/14/12-02/15/12
Received: 02/16/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVB1125-04 (2012020836 - Soil)					**Sampled: 02/14/12**				
Reporting Units: mg/kg dry									
Arsenic	EPA 6010B	12B0983	N/A	71	ND	0.991	02/23/12	02/25/12	
Cadmium	EPA 6010B	12B0983	N/A	7.1	ND	0.991	02/23/12	02/25/12	
Chromium	EPA 6010B	12B0983	N/A	28	**28**	0.991	02/23/12	02/25/12	
Copper	EPA 6010B	12B0983	N/A	71	**470**	0.991	02/23/12	02/25/12	
Lead	EPA 6010B	12B0983	N/A	71	ND	0.991	02/23/12	02/25/12	
Mercury	EPA 7471A	12B1101	N/A	1.4	**2.0**	0.915	02/27/12	02/27/12	
Molybdenum	EPA 6010B	12B0983	N/A	28	ND	0.991	02/23/12	02/25/12	
Nickel	EPA 6010B	12B0983	N/A	28	ND	0.991	02/23/12	02/25/12	
Selenium	EPA 6010B	12B0983	N/A	71	ND	0.991	02/23/12	02/25/12	
Silver	EPA 6010B	12B0983	N/A	36	ND	0.991	02/23/12	02/25/12	
Zinc	EPA 6010B	12B0983	N/A	140	**1100**	0.991	02/23/12	02/25/12	
Sample ID: PVB1125-01 (2012020766 - Water)					**Sampled: 02/14/12**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**210**	1	02/23/12	02/24/12	
Sample ID: PVB1125-06 (2012020831 - Water)					**Sampled: 02/15/12**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**210**	1	02/23/12	02/24/12	
Sample ID: PVB1125-07 (2012020835 - Water)					**Sampled: 02/15/12**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**200**	1	02/23/12	02/24/12	
Sample ID: PVB1125-01 (2012020766 - Water)					**Sampled: 02/14/12**				
Reporting Units: ug/l									
Calcium	EPA 200.7	12B0971	N/A	2000	**70000**	1	02/23/12	02/24/12	
Magnesium	EPA 200.7	12B0971	N/A	2000	**9500**	1	02/23/12	02/24/12	
Sample ID: PVB1125-06 (2012020831 - Water)					**Sampled: 02/15/12**				
Reporting Units: ug/l									
Calcium	EPA 200.7	12B0971	N/A	2000	**68000**	1	02/23/12	02/24/12	
Magnesium	EPA 200.7	12B0971	N/A	2000	**11000**	1	02/23/12	02/24/12	
Sample ID: PVB1125-07 (2012020835 - Water)					**Sampled: 02/15/12**				
Reporting Units: ug/l									
Calcium	EPA 200.7	12B0971	N/A	2000	**63000**	1	02/23/12	02/24/12	
Magnesium	EPA 200.7	12B0971	N/A	2000	**10000**	1	02/23/12	02/24/12	
Potassium	EPA 200.7	12B0971	N/A	2000	**20000**	1	02/23/12	02/24/12	
Sodium	EPA 200.7	12B0971	N/A	2000	**130000**	1	02/23/12	02/24/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #32 12-29301
Report Number: PVB1125

Sampled: 02/14/12-02/15/12
Received: 02/16/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVB1125-04 (2012020836 - Soil)					**Sampled: 02/14/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12B0744	N/A	0.10	**7.0**	1	02/17/12	02/17/12	
Sample ID: PVB1125-02 (2012020782 - Water)					**Sampled: 02/15/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12B0716	N/A	5.0	**340**	1	02/16/12	02/16/12	
Sample ID: PVB1125-03 (2012020785 - Water)					**Sampled: 02/15/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12B0716	N/A	5.0	**24**	1	02/16/12	02/16/12	
Sample ID: PVB1125-06 (2012020831 - Water)					**Sampled: 02/15/12**				
Reporting Units: mg/l									
Sulfate	EPA 300.0	12B0707	N/A	10	**140**	5	02/16/12	02/17/12	
Sample ID: PVB1125-07 (2012020835 - Water)					**Sampled: 02/15/12**				
Reporting Units: mg/l									
Sulfate	EPA 300.0	12B0707	N/A	10	**160**	5	02/16/12	02/17/12	
Sample ID: PVB1125-01RE1 (2012020766 - Water)					**Sampled: 02/14/12**				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12B1009	1.7	8.0	**6.4**	1	02/23/12	02/24/12	E4
Sample ID: PVB1125-05 (2012020840 - Water)					**Sampled: 02/15/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12B1009	1.7	8.0	**4.2**	1	02/23/12	02/24/12	E4

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #32 12-29301

Report Number: PVB1125

Sampled: 02/14/12-02/15/12
Received: 02/16/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 200.7	Water		X
EPA 300.0	Water		X
EPA 6010B	Soil	N/A	X
EPA 7471A	Soil		X
SM 2540G	Soil		X
SM 4500CN-E	Water		X
SM 4500CN-G	Water		X
SM 5210B	Water		X
SM2340B	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

PUB1125

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 32, DO# 12-29301

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Hardness Ca + Mg 200.7	Cyanide, amenable	BOD	Metals 6010B mg/kg Ag, Mo, As, Cd, Cr, Cu Pb, Ni, Se, Zn 6020	Mercury mg/kg	Total % solids for mg/kg	total cyanide			Special Instructions
																BS- biosolids
Randolph Park permeate pre eff	WW	HDPE	2	02-14-12	0747	HNO3 + NaOH	X	X						-01		discrete
25011-0300 2012020766																
Ina Rd raw Influent	WW	HDPE	1	02-15-12	0600	none			X					-02		composite
20001-0150 2012020782																please return bottle
Ina Rd final effluent #2	WW	HDPE	1	02-15-12	0600	none			X					-03		composite
20001-7020 2012020785																please return bottle
Thickened sludge to Arra Gro	BS	HDPE and glass	2	02-14-12	2359	none				X		X		-04		composite
20002-0200 2012020836																Results in mg/kg
Ina Rd final effluent #2	WW	HDPE	1	02-15-12	0830	NaOH							X	-05		discrete
20001-7020 2012020840																

Relinquished By:	Date/Time:	Received By:	Date/Time:
for samplers	02-15-12 1325		2/15/12 13:25
Relinquished By:	Date/Time: 2/15/12 15:00	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 10:30 02-16-12

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓ 2.6.C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577
Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: March 1, 2012 through March 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement	* < 70		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement	* < 7.0		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	* 29		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement	* 440		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement	* < 70		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement	1.29		mg/kg	1/31 days	Composite	EPA 7471A
		Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement	* < 28		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement	* < 28		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement	* < 70		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement	* 1100		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

* Analyses were subcontracted out to TestAmerica; ADHS# AZ0728. R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature James A. Doyle Per	Date Signed 05/07/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 4/30/2012 12:10:05
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
March 2012

Data Qualifiers:

None

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: None.

Notes:

In-house analyses were performed at the CRAO Laboratory location at 3035 W. El Camino del Cerro, Tucson AZ 85745.
2012030904 Metals sent to TA. NP

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Rocker

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

05/02/12
Date

Regional Biosolids Management Facility

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
Pour off											
2012030904	C	Miscellaneous Note	3/13/12 23:59	None		Subcontracted					
2012030904	C	Ammonia	3/13/12 23:59	EPA 350.1	03/20/12 10:01	12900.0	mg/Kg	157.1	714.3		aklos
2012030904	C	Mercury	3/13/12 23:59	EPA 7471A	03/15/12 13:15	1.268	mg/Kg	0.0037	0.29		khowell
2012030904	C	Nitrate	3/13/12 23:59	EPA 353.2	03/26/12 14:02	1.61	mg/Kg	0.2	0.5		aklos
2012030904	C	Nitrate/Nitrite	3/13/12 23:59	EPA 353.2	03/26/12 11:02	Trace	mg/Kg	1.886	11.429		aklos
2012030904	C	Nitrite	3/13/12 23:59	SM 4500-NO2 B	03/14/12 13:18	Trace	mg/Kg	0.571	11.429		aklos
2012030904	C	Nitrogen, Total Kjeldahl	3/13/12 23:59	EPA 351.2	03/22/12 14:15	58828.7	mg/Kg	417.1	1756.1		aklos
2012030904	C	Nitrogen, Total	3/13/12 23:59	Calculated	03/30/12 12:43	58831.6	mg/Kg		0.8		aklos
2012030904	C	Solids, Total	3/13/12 23:59	SM 2540G	03/14/12 12:55	7.00	%		0.01		jhernandez

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Sample Group #38 DO# 12-32674

Sampled:03/08/12-03/14/12
Received:03/16/12
Issued:03/29/12 11:24

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVC1303-01	2012030516	Water
PVC1303-02	2012030582	Water
PVC1303-03	2012030683	Water
PVC1303-04	2012030829	Water
PVC1303-05	2012030558	Water
PVC1303-06	2012030904	Soil
PVC1303-07	2012030908	Water
PVC1303-08	2012030899	Water
PVC1303-09	2012030899	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #38 DO# 12-32674
Report Number: PVC1303
Sampled: 03/08/12-03/14/12
Received: 03/16/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1303-06 (2012030904 - Soil)					**Sampled: 03/13/12**				
Reporting Units: mg/kg dry									
Arsenic	EPA 6010B	12C0838	N/A	70	ND	0.981	03/20/12	03/21/12	
Cadmium	EPA 6010B	12C0838	N/A	7.0	ND	0.981	03/20/12	03/21/12	
Chromium	EPA 6010B	12C0838	N/A	28	29	0.981	03/20/12	03/21/12	
Copper	EPA 6010B	12C0838	N/A	70	440	0.981	03/20/12	03/21/12	
Lead	EPA 6010B	12C0838	N/A	70	ND	0.981	03/20/12	03/21/12	
Molybdenum	EPA 6010B	12C0838	N/A	28	ND	0.981	03/20/12	03/21/12	
Nickel	EPA 6010B	12C0838	N/A	28	ND	0.981	03/20/12	03/21/12	
Selenium	EPA 6010B	12C0838	N/A	70	ND	0.981	03/20/12	03/21/12	
Silver	EPA 6010B	12C0838	N/A	35	ND	0.981	03/20/12	03/21/12	
Zinc	EPA 6010B	12C0838	N/A	140	1100	0.981	03/20/12	03/21/12	
Sample ID: PVC1303-01 (2012030516 - Water)					**Sampled: 03/08/12**				
Reporting Units: ug/l									
Beryllium	EPA 200.7	12C0942	N/A	1.0	ND	1	03/21/12	03/22/12	
Iron	EPA 200.7	12C0942	N/A	50	ND	1	03/21/12	03/22/12	
Sample ID: PVC1303-02 (2012030582 - Water)					**Sampled: 03/09/12**				
Reporting Units: ug/l									
Antimony	EPA 200.7	12C0942	N/A	40	ND	1	03/21/12	03/22/12	
Arsenic	EPA 200.7	12C0942	N/A	100	ND	1	03/21/12	03/22/12	
Beryllium	EPA 200.7	12C0942	N/A	1.0	ND	1	03/21/12	03/22/12	
Cadmium	EPA 200.7	12C0942	N/A	1.0	ND	1	03/21/12	03/22/12	
Chromium	EPA 200.7	12C0942	N/A	10	ND	1	03/21/12	03/22/12	
Copper	EPA 200.7	12C0942	N/A	10	220	1	03/21/12	03/22/12	
Lead	EPA 200.7	12C0942	N/A	15	ND	1	03/21/12	03/22/12	
Molybdenum	EPA 200.7	12C0942	N/A	10	ND	1	03/21/12	03/22/12	
Nickel	EPA 200.7	12C0942	N/A	10	18	1	03/21/12	03/22/12	
Selenium	EPA 200.7	12C0942	N/A	100	ND	1	03/21/12	03/22/12	
Silver	EPA 200.7	12C0942	N/A	10	ND	1	03/21/12	03/22/12	
Thallium	EPA 200.7	12C0942	N/A	100	ND	1	03/21/12	03/22/12	
Zinc	EPA 200.7	12C0942	N/A	50	200	1	03/21/12	03/22/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #38 DO# 12-32674
Report Number: PVC1303
Sampled: 03/08/12-03/14/12
Received: 03/16/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1303-06 (2012030904 - Soil)					Sampled: 03/13/12				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12C0848	N/A	0.10	7.1	1	03/20/12	03/20/12	
Sample ID: PVC1303-01 (2012030516 - Water)					Sampled: 03/08/12				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12C0952	1.7	8.0	ND	1	03/21/12	03/22/12	N1, E8
Sample ID: PVC1303-02 (2012030582 - Water)					Sampled: 03/09/12				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12C0952	1.7	8.0	4.8	1	03/21/12	03/22/12	E4
Sample ID: PVC1303-04 (2012030829 - Water)					Sampled: 03/13/12				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12C1075	1.7	8.0	1.7	1	03/23/12	03/23/12	E4
Sample ID: PVC1303-07 (2012030908 - Water)					Sampled: 03/14/12				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12C1202	1.7	8.0	3.7	1	03/27/12	03/27/12	E4, N1, N1a

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #38 DO# 12-32674

Report Number: PVC1303

Sampled: 03/08/12-03/14/12
Received: 03/16/12

DATA QUALIFIERS AND DEFINITIONS

E4	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).
E8	Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
N1	See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #38 DO# 12-32674

Report Number: PVC1303

Sampled: 03/08/12-03/14/12
Received: 03/16/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 200.7	Water		X
EPA 200.8	Water		X
EPA 6010B	Soil	N/A	X
SM 2540G	Soil		X
SM 4500CN-E	Water		X
SM 4500CN-G	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

COPY

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima Count CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group #38, DO# 12-32674

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total % solids for mg/kg calc	6010B Ag, Mo, As, Cd, Cr, Cu, Pb	6010B Ni, Se and Zn	Amenable cyanide	Cu, Pb, Ag + Se 200.8	Dissolved copper (filtered & preserved)				Special Instructions
Thickened sludge to Avra Gio	BS	glass	2	03-13-12	2359	none	X	X	X							composite
20002-0200 2012030704		and HDPE														
Arivaca Junction discharge	WW	HDPE	1	03-14-12	0944	NaOH				X						discrete
25004-0320 2012030908																pH=12
Ina Rd final effluent #2	WW	HDPE	2	03-14-12	0600	HNO_3					X	X				composite
20001-7020 2012030899																

BS - biosolids

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
for samplers	03-15-12 1037		3/15/12 10:37	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
				intact ____	on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012030904

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 03/13/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 03/13/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Symington, Vasquez (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C
Aluminum		
Antimony		
Arsenic		
Barium		
Beryllium		
Boron		
Cadmium		
Calcium		
Chromium		
Cobalt		
Copper		
Hardness		
Iron		
Lead		
Magnesium		
Manganese		
Mercury		
Molybdenum		
Nickel		
Potassium		
Selenium		
Silver Contract		■
Sodium		
Strontium		
Thallium		
Tin		

METALS	D	C
Titanium		
Vanadium		
Zinc		
Priority Pollutant Metals *		
TCLP Metals Hg Inhouse		
503 Metals ** Contract		■
Chromium, Hexavalent		
Chromium, Trivalent		

WET METHODS	D	C
Ammonia as N		■
Chloride		
Cyanide, Total		
Cyanide, Amenable		
Fluoride		
Ignitability		
Nitrate as N		■
Nitrite as N		■
Nitrate/Nitrite as N		
Nitrogen, Total Kjeldahl		
Nitrogen, Total as N		■
Orthophosphate as P		
Phosphorus, Total as P		
Sulfate		
Sulfide		
Turbidity		

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile		
Dioxin GC/SIM/MS Scan		
Organochlorine Pesticides & PCBs		
Purgeable Organics (GCMS)		
Semivolatile Organics (GCMS)		
Other		

MISCELLANEOUS METHODS	D	C
4,4-DDE		
Bis(2-ethylhexyl) phthalate		
Digester Gas		
Oil and Grease		
Organic Carbon, Total		
Organic Carbon, Dissolved		
TCLP Herbicides (Contract Lab)		
TCLP Pesticides		
TCLP Semivolatile Organics		
TCLP Volatile Organics		
Total Petroleum Hydrocarbons		
Volatile Acids		

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*		
Chronic *C. dubia*		
Chronic *Selenastrum capricornutum*		
Other		

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity		
BOD		
COD		
Coliform, Fecal		
Coliform, Total		
Conductivity		
E. coli		
Oxygen, Dissolved		
pH		
Solids, Settleable		
Solids, Total		■
Solids, Total Dissolved		
Solids, Total Suspended		
Solids, Total Volatile		
Solids, Volatile Suspended		
Other		

OTHER	D	C

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Poured off the daily sample 2012030862 GOS 03-14-12 Contract lab is Test America. GOS 03-15-12 PO # 12-32674

# of Bottles Delivered: (5) GOS

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by: Sampler	Received by:	Date:	Time: (24 Hour Clock)
for Matt Symington		03-14-12	1100
		3/15/12	10:37

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	9	°C
Initials:	GOS	
Non-Preserved	5	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:

	Yes	No	NA
Chain of Custody Record completed appropriately?	☒		
Sample labels match Chain of Custody?	☒		
Correct number of samples were delivered?	☒		
Custody seals intact?			☒
Within holding time?	☒		
Sufficient sample volume for analysis?	☒		
Samples are in proper containers?	☒		
Sample containers damaged/leaking/frozen?		☒	
40 ml vials headspace, > pea-sized air bubble?			☒
Received from a refrigerator?		☒	

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima Count CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group #38, DO# 12-32674

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: Various

Fax Number: 520-724-6071

Analysis Required: Total % solids for mg/kg calc; 6010B Ag, Mo, As, Cd, Cr, Cu, Pb; 6010B Ni, Se and Zn; Amenable cyanide; Cu, Pb, Ag + Se 200.8; Dissolved copper (filtered + preserved); BS - biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total % solids for mg/kg calc	6010B Ag, Mo, As, Cd, Cr, Cu, Pb	6010B Ni, Se and Zn	Amenable cyanide	Cu, Pb, Ag + Se 200.8	Dissolved copper (filtered + preserved)				Special Instructions
Thickened sludge to Avra Gin	BS	glass	2	03-13-12	2359	none	X	X	X							composite
20002-0200 2012030904		and HDPE														
Arivaca Junction discharge	WW	HDPE	1	03-14-12	0944	NaOH				X						discrete
25004-0320 2012030908																pH=12
Ina Rd final effluent #2	WW	HDPE	2	03-14-12	0600	HNO_3					X	X				composite
20001-7020 2012030899																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	03-15-12 1037 ~~1032~~		3/15/12 1037	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: April 1, 2012 through April 30, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)					
			Average		Units	Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 11**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 1.8**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	*** 26**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 480**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 18**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement	**1.26**		mg/kg	1/30 days	Composite	EPA 7471A
		Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 15**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 20**		mg/kg	1/30days	Composite	EPA 6010B
		Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 6.1**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement	*** 1100**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

* Analyses were subcontracted out to TestAmerica; ADHS# AZ0728. R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 6-18-12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 5/31/2012 10:38:30
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
April 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes: In-house analyses were conducted at the CRAO Laboratory location at 3035 W. El Camino del Cerro, Tucson, AZ 85745.

2012040662 Sent to Test America for 503 metals and Silver 4-11-12 JS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Esteban

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

05/31/12
Date

Regional Biosolids Management Facility

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
2012040662	C	Miscellaneous Note	4/10/12 23:59	None		Subcontracted					Other
2012040662	C	Ammonia	4/10/12 23:59	EPA 350.1	04/16/12 12:20	13233.4	mg/Kg	173.5	788.6	M1	aklos
2012040662	C	Mercury	4/10/12 23:59	EPA 7471A	04/18/12 12:02	1.26	mg/Kg	0.0041	0.32		dobrien
2012040662	C	Nitrate	4/10/12 23:59	Calculated	04/17/12 14:30	Trace	mg/Kg		12.6		khowell
2012040662	C	Nitrate/Nitrite	4/10/12 23:59	EPA 353.2	04/17/12 14:30	Trace	mg/Kg	0.52	12.6		khowell
2012040662	C	Nitrite	4/10/12 23:59	SM 4500-NO2 B	04/12/12 8:59	Trace	mg/Kg	0.631	12.618		aklos
2012040662	C	Nitrogen, Total Kjeldahl	4/10/12 23:59	EPA 351.2	04/26/12 13:02	62471.8	mg/Kg	342.3	1441.1		aklos
2012040662	C	Nitrogen, Total	4/10/12 23:59	Calculated	04/26/12 15:30	62475.9	mg/Kg		1441.1		aklos
2012040662	C	Solids, Total	4/10/12 23:59	SM 2540G	04/11/12 12:31	6.34	%		0.01		aellert

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
April 2012

Data Qualifier(s):	Definition:
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Sample Group #46

Sampled:04/09/12-04/12/12
Received:04/13/12
Issued:04/26/12 13:15

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 5 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVD1032-01	2012040664	Water
PVD1032-02	2012040664 (Blank)	Water
PVD1032-03	2012040673	Water
PVD1032-04	2012040592	Water
PVD1032-05	2012040593	Water
PVD1032-06	2012040590	Water
PVD1032-07	2012040589	Water
PVD1032-08	2012040506	Water
PVD1032-09	2012040507	Water
PVD1032-10	2012040505	Water
PVD1032-11	2012040475	Water
PVD1032-12	2012040662	Soil
PVD1032-13	2012040655	Water
PVD1032-14	2012040659	Water
PVD1032-15	2012040659	Water
PVD1032-16	2012040743	Soil

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory 3035 W El Camino Del Cerro Tucson, AZ 85745 Attention: Nancy Powell	Project ID: Sample Group #46 Report Number: PVD1032	Sampled: 04/09/12-04/12/12 Received: 04/13/12

SAMPLE RECEIPT:	Samples were received intact, at 4°C, on ice and with chain of custody documentation.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
	N1 - The RPD exceeded the acceptance limit due to sample matrix effects.
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	Refer to the last page for specific subcontract laboratory information included in this report.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #46
Report Number: PVD1032

Sampled: 04/09/12-04/12/12
Received: 04/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD1032-03 (2012040673 - Water)					**Sampled: 04/11/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-06 (2012040590 - Water)					**Sampled: 04/10/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-07 (2012040589 - Water)					**Sampled: 04/10/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-12 (2012040662 - Soil)					**Sampled: 04/10/12**			
Reporting Units: mg/kg dry								
Arsenic	EPA 6010B	12D0821	5.0	**11**	0.967	4/20/2012	4/24/2012	
Cadmium	EPA 6010B	12D0821	0.50	**1.8**	0.967	4/20/2012	4/24/2012	
Chromium	EPA 6010B	12D0821	2.0	**26**	0.967	4/20/2012	4/24/2012	
Copper	EPA 6010B	12D0821	5.0	**480**	0.967	4/20/2012	4/24/2012	
Lead	EPA 6010B	12D0821	5.0	**18**	0.967	4/20/2012	4/24/2012	
Molybdenum	EPA 6010B	12D0821	2.0	**15**	0.967	4/20/2012	4/24/2012	
Nickel	EPA 6010B	12D0821	2.0	**20**	0.967	4/20/2012	4/24/2012	
Selenium	EPA 6010B	12D0821	5.0	**6.1**	0.967	4/20/2012	4/24/2012	
Silver	EPA 6010B	12D0821	2.5	**8.5**	0.967	4/20/2012	4/24/2012	
Zinc	EPA 6010B	12D0821	10	**1100**	0.967	4/20/2012	4/24/2012	
Sample ID: PVD1032-13 (2012040655 - Water)					**Sampled: 04/11/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-14 (2012040659 - Water)					**Sampled: 04/11/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-16 (2012040743 - Soil)					**Sampled: 04/12/12**			
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12D0821	5.0	**7.3**	0.99	4/20/2012	4/24/2012	
Arsenic	EPA 6010B	12D0821	5.0	**6.6**	0.99	4/20/2012	4/24/2012	
Beryllium	EPA 6010B	12D0821	0.50	ND	0.99	4/20/2012	4/24/2012	
Cadmium	EPA 6010B	12D0821	0.50	**1.6**	0.99	4/20/2012	4/24/2012	
Chromium	EPA 6010B	12D0821	2.0	**23**	0.99	4/20/2012	4/24/2012	
Copper	EPA 6010B	12D0821	5.0	**450**	0.99	4/20/2012	4/24/2012	
Lead	EPA 6010B	12D0821	5.0	**22**	0.99	4/20/2012	4/24/2012	
Molybdenum	EPA 6010B	12D0821	2.0	**15**	0.99	4/20/2012	4/24/2012	
Nickel	EPA 6010B	12D0821	2.0	**15**	0.99	4/20/2012	4/24/2012	
Selenium	EPA 6010B	12D0821	5.0	**12**	0.99	4/20/2012	4/24/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #46
Report Number: PVD1032

Sampled: 04/09/12-04/12/12
Received: 04/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD1032-16 (2012040743 - Soil) - cont.					**Sampled: 04/12/12**			
Reporting Units: mg/kg dry								
Silver	EPA 6010B	12D0821	2.5	**10**	0.99	4/20/2012	4/24/2012	
Thallium	EPA 6010B	12D0821	5.0	**8.9**	0.99	4/20/2012	4/24/2012	
Zinc	EPA 6010B	12D0821	10	**870**	0.99	4/20/2012	4/24/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #46
Report Number: PVD1032

Sampled: 04/09/12-04/12/12
Received: 04/13/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD1032-12 (2012040662 - Soil)					**Sampled: 04/10/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0670	0.10	**6.2**	1	4/17/2012	4/17/2012	
Sample ID: PVD1032-16 (2012040743 - Soil)					**Sampled: 04/12/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0670	0.10	**1.4**	1	4/17/2012	4/17/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

PVD 1032

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 46, DO# 12-36220

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Copper 200.8	Zinc 200.8	Molybdenum 200.8	6010B Ag, As, Cd, Cr, Cu, Pb + Mo (mg/kg)	6010B Ni, Se and Zn (mg/kg)	Total % solids for mg/kg calc				Special Instructions
																BS- biosolids
Mt. Lemmon effluent	WW	HDPE	1	04-09-12	0900	HNO_3	1	1					—	10		composite
22250-0200 2012040505																
1204078-02																
Roger Rd raw influent	WW	HDPE	1	04-09-12	0600	HNO_3			1				—	11		composite
20923-0100 2012040475																
1204071-~~02~~ 01 cos 04-12-12																
Thickened sludge to AvraGro	BS	HDPE + glass	2	04-10-12	2359	none				1	1	1	—	12		composite
20002-0200 2012040662																
1204097-01																

Relinquished By:	Date/Time:	Received By:	Date/Time:
for samplers	04-12-12 1314		4/12/12 13:14
Relinquished By:	Date/Time:	Received By:	Date/Time:
	04/12/12 15:00		
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:
			4/13/12 1030

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

3.5°C

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

1204097-01

LAB ID: 201204 0652

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 04/10/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 04/10/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals Hg in house	☐	☐
Boron	☐	☐	503 Metals ** contract	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	☐	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver contract	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total ½ in house	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off. Metals sent to Test America.
605 04-11-12 DW 12-36220
Poured off 2012040622 + 1204091-10

# of Bottles Delivered: AV 4-11-12

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
M. S.	Refrig. @#23	4/10/12	2359
Refrig. @#23			
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		4-11-12	0600
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		4/11/12	0605
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		4/12/12	13:M
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	9.9	°C
Initials:	JYR	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☑	☐	☐
Sample labels match Chain of Custody?	☑	☐	☐
Correct number of samples were delivered?	☑	☐	☐
Custody seals intact?	☐	☐	☑
Within holding time?	☑	☐	☐
Sufficient sample volume for analysis?	☑	☐	☐
Samples are in proper containers?	☑	☐	☐
Sample containers damaged/leaking/frozen?	☐	☑	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☑
Received from a refrigerator?	☐	☑	☐

** Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
*** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 46, DO# 12-36220

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Copper 200.8	Zinc 200.8	Molybdenum 200.8	6010B Ag, As, Cd, Cr, Cu, Pb + Mo (mg/kg)	6010B Ni, Se and Zn (mg/kg)	Total % solids for mg/kg calc				Special Instructions
Mt. Lemmon effluent	WW	HDPE	1	04-09-12	0900	HNO_3	1	1								composite
22250-0200 2012040505																
1204078-02																
Roger Rd raw influent	WW	HDPE	1	04-09-12	0600	HNO_3			1							composite
20923-0100 2012040475																
1204071-~~02~~01																
1. COC 4/12/12																
Thickened sludge to Arra Gro	BS	HDPE	2	04-10-12	2359	none				1	1	1				composite
20002-0200 2012040662		+ glass														
1204097-01																

BS - biosolids

Relinquished By:	Date/Time:	Received By:	Date/Time:
for samples	04-12-12 1314		4/12/12 13:44
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:

Turnaround Time: (Check)
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal _____

Sample Integrity: (Check)
intact _____ on ice _____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 857439577
Facility Contact: John W. Sherlock,Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: May 1, 2012 through May 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005	Sample Measurement	**< 17.96**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005	Sample Measurement	**< 7.18**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	**29.5**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005	Sample Measurement	**448.7**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005	Sample Measurement	**23.6**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005	Sample Measurement	**1.16**		mg/kg	1/31 days	Composite	EPA 7471A
	40 CFR 503.13	Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005	Sample Measurement	**18.2**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005	Sample Measurement	**< 17.96**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005	Sample Measurement	**< 17.96**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005	Sample Measurement	**1063.8**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

* Analyses were subcontracted out to TestAmerica; ADHS# AZ0728. R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 8-13-12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 8/7/2012 11:40:56
Laboratory License #AZO159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
May 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes: None

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara Alsuber

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

08/09/12
Date

Regional Biosolids Management Facility

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
2012050640	C	Arsenic	5/8/12 23:59	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0096	17.9576		mbomar
2012050640	C	Cadmium	5/8/12 23:59	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0004	7.1830		mbomar
2012050640	C	Chromium	5/8/12 23:59	EPA 6010B	06/07/12 11:24	29.5	mg/Kg	0.0008	17.9576		mbomar
2012050640	C	Copper	5/8/12 23:59	EPA 6010B	06/07/12 11:24	448.7	mg/Kg	0.0014	17.9576		mbomar
2012050640	C	Lead	5/8/12 23:59	EPA 6010B	06/07/12 11:24	23.6	mg/Kg	0.0068	17.9576		mbomar
2012050640	C	Molybdenum	5/8/12 23:59	EPA 6010B	06/07/12 11:24	18.2	mg/Kg	0.0012	7.1830		mbomar
2012050640	C	Nickel	5/8/12 23:59	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0057	17.9576		mbomar
2012050640	C	Selenium	5/8/12 23:59	EPA 6010B	06/07/12 14:00	Trace	mg/Kg	0.0101	17.9576		mbomar
2012050640	C	Zinc	5/8/12 23:59	EPA 6010B	06/07/12 11:24	1063.8	mg/Kg	0.0028	17.9576		mbomar
2012050640	C	Silver	5/8/12 23:59	EPA 6010B	06/07/12 11:24	5.2	mg/Kg	0.0008	1.7958		mbomar
2012050640	C	Ammonia	5/8/12 23:59	EPA 350.1	05/14/12 11:41	11424.4	mg/Kg	159.9	726.7		aklos
2012050640	C	Mercury	5/8/12 23:59	EPA 7471A	05/30/12 9:57	1.157	mg/Kg	0.0038	0.145		dobrien
2012050640	C	Nitrate	5/8/12 23:59	Calculated	05/15/12 10:50	ND	mg/Kg		11.6		khowell
2012050640	C	Nitrate/Nitrite	5/8/12 23:59	EPA 353.2	05/15/12 10:50	Trace	mg/Kg	1.9	11.6		khowell
2012050640	C	Nitrite	5/8/12 23:59	SM 4500-NO2 B	05/09/12 13:25	Trace	mg/Kg	0.581	11.628		aklos
2012050640	C	Nitrogen, Total Kjeldahl	5/8/12 23:59	EPA 351.2	05/24/12 12:13	56868.0	mg/Kg	333.7	1405.0		aklos
2012050640	C	Nitrogen, Total	5/8/12 23:59	Calculated	05/24/12 13:44	56870.6	mg/Kg		0.8		aklos
2012050640	C	Solids, Total	5/8/12 23:59	SM 2540G	05/10/12 13:15	6.88	%		0.01		jvriper

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 20120506 4D

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 05/08/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 05/08/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	☐	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off. Poured off 20120506D1
COS 05-07-12

# of Bottles Delivered: 4

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
M. S	Refrigerator @ #23	5/8/12	2359
Relinquished by: Refrig. @ #23	Received by: Alex Vargas	Date: 5-9-12	Time: (24 Hour Clock) 0600
Relinquished by: Alex Vargas	Received by: Sherry Davis	Date: 5-9-12	Time: (24 Hour Clock) SN 5-9-12 ~~0610~~
Relinquished by: Sherry Davis	Received by:	Date:	Time: (24 Hour Clock) 0615
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

B 5-9-12

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	8.1	°C
Initials:	SN	
Non-Preserved	2	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☑	☐	☐
Sample labels match Chain of Custody?	☑	☐	☐
Correct number of samples were delivered?	☑	☐	☐
Custody seals intact?	☐	☐	☑
Within holding time?	☑	☐	☐
Sufficient sample volume for analysis?	☑	☐	☐
Samples are in proper containers?	☑	☐	☐
Sample containers damaged/leaking/frozen?	☐	☑	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☑
Received from a refrigerator?	☐	☑	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: June 1, 2012 through June 30, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005	Sample Measurement	**< 17.74**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005	Sample Measurement	**< 7.10**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	**30.2**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005	Sample Measurement	**475**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005	Sample Measurement	**18.9**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005	Sample Measurement	**1.41**		mg/kg	1/30 days	Composite	EPA 7471A
	40 CFR 503.13	Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005	Sample Measurement	**18.7**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005	Sample Measurement	**19.1**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005	Sample Measurement	**< 17.74**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005	Sample Measurement	**1070**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 10/10/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 09/26/2012
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

June 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara Celsular 09/26/12

Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Thickened Sludge to AvraGro Storage (20002-0200)

Sample Qualifiers for 1206048-01: Q6

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Data Qualifiers	Analyst
1206048-01	C	Ammonia	06/05/12 23:59	EPA 350.1	6/11/12 13:58	11900	mg/kg dry	149	678.19	M1	AMK
1206048-01	C	Arsenic	06/05/12 23:59	EPA 6010B	7/13/12 11:58	9.86	mg/kg dry	6.80	17.74	J	MLB
1206048-01	C	Cadmium	06/05/12 23:59	EPA 6010B	7/13/12 11:58	3.48	mg/kg dry	0.306	7.10	J	MLB
1206048-01	C	Chromium	06/05/12 23:59	EPA 6010B	7/13/12 11:58	30.2	mg/kg dry	0.545	17.74		MLB
1206048-01	C	Copper	06/05/12 23:59	EPA 6010B	7/13/12 11:58	475	mg/kg dry	0.984	17.74		MLB
1206048-01	C	Lead	06/05/12 23:59	EPA 6010B	7/13/12 11:58	18.9	mg/kg dry	6.27	17.74		MLB
1206048-01	C	Mercury	06/05/12 23:59	EPA 7471A	6/27/12 14:33	1.41	mg/kg dry	0.0367	0.07		DDO
1206048-01	C	Molybdenum	06/05/12 23:59	EPA 6010B	7/13/12 11:58	18.7	mg/kg dry	0.871	7.10		MLB
1206048-01	C	Nickel	06/05/12 23:59	EPA 6010B	7/13/12 11:58	19.1	mg/kg dry	4.03	17.74		MLB
1206048-01	C	Nitrate/Nitrite	06/05/12 23:59	EPA 353.2	6/15/12 12:55	3.3	mg/kg dry	1.8	11.07	J	KKH
1206048-01	C	Nitrite	06/05/12 23:59	SM4500-NO2	6/7/12 11:31	2.54	mg/kg dry	0.89	11.09	J	AMK
1206048-01	C	Total Kjeldahl Nitrogen	06/05/12 23:59	EPA 351.2	6/15/12 10:58	51000	mg/kg dry	366	1,536.38	M1	AMK
1206048-01	C	Nitrogen Total Biosolids	06/05/12 23:59	Calculated	6/15/12 12:55	51000	mg/kg dry	366	1,540.00		AMK
1206048-01	C	Selenium	06/05/12 23:59	EPA 6010B	7/13/12 11:58	10.6	mg/kg dry	7.18	17.74		MLB
1206048-01	C	Silver	06/05/12 23:59	EPA 6010B	7/13/12 11:58	5.49	mg/kg dry	0.590	1.77		MLB
1206048-01	C	% Solids	06/05/12 23:59	SM 2540G	6/6/12 10:14	7.23	%		0.01		SJD
1206048-01	C	Zinc	06/05/12 23:59	EPA 6010B	7/13/12 11:58	1070	mg/kg dry	1.98	17.74		MLB

Qualifier Definitions

J	Estimated value
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
Q6	Sample was received above recommended temperature.

General Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1206048-01

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 06/05/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 06/05/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	☐	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off.
Poured off 1206041-10
6-6-12

# of Bottles Delivered: 1

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by	Received by	Date	Time (24 Hour Clock)
Sampler	Refrig.@#23	6/11/12	
Refrig. @#23	Brian Nabr	6/6/12	0500
Brian Nabr	Edward Dodd	06/06/12	0642
Edward Dodd			

605
06-06-12

LAB USE ONLY

Sample Integrity/Preservation:	
Temperature:	7.8 °C
Initials:	
Non-Preserved	#
HNO_3	#
H_2SO_4	#
HCl	#
NaOH	#
$Na_2S_2O_3$	#
$Zn(C_2H_3O_2)_2$	#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577
Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: July 1, 2012 through July 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement			Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
				Average		Units			
Arsenic	R18-9-1005	Sample Measurement		**< 17.05**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005	Sample Measurement		**< 6.82**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement		**30.1**		mg/kg	1/30 days	Composite	EPA 6010B
		Table 1		3000		mg/kg	1/60 days		
Copper	R18-9-1005	Sample Measurement		**490**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005	Sample Measurement		**17.8**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005	Sample Measurement		**1.38**		mg/kg	1/30 days	Composite	EPA 7471A
	40 CFR 503.13	Table 1	Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005	Sample Measurement		**16.8**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1		75		mg/kg	1/60 days		
Nickel	R18-9-1005	Sample Measurement		**21.7**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005	Sample Measurement		**< 17.05**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005	Sample Measurement		**1000**		mg/kg	1/30 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 10/10/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 10/02/2012
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

July 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

10/3/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Laboratory License # AZO159

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)										Q6	
1207041-01	C	Ammonia	07/03/12 23:59	EPA 350.1	7/9/12 12:16	**10900**	mg/kg dry	122	555.25	M1	AMK
1207041-01	C	Arsenic	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**6.90**	mg/kg dry	6.54	17.05	J	MLB
1207041-01	C	Cadmium	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**3.46**	mg/kg dry	0.294	6.82	J	MLB
1207041-01	C	Chromium	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**30.1**	mg/kg dry	0.523	17.05		MLB
1207041-01	C	Copper	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**490**	mg/kg dry	0.945	17.05		MLB
1207041-01	C	Lead	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**17.8**	mg/kg dry	6.03	17.05		MLB
1207041-01	C	Mercury	07/03/12 23:59	EPA 7471A	7/26/12 13:14	**1.38**	mg/kg dry	0.0677	0.13		DDO
1207041-01	C	Molybdenum	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**16.8**	mg/kg dry	0.837	6.82		MLB
1207041-01	C	Nickel	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**21.7**	mg/kg dry	3.87	17.05		MLB
1207041-01	C	Nitrate/Nitrite	07/03/12 23:59	EPA 353.2	7/12/12 10:45	**2.3**	mg/kg dry	0.4	2.55	J	KKH
1207041-01	C	Nitrite	07/03/12 23:59	SM4500-NO2	7/5/12 12:46	**2.33**	mg/kg dry	0.82	10.22	J	AMK
1207041-01	C	Total Kjeldahl Nitrogen	07/03/12 23:59	EPA 351.2	7/6/12 14:19	**47300**	mg/kg dry	390	1,638.34	B4	AMK
1207041-01	C	Nitrogen Total Biosolids	07/03/12 23:59	Calculated	7/12/12 10:45	**47300**	mg/kg dry	390	1,640.00		AMK
1207041-01	C	Selenium	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**9.43**	mg/kg dry	6.90	17.05		MLB
1207041-01	C	Silver	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**5.91**	mg/kg dry	0.567	1.70		MLB
1207041-01	C	% Solids	07/03/12 23:59	SM 2540G	7/4/12 14:21	**7.83**	%		0.01		SRM
1207041-01	C	Zinc	07/03/12 23:59	EPA 6010B	7/13/12 12:09	**1000**	mg/kg dry	1.90	17.05		MLB

Qualifier Definitions

B4	Target analyte detected in blank at or above method acceptance criteria.
J	Estimated value
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
Q6	Sample was received above recommended temperature.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1207041-01

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 7/3/12 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 7/3/12 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Symington, Vazquez (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	☐	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off. Poured off daily samples
1207029-10 GOS 07-05-12

# of Bottles Delivered: 1

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
M. S.	Refrig @ #23	7/3/12	2359
Relinquished by: Refrig. @ #23	Received by: Alex Vazquez	Date: 7/4/12	Time: (24 Hour Clock) 0600
Relinquished by: Alex Vazquez	Received by: [illegible]	Date: 7/4/12	Time: (24 Hour Clock) 0606
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	13.1	°C
Initials:	AF	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☑	☐	☐
Sample labels match Chain of Custody?	☑	☐	☐
Correct number of samples were delivered?	☑	☐	☐
Custody seals intact?	☐	☐	☑
Within holding time?	☑	☐	☐
Sufficient sample volume for analysis?	☑	☐	☐
Samples are in proper containers?	☑	☐	☐
Sample containers damaged/leaking/frozen?	☐	☑	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☑
Received from a refrigerator?	☐	☑	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: August 1, 2012 through August 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 15.47**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 6.19**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	**31.5**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement	**497**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement	**25.1**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement	**1.38**		mg/kg	1/31 days	Composite	EPA 7471A
		Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement	**17.9**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 15.47**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 6.26**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement	**1070**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature James O. Davis For	Date Signed 10/29/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 10/10/2012
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

August 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A Esquer

10/10/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
1208160-01	C	Ammonia	08/14/12 23:59	EPA 350.1	8/20/12 10:38	**12000**	mg/kg dry	142	646.84		KKH
1208160-01	C	Arsenic	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**13.7**	mg/kg dry	5.93	15.47	J	MLB
1208160-01	C	Cadmium	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**2.58**	mg/kg dry	0.267	6.19	J	MLB
1208160-01	C	Chromium	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**31.5**	mg/kg dry	0.475	15.47		MLB
1208160-01	C	Copper	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**497**	mg/kg dry	0.858	15.47		MLB
1208160-01	C	Lead	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**25.1**	mg/kg dry	5.47	15.47		MLB
1208160-01	C	Mercury	08/14/12 23:59	EPA 7471A	9/5/12 10:46	**1.38**	mg/kg dry	0.0686	0.13	M5	DDO
1208160-01	C	Molybdenum	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**17.9**	mg/kg dry	0.760	6.19		MLB
1208160-01	C	Nickel	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**12.6**	mg/kg dry	3.51	15.47	J	MLB
1208160-01	C	Nitrate/Nitrite	08/14/12 23:59	EPA 353.2	8/21/12 10:59	**2.2**	mg/kg dry	1.7	10.35	J	KKH
1208160-01	C	Nitrite	08/14/12 23:59	SM4500-NO2	8/15/12 15:26	**2.79**	mg/kg dry	0.83	10.35	J	KKH
1208160-01	C	Total Kjeldahl Nitrogen	08/14/12 23:59	EPA 351.2	8/17/12 12:42	**48200**	mg/kg dry	308	1,293.68		KKH
1208160-01	C	Nitrogen Total Biosolids	08/14/12 23:59	Calculated	8/21/12 10:59	**48200**	mg/kg dry	308	1,290.00		KKH
1208160-01	C	Selenium	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**ND**	mg/kg dry	6.26	15.47		MLB
1208160-01	C	Silver	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**4.56**	mg/kg dry	0.514	1.55		MLB
1208160-01	C	Zinc	08/14/12 23:59	EPA 6010B	8/31/12 14:02	**1070**	mg/kg dry	1.73	15.47		MLB
1208160-01	C	% Solids	08/14/12 23:59	SM 2540G	8/15/12 12:58	**7.73**	%		0.01		JVR

Qualifier Definitions

J	Estimated value
M5	Analyte concentration was determined by the method of standard addition (MSA).

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

None

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: ~~8-15-12~~ ~~1208159-01~~ 1208160-1

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 08/14/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 08/14/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	■			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	■			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	■
Chloride	☐	☐
Cyanide, Total	☐	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	■
Nitrite as N	☐	■
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	■
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Monthly pour off.

# of Bottles Delivered: 2

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
M. [illegible] Refrig.@#23		8/14/12	2359
Refrig.@#23	Aley Vasquez	8/15/12	0610
Aley Vasquez	Joseph [illegible]	8/15/12	0617
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature: 13.3 °C

Initials:

Non-Preserved		#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☑	☐	☐
Sample labels match Chain of Custody?	☑	☐	☐
Correct number of samples were delivered?	☑	☐	☐
Custody seals intact?	☐	☐	☑
Within holding time?	☑	☐	☐
Sufficient sample volume for analysis?	☑	☐	☐
Samples are in proper containers?	☑	☐	☐
Sample containers damaged/leaking/frozen?	☐	☑	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☑
Received from a refrigerator?	☐	☑	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577
Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: September 1, 2012 through September 30, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005	Sample Measurement	**< 16.67**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005	Sample Measurement	**< 6.67**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	**31.7**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005	Sample Measurement	**521**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005	Sample Measurement	**24.0**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005	Sample Measurement	**1.69**		mg/kg	1/31 days	Composite	EPA 7471A
	40 CFR 503.13	Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005	Sample Measurement	**16.0**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005	Sample Measurement	**19.9**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005	Sample Measurement	**< 6.75**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005	Sample Measurement	**1140**		mg/kg	1/31 days	Composite	EPA 6010B
	40 CFR 503.13	Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 11/16/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 11/01/2012
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

September 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A Rowber

11/13/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Sample Qualifiers
Thickened Sludge to AvraGro Storage	1209167-01	Biosolids	9/17/2012 23:59:00	9/18/2012 6:27:00	Q6

Thickened Sludge to AvraGro Storage (20002-0200)

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1209167-01	C	Ammonia	09/17/12 23:59	EPA 350.1	9/24/12 11:40	**8520**	mg/kg dry	162	734.31	M1	AMK
1209167-01	C	Arsenic	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**9.03**	mg/kg dry	6.39	16.67	J	MLB
1209167-01	C	Cadmium	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**3.81**	mg/kg dry	0.287	6.67	J	MLB
1209167-01	C	Chromium	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**31.7**	mg/kg dry	0.512	16.67		MLB
1209167-01	C	Copper	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**521**	mg/kg dry	0.924	16.67		MLB
1209167-01	C	Lead	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**24.0**	mg/kg dry	5.90	16.67		MLB
1209167-01	C	Mercury	09/17/12 23:59	EPA 7471A	10/10/12 9:34	**1.69**	mg/kg dry	0.389	0.73		KKH
1209167-01	C	Molybdenum	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**16.0**	mg/kg dry	0.819	6.67		MLB
1209167-01	C	Nickel	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**19.9**	mg/kg dry	3.79	16.67		MLB
1209167-01	C	Nitrate/Nitrite	09/17/12 23:59	EPA 353.2	9/21/12 13:42	**ND**	mg/kg dry	1.9	11.75		MGA
1209167-01	C	Nitrite	09/17/12 23:59	SM4500-NO2	9/18/12 14:50	**2.94**	mg/kg dry	0.94	11.75	J	AMK
1209167-01	C	Total Kjeldahl Nitrogen	09/17/12 23:59	EPA 351.2	9/20/12 14:00	**57100**	mg/kg dry	664	1,398.69	M3	AMK
1209167-01	C	Nitrogen Total Biosolids	09/17/12 23:59	Calculated	9/21/12 13:42	**57100**	mg/kg dry	664	1,400.00		AMK
1209167-01	C	Selenium	09/17/12 23:59	EPA 6010B	10/2/12 12:07	**ND**	mg/kg dry	6.75	16.67		MLB
1209167-01	C	Silver	09/17/12 23:59	EPA 6010B	10/2/12 14:48	**5.30**	mg/kg dry	0.554	1.67		MLB
1209167-01	C	Zinc	09/17/12 23:59	EPA 6010B	10/2/12 14:48	**1140**	mg/kg dry	1.86	16.67	M5	MLB
1209167-01	C	% Solids	09/17/12 23:59	SM 2540G	9/18/12 15:20	**6.81**	%		0.01		JAH

Qualifier Definitions

J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
M5	Analyte concentration was determined by the method of standard addition (MSA).
Q6	Sample was received above recommended temperature.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1209167-01

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 09/17/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 09/17/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Weber (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	■	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Monthly pour off. Poured off the daily sample 1209162-10 by JS. COS 09-18-12

# of Bottles Delivered: 2

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
Refrig.@#23	Refrig.@#23	9/17/12	2359
Refrig.@#23	Cely Vasquez	9/18/12	0600
Cely Vasquez	Edward Deal	09/18/12	0627

LAB USE ONLY

Sample Integrity/Preservation:

Temperature: 8.1 °C

Initials: Eb

Non-Preserved	2	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: October 1, 2012 through October 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 19.65**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 7.86**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	**33.4**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement	**510**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement	**31.7**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement	**1.96**		mg/kg	1/31 days	Composite	EPA 7471A
		Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement	**15.8**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement	**22.1**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 7.96**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement	**1050**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 12-12-12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 12/03/2012
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

October 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By: Barbara Alcaraz

12/3/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
1210018-01	C	Nitrogen Total Biosolids	10/01/12 23:59	Calculated	10/11/12 13:42	**58200**	mg/kg dry	1030	2,170.00		AMK
1210018-01	C	Ammonia	10/01/12 23:59	EPA 350.1	10/9/12 11:49	**6170**	mg/kg dry	185	843.17	M1	AMK
1210018-01	C	Total Kjeldahl Nitrogen	10/01/12 23:59	EPA 351.2	10/11/12 13:42	**58200**	mg/kg dry	1030	2,174.52	M1	AMK
1210018-01	C	Nitrate/Nitrite	10/01/12 23:59	EPA 353.2	10/3/12 16:01	**ND**	mg/kg dry	2.2	13.49		MGA
1210018-01	C	Arsenic	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**11.7**	mg/kg dry	7.54	19.65	J	MLB
1210018-01	C	Cadmium	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**2.88**	mg/kg dry	0.339	7.86	J	MLB
1210018-01	C	Chromium	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**33.4**	mg/kg dry	0.603	19.65		MLB
1210018-01	C	Copper	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**510**	mg/kg dry	1.09	19.65		MLB
1210018-01	C	Lead	10/01/12 23:59	EPA 6010B	11/2/12 13:54	**31.7**	mg/kg dry	6.95	19.65		MLB
1210018-01	C	Molybdenum	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**15.8**	mg/kg dry	0.965	7.86		MLB
1210018-01	C	Nickel	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**22.1**	mg/kg dry	4.47	19.65		MLB
1210018-01	C	Selenium	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**ND**	mg/kg dry	7.96	19.65		MLB
1210018-01	C	Silver	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**6.44**	mg/kg dry	0.653	1.97		MLB
1210018-01	C	Zinc	10/01/12 23:59	EPA 6010B	11/2/12 11:40	**1050**	mg/kg dry	2.19	19.65		MLB
1210018-01	C	Mercury	10/01/12 23:59	EPA 7471A	10/10/12 9:43	**1.96**	mg/kg dry	0.447	0.84		KKH
1210018-01	C	Nitrite	10/01/12 23:59	SM4500-NO2	10/3/12 9:42	**3.60**	mg/kg dry	1.08	13.49	J	AMK
1210018-01	C	% Solids	10/01/12 23:59	SM 2540G	10/2/12 17:01	**5.93**	%		0.01		AFNE

Qualifier Definitions

J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

None

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1210018-01

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 10/01/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 10/01/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Weber (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	■			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	■			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	■
Chloride	☐	☐
Cyanide, Total	☐	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	■
Nitrite as N	☐	■
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	■
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off. Poured off 1210014-10
605002-12

# of Bottles Delivered: 2

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
Mehul Mah	Refrig.@#23	10/1/12	2359
REfrig.@#23	Alex Vasquez	10/2/12	0600
Alex Vasquez	Jesus Hernandez	100212	0610
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature: 11.9 °C

Initials: JH ~~11.9~~ JH 10/02/12

Non-Preserved	2	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	✓	☐	☐
Sample labels match Chain of Custody?	✓	☐	☐
Correct number of samples were delivered?	✓	☐	☐
Custody seals intact?	☐	☐	✓
Within holding time?	✓	☐	☐
Sufficient sample volume for analysis?	✓	☐	☐
Samples are in proper containers?	✓	☐	☐
Sample containers damaged/leaking/frozen?	☐	✓	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	✓
Received from a refrigerator?	☐	✓	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: November 1, 2012 through November 30, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement		Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
			Average		Units			
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 9.35**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 9.75**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement	**38.8**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement	**592**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement	**34.1**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement	**1.86**		mg/kg	1/31 days	Composite	EPA 7471A
		Table 1 / Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement	**21.0**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement	**28.9**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement	**< 9.87**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement	**1220**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1 / Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 12-20-12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 12/18/2012
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

November 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A Eowan

12/19/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

DRAFT: Thickened Sludge to AvraGro Storage (20002-0200)

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1211046-01	C	Nitrogen Total Biosolids	11/05/12 23:59	Calculated	11/16/12 11:31	**68000**	mg/kg dry	908	1,910.00		AMK
1211046-01	C	Ammonia	11/05/12 23:59	EPA 350.1	11/13/12 15:04	**12700**	mg/kg dry	170	773.37		AMK
1211046-01	C	Total Kjeldahl Nitrogen	11/05/12 23:59	EPA 351.2	11/16/12 11:31	**68000**	mg/kg dry	908	1,910.68		AMK
1211046-01	C	Nitrate/Nitrite	11/05/12 23:59	EPA 353.2	11/7/12 11:51	**11.1**	mg/kg dry	2.1	12.99	J	MGA
1211046-01	C	Arsenic	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**ND**	mg/kg dry	9.35	24.37		MLB
1211046-01	C	Cadmium	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**2.99**	mg/kg dry	0.420	9.75	J	MLB
1211046-01	C	Chromium	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**38.8**	mg/kg dry	0.748	24.37		MLB
1211046-01	C	Copper	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**592**	mg/kg dry	1.35	24.37		MLB
1211046-01	C	Lead	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**34.1**	mg/kg dry	8.62	24.37		MLB
1211046-01	C	Molybdenum	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**21.0**	mg/kg dry	1.20	9.75		MLB
1211046-01	C	Nickel	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**28.9**	mg/kg dry	5.54	24.37		MLB
1211046-01	C	Selenium	11/05/12 23:59	EPA 6010B	12/11/12 15:22	**ND**	mg/kg dry	9.87	24.37		MLB
1211046-01	C	Silver	11/05/12 23:59	EPA 6010B	12/11/12 15:22	**5.92**	mg/kg dry	0.810	2.44		MLB
1211046-01	C	Zinc	11/05/12 23:59	EPA 6010B	12/11/12 13:34	**1220**	mg/kg dry	2.72	24.37		MLB
1211046-01	C	Mercury	11/05/12 23:59	EPA 7471A	11/26/12 10:34	**1.86**	mg/kg dry	0.0861	0.16		KKH
1211046-01	C	Nitrite	11/05/12 23:59	SM4500-NO2	11/6/12 15:04	**3.24**	mg/kg dry	1.04	12.99	J	AMK
1211046-01	C	% Solids	11/05/12 23:59	SM 2540G	11/7/12 16:00	**6.16**	%		0.01		SRM

Qualifier Definitions

J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

None

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1211046-01

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 11/05/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 11/05/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	■	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off. Poured off the daily sample 1211041-08 603 11-06-12

# of Bottles Delivered: 2

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature] Refrig.@#23	Refrig.@#23	11/5/12	2359
Refrig.@#23	[signature]	11/6/12	0600
[signature]	[signature]	11/6/12	0610
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	6.9	°C
Initials:	SYR	
Non-Preserved	2	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☑	☐	☐
Sample labels match Chain of Custody?	☑	☐	☐
Correct number of samples were delivered?	☑	☐	☐
Custody seals intact?	☐	☐	☑
Within holding time?	☑	☐	☐
Sufficient sample volume for analysis?	☑	☐	☐
Samples are in proper containers?	☑	☐	☐
Sample containers damaged/leaking/frozen?	☐	☑	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☑
Received from a refrigerator?	☐	☑	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TABLE 6 - LAND APPLICATION POLLUTANT LIMITS

1. Name and Address of Facility: Regional Biosolids Management Facility
7101 North Casa Grande Highway
Tucson, Arizona 85743-9577

Facility Contact: John W. Sherlock, Deputy Director
Phone: (520) 443-6100

2. Name and Address of Facility Owner: Pima County Regional Wastewater Reclamation Department
201 North Stone, Tucson, Arizona 85701
3. Monitoring Period: December 1, 2012 through December 31, 2012
4. NPDES Permit Number: AZ0020001 / AZ0020923
5. Sludge Permit Number: N/A

	Regulatory Requirement			Pollutant Concentration (dry weight)			Frequency of Analysis	Sample Type (Discrete or Composite)	Analytical Method
				Average		Units			
Arsenic	R18-9-1005 40 CFR 503.13	Sample Measurement		**< 19.0**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	75	41	mg/kg	1/60 days		
Cadmium	R18-9-1005 40 CFR 503.13	Sample Measurement		**< 7.60**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	85	39	mg/kg	1/60 days		
Chromium	R18-9-1005	Sample Measurement		**23.8**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1		3000		mg/kg	1/60 days		
Copper	R18-9-1005 40 CFR 503.13	Sample Measurement		**466**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	4300	1500	mg/kg	1/60 days		
Lead	R18-9-1005 40 CFR 503.13	Sample Measurement		**<19.0**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	840	300	mg/kg	1/60 days		
Mercury	R18-9-1005 40 CFR 503.13	Sample Measurement		**1.24**		mg/kg	1/31 days	Composite	EPA 7471A
		Table 1	Table 2	57	17	mg/kg	1/60 days		
Molybdenum	R18-9-1005 40 CFR 503.13	Sample Measurement		**13**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1		75		mg/kg	1/60 days		
Nickel	R18-9-1005 40 CFR 503.13	Sample Measurement		**<19.0**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	420	420	mg/kg	1/60 days		
Selenium	R18-9-1005 40 CFR 503.13	Sample Measurement		**< 19.0**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	100	100	mg/kg	1/60 days		
Zinc	R18-9-1005 40 CFR 503.13	Sample Measurement		**762**		mg/kg	1/31 days	Composite	EPA 6010B
		Table 1	Table 2	7500	2800	mg/kg	1/60 days		

R18-9-1005 Table 2 is equivalent to 40 CFR 503.13 Table 3

6. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information submitted, it is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name and Official Title (type or print) John W. Sherlock, Deputy Director	Area Code and Phone (520) 443-6100
Signature	Date Signed 1-31-13

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 01/17/2013
Laboratory License: AZO159

Sample Analysis Report

Regional Biosolids Facility Management

December 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A. Esber

01/29/13
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Thickened Sludge to AvraGro Storage (20002-0200)

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1212143-01	C	Nitrogen Total Biosolids	12/17/12 23:59	Calculated	1/4/13 13:21	**72400**	mg/kg dry	975	2,050.00		AMK
1212143-01	C	Ammonia	12/17/12 23:59	EPA 350.1	12/24/12 15:02	**13000**	mg/kg dry	181	821.15		AMK
1212143-01	C	Total Kjeldahl Nitrogen	12/17/12 23:59	EPA 351.2	1/4/13 13:21	**72400**	mg/kg dry	975	2,052.89		AMK
1212143-01	C	Nitrate/Nitrite	12/17/12 23:59	EPA 353.2	12/20/12 10:54	**ND**	mg/kg dry	2.2	13.14		KKH
1212143-01	C	Arsenic	12/17/12 23:59	EPA 6010B	12/31/12 12:50	**17.4**	mg/kg dry	7.29	19.00	J	MLB
1212143-01	C	Cadmium	12/17/12 23:59	EPA 6010B	12/31/12 15:22	**2.29**	mg/kg dry	0.327	7.60	J	MLB
1212143-01	C	Chromium	12/17/12 23:59	EPA 6010B	12/31/12 12:50	**23.8**	mg/kg dry	0.583	19.00		MLB
1212143-01	C	Copper	12/17/12 23:59	EPA 6010B	12/31/12 12:50	**466**	mg/kg dry	1.05	19.00		MLB
1212143-01	C	Lead	12/17/12 23:59	EPA 6010B	12/31/12 14:46	**18.4**	mg/kg dry	6.72	19.00	J	MLB
1212143-01	C	Molybdenum	12/17/12 23:59	EPA 6010B	12/31/12 12:50	**13.0**	mg/kg dry	0.933	7.60		MLB
1212143-01	C	Nickel	12/17/12 23:59	EPA 6010B	12/31/12 12:50	**4.61**	mg/kg dry	4.32	19.00	J	MLB
1212143-01	C	Selenium	12/17/12 23:59	EPA 6010B	12/31/12 14:46	**9.09**	mg/kg dry	7.69	19.00	J	MLB
1212143-01	C	Silver	12/17/12 23:59	EPA 6010B	12/31/12 12:50	**5.70**	mg/kg dry	0.632	1.90		MLB
1212143-01	C	Zinc	12/17/12 23:59	EPA 6010B	12/31/12 14:46	**762**	mg/kg dry	2.12	19.00		MLB
1212143-01	C	Mercury	12/17/12 23:59	EPA 7471A	12/24/12 9:36	**1.24**	mg/kg dry	0.0870	0.16		KKH
1212143-01	C	Nitrite	12/17/12 23:59	SM4500-NO2	12/18/12 14:03	**6.30**	mg/kg dry	1.05	13.14	J	AMK
1212143-01	C	% Solids	12/17/12 23:59	SM 2540G	12/18/12 15:16	**6.09**	%		0.01		JVR

Qualifier Definitions

J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

None

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1212143-01

SITE & LOCATION: Thickened sludge to AvraGro

SITE-LOCATION NUMBER: 20002-0200 (XXXXX-XXXX)

SAMPLE START DATE: 12/17/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 12/17/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Vasquez, Symington (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	■
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	■
Mercury	☐	■	Nitrite as N	☐	■
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Monthly pour off. Poured off the daily sample
1212138-08 GOS 12-18-12

# of Bottles Delivered: 2

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Refrig @#23	12/17/12	2359
Relinquished by: Refrig @#23	Received by: Alex Vasquez	Date: 12/18/12	Time: 0550
Relinquished by: Alex Vasquez	Received by: [signature]	Date: 12/18/12	Time: 0623
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	5.1	°C
Initials:	[illegible]	
Non-Preserved	0	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

SECTION 3

INA ROAD WRF
AZPDES NO. AZ0020001

SAMPLING AND ANALYSIS

PRIORITY POLLUTANTS

TCLP

HAZARDOUSNESS

ANNUAL BIOSOLIDS REPORT 2012

PIMA COUNTY
REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PIMA COUNTY, ARIZONA

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 10/9/2012 11:54:35
Laboratory License #AZ0159

Sample Analysis Report
Ina Road WRF - Permit Number 20001
April 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **See Attached.**

Notes: All analyses were conducted at the CRAO Laboratory location at 3035 W. El Camino del Cerro, Tucson, AZ 85745.

2012040500 Sent to Bio Aquatic Testing for SC, SD. 4-27-12 CH

2012040592 Arsenic sent to Test America 4/10/12 JS
2012040593 Sample sent to Test America for arsenic analysis. GOS

2012040663 Sent to Bio Aquatic Testing for analyses.
2012040664 Sent to Test America for Chromium, Hexavalent and Dissolved LL mercury

2012040673 Sent to Test America for Barium and PPM metals 4-11-12 JS
2012040743 Sample sent to Test America for metals and solids analyses. GOS

2012040807 Sent to Bio Aquatic Testing for analyses.

2012041479 Sample sent to Test America for analysis. GOS
2012041550 Sample sent to Test America for analysis. GOS
2012041551 Sample sent to Test America for analysis. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

10/10/12
Date

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Sludge Gas Digester #6 (20001-3656)											
IS 2012040075	D	British Thermal Unit (BTU)	4/2/12 5:30	SM 2720C	04/02/12 8:35	587					cblissett
IS 2012040075	D	Carbon dioxide	4/2/12 5:30	SM 2720C	04/02/12 8:35	38.41	%				cblissett
IS 2012040075	D	Hydrogen sulfide	4/2/12 5:30	SM 2720C	04/02/12 8:35	0.19	%				cblissett
IS 2012040075	D	Methane	4/2/12 5:30	SM 2720C	04/02/12 8:35	57.90	%				cblissett
IS 2012040075	D	Nitrogen	4/2/12 5:30	SM 2720C	04/02/12 8:35	3.49	%				cblissett
Lab is not licensed for SM 2720C-Process Control Only											
Digester Bio-Solids Sample Tap (20001-5000)											
2012040743	D	Miscellaneous Note	4/12/12 9:10	None		Subcontracted					Other
2012040743	D	Cyanide, Total	4/12/12 9:10	SM 4500-CN-E	04/17/12 15:04	Trace	mg/Kg	0.37	1.7	N1	manderson
2012040743	D	Mercury	4/12/12 9:10	EPA 7471A	04/18/12 12:04	1.500	mg/Kg	0.018	0.35		dobrien
2012040743	D	Solids, Total	4/12/12 9:10	SM 2540G	04/13/12 12:30	1.41	%		0.01		smichaud
2012040743	D	1,2-Dibromo-3-chloropropane	4/12/12 9:10	EPA 8260B	04/26/12 19:07	ND	mg/Kg	0.00018	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,2-Dibromoethane	4/12/12 9:10	EPA 8260B	04/26/12 19:07	ND	mg/Kg	0.00013	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,2,4-Trichlorobenzene	4/12/12 9:10	EPA 8260B	04/26/12 19:07	ND	mg/Kg	0.00031	1.42	N1, D1, D4, Q5	dcorbett
2012040743	D	cis-1,2-Dichloroethene	4/12/12 9:10	EPA 8260B	04/26/12 19:07	ND	mg/Kg	0.0001	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Styrene	4/12/12 9:10	EPA 8260B	04/26/12 18:36	ND	mg/Kg	0.00014	0.71	N1, D1, D4	dcorbett
2012040743	D	Xylene, m- + p-	4/12/12 9:10	EPA 8260B	04/26/12 19:07	Trace	mg/Kg	0.00011	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Xylene, o-	4/12/12 9:10	EPA 8260B	04/26/12 19:07	ND	mg/Kg	0.00007	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Xylene, Total	4/12/12 9:10	EPA 8260B	04/26/12 19:07	Trace	mg/Kg		1.42	N1, D1, D4, Q5	dcorbett
2012040743	D	1,1,1-Trichloroethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00005	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,1,2-Trichloroethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00011	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,1-Dichloroethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00006	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,1-Dichloroethene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00007	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,2-Dichlorobenzene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00017	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,2-Dichloroethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00012	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,2-Dichloropropane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00013	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,3-Dichlorobenzene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00013	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,4-Dichlorobenzene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00016	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	1,1,2,2-Tetrachloroethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00009	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	2-Chloroethyl vinyl ether	4/12/12 9:10	EPA 624	04/26/12 18:36	ND	mg/Kg	0.0002	0.71	N1, D1, D4	dcorbett
2012040743	D	Benzene	4/12/12 9:10	EPA 624	04/26/12 19:07	Trace	mg/Kg	0.0001	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Bromodichloromethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00015	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Bromoform	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00008	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Bromomethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00009	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Carbon tetrachloride	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00006	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Chlorobenzene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00011	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Chloroethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00022	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Chloroform	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00011	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Chloromethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00008	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	cis-1,3-Dichloropropene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00012	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Dibromochloromethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00014	0.71	N1, D1, D4, Q5	dcorbett

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digester Bio-Solids Sample Tap (20001-5000)											
2012040743	D	Ethyl benzene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00008	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Methylene chloride	4/12/12 9:10	EPA 624	04/26/12 19:07	Trace	mg/Kg	0.00011	1.42	N1, D1, D4, Q5	dcorbett
2012040743	D	Tetrachloroethene	4/12/12 9:10	EPA 624	04/26/12 19:07	Trace	mg/Kg	0.00006	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Toluene	4/12/12 9:10	EPA 624	04/26/12 19:07	4.09	mg/Kg	0.00008	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Trichlorofluoromethane	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00005	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Trichloroethene	4/12/12 9:10	EPA 624	04/26/12 19:07	Trace	mg/Kg	0.00009	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Trihalomethane, Total	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg		0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	trans-1,2-Dichloroethene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00009	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	trans-1,3-Dichloropropene	4/12/12 9:10	EPA 624	04/26/12 19:07	ND	mg/Kg	0.00012	0.71	N1, D1, D4, Q5	dcorbett
2012040743	D	Vinyl chloride	4/12/12 9:10	EPA 624	04/26/12 18:36	ND	mg/Kg	0.00005	0.71	N1, D1, D4	dcorbett
2012040743	D	4,4-DDD	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.06	449.4	D1, D4	mmichel
2012040743	D	4,4-DDE	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.05	449.4	D1, D4, N1	mmichel
2012040743	D	4,4-DDT	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.04	1123.5	D1, D4, N1	mmichel
2012040743	D	Aldrin	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.1	449.4	D1, D4	mmichel
2012040743	D	alpha-BHC	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.09	449.4	D1, D4	mmichel
2012040743	D	Aroclor 1016	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.1	561.75	D1, D4	mmichel
2012040743	D	Aroclor 1221	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.09	1348.2	D1, D4	mmichel
2012040743	D	Aroclor 1232	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.16	1348.2	D1, D4	mmichel
2012040743	D	Aroclor 1242	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.1	1123.5	D1, D4	mmichel
2012040743	D	Aroclor 1248	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.16	1348.2	D1, D4	mmichel
2012040743	D	Aroclor 1254	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.07	1348.2	D1, D4	mmichel
2012040743	D	Aroclor 1260	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.25	1348.2	D1, D4	mmichel
2012040743	D	beta-BHC	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.1	449.4	D1, D4	mmichel
2012040743	D	Chlordane, Technical	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.7	4494	D1, D4	mmichel
2012040743	D	delta-BHC	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.08	449.4	D1, D4	mmichel
2012040743	D	Dieldrin	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.07	449.4	D1, D4	mmichel
2012040743	D	Endosulfan I	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.05	449.4	D1, D4	mmichel
2012040743	D	Endosulfan II	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.03	224.7	D1, D4	mmichel
2012040743	D	Endosulfan sulfate	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.05	449.4	D1, D4	mmichel
2012040743	D	Endrin	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.1	449.4	D1, D4	mmichel
2012040743	D	Endrin aldehyde	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.07	449.4	D1, D4, N1	mmichel
2012040743	D	gamma-BHC (Lindane)	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.09	449.4	D1, D4	mmichel
2012040743	D	Heptachlor	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.1	1123.5	D1, D4, L3, N1	mmichel
2012040743	D	Heptachlor epoxide	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	0.11	2247	D1, D4	mmichel
2012040743	D	Polychlorinated biphenyls, Total	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg		1348.2	D1, D4	mmichel
2012040743	D	Toxaphene	4/12/12 9:10	EPA 625	04/18/12 22:06	ND	ug/kg	5.08	35952	D1, D4	mmichel
2012040743	D	Methoxychlor	4/12/12 9:10	EPA 8270C	04/18/12 22:06	ND	ug/kg	0.06	449.4	D1, D4, N1	mmichel
2012040743	D	1,2,4-Trichlorobenzene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00106	5.68	D1, D4	smitchell
2012040743	D	1,2-Diphenylhydrazine	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00123	5.68	D1, D4	smitchell
2012040743	D	2,3-Dichloroaniline	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00104	5.68	D1, D4, N1	smitchell
2012040743	D	2,4,6-Trichlorophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.0012	5.68	D1, D4	smitchell
2012040743	D	2,4-Dichlorophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00116	5.68	D1, D4	smitchell
2012040743	D	2,4-Dimethylphenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00289	5.68	D1, D4	smitchell

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digester Bio-Solids Sample Tap (20001-5000)											
2012040743	D	2,4-Dinitrophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00943	17.04	D1, D4	smitchell
2012040743	D	2,4-Dinitrotoluene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.0012	5.68	D1, D4, N1	smitchell
2012040743	D	2,6-Dinitrotoluene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00194	5.68	D1, D4, N1	smitchell
2012040743	D	2-Chloronaphthalene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00113	17.04	D1, D4, N1	smitchell
2012040743	D	2-Chlorophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00151	5.68	D1, D4	smitchell
2012040743	D	2-Methylphenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00152	5.68	D1, D4, N1	smitchell
2012040743	D	2-Nitrophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00218	5.68	D1, D4	smitchell
2012040743	D	3,3-Dichlorobenzidine	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00223	28.4	D1, D4	smitchell
2012040743	D	4,6-Dinitro-2-methylphenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00373	5.68	D1, D4	smitchell
2012040743	D	4-Bromophenyl phenyl ether	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00145	17.04	D1, D4	smitchell
2012040743	D	4-Chloro-3-methylphenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00142	5.68	D1, D4	smitchell
2012040743	D	4-Chlorophenyl phenyl ether	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.000115	5.68	D1, D4	smitchell
2012040743	D	4-Methylphenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00294	5.68	D1, D4	smitchell
2012040743	D	4-Nitrophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00495	28.4	D1, D4, V1, N1	smitchell
2012040743	D	Acenaphthene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00117	5.68	D1, D4, N1	smitchell
2012040743	D	Acenaphthylene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00084	17.04	D1, D4, N1	smitchell
2012040743	D	Anthracene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00109	5.68	D1, D4	smitchell
2012040743	D	Benzo(a)anthracene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00144	5.68	D1, D4	smitchell
2012040743	D	Benzidine	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.02486	42.6	D1, D4, N1	smitchell
2012040743	D	Benzo(a)pyrene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00155	5.68	D1, D4	smitchell
2012040743	D	Benzo(b)fluoranthene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00157	5.68	D1, D4	smitchell
2012040743	D	Benzo(g,h,i)perylene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00178	5.68	D1, D4	smitchell
2012040743	D	Benzo(k)fluoranthene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00228	5.68	D1, D4	smitchell
2012040743	D	Bis(2-Chloroisopropyl)ether	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00114	5.68	D1, D4	smitchell
2012040743	D	Bis(2-chloroethoxy)methane	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00106	5.68	D1, D4	smitchell
2012040743	D	Bis(2-chloroethyl)ether	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00099	5.68	D1, D4	smitchell
2012040743	D	Bis(2-ethylhexyl) phthalate	4/12/12 9:10	EPA 625	05/01/12 18:01	17.83	mg/Kg	0.00267	5.68	D1, D4	smitchell
2012040743	D	Butylbenzyl phthalate	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00153	5.68	D1, D4	smitchell
2012040743	D	Carbazole	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00127	5.68	D1, D4, N1	smitchell
2012040743	D	Chrysene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00147	5.68	D1, D4	smitchell
2012040743	D	Dibenz(a,h)anthracene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00187	5.68	D1, D4	smitchell
2012040743	D	Diethyl phthalate	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00105	5.68	D1, D4	smitchell
2012040743	D	Dimethylphthalate	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00072	5.68	D1, D4	smitchell
2012040743	D	Di-n-butyl phthalate	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00167	17.04	D1, D4	smitchell
2012040743	D	Di-n-octylphthalate	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00183	5.68	D1, D4	smitchell
2012040743	D	Fluoranthene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00145	5.68	D1, D4	smitchell
2012040743	D	Fluorene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00128	5.68	D1, D4, N1	smitchell
2012040743	D	Hexachlorobenzene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.0008	17.04	D1, D4	smitchell
2012040743	D	Hexachlorobutadiene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00119	17.04	D1, D4	smitchell
2012040743	D	Hexachloroethane	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00121	5.68	D1, D4	smitchell
2012040743	D	Hexachlorocyclopentadiene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00259	5.68	D1, D4, N1	smitchell
2012040743	D	Indeno(1,2,3-cd)pyrene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00225	5.68	D1, D4	smitchell
2012040743	D	Isophorone	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00135	5.68	D1, D4, N1	smitchell

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digester Bio-Solids Sample Tap (20001-5000)											
2012040743	D	Naphthalene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00126	5.68	D1, D4	smitchell
2012040743	D	n-Decane	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00166	5.68	D1, D4	smitchell
2012040743	D	Nitrobenzene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00286	5.68	D1, D4	smitchell
2012040743	D	N-Nitroso-di-n-propylamine	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00113	5.68	D1, D4, N1	smitchell
2012040743	D	N-Nitrosodimethylamine	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00423	5.68	D1, D4, N1	smitchell
2012040743	D	N-Nitrosodiphenylamine	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00183	5.68	D1, D4, N1	smitchell
2012040743	D	n-Octadecane	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00166	5.68	D1, D4	smitchell
2012040743	D	Pentachlorophenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.0032	5.68	D1, D4	smitchell
2012040743	D	Phenanthrene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00115	5.68	D1, D4, N1	smitchell
2012040743	D	Phenol	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.0023	5.68	D1, D4	smitchell
2012040743	D	Pyrene	4/12/12 9:10	EPA 625	05/01/12 18:01	ND	mg/Kg	0.00129	5.68	D1, D4	smitchell
2012040743	D	Acrolein	4/12/12 9:10	EPA 624	04/18/12 4:12	ND	mg/Kg	0.00040	2.8368	D1, D4, S7	dcorbett
2012040743	D	Acrylonitrile	4/12/12 9:10	EPA 624	04/18/12 4:12	ND	mg/Kg	0.00026	2.8368	D1, D4	dcorbett
Final Effluent #2 (20001-7020)											
2012040500	C	Miscellaneous Note	4/9/12 8:00	None	Subcontracted						Other
2012040663	C	Miscellaneous Note	4/11/12 9:00	None	Subcontracted						Other
2012040664	D	Oxygen, Dissolved (Field)	4/11/12 8:25	SM 4500-O G	04/11/12 8:25	5.3	mg/l				Michael Silva
2012040664	D	pH (Field)	4/11/12 8:25	SM 4500-HB	04/11/12 8:25	6.9	pH Units				Michael Silva
2012040664	D	pH Temperature (Field)	4/11/12 8:25	SM 4500-HB	04/11/12 8:25	26.4	o C				Michael Silva
2012040664	D	Temperature (Field)	4/11/12 8:25	SM 2550B	04/11/12 8:25	26.7	o C				Michael Silva
2012040664	D	Miscellaneous Note	4/11/12 8:25	None	Subcontracted						Other
2012040664	D	Ammonia	4/11/12 8:25	SM4500-NH3-D	05/01/12 13:37	10.0	mg/l	0.02	0.10		aklos
2012040664	D	Cyanide, Total	4/11/12 8:25	SM 4500-CN-E	04/17/12 13:43	5.88	ug/l	1.1	5.0	M2	manderson
2012040664	D	Sulfide	4/11/12 8:25	HACH 8131	04/16/12 13:07	ND	mg/l	0.006	0.040	M1	dobrien
2012040664	D	Oil & Grease	4/11/12 8:25	EPA 1664A	04/17/12 16:15	6.09	mg/l	0.829	4.00		evega
2012040673	D	Miscellaneous Note	4/11/12 11:40	None	Subcontracted						Other
2012040673	D	Cyanide, Amenable to Chlorination	4/11/12 11:40	SM 4500-CN-G	04/25/12 10:17	ND	ug/l	1.1	5		manderson
2012040673	D	Fluoride	4/11/12 11:40	SM 4500-F C	04/12/12 14:03	0.464	mg/l	0.009	0.020		khowell
2012040673	D	Mercury	4/11/12 11:40	EPA 245.1	04/24/12 10:37	ND	ug/l	0.119	0.20		dobrien
2012040807	C	Miscellaneous Note	4/13/12 5:00	None	Subcontracted						Other
2012040809	C	1,2-Dibromo-3-chloropropane	4/13/12 6:00	EPA 8260B	04/27/12 12:41	ND	ug/l	0.18	2.0	Q5	dcorbett
2012040809	C	1,2-Dibromoethane	4/13/12 6:00	EPA 8260B	04/27/12 12:41	ND	ug/l	0.13	0.50	Q5	dcorbett
2012040809	C	1,2,4-Trichlorobenzene	4/13/12 6:00	EPA 8260B	04/27/12 12:41	ND	ug/l	0.31	1.0	Q5, V1, B1	dcorbett
2012040809	C	cis-1,2-Dichloroethene	4/13/12 6:00	EPA 8260B	04/27/12 12:41	ND	ug/l	0.10	0.50	Q5	dcorbett
2012040809	C	Styrene	4/13/12 6:00	EPA 8260B	04/27/12 12:41	ND	ug/l	0.14	0.50	L4	dcorbett

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Case Narrative

Sample ID: 2012040743
Permit Name: Ina Road WRF
Location Name: Digester Bio-Solids Sample Tap

This sample was analyzed for EPA Method 9010C on 04/17/12, target compounds flagged with N1 for this method failed the Matrix Spike from the same analytical batch but the spike was performed on a different sample. MGA

This sample was extracted for EPA Method 625 Pesticides on 04/12/2012, target compounds flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. MAM-Z.

This sample was extracted for EPA Method 625 Semi-volatiles on 04/19/12. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. SJM

This sample was analyzed for EPA Method 624 and 8260 on 04/26/2012 and 04/25/2012, target compounds flagged with N1 indicate that due to instrumentation difficulties, the corresponding 8260 compounds did not have spike quality control standards analyzed within the batch, including having no analyzed travel blank.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

1204108-01

LAB ID: 2012040743

SITE & LOCATION: Ina Road WPCF - Digester Bio-Solids Sample Tap

SITE-LOCATION NUMBER: 20001-5000 (XXXXX-XXXX)

SAMPLE START DATE: — (MM / DD / YYYY)

SAMPLE START TIME: — (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLE END DATE: 04/12/2012 (MM / DD / YYYY)

SAMPLE END TIME: 0910 (24 Hour Clock)

SAMPLER: Goodman, Morales (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C
Aluminum		
Antimony		
Arsenic		
Barium		
Beryllium		
Boron		
Cadmium		
Calcium		
Chromium		
Cobalt		
Copper		
Hardness		
Iron		
Lead		
Magnesium		
Manganese		
Mercury		
Molybdenum contract	■	
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Strontium		
Thallium		
Tin		

METALS	D	C
Titanium		
Vanadium		
Zinc Hg in house		
Priority Pollutant Metals *	■	
TCLP Metals contract		
503 Metals **		
Chromium, Hexavalent		
Chromium, Trivalent		

WET METHODS	D	C
Ammonia as N		
Chloride		
Cyanide, Total	■	
Cyanide, Amenable		
Fluoride		
Ignitability		
Nitrate as N		
Nitrite as N		
Nitrate/Nitrite as N		
Nitrogen, Total Kjeldahl		
Nitrogen, Total as N		
Orthophosphate as P		
Phosphorus, Total as P		
Sulfate		
Sulfide		
Turbidity		

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	■	
Dioxin GC/SIM/MS Scan		
Organochlorine Pesticides & PCBs	■	
Purgeable Organics (GCMS)	■	
Semivolatile Organics (GCMS)	■	
Other		

MISCELLANEOUS METHODS	D	C
4,4-DDE		
Bis(2-ethylhexyl) phthalate		
Digester Gas		
Oil and Grease		
Organic Carbon, Total		
Organic Carbon, Dissolved		
TCLP Herbicides (Contract Lab)		
TCLP Pesticides		
TCLP Semivolatile Organics		
TCLP Volatile Organics		
Total Petroleum Hydrocarbons		
Volatile Acids		

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*		
Chronic *C. dubia*		
Chronic *Selenastrum capricornutum*		
Other		

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity		
BOD		
COD		
Coliform, Fecal		
Coliform, Total		
Conductivity		
E. coli		
Oxygen, Dissolved		
pH		
Solids, Settleable		
Solids, Total ½ contract	■	
Solids, Total Dissolved		
Solids, Total Suspended		
Solids, Total Volatile		
Solids, Volatile Suspended		
Other		

OTHER	D	C

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
~~Lab shall composite the 4 discrete purgeables and 4 discrete acrolein/acrylonitrile.~~ pc 4-12-12

Duplicate of Metals and Total Solids. No preserved samples.

# of Bottles Delivered: 9 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 04-10-12 JS

WO# 12-362220

Sent to Test America for metals and solids GOS 04-12-12

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	14	°C
Initials:	GOS	
Non-Preserved	9	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒		
Sample labels match Chain of Custody?	☒		
Correct number of samples were delivered?	☒		
Custody seals intact?			☒
Within holding time?	☒		
Sufficient sample volume for analysis?	☒		
Samples are in proper containers?	☒		
Sample containers damaged/leaking/frozen?		☒	
40 ml vials headspace, > pea-sized air bubble?	☒		
Received from a refrigerator?		☒	

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date	Time: (24 Hour Clock)
		04-12-12	0952
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		4/12/12	1344
Relinquished by:	Received by	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date.	Time: (24 Hour Clock)

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 46, DO# 12-36220

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Copper 200.8	Zinc 200.8	Molybdenum 200.8	6010B Ag, As, Cd, Cr, Cu, Pb + Mo (mg/kg)	6010B Ni, Se and Zn (mg/kg)	Total % solids for mg/kg calc				Special Instructions
																BS- biosolids
Mt. Lemmon effluent	WW	HDPE	1	04-09-12	0900	HNO_3	1	1								composite
22250-0200 2012040505																
1204078-02																
Roger Rd raw influent	WW	HDPE	1	04-09-12	0600	HNO_3			1							composite
20923-0100 2012040475																
1204071-02 01																
1. cos 4/12/12																
Thickened sludge to Arra Gro	BS	HDPE	2	04-10-12	2359	none				1	1	1				Composite
20002-0200 2012040662		+ glass														
1204097-01																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	04-12-12 1314		4/12/12 13:44	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ____
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County CRAC Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group #46, DO# 12-36220

Project Manager: Nancy Purcell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total % solids for mg/kg calc	6010B Mo, Sb, As, Be, Cd, Cr, Cu, Pb + Ni	6010B Se, Ag, Tl, and Zn							Special Instructions
Inn Rd digester bio-solids tap	BS	HDPE	2	04-12-12	0910	none	1	1	1							discrete
20001-5000 2012040743																mg/kg please
1204108-01																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	04-12-12 1314		4/12/12 15:14	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ____
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #46
Report Number: PVD1032

Sampled: 04/09/12-04/12/12
Received: 04/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD1032-03 (2012040673 - Water)					**Sampled: 04/11/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-06 (2012040590 - Water)					**Sampled: 04/10/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-07 (2012040589 - Water)					**Sampled: 04/10/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-12 (2012040662 - Soil)					**Sampled: 04/10/12**			
Reporting Units: mg/kg dry								
Arsenic	EPA 6010B	12D0821	5.0	**11**	0.967	4/20/2012	4/24/2012	
Cadmium	EPA 6010B	12D0821	0.50	**1.8**	0.967	4/20/2012	4/24/2012	
Chromium	EPA 6010B	12D0821	2.0	**26**	0.967	4/20/2012	4/24/2012	
Copper	EPA 6010B	12D0821	5.0	**480**	0.967	4/20/2012	4/24/2012	
Lead	EPA 6010B	12D0821	5.0	**18**	0.967	4/20/2012	4/24/2012	
Molybdenum	EPA 6010B	12D0821	2.0	**15**	0.967	4/20/2012	4/24/2012	
Nickel	EPA 6010B	12D0821	2.0	**20**	0.967	4/20/2012	4/24/2012	
Selenium	EPA 6010B	12D0821	5.0	**6.1**	0.967	4/20/2012	4/24/2012	
Silver	EPA 6010B	12D0821	2.5	**8.5**	0.967	4/20/2012	4/24/2012	
Zinc	EPA 6010B	12D0821	10	**1100**	0.967	4/20/2012	4/24/2012	
Sample ID: PVD1032-13 (2012040655 - Water)					**Sampled: 04/11/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-14 (2012040659 - Water)					**Sampled: 04/11/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0633	1.0	ND	1	4/16/2012	4/19/2012	
Sample ID: PVD1032-16 (2012040743 - Soil)					**Sampled: 04/12/12**			
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12D0821	5.0	**7.3**	0.99	4/20/2012	4/24/2012	
Arsenic	EPA 6010B	12D0821	5.0	**6.6**	0.99	4/20/2012	4/24/2012	
Beryllium	EPA 6010B	12D0821	0.50	ND	0.99	4/20/2012	4/24/2012	
Cadmium	EPA 6010B	12D0821	0.50	**1.6**	0.99	4/20/2012	4/24/2012	
Chromium	EPA 6010B	12D0821	2.0	**23**	0.99	4/20/2012	4/24/2012	
Copper	EPA 6010B	12D0821	5.0	**450**	0.99	4/20/2012	4/24/2012	
Lead	EPA 6010B	12D0821	5.0	**22**	0.99	4/20/2012	4/24/2012	
Molybdenum	EPA 6010B	12D0821	2.0	**15**	0.99	4/20/2012	4/24/2012	
Nickel	EPA 6010B	12D0821	2.0	**15**	0.99	4/20/2012	4/24/2012	
Selenium	EPA 6010B	12D0821	5.0	**12**	0.99	4/20/2012	4/24/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #46
Report Number: PVD1032

Sampled: 04/09/12-04/12/12
Received: 04/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD1032-16 (2012040743 - Soil) - cont.					**Sampled: 04/12/12**			
Reporting Units: mg/kg dry								
Silver	EPA 6010B	12D0821	2.5	**10**	0.99	4/20/2012	4/24/2012	
Thallium	EPA 6010B	12D0821	5.0	**8.9**	0.99	4/20/2012	4/24/2012	
Zinc	EPA 6010B	12D0821	10	**870**	0.99	4/20/2012	4/24/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #46
Report Number: PVD1032

Sampled: 04/09/12-04/12/12
Received: 04/13/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD1032-12 (2012040662 - Soil)					**Sampled: 04/10/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0670	0.10	**6.2**	1	4/17/2012	4/17/2012	
Sample ID: PVD1032-16 (2012040743 - Soil)					**Sampled: 04/12/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0670	0.10	**1.4**	1	4/17/2012	4/17/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 5/9/2012 11:01:57
Laboratory License #AZ0159

Sample Analysis Report
Ina Road WRF - Permit Number 20001
January 2012

Revised 5/9/12

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **See Attached.**

Notes:

Metals analyses by method 200.8 were performed at the PCRWRD CRAO Laboratory location at 7101 N. Casa Grande Highway, Tucson, AZ 85743.

