PIMA COUNTY

ANNUAL BIOSOLIDS REPORT

CALENDAR YEAR 2011

REGIONAL WASTEWATER
RECLAMATION DEPARTMENT

TREATMENT DIVISION

PIMA COUNTY
TUCSON, ARIZONA

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 16, 2012

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

U.S. EPA REGION IX
Regional Biosolids Coordinator
USEPA Region IX (WTR-7)
75 Hawthorne Street
San Francisco, California 94105

Dear Daniel Czecholinski, Manager, Water Quality Compliance Assurance Unit - ADEQ

RE: BIOSOLIDS ANNUAL REPORT 2011

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 2011.

- 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.

TO: **ADEQ/EPA**
FROM: Jeff Prevatt, Program Manager - Compliance and Regulatory Affairs Office
RE: Biosolids Annual Report 2011
DATE: February 16, 2012

The Marana WRF, AZPDES Permit No. AZ0024520 and the Mt. Lemmon WRF, AZPDES Permit No. AZ0022250 trucked their solids to the Wastewater Collection System of Ina Road WRF.

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 2011
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

Pima County
Regional Wastewater Reclamation Department
201 North Stone Avenue
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February 16, 2012

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75 Hawthorne Street
San Francisco, California 94105

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

Dear Sir/Madam

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Jeff Prevatt, Program Manager
Compliance and Regulatory Affairs Office

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Ken Weber, Wastewater Treatment Plant Manager, Sub-Regional Facilities
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CONTENTS

BIOSOLIDS ANNUAL REPORT 2011

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

MARANA WRF, AZPDES NO. AZ0024520

MT. LEMMON WRF, AZPDES NO. AZ0022250

ANNUAL BIOSOLIDS REPORT 2011

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@azdeq.gov

Date signed =date(mm/dd/ year)	NPDES/AZP DES 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"
2/14/2012	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 01/01/11	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/11	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Tucson	85743	5204436100									

Dry Tons stored 01/01/10	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
	10432										
		4551	Pima County Roger Road WRF					Pipeline			
		76	Pima County Marana WRF					Pima County RWRD Truck-	5205498195		
		0.82	Pima County Mt. Lemmon WRF					Pima County RWRD Truck-	5205498195		

ADEQ Arizona Department of Environmental Quality

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Landfill											
Landfill											
Landfill											
Composting											
Composting											
Land Apply	10116	B	5	1		Avra Gro Systems, Inc.	Avra Gro Systems, Inc.	5202717736	Kai Farms, TNT Farms,		
Land Apply											
Land Apply											
Land Apply											
Land Apply											
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Name:

Title: Deputy Director-Treatment

Ina Road WRF, Pima County Regional Biosolids Management Facility
Biosolids Land Application Activities; January thru December 2011
Land Applier: Avra Gro Systems, Inc.

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)
Kai Farms, Marana, Az	JK-4	113.3	Pima Co.	Class B, Alt 2	Option 1	0.72	55.8	Wheat	340
		102.8				1617	62.6		
Kai Farms, Marana, Az	JK-7	584.6	Pima Co.	Class B, Alt 2	Option 1	3.1	233	Wheat & Cotton	340 0r 380
		506.9				6859	261		
Kai Farms, Marana, Az	JK-8	323.8	Pima Co.	Class B, Alt 2	Option 1	2.12	157.4	Cotton	380
		293.76				4744	176.4		
Kai Farms, Marana, Az	JK-9	240.4	Pima Co.	Class B, Alt 2	Option 1	1.29	99	Cotton	380
		218.00				2881	111		
Kai Farms, Marana, Az	JK-10	314.1	Pima Co.	Class B, Alt 2	Option 1	2	152	Cotton	380
		284.90				4514	170		
Kai Farms, Marana, Az	JK-12	236.8	Pima Co.	Class B, Alt 2	Option 1	1.6	121	Cotton	380
		214.70				3586	136		
Kai Farms, Marana, Az	JK-13	161.1	Pima Co.	Class B, Alt 2	Option 1	1.05	80.2	Cotton	380
		146.10				2344	89		
Kai Farms, Marana, Az	JK-14	443.6	Pima Co.	Class B, Alt 2	Option 1	3.15	239	Cotton	380
		402.40				7052	268		
Kai Farms, Marana, Az	JK-17	113.1	Pima Co.	Class B, Alt 2	Option 1	1.35	99	Wheat	340
		102.60				3018	111		
Kai Farms, Marana, Az	JK-18	256.5	Pima Co.	Class B, Alt 2	Option 1	4.42	327	Wheat	340
		232.60				9912	366		
Kai Farms, Marana, Az	JK-19	615.7	Pima Co.	Class B, Alt 2	Option 1	4.7	344	Cotton	380
		558.50				10174	386		
Kai Farms, Marana, Az	JK-20	581.2	Pima Co.	Class B, Alt 2	Option 1	3.7	282	Wheat	340
		481.60				8459	317		
Kai Farms, Marana, Az	JK-21D	82.6	Pima Co.	Class B, Alt 2	Option 1	3.93	589	Cotton	380
		74.90				8816	324		
Kai Farms, Marana, Az	JK-26	309.4	Pima Co.	Class B, Alt 2	Option 1	1.33	103.1	Cotton	380
		280.60				2989	115		
Kai Farms, Marana, Az	JK-27	304.9	Pima Co.	Class B, Alt 2	Option 1	1.7	125	Cotton	380
		231.10				3817	140		

Ina Road WRF, Pima County Regional Biosolids Management Facility
Biosolids Land Application Activities; January thru December 2011
Land Applier: Avra Gro Systems, Inc.

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)
Kai Farms, Marana, Az	JK-28	143.7	Pima Co.	Class B, Alt 2	Option 1	0.68	50	Cotton	380
		130.30				1534	56		
Kai Farms, Marana, Az	JK-29	79.5	Pima Co.	Class B, Alt 2	Option 1	0.4	36	Cotton	380
		72.1				1060	40		
Kai Farms, Marana, Az	JK-30	274.5	Pima Co.	Class B, Alt 2	Option 1	1.86	138	Cotton	380
		249				4157	155		
Kai Farms, Marana, Az	JK-34	741.5	Pima Co.	Class B, Alt 2	Option 1	5.26	398.1	Cotton - Wheat	380+340
		672.5				11787	446		
Kai Farms, Marana, Az	JK-37	401.04	Pima Co.	Class B, Alt 2	Option 1	3.34	259	Cotton	380
		363.37				7490	290		
Kai Farms, Marana, Az	JK-42	852.3	Pima Co.	Class B, Alt 2	Option 1	2.61	200	Wheat	340
		773.10				5860	225		
TNT Farms	GL-1	312.2	Pima Co.	Class B, Alt 2	Option 1	1.53	115	Cotton	380
		283.20				3353	129		
Toone Farms	AJ-1	536.8	Pima Co.	Class B, Alt 2	Option 1	4.31	326	Cotton	380
		486.90				9665	365		
Toone Farms	AJ-2	686	Pima Co.	Class B, Alt 2	Option 1	4.52	311	Cotton	380
		622.20				10135	349		
Tom Hum Farms	TH-5	822.2	Pima Co.	Class B, Alt 2	Option 1	3.62	277	Wheat - Milo	340+200
		745.70				8118	310		
Tom Hum Farms	TH-11N	332.9	Pima Co.	Class B, Alt 2	Option 1	4.38	334	Cotton	380
		301.90				9817	374		
Tom Hum Farms	TH-12E	270.20	Pima Co.	Class B, Alt 2	Option 1	3.97	300	Wheat	340
		245.29				8905	337		
Law Partnership	SG-54A	146.70	Pima Co.	Class B, Alt 2	Option 1	4.3	316	Pasture	400
		133.00				9669	355		
Law Partnership	SG-54C	144.90	Pima Co.	Class B, Alt 2	Option 1	4.3	317	Pasture	400
		131.40				9667	355		
Law Partnership	SG-53B	200.8	Pima Co.	Class B, Alt 2	Option 1	5.29	391	Pasture	400
		182.20				11846	439		
Lim Farms	LIM-2	336.3	Pima Co.	Class B, Alt 2	Option 1	4.95	359	Cotton	380
		305				11084	402		

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@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"
2/14/2012	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 01/01/11**	**Class (A/B/N)**	**Alternative #**	**VAR #**	**Dry Tons stored 12/31/11**	**Class (A/B/N)**	**Alternative #**	**VAR #**
Tucson	85745	5207246200	N	N							
Tucson	85705	5204436400									
Dry Tons stored 01/01/10	**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**
	13167			4551	Pima County Ina Road			Pipeline			
		346	Pima County Avra Valley WRF					Pima County RWRD Truck-	5204191958		
		81	Pima County Corona de Tucson WRF					Pima County RWRD Truck-	5204191958		
		270	Pima County Randolph Park WRF					Pipeline			

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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											
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2/14/2012		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 01/01/11	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/11	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Corona de Tucson	85711	5204436170									

Dry Tons stored 01/01/10	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
	747			270	Pima County Roger Road			Pima County (	5205498195		

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2/14/2012		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 01/01/11	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/11	Class (A/B/N)	Alternative #	VAR #
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	84			81	Pima County Roger Road			Pima County	5205498195		

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										10000	W. Snyder Hill Road

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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-Treatment

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@azdeq.gov

Date signed =date(mm/dd/ year)	NPDES/AZP DES 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"
2/14/2012	24520	100631	Pima County Marana Park WRF	Jeff	Prevatt	jeff.prevatt@wwm.pima.gov	Program Manager	3529	P	3035	W. El Camino del Cerro
										14393	N. Luckett Road

City	Zip	Phone	Lagoons/Tanks or LINED Drying Beds for ALL Sludge (Y/N)	Dry Tons Stored 01/01/11	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/11	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Corona de Tucson	85653	5204436170									

Dry Tons stored 01/01/10	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
	97			76	Pima County Ina Road			Pima County	5205498195		

ADEQ Arizona Department of Environmental Quality

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@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									
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Land Apply									
Land Apply									

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Name: Title: Deputy Director-Treatment

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@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"
2/14/2012	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 01/01/11	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/11	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Corona de Tucson	85711	5204436170									

Dry Tons stored 01/01/10	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
	0.55			0.82	Pima County Ina Road			Pima County	5205498195		

ADEQ Arizona Department of Environmental Quality

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@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									
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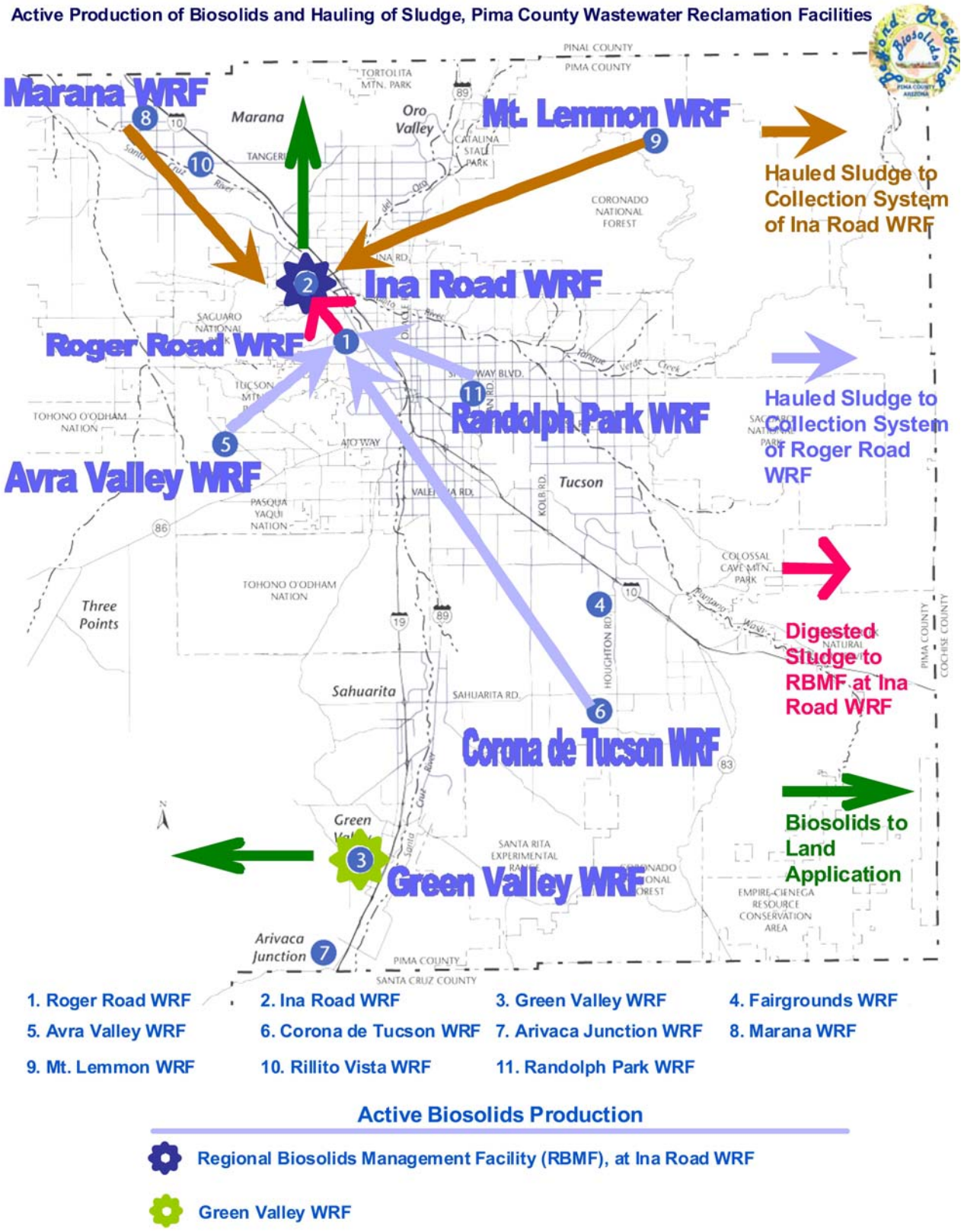
I certify, under penalty of law, that the information and descriptions have been made under my direction and supervision and under a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine whether the applicable biosolids requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Name: Title: Deputy Director-Treatment


Active Production of Biosolids and Hauling of Sludge, Pima County Wastewater Reclamation Facilities
Marana WRF
Mt. Lemmon WRF
Hauled Sludge to Collection System of Ina Road WRF
Ina Road WRF
Roger Road WRF
Randolph Park WRF
Hauled Sludge to Collection System of Roger Road WRF
Avra Valley WRF
Digested Sludge to RBMF at Ina Road WRF
Corona de Tucson WRF
Biosolids to Land Application
Green Valley WRF
Marana
Oro Valley
Tucson
Three Points
Sahuarita
Arivaca Junction
1. Roger Road WRF
2. Ina Road WRF
3. Green Valley WRF
4. Fairgrounds WRF
5. Avra Valley WRF
6. Corona de Tucson WRF
7. Arivaca Junction WRF
8. Marana WRF
9. Mt. Lemmon WRF
10. Rillito Vista WRF
11. Randolph Park WRF
Active Biosolids Production
Regional Biosolids Management Facility (RBMF), at Ina Road WRF
Green Valley WRF

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 2011

BIOSOLIDS ANNUAL REPORT 2011

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 12/01/11 Through 12/31/11

Reporting Period: From 12/01/11 Through 12/31/11

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

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.

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 2011	Volatile Solids Reduction (%)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	59	60	56	54	52	57	55	59	64	65	65	65
Digester #2	58	*43	O/S	O/S	O/S	O/S	62	59	64	62	61	64
Digester #3	62	60	55	54	54	61	55	59	61	63	63	66
Digester #4	60	57	56	56	56	60	56	60	62	64	65	67

O/S = Out of Service
* = Taken Out of Service on February 11, 2011

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

BIOSOLIDS ANNUAL REPORT 2011

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

ROGER ROAD WRF YEAR 2011	Volatile Solids Reduction (%)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	55.2	60.5	61.3	61.0	61.0	57.5	56.4	57.6	56.2	63.6	58.8	61.2
Digester #2	55.4	58.8	60.3	61.3	58.8	57.2	56.1	58.4	56.8	65.2	59.9	61.7
Digester #3	55.8	59.7	58.4	59.3	58.2	54.8	55.7	55.5	53.5	63.0	60.0	59
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	55.5	59.2	61.0	61.7	59.0	57.6	60.0	56.5	56.7	65.7	62.0	61.6

O/S = Out of Service

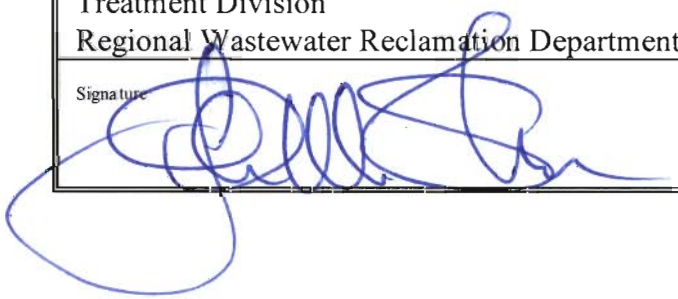
The mass of volatile solids of the Roger Road WRF biosolids has been reduced by at least 38 percent.

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 FEB 16 2012

BIOSOLIDS ANNUAL REPORT 2011

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 12/01/11 Through 12/31/11

Reporting Period: From 12/01/11 Through 12/31/11

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

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.

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 2011	AVERAGE DETENTION TIME (Days)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	30.27	21.60	21.07	25.11	21.42	24.38	29.94	36.86	39.88	34.59	19.37	21.38
Digester #2	30.26	*28.69	O/S	O/S	O/S	O/S	40.26	40.89	37.86	41.88	23.15	29.94
Digester #3	33.22	27.75	25.27	27.31	22.67	27.40	30.91	37.97	36.35	35.97	36.97	33.45
Digester #4	30.00	24.81	20.79	24.05	22.04	23.29	28.01	34.64	35.37	33.12	25.77	31.50

O/S = Out of Service
* = Taken Out of Service on February 11, 2011

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

ROGER ROAD WRF YEAR 2011	AVERAGE DETENTION TIME (Days)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	22.7	21.3	21.2	19.9	23.1	25.0	27.2	25.0	23.3	21.5	20.7	22.5
Digester #2	22.9	21.3	21.1	19.9	23.1	25.1	27.2	25.0	23.2	21.6	20.9	22.5
Digester #3	22.9	21.4	21.3	20.0	23.2	25.4	27.4	25.1	23.3	21.6	21.0	22.7
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	23.2	21.2	21.2	19.8	23.2	25.5	27.6	25.5	23.2	21.4	21.3	22.8

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

INA ROAD WRF YEAR 2011	AVERAGE TEMPERATURE (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	36.18	36.13	36.08	36.37	36.24	36.71	36.72	36.62	37.33	36.81	36.24	36.26
Digester #2	36.08	*36.41	O/S	O/S	O/S	O/S	36.73	36.87	37.09	36.72	36.35	36.32
Digester #3	35.71	36.01	35.91	36.14	36.10	36.60	36.61	36.47	37.11	**35.01	***	36.21
Digester #4	36.05	35.74	36.05	36.27	36.13	36.51	36.63	36.45	37.03	36.77	36.36	36.08

ROGER ROAD WRF YEAR 2011	AVERAGE TEMPERATURE (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Digester #1	36.8	36.7	36.9	36.7	36.7	36.8	36.9	37.1	36.9	36.9	36.9	36.8
Digester #2	36.8	36.5	36.9	36.9	36.8	36.9	36.9	36.9	36.9	36.9	36.9	36.9
Digester #3	37.0	36.3	37.0	36.9	37.1	36.9	37.0	37.1	37.1	37.0	36.6	36.1
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	37.1	36.4	36.7	36.9	36.8	36.9	36.9	37.1	36.9	37.1	37.2	36.9

O/S = Out of Service
* = Taken Out of Service on February 11, 2011
** = The Average Temperature reading for Ina Road Digester #3 was calculated from SCADA temperature log.
*** = Digester #3 was taken out of service where sludge was not fed and digested sludge was not drawn off from it between November 10 and November 29, 2011. The 15-day detention time at 35 ˚C or greater was achieved during the period November 15 thru November 29, 2011. The monthly average temperature of digester #3 November 1 thru November 30, 2011 was 34.9 ˚C. The November 2011 average monthly temperature represents a combination of SCADA temperature, November 1 thru 9, and the actual manual daily temperature, November 10 thru 30, of Digester #3 sludge.

BIOSOLIDS ANNUAL REPORT 2011

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 FEB 16 2012

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 2011	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
Nitrogen (T)	61805.6	59939.6	59932.2	65628.8	72448.4	59479.6	52338.6	55656.1	68378.5	58728.1	49175.1	*92000.0

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

BIOSOLIDS ANNUAL REPORT 2011

Pima County Regional Wastewater Reclamation Department

METALS IN BIOSOLIDS PRODUCED AT THE RBMF, 2011

	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
	[mg/kg]									
Regulatory Requirement										
Table 1, R18-9-1005 40 CFR, 503.13 Table 1	75	85	3000	4300	840	57	75	420	100	7500
Table 2, R18-9-1005 40 CFR, 503.13 Table 3	41	39	N/A	1500	300	17	N/A	420	100	2800
	As	**Cd**	**Cr**	**Cu**	**Pb**	**Hg**	**Mo**	**Ni**	**Se**	**Zn**
	Measured Concentration, [mg/kg]									
January-2011	< 0.013	< 6.70	17.5	426	< 16.8	1.7	10.7	17.5	< 0.012	798
February-2011	< 0.013	< 5.80	25.5	419	25.8	1.8	15.9	< 14.5	< 0.012	916
March-2011	< 16.80	< 6.70	26.8	457	< 16.8	1.2	14.6	26.6	< 16.8	968
April-2011	14	< 5.60	32.6	461	21.4	1.4	15.3	16.2	< 0.01	1014
May-2011	< 17.10	< 6.84	23.5	481	< 17.1	1.9	12.4	18.1	< 0.01	903
June-2011	< 13.70	< 5.48	26.9	474	18.6	1.5	13.6	19.6	< 13.7	1022
July-2011	< 0.01	< 6.60	29.6	529	27.5	4.4	15.5	24.4	< 16.5	1091
August-2011	< 18.32	< 7.33	31.5	570	23.5	1.8	15.6	28.5	< 0.01	1210
September-2011	16	< 5.62	29.4	565	21.5	1.3	15.1	19.5	21.1	1146
October-2011	16.2	< 5.87	26.3	531	20.6	1.6	12.2	14.7	< 0.012	1002
November-2011	< 15.12	< 6.05	26.8	493	18.8	2.1	14.7	< 16.4	< 0.012	1109
December-2011	< 72.0	< 7.20	< 29.0	510	< 72.0	< 1.4	< 29.0	< 29.0	< 72.0	1100
ANNUAL AVERAGE	**< 16.6**	**< 6.3**	**< 27.1**	**493**	**< 25.0**	**< 1.8**	**< 15.4**	**< 20.4**	**< 11.7**	**1023**
ANNUAL MAXIMUM	**< 72.0**	**< 7.3**	**32.6**	**570**	**< 72.0**	**4.4**	**< 29.0**	**< 29.0**	**< 72.0**	**1210**
	As	**Cd**	**Cr**	**Cu**	**Pb**	**Hg**	**Mo**	**Ni**	**Se**	**Zn**

N/A ≡ Not Applicable

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: 3/10/2011 11:13:14
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility
January 2011

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.

Notes: None

All results on this report intended for compliance submission must have the associated chain 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

03/21/11

Date

Regional Biosolids Management Facility

Thickened Sludge to AvraGro Storage (20002-0200)

Sample Number	Parameter	Sample Type	Sample Date	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010264	Arsenic	C	01/04/11	EPA 6010B	01/25/11 16:30	ND	mg/Kg	0.0125	16.8		mbomar
2011010264	Cadmium	C	01/04/11	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0005	6.7		mbomar
2011010264	Chromium	C	01/04/11	EPA 6010B	02/01/11 16:30	17.5	mg/Kg	0.0007	16.8		mbomar
2011010264	Copper	C	01/04/11	EPA 6010B	02/01/11 16:30	426	mg/Kg	0.0037	16.8		mbomar
2011010264	Lead	C	01/04/11	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0080	16.8		mbomar
2011010264	Molybdenum	C	01/04/11	EPA 6010B	01/25/11 16:30	10.7	mg/Kg	0.0026	6.7		mbomar
2011010264	Nickel	C	01/04/11	EPA 6010B	02/01/11 16:30	17.5	mg/Kg	0.0086	16.8		mbomar
2011010264	Selenium	C	01/04/11	EPA 6010B	01/25/11 16:30	ND	mg/Kg	0.0122	16.8		mbomar
2011010264	Zinc	C	01/04/11	EPA 6010B	01/25/11 16:30	798	mg/Kg	0.0033	16.8		mbomar
2011010264	Silver	C	01/04/11	EPA 6010B	02/01/11 16:30	7.4	mg/Kg	0.0011	1.7		mbomar
2011010264	Ammonia	C	01/04/11	EPA 350.1	01/11/11 11:21	8694.4	mg/Kg	0.7	347.2		tourada
2011010264	Cyanide, Total	C	01/04/11	SM 4500-CN-E	01/10/11 13:58	Trace	mg/Kg	0.35	1.7		aklos
2011010264	Mercury	C	01/04/11	EPA 7471A	01/20/11 10:37	1.70	mg/Kg	.0028	.28		khowell
2011010264	Nitrate	C	01/04/11	EPA 353.2	01/10/11 10:34	ND	mg/Kg	1.11	11.11		tourada
2011010264	Nitrate/Nitrite	C	01/04/11	EPA 353.2	01/10/11 8:21	ND	mg/Kg	0.6	11.1		tourada
2011010264	Nitrite	C	01/04/11	SM 4500-NO2	01/05/11 13:04	Trace	mg/Kg	1.11	11.11		manderson
2011010264	Nitrogen, Total Kjeldahl	C	01/04/11	EPA 351.2	01/07/11 9:01	61805.6	mg/Kg	902.8	1851.9		manderson
2011010264	Nitrogen, Total	C	01/04/11	Calculated	01/10/11 10:35	61805.6	mg/Kg		1851.9		tourada
2011010264	Solids, Total	C	01/04/11	SM 2540G	01/05/11 11:30	7.20	%		0.005		aellert

Lab Comments:

Data on this report was last modified on: 3/7/2011 14:54:31

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
CHAIN OF CUSTODY and ANALYSIS REQUEST FORM

Wednesday (Composite)

SUBMITTER: INA ROAD WPCF SUPERINTENDENT (Organization) LAB ID: 20110102 64

SAMPLER: Walsh (Print Last Names Only) FACILITY-LOCATION ID: 20002-0200

SAMPLE DATE: ~~01/05~~ 01/04/11 ~~01/05/11~~ (MM / DD / YY) SAMPLE TIME: 0500-2300 (24 Hour Clock)

603 01-05-11 605 01-05-11

SAMPLE LOCATION: Thickened Sludge to AvraGro Storage

PERMIT TYPE:			
	☐ APP	☐ REUSE	
	☐ APP Investigations	☐ USFS	
	☐ IWC	■ 503	
	☐ NPDES	☐ Other-	

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

INDICATE ALL ANALYSES REQUIRED

Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY METALS	D	C	INORGANIC CHEMISTRY METALS	D	C	ORGANIC CHEMISTRY PRIORITY POLLUTANTS	D	C	MICROBIOLOGY - WET CHEM	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	☐	☐	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*	☐	☐	Solids, Total	☐	■
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: **POURED OFF THE DAILY - SEE OPERATORS C.O.C. LIMS#** 20110102 26

24 hour composite ends on the sample date.

Septum blank preparation date:

COMPLIANCE FIELD MEASUREMENTS

☐ Chlorine		☐ Temperature	
☐ Oxygen (Dis.)		☐ pH	
☐ Conductivity		☐ Other	

Sample Receiving Temp.
14°C IR Therm 605

Number of Sample Containers
(4) 605

Sampled by: for Brian Walsh	Received by:	Date/Time: 01-05-11 0904
Relinquished by:	Received by:	Date/Time
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 and Regulatory Affairs Office (CRAO) Laboratory
7101 N. Casa Grande Highway, Tucson, AZ 85743-9577, Phone: (520) 443-6100

Report Date: 3/21/2011 09:59:17
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility
February 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.

Notes: None

All results on this report intended for compliance submission must have the associated chain 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

03/21/11

Date

Regional Biosolids Management Facility

Sample Number	Parameter	Sample Type	Sample Date	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thickened Sludge to AvraGro Storage (20002-0200)											
pour off											
2011021016	Arsenic	C	02/15/11	EPA 6010B	02/25/11 10:44	ND	mg/Kg	0.0125	14.5		mbomar
2011021016	Cadmium	C	02/15/11	EPA 6010B	02/25/11 10:44	Trace	mg/Kg	0.0005	5.8		mbomar
2011021016	Chromium	C	02/15/11	EPA 6010B	02/25/11 13:08	25.5	mg/Kg	0.0007	14.5		mbomar
2011021016	Copper	C	02/15/11	EPA 6010B	02/25/11 10:44	419	mg/Kg	0.0037	14.5		mbomar
2011021016	Lead	C	02/15/11	EPA 6010B	03/01/11 10:40	25.8	mg/Kg	0.0080	14.5		mbomar
2011021016	Molybdenum	C	02/15/11	EPA 6010B	02/25/11 10:44	15.9	mg/Kg	0.0026	5.8	M5	mbomar
2011021016	Nickel	C	02/15/11	EPA 6010B	02/25/11 10:44	Trace	mg/Kg	0.0086	14.5		mbomar
2011021016	Selenium	C	02/15/11	EPA 6010B	03/01/11 10:40	ND	mg/Kg	0.0122	14.5		mbomar
2011021016	Zinc	C	02/15/11	EPA 6010B	02/25/11 10:44	916	mg/Kg	0.0033	14.5		mbomar
2011021016	Silver	C	02/15/11	EPA 6010B	02/25/11 13:08	6.7	mg/Kg	0.0011	1.5	M5	mbomar
2011021016	Ammonia	C	02/15/11	EPA 350.1	02/23/11 9:24	6288.5	mg/Kg	0.7	350.1		tourada
2011021016	Cyanide, Total	C	02/15/11	SM 4500-CN-E	02/24/11 15:19	3.03	mg/Kg	0.35	1.8	M5	aklos
2011021016	Mercury	C	02/15/11	EPA 7471A	03/07/11 12:43	1.80	mg/Kg	.0028	.28		khowell
2011021016	Nitrate	C	02/15/11	EPA 353.2	02/25/11 7:58	ND	mg/Kg	0.2	0.5		tourada
2011021016	Nitrate/Nitrite	C	02/15/11	EPA 353.2	02/22/11 10:07	ND	mg/Kg	0.56	11.2		tourada
2011021016	Nitrite	C	02/15/11	SM 4500-NO2	02/16/11 12:56	Trace	mg/Kg	1.12	11.20		manderson
2011021016	Nitrogen, Total Kjeldahl	C	02/15/11	EPA 351.2	02/18/11 9:44	59939.6	mg/Kg	853.5	1750.7	D2	manderson
2011021016	Nitrogen, Total	C	02/15/11	Calculated	02/23/11 5:25	59939.6	mg/Kg		1750.7		manderson
2011021016	Solids, Total	C	02/15/11	SM 2540G	02/16/11 6:04	7.14	%		0.005		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.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
February 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011021016	D2	Sample required dilution due to high concentration of target analyte.	2/15/11
2011021016	M5	Analyte concentration was determined by the method of standard addition (MSA).	2/15/11

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE
CHAIN OF CUSTODY and ANALYSIS REQUEST FORM
Wednesday (Composite)

SUBMITTER: INA ROAD WPCF SUPERINTENDENT (Organization) LAB ID: 2011021016

SAMPLER: Walsh (Print Last Names Only) FACILITY-LOCATION ID: 20002-0200

SAMPLE DATE: 02-15-11 (MM / DD / YY) SAMPLE TIME: 0500-2300 (24 Hour Clock)

SAMPLE LOCATION: Thickened Sludge to AvraGro Storage

PERMIT TYPE:		
	☐ APP	☐ REUSE
	☐ APP Investigations	☐ USFS
	☐ IWC	■ 503
	☐ NPDES	☐ Other-

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

INDICATE ALL ANALYSES REQUIRED

Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY METALS	D	C	INORGANIC CHEMISTRY METALS	D	C	ORGANIC CHEMISTRY PRIORITY POLLUTANTS	D	C	MICROBIOLOGY - WET CHEM	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	☐	☐	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*	☐	☐	Solids, Total	☐	■
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: POURED OFF THE DAILY - SEE OPERATORS C.O.C. LIMS# 2011020979

24 hour composite ends on the sample date.

Septum blank preparation date:

COMPLIANCE FIELD MEASUREMENTS

- ☐ Chlorine _____
- ☐ Oxygen (Dis.) _____
- ☐ Conductivity
- ☐ Temperature _____
- ☐ pH _____
- ☐ Other

Sample Receiving Temp.
14°C IR Therm COS

Number of Sample Containers
(4) COS

for Brian Walsh (Operations)		02-16-11 0844
Sampled by:	Received by:	Date/Time
Relinquished by:	Received by:	Date/Time
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: 20110210 16
(yyyy/mm/xxxx – xxxx)

Facility or Submitter: Ina Ops POUR OFF

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers ~~received~~: 4
(Note: Septa set counts as '1' bottle) pour off

Were samples transported on ice? ☐ Yes ☒ No

Temperature of Samples: 14 °C ☒ IR ☐ LIG

INSPECTION	YES	NO	N/A	COMMENT
Chain of Custody relinquished by sampler?		✓		Signed by GOS for sampler
Sample labels match COC?	✓			Made by QA/QC
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	2
HNO_3 (Nitric Acid)	
H_2SO_4 (Sulfuric Acid)	1
HCL (Hydrochloric Acid)	
NaOH (Sodium Hydroxide)	1
$Na_2S_2O_3$ (Sodium Thiosulfate)	
$Zn(C_2H_3O_2)_2$ (Zinc Acetate)	

Additional comments or dialog:
POUR OFF
(For purposes of sample rejection, please be concise)

Checklist completed by: _____ 02-16-11
(Signature) (mm/dd/yy)

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: 4/28/2011 08:25:22
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
March 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: 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 A Escobar

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

04/28/11

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											
2011031055	C	Arsenic	3/15/11 23:00	EPA 6010B	03/30/11 12:11	Trace	mg/Kg	0.0125	16.8		mbomar
2011031055	C	Cadmium	3/15/11 23:00	EPA 6010B	03/30/11 10:30	Trace	mg/Kg	0.0005	6.7		mbomar
2011031055	C	Chromium	3/15/11 23:00	EPA 6010B	03/30/11 10:30	26.8	mg/Kg	0.0007	16.8		mbomar
2011031055	C	Copper	3/15/11 23:00	EPA 6010B	03/30/11 10:30	457	mg/Kg	0.0037	16.8		mbomar
2011031055	C	Lead	3/15/11 23:00	EPA 6010B	04/05/11 13:07	Trace	mg/Kg	0.0080	16.8		mbomar
2011031055	C	Molybdenum	3/15/11 23:00	EPA 6010B	03/30/11 10:30	14.6	mg/Kg	0.0026	6.7		mbomar
2011031055	C	Nickel	3/15/11 23:00	EPA 6010B	03/31/11 10:46	26.6	mg/Kg	0.0086	16.8		mbomar
2011031055	C	Selenium	3/15/11 23:00	EPA 6010B	03/31/11 13:38	Trace	mg/Kg	0.0122	16.8	M5	mbomar
2011031055	C	Zinc	3/15/11 23:00	EPA 6010B	03/30/11 10:30	968	mg/Kg	0.0033	16.8		mbomar
2011031055	C	Silver	3/15/11 23:00	EPA 6010B	04/05/11 11:49	8.6	mg/Kg	0.0011	1.68		mbomar
2011031055	C	Ammonia	3/15/11 23:00	EPA 350.1	03/17/11 6:07	15185.2	mg/Kg	3.7	385.8		tourada
2011031055	C	Cyanide, Total	3/15/11 23:00	SM 4500-CN-E	03/29/11 14:08	2.35	mg/Kg	0.39	1.9	M5	aklos
2011031055	C	Mercury	3/15/11 23:00	EPA 7471A	03/29/11 12:55	1.200	mg/Kg	0.0031	0.31		khowell
2011031055	C	Nitrate	3/15/11 23:00	EPA 353.2	03/22/11 4:57	4.30	mg/Kg	0.20	0.50		tourada
2011031055	C	Nitrate/Nitrite	3/15/11 23:00	EPA 353.2	03/21/11 7:01	Trace	mg/Kg	0.6	12.3		tourada
2011031055	C	Nitrite	3/15/11 23:00	SM 4500-NO2	03/17/11 8:13	ND	mg/Kg	1.24	12.35		manderson
2011031055	C	Nitrogen, Total Kjeldahl	3/15/11 23:00	EPA 351.2	04/01/11 12:51	59927.9	mg/Kg	835.9	1714.7	D2	manderson
2011031055	C	Nitrogen, Total	3/15/11 23:00	Calculated	04/04/11 7:32	59932.2	mg/Kg		1714.7		manderson
2011031055	C	Solids, Total	3/15/11 23:00	SM 2540G	03/16/11 12:26	6.48	%		0.005		jvriper

Lab Comments:

Data on this report was last modified on: 4/15/2011 08:59:31

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 20002
Regional Biosolids Management Facility
March 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011031055	D2	Sample required dilution due to high concentration of target analyte.	3/15/11
2011031055	M5	Analyte concentration was determined by the method of standard addition (MSA).	3/15/11

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE AND REGULATORY AFFAIRS OFFICE
CHAIN OF CUSTODY and ANALYSIS REQUEST FORM
Wednesday (Composite)

SUBMITTER: INA ROAD WPCF SUPERINTENDENT (Organization) — LAB ID: 20110310SS

SAMPLER: Vasquez (Print Last Names Only) — FACILITY-LOCATION ID: 20002-0200

SAMPLE DATE: 03/15/11 (MM / DD / YY) — SAMPLE TIME: 0500 - 2300 (24 Hour Clock)

SAMPLE LOCATION: Thickened Sludge to AvraGro Storage

PERMIT TYPE:
- ☐ APP
- ☐ APP Investigations
- ☐ IWC
- ☐ NPDES
- ☐ REUSE
- ☐ USFS
- ■ 503
- ☐ Other-

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

INDICATE ALL ANALYSES REQUIRED

Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY METALS	D	C	INORGANIC CHEMISTRY METALS	D	C	ORGANIC CHEMISTRY PRIORITY POLLUTANTS	D	C	MICROBIOLOGY - WET CHEM	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	☐	☐	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*	☐	☐	Solids, Total	☐	■
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: POURED OFF THE DAILY - SEE OPERATORS C.O.C. LIMS# 20110310I6

24 hour composite ends on the sample date.

Septum blank preparation date:

COMPLIANCE FIELD MEASUREMENTS

- ☐ Chlorine
- ☐ Oxygen (Dis.)
- ☐ Conductivity
- ☐ Temperature
- ☐ pH
- ☐ Other

Sample Receiving Temp.
16°C IR Therm Gun

Number of Sample Containers
4 GOS

Sampled by: for sampler — Received by: — 03-16-11 0855 Date/Time

Relinquished by: — Received by: — Date/Time

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 and Regulatory Affairs Office (CRAO) Laboratory
7101 N. Casa Grande Highway, Tucson, AZ 85743-9577, Phone: (520) 443-6100

Report Date: 6/10/2011 14:41:07
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
April 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: 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 A Esteban

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

06/10/11
Date

Regional Biosolids Management Facility

Thickened Sludge to AvraGro Storage (20002-0200)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011040822	C	Arsenic	4/12/11 23:00	EPA 6010B	04/22/11 11:25	14.0	mg/Kg	0.0125	13.9		mbomar
2011040822	C	Cadmium	4/12/11 23:00	EPA 6010B	04/21/11 13:36	Trace	mg/Kg	0.0005	5.6		mbomar
2011040822	C	Chromium	4/12/11 23:00	EPA 6010B	04/22/11 11:25	32.6	mg/Kg	0.0007	13.9		mbomar
2011040822	C	Copper	4/12/11 23:00	EPA 6010B	04/21/11 11:26	461	mg/Kg	0.0037	13.9		mbomar
2011040822	C	Lead	4/12/11 23:00	EPA 6010B	04/22/11 10:00	21.4	mg/Kg	0.0080	13.9		mbomar
2011040822	C	Molybdenum	4/12/11 23:00	EPA 6010B	04/22/11 10:00	15.3	mg/Kg	0.0026	5.6		mbomar
2011040822	C	Nickel	4/12/11 23:00	EPA 6010B	04/22/11 14:05	16.2	mg/Kg	0.0086	13.9		mbomar
2011040822	C	Selenium	4/12/11 23:00	EPA 6010B	04/21/11 13:36	ND	mg/Kg	0.0122	13.9		mbomar
2011040822	C	Zinc	4/12/11 23:00	EPA 6010B	04/21/11 13:36	1014	mg/Kg	0.0033	13.9		mbomar
2011040822	C	Silver	4/12/11 23:00	EPA 6010B	04/21/11 13:36	Trace	ug/l	0.9	25.0		mbomar
2011040822	C	Ammonia	4/12/11 23:00	EPA 350.1	04/20/11 9:13	13578.3	mg/Kg	2.7	686.8		tourada
2011040822	C	Cyanide, Total	4/12/11 23:00	SM 4500-CN-E	04/18/11 14:14	2.59	mg/Kg	0.34	1.7		aklos
2011040822	C	Mercury	4/12/11 23:00	EPA 7471A	04/17/11 15:52	1.43	mg/Kg	0.0027	0.27		khowell
2011040822	C	Nitrate	4/12/11 23:00	EPA 353.2	04/19/11 9:53	ND	mg/Kg	0.2	0.5		tourada
2011040822	C	Nitrate/Nitrite	4/12/11 23:00	EPA 353.2	04/19/11 7:54	ND	mg/Kg	0.5	11.0		tourada
2011040822	C	Nitrite	4/12/11 23:00	SM 4500-NO2	04/14/11 11:26	Trace	mg/Kg	1.099	10.989		manderson
2011040822	C	Nitrogen, Total Kjeldahl	4/12/11 23:00	EPA 351.2	04/21/11 9:31	65628.8	mg/Kg	637.8	1308.2	D2	manderson
2011040822	C	Nitrogen, Total	4/12/11 23:00	Calculated	04/21/11 13:40	65628.8	mg/Kg		1308.2		manderson
2011040822	C	Solids, Total	4/12/11 23:00	SM 2540G	04/13/11 6:20	7.28	%				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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
April 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011040822	D2	Sample required dilution due to high concentration of target analyte.	4/12/11

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011040822

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 04/12/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 04/12/2011 (MM / DD / YYYY)

SAMPLE END TIME: 2300 (24 Hour Clock)

SAMPLER: Vasquez (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

METALS

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	☐	☐	
Titanium	☐	☐	
Vanadium	☐	☐	
Zinc	☐	☐	
Priority Pollutant Metals *	☐	☐	
TCLP Metals	☐	☐	
503 Metals **	☐	■	
Chromium, Hexavalent	☐	☐	
Chromium, Trivalent	☐	☐	

WET METHODS

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

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

MISCELLANEOUS METHODS

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

Chronic *P. promelas*	☐	☐
Chronic *C. dubia*	☐	☐
Chronic *Selenastrum capricornutum*	☐	☐
Other	☐	☐

PHYSICAL CHEMISTRY

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

	☐	☐
	☐	☐
	☐	☐
	☐	☐

FIELD MEASUREMENTS

☐ 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 - See Operations CoC

LIMS # 2011040783

# of Bottles Delivered: 4 (GS)

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

LABUSE ONLY

Sample Integrity/Preservation:

Temperature:	14	°C
Initials:	GOS	
Non-Preserved	2	#
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?	☐	☒	☐

JV for Alex Vasquez	JV	04-13-11	0824
Relinquished by Sampler:	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)
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 (CRAO) Laboratory
7101 N. Casa Grande Highway, Tucson, AZ 85743-9577, Phone: (520) 443-6100

Report Date: 6/22/2011 08:57:28
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
May 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: 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 A Escobar

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

06/22/11

Date

Regional Biosolids Management Facility

Thickened Sludge to AvraGro Storage (20002-0200)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011050663	C	Arsenic	5/10/11 23:59	EPA 6010B	06/08/11 13:30	Trace	mg/Kg	0.0125	17.1		mbomar
2011050663	C	Cadmium	5/10/11 23:59	EPA 6010B	06/08/11 13:30	Trace	mg/Kg	0.0005	6.84		mbomar
2011050663	C	Chromium	5/10/11 23:59	EPA 6010B	06/08/11 13:30	23.5	mg/Kg	0.0007	17.1		mbomar
2011050663	C	Copper	5/10/11 23:59	EPA 6010B	06/08/11 15:25	481	mg/Kg	0.0037	17.1		mbomar
2011050663	C	Lead	5/10/11 23:59	EPA 6010B	06/08/11 13:30	Trace	mg/Kg	0.0080	17.1		mbomar
2011050663	C	Molybdenum	5/10/11 23:59	EPA 6010B	06/08/11 13:30	12.4	mg/Kg	0.0026	6.84		mbomar
2011050663	C	Nickel	5/10/11 23:59	EPA 6010B	06/08/11 13:30	18.1	mg/Kg	0.0086	17.1		mbomar
2011050663	C	Selenium	5/10/11 23:59	EPA 6010B	06/08/11 17:30	ND	mg/Kg	0.0122	17.1		mbomar
2011050663	C	Zinc	5/10/11 23:59	EPA 6010B	06/08/11 15:25	903	mg/Kg	0.0033	17.1		mbomar
2011050663	C	Silver	5/10/11 23:59	EPA 6010B	06/08/11 15:25	8.1	mg/Kg	0.0011	1.71		mbomar
2011050663	C	Ammonia	5/10/11 23:59	EPA 350.1	05/18/11 7:14	17638.4	mg/Kg	3.3	814.3		tourada
2011050663	C	Cyanide, Total	5/10/11 23:59	SM 4500-CN-E	05/24/11 10:27	ND	mg/Kg	0.41	2.0	M5	aklos
2011050663	C	Mercury	5/10/11 23:59	EPA 7471A	06/03/11 15:47	1.85	mg/Kg	0.0033	0.33	M5	khowell
2011050663	C	Nitrate	5/10/11 23:59	EPA 353.2	05/16/11 10:58	ND	mg/Kg	0.2	0.5		tourada
2011050663	C	Nitrate/Nitrite	5/10/11 23:59	EPA 353.2	05/16/11 8:09	ND	mg/Kg	0.65	13.0		tourada
2011050663	C	Nitrite	5/10/11 23:59	SM 4500-NO2	05/13/11 9:41	Trace	mg/Kg	1.30	13.03		manderson
2011050663	C	Nitrogen, Total Kjeldahl	5/10/11 23:59	EPA 351.2	05/20/11 10:46	72448.4	mg/Kg	1058.6	2171.6		manderson
2011050663	C	Nitrogen, Total	5/10/11 23:59	Calculated	05/20/11 13:18	72448.4	mg/Kg		0.8		manderson
2011050663	C	Solids, Total	5/10/11 23:59	SM 2540G	05/11/11 11:45	6.14	%				jdoranski

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.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
May 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011050663	M5	Analyte concentration was determined by the method of standard addition (MSA).	5/10/11

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011050663

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 05/10/11 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: **Deputy Director-Treatment**

SAMPLE END DATE: 05/10/11 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: W Ceber (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	☐	■
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 2011050624 by GOS. GOS 05-11-11

# of Bottles Delivered: (4) 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 Michael Weber		05-11-11	0944
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:	18	°C
Initials:	GO	
Non-Preserved	2	#
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*

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: 7/25/2011 13:14:04
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
June 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: 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 Rosales

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

07/26/11
Date

7-29-11

Regional Biosolids Management Facility

Thickened Sludge to AvraGro Storage (20002-0200)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011060299	C	Arsenic	6/5/11 23:59	EPA 6010B	06/08/11 13:30	Trace	mg/Kg	0.0125	13.7		mbomar
2011060299	C	Cadmium	6/5/11 23:59	EPA 6010B	06/08/11 13:30	Trace	mg/Kg	0.0005	5.48		mbomar
2011060299	C	Chromium	6/5/11 23:59	EPA 6010B	06/08/11 13:30	26.9	mg/Kg	0.0007	13.7		mbomar
2011060299	C	Copper	6/5/11 23:59	EPA 6010B	06/08/11 15:25	474	mg/Kg	0.0037	13.7		mbomar
2011060299	C	Lead	6/5/11 23:59	EPA 6010B	06/08/11 13:30	18.6	mg/Kg	0.0080	13.7		mbomar
2011060299	C	Molybdenum	6/5/11 23:59	EPA 6010B	06/08/11 13:30	13.6	mg/Kg	0.0026	5.48		mbomar
2011060299	C	Nickel	6/5/11 23:59	EPA 6010B	06/08/11 13:30	19.6	mg/Kg	0.0086	13.7		mbomar
2011060299	C	Selenium	6/5/11 23:59	EPA 6010B	06/08/11 17:30	Trace	mg/Kg	0.0122	13.7	M5	mbomar
2011060299	C	Zinc	6/5/11 23:59	EPA 6010B	06/08/11 15:25	1022	mg/Kg	0.0033	13.7		mbomar
2011060299	C	Silver	6/5/11 23:59	EPA 6010B	06/08/11 15:25	8.6	mg/Kg	0.0011	1.37		mbomar
2011060299	C	Ammonia	6/5/11 23:59	EPA 350.1	06/13/11 10:56	13088.1	mg/Kg	309.1	772.8		aklos
2011060299	C	Cyanide, Total	6/5/11 23:59	SM 4500-CN-E	06/17/11 10:02	Trace	mg/Kg	0.35	1.8	M5	manderson
2011060299	C	Mercury	6/5/11 23:59	EPA 7471A	06/23/11 10:26	1.47	mg/Kg	0.004	0.31		tourada
2011060299	C	Nitrate	6/5/11 23:59	EPA 353.2	06/07/11 15:40	ND	mg/Kg	0.2	0.5		aklos
2011060299	C	Nitrate/Nitrite	6/5/11 23:59	EPA 353.2	06/07/11 9:00	ND	mg/Kg	0.04	0.2		manderson
2011060299	C	Nitrite	6/5/11 23:59	SM 4500-NO2	06/06/11 14:36	Trace	mg/Kg	1.2	12.4		aklos
2011060299	C	Nitrogen, Total Kjeldahl	6/5/11 23:59	EPA 351.2	06/10/11 10:21	59479.6	mg/Kg	1000	2100		aklos
2011060299	C	Nitrogen, Total	6/5/11 23:59	Calculated	06/10/11 12:26	59479.6	mg/Kg		0.8		aklos
2011060299	C	Solids, Total	6/5/11 23:59	SM 2540G	06/06/11 12:07	6.47	%		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.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
June 2011

Data Qualifier(s):	Definition:
M5	Analyte concentration was determined by the method of standard addition (MSA).