All other in-house analyses were performed at the CRAO Laboratory new location, at 3035 W. El Camino Del Cerro, Tucson, AZ 85745.

2012010179 Sample sent to Test America for analysis. GOS
2012010180 Sample sent to Test America for analysis. GOS
2012010181 Sample sent to Test America for analysis. GOS

2012010433 Sample sent to BIO Aquatic Testing for WETT analysis. GOS
2012010434 Sample sent to Test America for analyses. GOS
2012010510 Sample sent to Test America for analyses. GOS
2012010511 Sample sent to Test America for analyses. GOS

2012010586 Sample sent to BIO Aquatic Testing for WETT analysis. GOS

2012010717 Sample sent to BIO Aquatic Testing for WETT analysis. GOS
2012010722 Sample sent to Test America for analyses. GOS
2012010723 Sample sent to Test America for analyses. GOS
2012010724 Sample sent to Test America for analyses. GOS
2012010725 Sample sent to Test America for analyses. GOS
2012010726 Sample sent to Test America for analyses. GOS
2012010727 Sample sent to Test America for analyses. GOS

2012010952 Sample sent to Test America for analyses. GOS
2012011023 Sample sent to Test America for 200.7 analyses. GOS
2012011024 Sample sent to TA for Potassium, Sodium, Hardness 2/1/12 NP

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Scuter

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

05 BAS 05/14/12
~~04~~ 14, 12

Date

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Raw Influent (20001-0130)											
2012010510	D	Miscellaneous Note	1/10/12 9:30	None		Subcontracted					
2012010722	C	Miscellaneous Note	1/13/12 6:00	None		Subcontracted					Other
2012010722	C	Methoxychlor	1/13/12 6:00	EPA 8270C	01/23/12 19:48	ND	ug/l	0.06	1	D1, D4	mmichel
2012010722	C	1,2,4-Trichlorobenzene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.06	4	D1, D4	smitchell
2012010722	C	1,2-Diphenylhydrazine	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.23	4	D1, D4	smitchell
2012010722	C	2,3-Dichloroaniline	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.04	4	D1, D4	smitchell
2012010722	C	2,4,6-Trichlorophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.2	4	D1, D4	smitchell
2012010722	C	2,4-Dichlorophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.16	4	D1, D4	smitchell
2012010722	C	2,4-Dimethylphenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.89	12	D1, D4	smitchell
2012010722	C	2,4-Dinitrophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	9.43	30	D1, D4	smitchell
2012010722	C	2,4-Dinitrotoluene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.2	4	D1, D4	smitchell
2012010722	C	2,6-Dinitrotoluene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.94	4	D1, D4	smitchell
2012010722	C	2-Chloronaphthalene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.13	4	D1, D4	smitchell
2012010722	C	2-Chlorophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.51	4	D1, D4	smitchell
2012010722	C	2-Methylphenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.52	4	D1, D4	smitchell
2012010722	C	2-Nitrophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.18	12	D1, D4	smitchell
2012010722	C	3,3-Dichlorobenzidine	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.23	20	D1, D4	smitchell
2012010722	C	4,6-Dinitro-2-methylphenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	3.73	20	D1, D4	smitchell
2012010722	C	4-Bromophenyl phenyl ether	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.45	4	D1, D4	smitchell
2012010722	C	4-Chloro-3-methylphenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.42	4	D1, D4	smitchell
2012010722	C	4-Chlorophenyl phenyl ether	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.15	4	D1, D4	smitchell
2012010722	C	4-Methylphenol	1/13/12 6:00	EPA 625	01/23/12 16:46	26.38	ug/l	2.94	12	D1, D4, N1	smitchell
2012010722	C	4-Nitrophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	4.95	12	D1, D4	smitchell
2012010722	C	Acenaphthene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.17	4	D1, D4	smitchell
2012010722	C	Acenaphthylene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	0.84	4	D1, D4	smitchell
2012010722	C	Anthracene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.09	4	D1, D4	smitchell
2012010722	C	Benzo(a)anthracene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.44	4	D1, D4	smitchell
2012010722	C	Benzidine	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	24.86	70	D1, D4, N1	smitchell
2012010722	C	Benzo(a)pyrene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.55	4	D1, D4	smitchell
2012010722	C	Benzo(b)fluoranthene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.57	4	D1, D4	smitchell
2012010722	C	Benzo(g,h,i)perylene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.78	4	D1, D4	smitchell
2012010722	C	Benzo(k)fluoranthene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.28	12	D1, D4	smitchell
2012010722	C	Bis(2-Chloroisopropyl)ether	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.14	4	D1, D4	smitchell
2012010722	C	Bis(2-chloroethoxy)methane	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.06	4	D1, D4	smitchell
2012010722	C	Bis(2-chloroethyl)ether	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	0.99	4	D1, D4	smitchell
2012010722	C	Bis(2-ethylhexyl) phthalate	1/13/12 6:00	EPA 625	01/23/12 16:46	12.66	ug/l	2.67	12	D1, D4	smitchell
2012010722	C	Butylbenzyl phthalate	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.53	4	D1, D4	smitchell
2012010722	C	Carbazole	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.27	4	D1, D4	smitchell
2012010722	C	Chrysene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.47	4	D1, D4	smitchell
2012010722	C	Dibenz(a,h)anthracene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.87	4	D1, D4	smitchell

Lab Comments:

Data on this report was last modified on: 3/27/2012 15:57:03

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Raw Influent (20001-0130)											
2012010722	C	Diethyl phthalate	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.05	4	D1, D4	smitchell
2012010722	C	Dimethylphthalate	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	0.72	4	D1, D4	smitchell
2012010722	C	Di-n-butyl phthalate	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.67	4	D1, D4, B1	smitchell
2012010722	C	Di-n-octylphthalate	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.83	4	D1, D4	smitchell
2012010722	C	Fluoranthene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.45	4	D1, D4	smitchell
2012010722	C	Fluorene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.28	4	D1, D4	smitchell
2012010722	C	Hexachlorobenzene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	0.8	4	D1, D4	smitchell
2012010722	C	Hexachlorobutadiene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.19	4	D1, D4	smitchell
2012010722	C	Hexachloroethane	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.21	4	D1, D4	smitchell
2012010722	C	Hexachlorocyclopentadiene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.59	20	D1, D4, N1	smitchell
2012010722	C	Indeno(1,2,3-cd)pyrene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.25	12	D1, D4	smitchell
2012010722	C	Isophorone	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.35	12	D1, D4	smitchell
2012010722	C	Naphthalene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.26	4	D1, D4	smitchell
2012010722	C	n-Decane	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.66	4	D1, D4	smitchell
2012010722	C	Nitrobenzene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	2.86	12	D1, D4	smitchell
2012010722	C	N-Nitroso-di-n-propylamine	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.13	4	D1, D4	smitchell
2012010722	C	N-Nitrosodimethylamine	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	4.23	12	D1, D4	smitchell
2012010722	C	N-Nitrosodiphenylamine	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.83	4	D1, D4	smitchell
2012010722	C	n-Octadecane	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.66	4	D1, D4	smitchell
2012010722	C	Pentachlorophenol	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	3.2	20	D1, D4	smitchell
2012010722	C	Phenanthrene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.15	4	D1, D4	smitchell
2012010722	C	Phenol	1/13/12 6:00	EPA 625	01/23/12 16:46	Trace	ug/l	2.3	12	D1, D4	smitchell
2012010722	C	Pyrene	1/13/12 6:00	EPA 625	01/23/12 16:46	ND	ug/l	1.29	4	D1, D4	smitchell

See Attached -Semi-Quantitation Sheet for EPA 625

2012010722	C	1,2-Diphenylhydrazine	1/13/12 6:00	EPA 8270C	01/23/12 16:46	ND	ug/l	1.23	4	D1, D4	smitchell
2012010722	C	4,4-DDD	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.06	1	D1, D4, N1	mmichel
2012010722	C	4,4-DDE	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.05	0.5	D1, D4	mmichel
2012010722	C	4,4-DDT	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.04	0.5	D1, D4	mmichel
2012010722	C	Aldrin	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.1	1	D1, D4	mmichel
2012010722	C	alpha-BHC	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.09	1	D1, D4, N1	mmichel
2012010722	C	Aroclor 1016	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.1	1.25	D1, D4	mmichel
2012010722	C	Aroclor 1221	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.09	1.25	D1, D4	mmichel
2012010722	C	Aroclor 1232	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.16	2.5	D1, D4	mmichel
2012010722	C	Aroclor 1242	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.1	2.5	D1, D4	mmichel
2012010722	C	Aroclor 1248	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.16	2.5	D1, D4	mmichel
2012010722	C	Aroclor 1254	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.07	2.5	D1, D4	mmichel
2012010722	C	Aroclor 1260	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.25	2.5	D1, D4	mmichel
2012010722	C	beta-BHC	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.1	1	D1, D4, N1	mmichel
2012010722	C	Chlordane, Technical	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.7	10	D1, D4	mmichel
2012010722	C	delta-BHC	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.08	1	D1, D4, N1	mmichel
2012010722	C	Dieldrin	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.07	1	D1, D4	mmichel
2012010722	C	Endosulfan I	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.05	0.5	D1, D4	mmichel

Lab Comments:

Data on this report was last modified on: 3/27/2012 15:57:03

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Raw Influent (20001-0130)											
2012010722	C	Endosulfan II	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.03	0.5	D1, D4	mmichel
2012010722	C	Endosulfan sulfate	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.05	0.5	D1, D4, N1	mmichel
2012010722	C	Endrin	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.1	1	D1, D4	mmichel
2012010722	C	Endrin aldehyde	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.07	1	D1, D4	mmichel
2012010722	C	gamma-BHC (Lindane)	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.09	1	D1, D4, N1	mmichel
2012010722	C	Heptachlor	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.1	1	D1, D4	mmichel
2012010722	C	Heptachlor epoxide	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	0.11	2.5	D1, D4	mmichel
2012010722	C	Polychlorinated biphenyls, Total	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l		2.5	D1, D4	mmichel
2012010722	C	Toxaphene	1/13/12 6:00	EPA 625	01/23/12 19:48	ND	ug/l	5.08	80	D1, D4	mmichel
Sludge Gas (20001-3650)											
2012010109	D	British Thermal Unit (BTU)	1/3/12 6:40	SM 2720C	01/03/12 9:58	589					cblissett
2012010109	D	Carbon dioxide	1/3/12 6:40	SM 2720C	01/03/12 9:58	41.24	%				cblissett
2012010109	D	Hydrogen sulfide	1/3/12 6:40	SM 2720C	01/03/12 9:58	0.35	%				cblissett
2012010109	D	Methane	1/3/12 6:40	SM 2720C	01/03/12 9:58	58.18	%				cblissett
2012010109	D	Nitrogen	1/3/12 6:40	SM 2720C	01/03/12 9:58	0.24	%				cblissett
2012010334	D	British Thermal Unit (BTU)	1/6/12 6:10	SM 2720C	01/06/12 8:22	603					cblissett
2012010334	D	Carbon dioxide	1/6/12 6:10	SM 2720C	01/06/12 8:22	39.92	%				cblissett
2012010334	D	Hydrogen sulfide	1/6/12 6:10	SM 2720C	01/06/12 8:22	0.37	%				cblissett
2012010334	D	Methane	1/6/12 6:10	SM 2720C	01/06/12 8:22	59.48	%				cblissett
2012010334	D	Nitrogen	1/6/12 6:10	SM 2720C	01/06/12 8:22	0.24	%				cblissett
2012010432	D	British Thermal Unit (BTU)	1/9/12 6:10	SM 2720C	01/09/12 8:13	584					cblissett
2012010432	D	Carbon dioxide	1/9/12 6:10	SM 2720C	01/09/12 8:13	41.70	%				cblissett
2012010432	D	Hydrogen sulfide	1/9/12 6:10	SM 2720C	01/09/12 8:13	0.35	%				cblissett
2012010432	D	Methane	1/9/12 6:10	SM 2720C	01/09/12 8:13	57.62	%				cblissett
2012010432	D	Nitrogen	1/9/12 6:10	SM 2720C	01/09/12 8:13	0.33	%				cblissett
2012010584	D	British Thermal Unit (BTU)	1/11/12 6:15	SM 2720C	01/11/12 11:57	579					cblissett
2012010584	D	Carbon dioxide	1/11/12 6:15	SM 2720C	01/11/12 11:57	42.25	%				cblissett
2012010584	D	Hydrogen sulfide	1/11/12 6:15	SM 2720C	01/11/12 11:57	0.33	%				cblissett
2012010584	D	Methane	1/11/12 6:15	SM 2720C	01/11/12 11:57	57.13	%				cblissett
2012010584	D	Nitrogen	1/11/12 6:15	SM 2720C	01/11/12 11:57	0.29	%				cblissett
2012010716	D	British Thermal Unit (BTU)	1/13/12 6:30	SM 2720C	01/13/12 8:44	574					cblissett
2012010716	D	Carbon dioxide	1/13/12 6:30	SM 2720C	01/13/12 8:44	42.66	%				cblissett
2012010716	D	Hydrogen sulfide	1/13/12 6:30	SM 2720C	01/13/12 8:44	0.33	%				cblissett
2012010716	D	Methane	1/13/12 6:30	SM 2720C	01/13/12 8:44	56.71	%				cblissett
2012010716	D	Nitrogen	1/13/12 6:30	SM 2720C	01/13/12 8:44	0.30	%				cblissett

Lab Comments:

Data on this report was last modified on: 3/27/2012 15:57:03

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY GROUP

NOTIFICATION

LABORATORY ID:	2012011333
SAMPLE DATE/TIME:	1/26/12 6:00 AM
SAMPLE PERMIT NAME:	Ina Road WRF
SAMPLE LOCATION NAME:	Final Effluent #2
PERMIT TYPE:	APP & AZPDES
FACILITY/LOCATION ID:	20001-7020
PARAMETER:	Cu
ANALYSIS DATE:	1/30/12
ANALYSIS RESULT:	12.17 I *u*g/L
LIMIT:	12.0 *u*g/L
COMMENTS:	

☑ **Exceedance** ☐ **Caution/Alert** ☐ **Not Analyzed** ☐ **Not Reported**

SUBMITTED BY: Jimmie Barajas — 2/1/12
ANALYST — DATE

REVIEWED BY: Richard Aros — 2/2/12
UNIT SUPERVISOR — DATE

☑ Laboratory Director Review

Audit Pending?
☐ Yes ☐ N

QA Audit Number:

xc: Submitter
Deputy Director, Treatment Division
CRAO Manager
Laboratory Supervisor
QA Officer
Unit Supervisor
Data Management Unit

* This form must be submitted upon the completion of analysis.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY GROUP

NOTIFICATION

LABORATORY ID:	2012010179
SAMPLE DATE/TIME:	1/4/12 10:03 AM
SAMPLE PERMIT NAME:	Ina Road WRF
SAMPLE LOCATION NAME:	Well SC-03-APP
PERMIT TYPE:	APP
FACILITY/LOCATION ID:	20001-9020
PARAMETER:	As
ANALYSIS DATE:	1/24/12
ANALYSIS RESULT:	40.50 *ug*/l
LIMIT:	40.0 *ug*/l
COMMENTS:	

☐ **Exceedance** ☑ **Caution/Alert** ☐ **Not Analyzed** ☐ **Not Reported**

SUBMITTED BY: Jimmie Barajas — 1/26/12
ANALYST — DATE

REVIEWED BY: Richard Aros — 1/26/12
UNIT SUPERVISOR — DATE

☑ Laboratory Director Review

Audit Pending?
☐ Yes ☐ N

QA Audit Number:

xc: Submitter
Deputy Director, Treatment Division
CRAO Manager
Laboratory Supervisor
QA Officer
Unit Supervisor
Data Management Unit

* This form must be submitted upon the completion of analysis.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY GROUP

NOTIFICATION

LABORATORY ID:	2012010582
SAMPLE DATE/TIME:	1/11/12 6:00 AM
SAMPLE PERMIT NAME:	Ina Road WRF
SAMPLE LOCATION NAME:	Final Effluent #2
PERMIT TYPE:	APP & AZPDES
FACILITY/LOCATION ID:	20001-7020
PARAMETER:	Cu
ANALYSIS DATE:	1/19/12
ANALYSIS RESULT:	12.12 *ug/l*
LIMIT:	12.0 *ug/l*
COMMENTS:	

☐ **Exceedance** ☑ **Caution/Alert** ☐ **Not Analyzed** ☐ **Not Reported**

SUBMITTED BY: Jimmie Barajas — ANALYST — 1/23/12 DATE

REVIEWED BY: Richard Aros — UNIT SUPERVISOR — 1/24/12 DATE

☑ Laboratory Director Review

Audit Pending?
☐ Yes ☐ N

QA Audit Number:

xc: Submitter
Deputy Director, Treatment Division
CRAO Manager
Laboratory Supervisor
QA Officer
Unit Supervisor
Data Management Unit

* This form must be submitted upon the completion of analysis.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Case Narrative

Sample ID: 2012010723
Permit Name: Ina Road WRF
Location Name: Digester Bio-Solids Sample Tap

This sample was extracted for EPA Method 625 Pesticides on 01/18/2012, target compounds flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. MAM-Z.

This sample was extracted for EPA Method 625 Semi-volatiles on 01/18/12. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. SJM

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Case Narrative

Sample ID: 2012010727
Permit Name: Ina Road WRF
Location Name: Thick. to AvraGro

This sample was extracted for EPA Method 625 Semi-volatiles on 01/18/12. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. SJM

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE/LABORATORY GROUP
ORGANIC MASS SPECTROMETRY UNIT

Sapphire No.: 2012010723
Sample Permit Name: Ina Road WRF
Sample Location Name: Digester Bio-Solids Sample Tap
Method:

☐ 624 ☑ 625 ☐ 8260 ☐ 8270

☑ **Semi-Quant** ☐ **Non-Target**

	Compound Name	Concentration mg/kg
1	Benzeneacetic Acid	25
2	Tetradecanoic Acid (Myristic)	22
3	Palmitic Acid	8388
4	Oleic Acid	7971
5	Stearic Acid	1415
6	Squalene	70
7	Cholestanol	44
8	2-Chloroethyl linoleate	337
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE/LABORATORY GROUP
ORGANIC MASS SPECTROMETRY UNIT

Sapphire No.: 2012010727
Sample Permit Name: Ina Road WRF
Sample Location Name: Thick. to AvraGro
Method:

☐ 624 ☑ 625 ☐ 8260 ☐ 8270

☑ **Semi-Quant** ☐ **Non-Target**

	Compound Name	Concentration µg/l
1	Benzeneacetic Acid	42
2	Tetradecanoic Acid (Myristic)	7
3	Palmitic Acid	1438
4	Oleic Acid	944
5	Stearic Acid	242
6	Squalene	16
7	Cholestanol	18
8	2H-Indol-2-one, 1,3-dihydro-	11
9	n-Octadecane	31
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM COPY

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 1 of

TAL-0013-550 (12/08)

Client Name/Address: RWRD Pima Co 3035 W El Camino del Cobre Tucson AZ ~~85757~~ 85745 01-13-12

Project/PO Number: 12-25353 0 1-13-12 Sample Group #2

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: Preston / Grandmaison

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	Acid + ACE VOC	RAD60	Mercury	TCLP metals	TCLP Pesticides	TCLP Semivolatile	TCLP Vol Organics	Total Solids			Special Instructions
25003-1349 LIMS Aura Eff 20120171 8	WW	HDPE	1	1-12-12	0615	NaOH	X											
		vials	1	1-12-12	0615	none		X										
		vials	1	1-12-12	0615	HCl			X									
		HDPE	1	-13-12	0615	HNO_3				X								
Pima Valley Raw MH 1B 25003-1909 LIMS 20120171 9	WW	HDPE	1	1-13-12	0600	NaOH	X											
	WW	vials	1	1-13-12		none		X										
		vials				HCl			X									
		HDPE				HNO_3				X								
Green Valley BFW ROD Raw 25003-1903 LIMS# 20120107 0	WW	HPDE	1	1-13-12	0730	NaOH	X											
		vials				none		X										
		vials				HCl			X									
		HPDE				HNO_3				X								
Ina Rd Thick → Ama Gro 25003-5701 20120 1332	Solid	glass THDPE	10	1-12-12	2200	none NaOH HNO_3	X	X	X	X	X	X	X	X	2			Cyanide Acid Cove RAD60 Hg mg/kg

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	01-13-12 @ 1429		GOS 01-14-12	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
GOS 01-14-12				48 hours ____	normal ____
Relinquished By:	Date/Time:	Received In Lab By:	Date/Time:	Sample Integrity: (Check)	
			1/13/12 1429	intact ____	on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

5.9°C, 5.6°C

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 20120107 23

SITE & LOCATION: Ina Road WPCF - Bio-Solids Digester Sample Tap

SITE-LOCATION NUMBER: 20001-5000 (XXXXX-XXXX)

SAMPLE START DATE: 01/12/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0600 (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLE END DATE: 01/13/2012 (MM / DD / YYYY)

SAMPLE END TIME: 0600 (24 Hour Clock)

SAMPLER: Goodman, Morales, Silva, Speir, Goodyear (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc Hg (contract lab)	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	■
Beryllium	☐	☐	TCLP Metals (contract)	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum (contract)	☐	■			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total (contract lab)	☐	■
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile (contract lab)	☐	■
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	■
Purgeable Organics (GCMS) (contract lab)	☐	■
Semivolatile Organics (GCMS)	☐	■
Other 2-CEVE (contract lab)	☐	■

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total 5pt (contract lab)	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
Lab shall preserve and composite 4 discrete purgeables and 4 discrete Acrolein/Acrylonitrile. Triplicate of Total Solids

Duplicate of Metals

# of Bottles Delivered: 10 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 01/10/2012 JS

pdf + Mo added via email GOS 02-07-12

Chain of Custody Record (Signatures Only)

Relinquished by Sampler	Received by:	Date:	Time: (24 Hour Clock)
[signatures]	[signature]	1-12-12	1800 GOS
[signatures]	[signature]	1-13-12	0800
[signature]	[signature]	01-13-12	0911
[signature]	Test America SR	01-13-12	1429 GOS 01-14-12
Relinquished by: GOS 02-06-12 [signature] (200.7 6010B metals)	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:		
Temperature:	0	°C
Initials:	GOS	
Non-Preserved	7	#
HNO_3	2	#
H_2SO_4		#
HCl		#
NaOH	1	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☒	☐
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

COPY

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 2 of

TAL-0013-550 (12/08)

Client Name/Address: Pima Co RWRD, 3835 W El Camino del Cerro, Tucson AZ 85745

Project/PO Number: 12-25353 Sample Group #22

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: 1-13-12 Preston/Graduman

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	AC HCL+ACEVP	8260	Mercury	Total Solid					Special Instructions
Green Valley Eff 35000-1923	WW	HDPE	1	1-13-12	0745	NaOH	X									
Lims #2012010721		Vials	1			none		X								
		Vials	1			~~HNO3~~ HCl 1-13-12			X							
		HDPE	1			HNO3				X						
Ina Raw 20001-8130 2012010722	WW	Vials	1	1-13-12	0600	none		X								
	WW	Vials	1	1-13-12	0600	HCl			X							
Ina Eff 20001-7020 2012010724	WW	Vials	1		0600	none		X								
	WW	Vials	1		0600	HCl			X							
Ina Biosolids 20001-5000 2012010723	WW	Vials	1	1-13-12	0600	none		X								mg/kg
	WW	Vials	1	1-13-12	0600	none			X	1-13-12						mg/kg
	WW	HDPE	2							X	X					1-CEVP+AC 1-8260
	WW	HDPE	1	1-13-12	0600	NaOH	X									
	WW	HDPE	1	1-13-12	0600	H_2O_2				X						

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
Carl Fox For Samples	01/13/12 @ 1425		DOS 01-14-12	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ____
Relinquished By: DOS 01-14-12	Date/Time:	Received in Lab By:	Date/Time: 1/13/12 14:29	Sample Integrity: (Check)
				intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

5.9°C, 5.6°C

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012010726

SITE & LOCATION: Ina Road WPCF - Thick to AvraGro

SITE-LOCATION NUMBER: 20001-5701 (XXXXX-XXXX)

SAMPLE START DATE: 01/12/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0700 (24 Hour Clock)

SAMPLE END DATE: 01/12/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2200 (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLER: Grodman, Morales, Silva, Speir, Goodyear (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	■
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
Corrosivity pH	☐	■
Sulfide, Total	☐	■
Ignitability	☐	■
Cyanide, Total	☐	■

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: To be sent to outside lab. Test America
DO#12-25366

# of Bottles Delivered: 5 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
		1-12-12	1802
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		1-13-12	0800
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		01-13-12	0920
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		GOS 01-14-12	
Relinquished by: GOS-01-14-12	Received by:	Date:	Time: (24 Hour Clock)
		1/14/12	1022

LAB USE ONLY

Sample Integrity/Preservation:		
Temperature:	0	°C
Initials:	GOS	
Non-Preserved	3	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH	2	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$	1	#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County R.W. RD, 3035 W. El Camino del Cerro, Tucson, AZ 85745

Project/PO Number: Sample group #23, DO#12-25366

Project Manager: Nancy Powell

Phone Number: Nancy P. 520-724-6183

Sampler: Michael R. Silva and various others

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	TCLP Herbicides	Ignitability	pH, Corrosivity	Total Sulfide	Total Cyanide	Total Solids	BOD	[illegible]		Special Instructions
Ina Road WPCF –	Bio Solids	glass	1	1-12-12	2200	none	X									composite
Thick to AvraGro		plastic	1	|	|	none		X	X							composite
20001-5701		plastic	1	|	|	NaOH + zinc acetate				X						composite
2012010726		plastic	1	|	|	NaOH					X					composite
		plastic	1	↓	↓	none						X				composite
Roger Rd WRF 2012010695 Influent 20923-0100	WW	Glass HDPE	1 4	1-13-12	0600	H2SO4 none							X	X		composite
Roger Rd WRF 2012010696 Eff 20923-7003	WW	glass HDPE	1 1	1-13-12	0600	H2SO4 none							X	X		composite
Ina Rd Raw 2012010672 20001-0150	WW	HDPE	1	1-13-12	0600	none							X			composite
Ina Eff 2012010675 20001-7020	WW	HDPE	1	1-13-12	0600	none							X			composite
Ina rd raw influent	WW	HDPE	1	01-14-12	0600	none							X			composite
20001-0150 2012010735																
Ina rd final effluent #2	WW	HDPE	1	01-14-12	0600	none							X			composite
20001-7020 2012010737																

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	1-13-12 0800	[signature]	1-13-12 - 0800
[signature]	01-13-12 0920	[signature]	01-13-12
[signature]	01-14-12 1022	Received in Lab By: [signature]	Date/Time: 1/14/12 1022

Turnaround Time: (Check)
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal _____

Sample Integrity: (Check)
intact _____ on ice _____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 20120107 27

SITE & LOCATION: Ina Road WPCF - Thick to AvraGro

SITE-LOCATION NUMBER: 20001-5701 (XXXXX-XXXX)

SAMPLE START DATE: 01/12/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0700 (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLE END DATE: 01/12/2012 (MM / DD / YYYY)

SAMPLE END TIME: 2200 (24 Hour Clock)

SAMPLER: Goodman, Morales, Silva, Speir, Goodyear (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals * (contract)	☐	■
Beryllium	☐	☐	TCLP Metals (contract lab)	☐	■
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum (contract)	☐	■			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total (contract lab)	☐	■
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile (contract lab)	☐	■
Dioxin GC/SIM/MS Scan	☐	■
Organochlorine Pesticides & PCBs	☐	■
Purgeable Organics (GCMS) (contract lab)	☐	■
Semivolatile Organics (GCMS)	☐	■
Other 2-CEVE (contract lab)	☐	■

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides (contract lab)	☐	■
TCLP Semivolatile Organics (contract lab)	☐	■
TCLP Volatile Organics (contract lab)	☐	■
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Acrolein/Acrylonitrile and Purgeables to be preserved and composited by lab. Triplicate of Total Solids. Duplicate of Metals

# of Bottles Delivered: 15 (2005)

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 01/10/2012 JS

PPM + Mo added via email. GOS 02-07-12

Chain of Custody Record (Signatures Only)

Relinquished by Sampler	Received by	Date	Time (24 Hour Clock)
[signature]	[signature]	1-12-12	1804
Relinquished by: [signature]	Received by: [signature]	1-13-12	0800
Relinquished by: [signature]	Received by: [signature]	01-13-12	0927
Relinquished by: [signature]	Received by: Test America SR	01-13-12	1429 GOS 01-14-12
Relinquished by: [signature] (GOS 02-07-12)	Received by:	Date:	Time (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:		
Temperature:	0	°C
Initials:	GOS	
Non-Preserved	GOS 01-13-12	#
HNO_3	2	#
H_2SO_4		#
HCl		#
NaOH	1	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☒	☐
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

COPY

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 2 of

Client Name/Address: Pima Co RWRD, 3035 W El Camino del Cerro, Tucson AZ 85745

Project/PO Number: 12-25353 Sample Group #22

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: 1-13-12 Preston/Gradman

Fax Number: 520-724-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	AC ACT & EVE	8260	Mercury	Total Solids					Special Instructions
Green Valley Eff 35002-1923	WW	HDPE	1	1-13-12	0745	NaOH	X									
Lims #2012010721		Vials	1			none		X								
		Vials	1			HCl			X							
		HDPE	1			HNO_3				X						
Ina Raw 20001-8130 2012010722	WW	Vials	1	1-13-12	0600	none		X								
	WW	Vials	1	1-13-12	0600	HCl			X							
Ina Eff 20001-3020 2012010724	WW	Vials	1		0600	none		X								
	WW	Vials	1		0600	HCl			X							
Ina Biosolids 20001-5000 2012010723	WW	Vials	1	1-13-12	0600	none		X								mg/kg
	WW	Vials	1	1-13-12	0600	none			X							mg/kg
	WW	HDPE	2							X	X					1-cert+AC 1-8260
	WW	HDPE	1	1-13-12	0600	NaOH	X									
	WW	HDPE	1	1-13-12	0600	H_2O_2				X						

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
Gary Lowe For Samples	01/13/12 @ 1425	DOS	01-14-12	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ____
Relinquished By: DOS 01-14-12	Date/Time:	Received In Lab By:	Date/Time: 1/13/12 14:29	Sample Integrity: (Check)
				Intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

5.9°C, 5.6°C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

COPY

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 2 of ____

Client Name/Address: Pima Co RWRD, 3835 W El Camino del Cerro, Tucson AZ 85745

Project/PO Number: 12-25353 Sample Group #22

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: 1-13-12 ~~Preston~~ Preston/Gradman

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	RC AC + 2CEVE	8260	Mercury	Total Solid					Special Instructions
Green Valley Eff 25002-1923	WW	HDPE	1	1-13-12	0745	NaOH	X									
Lims #2012010721		Vials	1			none		X								
		Vials	1			~~HNO3~~ HCl 1-13-12			X							
		HDPE	1			HNO_3				X						
Inf Raw 20001-8130 2012010722	WW	Vials	1	1-13-12	0600	none		X								
	WW	Vials	1	1-13-12	0600	HCl			X							
Inf Eff 20001-3020 2012010724	WW	Vials	1		0600	none		X								
	WW	Vials	1		0600	HCl			X							
Inf Biosolids 20001-5000 2012010723	WW	Vials	1	1-13-12	0600	none		X								mg/kg
	WW	Vials	1	1-13-12	0600	none			X	1-13-12						mg/kg
	WW	HDPE	2							X	X					1-cede + RC AC 1-8260
	WW	HDPE	1	1-13-12	0600	NaOH	X									
	WW	HDPE	1	1-13-12	0600	H_2SO_4				X						

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
Carl Jones Fed Express	01/13/12 @ 1425		605 01-14-12	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ____
Relinquished By: 605 01-14-12	Date/Time:	Received in Lab By:	Date/Time: 1/13/12 1429	Sample Integrity: (Check)
				intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

5.9°C, 5.6°C

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: ug/kg dry									
1,1,1-Trichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1,2,2-Tetrachloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1,2-Trichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1-Dichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1-Dichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1-Dichloropropene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2,3-Trichlorobenzene	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
1,2,3-Trichloropropane	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
1,2,4-Trimethylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dibromoethane (EDB)	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dichlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dichloropropane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,3,5-Trimethylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,3-Dichlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,3-Dichloropropane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,4-Dichlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
2,2-Dichloropropane	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
2-Butanone (MEK)	EPA 8260B	12A0479	N/A	30000	ND	3.76	01/14/12	01/21/12	
2-Chlorotoluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
2-Hexanone	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
4-Chlorotoluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
Acetone	EPA 8260B	12A0479	N/A	30000	ND	3.76	01/14/12	01/21/12	V1
Benzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromochloromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromodichloromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromoform	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromomethane	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
Carbon tetrachloride	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chloroform	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chloromethane	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
cis-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
cis-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Dibromochloromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Dichlorodifluoromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Ethylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil) - cont.					**Sampled: 01/12/12**				
Reporting Units: ug/kg dry									
m,p-Xylenes	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Methylene Chloride	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
n-Butylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
n-Propylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
o-Xylene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
p-Isopropyltoluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
sec-Butylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Styrene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
tert-Butylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Tetrachloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Toluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
trans-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
trans-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Trichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Trichlorofluoromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Vinyl Acetate	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Vinyl chloride	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Surrogate: Dibromofluoromethane (57-129%)					*81 %*				
Surrogate: Toluene-d8 (59-134%)					*66 %*				
Surrogate: 4-Bromofluorobenzene (56-127%)					*66 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: ug/kg dry									
1,1,1-Trichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1,2,2-Tetrachloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1,2-Trichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1-Dichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1-Dichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1-Dichloropropene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2,3-Trichlorobenzene	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
1,2,3-Trichloropropane	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
1,2,4-Trimethylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dibromoethane (EDB)	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dichlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dichloropropane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,3,5-Trimethylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,3-Dichlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,3-Dichloropropane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,4-Dichlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
2,2-Dichloropropane	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
2-Butanone (MEK)	EPA 8260B	12A0479	N/A	140000	ND	3.68	01/14/12	01/21/12	
2-Chlorotoluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
2-Hexanone	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
4-Chlorotoluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
Acetone	EPA 8260B	12A0479	N/A	140000	ND	3.68	01/14/12	01/21/12	V1
Benzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromochloromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromodichloromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromoform	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromomethane	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
Carbon tetrachloride	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chloroform	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chloromethane	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
cis-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
cis-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Dibromochloromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Dichlorodifluoromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Ethylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-08 (2012010723 - Soil) - cont.					**Sampled: 01/13/12**				
Reporting Units: ug/kg dry									
m,p-Xylenes	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Methylene Chloride	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
n-Butylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
n-Propylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
o-Xylene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
p-Isopropyltoluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
sec-Butylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Styrene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
tert-Butylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Tetrachloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Toluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
trans-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
trans-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Trichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Trichlorofluoromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Vinyl Acetate	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Vinyl chloride	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Surrogate: Dibromofluoromethane (57-129%)					*84 %*				
Surrogate: Toluene-d8 (59-134%)					*69 %*				
Surrogate: 4-Bromofluorobenzene (56-127%)					*69 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	6.3	1	01/16/12	01/16/12	
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	1.3	1	01/16/12	01/16/12	
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12A0842	N/A	6.3	ND	1.03	01/23/12	01/23/12	
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12A0842	N/A	31	ND	0.922	01/23/12	01/23/12	
Sample ID: PVA0887-01 (2012010718 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d
Sample ID: PVA0887-02 (2012010719 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d
Sample ID: PVA0887-03 (2012010720 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d
Sample ID: PVA0887-05 (2012010721 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

Volatile Organic Compounds by EPA Method 8260B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04RE1 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg									
Acrolein	SW846 8260B	12A4113	N/A	90.4	ND	4520	01/16/12	01/19/12	N1, D1
Acrylonitrile	SW846 8260B	12A4113	N/A	45.2	ND	4520	01/16/12	01/19/12	N1, D1
2-Chloroethylvinyl ether	SW846 8260B	12A4113	N/A	90.4	ND	4520	01/16/12	01/19/12	N1, D1
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: mg/kg									
Acrolein	SW846 8260B	12A3437	N/A	0.0185	ND	0.923	01/16/12	01/17/12	
Acrylonitrile	SW846 8260B	12A3437	N/A	0.00923	ND	0.923	01/16/12	01/17/12	
2-Chloroethylvinyl ether	SW846 8260B	12A3437	N/A	0.0185	ND	0.923	01/16/12	01/17/12	
Sample ID: PVA0887-04RE1 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: ug/kg									
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*97 %*				
Surrogate: Dibromofluoromethane (70-130%)					*97 %*				
Surrogate: Toluene-d8 (70-130%)					*108 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*108 %*				
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: ug/kg									
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*98 %*				
Surrogate: Dibromofluoromethane (70-130%)					*94 %*				
Surrogate: Toluene-d8 (70-130%)					*98 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*103 %*				
Sample ID: PVA0887-01 (2012010718 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/L									
Acrolein	SW846 8260B	12A4741	N/A	50.0	ND	1	01/17/12	01/18/12	
Acrylonitrile	SW846 8260B	12A4741	N/A	10.0	ND	1	01/17/12	01/18/12	
2-Chloroethylvinyl ether	SW846 8260B	12A4741	N/A	10.0	ND	1	01/17/12	01/18/12	
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*103 %*				
Surrogate: Dibromofluoromethane (70-130%)					*108 %*				
Surrogate: Toluene-d8 (70-130%)					*95 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*106 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP VOLATILE ORGANIC COMPOUNDS (EPA 1311/8260B)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
1,1-Dichloroethene	12A0790	N/A	0.10	ND	1	0.7	1/23/2012	1/23/2012	
1,2-Dichloroethane	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	
1,4-Dichlorobenzene	12A0790	N/A	0.10	ND	1	7.5	1/23/2012	1/23/2012	
2-Butanone (MEK)	12A0790	N/A	0.50	ND	1	200.0	1/23/2012	1/23/2012	
Benzene	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	
Carbon tetrachloride	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	L3
Chlorobenzene	12A0790	N/A	0.10	ND	1	100.0	1/23/2012	1/23/2012	
Chloroform	12A0790	N/A	0.10	ND	1	6.0	1/23/2012	1/23/2012	
Tetrachloroethene	12A0790	N/A	0.10	ND	1	0.7	1/23/2012	1/23/2012	
Trichloroethene	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	
Vinyl chloride	12A0790	N/A	0.10	ND	1	0.2	1/23/2012	1/23/2012	
Surrogate: 4-Bromofluorobenzene (70-130%)				*88 %*					
Surrogate: Dibromofluoromethane (70-130%)				*95 %*					
Surrogate: Toluene-d8 (70-130%)				*91 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP SEMI-VOLATILE ORGANIC COMPOUNDS (EPA 1311/8270C)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
1,4-Dichlorobenzene	12A0752	N/A	0.10	ND	1	7.5	1/20/2012	1/23/2012	
2,4,5-Trichlorophenol	12A0752	N/A	0.20	ND	1	400.0	1/20/2012	1/23/2012	
2,4,6-Trichlorophenol	12A0752	N/A	0.20	ND	1	2.0	1/20/2012	1/23/2012	
2,4-Dinitrotoluene	12A0752	N/A	0.050	ND	1	0.13	1/20/2012	1/23/2012	
2-Methylphenol	12A0752	N/A	0.10	ND	1	NA	1/20/2012	1/23/2012	
3&4-Methylphenol	12A0752	N/A	0.10	**0.11**	1	NA	1/20/2012	1/23/2012	
Hexachlorobenzene	12A0752	N/A	0.050	ND	1	0.13	1/20/2012	1/23/2012	
Hexachlorobutadiene	12A0752	N/A	0.10	ND	1	0.5	1/20/2012	1/23/2012	
Hexachloroethane	12A0752	N/A	0.10	ND	1	3.0	1/20/2012	1/23/2012	
Nitrobenzene	12A0752	N/A	0.10	ND	1	2.0	1/20/2012	1/23/2012	
Pentachlorophenol	12A0752	N/A	0.25	ND	1	100.0	1/20/2012	1/23/2012	
Pyridine	12A0752	N/A	0.10	ND	1	5.0	1/20/2012	1/23/2012	
Surrogate: 2,4,6-Tribromophenol (35-100%)				*53 %*					
Surrogate: 2-Fluorobiphenyl (20-90%)				*40 %*					
Surrogate: 2-Fluorophenol (35-75%)				*35 %*					
Surrogate: 4-Terphenyl-d14 (10-60%)				*60 %*					
Surrogate: Nitrobenzene-d5 (40-95%)				*57 %*					
Surrogate: Phenol-d6 (25-60%)				*29 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP ORGANOCHLORINE PESTICIDES (EPA 1311/8081A)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
Chlordane	12A0753	N/A	0.025	ND	1	0.03	1/20/2012	1/23/2012	
Endrin	12A0753	N/A	0.0025	ND	1	0.02	1/20/2012	1/23/2012	
gamma-BHC (Lindane)	12A0753	N/A	0.0025	ND	1	0.4	1/20/2012	1/23/2012	
Heptachlor	12A0753	N/A	0.0025	ND	1	0.008	1/20/2012	1/23/2012	
Heptachlor epoxide	12A0753	N/A	0.0025	ND	1	0.008	1/20/2012	1/23/2012	
Methoxychlor	12A0753	N/A	0.0050	ND	1	10.0	1/20/2012	1/23/2012	
Toxaphene	12A0753	N/A	0.050	ND	1	0.5	1/20/2012	1/23/2012	
Surrogate: Decachlorobiphenyl (25-130%)				*86 %*					
Surrogate: Tetrachloro-m-xylene (10-100%)				*74 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP METALS

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
Arsenic	12A0638	N/A	0.50	ND	1	5.0	1/18/2012	1/19/2012	
Barium	12A0638	N/A	10	ND	1	100.0	1/18/2012	1/19/2012	
Cadmium	12A0638	N/A	0.25	ND	1	1.0	1/18/2012	1/19/2012	
Chromium	12A0638	N/A	0.50	ND	1	5.0	1/18/2012	1/19/2012	
Lead	12A0638	N/A	0.50	ND	1	5.0	1/18/2012	1/19/2012	
Mercury	12A0854	N/A	0.00050	ND	1	0.2	1/24/2012	1/24/2012	
Selenium	12A0638	N/A	0.25	ND	1	1.0	1/18/2012	1/19/2012	
Silver	12A0638	N/A	0.25	ND	1	5.0	1/18/2012	1/19/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP EXTRACTION

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: None									
TCLP Extraction	12A0593	N/A	1.00	ND	1	NA	1/17/2012	1/18/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: 2012010727 (PVA0887-04) - Soil					
EPA 8260B	2	01/12/2012 22:00	01/13/2012 14:29	01/14/2012 10:00	01/21/2012 01:52
Sample ID: 2012010723 (PVA0887-08) - Soil					
EPA 8260B	2	01/13/2012 06:00	01/13/2012 14:29	01/14/2012 10:02	01/21/2012 02:24

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg dry									
Antimony	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Arsenic	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Beryllium	EPA 6010B	12B0317	N/A	7.9	ND	0.996	02/08/12	02/09/12	
Cadmium	EPA 6010B	12B0317	N/A	7.9	ND	0.996	02/08/12	02/09/12	
Chromium	EPA 6010B	12B0317	N/A	32	ND	0.996	02/08/12	02/09/12	
Copper	EPA 6010B	12B0317	N/A	79	**440**	0.996	02/08/12	02/09/12	
Lead	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Mercury	EPA 7471A	12A0596	N/A	1.6	ND	1.09	01/23/12	01/23/12	
Molybdenum	EPA 6010B	12B0317	N/A	32	ND	0.996	02/08/12	02/09/12	
Nickel	EPA 6010B	12B0317	N/A	32	ND	0.996	02/08/12	02/09/12	
Selenium	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Silver	EPA 6010B	12B0317	N/A	39	ND	0.996	02/08/12	02/09/12	
Thallium	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Zinc	EPA 6010B	12B0317	N/A	160	**970**	0.996	02/08/12	02/09/12	
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: mg/kg dry									
Antimony	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Arsenic	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Beryllium	EPA 6010B	12B0317	N/A	39	ND	0.991	02/08/12	02/09/12	
Cadmium	EPA 6010B	12B0317	N/A	39	ND	0.991	02/08/12	02/09/12	
Chromium	EPA 6010B	12B0317	N/A	160	ND	0.991	02/08/12	02/09/12	
Copper	EPA 6010B	12B0317	N/A	390	**440**	0.991	02/08/12	02/09/12	
Lead	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Mercury	EPA 7471A	12A0596	N/A	7.0	ND	0.899	01/23/12	01/23/12	
Molybdenum	EPA 6010B	12B0317	N/A	160	ND	0.991	02/08/12	02/09/12	
Nickel	EPA 6010B	12B0317	N/A	160	ND	0.991	02/08/12	02/09/12	
Selenium	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Silver	EPA 6010B	12B0317	N/A	190	ND	0.991	02/08/12	02/09/12	
Thallium	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Zinc	EPA 6010B	12B0317	N/A	780	**880**	0.991	02/08/12	02/09/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #20
Report Number: PVA0787

Sampled: 01/10/12-12/30/11
Received: 01/12/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: mg/kg dry									
Mercury	EPA 7471A	12A0596	N/A	1.4	ND	1.06	01/23/12	01/23/12	
Sample ID: PVA0787-01 (2011111093 - Water)					**Sampled: 11/18/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**240**	1	01/15/12	01/16/12	
Sample ID: PVA0787-02 (2011111355 - Water)					**Sampled: 11/23/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**430**	1	01/15/12	01/16/12	
Sample ID: PVA0787-03 (2011111413 - Water)					**Sampled: 11/25/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	01/15/12	01/16/12	
Sample ID: PVA0787-04 (2011120097 - Water)					**Sampled: 12/02/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	01/15/12	01/16/12	
Sample ID: PVA0787-05 (2011120470 - Water)					**Sampled: 12/09/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	01/15/12	01/16/12	
Sample ID: PVA0787-06 (2011120715 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**170**	1	01/15/12	01/16/12	
Sample ID: PVA0787-07 (2011120722 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**170**	1	01/15/12	01/16/12	
Sample ID: PVA0787-08 (2011120718 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**210**	1	01/15/12	01/16/12	
Sample ID: PVA0787-09 (2011120723 - Water)					**Sampled: 12/14/11**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**200**	1	01/15/12	01/16/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #20
Report Number: PVA0787

Sampled: 01/10/12-12/30/11
Received: 01/12/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	**7.3**	1	01/16/12	01/16/12	
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: mg/kg dry									
Nitrogen, Total	[CALC]	[CALC]	N/A	84	**36000**	1	01/18/12	01/19/12	
Ammonia-N	SM 4500NH3-D MOD	12A0882	N/A	690	**15000**	9.92	01/24/12	01/24/12	
Nitrate-N	EPA 9056	12A0517	N/A	27	ND	1	01/16/12	01/16/12	
Nitrite-N	EPA 9056	12A0517	N/A	27	ND	1	01/16/12	01/16/12	
Total Kjeldahl Nitrogen	SM 4500-NH3 D (mod)	12A0622	N/A	1100	**36000**	3.2	01/18/12	01/19/12	
Sample ID: PVA0787-16 (2012010578 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Fluoride	EPA 300.0	12A0397	N/A	0.40	**0.43**	1	01/12/12	01/12/12	
Nitrate-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/12/12	
Nitrite-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/12/12	
Orthophosphate - P	EPA 300	12A0397	N/A	0.20	**3.8**	1	01/12/12	01/12/12	
Phosphorus,Total - P	SM 4500-P B, E	12A0665	N/A	1.0	**8.3**	10	01/19/12	01/20/12	
Sulfate	EPA 300.0	12A0397	N/A	2.0	**140**	1	01/12/12	01/12/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**56**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**56**	1	01/24/12	01/25/12	
Sample ID: PVA0787-17 (2012010579 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Nitrate-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/13/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**58**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**58**	1	01/24/12	01/25/12	
Sample ID: PVA0787-18 (2012010580 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Nitrate-N	EPA 300.0	12A0408	N/A	0.20	**0.30**	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0408	N/A	0.20	ND	1	01/12/12	01/13/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**42**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**42**	1	01/24/12	01/25/12	
Sample ID: PVA0787-19 (2012010582 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Chloride	EPA 300.0	12A0408	N/A	20	**160**	10	01/12/12	01/13/12	
Fluoride	EPA 300.0	12A0408	N/A	0.40	**0.44**	1	01/12/12	01/13/12	
Nitrate-N	EPA 300.0	12A0408	N/A	0.20	**2.0**	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0408	N/A	0.20	**0.25**	1	01/12/12	01/13/12	
Orthophosphate - P	EPA 300	12A0408	N/A	0.20	**3.7**	1	01/12/12	01/13/12	
Phosphorus,Total - P	SM 4500-P B, E	12A0665	N/A	1.0	**4.2**	10	01/19/12	01/20/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #20
Report Number: PVA0787

Sampled: 01/10/12-12/30/11
Received: 01/12/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	**7.3**	1	01/16/12	01/16/12	
Sample ID: PVA0787-20 (2012010585 - Soil)					**Sampled: 01/10/12**				
Reporting Units: mg/kg dry									
Nitrogen, Total	[CALC]	[CALC]	N/A	84	**36000**	1	01/18/12	01/19/12	
Ammonia-N	SM 4500NH3-D MOD	12A0882	N/A	690	**15000**	9.92	01/24/12	01/24/12	
Nitrate-N	EPA 9056	12A0517	N/A	27	ND	1	01/16/12	01/16/12	
Nitrite-N	EPA 9056	12A0517	N/A	27	ND	1	01/16/12	01/16/12	
Total Kjeldahl Nitrogen	SM 4500-NH3 D (mod)	12A0622	N/A	1100	**36000**	3.2	01/18/12	01/19/12	
Sample ID: PVA0787-16 (2012010578 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Fluoride	EPA 300.0	12A0397	N/A	0.40	**0.43**	1	01/12/12	01/12/12	
Nitrate-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/12/12	
Nitrite-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/12/12	
Orthophosphate - P	EPA 300	12A0397	N/A	0.20	**3.8**	1	01/12/12	01/12/12	
Phosphorus,Total - P	SM 4500-P B, E	12A0665	N/A	1.0	**8.3**	10	01/19/12	01/20/12	
Sulfate	EPA 300.0	12A0397	N/A	2.0	**140**	1	01/12/12	01/12/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**56**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**56**	1	01/24/12	01/25/12	
Sample ID: PVA0787-17 (2012010579 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Nitrate-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0397	N/A	0.20	ND	1	01/12/12	01/13/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**58**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**58**	1	01/24/12	01/25/12	
Sample ID: PVA0787-18 (2012010580 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Nitrate-N	EPA 300.0	12A0408	N/A	0.20	**0.30**	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0408	N/A	0.20	ND	1	01/12/12	01/13/12	
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0881	N/A	1.0	**42**	1	01/24/12	01/25/12	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	N/A	1.4	**42**	1	01/24/12	01/25/12	
Sample ID: PVA0787-19 (2012010582 - Water)					**Sampled: 01/11/12**				
Reporting Units: mg/l									
Chloride	EPA 300.0	12A0408	N/A	20	**160**	10	01/12/12	01/13/12	
Fluoride	EPA 300.0	12A0408	N/A	0.40	**0.44**	1	01/12/12	01/13/12	
Nitrate-N	EPA 300.0	12A0408	N/A	0.20	**2.0**	1	01/12/12	01/13/12	
Nitrite-N	EPA 300.0	12A0408	N/A	0.20	**0.25**	1	01/12/12	01/13/12	
Orthophosphate - P	EPA 300	12A0408	N/A	0.20	**3.7**	1	01/12/12	01/13/12	
Phosphorus,Total - P	SM 4500-P B, E	12A0665	N/A	1.0	**4.2**	10	01/19/12	01/20/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0850-05 (2011120868 - Soil)					**Sampled: 12/16/11**			
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0729	6.2	ND	0.993	1/20/2012	1/22/2012	
Arsenic	EPA 6010B	12A0729	6.2	**8.6**	0.993	1/20/2012	1/22/2012	
Beryllium	EPA 6010B	12A0729	0.62	ND	0.993	1/20/2012	1/22/2012	
Cadmium	EPA 6010B	12A0729	0.62	**0.94**	0.993	1/20/2012	1/23/2012	
Chromium	EPA 6010B	12A0729	2.5	**13**	0.993	1/20/2012	1/22/2012	
Copper	EPA 6010B	12A0729	6.2	**370**	0.993	1/20/2012	1/22/2012	
Lead	EPA 6010B	12A0729	6.2	**12**	0.993	1/20/2012	1/22/2012	
Mercury	EPA 7471A	12A0596	0.12	**1.6**	1.07	1/23/2012	1/23/2012	H3
Molybdenum	EPA 6010B	12A0729	2.5	**12**	0.993	1/20/2012	1/22/2012	
Nickel	EPA 6010B	12A0729	2.5	**11**	0.993	1/20/2012	1/22/2012	
Selenium	EPA 6010B	12A0729	6.2	**7.5**	0.993	1/20/2012	1/22/2012	
Silver	EPA 6010B	12A0729	3.1	**3.6**	0.993	1/20/2012	1/22/2012	
Thallium	EPA 6010B	12A0729	6.2	ND	0.993	1/20/2012	1/22/2012	
Zinc	EPA 6010B	12A0729	12	**500**	0.993	1/20/2012	1/22/2012	
Sample ID: PVA0850-11 (2012010585 - Soil)					**Sampled: 01/10/12**			
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Arsenic	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Beryllium	EPA 6010B	12A0729	6.9	ND	0.995	1/20/2012	1/22/2012	
Cadmium	EPA 6010B	12A0729	6.9	ND	0.995	1/20/2012	1/23/2012	
Chromium	EPA 6010B	12A0729	28	**46**	0.995	1/20/2012	1/22/2012	
Copper	EPA 6010B	12A0729	69	**720**	0.995	1/20/2012	1/22/2012	
Lead	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Mercury	EPA 7471A	12A0596	1.4	ND	0.971	1/23/2012	1/23/2012	
Molybdenum	EPA 6010B	12A0729	28	ND	0.995	1/20/2012	1/22/2012	
Nickel	EPA 6010B	12A0729	28	**34**	0.995	1/20/2012	1/22/2012	
Selenium	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Silver	EPA 6010B	12A0729	35	ND	0.995	1/20/2012	1/22/2012	
Thallium	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Zinc	EPA 6010B	12A0729	140	**1700**	0.995	1/20/2012	1/22/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0850-04 (2012010663 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	12A0485	2.0	ND	5	1/15/2012	1/15/2012	D1
Nitrogen, Total (300.0 Pres. auto calc)	Calculation	[CALC]	3.0	ND	5	1/28/2012	1/28/2012	
Sample ID: PVA0850-04RE1 (2012010663 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A1091	1.0	ND	1	1/28/2012	1/28/2012	
Sample ID: PVA0850-05 (2011120868 - Soil)					**Sampled: 12/16/11**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12A0559	0.10	**80**	1	1/16/2012	1/16/2012	H3
Sample ID: PVA0850-06 (2012010621 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12A0865	0.50	**35**	1	1/24/2012	1/24/2012	
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**280**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-07 (2012010622 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12A0865	0.50	**32**	1	1/24/2012	1/24/2012	
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**23**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-08 (2012010596 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**300**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-09 (2012010598 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	12A0485	2.0	ND	5	1/15/2012	1/15/2012	D1
Sample ID: PVA0850-10 (2012010599 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**17**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-11 (2012010585 - Soil)					**Sampled: 01/10/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12A0559	0.10	**7.2**	1	1/16/2012	1/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #23 DO#12-25366

Report Number: PVA0929

Sampled: 01/12/12-01/14/12
Received: 01/14/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0929-04 (2012010726 - Soil)					**Sampled: 01/12/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	**6.8**	1	01/16/12	01/16/12	
Sample ID: PVA0929-04 (2012010726 - Soil)					**Sampled: 01/12/12**				
Reporting Units: I/NI									
Ignitability	EPA 1030	12A0950	N/A	NA	Not Ignitable	1	01/25/12	01/25/12	
Sample ID: PVA0929-04 (2012010726 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12A0842	N/A	5.9	ND	1.02	01/23/12	01/23/12	
Sample ID: PVA0929-02 (2012010748 - Water)					**Sampled: 01/14/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**320**	1	01/14/12	01/14/12	
Sample ID: PVA0929-03 (2012010749 - Water)					**Sampled: 01/14/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**23**	1	01/14/12	01/14/12	
Sample ID: PVA0929-05 (2012010695 - Water)					**Sampled: 01/13/12**				
Reporting Units: mg/l									
Ammonia-N	SM 4500NH3-D	12A0974	N/A	0.50	**33**	1	01/26/12	01/27/12	
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**250**	1	01/14/12	01/14/12	
Sample ID: PVA0929-06 (2012010696 - Water)					**Sampled: 01/13/12**				
Reporting Units: mg/l									
Ammonia-N	SM 4500NH3-D	12A0974	N/A	0.50	**31**	1	01/26/12	01/27/12	
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**22**	1	01/14/12	01/14/12	
Sample ID: PVA0929-07 (2012010672 - Water)					**Sampled: 01/13/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**270**	1	01/14/12	01/14/12	
Sample ID: PVA0929-08 (2012010675 - Water)					**Sampled: 01/13/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**29**	1	01/14/12	01/14/12	
Sample ID: PVA0929-09 (2012010735 - Water)					**Sampled: 01/14/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**340**	1	01/14/12	01/14/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #23 DO#12-25366
Report Number: PVA0929

Sampled: 01/12/12-01/14/12
Received: 01/14/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0929-10 (2012010737 - Water)					**Sampled: 01/14/12**				
Reporting Units: mg/l									
Biochemical Oxygen Demand	SM 5210B	12A0499	N/A	5.0	**22**	1	01/14/12	01/14/12	
Sample ID: PVA0929-04 (2012010726 - Soil)					**Sampled: 01/12/12**				
Reporting Units: pH Units									
pH	EPA 9045D	12A0553	N/A	1.68	**7.69**	1	01/16/12	01/16/12	
Temperature - °C	EPA 9045D	12A0553	N/A	NA	**20.7**	1	01/16/12	01/16/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #23 DO#12-25366

Report Number: PVA0929

Sampled: 01/12/12-01/14/12
Received: 01/14/12

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0929-04 (2012010726 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
2,4,5-TP (Silvex)	12A0844	N/A	0.013	ND	1	1.0	1/23/2012	1/26/2012	V1, N1
2,4-D	12A0844	N/A	0.013	ND	1	10.0	1/23/2012	1/26/2012	V1
Pentachlorophenol	12A0844	N/A	0.013	ND	1	100.0	1/23/2012	1/26/2012	V1
Surrogate: DCAA (30-154%)				*61 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #23 DO#12-25366

Report Number: PVA0929

Sampled: 01/12/12-01/14/12
Received: 01/14/12

TCLP EXTRACTION

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0929-04 (2012010726 - Soil)					**Sampled: 01/12/12**				
Reporting Units: None									
TCLP Extraction	12A0593	N/A	1.00	ND	1	NA	1/17/2012	1/18/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

SECTION 4

LAND APPLICATION EVENTS LABORATORY ANALYSES

Crop Plant and Harvest Schedule

AVRAGRO SYSTEMS, INC.
LAND APPLICATION CONTRACTOR
2012

PIMA COUNTY
REGIONAL BIOSOLIDS MANAGEMENT FACILITY
INA ROAD WRF
AZPDES NO. AZ0020001

ANNUAL BIOSOLIDS REPORT 2012

Crop Plant and Harvest Schedule

PREPARER: PIMA COUNTY REGIONAL BIOSOLIDS MANAGEMENT FACILITY; INA ROAD WRF, AZPDES NO. AZ0020001
LAND APPLIER: AVRAGRO SYSTEMS, INC.

Field ID	CROP	PLANT DATE	HARVEST DATE
JK-4	Wheat	2/15/2012	7/5/2012
JK-5	Wheat	2/12/2012	7/1/2012
JK-6	Cotton	4/25/2012	12/4/2012
JK-7	Wheat	2/5/2012	7/15/2012
JK-7	Cotton	4/26/2012	12/6/2012
JK-8	Cotton	4/15/2012	12/7/2012
JK-9	Wheat	1/20/2013	6/17/2013
JK-11	Cotton	4/20/2013	11/25/2013
JK-13	Corn Sillage	3/20/2013	7/20/2013
JK-14	Cotton	4/15/2013	11/30/2013
JK-15	Cotton	4/15/2013	11/30/2013
JK-18	Cotton	4/15/2013	11/30/2013
JK-21c	Cotton	4/15/2013	11/30/2013
JK-21d	Cotton	4/15/2013	11/30/2013
JK-26	Cotton	4/20/2013	12/1/2013
JK-27	Cotton	4/20/2013	12/1/2013
JK-29	Cotton	4/20/2013	12/1/2013

Field ID	CROP	PLANT DATE	HARVEST DATE
JK-30	Cotton	4/20/2013	12/1/2013
JK-33	Barley	2/1/2013	5/15/2013
JK-34	Milo	6/30/2012	12/10/2012
JK-35	Wheat	1/20/2012	6/10/2012
JK-35	Milo	6/30/2012	12/12/2012
JK-37	Cotton	4/10/2012	12/1/2012
JK-37	Barley	1/20/2013	5/15/2013
GL-1	Cotton	4/20/2013	12/1/2013
LIM-2	Cotton	4/15/2013	12/4/2013
AJ-1	Barley	1/20/2013	5/25/2013
AJ-2	Cotton	4/10/2012	12/4/2012
TH-3	Wheat	2/15/2012	6/30/2012
TH-3	Cotton	4/20/2013	11/30/2013
TH-4	Wheat	2/15/2012	6/30/2012
TH-4	Cotton	4/20/2013	11/30/2013
TH-5	Cotton	5/12/2012	12/15/2012
TH-11N	Cotton	4/18/2012	12/10/2012

Red - anticipated plant or harvest
JK-14 & JK-15 some of these may go to corn sillage - farmer unsure.

AvraGro Systems, Inc.
PO Box 91708
Tucson, AZ 85752
520-990-8888

February 13, 2013

Mr. Jackson Jenkins
Deputy Director
Pima County Wastewater Management
7100 N. Casa Grande Highway
Tucson, AZ 85743

Re: Yearly Biosolids Report for 2013

Dear Mr. Jenkins:

AvraGro Systems is pleased to submit our Annual Report, which includes the following information regarding biosolids management and land application operations for Pima County Wastewater Management, from January 2011 to December 2011.

- Field summaries (total biosolid loading, total nutrient loading, and cumulative metal loading)
- Biosolids analysis laboratory reports

If you should have any questions, please contact me at 520-271-7736.

Sincerely,

Rob Fehrmann
Managing Director

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Water Quality Compliance Assurance Unit
1110 W. Washington Street, MO5415B-1
Phoenix, Arizona 85007
602-771-4612 (voicemail) 602-771-4505 (fax)

BIOSOLIDS OR SEWAGE SLUDGE ANNUAL REPORT FORM FOR REPORTING YEAR 2012

All Preparers (Generators) and Land Applicators Must Complete the Following:

1. General Information

Date: 2/13/2013	**NPDES Permit # (if applicable):**
Company Name (Preparer/Applicator): Avragro Systems Inc.	
Contact Name: Rob Fehrmann	**Title:** Manager
Address: PO Box 91708., Tucson, AZ 85752	
Phone: (520) 271-7736	**Email:** robfehrmann@comcast.net

Certification: I certify, under penalty of law, that the information and descriptions, have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Signature: Rob Fehrmann	**Title:** Managing Director

2. Who are you? (Check all that apply)

☐ **Preparer.** (A "Preparer is a Generator") The biosolids or sewage sludge prepared at this site are: (select all that apply)

- ☐ Stored onsite
- ☐ Beneficially used for Land Application.
- ☐ Sold/given to a composting operation, a sludge drying operation or to another WWTP for further treatment
- ☐ Disposed of in a "biosolids only" surface disposal site, monofill, designated sludge only area
- ☐ Disposed of in a solid waste landfill - do biosolids go directly into the landfill ? _____
- ☐ Sent out of state for incineration, landfilling, land application, surface disposal, composting or sludge drying

☒ **Applicator.** One who applies biosolids to the land (farms, parks, forests, reclamation sites)

☐ **Owner or Operator** of a surface disposal site including wastewater treatment plants with surface disposal (final disposal) sites for sludge

3. Disposition of Biosolids.

Preparers - wastewater treatment facilities, composting operations and biosolids processing operations. Complete Parts 3.A, 3.B, 3.C, 3.D, and 3.E of this form (if more room is needed, provide additional sheets) for:

- All applicators used to haul and land apply your biosolids and the amount
- All surface disposal sites to which you sent or took biosolids and the amount
- All land application sites (farms, ranches) where biosolids from your facility were applied in 2003 and the amount
- All landfills to which you sent biosolids and the amount
- All composting operations or biosolids processing facilities including "sludge drying operations" to which you sent biosolids and the amount
- All incinerators to which you sent biosolids and the amount

Applicators. Complete Parts 3.C, 3.D, and 3.E. for out of state preparers. Complete Parts 3.F and 3.G of this form. If more room is needed, provide additional sheets) for:

- All preparers (including composting operations, biosolids processing facilities) from which you obtained biosolids
- All application sites (farms, ranches, composting operations) where biosolids were applied in 2003 and the amount.
- All land applicators that are taking biosolids from California generators are required to complete this form and ensure that the California WWTP or preparer is submitting its Annual Report to ADEQ.

Name Of Facility: _____ For Calendar Year: _____

DISPOSITION OF BIOSOLIDS

Do All Reporting In Dry Tons

Arizona Generators and Preparers – Complete Sections 3.A, 3.B, 3.C, and 3.D.
California Generators – Complete Section 3.D only

3.A. Amount Of Biosolids Stored On Site

Are biosolids stored in lined lagoons or impoundments? _____

Are biosolids stored directly on the ground? _____

Are lagoons used in the treatment process of biosolids? _____

	PATHOGEN TREATMENTS			VAR* Option Used
	NONE	CLASS B	CLASS A	
At the beginning of 2004: How much was stored or left over from the previous years? Include any amount that is being stored ANYWHERE - identify the storage of biosolids.	dry tons	dry tons 0	dry tons	
			(Circle one) Fecal coliform Salmonella	
		METHOD #		
At the end of 2004, how much is still stored on site? Where?	dry tons	dry tons 0	dry tons	
			(Circle one) Fecal coliform Salmonella	
		METHOD #		

3.B. Amount of Biosolids or sewage sludge received from another facility during the year, such as another wastewater treatment plant or another APP permitted facility, for further processing?

NAME OF FACILITY	LOCATION	PATHOGEN TREATMENT of the incoming biosolids			VAR* Option Used
		NONE	CLASS B	CLASS A	
1. Pima County Regional Biosolids Management Facility 7101 North Casa Grande Highway Tucson, Arizona 85743		dry tons	dry tons 8766.8	dry tons	
				(Circle one) Fecal coliform Salmonella	1
			METHOD #		
			Alt # 2		
2.		dry tons	dry tons	dry tons	
				(Circle one) Fecal coliform Salmonella	
			METHOD #		

3.C. Total amount of Biosolids "Prepared" at the	PATHOGEN TREATMENT	VAR*

facility during the year based on daily flow	NONE	CLASS B	CLASS A	Option Used
	dry tons	dry tons 0	dry tons	
			(Circle one)	
			Fecal coliform Salmonella	
		METHOD #		

3.D. Amount of Biosolids removed from the facility Name all recipients, include haulers name and phone number, land applicators, composters, landfills, drying facilities, EQB bagging facilities, bulk composting, etc.

NAME OF RECIPIENT	LOCATION	DISPOSITION **	PATHOGEN TREATMENT			VAR* Option Used
			NONE	CLASS B	CLASS A	
1.			tons	dry tons	dry tons	
					(Circle one)	
					Fecal coliform Salmonella	
				METHOD #		
2.			tons	dry tons	dry tons	
					(Circle one)	
					Fecal coliform Salmonella	
				METHOD #		
3.			tons	dry tons	dry tons	
					(Circle one)	
					Fecal coliform Salmonella	
				METHOD #		
4.			tons	dry tons	dry tons	
					(Circle one)	
					Fecal coliform Salmonella	
				METHOD #		

5.			tons	dry tons	dry tons	
					(Circle one) Fecal coliform Salmonella	
				METHOD #		
6.			tons	dry tons	dry tons	
					(Circle one) Fecal coliform Salmonella	
				METHOD #		

* VAR = Vector Attraction Reduction – Which option was used from A.A.C. R18-9-1010 (If Preparer did not perform VAR treatment, then specify "none")

** Disposition: Name the Land application, Surface Disposal, Incineration, Composting Operation, EQB (Exceptional Quality Biosolids) Bagging operation, Landfill, Biosolids Processing facility or sludge drying operation site. Example: Hunt Farm, Flagstaff WWTP Surface Disposal site, Northwest Landfill, Western Organics, etc.

3.E. Preparers must attach analytical results for (metals) pollutants according to A.A.C. R18-9-1012 (Self Monitoring), pathogen reduction results according to A.A.C. R18-9-1006 (Class A and Class B Pathogen Reduction Requirements) and Vector Attraction Reduction results according to A.A.C. R18-9-1010. This reporting is required under A.A.C. R18-9-1014(F) for biosolids produced or further treated at site during the year. Report all pollutant and pathogen results on a 100% dry weight basis.

NOTE: If biosolids are going to a landfill – attach Paint Filter Test and Toxicity Characteristic Leaching Procedure test (TCLP test) per 40CFR261.24

********Attn: All Arizona Generators, submit additional testing data/ see requirements under Biosolids Requirements in your AZPDES permit (example: Dioxins/dibenzofurans) with this Annual Report**

3F

Application Site/ Loaction	Field ID	Amount of Biosolids Applied (DT) (MDT)	Preparer	Pathogen Treatment	Vector Attraction Reduction Method	Loading Rate DT/acre Kg/H	Nitrogen Conc lb/a Kg/H	Type of Crop Grown after Application	Agronomic Rate of Crop Grown (lb/acre)	Cumulative Concentration of Pollutants (MG/Kg) in Soil									
										As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
Kai Farms, Marana, Az	JK-4	750.95	Pima Co.	Class B, Alt 2	Option 1	5	335	Wheat	360	0.3647	0.1351	1.9716	24.483	1.4644	0.105	0.902	1.1601	0.3233	50.347
		585.6				11187	376												
Kai Farms, Marana, Az	JK-5	275.36	Pima Co.	Class B, Alt 2	Option 1	1.25	84	Wheat	360	0.8148	0.3255	4.0123	49.4798	3.2906	0.1896	1.8212	2.5992	0.7036	90.3728
		249.76				2805	94												
Kai Farms, Marana, Az	JK-6	172.72	Pima Co.	Class B, Alt 2	Option 1	2.98	182	Cotton	380	0.4985	0.1704	2.2467	31.363	2.3939	0.0916	1.0962	1.4925	0.4378	58.7797
		156.65				6674	204												
Kai Farms, Marana, Az	JK-7	688.14	Pima Co.	Class B, Alt 2	Option 1	3.6	239	Wheat	360	0.8095	0.513	6.9315	80.2757	6.4241	0.2294	2.0288	3.7315	0.6411	144.127
		624.51				8075	268												
Kai Farms, Marana, Az	JK-8	204.39	Pima Co.	Class B, Alt 2	Option 1	1.34	88.5	Cotton	380	0.686	0.3637	4.6777	67.3234	4.4579	0.2065	2.4868	3.1927	0.6805	116.786
		185.38				2994	99												
Kai Farms, Marana, Az	JK-9	117.45	Pima Co.	Class B, Alt 2	Option 1	0.63	44	Wheat	360	0.275	0.1326	1.946	23.4926	2.0338	0.0828	0.5317	0.9214	0.2118	46.027
		106.53				1407	49												
Kai Farms, Marana, Az	JK-11	145.88	Pima Co.	Class B, Alt 2	Option 1	145.88	60.3	Barley	300	0.8823	0.3668	4.7871	70.5509	5.3636	0.2632	2.6366	3.2767	0.0715	130.89
		132.32				2056.44	67												
Kai Farms, Marana, Az	JK-13	378.89	Pima Co.	Class B, Alt 2	Option 1	2.46	152	Corn Sillage	400	1.1245	0.4227	6.0258	67.9137	4.4977	0.2409	2.5074	3.4146	0.8115	122.879
		343.39				5514	170												
Kai Farms, Marana, Az	JK-14	117.8	Pima Co.	Class B, Alt 2	Option 1	0.84	55	Wheat	360	0.8838	0.3896	5.428	64.4958	4.7932	0.2215	2.4194	2.9626	0.5526	129.106
		106.85				1872	61												
Kai Farms, Marana, Az	JK-15	21.9	Pima Co.	Class B, Alt 2	Option 1	21.9	5.6	Wheat	360	0.8642	0.4154	4.288	57.6256	4.5944	0.2215	1.9945	2.5442	0.6355	94.9905
		19.86				217	6.3												
Kai Farms, Marana, Az	JK-18	114.54	Pima Co.	Class B, Alt 2	Option 1	1.97	115	Cotton	380	0.4714	0.2716	3.3109	44.2167	3.0801	0.2366	0.9886	1.6595	0.4602	78.6798
		103.98				4426	129												
Kai Farms, Marana, Az	JK-21C	213.93	Pima Co.	Class B, Alt 2	Option 1	3.86	224.4	Wheat	360	0.6728	0.2488	3.9183	45.7001	3.3156	0.1576	1.3887	1.9838	0.5263	93.4199
		194.03				8654	251												
Kai Farms, Marana, Az	JK-21D	66.86	Pima Co.	Class B, Alt 2	Option 1	3.18	185	Cotton	380	0.787	0.378	5.2697	62..3308	4.7366	0.24	1.8481	2.9723	0.6156	124.215
		60.64				7136	207												
Kai Farms, Marana, Az	JK-26	293.62	Pima Co.	Class B, Alt 2	Option 1	1.27	82.6	Cotton	380	0.4814	0.2494	4.0736	41.3228	2.9576	0.1252	1.3699	2.2938	0.4013	79.0896
		266.31				2836	92.5												
Kai Farms, Marana, Az	JK-27	250.15	Pima Co.	Class B, Alt 2	Option 1	1.35	64.8	Cotton	380	0.5796	0.2306	2.7256	38.6665	2.9312	0.1429	1.3118	1.8396	0.4291	64.0761
		226.90				3030	95												

The vector attraction reduction: R18-9-1010-A.1; 40 CFR 503.33(b)(1)Alternative 1
The pathogen reduction, Class B: R18-9-1006-E Alternative 5;
40 CFR 503.32(b)(3) Appendix B, No. 3 Alternative 2

Application Site/ Loaction	Field ID	Amount of Biosolids Applied (DT) (MDT)	Preparer	Pathogen Treatment	Vector Attraction Reduction Method	Loading Rate DT/acre Kg/H	Nitrogen Conc lb/a Kg/H	Type of Crop Grown after Application	Agronomic Rate of Crop Grown (lb/acre)	Cumulative Concentration of Pollutants (MG/Kg) in Soil									
										As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
Kai Farms, Marana, Az	JK-29	204.86	Pima Co.	Class B, Alt 2	Option 1	1.22	73.1	Cotton	380	0.4859	0.1837	2.6038	36.0903	2.0054	0.126	1.4108	1.8977	0.3677	60.8019
		185.60				2733	81.9												
Kai Farms, Marana, Az	JK-30	172.35	Pima Co.	Class B, Alt 2	Option 1	1.16	72.1	Cotton	380	0.6819	0.3294	4.5665	55.6206	4.1714	0.1741	1.8811	2.4605	0.5073	104.843
		156.32				2610	80.8												
Kai Farms, Marana, Az	JK-33	336.6	Pima Co.	Class B, Alt 2	Option 1	2.61	172.1	Barley	300	0.4451	0.265	4.0213	37.5817	4.2086	0.1212	0.6676	1.5936	0.2517	69.9768
		305.29				5848	192.9												
Kai Farms, Marana, Az	JK-34	180.74	Pima Co.	Class B, Alt 2	Option 1	1.28	84.5	Milo	300	0.3546	0.2905	2.6309	38.8262	3.6099	0.1153	0.7138	1.5967	0.2895	65.0618
		163.93				2873	94.7												
Kai Farms, Marana, Az	JK-35	372.42	Pima Co.	Class B, Alt 2	Option 1	9.3	649	Wheat-Milo	660	0.2394	0.0516	0.8261	10.983	0.4063	0.0352	0.3646	0.5119	0.178	25.4839
		337.79				20867	728												
Kai Farms, Marana, Az	JK-37	715.42	Pima Co.	Class B, Alt 2	Option 1	5.96	394	Cotton-Wheat	394	0.4437	0.3123	3.2017	44.1459	4.1135	0.1196	0.7771	2.02	0.4089	72.7858
		648.90				13362	441												
TNT Farms	GL-1	197.47	Pima Co.	Class B, Alt 2	Option 1	0.97	56.3	Cotton	380	0.4852	0.2573	3.897	41.5009	3.812	0.1482	1.1868	1.9489	0.3569	71.3278
		179.11				2120	63.1												
Lim` Farms	LIM-2	318.46	Pima Co.	Class B, Alt 2	Option 1	4.68	314	Cotton	380	0.9514	0.4597	6.0162	73.693	5.9992	0.2474	2.55	3.8091	0.8312	157.089
		288.85				10497	352												
Toone Farms	AJ-1	306.99	Pima Co.	Class B, Alt 2	Option 1	2.47	163.6	Barley	300	0.6178	0.2214	2.8282	33.116	2.2858	0.1116	0.8949	1.8414	0.4771	60.6538
		278.45				5526	183.4												
Toone Farms	AJ-2	389.59	Pima Co.	Class B, Alt 2	Option 1	2.57	172.1	Cotton	380	0.6957	0.2067	2.6511	37.5211	2.1056	0.1178	1.1626	1.9151	0.5705	67.6706
		353.36				5756	192.8												
Tom Hum Farms	TH-3	538.72	Pima Co.	Class B, Alt 2	Option 1	3.72	256.9	Wheat-Cotton	740	0.255	0.0982	1.2208	18.5166	1.4475	0.0748	0.6941	0.9211	0.1802	38.3436
		488.97				8327	288												
Tom Hum Farms	TH-4	358.45	Pima Co.	Class B, Alt 2	Option 1	2.52	170	Wheat-Cotton	740	0.2385	0.0815	0.9325	20.4514	1.5556	0.0509	0.6053	0.9677	0.1837	29.8692
		325.12				5657	190.7												
Tom Hum Farms	TH-5	497.99	Pima Co.	Class B, Alt 2	Option 1	2.19	130	Cotton	380	0.3054	0.1008	1.3285	24.6185	2.0521	0.0569	0.6724	0.991	0.2353	44.6202
		451.68				4916	145												
Tom Hum Farms	TH-11N	364.16	Pima Co.	Class B, Alt 2	Option 1	4.8	318	Cotton	380	0.4549	0.1397	1.8601	26.3332	1.5081	0.0859	1.108	1.2107	0.3747	48.7031
		330.30				10739	356												

8766.80 DT

7856.38 MDT

MDT = metric dry metric tons

CERTIFICATION

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.14 and the site restrictions in §503.32(b)(5) was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Project(s):

Pima County, AZ Liquid

Reporting Period: January - December 2012

Name: Rob Fehrmann

Avragro Systems Inc.

Signature: Rob Fehrmann

Date: 2/13/13

The management practices were met as follows:

(a) Sites currently in agricultural production or drastically disturbed lands are not potential habitat for endangered species. Sites which are in a natural state and are converted to agricultural use are evaluated case by case.

(b), (c) Biosolids are applied under management conditions to prevent the movement of biosolids into wetlands or other waters of the United States. These management practices include adherence to slope restrictions, seasonal water table restrictions, floodplain restrictions, frozen and snow covered soils restrictions, and maintaining buffer zones to surface waters (including the 10 meter set back to waters of the United States unless a reduced buffer zone requirement has been approved by the permitting authority) as required by state and internal operating standards.

(d) Biosolids are applied at agronomic rates based on regional, state, and local crop nitrogen requirements. Reclamation rates are established directly with the permitting authority.

The site restrictions were met through written agreements with the landowner and/or farm operator (leaseholder) specifying their obligation to comply with the site restrictions.

Report Number: 12-013-0215
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 85659
Sample Id : PIMA CO 1/10/2012

Date Sampled: 1/10/2012 12:40:00
Date Received: 01/13/2012 00:00
Date Reported: 01/18/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.31	53100	100.0	JM	01/13/2012 15:20	SM-2540G
Moisture *	94.69		100.0	JM	01/13/2012 15:20	SM-2540G
Total Kjeldahl Nitrogen	8.23	82300	10.0	JM	01/16/2012 09:00	SM-4500-NH3C-TKN
Total Phosphorus	2.59	25900	100	KM	01/16/2012 13:04	SW-6010B
Total Potassium	0.28	2760	100	KM	01/16/2012 13:04	SW-6010B
Total Sulfur	1.17	11700	100	KM	01/16/2012 13:04	SW-6010B
Total Calcium	5.13	51300	100	KM	01/16/2012 13:04	SW-6010B
Total Magnesium	0.55	5500	100	KM	01/16/2012 13:04	SW-6010B
Total Sodium	0.30	2990	100	KM	01/16/2012 13:04	SW-6010B
Total Iron		9020	1	KM	01/16/2012 13:04	SW-6010B
Total Aluminum		10600	10	KM	01/16/2012 13:04	SW-6010B
Total Manganese		147	1	KM	01/16/2012 13:04	SW-6010B
Total Copper		483	1	KM	01/16/2012 13:04	SW-6010B
Total Zinc		1160	1	KM	01/16/2012 13:04	SW-6010B
Ammonia Nitrogen	2.82	28200	10.0	JM	01/16/2012 09:00	SM-4500-NH3C
Organic N	5.41	54100	10.0		01/16/2012 09:00	CALCULATION
Nitrate+Nitrite-N		33.9	1.00	JM	01/16/2012 08:00	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	01/16/2012 13:04	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-013-0215
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 85659
Sample Id : PIMA CO 1/10/2012

Date Sampled: 1/10/2012 12:40:00
Date Received: 01/13/2012 00:00
Date Reported: 01/18/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		41	5	KM	01/16/2012 13:04	SW-6010B
Total Nickel		22	5	KM	01/16/2012 13:04	SW-6010B
Total Lead		19	5	KM	01/16/2012 13:04	SW-6010B
Total Arsenic		9.0	1.0	KM	01/16/2012 13:04	SW-6010B
Total Mercury		1.2	0.4	KM	01/16/2012 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	01/16/2012 13:04	SW-6010B
pH (Standard Units) *	8.07		0.01	JM	01/16/2012 07:59	SW-9045D
Total Molybdenum		17	5	KM	01/16/2012 13:04	SW-6010B
Chloride		3120	200	JM	01/16/2012 09:50	SM-4500Cl-D
Total Boron		34	1	KM	01/16/2012 13:04	SW-6010B
Total Silver		8	5	KM	01/16/2012 13:04	SW-6010B

Comments:
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Se". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-030-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

www.aleastern.com

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 1/24/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 85893
Sample Id : PIMA CO

Date Sampled: 1/24/2012 10:30:00
Date Received: 01/30/2012 00:00
Date Reported: 02/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.21	62100	100.0	BW	01/30/2012 14:05	SM-2540G
Moisture *	93.79		100.0	BW	01/30/2012 14:05	SM-2540G
Total Kjeldahl Nitrogen	7.95	79500	10.0	JM	01/31/2012 09:20	SM-4500-NH3C-TKN
Total Phosphorus	2.43	24300	100	KM	01/31/2012 09:25	SW-6010B
Total Potassium	0.25	2540	100	KM	01/31/2012 09:25	SW-6010B
Total Sulfur	1.11	11100	100	KM	01/31/2012 09:25	SW-6010B
Total Calcium	4.94	49400	100	KM	01/31/2012 09:25	SW-6010B
Total Magnesium	0.50	5030	100	KM	01/31/2012 09:25	SW-6010B
Total Sodium	0.26	2630	100	KM	01/31/2012 09:25	SW-6010B
Total Iron		7940	1	KM	01/31/2012 09:25	SW-6010B
Total Aluminum		8200	10	KM	01/31/2012 09:25	SW-6010B
Total Manganese		140	1	KM	01/31/2012 09:25	SW-6010B
Total Copper		452	1	KM	01/31/2012 09:25	SW-6010B
Total Zinc		1110	1	KM	01/31/2012 09:25	SW-6010B
Ammonia Nitrogen	2.27	22700	10.0	JM	01/31/2012 07:39	SM-4500-NH3C
Organic N	5.68	56800	10.0		01/31/2012 07:39	CALCULATION
Nitrate+Nitrite-N		22.5	1.00	JM	01/31/2012 07:40	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	01/31/2012 09:25	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-030-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 1/24/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 85893
Sample Id : PIMA CO

Date Sampled: 1/24/2012 10:30:00
Date Received: 01/30/2012 00:00
Date Reported: 02/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		41	5	KM	01/31/2012 09:25	SW-6010B
Total Nickel		25	5	KM	01/31/2012 09:25	SW-6010B
Total Lead		18	5	KM	01/31/2012 09:25	SW-6010B
Total Arsenic		11.0	1.0	KM	01/31/2012 09:25	SW-6010B
Total Mercury		1.5	0.4	KM	02/01/2012 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	01/31/2012 09:25	SW-6010B
pH (Standard Units) *	7.96			JM	01/31/2012 07:39	SW-9045D
Total Molybdenum		15	5	KM	01/31/2012 09:25	SW-6010B
Chloride		2910	200	JM	02/01/2012 09:15	SM-4500Cl-D
Total Boron		32	1	KM	01/31/2012 09:25	SW-6010B
Total Silver		7	5	KM	01/31/2012 09:25	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-039-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 2/2/2012
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 86126
Sample Id : PIMA CO

Date Sampled: 2/2/2012 12:30:00
Date Received: 02/08/2012 00:00
Date Reported: 02/15/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.04	60400	100.0	JM	07/08/2012 13:59	SM-2540G
Moisture *	93.96		100.0	JM	07/08/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.55	75500	10.0	JM	02/09/2012 07:59	SM-4500-NH3C-TKN
Total Phosphorus	2.52	25200	100	KM	02/10/2012 12:44	SW-6010B
Total Potassium	0.24	2440	100	KM	02/10/2012 12:44	SW-6010B
Total Sulfur	1.14	11400	100	KM	02/10/2012 12:44	SW-6010B
Total Calcium	5.21	52100	100	KM	02/10/2012 12:44	SW-6010B
Total Magnesium	0.52	5230	100	KM	02/10/2012 12:44	SW-6010B
Total Sodium	0.29	2930	100	KM	02/10/2012 12:44	SW-6010B
Total Iron		8020	1	KM	02/10/2012 12:44	SW-6010B
Total Aluminum		8500	10	KM	02/10/2012 12:44	SW-6010B
Total Manganese		166	1	KM	02/10/2012 12:44	SW-6010B
Total Copper		457	1	KM	02/10/2012 12:44	SW-6010B
Total Zinc		1130	1	KM	02/10/2012 12:44	SW-6010B
Ammonia Nitrogen	2.24	22400	10.0	JM	02/09/2012 07:59	SM-4500-NH3C
Organic N	5.31	53100	10.0		02/09/2012 07:59	CALCULATION
Nitrate+Nitrite-N		19.9	1.00	JM	02/09/2012 08:00	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	02/10/2012 12:44	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-039-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 2/2/2012
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 86126
Sample Id : PIMA CO

Date Sampled: 2/2/2012 12:30:00
Date Received: 02/08/2012 00:00
Date Reported: 02/15/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		39	5	KM	02/10/2012 12:44	SW-6010B
Total Nickel		28	5	KM	02/10/2012 12:44	SW-6010B
Total Lead		19	5	KM	02/10/2012 12:44	SW-6010B
Total Arsenic		11.0	1.0	KM	02/10/2012 12:44	SW-6010B
Total Mercury		1.6	0.4	KM	02/10/2012 00:00	SW-7471A
Total Selenium		8.0	1.0	KM	02/10/2012 12:44	SW-6010B
pH (Standard Units) *	8.02			JM	02/09/2012 07:59	SW-9045D
Total Molybdenum		16	5	KM	02/10/2012 12:44	SW-6010B
Chloride		2670	200	JM	02/10/2012 09:35	SM-4500Cl-D
Total Boron		31	1	KM	02/10/2012 12:44	SW-6010B
Total Silver		8	5	KM	02/10/2012 12:44	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-052-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 2/17/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 86470
Sample Id : PIMA CO

Date Sampled: 2/17/2012 09:35:00
Date Received: 02/21/2012 00:00
Date Reported: 02/24/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.53	65300	100.0	JM	02/21/2012 14:39	SM-2540G
Moisture *	93.47		100.0	JM	02/21/2012 14:39	SM-2540G
Total Kjeldahl Nitrogen	6.95	69500	10.0	JM	02/22/2012 07:34	SM-4500-NH3C-TKN
Total Phosphorus	2.62	26200	100	KM	02/22/2012 11:43	SW-6010B
Total Potassium	0.23	2260	100	KM	02/22/2012 11:43	SW-6010B
Total Sulfur	1.16	11600	100	KM	02/22/2012 11:43	SW-6010B
Total Calcium	5.87	58700	100	KM	02/22/2012 11:43	SW-6010B
Total Magnesium	0.55	5490	100	KM	02/22/2012 11:43	SW-6010B
Total Sodium	0.29	2890	100	KM	02/22/2012 11:43	SW-6010B
Total Iron		10900	1	KM	02/22/2012 11:43	SW-6010B
Total Aluminum		8400	10	KM	02/22/2012 11:43	SW-6010B
Total Manganese		149	1	KM	02/22/2012 11:43	SW-6010B
Total Copper		475	1	KM	02/22/2012 11:43	SW-6010B
Total Zinc		1170	1	KM	02/22/2012 11:43	SW-6010B
Ammonia Nitrogen	1.98	19800	10.0	JM	02/22/2012 07:34	SM-4500-NH3C
Organic N	4.97	49700	10.0		02/22/2012 07:34	CALCULATION
Nitrate+Nitrite-N		39.8	1.00	JM	02/22/2012 07:50	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	02/22/2012 11:43	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-052-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 2/17/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 86470
Sample Id : PIMA CO

Date Sampled: 2/17/2012 09:35:00
Date Received: 02/21/2012 00:00
Date Reported: 02/24/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	02/22/2012 11:43	SW-6010B
Total Nickel		28	5	KM	02/22/2012 11:43	SW-6010B
Total Lead		20	5	KM	02/22/2012 11:43	SW-6010B
Total Arsenic		11.0	1.0	KM	02/22/2012 11:43	SW-6010B
Total Mercury		1.3	0.4	KM	02/22/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	02/22/2012 11:43	SW-6010B
pH (Standard Units) *	7.98		0.01	JM	02/22/2012 07:59	SW-9045D
Total Molybdenum		18	5	KM	02/22/2012 11:43	SW-6010B
Chloride		2570	200	JM	02/23/2012 08:35	SM-4500Cl-D
Total Boron		32	1	KM	02/22/2012 11:43	SW-6010B
Total Silver		7	0	KM	02/22/2012 11:43	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al" AND "Ca". THE LRB WAS OUT OF LIMITS FOR "NO3". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-072-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
The One Source.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO
AZ#0629

REPORT OF ANALYSIS

Lab Number : 86756
Sample Id : PIMA CO

Date Sampled: 3/7/2012 13:30:00
Date Received: 03/12/2012 00:00
Date Reported: 03/16/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.27	62700	100.0	JM	03/12/2012 14:30	SM-2540G
Moisture *	93.73		100.0	JM	03/12/2012 14:30	SM-2540G
Total Kjeldahl Nitrogen	6.32	63200	10.0	JM	03/13/2012 08:24	SM-4500-NH3C-TKN
Total Phosphorus	2.48	24800	100	KM	03/13/2012 15:09	SW-6010B
Total Potassium	0.20	2030	100	KM	03/13/2012 15:09	SW-6010B
Total Sulfur	1.07	10700	100	KM	03/13/2012 15:09	SW-6010B
Total Calcium	4.91	49100	100	KM	03/13/2012 15:09	SW-6010B
Total Magnesium	0.47	4670	100	KM	03/13/2012 15:09	SW-6010B
Total Sodium	0.26	2580	100	KM	03/13/2012 15:09	SW-6010B
Total Iron		6590	1	KM	03/13/2012 15:09	SW-6010B
Total Aluminum		7100	10	KM	03/13/2012 15:09	SW-6010B
Total Manganese		135	1	KM	03/13/2012 15:09	SW-6010B
Total Copper		443	1	KM	03/13/2012 15:09	SW-6010B
Total Zinc		1060	1	KM	03/13/2012 15:09	SW-6010B
Ammonia Nitrogen	1.99	19900	10.0	JM	03/13/2012 08:24	SM-4500-NH3C
Organic N	4.33	43300	10.0		03/13/2012 08:24	CALCULATION
Nitrate+Nitrite-N		30.3	1.00	JM	03/14/2012 08:00	SM-4500NO3F
Total Cadmium		3.0	1.0	KM	03/13/2012 15:09	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-072-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
The One Source.

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO
AZ#0629

REPORT OF ANALYSIS

Lab Number : 86756
Sample Id : PIMA CO

Date Sampled: 3/7/2012 13:30:00
Date Received: 03/12/2012 00:00
Date Reported: 03/16/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		33	5	KM	03/13/2012 15:09	SW-6010B
Total Nickel		21	5	KM	03/13/2012 15:09	SW-6010B
Total Lead		16	5	KM	03/13/2012 15:09	SW-6010B
Total Arsenic		8.0	1.0	KM	03/13/2012 15:09	SW-6010B
Total Mercury		1.1	0.4	KM	03/14/2012 09:00	SW-7471A
Total Selenium		10.0	1.0	KM	03/13/2012 15:09	SW-6010B
pH (Standard Units) *	7.88		0.01	JM	03/13/2012 08:35	SW-9045D
Total Molybdenum		16	5	KM	03/13/2012 15:09	SW-6010B
Chloride		2690	200	JM	03/14/2012 08:55	SM-4500Cl-D
Total Boron		28	1	KM	03/13/2012 15:09	SW-6010B
Total Silver		6	0	KM	03/13/2012 15:09	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Se". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "K" AND "P". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-090-0205
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
The One Source.

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 3/28/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87116
Sample Id : PIMA CO

Date Sampled: 3/28/2012 00:00:00
Date Received: 03/30/2012 00:00
Date Reported: 04/04/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	3.54	35400	100.0	JM	04/02/2012 07:45	SM-2540G
Moisture *	96.46		100.0	JM	04/02/2012 07:45	SM-2540G
Total Kjeldahl Nitrogen	7.94	79400	10.0	JM	04/02/2012 07:14	SM-4500-NH3C-TKN
Total Phosphorus	2.44	24400	100	KM	04/02/2012 14:37	SW-6010B
Total Potassium	0.28	2830	100	KM	04/02/2012 14:37	SW-6010B
Total Sulfur	1.07	10700	100	KM	04/02/2012 14:37	SW-6010B
Total Calcium	5.43	54300	100	KM	04/02/2012 14:37	SW-6010B
Total Magnesium	0.52	5190	100	KM	04/02/2012 14:37	SW-6010B
Total Sodium	0.39	3940	100	KM	04/02/2012 14:37	SW-6010B
Total Iron		7850	1	KM	04/02/2012 14:37	SW-6010B
Total Aluminum		8300	10	KM	04/02/2012 14:37	SW-6010B
Total Manganese		143	1	KM	04/02/2012 14:37	SW-6010B
Total Copper		469	1	KM	04/02/2012 14:37	SW-6010B
Total Zinc		1140	1	KM	04/02/2012 14:37	SW-6010B
Ammonia Nitrogen	2.85	28500	10.0	JM	04/02/2012 07:14	SM-4500-NH3C
Organic N	5.09	50900	10.0		04/02/2012 07:14	CALCULATION
Nitrate+Nitrite-N		98.9	1.00	JM	04/02/2012 07:15	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	04/02/2012 14:37	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-090-0205
Account Number: 16010
Submitted By: ROB FEHRMANN

The One Source.

A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 3/28/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87116
Sample Id : PIMA CO

Date Sampled: 3/28/2012 00:00:00
Date Received: 03/30/2012 00:00
Date Reported: 04/04/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	04/02/2012 14:37	SW-6010B
Total Nickel		22	5	KM	04/02/2012 14:37	SW-6010B
Total Lead		19	5	KM	04/02/2012 14:37	SW-6010B
Total Arsenic		10.0	1.0	KM	04/02/2012 14:37	SW-6010B
Total Mercury		1.4	0.4	KM	04/02/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	04/02/2012 14:37	SW-6010B
pH (Standard Units) *	8.14			JM	04/02/2012 07:14	SW-9045D
Total Molybdenum		17	5	KM	04/02/2012 14:37	SW-6010B
Chloride		3750	200	MW	04/03/2012 09:35	SM-4500Cl-D
Total Boron		33	1	KM	04/02/2012 14:37	SW-6010B
Total Silver		7	0	KM	04/02/2012 14:37	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al" AND "Se". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-110-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
The One Source.

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 4/11/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87466
Sample Id : PIMA CO

Date Sampled: 4/11/2012 11:30:00
Date Received: 04/19/2012 00:00
Date Reported: 04/24/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.25	62500	100.0	JM	04/19/2012 14:24	SM-2540G
Moisture *	93.75		100.0	JM	04/19/2012 14:24	SM-2540G
Total Kjeldahl Nitrogen	7.44	74400	10.0	JM	04/20/2012 07:30	SM-4500-NH3C-TKN
Total Phosphorus	2.69	26900	100	KM	04/20/2012 11:53	SW-6010B
Total Potassium	0.26	2590	100	KM	04/20/2012 11:53	SW-6010B
Total Sulfur	1.19	11900	100	KM	04/20/2012 11:53	SW-6010B
Total Calcium	5.05	50500	100	KM	04/20/2012 11:53	SW-6010B
Total Magnesium	0.58	5820	100	KM	04/20/2012 11:53	SW-6010B
Total Sodium	0.29	2940	100	KM	04/20/2012 11:53	SW-6010B
Total Iron		8040	1	KM	04/20/2012 11:53	SW-6010B
Total Aluminum		8400	10	KM	04/20/2012 11:53	SW-6010B
Total Manganese		153	1	KM	04/20/2012 11:53	SW-6010B
Total Copper		525	1	KM	04/20/2012 11:53	SW-6010B
Total Zinc		1190	1	KM	04/20/2012 11:53	SW-6010B
Ammonia Nitrogen	2.19	21900	10.0	JM	04/20/2012 07:30	SM-4500-NH3C
Organic N	5.25	52500	10.0		04/20/2012 07:30	CALCULATION
Nitrate+Nitrite-N		48.0	1.00	JM	04/20/2012 07:30	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	04/20/2012 11:53	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-110-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
The One Source.

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 4/11/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87466
Sample Id : PIMA CO

Date Sampled: 4/11/2012 11:30:00
Date Received: 04/19/2012 00:00
Date Reported: 04/24/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	04/20/2012 11:53	SW-6010B
Total Nickel		22	5	KM	04/20/2012 11:53	SW-6010B
Total Lead		18	5	KM	04/20/2012 11:53	SW-6010B
Total Arsenic		10.0	1.0	KM	04/20/2012 11:53	SW-6010B
Total Mercury		1.6	0.4	KM	04/20/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	04/20/2012 11:53	SW-6010B
pH (Standard Units) *	8.05		0.01	JM	04/20/2012 07:30	SW-9045D
Total Molybdenum		17	5	KM	04/20/2012 11:53	SW-6010B
Chloride		2640	200	JM	04/20/2012 08:10	SM-4500Cl-D
Total Boron		43	1	KM	04/20/2012 11:53	SW-6010B
Total Silver		8	5	KM	04/20/2012 11:53	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-143-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 4/16/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87950
Sample Id : PIMA CO 4/16/12

Date Sampled: 4/16/2012 06:45:00
Date Received: 05/22/2012 00:00
Date Reported: 05/25/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.34	63400	100.0	RD	05/22/2012 13:59	SM-2540G
Moisture *	93.66		100.0	RD	05/22/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.67	76700	10.0	MW	05/23/2012 08:39	SM-4500-NH3C-TKN
Total Phosphorus	2.47	24700	100	JM	05/23/2012 09:30	SW-6010B
Total Potassium	0.22	2150	100	JM	05/23/2012 09:30	SW-6010B
Total Sulfur	1.14	11400	100	JM	05/23/2012 09:30	SW-6010B
Total Calcium	5.05	50500	100	JM	05/23/2012 09:30	SW-6010B
Total Magnesium	0.53	5290	100	JM	05/23/2012 09:30	SW-6010B
Total Sodium	0.25	2470	100	JM	05/23/2012 09:30	SW-6010B
Total Iron		8600	1	JM	05/23/2012 09:30	SW-6010B
Total Aluminum		6500	10	JM	05/23/2012 09:30	SW-6010B
Total Manganese		138	1	JM	05/23/2012 09:30	SW-6010B
Total Copper		485	1	JM	05/23/2012 09:30	SW-6010B
Total Zinc		1130	1	JM	05/23/2012 09:30	SW-6010B
Ammonia Nitrogen	2.37	23700	10.0	MW	05/23/2012 08:39	SM-4500-NH3C
Organic N	5.30	53000	10.0		05/23/2012 08:39	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	MW	05/23/2012 08:40	SM-4500NO3F
Total Cadmium		2.0	1.0	JM	05/23/2012 09:30	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-143-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 4/16/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87950
Sample Id : PIMA CO 4/16/12

Date Sampled: 4/16/2012 06:45:00
Date Received: 05/22/2012 00:00
Date Reported: 05/25/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		36	5	JM	05/23/2012 09:30	SW-6010B
Total Nickel		21	5	JM	05/23/2012 09:30	SW-6010B
Total Lead		17	5	JM	05/23/2012 09:30	SW-6010B
Total Arsenic		11.0	1.0	JM	05/23/2012 09:30	SW-6010B
Total Mercury		3.9	0.4	JM	05/23/2012 09:00	SW-7471A
Total Selenium		10.0	1.0	JM	05/23/2012 09:30	SW-6010B
pH (Standard Units) *	8.14		0.01	MW	05/23/2012 09:35	SW-9045D
Total Molybdenum		19	5	JM	05/23/2012 09:30	SW-6010B
Chloride		2650	200	MW	05/23/2012 09:25	SM-4500Cl-D
Total Boron		43	1	JM	05/23/2012 09:30	SW-6010B
Total Silver		<5	5	JM	05/23/2012 09:30	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Ca". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al", "Fe", "Mn", AND "Se". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-122-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
The One Source.

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 4/26/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87659
Sample Id : PIMA CO

Date Sampled: 4/26/2012 12:30:00
Date Received: 05/01/2012 00:00
Date Reported: 05/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.87	58700	100.0	JM	05/01/2012 13:25	SM-2540G
Moisture *	94.13		100.0	JM	05/01/2012 13:25	SM-2540G
Total Kjeldahl Nitrogen	7.60	76000	10.0	JM	05/02/2012 07:45	SM-4500-NH3C-TKN
Total Phosphorus	2.38	23800	100	KM	05/02/2012 13:03	SW-6010B
Total Potassium	0.23	2280	100	KM	05/02/2012 13:03	SW-6010B
Total Sulfur	1.15	11500	100	KM	05/02/2012 13:03	SW-6010B
Total Calcium	5.08	50800	100	KM	05/02/2012 13:03	SW-6010B
Total Magnesium	0.51	5100	100	KM	05/02/2012 13:03	SW-6010B
Total Sodium	0.30	2960	100	KM	05/02/2012 13:03	SW-6010B
Total Iron		7650	1	KM	05/02/2012 13:03	SW-6010B
Total Aluminum		8400	10	KM	05/02/2012 13:03	SW-6010B
Total Manganese		231	1	KM	05/02/2012 13:03	SW-6010B
Total Copper		458	1	KM	05/02/2012 13:03	SW-6010B
Total Zinc		1120	1	KM	05/02/2012 13:03	SW-6010B
Ammonia Nitrogen	2.20	22000	10.0	JM	05/02/2012 07:45	SM-4500-NH3C
Organic N	5.40	54000	10.0		05/02/2012 07:45	CALCULATION
Nitrate+Nitrite-N		<2.00	1.00	JM	05/02/2012 07:45	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	05/02/2012 13:03	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-122-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
The One Source.

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 4/26/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 87659
Sample Id : PIMA CO

Date Sampled: 4/26/2012 12:30:00
Date Received: 05/01/2012 00:00
Date Reported: 05/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	05/02/2012 13:03	SW-6010B
Total Nickel		20	5	KM	05/02/2012 13:03	SW-6010B
Total Lead		18	5	KM	05/02/2012 13:03	SW-6010B
Total Arsenic		10.0	1.0	KM	05/02/2012 13:03	SW-6010B
Total Mercury		0.8	0.4	KM	05/02/2012 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	05/02/2012 13:03	SW-6010B
pH (Standard Units) *	8.09			JM	05/02/2012 07:45	SW-9045D
Total Molybdenum		17	5	KM	05/02/2012 13:03	SW-6010B
Chloride		3070	200	JM	05/02/2012 08:45	SM-4500Cl-D
Total Boron		38	1	KM	05/02/2012 13:03	SW-6010B
Total Silver		7	5	KM	05/02/2012 13:03	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Se". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al", "As", AND "Se". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-153-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 5/30/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88090
Sample Id : PIMA CO

Date Sampled: 5/30/2012 14:30:00
Date Received: 06/01/2012 00:00
Date Reported: 06/14/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.21	62100	100.0	JM	06/01/2012 15:09	SM-2540G
Moisture *	93.79		100.0	JM	06/01/2012 15:09	SM-2540G
Total Kjeldahl Nitrogen	7.55	75500	10.0	JM	06/04/2012 07:34	SM-4500-NH3C-TKN
Total Phosphorus	2.47	24700	100	KM	06/04/2012 08:25	SW-6010B
Total Potassium	0.27	2670	100	KM	06/04/2012 08:25	SW-6010B
Total Sulfur	1.15	11500	100	KM	06/04/2012 08:25	SW-6010B
Total Calcium	5.32	53200	100	KM	06/04/2012 08:25	SW-6010B
Total Magnesium	0.61	6110	100	KM	06/04/2012 08:25	SW-6010B
Total Sodium	0.30	3020	100	KM	06/04/2012 08:25	SW-6010B
Total Iron		8360	1	KM	06/04/2012 08:25	SW-6010B
Total Aluminum		7600	10	KM	06/04/2012 08:25	SW-6010B
Total Manganese		148	1	KM	06/04/2012 08:25	SW-6010B
Total Copper		511	1	KM	06/04/2012 08:25	SW-6010B
Total Zinc		1120	1	KM	06/04/2012 08:25	SW-6010B
Ammonia Nitrogen	2.75	27500	10.0	JM	06/05/2012 07:54	SM-4500-NH3C
Organic N	4.80	48000	10.0		06/04/2012 07:34	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	06/04/2012 07:35	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	06/04/2012 08:25	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-153-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 5/30/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88090
Sample Id : PIMA CO

Date Sampled: 5/30/2012 14:30:00
Date Received: 06/01/2012 00:00
Date Reported: 06/14/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		35	5	KM	06/04/2012 08:25	SW-6010B
Total Nickel		23	5	KM	06/04/2012 08:25	SW-6010B
Total Lead		16	5	KM	06/04/2012 08:25	SW-6010B
Total Arsenic		11.0	1.0	KM	06/04/2012 08:25	SW-6010B
Total Mercury		1.1	0.4	KM	06/04/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	06/04/2012 08:25	SW-6010B
pH (Standard Units) *	8.05		0.01	JM	06/04/2012 07:34	SW-9045D
Total Molybdenum		18	5	KM	06/04/2012 08:25	SW-6010B
Chloride		3540	200	JM	06/05/2012 08:25	SM-4500Cl-D
Total Boron		51	1	KM	06/04/2012 08:25	SW-6010B
Total Silver		5	5	KM	06/04/2012 08:25	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Se". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-174-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 6/14/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88306
Sample Id : PIMA CO

Date Sampled: 6/14/2012 13:30:00
Date Received: 06/22/2012 00:00
Date Reported: 07/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.48	64800	100.0	JM	06/22/2012 14:10	SM-2540G
Moisture *	93.52		100.0	JM	06/22/2012 14:10	SM-2540G
Total Kjeldahl Nitrogen	7.39	73900	10.0	JM	06/25/2012 07:54	SM-4500-NH3C-TKN
Total Phosphorus	2.60	26000	100	KM	07/02/2012 16:33	SW-6010B
Total Potassium	0.24	2430	100	KM	07/02/2012 16:33	SW-6010B
Total Sulfur	1.19	11900	100	KM	07/02/2012 16:33	SW-6010B
Total Calcium	5.42	54200	100	KM	07/02/2012 16:33	SW-6010B
Total Magnesium	0.60	6000	100	KM	07/02/2012 16:33	SW-6010B
Total Sodium	0.32	3180	100	KM	07/02/2012 16:33	SW-6010B
Total Iron		11500	1	KM	07/02/2012 16:33	SW-6010B
Total Aluminum		7400	10	KM	07/02/2012 16:33	SW-6010B
Total Manganese		171	1	KM	07/02/2012 16:33	SW-6010B
Total Copper		524	1	KM	07/02/2012 16:33	SW-6010B
Total Zinc		1290	1	KM	07/02/2012 16:33	SW-6010B
Ammonia Nitrogen	2.42	24200	10.0	JM	06/25/2012 07:54	SM-4500-NH3C
Organic N	4.97	49700	10.0		06/25/2012 07:54	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	06/25/2012 07:55	SM-4500NO3F
Total Cadmium		3.0	1.0	KM	07/02/2012 16:33	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-174-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

www.aleastern.com

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 6/14/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88306
Sample Id : PIMA CO

Date Sampled: 6/14/2012 13:30:00
Date Received: 06/22/2012 00:00
Date Reported: 07/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	07/02/2012 16:33	SW-6010B
Total Nickel		24	5	KM	07/02/2012 16:33	SW-6010B
Total Lead		20	5	KM	07/02/2012 16:33	SW-6010B
Total Arsenic		10.0	1.0	KM	07/02/2012 16:33	SW-6010B
Total Mercury		1.9	0.4	KM	06/25/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	07/02/2012 16:33	SW-6010B
pH (Standard Units) *	8.09		0.01	JM	06/25/2012 07:54	SW-9045D
Total Molybdenum		18	5	KM	07/02/2012 16:33	SW-6010B
Chloride		2820	200	JM	06/27/2012 08:15	SM-4500Cl-D
Total Boron		48	1	KM	07/02/2012 16:33	SW-6010B
Total Silver		6	0	KM	07/02/2012 16:33	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al", "Fe", AND "Se". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-181-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 6/26/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88377
Sample Id : PIMA CO

Date Sampled: 6/26/2012 12:30:00
Date Received: 06/29/2012 00:00
Date Reported: 07/20/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.68	66800	100.0	BW	06/29/2012 13:59	SM-2540G
Moisture *	93.32		100.0	BW	06/29/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.56	75600	10.0	JM	07/02/2012 07:59	SM-4500-NH3C-TKN
Total Phosphorus	2.85	28500	100	KM	07/19/2012 15:20	SW-6010B
Total Potassium	0.25	2510	100	KM	07/19/2012 15:20	SW-6010B
Total Sulfur	1.34	13400	100	KM	07/19/2012 15:20	SW-6010B
Total Calcium	6.00	60000	100	KM	07/19/2012 15:20	SW-6010B
Total Magnesium	0.68	6810	100	KM	07/19/2012 15:20	SW-6010B
Total Sodium	0.32	3150	100	KM	07/19/2012 15:20	SW-6010B
Total Iron		8660	1	KM	07/19/2012 15:20	SW-6010B
Total Aluminum		7300	10	KM	07/19/2012 15:20	SW-6010B
Total Manganese		153	1	KM	07/19/2012 15:20	SW-6010B
Total Copper		575	1	KM	07/19/2012 15:20	SW-6010B
Total Zinc		1270	1	KM	07/19/2012 15:20	SW-6010B
Ammonia Nitrogen	2.08	20800	10.0	JM	07/02/2012 07:59	SM-4500-NH3C
Organic N	5.48	54800	10.0		07/02/2012 07:59	CALCULATION
Nitrate+Nitrite-N		61.4	2.00	JM	07/02/2012 08:00	SM-4500NO3F
Total Cadmium		3.0	1.0	KM	07/19/2012 15:20	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-181-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 6/26/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88377
Sample Id : PIMA CO

Date Sampled: 6/26/2012 12:30:00
Date Received: 06/29/2012 00:00
Date Reported: 07/20/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	07/19/2012 15:20	SW-6010B
Total Nickel		24	5	KM	07/19/2012 15:20	SW-6010B
Total Lead		20	5	KM	07/19/2012 15:20	SW-6010B
Total Arsenic		12.0	1.0	KM	07/19/2012 15:20	SW-6010B
Total Mercury		1.4	0.4	KM	07/03/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	07/19/2012 15:20	SW-6010B
pH (Standard Units) *	8.19		0.01	RD	07/02/2012 10:00	SW-9045D
Total Molybdenum		18	5	KM	07/19/2012 15:20	SW-6010B
Chloride		2640	200	JM	07/03/2012 08:25	SM-4500Cl-D
Total Boron		52	1	KM	07/19/2012 15:20	SW-6010B
Total Silver		8	0	KM	07/19/2012 15:20	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "NO3+NO2-N". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-205-0202
Account Number: 16010

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 7/17/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88706
Sample Id : PIMA CO

Date Sampled: 7/17/2012 10:30:00
Date Received: 07/23/2012 00:00
Date Reported: 07/26/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.35	63500	100.0	JM	07/23/2012 12:29	SM-2540G
Moisture *	93.65		100.0	JM	07/23/2012 12:29	SM-2540G
Total Kjeldahl Nitrogen	7.48	74800	10.0	JM	07/24/2012 07:25	SM-4500-NH3C-TKN
Total Phosphorus	2.39	23900	100	KM	07/24/2012 12:13	SW-6010B
Total Potassium	0.23	2340	100	KM	07/24/2012 12:13	SW-6010B
Total Sulfur	1.12	11200	100	KM	07/24/2012 12:13	SW-6010B
Total Calcium	5.01	50100	100	KM	07/24/2012 12:13	SW-6010B
Total Magnesium	0.59	5880	100	KM	07/24/2012 12:13	SW-6010B
Total Sodium	0.25	2500	100	KM	07/24/2012 12:13	SW-6010B
Total Iron	0.84	8400	1	KM	07/24/2012 12:13	SW-6010B
Total Aluminum	0.80	8000	10	KM	07/24/2012 12:13	SW-6010B
Total Manganese	0.01	144	1	KM	07/24/2012 12:13	SW-6010B
Total Copper	0.05	529	1	KM	07/24/2012 12:13	SW-6010B
Total Zinc	0.11	1070	1	KM	07/24/2012 12:13	SW-6010B
Ammonia Nitrogen	2.35	23500	10.0	JM	07/24/2012 07:25	SM-4500-NH3C
Organic N	5.13	51300	10.0		07/24/2012 07:25	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	07/24/2012 07:25	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	07/24/2012 12:13	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-205-0202
Account Number: 16010

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 7/17/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 88706
Sample Id : PIMA CO

Date Sampled: 7/17/2012 10:30:00
Date Received: 07/23/2012 00:00
Date Reported: 07/26/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	07/24/2012 12:13	SW-6010B
Total Nickel		23	5	KM	07/24/2012 12:13	SW-6010B
Total Lead		20	5	KM	07/24/2012 12:13	SW-6010B
Total Arsenic		10.0	1.0	KM	07/24/2012 12:13	SW-6010B
Total Mercury		1.1	0.4	KM	07/24/2012 12:00	SW-7471A
Total Selenium		8.0	1.0	KM	07/24/2012 12:13	SW-6010B
pH (Standard Units) *	8.05		0.01	JM	07/24/2012 07:25	SW-9045D
Total Molybdenum		17	5	KM	07/24/2012 12:13	SW-6010B
Chloride		2760	200	JM	07/25/2012 08:25	SM-4500Cl-D
Total Boron		75	1	KM	07/24/2012 12:13	SW-6010B
Total Silver		8	5	KM	07/24/2012 12:13	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING.
QUALIFIER: THE LRB IS OUT OF LIMITS FOR "TKN". THE MATRIX SPIKE DUPLICATE IS OUT OF LIMITS FOR "TKN". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "NO3/NO2-N". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-214-0213
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 7/27/2012
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 88832
Sample Id : PIMA CO

Date Sampled: 7/27/2012 08:30:00
Date Received: 08/01/2012 00:00
Date Reported: 08/06/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.63	66300	100.0	RD	08/01/2012 13:59	SM-2540G
Moisture *	93.37		100.0	RD	08/01/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.30	73000	10.0	JM	08/02/2012 07:45	SM-4500-NH3C-TKN
Total Phosphorus	2.55	25500	100	KM	08/02/2012 15:19	SW-6010B
Total Potassium	0.26	2630	100	KM	08/02/2012 15:19	SW-6010B
Total Sulfur	1.23	12300	100	KM	08/02/2012 15:19	SW-6010B
Total Calcium	5.43	54300	100	KM	08/02/2012 15:19	SW-6010B
Total Magnesium	0.65	6520	100	KM	08/02/2012 15:19	SW-6010B
Total Sodium	0.29	2880	100	KM	08/02/2012 15:19	SW-6010B
Total Iron		9220	1	KM	08/02/2012 15:19	SW-6010B
Total Aluminum		8500	10	KM	08/02/2012 15:19	SW-6010B
Total Manganese		163	1	KM	08/02/2012 15:19	SW-6010B
Total Copper		583	1	KM	08/02/2012 15:19	SW-6010B
Total Zinc		1200	1	KM	08/02/2012 15:19	SW-6010B
Ammonia Nitrogen	2.34	23400	10.0	JM	08/02/2012 07:45	SM-4500-NH3C
Organic N	4.96	49600	10.0		08/02/2012 07:45	CALCULATION
Nitrate+Nitrite-N		33.2	2.00	JM	08/02/2012 07:45	SM-4500NO3F
Total Cadmium		3.0	1.0	KM	08/02/2012 15:19	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-214-0213
Account Number: 16010
Submitted By: ROB FEHRMANN

www.aleastern.com

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 7/27/2012
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 88832
Sample Id : PIMA CO

Date Sampled: 7/27/2012 08:30:00
Date Received: 08/01/2012 00:00
Date Reported: 08/06/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		42	5	KM	08/02/2012 15:19	SW-6010B
Total Nickel		25	5	KM	08/02/2012 15:19	SW-6010B
Total Lead		22	5	KM	08/02/2012 15:19	SW-6010B
Total Arsenic		11.0	1.0	KM	08/02/2012 15:19	SW-6010B
Total Mercury		1.9	0.4	KM	08/02/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	08/02/2012 15:19	SW-6010B
pH (Standard Units) *	8.14		0.01	JM	08/02/2012 07:45	SW-9045D
Total Molybdenum		19	5	KM	08/02/2012 15:19	SW-6010B
Chloride		2590	200	JM	08/02/2012 09:00	SM-4500Cl-D
Total Boron		53	1	KM	08/02/2012 15:19	SW-6010B
Total Silver		1	0	KM	08/02/2012 15:19	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Fe", "Mg", "P", AND "S". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-230-0200
Account Number: 16010

www.aleastern.com

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 8/15/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 89106
Sample Id : PIMA CO 8/15/2012

Date Sampled: 8/15/2012 09:30:00
Date Received: 08/17/2012 00:00
Date Reported: 08/22/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.76	67600	100.0	RD	08/17/2012 14:30	SM-2540G
Moisture *	93.24		100.0	RD	08/17/2012 14:30	SM-2540G
Total Kjeldahl Nitrogen	6.76	67600	10.0	JM	08/20/2012 08:39	SM-4500-NH3C-TKN
Total Phosphorus	2.56	25600	100	KM	08/20/2012 12:26	SW-6010B
Total Potassium	0.25	2460	100	KM	08/20/2012 12:26	SW-6010B
Total Sulfur	1.18	11800	100	KM	08/20/2012 12:26	SW-6010B
Total Calcium	5.41	54100	100	KM	08/20/2012 12:26	SW-6010B
Total Magnesium	0.70	6980	100	KM	08/20/2012 12:26	SW-6010B
Total Sodium	0.27	2650	100	KM	08/20/2012 12:26	SW-6010B
Total Iron		9170	1	KM	08/20/2012 12:26	SW-6010B
Total Aluminum		9400	10	KM	08/20/2012 12:26	SW-6010B
Total Manganese		162	1	KM	08/20/2012 12:26	SW-6010B
Total Copper		580	1	KM	08/20/2012 12:26	SW-6010B
Total Zinc		1290	1	KM	08/20/2012 12:26	SW-6010B
Ammonia Nitrogen	1.85	18500	10.0	JM	08/20/2012 08:39	SM-4500-NH3C
Organic N	4.91	49100	10.0		08/20/2012 08:39	CALCULATION
Nitrate+Nitrite-N		20.7	2.00	JM	08/20/2012 08:40	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	08/20/2012 12:26	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-230-0200
Account Number: 16010

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 8/15/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 89106
Sample Id : PIMA CO 8/15/2012

Date Sampled: 8/15/2012 09:30:00
Date Received: 08/17/2012 00:00
Date Reported: 08/22/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	08/20/2012 12:26	SW-6010B
Total Nickel		22	5	KM	08/20/2012 12:26	SW-6010B
Total Lead		23	5	KM	08/20/2012 12:26	SW-6010B
Total Arsenic		12.0	1.0	KM	08/20/2012 12:26	SW-6010B
Total Mercury		0.9	0.4	KM	08/20/2012 09:00	SW-7471A
Total Selenium		6.0	1.0	KM	08/20/2012 12:26	SW-6010B
pH (Standard Units) *	8.10		0.01	JM	08/20/2012 08:39	SW-9045D
Total Molybdenum		19	5	KM	08/20/2012 12:26	SW-6010B
Chloride		2540	200	JM	08/20/2012 09:30	SM-4500Cl-D
Total Boron		54	1	KM	08/20/2012 12:26	SW-6010B
Total Silver		8	0	KM	08/20/2012 12:26	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE DUPLICATE WAS OUT OF LIMITS FOR "TKN". THE LRB WAS OUT OF LIMITS FOR "Mo". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-242-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 8/27/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 89231
Sample Id : PIMA CO

Date Sampled: 8/27/2012 09:30:00
Date Received: 08/29/2012 00:00
Date Reported: 09/04/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.92	59200	100.0	JM	08/29/2012 14:10	SM-2540G
Moisture *	94.08		100.0	JM	08/29/2012 14:10	SM-2540G
Total Kjeldahl Nitrogen	6.84	68400	10.0	JM	08/30/2012 08:19	SM-4500-NH3C-TKN
Total Phosphorus	2.33	23300	100	KM	08/31/2012 13:50	SW-6010B
Total Potassium	0.25	2530	100	KM	08/31/2012 13:50	SW-6010B
Total Sulfur	1.18	11800	100	KM	08/31/2012 13:50	SW-6010B
Total Calcium	5.19	51900	100	KM	08/31/2012 13:50	SW-6010B
Total Magnesium	0.68	6780	100	KM	08/31/2012 13:50	SW-6010B
Total Sodium	0.26	2560	100	KM	08/31/2012 13:50	SW-6010B
Total Iron		9500	1	KM	08/31/2012 13:50	SW-6010B
Total Aluminum		8600	10	KM	08/31/2012 13:50	SW-6010B
Total Manganese		158	1	KM	08/31/2012 13:50	SW-6010B
Total Copper		560	1	KM	08/31/2012 13:50	SW-6010B
Total Zinc		1150	1	KM	08/31/2012 13:50	SW-6010B
Ammonia Nitrogen	2.01	20100	10.0	JM	08/30/2012 08:19	SM-4500-NH3C
Organic N	4.83	48300	10.0		08/30/2012 08:19	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	08/31/2012 07:55	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	08/31/2012 13:50	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-242-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 8/27/2012
AZ#0629

REPORT OF ANALYSIS

Lab Number : 89231
Sample Id : PIMA CO

Date Sampled: 8/27/2012 09:30:00
Date Received: 08/29/2012 00:00
Date Reported: 09/04/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		41	5	KM	08/31/2012 13:50	SW-6010B
Total Nickel		26	5	KM	08/31/2012 13:50	SW-6010B
Total Lead		25	5	KM	08/31/2012 13:50	SW-6010B
Total Arsenic		11.0	1.0	KM	08/31/2012 13:50	SW-6010B
Total Mercury		1.8	0.4	KM	08/30/2012 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	08/31/2012 13:50	SW-6010B
pH (Standard Units) *	7.98		2.00	JM	08/30/2012 08:50	SW-9045D
Total Molybdenum		18	5	KM	08/31/2012 13:50	SW-6010B
Chloride		2740	200	JM	08/31/2012 09:20	SM-4500Cl-D
Total Boron		52	1	KM	08/31/2012 13:50	SW-6010B
Total Silver		7	5	KM	08/30/2012 11:19	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Mo". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca", "K", "P", AND "S". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-263-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 9/17/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 89512
Sample Id : PIMA CO 9/17/12

Date Sampled: 9/17/2012 12:30:00
Date Received: 09/19/2012 00:00
Date Reported: 10/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.95	59500	100.0	JM	09/19/2012 13:59	SM-2540G
Moisture *	94.05		100.0	JM	09/19/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	6.86	68600	10.0	JM	09/20/2012 08:15	SM-4500-NH3C-TKN
Total Phosphorus	2.54	25400	100	DH	09/26/2012 09:00	SW-6010B
Total Potassium	0.27	2710	100	DH	09/26/2012 09:00	SW-6010B
Total Sulfur	1.33	13300	100	DH	09/26/2012 09:00	SW-6010B
Total Calcium	5.53	55300	100	DH	09/26/2012 09:00	SW-6010B
Total Magnesium	0.76	7570	100	DH	09/26/2012 09:00	SW-6010B
Total Sodium	0.29	2910	100	DH	09/26/2012 09:00	SW-6010B
Total Iron		10600	1	DH	09/26/2012 09:00	SW-6010B
Total Aluminum		9100	10	DH	09/26/2012 09:00	SW-6010B
Total Manganese		200	1	DH	09/26/2012 09:00	SW-6010B
Total Copper		690	1	DH	09/26/2012 09:00	SW-6010B
Total Zinc		1310	1	DH	09/26/2012 09:00	SW-6010B
Ammonia Nitrogen	1.95	19500	10.0	JM	09/20/2012 08:15	SM-4500-NH3C
Organic N	4.91	49100	10.0		09/20/2012 08:15	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	09/20/2012 08:15	SM-4500NO3F
Total Cadmium		2.0	1.0	DH	09/26/2012 09:00	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-263-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 9/17/12
AZ#0629

REPORT OF ANALYSIS

Lab Number : 89512
Sample Id : PIMA CO 9/17/12

Date Sampled: 9/17/2012 12:30:00
Date Received: 09/19/2012 00:00
Date Reported: 10/03/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		45	5	DH	09/26/2012 09:00	SW-6010B
Total Nickel		24	5	DH	09/26/2012 09:00	SW-6010B
Total Lead		27	5	DH	09/26/2012 09:00	SW-6010B
Total Arsenic		11.0	1.0	DH	09/26/2012 09:00	SW-6010B
Total Mercury		1.7	0.4	JM	09/21/2012 14:00	SW-7471A
Total Selenium		9.0	1.0	DH	09/26/2012 09:00	SW-6010B
pH (Standard Units) *	8.25		2.00	JM	09/20/2012 08:24	SW-9045D
Total Molybdenum		18	5	DH	09/26/2012 09:00	SW-6010B
Chloride		2530	200	JM	09/20/2012 09:20	SM-4500Cl-D
Total Boron		66	1	DH	09/26/2012 09:00	SW-6010B
Total Silver		8	5	JTR	09/28/2012 11:59	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "TKN". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-289-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 89882
Sample Id : PIMA COUNTY

Date Sampled: 10/10/2012 13:30:00
Date Received: 10/15/2012 00:00
Date Reported: 10/23/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.57	65700	100.0	JM	10/15/2012 14:15	SM-2540G
Moisture *	93.43		100.0	JM	10/15/2012 14:15	SM-2540G
Total Kjeldahl Nitrogen	6.99	69900	10.0	JM	10/16/2012 07:50	SM-4500-NH3C-TKN
Total Phosphorus	2.45	24500	100	BW	10/16/2012 09:00	SW-6010B
Total Potassium	0.26	2550	100	BW	10/16/2012 09:00	SW-6010B
Total Sulfur	1.27	12700	100	BW	10/16/2012 09:00	SW-6010B
Total Calcium	5.59	55900	100	BW	10/16/2012 09:00	SW-6010B
Total Magnesium	0.78	7770	100	BW	10/16/2012 09:00	SW-6010B
Total Sodium	0.29	2910	100	BW	10/16/2012 09:00	SW-6010B
Total Iron		9310	1	BW	10/16/2012 09:00	SW-6010B
Total Aluminum		8900	10	BW	10/16/2012 09:00	SW-6010B
Total Manganese		166	1	BW	10/16/2012 09:00	SW-6010B
Total Copper		604	1	BW	10/16/2012 09:00	SW-6010B
Total Zinc		1240	1	BW	10/16/2012 09:00	SW-6010B
Ammonia Nitrogen	1.83	18300	10.0	JM	10/16/2012 07:50	SM-4500-NH3C
Organic N	5.16	51600	10.0		10/16/2012 07:50	CALCULATION
Nitrate+Nitrite-N		76.1	2.00	JM	10/17/2012 08:15	SM-4500NO3F
Total Cadmium		2.0	1.0	BW	10/16/2012 09:00	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-289-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 89882
Sample Id : PIMA COUNTY

Date Sampled: 10/10/2012 13:30:00
Date Received: 10/15/2012 00:00
Date Reported: 10/23/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		42	5	BW	10/16/2012 09:00	SW-6010B
Total Nickel		24	5	BW	10/16/2012 09:00	SW-6010B
Total Lead		23	5	BW	10/16/2012 09:00	SW-6010B
Total Arsenic		10.0	1.0	BW	10/16/2012 09:00	SW-6010B
Total Mercury		1.8	0.4	JM	10/18/2012 13:00	SW-7471A
Total Selenium		8.0	1.0	BW	10/16/2012 09:00	SW-6010B
pH (Standard Units) *	8.07		2.00	JM	10/16/2012 07:50	SW-9045D
Total Molybdenum		16	5	BW	10/16/2012 09:00	SW-6010B
Chloride		2440	200	JM	10/16/2012 10:10	SM-4500Cl-D
Total Boron		68	1	BW	10/16/2012 09:00	SW-6010B
Total Silver		7	5	BKN	10/22/2012 14:44	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "AI" AND "B". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-304-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO AZ
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 90085
Sample Id : PIMA CO 10/26/12

Date Sampled: 10/26/2012 13:30:00
Date Received: 10/30/2012 00:00
Date Reported: 11/02/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.43	54300	100.0	JM	10/30/2012 14:35	SM-2540G
Moisture *	94.57		100.0	JM	10/30/2012 14:35	SM-2540G
Total Kjeldahl Nitrogen	7.53	75300	10.0	JM	10/31/2012 07:50	SM-4500-NH3C-TKN
Total Phosphorus	2.50	25000	100	BW	10/31/2012 08:55	SW-6010B
Total Potassium	0.28	2750	100	BW	10/31/2012 08:55	SW-6010B
Total Sulfur	1.32	13200	100	BW	10/31/2012 08:55	SW-6010B
Total Calcium	5.61	56100	100	BW	10/31/2012 08:55	SW-6010B
Total Magnesium	0.81	8130	100	BW	10/31/2012 08:55	SW-6010B
Total Sodium	0.28	2840	100	BW	10/31/2012 08:55	SW-6010B
Total Iron		9430	100	BW	10/31/2012 08:55	SW-6010B
Total Aluminum		7700	10	BW	10/31/2012 08:55	SW-6010B
Total Manganese		171	5	BW	10/31/2012 08:55	SW-6010B
Total Copper		610	5	BW	10/31/2012 08:55	SW-6010B
Total Zinc		1180	5	BW	10/31/2012 08:55	SW-6010B
Ammonia Nitrogen	2.27	22700	10.0	JM	10/31/2012 07:50	SM-4500-NH3C
Organic N	5.26	52600	10.0		10/31/2012 07:50	CALCULATION
Nitrate+Nitrite-N		36.8	2.00	JM	10/31/2012 07:50	SM-4500NO3F
Total Cadmium		2.0	2.0	BW	10/31/2012 08:55	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-304-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

www.aleastern.com

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO AZ
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 90085
Sample Id : PIMA CO 10/26/12

Date Sampled: 10/26/2012 13:30:00
Date Received: 10/30/2012 00:00
Date Reported: 11/02/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		42	5	BW	10/31/2012 08:55	SW-6010B
Total Nickel		27	5	BW	10/31/2012 08:55	SW-6010B
Total Lead		22	5	BW	10/31/2012 08:55	SW-6010B
Total Arsenic		11.0	3.0	BW	10/31/2012 08:55	SW-6010B
Total Mercury		2.1	0.4	JM	10/31/2012 08:45	SW-7471A
Total Selenium		9.0	5.0	BW	10/31/2012 08:55	SW-6010B
pH (Standard Units) *	8.08		2.00	MW	10/31/2012 08:15	SW-9045D
Total Molybdenum		17	5	BW	10/31/2012 08:55	SW-6010B
Chloride		2800	200	MW	10/31/2012 09:25	SM-4500Cl-D
Total Boron		74	3	BW	10/31/2012 08:55	SW-6010B
Total Silver		7	5	BKN	11/01/2012 14:35	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca", "Mg", AND "S". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-331-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 11/16/2012 13:05
AZ#0629

REPORT OF ANALYSIS

Lab Number : 90542
Sample Id : PIMA CO

Date Sampled: 11/16/2012 13:05:00
Date Received: 11/26/2012 00:00
Date Reported: 11/30/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.65	56500	100.0	JM	11/26/2012 13:59	SM-2540G
Moisture *	94.35		100.0	JM	11/26/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.49	74900	10.0	JM	11/22/2012 08:24	SM-4500-NH3C-TKN
Total Phosphorus	2.21	22100	100	KM	11/29/2012 10:32	SW-6010B
Total Potassium	0.23	2300	100	KM	11/29/2012 10:32	SW-6010B
Total Sulfur	1.16	11600	100	KM	11/29/2012 10:32	SW-6010B
Total Calcium	4.77	47700	100	KM	11/29/2012 10:32	SW-6010B
Total Magnesium	0.69	6920	100	KM	11/29/2012 10:32	SW-6010B
Total Sodium	0.28	2830	100	KM	11/29/2012 10:32	SW-6010B
Total Iron		7070	100	KM	11/29/2012 10:32	SW-6010B
Total Aluminum		5300	100	KM	11/29/2012 10:32	SW-6010B
Total Manganese		127	5	KM	11/29/2012 10:32	SW-6010B
Total Copper		540	5	KM	11/29/2012 10:32	SW-6010B
Total Zinc		1040	5	KM	11/29/2012 10:32	SW-6010B
Ammonia Nitrogen	2.23	22300	10.0	JM	11/27/2012 08:24	SM-4500-NH3C
Organic N	5.26	52600	10.0		11/22/2012 08:24	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	11/28/2012 08:20	SM-4500NO3F
Total Cadmium		2.0	2.0	KM	11/29/2012 10:32	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-331-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 11/16/2012 13:05
AZ#0629

REPORT OF ANALYSIS

Lab Number : 90542
Sample Id : PIMA CO

Date Sampled: 11/16/2012 13:05:00
Date Received: 11/26/2012 00:00
Date Reported: 11/30/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		34	5	KM	11/29/2012 10:32	SW-6010B
Total Nickel		26	5	KM	11/29/2012 10:32	SW-6010B
Total Lead		21	5	KM	11/29/2012 10:32	SW-6010B
Total Arsenic		10.0	3.0	KM	11/29/2012 10:32	SW-6010B
Total Mercury		1.6	0.4	KM	11/27/2012 08:30	SW-7471A
Total Selenium		9.0	5.0	KM	11/29/2012 10:32	SW-6010B
pH (Standard Units) *	7.93		2.00	JM	11/27/2012 08:24	SW-9045D
Total Molybdenum		17	5	KM	11/29/2012 10:32	SW-6010B
Chloride		2880	200	JM	11/27/2012 09:30	SM-4500Cl-D
Total Boron		69	3	KM	11/29/2012 10:32	SW-6010B
Total Silver		9	5	BKN	11/29/2012 18:49	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-335-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 90643
Sample Id : PIMA CO 11/28/12

Date Sampled: 11/28/2012 13:30:00
Date Received: 11/30/2012 00:00
Date Reported: 12/07/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	4.74	47400	100.0	JM	11/30/2012 13:34	SM-2540G
Moisture *	95.26		100.0	JM	11/30/2012 13:34	SM-2540G
Total Kjeldahl Nitrogen	7.32	73200	10.0	JM	12/03/2012 07:25	SM-4500-NH3C-TKN
Total Phosphorus	2.55	25500	100	KM	12/03/2012 13:07	SW-6010B
Total Potassium	0.26	2580	100	KM	12/03/2012 13:07	SW-6010B
Total Sulfur	1.30	13000	100	KM	12/03/2012 13:07	SW-6010B
Total Calcium	6.26	62600	100	KM	12/03/2012 13:07	SW-6010B
Total Magnesium	0.82	8170	100	KM	12/03/2012 13:07	SW-6010B
Total Sodium	0.35	3520	100	KM	12/03/2012 13:07	SW-6010B
Total Iron		8130	100	KM	12/03/2012 13:07	SW-6010B
Total Aluminum		6700	100	KM	12/03/2012 13:07	SW-6010B
Total Manganese		155	5	KM	12/03/2012 13:07	SW-6010B
Total Copper		577	5	KM	12/03/2012 13:07	SW-6010B
Total Zinc		1220	5	KM	12/03/2012 13:07	SW-6010B
Ammonia Nitrogen	2.28	22800	10.0	JM	12/03/2012 07:25	SM-4500-NH3C
Organic N	5.04	50400	10.0		12/03/2012 07:25	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	12/06/2012 08:30	SM-4500NO3F
Total Cadmium		3.0	2.0	KM	12/03/2012 13:07	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 12-335-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 90643
Sample Id : PIMA CO 11/28/12

Date Sampled: 11/28/2012 13:30:00
Date Received: 11/30/2012 00:00
Date Reported: 12/07/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		42	5	KM	12/03/2012 13:07	SW-6010B
Total Nickel		26	5	KM	12/03/2012 13:07	SW-6010B
Total Lead		23	5	KM	12/03/2012 13:07	SW-6010B
Total Arsenic		13.0	3.0	KM	12/03/2012 13:07	SW-6010B
Total Mercury		1.4	0.4	KM	12/05/2012 09:06	SW-7471A
Total Selenium		10.0	5.0	KM	12/03/2012 13:07	SW-6010B
pH (Standard Units) *	8.09		2.00	JM	12/03/2012 07:25	SW-9045D
Total Molybdenum		26	5	KM	12/03/2012 13:07	SW-6010B
Chloride		3200	200	JM	12/05/2012 09:05	SM-4500Cl-D
Total Boron		69	3	KM	12/03/2012 13:07	SW-6010B
Total Silver		7	5	BKN	12/06/2012 14:31	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Fe" AND "Mn". THE LCS WAS OUT OF LIMITS FOR "Na". THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca". ALL OTHER QC DATA IS ACCEPTABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 13-003-0210
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 91110
Sample Id : PIMA COUNTY

Date Sampled: 12/17/2012 13:30:00
Date Received: 01/03/2013 00:00
Date Reported: 01/14/2013

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.28	52800	100.0	JM	01/04/2013 10:00	SM-2540G
Moisture *	94.72		100.0	JM	01/04/2013 10:00	SM-2540G
Total Kjeldahl Nitrogen	7.75	77500	10.0	JM	01/04/2013 08:10	SM-4500-NH3C-TKN
Total Phosphorus	2.71	27100	100	KM	01/07/2013 08:54	SW-6010B
Total Potassium	0.38	3790	100	KM	01/07/2013 08:54	SW-6010B
Total Sulfur	1.25	12500	100	KM	01/07/2013 08:54	SW-6010B
Total Calcium	4.53	45300	100	KM	01/07/2013 08:54	SW-6010B
Total Magnesium	0.84	8440	100	KM	01/07/2013 08:54	SW-6010B
Total Sodium	0.34	3380	100	KM	01/07/2013 08:54	SW-6010B
Total Iron		6760	100	KM	01/07/2013 08:54	SW-6010B
Total Aluminum		6200	100	KM	01/07/2013 08:54	SW-6010B
Total Manganese		147	5	KM	01/07/2013 08:54	SW-6010B
Total Copper		525	5	KM	01/07/2013 08:54	SW-6010B
Total Zinc		993	5	KM	01/07/2013 08:54	SW-6010B
Ammonia Nitrogen	2.16	21600	10.0	JM	01/04/2013 08:10	SM-4500-NH3C
Organic N	5.59	55900	10.0		01/04/2013 08:10	CALCULATION
Nitrate+Nitrite-N		58.7	2.00	JM	01/04/2013 08:10	SM-4500NO3F
Total Cadmium		2.0	2.0	KM	01/07/2013 08:54	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 13-003-0210
Account Number: 16010
Submitted By: ROB FEHRMANN

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 91110
Sample Id : PIMA COUNTY

Date Sampled: 12/17/2012 13:30:00
Date Received: 01/03/2013 00:00
Date Reported: 01/14/2013

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		32	5	KM	01/07/2013 08:54	SW-6010B
Total Nickel		23	5	KM	01/07/2013 08:54	SW-6010B
Total Lead		16	5	KM	01/07/2013 08:54	SW-6010B
Total Arsenic		10.0	3.0	KM	01/07/2013 08:54	SW-6010B
Total Mercury		1.2	0.4	KM	01/14/2013 12:00	SW-7471A
Total Selenium		9.0	5.0	KM	01/07/2013 08:54	SW-6010B
pH (Standard Units) *	8.05		2.00	JM	01/04/2013 08:10	SW-9045D
Total Molybdenum		16	5	KM	01/07/2013 08:54	SW-6010B
Chloride		2740	200	JM	01/04/2013 09:15	SM-4500Cl-D
Total Boron		83	3	KM	01/07/2013 08:54	SW-6010B
Total Silver		7	5	BKN	01/09/2013 12:32	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 13-003-0211
Account Number: 16010

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 91111
Sample Id : PIMA COUNTY

Date Sampled: 12/27/2012 11:20:00
Date Received: 01/03/2013 00:00
Date Reported: 01/14/2013

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.74	57400	100.0	JM	01/04/2013 10:00	SM-2540G
Moisture *	94.26		100.0	JM	01/04/2013 10:00	SM-2540G
Total Kjeldahl Nitrogen	7.98	79800	10.0	JM	01/04/2013 08:10	SM-4500-NH3C-TKN
Total Phosphorus	2.60	26000	100	KM	01/07/2013 08:54	SW-6010B
Total Potassium	0.36	3570	100	KM	01/07/2013 08:54	SW-6010B
Total Sulfur	1.21	12100	100	KM	01/07/2013 08:54	SW-6010B
Total Calcium	4.30	43000	100	KM	01/07/2013 08:54	SW-6010B
Total Magnesium	0.71	7060	100	KM	01/07/2013 08:54	SW-6010B
Total Sodium	0.29	2940	100	KM	01/07/2013 08:54	SW-6010B
Total Iron		5930	100	KM	01/07/2013 08:54	SW-6010B
Total Aluminum		5600	100	KM	01/07/2013 08:54	SW-6010B
Total Manganese		130	5	KM	01/07/2013 08:54	SW-6010B
Total Copper		520	5	KM	01/07/2013 08:54	SW-6010B
Total Zinc		910	5	KM	01/07/2013 08:54	SW-6010B
Ammonia Nitrogen	2.28	22800	10.0	JM	01/04/2013 08:10	SM-4500-NH3C
Organic N	5.70	57000	10.0		01/04/2013 08:10	CALCULATION
Nitrate+Nitrite-N		<2.00	2.00	JM	01/04/2013 08:10	SM-4500NO3F
Total Cadmium		2.0	2.0	KM	01/07/2013 08:54	SW-6010B

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

Report Number: 13-003-0211
Account Number: 16010

A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446
www.aleastern.com

Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11661 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 91111
Sample Id : PIMA COUNTY

Date Sampled: 12/27/2012 11:20:00
Date Received: 01/03/2013 00:00
Date Reported: 01/14/2013

PARAMETER	RESULT (%)	RESULT (mg/kg)	QUANTITATION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		31	5	KM	01/07/2013 08:54	SW-6010B
Total Nickel		22	5	KM	01/07/2013 08:54	SW-6010B
Total Lead		15	5	KM	01/07/2013 08:54	SW-6010B
Total Arsenic		9.0	3.0	KM	01/07/2013 08:54	SW-6010B
Total Mercury		1.6	0.4	KM	01/14/2013 12:00	SW-7471A
Total Selenium		10.0	5.0	KM	01/07/2013 08:54	SW-6010B
pH (Standard Units) *	7.93		2.00	JM	01/04/2013 08:10	SW-9045D
Total Molybdenum		14	5	KM	01/07/2013 08:54	SW-6010B
Chloride		2610	200	JM	01/04/2013 09:15	SM-4500Cl-D
Total Boron		90	3	KM	01/07/2013 08:54	SW-6010B
Total Silver		7	5	BKN	01/09/2013 12:38	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Our reports and letters are for the exclusive and confidential use of our clients, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Debbie Holt

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

SECTION 5

ROGER ROAD WRF
AZPDES NO. AZ0020923

QUARTERLY SLUDGE SAMPLING AND ANALYSES

PRIORITY POLLUTANTS AND POLLUTANTS OF CONCERN

ANNUAL BIOSOLIDS REPORT 2012

PIMA COUNTY
REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PIMA COUNTY, ARIZONA

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 10/9/2012 09:17:09
Laboratory License #AZ0159

Sample Analysis Report
Roger Road WRF - Permit Number 20923
April 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **See Attached.**

Notes: All analyses were conducted at the CRAO Laboratory location at 3035 W. El Camino del Cerro, Tucson, AZ 85745.

2012040078 Sample Subcontracted to BIO-Aquatic Testing 04-02-12 lej.

2012040234 Sample sent to BIO Aquatic Testing for analysis. GOS

2012040236 Hex Chrome & Dissolved Low Level Mercury sent to Test America - lej 04-04-12.
2012040238 Metals sent to Test America: PPM 200.8, Ba 200.8, Mg 200.8 - lej - 04/04/12.
2012040320 Metals sent to Test America for analysis. GOS

2012040388 Sample sent to BIO Aquatic Testing for WETT analysis. GOS

2012041137 Sample sent to Test America for metals analysis. GOS
2012041478 Sample sent to Test America for analysis. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

10/10/12
Date

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Raw Influent (20923-0100)											
2012040387	C	Toxaphene	4/6/12 6:00	EPA 625	04/18/12 17:38	ND	ug/l	5.08	80		mmichel
2012040387	C	Acrolein	4/6/12 6:00	EPA 624	04/17/12 21:10	ND	ug/l	0.26	2	S7	dcorbett
2012040387	C	Acrylonitrile	4/6/12 6:00	EPA 624	04/17/12 21:10	ND	ug/l	0.40	2		dcorbett
Sludge Gas (20923-2100)											
2012040661	D	British Thermal Unit (BTU)	4/11/12 5:15	SM 2720C	04/11/12 8:52	584					evega
2012040661	D	Carbon dioxide	4/11/12 5:15	SM 2720C	04/11/12 8:52	41.02	%				evega
2012040661	D	Hydrogen sulfide	4/11/12 5:15	SM 2720C	04/11/12 8:52	0.29	%				evega
2012040661	D	Methane	4/11/12 5:15	SM 2720C	04/11/12 8:52	57.66	%				evega
2012040661	D	Nitrogen	4/11/12 5:15	SM 2720C	04/11/12 8:52	1.03	%				evega
2012041130	D	British Thermal Unit (BTU)	4/18/12 5:30	SM 2720C	04/18/12 9:27	593					cblissett
2012041130	D	Carbon dioxide	4/18/12 5:30	SM 2720C	04/18/12 9:27	40.59	%				cblissett
2012041130	D	Hydrogen sulfide	4/18/12 5:30	SM 2720C	04/18/12 9:27	0.00	%				cblissett
2012041130	D	Methane	4/18/12 5:30	SM 2720C	04/18/12 9:27	58.54	%				cblissett
2012041130	D	Nitrogen	4/18/12 5:30	SM 2720C	04/18/12 9:27	0.88	%				cblissett
2012041547	D	British Thermal Unit (BTU)	4/25/12 5:15	SM 2720C	04/25/12 10:04	599					cblissett
2012041547	D	Carbon dioxide	4/25/12 5:15	SM 2720C	04/25/12 10:04	40.09	%				cblissett
2012041547	D	Hydrogen sulfide	4/25/12 5:15	SM 2720C	04/25/12 10:04	0.00	%				cblissett
2012041547	D	Methane	4/25/12 5:15	SM 2720C	04/25/12 10:04	59.17	%				cblissett
2012041547	D	Nitrogen	4/25/12 5:15	SM 2720C	04/25/12 10:04	0.74	%				cblissett
Lab is not licensed for SM 2720C-Process Control Only											
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012040320	D	Miscellaneous Note	4/5/12 9:20	None	Subcontracted						Other
2012040320	D	Cyanide, Total	4/5/12 9:20	SM 4500-CN-E	04/17/12 15:04	1.72	mg/Kg	0.30	1.4	M2	manderson
2012040320	D	Mercury	4/5/12 9:20	EPA 7471A	04/18/12 11:56	1.410	mg/Kg	0.015	0.29		dobrien
2012040320	D	Solids, Total	4/5/12 9:20	SM 2540G	04/07/12 12:00	1.71	%		0.01		snevius
2012040320	D	1,2-Dibromo-3-chloropropane	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg	0.00018	0.585	Q5, N1	dcorbett
2012040320	D	1,2-Dibromoethane	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg	0.00013	0.585	Q5	dcorbett
2012040320	D	1,2,4-Trichlorobenzene	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg	0.00031	1.17	Q5	dcorbett
2012040320	D	cis-1,2-Dichloroethene	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg	0.0001	0.585	Q5	dcorbett
2012040320	D	Styrene	4/5/12 9:20	EPA 8260B	04/12/12 23:30	ND	mg/Kg	0.00014	0.585		dcorbett
2012040320	D	Xylene, m- + p-	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg	0.00011	0.585	Q5	dcorbett
2012040320	D	Xylene, o-	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg	0.00007	0.585	Q5	dcorbett
2012040320	D	Xylene, Total	4/5/12 9:20	EPA 8260B	04/19/12 13:18	ND	mg/Kg		1.17	Q5	dcorbett
2012040320	D	1,1,1-Trichloroethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00005	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,1,2-Trichloroethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00011	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,1-Dichloroethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00006	0.585	D1, D4, Q5	dcorbett

Lab Comments:

Data on this report was last modified on: 10/3/2012 14:03:09

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012040320	D	1,1-Dichloroethene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00007	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,2-Dichlorobenzene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00017	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,2-Dichloroethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00012	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,2-Dichloropropane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00013	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,3-Dichlorobenzene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00013	0.585	D1, D4, Q5, N1	dcorbett
2012040320	D	1,4-Dichlorobenzene	4/5/12 9:20	EPA 624	04/19/12 13:18	Trace	mg/Kg	0.00016	0.585	D1, D4, Q5	dcorbett
2012040320	D	1,1,2,2-Tetrachloroethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00009	0.585	D1, D4, Q5	dcorbett
2012040320	D	2-Chloroethyl vinyl ether	4/5/12 9:20	EPA 624	04/12/12 23:30	ND	mg/Kg	0.0002	0.585	D1, D4	dcorbett
2012040320	D	Benzene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.0001	0.585	D1, D4, Q5	dcorbett
2012040320	D	Bromodichloromethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00015	0.585	D1, D4, Q5	dcorbett
2012040320	D	Bromoform	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00008	0.585	D1, D4, Q5	dcorbett
2012040320	D	Bromomethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00009	0.585	D1, D4, Q5	dcorbett
2012040320	D	Carbon tetrachloride	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00006	0.585	D1, D4, Q5	dcorbett
2012040320	D	Chlorobenzene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00011	0.585	D1, D4, Q5	dcorbett
2012040320	D	Chloroethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00022	0.585	D1, D4, Q5, N1	dcorbett
2012040320	D	Chloroform	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00011	0.585	D1, D4, Q5	dcorbett
2012040320	D	Chloromethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00008	0.585	D1, D4, Q5, R4	dcorbett
2012040320	D	cis-1,3-Dichloropropene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00012	0.585	D1, D4, Q5	dcorbett
2012040320	D	Dibromochloromethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00014	0.585	D1, D4, Q5	dcorbett
2012040320	D	Ethyl benzene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00008	0.585	D1, D4, Q5	dcorbett
2012040320	D	Methylene chloride	4/5/12 9:20	EPA 624	04/19/12 13:18	Trace	mg/Kg	0.00011	1.17	D1, D4, Q5, N1	dcorbett
2012040320	D	Tetrachloroethene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00006	0.585	D1, D4, Q5	dcorbett
2012040320	D	Toluene	4/5/12 9:20	EPA 624	04/19/12 13:18	Trace	mg/Kg	0.00008	0.585	D1, D4, Q5	dcorbett
2012040320	D	Trichlorofluoromethane	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00005	0.585	D1, D4, Q5	dcorbett
2012040320	D	Trichloroethene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00009	0.585	D1, D4, Q5	dcorbett
2012040320	D	Trihalomethane, Total	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg		0.585	D1, D4, Q5	dcorbett
2012040320	D	trans-1,2-Dichloroethene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00009	0.585	D1, D4, Q5	dcorbett
2012040320	D	trans-1,3-Dichloropropene	4/5/12 9:20	EPA 624	04/19/12 13:18	ND	mg/Kg	0.00012	0.585	D1, D4, Q5	dcorbett
2012040320	D	Vinyl chloride	4/5/12 9:20	EPA 624	04/12/12 23:30	ND	mg/Kg	0.00005	0.585	D1, D4	dcorbett
2012040320	D	4,4-DDD	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.06	501.5	D1, D4	mmichel
2012040320	D	4,4-DDE	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.05	501.5	D1, D4, N1	mmichel
2012040320	D	4,4-DDT	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.04	1253.75	D1, D4, N1	mmichel
2012040320	D	Aldrin	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.1	501.5	D1, D4	mmichel
2012040320	D	alpha-BHC	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.09	501.5	D1, D4	mmichel
2012040320	D	Aroclor 1016	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.1	626.875	D1, D4	mmichel
2012040320	D	Aroclor 1221	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.09	1504.5	D1, D4	mmichel
2012040320	D	Aroclor 1232	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.16	1504.5	D1, D4	mmichel
2012040320	D	Aroclor 1242	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.1	1253.75	D1, D4	mmichel
2012040320	D	Aroclor 1248	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.16	1504.5	D1, D4	mmichel
2012040320	D	Aroclor 1254	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.07	1504.5	D1, D4	mmichel
2012040320	D	Aroclor 1260	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.25	1504.5	D1, D4	mmichel
2012040320	D	beta-BHC	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.1	501.5	D1, D4	mmichel
2012040320	D	Chlordane, Technical	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.7	5015	D1, D4	mmichel

Lab Comments:

Data on this report was last modified on: 10/3/2012 14:03:09

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012040320	D	delta-BHC	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.08	501.5	D1, D4	mmichel
2012040320	D	Dieldrin	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.07	501.5	D1, D4	mmichel
2012040320	D	Endosulfan I	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.05	501.5	D1, D4	mmichel
2012040320	D	Endosulfan II	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.03	250.75	D1, D4	mmichel
2012040320	D	Endosulfan sulfate	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.05	501.5	D1, D4	mmichel
2012040320	D	Endrin	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.1	501.5	D1, D4	mmichel
2012040320	D	Endrin aldehyde	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.07	501.5	D1, D4, N1	mmichel
2012040320	D	gamma-BHC (Lindane)	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.09	501.5	D1, D4	mmichel
2012040320	D	Heptachlor	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.1	1253.75	D1, D4, L3, N1	mmichel
2012040320	D	Heptachlor epoxide	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	0.11	2507.5	D1, D4	mmichel
2012040320	D	Polychlorinated biphenyls, Total	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg		1504.5	D1, D4	mmichel
2012040320	D	Toxaphene	4/5/12 9:20	EPA 625	04/18/12 21:38	ND	ug/kg	5.08	40120	D1, D4	mmichel
2012040320	D	Methoxychlor	4/5/12 9:20	EPA 8270C	04/18/12 21:38	ND	ug/kg	0.06	501.5	D1, D4, N1	mmichel
2012040320	D	1,2,4-Trichlorobenzene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00106	4.68	D1, D4	smitchell
2012040320	D	1,2-Diphenylhydrazine	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00123	4.68	D1, D4, S7	smitchell
2012040320	D	2,3-Dichloroaniline	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00104	4.68	D1, D4	smitchell
2012040320	D	2,4,6-Trichlorophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.0012	4.68	D1, D4	smitchell
2012040320	D	2,4-Dichlorophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00116	4.68	D1, D4	smitchell
2012040320	D	2,4-Dimethylphenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00289	14.04	D1, D4, N1	smitchell
2012040320	D	2,4-Dinitrophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00943	23.4	D1, D4, S7	smitchell
2012040320	D	2,4-Dinitrotoluene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.0012	4.68	D1, D4, S7	smitchell
2012040320	D	2,6-Dinitrotoluene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00194	4.68	D1, D4, S7	smitchell
2012040320	D	2-Chloronaphthalene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00113	4.68	D1, D4, S7	smitchell
2012040320	D	2-Chlorophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00151	4.68	D1, D4	smitchell
2012040320	D	2-Methylphenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00152	4.68	D1, D4	smitchell
2012040320	D	2-Nitrophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00218	4.68	D1, D4	smitchell
2012040320	D	3,3-Dichlorobenzidine	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00223	23.4	D1, D4	smitchell
2012040320	D	4,6-Dinitro-2-methylphenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00373	14.04	D1, D4, S7	smitchell
2012040320	D	4-Bromophenyl phenyl ether	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00145	4.68	D1, D4	smitchell
2012040320	D	4-Chloro-3-methylphenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00142	4.68	D1, D4	smitchell
2012040320	D	4-Chlorophenyl phenyl ether	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.000115	4.68	D1, D4, S7	smitchell
2012040320	D	4-Methylphenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00294	4.68	D1, D4	smitchell
2012040320	D	4-Nitrophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00495	14.04	D1, D4, V1, S7	smitchell
2012040320	D	Acenaphthene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00117	4.68	D1, D4, S7	smitchell
2012040320	D	Acenaphthylene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00084	4.68	D1, D4, S7	smitchell
2012040320	D	Anthracene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00109	4.68	D1, D4	smitchell
2012040320	D	Benzo(a)anthracene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00144	4.68	D1, D4	smitchell
2012040320	D	Benzidine	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.02486	81.9	D1, D4, N1	smitchell
2012040320	D	Benzo(a)pyrene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00155	4.68	D1, D4	smitchell
2012040320	D	Benzo(b)fluoranthene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00157	4.68	D1, D4	smitchell
2012040320	D	Benzo(g,h,i)perylene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00178	4.68	D1, D4	smitchell
2012040320	D	Benzo(k)fluoranthene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00228	4.68	D1, D4	smitchell
2012040320	D	Bis(2-Chloroisopropyl)ether	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00114	4.68	D1, D4	smitchell

Lab Comments:

Data on this report was last modified on: 10/3/2012 14:03:09

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012040320	D	Bis(2-chloroethoxy)methane	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00106	4.68	D1, D4	smitchell
2012040320	D	Bis(2-chloroethyl)ether	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00099	4.68	D1, D4	smitchell
2012040320	D	Bis(2-ethylhexyl) phthalate	4/5/12 9:20	EPA 625	05/01/12 17:25	17.53	mg/Kg	0.00267	4.68	D1, D4	smitchell
2012040320	D	Butylbenzyl phthalate	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00153	4.68	D1, D4	smitchell
2012040320	D	Carbazole	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00127	4.68	D1, D4	smitchell
2012040320	D	Chrysene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00147	4.68	D1, D4	smitchell
2012040320	D	Dibenz(a,h)anthracene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00187	4.68	D1, D4	smitchell
2012040320	D	Diethyl phthalate	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00105	4.68	D1, D4, S7	smitchell
2012040320	D	Dimethylphthalate	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00072	4.68	D1, D4, S7	smitchell
2012040320	D	Di-n-butyl phthalate	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00167	4.68	D1, D4	smitchell
2012040320	D	Di-n-octylphthalate	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00183	4.68	D1, D4	smitchell
2012040320	D	Fluoranthene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00145	4.68	D1, D4	smitchell
2012040320	D	Fluorene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00128	4.68	D1, D4, S7	smitchell
2012040320	D	Hexachlorobenzene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.0008	4.68	D1, D4	smitchell
2012040320	D	Hexachlorobutadiene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00119	4.68	D1, D4	smitchell
2012040320	D	Hexachloroethane	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00121	4.68	D1, D4	smitchell
2012040320	D	Hexachlorocyclopentadiene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00259	14.04	D1, D4, N1	smitchell
2012040320	D	Indeno(1,2,3-cd)pyrene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00225	4.68	D1, D4	smitchell
2012040320	D	Isophorone	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00135	4.68	D1, D4	smitchell
2012040320	D	Naphthalene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00126	4.68	D1, D4	smitchell
2012040320	D	n-Decane	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00166	4.68	D1, D4, N1	smitchell
2012040320	D	Nitrobenzene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00286	4.68	D1, D4	smitchell
2012040320	D	N-Nitroso-di-n-propylamine	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00113	4.68	D1, D4	smitchell
2012040320	D	N-Nitrosodimethylamine	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00423	14.04	D1, D4, N1	smitchell
2012040320	D	N-Nitrosodiphenylamine	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00183	4.68	D1, D4, S7	smitchell
2012040320	D	n-Octadecane	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00166	4.68	D1, D4	smitchell
2012040320	D	Pentachlorophenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.0032	14.04	D1, D4	smitchell
2012040320	D	Phenanthrene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00115	4.68	D1, D4	smitchell
2012040320	D	Phenol	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.0023	4.68	D1, D4	smitchell
2012040320	D	Pyrene	4/5/12 9:20	EPA 625	05/01/12 17:25	ND	mg/Kg	0.00129	4.68	D1, D4	smitchell
2012040320	D	Acrolein	4/5/12 9:20	EPA 624	04/17/12 20:37	ND	mg/Kg	0.00040	2.3392	D1, D4, S7	dcorbett
2012040320	D	Acrylonitrile	4/5/12 9:20	EPA 624	04/17/12 20:37	ND	mg/Kg	0.00026	2.3392	D1, D4	dcorbett
Final Effluent - Trough (20923-7003)											
2012040078	C	Miscellaneous Note	4/2/12 8:30	None		Subcontracted					Other
2012040234	C	Miscellaneous Note	4/4/12 9:00	None		Subcontracted					Other
2012040236	D	Miscellaneous Note	4/4/12 8:30	None		Subcontracted					Other
2012040236	D	Ammonia	4/4/12 8:30	SM4500-NH3-D	04/18/12 11:52	22.5	mg/l	0.02	0.10		aklos
2012040236	D	Cyanide, Total	4/4/12 8:30	SM 4500-CN-E	04/12/12 10:36	Trace	ug/l	1.1	5.0		manderson

Lab Comments:

Data on this report was last modified on: 10/3/2012 14:03:09

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Case Narrative

Sample ID: 2012040320
Permit Name: Roger Road WRF
Location Name: Digested Sludge to Regional Biosolids Facility

---

This sample was extracted for EPA Method 625 Pesticides on 04/12/2012, target compounds flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. MAM-Z.

This sample was extracted for EPA Method 625 Semi-volatiles on 04/12/12. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. SJM

This sample was analyzed for EPA Method 624 and Method 8260 on 04/12/12 and 04/19/12, target compounds flagged with N1 for this method failed the Matrix Spike from the same analytical batch but the spike was performed on a different sample. DLC

1204044-01

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012040320

SITE & LOCATION: Roger Road WWTP -Digester Sludge to Regional Biosolids Facility

SITE-LOCATION NUMBER: 20923-4500 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLE END DATE: 04/05/2012 (MM / DD / YYYY)

SAMPLE END TIME: 0920 (24 Hour Clock)

SAMPLER: GOODYEAR, SILVA (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum			Titanium		
Antimony			Vanadium		
Arsenic			Zinc		
Barium			Priority Pollutant Metals * (Hg in house)	■	
Beryllium			TCLP Metals (contract)		
Boron			503 Metals **		
Cadmium			Chromium, Hexavalent		
Calcium			Chromium, Trivalent		
Chromium			**WET METHODS**	D	C
Cobalt			Ammonia as N		
Copper			Chloride		
Hardness			Cyanide, Total	■	
Iron			Cyanide, Amenable		
Lead			Fluoride		
Magnesium			Ignitability		
Manganese			Nitrate as N		
Mercury			Nitrite as N		
Molybdenum (contract)	■		Nitrate/Nitrite as N		
Nickel			Nitrogen, Total Kjeldahl		
Potassium			Nitrogen, Total as N		
Selenium			Orthophosphate as P		
Silver			Phosphorus, Total as P		
Sodium			Sulfate		
Strontium			Sulfide		
Thallium			Turbidity		
Tin					

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	■	
Dioxin GC/SIM/MS Scan		
Organochlorine Pesticides & PCBs	■	
Purgeable Organics (GCMS)	■	
Semivolatile Organics (GCMS)	■	
Other		
MISCELLANEOUS METHODS	D	C
4,4-DDE		
Bis(2-ethylhexyl) phthalate		
Digester Gas		
Oil and Grease		
Organic Carbon, Total		
Organic Carbon, Dissolved		
TCLP Herbicides (Contract Lab)		
TCLP Pesticides		
TCLP Semivolatile Organics		
TCLP Volatile Organics		
Total Petroleum Hydrocarbons		
Volatile Acids		
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*		
Chronic *C. dubia*		
Chronic *Selenastrum capricornutum*		
Other		

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity		
BOD		
COD		
Coliform, Fecal		
Coliform, Total		
Conductivity		
E. coli		
Oxygen, Dissolved		
pH		
Solids, Settleable		
Solids, Total (SPLIT - CONTRACT)	■	
Solids, Total Dissolved		
Solids, Total Suspended		
Solids, Total Volatile		
Solids, Volatile Suspended		
Other		
OTHER	D	C

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine (Hach 10014)		µg/L
☐ Conductivity (SM 2510 B)		µmhos/cm
☐ Oxygen, Dissolved (SM 4500-O G)		mg/L
☐ pH / pH Temp (SM 4500-H B)	/	pH Units/ °C
☐ Temperature (SM 2550 B)		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Metals duplicate and total solids split. GOS 04-05-12
Contract lab is Test America. DC#12-35426

# of Bottles Delivered: 8

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 04-03-12 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time (24 Hour Clock)
[signature]	[signature] on	04-05-12	1003
[signature] on	[signature]	4/6/12	1322
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	1	°C
Initials:	LEJ	
Non-Preserved	8	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:

	Yes	No	NA
Chain of Custody Record completed appropriately?	☒		
Sample labels match Chain of Custody?	☒		
Correct number of samples were delivered?	☒		
Custody seals intact?			☒
Within holding time?	☒		
Sufficient sample volume for analysis?	☒		
Samples are in proper containers?	☒		
Sample containers damaged/leaking/frozen?		☒	
40 ml vials headspace, > pea-sized air bubble?	☒		
Received from a refrigerator?		☒	

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 1 of 2

Client Name/Address: Pima County CRAC Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 45, DO# 12-35426

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	~~7470~~ 6010B 6010B Sb, As, Be+Cd	6010B Mo, Cr, Cu, Pb, Ni, Se, Ag, Tl + Zn	Total % solids for mg/kg	200.8 Ba, Sb, As, Be, Cd, Cr, Cu + Pb	200.8 Ni, Se, Ag, Tl, Zn	Selenium 200.8				Special Instructions
Roger Rd digester sludge	BS	HDPE	2	04-05-12	0920	none	X	X	X							BS-biosolids
20923-~~400~~ 4500 (0004032) 2012040320																discrete mg/kg
1204044-01																
Green Valley discharge BNROD	WW	HDPE	1	04-05-12	0801	HNO_3				X	X					discrete
25000-1926i (0004032) 2012040331																
1204045-03																
Avra Valley raw influent	WW	HDPE	1	04-06-12	0600	HNO_3				X	X					composite
25003-1009 2012040393																
1204052-01 + 02																
Roger Rd final effluent trough	WW	HDPE	1	04-06-12	0600	HNO_3				~~X~~	~~X~~	X				composite
20923-7003 2012040366										(004) 04-06-12						
1204049-02																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	04-06-12 1322		4/6/12 13:22	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Sample Group #45 DO#12-35426

Sampled: 04/05/12-04/06/12
Received: 04/07/12
Issued: 04/18/12 10:49

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVD0554-01	2012040320	Soil
PVD0554-02	2012040331	Water
PVD0554-03	2012040393	Water
PVD0554-04	2012040366	Water
PVD0554-05	2012040390	Water
PVD0554-06	2012040392	Water
PVD0554-07	2012040391	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #45 DO#12-35426

Report Number: PVD0554

Sampled: 04/05/12-04/06/12
Received: 04/07/12

SAMPLE RECEIPT:	Samples were received intact, at 2°C, on ice and with chain of custody documentation. For samples PVD0554-05, -06, and -07, the client confirmed that cadium should be analyzed and not calcium.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements. N1 - Sample unable to be adjusted to correct pH due to matrix.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	PVD0554-01 as received was classified as a water. Due to the high percentage of water, this sample could not be handled as a solid for the metals preparation. The sample was reported with liquid concentration units of mg/L.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #45 DO#12-35426
Report Number: PVD0554

Sampled: 04/05/12-04/06/12
Received: 04/07/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD0554-01 (2012040320 - Soil)					**Sampled: 04/05/12**			**N1**
Reporting Units: mg/l								
Antimony	EPA 6010B	12D0369	0.40	ND	10	4/10/2012	4/11/2012	
Arsenic	EPA 6010B	12D0369	1.0	ND	10	4/10/2012	4/11/2012	
Beryllium	EPA 6010B	12D0369	0.010	ND	10	4/10/2012	4/11/2012	
Cadmium	EPA 6010B	12D0369	0.010	**0.034**	10	4/10/2012	4/11/2012	
Chromium	EPA 6010B	12D0369	0.10	**0.45**	10	4/10/2012	4/11/2012	
Copper	EPA 6010B	12D0369	0.10	**7.2**	10	4/10/2012	4/11/2012	
Lead	EPA 6010B	12D0369	0.15	**0.33**	10	4/10/2012	4/11/2012	
Molybdenum	EPA 6010B	12D0369	0.10	**0.24**	10	4/10/2012	4/11/2012	
Nickel	EPA 6010B	12D0369	0.10	**0.35**	10	4/10/2012	4/11/2012	
Selenium	EPA 6010B	12D0369	1.0	ND	10	4/10/2012	4/11/2012	
Silver	EPA 6010B	12D0369	0.10	**0.16**	10	4/10/2012	4/11/2012	
Thallium	EPA 6010B	12D0369	1.0	ND	10	4/10/2012	4/11/2012	
Zinc	EPA 6010B	12D0369	0.50	**20**	10	4/10/2012	4/11/2012	
Sample ID: PVD0554-02 (2012040331 - Water)					**Sampled: 04/05/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0504	1.0	ND	1	4/12/2012	4/13/2012	
Sample ID: PVD0554-03 (2012040393 - Water)					**Sampled: 04/06/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0504	1.0	ND	1	4/12/2012	4/13/2012	
Sample ID: PVD0554-05 (2012040390 - Water)					**Sampled: 04/06/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0504	1.0	ND	1	4/12/2012	4/13/2012	
Sample ID: PVD0554-06 (2012040392 - Water)					**Sampled: 04/06/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0504	1.0	ND	1	4/12/2012	4/13/2012	
Sample ID: PVD0554-07 (2012040391 - Water)					**Sampled: 04/06/12**			
Reporting Units: ug/l								
Beryllium	EPA 200.7	12D0504	1.0	ND	1	4/12/2012	4/13/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #45 DO#12-35426
Report Number: PVD0554

Sampled: 04/05/12-04/06/12
Received: 04/07/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVD0554-01 (2012040320 - Soil)				**Sampled: 04/05/12**				
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0438	0.10	**1.7**	1	4/11/2012	4/11/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Raw Influent (20923-0100)											
2012011477	C	Endrin	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l	0.1	0.2	D1, D4, L3, N1	mmichel
2012011477	C	Endrin aldehyde	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l	0.07	0.2	D1, D4	mmichel
2012011477	C	gamma-BHC (Lindane)	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l	0.09	0.2	D1, D4, N1	mmichel
2012011477	C	Heptachlor	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l	0.1	0.2	D1, D4, N1	mmichel
2012011477	C	Heptachlor epoxide	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l	0.11	0.5	D1, D4, N1	mmichel
2012011477	C	Polychlorinated biphenyls, Total	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l		0.5	D1, D4	mmichel
2012011477	C	Toxaphene	1/27/12 6:00	EPA 625	02/15/12 14:04	ND	ug/l	5.06	16	D1, D4	mmichel
Sludge Gas (20923-2100)											
2012010173	D	British Thermal Unit (BTU)	1/4/12 6:00	SM 2720C	01/04/12 8:37	587					cblissett
2012010173	D	Carbon dioxide	1/4/12 6:00	SM 2720C	01/04/12 8:37	41.53	%				cblissett
2012010173	D	Hydrogen sulfide	1/4/12 6:00	SM 2720C	01/04/12 8:37	0.34	%				cblissett
2012010173	D	Methane	1/4/12 6:00	SM 2720C	01/04/12 8:37	57.93	%				cblissett
2012010173	D	Nitrogen	1/4/12 6:00	SM 2720C	01/04/12 8:37	0.20	%				cblissett
2012010583	D	British Thermal Unit (BTU)	1/11/12 6:00	SM 2720C	01/11/12 8:13	549					cblissett
2012010583	D	Carbon dioxide	1/11/12 6:00	SM 2720C	01/11/12 8:13	43.30	%				cblissett
2012010583	D	Hydrogen sulfide	1/11/12 6:00	SM 2720C	01/11/12 8:13	0.33	%				cblissett
2012010583	D	Methane	1/11/12 6:00	SM 2720C	01/11/12 8:13	54.22	%				cblissett
2012010583	D	Nitrogen	1/11/12 6:00	SM 2720C	01/11/12 8:13	2.14	%				cblissett
2012010943	D	British Thermal Unit (BTU)	1/18/12 5:30	SM 2720C	01/18/12 9:27	577					cblissett
2012010943	D	Carbon dioxide	1/18/12 5:30	SM 2720C	01/18/12 9:27	42.38	%				cblissett
2012010943	D	Hydrogen sulfide	1/18/12 5:30	SM 2720C	01/18/12 9:27	0.34	%				cblissett
2012010943	D	Methane	1/18/12 5:30	SM 2720C	01/18/12 9:27	56.95	%				cblissett
2012010943	D	Nitrogen	1/18/12 5:30	SM 2720C	01/18/12 9:27	0.33	%				cblissett
2012011314	D	British Thermal Unit (BTU)	1/25/12 5:15	SM 2720C	01/25/12 10:24	543					cblissett
2012011314	D	Carbon dioxide	1/25/12 5:15	SM 2720C	01/25/12 10:24	40.17	%				cblissett
2012011314	D	Hydrogen sulfide	1/25/12 5:15	SM 2720C	01/25/12 10:24	0.32	%				cblissett
2012011314	D	Methane	1/25/12 5:15	SM 2720C	01/25/12 10:24	53.56	%				cblissett
2012011314	D	Nitrogen	1/25/12 5:15	SM 2720C	01/25/12 10:24	5.93	%				cblissett
Lab is not licensed for SM 2720C-Process Control Only											
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012011393	C	Miscellaneous Note	1/26/12 10:40	None	Subcontracted						Other
2012011393	C	Mercury	1/26/12 10:40	EPA 7471A	02/16/12 9:46	1.03	mg/Kg	0.017	0.33		khowell
2012011393	C	Solids, Total	1/26/12 10:40	SM 2540G	01/27/12 13:51	1.52	%		0.01		sdevito
2012011393	C	Acrolein	1/26/12 10:40	EPA 624	01/30/12 12:03	ND	mg/Kg	0.0013	6.6	D1, D4	jportillo
2012011393	C	Acrylonitrile	1/26/12 10:40	EPA 624	01/30/12 12:03	ND	mg/Kg	0.00206	6.6	D1, D4	jportillo

Lab Comments:

Data on this report was last modified on: 5/24/2012 08:32:46

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012011393	C	1,2-Dibromo-3-chloropropane	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.00018	0.66	D1, D4	dcorbett
2012011393	C	1,2-Dibromoethane	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.00013	0.66	D1, D4	dcorbett
2012011393	C	1,2,4-Trichlorobenzene	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.00031	0.66	D1, D4	dcorbett
2012011393	C	cis-1,2-Dichloroethene	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.0001	0.66	D1, D4	dcorbett
2012011393	C	Styrene	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.00014	0.66	D1, D4	dcorbett
2012011393	C	Xylene, m- + p-	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.00011	1.32	D1, D4	dcorbett
2012011393	C	Xylene, o-	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg	0.00007	0.66	D1, D4	dcorbett
2012011393	C	Xylene, Total	1/26/12 10:40	EPA 8260B	02/01/12 18:46	ND	mg/Kg		1.32	D1, D4	dcorbett
2012011393	C	1,1,1-Trichloroethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00005	0.66	D1, D4	dcorbett
2012011393	C	1,1,2-Trichloroethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00011	0.66	D1, D4	dcorbett
2012011393	C	1,1-Dichloroethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00006	0.66	D1, D4	dcorbett
2012011393	C	1,1-Dichloroethene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00007	0.66	D1, D4	dcorbett
2012011393	C	1,2-Dichlorobenzene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00017	0.66	D1, D4	dcorbett
2012011393	C	1,2-Dichloroethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00012	0.66	D1, D4	dcorbett
2012011393	C	1,2-Dichloropropane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00013	0.66	D1, D4	dcorbett
2012011393	C	1,3-Dichlorobenzene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00013	0.66	D1, D4	dcorbett
2012011393	C	1,4-Dichlorobenzene	1/26/12 10:40	EPA 624	02/01/12 18:46	0.63	mg/Kg	0.00016	0.66	D1, D4	dcorbett
2012011393	C	1,1,2,2-Tetrachloroethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00009	0.66	D1, D4	dcorbett
2012011393	C	2-Chloroethyl vinyl ether	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.0002	0.66	D1, D4	dcorbett
2012011393	C	Benzene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.0001	0.66	D1, D4	dcorbett
2012011393	C	Bromodichloromethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00015	0.66	D1, D4	dcorbett
2012011393	C	Bromoform	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00008	0.66	D1, D4	dcorbett
2012011393	C	Bromomethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00009	0.66	D1, D4, R4	dcorbett
2012011393	C	Carbon tetrachloride	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00006	0.66	D1, D4	dcorbett
2012011393	C	Chlorobenzene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00011	0.66	D1, D4	dcorbett
2012011393	C	Chloroethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00022	0.66	D1, D4, R4	dcorbett
2012011393	C	Chloroform	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00011	0.66	D1, D4	dcorbett
2012011393	C	Chloromethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00008	0.66	D1, D4, R4	dcorbett
2012011393	C	cis-1,3-Dichloropropene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00012	0.66	D1, D4	dcorbett
2012011393	C	Dibromochloromethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00014	0.66	D1, D4	dcorbett
2012011393	C	Ethyl benzene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00008	0.66	D1, D4	dcorbett
2012011393	C	Methylene chloride	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00011	0.66	D1, D4	dcorbett
2012011393	C	Tetrachloroethene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00006	0.66	D1, D4	dcorbett
2012011393	C	Toluene	1/26/12 10:40	EPA 624	02/01/12 18:46	Trace	mg/Kg	0.00008	0.66	D1, D4	dcorbett
2012011393	C	Trichlorofluoromethane	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00005	0.66	D1, D4, R4, V1	dcorbett
2012011393	C	Trichloroethene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00009	0.66	D1, D4	dcorbett
2012011393	C	Trihalomethane, Total	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg		0.66	D1, D4	dcorbett
2012011393	C	trans-1,2-Dichloroethene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00009	0.66	D1, D4	dcorbett
2012011393	C	trans-1,3-Dichloropropene	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00012	0.66	D1, D4	dcorbett
2012011393	C	Vinyl chloride	1/26/12 10:40	EPA 624	02/01/12 18:46	ND	mg/Kg	0.00005	0.66	D1, D4, R4	dcorbett