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 20110602 99

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 06/05/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 06/05/2011 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Weber and Vasquez (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	☐	■
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	☐	■
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
20110602 60 by GOS, GOS 06-06-11

# of Bottles Delivered: 4 GOS

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

If for Michael Weber	If	06-06-11	0852
Relinquished by Sampler:	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)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	18	°C
Initials:	GOS	
Non-Preserved	2	#
HNO_3	1	#
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*

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: 8/18/2011 07:49:57
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
July 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: 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 A Escobar

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

08/19/11

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)											
2011071106	C	Arsenic	7/19/11 23:59	EPA 6010B	07/26/11 14:20	ND	mg/Kg	0.0125	16.5		mbomar
2011071106	C	Cadmium	7/19/11 23:59	EPA 6010B	07/26/11 14:20	Trace	mg/Kg	0.0005	6.6		mbomar
2011071106	C	Chromium	7/19/11 23:59	EPA 6010B	07/26/11 14:20	29.6	mg/Kg	0.0007	16.5		mbomar
2011071106	C	Copper	7/19/11 23:59	EPA 6010B	07/26/11 14:20	529	mg/Kg	0.0037	16.5		mbomar
2011071106	C	Lead	7/19/11 23:59	EPA 6010B	07/26/11 17:33	27.5	mg/Kg	0.0080	16.5		mbomar
2011071106	C	Molybdenum	7/19/11 23:59	EPA 6010B	07/26/11 15:58	15.5	mg/Kg	0.0026	6.6		mbomar
2011071106	C	Nickel	7/19/11 23:59	EPA 6010B	07/26/11 15:58	24.4	mg/Kg	0.0086	16.5		mbomar
2011071106	C	Selenium	7/19/11 23:59	EPA 6010B	07/26/11 14:20	Trace	mg/Kg	0.0122	16.5		mbomar
2011071106	C	Zinc	7/19/11 23:59	EPA 6010B	07/26/11 14:20	1091	mg/Kg	0.0033	16.5		mbomar
2011071106	C	Silver	7/19/11 23:59	EPA 6010B	07/26/11 14:20	9.4	mg/Kg	0.0011	1.7		mbomar
2011071106	C	Ammonia	7/19/11 23:59	EPA 350.1	07/25/11 12:31	10707.4	mg/Kg	284.1	710.2		aklos
2011071106	C	Cyanide, Total	7/19/11 23:59	SM 4500-CN-E	07/27/11 13:45	1.62	mg/Kg	0.24	1.2	M5	manderson
2011071106	C	Mercury	7/19/11 23:59	EPA 7471A	07/28/11 11:44	4.390	mg/Kg	0.003	0.28		tourada
2011071106	C	Nitrate	7/19/11 23:59	EPA 353.2	07/28/11 12:48	0.83	mg/Kg	0.2	0.5		khowell
2011071106	C	Nitrate/Nitrite	7/19/11 23:59	EPA 353.2	07/28/11 12:48	Trace	mg/Kg	0.57	11.4		khowell
2011071106	C	Nitrite	7/19/11 23:59	SM 4500-NO2	07/20/11 11:28	Trace	mg/Kg	1.1	11.4		aklos
2011071106	C	Nitrogen, Total Kjeldahl	7/19/11 23:59	EPA 351.2	07/22/11 14:31	52334.9	mg/Kg	865.6	1775.6		aklos
2011071106	C	Nitrogen, Total	7/19/11 23:59	Calculated	07/28/11 12:48	52338.6	mg/Kg		0.8		khowell
2011071106	C	Solids, Total	7/19/11 23:59	SM 2540G	07/20/11 12:06	7.04	%		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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
July 2011

Data Qualifier(s):	Definition:
M5	Analyte concentration was determined by the method of standard addition (MSA).

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 20110711O6

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 07-19-11 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: **Deputy Director-Treatment**

SAMPLE END DATE: 07-19-11 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Uralowich (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	☐	■
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	☐	■
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 20110711Z9. GOS 07-20-11

# of Bottles Delivered: 4 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 Michael Uralowich		07-20-11	0820
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:	20	°C
Initials:	GOS	
Non-Preserved	2	#
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*

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: 9/29/2011 11:20:54
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
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: 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 Lawhon

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

10/03/11

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)											
2011080996	C	Arsenic	8/16/11 23:59	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0125	18.32		mbomar
2011080996	C	Cadmium	8/16/11 23:59	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0005	7.33		mbomar
2011080996	C	Chromium	8/16/11 23:59	EPA 6010B	08/24/11 17:30	31.5	mg/Kg	0.0007	18.32		mbomar
2011080996	C	Copper	8/16/11 23:59	EPA 6010B	08/24/11 17:30	570	mg/Kg	0.0037	18.32		mbomar
2011080996	C	Lead	8/16/11 23:59	EPA 6010B	08/23/11 18:00	23.5	mg/Kg	0.0080	18.32		mbomar
2011080996	C	Molybdenum	8/16/11 23:59	EPA 6010B	08/23/11 18:00	15.6	mg/Kg	0.0026	7.33		mbomar
2011080996	C	Nickel	8/16/11 23:59	EPA 6010B	08/24/11 17:30	28.5	mg/Kg	0.0086	18.32		mbomar
2011080996	C	Selenium	8/16/11 23:59	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0122	18.32		mbomar
2011080996	C	Zinc	8/16/11 23:59	EPA 6010B	08/23/11 18:00	1210	mg/Kg	0.0033	18.32		mbomar
2011080996	C	Silver	8/16/11 23:59	EPA 6010B	08/23/11 18:00	9.0	mg/Kg	0.0011	1.83		mbomar
2011080996	C	Ammonia	8/16/11 23:59	EPA 350.1	08/18/11 11:20	11978.7	mg/Kg	305.0	762.2		manderson
2011080996	C	Cyanide, Total	8/16/11 23:59	SM 4500-CN-E	08/29/11 13:35	ND	mg/Kg	0.38	6.56	N1, M5	manderson
2011080996	C	Mercury	8/16/11 23:59	EPA 7471A	08/18/11 15:58	1.80	mg/Kg	0.003	0.3		khowell
2011080996	C	Nitrate	8/16/11 23:59	EPA 353.2	08/24/11 13:58	ND	mg/Kg	1.22	12.20		tourada
2011080996	C	Nitrate/Nitrite	8/16/11 23:59	EPA 353.2	08/24/11 11:16	Trace	mg/Kg	0.6	12.2		tourada
2011080996	C	Nitrite	8/16/11 23:59	SM 4500-NO2	08/17/11 14:20	Trace	mg/Kg	1.22	12.20	M5	manderson
2011080996	C	Nitrogen, Total Kjeldahl	8/16/11 23:59	EPA 351.2	09/01/11 9:33	55653.1	mg/Kg	972.0	1993.8	N1	aklos
2011080996	C	Nitrogen, Total	8/16/11 23:59	Calculated	09/01/11 12:23	55656.1	mg/Kg		0.8	N1	aklos
2011080996	C	Solids, Total	8/16/11 23:59	SM 2540G	08/17/11 12:20	6.56	%		0.01		jdoranski

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.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
August 2011

Data Qualifier(s):	Definition:
M5	Analyte concentration was determined by the method of standard addition (MSA).
N1	See case narrative.

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

Case Narrative

Sample ID: 2011080996
Permit Name: Regional Biosolids Management Facility
Location Name: Thickened Sludge to AvraGro Storage

Sample was kept above recommended temperature for a period of eight or more hours due to equipment failure. The affected analyses include cyanide, TKN, and total nitrogen. RA

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011080996

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 08-16-11 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 08-16-11 (MM / DD / YYYY)

SAMPLE END TIME: 2359 (24 Hour Clock)

SAMPLER: Weber (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	☐	■
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	☐	■
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 2011081019. GDS 08-17-11

# of Bottles Delivered: (4) GDS

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler: for Michael Weber / Buddy Otero on 08-17-11	Received by:	Date: 08-17-11	Time: (24 Hour Clock) 0845
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)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	15	°C
Initials:	GDS	
Non-Preserved	2	#
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*

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: 10/19/2011 15:11:41
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
September 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: 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 Adolphson

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

10/24/11

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)											
2011090706	C	Arsenic	9/13/11 23:59	EPA 6010B	09/14/11 17:40	16.0	mg/Kg	0.0125	14.0617		mbomar
2011090706	C	Cadmium	9/13/11 23:59	EPA 6010B	09/14/11 17:40	Trace	mg/Kg	0.0005	5.6247		mbomar
2011090706	C	Chromium	9/13/11 23:59	EPA 6010B	09/14/11 18:30	29.4	mg/Kg	0.0007	14.0617		mbomar
2011090706	C	Copper	9/13/11 23:59	EPA 6010B	09/14/11 17:40	565	mg/Kg	0.0037	14.0617		mbomar
2011090706	C	Lead	9/13/11 23:59	EPA 6010B	09/14/11 17:40	21.5	mg/Kg	0.0080	14.0617		mbomar
2011090706	C	Molybdenum	9/13/11 23:59	EPA 6010B	09/14/11 17:40	15.1	mg/Kg	0.0026	5.6247		mbomar
2011090706	C	Nickel	9/13/11 23:59	EPA 6010B	09/14/11 17:40	19.5	mg/Kg	0.0086	14.0617		mbomar
2011090706	C	Selenium	9/13/11 23:59	EPA 6010B	09/21/11 14:53	21.1	mg/Kg	0.0122	14.0617	M5	mbomar
2011090706	C	Zinc	9/13/11 23:59	EPA 6010B	09/14/11 17:40	1146	mg/Kg	0.0033	14.0617		mbomar
2011090706	C	Silver	9/13/11 23:59	EPA 6010B	09/14/11 18:30	8.3	mg/Kg	0.0011	1.4062		mbomar
2011090706	C	Ammonia	9/13/11 23:59	EPA 350.1	09/22/11 12:13	10713.0	mg/Kg	295.9	739.6		aklos
2011090706	C	Cyanide, Total	9/13/11 23:59	SM 4500-CN-E	09/26/11 14:25	1.58	mg/Kg	0.25	1.2	M5, B4	manderson
2011090706	C	Mercury	9/13/11 23:59	EPA 7471A	10/06/11 10:39	1.320	mg/Kg	.003	.3		khowell
2011090706	C	Nitrate	9/13/11 23:59	EPA 353.2	09/27/11 15:14	1.77	mg/Kg	0.2	0.5		aklos
2011090706	C	Nitrate/Nitrite	9/13/11 23:59	EPA 353.2	09/27/11 13:13	Trace	mg/Kg	2.96	11.83		aklos
2011090706	C	Nitrite	9/13/11 23:59	SM 4500-NO2	09/14/11 13:45	Trace	mg/Kg	1.183	11.834		aklos
2011090706	C	Nitrogen, Total Kjeldahl	9/13/11 23:59	EPA 351.2	09/16/11 14:55	68375.1	mg/Kg	608.6	1248.3		aklos
2011090706	C	Nitrogen, Total	9/13/11 23:59	Calculated	09/27/11 15:16	68378.5	mg/Kg		0.8		aklos
2011090706	C	Solids, Total	9/13/11 23:59	SM 2540G	09/14/11 12:10	6.76	%		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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20002
Regional Biosolids Management Facility
September 2011

Data Qualifier(s):	Definition:
B4	Target analyte detected in blank at or above method acceptance criteria.
M5	Analyte concentration was determined by the method of standard addition (MSA).

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011090706

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 09/13/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: ~~09/0~~ 09/13/2011 (MM / DD / YYYY) COS 09-14-11

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	☐	■
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	☐	■
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: See 2011090730 for daily sample. COS 09-14-11

# of Bottles Delivered: ④ COS

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		09-14-11	0829
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:	14	°C
Initials:	COS	
Non-Preserved	2	#
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*

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: 11/16/2011 14:40:03
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
October 2011

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: 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 A. Escobar

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

11/17/11
Date

BAE
11/17/11

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)											
2011100259	C	Arsenic	10/4/11 23:59	EPA 6010B	10/21/11 14:46	16.2	mg/Kg	0.0125	14.6755		mbomar
2011100259	C	Cadmium	10/4/11 23:59	EPA 6010B	10/21/11 14:46	Trace	mg/Kg	0.0005	5.8702		mbomar
2011100259	C	Chromium	10/4/11 23:59	EPA 6010B	10/21/11 14:46	26.3	mg/Kg	0.0007	14.6755		mbomar
2011100259	C	Copper	10/4/11 23:59	EPA 6010B	10/21/11 14:46	531	mg/Kg	0.0037	14.6755		mbomar
2011100259	C	Lead	10/4/11 23:59	EPA 6010B	10/21/11 14:46	20.6	mg/Kg	0.0080	14.6755		mbomar
2011100259	C	Molybdenum	10/4/11 23:59	EPA 6010B	10/21/11 14:46	12.2	mg/Kg	0.0026	5.8702		mbomar
2011100259	C	Nickel	10/4/11 23:59	EPA 6010B	10/21/11 16:20	Trace	mg/Kg	0.0086	14.6755		mbomar
2011100259	C	Selenium	10/4/11 23:59	EPA 6010B	10/21/11 16:20	ND	mg/Kg	0.0122	14.6755		mbomar
2011100259	C	Zinc	10/4/11 23:59	EPA 6010B	10/21/11 14:46	1002	mg/Kg	0.0033	14.6755		mbomar
2011100259	C	Silver	10/4/11 23:59	EPA 6010B	10/21/11 14:46	6.4	mg/Kg	0.0011	1.4675		mbomar
2011100259	C	Ammonia	10/4/11 23:59	EPA 350.1	10/11/11 12:03	14541.4	mg/Kg	295.9	739.6		aklos
2011100259	C	Mercury	10/4/11 23:59	EPA 7471A	10/06/11 10:39	1.63	mg/Kg	0.003	0.3		khowell
2011100259	C	Nitrate	10/4/11 23:59	EPA 353.2	10/24/11 13:23	ND	mg/Kg	2.960	11.834		manderson
2011100259	C	Nitrate/Nitrite	10/4/11 23:59	EPA 353.2	10/21/11 13:23	ND	mg/Kg	2.960	11.834		manderson
2011100259	C	Nitrite	10/4/11 23:59	SM 4500-NO2	10/05/11 11:58	Trace	mg/Kg	1.18	11.83		aklos
2011100259	C	Nitrogen, Total Kjeldahl	10/4/11 23:59	EPA 351.2	10/14/11 9:55	58728.1	mg/Kg	844.5	1732.4		aklos
2011100259	C	Nitrogen, Total	10/4/11 23:59	Calculated	10/27/11 11:25	58728.1	mg/Kg		0.8		aklos
2011100259	C	Solids, Total	10/4/11 23:59	SM 2540G	10/05/11 10:50	6.76	%		0.01		edoyle

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.

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

GCS 10-05-11

LAB ID: 259
2011100221

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 10/04/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 10/04/2011 (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
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	☐	☐
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 2011100221.
GCS 10-05-11

# of Bottles Delivered 1 Bucket 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	10/4/11	2359
Refrig. #23	[signature]	10/5/11	0500
[signature]	[signature]	10/5/11	0616

LAB USE ONLY

Sample Integrity/Preservation:

Temperature: 14.1 °C

Initials: SD

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

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: 12/27/2011 08:10:13
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
November 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: 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 A Eswaran

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

12/27/11

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)											
2011110892	C	Arsenic	11/15/11 23:59	EPA 6010B	11/17/11 14:00	Trace	mg/Kg	0.0125	15.1233		mbomar
2011110892	C	Cadmium	11/15/11 23:59	EPA 6010B	11/17/11 14:00	Trace	mg/Kg	0.0005	6.0493		mbomar
2011110892	C	Chromium	11/15/11 23:59	EPA 6010B	11/17/11 14:00	26.8	mg/Kg	0.0007	15.1233		mbomar
2011110892	C	Copper	11/15/11 23:59	EPA 6010B	11/17/11 14:00	493	mg/Kg	0.0037	15.1233	M5	mbomar
2011110892	C	Lead	11/15/11 23:59	EPA 6010B	11/17/11 14:00	18.8	mg/Kg	0.0080	15.1233		mbomar
2011110892	C	Molybdenum	11/15/11 23:59	EPA 6010B	11/17/11 14:00	14.7	mg/Kg	0.0026	6.0493		mbomar
2011110892	C	Nickel	11/15/11 23:59	EPA 6010B	11/17/11 14:00	16.4	mg/Kg	0.0086	15.1233		mbomar
2011110892	C	Selenium	11/15/11 23:59	EPA 6010B	11/17/11 14:00	ND	mg/Kg	0.0122	15.1233		mbomar
2011110892	C	Zinc	11/15/11 23:59	EPA 6010B	11/17/11 14:00	1109	mg/Kg	0.0033	15.1233	M5	mbomar
2011110892	C	Silver	11/15/11 23:59	EPA 6010B	11/17/11 14:00	7.6	mg/Kg	0.0011	1.5123		mbomar
2011110892	C	Ammonia	11/15/11 23:59	EPA 350.1	11/21/11 12:57	11564.2	mg/Kg	267.4	668.4		aklos
2011110892	C	Mercury	11/15/11 23:59	EPA 7471A	11/17/11 10:26	2.048	mg/Kg	0.0027	0.27		khowell
2011110892	C	Nitrate	11/15/11 23:59	EPA 353.2	11/18/11 16:29	ND	mg/Kg	0.2	0.5		aklos
2011110892	C	Nitrate/Nitrite	11/15/11 23:59	EPA 353.2	11/17/11 11:44	ND	mg/Kg	2.674	10.695		aklos
2011110892	C	Nitrite	11/15/11 23:59	SM 4500-NO2	11/16/11 13:54	Trace	mg/Kg	1.070	10.695		aklos
2011110892	C	Nitrogen, Total Kjeldahl	11/15/11 23:59	EPA 351.2	11/18/11 14:32	49173.7	mg/Kg	693.3	1422.2		aklos
2011110892	C	Nitrogen, Total	11/15/11 23:59	Calculated	11/18/11 16:26	49175.1	mg/Kg		0.8		aklos
2011110892	C	Solids, Total	11/15/11 23:59	SM 2540G	11/16/11 12:10	7.48	%		0.01		jdoranski

Lab Comments:

Data on this report was last modified on: 12/14/2011 08:44:52

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 20002
Regional Biosolids Management Facility
November 2011

Data Qualifier(s):	Definition:
M5	Analyte concentration was determined by the method of standard addition (MSA).

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011110892

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 11/15/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 11/15/2011 (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	☐	■
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	☐	☐
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 2011110913 GOS 11-16-11

# 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] Refrigerator @ #23		11/15/11	2359
Refrigerator @ #23	[signature]	11/16/11	0500
[signature]	Joseph Dominski	11/16/11	0609
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:	8.4	°C
Initials:	JLO	
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 (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 2/7/2012 14:30:38
Laboratory License #AZ0159

Sample Analysis Report
Regional Biosolids Management Facility - Permit Number 20002
December 2011

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:

2011120724 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 Rincker

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

02/08/12

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)											
2011120724	C	Miscellaneous Note	12/13/11 23:59	None		Subcontracted					Other
2011120724	C	Solids, Total	12/13/11 23:59	SM 2540G	12/14/11 12:00	7.04	%		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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Contract Lab Report

UNOFFICIAL

Disclaimer:

This report was generated for informational purposes only. All results on this report (including any attached worksheets) intended for compliance submission must have all associated chains of custody attached to the results as required by ADHS Laboratory Licensure Rules. If you have received this report for compliance purposes and it is not complete, contact the Compliance and Regulatory Affairs Office for a complete copy.

Regional Biosolids Management Facility

For Sampling Period: 12/01/2011 - 12/31/2011

Sample Number	Parameter	Sample Date	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
Thickened Sludge to AvraGro Storage (20002-0200)								
2011120724	Ammonia	12/13/11	12/21/11	17000.0	mg/Kg			
2011120724	Mercury	12/13/11	12/27/11	<1.4	mg/Kg			
2011120724	Nitrate	12/13/11	12/20/11	<29.00	mg/Kg			
2011120724	Nitrite	12/13/11	12/20/11	<29.00	mg/Kg			
2011120724	Nitrogen, Total	12/13/11	12/22/11	92000.00	mg/Kg			
2011120724	Antimony	12/13/11	01/16/12	<72.00	mg/Kg			
2011120724	Arsenic	12/13/11	01/16/12	<72.00	mg/Kg			
2011120724	Beryllium	12/13/11	01/16/12	<7.20	mg/Kg			
2011120724	Cadmium	12/13/11	01/16/12	<7.20	mg/Kg			
2011120724	Chromium	12/13/11	01/16/12	<29.00	mg/Kg			
2011120724	Copper	12/13/11	01/16/12	510.0	mg/Kg			
2011120724	Lead	12/13/11	01/16/12	<72.00	mg/Kg			
2011120724	Molybdenum	12/13/11	01/16/12	<29.00	mg/Kg			
2011120724	Nickel	12/13/11	01/16/12	<29.00	mg/Kg			
2011120724	Selenium	12/13/11	01/16/12	<72.00	mg/Kg			
2011120724	Silver	12/13/11	01/16/12	<36.00	mg/Kg			
2011120724	Thallium	12/13/11	01/16/12	<72.00	mg/Kg			
2011120724	Zinc	12/13/11	01/16/12	1100.00	mg/Kg			
2011120724	Nitrogen, Total Kjeldahl	12/13/11	12/22/11	92000.0	mg/Kg			

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011120724

SITE & LOCATION: Thickened sludge to AvraGro

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

SAMPLE START DATE: 12/13/2011 (MM / DD / YYYY)

SAMPLE START TIME: 0500 (24 Hour Clock)

SUBMITTER: Deputy Director-Treatment

SAMPLE END DATE: 12/13/2011 (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 (contract lab)	☐	☐
503 Metals ** (contract lab)	☐	■
Chromium, Hexavalent	☐	☐
Chromium, Trivalent	☐	☐

WET METHODS	D	C
Ammonia as N	☐	■
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 (contract lab)	☐	☐
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 (in house)	☐	☐
Solids, Total (and 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: Poured off the daily sample 2011120682 by J and JS. COS 12-14-11 IDEX 12-21895 Sample sat to Test America. COS 12-14-11

# of Bottles Delivered: 1 & 12/13/11 BL

Transported on Ice: ☐ YES ☒ NO

Septum Blank Prep Date & Initials:

Metals sample type added to contract lab Test America. COS 01-12-12

Chain of Custody Record (Signatures Only)

Relinquished by	Received by	Date	Time (24 Hour Clock)
Sampler: Refrig #23	Refrig #23	12/13/11	2359
Refrig #13		12/14/11	0500
		12/14/11	0655
		12/15/11	0715

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	6.4	°C
Initials:	EO	
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

Poured off. COS 12-14-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

COPY

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 Cevro
Tucson AZ 85745

Project / PO Number:
Sample group #7
DO# 12-21895

Project Manager:
Nancy Powell

Phone Number:
520-724-6183

Sampler:
various

Fax Number:
520-724-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Total nitrogen	Ammonia SM4500-NH3-D	Nitrite EPA 9056	Nitrate EPA 9056	Mercury 7471A	Total solid % for mg/kg calc				Special Instructions
							Analysis Required									BS= biosolids
Marana UV Final Effluent	WW	glass	1	12-13-11	0640	H_2SO_4	X									discrete
25001-1970 201112065 9																
Thickened sludge to Avra Cre	BS	glass	4	12-13-11	2359	H_2SO_4	X	X	X	X	X	X				composite
20002-0200 201112072 4						and none										

Relinquished By: for samplers — Date / Time: 12-15-11 0915
Received By: — Date / Time: 12/15/11 9:15

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 SERVICES
7101 N. Casa Grande Hwy, Tucson, AZ 85743
Telephone: (520) 443-6100, Fax: (520) 443-6071

COPY

Subcontract Lab Data Checklist

LIMS # 2011120659, 2011120724, 2011120715, 2011120717, 2011120719, 2011120722, 2011120716, 2011120718, 2011120721, 2011120723 **DO: 12-21895** **Sample Group #7**

Contract Lab: Test America

Parameters: Nutrients, Mercury, Total Solids

TB 2-7-12

Preliminary Review

Lab Report signed and dated. ~~Draft~~	✓
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.	✓
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~~ ~~T-B~~ 1-30-12 Final Report 2-3-12 CBH
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.	✓
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: CBH 1-20-12

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: TB 2-7-12 **Final Review date and initials:** BAG 2/16/12

Corrective Action Report
Subcontract Lab Data

Preliminary Review: CH	Date: 1-30-12
QA/QC Review: CH	Date: 1-20-12
Data Entry: CH	Date: 2-3-12
Peer Review: ~~CH~~ TB 2-6-12	Date: ~~1-18-12~~ 2-6-12
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

20111207 24 - 2 TN results - asked for a corrected report TB 2-6-12 Rec 4-6-12 TB

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:

Fixed AnDate 20111207 16 T Phos.
Removed CL PPM & added CL 503 Metals
2-3-12 Removed CL 503 Metals, Added CL PPM

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 #7

Sampled: 12/13/11-12/14/11
Received: 12/16/11
Revised: 02/06/12 09:22

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
PUL1142-01	2011120659	Water
PUL1142-02	2011120724	Soil
PUL1142-03	2011120715	Water
PUL1142-04	2011120717	Water
PUL1142-05	2011120719	Water
PUL1142-06	2011120722	Water
PUL1142-07	2011120716	Water
PUL1142-08	2011120718	Water
PUL1142-09	2011120721	Water
PUL1142-10	2011120723	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

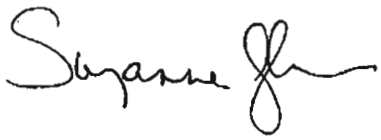
Project ID: Sample Group #7

Report Number: PUL1142

Sampled: 12/13/11-12/14/11
Received: 12/16/11

SAMPLE RECEIPT:	Samples were received intact, at 4°C, on ice and with chain of custody documentation. Samples for the analysis of nitrate, nitrite, and orthophosphate were received past hold and analysis for these analytes was cancelled per the client.
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 = 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). N1a = 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 revised to add the 13 metals by EPA Method 6010B for sample PUL1142-02 at the client's request. 2/6/2012: Report revised to remove uncorrected total nitrogen result for sample PUL142-02 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: Sample Group #7

Report Number: PUL1142

Sampled: 12/13/11-12/14/11
Received: 12/16/11

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1142-02 (2011120724 - Soil)				**Sampled: 12/13/11**				
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	72	ND	0.996	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	72	ND	0.996	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	7.2	ND	0.996	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	7.2	ND	0.996	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	29	ND	0.996	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	72	**510**	0.996	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	72	ND	0.996	1/13/2012	1/16/2012	
Mercury	EPA 7471A	11L1013	1.4	ND	0.946	12/26/2011	12/27/2011	
Molybdenum	EPA 6010B	12A0443	29	ND	0.996	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	29	ND	0.996	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	72	ND	0.996	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	36	ND	0.996	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	72	ND	0.996	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	140	**1100**	0.996	1/13/2012	1/16/2012	

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 #7

Report Number: PUL1142

Sampled: 12/13/11-12/14/11
Received: 12/16/11

DATA QUALIFIERS AND DEFINITIONS

D1	Sample required dilution due to matrix.
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

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Report Number: PUL1142

Sampled: 12/13/11-12/14/11
Received: 12/16/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
[CALC]	Soil		
Calculation	Water		N/A
EPA 300.0	Water		X
EPA 6010B	Soil	N/A	X
EPA 7471A	Soil		X
EPA 9056	Soil		X
SM 2540G	Soil		X
SM 4500-NH3 D (mod)	Soil		
SM 4500NH3-D MOD	Soil		
SM 4500-P B, E	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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM PUL1142

[ ] 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 #7
DO# 12-21895

Project Manager:
Nancy Powell

Phone Number:
520-724-6183

Sampler:
various

Fax Number:
520-724-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total nitrogen	Ammonia SM4500-NH3-D	Nitrite EPA 9056	Nitrate EPA 9056	Mercury 7471A	Total solid % for mg/kg calc				Special Instructions
Marana UV Final Effluent	WW	glass	1	12-13-11	0640	H_2SO_4	X									discrete
25001-1970 2011120659																-01
Thickened sludge to Avra Goo	BS	glass	4	12-13-11	2359	H_2SO_4	X	X	X	X	X	X				composite -02
20002-0200 2011120724						and none										

BS = biosolids

Relinquished By:	Date/Time:	Received By:	Date/Time:
for samplers	12-15-11 0915		12/15/11 9:15
	12/15/11 15:00		
		Received in Lab By:	12/16/11 1030

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

Sample Integrity: (Check)
intact ✓ on ice ✓ 3.9°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.

SECTION 3

INA ROAD WRF
AZPDES NO. AZ0020001

SAMPLING AND ANALYSIS

PRIORITY POLLUTANTS

TCLP

HAZARDOUSNESS

ANNUAL BIOSOLIDS REPORT 2011

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)											
2011010413	C	Pentachlorophenol	1/7/11 6:00	EPA 625	02/02/11 16:52	ND	mg/Kg	0.00076	14.22	D1, D4	smitchell
2011010413	C	Phenanthrene	1/7/11 6:00	EPA 625	02/02/11 16:52	ND	mg/Kg	0.00097	4.74	D1, D4	smitchell
2011010413	C	Phenol	1/7/11 6:00	EPA 625	02/02/11 16:52	ND	mg/Kg	0.00055	4.74	D1, D4	smitchell
2011010413	C	Pyrene	1/7/11 6:00	EPA 625	02/02/11 16:52	ND	mg/Kg	0.00119	4.74	D1, D4	smitchell
See Attached -Semi-Quantitation Sheet for EPA 625											
Thick. to AvraGro (20001-5701)											
2011010409	C	Miscellaneous Note	1/7/11 6:00	None	Subcontracted						Other
2011010422	C	Cyanide, Total	1/7/11 6:00	SM 4500-CN-E	01/10/11 13:58	2.38	mg/Kg	0.43	2.1		aklos
2011010422	C	Mercury	1/7/11 6:00	EPA 7471A	01/20/11 10:37	1.30	mg/Kg	0.0034	0.34		khowell
2011010422	C	Antimony	1/7/11 6:00	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0136	18.9		mbomar
2011010422	C	Arsenic	1/7/11 6:00	EPA 6010B	01/25/11 16:30	ND	mg/Kg	0.0125	18.9		mbomar
2011010422	C	Beryllium	1/7/11 6:00	EPA 6010B	02/01/11 16:30	Trace	mg/Kg	0.00003	3.8		mbomar
2011010422	C	Cadmium	1/7/11 6:00	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0005	7.6		mbomar
2011010422	C	Chromium	1/7/11 6:00	EPA 6010B	02/01/11 16:30	23.3	mg/Kg	0.0007	18.9		mbomar
2011010422	C	Copper	1/7/11 6:00	EPA 6010B	02/01/11 16:30	432	mg/Kg	0.0037	18.9		mbomar
2011010422	C	Lead	1/7/11 6:00	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0080	18.9		mbomar
2011010422	C	Molybdenum	1/7/11 6:00	EPA 6010B	01/25/11 16:30	19.4	mg/Kg	0.0026	7.6	M5	mbomar
2011010422	C	Nickel	1/7/11 6:00	EPA 6010B	02/01/11 16:30	Trace	mg/Kg	0.0086	18.9		mbomar
2011010422	C	Selenium	1/7/11 6:00	EPA 6010B	01/25/11 16:30	27.5	mg/Kg	0.0122	18.9		mbomar
2011010422	C	Silver	1/7/11 6:00	EPA 6010B	02/01/11 16:30	5.4	mg/Kg	0.0011	1.9	M5	mbomar
2011010422	C	Thallium	1/7/11 6:00	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0139	18.9		mbomar
2011010422	C	Zinc	1/7/11 6:00	EPA 6010B	01/25/11 16:30	892	mg/Kg	0.0033	18.9		mbomar
2011010422	C	Mercury	1/7/11 6:00	EPA 7470A-TCLP	01/31/11 12:10	ND	mg/l	0.00005	0.0002		khowell
2011010422	C	Arsenic	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0050	0.025		mbomar
2011010422	C	Barium	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	0.10	mg/l	0.0013	0.025		mbomar
2011010422	C	Cadmium	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	ND	mg/l	0.0007	0.01		mbomar
2011010422	C	Chromium	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0016	0.025		mbomar
2011010422	C	Lead	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	ND	mg/l	0.0079	0.025		mbomar
2011010422	C	Selenium	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	ND	mg/l	0.0114	0.0250		mbomar
2011010422	C	Silver	1/7/11 6:00	EPA 6010B-TCLP	02/04/11 16:30	ND	mg/l	0.00056	0.0025		mbomar
2011010422	C	Solids, Total	1/7/11 6:00	SM 2540G	01/08/11 6:10	5.83	%		0.005		edoyle
2011010422	C	Acrolein	1/7/11 6:00	EPA 603	01/16/11 18:13	ND	mg/Kg	0.00111	3.43	D1, D4, Q5, L4	dcorbett
2011010422	C	Acrylonitrile	1/7/11 6:00	EPA 603	01/16/11 18:13	ND	mg/Kg	0.00116	3.43	D1, D4, Q5	dcorbett
2011010422	C	1,2-Dibromo-3-chloropropane	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00052	1.7	D1, D4	dcorbett
2011010422	C	1,2-Dibromoethane	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00005	0.17	D1, D4	dcorbett
2011010422	C	1,2,4-Trichlorobenzene	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00011	0.17	D1, D4	dcorbett
2011010422	C	cis-1,2-Dichloroethene	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00002	0.17	D1, D4	dcorbett
2011010422	C	Styrene	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00006	0.17	D1, D4	dcorbett
2011010422	C	Xylene, m- + p-	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00015	0.17	D1, D4	dcorbett
2011010422	C	Xylene, o-	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg	0.00006	0.17	D1, D4, N1	dcorbett
2011010422	C	Xylene, Total	1/7/11 6:00	EPA 8260B	01/07/11 22:25	ND	mg/Kg		0.17	D1, D4	dcorbett
2011010422	C	1,1,1-Trichloroethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00007	0.17	D1, D4	dcorbett
2011010422	C	1,1,2-Trichloroethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.0001	0.17	D1, D4	dcorbett
2011010422	C	1,1-Dichloroethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00005	0.17	D1, D4	dcorbett
2011010422	C	1,1-Dichloroethene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4	dcorbett
2011010422	C	1,2-Dichlorobenzene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00014	0.17	D1, D4, N1	dcorbett
2011010422	C	1,2-Dichloroethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00005	0.17	D1, D4	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 Lab Supervisor.

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
Thick. to AvraGro (20001-5701)											
2011010422	C	1,2-Dichloropropane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00007	0.17	D1, D4	dcorbett
2011010422	C	1,3-Dichlorobenzene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4, N1	dcorbett
2011010422	C	1,4-Dichlorobenzene	1/7/11 6:00	EPA 624	01/07/11 22:25	0.19	mg/Kg	0.00011	0.17	D1, D4, N1	dcorbett
2011010422	C	1,1,2,2-Tetrachloroethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00026	0.17	D1, D4, N1	dcorbett
2011010422	C	2-Chloroethyl vinyl ether	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.0003	0.17	D1, D4	dcorbett
2011010422	C	Benzene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00005	0.17	D1, D4	dcorbett
2011010422	C	Bromodichloromethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00018	0.17	D1, D4	dcorbett
2011010422	C	Bromoform	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00007	0.17	D1, D4	dcorbett
2011010422	C	Bromomethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00021	0.34	D1, D4, N1	dcorbett
2011010422	C	Carbon tetrachloride	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.0001	0.17	D1, D4	dcorbett
2011010422	C	Chlorobenzene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00006	0.17	D1, D4, N1	dcorbett
2011010422	C	Chloroethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00015	0.17	D1, D4	dcorbett
2011010422	C	Chloroform	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00005	0.17	D1, D4	dcorbett
2011010422	C	Chloromethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00019	0.17	D1, D4, N1	dcorbett
2011010422	C	cis-1,3-Dichloropropene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00007	0.17	D1, D4, N1	dcorbett
2011010422	C	Dibromochloromethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4, N1	dcorbett
2011010422	C	Ethyl benzene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4, N1	dcorbett
2011010422	C	Methylene chloride	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4	dcorbett
2011010422	C	Tetrachloroethene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00011	0.17	D1, D4	dcorbett
2011010422	C	Toluene	1/7/11 6:00	EPA 624	01/07/11 22:25	Trace	mg/Kg	0.00007	0.17	D1, D4	dcorbett
2011010422	C	Trichlorofluoromethane	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4	dcorbett
2011010422	C	Trichloroethene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00008	0.17	D1, D4	dcorbett
2011010422	C	Trihalomethane, Total	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg		0.17	D1, D4	dcorbett
2011010422	C	trans-1,2-Dichloroethene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00014	0.17	D1, D4, N1	dcorbett
2011010422	C	trans-1,3-Dichloropropene	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00006	0.17	D1, D4, N1	dcorbett
2011010422	C	Vinyl chloride	1/7/11 6:00	EPA 624	01/07/11 22:25	ND	mg/Kg	0.00006	0.17	D1, D4	dcorbett
2011010422	C	4,4-DDD	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4, N1	mmichel
2011010422	C	4,4-DDE	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4	mmichel
2011010422	C	4,4-DDT	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	85.765	D1, D4	mmichel
2011010422	C	Aldrin	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4	mmichel
2011010422	C	alpha-BHC	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4, V1	mmichel
2011010422	C	Aroclor 1016	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.1	428.825	D1, D4	mmichel
2011010422	C	Aroclor 1221	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.03	857.65	D1, D4	mmichel
2011010422	C	Aroclor 1232	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.09	857.65	D1, D4	mmichel
2011010422	C	Aroclor 1242	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.08	857.65	D1, D4	mmichel
2011010422	C	Aroclor 1248	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.04	857.65	D1, D4	mmichel
2011010422	C	Aroclor 1254	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.05	857.65	D1, D4	mmichel
2011010422	C	Aroclor 1260	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.05	428.825	D1, D4	mmichel
2011010422	C	beta-BHC	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.04	85.765	D1, D4	mmichel
2011010422	C	Chlordane, Technical	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.48	857.65	D1, D4	mmichel
2011010422	C	delta-BHC	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	85.765	D1, D4, V1	mmichel
2011010422	C	Dieldrin	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4	mmichel
2011010422	C	Endosulfan I	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4	mmichel
2011010422	C	Endosulfan II	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.01	171.53	D1, D4	mmichel
2011010422	C	Endosulfan sulfate	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.02	42.8825	D1, D4, S4	mmichel
2011010422	C	Endrin	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.03	171.53	D1, D4	mmichel
2011010422	C	Endrin aldehyde	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.01	85.765	D1, D4, N1	mmichel
2011010422	C	gamma-BHC (Lindane)	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.04	85.765	D1, D4	mmichel
2011010422	C	Heptachlor	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.03	85.765	D1, D4	mmichel
2011010422	C	Heptachlor epoxide	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	0.04	85.765	D1, D4	mmichel

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Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thick. to AvraGro (20001-5701)											
2011010422	C	Toxaphene	1/7/11 6:00	EPA 625	02/08/11 17:31	ND	ug/kg	5.29	13722.4	D1, D4	mmichel
2011010422	C	Methoxychlor	1/7/11 6:00	EPA 8270C	02/08/11 17:31	ND	ug/kg	0.03	85.765	D1, D4	mmichel
2011010422	C	1,2,4-Trichlorobenzene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00054	1.38	D1, D4	smitchell
2011010422	C	1,2-Diphenylhydrazine	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00101	1.38	D1, D4	smitchell
2011010422	C	2,3-Dichloroaniline	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00172	1.38	D1, D4	smitchell
2011010422	C	2,4,6-Trichlorophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00078	1.38	D1, D4	smitchell
2011010422	C	2,4-Dichlorophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00059	1.38	D1, D4	smitchell
2011010422	C	2,4-Dimethylphenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00253	1.38	D1, D4	smitchell
2011010422	C	2,4-Dinitrophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00489	6.9	D1, D4	smitchell
2011010422	C	2,4-Dinitrotoluene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00095	1.38	D1, D4	smitchell
2011010422	C	2,6-Dinitrotoluene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00113	1.38	D1, D4	smitchell
2011010422	C	2-Chloronaphthalene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00101	1.38	D1, D4	smitchell
2011010422	C	2-Chlorophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00065	1.38	D1, D4	smitchell
2011010422	C	2-Methylphenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00118	1.38	D1, D4	smitchell
2011010422	C	2-Nitrophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00072	1.38	D1, D4	smitchell
2011010422	C	3,3-Dichlorobenzidine	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00676	10.35	D1, D4	smitchell
2011010422	C	4,6-Dinitro-2-methylphenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00119	4.14	D1, D4	smitchell
2011010422	C	4-Bromophenyl phenyl ether	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.0008	1.38	D1, D4	smitchell
2011010422	C	4-Chloro-3-methylphenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00071	1.38	D1, D4	smitchell
2011010422	C	4-Chlorophenyl phenyl ether	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00091	1.38	D1, D4	smitchell
2011010422	C	4-Methylphenol	1/7/11 6:00	EPA 625	02/02/11 17:30	4.43	mg/Kg	0.0013	1.38	D1, D4	smitchell
2011010422	C	4-Nitrophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00352	1.38	D1, D4, V1	smitchell
2011010422	C	Acenaphthene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00084	1.38	D1, D4	smitchell
2011010422	C	Acenaphthylene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00061	1.38	D1, D4	smitchell
2011010422	C	Anthracene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00092	1.38	D1, D4	smitchell
2011010422	C	Benzo(a)anthracene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00085	1.38	D1, D4	smitchell
2011010422	C	Benzidine	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.01323	10.35	D1, D4	smitchell
2011010422	C	Benzo(a)pyrene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00119	1.38	D1, D4	smitchell
2011010422	C	Benzo(b)fluoranthene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00137	1.38	D1, D4	smitchell
2011010422	C	Benzo(g,h,i)perylene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.0027	1.38	D1, D4	smitchell
2011010422	C	Benzo(k)fluoranthene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00187	1.38	D1, D4	smitchell
2011010422	C	Bis(2-Chloroisopropyl)ether	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00061	1.38	D1, D4	smitchell
2011010422	C	Bis(2-chloroethoxy)methane	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00051	1.38	D1, D4	smitchell
2011010422	C	Bis(2-chloroethyl)ether	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00067	1.38	D1, D4	smitchell
2011010422	C	Bis(2-ethylhexyl) phthalate	1/7/11 6:00	EPA 625	02/02/11 17:30	9.33	mg/Kg	0.00511	1.38	D1, D4	smitchell
2011010422	C	Butylbenzyl phthalate	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00166	1.38	D1, D4	smitchell
2011010422	C	Carbazole	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00141	2.76	D1, D4	smitchell
2011010422	C	Chrysene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00099	1.38	D1, D4	smitchell
2011010422	C	Dibenz(a,h)anthracene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00226	1.38	D1, D4	smitchell
2011010422	C	Diethyl phthalate	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.0007	1.38	D1, D4	smitchell
2011010422	C	Dimethylphthalate	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00069	1.38	D1, D4	smitchell
2011010422	C	Di-n-butyl phthalate	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00191	1.38	D1, D4	smitchell
2011010422	C	Di-n-octylphthalate	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00449	1.38	D1, D4	smitchell
2011010422	C	Fluoranthene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00109	1.38	D1, D4	smitchell
2011010422	C	Fluorene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00094	1.38	D1, D4	smitchell
2011010422	C	Hexachlorobenzene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00059	1.38	D1, D4	smitchell
2011010422	C	Hexachlorobutadiene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00052	1.38	D1, D4	smitchell
2011010422	C	Hexachloroethane	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00056	1.38	D1, D4	smitchell
2011010422	C	Hexachlorocyclopentadiene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00267	1.38	D1, D4	smitchell
2011010422	C	Indeno(1,2,3-cd)pyrene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00204	1.38	D1, D4	smitchell

Lab Comments:

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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.

Ina Road WRF

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Thick. to AvraGro (20001-5701)											
2011010422	C	Isophorone	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00325	1.38	D1, D4	smitchell
2011010422	C	Naphthalene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00072	1.38	D1, D4	smitchell
2011010422	C	n-Decane	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00068	1.38	D1, D4	smitchell
2011010422	C	Nitrobenzene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.0005	1.38	D1, D4	smitchell
2011010422	C	N-Nitroso-di-n-propylamine	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00063	1.38	D1, D4	smitchell
2011010422	C	N-Nitrosodimethylamine	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00064	1.38	D1, D4	smitchell
2011010422	C	N-Nitrosodiphenylamine	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00102	1.38	D1, D4	smitchell
2011010422	C	n-Octadecane	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00248	1.38	D1, D4	smitchell
2011010422	C	Pentachlorophenol	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00076	4.14	D1, D4	smitchell
2011010422	C	Phenanthrene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00097	1.38	D1, D4	smitchell
2011010422	C	Phenol	1/7/11 6:00	EPA 625	02/02/11 17:30	4.40	mg/Kg	0.00055	1.38	D1, D4	smitchell
2011010422	C	Pyrene	1/7/11 6:00	EPA 625	02/02/11 17:30	ND	mg/Kg	0.00119	1.38	D1, D4	smitchell
2011010422	C	Dioxin	1/7/11 6:00	EPA 625	02/04/11 15:06	ND	ug/l	0.025	0.025		smitchell
2011010422	C	Chlordane, Technical	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	0.48	0.5		mmichel
2011010422	C	Endrin	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	0.03	0.1	N1	mmichel
2011010422	C	gamma-BHC (Lindane)	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	0.04	0.05	N1	mmichel
2011010422	C	Heptachlor	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	0.03	0.05	N1	mmichel
2011010422	C	Heptachlor epoxide	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	0.04	0.05		mmichel
2011010422	C	Methoxychlor	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	0.03	0.05	N1, S4	mmichel
2011010422	C	Toxaphene	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 18:45	ND	ug/l	5.29	8		mmichel
2011010422	C	1,4-Dichlorobenzene	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	0.81	2		smitchell
2011010422	C	2,4,5-Trichlorophenol	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	8.64	10		smitchell
2011010422	C	2,4,6-Trichlorophenol	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	4.72	5		smitchell
2011010422	C	2,4-Dinitrotoluene	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	7.46	10		smitchell
2011010422	C	Hexachlorobenzene	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	1.71	2		smitchell
2011010422	C	Hexachlorobutadiene	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	1.19	2		smitchell
2011010422	C	Hexachloroethane	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	0.72	2		smitchell
2011010422	C	m+p-Cresols	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	22.21	ug/l	1.81	2		smitchell
2011010422	C	Nitrobenzene	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	0.76	2		smitchell
2011010422	C	o-Cresol	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	0.51	2		smitchell
2011010422	C	Pentachlorophenol	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	20.15	25		smitchell
2011010422	C	Pyridine	1/7/11 6:00	EPA 8270C-TCLP	02/08/11 12:03	ND	ug/l	1.62	2		smitchell
2011010422	C	1,1-Dichloroethene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.08	0.50	Q5	dcorbett
2011010422	C	1,2-Dichloroethane	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.05	0.50	Q5	dcorbett
2011010422	C	1,4-Dichlorobenzene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	0.58	ug/l	0.11	0.50	Q5, M1	dcorbett
2011010422	C	Benzene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.05	0.50	Q5	dcorbett
2011010422	C	Carbon tetrachloride	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.10	0.50	Q5	dcorbett
2011010422	C	Chlorobenzene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.06	0.50	Q5	dcorbett
2011010422	C	Chloroform	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.05	0.50	Q5	dcorbett
2011010422	C	Hexachlorobutadiene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.16	0.50	Q5	dcorbett
2011010422	C	Methyl ethyl ketone	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	12.60	ug/l	0.55	2.0	Q5, B1	dcorbett
2011010422	C	Tetrachloroethene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.11	0.50	Q5	dcorbett
2011010422	C	Trichloroethene	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	Trace	ug/l	0.08	0.50	Q5	dcorbett
2011010422	C	Vinyl chloride	1/7/11 6:00	EPA 8260B-TCLP	01/27/11 19:09	ND	ug/l	0.06	0.50	Q5	dcorbett

Q5- Sample preserved on 01/25/11 at 3:15pm

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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 20001
Ina Road WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010412	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010412	N1	See case narrative.	1/7/11
2011010413	D1	Sample required dilution due to matrix.	1/7/11
2011010413	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/7/11
2011010413	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010413	M5	Analyte concentration was determined by the method of standard addition (MSA).	1/7/11
2011010413	N1	See case narrative.	1/7/11
2011010413	R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.	1/7/11
2011010413	S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.	1/7/11
2011010413	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/7/11
2011010422	B1	Target analyte detected in method blank at or above the method reporting limit.	1/7/11
2011010422	D1	Sample required dilution due to matrix.	1/7/11
2011010422	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/7/11
2011010422	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010422	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	1/7/11
2011010422	M5	Analyte concentration was determined by the method of standard addition (MSA).	1/7/11
2011010422	N1	See case narrative.	1/7/11
2011010422	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/7/11
2011010422	S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.	1/7/11
2011010422	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/7/11
2011010520	D2	Sample required dilution due to high concentration of target analyte.	1/10/11
2011010521	D2	Sample required dilution due to high concentration of target analyte.	1/10/11
2011010522	D2	Sample required dilution due to high concentration of target analyte.	1/10/11

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

Case Narrative

Sample ID: 2011010422
Permit Name: Ina Road WRF
Location Name: Thick. to AvraGro

Ina Road WRF was sampled from its Thick to AvraGro location on 01/07/11 AND 01/31/11 for purgeable organics testing, EPA method 624 and method 8260. By means of the analysis performed, the matrix spike within this batch failed either high or low for compounds qualified with N1. The spike was performed on a different sample.