See Attached Non-Target Quantitation Sheet forEPA 624

Lab Comments:

Data on this report was last modified on: 5/24/2012 08:32:46

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012011393	C	4,4-DDD	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.06	438.3	D4	mmichel
2012011393	C	4,4-DDE	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.05	219.15	D4	mmichel
2012011393	C	4,4-DDT	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.04	219.15	D4, N1	mmichel
2012011393	C	Aldrin	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.1	438.3	D4, N1	mmichel
2012011393	C	alpha-BHC	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.09	438.3	D4	mmichel
2012011393	C	Aroclor 1016	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.1	547.875	D4	mmichel
2012011393	C	Aroclor 1221	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.09	1095.75	D4	mmichel
2012011393	C	Aroclor 1232	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.16	1095.75	D4	mmichel
2012011393	C	Aroclor 1242	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.1	1095.75	D4	mmichel
2012011393	C	Aroclor 1248	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.16	1095.75	D4	mmichel
2012011393	C	Aroclor 1254	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.07	1095.75	D4	mmichel
2012011393	C	Aroclor 1260	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.25	1095.75	D4	mmichel
2012011393	C	beta-BHC	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.1	438.3	D4	mmichel
2012011393	C	Chlordane, Technical	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.7	4383	D4	mmichel
2012011393	C	delta-BHC	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.08	438.3	D4	mmichel
2012011393	C	Dieldrin	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.07	438.3	D4	mmichel
2012011393	C	Endosulfan I	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.05	219.15	D4	mmichel
2012011393	C	Endosulfan II	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.03	219.15	D4	mmichel
2012011393	C	Endosulfan sulfate	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.05	219.15	D4	mmichel
2012011393	C	Endrin	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.1	438.3	D4, N1, L3	mmichel
2012011393	C	Endrin aldehyde	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.07	438.3	D4	mmichel
2012011393	C	gamma-BHC (Lindane)	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.09	438.3	D4, N1	mmichel
2012011393	C	Heptachlor	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.1	438.3	D4, N1	mmichel
2012011393	C	Heptachlor epoxide	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	0.11	2191.5	D4, N1	mmichel
2012011393	C	Polychlorinated biphenyls, Total	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg		1095.75	D4	mmichel
2012011393	C	Toxaphene	1/26/12 10:40	EPA 625	02/15/12 15:18	ND	ug/kg	5.08	35064	D4	mmichel
2012011393	C	Methoxychlor	1/26/12 10:40	EPA 8270C	02/15/12 15:18	ND	ug/kg	0.06	438.3	N1, D4	mmichel
2012011393	C	1,2,4-Trichlorobenzene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00106	5.26	D1, D4	smitchell
2012011393	C	1,2-Diphenylhydrazine	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00123	5.26	D1, D4	smitchell
2012011393	C	2,3-Dichloroaniline	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00104	5.26	D1, D4	smitchell
2012011393	C	2,4,6-Trichlorophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.0012	5.26	D1, D4	smitchell
2012011393	C	2,4-Dichlorophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00116	5.26	D1, D4	smitchell
2012011393	C	2,4-Dimethylphenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00289	5.26	D1, D4	smitchell
2012011393	C	2,4-Dinitrophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00943	15.78	D1, D4, N1	smitchell
2012011393	C	2,4-Dinitrotoluene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.0012	5.26	D1, D4	smitchell
2012011393	C	2,6-Dinitrotoluene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00194	5.26	D1, D4	smitchell
2012011393	C	2-Chloronaphthalene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00113	15.78	D1, D4	smitchell
2012011393	C	2-Chlorophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00151	5.26	D1, D4	smitchell
2012011393	C	2-Methylphenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00152	5.26	D1, D4	smitchell
2012011393	C	2-Nitrophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00218	5.26	D1, D4	smitchell
2012011393	C	3,3-Dichlorobenzidine	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00223	26.3	D1, D4, N1	smitchell

Lab Comments:

Data on this report was last modified on: 5/24/2012 08:32:46

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012011393	C	4,6-Dinitro-2-methylphenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00373	5.26	D1, D4	smitchell
2012011393	C	4-Bromophenyl phenyl ether	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00145	15.78	D1, D4	smitchell
2012011393	C	4-Chloro-3-methylphenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00142	5.26	D1, D4	smitchell
2012011393	C	4-Chlorophenyl phenyl ether	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.000115	5.26	D1, D4	smitchell
2012011393	C	4-Methylphenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00294	5.26	D1, D4, N1	smitchell
2012011393	C	4-Nitrophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00495	26.3	D1, D4	smitchell
2012011393	C	Acenaphthene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00117	5.26	D1, D4	smitchell
2012011393	C	Acenaphthylene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00084	15.78	D1, D4	smitchell
2012011393	C	Anthracene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00109	5.26	D1, D4	smitchell
2012011393	C	Benzo(a)anthracene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00144	5.26	D1, D4	smitchell
2012011393	C	Benzidine	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.02486	39.45	D1, D4, N1	smitchell
2012011393	C	Benzo(a)pyrene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00155	5.26	D1, D4	smitchell
2012011393	C	Benzo(b)fluoranthene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00157	5.26	D1, D4	smitchell
2012011393	C	Benzo(g,h,i)perylene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00178	5.26	D1, D4	smitchell
2012011393	C	Benzo(k)fluoranthene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00228	5.26	D1, D4	smitchell
2012011393	C	Bis(2-Chloroisopropyl)ether	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00114	5.26	D1, D4	smitchell
2012011393	C	Bis(2-chloroethoxy)methane	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00106	5.26	D1, D4	smitchell
2012011393	C	Bis(2-chloroethyl)ether	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00099	5.26	D1, D4	smitchell
2012011393	C	Bis(2-ethylhexyl) phthalate	1/26/12 10:40	EPA 625	03/07/12 17:22	21.27	mg/Kg	0.00267	5.26	D1, D4	smitchell
2012011393	C	Butylbenzyl phthalate	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00153	5.26	D1, D4	smitchell
2012011393	C	Carbazole	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00127	5.26	D1, D4	smitchell
2012011393	C	Chrysene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00147	5.26	D1, D4	smitchell
2012011393	C	Dibenz(a,h)anthracene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00187	5.26	D1, D4	smitchell
2012011393	C	Diethyl phthalate	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00105	5.26	D1, D4	smitchell
2012011393	C	Dimethylphthalate	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00072	5.26	D1, D4	smitchell
2012011393	C	Di-n-butyl phthalate	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00167	15.78	D1, D4	smitchell
2012011393	C	Di-n-octylphthalate	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00183	5.26	D1, D4	smitchell
2012011393	C	Fluoranthene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00145	5.26	D1, D4	smitchell
2012011393	C	Fluorene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00128	5.26	D1, D4	smitchell
2012011393	C	Hexachlorobenzene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.0008	15.78	D1, D4	smitchell
2012011393	C	Hexachlorobutadiene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00119	15.78	D1, D4	smitchell
2012011393	C	Hexachloroethane	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00121	5.26	D1, D4	smitchell
2012011393	C	Hexachlorocyclopentadiene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00259	5.26	D1, D4, N1	smitchell
2012011393	C	Indeno(1,2,3-cd)pyrene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00225	5.26	D1, D4	smitchell
2012011393	C	Isophorone	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00135	5.26	D1, D4	smitchell
2012011393	C	Naphthalene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00126	5.26	D1, D4	smitchell
2012011393	C	n-Decane	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00166	5.26	D1, D4	smitchell
2012011393	C	Nitrobenzene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00286	5.26	D1, D4	smitchell
2012011393	C	N-Nitroso-di-n-propylamine	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00113	5.26	D1, D4	smitchell
2012011393	C	N-Nitrosodimethylamine	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00423	5.26	D1, D4	smitchell
2012011393	C	N-Nitrosodiphenylamine	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00183	5.26	D1, D4	smitchell
2012011393	C	n-Octadecane	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00166	5.26	D1, D4	smitchell
2012011393	C	Pentachlorophenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.0032	5.26	D1, D4	smitchell

Lab Comments:

Data on this report was last modified on: 5/24/2012 08:32:46

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Roger Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2012011393	C	Phenanthrene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00115	5.26	D1, D4	smitchell
2012011393	C	Phenol	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.0023	5.26	D1, D4	smitchell
2012011393	C	Pyrene	1/26/12 10:40	EPA 625	03/07/12 17:22	ND	mg/Kg	0.00129	5.26	D1, D4	smitchell
See Attached -Semi-Quantitation Sheet for EPA 625											
Final Effluent - Trough (20923-7003)											
2012010509	D	Miscellaneous Note	1/10/12 9:50	None		Subcontracted					Other
2012010509	D	Chromium	1/10/12 9:50	EPA 200.8	01/12/12 16:35	Trace	ug/l	0.23	1.0		jbarajas
2012010509	D	Chromium, Hexavalent	1/10/12 9:50	SM 3500 CR-D		NA	ug/l	0.6	2		jbarajas
Total chromium below action level.											
2012010509	D	Sulfide	1/10/12 9:50	HACH 8131	01/13/12 13:31	0.029	mg/l	0.004	0.005		manderson
2012010509	D	Oil & Grease	1/10/12 9:50	EPA 1664A	01/12/12 14:18	Trace	mg/l	0.829	4.00		evega
2012011178	C	Miscellaneous Note	1/23/12 8:00	None		Subcontracted					Other
2012011179	D	Conductivity (Field)	1/23/12 9:40	SM 2510B	01/23/12 9:40	1355	umhos/cm		72.0		Jason Grodman
2012011179	D	Miscellaneous Note	1/23/12 9:40	None		Subcontracted					Other
2012011179	D	Barium	1/23/12 9:40	EPA 200.8	02/01/12 16:53	69.93	ug/l	0.24	1.0		jbarajas
2012011179	D	Manganese	1/23/12 9:40	EPA 200.8	02/01/12 16:53	14.98	ug/l	0.21	1.0		jbarajas
2012011179	D	Antimony	1/23/12 9:40	EPA 200.8	02/01/12 16:53	ND	ug/l	0.26	1.0		jbarajas
2012011179	D	Arsenic	1/23/12 9:40	EPA 200.8	02/01/12 16:53	3.47	ug/l	0.29	1.0		jbarajas
2012011179	D	Beryllium	1/23/12 9:40	EPA 200.8	02/01/12 16:53	ND	ug/l	0.20	1.0		jbarajas
2012011179	D	Cadmium	1/23/12 9:40	EPA 200.8	02/01/12 16:53	ND	ug/l	0.22	1.0		jbarajas
2012011179	D	Chromium	1/23/12 9:40	EPA 200.8	02/01/12 16:53	Trace	ug/l	0.24	1.0		jbarajas
2012011179	D	Copper	1/23/12 9:40	EPA 200.8	02/01/12 16:53	12.42	ug/l	0.26	1.0		jbarajas
2012011179	D	Lead	1/23/12 9:40	EPA 200.8	02/01/12 16:53	Trace	ug/l	0.07	1.0		jbarajas
2012011179	D	Nickel	1/23/12 9:40	EPA 200.8	02/01/12 16:53	8.20	ug/l	0.26	1.0		jbarajas
2012011179	D	Selenium	1/23/12 9:40	EPA 200.8	02/01/12 16:53	Trace	ug/l	0.42	1.0		jbarajas
2012011179	D	Silver	1/23/12 9:40	EPA 200.8	02/01/12 16:53	ND	ug/l	0.06	1.0		jbarajas
2012011179	D	Thallium	1/23/12 9:40	EPA 200.8	02/01/12 16:53	ND	ug/l	0.19	1.0		jbarajas
2012011179	D	Zinc	1/23/12 9:40	EPA 200.8	02/01/12 16:53	33.75	ug/l	0.46	1.0	D1	jbarajas
2012011179	D	Alkalinity, Total	1/23/12 9:40	SM 2320B	01/25/12 9:45	242	mg/l		20		jdoranski
2012011179	D	Alkalinity, Bicarbonate	1/23/12 9:40	SM 2320B	01/25/12 9:45	242	mg/l		20		jdoranski
2012011179	D	Alkalinity, Carbonate	1/23/12 9:40	SM 2320B	01/25/12 9:45	ND	mg/l		20		jdoranski
2012011179	D	Solids, Total Dissolved	1/23/12 9:40	SM 2540C	01/24/12 15:55	728	mg/l		10		jhernandez
2012011179	D	1,2,4-Trichlorobenzene	1/23/12 9:40	EPA 625	02/17/12 15:53	ND	ug/l	1.06	2	N1	smitchell

Lab Comments:

Data on this report was last modified on: 5/24/2012 08:32:46

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 02/07/2013
Laboratory License: AZO159

Sample Analysis Report

Roger Road WRF

July 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

02/15/13
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Dat Quaffiers	Analyst
1207129-01	C	Dibenzo(a,h)anthracene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.87	4.00		SJM
1207129-01	C	Diethyl phthalate	07/13/12 6:00	EPA 625	8/7/12 15:20	**6.06**	ug/L	1.05	4.00		SJM
1207129-01	C	Dimethyl phthalate	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	0.72	4.00		SJM
1207129-01	C	Di-n-butyl phthalate	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.67	4.00	B1	SJM
1207129-01	C	Di-n-octyl phthalate	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.83	4.00		SJM
1207129-01	C	Fluoranthene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.45	4.00		SJM
1207129-01	C	Fluorene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.28	4.00		SJM
1207129-01	C	Hexachlorobenzene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	0.80	4.00		SJM
1207129-01	C	Hexachlorobutadiene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.19	4.00		SJM
1207129-01	C	Hexachlorocyclopentadiene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	2.59	12.00		SJM
1207129-01	C	Hexachloroethane	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.21	4.00		SJM
1207129-01	C	Indeno(1,2,3-cd)pyrene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	2.25	12.00		SJM
1207129-01	C	Isophorone	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.35	4.00		SJM
1207129-01	C	Naphthalene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.26	4.00		SJM
1207129-01	C	n-Decane	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.66	4.00		SJM
1207129-01	C	Nitrobenzene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	2.86	12.00		SJM
1207129-01	C	N-Nitrosodimethylamine	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	4.23	12.00		SJM
1207129-01	C	N-Nitroso-di-n-propylamine	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.13	4.00		SJM
1207129-01	C	N-Nitrosodiphenylamine	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.83	4.00		SJM
1207129-01	C	n-Octadecane	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.66	4.00		SJM
1207129-01	C	Pentachlorophenol	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	3.20	12.00		SJM
1207129-01	C	Phenanthrene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.15	4.00		SJM
1207129-01	C	Phenol	07/13/12 6:00	EPA 625	8/7/12 15:20	**10.4**	ug/L	2.30	12.00		SJM
1207129-01	C	Pyrene	07/13/12 6:00	EPA 625	8/7/12 15:20	**ND**	ug/L	1.29	4.00		SJM
1207129-01	C	1,2-Diphenylhydrazine	07/13/12 6:00	EPA 8270C	8/7/12 15:20	**ND**	ug/L	1.23	4.00		SJM

Digested Sludge to Regional Biosolids Facility (20923-4500)

1207115-01	D	Acrolein	07/12/12 8:35	EPA 624	7/23/12 17:17	**ND**	mg/kg dry	0.00111	10.00		dlc
1207115-01	D	Acrylonitrile	07/12/12 8:35	EPA 624	7/23/12 17:17	**ND**	mg/kg dry	0.00116	10.00		dlc
1207115-01	D	Antimony	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**ND**	mg/kg dry	2.81	11.43		MLB
1207115-01	D	Arsenic	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**12.4**	mg/kg dry	4.38	11.43		MLB
1207115-01	D	Beryllium	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**0.182**	mg/kg dry	0.0232	2.29	J	MLB
1207115-01	D	Cadmium	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**3.09**	mg/kg dry	0.197	4.57	J	MLB
1207115-01	D	Chromium	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**29.7**	mg/kg dry	0.351	11.43		MLB
1207115-01	D	Copper	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**423**	mg/kg dry	0.634	11.43		MLB
1207115-01	D	Cyanide	07/12/12 8:35	SW 9010C/90147/24/12 18:25		**ND**	mg/kg dry		0.40		TS *

* Analysis Performed by:TestAmerica Phoenix - See attached contract lab report for official results.

1207115-01	D	Lead	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**20.4**	mg/kg dry	4.04	11.43		MLB
1207115-01	D	Mercury	07/12/12 8:35	EPA 7471A	7/26/12 13:43	**1.72**	mg/kg dry	0.146	0.28	M5	DDO
1207115-01	D	Molybdenum	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**18.1**	mg/kg dry	0.561	4.57		MLB
1207115-01	D	Nickel	07/12/12 8:35	EPA 6010B	8/1/12 15:42	**19.3**	mg/kg dry	2.60	11.43		MLB
1207115-01	D	4,4-DDD	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00005	0.000746	D4	mamz
1207115-01	D	4,4-DDE	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00005	0.000298	D4	mamz
1207115-01	D	4,4-DDT	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00004	0.000149	D4	mamz
1207115-01	D	Aldrin	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00008	0.000298	D4	mamz
1207115-01	D	alpha-BHC	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00008	0.000298	D4	mamz
1207115-01	D	beta-BHC	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00008	0.000298	D4	mamz
1207115-01	D	Chlordane	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00070	0.002983	D4	mamz
1207115-01	D	delta-BHC	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00007	0.000298	D4	mamz
1207115-01	D	Dieldrin	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00005	0.000298	D4	mamz
1207115-01	D	Endosulfan I	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00007	0.000298	D4	mamz
1207115-01	D	Endosulfan II	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00003	0.000746	D4, N1	mamz
1207115-01	D	Endosulfan sulfate	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00006	0.000746	D4, N1	mamz
1207115-01	D	Endrin	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00008	0.000298	D4	mamz
1207115-01	D	Endrin aldehyde	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00006	0.000298	D4	mamz
1207115-01	D	gamma-BHC (Lindane)	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00009	0.000298	D4	mamz

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Dat Qualifiers	Analyst
1207115-01	D	Heptachlor	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00008	0.000298	D4	mamz
1207115-01	D	Heptachlor Epoxide	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00009	0.000746	D4	mamz
1207115-01	D	PCB 1016	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00010	0.000895	D4	mamz
1207115-01	D	PCB 1221	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00009	0.000895	D4	mamz
1207115-01	D	PCB 1232	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00016	0.000895	D4	mamz
1207115-01	D	PCB 1242	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00010	0.000895	D4	mamz
1207115-01	D	PCB 1248	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00016	0.000895	D4	mamz
1207115-01	D	PCB 1254	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00007	0.000895	D4	mamz
1207115-01	D	PCB 1260	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00025	0.000895	D4	mamz
1207115-01	D	Toxaphene	07/12/12 8:35	EPA 625	8/3/12 22:56	**ND**	mg/kg dry	0.00508	0.02	D4	mamz
1207115-01	D	Methoxychlor	07/12/12 8:35	EPA 8270C	8/3/12 22:56	**ND**	mg/kg dry	0.00006	0.30		mamz
1207115-01	D	1,1,1-Trichloroethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00005	0.000553		dlc
1207115-01	D	1,1,2,2-Tetrachloroethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00009	0.000553	N1	dlc
1207115-01	D	1,1,2-Trichloroethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	1,1-Dichloroethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00006	0.000553		dlc
1207115-01	D	1,1-Dichloroethene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00007	0.000553		dlc
1207115-01	D	1,2-Dichlorobenzene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0002	0.000553		dlc
1207115-01	D	1,2-Dichloroethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553	N1	dlc
1207115-01	D	1,2-Dichloropropane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553	N1	dlc
1207115-01	D	1,3-Dichlorobenzene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	1,4-Dichlorobenzene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0002	0.000553	N1	dlc
1207115-01	D	2-Chloroethyl vinyl ether	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0002	0.000553		dlc
1207115-01	D	Benzene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553	N1	dlc
1207115-01	D	Bromodichloromethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0002	0.000553	N1	dlc
1207115-01	D	Bromoform	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00008	0.000553		dlc
1207115-01	D	Bromomethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00009	0.000553		dlc
1207115-01	D	Carbon Tetrachloride	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00006	0.000553		dlc
1207115-01	D	Chlorobenzene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Chloroethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0002	0.000553		dlc
1207115-01	D	Chloroform	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Chloromethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00008	0.000553		dlc
1207115-01	D	cis-1,3-Dichloropropene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Dibromochloromethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Ethyl Benzene	07/12/12 8:35	EPA 624	7/25/12 15:33	**0.176**	mg/kg dry	0.00008	0.000550		dlc
1207115-01	D	Methylene Chloride	07/12/12 8:35	EPA 624	7/25/12 15:33	**1.423**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Tetrachloroethene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00006	0.000553		dlc
1207115-01	D	Toluene	07/12/12 8:35	EPA 624	7/25/12 15:33	**0.210**	mg/kg dry	0.00008	0.000553	N1	dlc
1207115-01	D	Total Trihalomethanes	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.090	0.55		dlc
1207115-01	D	trans-1,2-Dichloroethene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00009	0.000553		dlc
1207115-01	D	trans-1,3-Dichloropropene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Trichloroethene	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00009	0.000553		dlc
1207115-01	D	Trichlorofluoromethane	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00005	0.000553		dlc
1207115-01	D	Vinyl chloride	07/12/12 8:35	EPA 624	7/25/12 15:33	**ND**	mg/kg dry	0.00005	0.000553		dlc
1207115-01	D	1,2,4-Trichlorobenzene	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0003	0.000553		dlc
1207115-01	D	1,2-Dibromo-3-chloropropane	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0002	0.001105	N1	dlc
1207115-01	D	1,2-Dibromoethane	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	cis-1,2-Dichloroethene	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	m,p-Xylenes	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.001105		dlc
1207115-01	D	o-Xylene	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.00007	0.000553		dlc
1207115-01	D	Styrene	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.000553		dlc
1207115-01	D	Xylenes, total	07/12/12 8:35	EPA 8260	7/25/12 15:33	**ND**	mg/kg dry	0.0001	0.001105		dlc
1207115-01	D	Selenium	07/12/12 8:35	EPA 6010B	8/1/12 15:42	**9.83**	mg/kg dry	4.63	11.43	J	MLB
1207115-01	D	1,2,4-Trichlorobenzene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	1,2-Diphenylhydrazine	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	2,3-Dichloroaniline	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	2,4,6-Trichlorophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Dat Qualifiers	Analyst
1207115-01	D	2,4-Dichlorophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	2,4-Dimethylphenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.003	13.26		SJM
1207115-01	D	2,4-Dinitrophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.009	22.10		SJM
1207115-01	D	2,4-Dinitrotoluene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	2,6-Dinitrotoluene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	2-Chloronaphthalene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	2-Chlorophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	2-Methyl-4,6-dinitrophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.004	13.26		SJM
1207115-01	D	2-Methylphenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	2-Nitrophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	13.26		SJM
1207115-01	D	3,3-Dichlorobenzidine	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	22.10		SJM
1207115-01	D	4-Bromophenyl phenyl ether	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	4-Chloro-3-methylphenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	4-Chlorophenyl phenyl ether	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	4-Methylphenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.003	13.26		SJM
1207115-01	D	4-Nitrophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.005	13.26		SJM
1207115-01	D	Acenaphthene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Acenaphthylene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.0008	4.42		SJM
1207115-01	D	Anthracene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Benzidine	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.02	77.35		SJM
1207115-01	D	Benzo[a]anthracene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Benzo[a]pyrene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Benzo[b]fluoranthene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Benzo[ghi]perylene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Benzo[k]fluoranthene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	13.26		SJM
1207115-01	D	bis(2-chloroethoxy)methane	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	bis(2-chloroethyl)ether	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	bis(2-chloroisopropyl)ether	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	bis(2-ethylhexyl)phthalate	07/12/12 8:35	EPA 625	8/7/12 14:44	**24.47**	mg/kg dry	0.003	13.26		SJM
1207115-01	D	Butylbenzylphthalate	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Carbazole	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Chrysene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Dibenzo(a,h)anthracene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Diethyl phthalate	07/12/12 8:35	EPA 625	8/7/12 14:44	**2.74**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Dimethyl phthalate	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.0007	4.42		SJM
1207115-01	D	Di-n-butyl phthalate	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Di-n-octyl phthalate	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Fluoranthene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Fluorene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Hexachlorobenzene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.0008	4.42		SJM
1207115-01	D	Hexachlorobutadiene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Hexachlorocyclopentadiene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.003	13.26		SJM
1207115-01	D	Hexachloroethane	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Indeno(1,2,3-cd)pyrene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	13.26		SJM
1207115-01	D	Isophorone	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Naphthalene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	n-Decane	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Nitrobenzene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.003	13.26		SJM
1207115-01	D	N-Nitrosodimethylamine	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.004	13.26		SJM
1207115-01	D	N-Nitroso-di-n-propylamine	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	N-Nitrosodiphenylamine	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	n-Octadecane	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	4.42		SJM
1207115-01	D	Pentachlorophenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.003	13.26		SJM
1207115-01	D	Phenanthrene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM
1207115-01	D	Phenol	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.002	13.26		SJM
1207115-01	D	Pyrene	07/12/12 8:35	EPA 625	8/7/12 14:44	**ND**	mg/kg dry	0.001	4.42		SJM

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Dat Qualifiers	Analyst
1207115-01	D	1,2-Diphenylhydrazine	07/12/12 8:35	EPA 8270C	8/7/12 14:44	**ND**	mg/kg dry	0.07	243.78		SJM
1207115-01	D	Silver	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**4.51**	mg/kg dry	0.380	1.14		MLB
1207115-01	D	% Solids	07/12/12 8:35	SM 2540G	7/13/12 15:23	**1.81**	%		0.01		SN
1207115-01	D	Thallium	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**ND**	mg/kg dry	6.51	11.43		MLB
1207115-01	D	Zinc	07/12/12 8:35	EPA 6010B	8/1/12 13:05	**1020**	mg/kg dry	1.27	11.43		MLB

Final Effluent Trough (20923-7003)

CL Ceriodaphnia dubia Reproduction

1207081-01	C	LOEC % Effluent	07/09/12 9:00	EPA 1002	7/17/12 10:35	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	NOEC % Effluent	07/09/12 9:00	EPA 1002	7/17/12 10:35	**100**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (IC25 Based)	07/09/12 9:00	EPA 1002	7/17/12 10:35	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (NOEC Based)	07/09/12 9:00	EPA 1002	7/17/12 10:35	**1.0**	N/A	1.0	1.0		OTHER *

* Analysis Performed by:Bio-Aquatic Testing, Inc. - See attached contract lab report for official results.

CL Ceriodaphnia dubia Survival

1207081-01	C	LOEC % Effluent	07/09/12 9:00	EPA 1002	7/17/12 10:35	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	NOEC % Effluent	07/09/12 9:00	EPA 1002	7/17/12 10:35	**100**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (NOEC Based)	07/09/12 9:00	EPA 1002	7/17/12 10:35	**1.0**	N/A	1.0	1.0		OTHER *

* Analysis Performed by:Bio-Aquatic Testing, Inc. - See attached contract lab report for official results.

CL Pimephales promelas Growth

1207081-01	C	LOEC % Effluent	07/09/12 9:00	EPA 1000	7/17/12 14:50	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	NOEC % Effluent	07/09/12 9:00	EPA 1000	7/17/12 14:50	**100**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (IC25 Based)	07/09/12 9:00	EPA 1000	7/17/12 14:50	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (NOEC Based)	07/09/12 9:00	EPA 1000	7/17/12 14:50	**1.0**	N/A	1.0	1.0		OTHER *

* Analysis Performed by:Bio-Aquatic Testing, Inc. - See attached contract lab report for official results.

CL Pimephales promelas Survival

1207081-01	C	LOEC % Effluent	07/09/12 9:00	EPA 1000	7/17/12 14:50	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	NOEC % Effluent	07/09/12 9:00	EPA 1000	7/17/12 14:50	**100**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (IC25 Based)	07/09/12 9:00	EPA 1000	7/17/12 14:50	**NA**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (NOEC Based)	07/09/12 9:00	EPA 1000	7/17/12 14:50	**1.0**	N/A	1.0	1.0		OTHER *

* Analysis Performed by:Bio-Aquatic Testing, Inc. - See attached contract lab report for official results.

CL Selenastrum capricornutum

1207081-01	C	LOEC % Effluent	07/09/12 9:00	EPA 1003	7/14/12 13:10	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	NOEC % Effluent	07/09/12 9:00	EPA 1003	7/14/12 13:10	**100**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (IC25 Based)	07/09/12 9:00	EPA 1003	7/14/12 13:10	**NC**	N/A	1.0	1.0		OTHER *
1207081-01	C	TUc (NOEC Based)	07/09/12 9:00	EPA 1003	7/14/12 13:10	**1.0**	N/A	1.0	1.0		OTHER *

* Analysis Performed by:Bio-Aquatic Testing, Inc. - See attached contract lab report for official results.

1207091-01	D	Alkalinity Total	07/10/12 9:30	SM 2320B	7/11/12 12:25	**247**	mg/L	2.0	20.00		AFNE
1207091-01	D	Antimony	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**0.39**	ug/L	0.17	1.00	J	JB
1207091-01	D	Arsenic	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**4.88**	ug/L	0.13	1.00		JB
1207091-01	D	Barium	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**61.1**	ug/L	0.26	1.00		JB
1207091-01	D	Beryllium	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**ND**	ug/L	0.22	1.00		JB
1207091-01	D	Bicarbonate Alkalinity	07/10/12 9:30	SM 2320B	7/11/12 12:25	**247**	mg/L	2.0	20.00		AFNE
1207091-01	D	Cadmium	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**ND**	ug/L	0.41	1.00		JB
1207091-01	D	Calcium	07/10/12 9:30	EPA 200.7	7/25/12 10:36	**68.4**	mg/L	0.04	20.00		MLB
1207091-01	D	Carbonate Alkalinity	07/10/12 9:30	SM 2320B	7/11/12 12:25	**ND**	mg/L	2.0	20.00		AFNE
1207091-01	D	Chloride	07/10/12 9:30	SM4500-Cl-E	7/26/12 12:31	**162**	mg/L	0.68	4.00	B4	MGA
1207091-01	D	Chromium	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**0.68**	ug/L	0.40	1.00	J	JB
1207091-01	D	Copper	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**4.22**	ug/L	0.66	1.00		JB
1207091-01	D	Cyanide Amenable	07/10/12 9:30	SM 4500-CN-G	7/13/12 14:07	**ND**	ug/L	1.00	5.00		MGA
1207091-01	D	Cyanide, Total	07/10/12 9:30	SM 4500CN-E	7/21/12 14:30	**1.9**	ug/l	1.7	8.0	Ja	TS *

* Analysis Performed by:TestAmerica Phoenix - See attached contract lab report for official results.

1207091-01	D	Specific Conductance	07/10/12 9:30	SM 2510B	7/10/12 9:30	**1415**	uS/cm		1.00		SMPLR
1207091-01	D	Fluoride	07/10/12 9:30	SM4500-F-C	7/22/12 11:11	**0.572**	mg/L	0.009	0.02		KKH
1207091-01	D	Hardness	07/10/12 9:30	SM 2340B	7/25/12 10:36	**224**	mg/L	0.10	49.90		MLB
1207091-01	D	Iron	07/10/12 9:30	EPA 200.7	7/20/12 13:06	**115**	ug/L	3.39	25.00		MLB
1207091-01	D	Lead	07/10/12 9:30	EPA 200.8	8/13/12 15:28	**0.15**	ug/L	0.11	1.00	J	JB

Qualifier Definitions

J	[Undefined]
A	Absent
B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at or above method acceptance criteria.
D1	Sample required dilution due to matrix.
D4	Minimum Reporting Limit (MRL) adjusted to reflect sample amount received and analyzed.
E8	Analyte reported to the MDL per project specification. Target analyte was not detected in the sample
J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.
Ja	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
M5	Analyte concentration was determined by the method of standard addition (MSA).
N1	See case narrative.
N7	Additional analysis was not performed based on the "Total" result which was below the requested analyte's MCL/Action level/Trigger Level.
NA	Not Analyzed
NC	Not Calculable
Q2	Sample received with head space.
Q6	Sample was received above recommended temperature.
S6	Surrogate recovery was below laboratory and method acceptance limits. Reextraction and/or reanalysis confirms low recovery caused by matrix effect.
S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

1207115-01

This sample was extracted for EPA Method 625 Semi-Volatiles and Pesticides. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

1207115-01

This sample was analyzed for EPA Method 624 Volatiles. Target analytes flagged with N1 failed the Matrix Spike from the same analytical batch but the spike was performed on a different sample.

1207129-02

This sample was extracted for EPA Method 625 Semi-Volatiles and Pesticides. Target analytes flagged with N1 for these methods failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

1207129-01

This sample was extracted for EPA Method 625 Semi-Volatiles and Pesticides. Target analytes flagged with N1for these methods failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

1207129-02

This sample was extracted for EPA Method 624 Purgeable Volatiles. Target analytes flagged with N1 failed the Matrix Spike from the same analytical batch but the spike was performed on a different sample.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson, AZ 85745

Project/PO Number: Sample For DO#13-2220 Cyanide, Hg

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	Amenable Cyanide	Total Cyanide mg/Kg	Total Solids						Special Instructions
Roger Rd Dig. Sldg	Sldg	HDPE ~~HPDE~~	1	7-12-12	0835	none	X									
20923-4500 1207115-01		B 7-19-12			7-19-12											discrete
Green Valley ~~Dish~~ Discharge B 7-19-12 25000-1921	WW	HDPE	1	7-12-12	0553 ~~0533~~	NaOH	X	X								
from BNRCD 1207117-07																discrete
Green Valley Eff APP	WW	HDPE	1	7-12-12	0530	NaOH	X	X								
25000-0960 1207117-08	B 7-19-12 W	H														discrete
PDEQ SW Site # 1	W	HDPE	1	7-15-12	1811 ~~1806~~	NaOH	X									
00051-0101 1207146-01		P B 7-19-12														discrete
PDEQ SW Site 4	W	HDPE	1	7-15-12	1850	NaOH	X									
00051-0103 1207148-01 ~~127~~ B 7-19-12																discrete
Ina Rd Digester BioSolids TAP 20001-500 1207213-01	Sldg	HDPE	2	7-19-12	0910	none			X	X						report in mg/Kg
1207213-01																discrete
Ina Rd Y-ly Pour-Off Final Eff #2	W	HDPE	1	7-18-12	0600	NaOH	X	X								
20001-7020 1207192-05																composite

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	07-19-12 1458		7/19/12 1458	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1207115-01

SITE & LOCATION: Roger Road WWTP -Digester Sludge to Regional Biosolids Facility

SITE-LOCATION NUMBER: 20923-4500 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLE END DATE: 07/12/12 (MM / DD / YYYY)

SAMPLE END TIME: 0835 (24 Hour Clock)

SAMPLER: Morales, Dreyfuss (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	■	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	■	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total contract	■	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	■	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	■	☐
Purgeable Organics (GCMS)	■	☐
Semivolatile Organics (GCMS)	■	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Cyanide sent to TA DO 13-2220 PO 7-9-12

# of Bottles Delivered: 7 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 7-05-12 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
R. [signature]	[signature]	07-12-12	0915
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	[signature]	7/9/12	14:38
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	18	°C
Initials:	GOS	
Non-Preserved	7	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☒	☐	☐
Received from a refrigerator?	☐	☒	☐

* *Sb. As. Be. Cd. Cr. Cu. Pb. Ni. Se. Ag. Tl. Zn. Mercury(Cold Vapor)*
** *As. Cd. Cr. Cu. Pb. Mercury. Mo. Ni. Se. Zn*

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson, AZ 85745

Project/PO Number: Sample For DO#13-2220 Cyanide, Hg

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	Amenable Cyanide	Total Cyanide mg/kg	Total Solids						Special Instructions
Roger Rd Dig. Sldg	Sldg	HDPE ~~HPDE~~	1	7-12-12	0835	none	X									
20923-4500 1207115-01		B 7-19-12			7-19-12 B											discrete
Green Valley ~~Dish~~ Discharge B 7-19-12	WW	HDPE	1	7-12-12	0553 ~~0533~~	NaOH	X	X								
from BNROD 25000-1921 1207117-07																discrete
Green Valley Eff APP	WW	HDPE	1	7-12-12	0530	NaOH	X	X								
25000-0960 1207117-05	~~W~~	~~H~~ B 7-19-12			1811 B 7-19-12											discrete
PDEQ SW Site # 1	W	HDPE	1	7-15-12	~~1806~~	NaOH	X									
00051-0101 1207146-01		P B 7-19-12														discrete
PDEQ SW Site 4	W	HDPE	1	7-15-12	1850	NaOH	X									
00051-0103 1207148-01 ~~1277~~ B 7-19-12																discrete
Ina Rd Digester BioSolids TAP 20001-500 1207213-01	Sldg	HDPE	2	7-19-12	0910	none			X	X						report in mg/Kg
1207213-01																discrete
Ina Rd Y-ly Pour-Off Final Eff #2	W	HDPE	1	7-18-12	0600	NaOH	X	X								
20001-7020 1207192-05																composite

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	07-19-12 1458		7/19/12 1458	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

BIO-AQUATIC TESTING, INC.
2501 MAYES RD., STE. 100
CARROLLTON, TX 75006
PH: 972-242-7750 FAX: 972-242-7749

CHAIN OF CUSTODY

Lab Id

Please Fill Out C-O-C by Completing Sections A, B, & C. P.O. No:

CAAO Client: PIMA COUNTY RWRD 3035 W EL CAMINO DEL CERRO TUCSON, AZ, 85745

Facility: ROGER ROAD

Permit No: AZ0020923

Outfall: 001

Client Contact: ROBSPEIR / NANCY POWELL
520-724-6256 724-6183 Fax
Client Phone: 724-6016 724-6071

A.1 Check Sample No.: ____ First, ____ Second, or ✓ Third.

Check the type of test(s) required, if different from the Scheduled Test(s) in "A":

C. dubia (water flea)	D. pulex (water flea)	D. magna (water flea)	P. promelas (minnow)	M. bahia (shrimp)	M. beryllina (minnow)	S. CAPRICORNUTUM
☒ Chronic	☐ Chronic	☐ Chronic	☒ Chronic	☐ Chronic	☐ Chronic	☒ Chronic
☐ 96 Hour	☐ 96 Hour	☐ 96 Hour	☐ 96 Hour	☐ 96 Hour	☐ 96 Hour	☐ 96 Hour
☐ 48 Hour	☐ 48 Hour	☐ 48 Hour	☐ 48 Hour	☐ 48 Hour	☐ 48 Hour	☐ 48 Hour
☐ 24 Hour	☐ 24 Hour	☐ 24 Hour	☐ 24 Hour	☐ 24 Hour	☐ 24 Hour	☐ 24 Hour

A. SCHEDULED TEST(s):

CHRONIC	C. DUBIA
CHRONIC	P. PROMELAS
CHRONIC	S. CAPRICORNUTUM

Dilution Series:

Include Semi-annual 24hr Acute Test?

To Ship the 1st Sample on: 07/09/12

Notes: ALL GET ZEOLITE TRTMT. Pima LIMS # 1207081-03
Temp prior to shipping 0 °C
pH = 7.84 s.u. d.O = 7.23 mg/L TEMP = 12.7 °C 5 7/13/12 TRC = 0.05 mg/L

B.

Sample ID or Location: (Outfall No. or Name)	Sample Type: E = Effluent, RS = Rec. Stream, S = Sediment	Sample Date From	Sample Date To	Sample Time (military) From	Sample Time (military) To	Grab or Composite	Sampled By: (Sign and Print Name)	Number Of Containers Shipped
1 ROGER ROAD WWTP FINAL EFF TROUGH	E	07/12/2012	07/13/2012	0400	0400	COMP	David M Goodyear	
2 20923-7003								
3								

C.

	Relinquished By:	Date	Time	Received By:	Date	Time
1	David M Goodyear	07/13/2012	0630	[illegible]	7-13-12	0800
2	[illegible]	7-13-12	0858	[illegible]	07-13-12	0858
3	[illegible]	07-13-12	1200	UPS	07-13-12	1200

Bio-Aquatic Sample Login

Method of Shipment:
☐ GRYHND PX ☐ Client Delivered
☐ UPS ☐ Bio-Pick Up
☐ FEDEX ☐ Other

BAT sample personnel: ○ Yes ● No
Check for Ammonia: ○ Yes ○ No
Dechlorinate Sample: ○ Yes ○ No
Dilution Water: ○ Receiving Stream ○ Synthetic Lab

Date: Time: By:
Temperature: (C) Int. Salinity: ppt Adj. Salinity: ppt
Chlorine: mg/l Ammonia: Other:
pH: DO: mg/l Condition:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson, AZ 85745

Project/PO Number: Sample For DO#13-2220 Cyanide, Hg

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	Amenable Cyanide	Total Cyanide mg/Kg	Total Solids					Special Instructions
Roger Rd Dig. Sldg	Sldg	HDPE ~~HPDE~~	1	7-12-12	0835	none	X								
20923-4500 1207115-01		B 7-19-12			7-19-12 B										discrete
Green Valley ~~Dish~~ Discharge B 7-19-12	WW	HDPE	1	7-12-12	0553 ~~0533~~	NaOH	X	X							
from BNROD 25000-1921 1207117-07															discrete
Green Valley Eff APP	WW	HDPE	1	7-12-12	0530	NaOH	X	X							
25000-0960 1207117-08	B 7-19-12 W	H													discrete
PDEQSW Site # 1	W	HDPE	1	7-15-12	1811 B 7-19-12 ~~1806~~	NaOH	X								
00051-0101 1207146-01		P B 7-19-12													discrete
PDEQSW Site 4	W	HDPE	1	7-15-12	1850	NaOH	X								
00051-0103 1207148-01 1277 B 7-19-12															discrete
Ina Rd Digester BioSolids 20001-500 1207213-01	TAP Sldg	HDPE	2	7-19-12	0910	none			X	X					report in mg/Kg
1207213-01															discrete
Ina Rd Y-ly Pour-Off Final Eff #2	W	HDPE	1	7-18-12	0600	NaOH	X	X							
20001-7020 1207192-05															composite

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	07-19-12 1458		7/19/12 1458	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson, AZ 85745

Project/PO Number: Sample For DO#13-2220 Cyanide, Hg

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	Amenable Cyanide	Total Cyanide mg/Kg	Total Solids						Special Instructions
Roger Rd Dig. Sldg	Sldg	HDPE ~~HPDE~~	1	7-12-12	0835	none	X									
20923-4500 1207115-01		B 7-19-12			7-19-12 B											discrete
Green Valley ~~Dist~~ Discharge B 7-19-12	WW	HDPE	1	7-12-12	0533 0553	NaOH	X	X								
from BNRCD 25000-1921 1207117-07																discrete
Green Valley Eff APP	WW	HDPE	1	7-12-12	0530	NaOH	X	X								
25000-0960 1207117-08	W	B 7-19-12 H			1811 B 7-19-12											discrete
PDEQ SW Site # 1	W	HDPE	1	7-15-12	1806	NaOH	X									
00051-0101 1207146-01		P B 7-19-12														discrete
PDEQ SW Site 4	W	HDPE	1	7-15-12	1850	NaOH	X									
00051-0103 1207148-01 1275 B 7-19-12																discrete
Ina Rd Digester BioSolids 20001-500 1207213-01	TAP Sldg	HDPE	2	7-19-12	0910	none			X	X						report in mg/Kg
1207213-01																discrete
Ina Rd Y-ly Pour-Off Final Eff #2	W	HDPE	1	7-18-12	0600	NaOH	X	X								
20001-7020 1207192-05																composite

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	07-19-12 1458		7/19/12 1458	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Samples for Cyanide,Hg

Sampled:07/10/12-07/19/12
Received:07/20/12
Issued:08/08/12 12:53

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVG1427-01	1207197-01	Water
PVG1427-02	Blank for LL Hg	Water
PVG1427-03	1207091-01	Water
PVG1427-04	1207093-02	Water
PVG1427-05	1207099-04	Water
PVG1427-06	1207101-01	Water
PVG1427-07	1207101-02	Water
PVG1427-08	1207108-2	Water
PVG1427-09	1207115-01	Soil
PVG1427-10	1207117-07	Water
PVG1427-11	1207117-08	Water
PVG1427-12	1207146-01	Water
PVG1427-13	1207148-01	Water
PVG1427-14	1207213-01	Soil
PVG1427-15	1207192-05	Water
PVG1427-16	1207196-01	Water
PVG1427-17	1207196-02	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Samples for Cyanide,Hg
Report Number: PVG1427

Sampled: 07/10/12-07/19/12
Received: 07/20/12

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

Cyanide samples are tested for the presence of sulfide in the laboratory within 24 hours of sampling. The sample requiring cyanide was received and tested for sulfide past the 24 hour period. The analysis for cyanide was performed within the prescribed hold time unless otherwise noted.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.

N1a - Sample found to contain Chlorine. The chlorine was treated and removed prior to distillation.
N1c - The sample, as received, was not preserved in accordance to the referenced analytical method.
N1d - The pH of the sample was 11.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

NI - Amenable cyanide results reported from total determination method.
N1b = Samples PVG1427-03 and -04 became cloudy during the coloring process after the chlorination step so the analysis for Free Cyanide had to be performed at a dilution. Amenable Cyanide is calculated by subtracting the Free Cyanide from the Total Cyanide therefore the Amenable Cyanide results are potentially biased high.
N1e - The MS/MSD RPD exceeded acceptance criteria. See LCS/LCSD RPD.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Samples for Cyanide,Hg

Report Number: PVG1427

Sampled: 07/10/12-07/19/12
Received: 07/20/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVG1427-14 (1207213-01 - Soil)					**Sampled: 07/19/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12G0912	N/A	0.10	**1.7**	1	07/24/12	07/24/12	
Sample ID: PVG1427-14 (1207213-01 - Soil)					**Sampled: 07/19/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12G0923	N/A	23	ND	0.982	07/24/12	07/24/12	
Sample ID: PVG1427-09 (1207115-01 - Soil)					**Sampled: 07/12/12**				
Reporting Units: mg/kg wet									
Cyanide	SW 9010C/9014	12G0923	N/A	0.40	ND	0.995	07/24/12	07/24/12	
Sample ID: PVG1427-01 (1207197-01 - Water)					**Sampled: 07/18/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G1204	1.7	8.0	**6.5**	1	07/31/12	07/31/12	M1, E4
Sample ID: PVG1427-03 (1207091-01 - Water)					**Sampled: 07/10/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G0826	1.7	8.0	**1.9**	1	07/21/12	07/21/12	E4
Sample ID: PVG1427-03RE1 (1207091-01 - Water)					**Sampled: 07/10/12**				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12G0864	1.7	8.0	**1.9**	1	07/23/12	07/23/12	N1b, E4
Sample ID: PVG1427-04 (1207093-02 - Water)					**Sampled: 07/10/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G0826	1.7	8.0	**1.9**	1	07/21/12	07/21/12	N1a, N1c, N1d, E4
Sample ID: PVG1427-04RE1 (1207093-02 - Water)					**Sampled: 07/10/12**				**N1d**
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12G0864	1.7	8.0	**1.9**	1	07/23/12	07/23/12	N1a, N1b, N1c, E4
Sample ID: PVG1427-05 (1207099-04 - Water)					**Sampled: 07/11/12**				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12G0864	1.7	8.0	ND	1	07/23/12	07/24/12	N1, E8
Cyanide, Total	SM 4500CN-E	12G0864	1.7	8.0	ND	1	07/23/12	07/23/12	E8
Sample ID: PVG1427-06 (1207101-01 - Water)					**Sampled: 07/11/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G0864	1.7	8.0	**2.4**	1	07/23/12	07/23/12	E4

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Samples for Cyanide,Hg

Report Number: PVG1427

Sampled: 07/10/12-07/19/12
Received: 07/20/12

DATA QUALIFIERS AND DEFINITIONS

E4	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).
E8	Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
N1	See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Samples for Cyanide,Hg

Report Number: PVG1427

Sampled: 07/10/12-07/19/12
Received: 07/20/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
SM 2540G	Soil		X
SM 4500CN-E	Water		X
SM 4500CN-G	Water		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

Subcontracted Laboratories

TestAmerica - Pensacola *Arizona Cert #AZ0710*
3355 McLemore Drive - Pensacola, FL 32514
Method Performed: 1631E Dissolved ug/L
Samples: PVG1427-01, PVG1427-02

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

PVG1427

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson, AZ 85745

Project/PO Number: Sample For DO#13-2220 Cyanide, Hg

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide	Amenable Cyanide	Total Cyanide mg/Kg	Total Solids					Special Instructions
Roger Rd Dig. Sldg	Sldg	HDPE ~~HPDE~~	1	7-12-12	0835	none	X						–	09	
20923-4500 1207115-01		7-19-12			7-19-12										discrete
Green Valley ~~Dish~~ Discharge 25000-1921	WW	HDPE	1	7-12-12	0553 ~~0533~~	NaOH	X	X					–	10	
from BNROD 1207117-07															discrete
Green Valley Eff APP	WW	HDPE	1	7-12-12	0530	NaOH	X	X					–	11	
25000-0960 1207117-08	W	7-19-12 H													discrete
PDEQ SW Site # 1	W	HDPE	1	7-15-12	1811 ~~1805~~	NaOH	X						–	12	
00051-0101 1207146-01		P 7-19-12													discrete
PDEQ SW Site 4	W	HDPE	1	7-15-12	1850	NaOH	X						–	13	
00051-0103 1207148-01 1275		7-19-12													discrete
Ina Rd Digester BioSolids 20001-500 1207213-01	TAP Sldg	HDPE	2	7-19-12	0910	none			X	X			–	14	report in mg/Kg
1207213-01															discrete
Ina Rd Y/ly Pour-Off Final Eff #2	W	HDPE	1	7-18-12	0600	NaOH	X	X					–	15	
20001-7020 1207192-05															composite

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
for samplers	07-19-12 1458		7/19/12 1458	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
	7/19/12 1500			48 hours ____	normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
			7/20/12 9:15	intact X	on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

3.3°C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Samples for Cyanide,Hg

Sampled:07/10/12-07/19/12
Received:07/20/12
Issued:08/08/12 12:53

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVG1427-01	1207197-01	Water
PVG1427-02	Blank for LL Hg	Water
PVG1427-03	1207091-01	Water
PVG1427-04	1207093-02	Water
PVG1427-05	1207099-04	Water
PVG1427-06	1207101-01	Water
PVG1427-07	1207101-02	Water
PVG1427-08	1207108-2	Water
PVG1427-09	1207115-01	Soil
PVG1427-10	1207117-07	Water
PVG1427-11	1207117-08	Water
PVG1427-12	1207146-01	Water
PVG1427-13	1207148-01	Water
PVG1427-14	1207213-01	Soil
PVG1427-15	1207192-05	Water
PVG1427-16	1207196-01	Water
PVG1427-17	1207196-02	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory 3035 W El Camino Del Cerro Tucson, AZ 85745 Attention: Nancy Powell	Project ID: Samples for Cyanide,Hg Report Number: PVG1427	Sampled: 07/10/12-07/19/12 Received: 07/20/12

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

Cyanide samples are tested for the presence of sulfide in the laboratory within 24 hours of sampling. The sample requiring cyanide was received and tested for sulfide past the 24 hour period. The analysis for cyanide was performed within the prescribed hold time unless otherwise noted.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.

N1a - Sample found to contain Chlorine. The chlorine was treated and removed prior to distillation.
N1c - The sample, as received, was not preserved in accordance to the referenced analytical method.
N1d - The pH of the sample was 11.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

N1 - Amenable cyanide results reported from total determination method.
N1b = Samples PVG1427-03 and -04 became cloudy during the coloring process after the chlorination step so the analysis for Free Cyanide had to be performed at a dilution. Amenable Cyanide is calculated by subtracting the Free Cyanide from the Total Cyanide therefore the Amenable Cyanide results are potentially biased high.
N1e - The MS/MSD RPD exceeded acceptance criteria. See LCS/LCSD RPD.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Samples for Cyanide,Hg
Report Number: PVG1427

Sampled: 07/10/12-07/19/12
Received: 07/20/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVG1427-14 (1207213-01 - Soil)					**Sampled: 07/19/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12G0912	N/A	0.10	**1.7**	1	07/24/12	07/24/12	
Sample ID: PVG1427-14 (1207213-01 - Soil)					**Sampled: 07/19/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12G0923	N/A	23	ND	0.982	07/24/12	07/24/12	
Sample ID: PVG1427-09 (1207115-01 - Soil)					**Sampled: 07/12/12**				
Reporting Units: mg/kg wet									
Cyanide	SW 9010C/9014	12G0923	N/A	0.40	ND	0.995	07/24/12	07/24/12	
Sample ID: PVG1427-01 (1207197-01 - Water)					**Sampled: 07/18/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G1204	1.7	8.0	**6.5**	1	07/31/12	07/31/12	M1, E4
Sample ID: PVG1427-03 (1207091-01 - Water)					**Sampled: 07/10/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G0826	1.7	8.0	**1.9**	1	07/21/12	07/21/12	E4
Sample ID: PVG1427-03RE1 (1207091-01 - Water)					**Sampled: 07/10/12**				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12G0864	1.7	8.0	**1.9**	1	07/23/12	07/23/12	N1b, E4
Sample ID: PVG1427-04 (1207093-02 - Water)					**Sampled: 07/10/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G0826	1.7	8.0	1.9	1	07/21/12	07/21/12	N1a, N1c, N1d, E4
Sample ID: PVG1427-04RE1 (1207093-02 - Water)					**Sampled: 07/10/12**				**N1d**
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12G0864	1.7	8.0	1.9	1	07/23/12	07/23/12	N1a, N1b, N1c, E4
Sample ID: PVG1427-05 (1207099-04 - Water)					**Sampled: 07/11/12**				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12G0864	1.7	8.0	ND	1	07/23/12	07/24/12	N1, E8
Cyanide, Total	SM 4500CN-E	12G0864	1.7	8.0	ND	1	07/23/12	07/23/12	E8
Sample ID: PVG1427-06 (1207101-01 - Water)					**Sampled: 07/11/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12G0864	1.7	8.0	**2.4**	1	07/23/12	07/23/12	E4

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

SECTION 6

AVRA VALLEY WRF
AZPDES NO. AZ0024121

SAMPLING AND ANALYSES

PRIORITY POLLUTANTS

TCLP

HAZARDOUSNESS

ANNUAL BIOSOLIDS REPORT 2012

PIMA COUNTY
REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PIMA COUNTY, ARIZONA

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 10/9/2012 12:53:43
Laboratory License #AZ0159

Sample Analysis Report
Avra Valley WRF - Permit Number 25003
April 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **See Attached.**

Notes: All analyses were conducted at the CRAO Laboratory location at 3035 W. El Camino del Cerro, Tucson, AZ 85745.

2012040391 Sample sent to Test America for metals analysis. GOS

2012041132 Sample sent to Test America for metals analysis. GOS

2012041481 Sent to Test America MBAS Surfactants 4-24-12 CH
2012041483 Sent to Test America for MBAS 4-30-12 CH
2012041484 Sent to Test America 4-30-12 CH
2012041485 Sent to Test America for MBAS Surfactant 4-24-12 CH

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

10/10/12
Date

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Effluent Sand Filter Channel (25003-1360)											
IS 2012041697	D	E-Coli	4/27/12 12:03	SM 9223B	04/28/12 14:44	1986.3	MPN/100ml		1		smichaud
Effluent UV Channel #2 Bank A (25003-1361)											
IS 2012041696	D	E-Coli	4/27/12 11:54	SM 9223B	04/28/12 14:43	49.6	MPN/100ml		1		smichaud
IS 2012041800	D	E-Coli	4/29/12 9:00	SM 9223B	04/30/12 12:09	1.0	MPN/100ml		1		sdevito
Effluent UV Channel #2 Bank B (25003-1362)											
IS 2012041695	D	E-Coli	4/27/12 11:50	SM 9223B	04/28/12 14:41	61.3	MPN/100ml		1		smichaud
Effluent UV Channel #2 Bank C (25003-1363)											
IS 2012041805	D	E-Coli	4/29/12 9:02	SM 9223B	04/30/12 12:09	<1.0	MPN/100ml		1		sdevito
Wet Haul Sludge (25003-1573)											
2012041136	D	Solids, Total	4/18/12 7:38	SM 2540G	04/19/12 15:45	2.45	%		0.01		sdevito
2012041136	D	Solids, Volatile	4/18/12 7:38	SM 2540G	04/19/12 15:45	78.9	%		0.005	T6	sdevito
2012041633	D	Solids, Total	4/26/12 9:54	SM 2540G	04/27/12 12:35	0.85	%		0.01		jhernandez
2012041633	D	Solids, Volatile	4/26/12 9:54	SM 2540G	04/27/12 14:15	77.8	%		0.005		jhernandez
2012041693	D	Cyanide, Total	4/27/12 10:00	SM 4500-CN-E	05/10/12 15:50	Trace	mg/Kg	0.55	2.6	M5	manderson
2012041693	D	Mercury	4/27/12 10:00	EPA 7471A	05/02/12 9:27	Trace	mg/Kg	0.027	0.526		dobrien
2012041693	D	Antimony	4/27/12 10:00	EPA 6010B	06/07/12 14:00	ND	mg/Kg	0.0062	31.0507		mbomar
2012041693	D	Arsenic	4/27/12 10:00	EPA 6010B	06/07/12 11:24	ND	mg/Kg	0.0096	31.0507		mbomar
2012041693	D	Beryllium	4/27/12 10:00	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.00005	6.2101		mbomar
2012041693	D	Cadmium	4/27/12 10:00	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0004	12.4203		mbomar
2012041693	D	Chromium	4/27/12 10:00	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0008	31.0507		mbomar
2012041693	D	Copper	4/27/12 10:00	EPA 6010B	06/07/12 11:24	202.4	mg/Kg	0.0014	31.0507		mbomar
2012041693	D	Lead	4/27/12 10:00	EPA 6010B	06/07/12 11:24	ND	mg/Kg	0.0088	31.0507		mbomar
2012041693	D	Molybdenum	4/27/12 10:00	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0012	12.4203		mbomar
2012041693	D	Nickel	4/27/12 10:00	EPA 6010B	06/07/12 11:24	Trace	mg/Kg	0.0057	31.0507		mbomar
2012041693	D	Selenium	4/27/12 10:00	EPA 6010B	06/07/12 14:00	Trace	mg/Kg	0.0101	31.0507		mbomar
2012041693	D	Silver	4/27/12 10:00	EPA 6010B	06/07/12 11:24	ND	mg/Kg	0.0008	3.1051		mbomar
2012041693	D	Thallium	4/27/12 10:00	EPA 6010B	06/07/12 14:00	ND	mg/Kg	0.0142	31.0507		mbomar
2012041693	D	Zinc	4/27/12 10:00	EPA 6010B	06/07/12 11:24	476.12	mg/Kg	0.0028	31.0507		mbomar

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012041693	D	Solids, Total	4/27/12 10:00	SM 2540G	04/28/12 12:52	0.95	%		0.01		smichaud
2012041693	D	Solids, Volatile	4/27/12 10:00	SM 2540G	04/28/12 13:18	76.3	%		0.005	T6	smichaud
2012041693	D	1,2-Dibromo-3-chloropropane	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00052	2.11		dcorbett
2012041693	D	1,2-Dibromoethane	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00005	1.055		dcorbett
2012041693	D	1,2,4-Trichlorobenzene	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00011	1.055	N1, L1	dcorbett
2012041693	D	cis-1,2-Dichloroethene	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00002	1.055	R1	dcorbett
2012041693	D	Styrene	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00006	1.055		dcorbett
2012041693	D	Xylene, m- + p-	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00015	2.11		dcorbett
2012041693	D	Xylene, o-	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg	0.00006	1.055		dcorbett
2012041693	D	Xylene, Total	4/27/12 10:00	EPA 8260B	05/07/12 16:07	ND	mg/Kg		2.11		dcorbett
2012041693	D	1,1,1-Trichloroethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00007	1.055	D1, D4, N1	dcorbett
2012041693	D	1,1,2-Trichloroethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.0001	1.055	D1, D4, N1	dcorbett
2012041693	D	1,1-Dichloroethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00005	1.055	D1, D4, N1	dcorbett
2012041693	D	1,1-Dichloroethene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	1,2-Dichlorobenzene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00014	1.055	D1, D4, N1	dcorbett
2012041693	D	1,2-Dichloroethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00005	1.055	D1, D4, N1	dcorbett
2012041693	D	1,2-Dichloropropane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00007	1.055	D1, D4, N1	dcorbett
2012041693	D	1,3-Dichlorobenzene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	1,4-Dichlorobenzene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00011	1.055	D1, D4, N1	dcorbett
2012041693	D	1,1,2,2-Tetrachloroethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00026	1.055	D1, D4, N1	dcorbett
2012041693	D	2-Chloroethyl vinyl ether	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.0003	1.055	D1, D4, N1	dcorbett
2012041693	D	Benzene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00005	1.055	D1, D4, N1	dcorbett
2012041693	D	Bromodichloromethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00018	1.055	D1, D4, N1	dcorbett
2012041693	D	Bromoform	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00007	1.055	D1, D4, N1	dcorbett
2012041693	D	Bromomethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00021	1.055	D1, D4, N1	dcorbett
2012041693	D	Carbon tetrachloride	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.0001	1.055	D1, D4, N1	dcorbett
2012041693	D	Chlorobenzene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00006	1.055	D1, D4, N1	dcorbett
2012041693	D	Chloroethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00015	1.055	D1, D4, N1	dcorbett
2012041693	D	Chloroform	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00005	1.055	D1, D4, N1	dcorbett
2012041693	D	Chloromethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00019	1.055	D1, D4, N1	dcorbett
2012041693	D	cis-1,3-Dichloropropene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00007	1.055	D1, D4, N1	dcorbett
2012041693	D	Dibromochloromethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	Ethyl benzene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	Methylene chloride	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	Tetrachloroethene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00011	1.055	D1, D4, N1	dcorbett
2012041693	D	Toluene	4/27/12 10:00	EPA 624	05/07/12 16:07	602.40	mg/Kg	0.00007	21.1	D1, D4, N1, D2	dcorbett
2012041693	D	Trichlorofluoromethane	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	Trichloroethene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00008	1.055	D1, D4, N1	dcorbett
2012041693	D	Trihalomethane, Total	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg		1.055	D1, D4, N1	dcorbett
2012041693	D	trans-1,2-Dichloroethene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00014	1.055	D1, D4, N1	dcorbett
2012041693	D	trans-1,3-Dichloropropene	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00006	1.055	D1, D4, N1	dcorbett
2012041693	D	Vinyl chloride	4/27/12 10:00	EPA 624	05/07/12 16:07	ND	mg/Kg	0.00006	1.055	D1, D4, N1	dcorbett
2012041693	D	4,4-DDD	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.06	240.5	D1, D4	jportillo

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012041693	D	4,4-DDE	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.05	240.5	D1, D4	jportillo
2012041693	D	4,4-DDT	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.04	120.25	D1, D4	jportillo
2012041693	D	Aldrin	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.1	240.5	D1, D4	jportillo
2012041693	D	alpha-BHC	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.09	240.5	D1, D4	jportillo
2012041693	D	Aroclor 1016	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.1	300.625	D1, D4	jportillo
2012041693	D	Aroclor 1221	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.09	601.25	D1, D4	jportillo
2012041693	D	Aroclor 1232	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.16	601.25	D1, D4	jportillo
2012041693	D	Aroclor 1242	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.1	601.25	D1, D4	jportillo
2012041693	D	Aroclor 1248	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.16	601.25	D1, D4	jportillo
2012041693	D	Aroclor 1254	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.07	601.25	D1, D4	jportillo
2012041693	D	Aroclor 1260	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.25	601.25	D1, D4	jportillo
2012041693	D	beta-BHC	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.1	240.5	D1, D4	jportillo
2012041693	D	Chlordane, Technical	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.7	2405	D1, D4	jportillo
2012041693	D	delta-BHC	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.08	240.5	D1, D4	jportillo
2012041693	D	Dieldrin	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.07	240.5	D1, D4	jportillo
2012041693	D	Endosulfan I	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.05	240.5	D1, D4	jportillo
2012041693	D	Endosulfan II	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.03	601.25	D1, D4	jportillo
2012041693	D	Endosulfan sulfate	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.05	601.25	D1, D4	jportillo
2012041693	D	Endrin	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.1	601.25	D1, D4	jportillo
2012041693	D	Endrin aldehyde	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.07	601.25	D1, D4	jportillo
2012041693	D	gamma-BHC (Lindane)	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.09	240.5	D1, D4	jportillo
2012041693	D	Heptachlor	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.1	601.25	D1, D4	jportillo
2012041693	D	Heptachlor epoxide	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	0.11	601.25	D1, D4	jportillo
2012041693	D	Polychlorinated biphenyls, Total	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg		601.25	D1, D4	jportillo
2012041693	D	Toxaphene	4/27/12 10:00	EPA 625	06/05/12 14:24	ND	ug/kg	5.08	19240	D1, D4	jportillo
2012041693	D	Methoxychlor	4/27/12 10:00	EPA 8270C	06/05/12 14:24	ND	ug/kg	0.06	240.5	D1, D4	jportillo
2012041693	D	1,2,4-Trichlorobenzene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00106	8.42	D1, D4	smitchell
2012041693	D	1,2-Diphenylhydrazine	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00123	8.42	D1, D4	smitchell
2012041693	D	2,3-Dichloroaniline	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00104	8.42	D1, D4, N1	smitchell
2012041693	D	2,4,6-Trichlorophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.0012	8.42	D1, D4, N1	smitchell
2012041693	D	2,4-Dichlorophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00116	8.42	D1, D4, N1	smitchell
2012041693	D	2,4-Dimethylphenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00289	25.26	D1, D4, N1	smitchell
2012041693	D	2,4-Dinitrophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00943	42.1	D1, D4	smitchell
2012041693	D	2,4-Dinitrotoluene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.0012	8.42	D1, D4	smitchell
2012041693	D	2,6-Dinitrotoluene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00194	8.42	D1, D4, N1	smitchell
2012041693	D	2-Chloronaphthalene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00113	8.42	D1, D4, N1	smitchell
2012041693	D	2-Chlorophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00151	8.42	D1, D4	smitchell
2012041693	D	2-Methylphenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00152	8.42	D1, D4	smitchell
2012041693	D	2-Nitrophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00218	8.42	D1, D4	smitchell
2012041693	D	3,3-Dichlorobenzidine	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00223	42.1	D1, D4, N1	smitchell
2012041693	D	4,6-Dinitro-2-methylphenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00373	25.26	D1, D4	smitchell
2012041693	D	4-Bromophenyl phenyl ether	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00145	8.42	D1, D4, N1	smitchell
2012041693	D	4-Chloro-3-methylphenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00142	8.42	D1, D4	smitchell

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012041693	D	4-Chlorophenyl phenyl ether	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.000115	8.42	D1, D4	smitchell
2012041693	D	4-Methylphenol	4/27/12 10:00	EPA 625	05/08/12 20:07	1669.26	mg/Kg	0.00294	8.42	D1, D4	smitchell
2012041693	D	4-Nitrophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00495	25.26	D1, D4	smitchell
2012041693	D	Acenaphthene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00117	8.42	D1, D4, N1	smitchell
2012041693	D	Acenaphthylene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00084	8.42	D1, D4	smitchell
2012041693	D	Anthracene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00109	8.42	D1, D4	smitchell
2012041693	D	Benzo(a)anthracene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00144	8.42	D1, D4	smitchell
2012041693	D	Benzidine	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.02486	147.35	D1, D4, N1	smitchell
2012041693	D	Benzo(a)pyrene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00155	8.42	D1, D4	smitchell
2012041693	D	Benzo(b)fluoranthene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00157	8.42	D1, D4	smitchell
2012041693	D	Benzo(g,h,i)perylene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00178	8.42	D1, D4	smitchell
2012041693	D	Benzo(k)fluoranthene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00228	8.42	D1, D4	smitchell
2012041693	D	Bis(2-Chloroisopropyl)ether	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00114	8.42	D1, D4	smitchell
2012041693	D	Bis(2-chloroethoxy)methane	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00106	8.42	D1, D4	smitchell
2012041693	D	Bis(2-chloroethyl)ether	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00099	8.42	D1, D4	smitchell
2012041693	D	Bis(2-ethylhexyl) phthalate	4/27/12 10:00	EPA 625	05/08/12 20:07	15.66	mg/Kg	0.00267	8.42	D1, D4	smitchell
2012041693	D	Butylbenzyl phthalate	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00153	8.42	D1, D4	smitchell
2012041693	D	Carbazole	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00127	8.42	D1, D4, N1	smitchell
2012041693	D	Chrysene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00147	8.42	D1, D4	smitchell
2012041693	D	Dibenz(a,h)anthracene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00187	8.42	D1, D4	smitchell
2012041693	D	Diethyl phthalate	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00105	8.42	D1, D4	smitchell
2012041693	D	Dimethylphthalate	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00072	8.42	D1, D4	smitchell
2012041693	D	Di-n-butyl phthalate	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00167	8.42	D1, D4	smitchell
2012041693	D	Di-n-octylphthalate	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00183	8.42	D1, D4	smitchell
2012041693	D	Fluoranthene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00145	8.42	D1, D4, N1	smitchell
2012041693	D	Fluorene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00128	8.42	D1, D4, N1	smitchell
2012041693	D	Hexachlorobenzene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.0008	8.42	D1, D4	smitchell
2012041693	D	Hexachlorobutadiene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00119	8.42	D1, D4	smitchell
2012041693	D	Hexachloroethane	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00121	8.42	D1, D4	smitchell
2012041693	D	Hexachlorocyclopentadiene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00259	25.26	D1, D4, N1	smitchell
2012041693	D	Indeno(1,2,3-cd)pyrene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00225	8.42	D1, D4	smitchell
2012041693	D	Isophorone	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00135	8.42	D1, D4, N1	smitchell
2012041693	D	Naphthalene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00126	8.42	D1, D4	smitchell
2012041693	D	n-Decane	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00166	8.42	D1, D4, N1	smitchell
2012041693	D	Nitrobenzene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00286	8.42	D1, D4	smitchell
2012041693	D	N-Nitroso-di-n-propylamine	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00113	8.42	D1, D4	smitchell
2012041693	D	N-Nitrosodimethylamine	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00423	25.26	D1, D4	smitchell
2012041693	D	N-Nitrosodiphenylamine	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00183	8.42	D1, D4	smitchell
2012041693	D	n-Octadecane	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00166	8.42	D1, D4	smitchell
2012041693	D	Pentachlorophenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.0032	25.26	D1, D4, N1	smitchell
2012041693	D	Phenanthrene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00115	8.42	D1, D4	smitchell
2012041693	D	Phenol	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.0023	8.42	D1, D4	smitchell

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012041693	D	Pyrene	4/27/12 10:00	EPA 625	05/08/12 20:07	ND	mg/Kg	0.00129	8.42	D1, D4, N1	smitchell
Well AV-06 (25003-2500)											
2012041132	D	Miscellaneous Note	4/18/12 10:24	None		Subcontracted					Other
2012041132	D	Calcium	4/18/12 10:24	EPA 200.7	04/27/12 15:00	69.7	mg/l	0.04	20.0		mbomar
2012041132	D	Magnesium	4/18/12 10:24	EPA 200.7	04/27/12 15:00	6.9	mg/l	0.01	2.0		mbomar
2012041132	D	Ammonia	4/18/12 10:24	SM4500-NH3-D	05/01/12 13:37	Trace	mg/l	0.02	0.10		aklos
2012041132	D	Chloride	4/18/12 10:24	SM4500-Cl-E	05/04/12 12:26	114.00	mg/l	0.68	4.00	B4	aklos
2012041132	D	Fluoride	4/18/12 10:24	SM 4500-F C	05/11/12 14:08	0.117	mg/l	0.009	0.020		khowell
2012041132	D	Hardness (Calculated)	4/18/12 10:24	SM 2340B	04/27/12 15:00	202	mg/l		50		mbomar
2012041132	D	Mercury	4/18/12 10:24	EPA 7470A	04/24/12 10:21	ND	ug/l	0.119	0.20		dobrien
2012041132	D	Nitrate	4/18/12 10:24	Calculated	04/24/12 11:43	0.69	mg/l		0.2		khowell
2012041132	D	Nitrate/Nitrite	4/18/12 10:24	EPA 353.2	04/24/12 11:43	0.7	mg/l	0.033	0.2		khowell
2012041132	D	Nitrite	4/18/12 10:24	SM 4500-NO2 B	04/19/12 12:59	Trace	mg/l	0.01	0.2		aklos
2012041132	D	Nitrogen, Total Kjeldahl	4/18/12 10:24	EPA 351.2	04/26/12 13:02	ND	mg/l	0.19	0.8		aklos
2012041132	D	Nitrogen, Total	4/18/12 10:24	Calculated	04/26/12 15:30	0.8	mg/l		0.8		aklos
2012041132	D	Phosphorus, Total	4/18/12 10:24	EPA 365.1	05/08/12 13:47	Trace	mg/l	0.06	0.5		manderson
2012041132	D	Sulfate	4/18/12 10:24	SM 4500-SO4 F	04/30/12 14:23	51	mg/l	14.5	50		khowell
SM 4500-SO4 F is not applicable to compliance testing for AZPDES samples.											
2012041132	D	Alkalinity, Total	4/18/12 10:24	SM 2320B	04/20/12 11:20	175	mg/l		20		sdevito
2012041132	D	Alkalinity, Bicarbonate	4/18/12 10:24	SM 2320B	04/20/12 11:20	175	mg/l		20		Other
2012041132	D	Alkalinity, Carbonate	4/18/12 10:24	SM 2320B	04/20/12 11:20	ND	mg/l		20		sdevito
2012041132	D	Coliform Presence Absence	4/18/12 10:24	SM 9223B	04/19/12 12:09	Absence					aellert
2012041132	D	E-Coli Presence Absence	4/18/12 10:24	SM 9223B	04/19/12 12:09	Absence					aellert
2012041132	D	Solids, Total Dissolved	4/18/12 10:24	SM 2540C	04/20/12 15:50	456	mg/l		10		jhernandez
RAS (25003-2700)											
2012041287	D	Cyanide, Total	4/20/12 9:00	SM 4500-CN-E	04/24/12 16:32	5.68	ug/l	1.10	5.0		manderson
2012041287	D	Mercury	4/20/12 9:00	EPA 245.1	04/24/12 11:03	2.55	ug/l	0.119	0.20	D1	dobrien
2012041287	D	Antimony	4/20/12 9:00	EPA 200.7	04/25/12 11:30	ND	ug/l	13.02	125	D1	mbomar
2012041287	D	Arsenic	4/20/12 9:00	EPA 200.7	04/24/12 16:32	Trace	ug/l	15.90	125	D1	mbomar
2012041287	D	Beryllium	4/20/12 9:00	EPA 200.7	04/25/12 11:30	Trace	ug/l	0.03	25	D1	mbomar
2012041287	D	Cadmium	4/20/12 9:00	EPA 200.7	04/24/12 16:32	Trace	ug/l	0.92	50.0	D1	mbomar
2012041287	D	Chromium	4/20/12 9:00	EPA 200.7	04/24/12 16:32	Trace	ug/l	2.48	125	D1	mbomar
2012041287	D	Copper	4/20/12 9:00	EPA 200.7	04/24/12 16:32	1143.00	ug/l	2.93	125	D1	mbomar

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Case Narrative

Sample ID: 2012041693
Permit Name: Avra Valley WRF
Location Name: Wet Haul Sludge

This sample was extracted for EPA Method 625 Semi-volatiles on 05/02/12. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. SJM

This sample was analyzed for EPA Method 8260 on 05/02/12 and 05/07/12, target compounds flagged with R1 and N1 for this method failed precision and/or accuracy due to problems encountered during sample preparation. The spike was performed on a different sample within the analytical batch. The laboratory control standard encountered issues during the analytical run, thus affecting the ability to report for 1,2,4-Trichlorobenzene. The compound 1,2,4-Trichlorobenzene was not detected in the sample when analyzed on two separate occasions and successfully passes calibration verification requirements, however it had failed high for the matrix spike and laboratory control recovery. In addition, the travel blank associated with this sample was not analyzed due to instrumentation difficulties. DLC

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 10/4/2012 10:21:28
Laboratory License #AZ0159

Sample Analysis Report
Avra Valley WRF - Permit Number 25003
February 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **See Attached.**

Notes: All analyses were conducted at the CRAO Laboratory location at 3035 W. El Camino del Cerro, Tucson, AZ 85745.

2012021136 Hardness and Sulfate sent to Test America on: 02-24-12 - lej.

2012021203 Sample sent to Test America for analyses. GOS

2012021502 Sample sent to Test America for cyanide analysis. GOS
2012021562 Sample sent to Test America for metals analyses. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A. Eastburn

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

10/10/12
Date

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Final Effluent at the U.V. Channel (25003-1351)											
2012021501	D	E-Coli	2/28/12 9:01	SM 9223B	02/29/12 12:16	8.4	MPN/100ml		1		smichaud
2012030065	D	E-Coli	2/29/12 8:25	SM 9223B	03/01/12 12:41	4.1	MPN/100ml		1		aellert
Wet Haul Sludge (25003-1573)											
2012021201	D	Solids, Total	2/22/12 8:44	SM 2540G	02/23/12 12:20	3.20	%		0.01		smichaud
2012021201	D	Solids, Volatile	2/22/12 8:44	SM 2540G	02/23/12 12:20	82.0	%		0.005		edoyle
2012021203	D	Miscellaneous Note	2/22/12 13:45	None		Subcontracted					Other
2012021203	D	Mercury	2/22/12 13:45	EPA 7471A	03/15/12 13:15	0.568	mg/Kg	0.0074	0.14	M5	khowell
2012021203	D	Solids, Total	2/22/12 13:45	SM 2540G	02/24/12 13:15	3.51	%		0.01		jdoranski
2012021203	D	Solids, Volatile	2/22/12 13:45	SM 2540G	02/24/12 14:59	81.6	%		0.005	N1	jdoranski
2012021203	D	1,2-Dibromo-3-chloropropane	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.00018	0.235	D1, D4	dcorbett
2012021203	D	1,2-Dibromoethane	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.00013	0.235	D1, D4	dcorbett
2012021203	D	1,2,4-Trichlorobenzene	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.00031	0.235	D1, D4	dcorbett
2012021203	D	cis-1,2-Dichloroethene	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.0001	0.235	D1, D4	dcorbett
2012021203	D	Styrene	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.00014	0.235	D1, D4	dcorbett
2012021203	D	Xylene, m- + p-	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.00011	0.47	D1, D4	dcorbett
2012021203	D	Xylene, o-	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg	0.00007	0.235	D1, D4, N1	dcorbett
2012021203	D	Xylene, Total	2/22/12 13:45	EPA 8260B	02/23/12 18:13	ND	mg/Kg		0.47	D1, D4	dcorbett
2012021203	D	1,1,1-Trichloroethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00005	0.235	D1, D4	dcorbett
2012021203	D	1,1,2-Trichloroethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00011	0.235	D1, D4, N1	dcorbett
2012021203	D	1,1-Dichloroethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00006	0.235	D1, D4	dcorbett
2012021203	D	1,1-Dichloroethene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00007	0.235	D1, D4	dcorbett
2012021203	D	1,2-Dichlorobenzene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00017	0.235	D1, D4, N1	dcorbett
2012021203	D	1,2-Dichloroethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00012	0.235	D1, D4	dcorbett
2012021203	D	1,2-Dichloropropane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00013	0.235	D1, D4	dcorbett
2012021203	D	1,3-Dichlorobenzene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00013	0.235	D1, D4, N1	dcorbett
2012021203	D	1,4-Dichlorobenzene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00016	0.235	D1, D4, N1	dcorbett
2012021203	D	1,1,2,2-Tetrachloroethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00009	0.235	D1, D4	dcorbett
2012021203	D	2-Chloroethyl vinyl ether	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.0002	0.235	D1, D4	dcorbett
2012021203	D	Benzene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.0001	0.235	D1, D4, N1	dcorbett
2012021203	D	Bromodichloromethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00015	0.235	D1, D4	dcorbett
2012021203	D	Bromoform	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00008	0.235	D1, D4, N1	dcorbett
2012021203	D	Bromomethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00009	0.235	D1, D4	dcorbett
2012021203	D	Carbon tetrachloride	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00006	0.235	D1, D4	dcorbett
2012021203	D	Chlorobenzene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00011	0.235	D1, D4, N1	dcorbett
2012021203	D	Chloroethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00022	0.235	D1, D4, N1	dcorbett
2012021203	D	Chloroform	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00011	0.235	D1, D4	dcorbett
2012021203	D	Chloromethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00008	0.235	D1, D4	dcorbett
2012021203	D	cis-1,3-Dichloropropene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00012	0.235	D1, D4, N1	dcorbett

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012021203	D	Dibromochloromethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00014	0.235	D1, D4	dcorbett
2012021203	D	Ethyl benzene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00008	0.235	D1, D4, N1	dcorbett
2012021203	D	Methylene chloride	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00011	0.235	D1, D4	dcorbett
2012021203	D	Tetrachloroethene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00006	0.235	D1, D4	dcorbett
2012021203	D	Toluene	2/22/12 13:45	EPA 624	02/23/12 18:13	1471.00	mg/Kg	0.00008	23.74	D1, D4, D2, N1	dcorbett
2012021203	D	Trichlorofluoromethane	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00005	0.235	D1, D4	dcorbett
2012021203	D	Trichloroethene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00009	0.235	D1, D4, N1	dcorbett
2012021203	D	Trihalomethane, Total	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg		0.235	D1, D4	dcorbett
2012021203	D	trans-1,2-Dichloroethene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00009	0.235	D1, D4	dcorbett
2012021203	D	trans-1,3-Dichloropropene	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00012	0.235	D1, D4, N1	dcorbett
2012021203	D	Vinyl chloride	2/22/12 13:45	EPA 624	02/23/12 18:13	ND	mg/Kg	0.00005	0.235	D1, D4, N1	dcorbett
2012021203	D	4,4-DDD	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.06	256.2	D1, D4	mmichel
2012021203	D	4,4-DDE	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.05	256.2	D1, D4	mmichel
2012021203	D	4,4-DDT	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.04	128.1	D1, D4	mmichel
2012021203	D	Aldrin	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.1	256.2	D1, D4	mmichel
2012021203	D	alpha-BHC	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.09	256.2	D1, D4	mmichel
2012021203	D	Aroclor 1016	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.1	320.25	D1, D4	mmichel
2012021203	D	Aroclor 1221	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.09	640.5	D1, D4	mmichel
2012021203	D	Aroclor 1232	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.16	768.6	D1, D4	mmichel
2012021203	D	Aroclor 1242	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.1	640.5	D1, D4	mmichel
2012021203	D	Aroclor 1248	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.16	768.6	D1, D4	mmichel
2012021203	D	Aroclor 1254	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.07	640.5	D1, D4	mmichel
2012021203	D	Aroclor 1260	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.25	640.5	D1, D4	mmichel
2012021203	D	beta-BHC	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.1	256.2	D1, D4	mmichel
2012021203	D	Chlordane, Technical	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.7	2562	D1, D4	mmichel
2012021203	D	delta-BHC	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.08	256.2	D1, D4	mmichel
2012021203	D	Dieldrin	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.07	256.2	D1, D4	mmichel
2012021203	D	Endosulfan I	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.05	128.1	D1, D4, N1	mmichel
2012021203	D	Endosulfan II	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.03	128.1	D1, D4, N1	mmichel
2012021203	D	Endosulfan sulfate	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.05	256.2	D1, D4	mmichel
2012021203	D	Endrin	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.1	256.2	D1, D4	mmichel
2012021203	D	Endrin aldehyde	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.07	256.2	D1, D4, N1	mmichel
2012021203	D	gamma-BHC (Lindane)	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.09	256.2	D1, D4, N1	mmichel
2012021203	D	Heptachlor	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.1	256.2	D1, D4, L3	mmichel
2012021203	D	Heptachlor epoxide	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	0.11	1281	D1, D4	mmichel
2012021203	D	Polychlorinated biphenyls, Total	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg		768.6	D1, D4	mmichel
2012021203	D	Toxaphene	2/22/12 13:45	EPA 625	03/07/12 15:40	ND	ug/kg	5.08	20496	D1, D4	mmichel
2012021203	D	Methoxychlor	2/22/12 13:45	EPA 8270C	03/07/12 15:40	ND	ug/kg	0.06	256.2	D1, D4	mmichel
2012021203	D	1,2,4-Trichlorobenzene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00106	2.28	D1, D4	smitchell
2012021203	D	1,2-Diphenylhydrazine	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00123	2.28	D1, D4	smitchell
2012021203	D	2,3-Dichloroaniline	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00104	2.28	D1, D4	smitchell

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012021203	D	2,4,6-Trichlorophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.0012	2.28	D1, D4	smitchell
2012021203	D	2,4-Dichlorophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00116	2.28	D1, D4	smitchell
2012021203	D	2,4-Dimethylphenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00289	6.84	D1, D4	smitchell
2012021203	D	2,4-Dinitrophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00943	11.4	D1, D4	smitchell
2012021203	D	2,4-Dinitrotoluene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.0012	2.28	D1, D4	smitchell
2012021203	D	2,6-Dinitrotoluene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00194	2.28	D1, D4	smitchell
2012021203	D	2-Chloronaphthalene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00113	2.28	D1, D4	smitchell
2012021203	D	2-Chlorophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00151	2.28	D1, D4	smitchell
2012021203	D	2-Methylphenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00152	2.28	D1, D4	smitchell
2012021203	D	2-Nitrophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00218	2.28	D1, D4	smitchell
2012021203	D	3,3-Dichlorobenzidine	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00223	11.4	D1, D4	smitchell
2012021203	D	4,6-Dinitro-2-methylphenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00373	6.84	D1, D4	smitchell
2012021203	D	4-Bromophenyl phenyl ether	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00145	2.28	D1, D4	smitchell
2012021203	D	4-Chloro-3-methylphenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00142	2.28	D1, D4	smitchell
2012021203	D	4-Chlorophenyl phenyl ether	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.000115	2.28	D1, D4	smitchell
2012021203	D	4-Methylphenol	2/22/12 13:45	EPA 625	03/07/12 18:00	1223.33	mg/Kg	0.00294	2.28	D1, D4	smitchell
2012021203	D	4-Nitrophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00495	6.84	D1, D4	smitchell
2012021203	D	Acenaphthene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00117	2.28	D1, D4	smitchell
2012021203	D	Acenaphthylene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00084	2.28	D1, D4	smitchell
2012021203	D	Anthracene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00109	2.28	D1, D4	smitchell
2012021203	D	Benzo(a)anthracene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00144	2.28	D1, D4	smitchell
2012021203	D	Benzidine	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.02486	39.9	D1, D4	smitchell
2012021203	D	Benzo(a)pyrene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00155	2.28	D1, D4	smitchell
2012021203	D	Benzo(b)fluoranthene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00157	2.28	D1, D4	smitchell
2012021203	D	Benzo(g,h,i)perylene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00178	2.28	D1, D4	smitchell
2012021203	D	Benzo(k)fluoranthene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00228	2.28	D1, D4	smitchell
2012021203	D	Bis(2-Chloroisopropyl)ether	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00114	2.28	D1, D4	smitchell
2012021203	D	Bis(2-chloroethoxy)methane	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00106	2.28	D1, D4	smitchell
2012021203	D	Bis(2-chloroethyl)ether	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00099	2.28	D1, D4	smitchell
2012021203	D	Bis(2-ethylhexyl) phthalate	2/22/12 13:45	EPA 625	03/07/12 18:00	5.45	mg/Kg	0.00267	2.28	D1, D4	smitchell
2012021203	D	Butylbenzyl phthalate	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00153	2.28	D1, D4	smitchell
2012021203	D	Carbazole	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00127	2.28	D1, D4	smitchell
2012021203	D	Chrysene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00147	2.28	D1, D4	smitchell
2012021203	D	Dibenz(a,h)anthracene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00187	2.28	D1, D4	smitchell
2012021203	D	Diethyl phthalate	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00105	2.28	D1, D4	smitchell
2012021203	D	Dimethylphthalate	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00072	2.28	D1, D4	smitchell
2012021203	D	Di-n-butyl phthalate	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00167	2.28	D1, D4	smitchell
2012021203	D	Di-n-octylphthalate	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00183	2.28	D1, D4	smitchell
2012021203	D	Fluoranthene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00145	2.28	D1, D4	smitchell
2012021203	D	Fluorene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00128	2.28	D1, D4	smitchell
2012021203	D	Hexachlorobenzene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.0008	2.28	D1, D4	smitchell
2012021203	D	Hexachlorobutadiene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00119	2.28	D1, D4	smitchell
2012021203	D	Hexachloroethane	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00121	2.28	D1, D4	smitchell

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Avra Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Wet Haul Sludge (25003-1573)											
2012021203	D	Hexachlorocyclopentadiene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00259	6.84	D1, D4	smitchell
2012021203	D	Indeno(1,2,3-cd)pyrene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00225	2.28	D1, D4	smitchell
2012021203	D	Isophorone	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00135	2.28	D1, D4	smitchell
2012021203	D	Naphthalene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00126	2.28	D1, D4	smitchell
2012021203	D	n-Decane	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00166	2.28	D1, D4	smitchell
2012021203	D	Nitrobenzene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00286	2.28	D1, D4	smitchell
2012021203	D	N-Nitroso-di-n-propylamine	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00113	2.28	D1, D4	smitchell
2012021203	D	N-Nitrosodimethylamine	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00423	6.84	D1, D4	smitchell
2012021203	D	N-Nitrosodiphenylamine	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00183	2.28	D1, D4	smitchell
2012021203	D	n-Octadecane	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00166	2.28	D1, D4	smitchell
2012021203	D	Pentachlorophenol	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.0032	6.84	D1, D4	smitchell
2012021203	D	Phenanthrene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00115	2.28	D1, D4	smitchell
2012021203	D	Phenol	2/22/12 13:45	EPA 625	03/07/12 18:00	5.63	mg/Kg	0.0023	2.28	D1, D4	smitchell
2012021203	D	Pyrene	2/22/12 13:45	EPA 625	03/07/12 18:00	ND	mg/Kg	0.00129	2.28	D1, D4	smitchell
See Attached -Semi-Quantitation Sheet for EPA 625											
2012021563	D	Solids, Total	2/29/12 9:15	SM 2540G	03/01/12 16:00	2.69	%		0.01		edoyle
2012021563	D	Acrolein	2/29/12 9:15	EPA 624	03/07/12 19:56	ND	mg/Kg	0.00103	13.45	D1, D4	dcorbett
2012021563	D	Acrylonitrile	2/29/12 9:15	EPA 624	03/07/12 19:56	ND	mg/Kg	0.00206	13.45	D1, D4	dcorbett
2012021566	D	Solids, Total	2/29/12 9:18	SM 2540G	03/01/12 16:00	2.73	%		0.01		edoyle
2012021566	D	Solids, Volatile	2/29/12 9:18	SM 2540G	03/01/12 16:00	80.8	%		0.005		edoyle
Well AV-06 (25003-2500)											
2012021136	D	Miscellaneous Note	2/21/12 10:22	None	Subcontracted						Other
2012021136	D	Ammonia	2/21/12 10:22	SM4500-NH3-D	02/28/12 13:16	Trace	mg/l	0.02	0.10		aklos
2012021136	D	Chloride	2/21/12 10:22	SM4500-Cl-E	03/12/12 11:30	115.00	mg/l	0.68	4.00	B4	manderson
2012021136	D	Fluoride	2/21/12 10:22	SM 4500-F C	03/19/12 14:26	0.132	mg/l	0.009	0.020		khowell
2012021136	D	Mercury	2/21/12 10:22	EPA 245.1	03/07/12 9:52	ND	ug/l	0.119	0.20		khowell
2012021136	D	Nitrate	2/21/12 10:22	Calculated	02/29/12 11:33	0.65	mg/l	0.2	0.5		khowell
2012021136	D	Nitrate/Nitrite	2/21/12 10:22	EPA 353.2	02/29/12 11:33	0.7	mg/l	0.033	0.2		khowell
2012021136	D	Nitrite	2/21/12 10:22	SM 4500-NO2 B	02/21/12 14:17	ND	mg/l	0.01	0.2		aklos
2012021136	D	Nitrogen, Total Kjeldahl	2/21/12 10:22	EPA 351.2	02/24/12 14:13	ND	mg/l	0.19	0.8		aklos
2012021136	D	Nitrogen, Total	2/21/12 10:22	Calculated	02/29/12 11:33	0.8	mg/l		0.8		khowell
2012021136	D	Phosphorus, Total	2/21/12 10:22	EPA 365.1	02/23/12 12:44	ND	mg/l	0.06	0.5		manderson
2012021136	D	Antimony	2/21/12 10:22	EPA 200.8	03/05/12 18:39	ND	ug/l	0.26	1.0		jbarajas
2012021136	D	Arsenic	2/21/12 10:22	EPA 200.8	03/05/12 18:39	Trace	ug/l	0.29	1.0		jbarajas
2012021136	D	Beryllium	2/21/12 10:22	EPA 200.8	03/05/12 18:39	ND	ug/l	0.20	1.0		jbarajas
2012021136	D	Cadmium	2/21/12 10:22	EPA 200.8	03/05/12 18:39	ND	ug/l	0.22	1.0		jbarajas
2012021136	D	Chromium	2/21/12 10:22	EPA 200.8	03/05/12 18:39	ND	ug/l	0.24	1.0		jbarajas
2012021136	D	Copper	2/21/12 10:22	EPA 200.8	03/05/12 18:39	Trace	ug/l	0.26	1.0		jbarajas

Lab Comments:

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE/LABORATORY GROUP
ORGANIC MASS SPECTROMETRY UNIT

Sapphire No.: 2012021203
Sample Permit Name: Avra Valley WRF
Sample Location Name: Wet Haul Sludge
Method:

☐ 624 ☑ 625 ☐ 8260 ☐ 8270

☑ **Semi-Quant** ☐ **Non-Target**

	Compound Name	Concentration µg/l
1	Benzeneacetic Acid	72
2	Indole	106
3	Tetradecanoic Acid	22
4	Palmitic Acid	4456
5	Oleic Acid	3607
6	Stearic Acid	1276
7	Squalene	18
8	Propanoic Acid	705
9	Butanoic Acid, 2-methyl-	1182
10	Pentanoic Acid, 2-methyl-	435
11	Hexanoic Acid, 2-methyl-	123
12	Toluene	1643
13	Butanoic Acid	492
14	1H-Indole, 3-methyl-	107
15	Benzene, 1-isocyanato-2-methyl-	44
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012L1201

SITE & LOCATION: Avra Valley RWRF Wet Haul Sludge (Discrete)

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: SRF WRF Section

SAMPLE END DATE: 2-22-2012 (MM / DD / YYYY)

SAMPLE END TIME: 0844 (24 Hour Clock)

SAMPLER: Brunson (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ☐ AZPDES ☐ Reuse ■ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	■	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
Other	☐	☐
Other	☐	☐
Other	☐	☐
Other	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:

# of Bottles Delivered: 1

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

LAB USE ONLY

Sample Integrity/Preservation:

Temperature: 4.0 °C

Initials: JS

Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:

	Yes	No	NA
Chain of Custody Record completed appropriately?	✓	☐	☐
Sample labels match Chain of Custody?	✓	☐	☐
Correct number of samples were delivered?	✓	☐	☐
Custody seals intact? JS 2-22-12	✓	☐	✓
Within holding time?	✓	☐	☐
Sufficient sample volume for analysis?	✓	☐	☐
Samples are in proper containers?	✓	☐	☐
Sample containers damaged/leaking/frozen?	☐	✓	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	✓
Received from a refrigerator?	☐	☐	✓

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	~~Sample~~ Refrigerator	2-22-12	0847
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Sample Refrigerator	Steven Garcia	2-22-12	1049
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Steven Garcia	[signature]	2-22-12	1145
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

* Sb, As, Be, Ca, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Ca, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012021203

SITE & LOCATION: Avra Valley Wet Haul Sludge

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: 02/22/2012 (MM / DD / YYYY)

SAMPLE START TIME: 1345 (24 Hour Clock)

SUBMITTER: IWC

SAMPLE END DATE: 02/22/2012 (MM / DD / YYYY)

SAMPLE END TIME: 1345 (24 Hour Clock)

SAMPLER: Guebara, Horney (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc contract	☐	☐
Barium	☐	☐	Priority Pollutant Metals	■	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **contract	■	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total CONTRACT LAB	■	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	■	☐
Purgeable Organics (GCMS)	■	☐
Semivolatile Organics (GCMS)	■	☐
Other Hg In House	☒	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	■	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Contract lab is Test America COS 02-24-12 QOA 12-30256

# of Bottles Delivered: 6

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
		02-22-12	1508
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		2/24/12	14:45
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:		
Temperature:	4.7	°C
Initials:	LET	
Non-Preserved	4	#
HNO_3	1	#
H_2SO_4		#
HCl		#
NaOH	1	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☒	☐	☐
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County Crao Lab, 3035 W El Camino de Cerro, Tucson, AZ 85745

Project/PO Number: Sample group #35, DO# 12-30256

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Molybdenum	Total Solids %	Cyanide, Total	Special Instructions
AVRA Valley Sludge 3 25003-1573 201202120 (2-22-12)	BS	HDPE	1	2/22/12	1345	HNO_3	X	X	X	X	X	X	X	X	X	X	X	X	X			discrete results in mg/kg
Avra Valley Sludge 25003-1573 201202120 3	BS	HDPE	2	2/22/12	1345	ice none NaOH														X	X	discrete
Roger Road - Final Effluent Trough 20923-9007 201202119 3	WW	HDPE	1	2/22/12	1007	NaOH															X	discrete
Las Quintas Serenas Water Co 12853-0100 201202132 3	WW	HDPE	2	02-24-12	0940	NaOH + HNO_3	X	X	X	X	X	X	X	X	X	X	X	X	X		X	composite

Relinquished By:	Date/Time:	Received By:	Date/Time:
Nancy Powell for Samplers	2/22/12 1554	[illegible]	02-24-12 0956
[illegible]	02-24-12 14:40	[illegible]	2/24/12 14:40
		Received in Lab By:	

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201202 1563

SITE & LOCATION: Avra Valley Wet Haul Sludge

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: 02/29/2012 (MM / DD / YYYY)

SAMPLE START TIME: 0915 (24 Hour Clock)

SUBMITTER: IWC

SAMPLE END DATE: 02/29/2012 (MM / DD / YYYY)

SAMPLE END TIME: 0915 (24 Hour Clock)

SAMPLER: Guebara, Horney (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total	☐	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	■	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: No separate bottle for total solids. GOS 02-29-12

# of Bottles Delivered: 1 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 02-22-12 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
		02-29-12	1138
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	6	°C
Initials:	GOS	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☒	☐
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012021566

SITE & LOCATION: Avra Valley RWRF Wet Haul Sludge (Discrete)

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: SRF WRF Section

SAMPLE END DATE: 2-29-2012 (MM / DD / YYYY)

SAMPLE END TIME: 0918 (24 Hour Clock)

SAMPLER: Brunson (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	■	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
Other	☐	☐
Other	☐	☐
Other	☐	☐
Other	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: 500 ml sample bottle GCS 02-29-12

# of Bottles Delivered: 1 GCS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
Sample Refrigerator	Sample Refrigerator	2-29-2012	0931
Sample Refrigerator	Steven Garcia	2-29-12	1057
Steven Garcia		02-29-12	1156

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	5	°C
Initials:	GCS	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Ca, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Ca, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Sample Group#35/DO12-30256

Sampled:02/21/12-02/24/12
Received:02/25/12
Issued:03/14/12 13:47

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVB1737-01	2012021272	Water
PVB1737-02	2012021136	Water
PVB1737-03	2012021306	Water
PVB1737-04	2012021203	Sludge
PVB1737-05	2012021193	Water
PVB1737-06	2012021329	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group#35/DO12-30256
Report Number: PVB1737

Sampled: 02/21/12-02/24/12
Received: 02/25/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVB1737-04 (2012021203 - Sludge)					**Sampled: 02/22/12**				
Reporting Units: mg/kg dry									
Antimony	EPA 6010B	12C0158	N/A	150	ND	0.997	03/05/12	03/07/12	
Arsenic	EPA 6010B	12C0158	N/A	150	ND	0.997	03/05/12	03/07/12	
Beryllium	EPA 6010B	12C0158	N/A	15	ND	0.997	03/05/12	03/07/12	
Cadmium	EPA 6010B	12C0158	N/A	15	ND	0.997	03/05/12	03/07/12	
Chromium	EPA 6010B	12C0158	N/A	58	ND	0.997	03/05/12	03/07/12	
Copper	EPA 6010B	12C0158	N/A	150	**190**	0.997	03/05/12	03/07/12	
Lead	EPA 6010B	12C0158	N/A	150	ND	0.997	03/05/12	03/07/12	
Molybdenum	EPA 6010B	12C0158	N/A	58	ND	0.997	03/05/12	03/07/12	
Nickel	EPA 6010B	12C0158	N/A	58	ND	0.997	03/05/12	03/07/12	
Selenium	EPA 6010B	12C0158	N/A	150	ND	0.997	03/05/12	03/07/12	
Silver	EPA 6010B	12C0158	N/A	73	ND	0.997	03/05/12	03/07/12	
Thallium	EPA 6010B	12C0158	N/A	150	ND	0.997	03/05/12	03/07/12	
Zinc	EPA 6010B	12C0158	N/A	290	**920**	0.997	03/05/12	03/07/12	
Sample ID: PVB1737-01 (2012021272 - Water)					**Sampled: 02/23/12**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**330**	1	03/03/12	03/06/12	
Sample ID: PVB1737-02 (2012021136 - Water)					**Sampled: 02/21/12**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**190**	1	03/03/12	03/06/12	
Sample ID: PVB1737-03 (2012021306 - Water)					**Sampled: 02/24/12**				
Reporting Units: mg/l									
Hardness, Total	SM2340B	[CALC]	N/A	13	**230**	1	03/03/12	03/06/12	
Sample ID: PVB1737-06 (2012021329 - Water)					**Sampled: 02/24/12**				
Reporting Units: mg/l									
Molybdenum	EPA 200.7	12C0118	N/A	0.010	ND	1	03/03/12	03/07/12	
Sample ID: PVB1737-01 (2012021272 - Water)					**Sampled: 02/23/12**				
Reporting Units: ug/l									
Calcium	EPA 200.7	12C0118	N/A	2000	**110000**	1	03/03/12	03/06/12	
Magnesium	EPA 200.7	12C0118	N/A	2000	**17000**	1	03/03/12	03/06/12	
Sample ID: PVB1737-02 (2012021136 - Water)					**Sampled: 02/21/12**				
Reporting Units: ug/l									
Calcium	EPA 200.7	12C0118	N/A	2000	**66000**	1	03/03/12	03/06/12	
Magnesium	EPA 200.7	12C0118	N/A	2000	**6500**	1	03/03/12	03/06/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group#35/DO12-30256
Report Number: PVB1737

Sampled: 02/21/12-02/24/12
Received: 02/25/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVB1737-04 (2012021203 - Sludge)					**Sampled: 02/22/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12B1141	N/A	0.10	**3.4**	1	02/27/12	02/27/12	
Sample ID: PVB1737-04 (2012021203 - Sludge)					**Sampled: 02/22/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12C0156	N/A	12	ND	0.912	03/05/12	03/06/12	
Sample ID: PVB1737-02 (2012021136 - Water)					**Sampled: 02/21/12**				
Reporting Units: mg/l									
Sulfate	EPA 300.0	12B1123	N/A	10	**49**	5	02/27/12	02/27/12	
Sample ID: PVB1737-01 (2012021272 - Water)					**Sampled: 02/23/12**				
Reporting Units: ug/l									
Cyanide, Amenable to Chlorination	SM 4500CN-G	12C0157	1.7	8.0	ND	1	03/05/12	03/05/12	N1
Sample ID: PVB1737-05 (2012021193 - Water)					**Sampled: 02/22/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12C0087	1.7	8.0	**5.8**	1	03/02/12	03/02/12	E4
Sample ID: PVB1737-06 (2012021329 - Water)					**Sampled: 02/24/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12C0087	1.7	8.0	**6.4**	1	03/02/12	03/02/12	E4

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group#35/DO12-30256
Report Number: PVB1737

Sampled: 02/21/12-02/24/12
Received: 02/25/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 200.7	Water		X
EPA 300.0	Water		X
EPA 6010B	Soil	N/A	X
SM 2540G	Soil		X
SM 4500CN-E	Water		X
SM 4500CN-G	Water		X
SM2340B	Water		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 4/30/2012 15:24:36
Laboratory License #AZ0159

Sample Analysis Report
Avra Valley WRF - Permit Number 25003
January 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

Alkalinity, pH (Field), pH Temperature (Field), Temperature (Field), E.coli, Coliform P/A, BOD, COD, TSS, TVSS, TS, TVS, TDS, TOC, metals by EPA 200.8, and Semi-Volatile Organics by EPA 625 and 8270C analyses were conducted at the CRAO Laboratory new location at 3035 W. El Camino del Cerro, Tucson, AZ.

2012010256 Sample sent to Test America for analyses. GOS

2012010662 Sample sent to Test America for analyses. GOS
2012010663 Sample sent to Test America for total nitrogen analysis. GOS
2012010664 Sample sent to Test America for analyses. GOS

2012010718 Samples sent to Test America NP
2012010719 Samples sent to Test America NP

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Espinosa

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

05/07/12
Date

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: Sample group #21 DO# 12-25242

Sampled: 01/10/12-12/16/11
Received: 01/13/12
Revised: 03/12/12 09:34

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVA0850-01	2012010659	Water
PVA0850-02	2012010662	Water
PVA0850-03	2012010664	Water
PVA0850-04	2012010663	Water
PVA0850-05	2011120868	Soil
PVA0850-06	2012010621	Water
PVA0850-07	2012010622	Water
PVA0850-08	2012010596	Water
PVA0850-09	2012010598	Water
PVA0850-10	2012010599	Water
PVA0850-11	2012010585	Soil

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

SAMPLE RECEIPT:	Samples were received intact, at 2°C, on ice and with chain of custody documentation.
HOLDING TIMES:	Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers. N1 - Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.
ADDITIONAL INFORMATION:	2/23/12 - The report was revised to add Copper and Chromium data for sample PVA0850-05 at the clients request. 3/12/12 - The report was revised to add Copper and Chromium data for sample PVA0850-11 at the clients request.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0850-05 (2011120868 - Soil)					**Sampled: 12/16/11**			
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0729	6.2	ND	0.993	1/20/2012	1/22/2012	
Arsenic	EPA 6010B	12A0729	6.2	**8.6**	0.993	1/20/2012	1/22/2012	
Beryllium	EPA 6010B	12A0729	0.62	ND	0.993	1/20/2012	1/22/2012	
Cadmium	EPA 6010B	12A0729	0.62	**0.94**	0.993	1/20/2012	1/23/2012	
Chromium	EPA 6010B	12A0729	2.5	**13**	0.993	1/20/2012	1/22/2012	
Copper	EPA 6010B	12A0729	6.2	**370**	0.993	1/20/2012	1/22/2012	
Lead	EPA 6010B	12A0729	6.2	**12**	0.993	1/20/2012	1/22/2012	
Mercury	EPA 7471A	12A0596	0.12	**1.6**	1.07	1/23/2012	1/23/2012	H3
Molybdenum	EPA 6010B	12A0729	2.5	**12**	0.993	1/20/2012	1/22/2012	
Nickel	EPA 6010B	12A0729	2.5	**11**	0.993	1/20/2012	1/22/2012	
Selenium	EPA 6010B	12A0729	6.2	**7.5**	0.993	1/20/2012	1/22/2012	
Silver	EPA 6010B	12A0729	3.1	**3.6**	0.993	1/20/2012	1/22/2012	
Thallium	EPA 6010B	12A0729	6.2	ND	0.993	1/20/2012	1/22/2012	
Zinc	EPA 6010B	12A0729	12	**500**	0.993	1/20/2012	1/22/2012	
Sample ID: PVA0850-11 (2012010585 - Soil)					**Sampled: 01/10/12**			
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Arsenic	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Beryllium	EPA 6010B	12A0729	6.9	ND	0.995	1/20/2012	1/22/2012	
Cadmium	EPA 6010B	12A0729	6.9	ND	0.995	1/20/2012	1/23/2012	
Chromium	EPA 6010B	12A0729	28	**46**	0.995	1/20/2012	1/22/2012	
Copper	EPA 6010B	12A0729	69	**720**	0.995	1/20/2012	1/22/2012	
Lead	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Mercury	EPA 7471A	12A0596	1.4	ND	0.971	1/23/2012	1/23/2012	
Molybdenum	EPA 6010B	12A0729	28	ND	0.995	1/20/2012	1/22/2012	
Nickel	EPA 6010B	12A0729	28	**34**	0.995	1/20/2012	1/22/2012	
Selenium	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Silver	EPA 6010B	12A0729	35	ND	0.995	1/20/2012	1/22/2012	
Thallium	EPA 6010B	12A0729	69	ND	0.995	1/20/2012	1/22/2012	
Zinc	EPA 6010B	12A0729	140	**1700**	0.995	1/20/2012	1/22/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #21 DO# 12-25242

Report Number: PVA0850

Sampled: 01/10/12-12/16/11
Received: 01/13/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0850-04 (2012010663 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	12A0485	2.0	ND	5	1/15/2012	1/15/2012	D1
Nitrogen, Total (300.0 Pres. auto calc)	Calculation	[CALC]	3.0	ND	5	1/28/2012	1/28/2012	
Sample ID: PVA0850-04RE1 (2012010663 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A1091	1.0	ND	1	1/28/2012	1/28/2012	
Sample ID: PVA0850-05 (2011120868 - Soil)					**Sampled: 12/16/11**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12A0559	0.10	**80**	1	1/16/2012	1/16/2012	H3
Sample ID: PVA0850-06 (2012010621 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12A0865	0.50	**35**	1	1/24/2012	1/24/2012	
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**280**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-07 (2012010622 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12A0865	0.50	**32**	1	1/24/2012	1/24/2012	
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**23**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-08 (2012010596 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**300**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-09 (2012010598 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	12A0485	2.0	ND	5	1/15/2012	1/15/2012	D1
Sample ID: PVA0850-10 (2012010599 - Water)					**Sampled: 01/12/12**			
Reporting Units: mg/l								
Biochemical Oxygen Demand	SM 5210B	12A0470	5.0	**17**	1	1/13/2012	1/13/2012	
Sample ID: PVA0850-11 (2012010585 - Soil)					**Sampled: 01/10/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12A0559	0.10	**7.2**	1	1/16/2012	1/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: ug/kg dry									
1,1,1-Trichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1,2,2-Tetrachloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1,2-Trichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1-Dichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1-Dichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,1-Dichloropropene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2,3-Trichlorobenzene	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
1,2,3-Trichloropropane	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
1,2,4-Trimethylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dibromoethane (EDB)	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dichlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dichloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,2-Dichloropropane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,3,5-Trimethylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,3-Dichlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,3-Dichloropropane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
1,4-Dichlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
2,2-Dichloropropane	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
2-Butanone (MEK)	EPA 8260B	12A0479	N/A	30000	ND	3.76	01/14/12	01/21/12	
2-Chlorotoluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
2-Hexanone	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
4-Chlorotoluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
Acetone	EPA 8260B	12A0479	N/A	30000	ND	3.76	01/14/12	01/21/12	V1
Benzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromochloromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromodichloromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromoform	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Bromomethane	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
Carbon tetrachloride	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chlorobenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chloroethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chloroform	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Chloromethane	EPA 8260B	12A0479	N/A	15000	ND	3.76	01/14/12	01/21/12	
cis-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
cis-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Dibromochloromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Dichlorodifluoromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Ethylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil) - cont.					**Sampled: 01/12/12**				
Reporting Units: ug/kg dry									
m,p-Xylenes	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Methylene Chloride	EPA 8260B	12A0479	N/A	5900	ND	3.76	01/14/12	01/21/12	
n-Butylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
n-Propylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
o-Xylene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
p-Isopropyltoluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
sec-Butylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Styrene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
tert-Butylbenzene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Tetrachloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Toluene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
trans-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
trans-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Trichloroethene	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Trichlorofluoromethane	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Vinyl Acetate	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Vinyl chloride	EPA 8260B	12A0479	N/A	3000	ND	3.76	01/14/12	01/21/12	
Surrogate: Dibromofluoromethane (57-129%)					*81 %*				
Surrogate: Toluene-d8 (59-134%)					*66 %*				
Surrogate: 4-Bromofluorobenzene (56-127%)					*66 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: ug/kg dry									
1,1,1-Trichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1,2,2-Tetrachloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1,2-Trichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1-Dichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1-Dichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,1-Dichloropropene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2,3-Trichlorobenzene	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
1,2,3-Trichloropropane	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
1,2,4-Trimethylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dibromoethane (EDB)	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dichlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dichloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,2-Dichloropropane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,3,5-Trimethylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,3-Dichlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,3-Dichloropropane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
1,4-Dichlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
2,2-Dichloropropane	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
2-Butanone (MEK)	EPA 8260B	12A0479	N/A	140000	ND	3.68	01/14/12	01/21/12	
2-Chlorotoluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
2-Hexanone	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
4-Chlorotoluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
Acetone	EPA 8260B	12A0479	N/A	140000	ND	3.68	01/14/12	01/21/12	V1
Benzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromochloromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromodichloromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromoform	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Bromomethane	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
Carbon tetrachloride	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chlorobenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chloroethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chloroform	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Chloromethane	EPA 8260B	12A0479	N/A	71000	ND	3.68	01/14/12	01/21/12	
cis-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
cis-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Dibromochloromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Dichlorodifluoromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Ethylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-08 (2012010723 - Soil) - cont.					**Sampled: 01/13/12**				
Reporting Units: ug/kg dry									
m,p-Xylenes	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Methylene Chloride	EPA 8260B	12A0479	N/A	28000	ND	3.68	01/14/12	01/21/12	
n-Butylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
n-Propylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
o-Xylene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
p-Isopropyltoluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
sec-Butylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Styrene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
tert-Butylbenzene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Tetrachloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Toluene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
trans-1,2-Dichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
trans-1,3-Dichloropropene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Trichloroethene	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Trichlorofluoromethane	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Vinyl Acetate	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Vinyl chloride	EPA 8260B	12A0479	N/A	14000	ND	3.68	01/14/12	01/21/12	
Surrogate: Dibromofluoromethane (57-129%)					*84 %*				
Surrogate: Toluene-d8 (59-134%)					*69 %*				
Surrogate: 4-Bromofluorobenzene (56-127%)					*69 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg dry									
Antimony	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Arsenic	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Beryllium	EPA 6010B	12B0317	N/A	7.9	ND	0.996	02/08/12	02/09/12	
Cadmium	EPA 6010B	12B0317	N/A	7.9	ND	0.996	02/08/12	02/09/12	
Chromium	EPA 6010B	12B0317	N/A	32	ND	0.996	02/08/12	02/09/12	
Copper	EPA 6010B	12B0317	N/A	79	**440**	0.996	02/08/12	02/09/12	
Lead	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Mercury	EPA 7471A	12A0596	N/A	1.6	ND	1.09	01/23/12	01/23/12	
Nickel	EPA 6010B	12B0317	N/A	32	ND	0.996	02/08/12	02/09/12	
Selenium	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Silver	EPA 6010B	12B0317	N/A	39	ND	0.996	02/08/12	02/09/12	
Thallium	EPA 6010B	12B0317	N/A	79	ND	0.996	02/08/12	02/09/12	
Zinc	EPA 6010B	12B0317	N/A	160	**970**	0.996	02/08/12	02/09/12	
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: mg/kg dry									
Antimony	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Arsenic	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Beryllium	EPA 6010B	12B0317	N/A	39	ND	0.991	02/08/12	02/09/12	
Cadmium	EPA 6010B	12B0317	N/A	39	ND	0.991	02/08/12	02/09/12	
Chromium	EPA 6010B	12B0317	N/A	160	ND	0.991	02/08/12	02/09/12	
Copper	EPA 6010B	12B0317	N/A	390	**440**	0.991	02/08/12	02/09/12	
Lead	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Mercury	EPA 7471A	12A0596	N/A	7.0	ND	0.899	01/23/12	01/23/12	
Nickel	EPA 6010B	12B0317	N/A	160	ND	0.991	02/08/12	02/09/12	
Selenium	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Silver	EPA 6010B	12B0317	N/A	190	ND	0.991	02/08/12	02/09/12	
Thallium	EPA 6010B	12B0317	N/A	390	ND	0.991	02/08/12	02/09/12	
Zinc	EPA 6010B	12B0317	N/A	780	**880**	0.991	02/08/12	02/09/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	**6.3**	1	01/16/12	01/16/12	
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12A0559	N/A	0.10	**1.3**	1	01/16/12	01/16/12	
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12A0842	N/A	6.3	ND	1.03	01/23/12	01/23/12	
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12A0842	N/A	31	ND	0.922	01/23/12	01/23/12	
Sample ID: PVA0887-01 (2012010718 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d
Sample ID: PVA0887-02 (2012010719 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d
Sample ID: PVA0887-03 (2012010720 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d
Sample ID: PVA0887-05 (2012010721 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12A0894	1.7	8.0	ND	1	01/24/12	01/24/12	N1c, N1d

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

Volatile Organic Compounds by EPA Method 8260B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04RE1 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/kg									
Acrolein	SW846 8260B	12A4113	N/A	90.4	ND	4520	01/16/12	01/19/12	N1, D1
Acrylonitrile	SW846 8260B	12A4113	N/A	45.2	ND	4520	01/16/12	01/19/12	N1, D1
2-Chloroethylvinyl ether	SW846 8260B	12A4113	N/A	90.4	ND	4520	01/16/12	01/19/12	N1, D1
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: mg/kg									
Acrolein	SW846 8260B	12A3437	N/A	0.0185	ND	0.923	01/16/12	01/17/12	
Acrylonitrile	SW846 8260B	12A3437	N/A	0.00923	ND	0.923	01/16/12	01/17/12	
2-Chloroethylvinyl ether	SW846 8260B	12A3437	N/A	0.0185	ND	0.923	01/16/12	01/17/12	
Sample ID: PVA0887-04RE1 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: ug/kg									
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*97 %*				
Surrogate: Dibromofluoromethane (70-130%)					*97 %*				
Surrogate: Toluene-d8 (70-130%)					*108 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*108 %*				
Sample ID: PVA0887-08 (2012010723 - Soil)					**Sampled: 01/13/12**				
Reporting Units: ug/kg									
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*98 %*				
Surrogate: Dibromofluoromethane (70-130%)					*94 %*				
Surrogate: Toluene-d8 (70-130%)					*98 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*103 %*				
Sample ID: PVA0887-01 (2012010718 - Water)					**Sampled: 01/13/12**				
Reporting Units: ug/L									
Acrolein	SW846 8260B	12A4741	N/A	50.0	ND	1	01/17/12	01/18/12	
Acrylonitrile	SW846 8260B	12A4741	N/A	10.0	ND	1	01/17/12	01/18/12	
2-Chloroethylvinyl ether	SW846 8260B	12A4741	N/A	10.0	ND	1	01/17/12	01/18/12	
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*103 %*				
Surrogate: Dibromofluoromethane (70-130%)					*108 %*				
Surrogate: Toluene-d8 (70-130%)					*95 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*106 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP VOLATILE ORGANIC COMPOUNDS (EPA 1311/8260B)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
1,1-Dichloroethene	12A0790	N/A	0.10	ND	1	0.7	1/23/2012	1/23/2012	
1,2-Dichloroethane	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	
1,4-Dichlorobenzene	12A0790	N/A	0.10	ND	1	7.5	1/23/2012	1/23/2012	
2-Butanone (MEK)	12A0790	N/A	0.50	ND	1	200.0	1/23/2012	1/23/2012	
Benzene	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	
Carbon tetrachloride	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	L3
Chlorobenzene	12A0790	N/A	0.10	ND	1	100.0	1/23/2012	1/23/2012	
Chloroform	12A0790	N/A	0.10	ND	1	6.0	1/23/2012	1/23/2012	
Tetrachloroethene	12A0790	N/A	0.10	ND	1	0.7	1/23/2012	1/23/2012	
Trichloroethene	12A0790	N/A	0.10	ND	1	0.5	1/23/2012	1/23/2012	
Vinyl chloride	12A0790	N/A	0.10	ND	1	0.2	1/23/2012	1/23/2012	
Surrogate: 4-Bromofluorobenzene (70-130%)				*88 %*					
Surrogate: Dibromofluoromethane (70-130%)				*95 %*					
Surrogate: Toluene-d8 (70-130%)				*91 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP SEMI-VOLATILE ORGANIC COMPOUNDS (EPA 1311/8270C)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
1,4-Dichlorobenzene	12A0752	N/A	0.10	ND	1	7.5	1/20/2012	1/23/2012	
2,4,5-Trichlorophenol	12A0752	N/A	0.20	ND	1	400.0	1/20/2012	1/23/2012	
2,4,6-Trichlorophenol	12A0752	N/A	0.20	ND	1	2.0	1/20/2012	1/23/2012	
2,4-Dinitrotoluene	12A0752	N/A	0.050	ND	1	0.13	1/20/2012	1/23/2012	
2-Methylphenol	12A0752	N/A	0.10	ND	1	NA	1/20/2012	1/23/2012	
3&4-Methylphenol	12A0752	N/A	0.10	**0.11**	1	NA	1/20/2012	1/23/2012	
Hexachlorobenzene	12A0752	N/A	0.050	ND	1	0.13	1/20/2012	1/23/2012	
Hexachlorobutadiene	12A0752	N/A	0.10	ND	1	0.5	1/20/2012	1/23/2012	
Hexachloroethane	12A0752	N/A	0.10	ND	1	3.0	1/20/2012	1/23/2012	
Nitrobenzene	12A0752	N/A	0.10	ND	1	2.0	1/20/2012	1/23/2012	
Pentachlorophenol	12A0752	N/A	0.25	ND	1	100.0	1/20/2012	1/23/2012	
Pyridine	12A0752	N/A	0.10	ND	1	5.0	1/20/2012	1/23/2012	
Surrogate: 2,4,6-Tribromophenol (35-100%)				*53 %*					
Surrogate: 2-Fluorobiphenyl (20-90%)				*40 %*					
Surrogate: 2-Fluorophenol (35-75%)				*35 %*					
Surrogate: 4-Terphenyl-d14 (10-60%)				*60 %*					
Surrogate: Nitrobenzene-d5 (40-95%)				*57 %*					
Surrogate: Phenol-d6 (25-60%)				*29 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP ORGANOCHLORINE PESTICIDES (EPA 1311/8081A)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
Chlordane	12A0753	N/A	0.025	ND	1	0.03	1/20/2012	1/23/2012	
Endrin	12A0753	N/A	0.0025	ND	1	0.02	1/20/2012	1/23/2012	
gamma-BHC (Lindane)	12A0753	N/A	0.0025	ND	1	0.4	1/20/2012	1/23/2012	
Heptachlor	12A0753	N/A	0.0025	ND	1	0.008	1/20/2012	1/23/2012	
Heptachlor epoxide	12A0753	N/A	0.0025	ND	1	0.008	1/20/2012	1/23/2012	
Methoxychlor	12A0753	N/A	0.0050	ND	1	10.0	1/20/2012	1/23/2012	
Toxaphene	12A0753	N/A	0.050	ND	1	0.5	1/20/2012	1/23/2012	
Surrogate: Decachlorobiphenyl (25-130%)				*86 %*					
Surrogate: Tetrachloro-m-xylene (10-100%)				*74 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP METALS

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: mg/l									
Arsenic	12A0638	N/A	0.50	ND	1	5.0	1/18/2012	1/19/2012	
Barium	12A0638	N/A	10	ND	1	100.0	1/18/2012	1/19/2012	
Cadmium	12A0638	N/A	0.25	ND	1	1.0	1/18/2012	1/19/2012	
Chromium	12A0638	N/A	0.50	ND	1	5.0	1/18/2012	1/19/2012	
Lead	12A0638	N/A	0.50	ND	1	5.0	1/18/2012	1/19/2012	
Mercury	12A0854	N/A	0.00050	ND	1	0.2	1/24/2012	1/24/2012	
Selenium	12A0638	N/A	0.25	ND	1	1.0	1/18/2012	1/19/2012	
Silver	12A0638	N/A	0.25	ND	1	5.0	1/18/2012	1/19/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22
Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

TCLP EXTRACTION

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVA0887-04 (2012010727 - Soil)					**Sampled: 01/12/12**				
Reporting Units: None									
TCLP Extraction	12A0593	N/A	1.00	ND	1	NA	1/17/2012	1/18/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: 12-25353 Sample Group #22

Report Number: PVA0887

Sampled: 01/12/12-01/13/12
Received: 01/13/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: 2012010727 (PVA0887-04) - Soil					
EPA 8260B	2	01/12/2012 22:00	01/13/2012 14:29	01/14/2012 10:00	01/21/2012 01:52
Sample ID: 2012010723 (PVA0887-08) - Soil					
EPA 8260B	2	01/13/2012 06:00	01/13/2012 14:29	01/14/2012 10:02	01/21/2012 02:24

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012011022

SITE & LOCATION: Avra Valley RWRF Wet Haul Sludge (Discrete)

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: SRF WRF Section

SAMPLE END DATE: 1-19-2012 (MM / DD / YYYY)

SAMPLE END TIME: 0819 (24 Hour Clock)

SAMPLER: MACCAMERON (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ☐ AZPDES ☐ Reuse ■ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total	☐	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	■	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
Other	☐	☐
Other	☐	☐
Other	☐	☐
Other	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:

# of Bottles Delivered: 1 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
Sample Refrigerator	Sample Refrigerator	1-19-2012	0819
Sample Refrigerator	Steven Garcia	1-19-12	1025
Steven Garcia	[illegible]	01-19-12	1109
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	0	°C
Initials:	GOS	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Ca, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Ca, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2012011318

SITE & LOCATION: Avra Valley RWRF Wet Haul Sludge (Discrete)

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SAMPLE END DATE: 1-25-2012 (MM / DD / YYYY)

SAMPLE END TIME: 0809 (24 Hour Clock)

SUBMITTER: SRF WRF Section

SAMPLER: MACCAMERON (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ☐ AZPDES ☐ Reuse ■ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	■	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
Other	☐	☐
Other	☐	☐
Other	☐	☐
Other	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:

# of Bottles Delivered: 1 GCJ

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	4	°C
Initials:	GCJ	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

Chain of Custody Record (Signatures Only)

Sample Refrigerator 1-25-2012 0816

Relinquished by	Received by	Date	Time (24 Hour Clock)
Sample Refrigerator	Steven Garcia	1-25-12	1015
Steven Garcia		01-25-12	1100

* *Sb, As, Be, Ca, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Ca, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

SECTION 7

2012 PREPARER FORM
AZPDES NO. AZ0024937

GREEN VALLEY BNROD

PREPARER FORM

AZPDES NO. AZ0024937

ANNUAL BIOSOLIDS REPORT 2012

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Date signed =date(mm/dd/year)	NPDES/AZPDES Permit#	APP #	Facility Name	Contact First Name	Contact Last Name	Contact Email	Title	FTE Residents served	Preparer or Applicator (P/A/AP)	Street or P.O. Box #	Street Name or "P.O. Box"
2/14/2013	24937	100629	Pima County Green Valley WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	20723	P	3035	W. El Camino del Cerro
										2201	N. Nogales Hwy

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/12	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/12	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200									
Tucson	85735	5204436170	Y	300							

Dry Tons stored 01/01/11	Dry Tons in, from Daily Flow	Dry Tons Sludge Received	From Facility (Name)	Dry Tons Sludge sent away	To Facilty (Name)	Mark "S" if reporting Short, NOT Metric Tons	Dry Tons Additions to Sludge	Received / Sent Away Hauler	Hauler Phone		Follow Up
100	366										

2012 Biosolids or Sewage Sludge Annual Report

ADEQ Arizona Department of Environmental Quality

Mail signed printout to: Robert Phalen, ADEQ Biosolids Coordinator
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: biosolids@azdeq.gov

Disposition	Dry Tons out, weighed	Class (A/B/N)	Alternative #	VAR #	Fecal C/ Salm. (F/S)	To (Recipient Name)	Hauler Name	Hauler Phone	Application Site
Surface Unit									
Surface Unit									
Landfill	360	B	2	7		Pima County Solid Waste Management	Pima County Truck	5205498195	Sahuarita Landfill - Pima
Landfill									
Landfill									
Composting									
Composting									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									
Land Apply									

I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

SECTION 8

GREEN VALLEY BNROD
AZPDES NO. AZ0024937

SAMPLING AND ANALYSES

PRIORITY POLLUTANTS

TCLP

HAZARDOUSNESS

ANNUAL BIOSOLIDS REPORT 2012

PIMA COUNTY
REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PIMA COUNTY, ARIZONA

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 02/01/2013
Laboratory License: AZO159

Sample Analysis Report

Green Valley WRF

November 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A Forster

02/08/13
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Sample Qualifiers

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Sample Qualifiers
BNROD-MLSS-Process Control	1211068-06	Water	11/7/2012 07:20:00	11/7/2012 11:34:00	Q6
BNROD-North Aerobic Digester Sludge	1211068-05	Water	11/7/2012 07:55:00	11/7/2012 11:34:00	Q6
BNROD-Raw Influent-Process Control	1211068-04	Water	11/7/2012 08:00:00	11/7/2012 11:34:00	Q6
BNROD-Final Effluent-Process Control	1211068-03	Water	11/7/2012 08:00:00	11/7/2012 11:34:00	Q6
Discharge from BNROD	1211068-02	Water	11/7/2012 09:27:00	11/7/2012 11:34:00	Q6
BNROD-Biosolids from drying bed #5 - East	1211067-01	Biosolids	11/7/2012 08:23:00	11/7/2012 11:34:00	Q6

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
Box 5 (25000-0550)											
1211139-01	D	Biochemical Oxygen Demand	11/14/12 9:45	SM 5210B	11/20/12 7:03	**85.6**	mg/L		2.00		JGD
1211139-01	D	Total Suspended Solids	11/14/12 9:45	SM 2540D	11/15/12 14:21	**34.0**	mg/L		2.50	R8	SRM
Effluent (25000-0950)											
1211139-02	C	Biochemical Oxygen Demand	11/14/12 8:00	SM 5210B	11/20/12 7:03	**2.10**	mg/L		2.00		JGD
1211139-02	C	Total Suspended Solids	11/14/12 8:00	SM 2540D	11/15/12 14:21	**4.80**	mg/L		2.50	R8	SRM
1211139-03	D	Ammonia	11/14/12 9:45	EPA 350.1	11/19/12 11:40	**ND**	mg/L	0.20	0.50		AMK
1211139-03	D	Nitrate/Nitrite	11/14/12 9:45	EPA 353.2	11/20/12 13:58	**1.0**	mg/L	0.03	0.20		KKH
1211139-03	D	Total Kjeldahl Nitrogen	11/14/12 9:45	EPA 351.2	11/16/12 12:46	**1.48**	mg/L	0.38	0.80		AMK
1211139-03	D	Nitrogen Total Water	11/14/12 9:45	Calculated	11/20/12 13:58	**2.51**	mg/L	0.38	0.80		AMK
1211139-03RE	D	Orthophosphate	11/14/12 9:45	EPA 365.1	11/14/12 15:08	**3.78**	mg/L	0.02	0.50		AMK
BNROD-Raw Influent-Process Control (25000-1905)											
1211068-04	C	Alkalinity Total	11/07/12 8:00	SM 2320B	11/7/12 14:30	**283**	mg/L	2.0	20.00		SRM
1211068-04	C	Ammonia	11/07/12 8:00	EPA 350.1	11/13/12 13:47	**30.6**	mg/L	0.20	2.00	D2	AMK
1211068-04	C	Bicarbonate Alkalinity	11/07/12 8:00	SM 2320B	11/7/12 14:30	**283**	mg/L	2.0	20.00		SRM
1211068-04	C	Biochemical Oxygen Demand	11/07/12 8:00	SM 5210B	11/13/12 7:34	**225**	mg/L		2.00		ETD
1211068-04	C	Carbonate Alkalinity	11/07/12 8:00	SM 2320B	11/7/12 14:30	**ND**	mg/L	2.0	20.00		SRM
1211068-04	C	Nitrate/Nitrite	11/07/12 8:00	EPA 353.2	11/15/12 15:08	**0.8**	mg/L	0.03	0.20		MGA
1211068-04	C	Total Kjeldahl Nitrogen	11/07/12 8:00	EPA 351.2	11/16/12 12:24	**48.4**	mg/L	0.38	1.60	D2	AMK
1211068-04	C	Nitrogen Total Water	11/07/12 8:00	Calculated	11/16/12 12:24	**49.2**	mg/L	0.38	1.60		AMK
1211068-04	C	Total Suspended Solids	11/07/12 8:00	SM 2540D	11/8/12 12:20	**394**	mg/L		2.50		JGD
1211139-04	C	Alkalinity Total	11/14/12 8:00	SM 2320B	11/16/12 9:54	**292**	mg/L	2.0	20.00		SJD
1211139-04	C	Ammonia	11/14/12 8:00	EPA 350.1	11/19/12 11:42	**31.5**	mg/L	0.20	2.00	D2	AMK
1211139-04	C	Bicarbonate Alkalinity	11/14/12 8:00	SM 2320B	11/16/12 9:54	**292**	mg/L	2.0	20.00		SJD
1211139-04	C	Biochemical Oxygen Demand	11/14/12 8:00	SM 5210B	11/20/12 7:03	**257**	mg/L		2.00		JGD
1211139-04	C	Carbonate Alkalinity	11/14/12 8:00	SM 2320B	11/16/12 9:54	**ND**	mg/L	2.0	20.00		SJD
1211139-04	C	Nitrate/Nitrite	11/14/12 8:00	EPA 353.2	11/20/12 14:08	**0.7**	mg/L	0.03	0.20		KKH
1211139-04	C	Total Kjeldahl Nitrogen	11/14/12 8:00	EPA 351.2	11/16/12 12:47	**44.6**	mg/L	0.38	1.60	D2	AMK
1211139-04	C	Nitrogen Total Water	11/14/12 8:00	Calculated	11/20/12 14:08	**45.3**	mg/L	0.38	1.60		AMK
1211139-04	C	Total Suspended Solids	11/14/12 8:00	SM 2540D	11/15/12 14:21	**280**	mg/L		2.50	R8	SRM
Discharge from BNROD (25000-1921)											
1211068-01	D	E. Coli	11/07/12 9:27	SM 9223B	11/8/12 11:53	**ND**	MPN/100 mL		1.00		JVR
1211068-02	D	Ammonia	11/07/12 9:27	SM4500-NH3-D	11/9/12 10:02	**0.79**	mg/L	0.02	0.50	B4	AMK
1211068-02	D	Nitrate/Nitrite	11/07/12 9:27	EPA 353.2	11/20/12 13:54	**1.1**	mg/L	0.03	0.20		KKH
1211068-02	D	Total Kjeldahl Nitrogen	11/07/12 9:27	EPA 351.2	11/16/12 12:22	**2.60**	mg/L	0.38	0.80		AMK
1211068-02	D	Nitrogen Total Water	11/07/12 9:27	Calculated	11/20/12 13:54	**3.69**	mg/L	0.38	0.80		AMK
1211255-01	D	Mercury	11/28/12 8:00	EPA 245.1	12/14/12 11:58	**ND**	ug/L	0.119	0.20		DDO

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst	
BNROD-Final Effluent-AZPDES-compliance data (25000-1923)												
1211152-01	C	Biochemical Oxygen Demand	11/15/12 9:30	SM 5210B	11/21/12 7:09	**2.90**	mg/L		2.00		JGD	
1211152-01	C	Mercury	11/15/12 9:30	1631E	11/20/12 14:30	**0.00099**	ug/L		0.00050		VLC	*
1211152-01	C	Nitrate/Nitrite	11/15/12 9:30	EPA 353.2	11/20/12 14:09	**0.9**	mg/L	0.03	0.20		KKH	
1211152-01	C	Total Kjeldahl Nitrogen	11/15/12 9:30	EPA 351.2	12/6/12 11:40	**1.52**	mg/L	0.38	0.80		AMK	
1211152-01	C	Nitrogen Total Water	11/15/12 9:30	Calculated	12/6/12 11:40	**2.42**	mg/L	0.38	0.80		AMK	
1211152-01	C	Phosphorus	11/15/12 9:30	EPA 365.1	11/26/12 15:03	**3.06**	mg/L	0.06	0.50		MGA	
1211152-01	C	Total Suspended Solids	11/15/12 9:30	SM 2540D	11/16/12 13:11	**4.40**	mg/L		2.50		JKS	
Analysis performed by TestAmerica Contract Laboratory. See Attached report for official lab results.												
1211152-01RE	C	Total Dissolved Solids	11/15/12 9:30	SM 2540C	11/19/12 13:29	**790**	mg/L		10.00		SJD	
1211152-02	D	Ammonia	11/15/12 9:20	SM4500-NH3-D	11/30/12 12:10	**0.17**	mg/L	0.02	0.50	B4, J	AMK	
1211152-02	D	Cyanide	11/15/12 9:20	SM4500-CN-E	11/21/12 16:07	**1.22**	ug/L	1.10	5.00	J	MGA	
1211152-02	D	E. Coli	11/15/12 9:20	SM 9223B	11/16/12 12:40	**ND**	MPN/100 mL		1.00		JAH	
1211152-02	D	Dissolved Oxygen	11/15/12 9:20	SM4500 O G	11/15/12 9:20	**5.0**	mg/L		0.10		SMPLR	
1211152-02	D	Temperature	11/15/12 9:20	SM2550B	11/15/12 9:20	**20.9**	°C		0.01		SMPLR	
1211152-02	D	Oil & Grease	11/15/12 9:20	EPA 1664A	11/27/12 13:38	**1.41**	mg/L	0.83	4.71	J	EVS	
1211152-02	D	pH	11/15/12 9:20	SM4500 H B	11/15/12 9:20	**7.26**	pH Units				SMPLR	
1211152-02	D	Temp at time of pH, °C	11/15/12 9:20	SM4500 H B	11/15/12 9:20	**20.6**	°C				SMPLR	
BNROD-Final Effluent-Process Control (25000-1925)												
1211068-03	C	Alkalinity Total	11/07/12 8:00	SM 2320B	11/7/12 14:30	**182**	mg/L	2.0	20.00		SRM	
1211068-03	C	Ammonia	11/07/12 8:00	EPA 350.1	11/13/12 13:36	**0.46**	mg/L	0.20	0.50	J	AMK	
1211068-03	C	Bicarbonate Alkalinity	11/07/12 8:00	SM 2320B	11/7/12 14:30	**182**	mg/L	2.0	20.00		SRM	
1211068-03	C	Biochemical Oxygen Demand	11/07/12 8:00	SM 5210B	11/13/12 7:34	**6.50**	mg/L		2.00		ETD	
1211068-03	C	Carbonate Alkalinity	11/07/12 8:00	SM 2320B	11/7/12 14:30	**ND**	mg/L	2.0	20.00		SRM	
1211068-03	C	Nitrate/Nitrite	11/07/12 8:00	EPA 353.2	11/20/12 13:55	**2.8**	mg/L	0.03	0.20		KKH	
1211068-03	C	Total Kjeldahl Nitrogen	11/07/12 8:00	EPA 351.2	11/16/12 12:23	**2.42**	mg/L	0.38	0.80		AMK	
1211068-03	C	Nitrogen Total Water	11/07/12 8:00	Calculated	11/20/12 13:55	**5.26**	mg/L	0.38	0.80		AMK	
1211068-03	C	Total Suspended Solids	11/07/12 8:00	SM 2540D	11/8/12 12:20	**7.06**	mg/L		2.50		JGD	
BNROD-MLSS-Process Control (25000-1940)												
1211068-06	D	Total Suspended Solids	11/07/12 7:20	SM 2540D	11/8/12 12:20	**1980**	mg/L		2.50		JGD	
1211068-06	D	Total Volatile Suspended Solids	11/07/12 7:20	EPA 160.4	11/8/12 16:04	**1680**	mg/L		2.50		JGD	
BNROD-North Aerobic Digester Sludge (25000-1950)												
1211068-05	D	% Solids	11/07/12 7:55	SM 2540G	11/8/12 17:46	**2.13**	%		0.01	R8	SRM	
1211068-05	D	% Solids, Total Volatile	11/07/12 7:55	SM 2540G	11/8/12 17:46	**76.9**	%		0.01	R8, T6	SRM	
BNROD-Biosolids from drying bed #5 - East (25000-1971)												
1211067-01	C	Percent Solids	11/07/12 8:23	SM 2540G	11/13/12 21:07	**86**	% by Weight		0.10		BAM	*
1211067-01	C	Arsenic	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**ND**	mg/kg dry	4.64	12.09		MLB	
1211067-01	C	Cadmium	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**2.23**	mg/kg dry	0.208	4.84	J	MLB	
1211067-01	C	Chromium	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**23.0**	mg/kg dry	0.371	12.09		MLB	
1211067-01	C	Copper	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**543**	mg/kg dry	0.670	12.09		MLB	
1211067-01	C	Cyanide	11/07/12 8:23	SW 9010C/9014	11/15/12 16:15	**2.7**	mg/kg dry		0.46		TS	*
1211067-01	C	Lead	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**26.0**	mg/kg dry	4.28	12.09		MLB	
1211067-01	C	Mercury	11/07/12 8:23	EPA 7471A	11/26/12 10:36	**2.02**	mg/kg dry	0.0304	0.06		KKH	

Analysis performed by TestAmerica Contract Laboratory. See Attached report for official lab results.

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1211067-01	C	Molybdenum	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**18.9**	mg/kg dry	0.594	4.84		MLB
1211067-01	C	Nickel	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**15.0**	mg/kg dry	2.75	12.09		MLB
1211067-01	C	Nitrate/Nitrite	11/07/12 8:23	EPA 353.2	11/20/12 13:53	**228**	mg/kg dry	0.4	2.29		KKH
1211067-01	C	Total Kjeldahl Nitrogen	11/07/12 8:23	EPA 351.2	11/16/12 11:33	**54700**	mg/kg dry	64.1	2,698.68	D2	AMK
1211067-01	C	Nitrogen Total Biosolids	11/07/12 8:23	Calculated	11/20/12 13:53	**54900**	mg/kg dry	64.1	2,700.00		AMK
1211067-01	C	Selenium	11/07/12 8:23	EPA 6010B	12/11/12 15:25	**7.61**	mg/kg dry	4.89	12.09	J	MLB
1211067-01	C	Silver	11/07/12 8:23	EPA 6010B	12/11/12 15:25	**7.47**	mg/kg dry	0.402	1.21		MLB
1211067-01	C	% Solids	11/07/12 8:23	SM 2540G	11/8/12 17:46	**87.2**	%		0.01	R8	SRM
1211067-01	C	Zinc	11/07/12 8:23	EPA 6010B	12/11/12 13:37	**831**	mg/kg dry	1.35	12.09		MLB
1211203-01	C	2,3,7,8-TCDD - Dioxin Scan	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	ug/kg dry		3.31		SJM
1211203-01	C	1,2,4-Trichlorobenzene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	1,2-Diphenylhydrazine	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	2,3-Dichloroaniline	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	2,4,6-Trichlorophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	2,4-Dichlorophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	2,4-Dimethylphenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.003	0.69	D1, D7	SJM
1211203-01	C	2,4-Dinitrophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.009	1.15	D1, D7	SJM
1211203-01	C	2,4-Dinitrotoluene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	2,6-Dinitrotoluene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	2-Chloronaphthalene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	2-Chlorophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	2-Methyl-4,6-dinitrophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.004	0.69	D1, D7	SJM
1211203-01	C	2-Methylphenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	2-Nitrophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.69	D1, D7	SJM
1211203-01	C	3,3-Dichlorobenzidine	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	1.73	D1, D7	SJM
1211203-01	C	4-Bromophenyl phenyl ether	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	4-Chloro-3-methylphenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	4-Chlorophenyl phenyl ether	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	4-Methylphenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.003	0.69	D1, D7	SJM
1211203-01	C	4-Nitrophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.005	0.69	D1, D7	SJM
1211203-01	C	Acenaphthene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Acenaphthylene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.0008	0.23	D1, D7	SJM
1211203-01	C	Anthracene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Benzidine	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.02	4.03	D1, D7	SJM
1211203-01	C	Benzo[a]anthracene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Benzo[a]pyrene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Benzo[b]fluoranthene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Benzo[ghi]perylene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Benzo[k]fluoranthene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.69	D1, D7	SJM
1211203-01	C	bis(2-chloroethoxy)methane	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	bis(2-chloroethyl)ether	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	bis(2-chloroisopropyl)ether	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	bis(2-ethylhexyl)phthalate	11/21/12 7:28	EPA 625	12/18/12 18:44	**NR**	mg/kg dry	0.003	0.69	N1	SJM
1211203-01	C	Butylbenzylphthalate	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Carbazole	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Chrysene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Dibenzo(a,h)anthracene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Diethyl phthalate	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Dimethyl phthalate	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.0007	0.23	D1, D7	SJM
1211203-01	C	Di-n-butyl phthalate	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	B1, D1, D7	SJM
1211203-01	C	Di-n-octyl phthalate	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Fluoranthene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Fluorene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Hexachlorobenzene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.0008	0.23	D1, D7	SJM

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1211203-01	C	Hexachlorobutadiene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Hexachlorocyclopentadiene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.003	0.69	D1, D7	SJM
1211203-01	C	Hexachloroethane	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Indeno(1,2,3-cd)pyrene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.69	D1, D7	SJM
1211203-01	C	Isophorone	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Naphthalene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	n-Decane	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Nitrobenzene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.003	0.69	D1, D7	SJM
1211203-01	C	N-Nitrosodimethylamine	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.004	0.69	D1, D7	SJM
1211203-01	C	N-Nitroso-di-n-propylamine	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	N-Nitrosodiphenylamine	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	n-Octadecane	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.002	0.23	D1, D7	SJM
1211203-01	C	Pentachlorophenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.003	0.69	D1, D7	SJM
1211203-01	C	Phenanthrene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D1, D7	SJM
1211203-01	C	Phenol	11/21/12 7:28	EPA 625	12/18/12 18:44	**0.96**	mg/kg dry	0.002	0.69	D1, D7, J	SJM
1211203-01	C	Pyrene	11/21/12 7:28	EPA 625	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.23	D7, D1	SJM
1211203-01	C	1,2-Diphenylhydrazine	11/21/12 7:28	EPA 8270C	12/18/12 18:44	**ND**	mg/kg dry	0.001	0.26		SJM
1211203-01	C	% Solids	11/21/12 7:28	SM 2540G	11/23/12 11:09	**86.9**	%		0.01		JGD

Qualifier Definitions

B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at or above method acceptance criteria.
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
D7	Minimum Reporting Limit adjusted to reflect sample dilution.
J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.
N1	See case narrative.
Q6	Sample was received above recommended temperature.
R8	Sample RPD exceeded the method acceptance limit.
T6	The reported result cannot be used for compliance purposes.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

1211203-01
Bis(2-ethylhexyl)phthalate was not reported due to proven lab contamination.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1211067-01

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 11/07/2012 (MM / DD / YYYY)

SAMPLE END TIME: 0823 (24 Hour Clock)

SAMPLER: Toms (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total contract	☐	■
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total ½ contract	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. CN and TJ sent to Test America QUARTERLY SAMPLES GOS 11-07-12 DO# 13-15742

# of Bottles Delivered: 5 JS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
Shelli Toms	Refridge	11.7.12	@ 0826
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Refridge	Steven Garcia	11-7-12	1042
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Steven Garcia		11-7-12	1134
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		11/7/12	13:34
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

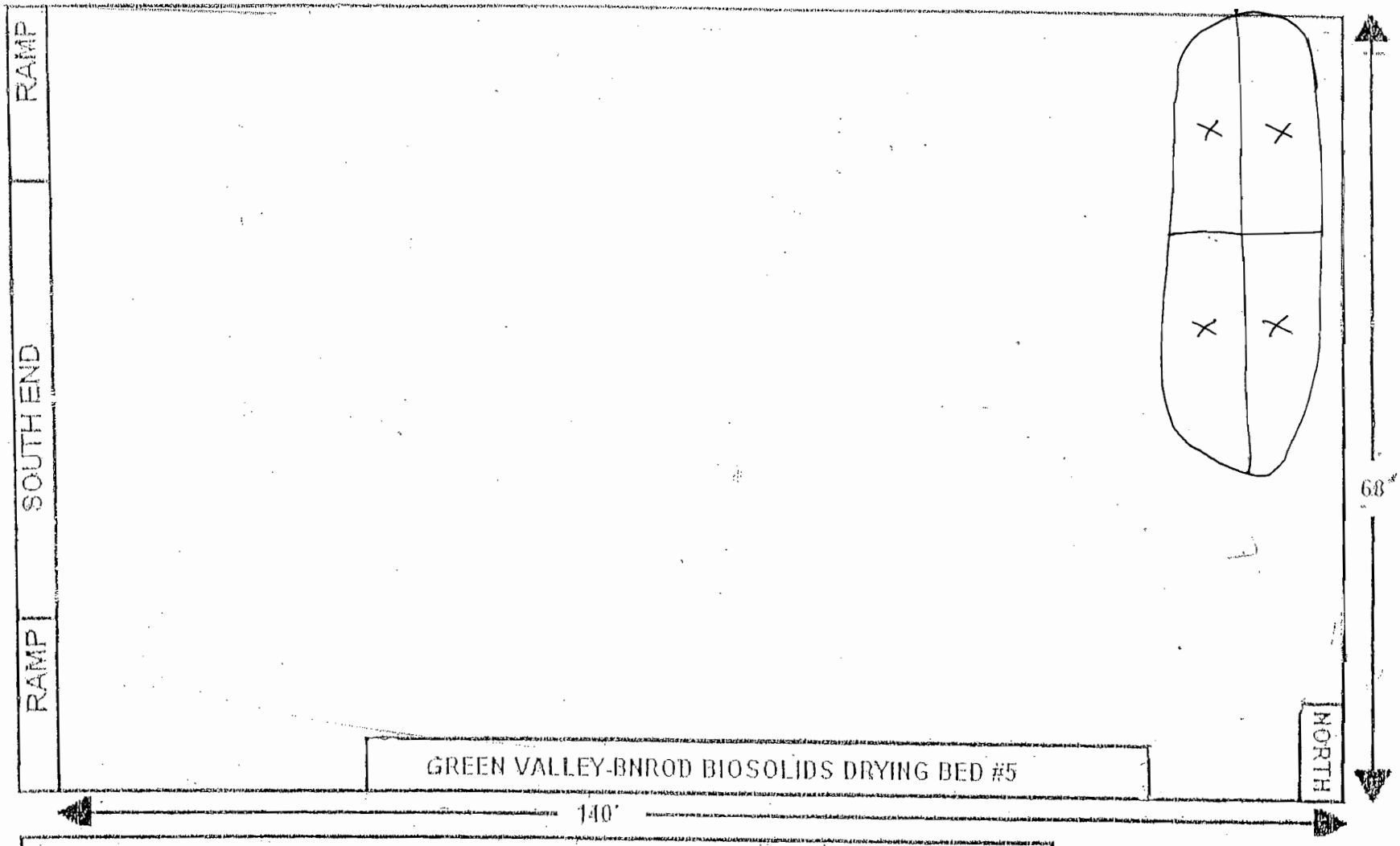
Sample Integrity/Preservation:

Temperature:	7	°C
Initials:	JS	
Non-Preserved	5	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	✓	☐	☐
Sample labels match Chain of Custody?	✓	☐	☐
Correct number of samples were delivered?	✓	☐	☐
Custody seals intact?	☐	☐	✓
Within holding time?	✓	☐	☐
Sufficient sample volume for analysis?	✓	☐	☐
Samples are in proper containers?	✓	☐	✓
Sample containers damaged/leaking/frozen?	☐	✓	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	✓
Received from a refrigerator?	☐	✓	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

1211067-01



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER DATE: TIME:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: GV biosolids, DO# 13-15742

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: Shelli Toms

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Cyanide, total mg/kg	Total solids % Tox mg/kg								Special Instructions
Green Valley drying bed #5 E	BS	HDPE	2	11-07-12	0823	none	1	1								composite
25000-1971 1211067-01																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for Shelli Toms	11-07-12 1334		11/7/12 13:34	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page _____ of _____

Client Name/Address:

Project/PO Number:

Project Manager:

Phone Number:

Sampler:

Fax Number:

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives										Special Instructions

Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:

Turnaround Time: (Check)
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal _____

Sample Integrity: (Check)
intact _____ on ice _____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1211203-01

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE) @ 12-28-12

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: 11-21-12 (MM / DD / YYYY) @ 12-28-12 SAMPLE START TIME: 0726 (24 Hour Clock) @ 12-28-12

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 11-21-12 (MM / DD / YYYY) SAMPLE END TIME: 0728 (24 Hour Clock)

SAMPLER: TOMS (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	■
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	■
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. No map included. GOS 11-21-12
QUARTERLY SAMPLES

# of Bottles Delivered: 3 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
Shelli Toms	Refridge	11-21-12	@ 0734
Relinquished by:	**Received by:**	**Date:**	**Time: (24 Hour Clock)**
Refridge	Steven Garcia	11-21-12	0932
Relinquished by:	**Received by:**	**Date:**	**Time: (24 Hour Clock)**
Steven Garcia		11-21-12	1116
Relinquished by:	**Received by:**	**Date:**	**Time: (24 Hour Clock)**
Relinquished by:	**Received by:**	**Date:**	**Time: (24 Hour Clock)**

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	3	°C
Initials:	GOS	
Non-Preserved	3	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: GV Biosolids

Sampled: 11/07/12
Received: 11/08/12
Issued: 11/20/12 12:21

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVK0662-01	1211067-01	Soil

SAMPLE RECEIPT:	Samples were received intact, at 4°C, on ice and with chain of custody documentation.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV Biosolids
Report Number: PVK0662

Sampled: 11/07/12
Received: 11/08/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVK0662-01 (1211067-01 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12K0512	0.10	**86**	1	11/13/2012	11/13/2012	
Sample ID: PVK0662-01 (1211067-01 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	12K0614	0.46	**2.7**	0.999	11/15/2012	11/15/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV Biosolids
Report Number: PVK0662

Sampled: 11/07/12
Received: 11/08/12

DATA QUALIFIERS AND DEFINITIONS

M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV Biosolids

Report Number: PVK0662

Sampled: 11/07/12
Received: 11/08/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
SM 2540G	Soil		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: GV biosolids, PO# 13-15742

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: Shelli Toms

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Cyanide, total mg/kg	Total solids % for mg/kg								Special Instructions
Green Valley drying bed #5E	BS	HDPE	2	11-07-12	0823	none	1	1			PUK0662-01					composite
25000-1971 1211067-01																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for Shelli Toms	11-07-12 1334		11/7/12 13:34	same day ___ 72 hours ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ___ 5 days ___
	11/7/12 15:00			48 hours ___ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
			11/8/12 7:45	intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

3.7°C

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 12/10/2012
Laboratory License: AZO159

Sample Analysis Report

Green Valley WRF

September 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A Escalera

12/11/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1209115-01	C	Nitrogen Total Water	09/12/12 8:00	Calculated	9/18/12 12:40	**1.18**	mg/L	0.38	0.80		AMK
1209115-01	C	Ammonia	09/12/12 8:00	EPA 350.1	9/17/12 12:24	**ND**	mg/L	0.20	0.50		AMK
1209115-01	C	Total Kjeldahl Nitrogen	09/12/12 8:00	EPA 351.2	9/14/12 14:40	**0.59**	mg/L	0.38	0.80	J	AMK
1209115-01	C	Nitrate/Nitrite	09/12/12 8:00	EPA 353.2	9/18/12 12:40	**0.6**	mg/L	0.03	0.20		MGA
1209115-01	C	Alkalinity Total	09/12/12 8:00	SM 2320B	9/14/12 16:57	**192**	mg/L	2.0	20.00		ETD
1209115-01	C	Bicarbonate Alkalinity	09/12/12 8:00	SM 2320B	9/14/12 16:57	**192**	mg/L	2.0	20.00		ETD
1209115-01	C	Carbonate Alkalinity	09/12/12 8:00	SM 2320B	9/14/12 16:57	**ND**	mg/L	2.0	20.00		ETD
1209115-01	C	Total Suspended Solids	09/12/12 8:00	SM 2540D	9/13/12 10:36	**ND**	mg/L		2.50		SJD
1209115-01	C	Biochemical Oxygen Demand	09/12/12 8:00	SM 5210B	9/18/12 7:13	**203**	mg/L		2.00		SJD

BNROD-MLSS-Process Control (25000-1940)

1209115-05	D	Total Volatile Suspended Solids	09/12/12 6:36	EPA 160.4	9/13/12 10:36	**1300**	mg/L		2.50		SJD
1209115-05	D	Total Suspended Solids	09/12/12 6:36	SM 2540D	9/13/12 10:36	**1540**	mg/L		2.50		SJD

BNROD-North Aerobic Digester Sludge (25000-1950)

1209115-02	D	% Solids	09/12/12 7:59	SM 2540G	9/13/12 15:41	**1.97**	%		0.01		ETD
1209115-02	D	% Solids, Total Volatile	09/12/12 7:59	SM 2540G	9/13/12 15:41	**76.8**	%		0.01	T6	ETD

BNROD-Biosolids from drying bed #5 - West (25000-1972)

1209267-01	C	Nitrogen Total Biosolids	09/27/12 7:50	Calculated	10/11/12 13:41	**71200**	mg/kg dry	63.2	2,660.00		AMK
1209267-01	C	Ammonia	09/27/12 7:50	EPA 350.1	10/1/12 13:56	**15600**	mg/kg dry	1.44	653.74	D2	AMK
1209267-01	C	Total Kjeldahl Nitrogen	09/27/12 7:50	EPA 351.2	10/11/12 13:41	**71200**	mg/kg dry	63.2	2,660.19	D2	AMK
1209267-01	C	Nitrate/Nitrite	09/27/12 7:50	EPA 353.2	10/3/12 15:34	**ND**	mg/kg dry	0.4	2.61		MGA
1209267-01	C	Arsenic	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**ND**	mg/kg dry	10.2	26.55		MLB
1209267-01	C	Cadmium	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**1.63**	mg/kg dry	0.457	10.62	J	MLB
1209267-01	C	Chromium	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**18.2**	mg/kg dry	0.815	26.55	J	MLB
1209267-01	C	Copper	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**424**	mg/kg dry	1.47	26.55		MLB
1209267-01	C	Lead	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**19.0**	mg/kg dry	9.39	26.55	J	MLB
1209267-01	C	Molybdenum	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**17.1**	mg/kg dry	1.30	10.62		MLB
1209267-01	C	Nickel	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**14.7**	mg/kg dry	6.03	26.55	J	MLB
1209267-01	C	Selenium	09/27/12 7:50	EPA 6010B	10/2/12 12:24	**ND**	mg/kg dry	10.8	26.55		MLB
1209267-01	C	Silver	09/27/12 7:50	EPA 6010B	10/2/12 15:06	**3.48**	mg/kg dry	0.883	2.66		MLB
1209267-01	C	Zinc	09/27/12 7:50	EPA 6010B	10/2/12 15:06	**748**	mg/kg dry	2.96	26.55		MLB
1209267-01	C	Mercury	09/27/12 7:50	EPA 7471A	10/10/12 9:41	**1.60**	mg/kg dry	0.0346	0.07		KKH
1209267-01	C	% Solids	09/27/12 7:50	SM 2540G	9/29/12 14:14	**76.5**	%		0.01		JGD
1209267-01	C	2,3,7,8-TCDD - Dioxin Scan	09/27/12 7:50	EPA 625	10/31/12 10:44	**ND**	ug/kg dry		32.69		SJM
1209267-01	C	1,2,4-Trichlorobenzene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	1,2-Diphenylhydrazine	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D7, D1	SJM
1209267-01	C	2,3-Dichloroaniline	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	2,4,6-Trichlorophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	2,4-Dichlorophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	2,4-Dimethylphenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.003	3.92	D1, D7	SJM
1209267-01	C	2,4-Dinitrophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.009	6.54	D1, D7	SJM
1209267-01	C	2,4-Dinitrotoluene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	2,6-Dinitrotoluene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	2-Chloronaphthalene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	2-Chlorophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	2-Methyl-4,6-dinitrophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.004	3.92	D1, D7, N1	SJM
1209267-01	C	2-Methylphenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1209267-01	C	2-Nitrophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	3.92	D1, D7	SJM
1209267-01	C	3,3'-Dichlorobenzidine	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	9.81	D1, D7	SJM
1209267-01	C	4-Bromophenyl phenyl ether	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	4-Chloro-3-methylphenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	4-Chlorophenyl phenyl ether	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	4-Methylphenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**19.4**	mg/kg dry	0.003	3.92	D1, D7, N1	SJM
1209267-01	C	4-Nitrophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.005	3.92	D1, D7, N1	SJM
1209267-01	C	Acenaphthene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Acenaphthylene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.0008	1.31	D1, D7	SJM
1209267-01	C	Anthracene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Benzidine	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.02	22.89	D1, D7, N1	SJM
1209267-01	C	Benzo[a]anthracene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Benzo[a]pyrene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Benzo[b]fluoranthene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Benzo[ghi]perylene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Benzo[k]fluoranthene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	3.92	D1, D7	SJM
1209267-01	C	bis(2-chloroethoxy)methane	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	bis(2-chloroethyl)ether	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	bis(2-chloroisopropyl)ether	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	bis(2-ethylhexyl)phthalate	09/27/12 7:50	EPA 625	10/29/12 18:30	**NR**	mg/kg dry	0.003	3.92	N1	SJM
1209267-01	C	Butylbenzylphthalate	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Carbazole	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Chrysene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Dibenzo(a,h)anthracene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Diethyl phthalate	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Dimethyl phthalate	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.0007	1.31	D1, D7	SJM
1209267-01	C	Di-n-butyl phthalate	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Di-n-octyl phthalate	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Fluoranthene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Fluorene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Hexachlorobenzene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.0008	1.31	D1, D7	SJM
1209267-01	C	Hexachlorobutadiene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Hexachlorocyclopentadiene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.003	3.92	D1, D7, N1	SJM
1209267-01	C	Hexachloroethane	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Indeno(1,2,3-cd)pyrene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	3.92	D1, D7	SJM
1209267-01	C	Isophorone	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Naphthalene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	n-Decane	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7, N1	SJM
1209267-01	C	Nitrobenzene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.003	3.92	D1, D7	SJM
1209267-01	C	N-Nitrosodimethylamine	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.004	3.92	D1, D7	SJM
1209267-01	C	N-Nitroso-di-n-propylamine	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	N-Nitrosodiphenylamine	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	n-Octadecane	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.31	D1, D7	SJM
1209267-01	C	Pentachlorophenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.003	3.92	D1, D7	SJM
1209267-01	C	Phenanthrene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	Phenol	09/27/12 7:50	EPA 625	10/29/12 18:30	**23.0**	mg/kg dry	0.002	3.92	D1, D7	SJM
1209267-01	C	Pyrene	09/27/12 7:50	EPA 625	10/29/12 18:30	**ND**	mg/kg dry	0.001	1.31	D1, D7	SJM
1209267-01	C	1,2-Diphenylhydrazine	09/27/12 7:50	EPA 8270C	10/29/12 18:30	**ND**	mg/kg dry	0.002	1.71	D1, D7	SJM
1209267-01	C	Percent Solids	09/27/12 7:50	SM 2540G	9/28/12 16:05	**78**	% by Weight		0.10		DS *
1209267-01	C	Cyanide	09/27/12 7:50	SW 9010C/9014	10/5/12 17:55	**2.7**	mg/kg dry		0.52		TS *

* Analysis Performed by:TestAmerica Phoenix - See attached contract lab report for official results.

Qualifier Definitions

D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
D7	Minimum Reporting Limit adjusted to reflect sample dilution.
J	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL) but above MDL.
K5	The dilution water D.O. depletion was > 0.2 mg/L.
N1	See case narrative.
NR	Not Reported
T6	The reported result cannot be used for compliance purposes.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

None

1209267-01

This sample was extracted for EPA Method 625 Semi-Volatiles. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

1209267-01

Bis(2-ethylhexyl)phthalate was not reported due to proven lab contamination. BAE 12/4/12

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1209267-01

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (WEST PILE)

SITE-LOCATION NUMBER: 25000-1972 (XXXXX-XXXX)

SAMPLE START DATE: 9-27-12 (MM / DD / YYYY)

SAMPLE START TIME: 0735 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 9-27-12 (MM / DD / YYYY)

SAMPLE END TIME: 0750 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	☐	■			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	■			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	■
Chloride	☐	☐
Cyanide, Total contract	☐	■
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	■
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	■
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	■
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. CN and 1 of 2 TS sent to Test America GCS 09-27-12
QUARTERLY SAMPLES

# of Bottles Delivered: 7 GCS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

DOH 13-10945

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Lab fridge	9-27-12	0805
Relinquished by: Lab fridge	Received by: Steven Garcia	Date: 9-27-12	Time: 0932
Relinquished by: Steven Garcia	Received by: [signature]	Date: 09-27-12	Time: 1135
Relinquished by: [signature]	Received by: [signature]	Date: 9/27/12	Time: 13:11
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

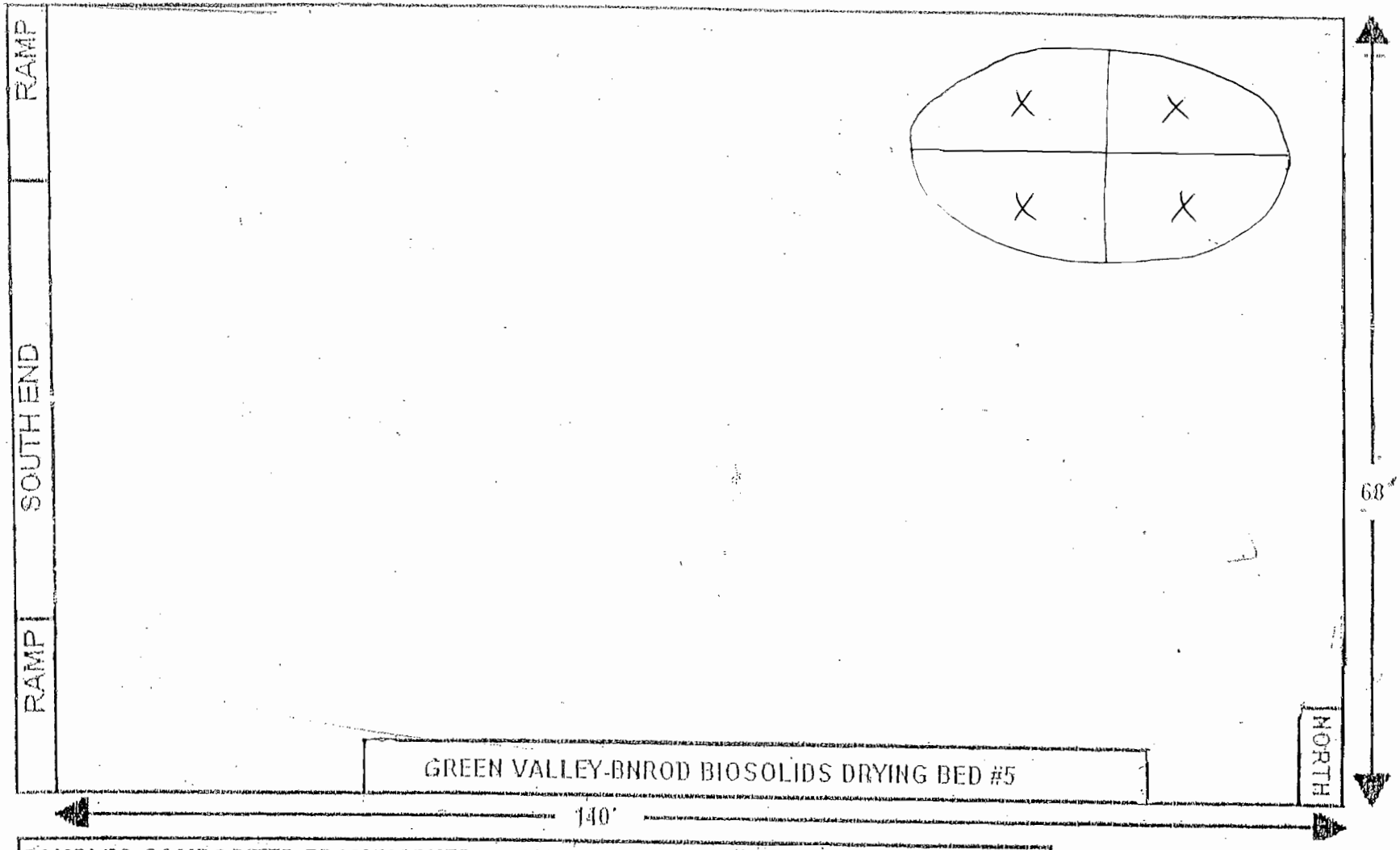
Temperature:	3	°C
Initials:	GCS	
Non-Preserved	7	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:

	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

1209267-01



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER R. ARTZ DATE: 9-27-12 TIME: 0750

WEST PILE

Quarterly Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: Pima County CRAO Lab, 3835 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Hg and CN DO# 13-10945

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required: BS - biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	LL Hg EPA 1631 dissolved unfiltered	LL Hg EPA 1631 dissolved blank	Total Cyanide mg/kg	Total solids for mg/kg						Special Instructions
Ina Rd River SC-06	W	glass vials	1	09-27-12	0845	none	1	1								Discrete - please
20001-9051 1209266-01																filter sample
Ina Rd River SC-12	W	glass vials	1	09-27-12	1005	none	1	1								Discrete - please
20001-9111 1209266-02																filter sample
Green Valley BS bed #5	BS	HDPE	2	09-27-12	0750	none			1	1						Composite
25000-1972 1209267-01																mg/kg please

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
Greg Spence for samplers	09-27-12 1311		9/27/12 13:11	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page _____ of _____

Client Name/Address:

Project/PO Number:

Project Manager:

Phone Number:

Sampler:

Fax Number:

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives										Special Instructions

Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:

Turnaround Time: (Check)
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal _____

Sample Integrity: (Check)
intact _____ on ice _____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Hg and Cn

Sampled: 09/27/12
Received: 09/28/12
Issued: 10/08/12 16:30

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVI1886-01	1209266-01	Water
PVI1886-02	1209266-01 (Blank)	Water
PVI1886-03	1209266-02	Water
PVI1886-04	1209266-02 (Blank)	Water
PVI1886-05	1209267-01	Soil

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Hg and Cn
Report Number: PVI1886

Sampled: 09/27/12
Received: 09/28/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVI1886-05 (1209267-01 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12I1090	0.10	**78**	1	9/28/2012	9/28/2012	
Sample ID: PVI1886-05 (1209267-01 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	12J0264	0.52	**2.7**	1.01	10/5/2012	10/5/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson Arizona 85745-9750, Phone (520) 724-6200

Report Date: 10/12/2012
Laboratory License: AZO159

Sample Analysis Report

Green Valley WRF

June 2012

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier below. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

Notes and Definitions:

See attached

Case Narratives:

See attached

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara Alsobrook

10/10/12
Date

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Sample Qualifiers
Discharge from BNROD	1206035-01	Water	6/5/2012 8:39:00	6/5/2012 11:26:00	
BNROD-Final Effluent-Process Control	1206035-02	Water	6/5/2012 8:00:00	6/5/2012 11:26:00	
Well GV-01-APP	1206038-01	Water	6/5/2012 11:46:00	6/5/2012 12:36:00	
Well GV-02-APP	1206038-02	Water	6/5/2012 10:46:00	6/5/2012 12:36:00	
BNROD-North Aerobic Digester Sludge	1206049-01	Water	6/6/2012 6:52:00	6/6/2012 11:20:00	Q6
BNROD-MLSS-Process Control	1206049-02	Water	6/6/2012 6:38:00	6/6/2012 11:20:00	Q6
BNROD-Raw Influent-Process Control	1206049-03	Water	6/6/2012 8:00:00	6/6/2012 11:20:00	Q6
Discharge from BNROD	1206061-01	Water	6/7/2012 7:53:00	6/7/2012 11:21:00	
Effluent	1206115-01	Water	6/13/2012 8:00:00	6/13/2012 12:08:00	
BNROD-Raw Influent-Process Control	1206115-02	Water	6/13/2012 8:00:00	6/13/2012 12:08:00	
Effluent	1206115-03	Water	6/13/2012 8:35:00	6/13/2012 12:08:00	
Box 5	1206115-04	Water	6/13/2012 8:55:00	6/13/2012 12:08:00	
Discharge from BNROD	1206135-01	Water	6/15/2012 6:30:00	6/15/2012 11:11:00	
BNROD-Biosolids from drying bed #5	1206154-01	Biosolids	6/16/2012 6:38:00	6/16/2012 8:29:00	
BNROD-Biosolids from drying bed #5	1206154-02	Biosolids	6/16/2012 6:38:00	6/16/2012 8:29:00	
Discharge from BNROD	1206196-01	Water	6/22/2012 7:28:00	6/22/2012 11:22:00	
BNROD-Final Effluent-AZPDES-compliance	1206225-01	Water	6/26/2012 9:30:00	6/26/2012 10:46:00	
BNROD-Final Effluent-AZPDES-compliance	1206225-02	Water	6/26/2012 9:15:00	6/26/2012 10:46:00	

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1206225-02	D	E. Coli	06/26/12 9:15	SM 9223B	6/27/12 12:39	**1**	MPN/100 mL		1.00		ETD

BNROD-Final Effluent-Process Control (25000-1925)

1206035-02	C	Ammonia	06/05/12 8:00	EPA 350.1	6/11/12 12:53	**ND**	mg/L	0.10	0.50		AMK
1206035-02	C	Nitrate/Nitrite	06/05/12 8:00	EPA 353.2	6/12/12 11:46	**0.8**	mg/L	0.03	0.20		KKH
1206035-02	C	Total Kjeldahl Nitrogen	06/05/12 8:00	EPA 351.2	6/8/12 16:01	**1.25**	mg/L	0.19	0.80		AMK
1206035-02	C	Nitrogen Total Water	06/05/12 8:00	Calculated	6/12/12 11:46	**2.08**	mg/L	0.19	0.80		AMK
1206035-02	C	Alkalinity Total	06/05/12 8:00	SM 2320B	6/6/12 10:47	**187**	mg/L	2.0	20.00		SJD
1206035-02	C	Bicarbonate Alkalinity	06/05/12 8:00	SM 2320B	6/6/12 10:47	**187**	mg/L	2.0	20.00		SJD
1206035-02	C	Biochemical Oxygen Demand	06/05/12 8:00	SM 5210B	6/11/12 7:51	**3.8**	mg/L		2.00	K5, K8	JGD
1206035-02	C	Carbonate Alkalinity	06/05/12 8:00	SM 2320B	6/6/12 10:47	**ND**	mg/L	2.0	20.00		SJD
1206035-02	C	Total Suspended Solids	06/05/12 8:00	SM 2540D	6/6/12 15:39	**ND**	mg/L		2.50		JAH

BNROD-MLSS-Process Control (25000-1940)

1206049-02	D	Total Suspended Solids	06/06/12 6:38	SM 2540D	6/7/12 14:16	**1560**	mg/L		2.50		JAH
1206049-02	D	Total Volatile Suspended Solids	06/06/12 6:38	EPA 160.4	6/7/12 14:16	**1290**	mg/L		2.50		JAH

BNROD-North Aerobic Digester Sludge (25000-1950)

1206049-01	D	% Solids	06/06/12 6:52	SM 2540G	6/7/12 15:49	**2.27**	%		0.01		AAP
1206049-01	D	% Solids, Total Volatile	06/06/12 6:52	SM 2540G	6/7/12 15:58	**12100**	%		0.01	T6	SJD

BNROD-Biosolids from drying bed #5 (25000-1970)

1206154-01	C	Ammonia	06/16/12 6:38	EPA 350.1	6/18/12 14:04	**10700**	mg/kg dry	1.21	1,098.81	D2	AMK
1206154-01	C	Arsenic	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**6.85**	mg/kg dry	2.68	6.99	J	MLB
1206154-01	C	Cadmium	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**1.24**	mg/kg dry	0.120	2.80	J	MLB
1206154-01	C	Chromium	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**12.4**	mg/kg dry	0.215	6.99		MLB
1206154-01	C	Copper	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**285**	mg/kg dry	0.388	6.99		MLB
1206154-01	C	Lead	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**11.0**	mg/kg dry	2.47	6.99		MLB
1206154-01	C	Mercury	06/16/12 6:38	EPA 7471A	6/27/12 14:38	**1.24**	mg/kg dry	0.0291	0.05		DDO
1206154-01	C	Molybdenum	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**10.2**	mg/kg dry	0.343	2.80		MLB
1206154-01	C	Nickel	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**8.71**	mg/kg dry	1.59	6.99		MLB
1206154-01	C	Nitrate/Nitrite	06/16/12 6:38	EPA 353.2	6/20/12 13:04	**7.6**	mg/kg dry	0.1	0.88		MGA
1206154-01	C	Total Kjeldahl Nitrogen	06/16/12 6:38	EPA 351.2	6/28/12 11:37	**65200**	mg/kg dry	30.8	2,585.43	B4, D2	AMK
1206154-01	C	Nitrogen Total Biosolids	06/16/12 6:38	Calculated	6/28/12 11:37	**65200**	mg/kg dry	30.8	2,580.00		AMK
1206154-01	C	Selenium	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**4.00**	mg/kg dry	2.83	6.99		MLB
1206154-01	C	Silver	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**2.17**	mg/kg dry	0.232	0.70		MLB
1206154-01	C	Zinc	06/16/12 6:38	EPA 6010B	7/13/12 12:02	**423**	mg/kg dry	0.780	6.99		MLB
1206154-01	C	% Solids	06/16/12 6:38	SM 2540G	6/19/12 13:03	**91.0**	%		0.01		JAH
1206154-01	C	2,3,7,8-TCDD - Dioxin Scan	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	ug/kg dry		54.94		SJM

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst
1206154-01	C	1,2,4-Trichlorobenzene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	1,2-Diphenylhydrazine	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	2,3-Dichloroaniline	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	2,4,6-Trichlorophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	2,4-Dichlorophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	2,4-Dimethylphenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.003	0.26		SJM
1206154-01	C	2,4-Dinitrophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.009	0.44		SJM
1206154-01	C	2,4-Dinitrotoluene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	2,6-Dinitrotoluene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	2-Chloronaphthalene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	2-Chlorophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	2-Methyl-4,6-dinitrophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.004	0.26		SJM
1206154-01	C	2-Methylphenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	2-Nitrophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.26		SJM
1206154-01	C	3,3'-Dichlorobenzidine	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.44		SJM
1206154-01	C	4-Bromophenyl phenyl ether	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	4-Chloro-3-methylphenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	4-Chlorophenyl phenyl ether	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	4-Methylphenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**19.9**	mg/kg dry	0.003	0.26		SJM
1206154-01	C	4-Nitrophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.005	0.26		SJM
1206154-01	C	Acenaphthene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Acenaphthylene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.0008	0.09		SJM
1206154-01	C	Anthracene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Benzidine	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.02	1.54		SJM
1206154-01	C	Benzo[a]anthracene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Benzo[a]pyrene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Benzo[b]fluoranthene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Benzo[ghi]perylene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Benzo[k]fluoranthene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.26		SJM
1206154-01	C	bis(2-chloroethoxy)methane	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	bis(2-chloroethyl)ether	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	bis(2-chloroisopropyl)ether	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	bis(2-ethylhexyl)phthalate	06/16/12 6:38	EPA 625	7/20/12 18:02	**0.31**	mg/kg dry	0.003	0.26	J	SJM
1206154-01	C	Butylbenzylphthalate	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Carbazole	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Chrysene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Dibenzo(a,h)anthracene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Diethyl phthalate	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Dimethyl phthalate	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.0007	0.09		SJM
1206154-01	C	Di-n-butyl phthalate	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Di-n-octyl phthalate	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Fluoranthene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Fluorene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Hexachlorobenzene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.0008	0.09		SJM
1206154-01	C	Hexachlorobutadiene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Hexachlorocyclopentadiene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.003	0.26		SJM
1206154-01	C	Hexachloroethane	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Indeno(1,2,3-cd)pyrene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.26		SJM
1206154-01	C	Isophorone	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	Naphthalene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	n-Decane	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	Nitrobenzene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.003	0.26		SJM
1206154-01	C	N-Nitrosodimethylamine	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.004	0.26		SJM
1206154-01	C	N-Nitroso-di-n-propylamine	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM
1206154-01	C	N-Nitrosodiphenylamine	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM
1206154-01	C	n-Octadecane	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.002	0.09		SJM

Lab ID:	Sample Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Sample/Data Qualifiers	Analyst	
1206154-01	C	Pentachlorophenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.003	0.26		SJM	
1206154-01	C	Phenanthrene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM	
1206154-01	C	Phenol	06/16/12 6:38	EPA 625	7/20/12 18:02	**18.9**	mg/kg dry	0.002	0.26		SJM	
1206154-01	C	Pyrene	06/16/12 6:38	EPA 625	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.09		SJM	
1206154-01	C	1,2-Diphenylhydrazine	06/16/12 6:38	EPA 8270C	7/20/12 18:02	**ND**	mg/kg dry	0.001	0.10		SJM	
1206154-01	C	Paint Filter Liquid	06/16/12 6:38	EPA 9095B	6/21/12 8:18	**Pass**	N/A				NJP	
1206154-01	C	Percent Solids	06/16/12 6:38	SM 2540G	6/20/12 13:25	**90**	% by Weight		0.10		KLH	*
1206154-01	C	Cyanide	06/16/12 6:38	SW 9010C/9014	6/27/12 15:50	**4.4**	mg/kg dry	0.17	0.44		TS	*

* Analysis Performed by:TestAmerica Phoenix - See attached contract lab report for official results.