2011010422 was extracted for EPA Method 625 Pesticides on 01/11/2011, 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 8270c TCLP Pesticides on 01/25/2011, 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

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

LABORATORY REPORT

Prepared For: Pima County WWTP
5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project:Thickener to Avira Gvo

Sampled:01/07/11
Received:01/08/11
Issued:01/17/11 16:38

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
PUA0458-01	2011010409	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:	No analyses were subcontracted to an outside laboratory.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
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Pima County WWTP
5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0458-01 (2011010409 - Soil)									
Reporting Units: mg/l									
2,4,5-TP (Silvex)	SW1311/8151A	11A0412	0.013	ND	1	1.0	1/13/2011	1/14/2011	
2,4-D	SW1311/8151A	11A0412	0.013	ND	1	10.0	1/13/2011	1/14/2011	
Pentachlorophenol	SW1311/8151A	11A0412	0.013	ND	1	100.0	1/13/2011	1/14/2011	
Surrogate: DCAA (30-154%)				*63 %*					

TestAmerica Phoenix

Suzanne Glass
Project Manager

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5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

TCLP EXTRACTION

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0458-01 (2011010409 - Soil) - cont.									
Reporting Units: None									
TCLP Extraction	EPA 1311	11A0233	1.00	ND	1	NA	1/10/2011	1/10/2011	

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
5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

METHOD BLANK/QC DATA

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0412 Extracted: 01/13/11										
Blank Analyzed: 01/14/2011 (11A0412-BLK1)										
2,4,5-TP (Silvex)	ND	0.013	mg/l							
2,4-D	ND	0.013	mg/l							
Pentachlorophenol	ND	0.013	mg/l							
Surrogate: DCAA	*0.0297*		*mg/l*	*0.0500*		*59*	*30-154*			
Blank Analyzed: 01/14/2011 (11A0412-BLK2)										
2,4,5-TP (Silvex)	ND	0.013	mg/l							
2,4-D	ND	0.013	mg/l							
Pentachlorophenol	ND	0.013	mg/l							
Surrogate: DCAA	*0.0254*		*mg/l*	*0.0500*		*51*	*30-154*			
LCS Analyzed: 01/14/2011 (11A0412-BS1)										
2,4,5-TP (Silvex)	0.0370	0.013	mg/l	0.0500		74	52-136			
2,4-D	0.0293	0.013	mg/l	0.0500		59	38-124			
Pentachlorophenol	0.0403	0.013	mg/l	0.0500		81	46-131			
Surrogate: DCAA	*0.0288*		*mg/l*	*0.0500*		*58*	*30-140*			
LCS Dup Analyzed: 01/14/2011 (11A0412-BSD1)										
2,4,5-TP (Silvex)	0.0311	0.013	mg/l	0.0500		62	52-136	18	20	
2,4-D	0.0242	0.013	mg/l	0.0500		48	38-124	19	20	
Pentachlorophenol	0.0455	0.013	mg/l	0.0500		91	46-131	12	20	
Surrogate: DCAA	*0.0438*		*mg/l*	*0.0500*		*88*	*30-140*			
Matrix Spike Analyzed: 01/14/2011 (11A0412-MS1)					**Source: PUA0458-01**					
2,4,5-TP (Silvex)	0.0361	0.013	mg/l	0.0500	ND	72	31-158			
2,4-D	0.0307	0.013	mg/l	0.0500	ND	61	23-159			
Pentachlorophenol	0.0367	0.013	mg/l	0.0500	ND	73	36-143			
Surrogate: DCAA	*0.0279*		*mg/l*	*0.0500*		*56*	*30-154*			

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Project Manager

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Pima County WWTP
5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

METHOD BLANK/QC DATA

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0412 Extracted: 01/13/11										
Matrix Spike Dup Analyzed: 01/14/2011 (11A0412-MSD1)					**Source: PUA0458-01**					
2,4,5-TP (Silvex)	0.0319	0.013	mg/l	0.0500	ND	64	31-158	12	35	
2,4-D	0.0295	0.013	mg/l	0.0500	ND	59	23-159	4	35	
Pentachlorophenol	0.0379	0.013	mg/l	0.0500	ND	76	36-143	3	35	
Surrogate: DCAA	*0.0434*		*mg/l*	*0.0500*		*87*	*30-154*			

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Pima County WWTP
5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

METHOD BLANK/QC DATA

TCLP EXTRACTION

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0233 Extracted: 01/10/11										
Blank Analyzed: 01/10/2011 (11A0233-BLK1)										
TCLP Extraction	ND	1.00	None							

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Pima County WWTP
5025 W Ina Road, Bldg B
Tucson, AZ 85743
Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

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

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Attention: Robert Speir

Project ID: Thickener to Avira Gvo
Report Number: PUA0458

Sampled: 01/07/11
Received: 01/08/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1311	Soil		X
SW1311/8151A	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

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
WATER QUALITY - Call us @443-6256
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: CRAO / W Q (Organization) LAB ID: 20110409

SAMPLER: Silva, Godoy, Gardner, Morales, Speir (Print Last Names Only) FACILITY-LOCATION ID: 20001-5701

SAMPLE DATE: 01-06-11 → 01-07-11 (MM / DD / YY) SAMPLE TIME: 0600 HRS → 0600 HRS. (24 Hour Clock)

SAMPLE LOCATION: Ina Road WPCF - Thick To AvraGro

PERMIT TYPE: ☐ APP ☐ INVESTIGATIONS ☐ IWC ■ AZPDES ☐ REUSE ☐ USFS ■ 503 ☐ Other

SAMPLE MATRIX: ■ Biosolids ☐ Groundwater ☐ Industrial Wastewater ☐ Soil ☐ Stormwater ☐ Surface Water ☐ Wastewater ☐ Other

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	☐	☐	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 (Con'ing Lab)	☐	■	Solids, Total	☐	☐
Magnesium	☐	☐	Fluoride	☐	☐	TCLP Pesticides	☐	☐	Solids, Total Dissolved	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐	TCLP Semivolatile Organics	☐	☐	Solids, Total Suspended	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐	TCLP Volatile Organics	☐	☐	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:
Ina Rd Laboratory shall send sample to outside lab as necessary.
WILL BE PICKED UP BY TEST AMERICA - LET PO# 11026355

FIELD MEASUREMENTS
☐ Chlorine ☐ Temperature
☐ Oxygen (Dis.) ☐ pH
☐ Conductivity ☐ Other

Sample Receiving Temp.: < 4° C IR THERM
Number of Sample Containers: 1 LET

Sampled by:	Received by:	Date/Time: 1-7-11 0800
Relinquished by:	Received by:	Date/Time: 01-07-11 | 0955
Relinquished by:	Received by:	Date/Time: 1|7|11 14:00
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 Coliform sample in the "Notes Box" if different than the information provided in heading.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAL-0013(1007)

Client Name/Address:
Pima County R.W.R.D.
7101 N. Casa Grande Hwy
Tucson, AZ 85743

Project/PO Number:
Thickener to Avra Gro
PO# 11026355

Project Manager: Rob Speir/Nancy Powell

Phone Number: 520-443-6100

Sampler: Michael R. Silva

Fax Number: 520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TCLP Herbicides	Special Instructions
Ina Rd WPCF-Thick To Avra Gro 20001-5701	BS	soil jar	1	1-7-11	0600	None	X	Pima Co. Lims #20110104094 BS = biosolids 24 Hr Composite 01-06-11 → 01/07/11
Pima LIMS # 20110104094								
PO# 11026355								

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
[signature]	01/07/11 0630 Hrs.	[signature]	1-7-11 @ 0800	same day ____	72 hours ____
				24 hours ____	5 days ____
[signature]	Date/Time:	[signature]	01-07-11 | 0955	48 hours ____	normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
[signature]		[signature]	1/7/11 (14:40)	intact ✓	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 & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 20110104O9 (yyyy/mm/xxxx – xxxx)

Facility or Submitter: WQ

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 Probably

Temperature of Samples: ≤4 °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) 01-07-11 (mm/dd/yy)

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
WATER QUALITY - Call us @443-6256
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: CRAO / W Q (Organization) LAB ID: 20110422

SAMPLER: Grodman, Morales, Silva, Goodlyear, Speir (Print Last Names Only) FACILITY-LOCATION ID: 20001-5701

SAMPLE DATE: 01-06-11 thru 01-07-11 (MM / DD / YY) SAMPLE TIME: 0600 thru 0600 HRS. (24 Hour Clock)

SAMPLE LOCATION: Ina Road WPCF - Thick To AvraGro

PERMIT TYPE: ☐ APP ☐ INVESTIGATIONS ☐ IWC ■ AZPDES ☐ REUSE ☐ USFS ■ 503 ☐ Other

SAMPLE MATRIX: ■ Biosolids ☐ Groundwater ☐ Industrial Wastewater ☐ Soil ☐ Stormwater ☐ Surface Water ☐ Wastewater ☐ Other

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	☐	☐	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	☐	☐	Solids, Total	☐	■
Magnesium	☐	☐	Fluoride	☐	☐	TCLP Pesticides	☐	■	Solids, Total Dissolved	☐	☐
Manganese	☐	☐	Nitrate as N	☐	☐	TCLP Semivolatile Organics	☐	■	Solids, Total Suspended	☐	☐
Mercury	☐	☐	Nitrite as N	☐	☐	TCLP Volatile Organics	☐	■	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: The laboratory shall composite the 4 discrete Purgeable Organic samples and the Acrolein & Acrylonitrile samples.
Acrolein/Acrylonitrile not pH adjusted due to Matrix of sample
Septum blank preparation date: 11-16-10 JS | Bubble in Trip Blank

FIELD MEASUREMENTS

☐ Chlorine _____ ☐ Temperature _____
☐ Oxygen (Dis.) _____ ☐ pH _____
☐ Conductivity ☐ Other

Sample Receiving Temp. ≤ 4°C IR THERM

Number of Sample Containers (12) L E J

Sampled by:	Received by:	Date/Time 01-06-11 1800 HRS.
Relinquished by:	Received by:	Date/Time 1-7-11 @0800
Relinquished by:	Received by:	Date/Time 01-07-11 0947
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 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: 20110422 (yyyy/mm/xxxx – xxxx)

Facility or Submitter: CRAO / WQ

Retrieved from a refrigerator: ☐ Yes ☑ No ☐ N/A

Total number of containers received: 12
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☑ Yes ☐ No

Temperature of Samples: °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?	✓			air bubbles
COC received by laboratory and signed?	✓			

PRESERVATIVE LABEL	# OF CONTAINERS
Non-preserved	10
HNO_3 (Nitric Acid)	
H_2SO_4 (Sulfuric Acid)	1
HCL (Hydrochloric Acid)	
NaOH (Sodium Hydroxide)	1
$Na_2S_2O_3$ (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) 1-7-11 (mm/dd/yy)

SECTION 4

LAND APPLICATION EVENTS LABORATORY ANALYSES

Crop Plant and Harvest Schedule

AVRAGRO SYSTEMS, INC.
LAND APPLICATION CONTRACTOR
2011

PIMA COUNTY
REGIONAL BIOSOLIDS MANAGEMENT FACILITY
INA ROAD WRF
AZPDES NO. AZ0020001

ANNUAL BIOSOLIDS REPORT 2011

ANNUAL BIOSOLIDS REPORT 2011

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	2/20/2012	6/16/2012
JK-7	Wheat & Cotton	2/21/2012, 4/15/2012	6/26/2012, 12/1/2012
JK-8	Cotton	4/14/2012	12/10/2012
JK-9	Cotton	4/14/2012	12/10/2012
JK-10	Cotton	4/16/2012	12/5/2012
JK-12	Cotton	4/20/2012	12/6/2012
JK-13	Cotton	4/28/2011	12/27/2011
JK-14	Cotton	4/29/2011	12/10/2011
JK-17	Wheat	1/27/2012	6/12/2012
JK-18	Wheat	2/20/2012	6/17/2012
JK-19	Cotton	1/25/2012	6/13/2012
JK-20	Wheat	1/23/2012	6/15/2012
JK-21D	Cotton	4/20/2012	12/10/2012
JK-26	Cotton	4/10/2011	12/20/2011
JK-27	Cotton	4/15/2012	12/15/2012
JK-28	Cotton	4/16/2012	12/16/2012

Field ID	CROP	PLANT DATE	HARVEST DATE
JK-29	Cotton	4/17/2012	12/17/2012
JK-30	Cotton	4/16/2012	12/5/2012
JK-34	Cotton - Wheat	4/10/2011, 1/30/2012	12/4/2011, 6/15/2012
JK-37	Cotton	4/15/2011	12/5/2011
JK-42	Wheat	2/15/2012	6/15/2012
GL-1	Cotton	4/15/2012	12/1/2012
AJ-1	Cotton	4/25/2011	12/14/2011
AJ-2	Cotton	5/5/2011	12/16/2011
TH-5	Wheat - Milo	1/25/2011, 7/15/2011	6/1/2011, 1/15/2012
TH-11N	Cotton	4/20/2012	12/20/2012
TH-12E	Wheat	1/31/2012	6/1/2012
SG-54A	Pasture	3/15/2012	every month
SG-54C	Pasture	3/16/2012	every month
SG-53B	Pasture	3/17/2012	every month
LIM-2	Cotton	4/20/2011	12/15/2011

Annual Report to

For

Pima County Waste Water Management

2011

Report from:

AvraGro Systems, Inc
Technical Department

PO Box 91708
Tucson, AZ 85752

Tel (520) 990-8888

AvraGro Systems, Inc.
PO Box 91708
Tucson, AZ 85752
520-990-8888

February 1, 2012

Mr. Jackson Jenkins
Deputy Director
Pima County Wastewater Management
7100 N. Casa Grande Highway
Tucson, AZ 85743

Re: Yearly Biosolids Report for 2011

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 2011

All Preparers (Generators) and Land Applicators Must Complete the Following:

1. General Information

Date: 2/1/2012	**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:	**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 Facility	Biosolids Management 7101 North Casa Grande Highway Tucson, Arizona 85743	dry tons	dry tons 10962.64	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**

Revised July 2004

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	113.3	Pima Co.	Class B, Alt 2	Option 1	0.72	55.8	Wheat	340	0.237	0.11	1.551	18.451	1.247	0.071	0.691	0.892	0.221	36.95
		102.8				1617	62.6												
Kai Farms, Marana, Az	JK-7	584.6	Pima Co.	Class B, Alt 2	Option 1	3.1	233	Wheat & Cotton	340 0r 380	0.722	0.497	6.622	76.246	6.274	0.211	1.884	3.533	0.568	134.744
		506.9				6859	261												
Kai Farms, Marana, Az	JK-8	323.8	Pima Co.	Class B, Alt 2	Option 1	2.12	157.4	Cotton	380	0.653	0.357	4.564	65.85	4.401	0.199	2.431	3.114	0.654	113.33
		293.76				4744	176.4												
Kai Farms, Marana, Az	JK-9	240.4	Pima Co.	Class B, Alt 2	Option 1	1.29	99	Cotton	380	0.259	0.129	1.894	22.745	2.008	0.078	0.505	0.888	0.198	44.367
		218.00				2881	111												
Kai Farms, Marana, Az	JK-10	314.1	Pima Co.	Class B, Alt 2	Option 1	2	152	Cotton	380	0.815	0.346	5.52	58.752	4.568	0.231	2.363	3.141	0.719	101.918
		284.90				4514	170												
Kai Farms, Marana, Az	JK-12	236.8	Pima Co.	Class B, Alt 2	Option 1	1.6	121	Cotton	380	0.917	0.354	4.802	70.138	4.438	0.236	2.57	3.1149	0.757	131.684
		214.70				3586	136												
Kai Farms, Marana, Az	JK-13	161.1	Pima Co.	Class B, Alt 2	Option 1	1.05	80.2	Cotton	380	1.062	0.411	5.796	64.817	4.374	0.23	2.409	3.262	0.762	116.11
		146.10				2344	89												
Kai Farms, Marana, Az	JK-14	443.6	Pima Co.	Class B, Alt 2	Option 1	3.15	239	Cotton	380	0.859	0.384	5.349	63.415	4.75	0.218	2.37	2.913	0.533	126.82
		402.40				7052	268												
Kai Farms, Marana, Az	JK-17	113.1	Pima Co.	Class B, Alt 2	Option 1	1.35	99	Wheat	340	0.473	0.259	3.312	45.338	3.737	0.0138	1.079	1.853	0.3763	92.06
		102.60				3018	111												
Kai Farms, Marana, Az	JK-18	256.5	Pima Co.	Class B, Alt 2	Option 1	4.42	327	Wheat	340	0.415	0.258	3.103	41.225	2.958	0.229	0.906	1.534	0.412	72.942
		232.60				9912	366												
Kai Farms, Marana, Az	JK-19	615.7	Pima Co.	Class B, Alt 2	Option 1	4.7	344	Cotton	380	0.68	0.34	4.825	61.512	5.168	0.349	1.513	2.299	0.623	119.082
		558.50				10174	386												
Kai Farms, Marana, Az	JK-20	581.2	Pima Co.	Class B, Alt 2	Option 1	3.7	282	Wheat	340	0.506	0.38	4.731	58.884	6.162	0.192	1.184	2.397	0.376	105.588
		481.60				8459	317												
Kai Farms, Marana, Az	JK-21D	82.6	Pima Co.	Class B, Alt 2	Option 1	3.93	589	Cotton	380	0.701	0.363	4.977	58.191	4.558	0.227	1.712	2.786	0.558	115.009
		74.90				8816	324												
Kai Farms, Marana, Az	JK-26	309.4	Pima Co.	Class B, Alt 2	Option 1	1.33	103.1	Cotton	380	0.449	0.241	3.955	39.671	2.893	0.119	1.316	2.222	0.378	75.631
		280.60				2989	115												
Kai Farms, Marana, Az	JK-27	304.9	Pima Co.	Class B, Alt 2	Option 1	1.7	125	Cotton	380	0.541	0.222	2.599	36.914	2.859	0.137	1.241	1.76	0.401	60.295
		231.10				3817	140												

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-28	143.7	Pima Co.	Class B, Alt 2	Option 1	0.68	50	Cotton	380	0.324	0.19	2.827	30.903	2.969	0.1	0.741	1.386	0.26	49.107
		130.30				1534	56												
Kai Farms, Marana, Az	JK-29	79.5	Pima Co.	Class B, Alt 2	Option 1	0.4	36	Cotton	380	0.453	0.177	2.481	34.331	1.935	0.12	1.361	1.821	0.341	57.24
		72.1				1060	40												
Kai Farms, Marana, Az	JK-30	274.5	Pima Co.	Class B, Alt 2	Option 1	1.86	138	Cotton	380	0.653	0.324	4.456	54.028	4.111	0.168	1.836	2.39	0.483	101.606
		249				4157	155												
Kai Farms, Marana, Az	JK-34	741.5	Pima Co.	Class B, Alt 2	Option 1	5.26	398.1	Cotton - Wheat	380+340	0.32	0.281	2.521	37.174	3.552	0.109	0.662	1.527	0.266	61.355
		672.5				11787	446												
Kai Farms, Marana, Az	JK-37	401.04	Pima Co.	Class B, Alt 2	Option 1	3.34	259	Cotton	380	0.307	0.284	2.745	37.362	3.883	0.0985	0.555	1.698	0.281	58.76
		363.37				7490	290												
Kai Farms, Marana, Az	JK-42	852.3	Pima Co.	Class B, Alt 2	Option 1	2.61	200	Wheat	340	0.432	0.148	2.518	25.143	1.84	0.082	0.892	1.128	0.342	45.872
		773.10				5860	225												
TNT Farms	GL-1	312.2	Pima Co.	Class B, Alt 2	Option 1	1.53	115	Cotton	380	0.46	0.253	3.81	40.271	3.759	0.144	1.146	1.893	0.339	68.592
		283.20				3353	129												
Toone Farms	AJ-1	536.8	Pima Co.	Class B, Alt 2	Option 1	4.31	326	Cotton	380	0.553	0.207	2.622	30.066	2.177	0.102	0.778	1.705	0.421	54.519
		486.90				9665	365												
Toone Farms	AJ-2	686	Pima Co.	Class B, Alt 2	Option 1	4.52	311	Cotton	380	0.637	0.189	2.437	34.818	1.995	0.109	1.064	1.785	0.513	61.094
		622.20				10135	349												
Tom Hum Farms	TH-5	822.2	Pima Co.	Class B, Alt 2	Option 1	3.62	277	Wheat - Milo	340+200	0.256	0.09	1.141	22.037	1.963	0.049	0.588	0.882	0.191	38.769
		745.70				8118	310												
Tom Hum Farms	TH-11N	332.9	Pima Co.	Class B, Alt 2	Option 1	4.38	334	Cotton	380	0.347	0.108	1.461	21.222	1.305	0.07	0.925	0.974	0.268	36.394
		301.90				9817	374												
Tom Hum Farms	TH-12E	270.20	Pima Co.	Class B, Alt 2	Option 1	3.97	300	Wheat	340	0.25	0.06	1.04	16.83	1.03	0.047	0.715	0.726	0.178	29.66
		245.29				8905	337												
Law Partnership	SG-54A	146.70	Pima Co.	Class B, Alt 2	Option 1	4.3	316	Pasture	400	0.114	0.019	0.465	5.964	0.238	0.017	0.191	0.222	0.087	12.616
		133.00				9669	355												
Law Partnership	SG-54C	144.90	Pima Co.	Class B, Alt 2	Option 1	4.3	317	Pasture	400	0.113	0.019	0.454	5.925	0.23	0.016	0.19	0.222	0.087	12.768
		131.40				9667	355												
Law Partnership	SG-53B	200.8	Pima Co.	Class B, Alt 2	Option 1	5.29	391	Pasture	400	0.13	0.023	0.462	6.942	0.213	0.015	0.225	0.272	0.106	16.94
		182.20				11846	439												
Lim Farms	LIM-2	336.3	Pima Co.	Class B, Alt 2	Option 1	4.95	359	Cotton	380	0.836	0.428	5.575	67.573	5.768	0.227	2.35	3.546	0.747	144.493
		305				11084	402												

10962.64 DT

9828.62 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 2011

Name: Rob Fehrmann

Avragro Systems Inc.

Signature: Rob Fehrmann

Date: 2/1/2012

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: 11-020-0206
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
2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 1/14/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 80331
Sample Id : PIMA CO 1/14/11

Date Sampled: 1/14/2011 00:00:00
Date Received: 01/20/2011 00:00
Date Reported: 01/27/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.85	58500	100.0	JM	01/20/2011 15:20	SM-2540G
Moisture *	94.15		100.0	JM	01/20/2011 15:20	SM-2540G
Total Kjeldahl Nitrogen	7.86	78600	10.0	JM	01/21/2011 09:00	SM-4500-NH3C-TKN
Total Phosphorus	2.88	28800	100	KM	01/21/2011 12:50	SW-6010B
Total Potassium	0.26	2550	100	KM	01/21/2011 12:50	SW-6010B
Total Sulfur	1.29	12900	100	KM	01/21/2011 12:50	SW-6010B
Total Calcium	5.51	55100	100	KM	01/21/2011 12:50	SW-6010B
Total Magnesium	0.52	5190	100	KM	01/21/2011 12:50	SW-6010B
Total Sodium	0.31	3120	100	KM	01/21/2011 12:50	SW-6010B
Total Iron		10100	1	KM	01/21/2011 12:50	SW-6010B
Total Aluminum		11800	10	KM	01/21/2011 12:50	SW-6010B
Total Manganese		156	1	KM	01/21/2011 12:50	SW-6010B
Total Copper		497	1	KM	01/21/2011 12:50	SW-6010B
Total Zinc		1080	1	KM	01/21/2011 12:50	SW-6010B
Ammonia Nitrogen	2.79	27900	10.0	JM	01/21/2011 09:00	SM-4500-NH3C
Organic N	5.07	50700	10.0		01/21/2011 09:00	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	01/21/2011 09:00	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	01/21/2011 12:50	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.

Debbie Holt

Report Number: 11-020-0206
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
2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 1/14/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 80331
Sample Id : PIMA CO 1/14/11

Date Sampled: 1/14/2011 00:00:00
Date Received: 01/20/2011 00:00
Date Reported: 01/27/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	01/21/2011 12:50	SW-6010B
Total Nickel		19	5	KM	01/21/2011 12:50	SW-6010B
Total Lead		18	5	KM	01/21/2011 12:50	SW-6010B
Total Arsenic		10.0	1.0	KM	01/21/2011 12:50	SW-6010B
Total Mercury		1.3	0.4	KM	01/21/2011 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	01/21/2011 12:50	SW-6010B
pH (Standard Units) *	7.93		0.01	D H	01/21/2011 08:35	SW-9045D
Total Molybdenum		15	5	KM	01/21/2011 12:50	SW-6010B
Chloride		2930	200	JM	01/21/2011 10:00	SM-4500Cl-D
Total Boron		47	1	KM	01/21/2011 12:50	SW-6010B
Total Silver		8	5	KM	01/21/2011 12:50	SW-6010B

Comments:

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Debbie Holt

Report Number: 11-031-0202
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
2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 1/27/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 80472
Sample Id : PIMA CO 1/27/11

Date Sampled: 1/27/2011 00:00:00
Date Received: 01/31/2011 00:00
Date Reported: 02/04/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.58	55800	100.0	RD	01/31/2011 15:00	SM-2540G
Moisture *	94.42		100.0	RD	01/31/2011 15:00	SM-2540G
Total Kjeldahl Nitrogen	8.28	82800	10.0	MW	02/01/2011 09:15	SM-4500-NH3C-TKN
Total Phosphorus	2.68	26800	100	KM	02/01/2011 12:32	SW-6010B
Total Potassium	0.27	2680	100	KM	02/01/2011 12:32	SW-6010B
Total Sulfur	1.18	11800	100	KM	02/01/2011 12:32	SW-6010B
Total Calcium	4.96	49600	100	KM	02/01/2011 12:32	SW-6010B
Total Magnesium	0.52	5160	100	KM	02/01/2011 12:32	SW-6010B
Total Sodium	0.31	3080	100	KM	02/01/2011 12:32	SW-6010B
Total Iron		8410	1	KM	02/01/2011 12:32	SW-6010B
Total Aluminum		11500	10	KM	02/01/2011 12:32	SW-6010B
Total Manganese		128	1	KM	02/01/2011 12:32	SW-6010B
Total Copper		482	1	KM	02/01/2011 12:32	SW-6010B
Total Zinc		1030	1	KM	02/01/2011 12:32	SW-6010B
Ammonia Nitrogen	2.74	27400	10.0	MW	02/01/2011 09:29	SM-4500-NH3C
Organic N	5.54	55400	10.0		02/01/2011 09:15	CALCULATION
Nitrate+Nitrite-N		25.1	1.00	MW	02/01/2011 09:30	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	02/01/2011 12:32	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.

Debbie Holt

Report Number: 11-031-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 1/27/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 80472
Sample Id : PIMA CO 1/27/11

Date Sampled: 1/27/2011 00:00:00
Date Received: 01/31/2011 00:00
Date Reported: 02/04/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		36	5	KM	02/01/2011 12:32	SW-6010B
Total Nickel		22	5	KM	02/01/2011 12:32	SW-6010B
Total Lead		20	5	KM	02/01/2011 12:32	SW-6010B
Total Arsenic		11.0	1.0	KM	02/01/2011 12:32	SW-6010B
Total Mercury		0.7	0.4	KM	02/01/2011 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	02/01/2011 12:32	SW-6010B
pH (Standard Units) *	8.09			TW	02/01/2011 10:00	SW-9045D
Total Molybdenum		15	5	KM	02/01/2011 12:32	SW-6010B
Chloride		2870	200	JM	02/02/2011 09:05	SM-4500Cl-D
Total Boron		48	1	KM	02/01/2011 12:32	SW-6010B
Total Silver		10	5	KM	02/01/2011 12:32	SW-6010B

Comments:

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Debbie Holt

Report Number: 11-049-0209
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 2/14/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 80870
Sample Id : PIMA CO 2/14/11

Date Sampled: 2/14/2011 00:00:00
Date Received: 02/18/2011 00:00
Date Reported: 02/23/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.60	56000	100.0	BW	02/18/2011 14:30	SM-2540G
Moisture *	94.40		100.0	BW	02/18/2011 14:30	SM-2540G
Total Kjeldahl Nitrogen	8.80	88000	10.0	JM	02/21/2011 08:44	SM-4500-NH3C-TKN
Total Phosphorus	2.52	25200	100	KM	02/21/2011 09:45	SW-6010B
Total Potassium	0.30	2950	100	KM	02/21/2011 09:45	SW-6010B
Total Sulfur	1.00	9980	100	KM	02/21/2011 09:45	SW-6010B
Total Calcium	4.68	46800	100	KM	02/21/2011 09:45	SW-6010B
Total Magnesium	0.49	4860	100	KM	02/21/2011 09:45	SW-6010B
Total Sodium	0.30	2950	100	KM	02/21/2011 09:45	SW-6010B
Total Iron		6350	1	KM	02/21/2011 09:45	SW-6010B
Total Aluminum		8800	10	KM	02/21/2011 09:45	SW-6010B
Total Manganese		122	1	KM	02/21/2011 09:45	SW-6010B
Total Copper		444	1	KM	02/21/2011 09:45	SW-6010B
Total Zinc		872	1	KM	02/21/2011 09:45	SW-6010B
Ammonia Nitrogen	2.88	28800	10.0	JM	02/21/2011 08:44	SM-4500-NH3C
Organic N	5.92	59200	10.0		02/21/2011 08:44	CALCULATION
Nitrate+Nitrite-N		32.1	1.00	JM	02/21/2011 08:45	SM-4500NO3F
Total Cadmium		1.0	1.0	KM	02/21/2011 09:45	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.

Debbie Holt

Report Number: 11-049-0209
Account Number: 16010
Submitted By: ROB FEHRMANN

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2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 2/14/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 80870
Sample Id : PIMA CO 2/14/11

Date Sampled: 2/14/2011 00:00:00
Date Received: 02/18/2011 00:00
Date Reported: 02/23/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		33	5	KM	02/21/2011 09:45	SW-6010B
Total Nickel		18	5	KM	02/21/2011 09:45	SW-6010B
Total Lead		18	5	KM	02/21/2011 09:45	SW-6010B
Total Arsenic		9.0	1.0	KM	02/21/2011 09:45	SW-6010B
Total Mercury		1.9	0.4	KM	02/21/2011 09:00	SW-7471A
Total Selenium		12.0	1.0	KM	02/21/2011 09:45	SW-6010B
pH (Standard Units) *	7.91			JM	02/21/2011 08:44	SW-9045D
Total Molybdenum		13	5	KM	02/21/2011 09:45	SW-6010B
Chloride		2390	200	JM	02/21/2011 10:00	SM-4500Cl-D
Total Boron		52	1	KM	02/21/2011 09:45	SW-6010B
Total Silver		8	5	KM	02/21/2011 09:45	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.

Debbie Holt

Report Number: 11-062-0204
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 81189
Sample Id : PIMA CO 2/28/11

Date Sampled: 2/28/2011 00:00:00
Date Received: 03/03/2011 00:00
Date Reported: 03/08/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	6.09	60900	100.0	JM	03/03/2011 15:00	SM-2540G
Moisture *	93.91		100.0	JM	03/03/2011 15:00	SM-2540G
Total Kjeldahl Nitrogen	7.60	76000	10.0	JM	03/04/2011 08:30	SM-4500-NH3C-TKN
Total Phosphorus	2.70	27000	100	KM	03/04/2011 13:09	SW-6010B
Total Potassium	0.27	2680	100	KM	03/04/2011 13:09	SW-6010B
Total Sulfur	1.08	10800	100	KM	03/04/2011 13:09	SW-6010B
Total Calcium	4.96	49600	100	KM	03/04/2011 13:09	SW-6010B
Total Magnesium	0.54	5440	100	KM	03/04/2011 13:09	SW-6010B
Total Sodium	0.29	2910	100	KM	03/04/2011 13:09	SW-6010B
Total Iron		7970	1	KM	03/04/2011 13:09	SW-6010B
Total Aluminum		10700	10	KM	03/04/2011 13:09	SW-6010B
Total Manganese		162	1	KM	03/04/2011 13:09	SW-6010B
Total Copper		470	1	KM	03/04/2011 13:09	SW-6010B
Total Zinc		1060	1	KM	03/04/2011 13:09	SW-6010B
Ammonia Nitrogen	2.53	25300	10.0	JM	03/04/2011 08:30	SM-4500-NH3C
Organic N	5.07	50700	10.0		03/04/2011 08:30	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	03/04/2011 08:30	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	03/04/2011 13:09	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.

Debbie Holt

Report Number: 11-062-0204
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 81189
Sample Id : PIMA CO 2/28/11

Date Sampled: 2/28/2011 00:00:00
Date Received: 03/03/2011 00:00
Date Reported: 03/08/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		41	5	KM	03/04/2011 13:09	SW-6010B
Total Nickel		23	5	KM	03/04/2011 13:09	SW-6010B
Total Lead		20	5	KM	03/04/2011 13:09	SW-6010B
Total Arsenic		11.0	1.0	KM	03/04/2011 13:09	SW-6010B
Total Mercury		0.8	0.4	KM	03/04/2011 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	03/04/2011 13:09	SW-6010B
pH (Standard Units) *	8.19			JM	03/04/2011 09:35	SW-9045D
Total Molybdenum		16	5	KM	03/04/2011 13:09	SW-6010B
Chloride		2590	200	JM	03/04/2011 09:40	SM-4500Cl-D
Total Boron		48	1	KM	03/04/2011 13:09	SW-6010B
Total Silver		7	5	KM	03/04/2011 13:09	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.

Debbie Holt

Report Number: 11-077-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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Project : PIMA CO 3/15/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 81457
Sample Id : PIMA CO 3/15/11

Date Sampled: 3/15/2011 00:00:00
Date Received: 03/18/2011 00:00
Date Reported: 03/23/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.66	56600	100.0	BW	03/18/2011 13:59	SM-2540G
Moisture *	94.34		100.0	BW	03/18/2011 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.70	77000	10.0	JM	03/21/2011 08:50	SM-4500-NH3C-TKN
Total Phosphorus	2.59	25900	100	KM	03/22/2011 13:00	SW-6010B
Total Potassium	0.31	3070	100	KM	03/22/2011 13:00	SW-6010B
Total Sulfur	1.01	10100	100	KM	03/22/2011 13:00	SW-6010B
Total Calcium	4.75	47500	100	KM	03/22/2011 13:00	SW-6010B
Total Magnesium	0.52	5240	100	KM	03/22/2011 13:00	SW-6010B
Total Sodium	0.32	3150	100	KM	03/22/2011 13:00	SW-6010B
Total Iron		6790	1	KM	03/22/2011 13:00	SW-6010B
Total Aluminum		10300	10	KM	03/22/2011 13:00	SW-6010B
Total Manganese		151	1	KM	03/22/2011 13:00	SW-6010B
Total Copper		447	1	KM	03/22/2011 13:00	SW-6010B
Total Zinc		1030	1	KM	03/22/2011 13:00	SW-6010B
Ammonia Nitrogen	2.77	27700	10.0	JM	03/21/2011 07:59	SM-4500-NH3C
Organic N	4.93	49300	10.0		03/21/2011 07:59	CALCULATION
Nitrate+Nitrite-N		19.4	1.00	JM	03/21/2011 08:00	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	03/22/2011 13:00	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.

Debbie Holt

Report Number: 11-077-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 3/15/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 81457
Sample Id : PIMA CO 3/15/11

Date Sampled: 3/15/2011 00:00:00
Date Received: 03/18/2011 00:00
Date Reported: 03/23/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		42	5	KM	03/22/2011 13:00	SW-6010B
Total Nickel		23	5	KM	03/22/2011 13:00	SW-6010B
Total Lead		18	5	KM	03/22/2011 13:00	SW-6010B
Total Arsenic		9.0	1.0	KM	03/22/2011 13:00	SW-6010B
Total Mercury		1.1	0.4	KM	03/21/2011 09:00	SW-7471A
Total Selenium		10.0	1.0	KM	03/22/2011 13:00	SW-6010B
pH (Standard Units) *	8.07		0.01	JM	03/21/2011 07:59	SW-9045D
Total Molybdenum		14	5	KM	03/22/2011 13:00	SW-6010B
Chloride		2680	200	JM	03/21/2011 09:45	SM-4500Cl-D
Total Boron		53	1	KM	03/22/2011 13:00	SW-6010B
Total Silver		7	5	KM	03/22/2011 13:00	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.

Debbie Holt

Report Number: 11-091-8214
Account Number: 16010

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TUCSON , AZ 85705

Project : PIMA CO 3/28/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 81728
Sample Id : PIMA CO 3/28/11

Date Sampled: 3/28/2011 00:00:00
Date Received: 04/01/2011 00:00
Date Reported: 05/16/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.48	54800	100.0	JM	04/01/2011 13:39	SM-2540G
Moisture *	94.52		100.0	JM	04/01/2011 13:39	SM-2540G
Total Kjeldahl Nitrogen	8.43	84300	10.0	JM	04/04/2011 08:15	SM-4500-NH3C-TKN
Total Phosphorus	2.56	25600	100	KM	04/04/2011 12:49	SW-6010B
Total Potassium	0.33	3280	100	KM	04/04/2011 12:49	SW-6010B
Total Sulfur	1.02	10200	100	KM	04/04/2011 12:49	SW-6010B
Total Calcium	5.01	50100	100	KM	04/04/2011 12:49	SW-6010B
Total Magnesium	0.52	5220	100	KM	04/04/2011 12:49	SW-6010B
Total Sodium	0.33	3330	100	KM	04/04/2011 12:49	SW-6010B
Total Iron		6430	1	KM	04/04/2011 12:49	SW-6010B
Total Aluminum		9200	10	KM	04/04/2011 12:49	SW-6010B
Total Manganese		142	1	KM	04/04/2011 12:49	SW-6010B
Total Copper		496	1	KM	04/04/2011 12:49	SW-6010B
Total Zinc		1020	1	KM	04/04/2011 12:49	SW-6010B
Ammonia Nitrogen	2.88	28800	10.0	JM	04/04/2011 08:15	SM-4500-NH3C
Organic N	5.55	55500	10.0		04/04/2011 08:15	CALCULATION
Nitrate+Nitrite-N		31.0	1.00	JM	04/04/2011 08:15	SM-4500NO3F
Total Cadmium		1.0	1.0	KM	04/04/2011 12:49	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.

Debbie Holt

Report Number: 11-091-8214
Account Number: 16010

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TUCSON , AZ 85705

Project : PIMA CO 3/28/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 81728
Sample Id : PIMA CO 3/28/11

Date Sampled: 3/28/2011 00:00:00
Date Received: 04/01/2011 00:00
Date Reported: 05/16/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	04/04/2011 12:49	SW-6010B
Total Nickel		26	5	KM	04/04/2011 12:49	SW-6010B
Total Lead		18	5	KM	04/04/2011 12:49	SW-6010B
Total Arsenic		9.0	1.0	KM	04/04/2011 12:49	SW-6010B
Total Mercury		2.0	0.4	KM	04/04/2011 11:00	SW-7471A
Total Selenium		10.0	1.0	KM	04/04/2011 12:49	SW-6010B
pH (Standard Units) *	8.03		0.01	JM	04/04/2011 08:15	SW-9045D
Total Molybdenum		14	5	KM	04/04/2011 12:49	SW-6010B
Chloride		3160	200	JM	04/05/2011 09:25	SM-4500Cl-D
Total Boron		58	1	KM	04/04/2011 12:49	SW-6010B
Total Silver		9	5	KM	04/04/2011 12:49	SW-6010B

Comments:
QUALIFIER: THE MATRIX SPIKE WAS RECOVERY WAS OUT OF LIMITS FOR "K", "Mg", "P", "Se", AND "S". ALL OTHER QC DATA IS ACCEPTABLE.
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
REPORT REISSUED WITH ABOVE COMMENT

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

Debbie Holt

Report Number: 11-108-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 4/14/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 81956
Sample Id : PIMA CO 4/14/2011

Date Sampled: 4/14/2011 00:00:00
Date Received: 04/18/2011 00:00
Date Reported: 04/25/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.87	58700	100.0	JM	04/18/2011 15:45	SM-2540G
Moisture *	94.13		100.0	JM	04/18/2011 15:45	SM-2540G
Total Kjeldahl Nitrogen	7.63	76300	10.0	TW	04/19/2011 09:15	SM-4500-NH3C-TKN
Total Phosphorus	2.53	25300	100	KM	04/19/2011 12:50	SW-6010B
Total Potassium	0.28	2820	100	KM	04/19/2011 12:50	SW-6010B
Total Sulfur	1.04	10400	100	KM	04/19/2011 12:50	SW-6010B
Total Calcium	5.73	57300	100	KM	04/19/2011 12:50	SW-6010B
Total Magnesium	0.52	5240	100	KM	04/19/2011 12:50	SW-6010B
Total Sodium	0.34	3390	100	KM	04/19/2011 12:50	SW-6010B
Total Iron		7180	1	KM	04/19/2011 12:50	SW-6010B
Total Aluminum		9500	10	KM	04/19/2011 12:50	SW-6010B
Total Manganese		130	1	KM	04/19/2011 12:50	SW-6010B
Total Copper		484	1	KM	04/19/2011 12:50	SW-6010B
Total Zinc		1040	1	KM	04/19/2011 12:50	SW-6010B
Ammonia Nitrogen	2.45	24500	10.0	MW	04/19/2011 09:15	SM-4500-NH3C
Organic N	5.18	51800	10.0		04/19/2011 09:15	CALCULATION
Nitrate+Nitrite-N		23.9	1.00	MW	04/20/2011 09:20	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	04/19/2011 12:50	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.

Debbie Holt

Report Number: 11-108-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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Project : PIMA CO 4/14/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 81956
Sample Id : PIMA CO 4/14/2011

Date Sampled: 4/14/2011 00:00:00
Date Received: 04/18/2011 00:00
Date Reported: 04/25/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	04/19/2011 12:50	SW-6010B
Total Nickel		31	5	KM	04/19/2011 12:50	SW-6010B
Total Lead		19	5	KM	04/19/2011 12:50	SW-6010B
Total Arsenic		8.0	1.0	KM	04/19/2011 12:50	SW-6010B
Total Mercury		1.7	0.4	KM	04/20/2011 09:00	SW-7471A
Total Selenium		15.0	1.0	KM	04/19/2011 12:50	SW-6010B
pH (Standard Units) *	8.15			MW	04/20/2011 10:54	SW-9045D
Total Molybdenum		17	5	KM	04/19/2011 12:50	SW-6010B
Chloride		2630	200	JM	04/21/2011 09:00	SM-4500Cl-D
Total Boron		52	1	KM	04/19/2011 12:50	SW-6010B
Total Silver		11	5	KM	04/19/2011 12:50	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.

Debbie Holt

Report Number: 11-118-0208
Account Number: 16010
Submitted By: ROB FEHRMANN

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A&L Eastern Laboratories, Inc.
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: AVRA GRO SYSTEMS
2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 4/26/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 82129
Sample Id : PIMA CO 4/26/2011

Date Sampled: 4/26/2011 00:00:00
Date Received: 04/28/2011 00:00
Date Reported: 05/04/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.38	53800	100.0	JM	04/28/2011 14:15	SM-2540G
Moisture *	94.62		100.0	JM	04/28/2011 14:15	SM-2540G
Total Kjeldahl Nitrogen	7.43	74300	10.0	JM	05/04/2011 09:00	SM-4500-NH3C-TKN
Total Phosphorus	2.84	28400	100	KM	04/29/2011 12:00	SW-6010B
Total Potassium	0.28	2770	100	KM	04/29/2011 12:00	SW-6010B
Total Sulfur	1.20	12000	100	KM	04/29/2011 12:00	SW-6010B
Total Calcium	5.96	59600	100	KM	04/29/2011 12:00	SW-6010B
Total Magnesium	0.54	5380	100	KM	04/29/2011 12:00	SW-6010B
Total Sodium	0.36	3630	100	KM	04/29/2011 12:00	SW-6010B
Total Iron		7980	1	KM	04/29/2011 12:00	SW-6010B
Total Aluminum		10700	10	KM	04/29/2011 12:00	SW-6010B
Total Manganese		149	1	KM	04/29/2011 12:00	SW-6010B
Total Copper		535	1	KM	04/29/2011 12:00	SW-6010B
Total Zinc		1190	1	KM	04/29/2011 12:00	SW-6010B
Ammonia Nitrogen	2.27	22700	10.0	JM	04/29/2011 08:35	SM-4500-NH3C
Organic N	5.16	51600	10.0		04/29/2011 08:35	CALCULATION
Nitrate+Nitrite-N		18.6	1.00	JM	04/29/2011 08:35	SM-4500NO3F
Total Cadmium		3.0	1.0	KM	04/29/2011 12:00	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.

Debbie Holt

Report Number: 11-118-0208
Account Number: 16010
Submitted By: ROB FEHRMANN

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2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 4/26/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 82129
Sample Id : PIMA CO 4/26/2011

Date Sampled: 4/26/2011 00:00:00
Date Received: 04/28/2011 00:00
Date Reported: 05/04/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		36	5	KM	04/29/2011 12:00	SW-6010B
Total Nickel		21	5	KM	04/29/2011 12:00	SW-6010B
Total Lead		22	5	KM	04/29/2011 12:00	SW-6010B
Total Arsenic		11.0	1.0	KM	04/29/2011 12:00	SW-6010B
Total Mercury		1.3	0.4	KM	04/29/2011 09:00	SW-7471A
Total Selenium		5.0	1.0	KM	04/29/2011 12:00	SW-6010B
pH (Standard Units) *	7.96		0.01	JM	04/29/2011 08:35	SW-9045D
Total Molybdenum		16	5	KM	04/29/2011 12:00	SW-6010B
Chloride		2580	200	JM	05/02/2011 09:55	SM-4500Cl-D
Total Boron		50	1	KM	04/29/2011 12:00	SW-6010B
Total Silver		13	5	KM	05/02/2011 13:00	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.

Debbie Holt

Report Number: 11-138-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 5/12/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 82438
Sample Id : PIMA CO 5/12/2011

Date Sampled: 5/12/2011 00:00:00
Date Received: 05/18/2011 00:00
Date Reported: 05/24/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.66	56600	100.0	BW	05/18/2011 15:00	SM-2540G
Moisture *	94.34		100.0	BW	05/18/2011 15:00	SM-2540G
Total Kjeldahl Nitrogen	8.22	82200	10.0	JM	05/19/2011 08:55	SM-4500-NH3C-TKN
Total Phosphorus	2.52	25200	100	KM	05/19/2011 12:54	SW-6010B
Total Potassium	0.28	2800	100	KM	05/19/2011 12:54	SW-6010B
Total Sulfur	1.16	11600	100	KM	05/19/2011 12:54	SW-6010B
Total Calcium	5.17	51700	100	KM	05/19/2011 12:54	SW-6010B
Total Magnesium	0.52	5150	100	KM	05/19/2011 12:54	SW-6010B
Total Sodium	0.34	3360	100	KM	05/19/2011 12:54	SW-6010B
Total Iron		7600	1	KM	05/19/2011 12:54	SW-6010B
Total Aluminum		9200	10	KM	05/19/2011 12:54	SW-6010B
Total Manganese		139	1	KM	05/19/2011 12:54	SW-6010B
Total Copper		527	1	KM	05/19/2011 12:54	SW-6010B
Total Zinc		1150	1	KM	05/19/2011 12:54	SW-6010B
Ammonia Nitrogen	2.84	28400	10.0	JM	05/19/2011 08:55	SM-4500-NH3C
Organic N	5.38	53800	10.0		05/19/2011 08:55	CALCULATION
Nitrate+Nitrite-N		35.3	1.00	JM	05/19/2011 08:25	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	05/19/2011 12:54	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.

Debbie Holt

Report Number: 11-138-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 5/12/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 82438
Sample Id : PIMA CO 5/12/2011

Date Sampled: 5/12/2011 00:00:00
Date Received: 05/18/2011 00:00
Date Reported: 05/24/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	05/19/2011 12:54	SW-6010B
Total Nickel		20	5	KM	05/19/2011 12:54	SW-6010B
Total Lead		19	5	KM	05/19/2011 12:54	SW-6010B
Total Arsenic		11.0	1.0	KM	05/19/2011 12:54	SW-6010B
Total Mercury		2.1	0.4	KM	05/19/2011 09:00	SW-7471A
Total Selenium		7.0	1.0	KM	05/19/2011 12:54	SW-6010B
pH (Standard Units) *	8.19			JM	05/19/2011 08:55	SW-9045D
Total Molybdenum		17	5	KM	05/19/2011 12:54	SW-6010B
Chloride		3260	200	JM	05/20/2011 08:15	SM-4500Cl-D
Total Boron		58	1	KM	05/19/2011 12:54	SW-6010B
Total Silver		14	0	KM	05/19/2011 12:54	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.

Debbie Holt

Report Number: 11-171-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

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2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 6/15/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 82844
Sample Id : PIMA CO 6/15/2011

Date Sampled: 6/15/2011 00:00:00
Date Received: 06/20/2011 00:00
Date Reported: 06/23/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.17	51700	100.0	JM	06/20/2011 14:50	SM-2540G
Moisture *	94.83		100.0	JM	06/20/2011 14:50	SM-2540G
Total Kjeldahl Nitrogen	7.93	79300	10.0	JM	06/21/2011 08:44	SM-4500-NH3C-TKN
Total Phosphorus	2.34	23400	100	KM	06/21/2011 14:13	SW-6010B
Total Potassium	0.25	2540	100	KM	06/21/2011 14:13	SW-6010B
Total Sulfur	1.09	10900	100	KM	06/21/2011 14:13	SW-6010B
Total Calcium	4.89	48900	100	KM	06/21/2011 14:13	SW-6010B
Total Magnesium	0.47	4650	100	KM	06/21/2011 14:13	SW-6010B
Total Sodium	0.34	3420	100	KM	06/21/2011 14:13	SW-6010B
Total Iron		6350	1	KM	06/21/2011 14:13	SW-6010B
Total Aluminum		7100	10	KM	06/21/2011 14:13	SW-6010B
Total Manganese		128	1	KM	06/21/2011 14:13	SW-6010B
Total Copper		521	1	KM	06/21/2011 14:13	SW-6010B
Total Zinc		1080	1	KM	06/21/2011 14:13	SW-6010B
Ammonia Nitrogen	2.61	26100	10.0	JM	06/21/2011 08:44	SM-4500-NH3C
Organic N	5.32	53200	10.0		06/21/2011 08:44	CALCULATION
Nitrate+Nitrite-N		36.8	1.00	JM	06/21/2011 08:45	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	06/21/2011 14:13	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.

Debbie Holt

Report Number: 11-171-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 6/15/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 82844
Sample Id : PIMA CO 6/15/2011

Date Sampled: 6/15/2011 00:00:00
Date Received: 06/20/2011 00:00
Date Reported: 06/23/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		34	5	KM	06/21/2011 14:13	SW-6010B
Total Nickel		21	5	KM	06/21/2011 14:13	SW-6010B
Total Lead		20	5	KM	06/21/2011 14:13	SW-6010B
Total Arsenic		10.0	1.0	KM	06/21/2011 14:13	SW-6010B
Total Mercury		2.0	0.4	KM	06/21/2011 09:00	SW-7471A
Total Selenium		8.0	1.0	KM	06/21/2011 14:13	SW-6010B
pH (Standard Units) *	7.99		0.00	JM	06/21/2011 09:40	SW-9045D
Total Molybdenum		14	5	KM	06/21/2011 14:13	SW-6010B
Chloride		3390	200	JM	06/21/2011 10:30	SM-4500Cl-D
Total Boron		54	1	KM	06/21/2011 14:13	SW-6010B
Total Silver		12	5	KM	06/21/2011 14:13	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca", "Cr", "Fe", 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.

Debbie Holt

Report Number: 11-187-0211
Account Number: 16010
Submitted By: ROB FEHRMANN

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2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 6/30/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 83050
Sample Id : PIMA CO 6/30/2011

Date Sampled: 6/30/2011 00:00:00
Date Received: 07/06/2011 00:00
Date Reported: 07/13/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.31	53100	100.0	jm	07/06/2011 14:24	SM-2540G
Moisture *	94.69		100.0	jm	07/06/2011 14:24	SM-2540G
Total Kjeldahl Nitrogen	8.31	83100	10.0	JM	07/07/2011 07:50	SM-4500-NH3C-TKN
Total Phosphorus	2.61	26100	100	KM	07/12/2011 10:05	SW-6010B
Total Potassium	0.27	2700	100	KM	07/12/2011 10:05	SW-6010B
Total Sulfur	1.18	11800	100	KM	07/12/2011 10:05	SW-6010B
Total Calcium	5.07	50700	100	KM	07/12/2011 10:05	SW-6010B
Total Magnesium	0.51	5100	100	KM	07/12/2011 10:05	SW-6010B
Total Sodium	0.32	3200	100	KM	07/12/2011 10:05	SW-6010B
Total Iron		7480	1	KM	07/12/2011 10:05	SW-6010B
Total Aluminum		9200	10	KM	07/12/2011 10:05	SW-6010B
Total Manganese		135	1	KM	07/12/2011 10:05	SW-6010B
Total Copper		550	1	KM	07/12/2011 10:05	SW-6010B
Total Zinc		1140	1	KM	07/12/2011 10:05	SW-6010B
Ammonia Nitrogen	2.88	28800	10.0	jm	07/07/2011 07:50	SM-4500-NH3C
Organic N	5.43	54300	10.0		07/07/2011 07:50	CALCULATION
Nitrate+Nitrite-N		24.5	1.00	JM	07/07/2011 07:50	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	07/12/2011 10:05	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.

Debbie Holt

Report Number: 11-187-0211
Account Number: 16010
Submitted By: ROB FEHRMANN

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2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 6/30/11
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 83050
Sample Id : PIMA CO 6/30/2011

Date Sampled: 6/30/2011 00:00:00
Date Received: 07/06/2011 00:00
Date Reported: 07/13/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	07/12/2011 10:05	SW-6010B
Total Nickel		21	5	KM	07/12/2011 10:05	SW-6010B
Total Lead		22	5	KM	07/12/2011 10:05	SW-6010B
Total Arsenic		12.0	1.0	KM	07/12/2011 10:05	SW-6010B
Total Mercury		1.9	0.4	KM	07/07/2011 09:00	SW-7471A
Total Selenium		7.0	1.0	KM	07/12/2011 10:05	SW-6010B
pH (Standard Units) *	8.16			jm	07/07/2011 00:00	SW-9045D
Total Molybdenum		17	5	KM	07/12/2011 10:05	SW-6010B
Chloride		2900	200	JM	07/07/2011 08:20	SM-4500Cl-D
Total Boron		55	1	KM	07/12/2011 10:05	SW-6010B
Total Silver		8	5	KM	07/13/2011 09:00	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Na". 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.

Debbie Holt

Report Number: 11-203-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 7/18/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83281
Sample Id : PIMA CO 7/18/11

Date Sampled: 7/18/2011 00:00:00
Date Received: 07/22/2011 00:00
Date Reported: 07/28/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.59	55900	100.0	BW	07/22/2011 13:59	SM-2540G
Moisture *	94.41		100.0	BW	07/22/2011 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.87	78700	10.0	MW	07/25/2011 08:24	SM-4500-NH3C-TKN
Total Phosphorus	2.49	24900	100	JM	07/28/2011 08:20	SW-6010B
Total Potassium	0.31	3070	100	JM	07/28/2011 08:20	SW-6010B
Total Sulfur	1.16	11600	100	JM	07/28/2011 08:20	SW-6010B
Total Calcium	4.97	49700	100	JM	07/28/2011 08:20	SW-6010B
Total Magnesium	0.54	5410	100	JM	07/28/2011 08:20	SW-6010B
Total Sodium	0.32	3180	100	JM	07/28/2011 08:20	SW-6010B
Total Iron		8750	1	JM	07/28/2011 08:20	SW-6010B
Total Aluminum		9400	10	JM	07/28/2011 08:20	SW-6010B
Total Manganese		141	1	JM	07/28/2011 08:20	SW-6010B
Total Copper		578	1	JM	07/28/2011 08:20	SW-6010B
Total Zinc		1160	1	JM	07/28/2011 08:20	SW-6010B
Ammonia Nitrogen	2.59	25900	10.0	MW	07/25/2011 08:24	SM-4500-NH3C
Organic N	5.28	52800	10.0		07/25/2011 08:24	CALCULATION
Nitrate+Nitrite-N		35.8	1.00	MW	07/25/2011 08:25	SM-4500NO3F
Total Cadmium		2.0	1.0	JM	07/28/2011 08:20	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.

Debbie Holt

Report Number: 11-203-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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Send To: AVRA GRO SYSTEMS
2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 7/18/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83281
Sample Id : PIMA CO 7/18/11

Date Sampled: 7/18/2011 00:00:00
Date Received: 07/22/2011 00:00
Date Reported: 07/28/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		39	5	JM	07/28/2011 08:20	SW-6010B
Total Nickel		29	5	JM	07/28/2011 08:20	SW-6010B
Total Lead		23	5	JM	07/28/2011 08:20	SW-6010B
Total Arsenic		11.0	1.0	JM	07/28/2011 08:20	SW-6010B
Total Mercury		1.2	0.4	JM	07/27/2011 10:00	SW-7471A
Total Selenium		7.0	1.0	JM	07/28/2011 08:20	SW-6010B
pH (Standard Units) *	8.03		0.01	MW	07/25/2011 09:54	SW-9045D
Total Molybdenum		16	5	JM	07/28/2011 08:20	SW-6010B
Chloride		3090	200	MW	07/26/2011 09:00	SM-4500Cl-D
Total Boron		52	1	JM	07/28/2011 08:20	SW-6010B
Total Silver		<5	5	JM	07/28/2011 08:20	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "Mn". 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.