1206154-02	C	Fecal Coliforms	06/16/12 6:38	SM 9221E	6/19/12 10:11	**2**	MPN/g		1.00		SRM	

Qualifier Definitions

A	Absent
B4	Target analyte detected in blank at or above method acceptance criteria.
CN4	Amenable cyanide results reported from total determination method.
D2	Sample required dilution due to high concentration of target analyte.
J	Estimated value
K5	The dilution water D.O. depletion was > 0.2 mg/L.
K8	Glucose/glutamic acid BOD/CBOD was above method acceptance levels.
Pass	Pass
Q6	Sample was received above recommended temperature.
T6	The reported result cannot be used for compliance purposes.

General Notes and Definitions

C	Sample Type - Composite
D	Sample Type - Discrete
DD	Sample Type - Discrete Duplicate
ND	Analyte NOT DETECTED at or above the reporting limit (MDL)
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-Analysis has been performed.

Case Narrative(s)

None

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1206154-01

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5

SITE-LOCATION NUMBER: 25000-1970 (XXXXX-XXXX)

SAMPLE START DATE: 6-16-12 (MM / DD / YYYY)

SAMPLE START TIME: 0619 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 6-16-12 (MM / DD / YYYY)

SAMPLE END TIME: 0638 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C
Aluminum		
Antimony		
Arsenic		
Barium		
Beryllium		
Boron		
Cadmium		
Calcium		
Chromium		
Cobalt		
Copper		
Hardness		
Iron		
Lead		
Magnesium		
Manganese		
Mercury		
Molybdenum		■
Nickel		
Potassium		
Selenium		
Silver		■
Sodium		
Strontium		
Thallium		
Tin		

METALS	D	C
Titanium		
Vanadium		
Zinc		
Priority Pollutant Metals *		
TCLP Metals		
503 Metals **		■
Chromium, Hexavalent		
Chromium, Trivalent		

WET METHODS	D	C
Ammonia as N		■
Chloride		
Cyanide, Total contract		■
Cyanide, Amenable		
Fluoride		
Ignitability		
Nitrate as N		
Nitrite as N		
Nitrate/Nitrite as N		
Nitrogen, Total Kjeldahl		
Nitrogen, Total as N		■
Orthophosphate as P		
Phosphorus, Total as P		
Sulfate		
Sulfide		
Turbidity		

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile		
Dioxin GC/SIM/MS Scan		■
Organochlorine Pesticides & PCBs		
Purgeable Organics (GCMS)		
Semivolatile Organics (GCMS)		■
Other		

MISCELLANEOUS METHODS	D	C
4,4-DDE		
Bis(2-ethylhexyl) phthalate		
Digester Gas		
Oil and Grease		
Organic Carbon, Total		
Organic Carbon, Dissolved		
TCLP Herbicides (Contract Lab)		
TCLP Pesticides		
TCLP Semivolatile Organics		
TCLP Volatile Organics		
Total Petroleum Hydrocarbons		
Volatile Acids		

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*		
Chronic *C. dubia*		
Chronic *Selenastrum capricornutum*		
Other		

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity		
BOD		
COD		
Coliform, Fecal		
Coliform, Total		
Conductivity		
E. coli		
Oxygen, Dissolved		
pH		
Solids, Settleable		
Solids, Total 1 of 2 contract		■
Solids, Total Dissolved		
Solids, Total Suspended		
Solids, Total Volatile		
Solids, Volatile Suspended		
Other		

OTHER	D	C
Paint Test		■

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 16 LOCATIONS. CN + TS sent to Test America
QUARTERLY SAMPLES CS 06-13-12 DO#12-444364

# of Bottles Delivered: 7

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
	Sharonee Michaud	6/16/12	8:29
for Sharonee Michaud		6/19/12	10:29
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

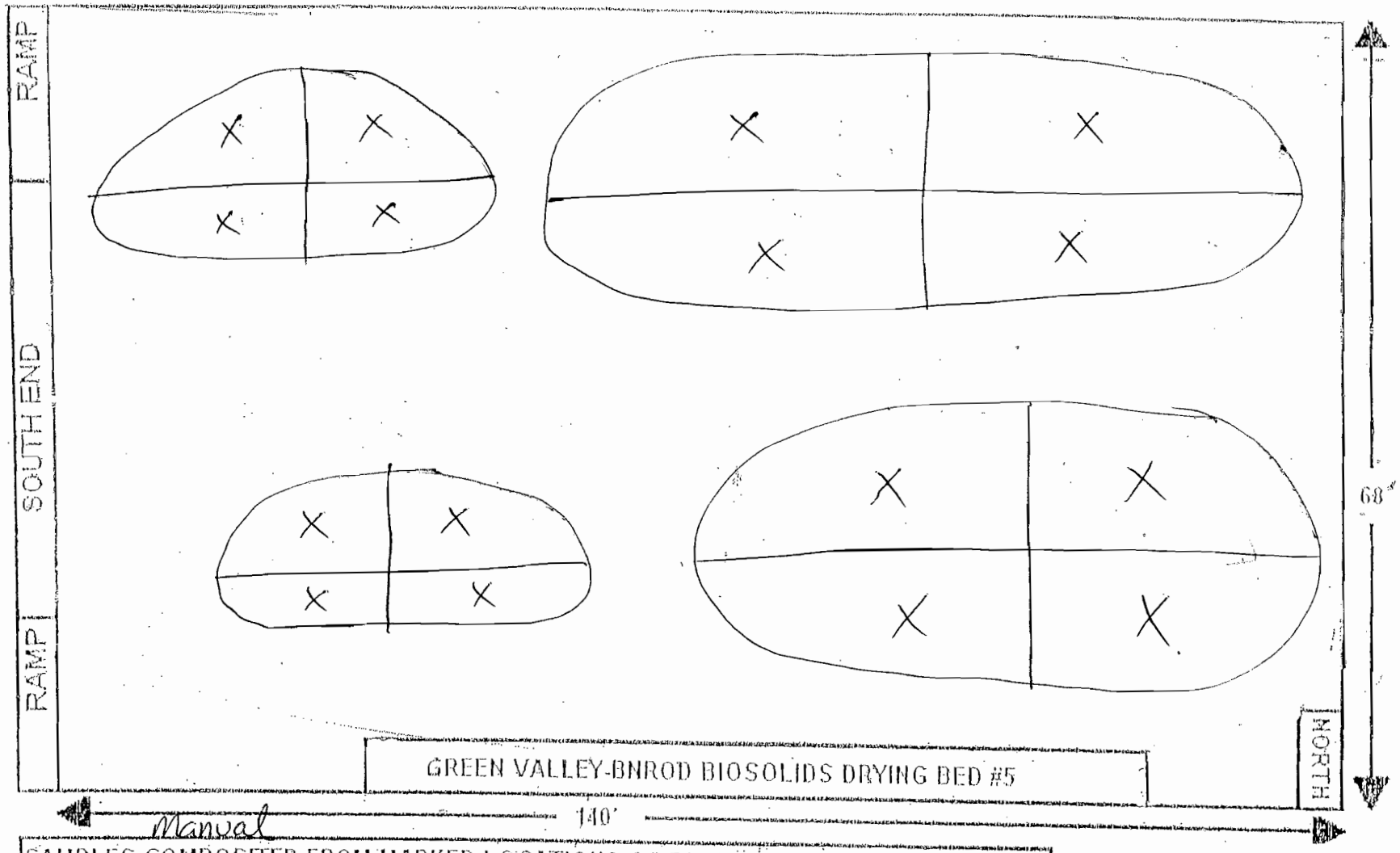
Sample Integrity/Preservation:

Temperature:	7.2	°C
Initials:	JM	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	✓		
Sample labels match Chain of Custody?	✓		
Correct number of samples were delivered?	✓		
Custody seals intact?			✓
Within holding time?	✓		
Sufficient sample volume for analysis?	✓		
Samples are in proper containers?	✓		
Sample containers damaged/leaking/frozen?		✓	
40 ml vials headspace, > pea-sized air bubble?			✓
Received from a refrigerator?		✓	

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

1206154-01



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

Manual

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER ARTZ DATE: 6-16-12 TIME: 0638

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 60, DO# 12-44434

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-0071

Analysis Required: Cyanide, total mg/L; Total % solids; Cyanide, total

BS - biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Cyanide, total mg/L	Total % solids	Cyanide, total							Special Instructions
Green Valley biosolids DB#5	BS	HDPE	2	06-6-12	0638	none	1	1								composite
25000-1970 1206154-01																
Lasertal Inc PL	WW	HDPE	1	06-14-12	0900	NaOH			1							discrete
12520-0100 1206128-01																
Lasertal Inc PL	WW	HDPE	1	06-14-12	0840	NaOH			1							composite
12520-0100 1206128-06																
Tucson Printed Circuits	WW	HDPE	1	06-14-12	1102	NaOH			1							discrete
121890100 1206129-01																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	06-18-12 1028		6/18/12 10:20	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1206154-02

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5

SITE-LOCATION NUMBER: 25000-1970 (XXXXX-XXXX)

SAMPLE START DATE: 6-16-12 (MM / DD / YYYY)

SAMPLE START TIME: 0619 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 6-16-12 (MM / DD / YYYY)

SAMPLE END TIME: 0638 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	☐			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total	☐	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal		■
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: RESULTS FOR FECAL SAMPLE TO BE mpn/gram (DRY WEIGHT). THESE ARE MANUAL COMPOSITE SAMPLES TAKEN FROM 16 LOCATIONS.

# of Bottles Delivered: 1

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Shawneen Michaud	6/16/12	8:29
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

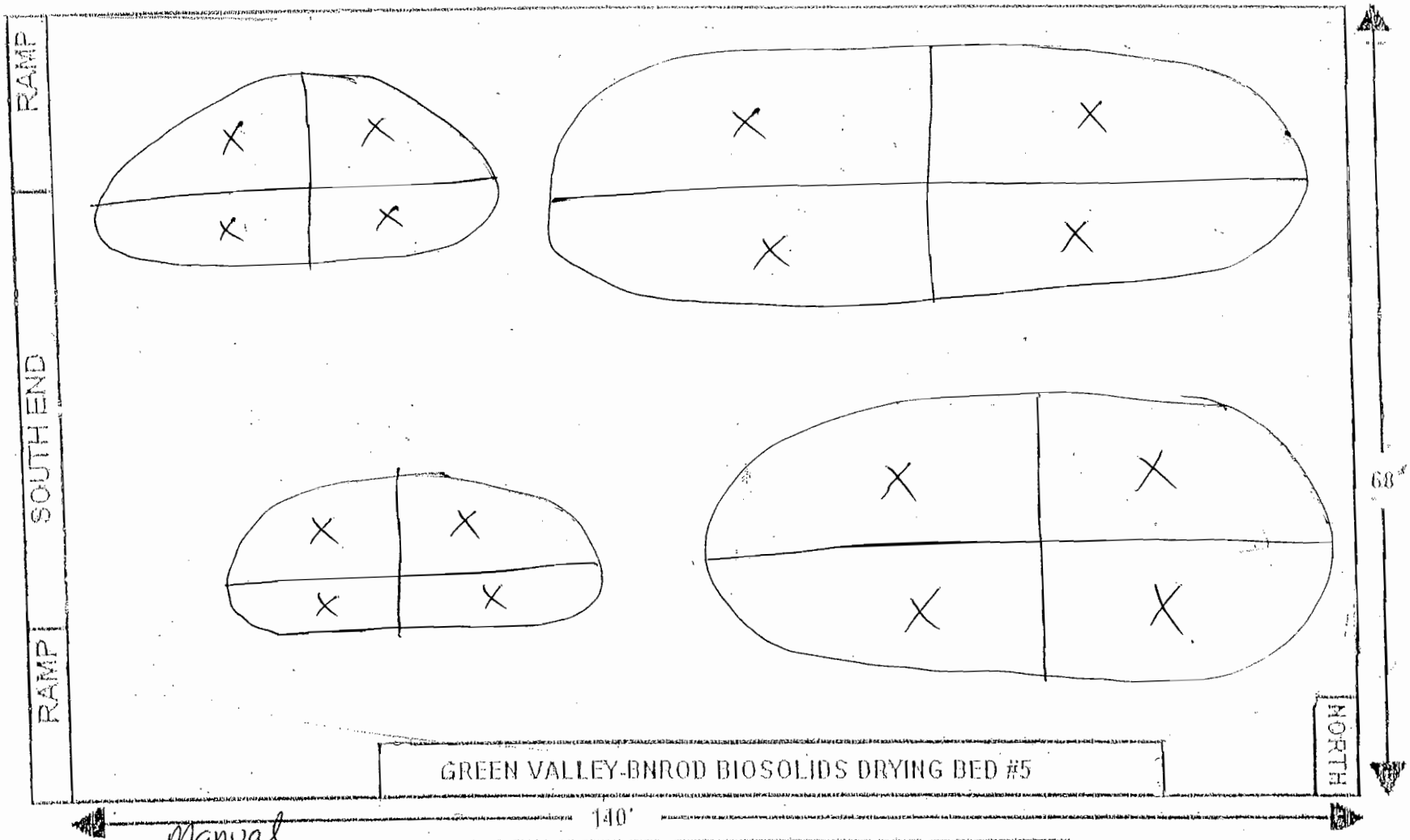
Sample Integrity/Preservation:

Temperature:	3.3	°C
Initials:	JM	
Non-Preserved	7	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	✓		
Sample labels match Chain of Custody?	✓		
Correct number of samples were delivered?	✓		
Custody seals intact?			✓
Within holding time?	✓		
Sufficient sample volume for analysis?	✓		
Samples are in proper containers?	✓		
Sample containers damaged/leaking/frozen?		✓	
40 ml vials headspace, > pea-sized air bubble?			✓
Received from a refrigerator?		✓	

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

1206154-02



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

Manual

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER Artz DATE: 6-16-12 TIME: 0638

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:Sample group #60

Sampled:06/14/12-06/16/12
Received:06/19/12
Issued:06/28/12 10:17

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVF1216-01	1206154-01	Soil
PVF1216-02	1206128-01	Water
PVF1216-03	1206128-06	Water
PVF1216-04	1206129-01	Water

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #60
Report Number: PVF1216

Sampled: 06/14/12-06/16/12
Received: 06/19/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVF1216-01 (1206154-01 - Soil)					**Sampled: 06/16/12**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12F0761	N/A	0.10	**90**	1	06/20/12	06/20/12	
Sample ID: PVF1216-01 (1206154-01 - Soil)					**Sampled: 06/16/12**				
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12F1018	0.17	0.44	**4.4**	0.994	06/26/12	06/27/12	
Sample ID: PVF1216-02 (1206128-01 - Water)					**Sampled: 06/14/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12F0891	1.7	8.0	ND	1	06/22/12	06/22/12	E8
Sample ID: PVF1216-03 (1206128-06 - Water)					**Sampled: 06/14/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12F0891	1.7	8.0	ND	1	06/22/12	06/22/12	E8
Sample ID: PVF1216-04 (1206129-01 - Water)					**Sampled: 06/14/12**				
Reporting Units: ug/l									
Cyanide, Total	SM 4500CN-E	12F0891	1.7	8.0	ND	1	06/22/12	06/22/12	E8

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino Del Cerro, Tucson, Arizona 85745-9750, Phone (520) 724-6200

Report Date: 09/12/2012
Laboratory License: AZO159

Sample Analysis Report

Client:	Sub-regional Facilities	Work Order ID:	1206154
Project:	Green Valley WRF	Lab Received Date:	6/16/12 8:29
Permit Type:	AZPDES	Project Number:	25000

Sample Integrity

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS:

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory Licensure Rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed By:

Barbara A Esmber — 09/17/12

Laboratory Director or Designee — Date
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Sample ID:	**1206154-02**	**Sample Start Date/Time**	6/16/2012 6:19:00
Site Location:	BNROD-Biosolids from drying bed #5	**Sample End Date/Time**	6/16/2012 6:38:00
Site Number:	25000-1970	**Sampled By:**	Roger Artz
		Sample Qualifiers:	

Parameter	Sample Type	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	MRL	Data Qualifiers	Analyst	SubLab
Fecal Coliforms	Composite	SM 9221E	6/19/12 10:11	**2**	MPN/g		1.00		SRM	

Qualifier Definitions

General Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit (MDL).
NR	Not Reported
DET	Analyte DETECTED
DRY	Sample results reported on a dry weight basis.
RPD	Relative Percent Difference.
Analysis Date	Analysis Date represents the final reading date.
Field Results	Field Results performed by "SMPLR" (Sampler), are not subject to approval of Laboratory Director.
Solids, Total Volatile	Used for process control samples only.
RE	Re-analysis has been performed.

Case Narrative(s)

None

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 1206154-02

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5

SITE-LOCATION NUMBER: 25000-1970 (XXXXX-XXXX)

SAMPLE START DATE: 6-16-12 (MM / DD / YYYY)

SAMPLE START TIME: 0619 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 6-16-12 (MM / DD / YYYY)

SAMPLE END TIME: 0638 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ☐ 503 ☐ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	■
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: RESULTS FOR FECAL SAMPLE TO BE mpn/gram (DRY WEIGHT). THESE ARE MANUAL COMPOSITE SAMPLES TAKEN FROM 16 LOCATIONS.

# of Bottles Delivered: 1

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Shawnee Michaud	6/16/12	8:29
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

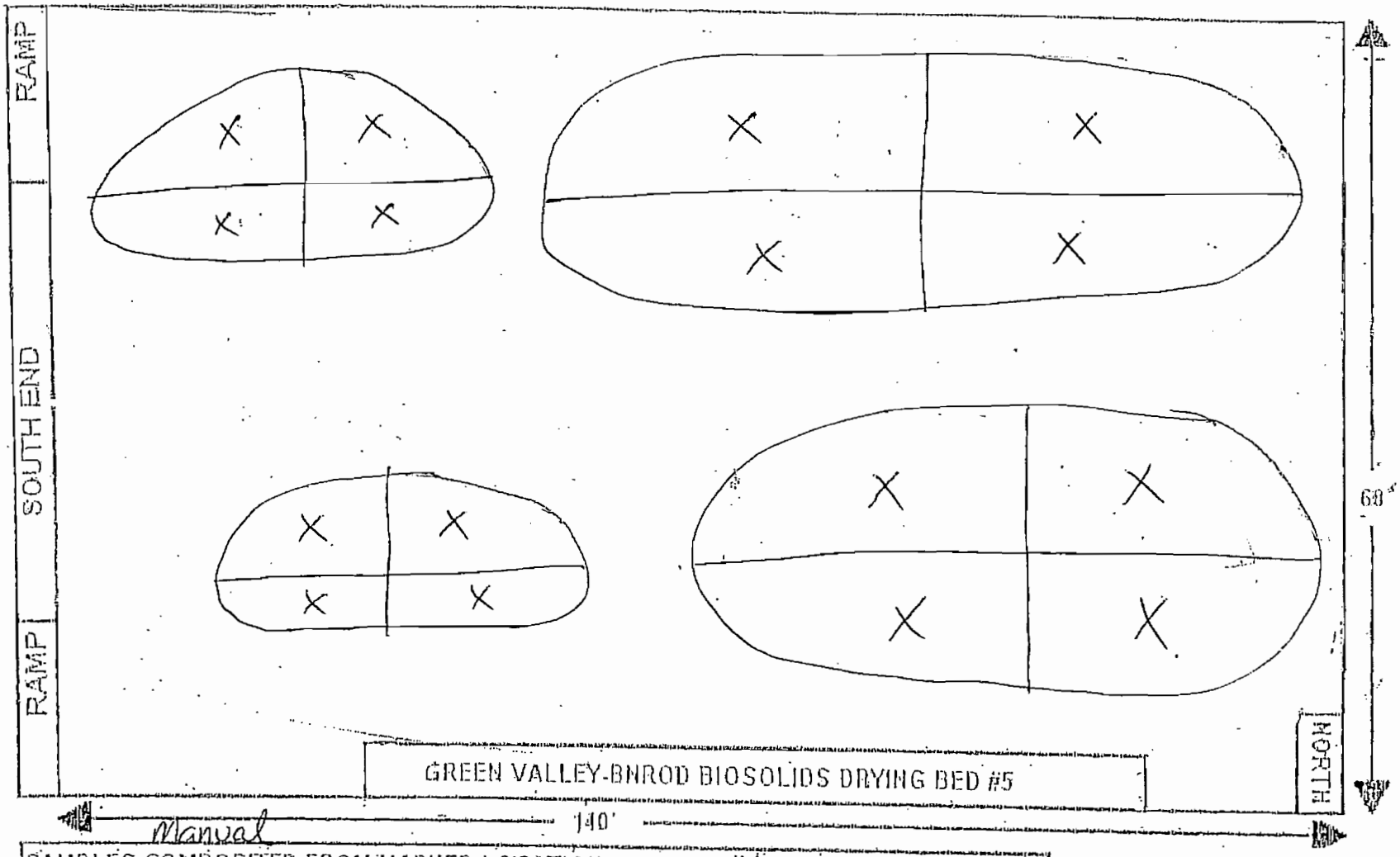
Temperature:	3.3	°C
Initials:	JM	
Non-Preserved	7	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:

	Yes	No	NA
Chain of Custody Record completed appropriately?	☑	☐	☐
Sample labels match Chain of Custody?	☑	☐	☐
Correct number of samples were delivered?	☑	☐	☐
Custody seals intact?	☐	☐	☑
Within holding time?	☑	☐	☐
Sufficient sample volume for analysis?	☑	☐	☐
Samples are in proper containers?	☑	☐	☐
Sample containers damaged/leaking/frozen?	☐	☑	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☑
Received from a refrigerator?	☐	☑	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

1206154-02



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

Manual

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER Aretz DATE: 6-16-12 TIME: 0638

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 6/27/2012 14:55:11
Laboratory License #AZO159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
March 2012

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

2012030836 Sent to Test America for analyses. GOS

2012031795 Sent to Test America for analyses JS
2012031796 Sent to Test America for analyses.

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Escobar

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

06/05/12
Date

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-MLSS-Process Control (25000-1940)											
2012030377	D	Solids, Total Suspended	3/7/12 7:40	SM 2540D	03/08/12 11:00	1966.7	mg/l		2.5		snevius
2012030377	D	Solids, Total Volatile Suspended	3/7/12 7:40	EPA 160.4	03/08/12 11:15	1800.0	mg/l		2.5		snevius
BNROD-North Aerobic Digester Sludge (25000-1950)											
2012030380	D	Solids, Total	3/7/12 7:55	SM 2540G	03/08/12 11:44	2.82	%		0.01		jhernandez
2012030380	D	Solids, Volatile	3/7/12 7:55	SM 2540G	03/08/12 14:40	84.2	%		0.005		jhernandez
BNROD-Biosolids from drying bed #5 (25000-1970)											
2012030836	D	Miscellaneous Note	3/13/12 10:00	None	Subcontracted						Other
2012030836	D	Solids, Total	3/13/12 10:00	SM 2540G	03/15/12 8:45	85.29	%		0.01		smichaud
2012030836	D	Solids, Volatile	3/13/12 10:00	SM 2540G	03/15/12 16:45	71.7	%		0.005		smichaud
2012030836	D	4,4-DDD	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.06	39.477	D1, D4, N1	mmichel
2012030836	D	4,4-DDE	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.05	39.477	D1, D4, N1	mmichel
2012030836	D	4,4-DDT	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.04	98.6925	D1, D4	mmichel
2012030836	D	Aldrin	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.1	39.477	D1, D4	mmichel
2012030836	D	alpha-BHC	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.09	39.477	D1, D4	mmichel
2012030836	D	Aroclor 1016	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.1	49.34625	D1, D4	mmichel
2012030836	D	Aroclor 1221	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.09	118.431	D1, D4	mmichel
2012030836	D	Aroclor 1232	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.16	118.431	D1, D4	mmichel
2012030836	D	Aroclor 1242	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.1	98.6925	D1, D4	mmichel
2012030836	D	Aroclor 1248	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.16	118.431	D1, D4	mmichel
2012030836	D	Aroclor 1254	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.07	118.431	D1, D4	mmichel
2012030836	D	Aroclor 1260	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.25	118.431	D1, D4	mmichel
2012030836	D	beta-BHC	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.1	39.477	D1, D4	mmichel
2012030836	D	Chlordane, Technical	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.7	394.77	D1, D4	mmichel
2012030836	D	delta-BHC	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.08	39.477	D1, D4	mmichel
2012030836	D	Dieldrin	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.07	39.477	D1, D4	mmichel
2012030836	D	Endosulfan I	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.05	39.477	D1, D4, N1	mmichel
2012030836	D	Endosulfan II	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.03	19.7385	D1, D4, N1	mmichel
2012030836	D	Endosulfan sulfate	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.05	39.477	D1, D4	mmichel
2012030836	D	Endrin	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.1	39.477	D1, D4	mmichel
2012030836	D	Endrin aldehyde	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.07	39.477	D1, D4, N1	mmichel
2012030836	D	gamma-BHC (Lindane)	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.09	39.477	D1, D4, N1	mmichel
2012030836	D	Heptachlor	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.1	98.6925	D1, D4	mmichel
2012030836	D	Heptachlor epoxide	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	0.11	197.385	D1, D4	mmichel
2012030836	D	Polychlorinated biphenyls, Total	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg		118.431	D1, D4	mmichel
2012030836	D	Toxaphene	3/13/12 10:00	EPA 625	04/20/12 19:10	ND	ug/kg	5.08	3158.16	D1, D4	mmichel
2012030836	D	Methoxychlor	3/13/12 10:00	EPA 8270C	04/20/12 19:10	ND	ug/kg	0.06	39.477	D1, D4	mmichel

Lab Comments:

Data on this report was last modified on: 6/4/2012 11:30:59

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 (25000-1970)											
2012030836	D	1,2,4-Trichlorobenzene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00106	0.1	D1, D4, S7	smitchell
2012030836	D	1,2-Diphenylhydrazine	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00123	0.1	D1, D4, S7	smitchell
2012030836	D	2,3-Dichloroaniline	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00104	0.1	D1, D4, S7	smitchell
2012030836	D	2,4,6-Trichlorophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.0012	0.1	D1, D4, S7	smitchell
2012030836	D	2,4-Dichlorophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00116	0.1	D1, D4, S7	smitchell
2012030836	D	2,4-Dimethylphenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00289	0.3	D1, D4, N1, S7	smitchell
2012030836	D	2,4-Dinitrophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00943	0.5	D1, D4, S7	smitchell
2012030836	D	2,4-Dinitrotoluene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.0012	0.1	D1, D4, S7	smitchell
2012030836	D	2,6-Dinitrotoluene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00194	0.1	D1, D4, S7	smitchell
2012030836	D	2-Chloronaphthalene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00113	0.1	D1, D4, S7	smitchell
2012030836	D	2-Chlorophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00151	0.1	D1, D4	smitchell
2012030836	D	2-Methylphenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00152	0.1	D1, D4, S7	smitchell
2012030836	D	2-Nitrophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00218	0.1	D1, D4, S7	smitchell
2012030836	D	3,3-Dichlorobenzidine	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00223	0.5	D1, D4	smitchell
2012030836	D	4,6-Dinitro-2-methylphenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00373	0.3	D1, D4, S7	smitchell
2012030836	D	4-Bromophenyl phenyl ether	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00145	0.1	D1, D4, S7	smitchell
2012030836	D	4-Chloro-3-methylphenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00142	0.1	D1, D4, S7	smitchell
2012030836	D	4-Chlorophenyl phenyl ether	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.000115	0.1	D1, D4, S7	smitchell
2012030836	D	4-Methylphenol	3/13/12 10:00	EPA 625	04/19/12 18:25	5.24	mg/Kg	0.00294	0.1	D1, D4, S7	smitchell
2012030836	D	4-Nitrophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00495	0.3	D1, D4, S7	smitchell
2012030836	D	Acenaphthene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00117	0.1	D1, D4, S7	smitchell
2012030836	D	Acenaphthylene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00084	0.1	D1, D4, S7	smitchell
2012030836	D	Anthracene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00109	0.1	D1, D4, S7	smitchell
2012030836	D	Benzo(a)anthracene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00144	0.1	D1, D4	smitchell
2012030836	D	Benzidine	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.02486	1.75	D1, D4	smitchell
2012030836	D	Benzo(a)pyrene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00155	0.1	D1, D4	smitchell
2012030836	D	Benzo(b)fluoranthene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00157	0.1	D1, D4	smitchell
2012030836	D	Benzo(g,h,i)perylene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00178	0.1	D1, D4	smitchell
2012030836	D	Benzo(k)fluoranthene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00228	0.1	D1, D4	smitchell
2012030836	D	Bis(2-Chloroisopropyl)ether	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00114	0.1	D1, D4, S7	smitchell
2012030836	D	Bis(2-chloroethoxy)methane	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00106	0.1	D1, D4, S7	smitchell
2012030836	D	Bis(2-chloroethyl)ether	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00099	0.1	D1, D4	smitchell
2012030836	D	Bis(2-ethylhexyl) phthalate	3/13/12 10:00	EPA 625	04/19/12 18:25	0.14	mg/Kg	0.00267	0.1	D1, D4	smitchell
2012030836	D	Butylbenzyl phthalate	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00153	0.1	D1, D4	smitchell
2012030836	D	Carbazole	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00127	0.1	D1, D4, S7	smitchell
2012030836	D	Chrysene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00147	0.1	D1, D4	smitchell
2012030836	D	Dibenz(a,h)anthracene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00187	0.1	D1, D4	smitchell
2012030836	D	Diethyl phthalate	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00105	0.1	D1, D4	smitchell
2012030836	D	Dimethylphthalate	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00072	0.1	D1, D4, S7	smitchell
2012030836	D	Di-n-butyl phthalate	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00167	0.1	D1, D4, B1	smitchell
2012030836	D	Di-n-octylphthalate	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00183	0.1	D1, D4	smitchell
2012030836	D	Fluoranthene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00145	0.1	D1, D4	smitchell
2012030836	D	Fluorene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00128	0.1	D1, D4, S7	smitchell

Lab Comments:

Data on this report was last modified on: 6/4/2012 11:30:59

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 (25000-1970)											
2012030836	D	Hexachlorobenzene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.0006	0.1	D1, D4, S7	smitchell
2012030836	D	Hexachlorobutadiene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00119	0.1	D1, D4, S7	smitchell
2012030836	D	Hexachloroethane	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00121	0.1	D1, D4, S7	smitchell
2012030836	D	Hexachlorocyclopentadiene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00259	0.3	D1, D4, N1, S7	smitchell
2012030836	D	Indeno(1,2,3-cd)pyrene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00225	0.1	D1, D4	smitchell
2012030836	D	Isophorone	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00135	0.1	D1, D4, S7	smitchell
2012030836	D	Naphthalene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00126	0.1	D1, D4, S7	smitchell
2012030836	D	n-Decane	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00166	0.1	D1, D4	smitchell
2012030836	D	Nitrobenzene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00286	0.1	D1, D4, S7	smitchell
2012030836	D	N-Nitroso-di-n-propylamine	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00113	0.1	D1, D4, S7	smitchell
2012030836	D	N-Nitrosodimethylamine	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00423	0.3	D1, D4	smitchell
2012030836	D	N-Nitrosodiphenylamine	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00183	0.1	D1, D4, S7	smitchell
2012030836	D	n-Octadecane	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00166	0.1	D1, D4, S7	smitchell
2012030836	D	Pentachlorophenol	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.0032	0.3	D1, D4, S7	smitchell
2012030836	D	Phenanthrene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00115	0.1	D1, D4, S7	smitchell
2012030836	D	Phenol	3/13/12 10:00	EPA 625	04/19/12 18:25	2.80	mg/Kg	0.0023	0.1	D1, D4	smitchell
2012030836	D	Pyrene	3/13/12 10:00	EPA 625	04/19/12 18:25	ND	mg/Kg	0.00129	0.1	D1, D4	smitchell
See Attached -Semi-Quantitation Sheet for EPA 625											
2012030836	D	Chlordane, Technical	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	1.38	25	D1, D4	mmichel
2012030836	D	Endrin	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	0.2	2.5	D1, D4	mmichel
2012030836	D	gamma-BHC (Lindane)	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	0.27	5	D1, D4	mmichel
2012030836	D	Heptachlor	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	0.27	5	D1, D4, R4	mmichel
2012030836	D	Heptachlor epoxide	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	0.29	5	D1, D4	mmichel
2012030836	D	Methoxychlor	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	0.27	5	D1, D4, R4	mmichel
2012030836	D	Toxaphene	3/13/12 10:00	EPA 8270C-TCLP	04/18/12 19:52	ND	ug/l	3.79	50	D1, D4	mmichel
2012030836	D	1,4-Dichlorobenzene	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	0.81	20	D1, D4, R4	smitchell
2012030836	D	2,4,5-Trichlorophenol	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	8.64	100	D1, D4	smitchell
2012030836	D	2,4,6-Trichlorophenol	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	4.72	50	D1, D4	smitchell
2012030836	D	2,4-Dinitrotoluene	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	7.46	100	D1, D4	smitchell
2012030836	D	Hexachlorobenzene	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	1.71	20	D1, D4	smitchell
2012030836	D	Hexachlorobutadiene	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	1.19	20	D1, D4, R4	smitchell
2012030836	D	Hexachloroethane	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	0.72	20	D1, D4, R4	smitchell
2012030836	D	m+p-Cresols	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	515.08	ug/l	1.81	20	D1, D4	smitchell
2012030836	D	Nitrobenzene	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	0.76	20	D1, D4	smitchell
2012030836	D	o-Cresol	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	0.51	20	D1, D4	smitchell
2012030836	D	Pentachlorophenol	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	20.15	250	D1, D4	smitchell
2012030836	D	Pyridine	3/13/12 10:00	EPA 8270C-TCLP	04/23/12 15:25	ND	ug/l	1.62	20	D1, D4	smitchell
BNROD-Biosolids from drying bed #5 - East (25000-1971)											
2012031796	C	Miscellaneous Note	3/29/12 8:39	None		Subcontracted					Other

Lab Comments:

Data on this report was last modified on: 6/4/2012 11:30:59

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 - East (25000-1971)											
2012031796	C	Mercury	3/29/12 8:39	EPA 7471A	04/16/12 11:54	1.350	mg/Kg	0.00030	0.057		dobrien
2012031796	C	Nitrate/Nitrite	3/29/12 8:39	EPA 353.2	04/10/15 11:55	24.9	mg/Kg	0.4	2.3		khowell
2012031796	C	Nitrogen, Total Kjeldahl	3/29/12 8:39	EPA 351.2	04/06/12 11:04	53593.7	mg/Kg	26.3	110.6	D2	aklos
2012031796	C	Nitrogen, Total	3/29/12 8:39	Calculated	04/10/15 11:55	53618.6	mg/Kg		0.8		khowell
2012031796	C	Solids, Total	3/29/12 8:39	SM 2540G	04/01/12 12:58	87.90	%		0.01		edoyle
BNROD-Biosolids from drying bed #5 - West (25000-1972)											
2012031795	C	Miscellaneous Note	3/29/12 8:18	None	Subcontracted						Other
2012031795	C	Mercury	3/29/12 8:18	EPA 7471A	04/18/12 11:52	1.870	mg/Kg	0.00033	0.063		dobrien
2012031795	C	Nitrate/Nitrite	3/29/12 8:18	EPA 353.2	04/10/15 11:55	6.8	mg/Kg	0.4	2.5		khowell
2012031795	C	Nitrogen, Total Kjeldahl	3/29/12 8:18	EPA 351.2	04/06/12 11:04	54823.6	mg/Kg	28.5	119.9	D2	aklos
2012031795	C	Nitrogen, Total	3/29/12 8:18	Calculated	04/10/15 11:55	54830.4	mg/Kg		0.8		khowell
2012031795	C	Solids, Total	3/29/12 8:18	SM 2540G	04/01/12 12:58	79.60	%		0.01		edoyle

Lab Comments:

Data on this report was last modified on: 6/4/2012 11:30:59

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Laboratory Director.

Total Volatile Solids - Used for process control samples only.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE/LABORATORY GROUP
ORGANIC MASS SPECTROMETRY UNIT

Sapphire No.: 2012030836
Sample Permit Name: Green Valley WRF
Sample Location Name: BNROD-Biosolids from drying bed #5
Method:

☐ 624 ☑ 625 ☐ 8260 ☐ 8270

☑ **Semi-Quant** ☐ **Non-Target**

	Compound Name	Concentration mg/kg
1	Benzeneacetic Acid	12
2	Palmitic Acid	268
3	Oleic Acid	109
4	Stearic Acid	62
5	Butanoic Acid	25
6	Butanoic Acid, 3-methyl-	38
7	Pentanoic Acid	20
8	Pentanoic Acid, 4-methyl-	4
9	Hexanoic Acid	12
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
March 2012

Data Qualifier(s):	Definition:
B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at or above method acceptance criteria.
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
D4	Minimum Reporting Limit (MRL) adjusted to reflect sample amount received and analyzed.
N1	See case narrative.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

Case Narrative

Sample ID: 2012030836
Permit Name: Green Valley WRF
Location Name: BNROD-Biosolids from drying bed #5

This sample was extracted for EPA Method 625 Semi-volatiles on 03/20/12. Target analytes flagged with N1 failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. SJM

This sample was extracted for EPA Method 625 Pesticides on 03/14/2012, target compounds flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample. MAM-Z.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of 1

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Green Valley BS, DO# 12-32477

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required: BS - biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total solid % for mg/kg calc.	Total cyanide mg/kg	TCLP metals	TCLP volatiles	TCLP herbicides	6010B Sb, As, Be, Cd, Cu, Cr, Pb, Ni, Se	6010B Ag, Tl, Zn	Dioxin ng/kg	Mercury mg/kg	Volatiles mg/kg (methanol extraction)	Ac/Ac and 2CEVE (methanol extraction)	Special Instructions
Green Valley BS #5	BS	HDPE + glass	8	03-13-12	1000	none	X	X	X	X	X	X	X	X	X	X	X	discrete
25000-1970 2012030836																		~~benzidine~~ COS 03-14-12
																		~~N-nitrosodimethylamine~~
																		~~1,2-diphenylhydrazine~~ COS 03-14-12

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	03-14-12 1030		3/14/12 1030	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✗

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 1 of 1

TAL-0013-550 (12/08)

Client Name/Address: Pima County CRAD Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Green Valley BS, PO# 12-32477

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required: Total solid % for mg/kg calc. | Total cyanide mg/kg | TCLP metals | TCLP volatiles | TCLP herbacides | 6010B Sb, As, Ba, Cd, Cu, Cr, Pb, Ni, Se | 6010B Ag, Tl, Zn | Dioxin mg/kg | Mercury mg/kg | Volatiles mg/kg (methanol extraction) | Ac/Ac and 2CEVE (methanol extraction) | BS-biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total solid % for mg/kg calc.	Total cyanide mg/kg	TCLP metals	TCLP volatiles	TCLP herbacides	6010B Sb, As, Ba, Cd, Cu, Cr, Pb, Ni, Se	6010B Ag, Tl, Zn	Dioxin mg/kg	Mercury mg/kg	Volatiles mg/kg (methanol extraction)	Ac/Ac and 2CEVE (methanol extraction)	Special Instructions
Green Valley BS #5	BS	HDPE + glass	8	031312	1000	none	X	X	X	X	X	X	X	X	X	X	X	discrete
25000-1970 2012030836																		~~benzidine~~ cos 03-14-12
																		~~Nitrosodimethylamine~~
																		~~1,2-diphenylhydrazine~~
																		cos 03-14-12

Relinquished By: for samplers — Date/Time:
Received By: — Date/Time: 3/13/12 1030

Relinquished By: — Date/Time:
Received By: — Date/Time:

Relinquished By: — Date/Time:
Received in Lab By: — Date/Time:

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201203 1796

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: 3-29-12 (MM / DD / YYYY)

SAMPLE START TIME: 0825 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 3-29-12 (MM / DD / YYYY)

SAMPLE END TIME: 0839 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C
Aluminum	☐	☐
Antimony	☐	☐
Arsenic	☐	☐
Barium	☐	☐
Beryllium	☐	☐
Boron	☐	☐
Cadmium	☐	☐
Calcium	☐	☐
Chromium	☐	☐
Cobalt	☐	☐
Copper	☐	☐
Hardness	☐	☐
Iron	☐	☐
Lead	☐	☐
Magnesium	☐	☐
Manganese	☐	☐
Mercury	☐	☐
Molybdenum	☐	☐
Nickel	☐	☐
Potassium	☐	☐
Selenium	☐	☐
Silver contract	☐	■
Sodium	☐	☐
Strontium	☐	☐
Thallium	☐	☐
Tin	☐	☐

METALS	D	C
Titanium	☐	☐
Vanadium	☐	☐
Zinc	☐	☐
Priority Pollutant Metals *	☐	☐
TCLP Metals	☐	☐
503 Metals ** contract	☐	■
Chromium, Hexavalent	☐	☐
Chromium, Trivalent	☐	☐

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total contract	☐	■
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	■
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable split	☐	☐
Solids, Total contract	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Contract lab is Test America QUARTERLY SAMPLES PO# 12-34660

# of Bottles Delivered: (5) GOJ

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Jason Morse	3/29/12	0907
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Jason Morse	[signature]	3/29/12	1043
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	[signature]	3/30/12	12:44
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

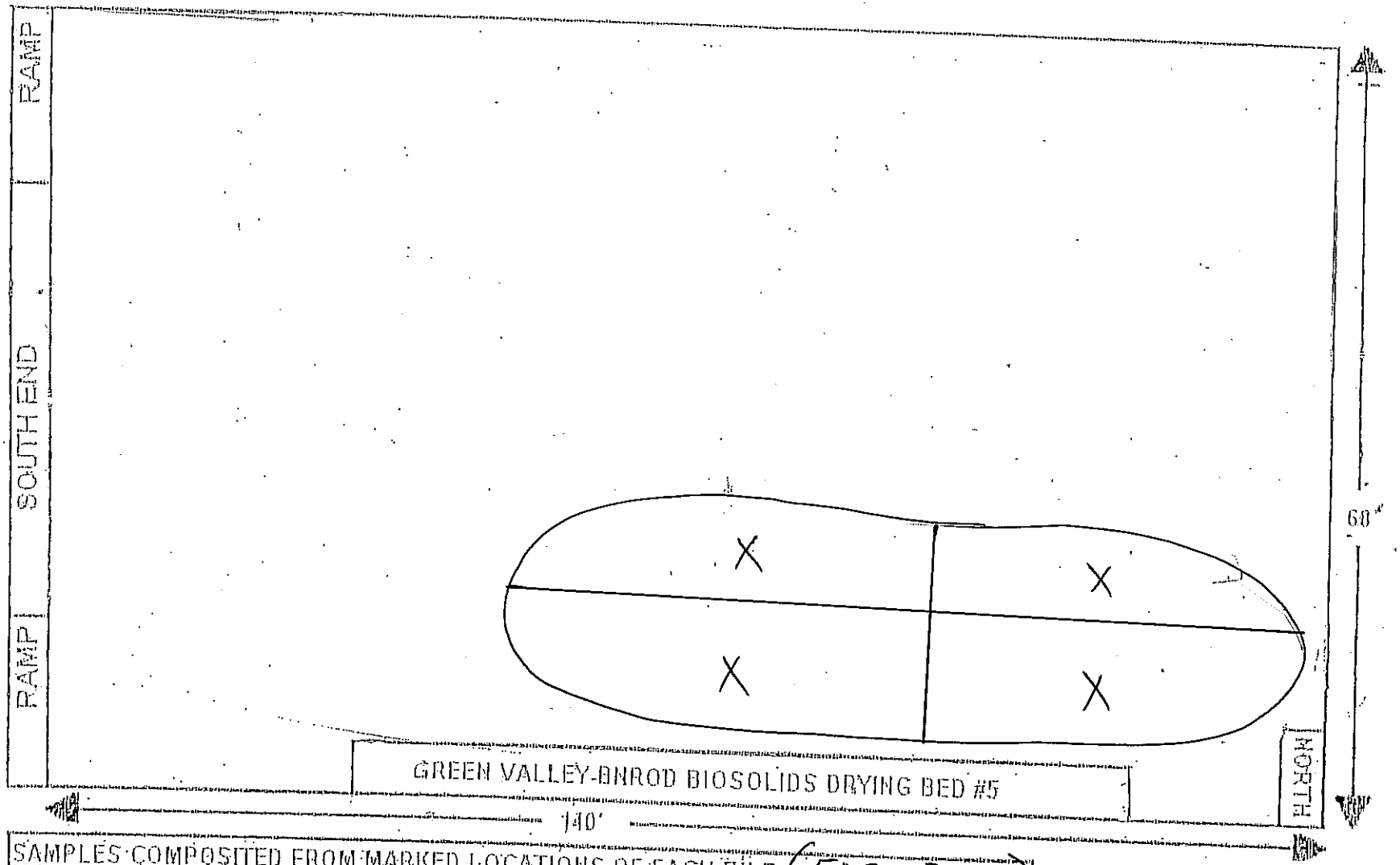
Sample Integrity/Preservation:

Temperature:	1	°C
Initials:	GOJ	
Non-Preserved	5	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

20120317 96



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE (EAST PILE)

SAMPLER: ARTZ DATE: 3-29-12 TIME: 0825/0839

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 43, DO# 12-34660

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids for mg/kg calc	6010B Mo, Ag, Cd, Cr, Cu + Pb (mg/kg)	6010B Ni, Se and Zn (mg/kg)	Se 200.8					Special Instructions
																135- biosolids
Green Valley drying bed #5 East	BS	HDPE	3	03-27-12	0839	none	X	X	X	X						dried biosolids
25000-1971 2012031796																hand ~~composited~~ mixed cos 03-30-12
Green Valley drying bed #5 W	BS	HDPE	3	03-29-12	0818	none	X	X	X	X						dried biosolids
25000-1972 2012031795																hand mixed
Roger Rd final effluent trap	WW	HDPE	1	03-30-12	0600	HNO_3					X					composite
20923-7003- 2012031837																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	03-30-12 1244		3/30/12 12:44	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 43, DO# 12-34660

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids for mg/kg calc	6010B Mo, Ag, As, Cd, Cr, Cu + Pb (mg/kg)	6010B Ni, Se and Zn (mg/kg)	Se, 200.8					Special Instructions
																BS- biosolids
Green Valley drying bed #5 East	BS	HDPE	3	03-29-12	0839	none	X	X	X	X						dried biosolids
25000-1971 2012031796																hand ~~composited~~ mixed cos 03-30-12
Green Valley drying bed #5 W	BS	HDPE	3	03-29-12	0818	none	X	X	X	X						dried biosolids
25000-1972 2012031795																hand mixed
Roger Rd final effluent trap	WW	HDPE	1	03-30-12	0600	HNO_3					X					composite
20923-7003- 2012031837																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samples	03-30-12 1244		3/30/12 12:44	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201203 1795

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (WEST PILE)

SITE-LOCATION NUMBER: 25000-1972 (XXXXX-XXXX)

SAMPLE START DATE: 3-29-12 (MM / DD / YYYY)

SAMPLE START TIME: 0803 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 3-29-12 (MM / DD / YYYY)

SAMPLE END TIME: 0818 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals ** CC	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total CC	☐	■
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver CC	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable split	☐	☐
Solids, Total contract	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Contract lab is Test America
QUARTERLY SAMPLES PO# 12-34660

# of Bottles Delivered: 5 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
	Lab fridge	3-29-12	0845
Lab fridge	Jason Morse	3-29-12	0907
Jason Morse		3/29/12	1043
		3/30/12	12:44
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

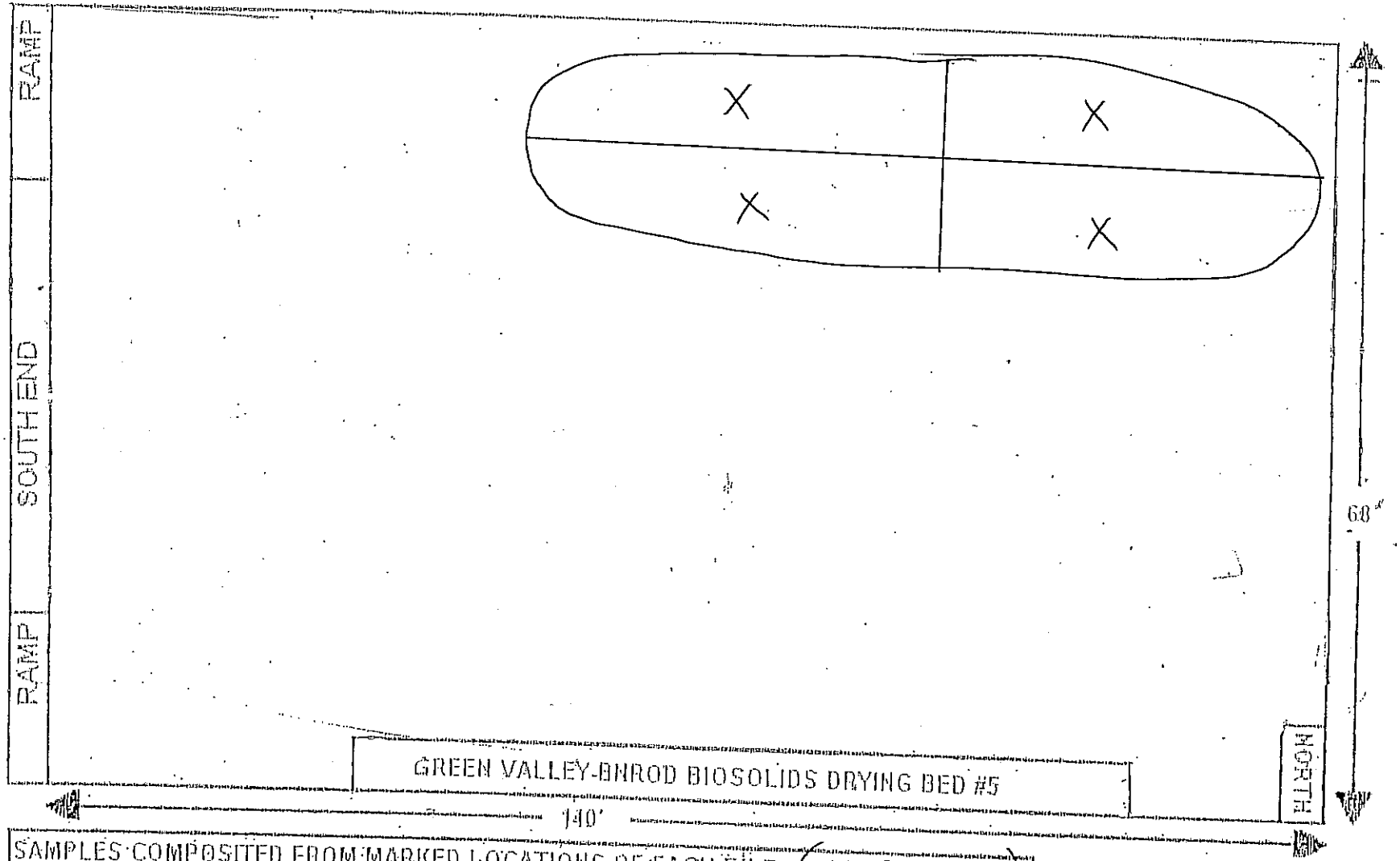
Sample Integrity/Preservation:

Temperature:	1	°C
Initials:	GOS	
Non-Preserved	5	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

2012031795



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE (WEST PILE)

SAMPLER: AETZ DATE: 3-29-12 TIME: 0803/0818

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

COPY

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Sample group # 43, DO# 12-34660

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanides mg/kg	Total % solids for mg/kg calc	6010B Mo, Ag, As, Cd, Cr, Cu + Pb (mg/kg)	6010B Ni, Se and Zn (mg/kg)	Se 200.8					Special Instructions
																BS- biosolids
Green Valley drying bed #5 East	BS	HDPE	3	03-27-12	0839	none	X	X	X	X						dried biosolids
25000-1971 2012031796																hand ~~composited~~ mixed COC 03-30-12
Green Valley drying bed #5W	BS	HDPE	3	03-27-12	0818	none	X	X	X	X						dried biosolids
25000-1972 2012031795																hand mixed
Roger Rd final effluent trough	WW	HDPE	1	03-30-12	0600	HNO_3					X					composite
20923-7003- 2012031837																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	03-30-12 1244		3/30/12 12:44	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: Green Valley BS

Sampled: 03/13/12
Received: 03/15/12
Revised: 05/11/12 13:53

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVC1176-01	2012030836	Biosolids

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS

Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

SAMPLE RECEIPT:	Samples were received intact, at 1°C, on ice and with chain of custody documentation.
HOLDING TIMES:	Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
	N1 = The Matrix Spike recovered high and outside of laboratory acceptance limits for 2-Butanone (MEK). All associated samples are non-detect for this compound and therefore should not be impacted. N1a - The RPD exceeded the acceptance limit due to sample matrix effects. N1b - RPD exceeded acceptance limits for the LCS/LCSD and the LCS and/or LCSD recovery exceeded acceptance limits. The analyte was not detected in the associated samples; therefore, the data is not impacted.
COMMENTS:	Results that fall between the MDL and RL are 'E4' flagged.
SUBCONTRACTED:	Refer to the last page for specific subcontract laboratory information included in this report.
ADDITIONAL INFORMATION:	5-11-2012: Report was revised to add data for molybdenum by method 6010B at the client's request.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS

Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									**H4, D1**
Reporting Units: ug/kg dry									
1,1,1-Trichloroethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,1,2,2-Tetrachloroethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,1,2-Trichloroethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,1-Dichloroethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,1-Dichloroethene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,1-Dichloropropene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,2,3-Trichlorobenzene	EPA 8260B	12C0752	N/A	240	ND	2	03/17/12	03/28/12	
1,2,3-Trichloropropane	EPA 8260B	12C0752	N/A	240	ND	2	03/17/12	03/28/12	
1,2,4-Trimethylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,2-Dibromoethane (EDB)	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,2-Dichlorobenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,2-Dichloroethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,2-Dichloropropane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,3,5-Trimethylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,3-Dichlorobenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,3-Dichloropropane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
1,4-Dichlorobenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
2,2-Dichloropropane	EPA 8260B	12C0752	N/A	240	ND	2	03/17/12	03/28/12	
2-Butanone (MEK)	EPA 8260B	12C0752	N/A	1200	ND	2	03/17/12	03/28/12	
2-Chlorotoluene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
2-Hexanone	EPA 8260B	12C0752	N/A	590	ND	2	03/17/12	03/28/12	
4-Chlorotoluene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	12C0752	N/A	590	ND	2	03/17/12	03/28/12	
Acetone	EPA 8260B	12C0752	N/A	1200	ND	2	03/17/12	03/28/12	
Benzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Bromobenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Bromochloromethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Bromodichloromethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Bromoform	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Bromomethane	EPA 8260B	12C0752	N/A	590	ND	2	03/17/12	03/28/12	L4
Carbon tetrachloride	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Chlorobenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Chloroethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Chloroform	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Chloromethane	EPA 8260B	12C0752	N/A	590	ND	2	03/17/12	03/28/12	L4
cis-1,2-Dichloroethene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
cis-1,3-Dichloropropene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Dibromochloromethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Dichlorodifluoromethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	L4
Ethylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids) - cont.									**H4, D1**
Reporting Units: ug/kg dry									
m,p-Xylenes	EPA 8260B	12C0752	N/A	240	ND	2	03/17/12	03/28/12	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Methylene Chloride	EPA 8260B	12C0752	N/A	240	ND	2	03/17/12	03/28/12	
n-Butylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
n-Propylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
o-Xylene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
p-Isopropyltoluene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
sec-Butylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Styrene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
tert-Butylbenzene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Tetrachloroethene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Toluene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
trans-1,2-Dichloroethene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
trans-1,3-Dichloropropene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Trichloroethene	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Trichlorofluoromethane	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Vinyl Acetate	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Vinyl chloride	EPA 8260B	12C0752	N/A	120	ND	2	03/17/12	03/28/12	
Surrogate: Dibromofluoromethane (51-115%)					*93 %*				
Surrogate: Toluene-d8 (54-115%)					*96 %*				
Surrogate: 4-Bromofluorobenzene (51-117%)					*86 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS

Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: mg/kg dry									
Antimony	EPA 6010B	12C0694	N/A	5.9	ND	0.991	03/16/12	03/19/12	
Arsenic	EPA 6010B	12C0694	N/A	5.9	**10**	0.991	03/16/12	03/19/12	
Beryllium	EPA 6010B	12C0694	N/A	0.59	ND	0.991	03/16/12	03/19/12	
Cadmium	EPA 6010B	12C0694	N/A	0.59	**1.0**	0.991	03/16/12	03/19/12	
Chromium	EPA 6010B	12C0694	N/A	2.4	**14**	0.991	03/16/12	03/19/12	
Copper	EPA 6010B	12C0694	N/A	5.9	**390**	0.991	03/16/12	03/19/12	
Lead	EPA 6010B	12C0694	N/A	5.9	**10**	0.991	03/16/12	03/19/12	
Mercury	EPA 7471A	12C1113	N/A	0.12	**0.77**	0.977	03/26/12	03/26/12	
Molybdenum	EPA 6010B	12C0694	N/A	2.4	**13**	0.991	03/16/12	03/19/12	
Nickel	EPA 6010B	12C0694	N/A	2.4	**11**	0.991	03/16/12	03/19/12	
Selenium	EPA 6010B	12C0694	N/A	5.9	**6.4**	0.991	03/16/12	03/19/12	
Silver	EPA 6010B	12C0694	N/A	3.0	**4.6**	0.991	03/16/12	03/19/12	
Thallium	EPA 6010B	12C0694	N/A	5.9	ND	0.991	03/16/12	03/19/12	
Zinc	EPA 6010B	12C0694	N/A	12	**550**	0.991	03/16/12	03/19/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: % by Weight									
Percent Solids	SM 2540G	12C0848	N/A	0.10	85	1	03/20/12	03/20/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: mg/kg dry									
Cyanide	SW 9010C/9014	12C1201	N/A	0.47	6.1	0.997	03/27/12	03/27/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

General Chemistry Parameters

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: %									
% Dry Solids	SW-846	12C5376	N/A	0.500	**85.0**	1	03/26/12	03/26/12	SPS

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

Volatile Organic Compounds by EPA Method 8260B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: mg/kg dry									
Acrolein	SW846 8260B	12C3582	N/A	0.0234	ND	0.994	03/17/12	03/20/12	L3
Acrylonitrile	SW846 8260B	12C3582	N/A	0.0117	ND	0.994	03/17/12	03/20/12	
2-Chloroethylvinyl ether	SW846 8260B	12C3582	N/A	0.0234	ND	0.994	03/17/12	03/20/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

Volatile Organic Compounds by EPA Method 8260B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids) - cont.									
Reporting Units: ug/kg									
Surrogate: 1,2-Dichloroethane-d4 (70-130%)					*113 %*				
Surrogate: Dibromofluoromethane (70-130%)					*98 %*				
Surrogate: Toluene-d8 (70-130%)					*110 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*135 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

D 2216-90_2082089x

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: %									
Percent Moisture	D 2216-90_2082089	2082089	0.1	0.1	**14.3**	1	03/22/12	03/23/12	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

EPA-5 1613B-Tetrasx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: pg/g									
2,3,7,8-TCDD	EPA-5 1613B-Tetras	2087112	0.37	1	**0.41**	0.99	03/27/12	03/29/12	E4
Surrogate: 13C-2,3,7,8-TCDD (31-137%)					*65 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (42-164%)					*86 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

TCLP VOLATILE ORGANIC COMPOUNDS (EPA 1311/8260B)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: mg/l									
1,1-Dichloroethene	12C1044	N/A	0.10	ND	1	0.7	3/23/2012	3/23/2012	
1,2-Dichloroethane	12C1044	N/A	0.10	ND	1	0.5	3/23/2012	3/23/2012	
1,4-Dichlorobenzene	12C1044	N/A	0.10	ND	1	7.5	3/23/2012	3/23/2012	
2-Butanone (MEK)	12C1044	N/A	0.50	ND	1	200.0	3/23/2012	3/23/2012	L3
Benzene	12C1044	N/A	0.10	ND	1	0.5	3/23/2012	3/23/2012	
Carbon tetrachloride	12C1044	N/A	0.10	ND	1	0.5	3/23/2012	3/23/2012	
Chlorobenzene	12C1044	N/A	0.10	ND	1	100.0	3/23/2012	3/23/2012	
Chloroform	12C1044	N/A	0.10	ND	1	6.0	3/23/2012	3/23/2012	
Tetrachloroethene	12C1044	N/A	0.10	ND	1	0.7	3/23/2012	3/23/2012	
Trichloroethene	12C1044	N/A	0.10	ND	1	0.5	3/23/2012	3/23/2012	
Vinyl chloride	12C1044	N/A	0.10	ND	1	0.2	3/23/2012	3/23/2012	
Surrogate: 4-Bromofluorobenzene (70-130%)				*98 %*					
Surrogate: Dibromofluoromethane (70-130%)				*101 %*					
Surrogate: Toluene-d8 (70-130%)				*95 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS

Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

TCLP METALS

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: mg/l									
Arsenic	12C0743	N/A	0.50	ND	1	5.0	3/17/2012	3/19/2012	
Barium	12C0743	N/A	10	ND	1	100.0	3/17/2012	3/19/2012	
Cadmium	12C0743	N/A	0.25	ND	1	1.0	3/17/2012	3/19/2012	
Chromium	12C0743	N/A	0.50	ND	1	5.0	3/17/2012	3/19/2012	
Lead	12C0743	N/A	0.50	ND	1	5.0	3/17/2012	3/19/2012	
Mercury	12C1108	N/A	0.00050	ND	1	0.2	3/26/2012	3/26/2012	
Selenium	12C0743	N/A	0.25	ND	1	1.0	3/17/2012	3/19/2012	
Silver	12C0743	N/A	0.25	ND	1	5.0	3/17/2012	3/19/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: mg/l									
2,4,5-TP (Silvex)	12C0962	N/A	0.013	ND	1	1.0	3/21/2012	3/23/2012	
2,4-D	12C0962	N/A	0.013	ND	1	10.0	3/21/2012	3/23/2012	
Pentachlorophenol	12C0962	N/A	0.013	ND	1	100.0	3/21/2012	3/23/2012	
Surrogate: DCAA (30-154%)				*101 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS
Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

TCLP EXTRACTION

Analyte	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC1176-01 (2012030836 - Biosolids)									
Reporting Units: None									
TCLP Extraction	12C0674	N/A	1.00	ND	1	NA	3/15/2012	3/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Green Valley BS

Report Number: PVC1176

Sampled: 03/13/12
Received: 03/15/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: 2012030836 (PVC1176-01) - Soil					
EPA 8260B	2	03/13/2012 10:00	03/15/2012 10:30	03/17/2012 13:25	03/28/2012 04:37

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

PVC 1176

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Green Valley BS, DO# 12-32477

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required: BS - biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total solid % for mg/kg calc.	Total cyanide mg/kg	TCLP metals	TCLP volatiles	TCLP herbicides	6010B Sb, As, Be, Cd, Cu, Cr, Pb, Ni, Se	6010B Ag, Tl, Zn	Dioxin mg/kg	Mercury mg/kg	Volatiles mg/kg (methanol extraction)	Ac/Ac anal 2C12VE (methanol extraction)	Special Instructions
Green Valley BS #5	BS	HDPE + glass	8	03-13-12	1000	none	X	X	X	X	X	X	X	X	X	X	X	discrete -01
25000-1970 2012030836																		~~benzidine~~ GS 03-14-12
																		~~N-nitrosodimethylamine~~
																		~~1,2-diphenylhydrazine~~
																		GOS 03-14-12

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	03-14-12 1030		3/14/12 1030	same day ___ 72 hours ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ___ 5 days ___
	3/14/12 15:00			48 hours ___ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
			3/15/12 10:30	intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1.02

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

PVC 1176

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[.] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 1 of 1

Client Name/Address: Pima County CRAO Lab, 3035 W El Camino Del Cerro, Tucson AZ 85745

Project/PO Number: Green Valley BS, DO# 12-32477

Project Manager: Nancy Powell

Phone Number: 520-724-6183

Sampler: various

Fax Number: 520-724-6071

Analysis Required: BS-6 to solids

Special Instructions: -01

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total solid % for mg/kg calc.	Total cyanide mg/kg	TCLP metals	TCLP volatiles	TCLP herbicides	6010B Sb, As, Ba, Cd, Cu, Cr, Pb, Ni, Se	6010B Ag, Tl, Zn	Dioxin mg/kg	Mercury mg/kg	Volatiles mg/kg (methanol extraction)	Ac/Ac and 2CEVE (methanol extraction)	Special Instructions
Green Valley BS #5	BS	HDPE + glass	8	03-13-12	1000	none	X	X	X	X	X	X	X	X	X	X	X	discrete
25000-1970 2012030836																		~~benzidine~~ GS 03-14-12
																		~~N-nitrosodimethylamine~~
																		~~1,2-diphenylhydrazine~~
																		COS 03-14-12

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for samplers	03-14-12 1030		3/14/12 10:30	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
	3/14/12 15:00			48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
			3/15/12 10:30	intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1.02

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: Sample Group #43

Sampled: 03/29/12-03/30/12
Received: 03/31/12
Issued: 04/10/12 16:52

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PVC2267-01	2012031796	Soil
PVC2267-02	2012031795	Soil
PVC2267-03	2012031837	Water

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #43

Report Number: PVC2267

Sampled: 03/29/12-03/30/12
Received: 03/31/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC2267-01 (2012031796 - Soil)					**Sampled: 03/29/12**			
Reporting Units: mg/kg dry								
Arsenic	EPA 6010B	12D0061	5.7	**11**	0.995	4/3/2012	4/4/2012	
Cadmium	EPA 6010B	12D0061	0.57	**1.2**	0.995	4/3/2012	4/4/2012	
Chromium	EPA 6010B	12D0061	2.3	**15**	0.995	4/3/2012	4/4/2012	
Copper	EPA 6010B	12D0061	5.7	**400**	0.995	4/3/2012	4/4/2012	
Lead	EPA 6010B	12D0061	5.7	**12**	0.995	4/3/2012	4/4/2012	
Molybdenum	EPA 6010B	12D0061	2.3	**14**	0.995	4/3/2012	4/4/2012	
Nickel	EPA 6010B	12D0061	2.3	**12**	0.995	4/3/2012	4/4/2012	
Selenium	EPA 6010B	12D0061	5.7	**7.3**	0.995	4/3/2012	4/4/2012	
Silver	EPA 6010B	12D0061	2.9	**4.9**	0.995	4/3/2012	4/4/2012	
Zinc	EPA 6010B	12D0061	11	**610**	0.995	4/3/2012	4/4/2012	
Sample ID: PVC2267-02 (2012031795 - Soil)					**Sampled: 03/29/12**			
Reporting Units: mg/kg dry								
Arsenic	EPA 6010B	12D0061	6.3	**14**	1	4/3/2012	4/4/2012	
Cadmium	EPA 6010B	12D0061	0.63	**1.3**	1	4/3/2012	4/4/2012	
Chromium	EPA 6010B	12D0061	2.5	**19**	1	4/3/2012	4/4/2012	
Copper	EPA 6010B	12D0061	6.3	**540**	1	4/3/2012	4/4/2012	M3
Lead	EPA 6010B	12D0061	6.3	**15**	1	4/3/2012	4/4/2012	
Molybdenum	EPA 6010B	12D0061	2.5	**17**	1	4/3/2012	4/4/2012	
Nickel	EPA 6010B	12D0061	2.5	**15**	1	4/3/2012	4/4/2012	
Selenium	EPA 6010B	12D0061	6.3	**8.3**	1	4/3/2012	4/4/2012	
Silver	EPA 6010B	12D0061	3.1	**6.1**	1	4/3/2012	4/4/2012	
Zinc	EPA 6010B	12D0061	13	**720**	1	4/3/2012	4/4/2012	M3

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #43

Report Number: PVC2267

Sampled: 03/29/12-03/30/12
Received: 03/31/12

TOTAL METALS BY ICP/MS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC2267-03 (2012031837 - Water)					**Sampled: 03/30/12**			
Reporting Units: ug/l								
Selenium	EPA 200.8	12D0060	2.0	**2.0**	1	4/3/2012	4/4/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample Group #43
Report Number: PVC2267

Sampled: 03/29/12-03/30/12
Received: 03/31/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVC2267-01 (2012031796 - Soil)					**Sampled: 03/29/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0206	0.10	88	1	4/5/2012	4/5/2012	
Sample ID: PVC2267-01 (2012031796 - Soil)					**Sampled: 03/29/12**			
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	12D0092	0.46	4.0	1.01	4/3/2012	4/4/2012	
Sample ID: PVC2267-02 (2012031795 - Soil)					**Sampled: 03/29/12**			
Reporting Units: % by Weight								
Percent Solids	SM 2540G	12D0206	0.10	80	1	4/5/2012	4/5/2012	
Sample ID: PVC2267-02 (2012031795 - Soil)					**Sampled: 03/29/12**			
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	12D0092	0.50	3.7	1.03	4/3/2012	4/4/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

FEBRUARY 2012 – WEST PILE, BIOSOLIDS BATCH PRODUCTION CERTIFICATION 'CLASS B' BIOSOLIDS, R18.9.1006.E ALTERNATIVE 2 GREEN VALLEY BIOLOGICAL NUTRIENT REMOVAL OXIDATION DITCH (BNROD)

Source of Biosolids

Name of Facility: Green Valley BNROD; AZPDES Permit No. AZ0024937

Address of Facility: 2201 North Nogales Hwy, Green Valley, Arizona

Preparer of Biosolids

Name and Title: Ken Weber, WWTP Manager, Sub Regional Facilities - Treatment Division

Address: 4527 West Walker Road, Tucson, Arizona 85743

Telephone Number: (520) 443-6171

Biosolids Generation and Preparation

Processing Period: June 2011 to December 2011

Estimated Quantity: <290 Dry tons.

Vector Attraction Reduction Treatment Method: Option 7 (R18-9-1010.A.7)

The percent solids of the biosolids is equal to or greater than 75%

Percent Solids Analysis Results		
Sample Date	Total Solids – Analysis Results, (%)	Sample Number
November 18, 2011	86.8	2011111118

The above data shows that the biosolids meet the vector attraction reduction requirements.

Pathogen Reduction Treatment Alternative: Class B, Alternative 2 under R18.9.1006.E – "Air drying. The biosolids are dried on sand beds or paved or unpaved basins for at least three months. During at least two of the three months, the ambient average daily temperature is above 0° C;"

The current January 2012 batch of biosolids was processed as follows in the table below:

West Pile, February 2012 Batch
Processing Period and Bed Rotation

Drying Bed #	90-day Air Drying		Batch Holding, Bed #5	
	Begin	End	Begin	End
4	June 9, 2011	September 6, 2011	September 7, 2011	Hauling Date
2	July 10, 2011	October 7, 2011	October 8, 2011	Hauling Date
3	August 10, 2011	November 7, 2011	November 8, 2011	Hauling Date
1	September 12, 2011	December 10, 2011	December 11, 2011	Hauling Date

The biosolids were air-dried on concrete paved drying beds for at least three months; during at least two of the three months, the ambient average daily temperature was above 0° C. The processing dates, listed in the table above, and the ambient average daily temperature, Appendix A, show that the biosolids meet the Class B biosolids pathogen reduction requirements.

Nutrient Nitrogen Concentration

Sample Date	Sample Number	Nitrate / Nitrite mg/kg	Total Kjeldahl Nitrogen mg/kg	Total Nitrogen mg/kg
November 18, 2011	2011111118	75	61,390	61,465

Pollutant Concentration

	Analysis Results, mg/kg Sample Number Sample Date 2011111118 November 18, 2011	Table 2 R18-9-1005 Monthly Average Pollutant Concentrations	Table 1 R18-9-1005 Ceiling Concentration Limits for All Biosolids Applied to Land
Arsenic	11	41	75
Cadmium	1.5	39	85
Chromium	16	Not Applicable	3000
Copper	490	1500	4300
Lead	14	300	840
Mercury	0.58	17	57
Molybdenum	16	Not Applicable	75
Nickel	13	420	420
Selenium	9.1	100	100
Zinc	690	2800	7500

The above data shows that the metals concentrations meet Table 1 and Table 2 requirements.

Notice to Land Applier

Article 10 of Rule 18 Chapter 9 of the Arizona Administrative Code states the following in subsection 1006.C "Land on which biosolids with Class B pathogen reduction requirements are applied is subject to the use restrictions established in R18-9-1009." Article 10 of Rule 18 Chapter 9 subsection 1008 lists the management practices requirements for the land application of biosolids to reclamation sites. Both sections R18-9-1008 and R18-9-1009 are provide following the certification signature as a ready reference to the land applier.

Attachment: Laboratory sample analysis reports.

Certification

I certify, under penalty of law, that the pollutant analysis and the description of pathogen treatment and vector attraction reduction activities have been made under my direction and supervision; and under a system design to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

Kenneth A. Weber — 2/14/12

Ken Weber, WWTP Manager
Pima County Regional Wastewater Reclamation Department

Date

R18-9-1008. Management Practices, Application of Biosolids to Reclamation Sites

A. An applicator of bulk biosolids that are not exceptional quality biosolids shall comply with the following management practices at each land application site where the bulk biosolids are applied for reclamation. The applicator shall not:
   1. Apply bulk biosolids unless the soil and biosolids mixture has a pH of 5.0 or higher immediately after land application;
   2. Apply bulk biosolids to land with slopes greater than 6% unless:
      a. The site is operating under an AZPDES permit or a permit issued under section 402 (33 U.S.C. 1342) or 404 (33 U.S.C. 1344) of the Clean Water Act;
      b. The site is reclaimed as specified under A.R.S. Title 27, Chapter 5, and controls are in place to prevent runoff from leaving the application area; or
      c. Runoff from the site does not reach navigable waters;
   3. Apply bulk biosolids to land under the following conditions:
      a. Bulk biosolids with Class A pathogen reduction. To land if the depth to groundwater is 5 feet (1.52 meters) or less;
      b. Bulk biosolids with Class B pathogen reduction.
         i. To land if the depth to groundwater is 10 feet (3.04 meters) or less; and
         ii. To gravel, coarse or medium sands, or sands with less than 15% coarse fragments if the depth to groundwater is 40 feet (12.2 meters) or less from the point of application of biosolids;
   4. Apply bulk biosolids to land that is 32.8 feet (10 meters) or less from navigable waters;
   5. Store or apply bulk biosolids closer than 1000 feet (305 meters) from a public or semi-public drinking water supply well, unless the applicator justifies and the Department approves a shorter distance, or apply bulk biosolids closer than 250 feet (76.2 meters) from any other water well;
   6. Store or apply bulk biosolids within 1000 feet (305 meters) of a public right-of-way or private property line unless the applicator receives permission to apply bulk biosolids from the land owner or lessee of the adjoining property;

7. Exceed a total of 150 dry tons per acre to any portion of a reclamation site if bulk biosolids are applied;
8. Apply bulk biosolids with less than 10% solids;
9. Apply bulk biosolids to land that is flooded, frozen, or snow-covered so that the bulk biosolids enter a wetland or other navigable waters, except as provided in an AZPDES permit or a permit issued under section 402 (33 U.S.C. 1342) or 404 (33 U.S.C. 1344) of the Clean Water Act;
10. Apply more water than necessary to control dust and establish vegetation; and
11. Apply bulk biosolids within 1000 feet (305 meters) of a dwelling unless the biosolids are injected or incorporated into the soil within 10 hours of being applied.
12. Store bulk biosolids within 1000 feet (305 meters) of a dwelling unless the applicator obtains permission from the dwelling owner or lessee to store the biosolids at a shorter distance from the dwelling. If the dwelling owner or lessee changes, the applicator shall obtain permission from the new dwelling owner or lessee to continue to store the bulk biosolids within 1000 feet of the dwelling or move the biosolids to a location at least 1000 feet from the dwelling.

B. The requirements of R18-9-1007(B) apply if biosolids placed in a bag or other container are used to reclaim a site.

R18-9-1009. Site Restrictions

A. The following site restrictions apply to land where biosolids, which do not meet the Class A pathogen reduction requirements established in R18-9-1006, are land-applied.
1. A person shall not:
   a. Harvest food crop parts that touch the biosolids, or biosolids and soil mixture, but otherwise grow above the land's surface for 14 months following application;
   b. Harvest food crop parts growing in or below the land's surface for 20 months following application if the biosolids remain unincorporated on the land's surface for four months or more;
   c. Harvest food crop parts growing in or below the land's surface for 38 months following application if the biosolids remain on the land's surface for less than four months before incorporation;
   d. Harvest food, feed, and fiber crops for 30 days after application;
   e. Graze animals on the land for 30 days after application; or
   f. Harvest turf to be used at a public contact site or private residence for one year after application.
2. A person shall restrict public access to:
   a. Public contact sites for one year after application, and
   b. Land with a low potential for public exposure for 30 days after application.

B. If the vector attraction reduction requirement is met using the method:
1. In R18-9-1010(C)(1) or R18-9-1010(C)(2), the requirements of subsection (A) apply to domestic septage applied to agricultural land, forests, or reclamation sites; or
2. In R18-9-1010(C)(3), the requirements of subsection (A)(1)(a) through (A)(1)(d) apply to domestic septage applied to agricultural land, forests, or reclamation sites.

C. Once application is completed at a site, the applicator shall, in writing, provide the land owner and lessee with the following information:
1. The cumulative pollutant loading at the site if it is greater than or equal to 90% of the available site capacity established in Table 4 of R18-9-1005;
2. Any restriction established in this Section that applies to the property and the nature of the restriction; and
3. The signature of a responsible official of the applicator on this document that includes the following statement:

"I certify under penalty of law, that the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for false representations, including fines and imprisonment."

D. The land owner or lessee shall provide each applicator with a signature indicating receipt of the site restriction statement.

Appendix A – Temperature Records
Ambient Average Daily Temperature, Green Valley WRF, Arizona
January – December 2011

2011													
Jan	°C	Feb	°C	Mar	°C	Apr	°C	May	°C	Jun	°C	Jul	°C
1	13.6	1	15.6	1	13.7	1	24.4	1	15.6	1	29.2	1	33.9
2	10.8	2	10.7	2	15.7	2	26.1	2	17.5	2	26.9	2	35.8
3	11.4	3	8.9	3	16.8	3	24.2	3	23.9	3	26.1	3	33.1
4	9.8	4	10.1	4	14.7	4	20.0	4	26.4	4	27.2	4	30.0
5	9.2	5	9.5	5	15.1	5	21.4	5	25.0	5	28.9	5	28.9
6	8.5	6	9.5	6	17.2	6	22.5	6	25.3	6	29.4	6	29.2
7	8.6	7	12.3	7	18.4	7	20.6	7	25.8	7	27.2	7	31.7
8	12.1	8	13.7	8	13.6	8	19.7	8	25.0	8	25.8	8	33.1
9	10.5	9	6.1	9	14.5	9	9.4	9	22.2	9	26.4	9	33.1
10	11.2	10	9.1	10	17.7	10	9.2	10	18.1	10	27.5	10	30.8
11	12.2	11	10.2	11	18.9	11	16.4	11	17.8	11	27.2	11	28.1
12	10.6	12	12.0	12	18.7	12	18.6	12	21.4	12	28.1	12	30.3
13	8.7	13	14.2	13	17.9	13	19.2	13	25.3	13	28.3	13	30.0
14	0.5	14	15.6	14	18.4	14	17.5	14	24.2	14	28.1	14	29.2
15	-3.6	15	15.4	15	19.4	15	19.4	15	25.0	15	30.8	15	28.6
16	0.9	16	15.9	16	20.4	16	21.9	16	21.9	16	31.1	16	31.4
17	6.7	17	16.4	17	21.8	17	24.4	17	20.6	17	31.4	17	33.6
18	8.6	18	14.5	18	20.9	18	24.2	18	19.7	18	32.2	18	32.2
19	10.7	19	15.6	19	18.3	19	23.9	19	18.9	19	30.3	19	31.7
20	14.9	20	10.7	20	18.2	20	23.3	20	18.6	20	28.6	20	30.3
21	9.5	21	8.9	21	17.6	21	22.8	21	22.8	21	30.0	21	31.4
22	8.2	22	10.1	22	13.0	22	23.3	22	24.2	22	32.2	22	33.1
23	10.2	23	9.5	23	14.3	23	22.5	23	24.2	23	32.5	23	30.3
24	12.0	24	9.5	24	15.0	24	22.2	24	23.9	24	32.8	24	28.1
25	14.2	25	12.3	25	14.9	25	20.8	25	24.2	25	33.6	25	28.9
26	15.6	26	13.7	26	16.0	26	21.7	26	26.7	26	34.2	26	31.1
27	15.4	27	6.1	27	17.1	27	20.3	27	27.8	27	34.4	27	31.7
28	15.9	28	9.1	28	18.3	28	22.8	28	27.5	28	35.0	28	31.9
29	16.4			29	18.8	29	24.2	29	26.9	29	34.7	29	30.8
30	14.5			30	19.0	30	20.6	30	26.7	30	31.9	30	31.9
31	13.6			31	21.4			31	27.5		29.2	31	31.9

Appendix A – Temperature Records (Continued)
Ambient Average Daily Temperature, Green Valley WRF, Arizona
January – December 2011

2011										2012	
Aug	°C	Sept	°C	Oct	°C	Nov	°C	Dec	°C	Jan	°C
1	31.9	1	34.7	1	28.6	1	21.4	1	13.1	1	13.9
2	33.6	2	31.1	2	26.4	2	17.5	2	8.2	2	14.2
3	30.6	3	32.5	3	26.7	3	18.9	3	6.7	3	13.6
4	33.1	4	33.1	4	25.6	4	18.9	4	3.7	4	13.4
5	33.1	5	30.3	5	22.8	5	11.7	5	3.1	5	12.6
6	31.1	6	30.6	6	17.8	6	12.8	6	2.3	6	11.8
7	31.1	7	31.1	7	16.1	7	10.3	7	3.8	7	12.8
8	30.3	8	31.7	8	15.6	8	7.9	8	6.3	8	8.3
9	31.7	9	28.1	9	18.3	9	11.1	9	7.6	9	7.3
10	28.6	10	25.8	10	20.6	10	16.1	10	9.9	10	9.1
11	28.6	11	26.1	11	21.4	11	13.8	11	11.5	11	9.6
12	29.2	12	25.6	12	23.3	12	16.9	12	10.3	12	9.8
13	30.3	13	26.4	13	25.8	13	13.0	13	7.0	13	8.8
14	31.7	14	24.7	14	25.8	14	13.0	14	7.6	14	10.4
15	30.8	15	23.6	15	26.9	15	12.3	15	6.3	15	13.2
16	31.1	16	25.8	16	25.8	16	12.3	16	9.8	16	13.1
17	32.8	17	25.6	17	24.7	17	13.5	17	13.9	17	10.4
18	31.1	18	25.8	18	24.4	18	15.4	18	8.1	18	9.6
19	28.6	19	27.2	19	25.3	19	16.8	19	7.9	19	11.1
20	30.8	20	28.1	20	24.2	20	16.9	20	9.1	20	11.4
21	31.4	21	28.1	21	24.2	21	14.4	21	7.9	21	14.1
22	32.2	22	29.2	22	25.0	22	11.0	22	7.6	22	11.2
23	33.3	23	28.9	23	25.0	23	14.5	23	3.6	23	11.3
24	33.6	24	29.2	24	24.4	24	15.4	24	8.6	24	11.3
25	33.9	25	27.5	25	23.9	25	12.1	25	8.5	25	9.1
26	34.4	26	25.8	26	21.1	26	11.4	26	7.1	26	10.8
27	33.6	27	26.9	27	16.1	27	13.2	27	7.7	27	13.6
28	31.9	28	25.6	28	19.2	28	11.6	28	8.1	28	13.8
29	33.3	29	26.7	29	21.1	29	12.7	29	11.0	29	13.8
30	33.3	30	27.5	30	21.4	30	15.1	30	13.6	30	13.8
31	35.3			31	22.2			31	13.3	31	12.3

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 2/3/2012 14:05:45
Laboratory License #AZ0159

Sample Analysis Report

Custom Report - Green Valley WRF

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

2011111118 Sample sent to Test America for total cyanide and solids 11-18-11. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A. Robson

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

02/06/12
Date

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 - West (25000-1972)											
2011111118	C	Miscellaneous Note	11/18/11 7:37	None		Subcontracted					Other
2011111118	C	Nitrate/Nitrite	11/18/11 7:37	EPA 353.2	11/25/11 11:31	74.9	mg/Kg	0.06	2.30		manderson
2011111118	C	Nitrogen, Total Kjeldahl	11/18/11 7:37	EPA 351.2	11/23/11 14:27	61390.0	mg/Kg	53.5	109.7	D2	aklos
2011111118	C	Nitrogen, Total	11/18/11 7:37	Calculated	11/25/11 11:31	61464.8	mg/Kg		0.8		manderson
2011111118	C	Solids, Total	11/18/11 7:37	SM 2540G	11/19/11 11:00	86.80	%		0.01		jvriper

Lab Comments:

Data on this report was last modified on: 2/3/2012 14:25:28

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF

Data Qualifier(s):	Definition:
D2	Sample required dilution due to high concentration of target analyte.

Contract Lab Report
UNOFFICIAL

Green Valley WRF

Sample Number	Parameter	Sample Date	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
BNROD-Biosolids from drying bed #5 - West (25000-1972)								
2011111118	Arsenic	11/18/11	01/16/12	11.0	mg/Kg			
2011111118	Cadmium	11/18/11	01/16/12	1.5	mg/Kg			
2011111118	Chromium	11/18/11	01/16/12	16.0	mg/Kg			
2011111118	Copper	11/18/11	01/16/12	490.0	mg/Kg			
2011111118	Lead	11/18/11	01/16/12	14.0	mg/Kg			
2011111118	Molybdenum	11/18/11	01/16/12	16.0	mg/Kg			
2011111118	Nickel	11/18/11	01/16/12	13.0	mg/Kg			
2011111118	Selenium	11/18/11	01/16/12	9.1	mg/Kg			
2011111118	Zinc	11/18/11	01/16/12	690.0	mg/Kg			
2011111118	Silver	11/18/11	01/16/12	6.0	mg/Kg			
2011111118	Cyanide, Total	11/18/11	12/01/11	4.800	mg/Kg			
2011111118	Mercury	11/18/11	12/06/11	0.58	mg/Kg			

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201111 1118

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (WEST PILE)

SITE-LOCATION NUMBER: 25000-1972 (XXXXX-XXXX)

SAMPLE START DATE: 11-18-11 (MM / DD / YYYY)

SAMPLE START TIME: 0720 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 11-18-11 (MM / DD / YYYY)

SAMPLE END TIME: 0737 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals ** (contract lab)	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total (contract	☐	■
Iron	☐	☐	Cyanide, Amenable lab)	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver (contract lab)	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Cyanide + TS sent to Test America QUARTERLY SAMPLES DO# 12-17593

# of Bottles Delivered: 5 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Metals added 01-12-12 GOS PO#12-25201

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Lab fridge	11-18-11	0742
Lab fridge	Steven Garcia	11-18-11	0912
Steven Garcia	[signature]	11-18-11	1131
[signature]	[signature]	11/19/11	13:20
[signature]	[signature]	11/22/11	14:25

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	1	°C
Initials:	GOS	
Non-Preserved	3	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH	1	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn Mercury (contract lab)

Mercury sent to Test America. DO# 11-19125

>>> Select a Laboratory Here <<<
N/A
N/A
N/A
N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
ima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
ucson/AZ/85743	Calendar (C) or Work Days (W) _____			
520) 443-6183 Phone	TAT if different from Below _____			
520) 443-6071 FAX	☐ 2 weeks			SDG No.
roject Name: GV BS mercury and AV	☐ 1 week			
ite:Green Valley	☐ 2 days			
O# 12-19185	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Mercury 7471A mg/kg	tota solids	Semi-volatiles 8270	Volatiles 8260	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	1	X	X			results in mg/kg
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	1	X	X			results in mg/kg
Avra Valley RWRF effluent APP 25003-1350 2011111289	11/22/11	0708	discrete	WW	4			X	X	Semi-volatiles in triplicate if you want. GOS 11-22-11

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

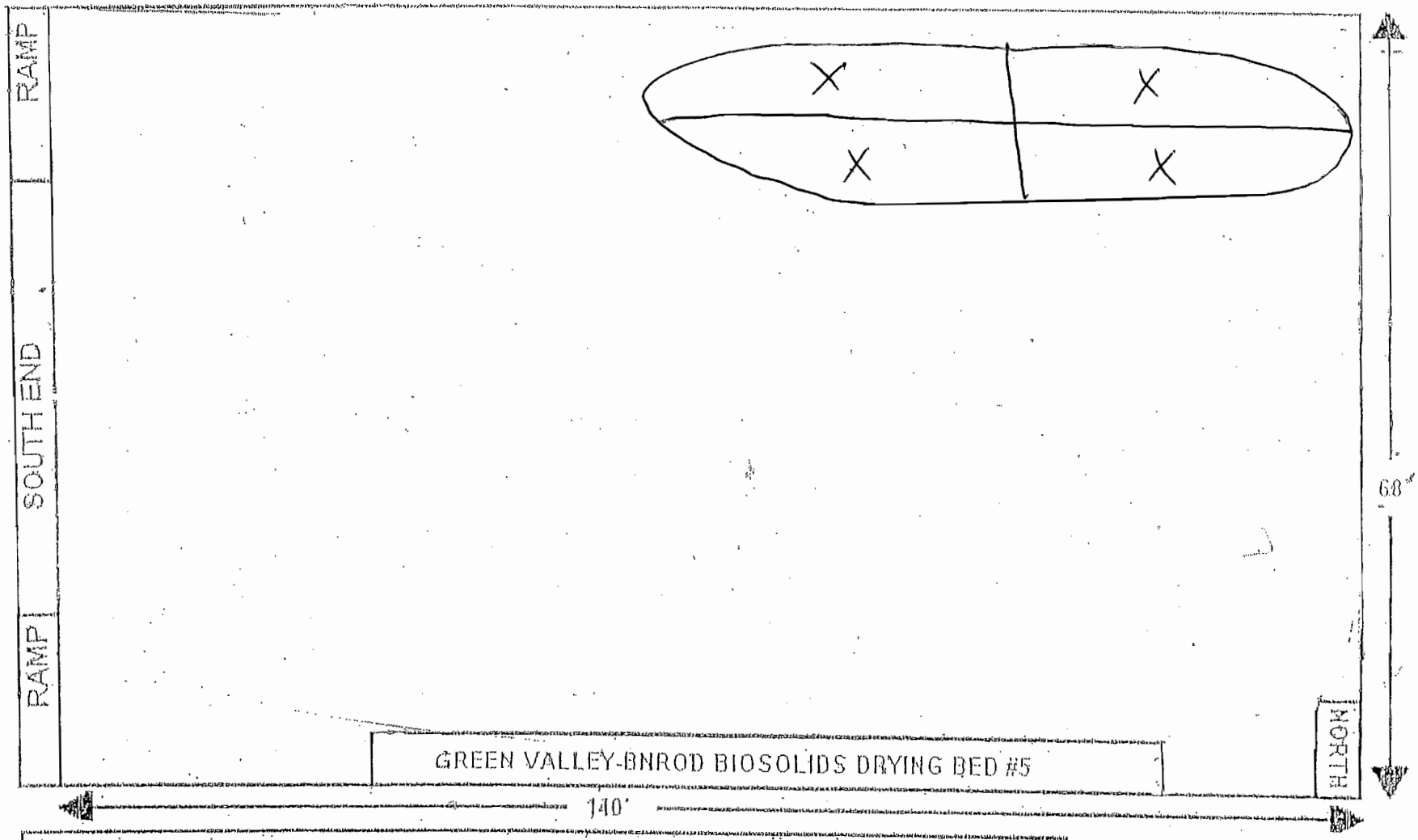
Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: The total solids samples were submitted 11-18-11 and can be reused. They're the same samples. Or you can split the samples for mercury and total solids, if you want. We expect to be charged for total solids twice. Thanks.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima CRAO Lab	11-22-11		TA-TUC	11/22/11 14:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, dated 04/07/2011



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE WEST PILE

SAMPLER R. Aretz DATE: 11-18-11 TIME: 0737

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111117, 2011111118 **DO:12*17593**
Contract Lab: Test America
Parameters:Total cyanide mg/kg, Total Solids
Preliminary Review

Lab Report signed and dated.	x
Data users notified of any Permit exceedances if necessary.	na
Data Results entered in LIMs, date correct, analyst correct, and released	x
Subcontract Lab licensed for Analysis reported?	x

Preliminary Review date and initials: TB 1-5-12

QA/QC Review

Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	**na**
Data packet includes QC Report from primary lab and any secondary subcontract labs.	X
QC data included for every analysis method.	X
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	X
Correct Data Qualifiers included if necessary.	X
Report Comments included if necessary.	X
DO received in Pima Core	x
WET Testing Specific Requirements	
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: TB 1-5-12

Peer/Final Review

	PR	FR
LIMS data matches reported data.	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GOS	✓
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GOS	NA

Peer Review date and initials: GOS 01-05-12 **Final Review date and initials:** BAE 1/9/2012

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Center Blvd. Ste 189
Phoenix, AZ 85040
Tel: (602) 437-3340

TestAmerica Job ID: PUK1343
Client Project/Site: GV BS cyanides
Client Project Description: Cyanides

For:
Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment
Tucson, AZ 85743

Attn: Nancy Powell

Authorized for release by:
12/6/2011 3:11:24 PM

Suzanne Glass
Project Manager
suzanne.glass@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13

Definitions/Glossary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Job ID: PUK1343

Laboratory: TestAmerica Phoenix

Narrative

SAMPLE RECEIPT: Samples were received intact, at 0.6 °C, on ice and with chain of custody documentation.
HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS: No significant observations were made.
SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Detection Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118 — Lab Sample ID: PUK1343-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	4.8		0.46		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Client Sample ID: 2011111117 — Lab Sample ID: PUK1343-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	10		0.58		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Client Sample Results

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118

Date Collected: 11/18/11 07:37
Date Received: 11/19/11 10:00

Lab Sample ID: PUK1343-01

Matrix: Soil
Percent Solids: 87.2

Method: SM 2540G - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87		0.10		% by Weight		11/23/11 10:20	11/23/11 10:40	1.0

Method: SW 9010C/9014 - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	4.8		0.46		mg/kg dry	☼	12/01/11 13:45	12/01/11 16:00	1.0

Client Sample ID: 2011111117

Date Collected: 11/18/11 07:11
Date Received: 11/19/11 10:00

Lab Sample ID: PUK1343-02

Matrix: Soil
Percent Solids: 69

Method: SM 2540G - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69		0.10		% by Weight		11/23/11 10:20	11/23/11 10:40	1.0

Method: SW 9010C/9014 - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	10		0.58		mg/kg dry	☼	12/01/11 13:45	12/01/11 16:00	1.0

Lab Chronicle

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118

Lab Sample ID: PUK1343-01

Date Collected: 11/18/11 07:37
Matrix: Soil
Date Received: 11/19/11 10:00
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	N_General Prep		1.0	11K0888_P	11/23/11 10:20	KOB	TAL PHX
Total	Analysis	SM 2540G		1.0	11K0888	11/23/11 10:40	KOB	TAL PHX
Total	Prep	N_General Prep		0.98	11L0042_P	12/01/11 13:45	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11L0042	12/01/11 16:00	TS	TAL PHX

Client Sample ID: 2011111117

Lab Sample ID: PUK1343-02

Date Collected: 11/18/11 07:11
Matrix: Soil
Date Received: 11/19/11 10:00
Percent Solids: 69

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	N_General Prep		1.0	11K0888_P	11/23/11 10:20	KOB	TAL PHX
Total	Analysis	SM 2540G		1.0	11K0888	11/23/11 10:40	KOB	TAL PHX
Total	Prep	N_General Prep		0.98	11L0042_P	12/01/11 13:45	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11L0042	12/01/11 16:00	TS	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Certification Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Phoenix	AIHA - LAP	IHLAP		154268
TestAmerica Phoenix	Arizona	State Program	9	AZ0728
TestAmerica Phoenix	California	NELAC	9	01109CA
TestAmerica Phoenix	California	State Program	9	2704
TestAmerica Phoenix	Nevada	State Program	9	AZ01030
TestAmerica Phoenix	New York	NELAC	2	11898
TestAmerica Phoenix	Oregon	NELAC	10	AZ100001
TestAmerica Phoenix	USDA	USDA		P330-09-00024

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Method	Method Description	Protocol	Laboratory
SM 2540G	INORGANICS		TAL PHX
SW 9010C/9014	INORGANICS		TAL PHX

Protocol References:

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Sample Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
PUK1343-01	2011111118	Soil	11/18/11 07:37	11/19/11 10:00
PUK1343-02	2011111117	Soil	11/18/11 07:11	11/19/11 10:00

>>> Select a Laboratory Here <<<
N/A
N/A
N/A
N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
lma County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
ucson/AZ/85743	Calendar (C) or Work Days (W)			PUK1343
520) 443-6183 Phone	TAT if different from Below			
520) 443-6071 FAX	☐ 2 weeks			SDG No.
roject Name: GV BS cyanides	☐ 1 week			
ite:Green Valley	☐ 2 days			
O # 12-17593	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total cyanide mg/kg	tota solids	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	2		X	X	results in mg/kg 01
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	2		X	X	results in mg/kg 02

reservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

ossible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

pecial Instructions/QC Requirements & Comments:

elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima County RWRD	11-18-11 1320		TA-TUC	11/18/11 13:20
elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/18/11 15:00			
elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/19/11 1000

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111118, 2011111117 **DO: 12-17593**
CV BS cyanides

Contract Lab: Test America
Parameters: Total Cyanide, Total Solids, 503 Metals,

Preliminary Review

Lab Report signed and dated.	✓
Data users notified of any Permit exceedances if necessary.	N/A
Data Results entered in LIMs, date correct, analyst correct, and released	✓
Subcontract Lab licensed for Analysis reported?	✓
Check that no data exceeds permit requirements. LIMS	✓
Semivolatiles & Volatiles: Check that all analytes were delivered.	N/A
Check that MDLs are below water quality standards, If not notify.	✓
Check that CRAO Lab MDLs/PQLs are not in Contract Lab results. (no analyte should be trace or ND)	✓

Preliminary Review date and initials: CBH 1-30-12

QA/QC Review

Copy of CoC included with Lab Report.	✓
Sample IDs verified against C oC.	✓
Sample dates and received dates are correct	✓
Analyses and methods verified against CoC. COC, email, case narrative	✓
Sample holding times not exceeded.	✓
Dilution on ND samples only in event of matrix interference.	✓
Data packet includes QC Report from primary lab and any secondary subcontract labs.	✓
QC data included for every analysis method.	✓
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	✓
Correct Data Qualifiers included if necessary.	✓
Report Comments included if necessary.	✓
Check that DO matches COC in types and number of tests.	N/A
DO received in Pima Core.	N/A
WET Testing Specific Requirements	N/A
Statement of Pass/Fail reflected in End Points	↓
Report states if zeolite treatment was utilized	↓
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	↓
Chemistry data included	↓
Reference Toxicant Test Results and Control Chart within limits	↓
PMSD Determination included and within acceptable range	↓
End Points include TUc, NOEC, LOEC, and IC25	↓
Statistics verify endpoints	↓

QA/QC Review date and initials: 1-31-12 CBH

Peer/Final Review

PR FR

LIMS data matches reported data.	✓	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	✓	✓
Correct Data Qualifiers included if necessary.	✓	✓
DO received in Pima Core		NA

Peer Review date and initials: ~~CBN 1-31-12~~ B 1-31-12 **Final Review date and initials:** BAE 1/31/12

Corrective Action Report
Subcontract Lab Data

Preliminary Review: CBN	Date: 1-30-12
QA/QC Review:	Date:
Data Entry: CH	Date: 1-18-12
Peer Review:	Date:
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

2D1111118 & 17 Ch PPM Sig removed, Added Ch 503 Metals Added

Deviations from Acceptable QA/QC:

[ ] Missing QC Report.
[ ] Missing QC Data.
[ ] Missing Data Qualifiers.
[ ] Missing CoC.
[ ] Incorrect Sample IDs.
[ ] Incorrect Analysis Method.
[ ] Holding Time for analysis exceeded.
[ ] Inappropriate dilution performed.
[ ] Other.

Corrective Action:

[] Request report correction from Subcontract Lab project manager.
[ ] Add missing Data Qualifiers.
[ ] Notify data end-user of deviation.
[ ]Arrange for resampling.
[x] Other: Added Ch 6D1DB Silver

Mercury not included in this report
Hg Reported on a Prior Report # PUK 1549 B 1-31-12

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:GV BS cyanides

Sampled: 11/18/11
Received: 11/19/11
Issued: 01/23/12 10:16

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUK1343-01	2011111118	Soil
PUK1343-02	2011111117	Soil

SAMPLE RECEIPT: Samples were received intact, at 1°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

N1 - The RPD exceeded the acceptance limit due to sample matrix effects.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: 1/23/2012: Report was revised to add 13 metals by EPA Method 6010B at the client's request after the original data was released.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides

Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	5.7	ND	1	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	5.7	**11**	1	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	0.57	ND	1	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	0.57	**1.5**	1	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	2.3	**16**	1	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	5.7	**490**	1	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	5.7	**14**	1	1/13/2012	1/16/2012	
Molybdenum	EPA 6010B	12A0443	2.3	**16**	1	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	2.3	**13**	1	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	5.7	**9.1**	1	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	2.9	**6.0**	1	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	5.7	ND	1	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	11	**690**	1	1/13/2012	1/16/2012	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	7.2	ND	0.999	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	7.2	**15**	0.999	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	0.72	ND	0.999	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	0.72	**2.0**	0.999	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	2.9	**23**	0.999	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	7.2	**690**	0.999	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	7.2	**22**	0.999	1/13/2012	1/16/2012	
Molybdenum	EPA 6010B	12A0443	2.9	**23**	0.999	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	2.9	**19**	0.999	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	7.2	**12**	0.999	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	3.6	**7.2**	0.999	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	7.2	ND	0.999	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	14	**910**	0.999	1/13/2012	1/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11K0888	0.10	**87**	1	11/23/2011	11/23/2011	
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0042	0.46	**4.8**	0.978	12/1/2011	12/1/2011	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11K0888	0.10	**69**	1	11/23/2011	11/23/2011	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0042	0.58	**10**	0.984	12/1/2011	12/1/2011	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides

Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

DATA QUALIFIERS AND DEFINITIONS

M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
N1	See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 6010B	Soil	N/A	X
SM 2540G	Soil		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

>>> Select a Laboratory Here <<<
#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			PUK1343
(520) 443-6183 Phone	TAT if different from Below _____			SDG No.
(520) 443-6071 FAX	☐ 2 weeks			
Project Name: GV BS cyanides	☐ 1 week			
Site:Green Valley	☐ 2 days			
P O # 12-17593	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total cyanide mg/kg	tota solids	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	2		X	X	results in mg/kg 01
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	2		X	X	results in mg/kg 02
email 1-12-12									
Also Antim, Arsenic, Beryllium, Cadm, lead nickel, selenium, silver, thallium, zinc, molly mg/kg									
Mercury									

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Pima County RWRD	11-18-11 1320	[signature]	TA-TUC	11/18/11 13:20
[signature]	TA-TUC	11/18/11 (5:00)	[signature]		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
			[signature]	TA	11/19/11 1000

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111118, 2011111117, 2011111289 **DO:12*19185**
Contract Lab:Test America
Parameters: Mercury (mg/kg), Total solids, 8270, 8260
Preliminary Review

Lab Report signed and dated.	X
Data users notified of any Permit exceedances if necessary.	x
Data Results entered in LIMs, date correct, analyst correct, and released	x
Subcontract Lab licensed for Analysis reported?	x

Preliminary Review date and initials: RB 1-24-12

QA/QC Review

Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	x
Data packet includes QC Report from primary lab and any secondary subcontract labs.	x
QC data included for every analysis method.	x
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	x
Correct Data Qualifiers included if necessary.	x
Report Comments included if necessary.	x
DO received in Pima Core	NO
WET Testing Specific Requirements	
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: RB 1-24-12

Peer/Final Review

	PR	FR
LIMS data matches reported data. SecCA	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GOS	
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GOS	NA

Peer Review date and initials: GOS 01-26-12 **Final Review date and initials:** 2/2/12 BAC

Corrective Action Report
Subcontract Lab Data

Preliminary Review:	Date:
QA/QC Review:	Date:
Data Entry:	Date:
Peer Review: GOS	Date: 01-26-12
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

201111118, 201111117 and 201111289

Deviations from Acceptable QA/QC:

[ ] Missing QC Report.
[ ] Missing QC Data.
[ ] Missing Data Qualifiers.
[ ] Missing CoC.
[ ] Incorrect Sample IDs.
[ ] Incorrect Analysis Method.
[ ] Holding Time for analysis exceeded.
[ ] Inappropriate dilution performed.
[X] Other.
Dates, times and results didn't match.

Corrective Action:

[] Request report correction from Subcontract Lab project manager.
[ ] Add missing Data Qualifiers.
[ ] Notify data end-user of deviation.
[ ]Arrange for resampling.
[X] Other:
Fixed dates, times and results in LIMS.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: GV BS mercury and AV

Sampled: 11/18/11-11/22/11
Received: 11/23/11
Revised: 01/19/12 16:03

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUK1549-01	2011111118	Soil
PUK1549-02	2011111117	Soil
PUK1549-03	2011111289	Water

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: 1/19/2012 - Revised to report the 8270 data to the MDL at the client's request.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-01RE1 (2011111118 - Soil)					**Sampled: 11/18/11**				
Reporting Units: mg/kg									
Mercury	EPA 7471A	11L0136	N/A	0.10	**0.58**	1.07	12/05/11	12/06/11	
Sample ID: PUK1549-02RE1 (2011111117 - Soil)					**Sampled: 11/18/11**				
Reporting Units: mg/kg									
Mercury	EPA 7471A	11L0136	N/A	0.10	**0.77**	1.05	12/05/11	12/06/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-01 (2011111118 - Soil)					**Sampled: 11/18/11**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	11K0933	N/A	0.10	**85**	1	11/23/11	11/23/11	
Sample ID: PUK1549-02 (2011111117 - Soil)					**Sampled: 11/18/11**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	11K0933	N/A	0.10	**85**	1	11/23/11	11/23/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV

Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

DATA QUALIFIERS AND DEFINITIONS

E8	Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
N1	See case narrative.
Q10	Sample received in inappropriate sample container.
Q2	Sample received with head space.
Q8	Insufficient sample received to meet method QC requirements. Batch QC requirements satisfy ADEQ policies 0154.000 and 0155.000.
R1	The RPD/RSD exceeded the method acceptance limit.
R6	LFB/LFBD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 7471A	Soil		X
EPA 8260B	Water	X	X
EPA 8270C	Water		X
SM 2540G	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

>>> Select a Laboratory Here <<<

#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

PUK1549

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			
(520) 443-6183 Phone	TAT if different from Below _____			
(520) 443-6071 FAX	☐ 2 weeks			SDG No.
Project Name: GV BS mercury and AV	☐ 1 week			
Site:Green Valley	☐ 2 days			
PO# 12-19185	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Mercury 7471A mg/kg	tota solids	Semi-volatiles 8270	Volatiles 8260	Sample Specific Notes:
-01 Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	1	X	X			results in mg/kg
-02 Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	1	X	X			results in mg/kg
-03 Avra Valley RWRF effluent APP 25003-1350 2011111289	11/22/11	0708	discrete	WW	4			X	X	Semi-volatiles in triplicate if you want. GOS 11-22-11

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: The total solids samples were submitted 11-18-11 and can be reused. They're the same samples. Or you can split the samples for mercury and total solids, if you want. We expect to be charged for total solids twice. Thanks.

28°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima CRAO Lab	11-22-11		TA-TUC	11/22/11 14:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/22/11 15:00			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/23/11 1030

Form No. CA-C-WI-002, dated 04/07/2011

SECTION 9

GREEN VALLEY BNROD
AZPDES NO. AZ0024937

BIOSOLIDS BATCHES

FEBRUARY 2012

DRYING BED#5

CLASS B ALT. 2 AND VAR #7

A.A.C. RULE 18.9.1005 METALS

ANNUAL BIOSOLIDS REPORT 2012

PIMA COUNTY
REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PIMA COUNTY, ARIZONA

FEBRUARY 2012 – EAST PILE, BIOSOLIDS BATCH PRODUCTION CERTIFICATION 'CLASS B' BIOSOLIDS, R18.9.1006.E ALTERNATIVE 2 GREEN VALLEY BIOLOGICAL NUTRIENT REMOVAL OXIDATION DITCH (BNROD)

Source of Biosolids

Name of Facility: Green Valley BNROD; AZPDES Permit No. AZ0024937

Address of Facility: 2201 North Nogales Hwy, Green Valley, Arizona

Preparer of Biosolids

Name and Title: Ken Weber, WWTP Manager, Sub Regional Facilities - Treatment Division

Address: 4527 West Walker Road, Tucson, Arizona 85743

Telephone Number: (520) 443-6171

Biosolids Generation and Preparation

Processing Period: January 2011 to February 2012

Estimated Quantity: <290 Dry tons.

Vector Attraction Reduction Treatment Method: Option 7 (R18-9-1010.A.7)

The percent solids of the biosolids is equal to or greater than 75%

Percent Solids Analysis Results - Arithmetic Mean = 88.8 %

Sample Date	Total Solids – Analysis Results, (%)	Sample Number
3/24/2011	88.1	2011031557
3/24/2011	87.9	2011031560
6/16/2011	90.2	2011060879
8/31/2011	90.9	2011081871
8/31/2011	87.5	2011081872
11/18/2011	88.0	2011111117

The above data shows that the biosolids meet the vector attraction reduction requirements.

Pathogen Reduction Treatment Alternative: Class B, Alternative 2 under R18.9.1006.E – "Air drying. The biosolids are dried on sand beds or paved or unpaved basins for at least three months. During at least two of the three months, the ambient average daily temperature is above 0° C;"

The current February 2012 batch of biosolids was processed as follows in the table below:

East Pile, February 2012 Batch
Processing Period and Bed Rotation

	90-day Air Drying		Batch Holding, Bed #5	
Drying Bed #	**Begin**	**End**	**Begin**	**End**
1	January 2, 2011	April 1, 2011	April 2, 2011	Hauling Date
4	February 4, 2011	May 4, 2011	May 5, 2011	Hauling Date
2	March 5, 2011	June 2, 2011	June 3, 2011	Hauling Date
3	April 7, 2011	July 5, 2011	July 6, 2011	Hauling Date
1	May 8, 2011	August 5, 2011	August 6, 2011	Hauling Date

The biosolids were air-dried on concrete paved drying beds for at least three months; during at least two of the three months, the ambient average daily temperature was above 0° C. The processing dates, listed in the table above, and the ambient average daily temperature, Appendix A, show that the biosolids meet the Class B biosolids pathogen reduction requirements.

Nutrient Nitrogen Concentration

Sample Date	Sample Number	Nitrate / Nitrite mg/kg	Total Kjeldahl Nitrogen mg/kg	Total Nitrogen mg/kg
3/24/2011	2011031560	303	68,801	69,104
6/16/2011	2011060879	62	63,748	63,810
8/31/2011	2011081872	27	65,293	65,320
11/18/2011	2011111117	22	50,920	50,942

Pollutant Concentration

	Analysis Results, mg/kg				Table 2 R18-9-1005 Monthly Average Pollutant Concentrations	Table 1 R18-9-1005 Ceiling Concentration Limits for All Biosolids Applied to Land
	Sample Number Sample Date					
	2011031560 3/24/2011	2011060879 6/16/2011	2011081872 8/31/2011	2011111117 11/18/2011		
Arsenic	< 18	< 8.7	9.2	15	41	75
Cadmium	< 7.2	< 3.5	< 3.4	2.0	39	85
Chromium	41.1	21.6	14.3	23	Not Applicable	3000
Copper	547	412	373	690	1500	4300
Lead	< 18	15.7	9.3	22	300	840
Mercury	2.8	1.4	1.6	0.77	17	57
Molybdenum	12.6	12.6	10.7	23	Not Applicable	75
Nickel	25	15.7	10.8	19	420	420
Selenium	< 18	< 8.7	< 8.4	12	100	100
Zinc	750	618	617	910	2800	7500

The above data shows that the metals concentrations meet Table 1 and Table 2 requirements.

Fecal Coliform Analysis Results - Geometric Mean		
Sample Date	Fecal Coliform Sludge – Analysis Results, (MPN/g)	Sample Number
8/31/2011	< 22 MPN/g	2011081871

Notice to Land Applier

Article 10 of Rule 18 Chapter 9 of the Arizona Administrative Code states the following in subsection 1006.C "Land on which biosolids with Class B pathogen reduction requirements are applied is subject to the use restrictions established in R18-9-1009." Article 10 of Rule 18 Chapter 9 subsection 1008 lists the management practices requirements for the land application of biosolids to reclamation sites. Both sections R18-9-1008 and R18-9-1009 are provide following the certification signature as a ready reference to the land applier.

Attachment: Laboratory sample analysis reports.

Certification

I certify, under penalty of law, that the pollutant analysis and the description of pathogen treatment and vector attraction reduction activities have been made under my direction and supervision; and under a system design to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

Ken Weber, WWTP Manager
Pima County Regional Wastewater Reclamation Department

2/14/12
Date

R18-9-1008. Management Practices, Application of Biosolids to Reclamation Sites

A. An applicator of bulk biosolids that are not exceptional quality biosolids shall comply with the following management practices at each land application site where the bulk biosolids are applied for reclamation. The applicator shall not:
   1. Apply bulk biosolids unless the soil and biosolids mixture has a pH of 5.0 or higher immediately after land application;
   2. Apply bulk biosolids to land with slopes greater than 6% unless:
      a. The site is operating under an AZPDES permit or a permit issued under section 402 (33 U.S.C. 1342) or 404 (33 U.S.C. 1344) of the Clean Water Act;
      b. The site is reclaimed as specified under A.R.S. Title 27, Chapter 5, and controls are in place to prevent runoff from leaving the application area; or
      c. Runoff from the site does not reach navigable waters;
   3. Apply bulk biosolids to land under the following conditions:
      a. Bulk biosolids with Class A pathogen reduction. To land if the depth to groundwater is 5 feet (1.52 meters) or less;
      b. Bulk biosolids with Class B pathogen reduction.
         i. To land if the depth to groundwater is 10 feet (3.04 meters) or less; and
         ii. To gravel, coarse or medium sands, or sands with less than 15% coarse fragments if the depth to groundwater is 40 feet (12.2 meters) or less from the point of application of biosolids;
   4. Apply bulk biosolids to land that is 32.8 feet (10 meters) or less from navigable waters;
   5. Store or apply bulk biosolids closer than 1000 feet (305 meters) from a public or semi-public drinking water supply well, unless the applicator justifies and the Department approves a shorter distance, or apply bulk biosolids closer than 250 feet (76.2 meters) from any other water well;
   6. Store or apply bulk biosolids within 1000 feet (305 meters) of a public right-of-way or private property line unless the applicator receives permission to apply bulk biosolids from the land owner or lessee of the adjoining property;

7. Exceed a total of 150 dry tons per acre to any portion of a reclamation site if bulk biosolids are applied;
8. Apply bulk biosolids with less than 10% solids;
9. Apply bulk biosolids to land that is flooded, frozen, or snow-covered so that the bulk biosolids enter a wetland or other navigable waters, except as provided in an AZPDES permit or a permit issued under section 402 (33 U.S.C. 1342) or 404 (33 U.S.C. 1344) of the Clean Water Act;
10. Apply more water than necessary to control dust and establish vegetation; and
11. Apply bulk biosolids within 1000 feet (305 meters) of a dwelling unless the biosolids are injected or incorporated into the soil within 10 hours of being applied.
12. Store bulk biosolids within 1000 feet (305 meters) of a dwelling unless the applicator obtains permission from the dwelling owner or lessee to store the biosolids at a shorter distance from the dwelling. If the dwelling owner or lessee changes, the applicator shall obtain permission from the new dwelling owner or lessee to continue to store the bulk biosolids within 1000 feet of the dwelling or move the biosolids to a location at least 1000 feet from the dwelling.

B. The requirements of R18-9-1007(B) apply if biosolids placed in a bag or other container are used to reclaim a site.

R18-9-1009. Site Restrictions

A. The following site restrictions apply to land where biosolids, which do not meet the Class A pathogen reduction requirements established in R18-9-1006, are land-applied.
1. A person shall not:
   a. Harvest food crop parts that touch the biosolids, or biosolids and soil mixture, but otherwise grow above the land's surface for 14 months following application;
   b. Harvest food crop parts growing in or below the land's surface for 20 months following application if the biosolids remain unincorporated on the land's surface for four months or more;
   c. Harvest food crop parts growing in or below the land's surface for 38 months following application if the biosolids remain on the land's surface for less than four months before incorporation;
   d. Harvest food, feed, and fiber crops for 30 days after application;
   e. Graze animals on the land for 30 days after application; or
   f. Harvest turf to be used at a public contact site or private residence for one year after application.
2. A person shall restrict public access to:
   a. Public contact sites for one year after application, and
   b. Land with a low potential for public exposure for 30 days after application.

B. If the vector attraction reduction requirement is met using the method:
1. In R18-9-1010(C)(1) or R18-9-1010(C)(2), the requirements of subsection (A) apply to domestic septage applied to agricultural land, forests, or reclamation sites; or
2. In R18-9-1010(C)(3), the requirements of subsection (A)(1)(a) through (A)(1)(d) apply to domestic septage applied to agricultural land, forests, or reclamation sites.

C. Once application is completed at a site, the applicator shall, in writing, provide the land owner and lessee with the following information:
1. The cumulative pollutant loading at the site if it is greater than or equal to 90% of the available site capacity established in Table 4 of R18-9-1005;
2. Any restriction established in this Section that applies to the property and the nature of the restriction; and
3. The signature of a responsible official of the applicator on this document that includes the following statement:

"I certify under penalty of law, that the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for false representations, including fines and imprisonment."

D. The land owner or lessee shall provide each applicator with a signature indicating receipt of the site restriction statement.

Appendix A – Temperature Records
Ambient Average Daily Temperature, Green Valley WRF, Arizona
January – December 2011

2011													
Jan	°C	Feb	°C	Mar	°C	Apr	°C	May	°C	Jun	°C	Jul	°C
1	13.6	1	15.6	1	13.7	1	24.4	1	15.6	1	29.2	1	33.9
2	10.8	2	10.7	2	15.7	2	26.1	2	17.5	2	26.9	2	35.8
3	11.4	3	8.9	3	16.8	3	24.2	3	23.9	3	26.1	3	33.1
4	9.8	4	10.1	4	14.7	4	20.0	4	26.4	4	27.2	4	30.0
5	9.2	5	9.5	5	15.1	5	21.4	5	25.0	5	28.9	5	28.9
6	8.5	6	9.5	6	17.2	6	22.5	6	25.3	6	29.4	6	29.2
7	8.6	7	12.3	7	18.4	7	20.6	7	25.8	7	27.2	7	31.7
8	12.1	8	13.7	8	13.6	8	19.7	8	25.0	8	25.8	8	33.1
9	10.5	9	6.1	9	14.5	9	9.4	9	22.2	9	26.4	9	33.1
10	11.2	10	9.1	10	17.7	10	9.2	10	18.1	10	27.5	10	30.8
11	12.2	11	10.2	11	18.9	11	16.4	11	17.8	11	27.2	11	28.1
12	10.6	12	12.0	12	18.7	12	18.6	12	21.4	12	28.1	12	30.3
13	8.7	13	14.2	13	17.9	13	19.2	13	25.3	13	28.3	13	30.0
14	0.5	14	15.6	14	18.4	14	17.5	14	24.2	14	28.1	14	29.2
15	-3.6	15	15.4	15	19.4	15	19.4	15	25.0	15	30.8	15	28.6
16	0.9	16	15.9	16	20.4	16	21.9	16	21.9	16	31.1	16	31.4
17	6.7	17	16.4	17	21.8	17	24.4	17	20.6	17	31.4	17	33.6
18	8.6	18	14.5	18	20.9	18	24.2	18	19.7	18	32.2	18	32.2
19	10.7	19	15.6	19	18.3	19	23.9	19	18.9	19	30.3	19	31.7
20	14.9	20	10.7	20	18.2	20	23.3	20	18.6	20	28.6	20	30.3
21	9.5	21	8.9	21	17.6	21	22.8	21	22.8	21	30.0	21	31.4
22	8.2	22	10.1	22	13.0	22	23.3	22	24.2	22	32.2	22	33.1
23	10.2	23	9.5	23	14.3	23	22.5	23	24.2	23	32.5	23	30.3
24	12.0	24	9.5	24	15.0	24	22.2	24	23.9	24	32.8	24	28.1
25	14.2	25	12.3	25	14.9	25	20.8	25	24.2	25	33.6	25	28.9
26	15.6	26	13.7	26	16.0	26	21.7	26	26.7	26	34.2	26	31.1
27	15.4	27	6.1	27	17.1	27	20.3	27	27.8	27	34.4	27	31.7
28	15.9	28	9.1	28	18.3	28	22.8	28	27.5	28	35.0	28	31.9
29	16.4			29	18.8	29	24.2	29	26.9	29	34.7	29	30.8
30	14.5			30	19.0	30	20.6	30	26.7	30	31.9	30	31.9
31	13.6			31	21.4			31	27.5		29.2	31	31.9

Appendix A – Temperature Records (Continued)
Ambient Average Daily Temperature, Green Valley WRF, Arizona
January – December 2011

2011										2012	
Aug	°C	Sept	°C	Oct	°C	Nov	°C	Dec	°C	Jan	°C
1	31.9	1	34.7	1	28.6	1	21.4	1	13.1	1	13.9
2	33.6	2	31.1	2	26.4	2	17.5	2	8.2	2	14.2
3	30.6	3	32.5	3	26.7	3	18.9	3	6.7	3	13.6
4	33.1	4	33.1	4	25.6	4	18.9	4	3.7	4	13.4
5	33.1	5	30.3	5	22.8	5	11.7	5	3.1	5	12.6
6	31.1	6	30.6	6	17.8	6	12.8	6	2.3	6	11.8
7	31.1	7	31.1	7	16.1	7	10.3	7	3.8	7	12.8
8	30.3	8	31.7	8	15.6	8	7.9	8	6.3	8	8.3
9	31.7	9	28.1	9	18.3	9	11.1	9	7.6	9	7.3
10	28.6	10	25.8	10	20.6	10	16.1	10	9.9	10	9.1
11	28.6	11	26.1	11	21.4	11	13.8	11	11.5	11	9.6
12	29.2	12	25.6	12	23.3	12	16.9	12	10.3	12	9.8
13	30.3	13	26.4	13	25.8	13	13.0	13	7.0	13	8.8
14	31.7	14	24.7	14	25.8	14	13.0	14	7.6	14	10.4
15	30.8	15	23.6	15	26.9	15	12.3	15	6.3	15	13.2
16	31.1	16	25.8	16	25.8	16	12.3	16	9.8	16	13.1
17	32.8	17	25.6	17	24.7	17	13.5	17	13.9	17	10.4
18	31.1	18	25.8	18	24.4	18	15.4	18	8.1	18	9.6
19	28.6	19	27.2	19	25.3	19	16.8	19	7.9	19	11.1
20	30.8	20	28.1	20	24.2	20	16.9	20	9.1	20	11.4
21	31.4	21	28.1	21	24.2	21	14.4	21	7.9	21	14.1
22	32.2	22	29.2	22	25.0	22	11.0	22	7.6	22	11.2
23	33.3	23	28.9	23	25.0	23	14.5	23	3.6	23	11.3
24	33.6	24	29.2	24	24.4	24	15.4	24	8.6	24	11.3
25	33.9	25	27.5	25	23.9	25	12.1	25	8.5	25	9.1
26	34.4	26	25.8	26	21.1	26	11.4	26	7.1	26	10.8
27	33.6	27	26.9	27	16.1	27	13.2	27	7.7	27	13.6
28	31.9	28	25.6	28	19.2	28	11.6	28	8.1	28	13.8
29	33.3	29	26.7	29	21.1	29	12.7	29	11.0	29	13.8
30	33.3	30	27.5	30	21.4	30	15.1	30	13.6	30	13.8
31	35.3			31	22.2			31	13.3	31	12.3

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
7101 N. Casa Grande Highway, Tucson, AZ 85743-9577, Phone: (520) 443-6100

Report Date: 10/28/2011 13:57:53
Laboratory License #AZ0159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
August 2011

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

2011081872 Sample sent to Test America for cyanide analysis 09-01-11. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A Escobar

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

11/01/11
Date

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-MLSS-Process Control (25000-1940)											
2011080212	D	Solids, Total Suspended	8/3/11 6:50	SM 2540D	08/04/11 11:50	1733.3	mg/l		2.5		snevius
2011080212	D	Solids, Total Volatile Suspended	8/3/11 6:50	EPA 160.4	08/04/11 12:20	1333.3	mg/l		2.5		snevius
BNROD-North Aerobic Digester Sludge (25000-1950)											
2011080213	D	pH (Field)	8/3/11 7:55	SM 4500-HB	08/03/11 7:55	7.3	pH Units				Mario Solano
2011080213	D	pH Temperature (Field)	8/3/11 7:55	SM 4500-HB	08/03/11 7:55	39.6	o C				Mario Solano
2011080213	D	Solids, Total	8/3/11 7:55	SM 2540G	08/04/11 12:25	2.56	%		0.01		jvriper
2011080213	D	Solids, Volatile	8/3/11 7:55	SM 2540G	08/04/11 14:55	76.2	%		0.005		jvriper
BNROD-Biosolids from drying bed #5 - East (25000-1971)											
2011081871	D	Coliform, Fecal Sludge	8/31/11 6:55	SM 9221E	09/03/11 12:45	<22	MPN/g		20		jhernandez
2011081871	D	Coliform, Fecal	8/31/11 6:55	SM 9221E	09/03/11 12:45	<2	MPN/100ml		2		jhernandez
2011081871	D	Solids, Total	8/31/11 6:55	SM 2540G	09/01/11 9:17	90.87	%		0.01		jvriper
2011081872	C	Miscellaneous Note	8/31/11 6:50	None		Subcontracted					Other
2011081872	C	Arsenic	8/31/11 6:50	EPA 6010B	09/14/11 17:40	9.2	mg/Kg	0.0125	8.4062		mbomar
2011081872	C	Cadmium	8/31/11 6:50	EPA 6010B	09/14/11 17:40	Trace	mg/Kg	0.0005	3.3625		mbomar
2011081872	C	Chromium	8/31/11 6:50	EPA 6010B	09/14/11 18:30	14.3	mg/Kg	0.0007	8.4062		mbomar
2011081872	C	Copper	8/31/11 6:50	EPA 6010B	09/14/11 17:40	373	mg/Kg	0.0037	8.4062		mbomar
2011081872	C	Lead	8/31/11 6:50	EPA 6010B	09/14/11 17:40	9.3	mg/Kg	0.0080	8.4062		mbomar
2011081872	C	Molybdenum	8/31/11 6:50	EPA 6010B	09/14/11 17:40	10.7	mg/Kg	0.0026	3.3625		mbomar
2011081872	C	Nickel	8/31/11 6:50	EPA 6010B	09/14/11 17:40	10.8	mg/Kg	0.0086	8.4062		mbomar
2011081872	C	Selenium	8/31/11 6:50	EPA 6010B	09/21/11 14:53	Trace	mg/Kg	0.0122	8.4062		mbomar
2011081872	C	Zinc	8/31/11 6:50	EPA 6010B	09/14/11 17:40	617	mg/Kg	0.0033	8.4062		mbomar
2011081872	C	Silver	8/31/11 6:50	EPA 6010B	09/14/11 18:30	3.8	mg/Kg	0.0011	0.8406		mbomar
2011081872	C	Mercury	8/31/11 6:50	EPA 7471A	09/12/11 15:40	1.580	mg/Kg	0.00023	0.057		khowell
2011081872	C	Nitrate/Nitrite	8/31/11 6:50	EPA 353.2	09/07/11 11:57	26.8	mg/Kg	0.05	2.29		manderson
2011081872	C	Nitrogen, Total Kjeldahl	8/31/11 6:50	EPA 351.2	09/08/11 9:50	65293.4	mg/Kg	53.9	110.5	D2	aklos
2011081872	C	Nitrogen, Total	8/31/11 6:50	Calculated	09/08/11 13:13	65320.2	mg/Kg		0.8		aklos
2011081872	C	Solids, Total	8/31/11 6:50	SM 2540G	09/01/11 9:17	87.47	%		0.01		jvriper

Lab Comments:

Data on this report was last modified on: 10/19/2011 06:50:12

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201108 1871

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: (MM / DD / YYYY)

SAMPLE START TIME: (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 08/31/2011 (MM / DD / YYYY)

SAMPLE END TIME: 0655 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	☐
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	■	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
RESULTS FOR FECAL SAMPLE TO BE mpn/gram (DRY WEIGHT) TS has to be taken out of same bottle. GOS 08-31-11

# of Bottles Delivered: 1 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Lab Fridge	8-31-11	0705
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Lab Fridge	Rick Anderson	8-31-11	0907
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Rick Anderson	[signature]	08-31-11	1208
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

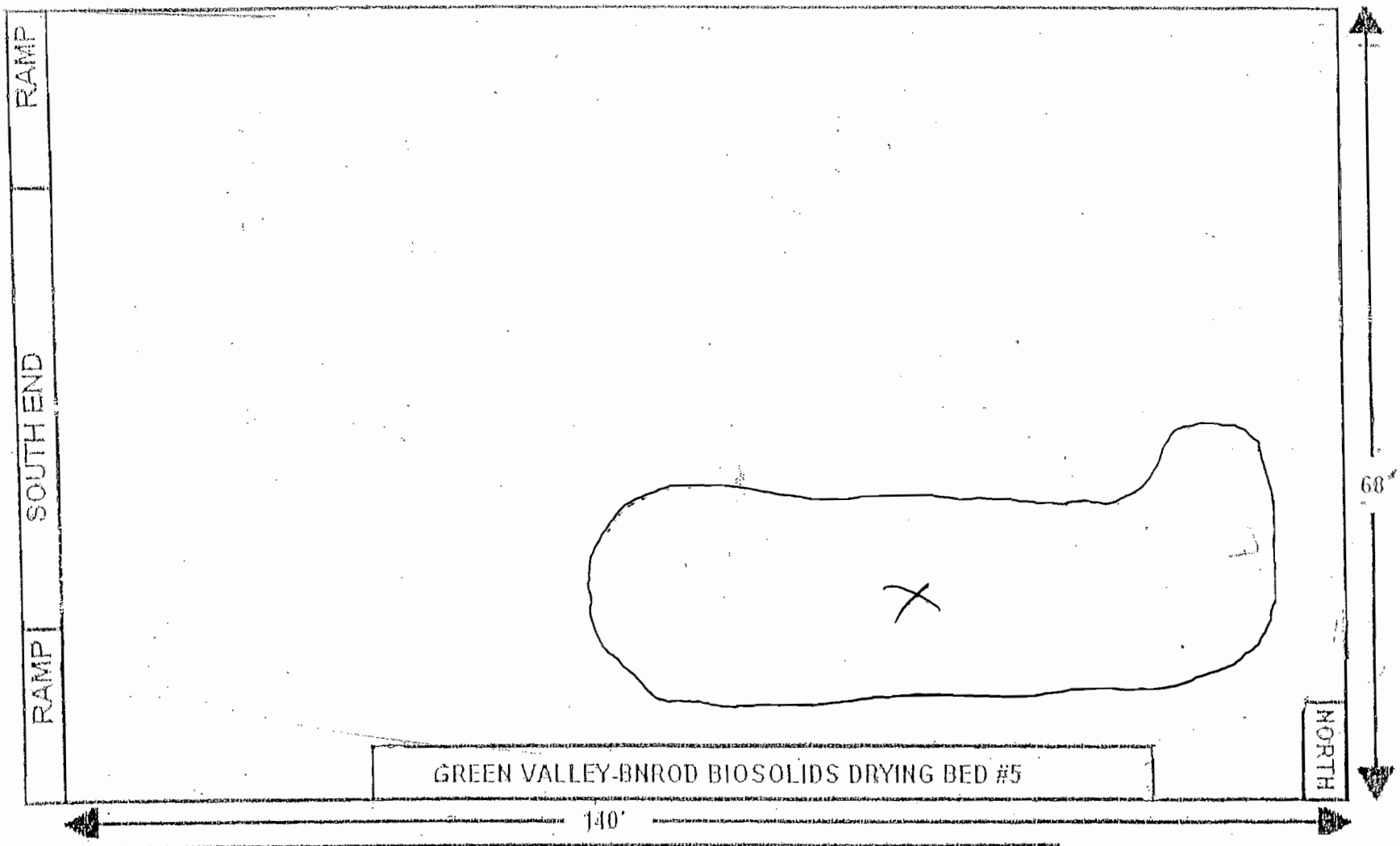
Sample Integrity/Preservation:

Temperature:	6	°C
Initials:	GOS	
Non-Preserved	1	#
HNO_3		#
H_2SO_4		#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

2011081871



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER R. ARTZ DATE: 8-31-11 TIME: 0655 (EAST PILE)

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201108 1872

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: 08/31/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0630 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 08/31/2011 (MM / DD / YYYY)

SAMPLE END TIME: 0650 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total (contract lab)	☐	■
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total 2 (for contract lab)	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Cyanide for Test America, QUARTERLY SAMPLES DOH 12#7257

# of Bottles Delivered: 5 (GJ)

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
	Lab fridge	8-31-11	0705
Lab fridge	Rick Anderson	8-31-11	0907
Rick Anderson		08-31-11	1208
		9/1/11	10:00

Relinquished by: / Received by: / Date: / Time: (24 Hour Clock)

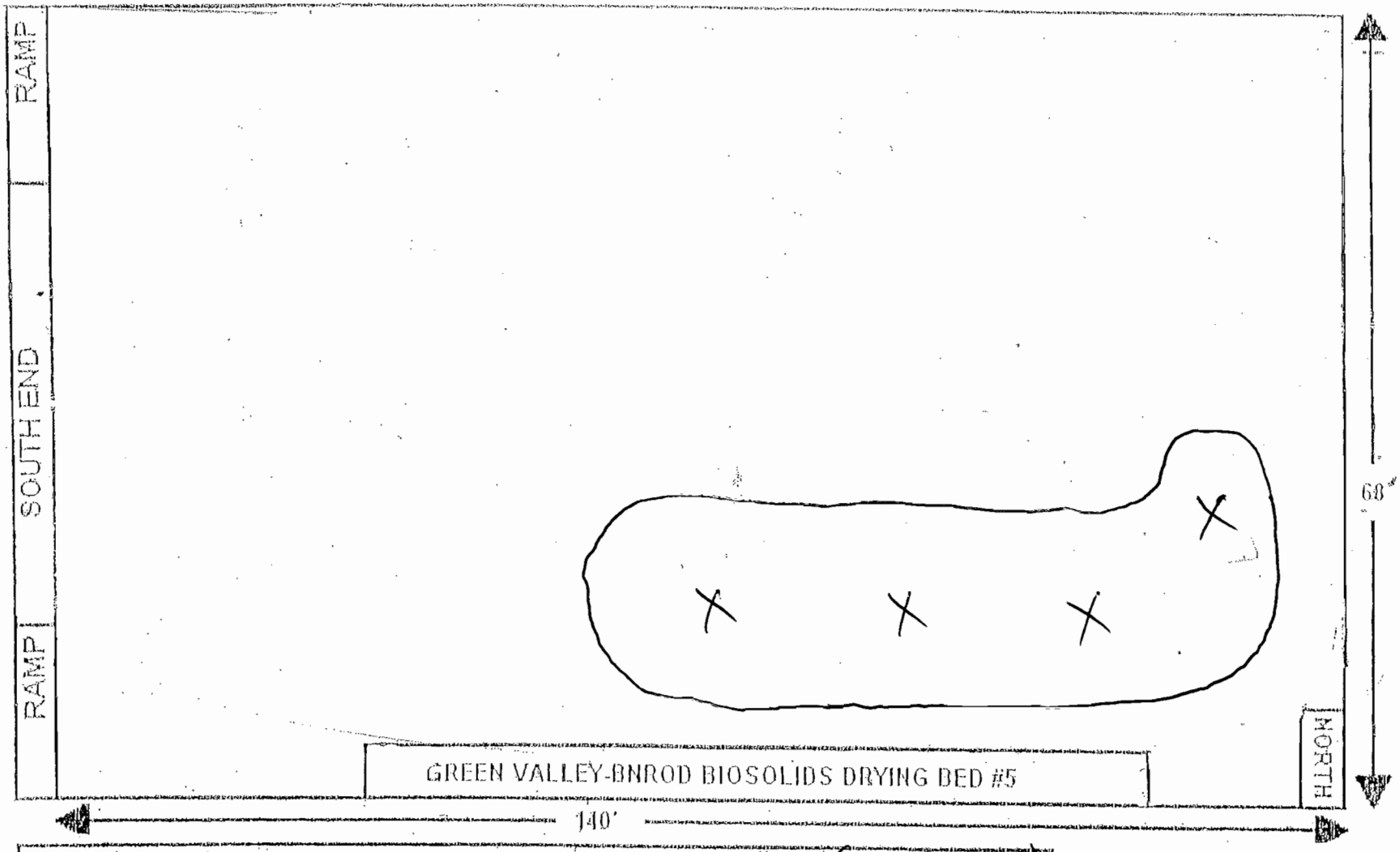
LAB USE ONLY

Sample Integrity/Preservation:		
Temperature:	6	°C
Initials:	GJ	
Non-Preserved	4	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* *Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)*
** *As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn*

2011081872



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE (EAST PILE)

SAMPLER R. Aertz DATE: 8-31-11 TIME: Start time: 0630

Stop time: 0650

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 2/3/2012 14:05:05
Laboratory License #AZ0159

Sample Analysis Report

Custom Report - Green Valley WRF

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

2011031560 Sample sent to Test America for Total Cyanide (mg/kg) and Total Solids analysis 03-24-11.
2011060879 Sample sent to Test America for cyanide analysis 06-16-11. GOS
2011081872 Sample sent to Test America for cyanide analysis 09-01-11. GOS
2011111117 Sample sent to Test America for total cyanide and solids 11-18-11. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara Esobar

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

02.06.12
Date

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 - East (25000-1971)											
2011031557	D	Coliform, Fecal Sludge	3/24/11 7:00	SM 9221E	03/26/11 11:08	919000	MPN/g		20		jdoranski
2011031557	D	Coliform, Fecal	3/24/11 7:00	SM 9221E	03/26/11 11:08	90000	MPN/100ml		2		jdoranski
2011031557	D	Solids, Total	3/24/11 7:00	SM 2540G	03/25/11 9:00	88.10	%		0.005		edoyle
2011031560	C	Miscellaneous Note	3/24/11 6:52	None		Subcontracted					Other
2011031560	C	Arsenic	3/24/11 6:52	EPA 6010B	03/30/11 12:05	Trace	mg/Kg	0.0125	18.0		mbomar
2011031560	C	Cadmium	3/24/11 6:52	EPA 6010B	03/30/11 10:30	Trace	mg/Kg	0.0005	7.2		mbomar
2011031560	C	Chromium	3/24/11 6:52	EPA 6010B	03/30/11 10:30	41.1	mg/Kg	0.0007	18.0		mbomar
2011031560	C	Copper	3/24/11 6:52	EPA 6010B	03/30/11 10:30	547	mg/Kg	0.0037	18.0		mbomar
2011031560	C	Lead	3/24/11 6:52	EPA 6010B	04/05/11 13:07	Trace	mg/Kg	0.0080	18.0		mbomar
2011031560	C	Molybdenum	3/24/11 6:52	EPA 6010B	03/30/11 10:30	12.6	mg/Kg	0.0026	7.2		mbomar
2011031560	C	Nickel	3/24/11 6:52	EPA 6010B	03/31/11 10:46	25.0	mg/Kg	0.0086	18.0	M5	mbomar
2011031560	C	Selenium	3/24/11 6:52	EPA 6010B	03/31/11 13:38	Trace	mg/Kg	0.0122	18.0		mbomar
2011031560	C	Zinc	3/24/11 6:52	EPA 6010B	03/30/11 10:30	750	mg/Kg	0.0033	18.0	M5	mbomar
2011031560	C	Silver	3/24/11 6:52	EPA 6010B	04/05/11 11:49	8.9	mg/Kg	0.0011	1.80	M5	mbomar
2011031560	C	Mercury	3/24/11 6:52	EPA 7471A	03/29/11 12:55	2.800	mg/Kg	0.00023	0.057	D2	khowell
2011031560	C	Nitrate/Nitrite	3/24/11 6:52	EPA 353.2	03/29/11 9:23	303.0	mg/Kg	0.05	2.3	D2	tourada
2011031560	C	Nitrogen, Total Kjeldahl	3/24/11 6:52	EPA 351.2	04/01/11 12:51	68801.1	mg/Kg	52.8	108.3	D2	manderson
2011031560	C	Nitrogen, Total	3/24/11 6:52	Calculated	04/04/11 9:02	69104.1	mg/Kg		108.3		manderson
2011031560	C	Solids, Total	3/24/11 6:52	SM 2540G	03/25/11 9:00	87.90	%		0.005		edoyle
2011060879	C	Miscellaneous Note	6/16/11 6:45	None		Subcontracted					Other
2011060879	C	Arsenic	6/16/11 6:45	EPA 6010B	07/01/11 12:00	Trace	mg/Kg	0.0125	8.66		mbomar
2011060879	C	Cadmium	6/16/11 6:45	EPA 6010B	07/01/11 12:00	Trace	mg/Kg	0.0005	3.46		mbomar
2011060879	C	Chromium	6/16/11 6:45	EPA 6010B	07/01/11 12:00	21.6	mg/Kg	0.0007	8.66		mbomar
2011060879	C	Copper	6/16/11 6:45	EPA 6010B	07/01/11 12:00	412	mg/Kg	0.0037	8.66		mbomar
2011060879	C	Lead	6/16/11 6:45	EPA 6010B	07/01/11 10:30	12.2	mg/Kg	0.0080	8.66		mbomar
2011060879	C	Molybdenum	6/16/11 6:45	EPA 6010B	07/01/11 10:30	12.6	mg/Kg	0.0026	3.46		mbomar
2011060879	C	Nickel	6/16/11 6:45	EPA 6010B	07/01/11 13:00	15.7	mg/Kg	0.0083	8.66		mbomar
2011060879	C	Selenium	6/16/11 6:45	EPA 6010B	07/01/11 10:30	Trace	mg/Kg	0.0122	8.66		mbomar
2011060879	C	Zinc	6/16/11 6:45	EPA 6010B	07/01/11 10:30	618	mg/Kg	0.0033	8.66		mbomar
2011060879	C	Silver	6/16/11 6:45	EPA 6010B	07/01/11 13:00	4.5	mg/Kg	0.0011	0.866		mbomar
2011060879	C	Mercury	6/16/11 6:45	EPA 7471A	06/23/11 10:26	1.35	mg/Kg	0.0003	0.06		tourada
2011060879	C	Nitrate/Nitrite	6/16/11 6:45	EPA 353.2	06/21/11 9:58	62.0	mg/Kg	0.04	2.22		manderson
2011060879	C	Nitrogen, Total Kjeldahl	6/16/11 6:45	EPA 351.2	07/01/11 9:48	63747.7	mg/Kg	26.2	53.7	D2	aklos
2011060879	C	Nitrogen, Total	6/16/11 6:45	Calculated	07/01/11 11:18	63809.7	mg/Kg		0.8		aklos
2011060879	C	Solids, Total	6/16/11 6:45	SM 2540G	06/19/11 8:00	90.20	%		0.01		jvriper
2011081872	C	Miscellaneous Note	8/31/11 6:50	None		Subcontracted					Other

Lab Comments:

Data on this report was last modified on: 2/3/2012 14:17:56

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 - East (25000-1971)											
2011081872	C	Arsenic	8/31/11 6:50	EPA 6010B	09/14/11 17:40	9.2	mg/Kg	0.0125	8.4062		mbomar
2011081872	C	Cadmium	8/31/11 6:50	EPA 6010B	09/14/11 17:40	Trace	mg/Kg	0.0005	3.3625		mbomar
2011081872	C	Chromium	8/31/11 6:50	EPA 6010B	09/14/11 18:30	14.3	mg/Kg	0.0007	8.4062		mbomar
2011081872	C	Copper	8/31/11 6:50	EPA 6010B	09/14/11 17:40	373	mg/Kg	0.0037	8.4062		mbomar
2011081872	C	Lead	8/31/11 6:50	EPA 6010B	09/14/11 17:40	9.3	mg/Kg	0.0080	8.4062		mbomar
2011081872	C	Molybdenum	8/31/11 6:50	EPA 6010B	09/14/11 17:40	10.7	mg/Kg	0.0026	3.3625		mbomar
2011081872	C	Nickel	8/31/11 6:50	EPA 6010B	09/14/11 17:40	10.8	mg/Kg	0.0086	8.4062		mbomar
2011081872	C	Selenium	8/31/11 6:50	EPA 6010B	09/21/11 14:53	Trace	mg/Kg	0.0122	8.4062		mbomar
2011081872	C	Zinc	8/31/11 6:50	EPA 6010B	09/14/11 17:40	617	mg/Kg	0.0033	8.4062		mbomar
2011081872	C	Silver	8/31/11 6:50	EPA 6010B	09/14/11 18:30	3.8	mg/Kg	0.0011	0.8406		mbomar
2011081872	C	Mercury	8/31/11 6:50	EPA 7471A	09/12/11 15:40	1.580	mg/Kg	0.00023	0.057		khowell
2011081872	C	Nitrate/Nitrite	8/31/11 6:50	EPA 353.2	09/07/11 11:57	26.8	mg/Kg	0.05	2.29		manderson
2011081872	C	Nitrogen, Total Kjeldahl	8/31/11 6:50	EPA 351.2	09/08/11 9:50	65293.4	mg/Kg	53.9	110.5	D2	aklos
2011081872	C	Nitrogen, Total	8/31/11 6:50	Calculated	09/08/11 13:13	65320.2	mg/Kg		0.8		aklos
2011081872	C	Solids, Total	8/31/11 6:50	SM 2540G	09/01/11 9:17	87.47	%		0.01		jvriper
2011111117	C	Miscellaneous Note	11/18/11 7:11	None		Subcontracted					Other
2011111117	C	Nitrate/Nitrite	11/18/11 7:11	EPA 353.2	11/25/11 11:31	21.8	mg/Kg	0.06	2.27		manderson
2011111117	C	Nitrogen, Total Kjeldahl	11/18/11 7:11	EPA 351.2	11/23/11 14:27	50920.3	mg/Kg	54.1	111.0	D2	aklos
2011111117	C	Nitrogen, Total	11/18/11 7:11	Calculated	11/25/11 11:31	50942.1	mg/Kg		0.8		manderson
2011111117	C	Solids, Total	11/18/11 7:11	SM 2540G	11/19/11 11:00	88.00	%		0.01		jvriper

Lab Comments:

Data on this report was last modified on: 2/3/2012 14:17:56

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF

Data Qualifier(s):	Definition:
D2	Sample required dilution due to high concentration of target analyte.
M5	Analyte concentration was determined by the method of standard addition (MSA).

2011031557

PIMA COUNTY WASTEWATER MANAGEMENT
TECHNICAL SERVICES SECTION
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: SUB-REGIONAL FACILITIES (Organization) — LAB ID: 2011031557

SAMPLER: ARTZ (Print Last Names Only) — FACILITY-LOCATION ID: 25000-1971-000

SAMPLE DATE: 3-24-11 (MM / DD / YY) — 0700 (24 Hour Clock)

SAMPLE MATRIX
- [redacted]
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

SAMPLE LOCATION: GREEN VALLEY BNROD BIO-SOLIDS FROM DRYING BED #5 (EAST)

PERMIT TYPE:
- ☐ APP
- ☐ APP Investigations
- ☐ IWC
- ■ [redacted]
- ☐ REUSE
- ☐ USFS
- ☐ 503
- ☐ PROCESS CONTROL

INDICATE ALL ANALYSES REQUIRED

Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY METALS	D	C	METALS	D	C	ORGANIC CHEMISTRY PRIORITY POLLUTANTS	D	C	MICROBIOLOGY-WET CHEMISTRY	D	C
Aluminum	☐	☐	Tin	☐	☐	Acrolein and Acrylonitrile	☐	☐	Alkalinity	☐	☐
Antimony	☐	☐	Titanium	☐	☐	Dioxin GC/SIM/MS Scan	☐	☐	Bicarbonate	☐	☐
Arsenic	☐	☐	Vanadium	☐	☐	Organochlorine Pesticides & PCBs	☐	☐	BOD	☐	☐
Barium	☐	☐	Zinc	☐	☐	Purgeable Organics (GCMS)	☐	☐	Carbonate	☐	☐
Beryllium	☐	☐	ICP Scan *	☐	☐	Semivolatile Organics (GCMS)	☐	☐	COD	☐	☐
Boron	☐	☐	Priority Pollutant Metals **	☐	☐	Other	☐	☐	[redacted]	■	☐
Cadmium	☐	☐	TCLP Metals	☐	☐	**MISCELLANEOUS METHODS**	D	C	Coliform, Sediment	☐	☐
Calcium	☐	☐	503 Metals ***	☐	☐	Digester Gas	☐	☐	Coliform, Total ****	☐	☐
Chromium	☐	☐	Other	☐	☐	Lindane	☐	☐	Conductivity	☐	☐
Cobalt	☐	☐	**WET METHODS**	D	C	Oil and Grease	☐	☐	Ignitability	☐	☐
Copper	☐	☐	Ammonia as N	☐	☐	Organic Carbon, Total	☐	☐	Oxygen, Dissolved	☐	☐
Hardness	☐	☐	Chloride	☐	☐	Organic Carbon, Dissolved	☐	☐	pH	☐	☐
Iron	☐	☐	Cyanide, Total	☐	☐	Organophosphorous Pesticides	☐	☐	Solids, Settleable	☐	☐
Lead	☐	☐	Cyanide, Amenable	☐	☐	TCLP Herbicides *Contract Lab*	☐	☐	[redacted]	■	☐
Magnesium	☐	☐	Fluoride	☐	☐	TCLP Pesticides	☐	☐	Solids, Total Dissolved	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐	TCLP Semivolatile Organics	☐	☐	Solids, Total Suspended	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐	TCLP Volatile Organics *Contract Lab*	☐	☐	Solids, Total Volatile	☐	☐
Molybdenum	☐	☐	Nitrate & Nitrite as N	☐	☐	Total Petroleum Hydrocarbons	☐	☐	Solids, Volatile Suspended	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐	Volatile Acids	☐	☐	Turbidity	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	☐						
Selenium	☐	☐	Orthophosphate as P	☐	☐	Other	☐	☐	Other	☐	☐
Silver	☐	☐	Phosphorus, Total as P	☐	☐						
Sodium	☐	☐	Sulfate	☐	☐	Other	☐	☐	Other	☐	☐
Strontium	☐	☐	Sulfide	☐	☐						
Thallium	☐	☐	Other	☐	☐	Other	☐	☐	Other	☐	☐

NOTES:

RESULTS for fecal sample to be mpn/gram (dry weight)

COMPLIANCE FIELD MEASUREMENTS

- ☐ Chlorine
- ☐ Oxygen (Dis.)
- ☐ Conductivity
- ☐ TEMP.
- ☐ pH
- ☐ Other

Sample Receiving Temp.: 2°C IR Therm GOS

Number of Sample Containers: 1 GOS

Sampled by: [signature]	Received by: Lab fridge	Date/Time: 3-24-11 0708
Relinquished by: Lab fridge	Received by: [signature]	Date/Time: 3-24-11 / 08:34AM
Relinquished by: [signature]	Received by: [signature]	Date/Time: 03-24-11 1109
Relinquished by:	Received by:	Date/Time
Relinquished by:	Received by:	Date/Time
Relinquished by:	Received by:	Date/Time

* Semiquantitative Results - NOT TO BE USED FOR COMPLIANCE TESTING

** Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Thallium and Zinc by ICP. Mercury by Cold Vapor.

*** Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc.

**** Indicate date and time of the Coliform sample in the "Notes Box" if different than the information provided in heading.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 2011031557 (yyyy/mm/xxxx – xxxx)

Facility or Submitter: SRF Green Valley

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers received: 1
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☒ Yes ☐ No

Temperature of Samples: 2 °C ☒ IR ☐ LIG

INSPECTION	YES	NO	N/A	COMMENT
Chain of Custody relinquished by sampler?	✓			
Sample labels match COC?	✓			
Correct # of samples were delivered?	✓			
Custody Seals unbroken? (*E. Coli*, Sulfate only)			✓	
Within holding time?	✓			
Sufficient sample volume for analysis	✓			
Samples are in correct containers?	✓			
Are sample containers damaged or leaking?		✓		
40 ml vials headspace, or air bubbles?			✓	
COC received by laboratory and signed?	✓			

PRESERVATIVE LABEL	# OF CONTAINERS
Non-preserved	1
HNO_3 (Nitric Acid)	
H_2SO_4 (Sulfuric Acid)	
HCL (Hydrochloric Acid)	
NaOH (Sodium Hydroxide)	
$Na_2S_2O_3$ (Sodium Thiosulfate)	
$Zn(C_2H_3O_2)_2$ (Zinc Acetate)	

Additional comments or dialog:

(For purposes of sample rejection, please be concise)

Checklist completed by: [signature] (Signature) 03-24-11 (mm/dd/yy)

2011031560

PIMA COUNTY WASTEWATER MANAGEMENT
TECHNICAL SERVICES SECTION
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: SUB-REGIONAL FACILITIES (Organization) — LAB ID: 201103 1560

SAMPLER: Artz (Print Last Names Only) — FACILITY-LOCATION ID: 25000-1971-000

SAMPLE DATE: 3-24-11 (MM / DD / YY) — 0642 - 0652 (24 Hour Clock)

GOS per RA 03-24-11

SAMPLE LOCATION: GREEN VALLEY BNROD BIO-SOLIDS FROM DRYING BED #5 (EAST)

SAMPLE MATRIX:
- ■ [redacted]
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ *Surface Water*
- ☐ Wastewater
- ☐ Other

PERMIT TYPE:
- ☐ APP
- ☐ APP Investigations
- ☐ IWC
- ■ [redacted]
- ☐ REUSE
- ☐ USFS
- ■ [redacted]
- ☐ PROCESS CONTROL

INDICATE ALL ANALYSES REQUIRED

Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY						ORGANIC CHEMISTRY			MICROBIOLOGY-WET CHEMISTRY		
METALS	D	C	METALS	D	C	PRIORITY POLLUTANTS	D	C		D	C
Aluminum	☐	☐	Tin	☐	☐	Acrolein and Acrylonitrile	☐	☐	Alkalinity	☐	☐
Antimony	☐	☐	Titanium	☐	☐	Dioxin GC/SIM/MS Scan	☐	☐	Bicarbonate	☐	☐
Arsenic	☐	☐	Vanadium	☐	☐	Organochlorine Pesticides & PCBs	☐	☐	BOD	☐	☐
Barium	☐	☐	Zinc	☐	☐	Purgeable Organics (GCMS)	☐	☐	Carbonate	☐	☐
Beryllium	☐	☐	ICP Scan *	☐	☐	Semivolatile Organics (GCMS)	☐	☐	COD	☐	☐
Boron	☐	☐	Priority Pollutant Metals **	☐	☐	Other	☐	☐	Coliform, Fecal ****	☐	
Cadmium	☐	☐	TCLP Metals	☐	☐	MISCELLANEOUS METHODS	D	C	Coliform, Sediment	☐	☐
Calcium	☐	☐	[redacted]	☐	■	Digester Gas	☐	☐	Coliform, Total ****	☐	☐
Chromium	☐	☐	Other	☐	☐	Lindane	☐	☐	Conductivity	☐	☐
Cobalt	☐	☐	WET METHODS	D	C	Oil and Grease	☐	☐	Ignitability	☐	☐
Copper	☐	☐	Ammonia as N	☐	☐	Organic Carbon, Total	☐	☐	Oxygen, Dissolved	☐	☐
Hardness	☐	☐	Chloride	☐	☐	Organic Carbon, Dissolved	☐	☐	pH	☐	☐
Iron	☐	☐	[redacted]	☐	■	Organophosphorous Pesticides	☐	☐	Solids, Settleable	☐	☐
Lead	☐	☐	Cyanide, Amenable (ab)	☐	☐	TCLP Herbicides *Contract Lab*	☐	☐	[redacted]	☐	■
Magnesium	☐	☐	Fluoride	☐	☐	TCLP Pesticides	☐	☐	Solids, Total Dissolved	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐	TCLP Semivolatile Organics	☐	☐	Solids, Total Suspended	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐	TCLP Volatile Organics *Contract Lab*	☐	☐	Solids, Total Volatile	☐	☐
Molybdenum	☐	☐	Nitrate & Nitrite as N	☐	☐	Total Petroleum Hydrocarbons	☐	☐	Solids, Volatile Suspended	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐	Volatile Acids	☐	☐	Turbidity	☐	☐
Potassium	☐	☐	[redacted]	☐	■						
Selenium	☐	☐	Orthophosphate as P	☐	☐		☐	☐	Other	☐	☐
[redacted]	☐	■	Phosphorus, Total as P	☐	☐						
Sodium	☐	☐	Sulfate	☐	☐				Other	☐	☐
Strontium	☐	☐	Sulfide	☐	☐						
Thallium	☐	☐	Other	☐	☐	Other	☐	☐	Other	☐	☐

In house and (contract lab)

NOTES: THESE ARE MAN.COMPOSITE SAMPLES TAKEN FROM 4 DIFF. LOCATIONS @ 2 MIN. INTERVALS

QUARTERLY SAMPLES - TOTAL CYANIDE TO CONTRACT LAB

Total cyanide sent to Test America. 1 of 2 total solids sent to Test America. PO# 11037214 GOS 03-24-11

COMPLIANCE FIELD MEASUREMENTS
- ☐ Chlorine
- ☐ Oxygen (Dis.)
- ☐ Conductivity
- ☐ TEMP
- ☐ pH
- ☐ Other

Sample Receiving Temp. 0°C IR Therm GOS

Number of Sample Containers 5 GOS

Sampled by:	Lab Fridge	Received by:	3-24-11 0708 Date/Time
Relinquished by: Lab Fridge	Rick Anderson	Received by:	3-24-11 / 08:34 Am Date/Time
Relinquished by: Rick Anderson		Received by:	03-24-11 1109 Date/Time
Relinquished by:		Received by:	3/24/11 13:00 Date/Time
Relinquished by:		Received by:	Date/Time

* Semiquantitative Results - NOT TO BE USED FOR COMPLIANCE TESTING

** Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Thallium and Zinc by ICP. Mercury by Cold Vapor.

*** Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc.

**** Indicate date and time of the Coliform sample in the "Notes Box" if different than the information provided in heading.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 1 of 1

Client Name/Address: Pima County RWRD, 7101 N Casa Grande Hwy, Tucson AZ 85743

Project/PO Number: Green Valley #5, PO# 11037214

Project Manager: Nancy Powell

Phone Number: 520-443-6183

Sampler: Roger Artz

Fax Number: 520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids								Special Instructions
Green Valley drying bed #5	biosolids	HDPE	2	03-24-11	0642-0652	ice none	1	1								hand composited
East 25000-1971																from different location
Pima LIMS# 201103 1560																
PO# 11037214																

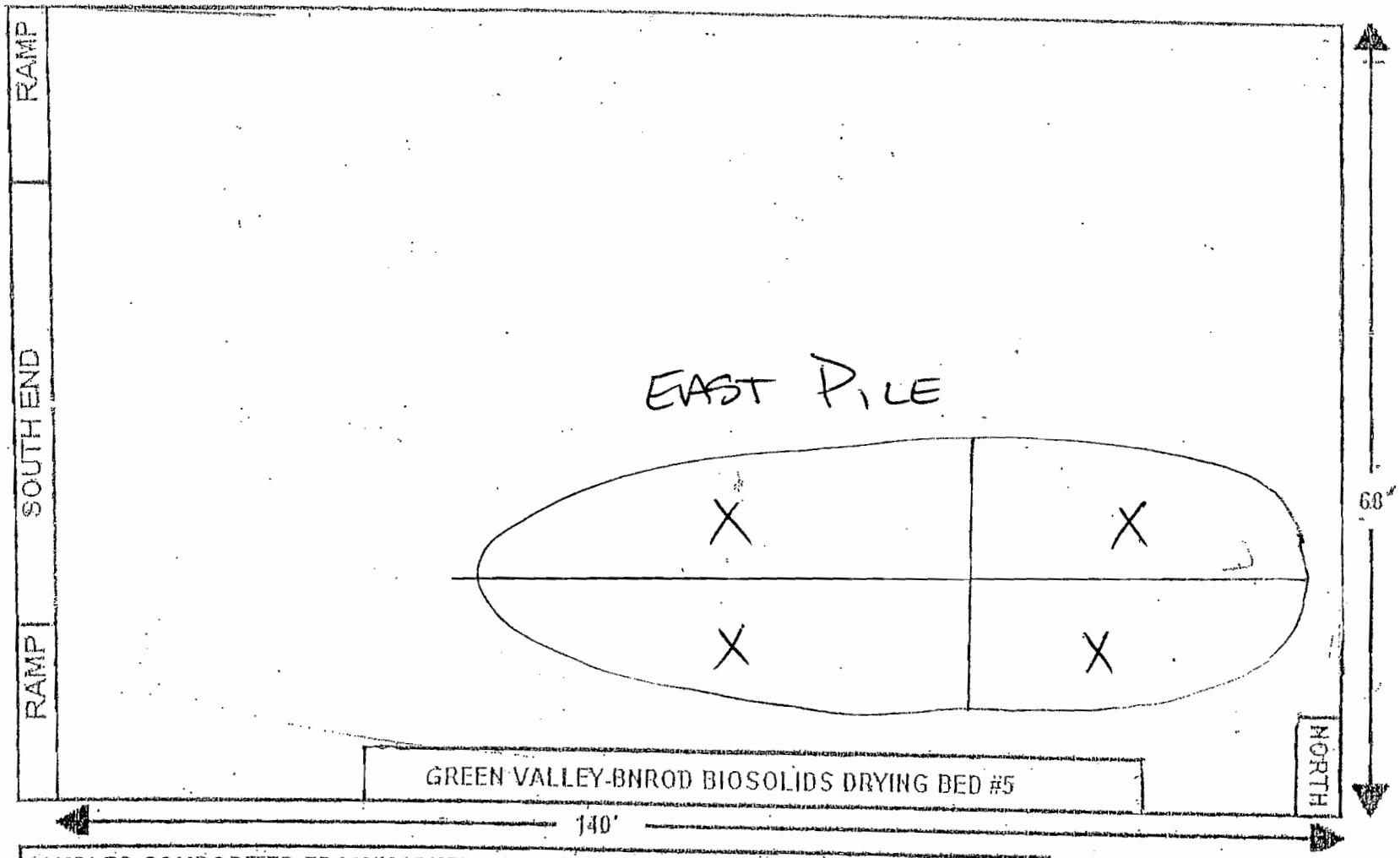
Relinquished By:	Date/Time:	Received By:	Date/Time:
for Roger Artz	03-24-11 1109		03-24-11 1109
Relinquished By:	Date/Time:	Received By:	Date/Time: 3/24/11 1310
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

201103 1560



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER R. Arz DATE: 3-24-11 TIME: 0652

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 201103 1560
(yyyy/mm/xxxx – xxxx)

Facility or Submitter: SRF Green Valley

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers received: 5
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☒ Yes ☐ No

Temperature of Samples: 0 °C ☒ IR ☐ LIG

INSPECTION	YES	NO	N/A	COMMENT
Chain of Custody relinquished by sampler?	✓			
Sample labels match COC?	✓			
Correct # of samples were delivered?	✓			
Custody Seals unbroken? (*E. Coli*, Sulfate only)			✓	
Within holding time?	✓			
Sufficient sample volume for analysis	✓			
Samples are in correct containers?	✓			
Are sample containers damaged or leaking?		✓		
40 ml vials headspace, or air bubbles?			✓	
COC received by laboratory and signed?	✓			

PRESERVATIVE LABEL	# OF CONTAINERS
Non-preserved	4
HNO_3 (Nitric Acid)	
H_2SO_4 (Sulfuric Acid)	1
HCL (Hydrochloric Acid)	
NaOH (Sodium Hydroxide)	
$Na_2S_2O_3$ (Sodium Thiosulfate)	
$Zn(C_2H_3O_2)_2$ (Zinc Acetate)	

Additional comments or dialog:

(For purposes of sample rejection, please be concise)

Checklist completed by: [signature] (Signature) 03-24-11 (mm/dd/yy)

2011060879

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011060879

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: 6-16-11 (MM / DD / YYYY)

SAMPLE START TIME: 0631 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 6-16-11 (MM / DD / YYYY)

SAMPLE END TIME: 0645 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total (contract lab)	☐	■
Iron	☐	☐	Cyanide, Amenable	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐
MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total (contract lab)	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐
OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. QUARTERLY SAMPLES
Cyanide sent Test America PO# 11049243

# of Bottles Delivered: (5) GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Sampler	Lab Fridge	6-16-11	0700
Lab Fridge	Rick Anderson	6-16-11	0852
Rick Anderson		06-16-11	1128
		6/16/11	12:26
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

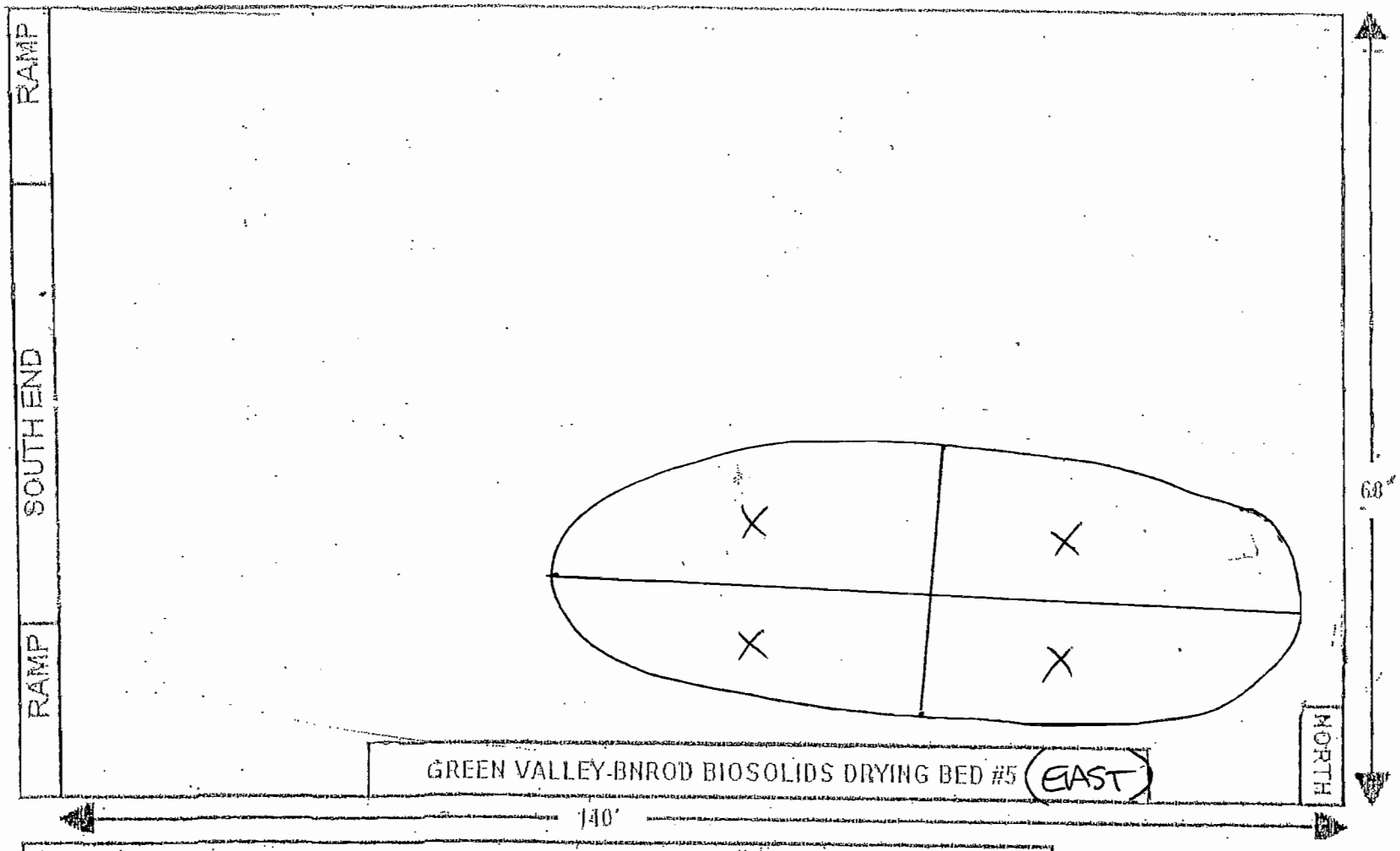
Sample Integrity/Preservation:

Temperature:	5	°C
Initials:	GOS	
Non-Preserved	4	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

2011060879



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER: R. Artz DATE: 6-16-11 TIME: 0645

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of 1

Client Name/Address: Pima County RWRD, 7101 N Casa Grande Hwy, Tucson AZ 85743

Project/PO Number: Green Valley cyanide, PO# 11049243

Project Manager: Nancy Powell

Phone Number: 520-443-6183

Sampler: Roger Artz

Fax Number: 520-443-6075

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids for mg/kg calculation								Special Instructions
Green Valley BNROD biosolids	BS	HDPE	2	06-16-11	0645	none	1	1								hand composited
from drying bed #5																
(East pile)																
Pima LIMS # 2011060879																
PO# 11049243																
Location # 25000-1971																

Relinquished By:	Date/Time:	Received By:	Date/Time:
for Roger Artz	06-16-11 1138		06-16-11 1138
Relinquished By:	Date/Time:	Received By:	Date/Time:
	06-16-11 1226		6/16/11 12:26
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

2011081872

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011081872

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: 08/31/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0630 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 08/31/2011 (MM / DD / YYYY)

SAMPLE END TIME: 0650 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals **	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐			
Cobalt	☐	☐			
Copper	☐	☐			
Hardness	☐	☐			
Iron	☐	☐			
Lead	☐	☐			
Magnesium	☐	☐			
Manganese	☐	☐			
Mercury	☐	☐			
Molybdenum	☐	☐			
Nickel	☐	☐			
Potassium	☐	☐			
Selenium	☐	☐			
Silver	☐	■			
Sodium	☐	☐			
Strontium	☐	☐			
Thallium	☐	☐			
Tin	☐	☐			

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total (contract lab)	☐	■
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	■
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total 20 (for contract lab)	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Cyanide for Test America, QUARTERLY SAMPLES PO# 12*7257

# of Bottles Delivered: 5 (GC)

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	6	°C
Initials:	GCS	
Non-Preserved	4	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:

	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

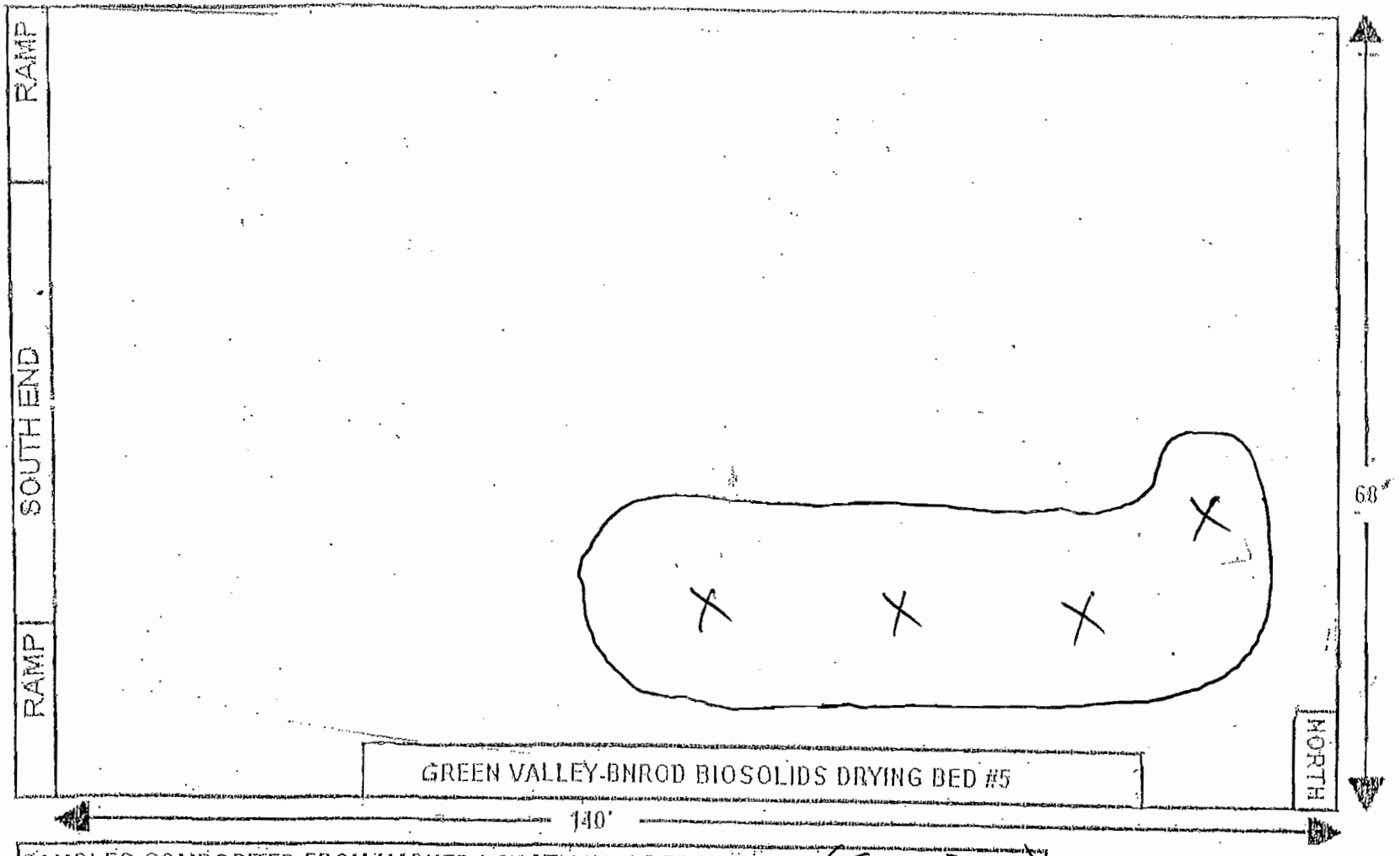
* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
	Lab fridge	8-31-11	0705
Lab fridge	Rick Anderson	8-31-11	0907
Rick Anderson		08-31-11	1208
		9/1/11	10:00

Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

2011081872



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE (EAST PILE)

SAMPLER R. Aretz DATE: 8-31-11 TIME: Start time: 0630

Stop time: 0650

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Client Name/Address: Pima County RWRD, 7101 N Casa Grande Hwy, Tucson AZ 85743

Project/PO Number: Green Valley, DO# 12*7257

Project Manager: Nancy Powell

Phone Number: 520-443-6100

Sampler: Roger Artz

Fax Number: 520-443-6071

Analysis Required: Total cyanide mg/kg; Total % solids for mg/kg calculation

BS = biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids for mg/kg calculation								Special Instructions
Green Valley BNROD	BS	HDPE	2	08-31-11	0630-0656	None	1	1								Short composite.
biosolids from drying bed #5																
25000-1971																
Pima LIMS# 2011081372																
DO# 12*7257																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
for Roger Artz	08-31-11 1328		08-31-11 1328	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
	09-01-11 1000		9/1/11 10:00	48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
				intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011 11117

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (EAST PILE)

SITE-LOCATION NUMBER: 25000-1971 (XXXXX-XXXX)

SAMPLE START DATE: 11-18-11 (MM / DD / YYYY)

SAMPLE START TIME: 0655 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 11-18-11 (MM / DD / YYYY)

SAMPLE END TIME: 0711 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C
Aluminum	☐	☐
Antimony	☐	☐
Arsenic	☐	☐
Barium	☐	☐
Beryllium	☐	☐
Boron	☐	☐
Cadmium	☐	☐
Calcium	☐	☐
Chromium	☐	☐
Cobalt	☐	☐
Copper	☐	☐
Hardness	☐	☐
Iron	☐	☐
Lead	☐	☐
Magnesium	☐	☐
Manganese	☐	☐
Mercury	☐	☐
Molybdenum	☐	☐
Nickel	☐	☐
Potassium	☐	☐
Selenium	☐	☐
Silver (Contract lab)	☐	■
Sodium	☐	☐
Strontium	☐	☐
Thallium	☐	☐
Tin	☐	☐

METALS	D	C
Titanium	☐	☐
Vanadium	☐	☐
Zinc	☐	☐
Priority Pollutant Metals *	☐	☐
TCLP Metals	☐	☐
503 Metals ** (Contract lab)	☐	■
Chromium, Hexavalent	☐	☐
Chromium, Trivalent	☐	☐

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total (Contract lab)	☐	■
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Ignitability	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate/Nitrite as N	☐	☐
Nitrogen, Total Kjeldahl	☐	☐
Nitrogen, Total as N	☐	■
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Turbidity	☐	☐

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions:
THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Cyanide + TS sent to Test America QUARTERLY SAMPLES DO# 12-17593

# of Bottles Delivered: 5 COS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Metals added 01-12-12 COS DO# 12-15281

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Lab fridge	11-18-11	0742
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Lab fridge	Steven Garcia	11-18-11	0910
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Steven Garcia	[signature]	11-18-11	1131
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	[signature]	11/19/11	13:20
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	[signature]	11/22/11	14:35

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	1	°C
Initials:	COS	
Non-Preserved	3	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH	1	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn Mercury (contract lab)

Mercury sent to Test America DO# 12-15281

>>> Select a Laboratory Here <<<
N/A
N/A
N/A
N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
ima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
ucson/AZ/85743	Calendar (C) or Work Days (W) _____			
520) 443-6183 Phone	TAT if different from Below _____			
520) 443-6071 FAX	☐ 2 weeks			SDG No.
roject Name: GV BS mercury and AV	☐ 1 week			
ite:Green Valley	☐ 2 days			
O# 12-19185	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Mercury 7471A mg/kg	tota solids	Semi-volatiles 8270	Volatiles 8260	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	1	X	X			results in mg/kg
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	1	X	X			results in mg/kg
Avra Valley RWRF effluent APP 25003-1350 2011111289	11/22/11	0708	discrete	WW	4			X	X	Semi-volatiles in triplicate if you want. GOS 11-22-11