Debbie Holt

Report Number: 11-215-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

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2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 7/28/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83409
Sample Id : PIMA CO 7/28/11

Date Sampled: 7/28/2011 00:00:00
Date Received: 08/04/2011 00:00
Date Reported: 08/08/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.20	52000	100.0	JM	08/03/2011 13:45	SM-2540G
Moisture *	94.80		100.0	JM	08/03/2011 13:45	SM-2540G
Total Kjeldahl Nitrogen	7.92	79200	10.0	JM	08/05/2011 08:50	SM-4500-NH3C-TKN
Total Phosphorus	2.53	25300	100	KM	08/04/2011 14:52	SW-6010B
Total Potassium	0.28	2750	100	KM	08/04/2011 14:52	SW-6010B
Total Sulfur	1.16	11600	100	KM	08/04/2011 14:52	SW-6010B
Total Calcium	5.42	54200	100	KM	08/04/2011 14:52	SW-6010B
Total Magnesium	0.53	5320	100	KM	08/04/2011 14:52	SW-6010B
Total Sodium	0.33	3300	100	KM	08/04/2011 14:52	SW-6010B
Total Iron		9130	1	KM	08/04/2011 14:52	SW-6010B
Total Aluminum		9500	10	KM	08/04/2011 14:52	SW-6010B
Total Manganese		158	1	KM	08/04/2011 14:52	SW-6010B
Total Copper		606	1	KM	08/04/2011 14:52	SW-6010B
Total Zinc		1140	1	KM	08/04/2011 14:52	SW-6010B
Ammonia Nitrogen	2.79	27900	10.0	JM	08/04/2011 08:50	SM-4500-NH3C
Organic N	5.13	51300	10.0		08/04/2011 08:50	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	08/04/2011 08:50	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	08/04/2011 14:52	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.

Debbie Holt

Report Number: 11-215-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 7/28/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83409
Sample Id : PIMA CO 7/28/11

Date Sampled: 7/28/2011 00:00:00
Date Received: 08/04/2011 00:00
Date Reported: 08/08/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		45	5	KM	08/04/2011 14:52	SW-6010B
Total Nickel		37	5	KM	08/04/2011 14:52	SW-6010B
Total Lead		24	5	KM	08/04/2011 14:52	SW-6010B
Total Arsenic		12.0	1.0	KM	08/04/2011 14:52	SW-6010B
Total Mercury		1.9	0.4	KM	08/04/2011 12:00	SW-7471A
Total Selenium		6.0	1.0	KM	08/04/2011 14:52	SW-6010B
pH (Standard Units) *	8.17			JM	08/04/2011 08:50	SW-9045D
Total Molybdenum		16	5	KM	08/04/2011 14:52	SW-6010B
Chloride		2890	632	MW	08/04/2011 08:50	SM-4500Cl-D
Total Boron		56	1	KM	08/04/2011 14:52	SW-6010B
Total Silver		10	5	KM	08/04/2011 14:52	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.

Debbie Holt

Report Number: 11-234-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 8/17/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83675
Sample Id : PIMA CO 8/17/11

Date Sampled: 8/17/2011 00:00:00
Date Received: 08/22/2011 00:00
Date Reported: 08/25/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.28	52800	100.0	JM	08/22/2011 15:29	SM-2540G
Moisture *	94.72		100.0	JM	08/22/2011 15:29	SM-2540G
Total Kjeldahl Nitrogen	7.97	79700	10.0	JM	08/23/2011 09:00	SM-4500-NH3C-TKN
Total Phosphorus	2.55	25500	100	KM	08/23/2011 13:33	SW-6010B
Total Potassium	0.27	2660	100	KM	08/23/2011 13:33	SW-6010B
Total Sulfur	1.28	12800	100	KM	08/23/2011 13:33	SW-6010B
Total Calcium	6.03	60300	100	KM	08/23/2011 13:33	SW-6010B
Total Magnesium	0.55	5460	100	KM	08/23/2011 13:33	SW-6010B
Total Sodium	0.37	3670	100	KM	08/23/2011 13:33	SW-6010B
Total Iron		8480	1	KM	08/23/2011 13:33	SW-6010B
Total Aluminum		8300	10	KM	08/23/2011 13:33	SW-6010B
Total Manganese		160	1	KM	08/23/2011 13:33	SW-6010B
Total Copper		667	1	KM	08/23/2011 13:33	SW-6010B
Total Zinc		1340	1	KM	08/23/2011 13:33	SW-6010B
Ammonia Nitrogen	2.80	28000	10.0	JM	08/23/2011 09:00	SM-4500-NH3C
Organic N	5.17	51700	10.0		08/23/2011 09:00	CALCULATION
Nitrate+Nitrite-N		32.2	1.00	JM	08/23/2011 09:00	SM-4500NO3F
Total Cadmium		3.0	1.0	KM	08/23/2011 13:33	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.

Debbie Holt

Report Number: 11-234-0201
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 8/17/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83675
Sample Id : PIMA CO 8/17/11

Date Sampled: 8/17/2011 00:00:00
Date Received: 08/22/2011 00:00
Date Reported: 08/25/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		39	5	KM	08/23/2011 13:33	SW-6010B
Total Nickel		27	5	KM	08/23/2011 13:33	SW-6010B
Total Lead		27	5	KM	08/23/2011 13:33	SW-6010B
Total Arsenic		14.0	1.0	KM	08/23/2011 13:33	SW-6010B
Total Mercury		1.8	0.4	KM	08/23/2011 12:00	SW-7471A
Total Selenium		7.0	1.0	KM	08/23/2011 13:33	SW-6010B
pH (Standard Units) *	8.05		0.01	JM	08/23/2011 09:00	SW-9045D
Total Molybdenum		18	5	KM	08/23/2011 13:33	SW-6010B
Chloride		3230	200	JM	08/24/2011 09:40	SM-4500Cl-D
Total Boron		56	1	KM	08/23/2011 13:33	SW-6010B
Total Silver		9	5	KM	08/23/2011 13:33	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.

Debbie Holt

Report Number: 11-245-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 8/30/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83845
Sample Id : PIMA CO 8/30/11

Date Sampled: 8/30/2011 00:00:00
Date Received: 09/02/2011 00:00
Date Reported: 09/09/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.23	52300	100.0	RD	09/02/2011 15:29	SM-2540G
Moisture *	94.77		100.0	RD	09/02/2011 15:29	SM-2540G
Total Kjeldahl Nitrogen	7.88	78800	10.0	JM	09/06/2011 09:40	SM-4500-NH3C-TKN
Total Phosphorus	2.33	23300	100	KM	09/06/2011 13:20	SW-6010B
Total Potassium	0.29	2860	100	KM	09/06/2011 13:20	SW-6010B
Total Sulfur	1.18	11800	100	KM	09/06/2011 13:20	SW-6010B
Total Calcium	5.08	50800	100	KM	09/06/2011 13:20	SW-6010B
Total Magnesium	0.51	5060	100	KM	09/06/2011 13:20	SW-6010B
Total Sodium	0.31	3130	100	KM	09/06/2011 13:20	SW-6010B
Total Iron		10500	1	KM	09/06/2011 13:20	SW-6010B
Total Aluminum		10200	10	KM	09/06/2011 13:20	SW-6010B
Total Manganese		175	1	KM	09/06/2011 13:20	SW-6010B
Total Copper		665	1	KM	09/06/2011 13:20	SW-6010B
Total Zinc		1200	1	KM	09/06/2011 13:20	SW-6010B
Ammonia Nitrogen	2.75	27500	10.0	JM	09/06/2011 09:40	SM-4500-NH3C
Organic N	5.13	51300	10.0		09/06/2011 09:40	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	09/06/2011 09:40	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	09/06/2011 13:20	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.

Debbie Holt

Report Number: 11-245-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 8/30/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 83845
Sample Id : PIMA CO 8/30/11

Date Sampled: 8/30/2011 00:00:00
Date Received: 09/02/2011 00:00
Date Reported: 09/09/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	09/06/2011 13:20	SW-6010B
Total Nickel		24	5	KM	09/06/2011 13:20	SW-6010B
Total Lead		26	5	KM	09/06/2011 13:20	SW-6010B
Total Arsenic		12.0	1.0	KM	09/06/2011 13:20	SW-6010B
Total Mercury		1.8	0.4	KM	09/06/2011 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	09/06/2011 13:20	SW-6010B
pH (Standard Units) *	7.98		0.01	JM	09/06/2011 10:50	SW-9045D
Total Molybdenum		16	5	KM	09/06/2011 13:20	SW-6010B
Chloride		3020	200	JM	09/06/2011 12:45	SM-4500Cl-D
Total Boron		56	1	KM	09/06/2011 13:20	SW-6010B
Total Silver		10	5	KM	09/08/2011 11:00	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB WAS OUT OF LIMITS FOR "As". 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.

Debbie Holt

Report Number: 11-262-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 9/14/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 84017
Sample Id : PIMA CO 9/14/2011

Date Sampled: 9/14/2011 00:00:00
Date Received: 09/19/2011 00:00
Date Reported: 09/22/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.22	52200	100.0	JM	09/19/2011 13:54	SM-2540G
Moisture *	94.78		100.0	JM	09/19/2011 13:54	SM-2540G
Total Kjeldahl Nitrogen	7.78	77800	10.0	JM	09/20/2011 07:14	SM-4500-NH3C-TKN
Total Phosphorus	2.36	23600	100	KM	09/21/2011 13:54	SW-6010B
Total Potassium	0.25	2540	100	KM	09/21/2011 13:54	SW-6010B
Total Sulfur	1.27	12700	100	KM	09/21/2011 13:54	SW-6010B
Total Calcium	5.12	51200	100	KM	09/21/2011 13:54	SW-6010B
Total Magnesium	0.50	5000	100	KM	09/21/2011 13:54	SW-6010B
Total Sodium	0.33	3270	100	KM	09/21/2011 13:54	SW-6010B
Total Iron		8130	1	KM	09/21/2011 13:54	SW-6010B
Total Aluminum		8200	10	KM	09/21/2011 13:54	SW-6010B
Total Manganese		168	1	KM	09/21/2011 13:54	SW-6010B
Total Copper		627	1	KM	09/21/2011 13:54	SW-6010B
Total Zinc		1220	1	KM	09/21/2011 13:54	SW-6010B
Ammonia Nitrogen	2.53	25300	10.0	JM	09/20/2011 07:14	SM-4500-NH3C
Organic N	5.25	52500	10.0		09/20/2011 07:14	CALCULATION
Nitrate+Nitrite-N		92.0	1.00	JM	09/20/2011 07:15	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	09/21/2011 13:54	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.

Debbie Holt

Report Number: 11-262-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 9/14/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 84017
Sample Id : PIMA CO 9/14/2011

Date Sampled: 9/14/2011 00:00:00
Date Received: 09/19/2011 00:00
Date Reported: 09/22/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		42	5	KM	09/21/2011 13:54	SW-6010B
Total Nickel		22	5	KM	09/21/2011 13:54	SW-6010B
Total Lead		25	5	KM	09/21/2011 13:54	SW-6010B
Total Arsenic		11.0	1.0	KM	09/21/2011 13:54	SW-6010B
Total Mercury		1.9	0.4	KM	09/21/2011 09:00	SW-7471A
Total Selenium		10.0	1.0	KM	09/21/2011 13:54	SW-6010B
pH (Standard Units) *	8.07			JM	09/20/2011 07:14	SW-9045D
Total Molybdenum		16	5	KM	09/21/2011 13:54	SW-6010B
Chloride		4150	200	JM	09/21/2011 08:35	SM-4500Cl-D
Total Boron		58	1	KM	09/21/2011 13:54	SW-6010B
Total Silver		9	5	KM	09/21/2011 13:54	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca" AND "Mg". 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.

Debbie Holt

Report Number: 11-276-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 9/29/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 84184
Sample Id : PIMA CO 9/29/2011

Date Sampled: 9/29/2011 00:00:00
Date Received: 10/03/2011 00:00
Date Reported: 10/06/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.18	51800	100.0	JM	10/03/2011 13:59	SM-2540G
Moisture *	94.82		100.0	JM	10/03/2011 13:59	SM-2540G
Total Kjeldahl Nitrogen	7.70	77000	10.0	JM	10/04/2011 07:30	SM-4500-NH3C-TKN
Total Phosphorus	2.46	24600	100	KM	10/04/2011 16:09	SW-6010B
Total Potassium	0.32	3190	100	KM	10/04/2011 16:09	SW-6010B
Total Sulfur	1.38	13800	100	KM	10/04/2011 16:09	SW-6010B
Total Calcium	5.48	54800	100	KM	10/04/2011 16:09	SW-6010B
Total Magnesium	0.57	5670	100	KM	10/04/2011 16:09	SW-6010B
Total Sodium	0.37	3650	100	KM	10/04/2011 16:09	SW-6010B
Total Iron		11800	1	KM	10/04/2011 16:09	SW-6010B
Total Aluminum		11900	10	KM	10/04/2011 16:09	SW-6010B
Total Manganese		186	1	KM	10/04/2011 16:09	SW-6010B
Total Copper		642	1	KM	10/04/2011 16:09	SW-6010B
Total Zinc		1340	1	KM	10/04/2011 16:09	SW-6010B
Ammonia Nitrogen	2.57	25700	10.0	JM	10/04/2011 07:30	SM-4500-NH3C
Organic N	5.13	51300	10.0		10/04/2011 07:30	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	10/04/2011 07:40	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	10/04/2011 16:09	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.

Debbie Holt

Report Number: 11-276-0202
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 9/29/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 84184
Sample Id : PIMA CO 9/29/2011

Date Sampled: 9/29/2011 00:00:00
Date Received: 10/03/2011 00:00
Date Reported: 10/06/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		45	5	KM	10/04/2011 16:09	SW-6010B
Total Nickel		24	5	KM	10/04/2011 16:09	SW-6010B
Total Lead		29	5	KM	10/04/2011 16:09	SW-6010B
Total Arsenic		12.0	1.0	KM	10/04/2011 16:09	SW-6010B
Total Mercury		1.8	0.4	KM	10/04/2011 11:00	SW-7471A
Total Selenium		8.0	1.0	KM	10/04/2011 16:09	SW-6010B
pH (Standard Units) *	8.15		0.01	JM	10/04/2011 07:30	SW-9045D
Total Molybdenum		19	5	KM	10/04/2011 16:09	SW-6010B
Chloride		2950	200	JM	10/05/2011 09:45	SM-4500Cl-D
Total Boron		61	1	KM	10/04/2011 16:09	SW-6010B
Total Silver		9	0	KM	10/04/2011 16:09	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.

Debbie Holt

Report Number: 11-293-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85705

Project : PIMA CO 10/17/11
AZ#0629

REPORT OF ANALYSIS

Lab Number : 84451
Sample Id : PIMA CO 10-17-11

Date Sampled: 10/17/2011 00:00:00
Date Received: 10/20/2011 00:00
Date Reported: 10/25/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.14	51400	100.0	JM	10/20/2011 14:30	SM-2540G
Moisture *	94.86		100.0	JM	10/20/2011 14:30	SM-2540G
Total Kjeldahl Nitrogen	7.67	76700	10.0	JM	10/21/2011 07:45	SM-4500-NH3C-TKN
Total Phosphorus	2.32	23200	100	KM	10/21/2011 12:36	SW-6010B
Total Potassium	0.30	2970	100	KM	10/21/2011 12:36	SW-6010B
Total Sulfur	1.21	12100	100	KM	10/21/2011 12:36	SW-6010B
Total Calcium	5.01	50100	100	KM	10/21/2011 12:36	SW-6010B
Total Magnesium	0.51	5100	100	KM	10/21/2011 12:36	SW-6010B
Total Sodium	0.31	3090	100	KM	10/21/2011 12:36	SW-6010B
Total Iron		10200	1	KM	10/21/2011 12:36	SW-6010B
Total Aluminum		10600	10	KM	10/21/2011 12:36	SW-6010B
Total Manganese		203	1	KM	10/21/2011 12:36	SW-6010B
Total Copper		623	1	KM	10/21/2011 12:36	SW-6010B
Total Zinc		1200	1	KM	10/21/2011 12:36	SW-6010B
Ammonia Nitrogen	2.57	25700	10.0	JM	10/21/2011 07:45	SM-4500-NH3C
Organic N	5.10	51000	10.0		10/21/2011 07:45	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	10/21/2011 07:45	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	10/21/2011 12:36	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.

Debbie Holt

Report Number: 11-293-0203
Account Number: 16010
Submitted By: ROB FEHRMANN

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Send To: AVRA GRO SYSTEMS
2305 W RUTHRAUFF RD
TUCSON , AZ 85705

Project : PIMA CO 10/17/11
AZ#0629

REPORT OF ANALYSIS

Lab Number : 84451
Sample Id : PIMA CO 10-17-11

Date Sampled: 10/17/2011 00:00:00
Date Received: 10/20/2011 00:00
Date Reported: 10/25/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		50	5	KM	10/21/2011 12:36	SW-6010B
Total Nickel		21	5	KM	10/21/2011 12:36	SW-6010B
Total Lead		24	5	KM	10/21/2011 12:36	SW-6010B
Total Arsenic		10.0	1.0	KM	10/21/2011 12:36	SW-6010B
Total Mercury		1.9	0.4	KM	10/24/2011 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	10/21/2011 12:36	SW-6010B
pH (Standard Units) *	8.09		0.01	JM	10/21/2011 07:45	SW-9045D
Total Molybdenum		17	5	KM	10/21/2011 12:36	SW-6010B
Chloride		2950	200	JM	10/21/2011 08:50	SM-4500Cl-D
Total Boron		55	1	KM	10/21/2011 12:36	SW-6010B
Total Silver		8	0	KM	10/21/2011 12:36	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE LRB AND MATRIX SPIKE WERE 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.

Debbie Holt

Report Number: 11-307-0214
Account Number: 16010
Submitted By: RPB FEHRMANN

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PO Box 91708
TUCSON , AZ 85752

Project : PIMA CO 10/31/2011
AZ CERT#0629

REPORT OF ANALYSIS

Lab Number : 84669
Sample Id : PIMA CO 10/31/2011

Date Sampled: 10/31/2011 00:00:00
Date Received: 11/03/2011 00:00
Date Reported: 11/08/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		49	5	KM	11/04/2011 13:36	SW-6010B
Total Nickel		23	5	KM	11/04/2011 13:36	SW-6010B
Total Lead		26	5	KM	11/04/2011 13:36	SW-6010B
Total Arsenic		12.0	1.0	KM	11/04/2011 13:36	SW-6010B
Total Mercury		1.4	0.4	KM	11/04/2011 09:00	SW-7471A
Total Selenium		7.0	1.0	KM	11/04/2011 13:36	SW-6010B
pH (Standard Units) *	8.12		0.01	JM	11/04/2011 07:39	SW-9045D
Total Molybdenum		20	5	KM	11/04/2011 13:36	SW-6010B
Chloride		519	200	JM	11/07/2011 09:10	SM-4500Cl-D
Total Boron		51	1	KM	11/04/2011 13:36	SW-6010B
Total Silver		<5	5	KM	11/04/2011 13:36	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.

Debbie Holt

Report Number: 11-307-0214
Account Number: 16010
Submitted By: RPB FEHRMANN

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PO Box 91708
TUCSON , AZ 85752

Project : PIMA CO 10/31/2011
AZ CERT#0629

REPORT OF ANALYSIS

Lab Number : 84669
Sample Id : PIMA CO 10/31/2011

Date Sampled: 10/31/2011 00:00:00
Date Received: 11/03/2011 00:00
Date Reported: 11/08/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	4.85	48500	100.0	JM	11/03/2011 14:30	SM-2540G
Moisture *	95.15		100.0	JM	11/03/2011 14:30	SM-2540G
Total Kjeldahl Nitrogen	8.04	80400	10.0	JM	11/04/2011 07:39	SM-4500-NH3C-TKN
Total Phosphorus	2.39	23900	100	KM	11/04/2011 13:36	SW-6010B
Total Potassium	0.31	3070	100	KM	11/04/2011 13:36	SW-6010B
Total Sulfur	1.21	12100	100	KM	11/04/2011 13:36	SW-6010B
Total Calcium	5.08	50800	100	KM	11/04/2011 13:36	SW-6010B
Total Magnesium	0.48	4830	100	KM	11/04/2011 13:36	SW-6010B
Total Sodium	0.32	3240	100	KM	11/04/2011 13:36	SW-6010B
Total Iron		9010	1	KM	11/04/2011 13:36	SW-6010B
Total Aluminum		10000	10	KM	11/04/2011 13:36	SW-6010B
Total Manganese		164	1	KM	11/04/2011 13:36	SW-6010B
Total Copper		558	1	KM	11/04/2011 13:36	SW-6010B
Total Zinc		1280	1	KM	11/04/2011 13:36	SW-6010B
Ammonia Nitrogen	2.66	26600	10.0	JM	11/04/2011 07:39	SM-4500-NH3C
Organic N	5.38	53800	10.0		11/04/2011 07:39	CALCULATION
Nitrate+Nitrite-N		41.2	1.00	JM	11/04/2011 07:40	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	11/04/2011 13:36	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.

Debbie Holt

Report Number: 11-325-0200
Account Number: 16010

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PO Box 91708
TUCSON , AZ 85752

Project : PIMA CO 11/11/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 84943
Sample Id : PIMA CO 11/11/11

Date Sampled: 11/11/2011 00:00:00
Date Received: 11/21/2011 00:00
Date Reported: 11/28/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.47	54700	100.0	MW	11/22/2011 07:50	SM-2540G
Moisture *	94.53		100.0	MW	11/22/2011 07:50	SM-2540G
Total Kjeldahl Nitrogen	7.92	79200	10.0	JM	11/22/2011 07:54	SM-4500-NH3C-TKN
Total Phosphorus	2.60	26000	100	KM	11/22/2011 13:25	SW-6010B
Total Potassium	0.25	2540	100	KM	11/22/2011 13:25	SW-6010B
Total Sulfur	1.18	11800	100	KM	11/22/2011 13:25	SW-6010B
Total Calcium	5.52	55200	100	KM	11/22/2011 13:25	SW-6010B
Total Magnesium	0.49	4870	100	KM	11/22/2011 13:25	SW-6010B
Total Sodium	0.31	3130	100	KM	11/22/2011 13:25	SW-6010B
Total Iron		8470	1	KM	11/22/2011 13:25	SW-6010B
Total Aluminum		8300	10	KM	11/22/2011 13:25	SW-6010B
Total Manganese		159	1	KM	11/22/2011 13:25	SW-6010B
Total Copper		586	1	KM	11/22/2011 13:25	SW-6010B
Total Zinc		1430	1	KM	11/22/2011 13:25	SW-6010B
Ammonia Nitrogen	2.54	25400	10.0	JM	11/22/2011 07:54	SM-4500-NH3C
Organic N	5.38	53800	10.0		11/22/2011 07:54	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	11/22/2011 08:00	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	11/22/2011 13:25	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.

Debbie Holt

Report Number: 11-325-0200
Account Number: 16010

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PO Box 91708
TUCSON , AZ 85752

Project : PIMA CO 11/11/2011
AZ#0629

REPORT OF ANALYSIS

Lab Number : 84943
Sample Id : PIMA CO 11/11/11

Date Sampled: 11/11/2011 00:00:00
Date Received: 11/21/2011 00:00
Date Reported: 11/28/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		39	5	KM	11/22/2011 13:25	SW-6010B
Total Nickel		23	5	KM	11/22/2011 13:25	SW-6010B
Total Lead		23	5	KM	11/22/2011 13:25	SW-6010B
Total Arsenic		11.0	1.0	KM	11/22/2011 13:25	SW-6010B
Total Mercury		1.1	0.4	KM	11/22/2011 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	11/22/2011 13:25	SW-6010B
pH (Standard Units) *	8.05		0.01	JM	11/22/2011 07:59	SW-9045D
Total Molybdenum		19	5	KM	11/22/2011 13:25	SW-6010B
Chloride		2870	200	JM	11/22/2011 09:00	SM-4500Cl-D
Total Boron		47	1	KM	11/22/2011 13:25	SW-6010B
Total Silver		8	0	KM	11/22/2011 13:25	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 "Ca" AND "Fe". 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.

Debbie Holt

Report Number: 11-334-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85752

Project : PIMA CO 11/29/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 85045
Sample Id : PIMA CO 11/29/11

Date Sampled: 11/29/2011 12:00:00
Date Received: 11/30/2011 00:00
Date Reported: 12/06/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	4.91	49100	100.0	MW	12/01/2011 07:59	SM-2540G
Moisture *	95.09		100.0	MW	12/01/2011 07:59	SM-2540G
Total Kjeldahl Nitrogen	8.21	82100	10.0	MW	12/01/2011 08:15	SM-4500-NH3C-TKN
Total Phosphorus	2.36	23600	100	KM	12/01/2011 12:31	SW-6010B
Total Potassium	0.27	2710	100	KM	12/01/2011 12:31	SW-6010B
Total Sulfur	1.04	10400	100	KM	12/01/2011 12:31	SW-6010B
Total Calcium	5.10	51000	100	KM	12/01/2011 12:31	SW-6010B
Total Magnesium	0.47	4690	100	KM	12/01/2011 12:31	SW-6010B
Total Sodium	0.30	2970	100	KM	12/01/2011 12:31	SW-6010B
Total Iron		7210	1	KM	12/01/2011 12:31	SW-6010B
Total Aluminum		8000	10	KM	12/01/2011 12:31	SW-6010B
Total Manganese		141	1	KM	12/01/2011 12:31	SW-6010B
Total Copper		507	1	KM	12/01/2011 12:31	SW-6010B
Total Zinc		1170	1	KM	12/01/2011 12:31	SW-6010B
Ammonia Nitrogen	2.69	26900	10.0	MW	12/01/2011 08:15	SM-4500-NH3C
Organic N	5.52	55200	10.0		12/01/2011 08:15	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	MW	12/01/2011 08:15	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	12/01/2011 12:31	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.

Debbie Holt

Report Number: 11-334-0200
Account Number: 16010
Submitted By: ROB FEHRMANN

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TUCSON , AZ 85752

Project : PIMA CO 11/29/2011
AZ CERT #0629

REPORT OF ANALYSIS

Lab Number : 85045
Sample Id : PIMA CO 11/29/11

Date Sampled: 11/29/2011 12:00:00
Date Received: 11/30/2011 00:00
Date Reported: 12/06/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		37	5	KM	12/01/2011 12:31	SW-6010B
Total Nickel		21	5	KM	12/01/2011 12:31	SW-6010B
Total Lead		18	5	KM	12/01/2011 12:31	SW-6010B
Total Arsenic		11.0	1.0	KM	12/01/2011 12:31	SW-6010B
Total Mercury		1.3	0.4	KM	12/01/2011 09:00	SW-7471A
Total Selenium		9.0	1.0	KM	12/01/2011 12:31	SW-6010B
pH (Standard Units) *	8.22			MW	12/01/2011 08:44	SW-9045D
Total Molybdenum		18	5	KM	12/01/2011 12:31	SW-6010B
Chloride		3060	200	MW	12/05/2011 08:55	SM-4500Cl-D
Total Boron		37	1	KM	12/01/2011 12:31	SW-6010B
Total Silver		8	5	KM	12/01/2011 12:31	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Ca" 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.

Debbie Holt

Report Number: 11-355-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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Send To: AVRA GRO SYSTEMS INC
ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA COUNTY 12/16/2011
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 85352
Sample Id : PIMA CO 12/16/2011

Date Sampled: 12/16/2011 00:00:00
Date Received: 12/21/2011 00:00
Date Reported: 01/04/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	4.13	41300	100.0	JM	12/21/2011 15:00	SM-2540G
Moisture *	95.87		100.0	JM	12/21/2011 15:00	SM-2540G
Total Kjeldahl Nitrogen	7.97	79700	10.0	JM	12/22/2011 07:45	SM-4500-NH3C-TKN
Total Phosphorus	2.48	24800	100	KM	01/02/2012 10:15	SW-6010B
Total Potassium	0.28	2780	100	KM	01/02/2012 10:15	SW-6010B
Total Sulfur	1.12	11200	100	KM	01/02/2012 10:15	SW-6010B
Total Calcium	5.16	51600	100	KM	01/02/2012 10:15	SW-6010B
Total Magnesium	0.55	5530	100	KM	01/02/2012 10:15	SW-6010B
Total Sodium	0.38	3830	100	KM	01/02/2012 10:15	SW-6010B
Total Iron		7850	1	KM	01/02/2012 10:15	SW-6010B
Total Aluminum		8600	10	KM	01/02/2012 10:15	SW-6010B
Total Manganese		144	1	KM	01/02/2012 10:15	SW-6010B
Total Copper		600	1	KM	01/02/2012 10:15	SW-6010B
Total Zinc		1210	1	KM	01/02/2012 10:15	SW-6010B
Ammonia Nitrogen	2.86	28600	10.0	JM	12/22/2011 07:45	SM-4500-NH3C
Organic N	5.11	51100	10.0		12/22/2011 07:45	CALCULATION
Nitrate+Nitrite-N		53.3	1.00	JM	12/22/2011 07:45	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	01/02/2012 10:15	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.

Debbie Holt

Report Number: 11-355-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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MARANA , AZ 85653

Project : PIMA COUNTY 12/16/2011
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 85352
Sample Id : PIMA CO 12/16/2011

Date Sampled: 12/16/2011 00:00:00
Date Received: 12/21/2011 00:00
Date Reported: 01/04/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		38	5	KM	01/02/2012 10:15	SW-6010B
Total Nickel		32	5	KM	01/02/2012 10:15	SW-6010B
Total Lead		29	5	KM	01/02/2012 10:15	SW-6010B
Total Arsenic		10.0	1.0	KM	01/02/2012 10:15	SW-6010B
Total Mercury		0.8	0.4	KM	01/02/2012 10:00	SW-7471A
Total Selenium		6.0	1.0	KM	01/02/2012 10:15	SW-6010B
pH (Standard Units) *	8.22			JM	12/22/2011 09:00	SW-9045D
Total Molybdenum		19	5	KM	01/02/2012 10:15	SW-6010B
Chloride		3900	200	JM	12/22/2011 09:00	SM-4500Cl-D
Total Boron		37	1	KM	01/02/2012 10:15	SW-6010B
Total Silver		8	5	KM	01/02/2012 10:15	SW-6010B

Comments:
pH, CHLORIDE, SULFUR, & SILVER NOT FOR COMPLIANCE TESTING
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Na". 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.

Debbie Holt

Report Number: 12-002-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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ROB FEHRMANN
11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 12/22/2011
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 85401
Sample Id : PIMA CO

Date Sampled: 12/22/2011 09:30:00
Date Received: 01/02/2012 00:00
Date Reported: 01/05/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	5.17	51700	100.0	JM	01/02/2012 13:59	SM-2540G
Moisture *	94.83		100.0	JM	01/02/2012 13:59	SM-2540G
Total Kjeldahl Nitrogen	8.10	81000	10.0	JM	01/03/2012 07:34	SM-4500-NH3C-TKN
Total Phosphorus	2.35	23500	100	KM	01/03/2012 11:46	SW-6010B
Total Potassium	0.23	2340	100	KM	01/03/2012 11:46	SW-6010B
Total Sulfur	1.12	11200	100	KM	01/03/2012 11:46	SW-6010B
Total Calcium	5.14	51400	100	KM	01/03/2012 11:46	SW-6010B
Total Magnesium	0.52	5160	100	KM	01/03/2012 11:46	SW-6010B
Total Sodium	0.29	2920	100	KM	01/03/2012 11:46	SW-6010B
Total Iron		6270	1	KM	01/03/2012 11:46	SW-6010B
Total Aluminum		6200	10	KM	01/03/2012 11:46	SW-6010B
Total Manganese		144	1	KM	01/03/2012 11:46	SW-6010B
Total Copper		538	1	KM	01/03/2012 11:46	SW-6010B
Total Zinc		1200	1	KM	01/03/2012 11:46	SW-6010B
Ammonia Nitrogen	2.79	27900	10.0	JM	01/03/2012 07:34	SM-4500-NH3C
Organic N	5.31	53100	10.0		01/03/2012 07:34	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	01/03/2012 07:35	SM-4500NO3F
Total Cadmium		2.0	1.0	KM	01/03/2012 11:46	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.

Debbie Holt

Report Number: 12-002-0206
Account Number: 16010
Submitted By: ROB FEHRMANN

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11161 W GRIER RD
MARANA , AZ 85653

Project : PIMA CO 12/22/2011
AZ CERT # 0629

REPORT OF ANALYSIS

Lab Number : 85401
Sample Id : PIMA CO

Date Sampled: 12/22/2011 09:30:00
Date Received: 01/02/2012 00:00
Date Reported: 01/05/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Chromium		34	5	KM	01/03/2012 11:46	SW-6010B
Total Nickel		23	5	KM	01/03/2012 11:46	SW-6010B
Total Lead		22	5	KM	01/03/2012 11:46	SW-6010B
Total Arsenic		10.0	1.0	KM	01/03/2012 11:46	SW-6010B
Total Mercury		1.8	0.4	KM	01/03/2012 10:00	SW-7471A
Total Selenium		9.0	1.0	KM	01/03/2012 11:46	SW-6010B
pH (Standard Units) *	8.07			JM	01/03/2012 07:34	SW-9045D
Total Molybdenum		18	5	KM	01/03/2012 11:46	SW-6010B
Chloride		2950	200	JM	01/04/2012 08:05	SM-4500Cl-D
Total Boron		29	1	KM	01/03/2012 11:46	SW-6010B
Total Silver		8	5	KM	01/04/2012 14:00	SW-6010B

Comments:
QUALIFIER: THE MATRIX SPIKE WAS OUT OF LIMITS FOR "Al" AND "Cr". ALL OTHER QC DATA IS ACCEPTABLE.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.

Debbie Holt

SECTION 5

ROGER ROAD WRF
AZPDES NO. AZ0020923

QUARTERLY SLUDGE SAMPLING AND ANALYSES

PRIORITY POLLUTANTS AND POLLUTANTS OF CONCERN

ANNUAL BIOSOLIDS REPORT 2011

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: 4/12/2011 11:48:01
Laboratory License #AZ0159

Sample Analysis Report
Roger Road WRF - Permit Number 20923
January 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: **See Attachment.**

Notes:

2011010527 Sample sent to BIO Aquatic Testing for WETT analysis 01-10-11.

2011011439 Sample sent to Test America for cyanide analysis 01-31-11.

2011010674 Sample sent to BIO Aquatic Testing for WETT analysis 01-12-11.

2011010819 Sample sent to BIO Aquatic Testing for WETT analysis 01-14-11.
2011010820 Sample sent to Test America for SOC analysis 01-14-11.

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

04/15/11

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
Sludge Gas (20923-2100)											
2011011047	D	British Thermal Unit (BTU)	1/19/11 5:30	SM 2720C	01/19/11 10:03	545					cblissett
2011011047	D	Carbon dioxide	1/19/11 5:30	SM 2720C	01/19/11 10:03	40.68	%				cblissett
2011011047	D	Hydrogen sulfide	1/19/11 5:30	SM 2720C	01/19/11 10:03	0.29	%				cblissett
2011011047	D	Methane	1/19/11 5:30	SM 2720C	01/19/11 10:03	53.79	%				cblissett
2011011047	D	Nitrogen	1/19/11 5:30	SM 2720C	01/19/11 10:03	5.24	%				cblissett
Lab is not licensed for SM 2720C-Process Control Only											
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2011010764	C	Cyanide, Total	1/13/11 11:30	SM 4500-CN-E	01/19/11 13:25	9.98	mg/Kg	0.81	4.1	M5	aklos
2011010764	C	Mercury	1/13/11 11:30	EPA 7471A	01/20/11 10:37	1.20	mg/Kg	0.013	0.32		khowell
2011010764	C	Antimony	1/13/11 11:30	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0136	18.0		mbomar
2011010764	C	Arsenic	1/13/11 11:30	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0125	18.0		mbomar
2011010764	C	Beryllium	1/13/11 11:30	EPA 6010B	02/01/11 16:30	Trace	mg/Kg	0.00003	3.6		mbomar
2011010764	C	Cadmium	1/13/11 11:30	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0005	7.2		mbomar
2011010764	C	Chromium	1/13/11 11:30	EPA 6010B	02/01/11 16:30	28.7	mg/Kg	0.0007	18.0		mbomar
2011010764	C	Copper	1/13/11 11:30	EPA 6010B	02/01/11 16:30	416	mg/Kg	0.0037	18.0		mbomar
2011010764	C	Lead	1/13/11 11:30	EPA 6010B	01/25/11 16:30	24.9	mg/Kg	0.0080	18.0		mbomar
2011010764	C	Molybdenum	1/13/11 11:30	EPA 6010B	01/25/11 16:30	14.5	mg/Kg	0.0026	7.2		mbomar
2011010764	C	Nickel	1/13/11 11:30	EPA 6010B	02/01/11 16:30	Trace	mg/Kg	0.0086	18.0		mbomar
2011010764	C	Selenium	1/13/11 11:30	EPA 6010B	01/25/11 16:30	ND	mg/Kg	0.0122	18.0		mbomar
2011010764	C	Silver	1/13/11 11:30	EPA 6010B	02/01/11 16:30	8.6	mg/Kg	0.0011	1.8		mbomar
2011010764	C	Thallium	1/13/11 11:30	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0139	18.0		mbomar
2011010764	C	Zinc	1/13/11 11:30	EPA 6010B	01/25/11 16:30	1030	mg/Kg	0.0033	18.0		mbomar
2011010764	C	Solids, Total	1/13/11 11:30	SM 2540G	01/14/11 13:05	1.54	%		0.005		jhernandez
2011010764	C	Acrolein	1/13/11 11:30	EPA 603	01/16/11 19:08	ND	mg/Kg	0.00111	12.9	D1, D4, L4	dcorbett
2011010764	C	Acrylonitrile	1/13/11 11:30	EPA 603	01/16/11 19:08	ND	mg/Kg	0.00116	12.9	D1, D4	dcorbett
2011010764	C	1,2-Dibromo-3-chloropropane	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00052	6.5	D1, D4, Q5, N1, L2	dcorbett
2011010764	C	1,2-Dibromoethane	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00005	0.65	D1, D4, Q5	dcorbett
2011010764	C	1,2,4-Trichlorobenzene	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00011	0.65	D1, D4, Q5	dcorbett
2011010764	C	cis-1,2-Dichloroethene	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00002	0.65	D1, D4, Q5	dcorbett
2011010764	C	Styrene	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00006	0.65	D1, D4	dcorbett
2011010764	C	Xylene, m- + p-	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00015	0.65	D1, D4, Q5	dcorbett
2011010764	C	Xylene, o-	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg	0.00006	0.65	D1, D4, Q5	dcorbett
2011010764	C	Xylene, Total	1/13/11 11:30	EPA 8260B	01/24/11 22:58	ND	mg/Kg		1.3	D1, D4, Q5	dcorbett
2011010764	C	1,1,1-Trichloroethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00007	0.65	D1, D4, Q5, N1, S7	dcorbett
2011010764	C	1,1,2-Trichloroethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.0001	0.65	D1, D4, Q5	dcorbett
2011010764	C	1,1-Dichloroethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00005	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	1,1-Dichloroethene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	1,2-Dichlorobenzene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00014	0.65	D1, D4, Q5, N1	dcorbett
2011010764	C	1,2-Dichloroethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00005	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	1,2-Dichloropropane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00007	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	1,3-Dichlorobenzene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5	dcorbett
2011010764	C	1,4-Dichlorobenzene	1/13/11 11:30	EPA 624	01/24/11 22:58	Trace	mg/Kg	0.00011	0.65	D1, D4, Q5, N1	dcorbett
2011010764	C	1,1,2,2-Tetrachloroethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00026	0.65	D1, D4, Q5	dcorbett
2011010764	C	2-Chloroethyl vinyl ether	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.0003	0.65	D1, D4	dcorbett
2011010764	C	Benzene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00005	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	Bromodichloromethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00018	0.65	D1, D4, Q5	dcorbett
2011010764	C	Bromoform	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00007	0.65	D1, D4, Q5	dcorbett
2011010764	C	Bromomethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00021	1.3	D1, D4, Q5, S7	dcorbett

Lab Comments:

Data on this report was last modified on: 4/12/2011 10:14:58

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.

Roger Road WRF

Digested Sludge to Regional Biosolids Facility (20923-4500)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010764	C	Carbon tetrachloride	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.0001	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	Chlorobenzene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00006	0.65	D1, D4, Q5	dcorbett
2011010764	C	Chloroethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00015	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	Chloroform	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00005	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	Chloromethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00019	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	cis-1,3-Dichloropropene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00007	0.65	D1, D4, Q5, N1	dcorbett
2011010764	C	Dibromochloromethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5	dcorbett
2011010764	C	Ethyl benzene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5, N1	dcorbett
2011010764	C	Methylene chloride	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	Tetrachloroethene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00011	0.65	D1, D4, Q5, N1	dcorbett
2011010764	C	Toluene	1/13/11 11:30	EPA 624	01/24/11 22:58	Trace	mg/Kg	0.00007	0.65	D1, D4, Q5	dcorbett
2011010764	C	Trichlorofluoromethane	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	Trichloroethene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00008	0.65	D1, D4, Q5, N1, S7	dcorbett
2011010764	C	Trihalomethane, Total	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg		0.65	D1, D4, Q5	dcorbett
2011010764	C	trans-1,2-Dichloroethene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00014	0.65	D1, D4, Q5, S7	dcorbett
2011010764	C	trans-1,3-Dichloropropene	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00006	0.65	D1, D4, Q5, N1	dcorbett
2011010764	C	Vinyl chloride	1/13/11 11:30	EPA 624	01/24/11 22:58	ND	mg/Kg	0.00006	0.65	D1, D4, M2, S7	dcorbett
2011010764	C	4,4-DDD	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4	mmichel
2011010764	C	4,4-DDE	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4	mmichel
2011010764	C	4,4-DDT	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	185.53	D1, D4, N1	mmichel
2011010764	C	Aldrin	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4	mmichel
2011010764	C	alpha-BHC	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4, V1	mmichel
2011010764	C	Aroclor 1016	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.1	927.65	D1, D4	mmichel
2011010764	C	Aroclor 1221	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.03	1855.3	D1, D4	mmichel
2011010764	C	Aroclor 1232	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.09	1855.3	D1, D4	mmichel
2011010764	C	Aroclor 1242	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.08	1855.3	D1, D4	mmichel
2011010764	C	Aroclor 1248	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.04	1855.3	D1, D4	mmichel
2011010764	C	Aroclor 1254	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.05	1855.3	D1, D4	mmichel
2011010764	C	Aroclor 1260	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.05	927.65	D1, D4	mmichel
2011010764	C	beta-BHC	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.04	185.53	D1, D4	mmichel
2011010764	C	Chlordane, Technical	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.48	1855.3	D1, D4	mmichel
2011010764	C	delta-BHC	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	185.53	D1, D4, V1	mmichel
2011010764	C	Dieldrin	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4	mmichel
2011010764	C	Endosulfan I	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4	mmichel
2011010764	C	Endosulfan II	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.01	371.06	D1, D4	mmichel
2011010764	C	Endosulfan sulfate	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.02	92.765	D1, D4, S4	mmichel
2011010764	C	Endrin	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.03	371.06	D1, D4, N1	mmichel
2011010764	C	Endrin aldehyde	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.01	185.53	D1, D4, N1	mmichel
2011010764	C	gamma-BHC (Lindane)	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.04	185.53	D1, D4	mmichel
2011010764	C	Heptachlor	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.03	185.53	D1, D4	mmichel
2011010764	C	Heptachlor epoxide	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	0.04	185.53	D1, D4	mmichel
2011010764	C	Toxaphene	1/13/11 11:30	EPA 625	02/08/11 18:21	ND	ug/kg	5.29	29684.8	D1, D4	mmichel
2011010764	C	Methoxychlor	1/13/11 11:30	EPA 8270C	02/08/11 18:21	ND	ug/kg	0.03	185.53	N1, D1, D4	mmichel
2011010764	C	1,2,4-Trichlorobenzene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00054	5.2	D1, D4	smitchell
2011010764	C	1,2-Diphenylhydrazine	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00101	5.2	D1, D4	smitchell
2011010764	C	2,3-Dichloroaniline	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00172	5.2	D1, D4	smitchell
2011010764	C	2,4,6-Trichlorophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00078	5.2	D1, D4	smitchell
2011010764	C	2,4-Dichlorophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00059	5.2	D1, D4	smitchell
2011010764	C	2,4-Dimethylphenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00253	5.2	D1, D4	smitchell
2011010764	C	2,4-Dinitrophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00489	26	D1, D4	smitchell

Lab Comments:

Data on this report was last modified on: 4/12/2011 10:14:58

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Roger Road WRF

Digested Sludge to Regional Biosolids Facility (20923-4500)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010764	C	2,4-Dinitrotoluene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00095	5.2	D1, D4	smitchell
2011010764	C	2,6-Dinitrotoluene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00113	5.2	D1, D4	smitchell
2011010764	C	2-Chloronaphthalene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00101	5.2	D1, D4	smitchell
2011010764	C	2-Chlorophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00065	5.2	D1, D4	smitchell
2011010764	C	2-Methylphenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00118	5.2	D1, D4	smitchell
2011010764	C	2-Nitrophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00072	5.2	D1, D4	smitchell
2011010764	C	3,3-Dichlorobenzidine	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00676	39	D1, D4	smitchell
2011010764	C	4,6-Dinitro-2-methylphenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00119	15.6	D1, D4	smitchell
2011010764	C	4-Bromophenyl phenyl ether	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.0008	5.2	D1, D4	smitchell
2011010764	C	4-Chloro-3-methylphenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00071	5.2	D1, D4	smitchell
2011010764	C	4-Chlorophenyl phenyl ether	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00091	5.2	D1, D4	smitchell
2011010764	C	4-Methylphenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.0013	5.2	D1, D4	smitchell
2011010764	C	4-Nitrophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00352	5.2	D1, D4, V1	smitchell
2011010764	C	Acenaphthene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00084	5.2	D1, D4	smitchell
2011010764	C	Acenaphthylene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00061	5.2	D1, D4	smitchell
2011010764	C	Anthracene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00092	5.2	D1, D4	smitchell
2011010764	C	Benzo(a)anthracene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00085	5.2	D1, D4	smitchell
2011010764	C	Benzidine	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.01323	39	D1, D4, N1	smitchell
2011010764	C	Benzo(a)pyrene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00119	5.2	D1, D4	smitchell
2011010764	C	Benzo(b)fluoranthene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00137	5.2	D1, D4	smitchell
2011010764	C	Benzo(g,h,i)perylene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.0027	5.2	D1, D4	smitchell
2011010764	C	Benzo(k)fluoranthene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00187	5.2	D1, D4	smitchell
2011010764	C	Bis(2-Chloroisopropyl)ether	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00061	5.2	D1, D4	smitchell
2011010764	C	Bis(2-chloroethoxy)methane	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00051	5.2	D1, D4	smitchell
2011010764	C	Bis(2-chloroethyl)ether	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00067	5.2	D1, D4	smitchell
2011010764	C	Bis(2-ethylhexyl) phthalate	1/13/11 11:30	EPA 625	02/02/11 18:07	32.3	mg/Kg	0.00511	5.2	D1, D4	smitchell
2011010764	C	Butylbenzyl phthalate	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00166	5.2	D1, D4	smitchell
2011010764	C	Carbazole	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00141	10.4	D1, D4	smitchell
2011010764	C	Chrysene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00099	5.2	D1, D4	smitchell
2011010764	C	Dibenz(a,h)anthracene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00226	5.2	D1, D4	smitchell
2011010764	C	Diethyl phthalate	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.0007	5.2	D1, D4	smitchell
2011010764	C	Dimethylphthalate	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00069	5.2	D1, D4	smitchell
2011010764	C	Di-n-butyl phthalate	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00191	5.2	D1, D4	smitchell
2011010764	C	Di-n-octylphthalate	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00449	5.2	D1, D4	smitchell
2011010764	C	Fluoranthene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00109	5.2	D1, D4	smitchell
2011010764	C	Fluorene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00094	5.2	D1, D4	smitchell
2011010764	C	Hexachlorobenzene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00059	5.2	D1, D4	smitchell
2011010764	C	Hexachlorobutadiene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00052	5.2	D1, D4	smitchell
2011010764	C	Hexachloroethane	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00056	5.2	D1, D4	smitchell
2011010764	C	Hexachlorocyclopentadiene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00267	5.2	D1, D4	smitchell
2011010764	C	Indeno(1,2,3-cd)pyrene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00204	5.2	D1, D4	smitchell
2011010764	C	Isophorone	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00325	5.2	D1, D4	smitchell
2011010764	C	Naphthalene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00072	5.2	D1, D4	smitchell
2011010764	C	n-Decane	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00068	5.2	D1, D4	smitchell
2011010764	C	Nitrobenzene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.0005	5.2	D1, D4	smitchell
2011010764	C	N-Nitroso-di-n-propylamine	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00063	5.2	D1, D4	smitchell
2011010764	C	N-Nitrosodimethylamine	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00064	5.2	D1, D4	smitchell
2011010764	C	N-Nitrosodiphenylamine	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00102	5.2	D1, D4	smitchell
2011010764	C	n-Octadecane	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00248	5.2	D1, D4	smitchell
2011010764	C	Pentachlorophenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00076	15.6	D1, D4	smitchell

Lab Comments:

Data on this report was last modified on: 4/12/2011 10:14:58

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.

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)											
2011010764	C	Phenanthrene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00097	5.2	D1, D4	smitchell
2011010764	C	Phenol	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00055	5.2	D1, D4	smitchell
2011010764	C	Pyrene	1/13/11 11:30	EPA 625	02/02/11 18:07	ND	mg/Kg	0.00119	5.2	D1, D4	smitchell
See Attached -Semi-Quantitation Sheet for EPA 625											
Final Effluent B-Outfall 001 (20923-7002)											
2011010527	C	Miscellaneous Note	1/10/11 9:00	None		Subcontracted					Other
2011010674	C	Miscellaneous Note	1/12/11 9:00	None		Subcontracted					Other
2011010819	C	Miscellaneous Note	1/14/11 5:00	None		Subcontracted					Other
Final Effluent - Trough (20923-7003)											
UofA study											
2011010533	C	pH	1/11/11 6:00	SM 4500-HB	01/11/11 9:41	7.6	pH Units			H3	aellert
2011010533	C	pH Temperature	1/11/11 6:00	SM 4500-HB	01/11/11 9:41	20.2	o C			H3	aellert
2011010533	C	TOC	1/11/11 6:00	SM 5310C	01/25/11 8:52	19.86	mg/l	0.56	1.00		cblissett
UofA study											
IS 2011010608	D	pH (Field)	1/11/11 9:34	SM 4500-HB	01/11/11 9:28	7.6	pH Units				Sampler
IS 2011010608	D	TOC	1/11/11 9:34	SM 5310C		NA	mg/l	0.56	1.00		cblissett
2011010609	D	Conductivity (Field)	1/11/11 9:16	SM 2510B	01/11/11 9:09	1436	umhos/cm		72.0		Sampler
2011010609	D	Calcium	1/11/11 9:16	EPA 200.7	01/16/11 11:33	73.9	mg/l	0.22	20.0		khowell
2011010609	D	Iron	1/11/11 9:16	EPA 200.7	01/19/11 15:49	141.0	ug/l	9.1	25.0		khowell
2011010609	D	Magnesium	1/11/11 9:16	EPA 200.7	01/16/11 11:33	13.6	mg/l	0.04	10.0		khowell
2011010609	D	Potassium	1/11/11 9:16	EPA 200.7	01/16/11 11:33	16.00	mg/l	0.12	10.0		khowell
2011010609	D	Sodium	1/11/11 9:16	EPA 200.7	01/16/11 15:13	143.00	mg/l	0.08	20.0		khowell
2011010609	D	Barium	1/11/11 9:16	EPA 200.8	01/25/11 19:30	62.13	ug/l	0.21	1.6		jbarajas
2011010609	D	Manganese	1/11/11 9:16	EPA 200.8	01/25/11 19:30	13.27	ug/l	0.15	1.0		jbarajas
2011010609	D	Chloride	1/11/11 9:16	SM4500-Cl-E	01/24/11 8:32	161.00	mg/l	0.71	4.00		tourada
2011010609	D	Cyanide, Amenable to Chlorination	1/11/11 9:16	SM 4500-CN-G	01/14/11 9:58	ND	ug/l	1.0	5		aklos
2011010609	D	Fluoride	1/11/11 9:16	SM 4500-F C	01/14/11 13:00	0.440	mg/l	0.002	0.020		manderson
2011010609	D	Hardness (Calculated)	1/11/11 9:16	SM 2340B	01/16/11 11:33	241	mg/l		50		khowell
2011010609	D	Mercury	1/11/11 9:16	EPA 245.1	01/31/11 12:10	0.320	ug/l	0.09	0.20		khowell
2011010609	D	Antimony	1/11/11 9:16	EPA 200.8	01/25/11 19:30	Trace	ug/l	0.108	1.0		jbarajas
2011010609	D	Arsenic	1/11/11 9:16	EPA 200.8	01/25/11 19:30	4.25	ug/l	0.33	2.5		jbarajas
2011010609	D	Beryllium	1/11/11 9:16	EPA 200.8	01/25/11 19:30	ND	ug/l	0.01	1.0		jbarajas
2011010609	D	Cadmium	1/11/11 9:16	EPA 200.8	01/25/11 19:30	ND	ug/l	0.22	1.9		jbarajas
2011010609	D	Chromium	1/11/11 9:16	EPA 200.8	01/25/11 19:30	Trace	ug/l	0.21	1.8		apagel
2011010609	D	Copper	1/11/11 9:16	EPA 200.8	01/25/11 19:30	11.12	ug/l	0.29	2.5		jbarajas
2011010609	D	Lead	1/11/11 9:16	EPA 200.8	01/25/11 19:30	Trace	ug/l	0.02	1.0		jbarajas
2011010609	D	Nickel	1/11/11 9:16	EPA 200.8	01/25/11 19:30	2.60	ug/l	0.15	1.05		jbarajas
2011010609	D	Selenium	1/11/11 9:16	EPA 200.8	01/25/11 19:30	Trace	ug/l	0.22	2.0		jbarajas
2011010609	D	Silver	1/11/11 9:16	EPA 200.8	01/25/11 19:30	Trace	ug/l	0.02	1.0		jbarajas
2011010609	D	Thallium	1/11/11 9:16	EPA 200.8	01/25/11 19:30	ND	ug/l	0.09	1.0		jbarajas
2011010609	D	Zinc	1/11/11 9:16	EPA 200.8	01/25/11 19:30	25.70	ug/l	0.19	1.7		jbarajas
2011010609	D	Sulfate	1/11/11 9:16	SM 4500-SO4	01/25/11 9:34	189	mg/l	4.41	50		tourada

Lab Comments:

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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 20923
Roger Road WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010533	H3	Sample was received and analyzed past holding time.	1/11/11
2011010609	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/11/11
2011010609	N1	See case narrative.	1/11/11
2011010609	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/11/11
2011010672	N1	See case narrative.	1/12/11
2011010764	D1	Sample required dilution due to matrix.	1/13/11
2011010764	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/13/11
2011010764	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/13/11
2011010764	L4	The associated blank spike recovery was below method acceptance limits.	1/13/11
2011010764	M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.	1/13/11
2011010764	M5	Analyte concentration was determined by the method of standard addition (MSA).	1/13/11
2011010764	N1	See case narrative.	1/13/11
2011010764	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/13/11
2011010764	S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.	1/13/11
2011010764	S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.	1/13/11
2011010764	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/13/11
2011010817	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/14/11
2011010817	L4	The associated blank spike recovery was below method acceptance limits.	1/14/11
2011010817	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	1/14/11
2011010817	M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.	1/14/11
2011010817	N1	See case narrative.	1/14/11
2011010817	R1	RPD/RSD exceeded the method acceptance limit.	1/14/11
2011010817	R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.	1/14/11

Data Qualifiers and Definitions for Permit 20923
Roger Road WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010817	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/14/11
2011010818	D1	Sample required dilution due to matrix.	1/14/11
2011010818	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/14/11
2011010818	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/14/11
2011010818	L4	The associated blank spike recovery was below method acceptance limits.	1/14/11
2011010818	N1	See case narrative.	1/14/11
2011010818	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/14/11
2011011439	N1	See case narrative.	1/25/11

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

Case Narrative

Sample ID: 2011010764
Permit Name: Roger Road WRF
Location Name: Digested Sludge to Regional Biosolids Facility

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2011010764 was extracted for EPA Method 625 Pesticides and Semi-Volatiles, each on 01/19/2011, target analytes flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

Roger Road WRF was sampled from its Digetsed Sludge to Regional Biosolids Facility on 01/13/11 for purgeable organics testing, EPA method 624 and method 8260. By means of the analysis performed, the qualifier N1 is used to indicate when a compound failed QC requirements for a spike employed on a different sample within the batch. The compounds qualified with N1 either failed high or low for matrix spike recovery criteria.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
WATER QUALITY - 443-6256
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: CRAO / W Q (Organization) LAB ID: 20110 10764

SAMPLER: GOODYEAR, SZYDELKO (Print Last Names Only) FACILITY-LOCATION ID: 20923-4500

SAMPLE DATE: 01/13/11 (MM / DD / YY) SAMPLE TIME: 0730 TO 1130 (24 Hour Clock)

SAMPLE LOCATION: Roger Road WWTP - Digester Sludge to Regional BioSolids Facility

PERMIT TYPE:		
	☐ APP	☐ REUSE
	☐ INVESTIGATIONS	☐ USFS
	☐ IWC	☐ 503
	■ NPDES - Quarterly	☐ Other

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other _____

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	☐	☐	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*	☐	☐	Solids, Total	☐	■
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: The laboatory shall composite the discrete Purgeable organic and Acrolein/Acrylonitrile samples.
Acrolein/Acrylonitrile samples have been pH adjusted to 4-5 S.U.
Septum blank preparation date: 11-16-10 JS | Bubbles in volatiles. GOS ~~01-13-11~~ ~~01-13-11~~ 01-13-11

FIELD MEASUREMENTS GOS 01-13-11

☐ Chlorine		☐ Temperature	
☐ Oxygen (Dis.)		☐ pH	
☐ Conductivity		☐ Other	

Sample Receiving Temp.
15°C IR Thermo GOS

Number of Sample Containers
(7) GOS

Sampled by: Daniel M Goodyear	Received by:	Date/Time: 01-13-11 1216
Relinquished by:	Received by:	Date/Time
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 Coliform sample in the "Notes Box" if different than the information provided in heading.

Annual Digester Composite

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 2011010764
(yyyy/mm/xxxx – xxxx)

Facility or Submitter: WQ

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers received: 7
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☒ Yes ☐ No

Temperature of Samples: 15 °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)	1
H_2SO_4 (Sulfuric Acid)	
HCL (Hydrochloric Acid)	1
NaOH (Sodium Hydroxide)	1
$Na_2S_2O_3$ (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: _____ 01-13-11
(Signature) (mm/dd/yy)

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: 6/22/2011 09:11:32
Laboratory License #AZ0159

Sample Analysis Report
Roger Road WRF - Permit Number 20923
April 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: **See Attached.**

Notes:

2011040187 Sample sent to BIO Aquatic Testing for WETT analysis 04-04-11.
2011040286 Sample was not analyzed for Cyanide due to sample storage refrigeration failure.
2011040287 Some parameters were not analyzed due to sample storage refrigeration failure.

2011040369 Sample sent to BIO Aquatic Testing for WETT analysis 04-06-11. GOS

2011040547 Sample sent to BIO Aquatic Testing for WETT analysis 04-08-11. 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

06/23/11

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
Sludge Gas (20923-2100)											
2011041232	D	British Thermal Unit (BTU)	4/20/11 5:35	SM 2720C	04/20/11 8:46	596					cblissett
2011041232	D	Carbon dioxide	4/20/11 5:35	SM 2720C	04/20/11 8:46	39.98	%				cblissett
2011041232	D	Hydrogen sulfide	4/20/11 5:35	SM 2720C	04/20/11 8:46	0.34	%				cblissett
2011041232	D	Methane	4/20/11 5:35	SM 2720C	04/20/11 8:46	58.81	%				cblissett
2011041232	D	Nitrogen	4/20/11 5:35	SM 2720C	04/20/11 8:46	0.88	%				cblissett
2011041659	D	British Thermal Unit (BTU)	4/27/11 5:35	SM 2720C	04/27/11 9:12	571					cblissett
2011041659	D	Carbon dioxide	4/27/11 5:35	SM 2720C	04/27/11 9:12	41.24	%				cblissett
2011041659	D	Hydrogen sulfide	4/27/11 5:35	SM 2720C	04/27/11 9:12	0.30	%				cblissett
2011041659	D	Methane	4/27/11 5:35	SM 2720C	04/27/11 9:12	56.40	%				cblissett
2011041659	D	Nitrogen	4/27/11 5:35	SM 2720C	04/27/11 9:12	2.05	%				cblissett
Lab is not licensed for SM 2720C-Process Control Only											
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2011040467	D	Cyanide, Total	4/7/11 9:30	SM 4500-CN-E	04/13/11 9:40	11.41	mg/Kg	1.0	5.2		aklos
2011040467	D	Mercury	4/7/11 9:30	EPA 7471A	04/17/11 15:52	1.430	mg/Kg	0.0083	0.21		khowell
2011040467	D	Antimony	4/7/11 9:30	EPA 6010B	04/14/11 11:00	ND	mg/Kg	0.0136	9.49		mbomar
2011040467	D	Arsenic	4/7/11 9:30	EPA 6010B	04/13/11 16:02	16.30	mg/Kg	0.0125	9.49		mbomar
2011040467	D	Beryllium	4/7/11 9:30	EPA 6010B	04/14/11 11:00	Trace	mg/Kg	0.00003	1.90		mbomar
2011040467	D	Cadmium	4/7/11 9:30	EPA 6010B	04/13/11 16:02	Trace	mg/Kg	0.0005	3.79		mbomar
2011040467	D	Chromium	4/7/11 9:30	EPA 6010B	04/13/11 16:02	31.30	mg/Kg	0.0007	9.49		mbomar
2011040467	D	Copper	4/7/11 9:30	EPA 6010B	04/13/11 16:02	374.0	mg/Kg	0.0037	9.49		mbomar
2011040467	D	Lead	4/7/11 9:30	EPA 6010B	04/13/11 16:02	19.00	mg/Kg	0.0080	9.49		mbomar
2011040467	D	Molybdenum	4/7/11 9:30	EPA 6010B	04/13/11 16:02	13.30	mg/Kg	0.0026	3.79		mbomar
2011040467	D	Nickel	4/7/11 9:30	EPA 6010B	04/14/11 11:00	17.30	mg/Kg	0.0086	9.49		mbomar
2011040467	D	Selenium	4/7/11 9:30	EPA 6010B	04/13/11 16:02	Trace	mg/Kg	0.0122	9.49		mbomar
2011040467	D	Silver	4/7/11 9:30	EPA 6010B	04/14/11 9:26	9.30	mg/Kg	0.0011	0.95		mbomar
2011040467	D	Thallium	4/7/11 9:30	EPA 6010B	04/14/11 9:26	ND	mg/Kg	0.0139	9.49		mbomar
2011040467	D	Zinc	4/7/11 9:30	EPA 6010B	04/13/11 16:02	929.00	mg/Kg	0.0033	9.49		mbomar
2011040467	D	Solids, Total	4/7/11 9:30	SM 2540G	04/08/11 13:40	2.42	%				aellert
2011040467	D	Acrolein	4/7/11 9:30	EPA 603	04/21/11 0:23	ND	mg/Kg	0.00111	8.264	D1, D4	dcorbett
2011040467	D	Acrylonitrile	4/7/11 9:30	EPA 603	04/21/11 0:23	ND	mg/Kg	0.00116	8.264	D1, D4	dcorbett
2011040467	D	1,2-Dibromo-3-chloropropane	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00052	0.83	D1, D4	dcorbett
2011040467	D	1,2-Dibromoethane	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00005	0.415	D1, D4	dcorbett
2011040467	D	1,2,4-Trichlorobenzene	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00011	0.415	D1, D4	dcorbett
2011040467	D	cis-1,2-Dichloroethene	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00002	0.415	D1, D4	dcorbett
2011040467	D	Styrene	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00006	0.415	D1, D4	dcorbett
2011040467	D	Xylene, m- + p-	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00015	0.415	D1, D4	dcorbett
2011040467	D	Xylene, o-	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg	0.00006	0.415	D1, D4	dcorbett
2011040467	D	Xylene, Total	4/7/11 9:30	EPA 8260B	04/08/11 21:19	ND	mg/Kg		0.83	D1, D4	dcorbett
2011040467	D	1,1,1-Trichloroethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00007	0.415	D1, D4	dcorbett
2011040467	D	1,1,2-Trichloroethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.0001	0.415	D1, D4	dcorbett
2011040467	D	1,1-Dichloroethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00005	0.415	D1, D4, N1	dcorbett
2011040467	D	1,1-Dichloroethene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.415	D1, D4	dcorbett
2011040467	D	1,2-Dichlorobenzene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00014	0.415	D1, D4	dcorbett
2011040467	D	1,2-Dichloroethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00005	0.415	D1, D4	dcorbett
2011040467	D	1,2-Dichloropropane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00007	0.415	D1, D4	dcorbett
2011040467	D	1,3-Dichlorobenzene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.415	D1, D4	dcorbett
2011040467	D	1,4-Dichlorobenzene	4/7/11 9:30	EPA 624	04/08/11 21:19	0.850	mg/Kg	0.00011	0.415	D1, D4	dcorbett

Lab Comments:

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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.

Roger Road WRF

Digested Sludge to Regional Biosolids Facility (20923-4500)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011040467	D	1,1,2,2-Tetrachloroethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00026	0.415	D1, D4	dcorbett
2011040467	D	2-Chloroethyl vinyl ether	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.0003	0.415	D1, D4	dcorbett
2011040467	D	Benzene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00005	0.415	D1, D4	dcorbett
2011040467	D	Bromodichloromethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00018	0.415	D1, D4	dcorbett
2011040467	D	Bromoform	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00007	0.415	D1, D4	dcorbett
2011040467	D	Bromomethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00021	0.415	D1, D4	dcorbett
2011040467	D	Carbon tetrachloride	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.0001	0.415	D1, D4	dcorbett
2011040467	D	Chlorobenzene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00006	0.415	D1, D4	dcorbett
2011040467	D	Chloroethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00015	0.415	D1, D4	dcorbett
2011040467	D	Chloroform	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00005	0.415	D1, D4	dcorbett
2011040467	D	Chloromethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00019	0.415	D1, D4	dcorbett
2011040467	D	cis-1,3-Dichloropropene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00007	0.415	D1, D4, N1	dcorbett
2011040467	D	Dibromochloromethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.415	D1, D4	dcorbett
2011040467	D	Ethyl benzene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.415	D1, D4	dcorbett
2011040467	D	Methylene chloride	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.415	D1, D4	dcorbett
2011040467	D	Tetrachloroethene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00011	0.415	D1, D4	dcorbett
2011040467	D	Toluene	4/7/11 9:30	EPA 624	04/08/11 21:19	Trace	mg/Kg	0.00007	0.415	D1, D4	dcorbett
2011040467	D	Trichlorofluoromethane	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.415	D1, D4	dcorbett
2011040467	D	Trichloroethene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00008	0.83	D1, D4	dcorbett
2011040467	D	Trihalomethane, Total	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg		0.415	D1, D4	dcorbett
2011040467	D	trans-1,2-Dichloroethene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00014	0.415	D1, D4	dcorbett
2011040467	D	trans-1,3-Dichloropropene	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00006	0.415	D1, D4, N1	dcorbett
2011040467	D	Vinyl chloride	4/7/11 9:30	EPA 624	04/08/11 21:19	ND	mg/Kg	0.00006	0.415	D1, D4	dcorbett
2011040467	D	4,4-DDD	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	42.6875	D1, D4	mmichel
2011040467	D	4,4-DDE	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	42.6875	D1, D4	mmichel
2011040467	D	4,4-DDT	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	170.75	D1, D4	mmichel
2011040467	D	Aldrin	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	42.6875	D1, D4	mmichel
2011040467	D	alpha-BHC	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	42.6875	D1, D4	mmichel
2011040467	D	Aroclor 1016	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.1	213.4375	D1, D4	mmichel
2011040467	D	Aroclor 1221	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.03	426.875	D1, D4	mmichel
2011040467	D	Aroclor 1232	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.09	426.875	D1, D4	mmichel
2011040467	D	Aroclor 1242	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.08	426.875	D1, D4	mmichel
2011040467	D	Aroclor 1248	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.04	426.875	D1, D4	mmichel
2011040467	D	Aroclor 1254	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.05	426.875	D1, D4	mmichel
2011040467	D	Aroclor 1260	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.05	426.875	D1, D4	mmichel
2011040467	D	beta-BHC	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.04	85.375	D1, D4	mmichel
2011040467	D	Chlordane, Technical	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.48	6830	D1, D4	mmichel
2011040467	D	delta-BHC	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	42.6875	D1, D4	mmichel
2011040467	D	Dieldrin	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	42.6875	D1, D4	mmichel
2011040467	D	Endosulfan I	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	170.75	D1, D4	mmichel
2011040467	D	Endosulfan II	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.01	170.75	D1, D4	mmichel
2011040467	D	Endosulfan sulfate	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.02	85.375	D1, D4	mmichel
2011040467	D	Endrin	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.03	170.75	D1, D4	mmichel
2011040467	D	Endrin aldehyde	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.01	85.375	D1, D4	mmichel
2011040467	D	gamma-BHC (Lindane)	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.04	85.375	D1, D4	mmichel
2011040467	D	Heptachlor	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.03	85.375	D1, D4	mmichel
2011040467	D	Heptachlor epoxide	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	0.04	85.375	D1, D4	mmichel
2011040467	D	Toxaphene	4/7/11 9:30	EPA 625	05/05/11 13:07	ND	ug/kg	5.29	13660	D1, D4	mmichel
2011040467	D	Methoxychlor	4/7/11 9:30	EPA 8270C	05/05/11 13:07	ND	ug/kg	0.03	85.375	D1, D4	mmichel
2011040467	D	1,2,4-Trichlorobenzene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00054	3.3	D1, D4, N1	smitchell

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Roger Road WRF

Digested Sludge to Regional Biosolids Facility (20923-4500)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011040467	D	1,2-Diphenylhydrazine	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00101	3.3	D1, D4	smitchell
2011040467	D	2,3-Dichloroaniline	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00172	3.3	D1, D4	smitchell
2011040467	D	2,4,6-Trichlorophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00078	3.3	D1, D4	smitchell
2011040467	D	2,4-Dichlorophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00059	3.3	D1, D4	smitchell
2011040467	D	2,4-Dimethylphenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00253	3.3	D1, D4	smitchell
2011040467	D	2,4-Dinitrophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00489	9.9	D1, D4	smitchell
2011040467	D	2,4-Dinitrotoluene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00095	3.3	D1, D4	smitchell
2011040467	D	2,6-Dinitrotoluene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00113	3.3	D1, D4	smitchell
2011040467	D	2-Chloronaphthalene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00101	3.3	D1, D4	smitchell
2011040467	D	2-Chlorophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00065	3.3	D1, D4	smitchell
2011040467	D	2-Methylphenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00118	3.3	D1, D4	smitchell
2011040467	D	2-Nitrophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00072	3.3	D1, D4	smitchell
2011040467	D	3,3-Dichlorobenzidine	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00676	3.3	D1, D4	smitchell
2011040467	D	4,6-Dinitro-2-methylphenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00119	9.9	D1, D4	smitchell
2011040467	D	4-Bromophenyl phenyl ether	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.0008	3.3	D1, D4	smitchell
2011040467	D	4-Chloro-3-methylphenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00071	3.3	D1, D4	smitchell
2011040467	D	4-Chlorophenyl phenyl ether	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00091	3.3	D1, D4	smitchell
2011040467	D	4-Methylphenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.0013	3.3	D1, D4, N1	smitchell
2011040467	D	4-Nitrophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00352	3.3	D1, D4	smitchell
2011040467	D	Acenaphthene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00084	3.3	D1, D4	smitchell
2011040467	D	Acenaphthylene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00061	3.3	D1, D4, N1	smitchell
2011040467	D	Anthracene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00092	3.3	D1, D4	smitchell
2011040467	D	Benzo(a)anthracene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00085	3.3	D1, D4	smitchell
2011040467	D	Benzidine	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.01323	3.3	D1, D4, N1	smitchell
2011040467	D	Benzo(a)pyrene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00119	3.3	D1, D4	smitchell
2011040467	D	Benzo(b)fluoranthene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00137	3.3	D1, D4	smitchell
2011040467	D	Benzo(g,h,i)perylene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.0027	3.3	D1, D4	smitchell
2011040467	D	Benzo(k)fluoranthene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00187	3.3	D1, D4	smitchell
2011040467	D	Bis(2-Chloroisopropyl)ether	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00061	3.3	D1, D4, N1	smitchell
2011040467	D	Bis(2-chloroethoxy)methane	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00051	3.3	D1, D4	smitchell
2011040467	D	Bis(2-chloroethyl)ether	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00067	3.3	D1, D4	smitchell
2011040467	D	Bis(2-ethylhexyl) phthalate	4/7/11 9:30	EPA 625	05/19/11 19:23	32.5	mg/Kg	0.00511	3.3	D1, D4	smitchell
2011040467	D	Butylbenzyl phthalate	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00166	3.3	D1, D4	smitchell
2011040467	D	Carbazole	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00141	3.3	D1, D4	smitchell
2011040467	D	Chrysene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00099	3.3	D1, D4	smitchell
2011040467	D	Dibenz(a,h)anthracene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00226	3.3	D1, D4	smitchell
2011040467	D	Diethyl phthalate	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.0007	3.3	D1, D4	smitchell
2011040467	D	Dimethylphthalate	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00069	3.3	D1, D4	smitchell
2011040467	D	Di-n-butyl phthalate	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00191	3.3	D1, D4	smitchell
2011040467	D	Di-n-octylphthalate	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00449	3.3	D1, D4	smitchell
2011040467	D	Fluoranthene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00109	3.3	D1, D4	smitchell
2011040467	D	Fluorene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00094	3.3	D1, D4	smitchell
2011040467	D	Hexachlorobenzene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00059	3.3	D1, D4	smitchell
2011040467	D	Hexachlorobutadiene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00052	3.3	D1, D4	smitchell
2011040467	D	Hexachloroethane	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00056	3.3	D1, D4, N1	smitchell
2011040467	D	Hexachlorocyclopentadiene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00267	3.3	D1, D4	smitchell
2011040467	D	Indeno(1,2,3-cd)pyrene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00204	3.3	D1, D4	smitchell
2011040467	D	Isophorone	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00325	3.3	D1, D4, N1	smitchell
2011040467	D	Naphthalene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00072	3.3	D1, D4	smitchell
2011040467	D	n-Decane	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00068	3.3	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 Lab Supervisor.

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)											
2011040467	D	Nitrobenzene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.0005	3.3	D1, D4, N1	smitchell
2011040467	D	N-Nitroso-di-n-propylamine	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00063	3.3	D1, D4	smitchell
2011040467	D	N-Nitrosodimethylamine	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00064	3.3	D1, D4	smitchell
2011040467	D	N-Nitrosodiphenylamine	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00102	3.3	D1, D4	smitchell
2011040467	D	n-Octadecane	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00248	3.3	D1, D4	smitchell
2011040467	D	Pentachlorophenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00076	16.5	D1, D4	smitchell
2011040467	D	Phenanthrene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00097	3.3	D1, D4	smitchell
2011040467	D	Phenol	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00055	3.3	D1, D4	smitchell
2011040467	D	Pyrene	4/7/11 9:30	EPA 625	05/19/11 19:23	ND	mg/Kg	0.00119	3.3	D1, D4	smitchell
Final Effluent - Trough (20923-7003)											
2011040187	C	Miscellaneous Note	4/4/11 9:30	None	Subcontracted						Other
2011040287	D	Chromium	4/5/11 9:28	EPA 200.8	04/11/11 15:58	Trace	ug/l	0.21	1.8		jbarajas
2011040287	D	Ammonia	4/5/11 9:28	SM4500-NH3-D		NA	mg/l	0.03	0.10	Q1	tourada
2011040287	D	Chromium, Hexavalent	4/5/11 9:28	SM 3500 CR-D		NA	ug/l	0.6	2	N1	mbomar
2011040287	D	Cyanide, Total	4/5/11 9:28	SM 4500-CN-E		NA	ug/l	1.0	5.0	Q1	aklos
2011040287	D	Sulfide	4/5/11 9:28	HACH 8131		NA	mg/l	0.002	0.010	Q1	aklos
2011040287	D	Oil & Grease	4/5/11 9:28	EPA 1664A	04/07/11 11:43	Trace	mg/l	0.87	4.00		evega
2011040369	C	Miscellaneous Note	4/6/11 9:20	None	Subcontracted						Other
2011040464	D	Conductivity (Field)	4/7/11 9:05	SM 2510B	04/07/11 9:05	1370	umhos/cm		72.0		Sampler
2011040464	D	Calcium	4/7/11 9:05	EPA 200.7	04/10/11 13:31	71.6	mg/l	0.22	20.0		khowell
2011040464	D	Iron	4/7/11 9:05	EPA 200.7	04/19/11 12:12	135.0	ug/l	9.1	25.0		khowell
2011040464	D	Magnesium	4/7/11 9:05	EPA 200.7	04/10/11 13:31	12.3	mg/l	0.04	10.0		khowell
2011040464	D	Potassium	4/7/11 9:05	EPA 200.7	04/10/11 13:31	17.60	mg/l	0.12	10.0		khowell
2011040464	D	Sodium	4/7/11 9:05	EPA 200.7	04/10/11 13:31	148.00	mg/l	0.08	20.0		khowell
2011040464	D	Barium	4/7/11 9:05	EPA 200.8	04/13/11 16:22	65.29	ug/l	0.21	1.6		jbarajas
2011040464	D	Manganese	4/7/11 9:05	EPA 200.8	04/13/11 16:22	11.64	ug/l	0.15	1.0		jbarajas
2011040464	D	Chloride	4/7/11 9:05	SM4500-Cl-E	04/18/11 13:13	160.00	mg/l	0.71	4.00		tourada
2011040464	D	Cyanide, Amenable to Chlorination	4/7/11 9:05	SM 4500-CN-G	04/13/11 9:40	ND	ug/l	1.0	5		aklos
2011040464	D	Fluoride	4/7/11 9:05	SM 4500-F C	04/12/11 13:36	0.461	mg/l	0.002	0.020		manderson
2011040464	D	Hardness (Calculated)	4/7/11 9:05	SM 2340B	04/10/11 13:31	229	mg/l		50		khowell
2011040464	D	Mercury	4/7/11 9:05	EPA 245.1	04/13/11 11:31	ND	ug/l	0.15	0.20		khowell
2011040464	D	Nitrate/Nitrite	4/7/11 9:05	EPA 353.2	04/11/11 12:54	0.4	mg/l	0.04	0.2		tourada
2011040464	D	Nitrogen, Total Kjeldahl	4/7/11 9:05	EPA 351.2	04/15/11 10:54	29.1	mg/l	0.39	0.8		manderson
2011040464	D	Nitrogen, Total	4/7/11 9:05	Calculated	04/15/11 14:02	29.5	mg/l		0.8		manderson
2011040464	D	Antimony	4/7/11 9:05	EPA 200.8	04/13/11 16:22	ND	ug/l	0.108	1.0		jbarajas
2011040464	D	Arsenic	4/7/11 9:05	EPA 200.8	04/13/11 16:22	3.66	ug/l	0.33	2.5		jbarajas
2011040464	D	Beryllium	4/7/11 9:05	EPA 200.8	04/13/11 16:22	ND	ug/l	0.01	1.0		jbarajas
2011040464	D	Cadmium	4/7/11 9:05	EPA 200.8	04/13/11 16:22	ND	ug/l	0.22	1.9		jbarajas
2011040464	D	Chromium	4/7/11 9:05	EPA 200.8	04/13/11 16:22	Trace	ug/l	0.21	1.8		jbarajas
2011040464	D	Copper	4/7/11 9:05	EPA 200.8	04/13/11 16:22	6.21	ug/l	0.29	2.5		jbarajas
2011040464	D	Lead	4/7/11 9:05	EPA 200.8	04/13/11 16:22	Trace	ug/l	0.02	1.0		jbarajas
2011040464	D	Nickel	4/7/11 9:05	EPA 200.8	04/13/11 16:22	2.50	ug/l	0.15	1.05		jbarajas
2011040464	D	Selenium	4/7/11 9:05	EPA 200.8	04/13/11 16:22	Trace	ug/l	0.22	2.0		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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20923
Roger Road WRF
April 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011040286	Q1	Sample integrity was not maintained. See case narrative.	4/5/11
2011040287	N1	See case narrative.	4/5/11
2011040287	Q1	Sample integrity was not maintained. See case narrative.	4/5/11
2011040299	D2	Sample required dilution due to high concentration of target analyte.	4/5/11
2011040299	Q1	Sample integrity was not maintained. See case narrative.	4/5/11
2011040301	D2	Sample required dilution due to high concentration of target analyte.	4/5/11
2011040301	Q1	Sample integrity was not maintained. See case narrative.	4/5/11
2011040302	D2	Sample required dilution due to high concentration of target analyte.	4/5/11
2011040302	Q1	Sample integrity was not maintained. See case narrative.	4/5/11
2011040303	D2	Sample required dilution due to high concentration of target analyte.	4/5/11
2011040303	Q1	Sample integrity was not maintained. See case narrative.	4/5/11
2011040464	N1	See case narrative.	4/7/11
2011040464	Q1	Sample integrity was not maintained. See case narrative.	4/7/11
2011040467	D1	Sample required dilution due to matrix.	4/7/11
2011040467	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	4/7/11
2011040467	N1	See case narrative.	4/7/11
2011040545	D1	Sample required dilution due to matrix.	4/8/11
2011040545	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	4/8/11
2011040545	N1	See case narrative.	4/8/11
2011040545	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	4/8/11
2011040546	L4	The associated blank spike recovery was below method acceptance limits.	4/8/11
2011040546	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	4/8/11
2011040546	M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.	4/8/11

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

Case Narrative

Sample ID: 2011040467
Permit Name: Roger Road WRF
Location Name: Digested Sludge to Regional Biosolids Facility

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This sample was analyzed for EPA Method 624 and 8260 on 04/8/2011, 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.

This sample was extracted for EPA Method 625 Semi-volatiles on 04/14/2011. 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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011040467

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: 04/07/11 (MM / DD / YYYY)

SAMPLE END TIME: 0930 (24 Hour Clock)

SAMPLER: Grodman, 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	■	☐
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	■	☐
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:
Acrolein/Acrylonitrile samples have been pH adjusted 4-5SU

Bubbles in trip blanks, GOS 04-07-11

# of Bottles Delivered: 7 GOS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 02-17-11 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date: 04-07-11	Time: (24 Hour Clock) 1058
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:	4	°C
Initials:	GOS	
Non-Preserved	4	#
HNO_3	1	#
H_2SO_4		#
HCl	1	#
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?	☐	☒	☐

GOS 04-07-11

* 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 (CRAO) Laboratory
7101 N. Casa Grande Highway, Tucson, AZ 85743-9577, Phone: (520) 443-6100

Report Date: 12/7/2011 10:11:06
Laboratory License #AZ0159

Sample Analysis Report
Roger Road WRF - Permit Number 20923
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: **See Attached.**

Notes:

2011080487 Sample sent to BIO Aquatic testing for WETT analysis 08-08-11. GOS

2011080645 Sample sent to BIO Aquatic Testing for WETT analysis 08-10-11. GOS

2011080797 Sample sent to BIO Aquatic Testing for WETT analysis 08-12-11. GOS

2011080799 Samples sent to Test America for SOC analyses 08-12-11. GOS

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Reviewed by:

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

12/14/11
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
Sludge Gas (20923-2100)											
2011081869	D	Hydrogen sulfide	8/31/11 5:30	SM 2720C	08/31/11 9:55	0.36	%				evega
2011081869	D	Methane	8/31/11 5:30	SM 2720C	08/31/11 9:55	59.64	%				evega
2011081869	D	Nitrogen	8/31/11 5:30	SM 2720C	08/31/11 9:55	0.25	%				evega
Lab is not licensed for SM 2720C-Process Control Only											
Digested Sludge to Regional Biosolids Facility (20923-4500)											
2011080734	D	Cyanide, Total	8/11/11 8:45	SM 4500-CN-E	08/16/11 9:28	ND	mg/Kg	0.26	1.3	M5	manderson
2011080734	D	Mercury	8/11/11 8:45	EPA 7471A	08/18/11 15:58	2.20	mg/Kg	0.01	0.3	M5	khowell
2011080734	D	Antimony	8/11/11 8:45	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0136	10.10		mbomar
2011080734	D	Arsenic	8/11/11 8:45	EPA 6010B	08/23/11 18:00	10.50	mg/Kg	0.0125	10.10		mbomar
2011080734	D	Beryllium	8/11/11 8:45	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.00003	2.02		mbomar
2011080734	D	Cadmium	8/11/11 8:45	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0005	4.04		mbomar
2011080734	D	Chromium	8/11/11 8:45	EPA 6010B	08/24/11 17:30	28.50	mg/Kg	0.0007	10.10		mbomar
2011080734	D	Copper	8/11/11 8:45	EPA 6010B	08/24/11 17:30	469	mg/Kg	0.0037	10.10		mbomar
2011080734	D	Lead	8/11/11 8:45	EPA 6010B	08/23/11 18:00	21.60	mg/Kg	0.0080	10.10		mbomar
2011080734	D	Molybdenum	8/11/11 8:45	EPA 6010B	08/23/11 18:00	15.30	mg/Kg	0.0026	4.04		mbomar
2011080734	D	Nickel	8/11/11 8:45	EPA 6010B	08/24/11 17:30	24.00	mg/Kg	0.0086	10.10		mbomar
2011080734	D	Selenium	8/11/11 8:45	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0122	10.10		mbomar
2011080734	D	Silver	8/11/11 8:45	EPA 6010B	08/23/11 18:00	7.30	mg/Kg	0.0011	1.01		mbomar
2011080734	D	Thallium	8/11/11 8:45	EPA 6010B	08/24/11 18:30	ND	mg/Kg	0.0139	10.10		mbomar
2011080734	D	Zinc	8/11/11 8:45	EPA 6010B	08/23/11 18:00	1147	mg/Kg	0.0033	50.5	D2	mbomar
2011080734	D	Solids, Total	8/11/11 8:45	SM 2540G	08/12/11 11:20	1.92	%		0.01		snevius
2011080734	D	Acrolein	8/11/11 8:45	EPA 603	08/11/11 11:14	ND	mg/Kg	0.00111	10.4	Q2	dcorbett
2011080734	D	Acrylonitrile	8/11/11 8:45	EPA 603	08/11/11 11:14	ND	mg/Kg	0.00116	10.4	Q2	dcorbett
2011080734	D	1,2-Dibromo-3-chloropropane	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00052	1.04	Q2, N1	dcorbett
2011080734	D	1,2-Dibromoethane	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00005	0.52	Q2	dcorbett
2011080734	D	1,2,4-Trichlorobenzene	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00011	0.52	Q2	dcorbett
2011080734	D	cis-1,2-Dichloroethene	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00002	0.52	Q2	dcorbett
2011080734	D	Styrene	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00006	0.52	Q2	dcorbett
2011080734	D	Xylene, m- + p-	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00015	1.04	Q2	dcorbett
2011080734	D	Xylene, o-	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg	0.00006	0.52	Q2	dcorbett
2011080734	D	Xylene, Total	8/11/11 8:45	EPA 8260B	08/17/11 16:16	ND	mg/Kg		1.04	Q2	dcorbett
2011080734	D	1,1,1-Trichloroethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00007	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	1,1,2-Trichloroethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.0001	0.52	Q2, D1, D4	dcorbett
2011080734	D	1,1-Dichloroethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00005	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	1,1-Dichloroethene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4, S6, N1	dcorbett
2011080734	D	1,2-Dichlorobenzene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00014	0.52	Q2, D1, D4	dcorbett
2011080734	D	1,2-Dichloroethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00005	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	1,2-Dichloropropane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00007	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	1,3-Dichlorobenzene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4	dcorbett

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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)											
2011080734	D	1,4-Dichlorobenzene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00011	0.52	Q2, D1, D4	dcorbett
2011080734	D	1,1,2,2-Tetrachloroethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00026	0.52	Q2, D1, D4	dcorbett
2011080734	D	2-Chloroethyl vinyl ether	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.0003	0.52	Q2, D1, D4	dcorbett
2011080734	D	Benzene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00005	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Bromodichloromethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00018	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Bromoform	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00007	0.52	Q2, D1, D4, N1	dcorbett
2011080734	D	Bromomethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00021	0.52	Q2, D1, D4, S6, N1	dcorbett
2011080734	D	Carbon tetrachloride	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.0001	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Chlorobenzene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00006	0.52	Q2, D1, D4	dcorbett
2011080734	D	Chloroethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00015	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Chloroform	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00005	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Chloromethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00019	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	cis-1,3-Dichloropropene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00007	0.52	Q2, D1, D4, N1	dcorbett
2011080734	D	Dibromochloromethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4	dcorbett
2011080734	D	Ethyl benzene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4	dcorbett
2011080734	D	Methylene chloride	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Tetrachloroethene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00011	0.52	Q2, D1, D4	dcorbett
2011080734	D	Toluene	8/11/11 8:45	EPA 624	08/17/11 16:16	Trace	mg/Kg	0.00007	0.52	Q2, D1, D4	dcorbett
2011080734	D	Trichlorofluoromethane	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Trichloroethene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00008	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	Trihalomethane, Total	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg		0.52	Q2, D1, D4	dcorbett
2011080734	D	trans-1,2-Dichloroethene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00014	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	trans-1,3-Dichloropropene	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00006	0.52	Q2, D1, D4, N1	dcorbett
2011080734	D	Vinyl chloride	8/11/11 8:45	EPA 624	08/17/11 16:16	ND	mg/Kg	0.00006	0.52	Q2, D1, D4, S6	dcorbett
2011080734	D	4,4-DDD	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	75.7	D1, D4	mmichel
2011080734	D	4,4-DDE	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	75.7	D1, D4	mmichel
2011080734	D	4,4-DDT	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	302.8	D1, D4	mmichel
2011080734	D	Aldrin	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	75.7	D1, D4, N1	mmichel
2011080734	D	alpha-BHC	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	75.7	D1, D4	mmichel
2011080734	D	Aroclor 1016	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.1	378.5	D1, D4	mmichel
2011080734	D	Aroclor 1221	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.03	757	D1, D4	mmichel
2011080734	D	Aroclor 1232	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.09	757	D1, D4	mmichel
2011080734	D	Aroclor 1242	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.08	757	D1, D4	mmichel
2011080734	D	Aroclor 1248	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.04	757	D1, D4	mmichel
2011080734	D	Aroclor 1254	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.05	757	D1, D4	mmichel
2011080734	D	Aroclor 1260	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.05	757	D1, D4	mmichel
2011080734	D	beta-BHC	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.04	151.4	D1, D4	mmichel
2011080734	D	Chlordane, Technical	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.48	12112	D1, D4	mmichel
2011080734	D	delta-BHC	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	75.7	D1, D4	mmichel
2011080734	D	Dieldrin	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	75.7	D1, D4	mmichel
2011080734	D	Endosulfan I	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	302.8	D1, D4	mmichel

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2011080734	D	Endosulfan II	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.01	302.8	D1, D4	mmichel
2011080734	D	Endosulfan sulfate	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.02	151.4	D1, D4	mmichel
2011080734	D	Endrin	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.03	302.8	D1. D4	mmichel
2011080734	D	Endrin aldehyde	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.01	151.4	D1, D4	mmichel
2011080734	D	gamma-BHC (Lindane)	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.04	151.4	D1, D4	mmichel
2011080734	D	Heptachlor	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.03	151.4	D1, D4, N1	mmichel
2011080734	D	Heptachlor epoxide	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	0.04	151.4	D1, D4	mmichel
2011080734	D	Polychlorinated biphenyls, Total	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg		757	D1, D4	mmichel
2011080734	D	Toxaphene	8/11/11 8:45	EPA 625	09/15/11 13:19	ND	ug/kg	5.29	24224	D1, D4	mmichel
2011080734	D	Methoxychlor	8/11/11 8:45	EPA 8270C	09/15/11 13:19	ND	ug/kg	0.03	151.4	D1, D4	mmichel
2011080734	D	1,2,4-Trichlorobenzene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00054	4.16	D1, D4	smitchell
2011080734	D	1,2-Diphenylhydrazine	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00101	4.16	D1, D4	smitchell
2011080734	D	2,3-Dichloroaniline	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00172	4.16	D1, D4	smitchell
2011080734	D	2,4,6-Trichlorophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00078	4.16	D1, D4	smitchell
2011080734	D	2,4-Dichlorophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00059	4.16	D1, D4	smitchell
2011080734	D	2,4-Dimethylphenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00253	4.16	D1, D4	smitchell
2011080734	D	2,4-Dinitrophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00489	20.8	D1, D4	smitchell
2011080734	D	2,4-Dinitrotoluene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00095	4.16	D1, D4	smitchell
2011080734	D	2,6-Dinitrotoluene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00113	4.16	D1, D4	smitchell
2011080734	D	2-Chloronaphthalene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00101	4.16	D1, D4	smitchell
2011080734	D	2-Chlorophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00065	4.16	D1, D4	smitchell
2011080734	D	2-Methylphenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00118	4.16	D1, D4	smitchell
2011080734	D	2-Nitrophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00072	4.16	D1, D4	smitchell
2011080734	D	3,3-Dichlorobenzidine	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00676	4.16	D1, D4	smitchell
2011080734	D	4,6-Dinitro-2-methylphenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00119	4.16	D1, D4	smitchell
2011080734	D	4-Bromophenyl phenyl ether	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.0008	4.16	D1, D4	smitchell
2011080734	D	4-Chloro-3-methylphenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00071	4.16	D1, D4	smitchell
2011080734	D	4-Chlorophenyl phenyl ether	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00091	4.16	D1, D4	smitchell
2011080734	D	4-Methylphenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.0013	4.16	D1, D4, N1	smitchell
2011080734	D	4-Nitrophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00352	12.48	D1, D4	smitchell
2011080734	D	Acenaphthene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00084	4.16	D1, D4	smitchell
2011080734	D	Acenaphthylene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00061	4.16	D1, D4	smitchell
2011080734	D	Anthracene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00092	4.16	D1, D4	smitchell
2011080734	D	Benzo(a)anthracene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00085	4.16	D1, D4	smitchell
2011080734	D	Benzidine	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.01323	4.16	D1, D4, N1	smitchell
2011080734	D	Benzo(a)pyrene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00119	4.16	D1, D4	smitchell
2011080734	D	Benzo(b)fluoranthene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00137	4.16	D1, D4	smitchell
2011080734	D	Benzo(g,h,i)perylene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.0027	4.16	D1, D4	smitchell
2011080734	D	Benzo(k)fluoranthene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00187	4.16	D1, D4	smitchell
2011080734	D	Bis(2-Chloroisopropyl)ether	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00061	4.16	D1, D4	smitchell
2011080734	D	Bis(2-chloroethoxy)methane	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00051	4.16	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 Lab Supervisor.

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)											
2011080734	D	Bis(2-chloroethyl)ether	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00067	4.16	D1, D4	smitchell
2011080734	D	Bis(2-ethylhexyl) phthalate	8/11/11 8:45	EPA 625	08/25/11 16:49	23.19	mg/Kg	0.00511	4.16	D1, D4	smitchell
2011080734	D	Butylbenzyl phthalate	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00166	4.16	D1, D4	smitchell
2011080734	D	Carbazole	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00141	4.16	D1, D4	smitchell
2011080734	D	Chrysene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00099	4.16	D1, D4	smitchell
2011080734	D	Dibenz(a,h)anthracene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00226	4.16	D1, D4	smitchell
2011080734	D	Diethyl phthalate	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.0007	4.16	D1, D4	smitchell
2011080734	D	Dimethylphthalate	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00069	4.16	D1, D4	smitchell
2011080734	D	Di-n-butyl phthalate	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00191	4.16	D1, D4	smitchell
2011080734	D	Di-n-octylphthalate	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00449	4.16	D1, D4	smitchell
2011080734	D	Fluoranthene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00109	4.16	D1, D4	smitchell
2011080734	D	Fluorene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00094	4.16	D1, D4	smitchell
2011080734	D	Hexachlorobenzene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00059	4.16	D1, D4	smitchell
2011080734	D	Hexachlorobutadiene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00052	4.16	D1, D4, N1	smitchell
2011080734	D	Hexachloroethane	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00056	4.16	D1, D4, N1	smitchell
2011080734	D	Hexachlorocyclopentadiene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00267	4.16	D1, D4, N1	smitchell
2011080734	D	Indeno(1,2,3-cd)pyrene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00204	4.16	D1, D4	smitchell
2011080734	D	Isophorone	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00325	4.16	D1, D4	smitchell
2011080734	D	Naphthalene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00072	4.16	D1, D4	smitchell
2011080734	D	n-Decane	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00068	4.16	D1, D4, N1	smitchell
2011080734	D	Nitrobenzene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.0005	4.16	D1, D4	smitchell
2011080734	D	N-Nitroso-di-n-propylamine	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00063	4.16	D1, D4	smitchell
2011080734	D	N-Nitrosodimethylamine	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00064	4.16	D1, D4	smitchell
2011080734	D	N-Nitrosodiphenylamine	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00102	4.16	D1, D4	smitchell
2011080734	D	n-Octadecane	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00248	4.16	D1, D4	smitchell
2011080734	D	Pentachlorophenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00076	4.16	D1, D4	smitchell
2011080734	D	Phenanthrene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00097	4.16	D1, D4	smitchell
2011080734	D	Phenol	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00055	4.16	D1, D4	smitchell
2011080734	D	Pyrene	8/11/11 8:45	EPA 625	08/25/11 16:49	ND	mg/Kg	0.00119	4.16	D1, D4	smitchell
Final Effluent - Trough (20923-7003)											
2011080486	D	Conductivity (Field)	8/8/11 10:05	SM 2510B	08/08/11 10:05	1289	umhos/cm		72.0		Jason Grodmar
2011080486	D	Calcium	8/8/11 10:05	EPA 200.7	08/11/11 15:30	69.4	mg/l	0.22	20.0		mbomar
2011080486	D	Iron	8/8/11 10:05	EPA 200.7	08/16/11 14:25	110.0	ug/l	9.1	25.0		khowell
2011080486	D	Magnesium	8/8/11 10:05	EPA 200.7	08/11/11 15:30	11.4	mg/l	0.04	10.0		mbomar
2011080486	D	Potassium	8/8/11 10:05	EPA 200.7	08/11/11 15:30	13.00	mg/l	0.12	10.0		mbomar
2011080486	D	Sodium	8/8/11 10:05	EPA 200.7	08/11/11 15:30	141.00	mg/l	0.08	20.0		mbomar
2011080486	D	Barium	8/8/11 10:05	EPA 200.8	08/11/11 15:51	67.23	ug/l	0.24	1.0		jbarajas
2011080486	D	Manganese	8/8/11 10:05	EPA 200.8	08/11/11 15:51	20.10	ug/l	0.21	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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20923
Roger Road WRF
August 2011

Data Qualifier(s):	Definition:
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.
L2	The associated blank spike recovery was below laboratory acceptance limits.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M5	Analyte concentration was determined by the method of standard addition (MSA).
N1	See case narrative.
Q2	Sample received with headspace.
R1	RPD/RSD exceeded the method acceptance limit.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
S6	Surrogate recovery was below laboratory and method acceptance limits.Reextraction and/or reanalysis confirms low recovery caused by matrix effect.
V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.
V9	CCV recovery was below method acceptance limits.

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

Case Narrative

Sample ID: 2011080734
Permit Name: Roger Road WRF
Location Name: Digested Sludge to Regional Biosolids Facility

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This sample was analyzed for EPA Method 624 and Method 8260 on 08/17/11, 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

This sample was extracted for EPA Method 8270C Semi-volatiles on 08/18/2011. 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 08/16/2011, 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

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 20110807734

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: 08/11/2011 (MM / DD / YYYY)

SAMPLE END TIME: 0845 (24 Hour Clock)

SAMPLER: Gregory 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
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	■	☐
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: Bubbles in volatiles. GCS 08-11-11

# of Bottles Delivered: 7 GCS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 07-20-11 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler: Gregory Silva	Received by:	Date: 08-11-11	Time: (24 Hour Clock) 1007
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:	4	°C
Initials:	GCS	
Non-Preserved	4	#
HNO_3	1	#
H_2SO_4 GCS 08-11-11	1	#
HCl	1	#
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*

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

FINAL LABORATORY GROUP REPORTS

LIMS # 2011080734
Parameters: Metals, Cn, EPA 603, Pesticides, Volatiles, Semi-Volatiles, Total Solids

QA/QC Review

Copy of CoC included with Lab Report.	Yes
Sample IDs verified against CoC.	Yes
Sample dates/times are correct	Yes
Analyses and methods verified against CoC.	Yes
Sample holding times not exceeded.	Yes
Correct Data Qualifiers included if necessary.	Yes
Report Comments included if necessary.	Yes
Are there exceedences/Not Analyzed/No Results?	No
If yes, is there a notification form attached?	N/a
Correct units? (mg/l or ug/l, mg/kg, SU@--°)	Yes
If there are Contract Lab Results, Is there a Contract Lab Checksheet?	N/a
Sample Receipt Checklist?	Yes
Correct Methods?	Yes
MDLS/PQLS	Yes

QA/QC Review date and initials: lej 11/09/11 **Final Review date and initials:** 11-18-11

Comments:

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: 12/28/2011 11:48:01
Laboratory License #AZ0159

Sample Analysis Report
Roger Road WRF - Permit Number 20923
October 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:

2011100968 Sample sent to BIO Aquatic Testing for WETT analysis 10-17-11. GOS

2011101105 Sample sent to BIO Aquatic Testing for WETT analysis 10-19-11. JS

2011101253 Sample sent to BIO Aquatic Testing for WETT analysis 10-21-11. 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 Rosales

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

12/28/11

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)											
2011101252	C	Endosulfan II	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.01	0.4	D1, D4	mmichel
2011101252	C	Endosulfan sulfate	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.02	0.2	D1, D4, N1	mmichel
2011101252	C	Endrin	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.03	0.2	D1, D4	mmichel
2011101252	C	Endrin aldehyde	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.01	0.1	D1, D4, N1	mmichel
2011101252	C	gamma-BHC (Lindane)	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.04	0.2	D1, D4	mmichel
2011101252	C	Heptachlor	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.03	0.2	D1, D4, N1	mmichel
2011101252	C	Heptachlor epoxide	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	0.04	0.2	D1, D4	mmichel
2011101252	C	Polychlorinated biphenyls, Total	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l		1.2	D1, D4	mmichel
2011101252	C	Toxaphene	10/21/11 6:00	EPA 625	10/24/11 18:55	ND	ug/l	5.29	32	D1, D4	mmichel
Sludge Gas (20923-2100)											
2011100260	D	British Thermal Unit (BTU)	10/5/11 5:30	SM 2720C	10/05/11 9:56	559					cblissett
2011100260	D	Carbon dioxide	10/5/11 5:30	SM 2720C	10/05/11 9:56	40.60	%				cblissett
2011100260	D	Hydrogen sulfide	10/5/11 5:30	SM 2720C	10/05/11 9:56	0.33	%				cblissett
2011100260	D	Methane	10/5/11 5:30	SM 2720C	10/05/11 9:56	55.18	%				cblissett
2011100260	D	Nitrogen	10/5/11 5:30	SM 2720C	10/05/11 9:56	3.89	%				cblissett
2011100678	D	British Thermal Unit (BTU)	10/12/11 5:30	SM 2720C	10/12/11 10:36	592					cblissett
2011100678	D	Carbon dioxide	10/12/11 5:30	SM 2720C	10/12/11 10:36	41.08	%				cblissett
2011100678	D	Hydrogen sulfide	10/12/11 5:30	SM 2720C	10/12/11 10:36	0.35	%				cblissett
2011100678	D	Methane	10/12/11 5:30	SM 2720C	10/12/11 10:36	58.40	%				cblissett
2011100678	D	Nitrogen	10/12/11 5:30	SM 2720C	10/12/11 10:36	0.17	%				cblissett
2011101104	D	British Thermal Unit (BTU)	10/19/11 3:00	SM 2720C	10/19/11 8:06	605					cblissett
2011101104	D	Carbon dioxide	10/19/11 3:00	SM 2720C	10/19/11 8:06	39.50	%				cblissett
2011101104	D	Hydrogen sulfide	10/19/11 3:00	SM 2720C	10/19/11 8:06	0.36	%				cblissett
2011101104	D	Methane	10/19/11 3:00	SM 2720C	10/19/11 8:06	59.75	%				cblissett
2011101104	D	Nitrogen	10/19/11 3:00	SM 2720C	10/19/11 8:06	0.39	%				cblissett
2011101483	D	British Thermal Unit (BTU)	10/26/11 2:15	SM 2720C	10/26/11 8:45	612					cblissett
2011101483	D	Carbon dioxide	10/26/11 2:15	SM 2720C	10/26/11 8:45	38.80	%				cblissett
2011101483	D	Hydrogen sulfide	10/26/11 2:15	SM 2720C	10/26/11 8:45	0.35	%				cblissett
2011101483	D	Methane	10/26/11 2:15	SM 2720C	10/26/11 8:45	60.38	%				cblissett
2011101483	D	Nitrogen	10/26/11 2:15	SM 2720C	10/26/11 8:45	0.47	%				cblissett

Lab is not licensed for SM 2720C-Process Control Only

Digested Sludge to Regional Biosolids Facility (20923-4500)

2011101185	D	Cyanide, Total	10/20/11 9:15	SM 4500-CN-E	11/02/11 13:32	Trace	mg/Kg	0.33	1.7	M5	manderson

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.