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

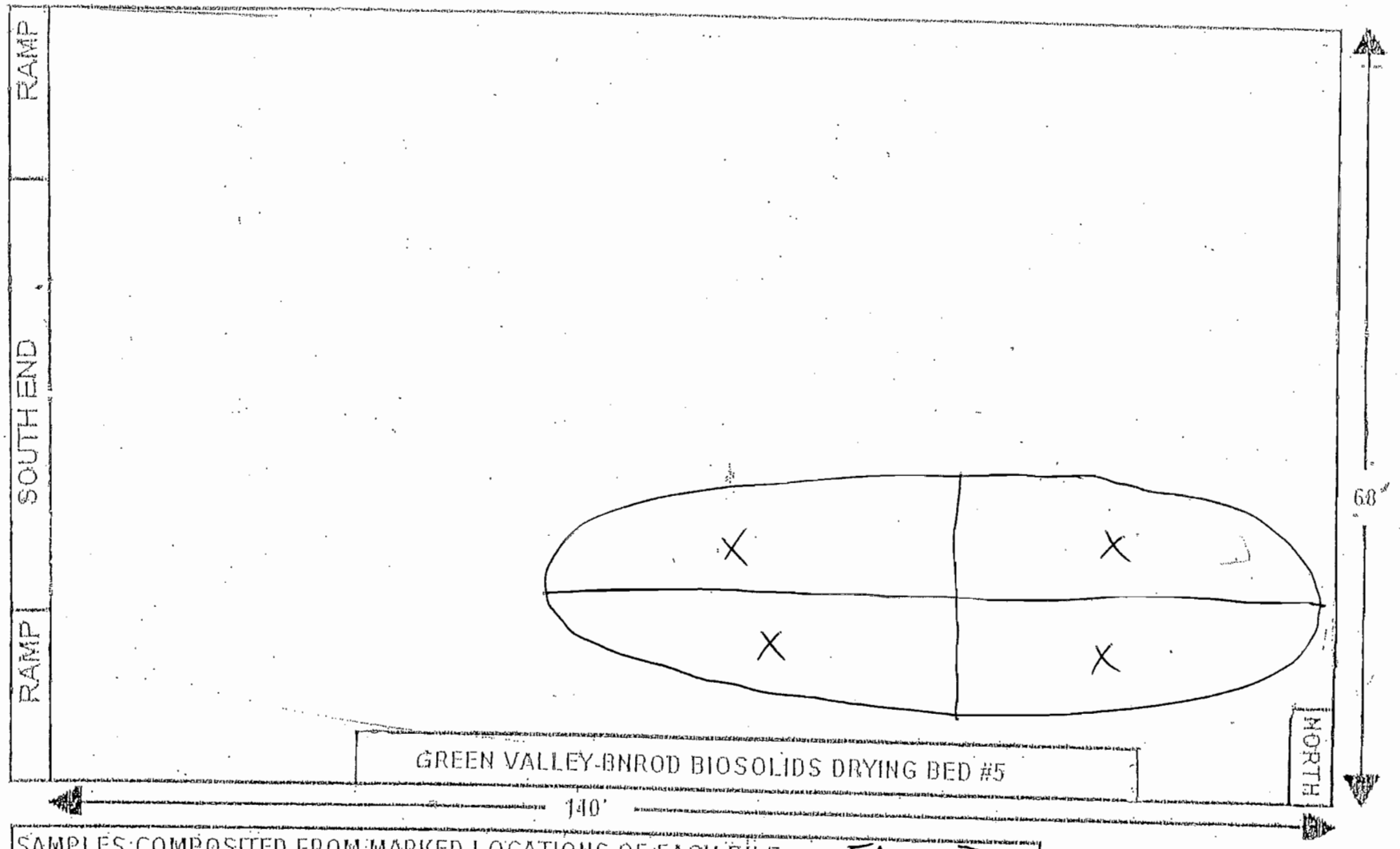
Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: The total solids samples were submitted 11-18-11 and can be reused. They're the same samples. Or you can split the samples for mercury and total solids, if you want. We expect to be charged for total solids twice. Thanks.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima CRAO Lab	11-22-11		TA-TUC	11/22/11 14:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, dated 04/07/2011



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE EAST PILE

SAMPLER R. ARTZ DATE: 11-18-11 TIME: 0711

20111117

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data REVISED DATA

LIMS # **2011031560** **PO: 11037214**
Contract Lab: Test America
Parameters: Total Solids (for mg/kg calculation only), Total Cyanide (biosolids)
Preliminary Review

Lab Report signed and dated.	√
Data users notified of any Permit exceedances if necessary.	NA
Data Results entered in LIMs, date correct, analyst correct, and released	√

Preliminary Review date and initials: B 4-21-11

QA/QC Review

Copy of CoC included with Lab Report.	√
Sample IDs verified against C oC.	√
Sample dates and received dates are correct	√
Analyses and methods verified against CoC.	√
Sample holding times not exceeded.	√
Dilution on ND samples only in event of matrix interference.	√
Data packet includes QC Report from primary lab and any secondary subcontract labs.	√
QC data included for every analysis method.	√
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	√
Correct Data Qualifiers included if necessary.	√
Report Comments included if necessary.	√
PO received in Synergen	√

QA/QC Review date and initials: B 4-21-11

Peer/Final Review

R R	P F	
LIMS data matches reported data.	GOS	
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000	GOS	
Correct Data Qualifiers included if necessary.	NA	
PO received in Synergen	GOS	NA

Peer Review date and initials: GOS 04-21-11 **Final Review date and initials:** 4/29/11 BAC

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project:Green Valley #5

Sampled:03/24/11
Received:03/25/11
Issued:04/05/11 15:02

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUC1655-01	2011031560	Biosolids

SAMPLE RECEIPT:	Samples were received intact, at 2°C, on ice and with chain of custody documentation.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley #5
Report Number: PUC1655

Sampled: 03/24/11
Received: 03/25/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUC1655-01 (2011031560 - Biosolids)								
Reporting Units: % by Weight								
Percent Solids	M2540G	11C1010	0.10	**87**	1	3/28/2011	3/28/2011	
Sample ID: PUC1655-01 (2011031560 - Biosolids)								
Reporting Units: mg/kg dry								
Cyanide	SW9010C/9014	11D0090	0.46	**7.6**	0.995	4/4/2011	4/4/2011	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley #5
Report Number: PUC1655

Sampled: 03/24/11
Received: 03/25/11

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater
Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley #5
Report Number: PUC1655

Sampled: 03/24/11
Received: 03/25/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
M2540G	Soil		X
SW9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of 1

Client Name/Address: Pima County RWRD, 2101 N Casa Grande Hwy, Tucson AZ 85743

Project/PO Number: Green Valley #45, PO # 11037214

Project Manager: Nancy Powell

Phone Number: 520-443-5183

Sampler: Roger Ashby

Fax Number: 520-443-5071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total Cyanide mg/kg	Total Metals								Special Instructions
Green Valley Spring #45	Solid	HDPE	2	03-24-11	1042-1050	ice none	1	1			MRL 1645-101					hand composited
East 25000-1971																Coordinate Location
Pima LIMS # 50110516																
PO# 11037214																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
Roger Ashby	03-24-11 1109		03-24-11 1109	same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
	3/24/11		3/25/11	intact ____ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011060879 **PO: 11049243**
Contract Lab: Test America
Parameters: Cyanide
Preliminary Review

Lab Report signed and dated.	√
Data users notified of any Permit exceedances if necessary.	NA
Data Results entered in LIMs, date correct, analyst correct, and released	√
Subcontract Lab licensed for Analysis reported?	√

Preliminary Review date and initials: PB 7-5-11

QA/QC Review

Copy of CoC included with Lab Report.	√
Sample IDs verified against C oC.	√
Sample dates and received dates are correct	√
Analyses and methods verified against CoC.	√
Sample holding times not exceeded.	√
Dilution on ND samples only in event of matrix interference.	√
Data packet includes QC Report from primary lab and any secondary subcontract labs.	√
QC data included for every analysis method.	√
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	√
Correct Data Qualifiers included if necessary.	√
Report Comments included if necessary.	√
PO received in Pima Core	√

QA/QC Review date and initials: PB 7-5-11

Peer/Final Review

	PR	FR
LIMS data matches reported data.	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000	GOS	✓
Correct Data Qualifiers included if necessary.	NA	N/A
PO received in ~~Synergen~~ Pima Core	NO	NA

Peer Review date and initials: GOS 07-06-11 **Final Review date and initials:** BAE 7/11/11

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project:Green Valley Cyanide

Sampled:06/16/11
Received:06/17/11
Issued:06/28/11 08:59

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUF1040-01	2011060879	Biosolids

SAMPLE RECEIPT:	Samples were received intact, at 2°C, on ice and with chain of custody documentation.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater
Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Cyanide
Report Number: PUF1040

Sampled: 06/16/11
Received: 06/17/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUF1040-01 (2011060879 - Biosolids)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11F0667	0.10	**92**	1	6/17/2011	6/17/2011	
Sample ID: PUF1040-01 (2011060879 - Biosolids)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11F0801	0.43	**4.2**	1	6/22/2011	6/22/2011	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater
Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Cyanide
Report Number: PUF1040

Sampled: 06/16/11
Received: 06/17/11

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater
Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Cyanide
Report Number: PUF1040

Sampled: 06/16/11
Received: 06/17/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
SM 2540G	Soil		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page 1 of 1

Client Name/Address: Pima County RWRD, 7101 N Casa Grande Hwy, Tucson AZ 85743

Project/PO Number: Green Valley cyanide, PO# 11049243

Project Manager: Nancy Powell

Phone Number: 520-443-6183

Sampler: Roger Antz

Fax Number: 520-443-6075

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids for mg/kg calculation								Special Instructions
Green Valley DNRCD biosolids	SS	HDPE	2	06-16-11	0845	none	1	1				ALF (control)				bed composited
Green Valley bed #5																
(East side)																
Pima LIMS # 20106 3879																
PO# 11049243																
Location # 3500-1971																

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
for Roger Antz	06-16-11 1138		06-16-11 1138	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
	06-16-11 1222		6/16/11 1222	48 hours ____	normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
	6/16/11 1500		6/17 [illegible]	intact ✓	on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011081872 **DO: 12*7257**
Contract Lab: Test America
Parameters: Cyanide, mg/kg, Total Solids
Preliminary Review

Lab Report signed and dated.	√
Data users notified of any Permit exceedances if necessary.	NA
Data Results entered in LIMs, date correct, analyst correct, and released	√
Subcontract Lab licensed for Analysis reported?	√

Preliminary Review date and initials: PB 10-17-11

QA/QC Review

Copy of CoC included with Lab Report.	√
Sample IDs verified against C oC.	√
Sample dates and received dates are correct	√
Analyses and methods verified against CoC.	√
Sample holding times not exceeded.	√
Dilution on ND samples only in event of matrix interference.	√
Data packet includes QC Report from primary lab and any secondary subcontract labs.	√
QC data included for every analysis method.	√
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	√
Correct Data Qualifiers included if necessary.	√
Report Comments included if necessary.	√
DO received in Pima Core	√
WET Testing Specific Requirements	NA
Statement of Pass/Fail reflected in End Points	NA
Report states if zeolite treatment was utilized	NA
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	NA
Chemistry data included	NA
Reference Toxicant Test Results and Control Chart within limits	NA
PMSD Determination included and within acceptable range	NA
End Points include TUc, NOEC, LOEC, and IC25	NA
Statistics verify endpoints	NA

QA/QC Review date and initials: PB 10-17-11

Peer/Final Review

	PR	FR
LIMS data matches reported data.	GDS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GDS	✓
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GDS	NA

Peer Review date and initials: GDS 10-18-11 **Final Review date and initials:** BAE 10/18/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Center Blvd. Ste 189
Phoenix, AZ 85040
Tel: (602) 437-3340

TestAmerica Job ID: PUI0105
Client Project/Site: Green Valley
Client Project Description: N_Green Valley Biosolids

For:
Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment
Tucson, AZ 85743

Attn: Nancy Powell

Authorized for release by:
09/15/2011 02:31:25 PM

Suzanne Glass
Project Manager
suzanne.glass@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13

Definitions/Glossary

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit (Dioxin)
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or method detection limit if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Job ID: PUI0105

Laboratory: TestAmerica Phoenix

Narrative

SAMPLE RECEIPT: Samples were received intact, at 4.4 °C, on ice and with chain of custody documentation.
HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS: No significant observations were made.
SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Detection Summary

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Client Sample ID: 2011081872 — Lab Sample ID: PUI0105-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	3.6		0.45		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Client Sample Results

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Client Sample ID: 2011081872
Date Collected: 08/31/11 06:50
Date Received: 09/02/11 09:40

Lab Sample ID: PUI0105-01
Matrix: Biosolids
Percent Solids: 88.3

Method: SM 2540G - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88		0.10		% by Weight		09/07/11 14:30	09/07/11 17:30	1.0

Method: SW 9010C/9014 - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	3.6		0.45		mg/kg dry	☼	09/09/11 11:00	09/09/11 17:45	1.0

Lab Chronicle

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Client Sample ID: 2011081872
Date Collected: 08/31/11 06:50
Date Received: 09/02/11 09:40

Lab Sample ID: PUI0105-01
Matrix: Biosolids
Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	General Prep			11I0180_P	09/07/11 14:30	KD	TAL PHX
Total	Analysis	SM 2540G		1.0	11I0180	09/07/11 17:30	KD	TAL PHX
Total	Prep	N_General Prep		1.0	11I0327_P	09/09/11 11:00	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11I0327	09/09/11 17:45	TS	TAL PHX

Laboratory References:
TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Certification Summary

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Phoenix	AIHA	IHLAP		154268
TestAmerica Phoenix	Arizona	State Program	9	AZ0728
TestAmerica Phoenix	California	NELAC	9	01109CA
TestAmerica Phoenix	California	State Program	9	2704
TestAmerica Phoenix	Nevada	State Program	9	AZ01030
TestAmerica Phoenix	New York	NELAC	2	11898
TestAmerica Phoenix	Oregon	NELAC	10	AZ100001
TestAmerica Phoenix	USDA	USDA		P330-09-00024

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Method	Method Description	Protocol	Laboratory
SM 2540G	INORGANICS		TAL PHX
SW 9010C/9014	INORGANICS		TAL PHX

Protocol References:

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Sample Summary

Client: Pima County WWTP
Project/Site: Green Valley

TestAmerica Job ID: PUI0105

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
PUI0105-01	2011081872	Biosolids	08/31/11 06:50	09/02/11 09:40

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

PUI0105

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013-550 (12/08)

Page 1 of 1

Client Name/Address: Pima County RWRD, 7101 N Casa Grande Hwy, Tucson AZ 85743

Project/PO Number: Green Valley DO# 12*7257

Project Manager: Nancy Powell

Phone Number: 520-443-6100

Sampler: Roger Autz

Fax Number: 520-443-6071

Analysis Required: Total cyanide mg/kg; Total % solids for mg/kg calculation

BS = biosolids

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total cyanide mg/kg	Total % solids for mg/kg calculation	Special Instructions
Green Valley BNROD biosolids from drying bed #5 25000-1971 Pima LIMS# 2011081872 - 01 DO# 12*7257	BS	HDPE	2	08-31-11	0630-0656	None	1	1	Short composite.

1st Temp 4.2°C (1) 9/1/11 10:00

Relinquished By:	Date/Time:	Received By:	Date/Time:
for Roger Autz	08-31-11 1328		08-31-11 1328
	09-01-11 1000		9/1/11 10:00
	9/1/11 15:00	Fed Ex	

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Fed Ex 9/2/11 9:40 4.4°C

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111117, 2011111118 **DO:12*17593**
Contract Lab: Test America
Parameters:Total cyanide mg/kg, Total Solids
Preliminary Review

Lab Report signed and dated.	x
Data users notified of any Permit exceedances if necessary.	na
Data Results entered in LIMs, date correct, analyst correct, and released	x
Subcontract Lab licensed for Analysis reported?	x

Preliminary Review date and initials: TB 1-5-12

QA/QC Review

Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	**na**
Data packet includes QC Report from primary lab and any secondary subcontract labs.	X
QC data included for every analysis method.	X
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	X
Correct Data Qualifiers included if necessary.	X
Report Comments included if necessary.	X
DO received in Pima Core	x
WET Testing Specific Requirements	
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: TB 1-5-12

Peer/Final Review

	PR	FR
LIMS data matches reported data.	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GOS	✓
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GOS	NA

Peer Review date and initials: GOS 01-05-12 **Final Review date and initials:** BAE 1/9/201

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Center Blvd. Ste 189
Phoenix, AZ 85040
Tel: (602) 437-3340

TestAmerica Job ID: PUK1343
Client Project/Site: GV BS cyanides
Client Project Description: Cyanides

For:
Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment
Tucson, AZ 85743

Attn: Nancy Powell

Authorized for release by:
12/6/2011 3:11:24 PM

Suzanne Glass
Project Manager
suzanne.glass@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Job ID: PUK1343

Laboratory: TestAmerica Phoenix

Narrative

SAMPLE RECEIPT: Samples were received intact, at 0.6 °C, on ice and with chain of custody documentation.
HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS: No significant observations were made.
SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Detection Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118 — Lab Sample ID: PUK1343-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	4.8		0.46		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Client Sample ID: 2011111117 — Lab Sample ID: PUK1343-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	10		0.58		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Lab Chronicle

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118

Lab Sample ID: PUK1343-01

Date Collected: 11/18/11 07:37
Matrix: Soil
Date Received: 11/19/11 10:00
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	N_General Prep		1.0	11K0888_P	11/23/11 10:20	KOB	TAL PHX
Total	Analysis	SM 2540G		1.0	11K0888	11/23/11 10:40	KOB	TAL PHX
Total	Prep	N_General Prep		0.98	11L0042_P	12/01/11 13:45	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11L0042	12/01/11 16:00	TS	TAL PHX

Client Sample ID: 2011111117

Lab Sample ID: PUK1343-02

Date Collected: 11/18/11 07:11
Matrix: Soil
Date Received: 11/19/11 10:00
Percent Solids: 69

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	N_General Prep		1.0	11K0888_P	11/23/11 10:20	KOB	TAL PHX
Total	Analysis	SM 2540G		1.0	11K0888	11/23/11 10:40	KOB	TAL PHX
Total	Prep	N_General Prep		0.98	11L0042_P	12/01/11 13:45	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11L0042	12/01/11 16:00	TS	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Certification Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Phoenix	AIHA - LAP	IHLAP		154268
TestAmerica Phoenix	Arizona	State Program	9	AZ0728
TestAmerica Phoenix	California	NELAC	9	01109CA
TestAmerica Phoenix	California	State Program	9	2704
TestAmerica Phoenix	Nevada	State Program	9	AZ01030
TestAmerica Phoenix	New York	NELAC	2	11898
TestAmerica Phoenix	Oregon	NELAC	10	AZ100001
TestAmerica Phoenix	USDA	USDA		P330-09-00024

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Method	Method Description	Protocol	Laboratory
SM 2540G	INORGANICS		TAL PHX
SW 9010C/9014	INORGANICS		TAL PHX

Protocol References:

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Sample Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
PUK1343-01	2011111118	Soil	11/18/11 07:37	11/19/11 10:00
PUK1343-02	2011111117	Soil	11/18/11 07:11	11/19/11 10:00

>>> Select a Laboratory Here <<<
#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			PUK1343
(520) 443-6183 Phone	TAT if different from Below _____			SDG No.
(520) 443-6071 FAX	☐ 2 weeks			
Project Name: GV BS cyanides	☐ 1 week			
Site:Green Valley	☐ 2 days			
P O # 12-17593	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Total cyanide mg/kg	tota solids	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	2	X	X	results in mg/kg 01
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	2	X	X	results in mg/kg 02

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima County RWRD	11-18-11 1320		TA-TUC	11/18/11 13:20
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/18/11 1500			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/19/11 1000

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111118, 2011111117 **DO: 12-17593**
CV BS cyanides

Contract Lab: Test America
Parameters: Total Cyanide, Total Solids, 503 Metals,

Preliminary Review

Lab Report signed and dated.	✓
Data users notified of any Permit exceedances if necessary.	N/A
Data Results entered in LIMs, date correct, analyst correct, and released	✓
Subcontract Lab licensed for Analysis reported?	✓
Check that no data exceeds permit requirements. LIMS	✓
Semivolatiles & Volatiles: Check that all analytes were delivered.	N/A
Check that MDLs are below water quality standards, If not notify.	✓
Check that CRAO Lab MDLs/PQLs are not in Contract Lab results. (no analyte should be trace or ND)	✓

Preliminary Review date and initials: CBH 1-30-12

QA/QC Review

Copy of CoC included with Lab Report.	✓
Sample IDs verified against C oC.	✓
Sample dates and received dates are correct	✓
Analyses and methods verified against CoC. COC, email, case narrative	✓
Sample holding times not exceeded.	✓
Dilution on ND samples only in event of matrix interference.	✓
Data packet includes QC Report from primary lab and any secondary subcontract labs.	✓
QC data included for every analysis method.	✓
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	✓
Correct Data Qualifiers included if necessary.	✓
Report Comments included if necessary.	✓
Check that DO matches COC in types and number of tests.	N/A
DO received in Pima Core.	N/A
WET Testing Specific Requirements	N/A
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: 1-31-12 CBH

Peer/Final Review

PR FR

LIMS data matches reported data.	✓	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	✓	✓
Correct Data Qualifiers included if necessary.	✓	✓
DO received in Pima Core		NA

Peer Review date and initials: ~~CBN 1-31-12~~ TB 1-31-12 **Final Review date and initials:** BAE 1/31/12

Corrective Action Report
Subcontract Lab Data

Preliminary Review: CBN	Date: 1-30-12
QA/QC Review:	Date:
Data Entry: CH	Date: 1-18-12
Peer Review:	Date:
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

2D1111118 Ch PPM Sig removed, Added Ch 503 Metals
& 17 Added

Deviations from Acceptable QA/QC:

[ ] Missing QC Report.
[ ] Missing QC Data.
[ ] Missing Data Qualifiers.
[ ] Missing CoC.
[ ] Incorrect Sample IDs.
[ ] Incorrect Analysis Method.
[ ] Holding Time for analysis exceeded.
[ ] Inappropriate dilution performed.
[ ] Other.

Corrective Action:

[] Request report correction from Subcontract Lab project manager.
[ ] Add missing Data Qualifiers.
[ ] Notify data end-user of deviation.
[ ]Arrange for resampling.
[x] Other:
Added Ch 6D10B Silver

Mercury not included in this report
Hg Reported on a Prior Report # PUK 1549 TB 1-31-12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:GV BS cyanides

Sampled: 11/18/11
Received: 11/19/11
Issued: 01/23/12 10:16

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUK1343-01	2011111118	Soil
PUK1343-02	2011111117	Soil

SAMPLE RECEIPT: Samples were received intact, at 1°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

N1 - The RPD exceeded the acceptance limit due to sample matrix effects.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: 1/23/2012: Report was revised to add 13 metals by EPA Method 6010B at the client's request after the original data was released.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	5.7	ND	1	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	5.7	**11**	1	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	0.57	ND	1	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	0.57	**1.5**	1	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	2.3	**16**	1	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	5.7	**490**	1	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	5.7	**14**	1	1/13/2012	1/16/2012	
Molybdenum	EPA 6010B	12A0443	2.3	**16**	1	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	2.3	**13**	1	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	5.7	**9.1**	1	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	2.9	**6.0**	1	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	5.7	ND	1	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	11	**690**	1	1/13/2012	1/16/2012	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	7.2	ND	0.999	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	7.2	**15**	0.999	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	0.72	ND	0.999	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	0.72	**2.0**	0.999	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	2.9	**23**	0.999	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	7.2	**690**	0.999	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	7.2	**22**	0.999	1/13/2012	1/16/2012	
Molybdenum	EPA 6010B	12A0443	2.9	**23**	0.999	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	2.9	**19**	0.999	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	7.2	**12**	0.999	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	3.6	**7.2**	0.999	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	7.2	ND	0.999	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	14	**910**	0.999	1/13/2012	1/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11K0888	0.10	**87**	1	11/23/2011	11/23/2011	
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0042	0.46	**4.8**	0.978	12/1/2011	12/1/2011	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11K0888	0.10	**69**	1	11/23/2011	11/23/2011	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0042	0.58	**10**	0.984	12/1/2011	12/1/2011	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory	Project ID: GV BS cyanides	
3035 W El Camino Del Cerro		Sampled: 11/18/11
Tucson, AZ 85745	Report Number: PUK1343	Received: 11/19/11
Attention: Nancy Powell		

DATA QUALIFIERS AND DEFINITIONS

M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
N1	See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 6010B	Soil	N/A	X
SM 2540G	Soil		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

>>> Select a Laboratory Here <<<
#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			PUK1343
(520) 443-6183 Phone	TAT if different from Below _____			SDG No.
(520) 443-6071 FAX	☐ 2 weeks			
Project Name: GV BS cyanides	☐ 1 week			
Site:Green Valley	☐ 2 days			
P O # 12-17593	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total cyanide mg/kg	tota solids	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	2		X	X	results in mg/kg 01
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	2		X	X	results in mg/kg 02
email 1-12-12									
Also Antim, Arsenic, Beryllium, Cadm, lead, nickel, selenium, silver, thallium, zinc, moly mg/kg									
Mercury									

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima County RWRD	11-18-11 1520		TA-TUC	11/18/11 13:20
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/18/11 15:20			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/19/11 1000

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111118, 2011111117, 2011111289 **DO:12*19185**
Contract Lab:Test America
Parameters: Mercury (mg/kg), Total solids, 8270, 8260

Preliminary Review

Lab Report signed and dated.	X
Data users notified of any Permit exceedances if necessary.	x
Data Results entered in LIMs, date correct, analyst correct, and released	x
Subcontract Lab licensed for Analysis reported?	x

Preliminary Review date and initials: RB 1-24-12

QA/QC Review

Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	x
Data packet includes QC Report from primary lab and any secondary subcontract labs.	x
QC data included for every analysis method.	x
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	x
Correct Data Qualifiers included if necessary.	x
Report Comments included if necessary.	x
DO received in Pima Core	NO
WET Testing Specific Requirements	
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: RB 1-24-12

Peer/Final Review

	PR	FR
LIMS data matches reported data. SeeCA	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GOS	
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GOS	NA

Peer Review date and initials: GOS 01-26-12 **Final Review date and initials:** 2/2/12 BAC

Corrective Action Report
Subcontract Lab Data

Preliminary Review:	Date:
QA/QC Review:	Date:
Data Entry:	Date:
Peer Review: GOS	Date: 01-26-12
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

2011111118, 2011111117 and 2011111289

Deviations from Acceptable QA/QC:

[ ] Missing QC Report.
[ ] Missing QC Data.
[ ] Missing Data Qualifiers.
[ ] Missing CoC.
[ ] Incorrect Sample IDs.
[ ] Incorrect Analysis Method.
[ ] Holding Time for analysis exceeded.
[ ] Inappropriate dilution performed.
[X] Other.

: Dates, times and results didn't match.

Corrective Action:

[] Request report correction from Subcontract Lab project manager.
[ ] Add missing Data Qualifiers.
[ ] Notify data end-user of deviation.
[ ]Arrange for resampling.
[X] Other:

Fixed dates, times and results in LIMS.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: GV BS mercury and AV

Sampled: 11/18/11-11/22/11
Received: 11/23/11
Revised: 01/19/12 16:03

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUK1549-01	2011111118	Soil
PUK1549-02	2011111117	Soil
PUK1549-03	2011111289	Water

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: 1/19/2012 - Revised to report the 8270 data to the MDL at the client's request.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-03 (2011111289 - Water)					**Sampled: 11/22/11**				**N1a, Q2, Q10, N1b**
Reporting Units: ug/l									
1,1,1-Trichloroethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,1,2,2-Tetrachloroethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,1,2-Trichloroethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,1-Dichloroethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,1-Dichloroethene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,1-Dichloropropene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,2,3-Trichlorobenzene	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
1,2,3-Trichloropropane	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
1,2,4-Trichlorobenzene	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
1,2,4-Trimethylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,2-Dibromoethane (EDB)	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,2-Dichlorobenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,2-Dichloroethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,2-Dichloropropane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,3,5-Trimethylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,3-Dichlorobenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,3-Dichloropropane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
1,4-Dichlorobenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
2,2-Dichloropropane	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
2-Butanone (MEK)	EPA 8260B	11L0125	N/A	5.0	ND	1	12/03/11	12/03/11	
2-Chlorotoluene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
2-Hexanone	EPA 8260B	11L0125	N/A	5.0	ND	1	12/03/11	12/03/11	
4-Chlorotoluene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11L0125	N/A	5.0	ND	1	12/03/11	12/03/11	
Acetone	EPA 8260B	11L0125	N/A	20	ND	1	12/03/11	12/03/11	V1
Benzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Bromobenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Bromochloromethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Bromodichloromethane	EPA 8260B	11L0125	N/A	1.0	**1.4**	1	12/03/11	12/03/11	
Bromoform	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Bromomethane	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
Carbon tetrachloride	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Chlorobenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Chloroethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Chloroform	EPA 8260B	11L0125	N/A	1.0	**4.0**	1	12/03/11	12/03/11	
Chloromethane	EPA 8260B	11L0125	N/A	5.0	ND	1	12/03/11	12/03/11	
cis-1,2-Dichloroethene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
cis-1,3-Dichloropropene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Dibromochloromethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV

Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-03 (2011111289 - Water) - cont.					**Sampled: 11/22/11**				**N1a, Q2, Q10, N1b**
Reporting Units: ug/l									
Dichlorodifluoromethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Ethylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
m,p-Xylenes	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Methylene Chloride	EPA 8260B	11L0125	N/A	2.0	ND	1	12/03/11	12/03/11	
n-Butylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
n-Propylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
o-Xylene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
p-Isopropyltoluene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
sec-Butylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Styrene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
tert-Butylbenzene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Tetrachloroethene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Toluene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
trans-1,2-Dichloroethene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
trans-1,3-Dichloropropene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Trichloroethene	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Trichlorofluoromethane	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Vinyl Acetate	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Vinyl chloride	EPA 8260B	11L0125	N/A	1.0	ND	1	12/03/11	12/03/11	
Surrogate: Dibromofluoromethane (70-130%)					*116 %*				
Surrogate: Toluene-d8 (70-130%)					*106 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)					*101 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV

Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

SEMI-VOLATILE ORGANICS BY GC/MS (EPA 3520C/8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-03 (2011111289 - Water)					**Sampled: 11/22/11**				**E8**
Reporting Units: ug/l									
Bis(2-chloroethyl)ether	EPA 8270C	11K1039	2.5	10	ND	1.05	11/29/11	12/01/11	
Phenol	EPA 8270C	11K1039	3.8	10	ND	1.05	11/29/11	12/01/11	
2-Chlorophenol	EPA 8270C	11K1039	3.8	10	ND	1.05	11/29/11	12/01/11	
1,3-Dichlorobenzene	EPA 8270C	11K1039	3.3	10	ND	1.05	11/29/11	12/01/11	
1,4-Dichlorobenzene	EPA 8270C	11K1039	3.2	10	ND	1.05	11/29/11	12/01/11	
1,2-Dichlorobenzene	EPA 8270C	11K1039	2.8	10	ND	1.05	11/29/11	12/01/11	
Benzyl alcohol	EPA 8270C	11K1039	4.1	10	ND	1.05	11/29/11	12/01/11	
Bis(2-chloroisopropyl)ether	EPA 8270C	11K1039	2.9	10	ND	1.05	11/29/11	12/01/11	
2-Methylphenol	EPA 8270C	11K1039	3.0	10	ND	1.05	11/29/11	12/01/11	
Hexachloroethane	EPA 8270C	11K1039	3.8	10	ND	1.05	11/29/11	12/01/11	
n-Nitroso-di-n-propylamine	EPA 8270C	11K1039	3.1	10	ND	1.05	11/29/11	12/01/11	
3&4-Methylphenol	EPA 8270C	11K1039	5.7	10	ND	1.05	11/29/11	12/01/11	
Nitrobenzene	EPA 8270C	11K1039	2.4	10	ND	1.05	11/29/11	12/01/11	
Isophorone	EPA 8270C	11K1039	2.6	10	ND	1.05	11/29/11	12/01/11	
2-Nitrophenol	EPA 8270C	11K1039	5.7	15	ND	1.05	11/29/11	12/01/11	
2,4-Dimethylphenol	EPA 8270C	11K1039	5.2	10	ND	1.05	11/29/11	12/01/11	
Benzoic acid	EPA 8270C	11K1039	13	25	ND	1.05	11/29/11	12/01/11	
Bis(2-chloroethoxy)methane	EPA 8270C	11K1039	2.8	10	ND	1.05	11/29/11	12/01/11	
2,4-Dichlorophenol	EPA 8270C	11K1039	3.3	10	ND	1.05	11/29/11	12/01/11	
1,2,4-Trichlorobenzene	EPA 8270C	11K1039	3.5	10	ND	1.05	11/29/11	12/01/11	
Naphthalene	EPA 8270C	11K1039	2.7	10	ND	1.05	11/29/11	12/01/11	
4-Chloroaniline	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
Hexachlorobutadiene	EPA 8270C	11K1039	5.6	10	ND	1.05	11/29/11	12/01/11	
4-Chloro-3-methylphenol	EPA 8270C	11K1039	2.8	10	ND	1.05	11/29/11	12/01/11	
2-Methylnaphthalene	EPA 8270C	11K1039	2.7	10	ND	1.05	11/29/11	12/01/11	
Hexachlorocyclopentadiene	EPA 8270C	11K1039	6.9	10	ND	1.05	11/29/11	12/01/11	
2,4,6-Trichlorophenol	EPA 8270C	11K1039	2.8	20	ND	1.05	11/29/11	12/01/11	
2,4,5-Trichlorophenol	EPA 8270C	11K1039	2.6	20	ND	1.05	11/29/11	12/01/11	
2-Chloronaphthalene	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
2-Nitroaniline	EPA 8270C	11K1039	7.2	10	ND	1.05	11/29/11	12/01/11	
Acenaphthylene	EPA 8270C	11K1039	2.1	10	ND	1.05	11/29/11	12/01/11	
Dimethyl phthalate	EPA 8270C	11K1039	4.9	20	ND	1.05	11/29/11	12/01/11	
2,6-Dinitrotoluene	EPA 8270C	11K1039	5.8	10	ND	1.05	11/29/11	12/01/11	
Acenaphthene	EPA 8270C	11K1039	2.1	10	ND	1.05	11/29/11	12/01/11	
3-Nitroaniline	EPA 8270C	11K1039	6.4	10	ND	1.05	11/29/11	12/01/11	
2,4-Dinitrophenol	EPA 8270C	11K1039	19	50	ND	1.05	11/29/11	12/01/11	
Dibenzofuran	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
2,4-Dinitrotoluene	EPA 8270C	11K1039	7.9	10	ND	1.05	11/29/11	12/01/11	
4-Nitrophenol	EPA 8270C	11K1039	9.2	25	ND	1.05	11/29/11	12/01/11	
Fluorene	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

SEMI-VOLATILE ORGANICS BY GC/MS (EPA 3520C/8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-03 (2011111289 - Water) - cont.					**Sampled: 11/22/11**				**E8**
Reporting Units: ug/l									
4-Chlorophenyl phenyl ether	EPA 8270C	11K1039	2.4	10	ND	1.05	11/29/11	12/01/11	
Diethyl phthalate	EPA 8270C	11K1039	2.5	10	ND	1.05	11/29/11	12/01/11	
4-Nitroaniline	EPA 8270C	11K1039	3.2	10	ND	1.05	11/29/11	12/01/11	
4,6-Dinitro-2-methylphenol	EPA 8270C	11K1039	18	50	ND	1.05	11/29/11	12/01/11	
n-Nitrosodiphenylamine	EPA 8270C	11K1039	2.4	10	ND	1.05	11/29/11	12/01/11	
1,2-Diphenylhydrazine (as Azobenzene)	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
4-Bromophenyl phenyl ether	EPA 8270C	11K1039	2.7	10	ND	1.05	11/29/11	12/01/11	
Hexachlorobenzene	EPA 8270C	11K1039	2.4	10	ND	1.05	11/29/11	12/01/11	
Pentachlorophenol	EPA 8270C	11K1039	14	50	ND	1.05	11/29/11	12/01/11	
Phenanthrene	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
Anthracene	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
Di-n-butyl phthalate	EPA 8270C	11K1039	2.4	10	ND	1.05	11/29/11	12/01/11	
Fluoranthene	EPA 8270C	11K1039	2.6	10	ND	1.05	11/29/11	12/01/11	
Pyrene	EPA 8270C	11K1039	2.1	10	ND	1.05	11/29/11	12/01/11	
Butyl benzyl phthalate	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
3,3-Dichlorobenzidine	EPA 8270C	11K1039	3.1	10	ND	1.05	11/29/11	12/01/11	
Benzanthracene	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
Chrysene	EPA 8270C	11K1039	2.3	10	ND	1.05	11/29/11	12/01/11	
Bis(2-ethylhexyl)phthalate	EPA 8270C	11K1039	2.9	10	ND	1.05	11/29/11	12/01/11	
Di-n-octyl phthalate	EPA 8270C	11K1039	2.4	10	ND	1.05	11/29/11	12/01/11	
Benzo(b)fluoranthene	EPA 8270C	11K1039	2.1	10	ND	1.05	11/29/11	12/01/11	
Benzo(k)fluoranthene	EPA 8270C	11K1039	2.6	10	ND	1.05	11/29/11	12/01/11	
Benzo(a)pyrene	EPA 8270C	11K1039	2.2	10	ND	1.05	11/29/11	12/01/11	
Indeno(1,2,3-cd)pyrene	EPA 8270C	11K1039	3.5	10	ND	1.05	11/29/11	12/01/11	
Dibenz(a,h)anthracene	EPA 8270C	11K1039	4.1	10	ND	1.05	11/29/11	12/01/11	
Benzo(g,h,i)perylene	EPA 8270C	11K1039	3.5	10	ND	1.05	11/29/11	12/01/11	
Surrogate: 2-Fluorophenol (10-78%)					*29 %*				
Surrogate: Phenol-d6 (10-51%)					*20 %*				
Surrogate: Nitrobenzene-d5 (22-116%)					*49 %*				
Surrogate: 2-Fluorobiphenyl (40-91%)					*46 %*				
Surrogate: 2,4,6-Tribromophenol (14-122%)					*78 %*				
Surrogate: 4-Terphenyl-d14 (10-117%)					*58 %*				

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-01RE1 (2011111118 - Soil)					**Sampled: 11/18/11**				
Reporting Units: mg/kg									
Mercury	EPA 7471A	11L0136	N/A	0.10	**0.58**	1.07	12/05/11	12/06/11	
Sample ID: PUK1549-02RE1 (2011111117 - Soil)					**Sampled: 11/18/11**				
Reporting Units: mg/kg									
Mercury	EPA 7471A	11L0136	N/A	0.10	**0.77**	1.05	12/05/11	12/06/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV

Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-01 (2011111118 - Soil)					**Sampled: 11/18/11**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	11K0933	N/A	0.10	**85**	1	11/23/11	11/23/11	
Sample ID: PUK1549-02 (2011111117 - Soil)					**Sampled: 11/18/11**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	11K0933	N/A	0.10	**85**	1	11/23/11	11/23/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

DATA QUALIFIERS AND DEFINITIONS

E8	Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
N1	See case narrative.
Q10	Sample received in inappropriate sample container.
Q2	Sample received with head space.
Q8	Insufficient sample received to meet method QC requirements. Batch QC requirements satisfy ADEQ policies 0154.000 and 0155.000.
R1	The RPD/RSD exceeded the method acceptance limit.
R6	LFB/LFBD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 7471A	Soil		X
EPA 8260B	Water	X	X
EPA 8270C	Water		X
SM 2540G	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

>>> Select a Laboratory Here <<<

#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

PUK1549

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			
(520) 443-6183 Phone	TAT if different from Below _____			
(520) 443-6071 FAX	☐ 2 weeks			SDG No.
Project Name: GV BS mercury and AV	☐ 1 week			
Site:Green Valley	☐ 2 days			
PO# 12-19185	☐ 1 day			

	Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Mercury 7471A mg/kg	tota solids	Semi-volatiles 8270	Volatiles 8260	Sample Specific Notes:
-01	Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	1		X	X			results in mg/kg
-02	Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	1		X	X			results in mg/kg
-03	Avra Valley RWRF effluent APP 25003-1350 2011111289	11/22/11	0708	discrete	WW	4				X	X	Semi-volatiles in triplicate if you want. GOS 11-22-11

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: The total solids samples were submitted 11-18-11 and can be reused. They're the same samples. Or you can split the samples for mercury and total solids, if you want. We expect to be charged for total solids twice. Thanks.

28°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima CRAO Lab	11-22-11		TA-TUC	11/22/11 14:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/22/11 (5pm)			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/23/11 1030

Form No. CA-C-WI-002, dated 04/07/2011

Contract Lab Report
UNOFFICIAL

Report Date: 2/3/2012

Green Valley WRF

Sample Number	Parameter	Sample Date	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
BNROD-Biosolids from drying bed #5 - East (25000-1971)								
2011031560	Cyanide, Total	03/24/11	04/04/11	7.600	mg/Kg			
2011060879	Cyanide, Total	06/16/11	06/22/11	4.200	mg/Kg			
2011081872	Cyanide, Total	08/31/11	09/09/11	3.600	mg/Kg			
2011111117	Arsenic	11/18/11	01/16/12	15.0	mg/Kg			
2011111117	Cadmium	11/18/11	01/16/12	2.0	mg/Kg			
2011111117	Chromium	11/18/11	01/16/12	23.0	mg/Kg			
2011111117	Copper	11/18/11	01/16/12	690.0	mg/Kg			
2011111117	Lead	11/18/11	01/16/12	22.0	mg/Kg			
2011111117	Molybdenum	11/18/11	01/16/12	23.0	mg/Kg			
2011111117	Nickel	11/18/11	01/16/12	19.0	mg/Kg			
2011111117	Selenium	11/18/11	01/16/12	12.0	mg/Kg			
2011111117	Zinc	11/18/11	01/16/12	910.0	mg/Kg			
2011111117	Silver	11/18/11	01/16/12	7.2	mg/Kg			
2011111117	Cyanide, Total	11/18/11	12/01/11	10.000	mg/Kg			
2011111117	Mercury	11/18/11	12/06/11	0.77	mg/Kg			

PAGE LEFT BLANK INTENTIONALLY

ANNUAL BIOSOLIDS REPORT 2012

FEBRUARY 2012 – WEST PILE, BIOSOLIDS BATCH PRODUCTION CERTIFICATION 'CLASS B' BIOSOLIDS, R18.9.1006.E ALTERNATIVE 2 GREEN VALLEY BIOLOGICAL NUTRIENT REMOVAL OXIDATION DITCH (BNROD)

Source of Biosolids

Name of Facility: Green Valley BNROD; AZPDES Permit No. AZ0024937

Address of Facility: 2201 North Nogales Hwy, Green Valley, Arizona

Preparer of Biosolids

Name and Title: Ken Weber, WWTP Manager, Sub Regional Facilities - Treatment Division

Address: 4527 West Walker Road, Tucson, Arizona 85743

Telephone Number: (520) 443-6171

Biosolids Generation and Preparation

Processing Period: June 2011 to December 2011

Estimated Quantity: <290 Dry tons.

Vector Attraction Reduction Treatment Method: Option 7 (R18-9-1010.A.7)

The percent solids of the biosolids is equal to or greater than 75%

Percent Solids Analysis Results		
Sample Date	Total Solids – Analysis Results, (%)	Sample Number
November 18, 2011	86.8	2011111118

The above data shows that the biosolids meet the vector attraction reduction requirements.

Pathogen Reduction Treatment Alternative: Class B, Alternative 2 under R18.9.1006.E – "Air drying. The biosolids are dried on sand beds or paved or unpaved basins for at least three months. During at least two of the three months, the ambient average daily temperature is above 0° C;"

The current February 2012 batch of biosolids was processed as follows in the table below:

West Pile, February 2012 Batch
Processing Period and Bed Rotation

Drying Bed #	90-day Air Drying		Batch Holding, Bed #5	
	Begin	End	Begin	End
4	June 9, 2011	September 6, 2011	September 7, 2011	Hauling Date
2	July 10, 2011	October 7, 2011	October 8, 2011	Hauling Date
3	August 10, 2011	November 7, 2011	November 8, 2011	Hauling Date
1	September 12, 2011	December 10, 2011	December 11, 2011	Hauling Date

The biosolids were air-dried on concrete paved drying beds for at least three months; during at least two of the three months, the ambient average daily temperature was above 0° C. The processing dates, listed in the table above, and the ambient average daily temperature, Appendix A, show that the biosolids meet the Class B biosolids pathogen reduction requirements.

Nutrient Nitrogen Concentration

Sample Date	Sample Number	Nitrate / Nitrite mg/kg	Total Kjeldahl Nitrogen mg/kg	Total Nitrogen mg/kg
November 18, 2011	2011111118	75	61,390	61,465

Pollutant Concentration

	Analysis Results, mg/kg Sample Number Sample Date 2011111118 November 18, 2011	Table 2 R18-9-1005 Monthly Average Pollutant Concentrations	Table 1 R18-9-1005 Ceiling Concentration Limits for All Biosolids Applied to Land
Arsenic	11	41	75
Cadmium	1.5	39	85
Chromium	16	Not Applicable	3000
Copper	490	1500	4300
Lead	14	300	840
Mercury	0.58	17	57
Molybdenum	16	Not Applicable	75
Nickel	13	420	420
Selenium	9.1	100	100
Zinc	690	2800	7500

The above data shows that the metals concentrations meet Table 1 and Table 2 requirements.

Notice to Land Applier

Article 10 of Rule 18 Chapter 9 of the Arizona Administrative Code states the following in subsection 1006.C "Land on which biosolids with Class B pathogen reduction requirements are applied is subject to the use restrictions established in R18-9-1009." Article 10 of Rule 18 Chapter 9 subsection 1008 lists the management practices requirements for the land application of biosolids to reclamation sites. Both sections R18-9-1008 and R18-9-1009 are provide following the certification signature as a ready reference to the land applier.

Attachment: Laboratory sample analysis reports.

Certification

I certify, under penalty of law, that the pollutant analysis and the description of pathogen treatment and vector attraction reduction activities have been made under my direction and supervision; and under a system design to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

Kenneth A. Weber — 2/14/12

Ken Weber, WWTP Manager
Pima County Regional Wastewater Reclamation Department

Date

R18-9-1008. Management Practices, Application of Biosolids to Reclamation Sites

A. An applicator of bulk biosolids that are not exceptional quality biosolids shall comply with the following management practices at each land application site where the bulk biosolids are applied for reclamation. The applicator shall not:
   1. Apply bulk biosolids unless the soil and biosolids mixture has a pH of 5.0 or higher immediately after land application;
   2. Apply bulk biosolids to land with slopes greater than 6% unless:
      a. The site is operating under an AZPDES permit or a permit issued under section 402 (33 U.S.C. 1342) or 404 (33 U.S.C. 1344) of the Clean Water Act;
      b. The site is reclaimed as specified under A.R.S. Title 27, Chapter 5, and controls are in place to prevent runoff from leaving the application area; or
      c. Runoff from the site does not reach navigable waters;
   3. Apply bulk biosolids to land under the following conditions:
      a. Bulk biosolids with Class A pathogen reduction. To land if the depth to groundwater is 5 feet (1.52 meters) or less;
      b. Bulk biosolids with Class B pathogen reduction.
         i. To land if the depth to groundwater is 10 feet (3.04 meters) or less; and
         ii. To gravel, coarse or medium sands, or sands with less than 15% coarse fragments if the depth to groundwater is 40 feet (12.2 meters) or less from the point of application of biosolids;
   4. Apply bulk biosolids to land that is 32.8 feet (10 meters) or less from navigable waters;
   5. Store or apply bulk biosolids closer than 1000 feet (305 meters) from a public or semi-public drinking water supply well, unless the applicator justifies and the Department approves a shorter distance, or apply bulk biosolids closer than 250 feet (76.2 meters) from any other water well;
   6. Store or apply bulk biosolids within 1000 feet (305 meters) of a public right-of-way or private property line unless the applicator receives permission to apply bulk biosolids from the land owner or lessee of the adjoining property;

7. Exceed a total of 150 dry tons per acre to any portion of a reclamation site if bulk biosolids are applied;
8. Apply bulk biosolids with less than 10% solids;
9. Apply bulk biosolids to land that is flooded, frozen, or snow-covered so that the bulk biosolids enter a wetland or other navigable waters, except as provided in an AZPDES permit or a permit issued under section 402 (33 U.S.C. 1342) or 404 (33 U.S.C. 1344) of the Clean Water Act;
10. Apply more water than necessary to control dust and establish vegetation; and
11. Apply bulk biosolids within 1000 feet (305 meters) of a dwelling unless the biosolids are injected or incorporated into the soil within 10 hours of being applied.
12. Store bulk biosolids within 1000 feet (305 meters) of a dwelling unless the applicator obtains permission from the dwelling owner or lessee to store the biosolids at a shorter distance from the dwelling. If the dwelling owner or lessee changes, the applicator shall obtain permission from the new dwelling owner or lessee to continue to store the bulk biosolids within 1000 feet of the dwelling or move the biosolids to a location at least 1000 feet from the dwelling.

B. The requirements of R18-9-1007(B) apply if biosolids placed in a bag or other container are used to reclaim a site.

R18-9-1009. Site Restrictions

A. The following site restrictions apply to land where biosolids, which do not meet the Class A pathogen reduction requirements established in R18-9-1006, are land-applied.
1. A person shall not:
   a. Harvest food crop parts that touch the biosolids, or biosolids and soil mixture, but otherwise grow above the land's surface for 14 months following application;
   b. Harvest food crop parts growing in or below the land's surface for 20 months following application if the biosolids remain unincorporated on the land's surface for four months or more;
   c. Harvest food crop parts growing in or below the land's surface for 38 months following application if the biosolids remain on the land's surface for less than four months before incorporation;
   d. Harvest food, feed, and fiber crops for 30 days after application;
   e. Graze animals on the land for 30 days after application; or
   f. Harvest turf to be used at a public contact site or private residence for one year after application.
2. A person shall restrict public access to:
   a. Public contact sites for one year after application, and
   b. Land with a low potential for public exposure for 30 days after application.

B. If the vector attraction reduction requirement is met using the method:
1. In R18-9-1010(C)(1) or R18-9-1010(C)(2), the requirements of subsection (A) apply to domestic septage applied to agricultural land, forests, or reclamation sites; or
2. In R18-9-1010(C)(3), the requirements of subsection (A)(1)(a) through (A)(1)(d) apply to domestic septage applied to agricultural land, forests, or reclamation sites.

C. Once application is completed at a site, the applicator shall, in writing, provide the land owner and lessee with the following information:
1. The cumulative pollutant loading at the site if it is greater than or equal to 90% of the available site capacity established in Table 4 of R18-9-1005;
2. Any restriction established in this Section that applies to the property and the nature of the restriction; and
3. The signature of a responsible official of the applicator on this document that includes the following statement:

"I certify under penalty of law, that the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for false representations, including fines and imprisonment."

D. The land owner or lessee shall provide each applicator with a signature indicating receipt of the site restriction statement.

Appendix A – Temperature Records
Ambient Average Daily Temperature, Green Valley WRF, Arizona
January – December 2011

2011													
Jan	°C	Feb	°C	Mar	°C	Apr	°C	May	°C	Jun	°C	Jul	°C
1	13.6	1	15.6	1	13.7	1	24.4	1	15.6	1	29.2	1	33.9
2	10.8	2	10.7	2	15.7	2	26.1	2	17.5	2	26.9	2	35.8
3	11.4	3	8.9	3	16.8	3	24.2	3	23.9	3	26.1	3	33.1
4	9.8	4	10.1	4	14.7	4	20.0	4	26.4	4	27.2	4	30.0
5	9.2	5	9.5	5	15.1	5	21.4	5	25.0	5	28.9	5	28.9
6	8.5	6	9.5	6	17.2	6	22.5	6	25.3	6	29.4	6	29.2
7	8.6	7	12.3	7	18.4	7	20.6	7	25.8	7	27.2	7	31.7
8	12.1	8	13.7	8	13.6	8	19.7	8	25.0	8	25.8	8	33.1
9	10.5	9	6.1	9	14.5	9	9.4	9	22.2	9	26.4	9	33.1
10	11.2	10	9.1	10	17.7	10	9.2	10	18.1	10	27.5	10	30.8
11	12.2	11	10.2	11	18.9	11	16.4	11	17.8	11	27.2	11	28.1
12	10.6	12	12.0	12	18.7	12	18.6	12	21.4	12	28.1	12	30.3
13	8.7	13	14.2	13	17.9	13	19.2	13	25.3	13	28.3	13	30.0
14	0.5	14	15.6	14	18.4	14	17.5	14	24.2	14	28.1	14	29.2
15	-3.6	15	15.4	15	19.4	15	19.4	15	25.0	15	30.8	15	28.6
16	0.9	16	15.9	16	20.4	16	21.9	16	21.9	16	31.1	16	31.4
17	6.7	17	16.4	17	21.8	17	24.4	17	20.6	17	31.4	17	33.6
18	8.6	18	14.5	18	20.9	18	24.2	18	19.7	18	32.2	18	32.2
19	10.7	19	15.6	19	18.3	19	23.9	19	18.9	19	30.3	19	31.7
20	14.9	20	10.7	20	18.2	20	23.3	20	18.6	20	28.6	20	30.3
21	9.5	21	8.9	21	17.6	21	22.8	21	22.8	21	30.0	21	31.4
22	8.2	22	10.1	22	13.0	22	23.3	22	24.2	22	32.2	22	33.1
23	10.2	23	9.5	23	14.3	23	22.5	23	24.2	23	32.5	23	30.3
24	12.0	24	9.5	24	15.0	24	22.2	24	23.9	24	32.8	24	28.1
25	14.2	25	12.3	25	14.9	25	20.8	25	24.2	25	33.6	25	28.9
26	15.6	26	13.7	26	16.0	26	21.7	26	26.7	26	34.2	26	31.1
27	15.4	27	6.1	27	17.1	27	20.3	27	27.8	27	34.4	27	31.7
28	15.9	28	9.1	28	18.3	28	22.8	28	27.5	28	35.0	28	31.9
29	16.4			29	18.8	29	24.2	29	26.9	29	34.7	29	30.8
30	14.5			30	19.0	30	20.6	30	26.7	30	31.9	30	31.9
31	13.6			31	21.4			31	27.5		29.2	31	31.9

Appendix A – Temperature Records (Continued)
Ambient Average Daily Temperature, Green Valley WRF, Arizona
January – December 2011

2011										2012	
Aug	°C	Sept	°C	Oct	°C	Nov	°C	Dec	°C	Jan	°C
1	31.9	1	34.7	1	28.6	1	21.4	1	13.1	1	13.9
2	33.6	2	31.1	2	26.4	2	17.5	2	8.2	2	14.2
3	30.6	3	32.5	3	26.7	3	18.9	3	6.7	3	13.6
4	33.1	4	33.1	4	25.6	4	18.9	4	3.7	4	13.4
5	33.1	5	30.3	5	22.8	5	11.7	5	3.1	5	12.6
6	31.1	6	30.6	6	17.8	6	12.8	6	2.3	6	11.8
7	31.1	7	31.1	7	16.1	7	10.3	7	3.8	7	12.8
8	30.3	8	31.7	8	15.6	8	7.9	8	6.3	8	8.3
9	31.7	9	28.1	9	18.3	9	11.1	9	7.6	9	7.3
10	28.6	10	25.8	10	20.6	10	16.1	10	9.9	10	9.1
11	28.6	11	26.1	11	21.4	11	13.8	11	11.5	11	9.6
12	29.2	12	25.6	12	23.3	12	16.9	12	10.3	12	9.8
13	30.3	13	26.4	13	25.8	13	13.0	13	7.0	13	8.8
14	31.7	14	24.7	14	25.8	14	13.0	14	7.6	14	10.4
15	30.8	15	23.6	15	26.9	15	12.3	15	6.3	15	13.2
16	31.1	16	25.8	16	25.8	16	12.3	16	9.8	16	13.1
17	32.8	17	25.6	17	24.7	17	13.5	17	13.9	17	10.4
18	31.1	18	25.8	18	24.4	18	15.4	18	8.1	18	9.6
19	28.6	19	27.2	19	25.3	19	16.8	19	7.9	19	11.1
20	30.8	20	28.1	20	24.2	20	16.9	20	9.1	20	11.4
21	31.4	21	28.1	21	24.2	21	14.4	21	7.9	21	14.1
22	32.2	22	29.2	22	25.0	22	11.0	22	7.6	22	11.2
23	33.3	23	28.9	23	25.0	23	14.5	23	3.6	23	11.3
24	33.6	24	29.2	24	24.4	24	15.4	24	8.6	24	11.3
25	33.9	25	27.5	25	23.9	25	12.1	25	8.5	25	9.1
26	34.4	26	25.8	26	21.1	26	11.4	26	7.1	26	10.8
27	33.6	27	26.9	27	16.1	27	13.2	27	7.7	27	13.6
28	31.9	28	25.6	28	19.2	28	11.6	28	8.1	28	13.8
29	33.3	29	26.7	29	21.1	29	12.7	29	11.0	29	13.8
30	33.3	30	27.5	30	21.4	30	15.1	30	13.6	30	13.8
31	35.3			31	22.2			31	13.3	31	12.3

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 2/3/2012 14:05:45
Laboratory License #AZ0159

Sample Analysis Report

Custom Report - Green Valley WRF

Data Qualifiers:

See Attachment for Data Qualifiers and Definitions.

Sample Integrity:

SAMPLE RECEIPT: Samples were received intact at the required temperature, unless otherwise noted with a data qualifier. Please refer to the Chain of Custody for sample receipt details.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Pima County CRAO Laboratory Quality Manual.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

NOTIFICATIONS: **None.**

Notes:

2011111118 Sample sent to Test America for total cyanide and solids 11-18-11. GOS

All results on this report intended for compliance submission must have the associated chain(s) of custody attached for the results to meet reporting requirements as per ADHS Laboratory licensure rules. If you have received this report for compliance purposes and it is not complete, please contact the Compliance and Regulatory Affairs Office for a final report in its entirety.

Reviewed by:

Barbara A. Robson

Laboratory Director or Designee
Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

02/06/12
Date

Green Valley WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
BNROD-Biosolids from drying bed #5 - West (25000-1972)											
2011111118	C	Miscellaneous Note	11/18/11 7:37	None		Subcontracted					Other
2011111118	C	Nitrate/Nitrite	11/18/11 7:37	EPA 353.2	11/25/11 11:31	74.9	mg/Kg	0.06	2.30		manderson
2011111118	C	Nitrogen, Total Kjeldahl	11/18/11 7:37	EPA 351.2	11/23/11 14:27	61390.0	mg/Kg	53.5	109.7	D2	aklos
2011111118	C	Nitrogen, Total	11/18/11 7:37	Calculated	11/25/11 11:31	61464.8	mg/Kg		0.8		manderson
2011111118	C	Solids, Total	11/18/11 7:37	SM 2540G	11/19/11 11:00	86.80	%		0.01		jvriper

Lab Comments:

Data on this report was last modified on: 2/3/2012 14:25:28

ND = Not Detected (<MDL) or if MDL does not exist (<PQL), Trace = > MDL and < PQL, NA = Not Analyzed, NR = Not Reported, (T) = Total.
Analysis Date represents the final reading date.

* Identifies results that are not approved.
IS identifies Investigative Samples
Field results are not subject to approval of Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF

Data Qualifier(s):	Definition:
D2	Sample required dilution due to high concentration of target analyte.

Contract Lab Report
UNOFFICIAL

Green Valley WRF

Sample Number	Parameter	Sample Date	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
BNROD-Biosolids from drying bed #5 - West (25000-1972)								
2011111118	Arsenic	11/18/11	01/16/12	11.0	mg/Kg			
2011111118	Cadmium	11/18/11	01/16/12	1.5	mg/Kg			
2011111118	Chromium	11/18/11	01/16/12	16.0	mg/Kg			
2011111118	Copper	11/18/11	01/16/12	490.0	mg/Kg			
2011111118	Lead	11/18/11	01/16/12	14.0	mg/Kg			
2011111118	Molybdenum	11/18/11	01/16/12	16.0	mg/Kg			
2011111118	Nickel	11/18/11	01/16/12	13.0	mg/Kg			
2011111118	Selenium	11/18/11	01/16/12	9.1	mg/Kg			
2011111118	Zinc	11/18/11	01/16/12	690.0	mg/Kg			
2011111118	Silver	11/18/11	01/16/12	6.0	mg/Kg			
2011111118	Cyanide, Total	11/18/11	12/01/11	4.800	mg/Kg			
2011111118	Mercury	11/18/11	12/06/11	0.58	mg/Kg			

Pima County Regional Wastewater Reclamation Department
Compliance and Regulatory Affairs Office Laboratory

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201111 1118

SITE & LOCATION: GREEN VALLEY BNROD BIOSOLIDS FROM DRYING BED #5 (WEST PILE)

SITE-LOCATION NUMBER: 25000-1972 (XXXXX-XXXX)

SAMPLE START DATE: 11-18-11 (MM / DD / YYYY)

SAMPLE START TIME: 0720 (24 Hour Clock)

SUBMITTER: Sub-Regional Facilities

SAMPLE END DATE: 11-18-11 (MM / DD / YYYY)

SAMPLE END TIME: 0737 (24 Hour Clock)

SAMPLER: ARTZ (Print Last Names Only)

Permit Type: ☐ APP ☐ Investigative ■ 503 ■ AZPDES ☐ Reuse ☐ Process Control ☐ IWC ☐ USFS ☐ Other

Sample Matrix: ■ Biosolids ☐ Soil ☐ Wastewater ☐ Groundwater ☐ Stormwater ☐ Other ☐ Industrial ☐ Surface Water

INORGANIC CHEMISTRY

METALS	D	C	METALS	D	C
Aluminum	☐	☐	Titanium	☐	☐
Antimony	☐	☐	Vanadium	☐	☐
Arsenic	☐	☐	Zinc	☐	☐
Barium	☐	☐	Priority Pollutant Metals *	☐	☐
Beryllium	☐	☐	TCLP Metals	☐	☐
Boron	☐	☐	503 Metals ** (contract lab)	☐	■
Cadmium	☐	☐	Chromium, Hexavalent	☐	☐
Calcium	☐	☐	Chromium, Trivalent	☐	☐
Chromium	☐	☐	**WET METHODS**	D	C
Cobalt	☐	☐	Ammonia as N	☐	☐
Copper	☐	☐	Chloride	☐	☐
Hardness	☐	☐	Cyanide, Total (contract	☐	■
Iron	☐	☐	Cyanide, Amenable lab)	☐	☐
Lead	☐	☐	Fluoride	☐	☐
Magnesium	☐	☐	Ignitability	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐
Molybdenum	☐	☐	Nitrate/Nitrite as N	☐	☐
Nickel	☐	☐	Nitrogen, Total Kjeldahl	☐	☐
Potassium	☐	☐	Nitrogen, Total as N	☐	■
Selenium	☐	☐	Orthophosphate as P	☐	☐
Silver (contract lab)	☐	■	Phosphorus, Total as P	☐	☐
Sodium	☐	☐	Sulfate	☐	☐
Strontium	☐	☐	Sulfide	☐	☐
Thallium	☐	☐	Turbidity	☐	☐
Tin	☐	☐			

ORGANIC CHEMISTRY

PRIORITY POLLUTANTS	D	C
Acrolein and Acrylonitrile	☐	☐
Dioxin GC/SIM/MS Scan	☐	☐
Organochlorine Pesticides & PCBs	☐	☐
Purgeable Organics (GCMS)	☐	☐
Semivolatile Organics (GCMS)	☐	☐
Other	☐	☐

MISCELLANEOUS METHODS	D	C
4,4-DDE	☐	☐
Bis(2-ethylhexyl) phthalate	☐	☐
Digester Gas	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
TCLP Herbicides (Contract Lab)	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐

EFFLUENT TOXICITY TESTING	D	C
Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

MICROBIOLOGY - WET CHEM

	D	C
Alkalinity	☐	☐
BOD	☐	☐
COD	☐	☐
Coliform, Fecal	☐	☐
Coliform, Total	☐	☐
Conductivity	☐	☐
E. coli	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	☐	■
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Other	☐	☐

OTHER	D	C
	☐	☐
	☐	☐
	☐	☐
	☐	☐

COMPLIANCE FIELD MEASUREMENTS

	Result	Units
☐ Chlorine *Hach 10014*		µg/L
☐ Conductivity *SM 2510 B*		µmhos/cm
☐ Oxygen, Dissolved *SM 4500-O G*		mg/L
☐ pH / pH Temp *SM 4500-H B*	/	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: THESE ARE MAN. COMPOSITE SAMPLES TAKEN FROM 4 LOCATIONS. Cyanide + TS sent to Test America QUARTERLY SAMPLES DO# 12-17593

# of Bottles Delivered: 5 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Metals added 01-12-12 GOS PO#12-25201

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
[signature]	Lab fridge	11-18-11	0742
Lab fridge	Steven Garcia	11-18-11	0912
Steven Garcia	[signature]	11-18-11	1131
[signature]	[signature]	11/19/11	13:20
[signature]	[signature]	11/22/11	14:25

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	1	°C
Initials:	GOS	
Non-Preserved	3	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH	1	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

Sample Inspection:	Yes	No	NA
Chain of Custody Record completed appropriately?	☒	☐	☐
Sample labels match Chain of Custody?	☒	☐	☐
Correct number of samples were delivered?	☒	☐	☐
Custody seals intact?	☐	☐	☒
Within holding time?	☒	☐	☐
Sufficient sample volume for analysis?	☒	☐	☐
Samples are in proper containers?	☒	☐	☐
Sample containers damaged/leaking/frozen?	☐	☒	☐
40 ml vials headspace, > pea-sized air bubble?	☐	☐	☒
Received from a refrigerator?	☐	☒	☐

* Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Tl, Zn, Mercury(Cold Vapor)
** As, Cd, Cr, Cu, Pb, Mercury, Mo, Ni, Se, Zn Mercury (contract lab)

Mercury sent to Test America. DO# 11-19125

>>> Select a Laboratory Here <<<
N/A
N/A
N/A
N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
ima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
ucson/AZ/85743	Calendar (C) or Work Days (W) _____			
520) 443-6183 Phone	TAT if different from Below _____			
520) 443-6071 FAX	☐ 2 weeks			SDG No.
roject Name: GV BS mercury and AV	☐ 1 week			
ite:Green Valley	☐ 2 days			
O# 12-19185	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Mercury 7471A mg/kg	tota solids	Semi-volatiles 8270	Volatiles 8260	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	1	X	X			results in mg/kg
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	1	X	X			results in mg/kg
Avra Valley RWRF effluent APP 25003-1350 2011111289	11/22/11	0708	discrete	WW	4			X	X	Semi-volatiles in triplicate if you want. GOS 11-22-11

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

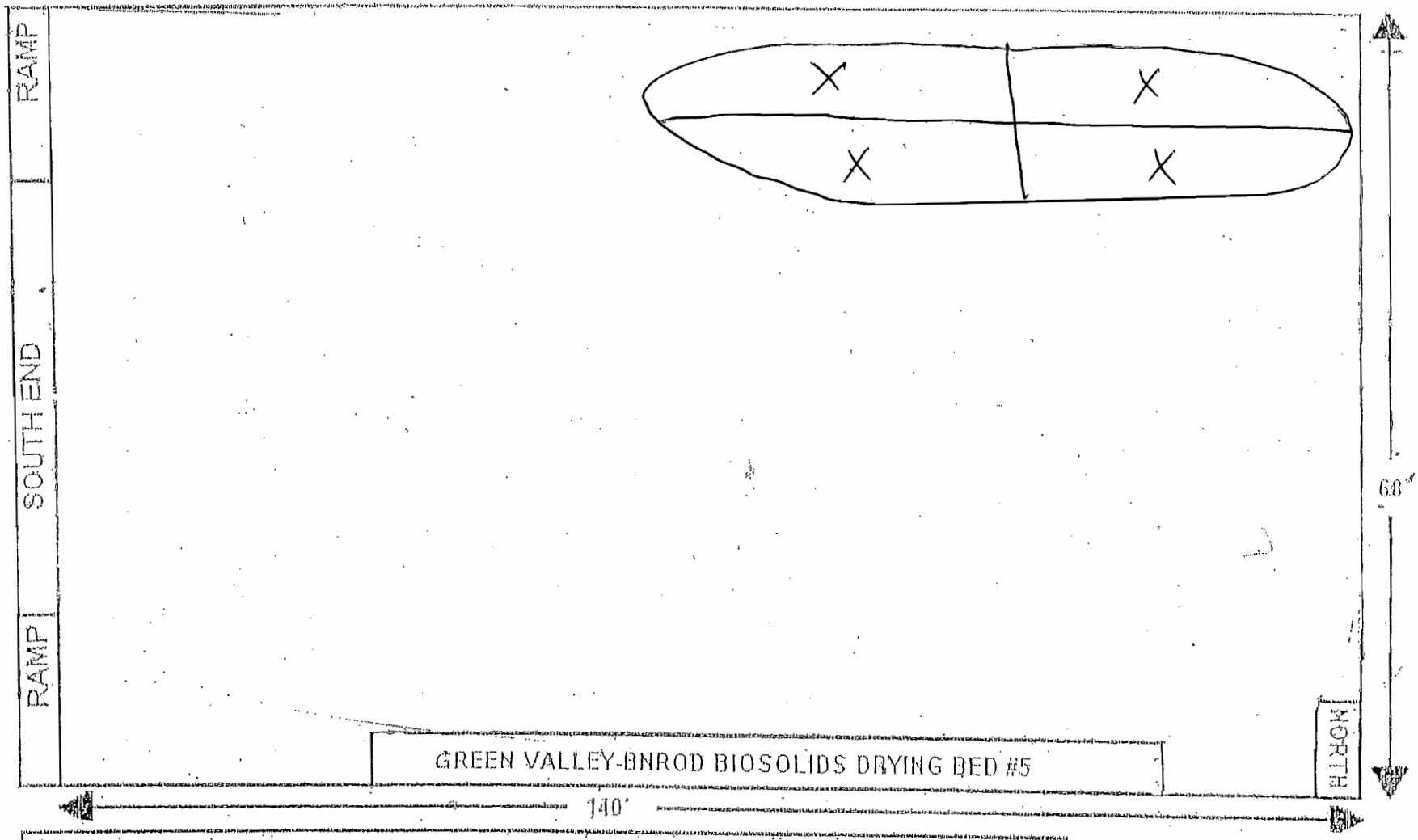
Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: The total solids samples were submitted 11-18-11 and can be reused. They're the same samples. Or you can split the samples for mercury and total solids, if you want. We expect to be charged for total solids twice. Thanks.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima CRAO Lab	11-22-11		TA-TUC	11/22/11 14:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, dated 04/07/2011



GREEN VALLEY-BNROD BIOSOLIDS DRYING BED #5

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE WEST PILE

SAMPLER R. Aretz DATE: 11-18-11 TIME: 0737

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111117, 2011111118 **DO:12*17593**
Contract Lab: Test America
Parameters:Total cyanide mg/kg, Total Solids
Preliminary Review

Lab Report signed and dated.	x
Data users notified of any Permit exceedances if necessary.	na
Data Results entered in LIMs, date correct, analyst correct, and released	x
Subcontract Lab licensed for Analysis reported?	x

Preliminary Review date and initials: TB 1-5-12

QA/QC Review

Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	**na**
Data packet includes QC Report from primary lab and any secondary subcontract labs.	X
QC data included for every analysis method.	X
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	X
Correct Data Qualifiers included if necessary.	X
Report Comments included if necessary.	X
DO received in Pima Core	x
WET Testing Specific Requirements	
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: TB 1-5-12

Peer/Final Review

	PR	FR
LIMS data matches reported data.	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GOS	✓
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GOS	NA

Peer Review date and initials: GOS 01-05-12 **Final Review date and initials:** BAE 1/9/2012

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Center Blvd. Ste 189
Phoenix, AZ 85040
Tel: (602) 437-3340

TestAmerica Job ID: PUK1343
Client Project/Site: GV BS cyanides
Client Project Description: Cyanides

For:
Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment
Tucson, AZ 85743

Attn: Nancy Powell

Authorized for release by:
12/6/2011 3:11:24 PM

Suzanne Glass
Project Manager
suzanne.glass@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
QC Sample Results 7
QC Association Summary 8
Lab Chronicle 9
Certification Summary 10
Method Summary 11
Sample Summary 12
Chain of Custody 13

Definitions/Glossary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Job ID: PUK1343

Laboratory: TestAmerica Phoenix

Narrative

SAMPLE RECEIPT: Samples were received intact, at 0.6 °C, on ice and with chain of custody documentation.
HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS: No significant observations were made.
SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Detection Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118 — Lab Sample ID: PUK1343-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	4.8		0.46		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Client Sample ID: 2011111117 — Lab Sample ID: PUK1343-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	10		0.58		mg/kg dry	1.0	☼	SW 9010C/9014	Total

Client Sample Results

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118

Date Collected: 11/18/11 07:37
Date Received: 11/19/11 10:00

Lab Sample ID: PUK1343-01

Matrix: Soil
Percent Solids: 87.2

Method: SM 2540G - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87		0.10		% by Weight		11/23/11 10:20	11/23/11 10:40	1.0

Method: SW 9010C/9014 - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	4.8		0.46		mg/kg dry	☼	12/01/11 13:45	12/01/11 16:00	1.0

Client Sample ID: 2011111117

Date Collected: 11/18/11 07:11
Date Received: 11/19/11 10:00

Lab Sample ID: PUK1343-02

Matrix: Soil
Percent Solids: 69

Method: SM 2540G - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69		0.10		% by Weight		11/23/11 10:20	11/23/11 10:40	1.0

Method: SW 9010C/9014 - INORGANICS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	10		0.58		mg/kg dry	☼	12/01/11 13:45	12/01/11 16:00	1.0

Lab Chronicle

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Client Sample ID: 2011111118

Lab Sample ID: PUK1343-01

Date Collected: 11/18/11 07:37
Matrix: Soil
Date Received: 11/19/11 10:00
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	N_General Prep		1.0	11K0888_P	11/23/11 10:20	KOB	TAL PHX
Total	Analysis	SM 2540G		1.0	11K0888	11/23/11 10:40	KOB	TAL PHX
Total	Prep	N_General Prep		0.98	11L0042_P	12/01/11 13:45	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11L0042	12/01/11 16:00	TS	TAL PHX

Client Sample ID: 2011111117

Lab Sample ID: PUK1343-02

Date Collected: 11/18/11 07:11
Matrix: Soil
Date Received: 11/19/11 10:00
Percent Solids: 69

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	N_General Prep		1.0	11K0888_P	11/23/11 10:20	KOB	TAL PHX
Total	Analysis	SM 2540G		1.0	11K0888	11/23/11 10:40	KOB	TAL PHX
Total	Prep	N_General Prep		0.98	11L0042_P	12/01/11 13:45	TS	TAL PHX
Total	Analysis	SW 9010C/9014		1.0	11L0042	12/01/11 16:00	TS	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Certification Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Phoenix	AIHA - LAP	IHLAP		154268
TestAmerica Phoenix	Arizona	State Program	9	AZ0728
TestAmerica Phoenix	California	NELAC	9	01109CA
TestAmerica Phoenix	California	State Program	9	2704
TestAmerica Phoenix	Nevada	State Program	9	AZ01030
TestAmerica Phoenix	New York	NELAC	2	11898
TestAmerica Phoenix	Oregon	NELAC	10	AZ100001
TestAmerica Phoenix	USDA	USDA		P330-09-00024

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Method	Method Description	Protocol	Laboratory
SM 2540G	INORGANICS		TAL PHX
SW 9010C/9014	INORGANICS		TAL PHX

Protocol References:

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040, TEL (602) 437-3340

Sample Summary

Client: Pima County WWTP
Project/Site: GV BS cyanides

TestAmerica Job ID: PUK1343

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
PUK1343-01	2011111118	Soil	11/18/11 07:37	11/19/11 10:00
PUK1343-02	2011111117	Soil	11/18/11 07:11	11/19/11 10:00

>>> Select a Laboratory Here <<<
N/A
N/A
N/A
N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
lma County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
ucson/AZ/85743	Calendar (C) or Work Days (W)			PUK1343
520) 443-6183 Phone	TAT if different from Below			
520) 443-6071 FAX	☐ 2 weeks			SDG No.
roject Name: GV BS cyanides	☐ 1 week			
ite:Green Valley	☐ 2 days			
O # 12-17593	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total cyanide mg/kg	tota solids	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	2		X	X	results in mg/kg 01
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	2		X	X	results in mg/kg 02

reservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

ossible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

pecial Instructions/QC Requirements & Comments:

elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima County RWRD	11-18-11 1320		TA-TUC	11/18/11 13:20
elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/18/11 15:00			
elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/19/11 1000

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111118, 2011111117 **DO: 12-17593**
CV BS cyanides

Contract Lab: Test America
Parameters: Total Cyanide, Total Solids, 503 Metals,

Preliminary Review

Lab Report signed and dated.	✓
Data users notified of any Permit exceedances if necessary.	N/A
Data Results entered in LIMs, date correct, analyst correct, and released	✓
Subcontract Lab licensed for Analysis reported?	✓
Check that no data exceeds permit requirements. LIMS	✓
Semivolatiles & Volatiles: Check that all analytes were delivered.	N/A
Check that MDLs are below water quality standards, If not notify.	✓
Check that CRAO Lab MDLs/PQLs are not in Contract Lab results. (no analyte should be trace or ND)	✓

Preliminary Review date and initials: CBH 1-30-12

QA/QC Review

Copy of CoC included with Lab Report.	✓
Sample IDs verified against C oC.	✓
Sample dates and received dates are correct	✓
Analyses and methods verified against CoC. COC, email, case narrative	✓
Sample holding times not exceeded.	✓
Dilution on ND samples only in event of matrix interference.	✓
Data packet includes QC Report from primary lab and any secondary subcontract labs.	✓
QC data included for every analysis method.	✓
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	✓
Correct Data Qualifiers included if necessary.	✓
Report Comments included if necessary.	✓
Check that DO matches COC in types and number of tests.	N/A
DO received in Pima Core.	N/A
WET Testing Specific Requirements	N/A
Statement of Pass/Fail reflected in End Points	↓
Report states if zeolite treatment was utilized	↓
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	↓
Chemistry data included	↓
Reference Toxicant Test Results and Control Chart within limits	↓
PMSD Determination included and within acceptable range	↓
End Points include TUc, NOEC, LOEC, and IC25	↓
Statistics verify endpoints	↓

QA/QC Review date and initials: 1-31-12 CBH

Peer/Final Review

PR FR

LIMS data matches reported data.	✓	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	✓	✓
Correct Data Qualifiers included if necessary.	✓	✓
DO received in Pima Core		NA

Peer Review date and initials: ~~CBN 1-31-12~~ B 1-31-12 **Final Review date and initials:** BAE 1/31/12

Corrective Action Report
Subcontract Lab Data

Preliminary Review: CBN	Date: 1-30-12
QA/QC Review:	Date:
Data Entry: CH	Date: 1-18-12
Peer Review:	Date:
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

2D1111118 & 17 Ch PPM Sig removed, Added Ch 503 Metals Added

Deviations from Acceptable QA/QC:

[ ] Missing QC Report.
[ ] Missing QC Data.
[ ] Missing Data Qualifiers.
[ ] Missing CoC.
[ ] Incorrect Sample IDs.
[ ] Incorrect Analysis Method.
[ ] Holding Time for analysis exceeded.
[ ] Inappropriate dilution performed.
[ ] Other.

Corrective Action:

[] Request report correction from Subcontract Lab project manager.
[ ] Add missing Data Qualifiers.
[ ] Notify data end-user of deviation.
[ ]Arrange for resampling.
[x] Other: Added Ch 6D1DB Silver

Mercury not included in this report
Hg Reported on a Prior Report # PUK 1549 B 1-31-12

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project:GV BS cyanides

Sampled: 11/18/11
Received: 11/19/11
Issued: 01/23/12 10:16

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUK1343-01	2011111118	Soil
PUK1343-02	2011111117	Soil

SAMPLE RECEIPT: Samples were received intact, at 1°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

N1 - The RPD exceeded the acceptance limit due to sample matrix effects.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: 1/23/2012: Report was revised to add 13 metals by EPA Method 6010B at the client's request after the original data was released.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides

Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	5.7	ND	1	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	5.7	**11**	1	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	0.57	ND	1	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	0.57	**1.5**	1	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	2.3	**16**	1	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	5.7	**490**	1	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	5.7	**14**	1	1/13/2012	1/16/2012	
Molybdenum	EPA 6010B	12A0443	2.3	**16**	1	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	2.3	**13**	1	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	5.7	**9.1**	1	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	2.9	**6.0**	1	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	5.7	ND	1	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	11	**690**	1	1/13/2012	1/16/2012	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	7.2	ND	0.999	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	7.2	**15**	0.999	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	0.72	ND	0.999	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	0.72	**2.0**	0.999	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	2.9	**23**	0.999	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	7.2	**690**	0.999	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	7.2	**22**	0.999	1/13/2012	1/16/2012	
Molybdenum	EPA 6010B	12A0443	2.9	**23**	0.999	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	2.9	**19**	0.999	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	7.2	**12**	0.999	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	3.6	**7.2**	0.999	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	7.2	ND	0.999	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	14	**910**	0.999	1/13/2012	1/16/2012	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11K0888	0.10	**87**	1	11/23/2011	11/23/2011	
Sample ID: PUK1343-01 (2011111118 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0042	0.46	**4.8**	0.978	12/1/2011	12/1/2011	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11K0888	0.10	**69**	1	11/23/2011	11/23/2011	
Sample ID: PUK1343-02 (2011111117 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0042	0.58	**10**	0.984	12/1/2011	12/1/2011	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides

Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

DATA QUALIFIERS AND DEFINITIONS

M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
N1	See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS cyanides
Report Number: PUK1343

Sampled: 11/18/11
Received: 11/19/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 6010B	Soil	N/A	X
SM 2540G	Soil		X
SW 9010C/9014	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

>>> Select a Laboratory Here <<<
#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			PUK1343
(520) 443-6183 Phone	TAT if different from Below _____			SDG No.
(520) 443-6071 FAX	☐ 2 weeks			
Project Name: GV BS cyanides	☐ 1 week			
Site:Green Valley	☐ 2 days			
P O # 12-17593	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total cyanide mg/kg	tota solids	Sample Specific Notes:
Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	2		X	X	results in mg/kg 01
Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	2		X	X	results in mg/kg 02
email 1-12-12									
Also Antim, Arsenic, Beryllium, Cadm, lead nickel, selenium, silver, thallium, zinc, molly mg/kg									
Mercury									

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Pima County RWRD	11-18-11 1320	[signature]	TA-TUC	11/18/11 13:20
[signature]	TA-TUC	11/18/11 (5:00)	[signature]		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
			[signature]	TA	11/19/11 1000

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE LABORATORY SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

Subcontract Lab Data Checklist

LIMS # 2011111118, 2011111117, 2011111289 **DO:12*19185**
Contract Lab:Test America
Parameters: Mercury (mg/kg), Total solids, 8270, 8260
Preliminary Review

Lab Report signed and dated.	X
Data users notified of any Permit exceedances if necessary.	x
Data Results entered in LIMs, date correct, analyst correct, and released	x
Subcontract Lab licensed for Analysis reported?	x

Preliminary Review date and initials: RB 1-24-12

QA/QC Review

Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	x
Data packet includes QC Report from primary lab and any secondary subcontract labs.	x
QC data included for every analysis method.	x
Required QC items included for every analysis method: typically Method Blank, LCS, MS, MSD.	x
Correct Data Qualifiers included if necessary.	x
Report Comments included if necessary.	x
DO received in Pima Core	NO
WET Testing Specific Requirements	
Statement of Pass/Fail reflected in End Points	
Report states if zeolite treatment was utilized	
Survival and Reproduction or Growth Data included (P. promelas or Ceriodaphnia only)	
Chemistry data included	
Reference Toxicant Test Results and Control Chart within limits	
PMSD Determination included and within acceptable range	
End Points include TUc, NOEC, LOEC, and IC25	
Statistics verify endpoints	

QA/QC Review date and initials: RB 1-24-12

Peer/Final Review

	PR	FR
LIMS data matches reported data. SecCA	GOS	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	GOS	
Correct Data Qualifiers included if necessary.	NA	✓
DO received in Pima Core	GOS	NA

Peer Review date and initials: GOS 01-26-12 **Final Review date and initials:** 2/2/12 BAC

Corrective Action Report
Subcontract Lab Data

Preliminary Review:	Date:
QA/QC Review:	Date:
Data Entry:	Date:
Peer Review: GOS	Date: 01-26-12
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

201111118, 201111117 and 201111289

Deviations from Acceptable QA/QC:

[ ] Missing QC Report.
[ ] Missing QC Data.
[ ] Missing Data Qualifiers.
[ ] Missing CoC.
[ ] Incorrect Sample IDs.
[ ] Incorrect Analysis Method.
[ ] Holding Time for analysis exceeded.
[ ] Inappropriate dilution performed.
[X] Other.
Dates, times and results didn't match.

Corrective Action:

[] Request report correction from Subcontract Lab project manager.
[ ] Add missing Data Qualifiers.
[ ] Notify data end-user of deviation.
[ ]Arrange for resampling.
[X] Other:
Fixed dates, times and results in LIMS.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project: GV BS mercury and AV

Sampled: 11/18/11-11/22/11
Received: 11/23/11
Revised: 01/19/12 16:03

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUK1549-01	2011111118	Soil
PUK1549-02	2011111117	Soil
PUK1549-03	2011111289	Water

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: 1/19/2012 - Revised to report the 8270 data to the MDL at the client's request.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-01RE1 (2011111118 - Soil)					**Sampled: 11/18/11**				
Reporting Units: mg/kg									
Mercury	EPA 7471A	11L0136	N/A	0.10	**0.58**	1.07	12/05/11	12/06/11	
Sample ID: PUK1549-02RE1 (2011111117 - Soil)					**Sampled: 11/18/11**				
Reporting Units: mg/kg									
Mercury	EPA 7471A	11L0136	N/A	0.10	**0.77**	1.05	12/05/11	12/06/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUK1549-01 (2011111118 - Soil)					**Sampled: 11/18/11**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	11K0933	N/A	0.10	**85**	1	11/23/11	11/23/11	
Sample ID: PUK1549-02 (2011111117 - Soil)					**Sampled: 11/18/11**				
Reporting Units: % by Weight									
Percent Solids	SM 2540G	11K0933	N/A	0.10	**85**	1	11/23/11	11/23/11	

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV

Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

DATA QUALIFIERS AND DEFINITIONS

E8	Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
N1	See case narrative.
Q10	Sample received in inappropriate sample container.
Q2	Sample received with head space.
Q8	Insufficient sample received to meet method QC requirements. Batch QC requirements satisfy ADEQ policies 0154.000 and 0155.000.
R1	The RPD/RSD exceeded the method acceptance limit.
R6	LFB/LFBD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Pima County WWTP, WESC Laboratory
3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: GV BS mercury and AV
Report Number: PUK1549

Sampled: 11/18/11-11/22/11
Received: 11/23/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 7471A	Soil		X
EPA 8260B	Water	X	X
EPA 8270C	Water		X
SM 2540G	Soil		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Suzanne Glass
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

>>> Select a Laboratory Here <<<

#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

PUK1549

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Nancy Powell	Site Contact:	Date: 11-18-11	COC No:
Pima County RWRD	Tel/Fax: 520-443-6183	Lab Contact:	Carrier:	1 of 1 COCs
7101 N Casa Grande Hwy	Analysis Turnaround Time			Job No.
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			
(520) 443-6183 Phone	TAT if different from Below _____			
(520) 443-6071 FAX	☐ 2 weeks			SDG No.
Project Name: GV BS mercury and AV	☐ 1 week			
Site:Green Valley	☐ 2 days			
PO# 12-19185	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Mercury 7471A mg/kg	tota solids	Semi-volatiles 8270	Volatiles 8260	Sample Specific Notes:
-01 Green Valley biosolids drying bed #5 west 25000-1972 2011111118	11/18/2011	737	composite	BS	1	X	X			results in mg/kg
-02 Green Valley biosolids drying bed #5 east 25000-1971 2011111117	11/18/11	0711	composite	BS	1	X	X			results in mg/kg
-03 Avra Valley RWRF effluent APP 25003-1350 2011111289	11/22/11	0708	discrete	WW	4			X	X	Semi-volatiles in triplicate if you want. GOS 11-22-11

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: The total solids samples were submitted 11-18-11 and can be reused. They're the same samples. Or you can split the samples for mercury and total solids, if you want. We expect to be charged for total solids twice. Thanks.

28°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Pima CRAO Lab	11-22-11		TA-TUC	11/22/11 14:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA-TUC	11/22/11 15:00			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/23/11 1030

Form No. CA-C-WI-002, dated 04/07/2011

PIMA COUNTY GREEN VALLEY BNROD BIOSOLIDS DISPOSITION SAHUARITA LANDFILL, PIMA COUNTY, ARIZONA – JULY 2012

SUMMARY

The Pima County Wastewater Reclamation Department (PCRWD) prepared Class B biosolids at the Biological Nutrient Removal Oxidation Ditch (BNROD) plant which were disposed of at Sahuarita Landfill, Pima County, Arizona in July 2012.

PREPARATION OF THE BIOSOLIDS

The Class 'B' biosolids were generated and processed at the Pima County Green Valley BNROD in the course of cleaning the influent wastewater discharged by domestic and commercial sewer users. The solids were separated from the liquid stream following the biological nutrient removal process, thickened, aerobically digested, dewatered and air-sun dried to greater than 75% solids content between December 2010 and December 2011. The results of metals testing were below the ceiling concentration limits and below the pollutant concentration limits, listed in Table 1 and Table 2 in R18-9-1005 (respectively Table-1 and in Table-3 of 40 CFR 503.13). The Pathogen Reduction to produce Class B biosolids utilized Alternative 2 of R18.9.1006.E – "Air drying. The biosolids are dried on sand beds or paved or unpaved basins for at least three months. During at least two of the three months, the ambient average daily temperature is above 0° C.

The biosolids were air-dried on concrete paved drying beds for at least three months; during at least two of the three months, the ambient average daily temperature was above 0° C. The processing period and the recorded ambient average daily temperature show that the biosolids meet the Class B biosolids pathogen reduction requirements. The dried solids were then transferred to the staging area on Drying Bed #5 where they were subject to further drying, in preparation for transport.

TRANSPORTATION TO SAHUARITA LANDFILL

Pima County transported the Class B biosolids from the Green Valley BNROD to the Sahuarita Landfill using 12 cubic yard dump trucks. The Sahuarita landfill is located at 16605 S. La Canada Road in Sahuarita, Pima County, Arizona. The delivery of the biosolids occurred July 12th thru the 28th, 2012. The total number of truck loads transported to the Sahuarita landfill was 60 loads yielding a total weight of approximately 452 tons, including the moisture content of 12.2%. Therefore, the total dry weight of the biosolids delivered was 397 dry tons, or equivalently, 360 metric dry tons.