Roger Road WRF

Digested Sludge to Regional Biosolids Facility (20923-4500)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011101185	D	Mercury	10/20/11 9:15	EPA 7471A	10/25/11 11:29	1.66	mg/Kg	0.013	0.32		khowell
2011101185	D	Antimony	10/20/11 9:15	EPA 6010B	10/21/11 16:20	ND	mg/Kg	0.0136	19.2012		mbomar
2011101185	D	Arsenic	10/20/11 9:15	EPA 6010B	10/21/11 14:46	Trace	mg/Kg	0.0125	19.2012		mbomar
2011101185	D	Beryllium	10/20/11 9:15	EPA 6010B	10/21/11 14:46	Trace	mg/Kg	0.00003	3.8402		mbomar
2011101185	D	Cadmium	10/20/11 9:15	EPA 6010B	10/21/11 14:46	Trace	mg/Kg	0.0005	7.6805		mbomar
2011101185	D	Chromium	10/20/11 9:15	EPA 6010B	10/21/11 14:46	31.80	mg/Kg	0.0007	19.2012		mbomar
2011101185	D	Copper	10/20/11 9:15	EPA 6010B	10/21/11 14:46	511	mg/Kg	0.0037	19.2012		mbomar
2011101185	D	Lead	10/20/11 9:15	EPA 6010B	10/21/11 14:46	26.80	mg/Kg	0.0080	19.2012		mbomar
2011101185	D	Molybdenum	10/20/11 9:15	EPA 6010B	10/21/11 14:46	18.70	mg/Kg	0.0026	7.6805		mbomar
2011101185	D	Nickel	10/20/11 9:15	EPA 6010B	10/21/11 16:20	22.90	mg/Kg	0.0086	19.2012		mbomar
2011101185	D	Selenium	10/20/11 9:15	EPA 6010B	10/21/11 16:20	ND	mg/Kg	0.0122	19.2012		mbomar
2011101185	D	Silver	10/20/11 9:15	EPA 6010B	10/21/11 14:46	7.50	mg/Kg	0.0011	1.9201		mbomar
2011101185	D	Thallium	10/20/11 9:15	EPA 6010B	10/21/11 16:20	ND	mg/Kg	0.0139	19.2012		mbomar
2011101185	D	Zinc	10/20/11 9:15	EPA 6010B	10/21/11 14:46	1202	mg/Kg	0.0033	19.2012		mbomar
2011101185	D	Solids, Total	10/20/11 9:15	SM 2540G	10/21/11 12:30	1.55	%		0.01		jvriper
2011101185	D	Acrolein	10/20/11 9:15	EPA 603	10/31/11 17:27	ND	mg/Kg	0.00111	10.0	Q2, D1, D4, R4	dcorbett
2011101185	D	Acrylonitrile	10/20/11 9:15	EPA 603	10/31/11 17:27	ND	mg/Kg	0.00116	10.0	Q2, D1, D4	dcorbett
2011101185	D	1,2-Dibromo-3-chloropropane	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00052	1.29	Q2	dcorbett
2011101185	D	1,2-Dibromoethane	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00005	0.645	Q2	dcorbett
2011101185	D	1,2,4-Trichlorobenzene	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00011	0.645	Q2	dcorbett
2011101185	D	cis-1,2-Dichloroethene	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00002	0.645	Q2	dcorbett
2011101185	D	Styrene	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00006	0.645	Q2	dcorbett
2011101185	D	Xylene, m- + p-	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00015	1.29	Q2	dcorbett
2011101185	D	Xylene, o-	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg	0.00006	0.645	Q2	dcorbett
2011101185	D	Xylene, Total	10/20/11 9:15	EPA 8260B	10/27/11 22:12	ND	mg/Kg		1.29	Q2	dcorbett
2011101185	D	1,1,1-Trichloroethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00007	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,1,2-Trichloroethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.0001	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,1-Dichloroethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00005	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,1-Dichloroethene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,2-Dichlorobenzene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00014	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,2-Dichloroethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00005	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,2-Dichloropropane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00007	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,3-Dichlorobenzene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,4-Dichlorobenzene	10/20/11 9:15	EPA 624	10/27/11 22:12	Trace	mg/Kg	0.00011	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	1,1,2,2-Tetrachloroethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00026	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	2-Chloroethyl vinyl ether	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.0003	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Benzene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00005	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Bromodichloromethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00018	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Bromoform	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00007	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Bromomethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00021	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Carbon tetrachloride	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.0001	0.645	Q2, N1, D1, D4	dcorbett

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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)											
2011101185	D	Chlorobenzene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00006	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Chloroethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00015	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Chloroform	10/20/11 9:15	EPA 624	10/27/11 22:12	Trace	mg/Kg	0.00005	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Chloromethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00019	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	cis-1,3-Dichloropropene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00007	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Dibromochloromethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Ethyl benzene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Methylene chloride	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Tetrachloroethene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00011	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Toluene	10/20/11 9:15	EPA 624	10/27/11 22:12	Trace	mg/Kg	0.00007	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Trichlorofluoromethane	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Trichloroethene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00008	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Trihalomethane, Total	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg		0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	trans-1,2-Dichloroethene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00014	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	trans-1,3-Dichloropropene	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00006	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	Vinyl chloride	10/20/11 9:15	EPA 624	10/27/11 22:12	ND	mg/Kg	0.00006	0.645	Q2, N1, D1, D4	dcorbett
2011101185	D	4,4-DDD	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4	mmichel
2011101185	D	4,4-DDE	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4	mmichel
2011101185	D	4,4-DDT	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4	mmichel
2011101185	D	Aldrin	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4, N1	mmichel
2011101185	D	alpha-BHC	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4	mmichel
2011101185	D	Aroclor 1016	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.1	366.625	D1, D4	mmichel
2011101185	D	Aroclor 1221	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.03	366.625	D1, D4	mmichel
2011101185	D	Aroclor 1232	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.09	733.25	D1, D4	mmichel
2011101185	D	Aroclor 1242	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.08	879.9	D1, D4	mmichel
2011101185	D	Aroclor 1248	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.04	879.9	D1, D4	mmichel
2011101185	D	Aroclor 1254	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.05	879.9	D1, D4	mmichel
2011101185	D	Aroclor 1260	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.05	733.25	D1, D4	mmichel
2011101185	D	beta-BHC	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.04	146.65	D1, D4	mmichel
2011101185	D	Chlordane, Technical	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.48	1466.5	D1, D4	mmichel
2011101185	D	delta-BHC	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4	mmichel
2011101185	D	Dieldrin	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	73.325	D1, D4	mmichel
2011101185	D	Endosulfan I	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	293.3	D1, D4, N1	mmichel
2011101185	D	Endosulfan II	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.01	293.3	D1, D4	mmichel
2011101185	D	Endosulfan sulfate	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.02	146.65	D1, D4, N1	mmichel
2011101185	D	Endrin	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.03	146.65	D1, D4	mmichel
2011101185	D	Endrin aldehyde	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.01	73.325	D1, D4, N1	mmichel
2011101185	D	gamma-BHC (Lindane)	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.04	146.65	D1, D4	mmichel
2011101185	D	Heptachlor	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.03	146.65	D1, D4, N1	mmichel
2011101185	D	Heptachlor epoxide	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	0.04	146.65	D1, D4	mmichel
2011101185	D	Polychlorinated biphenyls, Total	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg		879.9	D1, D4	mmichel

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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)											
2011101185	D	Toxaphene	10/20/11 9:15	EPA 625	10/24/11 19:19	ND	ug/kg	5.29	23464	D1, D4	mmichel
2011101185	D	Methoxychlor	10/20/11 9:15	EPA 8270C	10/24/11 19:19	ND	ug/kg	0.03	733.25	D1, D4	mmichel
2011101185	D	1,2,4-Trichlorobenzene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00054	5.2	D1, D4, S1	smitchell
2011101185	D	1,2-Diphenylhydrazine	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00101	5.2	D1, D4	smitchell
2011101185	D	2,3-Dichloroaniline	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00172	5.2	D1, D4, N1, S1	smitchell
2011101185	D	2,4,6-Trichlorophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00078	5.2	D1, D4, S1	smitchell
2011101185	D	2,4-Dichlorophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00059	5.2	D1, D4, S1	smitchell
2011101185	D	2,4-Dimethylphenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00253	5.2	D1, D4, S1	smitchell
2011101185	D	2,4-Dinitrophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00489	39	D1, D4	smitchell
2011101185	D	2,4-Dinitrotoluene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00095	5.2	D1, D4	smitchell
2011101185	D	2,6-Dinitrotoluene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00113	5.2	D1, D4	smitchell
2011101185	D	2-Chloronaphthalene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00101	5.2	D1, D4	smitchell
2011101185	D	2-Chlorophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00065	5.2	D1, D4, S1	smitchell
2011101185	D	2-Methylphenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00118	5.2	D1, D4, S1	smitchell
2011101185	D	2-Nitrophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00072	5.2	D1, D4, S1	smitchell
2011101185	D	3,3-Dichlorobenzidine	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00676	26	D1, D4, N1	smitchell
2011101185	D	4,6-Dinitro-2-methylphenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00119	15.6	D1, D4	smitchell
2011101185	D	4-Bromophenyl phenyl ether	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.0008	5.2	D1, D4	smitchell
2011101185	D	4-Chloro-3-methylphenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00071	5.2	D1, D4, S1	smitchell
2011101185	D	4-Chlorophenyl phenyl ether	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00091	5.2	D1, D4	smitchell
2011101185	D	4-Methylphenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.0013	5.2	D1, D4, N1, S1	smitchell
2011101185	D	4-Nitrophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00352	15.6	D1, D4	smitchell
2011101185	D	Acenaphthene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00084	5.2	D1, D4	smitchell
2011101185	D	Acenaphthylene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00061	5.2	D1, D4	smitchell
2011101185	D	Anthracene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00092	5.2	D1, D4	smitchell
2011101185	D	Benzo(a)anthracene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00085	5.2	D1, D4	smitchell
2011101185	D	Benzidine	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.01323	26	D1, D4, N1	smitchell
2011101185	D	Benzo(a)pyrene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00119	5.2	D1, D4, N1	smitchell
2011101185	D	Benzo(b)fluoranthene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00137	5.2	D1, D4, N1	smitchell
2011101185	D	Benzo(g,h,i)perylene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.0027	5.2	D1, D4, N1	smitchell
2011101185	D	Benzo(k)fluoranthene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00187	5.2	D1, D4, N1	smitchell
2011101185	D	Bis(2-Chloroisopropyl)ether	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00061	5.2	D1, D4, S1	smitchell
2011101185	D	Bis(2-chloroethoxy)methane	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00051	5.2	D1, D4, S1	smitchell
2011101185	D	Bis(2-chloroethyl)ether	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00067	5.2	D1, D4, S1	smitchell
2011101185	D	Bis(2-ethylhexyl) phthalate	10/20/11 9:15	EPA 625	11/15/11 17:46	61.52	mg/Kg	0.00511	5.2	D1, D4	smitchell
2011101185	D	Butylbenzyl phthalate	10/20/11 9:15	EPA 625	11/15/11 17:46	6.08	mg/Kg	0.00166	5.2	D1, D4, N1	smitchell
2011101185	D	Carbazole	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00141	5.2	D1, D4, N1	smitchell
2011101185	D	Chrysene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00099	5.2	D1, D4	smitchell
2011101185	D	Dibenz(a,h)anthracene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00226	5.2	D1, D4, N1	smitchell
2011101185	D	Diethyl phthalate	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.0007	5.2	D1, D4	smitchell
2011101185	D	Dimethylphthalate	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00069	5.2	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.
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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)											
2011101185	D	Di-n-butyl phthalate	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00191	5.2	D1, D4	smitchell
2011101185	D	Di-n-octylphthalate	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00449	5.2	D1, D4, N1	smitchell
2011101185	D	Fluoranthene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00109	5.2	D1, D4, N1	smitchell
2011101185	D	Fluorene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00094	5.2	D1, D4	smitchell
2011101185	D	Hexachlorobenzene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00059	5.2	D1, D4, N1	smitchell
2011101185	D	Hexachlorobutadiene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00052	5.2	D1, D4, N1, S1	smitchell
2011101185	D	Hexachloroethane	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00056	5.2	D1, D4, S1	smitchell
2011101185	D	Hexachlorocyclopentadiene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00267	26	D1, D4, S1	smitchell
2011101185	D	Indeno(1,2,3-cd)pyrene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00204	5.2	D1, D4	smitchell
2011101185	D	Isophorone	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00325	5.2	D1, D4, S1	smitchell
2011101185	D	Naphthalene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00072	5.2	D1, D4, S1	smitchell
2011101185	D	n-Decane	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00068	5.2	D1, D4, N1, S1	smitchell
2011101185	D	Nitrobenzene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.0005	5.2	D1, D4, S1	smitchell
2011101185	D	N-Nitroso-di-n-propylamine	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00063	5.2	D1, D4, S1	smitchell
2011101185	D	N-Nitrosodimethylamine	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00064	15.6	D1, D4	smitchell
2011101185	D	N-Nitrosodiphenylamine	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00102	5.2	D1, D4	smitchell
2011101185	D	n-Octadecane	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00248	5.2	D1, D4, N1	smitchell
2011101185	D	Pentachlorophenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00076	26	D1, D4	smitchell
2011101185	D	Phenanthrene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00097	5.2	D1, D4	smitchell
2011101185	D	Phenol	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00055	15.6	D1, D4, S1	smitchell
2011101185	D	Pyrene	10/20/11 9:15	EPA 625	11/15/11 17:46	ND	mg/Kg	0.00119	5.2	D1, D4, N1	smitchell
Final Effluent - Trough (20923-7003)											
2011100262	D	Chromium	10/5/11 8:25	EPA 200.8	10/24/11 21:44	Trace	ug/l	0.23	1.0		jbarajas
2011100262	D	Chromium, Hexavalent	10/5/11 8:25	SM 3500 CR-D		NA	ug/l	0.6	2		jbarajas
Total chromium below action level.											
2011100262	D	Cyanide, Total	10/5/11 8:25	SM 4500-CN-E	10/12/11 14:21	Trace	ug/l	1.0	5.0		manderson
2011100262	D	Sulfide	10/5/11 8:25	HACH 8131	10/07/11 11:08	ND	mg/l	0.002	0.010		khowell
2011100262	D	Oil & Grease	10/5/11 8:25	EPA 1664A	10/11/11 11:09	ND	mg/l	0.87	4.00		evega
2011100968	C	Miscellaneous Note	10/17/11 8:00	None		Subcontracted					Other
2011101105	C	Miscellaneous Note	10/19/11 8:30	None		Subcontracted					Other
2011101109	D	Chromium	10/19/11 7:52	EPA 200.8	10/31/11 16:47	Trace	ug/l	0.23	1.0		jbarajas

Lab Comments:

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Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 20923
Roger Road WRF
October 2011

Data Qualifier(s):	Definition:
D1	Sample required dilution due to matrix.
D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.
L4	The associated blank spike recovery was below method acceptance limits.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M5	Analyte concentration was determined by the method of standard addition (MSA).
N1	See case narrative.
Q2	Sample received with headspace.
R1	RPD/RSD exceeded the method acceptance limit. See case narrative.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
S1	Surrogate recovery was above laboratory acceptance limits, but within method acceptance limits.

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

Case Narrative

Sample ID: 2011101185
Permit Name: Roger Road WRF
Location Name: Digested Sludge to Regional Biosolids Facility

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This sample was extracted for EPA Method 625 Pesticides on 10/21/2011, 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 10/27/11. 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 10/27/11, target compounds flagged with R1 for this method failed precision and accuracy due to matrix interferences inherent of the sample. DLC

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011101185

SITE & LOCATION: Roger Road WWTP -Digester Sludge to Regional Biosolids Facility

SITE-LOCATION NUMBER: 20923-4500 (XXXXX-XXXX)

SAMPLE START DATE: 10/20/11 (MM / DD / YYYY)

SAMPLE START TIME: 0915 (24 Hour Clock)

SUBMITTER: CRAO/Water Quality

SAMPLE END DATE: 10/20/11 (MM / DD / YYYY)

SAMPLE END TIME: 0915 (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	■	☐
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	■	☐
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: Acrolein and Acrylonitrile Sample has been pH adjusted w/HCl to 4-5 s.u.

# of Bottles Delivered: 7 CCS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 10-06-11 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
		10-20-11	1009
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)
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	13	°C
Initials:	CCS	
Non-Preserved	4	#
HNO_3	1	#
H_2SO_4		#
HCl	1	#
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*

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

FINAL LABORATORY GROUP REPORTS

LIMS # 2011101185
Parameters: Metals, Cn, EPA 603, Pesticides, Volatiles, Semi-Volatiles

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QA/QC Review

Copy of CoC included with Lab Report.	Yes
Sample IDs verified against CoC.	Yes
Sample dates/times are correct	Yes
Analyses and methods verified against CoC.	Yes
Sample holding times not exceeded.	Yes
Correct Data Qualifiers included if necessary.	Yes
Report Comments included if necessary.	Yes
Are there exceedences/Not Analyzed/No Results?	No
If yes, is there a notification form attached?	N/a
Correct units? (mg/l or ug/l, mg/kg, SU@--°)	Yes
If there are Contract Lab Results, Is there a Contract Lab Checksheet?	N/a
Sample Receipt Checklist?	Yes
Correct Methods?	Yes
MDLS/PQLS	Yes

QA/QC Review date and initials: lej 12/16/11 **Final Review date and initials:** 12-19-11

Comments:

SECTION 6

AVRA VALLEY WRF
AZPDES NO. AZ0024121

SAMPLING AND ANALYSES

PRIORITY POLLUTANTS

TCLP

HAZARDOUSNESS

ANNUAL BIOSOLIDS REPORT 2011

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: 4/6/2011 10:08:56
Laboratory License #AZ0159

Sample Analysis Report
Avra Valley WRF - Permit Number 25003
January 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:	See Attachment.

Notes:

2011010676 Dry Well - No Sample

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

04/05/11
Date

Avra Valley WRF

Wet Haul Sludge (25003-1573)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011011128	D	Cyanide, Total	1/19/11 14:40	SM 4500-CN-E		NA	ug/l	1.0	5.0		aklos
2011011128	D	Mercury	1/19/11 14:40	EPA 7471A	02/15/11 10:47	0.840	mg/Kg	0.006	0.15		khowell
2011011128	D	Antimony	1/19/11 14:40	EPA 6010B	02/25/11 10:44	ND	mg/Kg	0.0136	6.7		mbomar
2011011128	D	Arsenic	1/19/11 14:40	EPA 6010B	02/25/11 10:44	6.7	mg/Kg	0.0125	6.7		mbomar
2011011128	D	Beryllium	1/19/11 14:40	EPA 6010B	02/25/11 13:08	Trace	mg/Kg	0.00003	1.3		mbomar
2011011128	D	Cadmium	1/19/11 14:40	EPA 6010B	02/25/11 10:44	Trace	mg/Kg	0.0005	2.7		mbomar
2011011128	D	Chromium	1/19/11 14:40	EPA 6010B	02/25/11 13:08	12.0	mg/Kg	0.0007	6.7		mbomar
2011011128	D	Copper	1/19/11 14:40	EPA 6010B	02/25/11 10:44	167	mg/Kg	0.0037	6.7		mbomar
2011011128	D	Lead	1/19/11 14:40	EPA 6010B	03/01/11 10:40	Trace	mg/Kg	0.0080	6.7		mbomar
2011011128	D	Molybdenum	1/19/11 14:40	EPA 6010B	02/25/11 10:44	8.1	mg/Kg	0.0026	2.7		mbomar
2011011128	D	Nickel	1/19/11 14:40	EPA 6010B	02/25/11 10:44	Trace	mg/Kg	0.0086	6.7		mbomar
2011011128	D	Selenium	1/19/11 14:40	EPA 6010B	03/01/11 10:40	7.4	mg/Kg	0.0122	6.7		mbomar
2011011128	D	Silver	1/19/11 14:40	EPA 6010B	02/25/11 13:08	1.3	mg/Kg	0.0011	0.7		mbomar
2011011128	D	Thallium	1/19/11 14:40	EPA 6010B	03/01/11 10:40	ND	mg/Kg	0.0139	6.7		mbomar
2011011128	D	Zinc	1/19/11 14:40	EPA 6010B	02/25/11 10:44	561	mg/Kg	0.0033	6.7		mbomar
2011011128	D	Solids, Total	1/19/11 14:40	SM 2540G	01/21/11 12:53	3.31	%		0.005		jhernandez
2011011128	D	Acrolein	1/19/11 14:40	EPA 603	02/11/11 17:46	ND	mg/Kg	0.00116	6.042	D1, D4, Q5, R1	dcorbett
2011011128	D	Acrylonitrile	1/19/11 14:40	EPA 603	02/11/11 17:46	ND	mg/Kg	0.00111	6.042	D1, D4, Q5	dcorbett
2011011128	D	1,2-Dibromo-3-chloropropane	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00052	3	D1, D4, N1, L2	dcorbett
2011011128	D	1,2-Dibromoethane	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00005	0.3	D1, D4	dcorbett
2011011128	D	1,2,4-Trichlorobenzene	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00011	0.3	D1, D4	dcorbett
2011011128	D	cis-1,2-Dichloroethene	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00002	0.3	D1, D4	dcorbett
2011011128	D	Styrene	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00006	0.3	D1, D4	dcorbett
2011011128	D	Xylene, m- + p-	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00015	0.3	D1, D4	dcorbett
2011011128	D	Xylene, o-	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg	0.00006	0.3	D1, D4, N1	dcorbett
2011011128	D	Xylene, Total	1/19/11 14:40	EPA 8260B	01/21/11 18:56	ND	mg/Kg		0.6	D1, D4	dcorbett
2011011128	D	1,1,1-Trichloroethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00007	0.3	D1, D4, N1	dcorbett
2011011128	D	1,1,2-Trichloroethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.0001	0.3	D1, D4	dcorbett
2011011128	D	1,1-Dichloroethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00005	0.3	D1, D4	dcorbett
2011011128	D	1,1-Dichloroethene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4	dcorbett
2011011128	D	1,2-Dichlorobenzene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00014	0.3	D1, D4	dcorbett
2011011128	D	1,2-Dichloroethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00005	0.3	D1, D4	dcorbett
2011011128	D	1,2-Dichloropropane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00007	0.3	D1, D4	dcorbett
2011011128	D	1,3-Dichlorobenzene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4	dcorbett
2011011128	D	1,4-Dichlorobenzene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00011	0.3	D1, D4	dcorbett
2011011128	D	1,1,2,2-Tetrachloroethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00026	0.3	D1, D4, N1	dcorbett
2011011128	D	2-Chloroethyl vinyl ether	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.0003	0.3	D1, D4	dcorbett
2011011128	D	Benzene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00005	0.3	D1, D4	dcorbett
2011011128	D	Bromodichloromethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00018	0.3	D1, D4	dcorbett
2011011128	D	Bromoform	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00007	0.3	D1, D4, N1	dcorbett
2011011128	D	Bromomethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00021	0.6	D1, D4	dcorbett
2011011128	D	Carbon tetrachloride	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.0001	0.3	D1, D4	dcorbett
2011011128	D	Chlorobenzene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00006	0.3	D1, D4	dcorbett
2011011128	D	Chloroethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00015	0.3	D1, D4	dcorbett
2011011128	D	Chloroform	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00005	0.3	D1, D4	dcorbett
2011011128	D	Chloromethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00019	0.3	D1, D4, N1	dcorbett
2011011128	D	cis-1,3-Dichloropropene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00007	0.3	D1, D4, N1	dcorbett
2011011128	D	Dibromochloromethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4	dcorbett
2011011128	D	Ethyl benzene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4, N1	dcorbett
2011011128	D	Methylene chloride	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4	dcorbett

Lab Comments:

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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)											
2011011128	D	Tetrachloroethene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00011	0.3	D1, D4, N1	dcorbett
2011011128	D	Toluene	1/19/11 14:40	EPA 624	01/21/11 18:56	578.8	mg/Kg	0.00007	0.3	D1, D4, E3	dcorbett
2011011128	D	Trichlorofluoromethane	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4	dcorbett
2011011128	D	Trichloroethene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00008	0.3	D1, D4, N1	dcorbett
2011011128	D	Trihalomethane, Total	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg		0.3	D1, D4	dcorbett
2011011128	D	trans-1,2-Dichloroethene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00014	0.3	D1, D4	dcorbett
2011011128	D	trans-1,3-Dichloropropene	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00006	0.3	D1, D4, N1	dcorbett
2011011128	D	Vinyl chloride	1/19/11 14:40	EPA 624	01/21/11 18:56	ND	mg/Kg	0.00006	0.3	D1, D4, N1	dcorbett
2011011128	D	4,4-DDD	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4	mmichel
2011011128	D	4,4-DDE	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4	mmichel
2011011128	D	4,4-DDT	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	151.055	D1, D4	mmichel
2011011128	D	Aldrin	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4	mmichel
2011011128	D	alpha-BHC	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4, V1	mmichel
2011011128	D	Aroclor 1016	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.1	755.275	D1, D4	mmichel
2011011128	D	Aroclor 1221	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.03	1510.55	D1, D4	mmichel
2011011128	D	Aroclor 1232	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.09	1510.55	D1, D4	mmichel
2011011128	D	Aroclor 1242	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.08	1510.55	D1, D4	mmichel
2011011128	D	Aroclor 1248	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.04	1510.55	D1, D4	mmichel
2011011128	D	Aroclor 1254	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.05	1510.55	D1, D4	mmichel
2011011128	D	Aroclor 1260	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.05	755.275	D1, D4	mmichel
2011011128	D	beta-BHC	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.04	151.055	D1, D4	mmichel
2011011128	D	Chlordane, Technical	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.48	1510.55	D1, D4	mmichel
2011011128	D	delta-BHC	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	151.055	D1, D4, V1	mmichel
2011011128	D	Dieldrin	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4	mmichel
2011011128	D	Endosulfan I	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4	mmichel
2011011128	D	Endosulfan II	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.01	302.11	D1, D4	mmichel
2011011128	D	Endosulfan sulfate	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.02	75.5275	D1, D4	mmichel
2011011128	D	Endrin	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.03	302.11	D1, D4	mmichel
2011011128	D	Endrin aldehyde	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.01	151.055	D1, D4	mmichel
2011011128	D	gamma-BHC (Lindane)	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.04	151.055	D1, D4	mmichel
2011011128	D	Heptachlor	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.03	151.055	D1, D4	mmichel
2011011128	D	Heptachlor epoxide	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	0.04	151.055	D1, D4	mmichel
2011011128	D	Toxaphene	1/19/11 14:40	EPA 625	02/08/11 19:53	ND	ug/kg	5.29	24168.8	D1, D4	mmichel
2011011128	D	Methoxychlor	1/19/11 14:40	EPA 8270C	02/08/11 19:53	ND	ug/kg	0.03	151.055	D1, D4	mmichel
2011011128	D	1,2,4-Trichlorobenzene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00054	2.42	D1, D4	smitchell
2011011128	D	1,2-Diphenylhydrazine	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00101	2.42	D1, D4	smitchell
2011011128	D	2,3-Dichloroaniline	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00172	2.42	D1, D4	smitchell
2011011128	D	2,4,6-Trichlorophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00078	2.42	D1, D4	smitchell
2011011128	D	2,4-Dichlorophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00059	2.42	D1, D4	smitchell
2011011128	D	2,4-Dimethylphenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00253	2.42	D1, D4	smitchell
2011011128	D	2,4-Dinitrophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00489	12.1	D1, D4	smitchell
2011011128	D	2,4-Dinitrotoluene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00095	2.42	D1, D4	smitchell
2011011128	D	2,6-Dinitrotoluene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00113	2.42	D1, D4	smitchell
2011011128	D	2-Chloronaphthalene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00101	2.42	D1, D4	smitchell
2011011128	D	2-Chlorophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00065	2.42	D1, D4	smitchell
2011011128	D	2-Methylphenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00118	2.42	D1, D4	smitchell
2011011128	D	2-Nitrophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00072	2.42	D1, D4	smitchell
2011011128	D	3,3-Dichlorobenzidine	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00676	18.15	D1, D4	smitchell
2011011128	D	4,6-Dinitro-2-methylphenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00119	7.26	D1, D4	smitchell
2011011128	D	4-Bromophenyl phenyl ether	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.0008	2.42	D1, D4	smitchell

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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)											
2011011128	D	4-Chloro-3-methylphenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00071	2.42	D1, D4	smitchell
2011011128	D	4-Chlorophenyl phenyl ether	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00091	2.42	D1, D4	smitchell
2011011128	D	4-Methylphenol	1/19/11 14:40	EPA 625	02/04/11 14:23	440.56	mg/Kg	0.0013	2.42	D1, D4, D2	smitchell
2011011128	D	4-Nitrophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00352	2.42	D1, D4, V1	smitchell
2011011128	D	Acenaphthene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00084	2.42	D1, D4	smitchell
2011011128	D	Acenaphthylene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00061	2.42	D1, D4	smitchell
2011011128	D	Anthracene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00092	2.42	D1, D4	smitchell
2011011128	D	Benzo(a)anthracene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00085	2.42	D1, D4	smitchell
2011011128	D	Benzidine	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.01323	18.15	D1, D4	smitchell
2011011128	D	Benzo(a)pyrene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00119	2.42	D1, D4	smitchell
2011011128	D	Benzo(b)fluoranthene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00137	2.42	D1, D4	smitchell
2011011128	D	Benzo(g,h,i)perylene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.0027	2.42	D1, D4	smitchell
2011011128	D	Benzo(k)fluoranthene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00187	2.42	D1, D4	smitchell
2011011128	D	Bis(2-Chloroisopropyl)ether	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00061	2.42	D1, D4	smitchell
2011011128	D	Bis(2-chloroethoxy)methane	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00051	2.42	D1, D4	smitchell
2011011128	D	Bis(2-chloroethyl)ether	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00067	2.42	D1, D4	smitchell
2011011128	D	Bis(2-ethylhexyl) phthalate	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00511	2.42	D1, D4	smitchell
2011011128	D	Butylbenzyl phthalate	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00166	2.42	D1, D4	smitchell
2011011128	D	Carbazole	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00141	4.84	D1, D4	smitchell
2011011128	D	Chrysene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00099	2.42	D1, D4	smitchell
2011011128	D	Dibenz(a,h)anthracene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00226	2.42	D1, D4	smitchell
2011011128	D	Diethyl phthalate	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.0007	2.42	D1, D4	smitchell
2011011128	D	Dimethylphthalate	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00069	2.42	D1, D4	smitchell
2011011128	D	Di-n-butyl phthalate	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00191	2.42	D1, D4	smitchell
2011011128	D	Di-n-octylphthalate	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00449	2.42	D1, D4	smitchell
2011011128	D	Fluoranthene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00109	2.42	D1, D4	smitchell
2011011128	D	Fluorene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00094	2.42	D1, D4	smitchell
2011011128	D	Hexachlorobenzene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00059	2.42	D1, D4	smitchell
2011011128	D	Hexachlorobutadiene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00052	2.42	D1, D4	smitchell
2011011128	D	Hexachloroethane	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00056	2.42	D1, D4	smitchell
2011011128	D	Hexachlorocyclopentadiene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00267	2.42	D1, D4	smitchell
2011011128	D	Indeno(1,2,3-cd)pyrene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00204	2.42	D1, D4	smitchell
2011011128	D	Isophorone	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00325	2.42	D1, D4	smitchell
2011011128	D	Naphthalene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00072	2.42	D1, D4	smitchell
2011011128	D	n-Decane	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00068	2.42	D1, D4	smitchell
2011011128	D	Nitrobenzene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.0005	2.42	D1, D4	smitchell
2011011128	D	N-Nitroso-di-n-propylamine	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00063	2.42	D1, D4	smitchell
2011011128	D	N-Nitrosodimethylamine	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00064	2.42	D1, D4	smitchell
2011011128	D	N-Nitrosodiphenylamine	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00102	2.42	D1, D4	smitchell
2011011128	D	n-Octadecane	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00248	2.42	D1, D4	smitchell
2011011128	D	Pentachlorophenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00076	7.26	D1, D4	smitchell
2011011128	D	Phenanthrene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00097	2.42	D1, D4	smitchell
2011011128	D	Phenol	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00055	2.42	D1, D4	smitchell
2011011128	D	Pyrene	1/19/11 14:40	EPA 625	02/02/11 18:45	ND	mg/Kg	0.00119	2.42	D1, D4	smitchell
2011011132	D	Solids, Total	1/19/11 12:55	SM 2540G	01/21/11 12:53	3.42	%		0.005		jhernandez
2011011132	D	Solids, Volatile	1/19/11 12:55	SM 2540G	01/21/11 12:53	76.6	%		0.005		jhernandez

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Data Qualifiers and Definitions for Permit 25003
Avra Valley WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010273	D2	Sample required dilution due to high concentration of target analyte.	1/5/11
2011010419	D1	Sample required dilution due to matrix.	1/7/11
2011010419	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/7/11
2011010419	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010419	N1	See case narrative.	1/7/11
2011010421	D1	Sample required dilution due to matrix.	1/7/11
2011010421	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010421	N1	See case narrative.	1/7/11
2011010421	Q1	Sample integrity was not maintained. See case narrative.	1/7/11
2011010675	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010682	K1	The sample dilutions set-up for the BOD/CBOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.	1/12/11
2011011128	D1	Sample required dilution due to matrix.	1/19/11
2011011128	D2	Sample required dilution due to high concentration of target analyte.	1/19/11
2011011128	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/19/11
2011011128	E3	Concentration estimated. Analyte exceeded calibration range. Reanalysis not possible due to holding time requirements.	1/19/11
2011011128	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/19/11
2011011128	N1	See case narrative.	1/19/11
2011011128	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/19/11
2011011128	R1	RPD/RSD exceeded the method acceptance limit.	1/19/11
2011011128	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/19/11
2011011524	K5	The dilution water D.O. depletion was >0.2 mg/L.	1/26/11
2011011525	K5	The dilution water D.O. depletion was >0.2 mg/L.	1/26/11

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
COMPLIANCE & REGULATORY AFFAIRS OFFICE
LABORATORY GROUP

NOTIFICATION

LABORATORY ID:	2011011128
SAMPLE DATE/TIME:	1/19/11 2:40 PM
SAMPLE PERMIT NAME:	Avra Valley WRF
SAMPLE LOCATION NAME:	Wet Haul Sludge
PERMIT TYPE:	503
FACILITY/LOCATION ID:	25003-1573
PARAMETER:	Total CN
ANALYSIS DATE:	NA
ANALYSIS RESULT:	NA
LIMIT:	
COMMENTS:	Recirculation chiller down, unable to perform analysis within holding time limit.

☐ **Exceedance** ☑ **Not Analyzed** ☐ **Not Reported**

SUBMITTED BY: Andrew Klos (ANALYST) 2/3/11 (DATE)

REVIEWED BY: Richard Aros (UNIT SUPERVISOR) 2/3/11 (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: 2011011128
Permit Name: Avra Valley WRF
Location Name: Wet Haul Sludge

Avra Valley WRF was sampled from its Wet Haul Sludge location on 01/19/11 for purgeable organics testing, EPA method 624 and method 8260. By means of the analysis performed, the matrix spike employed on a different sample within this batch failed either low or high on compounds qualified with N1.

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
WATER QUALITY
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: IWC (Organization) LAB ID: 201101 1128

SAMPLERS: Guebara, Mackie, Carpenter (Print Last Names Only) FACILITY-LOCATION ID: 25003-1573

SAMPLE DATE: 01/19/11 (MM / DD / YY) SAMPLE TIME: 1440 (24 Hour Clock)

SAMPLE LOCATION: Avra Valley WRF - Wet Haul Sludge

PERMIT TYPE:
- ☐ APP
- ☐ Investigations
- ☐ IWC
- ☐ AZPDES
- ☐ REUSE
- ☐ USFS
- ■ 503
- ☐ Other

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Reclaimed Water

INDICATE ALL ANALYSES REQUIRED
Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY

METALS	D	C
Aluminum	☐	☐
Antimony	☐	☐
Arsenic	☐	☐
Barium	☐	☐
Beryllium	☐	☐
Boron	☐	☐
Cadmium	☐	☐
Calcium	☐	☐
Chromium	☐	☐
Chromium $^{+6}$	☐	☐
Cobalt	☐	☐
Copper	☐	☐
Hardness	☐	☐
Iron	☐	☐
Lead	☐	☐
Magnesium	☐	☐
Manganese	☐	☐
Mercury	☐	☐
Molybdenum	■	☐
Nickel	☐	☐
Potassium	☐	☐
Selenium	☐	☐
Silver	☐	☐
Sodium	☐	☐
Strontium	☐	☐

METALS	D	C
Thallium	☐	☐
Tin	☐	☐
Titanium	☐	☐
Vanadium	☐	☐
Zinc	☐	☐
ICP Scan *	☐	☐
Priority Pollutant Metals **	■	☐
TCLP Metals	☐	☐
503 Metals ***	☐	☐

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total	■	☐
Cyanide, Amenable	☐	☐
Fluoride	☐	☐
Nitrate as N	☐	☐
Nitrite as N	☐	☐
Nitrate & Nitrite as N	☐	☐
Nitrogen, Tot. Kjeldahl	☐	☐
Nitrogen, Total as N	☐	☐
Orthophosphate as P	☐	☐
Phosphorus, Total as P	☐	☐
Sulfate	☐	☐
Sulfide	☐	☐
Other	☐	☐

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
Digester Gas	☐	☐
Lindane	☐	☐
Oil and Grease	☐	☐
Organic Carbon, Total	☐	☐
Organic Carbon, Dissolved	☐	☐
Organophosphorous Pesticides	☐	☐
TCLP Herbicides	☐	☐
TCLP Pesticides	☐	☐
TCLP Semivolatile Organics	☐	☐
TCLP Volatile Organics	☐	☐
Total Petroleum Hydrocarbons	☐	☐
Volatile Acids	☐	☐
	☐	☐
	☐	☐
	☐	☐
Other: 1,2-Dichlorbenzene	■	☐
1,3-Dichlorbenzene	■	☐
1,4-Dichlorobenzene	■	☐

MICROBIOLOGY-WET CHEMISTRY

	D	C
Alkalinity	☐	☐
Bicarbonate	☐	☐
BOD	☐	☐
Carbonate	☐	☐
COD	☐	☐
Coliform, Fecal ****	☐	☐
Coliform, Sediment	☐	☐
Coliform, Total ****	☐	☐
E-*coli* ****	☐	☐
Conductivity	☐	☐
Ignitability	☐	☐
Oxygen, Dissolved	☐	☐
pH	☐	☐
Solids, Settleable	☐	☐
Solids, Total	■	☐
(% solids mg/kg)		
Solids, Total Dissolved	☐	☐
Solids, Total Suspended	☐	☐
Solids, Total Volatile	☐	☐
Solids, Volatile Suspended	☐	☐
Turbidity	☐	
Reactivity	☐	☐
Corrosivity	☐	☐
	☐	☐

Notes: The Lab shall composite the four discrete Purgeable Organics samples.

Septum Prep Date: 01/04/11 JS Bubbles in volatiles. COC is not preserved. Metals are preserved. COS 01-20-11

FIELD MEASUREMENTS

- ☐ Chlorine _____
- ☐ Temperature _____
- ☐ Oxygen (Dis.) _____
- ☐ pH _____
- ☐ Conductivity
- ☐ Other

Sample Receiving Temp.
4°C IR Therm 60

Number of Sample Containers
7 GOS

Sampled by: John Bink / Dave Mackie	Received by: Dave Mackie	Date/Time: 01/20/11 0930
Relinquished by: Dave Mackie	Received by:	Date/Time: 01-20-11 0945
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 all bacteria samples 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: 20110 1128
(yyyy/mm/xxxx – xxxx)

Facility or Submitter: IWC

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers received: 7
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☒ Yes ☐ No

Temperature of Samples: ≤4 °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?	✓			Small bubbles
COC received by laboratory and signed?	✓			

PRESERVATIVE LABEL	# OF CONTAINERS
Non-preserved	5
HNO_3 (Nitric Acid)	1
H_2SO_4 (Sulfuric Acid)	
HCL (Hydrochloric Acid)	
NaOH (Sodium Hydroxide)	1
$Na_2S_2O_3$ (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) 01-20-11 (mm/dd/yy)

PIMA COUNTY WASTEWATER MANAGEMENT
TECHNICAL SERVICES SECTION
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: Sub Regional Wastewater Reclaimation Facilities Section (Organization) LAB ID: 20110111132

SAMPLER: Brunson (Print Last Names Only) PHONE # 520-578-7341

SAMPLE DATE: 1-19-2011 (MM / DD / YY) FACILITY LOCATION ID: 25003-1573

1255 (24 Hour Clock)

SAMPLE LOCATION: Avra Valley RWRF Wet Haul Sludge (Discrete)

PERMIT TYPE:			
	☐ APP	☐ REUSE	
	☐ APP Investigations	☐ USFS	
	☐ IWC	☐ 503	
	☐ NPDES	■ Other	

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

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	☐	☐	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*	☐	☐	**Solids, Total**	■	☐
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: Transported in Ice

COMPLIANCE FIELD MEASUREMENTS

☐ Chlorine _____	☐ Temperature _____
☐ Oxygen (Dis.) _____	☐ pH _____
☐ Conductivity	☐ Other

Sample Receiving Temp.
≤4°C IR Thermo GS

Number of Sample Containers
(1) COS

Sampled by:	Laboratory refrigerator	1-19-2011 1322
	Received by:	Date/Time
Relinquished by: Laboratory refrigerator	Received by: Rick Anderson 1-20-11	09:30 AM
	Received by:	Date/Time
Relinquished by: Rick Anderson	Received by:	01-20-11 1047
	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: 20110111 32
(yyyy/mm/xxxx – xxxx)

Facility or Submitter: SRF Avra 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: ≤4 °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: _____ 01-20-11
(Signature) (mm/dd/yy)

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: 6/9/2011 09:33:50
Laboratory License #AZ0159

Sample Analysis Report
Avra Valley WRF - Permit Number 25003
April 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: **See Attached.**

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 A. Esobar

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

6/6/2011

Date

Data Qualifiers and Definitions for Permit 25003
Avra Valley WRF
April 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011040374	K1	The sample dilutions set-up for the BOD/CBOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.	4/6/11
2011040390	D2	Sample required dilution due to high concentration of target analyte.	4/6/11
2011040390	Q1	Sample integrity was not maintained. See case narrative.	4/6/11
2011040552	D1	Sample required dilution due to matrix.	4/8/11
2011040552	N1	See case narrative.	4/8/11
2011040552	S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.	4/8/11
2011040555	D1	Sample required dilution due to matrix.	4/8/11
2011040555	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	4/8/11
2011040555	N1	See case narrative.	4/8/11
2011040555	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	4/8/11
2011040759	D1	Sample required dilution due to matrix.	4/12/11
2011040759	D2	Sample required dilution due to high concentration of target analyte.	4/12/11
2011040759	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	4/12/11
2011040759	N1	See case narrative.	4/12/11
2011040759	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	4/12/11
2011040918	N1	See case narrative.	4/14/11
2011040918	V9	CCV recovery was below method acceptance limits.	4/14/11
2011041660	D2	Sample required dilution due to high concentration of target analyte.	4/27/11
2011041673	K1	The sample dilutions set-up for the BOD/CBOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.	4/27/11

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

Case Narrative

Sample ID: 2011040759
Permit Name: Avra Valley WRF
Location Name: Wet Haul Sludge

This sample was extracted for EPA Method 625 Pesticides on 04/18/2011, 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 analyzed for EPA Method 624 and 8260 on 04/19/11 and 04/22/11, 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.

This sample was extracted for EPA Method 625 Semi-volatiles on 04/14/2011. 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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 2011040376

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: 4-6-11 (MM / DD / YYYY)

SAMPLE END TIME: 0812 (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
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	☐	☐
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 GDS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler: Sample Refrigerator	Received by:	Date: 4-6-11	Time: (24 Hour Clock) 0814
Relinquished by: Sample Refrigerator	Received by: Ruth Anderson	Date: 4-6-11	Time: (24 Hour Clock) 09:45AM
Relinquished by: Ruth Anderson	Received by:	Date: 04-06-11	Time: (24 Hour Clock) 1144
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:	GDS	
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: 2011040759

SITE & LOCATION: Avra Valley WRF - Wet Haul Sludge

SITE-LOCATION NUMBER: **25003-1573** (XXXXX-XXXX)

SAMPLE START DATE: **04/12/2011** (MM / DD / YYYY)

SAMPLE START TIME: 1440 (24 Hour Clock)

SUBMITTER: **IWC**

SAMPLE END DATE: 04/12/2011 (MM / DD / YYYY)

SAMPLE END TIME: 1440 (24 Hour Clock)

SAMPLER: **Carpenter, Grant** (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	☐	☐
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	■	☐
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: Bubble in volatiles. COS 04-12-11

# of Bottles Delivered: 6

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 02-17-11 JS

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date: 04-12-11	Time: (24 Hour Clock) 1536
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	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, 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 (CRAO) Laboratory
7101 N. Casa Grande Highway, Tucson, AZ 85743-9577, Phone: (520) 443-6100

Revision 1
Report Date: 10/3/2011 08:48:07
Laboratory License #AZ0159

Sample Analysis Report
Avra Valley WRF - Permit Number 25003
July 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:

Updated report packet with corrected Chains of Custody for Lab IDs 2011071609 and 2011071610.

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

10/03/11
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 (25003-1350)											
2011071684	C	Solids, Total Suspended	7/28/11 9:30	SM 2540D	07/29/11 11:20	<2.5	mg/l		2.5		jhernandez
Final Effluent at the U.V. Channel (25003-1351)											
2011070312	D	E-Coli	7/6/11 8:11	SM 9223B	07/07/11 13:08	<1.0	MPN/100ml		1		jhernandez
2011070481	D	E-Coli	7/8/11 6:34	SM 9223B	07/09/11 11:32	<1.0	MPN/100ml		1		edoyle
2011070689	D	E-Coli	7/12/11 6:53	SM 9223B	07/13/11 12:43	<1.0	MPN/100ml		1		jvriper
2011070771	D	E-Coli	7/13/11 8:11	SM 9223B	07/14/11 11:59	<1.0	MPN/100ml		1		jvriper
2011071105	D	E-Coli	7/19/11 9:11	SM 9223B	07/20/11 12:03	<1.0	MPN/100ml		1		sdevito
2011071178	D	E-Coli	7/20/11 8:41	SM 9223B	07/21/11 12:00	<1.0	MPN/100ml		1		sdevito
2011071544	D	Temperature (Field)	7/26/11 7:45	SM 2550B	07/26/11 7:45	28.9	o C				Robert Hester
2011071544	D	E-Coli	7/26/11 7:45	SM 9223B	07/27/11 12:04	<1.0	MPN/100ml		1		sdevito
2011071609	D	E-Coli	7/27/11 9:58	SM 9223B	07/28/11 12:05	<1.0	MPN/100ml		1		sdevito
Wet Haul Sludge (25003-1573)											
2011071756	D	Cyanide, Total	7/29/11 13:55	SM 4500-CN-E	08/09/11 14:09	ND	mg/Kg	0.9	4.5	M5	manderson
2011071756	D	Mercury	7/29/11 13:55	EPA 7471A	08/18/11 15:58	1.10	mg/Kg	0.007	0.2		khowell
2011071756	D	Antimony	7/29/11 13:55	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0136	11.79		mbomar
2011071756	D	Arsenic	7/29/11 13:55	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0125	11.79		mbomar
2011071756	D	Beryllium	7/29/11 13:55	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.00003	2.36		mbomar
2011071756	D	Cadmium	7/29/11 13:55	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0005	4.71		mbomar
2011071756	D	Chromium	7/29/11 13:55	EPA 6010B	08/24/11 17:30	13.20	mg/Kg	0.0007	11.79		mbomar
2011071756	D	Copper	7/29/11 13:55	EPA 6010B	08/24/11 17:30	193	mg/Kg	0.0037	11.79		mbomar
2011071756	D	Lead	7/29/11 13:55	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0080	11.79		mbomar
2011071756	D	Molybdenum	7/29/11 13:55	EPA 6010B	08/23/11 18:00	8.70	mg/Kg	0.0026	4.71		mbomar
2011071756	D	Nickel	7/29/11 13:55	EPA 6010B	08/24/11 17:30	15.60	mg/Kg	0.0086	11.79		mbomar
2011071756	D	Selenium	7/29/11 13:55	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0122	11.79		mbomar
2011071756	D	Silver	7/29/11 13:55	EPA 6010B	08/23/11 18:00	1.30	mg/Kg	0.0011	1.18		mbomar

Lab Comments:

Data on this report was last modified on: 9/29/2011 14:24:24 Updated report packet with corrected Chains of Custody for 2011071609 and 2011071610.
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.

Avra Valley WRF

Wet Haul Sludge (25003-1573)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011071756	D	Thallium	7/29/11 13:55	EPA 6010B	08/24/11 18:30	ND	mg/Kg	0.0139	11.79		mbomar
2011071756	D	Zinc	7/29/11 13:55	EPA 6010B	08/23/11 18:00	605	mg/Kg	0.0033	11.79		mbomar
2011071756	D	Solids, Total	7/29/11 13:55	SM 2540G	07/30/11 10:55	2.78	%		0.01		snevius
2011071756	D	1,2-Dibromo-3-chloropropane	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00052	0.72	D1, D4, L2, Q5, V9, N1	dcorbett
2011071756	D	1,2-Dibromoethane	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,2,4-Trichlorobenzene	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00011	0.36	D1, D4, V9, Q5	dcorbett
2011071756	D	cis-1,2-Dichloroethene	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00002	0.36	D1, D4, Q5	dcorbett
2011071756	D	Styrene	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4	dcorbett
2011071756	D	Xylene, m- + p-	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00015	0.72	D1, D4, Q5	dcorbett
2011071756	D	Xylene, o-	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4, Q5	dcorbett
2011071756	D	Xylene, Total	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg		0.72	D1, D4	dcorbett
2011071756	D	1,1,1-Trichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,1,2-Trichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.0001	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,1-Dichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,1-Dichloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	1,2-Dichlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00014	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,2-Dichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,2-Dichloropropane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,3-Dichlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,4-Dichlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00011	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	1,1,2,2-Tetrachloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00026	0.36	D1, D4, Q5	dcorbett
2011071756	D	2-Chloroethyl vinyl ether	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.0003	0.36	D1, D4	dcorbett
2011071756	D	Benzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	Bromodichloromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00018	0.36	D1, D4, Q5	dcorbett
2011071756	D	Bromoform	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	Bromomethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00021	0.36	D1, D4, Q5	dcorbett
2011071756	D	Carbon tetrachloride	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.0001	0.36	D1, D4, Q5	dcorbett
2011071756	D	Chlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4, Q5	dcorbett
2011071756	D	Chloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00015	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	Chloroform	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	Chloromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00019	0.36	D1, D4, Q5	dcorbett
2011071756	D	cis-1,3-Dichloropropene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	Dibromochloromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Ethyl benzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Methylene chloride	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Tetrachloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00011	0.36	D1, D4, Q5	dcorbett

Lab Comments:

Data on this report was last modified on: 9/29/2011 14:24:24 Updated report packet with corrected Chains of Custody for 2011071609 and 2011071610.
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.

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)											
2011071756	D	Toluene	7/29/11 13:55	EPA 624	08/09/11 17:51	0.38	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	Trichlorofluoromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Trichloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Trihalomethane, Total	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg		0.36	D1, D4, Q5	dcorbett
2011071756	D	trans-1,2-Dichloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00014	0.36	D1, D4, Q5	dcorbett
2011071756	D	trans-1,3-Dichloropropene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	Vinyl chloride	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4	dcorbett
2011071756	D	4,4-DDD	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	222.045	D1, D4	mmichel
2011071756	D	4,4-DDE	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	4,4-DDT	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	222.045	D1, D4	mmichel
2011071756	D	Aldrin	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	alpha-BHC	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Aroclor 1016	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.1	277.55625	D1, D4	mmichel
2011071756	D	Aroclor 1221	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.03	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1232	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.09	555.1125	D1, D4	mmichel
2011071756	D	Aroclor 1242	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.08	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1248	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1254	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.05	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1260	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.05	555.1125	D1, D4	mmichel
2011071756	D	beta-BHC	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	111.0225	D1, D4	mmichel
2011071756	D	Chlordane, Technical	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.48	1110.225	D1, D4	mmichel
2011071756	D	delta-BHC	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Dieldrin	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Endosulfan I	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	222.045	D1, D4	mmichel
2011071756	D	Endosulfan II	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.01	111.0225	D1, D4	mmichel
2011071756	D	Endosulfan sulfate	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Endrin	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.03	222.045	D1, D4	mmichel
2011071756	D	Endrin aldehyde	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.01	111.0225	D1, D4	mmichel
2011071756	D	gamma-BHC (Lindane)	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	111.0225	D1, D4	mmichel
2011071756	D	Heptachlor	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.03	111.0225	D1, D4	mmichel
2011071756	D	Heptachlor epoxide	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	111.0225	D1, D4	mmichel
2011071756	D	Polychlorinated biphenyls, Total	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg		666.135	D1, D4	mmichel
2011071756	D	Toxaphene	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	5.29	17763.6	D1, D4	mmichel
2011071756	D	Methoxychlor	7/29/11 13:55	EPA 8270C	09/09/11 16:10	ND	ug/kg	0.03	111.0225	D1, D4	mmichel
2011071756	D	1,2,4-Trichlorobenzene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00054	2.88		smitchell
2011071756	D	1,2-Diphenylhydrazine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00101	2.88		smitchell

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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 (25003-1350)											
2011071684	C	Solids, Total Suspended	7/28/11 9:30	SM 2540D	07/29/11 11:20	<2.5	mg/l		2.5		jhernandez
Final Effluent at the U.V. Channel (25003-1351)											
2011070312	D	E-Coli	7/6/11 8:11	SM 9223B	07/07/11 13:08	<1.0	MPN/100ml		1		jhernandez
2011070481	D	E-Coli	7/8/11 6:34	SM 9223B	07/09/11 11:32	<1.0	MPN/100ml		1		edoyle
2011070689	D	E-Coli	7/12/11 6:53	SM 9223B	07/13/11 12:43	<1.0	MPN/100ml		1		jvriper
2011070771	D	E-Coli	7/13/11 8:11	SM 9223B	07/14/11 11:59	<1.0	MPN/100ml		1		jvriper
2011071105	D	E-Coli	7/19/11 9:11	SM 9223B	07/20/11 12:03	<1.0	MPN/100ml		1		sdevito
2011071178	D	E-Coli	7/20/11 8:41	SM 9223B	07/21/11 12:00	<1.0	MPN/100ml		1		sdevito
2011071544	D	Temperature (Field)	7/26/11 7:45	SM 2550B	07/26/11 7:45	28.9	o C				Robert Hester
2011071544	D	E-Coli	7/26/11 7:45	SM 9223B	07/27/11 12:04	<1.0	MPN/100ml		1		sdevito
2011071609	D	E-Coli	7/27/11 9:58	SM 9223B	07/28/11 12:05	<1.0	MPN/100ml		1		sdevito
Wet Haul Sludge (25003-1573)											
2011071756	D	Cyanide, Total	7/29/11 13:55	SM 4500-CN-E	08/09/11 14:09	ND	mg/Kg	0.9	4.5	M5	manderson
2011071756	D	Mercury	7/29/11 13:55	EPA 7471A	08/18/11 15:58	1.10	mg/Kg	0.007	0.2		khowell
2011071756	D	Antimony	7/29/11 13:55	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0136	11.79		mbomar
2011071756	D	Arsenic	7/29/11 13:55	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0125	11.79		mbomar
2011071756	D	Beryllium	7/29/11 13:55	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.00003	2.36		mbomar
2011071756	D	Cadmium	7/29/11 13:55	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0005	4.71		mbomar
2011071756	D	Chromium	7/29/11 13:55	EPA 6010B	08/24/11 17:30	13.20	mg/Kg	0.0007	11.79		mbomar
2011071756	D	Copper	7/29/11 13:55	EPA 6010B	08/24/11 17:30	193	mg/Kg	0.0037	11.79		mbomar
2011071756	D	Lead	7/29/11 13:55	EPA 6010B	08/23/11 18:00	Trace	mg/Kg	0.0080	11.79		mbomar
2011071756	D	Molybdenum	7/29/11 13:55	EPA 6010B	08/23/11 18:00	8.70	mg/Kg	0.0026	4.71		mbomar
2011071756	D	Nickel	7/29/11 13:55	EPA 6010B	08/24/11 17:30	15.60	mg/Kg	0.0086	11.79		mbomar
2011071756	D	Selenium	7/29/11 13:55	EPA 6010B	08/23/11 18:00	ND	mg/Kg	0.0122	11.79		mbomar
2011071756	D	Silver	7/29/11 13:55	EPA 6010B	08/23/11 18:00	1.30	mg/Kg	0.0011	1.18		mbomar

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Avra Valley WRF

Wet Haul Sludge (25003-1573)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011071756	D	Thallium	7/29/11 13:55	EPA 6010B	08/24/11 18:30	ND	mg/Kg	0.0139	11.79		mbomar
2011071756	D	Zinc	7/29/11 13:55	EPA 6010B	08/23/11 18:00	605	mg/Kg	0.0033	11.79		mbomar
2011071756	D	Solids, Total	7/29/11 13:55	SM 2540G	07/30/11 10:55	2.78	%		0.01		snevius
2011071756	D	1,2-Dibromo-3-chloropropane	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00052	0.72	D1, D4, L2, Q5, V9, N1	dcorbett
2011071756	D	1,2-Dibromoethane	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,2,4-Trichlorobenzene	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00011	0.36	D1, D4, V9, Q5	dcorbett
2011071756	D	cis-1,2-Dichloroethene	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00002	0.36	D1, D4, Q5	dcorbett
2011071756	D	Styrene	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4	dcorbett
2011071756	D	Xylene, m- + p-	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00015	0.72	D1, D4, Q5	dcorbett
2011071756	D	Xylene, o-	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4, Q5	dcorbett
2011071756	D	Xylene, Total	7/29/11 13:55	EPA 8260B	08/09/11 17:51	ND	mg/Kg		0.72	D1, D4	dcorbett
2011071756	D	1,1,1-Trichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,1,2-Trichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.0001	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,1-Dichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,1-Dichloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	1,2-Dichlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00014	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,2-Dichloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,2-Dichloropropane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,3-Dichlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	1,4-Dichlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00011	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	1,1,2,2-Tetrachloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00026	0.36	D1, D4, Q5	dcorbett
2011071756	D	2-Chloroethyl vinyl ether	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.0003	0.36	D1, D4	dcorbett
2011071756	D	Benzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	Bromodichloromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00018	0.36	D1, D4, Q5	dcorbett
2011071756	D	Bromoform	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	Bromomethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00021	0.36	D1, D4, Q5	dcorbett
2011071756	D	Carbon tetrachloride	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.0001	0.36	D1, D4, Q5	dcorbett
2011071756	D	Chlorobenzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4, Q5	dcorbett
2011071756	D	Chloroethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00015	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	Chloroform	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00005	0.36	D1, D4, Q5	dcorbett
2011071756	D	Chloromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00019	0.36	D1, D4, Q5	dcorbett
2011071756	D	cis-1,3-Dichloropropene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	Dibromochloromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Ethyl benzene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Methylene chloride	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Tetrachloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00011	0.36	D1, D4, Q5	dcorbett

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Wet Haul Sludge (25003-1573)											
2011071756	D	Toluene	7/29/11 13:55	EPA 624	08/09/11 17:51	0.38	mg/Kg	0.00007	0.36	D1, D4, Q5	dcorbett
2011071756	D	Trichlorofluoromethane	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Trichloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00008	0.36	D1, D4, Q5	dcorbett
2011071756	D	Trihalomethane, Total	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg		0.36	D1, D4, Q5	dcorbett
2011071756	D	trans-1,2-Dichloroethene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00014	0.36	D1, D4, Q5	dcorbett
2011071756	D	trans-1,3-Dichloropropene	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4, N1, Q5	dcorbett
2011071756	D	Vinyl chloride	7/29/11 13:55	EPA 624	08/09/11 17:51	ND	mg/Kg	0.00006	0.36	D1, D4	dcorbett
2011071756	D	4,4-DDD	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	222.045	D1, D4	mmichel
2011071756	D	4,4-DDE	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	4,4-DDT	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	222.045	D1, D4	mmichel
2011071756	D	Aldrin	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	alpha-BHC	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Aroclor 1016	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.1	277.55625	D1, D4	mmichel
2011071756	D	Aroclor 1221	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.03	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1232	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.09	555.1125	D1, D4	mmichel
2011071756	D	Aroclor 1242	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.08	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1248	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1254	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.05	666.135	D1, D4	mmichel
2011071756	D	Aroclor 1260	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.05	555.1125	D1, D4	mmichel
2011071756	D	beta-BHC	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	111.0225	D1, D4	mmichel
2011071756	D	Chlordane, Technical	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.48	1110.225	D1, D4	mmichel
2011071756	D	delta-BHC	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Dieldrin	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Endosulfan I	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	222.045	D1, D4	mmichel
2011071756	D	Endosulfan II	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.01	111.0225	D1, D4	mmichel
2011071756	D	Endosulfan sulfate	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.02	111.0225	D1, D4	mmichel
2011071756	D	Endrin	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.03	222.045	D1, D4	mmichel
2011071756	D	Endrin aldehyde	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.01	111.0225	D1, D4	mmichel
2011071756	D	gamma-BHC (Lindane)	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	111.0225	D1, D4	mmichel
2011071756	D	Heptachlor	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.03	111.0225	D1, D4	mmichel
2011071756	D	Heptachlor epoxide	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	0.04	111.0225	D1, D4	mmichel
2011071756	D	Polychlorinated biphenyls, Total	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg		666.135	D1, D4	mmichel
2011071756	D	Toxaphene	7/29/11 13:55	EPA 625	09/09/11 16:10	ND	ug/kg	5.29	17763.6	D1, D4	mmichel
2011071756	D	Methoxychlor	7/29/11 13:55	EPA 8270C	09/09/11 16:10	ND	ug/kg	0.03	111.0225	D1, D4	mmichel
2011071756	D	1,2,4-Trichlorobenzene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00054	2.88		smitchell
2011071756	D	1,2-Diphenylhydrazine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00101	2.88		smitchell

Lab Comments:

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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)											
2011071756	D	2,3-Dichloroaniline	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00172	2.88		smitchell
2011071756	D	2,4,6-Trichlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00078	2.88		smitchell
2011071756	D	2,4-Dichlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00059	2.88		smitchell
2011071756	D	2,4-Dimethylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00253	2.88		smitchell
2011071756	D	2,4-Dinitrophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00489	14.4		smitchell
2011071756	D	2,4-Dinitrotoluene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00095	2.88		smitchell
2011071756	D	2,6-Dinitrotoluene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00113	2.88		smitchell
2011071756	D	2-Chloronaphthalene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00101	2.88		smitchell
2011071756	D	2-Chlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00065	2.88		smitchell
2011071756	D	2-Methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00118	2.88		smitchell
2011071756	D	2-Nitrophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00072	2.88		smitchell
2011071756	D	3,3-Dichlorobenzidine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00676	2.88		smitchell
2011071756	D	4,6-Dinitro-2-methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00119	2.88		smitchell
2011071756	D	4-Bromophenyl phenyl ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0008	2.88		smitchell
2011071756	D	4-Chloro-3-methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00071	2.88		smitchell
2011071756	D	4-Chlorophenyl phenyl ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00091	2.88		smitchell
2011071756	D	4-Methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0013	2.88		smitchell
2011071756	D	4-Nitrophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00352	8.64		smitchell
2011071756	D	Acenaphthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00084	2.88		smitchell
2011071756	D	Acenaphthylene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00061	2.88		smitchell
2011071756	D	Anthracene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00092	2.88		smitchell
2011071756	D	Benzo(a)anthracene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00085	2.88		smitchell
2011071756	D	Benzidine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.01323	2.88		smitchell
2011071756	D	Benzo(a)pyrene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00119	2.88		smitchell
2011071756	D	Benzo(b)fluoranthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00137	2.88		smitchell
2011071756	D	Benzo(g,h,i)perylene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0027	2.88		smitchell
2011071756	D	Benzo(k)fluoranthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00187	2.88		smitchell
2011071756	D	Bis(2-Chloroisopropyl)ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00061	2.88		smitchell
2011071756	D	Bis(2-chloroethoxy)methane	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00051	2.88		smitchell
2011071756	D	Bis(2-chloroethyl)ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00067	2.88		smitchell
2011071756	D	Bis(2-ethylhexyl) phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00511	2.88		smitchell
2011071756	D	Butylbenzyl phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00166	2.88		smitchell
2011071756	D	Carbazole	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00141	2.88		smitchell
2011071756	D	Chrysene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00099	2.88		smitchell
2011071756	D	Dibenz(a,h)anthracene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00226	2.88		smitchell
2011071756	D	Diethyl phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0007	2.88		smitchell

Lab Comments:

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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)											
2011071756	D	2,3-Dichloroaniline	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00172	2.88		smitchell
2011071756	D	2,4,6-Trichlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00078	2.88		smitchell
2011071756	D	2,4-Dichlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00059	2.88		smitchell
2011071756	D	2,4-Dimethylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00253	2.88		smitchell
2011071756	D	2,4-Dinitrophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00489	14.4		smitchell
2011071756	D	2,4-Dinitrotoluene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00095	2.88		smitchell
2011071756	D	2,6-Dinitrotoluene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00113	2.88		smitchell
2011071756	D	2-Chloronaphthalene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00101	2.88		smitchell
2011071756	D	2-Chlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00065	2.88		smitchell
2011071756	D	2-Methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00118	2.88		smitchell
2011071756	D	2-Nitrophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00072	2.88		smitchell
2011071756	D	3,3-Dichlorobenzidine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00676	2.88		smitchell
2011071756	D	4,6-Dinitro-2-methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00119	2.88		smitchell
2011071756	D	4-Bromophenyl phenyl ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0008	2.88		smitchell
2011071756	D	4-Chloro-3-methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00071	2.88		smitchell
2011071756	D	4-Chlorophenyl phenyl ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00091	2.88		smitchell
2011071756	D	4-Methylphenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0013	2.88		smitchell
2011071756	D	4-Nitrophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00352	8.64		smitchell
2011071756	D	Acenaphthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00084	2.88		smitchell
2011071756	D	Acenaphthylene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00061	2.88		smitchell
2011071756	D	Anthracene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00092	2.88		smitchell
2011071756	D	Benzo(a)anthracene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00085	2.88		smitchell
2011071756	D	Benzidine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.01323	2.88		smitchell
2011071756	D	Benzo(a)pyrene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00119	2.88		smitchell
2011071756	D	Benzo(b)fluoranthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00137	2.88		smitchell
2011071756	D	Benzo(g,h,i)perylene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0027	2.88		smitchell
2011071756	D	Benzo(k)fluoranthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00187	2.88		smitchell
2011071756	D	Bis(2-Chloroisopropyl)ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00061	2.88		smitchell
2011071756	D	Bis(2-chloroethoxy)methane	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00051	2.88		smitchell
2011071756	D	Bis(2-chloroethyl)ether	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00067	2.88		smitchell
2011071756	D	Bis(2-ethylhexyl) phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00511	2.88		smitchell
2011071756	D	Butylbenzyl phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00166	2.88		smitchell
2011071756	D	Carbazole	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00141	2.88		smitchell
2011071756	D	Chrysene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00099	2.88		smitchell
2011071756	D	Dibenz(a,h)anthracene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00226	2.88		smitchell
2011071756	D	Diethyl phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0007	2.88		smitchell

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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)											
2011071756	D	Dimethylphthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00069	2.88		smitchell
2011071756	D	Di-n-butyl phthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00191	2.88		smitchell
2011071756	D	Di-n-octylphthalate	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00449	2.88		smitchell
2011071756	D	Fluoranthene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00109	2.88		smitchell
2011071756	D	Fluorene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00094	2.88		smitchell
2011071756	D	Hexachlorobenzene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00059	2.88		smitchell
2011071756	D	Hexachlorobutadiene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00052	2.88		smitchell
2011071756	D	Hexachloroethane	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00056	2.88		smitchell
2011071756	D	Hexachlorocyclopentadiene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00267	2.88		smitchell
2011071756	D	Indeno(1,2,3-cd)pyrene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00204	2.88		smitchell
2011071756	D	Isophorone	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00325	2.88		smitchell
2011071756	D	Naphthalene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00072	2.88		smitchell
2011071756	D	n-Decane	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00068	2.88		smitchell
2011071756	D	Nitrobenzene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.0005	2.88		smitchell
2011071756	D	N-Nitroso-di-n-propylamine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00063	2.88		smitchell
2011071756	D	N-Nitrosodimethylamine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00064	2.88		smitchell
2011071756	D	N-Nitrosodiphenylamine	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00102	2.88		smitchell
2011071756	D	n-Octadecane	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00248	2.88		smitchell
2011071756	D	Pentachlorophenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00076	2.88		smitchell
2011071756	D	Phenanthrene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00097	2.88		smitchell
2011071756	D	Phenol	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00055	2.88		smitchell
2011071756	D	Pyrene	7/29/11 13:55	EPA 625	08/25/11 16:11	ND	mg/Kg	0.00119	2.88		smitchell
Well AV-4 (25003-2400)											
IS 2011071266	D	Calcium	7/21/11 11:34	EPA 200.7	07/25/11 9:46	32.5	mg/l	0.22	20.0		khowell
IS 2011071266	D	Magnesium	7/21/11 11:34	EPA 200.7	07/25/11 9:46	Trace	mg/l	0.04	10.0		khowell
IS 2011071266	D	Barium	7/21/11 11:34	EPA 200.8	07/27/11 16:08	30.85	ug/l	0.24	1.0		jbarajas
IS 2011071266	D	Manganese	7/21/11 11:34	EPA 200.8	07/27/11 16:08	41.11	ug/l	0.21	1.0		jbarajas
IS 2011071266	D	Ammonia	7/21/11 11:34	EPA 350.1	07/25/11 12:31	ND	mg/l	0.20	0.5		aklos
IS 2011071266	D	Chloride	7/21/11 11:34	SM4500-Cl-E	07/21/11 14:24	23.20	mg/l	0.71	4.00		manderson
IS 2011071266	D	Hardness (Calculated)	7/21/11 11:34	SM 2340B	07/25/11 9:46	101	mg/l		50		khowell
IS 2011071266	D	Mercury	7/21/11 11:34	EPA 7470A	08/02/11 14:07	ND	ug/l	0.15	0.20		tourada
IS 2011071266	D	Nitrate/Nitrite	7/21/11 11:34	EPA 353.2	07/28/11 12:48	3.6	mg/l	0.02	0.2		khowell
IS 2011071266	D	Nitrogen, Total Kjeldahl	7/21/11 11:34	EPA 351.2	07/22/11 14:31	ND	mg/l	0.39	0.8		aklos
IS 2011071266	D	Nitrogen, Total	7/21/11 11:34	Calculated	07/28/11 12:48	3.6	mg/l		0.8		khowell

Lab Comments:

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Data Qualifiers and Definitions for Permit 25003
Avra Valley WRF
July 2011

Data Qualifier(s):	Definition:
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.
K1	The sample dilutions set-up for the BOD/CBOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.
L2	The associated blank spike recovery was below laboratory acceptance limits.
L4	The associated blank spike recovery was below method acceptance limits.
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.
Q2	Sample received with headspace.
Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.
V9	CCV recovery was below method acceptance limits.

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

Case Narrative

Sample ID: 2011071756
Permit Name: Avra Valley WRF
Location Name: Wet Haul Sludge

This sample was analyzed for EPA Method 624 on 08/09/11, 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
V9 and L2 explanation: the Calibration Verification % Difference for this compound was 40%, while the Laboratory limit is ≤34%. The Laboratory Control Sample recovery was 58%, while the laboratory limit is 69-131%. The Matrix Spike performed on a different sample from the same analysis batch met QC acceptance criteria." MAM-Z

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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201107 1756

SITE & LOCATION: Avra Valley WRF - Wet Haul Sludge

SITE-LOCATION NUMBER: **25003-1573** (XXXXX-XXXX)

SAMPLE START DATE: **07/29/2011** (MM / DD / YYYY)

SAMPLE START TIME: 1355 (24 Hour Clock)

SUBMITTER: **IWC**

SAMPLE END DATE: **07/29/2011** (MM / DD / YYYY)

SAMPLE END TIME: 1355 (24 Hour Clock) pdG, GDS 07-29-11

SAMPLER: **Guebara, Mackie** (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	☐	☐
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	■	☐
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: 6 GDS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 7-29-11 JS

Chain of Custody Record (Signatures Only)

Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
Sampler		07-29-11	1444

LAB USE ONLY

Sample Integrity/Preservation:

Temperature:	10	°C
Initials:	GDS	
Non-Preserved	4	#
HNO_3	i	#
H_2SO_4		#
HCl		#
NaOH	i	#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

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 (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone:(520) 724-6200

Report Date: 2/15/2012
Laboratory License # AZ0159

PRELIMINARY Sample Analysis Report

Submitter:	Industrial Wastewater Control Group	Lab ID:	**2011121044**
Sample Location:	Avra Valley WRF	Sample Start Date/Time:	12/20/2011 10:00:00
	Wet Haul Sludge	Sample End Date/Time:	12/20/2011 10:00:00
		Sampled By:	Carlos Guebara
Permit Type:	503	Site-Location Number:	25003-1573
		Lab Received Date:	12/20/2011 12:28:00

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.
This sample was transported on ice.
Q6 - Sample was received above recommended temperature.

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.

COMMENTS: No significant observations were made.

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

NOTIFICATIONS: **None.**

NOTES: 2011121044

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:

Incomplete Report

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

/ /
Date

Lab Number: **2011121044** Sample Date: 12/20/11
Site Location: Avra Valley WRF Sample Time: 1000
Wet Haul Sludge

Parameter	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Miscellaneous Note	None		Subcontracted					Other
Solids, Total	SM 2540G	12/21/11 13:30	***2.34***	%		0.01		edoyle
4,4-DDD	EPA 625	1/23/12 20:36	ND	ug/kg	0.06	234.8	D1, D4	mmichel
4,4-DDE	EPA 625	1/23/12 20:36	ND	ug/kg	0.05	117.4	D1, D4	mmichel
4,4-DDT	EPA 625	1/23/12 20:36	ND	ug/kg	0.04	117.4	D1, D4	mmichel
Aldrin	EPA 625	1/23/12 20:36	ND	ug/kg	0.1	234.8	D1, D4	mmichel
alpha-BHC	EPA 625	1/23/12 20:36	ND	ug/kg	0.09	234.8	D1, D4	mmichel
Aroclor 1016	EPA 625	1/23/12 20:36	ND	ug/kg	0.1	293.5	D1, D4	mmichel
Aroclor 1221	EPA 625	1/23/12 20:36	ND	ug/kg	0.09	293.5	D1, D4	mmichel
Aroclor 1232	EPA 625	1/23/12 20:36	ND	ug/kg	0.16	587	D1, D4	mmichel
Aroclor 1242	EPA 625	1/23/12 20:36	ND	ug/kg	0.1	704.4	D1, D4	mmichel
Aroclor 1248	EPA 625	1/23/12 20:36	ND	ug/kg	0.16	704.4	D1, D4	mmichel
Aroclor 1254	EPA 625	1/23/12 20:36	ND	ug/kg	0.07	704.4	D1, D4	mmichel
Aroclor 1260	EPA 625	1/23/12 20:36	ND	ug/kg	0.25	587	D1, D4	mmichel
beta-BHC	EPA 625	1/23/12 20:36	ND	ug/kg	0.1	234.8	D1, D4	mmichel
Chlordane, Technical	EPA 625	1/23/12 20:36	ND	ug/kg	0.7	2348	D1, D4	mmichel
delta-BHC	EPA 625	1/23/12 20:36	ND	ug/kg	0.08	234.8	D1, D4	mmichel
Dieldrin	EPA 625	1/23/12 20:36	ND	ug/kg	0.07	234.8	D1, D4	mmichel
Endosulfan I	EPA 625	1/23/12 20:36	ND	ug/kg	0.05	234.8	D1, D4	mmichel
Endosulfan II	EPA 625	1/23/12 20:36	ND	ug/kg	0.03	234.8	D1, D4	mmichel
Endosulfan sulfate	EPA 625	1/23/12 20:36	ND	ug/kg	0.05	117.4	D1, D4	mmichel
Endrin	EPA 625	1/23/12 20:36	ND	ug/kg	0.1	234.8	D1, D4	mmichel
Endrin aldehyde	EPA 625	1/23/12 20:36	ND	ug/kg	0.07	234.8	D1, D4	mmichel
gamma-BHC (Lindane)	EPA 625	1/23/12 20:36	ND	ug/kg	0.09	234.8	D1, D4	mmichel
Heptachlor	EPA 625	1/23/12 20:36	ND	ug/kg	0.1	234.8	D1, D4	mmichel
Heptachlor epoxide	EPA 625	1/23/12 20:36	ND	ug/kg	0.11	1174	D1, D4	mmichel
Polychlorinated biphenyls, Total	EPA 625	1/23/12 20:36	ND	ug/kg		704.4	D1, D4	mmichel
Toxaphene	EPA 625	1/23/12 20:36	ND	ug/kg	5.08	18784	D1, D4	mmichel
Methoxychlor	EPA 8270C	1/23/12 20:36	ND	ug/kg	0.06	587	D1, D4	mmichel
1,2,4-Trichlorobenzene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00106	3.4	D1, D4	smitchell
1,2-Diphenylhydrazine	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00123	3.4	D1, D4	smitchell
2,3-Dichloroaniline	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00104	3.4	D1, D4	smitchell
2,4,6-Trichlorophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.0012	3.4	D1, D4, N1	smitchell
2,4-Dichlorophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00116	3.4	D1, D4, N1	smitchell

Lab Comments:

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Field results are not subject to approval of Laboratory Supervisor.
Total Volatile Solids - Used for process control samples only.

Lab Number: **2011121044** Sample Date: 12/20/11
Site Location: Avra Valley WRF Sample Time: 1000
Wet Haul Sludge

Parameter	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2,4-Dimethylphenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00289	3.4	D1, D4	smitchell
2,4-Dinitrophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00943	25.5	D1, D4	smitchell
2,4-Dinitrotoluene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.0012	3.4	D1, D4	smitchell
2,6-Dinitrotoluene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00194	3.4	D1, D4	smitchell
2-Chloronaphthalene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00113	3.4	D1, D4	smitchell
2-Chlorophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00151	3.4	D1, D4, N1	smitchell
2-Methylphenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00152	3.4	D1, D4	smitchell
2-Nitrophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00218	3.4	D1, D4	smitchell
3,3-Dichlorobenzidine	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00223	17	D1, D4, N1	smitchell
4,6-Dinitro-2-methylphenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00373	10.2	D1, D4	smitchell
4-Bromophenyl phenyl ether	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00145	3.4	D1, D4, N1	smitchell
4-Chloro-3-methylphenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00142	3.4	D1, D4	smitchell
4-Chlorophenyl phenyl ether	EPA 625	1/23/12 14:22	ND	mg/Kg	0.000115	3.4	D1, D4	smitchell
4-Methylphenol	EPA 625	1/23/12 14:22	***691.50000***	mg/Kg	0.00294	3.4	D1, D4, N1, E3	smitchell
4-Nitrophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00495	10.2	D1, D4	smitchell
Acenaphthene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00117	3.4	D1, D4	smitchell
Acenaphthylene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00084	3.4	D1, D4	smitchell
Anthracene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00109	3.4	D1, D4, N1	smitchell
Benzo(a)anthracene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00144	3.4	D1, D4, N1	smitchell
Benzidine	EPA 625	1/23/12 14:22	ND	mg/Kg	0.02486	17	D1, D4, N1	smitchell
Benzo(a)pyrene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00155	3.4	D1, D4	smitchell
Benzo(b)fluoranthene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00157	3.4	D1, D4	smitchell
Benzo(g,h,i)perylene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00178	3.4	D1, D4	smitchell
Benzo(k)fluoranthene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00228	3.4	D1, D4, N1	smitchell
Bis(2-Chloroisopropyl)ether	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00114	3.4	D1, D4	smitchell
Bis(2-chloroethoxy)methane	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00106	3.4	D1, D4	smitchell
Bis(2-chloroethyl)ether	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00099	3.4	D1, D4	smitchell
Bis(2-ethylhexyl) phthalate	EPA 625	1/23/12 14:22	***8.13000***	mg/Kg	0.00267	3.4	D1, D4	smitchell
Butylbenzyl phthalate	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00153	3.4	D1, D4	smitchell
Carbazole	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00127	3.4	D1, D4	smitchell
Chrysene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00147	3.4	D1, D4, N1	smitchell
Dibenz(a,h)anthracene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00187	3.4	D1, D4	smitchell
Diethyl phthalate	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00105	3.4	D1, D4, N1	smitchell
Dimethylphthalate	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00072	3.4	D1, D4, N1	smitchell
Di-n-butyl phthalate	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00167	3.4	D1, D4	smitchell
Di-n-octylphthalate	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00183	3.4	D1, D4	smitchell
Fluoranthene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00145	3.4	D1, D4, N1	smitchell
Fluorene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00128	3.4	D1, D4	smitchell
Hexachlorobenzene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.0008	3.4	D1, D4, N1	smitchell
Hexachlorobutadiene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00119	3.4	D1, D4, N1	smitchell
Hexachloroethane	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00121	3.4	D1, D4, N1	smitchell

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Total Volatile Solids - Used for process control samples only.

Lab Number: **2011121044** Sample Date: 12/20/11
Site Location: Avra Valley WRF Sample Time: 1000
Wet Haul Sludge

Parameter	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
Hexachlorocyclopentadiene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00259	17	D1, D4	smitchell
Indeno(1,2,3-cd)pyrene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00225	3.4	D1, D4	smitchell
Isophorone	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00135	3.4	D1, D4	smitchell
Naphthalene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00126	3.4	D1, D4	smitchell
n-Decane	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00166	3.4	D1, D4, N1	smitchell
Nitrobenzene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00286	3.4	D1, D4	smitchell
N-Nitroso-di-n-propylamine	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00113	3.4	D1, D4	smitchell
N-Nitrosodimethylamine	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00423	10.2	D1, D4	smitchell
N-Nitrosodiphenylamine	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00183	3.4	D1, D4	smitchell
n-Octadecane	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00166	3.4	D1, D4, N1	smitchell
Pentachlorophenol	EPA 625	1/23/12 14:22	ND	mg/Kg	0.0032	17	D1, D4, N1	smitchell
Phenanthrene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00115	3.4	D1, D4, N1	smitchell
Phenol	EPA 625	1/23/12 14:22	***10.42000***	mg/Kg	0.0023	10.2	D1, D4	smitchell
Pyrene	EPA 625	1/23/12 14:22	ND	mg/Kg	0.00129	3.4	D1, D4	smitchell

See Attached Semi-Quantitation Sheet(s) for EPA 625

Lab Comments:

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Analysis Date represents the final reading date.

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Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions

Lab ID: 2011121044

Submitter:	IWC	Sample Start Date/Time:	12/20/2011 10:00:00
Sample Location:	Avra Valley WRF Wet Haul Sludge	Sample End Date/Time:	12/20/2011 10:00:00

Data Qualifiers:

D1	Sample required dilution due to matrix.
D4	Minimum Reporting Limit (MRL) adjusted to reflect sample amount received and analyzed.
E3	Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
N1	See case narrative.

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

Case Narrative

Sample ID: 2011121044
Permit Name: Avra Valley WRF
Location Name: Wet Haul Sludge

This sample was extracted for EPA Method 625 Semi-volatiles on 12/27/11. 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

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

LAB ID: 201112 1044

COPY

SITE & LOCATION: Avra Valley WRF - Wet Haul Sludge

SITE-LOCATION NUMBER: 25003-1573 (XXXXX-XXXX)

SAMPLE START DATE: 12/20/2011 (MM / DD / YYYY)

SAMPLE START TIME: 1000 (24 Hour Clock)

SUBMITTER: IWC

SAMPLE END DATE: 12/20/2011 (MM / DD / YYYY)

SAMPLE END TIME: 1000 (24 Hour Clock)

SAMPLER: Guebara, Horney (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	☐	☐
Sodium	☐	☐
Strontium	☐	☐
Thallium	☐	☐
Tin	☐	☐

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

WET METHODS	D	C
Ammonia as N	☐	☐
Chloride	☐	☐
Cyanide, Total (contract lab)	■	☐
Cyanide, Amenable (contract lab)	☐	☐
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) (contract lab)	■	☐
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
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*	7	pH Units/ °C
☐ Temperature *SM 2550 B*		°C
☐ Total Depth of Well		feet
☐ Depth to Water		feet
☐ Other		

Comments/Instructions: Metals and solids split with contract lab. Contract Lab is Test America COS 12-20-11 PO# 12-22707 Metals added 01-12-12. COS PO#

# of Bottles Delivered: 6 @ 5

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials: 11-14-11 JS

12-25201

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by:	Date:	Time: (24 Hour Clock)
		12-20-11	1228
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)
		12/21/11	9:15
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:	15	°C
Initials:	COS	
Non-Preserved	4	#
HNO_3 pH<2	1	#
H_2SO_4 pH<2		#
HCl COS 12-20-11 COS 12-20-11		#
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, 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

TAL-0013-550 (10/10)

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 - 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 #11
PO# 12-22707

Project Manager:
Nancy Powell

Phone Number:
520-724-6183

Sampler:
Various

Fax Number:
520-724-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Ammonia SM4500-NH3-D	Chloride	Sulfate	Mercury 7471A mg/kg	Volatiles 8260 mg/kg	Cyanides, total mg/kg	Total solid % for mg/kg	Total nitrogen	2-chloroethylvinylether mg/kg	Special Instructions
Ina road Well SC-03-APP	GW	glass + HDPE	2	12-20-11	1020	H_2SO_4 + none	X	X	X					X		discrete
20001-9020 20111210 45																
Avra Valley Wet Haul Sludge	BS	glass + HDPE	4	12-20-11	1000	NaOH, HNO_3 and none				X	X	X	X		X	discrete
25003-1513 20111210 44			5													
			GCS 12-21-11													
Ina road Well SC-05-APP	GW	glass + ~~12~~ HDPE	2	12-20-11	1105	H_2SO_4 and none	X	X	X					X		discrete
20001-9040 20111210 47		GCS 12-21-11														
Ina road Well SC-07-APP	GW	glass + HDPE	2	12-20-11	1159	H_2SO_4 and none	X	X	X					X		discrete
20001-9060 20111210 46																

GW = ground water
BS = biosolids

Relinquished By: JK for samplers — Date/Time:
Relinquished By: — Date/Time:
Relinquished By: — Date/Time:

Received By: — Date/Time: 12/21/11 9:15
Received 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 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.

Contract Lab Report

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Disclaimer:

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Avra Valley WRF

For Sampling Period: 12/01/2011 - 12/31/2011

Sample Number	Parameter	Sample Date	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
Wet Haul Sludge (25003-1573)								
2011121044	Cyanide, Total	12/20/11	12/23/11	<18.000	mg/Kg			
2011121044	Mercury	12/20/11	12/29/11	<4.10	mg/Kg			
2011121044	Antimony	12/20/11	01/16/12	<230.00	mg/Kg			
2011121044	Arsenic	12/20/11	01/16/12	<230.00	mg/Kg			
2011121044	Beryllium	12/20/11	01/16/12	<23.00	mg/Kg			
2011121044	Cadmium	12/20/11	01/16/12	<23.00	mg/Kg			
2011121044	Chromium	12/20/11	01/16/12	<92.00	mg/Kg			
2011121044	Copper	12/20/11	01/16/12	<230.0	mg/Kg			
2011121044	Lead	12/20/11	01/16/12	<230.00	mg/Kg			
2011121044	Molybdenum	12/20/11	01/16/12	<92.00	mg/Kg			
2011121044	Nickel	12/20/11	01/16/12	<92.00	mg/Kg			
2011121044	Selenium	12/20/11	01/16/12	<230.00	mg/Kg			
2011121044	Silver	12/20/11	01/16/12	<110.00	mg/Kg			
2011121044	Thallium	12/20/11	01/16/12	<230.00	mg/Kg			
2011121044	Zinc	12/20/11	01/16/12	1400.00	mg/Kg			
2011121044	1,1,1-Trichloroethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,1,2-Trichloroethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,1-Dichloroethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,1-Dichloroethene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,2-Dichlorobenzene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,2-Dichloroethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,2-Dichloropropane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,3-Dichlorobenzene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,4-Dichlorobenzene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	1,1,2,2-Tetrachloroethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	2-Chloroethyl vinyl ether	12/20/11	12/23/11	<10.00	mg/Kg			
2011121044	Benzene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Bromodichloromethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Bromoform	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Bromomethane	12/20/11	12/30/11	<28.00	mg/Kg			
2011121044	Carbon tetrachloride	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Chlorobenzene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Chloroethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Chloroform	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Chloromethane	12/20/11	12/30/11	<28.00	mg/Kg			
2011121044	cis-1,3-Dichloropropene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Dibromochloromethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Ethyl benzene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Methylene chloride	12/20/11	12/30/11	<11.00	mg/Kg			
2011121044	Tetrachloroethene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Toluene	12/20/11	12/30/11	470.00	mg/Kg			

Contract Lab Report

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Avra Valley WRF

For Sampling Period: 12/01/2011 - 12/31/2011

Sample Number	Parameter	Sample Date	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
Wet Haul Sludge (25003-1573)								
2011121044	Trichlorofluoromethane	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Trichloroethene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Trihalomethane, Total	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	trans-1,2-Dichloroethene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	trans-1,3-Dichloropropene	12/20/11	12/30/11	<5.70	mg/Kg			
2011121044	Vinyl chloride	12/20/11	12/30/11	<5.70	mg/Kg			

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

Final Report

LIMS # 2011121045, 2011121044, 2011121047, 2011121046 **DO: 12-22707** **Sample Group #11**

Contract Lab: Test America

Parameters: VOC, Total Metals, Nutrients, Solids

Preliminary Review

Lab Report signed and dated. Draft	✓
Data users notified of any Permit exceedances if necessary.	N/A
Data Results entered in LIMs, date correct, analyst correct, and released	CH ✓
Subcontract Lab licensed for Analysis reported?	✓
Check that no data exceeds permit requirements.	✓
Semivolatiles & Volatiles: Check that all analytes were delivered.	✓
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: 1-30-12 CBT

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.	✓
Check that DO matches COC in types and number of tests.	✓
DO received in Pima Core.	
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: CH 1-20-12

Peer/Final Review 2011121044 8260 ✓ 2CEVE ✓ cyanide ✓ ~~20~~ 8260 value changed from PR FR ug/l → mg/l (R) 2-2-12 (R) 2-2-11

K, Na, Hardness for 10454 1047 on PW A 0758

LIMS data matches reported data.	X	✓
Analysis dates and times (0:00:00) are correct. Analysis date=Report Date, Time = 0000 (unless time is given)	X	✓
Correct Data Qualifiers included if necessary.	X	✓
DO received in Pima Core	NO	NA

Peer Review date and initials: 2-4-12 **Final Review date and initials:** BAC 2/6/12

Corrective Action Report
Subcontract Lab Data

Preliminary Review:	Date: ~~1-30-12~~ 1-30-12
QA/QC Review:	Date: 1-30-12
Data Entry:	Date:
Peer Review: ~~BAC~~	Date: ~~1-30-12~~ ~~1-30-12~~ 2-4-12
Lab Supervisor:	Date:

Log Numbers and Analyses Affected:

2-2-12 8260 values recorded as ug/l. Changed to mg/l
Asked Suzanne G for Cd result

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.
[ ] Other:

2011121044 - Fixed Cyanide Andate,
Fixed 2 Chloroethylvinylether added units, AND Date, corrected value
1-30-11

2011121044 1-31-12
~~added~~ Removed extra Mo login. Waiting for Cd. Rec' 2-4-12

Nancy Powell

From: Nancy Powell
Sent: Thursday, January 19, 2012 10:30
To: 'Glass, Suzanne'
Subject: RE: We need to add analyses to existing samples- all rush DO12-25201

Yes please. I see the silver now- big as day. Thank you

Nancy Powell
520.724.6183

From: Glass, Suzanne [mailto:Suzanne.Glass@testamericainc.com]
Sent: Thursday, January 19, 2012 10:25
To: Nancy Powell
Subject: RE: We need to add analyses to existing samples- all rush DO12-25201

Silver for 2011111118 is 6.0 mg/kg dry and on the report.

I have requested the data for Cr and Cu be added. I can have it ready by the end of the day on Monday.

Do you need Cr and Cu on the other solids as well?

From: Nancy Powell [mailto:Nancy.Powell@wwm.pima.gov]
Sent: Thursday, January 19, 2012 10:16 AM
To: Glass, Suzanne
Subject: RE: We need to add analyses to existing samples- all rush DO12-25201

Good morning Suzanne,
I am looking at the preliminary report PUK1343 and I have a question. I guess we need chromium and copper on these samples and silver is missing from 2011111118
2011111117. I am really tired of having to bother you. Thank you for all your help.

Nancy Powell
520.724.6183

From: Glass, Suzanne [mailto:Suzanne.Glass@testamericainc.com]
Sent: Thursday, January 12, 2012 13:39
To: Nancy Powell
Cc: Greg Spence
Subject: RE: We need to add analyses to existing samples- all rush DO12-25201

We can have these for you in 3 business days....Tuesday Jan 17th. Will that work?

From: Nancy Powell [mailto:Nancy.Powell@wwm.pima.gov]
Sent: Thursday, January 12, 2012 11:28 AM
To: Glass, Suzanne

Cc: Greg Spence
Subject: We need to add analyses to existing samples- all rush DO12-25201

Dear Suzanne,

LIMS# 2011121044 Avra Valley Wet Haul Sludge Sample Date 12-20-11

LIMS# 2011111117, Green Valley BNROD Biosolids Drying bed 5 east,Sample Date 11-18-11

LIMS# 2011111118, Green Valley BNROD Biosolids Drying bed 5 west, Sample Date 11-18-11

LIMS #2011120724, Regional Biosolids Thickened Sludge to Avra Gro, Sample Date 12-13-11

please add

Antimony, arsenic, beryllium, cadmium, lead, nickel, selenium, silver, thallium, zinc, molybdenum all mg/kg. You already have a sample for Mercury & TS.

You already have a sample for Mercury & TS for each of these samples.

DO #12 -25201

Please rush them all.

Thank you

Nancy Powell

QA Chemist Specialist

Pima Co. RWRD

CRAO Laboratory

3035 W El Camino del Cerro

Tucson, Arizona 85745

(520) 724-6183

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 #11 DO# 12-22707

Sampled: 12/20/11
Received: 12/21/11
Revised: 02/03/12 10:38

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
PUL1470-01	2011121045	Water
PUL1470-02	2011121044	Soil
PUL1470-03	2011121047	Water
PUL1470-04	2011121046	Water
PUL1470-05	Trip Blank	Water

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
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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 #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

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. Results were qualified where the sample container did not meet the method preservation requirements.

Solid samples for analysis by method 8260 were received in glass jars.

N1a = The sample, as received, was not preserved in accordance to the referenced analytical method.
N1c = The pH of the sample was 4.

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).
N1b = This analyte has been shown to degrade upon preservation with HCl and cannot accurately be quantitated.
N1d = The RPD exceeded the acceptance limit due to sample matrix effects.
N1e = Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

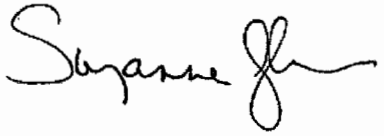
COMMENTS: No significant observations were made.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL INFORMATION: 1-23-2012: The report was revised to add 13 metals by EPA method 6010B to sample PUL1470-02 at the client's request.

2-3-2012: The report was revised to add data for Cadmium by EPA method 6010B to sample PUL1470-02 and to add a dilution qualifier to the result for 2-CEVE by method 8260.

Reviewed By:



TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
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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 #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-05 (Trip Blank - Water)								**N1a, N1c**
Reporting Units: ug/l								
1,1,1-Trichloroethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,1,2-Trichloroethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,1-Dichloroethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,1-Dichloroethene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,1-Dichloropropene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
1,2,3-Trichloropropane	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,2-Dichlorobenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,2-Dichloroethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	L3
1,2-Dichloropropane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,3-Dichlorobenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,3-Dichloropropane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
1,4-Dichlorobenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
2,2-Dichloropropane	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
2-Butanone (MEK)	EPA 8260B	11L1016	5.0	ND	1	12/28/2011	12/28/2011	
2-Chlorotoluene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
2-Hexanone	EPA 8260B	11L1016	5.0	ND	1	12/28/2011	12/28/2011	
4-Chlorotoluene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11L1016	5.0	ND	1	12/28/2011	12/28/2011	
Acetone	EPA 8260B	11L1016	20	ND	1	12/28/2011	12/28/2011	
Benzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Bromobenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Bromochloromethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Bromodichloromethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Bromoform	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Bromomethane	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
Carbon tetrachloride	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Chlorobenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Chloroethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Chloroform	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Chloromethane	EPA 8260B	11L1016	5.0	ND	1	12/28/2011	12/28/2011	
cis-1,2-Dichloroethene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
cis-1,3-Dichloropropene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Dibromochloromethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Dichlorodifluoromethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-05 (Trip Blank - Water) - cont.								**N1a, N1c**
Reporting Units: ug/l								
Ethylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
m,p-Xylenes	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Methylene Chloride	EPA 8260B	11L1016	2.0	ND	1	12/28/2011	12/28/2011	
n-Butylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
n-Propylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
o-Xylene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
p-Isopropyltoluene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
sec-Butylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Styrene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
tert-Butylbenzene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Tetrachloroethene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Toluene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
trans-1,2-Dichloroethene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
trans-1,3-Dichloropropene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Trichloroethene	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Trichlorofluoromethane	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Vinyl Acetate	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Vinyl chloride	EPA 8260B	11L1016	1.0	ND	1	12/28/2011	12/28/2011	
Surrogate: Dibromofluoromethane (70-130%)				*92 %*				
Surrogate: Toluene-d8 (70-130%)				*91 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)				*90 %*				

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Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-02 (2011121044 - Soil)								
Reporting Units: ug/kg dry								
1,1,1-Trichloroethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,1,2-Trichloroethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,1-Dichloroethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,1-Dichloroethene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,1-Dichloropropene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11L0891	11000	ND	2.49	12/22/2011	12/30/2011	
1,2,3-Trichloropropane	EPA 8260B	11L0891	11000	ND	2.49	12/22/2011	12/30/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,2-Dichlorobenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,2-Dichloroethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,2-Dichloropropane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,3-Dichlorobenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,3-Dichloropropane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
1,4-Dichlorobenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
2,2-Dichloropropane	EPA 8260B	11L0891	11000	ND	2.49	12/22/2011	12/30/2011	
2-Butanone (MEK)	EPA 8260B	11L0891	57000	ND	2.49	12/22/2011	12/30/2011	
2-Chlorotoluene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
2-Hexanone	EPA 8260B	11L0891	28000	ND	2.49	12/22/2011	12/30/2011	
4-Chlorotoluene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11L0891	28000	ND	2.49	12/22/2011	12/30/2011	
Acetone	EPA 8260B	11L0891	57000	ND	2.49	12/22/2011	12/30/2011	
Benzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Bromobenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Bromochloromethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Bromodichloromethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Bromoform	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Bromomethane	EPA 8260B	11L0891	28000	ND	2.49	12/22/2011	12/30/2011	
Carbon tetrachloride	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Chlorobenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Chloroethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Chloroform	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Chloromethane	EPA 8260B	11L0891	28000	ND	2.49	12/22/2011	12/30/2011	
cis-1,2-Dichloroethene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
cis-1,3-Dichloropropene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Dibromochloromethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Dichlorodifluoromethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Ethylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	

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Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-02 (2011121044 - Soil) - cont.								
Reporting Units: ug/kg dry								
m,p-Xylenes	EPA 8260B	11L0891	11000	ND	2.49	12/22/2011	12/30/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Methylene Chloride	EPA 8260B	11L0891	11000	ND	2.49	12/22/2011	12/30/2011	
n-Butylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
n-Propylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
o-Xylene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
p-Isopropyltoluene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
sec-Butylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Styrene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
tert-Butylbenzene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Tetrachloroethene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Toluene	EPA 8260B	11L0891	5700	**470000**	2.49	12/22/2011	12/30/2011	
trans-1,2-Dichloroethene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
trans-1,3-Dichloropropene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Trichloroethene	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Trichlorofluoromethane	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Vinyl Acetate	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Vinyl chloride	EPA 8260B	11L0891	5700	ND	2.49	12/22/2011	12/30/2011	
Surrogate: Dibromofluoromethane (57-129%)				*48 %*				*N1e*
Surrogate: Toluene-d8 (59-134%)				*46 %*				*N1e*
Surrogate: 4-Bromofluorobenzene (56-127%)				*47 %*				*N1e*

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Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

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TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-02 (2011121044 - Soil)								
Reporting Units: mg/kg dry								
Antimony	EPA 6010B	12A0443	230	ND	1	1/13/2012	1/16/2012	
Arsenic	EPA 6010B	12A0443	230	ND	1	1/13/2012	1/16/2012	
Beryllium	EPA 6010B	12A0443	23	ND	1	1/13/2012	1/16/2012	
Cadmium	EPA 6010B	12A0443	23	ND	1	1/13/2012	1/16/2012	
Calcium	EPA 6010B	12A0443	1100	**29000**	1	1/13/2012	1/16/2012	
Chromium	EPA 6010B	12A0443	92	ND	1	1/13/2012	1/16/2012	
Copper	EPA 6010B	12A0443	230	ND	1	1/13/2012	1/16/2012	
Lead	EPA 6010B	12A0443	230	ND	1	1/13/2012	1/16/2012	
Mercury	EPA 7471A	11L1101	4.1	ND	0.895	12/29/2011	12/29/2011	
Molybdenum	EPA 6010B	12A0443	92	ND	1	1/13/2012	1/16/2012	
Nickel	EPA 6010B	12A0443	92	ND	1	1/13/2012	1/16/2012	
Selenium	EPA 6010B	12A0443	230	ND	1	1/13/2012	1/16/2012	
Silver	EPA 6010B	12A0443	110	ND	1	1/13/2012	1/16/2012	
Thallium	EPA 6010B	12A0443	230	ND	1	1/13/2012	1/16/2012	
Zinc	EPA 6010B	12A0443	460	**1400**	1	1/13/2012	1/16/2012	

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-01 (2011121045 - Water)								
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	11L1172	0.50	ND	1	12/30/2011	12/30/2011	
Chloride	EPA 300.0	11L0905	10	**140**	5	12/22/2011	12/22/2011	
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	11L1038	2.0	**6.1**	5	12/27/2011	12/27/2011	
Sulfate	EPA 300.0	11L0905	2.0	**150**	1	12/22/2011	12/22/2011	
Nitrogen, Total (300.0 Pres. auto calc)	Calculation	[CALC]	3.0	**6.1**	5	1/9/2012	1/10/2012	
Sample ID: PUL1470-01RE1 (2011121045 - Water)								
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0270	1.0	ND	1	1/9/2012	1/10/2012	
Sample ID: PUL1470-02 (2011121044 - Soil)								
Reporting Units: % by Weight								
Percent Solids	SM 2540G	11L0928	0.10	**2.2**	1	12/22/2011	12/22/2011	
Sample ID: PUL1470-02 (2011121044 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW 9010C/9014	11L0981	18	ND	1.02	12/23/2011	12/23/2011	
Sample ID: PUL1470-03 (2011121047 - Water)								
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	11L1172	0.50	ND	1	12/30/2011	12/30/2011	
Chloride	EPA 300.0	11L0904	10	**130**	5	12/22/2011	12/22/2011	
Fluoride	EPA 300.0	11L0904	0.40	ND	1	12/22/2011	12/22/2011	
Nitrogen, Nitrate/Nitrite Total	EPA 300.0	11L1038	2.0	**7.1**	5	12/27/2011	12/27/2011	
Sulfate	EPA 300.0	11L0904	10	**140**	5	12/22/2011	12/22/2011	
Nitrogen, Total (300.0 Pres. auto calc)	Calculation	[CALC]	3.0	**7.1**	5	1/9/2012	1/10/2012	
Sample ID: PUL1470-03RE1 (2011121047 - Water)								
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0270	1.0	ND	1	1/9/2012	1/10/2012	

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-04 (2011121046 - Water)								
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	11L1172	0.50	**2.5**	1	12/30/2011	12/30/2011	
Chloride	EPA 300.0	11L0905	10	**130**	5	12/22/2011	12/22/2011	
Nitrate-N	EPA 300.0	11L0905	0.20	ND	1	12/22/2011	12/22/2011	
Nitrite-N	EPA 300.0	11L0905	0.20	ND	1	12/22/2011	12/22/2011	
Sulfate	EPA 300.0	11L0905	2.0	**140**	1	12/22/2011	12/22/2011	
Nitrogen, Total (300.0 + auto calc)	Calculation	[CALC]	1.4	ND	1	1/9/2012	1/10/2012	
Sample ID: PUL1470-04RE1 (2011121046 - Water)								
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	SM4500-NH3 D	12A0270	1.0	ND	1	1/9/2012	1/10/2012	

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUL1470-02 (2011121044 - Soil)								
Reporting Units: mg/kg wet								
2-Chloroethylvinyl ether	SW846 8260B	12A3052	10.0	ND	500	12/23/2011	12/23/2011	D1
Sample ID: PUL1470-02 (2011121044 - Soil)								
Reporting Units: ug/kg								
Surrogate: 1,2-Dichloroethane-d4 (70-130%)				*113 %*				
Surrogate: Dibromofluoromethane (70-130%)				*106 %*				
Surrogate: Toluene-d8 (70-130%)				*90 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)				*101 %*				
Sample ID: PUL1470-05 (Trip Blank - Water)								
Reporting Units: ug/L								
2-Chloroethylvinyl ether	SW846 8260B	11L6793	10.0	ND	1	12/23/2011	12/23/2011	
Surrogate: 1,2-Dichloroethane-d4 (70-130%)				*109 %*				
Surrogate: Dibromofluoromethane (70-130%)				*109 %*				
Surrogate: Toluene-d8 (70-130%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (70-130%)				*102 %*				

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

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: 2011121044 (PUL1470-02) - Soil					
EPA 8260B	2	12/20/2011 10:00	12/21/2011 15:25	12/22/2011 09:28	12/30/2011 09:01
Sample ID: 2011121046 (PUL1470-04) - Water					
Calculation	2	12/20/2011 11:59	12/21/2011 15:25	01/09/2012 22:10	01/10/2012 12:00
EPA 300.0	2	12/20/2011 11:59	12/21/2011 15:25	12/22/2011 11:40	12/22/2011 11:41

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
Blank Analyzed: 12/28/2011 (11L1016-BLK1)										
1,1,1-Trichloroethane	ND	1.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	1.0	ug/l							
1,1,2-Trichloroethane	ND	1.0	ug/l							
1,1-Dichloroethane	ND	1.0	ug/l							
1,1-Dichloroethene	ND	1.0	ug/l							
1,1-Dichloropropene	ND	1.0	ug/l							
1,2,3-Trichlorobenzene	ND	2.0	ug/l							
1,2,3-Trichloropropane	ND	2.0	ug/l							
1,2,4-Trichlorobenzene	ND	2.0	ug/l							
1,2,4-Trimethylbenzene	ND	1.0	ug/l							
1,2-Dibromoethane (EDB)	ND	1.0	ug/l							
1,2-Dichlorobenzene	ND	1.0	ug/l							
1,2-Dichloroethane	ND	1.0	ug/l							
1,2-Dichloropropane	ND	1.0	ug/l							
1,3,5-Trimethylbenzene	ND	1.0	ug/l							
1,3-Dichlorobenzene	ND	1.0	ug/l							
1,3-Dichloropropane	ND	1.0	ug/l							
1,4-Dichlorobenzene	ND	1.0	ug/l							
2,2-Dichloropropane	ND	2.0	ug/l							
2-Butanone (MEK)	ND	5.0	ug/l							
2-Chlorotoluene	ND	1.0	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l							
Acetone	ND	20	ug/l							
Benzene	ND	1.0	ug/l							
Bromobenzene	ND	1.0	ug/l							
Bromochloromethane	ND	1.0	ug/l							
Bromodichloromethane	ND	1.0	ug/l							
Bromoform	ND	1.0	ug/l							
Bromomethane	ND	2.0	ug/l							
Carbon tetrachloride	ND	1.0	ug/l							
Chlorobenzene	ND	1.0	ug/l							
Chloroethane	ND	1.0	ug/l							
Chloroform	ND	1.0	ug/l							

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
Blank Analyzed: 12/28/2011 (11L1016-BLK1)										
Chloromethane	ND	5.0	ug/l							
cis-1,2-Dichloroethene	ND	1.0	ug/l							
cis-1,3-Dichloropropene	ND	1.0	ug/l							
Dibromochloromethane	ND	1.0	ug/l							
Dichlorodifluoromethane	ND	1.0	ug/l							
Ethylbenzene	ND	1.0	ug/l							
m,p-Xylenes	ND	2.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
Methylene Chloride	ND	2.0	ug/l							
n-Butylbenzene	ND	1.0	ug/l							
n-Propylbenzene	ND	1.0	ug/l							
o-Xylene	ND	1.0	ug/l							
p-Isopropyltoluene	ND	1.0	ug/l							
sec-Butylbenzene	ND	1.0	ug/l							
Styrene	ND	1.0	ug/l							
tert-Butylbenzene	ND	1.0	ug/l							
Tetrachloroethene	ND	1.0	ug/l							
Toluene	ND	1.0	ug/l							
trans-1,2-Dichloroethene	ND	1.0	ug/l							
trans-1,3-Dichloropropene	ND	1.0	ug/l							
Trichloroethene	ND	1.0	ug/l							
Trichlorofluoromethane	ND	1.0	ug/l							
Vinyl Acetate	ND	1.0	ug/l							
Vinyl chloride	ND	1.0	ug/l							
Surrogate: Dibromofluoromethane	*25.8*		*ug/l*	*25.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*23.1*		*ug/l*	*25.0*		*92*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*23.2*		*ug/l*	*25.0*		*93*	*70-130*			

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Report Number: PUL1470

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
LCS Analyzed: 12/28/2011 (11L1016-BS1)										
1,1,1-Trichloroethane	25.5	1.0	ug/l	25.0		102	70-130			
1,1,2,2-Tetrachloroethane	26.3	1.0	ug/l	25.0		105	70-130			
1,1,2-Trichloroethane	24.5	1.0	ug/l	25.0		98	70-130			
1,1-Dichloroethane	25.1	1.0	ug/l	25.0		100	70-130			
1,1-Dichloroethene	20.4	1.0	ug/l	25.0		82	70-130			
1,1-Dichloropropene	24.0	1.0	ug/l	25.0		96	70-130			
1,2,3-Trichlorobenzene	27.9	2.0	ug/l	25.0		112	70-130			
1,2,3-Trichloropropane	27.5	2.0	ug/l	25.0		110	70-130			
1,2,4-Trichlorobenzene	27.3	2.0	ug/l	25.0		109	70-130			
1,2,4-Trimethylbenzene	26.1	1.0	ug/l	25.0		105	70-130			
1,2-Dibromoethane (EDB)	25.8	1.0	ug/l	25.0		103	70-130			
1,2-Dichlorobenzene	26.6	1.0	ug/l	25.0		106	70-130			
1,2-Dichloroethane	31.2	1.0	ug/l	25.0		125	72-133			
1,2-Dichloropropane	25.3	1.0	ug/l	25.0		101	70-130			
1,3,5-Trimethylbenzene	26.4	1.0	ug/l	25.0		105	70-130			
1,3-Dichlorobenzene	26.2	1.0	ug/l	25.0		105	70-130			
1,3-Dichloropropane	26.3	1.0	ug/l	25.0		105	70-130			
1,4-Dichlorobenzene	26.6	1.0	ug/l	25.0		106	70-130			
2,2-Dichloropropane	26.9	2.0	ug/l	25.0		108	70-130			
2-Butanone (MEK)	23.7	5.0	ug/l	25.0		95	48-150			
2-Chlorotoluene	27.3	1.0	ug/l	25.0		109	70-130			
2-Hexanone	29.6	5.0	ug/l	25.0		118	44-150			
4-Chlorotoluene	26.8	1.0	ug/l	25.0		107	70-130			
4-Methyl-2-pentanone (MIBK)	25.6	5.0	ug/l	25.0		103	61-142			
Acetone	26.5	20	ug/l	25.0		106	30-150			
Benzene	25.0	1.0	ug/l	25.0		100	70-130			
Bromobenzene	25.8	1.0	ug/l	25.0		103	70-130			
Bromochloromethane	24.9	1.0	ug/l	25.0		100	70-130			
Bromodichloromethane	27.3	1.0	ug/l	25.0		109	70-130			
Bromoform	25.7	1.0	ug/l	25.0		103	67-122			
Bromomethane	24.6	2.0	ug/l	25.0		98	64-132			
Carbon tetrachloride	27.4	1.0	ug/l	25.0		110	70-130			
Chlorobenzene	25.9	1.0	ug/l	25.0		104	70-130			
Chloroethane	22.2	1.0	ug/l	25.0		89	69-128			
Chloroform	26.3	1.0	ug/l	25.0		105	70-130			

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
LCS Analyzed: 12/28/2011 (11L1016-BS1)										
Chloromethane	22.8	5.0	ug/l	25.0		91	56-131			
cis-1,2-Dichloroethene	23.3	1.0	ug/l	25.0		93	70-130			
cis-1,3-Dichloropropene	25.6	1.0	ug/l	25.0		102	70-130			
Dibromochloromethane	26.8	1.0	ug/l	25.0		107	70-130			
Dichlorodifluoromethane	22.3	1.0	ug/l	25.0		89	42-150			
Ethylbenzene	26.6	1.0	ug/l	25.0		106	70-130			
m,p-Xylenes	24.0	2.0	ug/l	25.0		96	70-130			
Methyl-tert-butyl Ether (MTBE)	25.2	1.0	ug/l	25.0		101	70-130			
Methylene Chloride	21.4	2.0	ug/l	25.0		86	70-130			
n-Butylbenzene	27.2	1.0	ug/l	25.0		109	70-130			
n-Propylbenzene	27.7	1.0	ug/l	25.0		111	70-130			
o-Xylene	26.3	1.0	ug/l	25.0		105	70-130			
p-Isopropyltoluene	26.2	1.0	ug/l	25.0		105	70-130			
sec-Butylbenzene	26.3	1.0	ug/l	25.0		105	70-130			
Styrene	25.7	1.0	ug/l	25.0		103	70-130			
tert-Butylbenzene	26.3	1.0	ug/l	25.0		105	70-130			
Tetrachloroethene	23.6	1.0	ug/l	25.0		94	70-130			
Toluene	25.2	1.0	ug/l	25.0		101	70-130			
trans-1,2-Dichloroethene	22.5	1.0	ug/l	25.0		90	70-130			
trans-1,3-Dichloropropene	26.6	1.0	ug/l	25.0		106	70-130			
Trichloroethene	24.7	1.0	ug/l	25.0		99	70-130			
Trichlorofluoromethane	28.1	1.0	ug/l	25.0		112	78-149			
Vinyl Acetate	28.0	1.0	ug/l	25.0		112	57-149			
Vinyl chloride	25.7	1.0	ug/l	25.0		103	66-134			
Surrogate: Dibromofluoromethane	*24.6*		*ug/l*	*25.0*		*98*	*70-130*			
Surrogate: Toluene-d8	*24.0*		*ug/l*	*25.0*		*96*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.3*		*ug/l*	*25.0*		*97*	*70-130*			

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VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
LCS Dup Analyzed: 12/28/2011 (11L1016-BSD1)										
1,1,1-Trichloroethane	26.0	1.0	ug/l	25.0		104	70-130	2	20	
1,1,2,2-Tetrachloroethane	24.9	1.0	ug/l	25.0		100	70-130	5	20	
1,1,2-Trichloroethane	25.7	1.0	ug/l	25.0		103	70-130	5	20	
1,1-Dichloroethane	26.1	1.0	ug/l	25.0		104	70-130	4	20	
1,1-Dichloroethene	20.4	1.0	ug/l	25.0		82	70-130	0.2	20	
1,1-Dichloropropene	24.2	1.0	ug/l	25.0		97	70-130	0.7	20	
1,2,3-Trichlorobenzene	28.5	2.0	ug/l	25.0		114	70-130	2	20	
1,2,3-Trichloropropane	26.0	2.0	ug/l	25.0		104	70-130	6	20	
1,2,4-Trichlorobenzene	27.8	2.0	ug/l	25.0		111	70-130	2	20	
1,2,4-Trimethylbenzene	25.8	1.0	ug/l	25.0		103	70-130	1	20	
1,2-Dibromoethane (EDB)	26.3	1.0	ug/l	25.0		105	70-130	2	20	
1,2-Dichlorobenzene	26.5	1.0	ug/l	25.0		106	70-130	0.4	20	
1,2-Dichloroethane	33.7	1.0	ug/l	25.0		135	72-133	8	20	*L3*
1,2-Dichloropropane	25.4	1.0	ug/l	25.0		102	70-130	0.2	20	
1,3,5-Trimethylbenzene	25.2	1.0	ug/l	25.0		101	70-130	5	20	
1,3-Dichlorobenzene	26.6	1.0	ug/l	25.0		106	70-130	1	20	
1,3-Dichloropropane	27.6	1.0	ug/l	25.0		110	70-130	5	20	
1,4-Dichlorobenzene	26.7	1.0	ug/l	25.0		107	70-130	0.3	20	
2,2-Dichloropropane	26.1	2.0	ug/l	25.0		105	70-130	3	20	
2-Butanone (MEK)	24.2	5.0	ug/l	25.0		97	48-150	2	33	
2-Chlorotoluene	26.0	1.0	ug/l	25.0		104	70-130	5	20	
2-Hexanone	30.0	5.0	ug/l	25.0		120	44-150	2	31	
4-Chlorotoluene	26.4	1.0	ug/l	25.0		106	70-130	1	20	
4-Methyl-2-pentanone (MIBK)	26.6	5.0	ug/l	25.0		106	61-142	4	22	
Acetone	30.7	20	ug/l	25.0		123	30-150	15	35	
Benzene	25.2	1.0	ug/l	25.0		101	70-130	0.5	20	
Bromobenzene	25.5	1.0	ug/l	25.0		102	70-130	1	20	
Bromochloromethane	26.5	1.0	ug/l	25.0		106	70-130	6	20	
Bromodichloromethane	29.3	1.0	ug/l	25.0		117	70-130	7	20	
Bromoform	25.4	1.0	ug/l	25.0		102	67-122	0.9	20	
Bromomethane	24.6	2.0	ug/l	25.0		98	64-132	0.08	20	
Carbon tetrachloride	27.3	1.0	ug/l	25.0		109	70-130	0.3	20	
Chlorobenzene	26.6	1.0	ug/l	25.0		107	70-130	3	20	
Chloroethane	22.6	1.0	ug/l	25.0		91	69-128	2	20	
Chloroform	27.9	1.0	ug/l	25.0		112	70-130	6	20	

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
LCS Dup Analyzed: 12/28/2011 (11L1016-BSD1)										
Chloromethane	22.9	5.0	ug/l	25.0		92	56-131	0.6	20	
cis-1,2-Dichloroethene	24.6	1.0	ug/l	25.0		98	70-130	6	20	
cis-1,3-Dichloropropene	27.0	1.0	ug/l	25.0		108	70-130	6	20	
Dibromochloromethane	28.0	1.0	ug/l	25.0		112	70-130	4	20	
Dichlorodifluoromethane	21.2	1.0	ug/l	25.0		85	42-150	5	20	
Ethylbenzene	26.2	1.0	ug/l	25.0		105	70-130	1	20	
m,p-Xylenes	24.1	2.0	ug/l	25.0		96	70-130	0.3	20	
Methyl-tert-butyl Ether (MTBE)	26.4	1.0	ug/l	25.0		106	70-130	5	20	
Methylene Chloride	23.1	2.0	ug/l	25.0		92	70-130	8	20	
n-Butylbenzene	25.4	1.0	ug/l	25.0		102	70-130	7	20	
n-Propylbenzene	26.1	1.0	ug/l	25.0		105	70-130	6	20	
o-Xylene	25.1	1.0	ug/l	25.0		100	70-130	5	20	
p-Isopropyltoluene	25.2	1.0	ug/l	25.0		101	70-130	4	20	
sec-Butylbenzene	25.0	1.0	ug/l	25.0		100	70-130	5	20	
Styrene	26.0	1.0	ug/l	25.0		104	70-130	1	20	
tert-Butylbenzene	24.5	1.0	ug/l	25.0		98	70-130	7	20	
Tetrachloroethene	23.2	1.0	ug/l	25.0		93	70-130	2	20	
Toluene	25.1	1.0	ug/l	25.0		101	70-130	0.04	20	
trans-1,2-Dichloroethene	22.3	1.0	ug/l	25.0		89	70-130	0.7	20	
trans-1,3-Dichloropropene	28.8	1.0	ug/l	25.0		115	70-130	8	20	
Trichloroethene	24.2	1.0	ug/l	25.0		97	70-130	2	20	
Trichlorofluoromethane	28.0	1.0	ug/l	25.0		112	78-149	0.2	20	
Vinyl Acetate	29.3	1.0	ug/l	25.0		117	57-149	5	21	
Vinyl chloride	24.5	1.0	ug/l	25.0		98	66-134	5	20	
Surrogate: Dibromofluoromethane	*25.4*		*ug/l*	*25.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*23.8*		*ug/l*	*25.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*70-130*			

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Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
Matrix Spike Analyzed: 12/28/2011 (11L1016-MS1)					**Source: PUL1526-01**					
1,1,1-Trichloroethane	25.8	1.0	ug/l	25.0	ND	103	76-132			
1,1,2,2-Tetrachloroethane	23.0	1.0	ug/l	25.0	ND	92	69-133			
1,1,2-Trichloroethane	22.0	1.0	ug/l	25.0	ND	88	70-130			
1,1-Dichloroethane	24.0	1.0	ug/l	25.0	ND	96	70-130			
1,1-Dichloroethene	18.0	1.0	ug/l	25.0	ND	72	70-130			
1,1-Dichloropropene	23.1	1.0	ug/l	25.0	ND	92	70-130			
1,2,3-Trichlorobenzene	24.8	2.0	ug/l	25.0	ND	99	70-130			
1,2,3-Trichloropropane	23.4	2.0	ug/l	25.0	ND	94	70-130			
1,2,4-Trichlorobenzene	24.6	2.0	ug/l	25.0	ND	98	66-126			
1,2,4-Trimethylbenzene	24.4	1.0	ug/l	25.0	ND	97	70-130			
1,2-Dibromoethane (EDB)	23.5	1.0	ug/l	25.0	ND	94	70-130			
1,2-Dichlorobenzene	24.0	1.0	ug/l	25.0	ND	96	70-130			
1,2-Dichloroethane	29.2	1.0	ug/l	25.0	ND	117	68-143			
1,2-Dichloropropane	23.5	1.0	ug/l	25.0	ND	94	70-130			
1,3,5-Trimethylbenzene	25.0	1.0	ug/l	25.0	ND	100	61-138			
1,3-Dichlorobenzene	24.5	1.0	ug/l	25.0	ND	98	70-130			
1,3-Dichloropropane	25.6	1.0	ug/l	25.0	ND	103	70-130			
1,4-Dichlorobenzene	23.8	1.0	ug/l	25.0	ND	95	70-130			
2,2-Dichloropropane	26.1	2.0	ug/l	25.0	ND	104	66-130			
2-Butanone (MEK)	19.9	5.0	ug/l	25.0	ND	80	22-150			
2-Chlorotoluene	25.8	1.0	ug/l	25.0	ND	103	70-130			
2-Hexanone	22.1	5.0	ug/l	25.0	ND	89	18-150			
4-Chlorotoluene	26.2	1.0	ug/l	25.0	ND	105	70-130			
4-Methyl-2-pentanone (MIBK)	22.4	5.0	ug/l	25.0	ND	90	56-145			
Acetone	19.2	20	ug/l	25.0	ND	77	10-150			
Benzene	23.7	1.0	ug/l	25.0	ND	95	70-130			
Bromobenzene	24.0	1.0	ug/l	25.0	ND	96	70-130			
Bromochloromethane	22.2	1.0	ug/l	25.0	ND	89	70-130			
Bromodichloromethane	26.3	1.0	ug/l	25.0	ND	105	70-130			
Bromoform	22.0	1.0	ug/l	25.0	ND	88	62-126			
Bromomethane	19.4	2.0	ug/l	25.0	ND	77	55-136			
Carbon tetrachloride	28.6	1.0	ug/l	25.0	ND	114	76-131			
Chlorobenzene	24.8	1.0	ug/l	25.0	ND	99	70-130			
Chloroethane	18.7	1.0	ug/l	25.0	ND	75	67-134			
Chloroform	25.8	1.0	ug/l	25.0	0.410	102	70-130			

TestAmerica Phoenix

Suzanne Glass
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
Matrix Spike Analyzed: 12/28/2011 (11L1016-MS1)					**Source: PUL1526-01**					
Chloromethane	18.0	5.0	ug/l	25.0	ND	72	50-135			
cis-1,2-Dichloroethene	21.7	1.0	ug/l	25.0	ND	87	70-130			
cis-1,3-Dichloropropene	24.0	1.0	ug/l	25.0	ND	96	70-130			
Dibromochloromethane	26.1	1.0	ug/l	25.0	ND	104	70-130			
Dichlorodifluoromethane	19.4	1.0	ug/l	25.0	ND	77	36-150			
Ethylbenzene	26.8	1.0	ug/l	25.0	ND	107	70-130			
m,p-Xylenes	23.8	2.0	ug/l	25.0	ND	95	70-130			
Methyl-tert-butyl Ether (MTBE)	21.9	1.0	ug/l	25.0	ND	88	67-138			
Methylene Chloride	19.2	2.0	ug/l	25.0	ND	77	74-132			
n-Butylbenzene	26.0	1.0	ug/l	25.0	ND	104	70-130			
n-Propylbenzene	26.3	1.0	ug/l	25.0	ND	105	70-130			
o-Xylene	25.8	1.0	ug/l	25.0	ND	103	70-130			
p-Isopropyltoluene	25.7	1.0	ug/l	25.0	ND	103	70-130			
sec-Butylbenzene	25.5	1.0	ug/l	25.0	ND	102	70-130			
Styrene	21.9	1.0	ug/l	25.0	ND	88	51-123			
tert-Butylbenzene	25.8	1.0	ug/l	25.0	ND	103	70-130			
Tetrachloroethene	23.5	1.0	ug/l	25.0	ND	94	70-130			
Toluene	24.0	1.0	ug/l	25.0	ND	96	70-130			
trans-1,2-Dichloroethene	21.1	1.0	ug/l	25.0	ND	84	70-130			
trans-1,3-Dichloropropene	24.4	1.0	ug/l	25.0	ND	98	71-132			
Trichloroethene	23.8	1.0	ug/l	25.0	ND	95	70-130			
Trichlorofluoromethane	27.2	1.0	ug/l	25.0	ND	109	74-150			
Vinyl Acetate	23.7	1.0	ug/l	25.0	ND	95	50-150			
Vinyl chloride	21.7	1.0	ug/l	25.0	ND	87	58-139			
Surrogate: Dibromofluoromethane	*23.6*		*ug/l*	*25.0*		*94*	*70-130*			
Surrogate: Toluene-d8	*22.8*		*ug/l*	*25.0*		*91*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.1*		*ug/l*	*25.0*		*100*	*70-130*			

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
Matrix Spike Dup Analyzed: 12/28/2011 (11L1016-MSD1)					**Source: PUL1526-01**					
1,1,1-Trichloroethane	27.0	1.0	ug/l	25.0	ND	108	76-132	4	20	
1,1,2,2-Tetrachloroethane	26.1	1.0	ug/l	25.0	ND	104	69-133	13	20	
1,1,2-Trichloroethane	24.4	1.0	ug/l	25.0	ND	98	70-130	10	20	
1,1-Dichloroethane	24.8	1.0	ug/l	25.0	ND	99	70-130	3	20	
1,1-Dichloroethene	19.2	1.0	ug/l	25.0	ND	77	70-130	7	20	
1,1-Dichloropropene	24.8	1.0	ug/l	25.0	ND	99	70-130	7	20	
1,2,3-Trichlorobenzene	26.0	2.0	ug/l	25.0	ND	104	70-130	5	20	
1,2,3-Trichloropropane	26.0	2.0	ug/l	25.0	ND	104	70-130	10	20	
1,2,4-Trichlorobenzene	26.2	2.0	ug/l	25.0	ND	105	66-126	6	20	
1,2,4-Trimethylbenzene	25.7	1.0	ug/l	25.0	ND	103	70-130	5	20	
1,2-Dibromoethane (EDB)	24.6	1.0	ug/l	25.0	ND	98	70-130	4	20	
1,2-Dichlorobenzene	26.0	1.0	ug/l	25.0	ND	104	70-130	8	20	
1,2-Dichloroethane	30.6	1.0	ug/l	25.0	ND	122	68-143	5	20	
1,2-Dichloropropane	24.5	1.0	ug/l	25.0	ND	98	70-130	4	20	
1,3,5-Trimethylbenzene	25.9	1.0	ug/l	25.0	ND	103	61-138	3	33	
1,3-Dichlorobenzene	26.9	1.0	ug/l	25.0	ND	107	70-130	9	20	
1,3-Dichloropropane	26.2	1.0	ug/l	25.0	ND	105	70-130	2	20	
1,4-Dichlorobenzene	26.1	1.0	ug/l	25.0	ND	105	70-130	10	20	
2,2-Dichloropropane	25.7	2.0	ug/l	25.0	ND	103	66-130	2	20	
2-Butanone (MEK)	22.4	5.0	ug/l	25.0	ND	90	22-150	12	31	
2-Chlorotoluene	27.6	1.0	ug/l	25.0	ND	110	70-130	7	20	
2-Hexanone	24.8	5.0	ug/l	25.0	ND	99	18-150	11	25	
4-Chlorotoluene	27.6	1.0	ug/l	25.0	ND	110	70-130	5	20	
4-Methyl-2-pentanone (MIBK)	26.0	5.0	ug/l	25.0	ND	104	56-145	15	26	
Acetone	24.3	20	ug/l	25.0	ND	97	10-150	23	35	
Benzene	24.7	1.0	ug/l	25.0	ND	99	70-130	4	20	
Bromobenzene	25.9	1.0	ug/l	25.0	ND	104	70-130	8	20	
Bromochloromethane	23.7	1.0	ug/l	25.0	ND	95	70-130	7	20	
Bromodichloromethane	28.1	1.0	ug/l	25.0	ND	112	70-130	6	20	
Bromoform	24.8	1.0	ug/l	25.0	ND	99	62-126	12	20	
Bromomethane	21.7	2.0	ug/l	25.0	ND	87	55-136	11	24	
Carbon tetrachloride	29.1	1.0	ug/l	25.0	ND	117	76-131	2	20	
Chlorobenzene	25.6	1.0	ug/l	25.0	ND	102	70-130	3	20	
Chloroethane	22.0	1.0	ug/l	25.0	ND	88	67-134	16	20	
Chloroform	26.3	1.0	ug/l	25.0	0.410	104	70-130	2	20	

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3035 W El Camino Del Cerro
Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1016 Extracted: 12/28/11										
Matrix Spike Dup Analyzed: 12/28/2011 (11L1016-MSD1)					**Source: PUL1526-01**					
Chloromethane	19.3	5.0	ug/l	25.0	ND	77	50-135	7	20	
cis-1,2-Dichloroethene	22.2	1.0	ug/l	25.0	ND	89	70-130	2	20	
cis-1,3-Dichloropropene	25.3	1.0	ug/l	25.0	ND	101	70-130	5	20	
Dibromochloromethane	26.3	1.0	ug/l	25.0	ND	105	70-130	0.8	20	
Dichlorodifluoromethane	19.7	1.0	ug/l	25.0	ND	79	36-150	2	22	
Ethylbenzene	26.6	1.0	ug/l	25.0	ND	106	70-130	0.8	20	
m,p-Xylenes	24.6	2.0	ug/l	25.0	ND	98	70-130	3	20	
Methyl-tert-butyl Ether (MTBE)	24.1	1.0	ug/l	25.0	ND	97	67-138	10	21	
Methylene Chloride	19.9	2.0	ug/l	25.0	ND	80	74-132	4	20	
n-Butylbenzene	27.2	1.0	ug/l	25.0	ND	109	70-130	5	20	
n-Propylbenzene	27.8	1.0	ug/l	25.0	ND	111	70-130	6	20	
o-Xylene	25.7	1.0	ug/l	25.0	ND	103	70-130	0.3	20	
p-Isopropyltoluene	25.7	1.0	ug/l	25.0	ND	103	70-130	0.08	20	
sec-Butylbenzene	26.0	1.0	ug/l	25.0	ND	104	70-130	2	20	
Styrene	22.2	1.0	ug/l	25.0	ND	89	51-123	1	21	
tert-Butylbenzene	27.1	1.0	ug/l	25.0	ND	108	70-130	5	20	
Tetrachloroethene	23.9	1.0	ug/l	25.0	ND	96	70-130	2	20	
Toluene	24.8	1.0	ug/l	25.0	ND	99	70-130	3	20	
trans-1,2-Dichloroethene	21.1	1.0	ug/l	25.0	ND	85	70-130	0.2	20	
trans-1,3-Dichloropropene	26.4	1.0	ug/l	25.0	ND	106	71-132	8	20	
Trichloroethene	24.8	1.0	ug/l	25.0	ND	99	70-130	4	20	
Trichlorofluoromethane	29.0	1.0	ug/l	25.0	ND	116	74-150	6	20	
Vinyl Acetate	26.0	1.0	ug/l	25.0	ND	104	50-150	9	23	
Vinyl chloride	23.5	1.0	ug/l	25.0	ND	94	58-139	8	21	
Surrogate: Dibromofluoromethane	*23.3*		*ug/l*	*25.0*		*93*	*70-130*			
Surrogate: Toluene-d8	*23.4*		*ug/l*	*25.0*		*94*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*23.9*		*ug/l*	*25.0*		*96*	*70-130*			

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Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
Blank Analyzed: 12/28/2011 (11L0891-BLK1)										
1,1,1-Trichloroethane	ND	50	ug/kg wet							
1,1,2,2-Tetrachloroethane	ND	50	ug/kg wet							
1,1,2-Trichloroethane	ND	50	ug/kg wet							
1,1-Dichloroethane	ND	50	ug/kg wet							
1,1-Dichloroethene	ND	50	ug/kg wet							
1,1-Dichloropropene	ND	50	ug/kg wet							
1,2,3-Trichlorobenzene	ND	100	ug/kg wet							
1,2,3-Trichloropropane	ND	100	ug/kg wet							
1,2,4-Trimethylbenzene	ND	50	ug/kg wet							
1,2-Dibromoethane (EDB)	ND	50	ug/kg wet							
1,2-Dichlorobenzene	ND	50	ug/kg wet							
1,2-Dichloroethane	ND	50	ug/kg wet							
1,2-Dichloropropane	ND	50	ug/kg wet							
1,3,5-Trimethylbenzene	ND	50	ug/kg wet							
1,3-Dichlorobenzene	ND	50	ug/kg wet							
1,3-Dichloropropane	ND	50	ug/kg wet							
1,4-Dichlorobenzene	ND	50	ug/kg wet							
2,2-Dichloropropane	ND	100	ug/kg wet							
2-Butanone (MEK)	ND	500	ug/kg wet							
2-Chlorotoluene	ND	50	ug/kg wet							
2-Hexanone	ND	250	ug/kg wet							
4-Chlorotoluene	ND	50	ug/kg wet							
4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg wet							
Acetone	ND	500	ug/kg wet							
Benzene	ND	50	ug/kg wet							
Bromobenzene	ND	50	ug/kg wet							
Bromochloromethane	ND	50	ug/kg wet							
Bromodichloromethane	ND	50	ug/kg wet							
Bromoform	ND	50	ug/kg wet							
Bromomethane	ND	250	ug/kg wet							
Carbon tetrachloride	ND	50	ug/kg wet							
Chlorobenzene	ND	50	ug/kg wet							
Chloroethane	ND	50	ug/kg wet							
Chloroform	ND	50	ug/kg wet							
Chloromethane	ND	250	ug/kg wet							

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
Blank Analyzed: 12/28/2011 (11L0891-BLK1)										
cis-1,2-Dichloroethene	ND	50	ug/kg wet							
cis-1,3-Dichloropropene	ND	50	ug/kg wet							
Dibromochloromethane	ND	50	ug/kg wet							
Dichlorodifluoromethane	ND	50	ug/kg wet							
Ethylbenzene	ND	50	ug/kg wet							
m,p-Xylenes	ND	100	ug/kg wet							
Methyl-tert-butyl Ether (MTBE)	ND	50	ug/kg wet							
Methylene Chloride	ND	100	ug/kg wet							
n-Butylbenzene	ND	50	ug/kg wet							
n-Propylbenzene	ND	50	ug/kg wet							
o-Xylene	ND	50	ug/kg wet							
p-Isopropyltoluene	ND	50	ug/kg wet							
sec-Butylbenzene	ND	50	ug/kg wet							
Styrene	ND	50	ug/kg wet							
tert-Butylbenzene	ND	50	ug/kg wet							
Tetrachloroethene	ND	50	ug/kg wet							
Toluene	ND	50	ug/kg wet							
trans-1,2-Dichloroethene	ND	50	ug/kg wet							
trans-1,3-Dichloropropene	ND	50	ug/kg wet							
Trichloroethene	ND	50	ug/kg wet							
Trichlorofluoromethane	ND	50	ug/kg wet							
Vinyl Acetate	ND	50	ug/kg wet							
Vinyl chloride	ND	50	ug/kg wet							
Surrogate: Dibromofluoromethane	*1110*		*ug/kg wet*	*1250*		*89*	*57-129*			
Surrogate: Toluene-d8	*1000*		*ug/kg wet*	*1250*		*80*	*59-134*			
Surrogate: 4-Bromofluorobenzene	*1030*		*ug/kg wet*	*1250*		*83*	*56-127*			
LCS Analyzed: 12/29/2011 (11L0891-BS1)										
1,1,1-Trichloroethane	1150	50	ug/kg wet	1260		91	70-130			
1,1,2,2-Tetrachloroethane	999	50	ug/kg wet	1260		80	63-129			
1,1,2-Trichloroethane	1070	50	ug/kg wet	1260		85	70-130			
1,1-Dichloroethane	960	50	ug/kg wet	1260		76	70-130			
1,1-Dichloroethene	956	50	ug/kg wet	1260		76	70-130			
1,1-Dichloropropene	908	50	ug/kg wet	1260		72	70-130			
1,2,3-Trichlorobenzene	1150	100	ug/kg wet	1260		92	70-130			
1,2,3-Trichloropropane	1070	100	ug/kg wet	1260		85	64-125			

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Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
LCS Analyzed: 12/29/2011 (11L0891-BS1)										
1,2,4-Trimethylbenzene	1090	50	ug/kg wet	1260		87	66-124			
1,2-Dibromoethane (EDB)	1040	50	ug/kg wet	1260		83	70-130			
1,2-Dichlorobenzene	1170	50	ug/kg wet	1260		93	70-130			
1,2-Dichloroethane	1190	50	ug/kg wet	1260		95	71-139			
1,2-Dichloropropane	990	50	ug/kg wet	1260		79	70-130			
1,3,5-Trimethylbenzene	1090	50	ug/kg wet	1260		87	70-130			
1,3-Dichlorobenzene	1160	50	ug/kg wet	1260		92	70-130			
1,3-Dichloropropane	1010	50	ug/kg wet	1260		80	70-130			
1,4-Dichlorobenzene	1130	50	ug/kg wet	1260		90	70-130			
2,2-Dichloropropane	1190	100	ug/kg wet	1260		95	65-122			
2-Butanone (MEK)	962	500	ug/kg wet	1260		77	33-143			
2-Chlorotoluene	1070	50	ug/kg wet	1260		85	70-130			
2-Hexanone	986	250	ug/kg wet	1260		79	31-136			
4-Chlorotoluene	1080	50	ug/kg wet	1260		86	70-130			
4-Methyl-2-pentanone (MIBK)	870	250	ug/kg wet	1260		69	59-124			
Acetone	1170	500	ug/kg wet	1260		94	20-150			
Benzene	986	50	ug/kg wet	1260		79	70-130			
Bromobenzene	1140	50	ug/kg wet	1260		91	70-130			
Bromochloromethane	1050	50	ug/kg wet	1260		84	70-130			
Bromodichloromethane	1050	50	ug/kg wet	1260		84	70-130			
Bromoform	935	50	ug/kg wet	1260		75	58-108			
Bromomethane	1080	250	ug/kg wet	1260		86	65-116			
Carbon tetrachloride	1120	50	ug/kg wet	1260		89	68-133			
Chlorobenzene	1070	50	ug/kg wet	1260		85	70-130			
Chloroethane	874	50	ug/kg wet	1260		70	67-120			
Chloroform	1050	50	ug/kg wet	1260		83	70-130			
Chloromethane	930	250	ug/kg wet	1260		74	44-121			
cis-1,2-Dichloroethene	965	50	ug/kg wet	1260		77	70-130			
cis-1,3-Dichloropropene	998	50	ug/kg wet	1260		80	70-130			
Dibromochloromethane	982	50	ug/kg wet	1260		78	70-130			
Dichlorodifluoromethane	670	50	ug/kg wet	1260		53	15-117			
Ethylbenzene	1040	50	ug/kg wet	1260		83	70-130			
m,p-Xylenes	995	100	ug/kg wet	1260		79	70-130			
Methyl-tert-butyl Ether (MTBE)	1030	50	ug/kg wet	1260		82	69-132			
Methylene Chloride	997	100	ug/kg wet	1260		79	70-130			

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Pima County WWTP, WESC Laboratory
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Tucson, AZ 85745
Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
LCS Analyzed: 12/29/2011 (11L0891-BS1)										
n-Butylbenzene	1090	50	ug/kg wet	1260		87	70-130			
n-Propylbenzene	1110	50	ug/kg wet	1260		88	70-130			
o-Xylene	1060	50	ug/kg wet	1260		84	70-130			
p-Isopropyltoluene	1060	50	ug/kg wet	1260		85	70-130			
sec-Butylbenzene	1070	50	ug/kg wet	1260		86	70-130			
Styrene	999	50	ug/kg wet	1260		80	70-130			
tert-Butylbenzene	1120	50	ug/kg wet	1260		89	70-130			
Tetrachloroethene	1040	50	ug/kg wet	1260		83	70-130			
Toluene	1030	50	ug/kg wet	1260		82	70-130			
trans-1,2-Dichloroethene	927	50	ug/kg wet	1260		74	70-130			
trans-1,3-Dichloropropene	1010	50	ug/kg wet	1260		81	70-130			
Trichloroethene	1000	50	ug/kg wet	1260		80	70-130			
Trichlorofluoromethane	1300	50	ug/kg wet	1260		104	72-143			
Vinyl Acetate	971	50	ug/kg wet	1260		77	46-150			
Vinyl chloride	544	50	ug/kg wet	1260		43	10-118			
Surrogate: Dibromofluoromethane	*1060*		*ug/kg wet*	*1260*		*84*	*70-130*			
Surrogate: Toluene-d8	*1010*		*ug/kg wet*	*1260*		*80*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*1010*		*ug/kg wet*	*1260*		*80*	*70-130*			
LCS Dup Analyzed: 12/29/2011 (11L0891-BSD1)										
1,1,1-Trichloroethane	1070	50	ug/kg wet	1260		85	70-130	7	32	
1,1,2,2-Tetrachloroethane	1040	50	ug/kg wet	1260		82	63-129	4	38	
1,1,2-Trichloroethane	1070	50	ug/kg wet	1260		85	70-130	0.3	39	
1,1-Dichloroethane	941	50	ug/kg wet	1260		75	70-130	2	33	
1,1-Dichloroethene	914	50	ug/kg wet	1260		73	70-130	4	31	
1,1-Dichloropropene	918	50	ug/kg wet	1260		73	70-130	1	30	
1,2,3-Trichlorobenzene	1220	100	ug/kg wet	1260		97	70-130	6	35	
1,2,3-Trichloropropane	1100	100	ug/kg wet	1260		87	64-125	3	39	
1,2,4-Trimethylbenzene	1050	50	ug/kg wet	1260		84	66-124	4	31	
1,2-Dibromoethane (EDB)	1120	50	ug/kg wet	1260		89	70-130	7	36	
1,2-Dichlorobenzene	1180	50	ug/kg wet	1260		94	70-130	1	28	
1,2-Dichloroethane	1180	50	ug/kg wet	1260		94	71-139	0.4	37	
1,2-Dichloropropane	1010	50	ug/kg wet	1260		80	70-130	2	31	
1,3,5-Trimethylbenzene	1100	50	ug/kg wet	1260		87	70-130	0.8	27	
1,3-Dichlorobenzene	1140	50	ug/kg wet	1260		91	70-130	1	27	
1,3-Dichloropropane	1040	50	ug/kg wet	1260		83	70-130	4	32	

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
LCS Dup Analyzed: 12/29/2011 (11L0891-BSD1)										
1,4-Dichlorobenzene	1110	50	ug/kg wet	1260		88	70-130	2	27	
2,2-Dichloropropane	1020	100	ug/kg wet	1260		81	65-122	15	31	
2-Butanone (MEK)	1100	500	ug/kg wet	1260		87	33-143	13	53	
2-Chlorotoluene	1050	50	ug/kg wet	1260		84	70-130	1	27	
2-Hexanone	1130	250	ug/kg wet	1260		90	31-136	14	48	
4-Chlorotoluene	1070	50	ug/kg wet	1260		85	70-130	1	28	
4-Methyl-2-pentanone (MIBK)	961	250	ug/kg wet	1260		76	59-124	10	51	
Acetone	1230	500	ug/kg wet	1260		98	20-150	5	50	
Benzene	995	50	ug/kg wet	1260		79	70-130	0.9	33	
Bromobenzene	1160	50	ug/kg wet	1260		92	70-130	2	28	
Bromochloromethane	1050	50	ug/kg wet	1260		83	70-130	0.4	37	
Bromodichloromethane	1050	50	ug/kg wet	1260		84	70-130	0.1	34	
Bromoform	1010	50	ug/kg wet	1260		80	58-108	7	35	
Bromomethane	1010	250	ug/kg wet	1260		80	65-116	7	33	
Carbon tetrachloride	1090	50	ug/kg wet	1260		87	68-133	3	32	
Chlorobenzene	1080	50	ug/kg wet	1260		86	70-130	0.5	29	
Chloroethane	925	50	ug/kg wet	1260		74	67-120	6	32	
Chloroform	1020	50	ug/kg wet	1260		81	70-130	2	33	
Chloromethane	921	250	ug/kg wet	1260		73	44-121	1	36	
cis-1,2-Dichloroethene	937	50	ug/kg wet	1260		75	70-130	3	35	
cis-1,3-Dichloropropene	1020	50	ug/kg wet	1260		81	70-130	2	35	
Dibromochloromethane	1020	50	ug/kg wet	1260		81	70-130	4	35	
Dichlorodifluoromethane	722	50	ug/kg wet	1260		57	15-117	7	39	
Ethylbenzene	1050	50	ug/kg wet	1260		84	70-130	0.5	28	
m,p-Xylenes	1010	100	ug/kg wet	1260		80	70-130	1	20	
Methyl-tert-butyl Ether (MTBE)	1050	50	ug/kg wet	1260		84	69-132	2	46	
Methylene Chloride	1000	100	ug/kg wet	1260		80	70-130	0.6	38	
n-Butylbenzene	1070	50	ug/kg wet	1260		85	70-130	2	27	
n-Propylbenzene	1090	50	ug/kg wet	1260		87	70-130	1	29	
o-Xylene	1070	50	ug/kg wet	1260		85	70-130	1	20	
p-Isopropyltoluene	1040	50	ug/kg wet	1260		83	70-130	2	30	
sec-Butylbenzene	1030	50	ug/kg wet	1260		82	70-130	4	28	
Styrene	1060	50	ug/kg wet	1260		85	70-130	6	30	
tert-Butylbenzene	1080	50	ug/kg wet	1260		86	70-130	3	27	
Tetrachloroethene	1060	50	ug/kg wet	1260		84	70-130	2	26	

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
LCS Dup Analyzed: 12/29/2011 (11L0891-BSD1)										
Toluene	1050	50	ug/kg wet	1260		84	70-130	2	31	
trans-1,2-Dichloroethene	931	50	ug/kg wet	1260		74	70-130	0.4	31	
trans-1,3-Dichloropropene	1080	50	ug/kg wet	1260		86	70-130	7	37	
Trichloroethene	1000	50	ug/kg wet	1260		80	70-130	0.4	29	
Trichlorofluoromethane	1240	50	ug/kg wet	1260		99	72-143	5	37	
Vinyl Acetate	986	50	ug/kg wet	1260		78	46-150	2	50	
Vinyl chloride	548	50	ug/kg wet	1260		44	10-118	0.8	65	
Surrogate: Dibromofluoromethane	*1050*		*ug/kg wet*	*1260*		*84*	*70-130*			
Surrogate: Toluene-d8	*1010*		*ug/kg wet*	*1260*		*80*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*1000*		*ug/kg wet*	*1260*		*80*	*70-130*			
Matrix Spike Analyzed: 12/28/2011 (11L0891-MS1)					**Source: PUL1463-01**					
1,1,1-Trichloroethane	929	50	ug/kg wet	1250	ND	74	53-133			
1,1,2,2-Tetrachloroethane	869	50	ug/kg wet	1250	ND	70	44-139			
1,1,2-Trichloroethane	892	50	ug/kg wet	1250	ND	71	57-118			
1,1-Dichloroethane	910	50	ug/kg wet	1250	ND	73	57-132			
1,1-Dichloroethene	634	50	ug/kg wet	1250	ND	51	50-131			
1,1-Dichloropropene	828	50	ug/kg wet	1250	ND	66	52-129			
1,2,3-Trichlorobenzene	1010	100	ug/kg wet	1250	ND	81	32-137			
1,2,3-Trichloropropane	919	100	ug/kg wet	1250	ND	74	56-131			
1,2,4-Trimethylbenzene	1040	50	ug/kg wet	1250	ND	83	28-139			
1,2-Dibromoethane (EDB)	895	50	ug/kg wet	1250	ND	72	62-119			
1,2-Dichlorobenzene	1030	50	ug/kg wet	1250	ND	82	54-130			
1,2-Dichloroethane	1190	50	ug/kg wet	1250	ND	95	52-138			
1,2-Dichloropropane	922	50	ug/kg wet	1250	ND	74	61-124			
1,3,5-Trimethylbenzene	1040	50	ug/kg wet	1250	ND	84	48-146			
1,3-Dichlorobenzene	1010	50	ug/kg wet	1250	ND	81	53-132			
1,3-Dichloropropane	982	50	ug/kg wet	1250	ND	79	63-116			
1,4-Dichlorobenzene	1020	50	ug/kg wet	1250	ND	81	55-132			
2,2-Dichloropropane	859	100	ug/kg wet	1250	ND	69	50-123			
2-Butanone (MEK)	758	500	ug/kg wet	1250	ND	61	35-126			
2-Chlorotoluene	1040	50	ug/kg wet	1250	ND	83	52-136			
2-Hexanone	913	250	ug/kg wet	1250	ND	73	30-115			
4-Chlorotoluene	1080	50	ug/kg wet	1250	ND	87	56-136			
4-Methyl-2-pentanone (MIBK)	852	250	ug/kg wet	1250	ND	68	50-124			
Acetone	858	500	ug/kg wet	1250	ND	69	16-149			

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
Matrix Spike Analyzed: 12/28/2011 (11L0891-MS1)					**Source: PUL1463-01**					
Benzene	917	50	ug/kg wet	1250	ND	74	55-123			
Bromobenzene	996	50	ug/kg wet	1250	ND	80	59-129			
Bromochloromethane	926	50	ug/kg wet	1250	ND	74	56-129			
Bromodichloromethane	1060	50	ug/kg wet	1250	ND	85	60-124			
Bromoform	885	50	ug/kg wet	1250	ND	71	51-109			
Bromomethane	672	250	ug/kg wet	1250	ND	54	39-123			
Carbon tetrachloride	937	50	ug/kg wet	1250	ND	75	45-140			
Chlorobenzene	1000	50	ug/kg wet	1250	ND	80	61-123			
Chloroethane	614	50	ug/kg wet	1250	ND	49	44-125			
Chloroform	1050	50	ug/kg wet	1250	ND	84	57-131			
Chloromethane	642	250	ug/kg wet	1250	ND	51	28-119			
cis-1,2-Dichloroethene	866	50	ug/kg wet	1250	ND	69	58-118			
cis-1,3-Dichloropropene	971	50	ug/kg wet	1250	ND	78	50-139			
Dibromochloromethane	952	50	ug/kg wet	1250	ND	76	59-117			
Dichlorodifluoromethane	386	50	ug/kg wet	1250	ND	31	10-96			
Ethylbenzene	1000	50	ug/kg wet	1250	ND	80	54-133			
m,p-Xylenes	942	100	ug/kg wet	1250	ND	75	51-130			
Methyl-tert-butyl Ether (MTBE)	909	50	ug/kg wet	1250	ND	73	56-128			
Methylene Chloride	746	100	ug/kg wet	1250	ND	60	52-132			
n-Butylbenzene	1010	50	ug/kg wet	1250	ND	81	41-150			
n-Propylbenzene	1030	50	ug/kg wet	1250	ND	83	50-148			
o-Xylene	997	50	ug/kg wet	1250	ND	80	45-137			
p-Isopropyltoluene	1000	50	ug/kg wet	1250	ND	80	44-140			
sec-Butylbenzene	985	50	ug/kg wet	1250	ND	79	40-146			
Styrene	971	50	ug/kg wet	1250	ND	78	45-122			
tert-Butylbenzene	1010	50	ug/kg wet	1250	ND	81	49-138			
Tetrachloroethene	891	50	ug/kg wet	1250	ND	71	47-138			
Toluene	983	50	ug/kg wet	1250	12.0	78	59-129			
trans-1,2-Dichloroethene	765	50	ug/kg wet	1250	ND	61	57-128			
trans-1,3-Dichloropropene	1010	50	ug/kg wet	1250	ND	81	45-132			
Trichloroethene	909	50	ug/kg wet	1250	ND	73	56-136			
Trichlorofluoromethane	762	50	ug/kg wet	1250	13.5	60	41-148			
Vinyl Acetate	57.4	50	ug/kg wet	1250	ND	5	10-150			*M2*
Vinyl chloride	430	50	ug/kg wet	1250	ND	34	12-97			
Surrogate: Dibromofluoromethane	*906*		*ug/kg wet*	*1250*		*73*	*57-129*			

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
Matrix Spike Analyzed: 12/28/2011 (11L0891-MS1)					**Source: PUL1463-01**					
Surrogate: Toluene-d8	*844*		*ug/kg wet*	*1250*		*68*	*59-134*			
Surrogate: 4-Bromofluorobenzene	*893*		*ug/kg wet*	*1250*		*72*	*56-127*			
Matrix Spike Dup Analyzed: 12/28/2011 (11L0891-MSD1)					**Source: PUL1463-01**					
1,1,1-Trichloroethane	923	50	ug/kg wet	1240	ND	74	53-133	0.6	25	
1,1,2,2-Tetrachloroethane	803	50	ug/kg wet	1240	ND	65	44-139	8	40	
1,1,2-Trichloroethane	877	50	ug/kg wet	1240	ND	71	57-118	2	29	
1,1-Dichloroethane	891	50	ug/kg wet	1240	ND	72	57-132	2	26	
1,1-Dichloroethene	589	50	ug/kg wet	1240	ND	47	50-131	7	32	*M2*
1,1-Dichloropropene	788	50	ug/kg wet	1240	ND	64	52-129	5	21	
1,2,3-Trichlorobenzene	1040	100	ug/kg wet	1240	ND	84	32-137	2	30	
1,2,3-Trichloropropane	853	100	ug/kg wet	1240	ND	69	56-131	7	24	
1,2,4-Trimethylbenzene	1020	50	ug/kg wet	1240	ND	82	28-139	2	26	
1,2-Dibromoethane (EDB)	860	50	ug/kg wet	1240	ND	69	62-119	4	24	
1,2-Dichlorobenzene	977	50	ug/kg wet	1240	ND	79	54-130	5	23	
1,2-Dichloroethane	1150	50	ug/kg wet	1240	ND	93	52-138	3	30	
1,2-Dichloropropane	961	50	ug/kg wet	1240	ND	78	61-124	4	21	
1,3,5-Trimethylbenzene	983	50	ug/kg wet	1240	ND	79	48-146	6	35	
1,3-Dichlorobenzene	1010	50	ug/kg wet	1240	ND	81	53-132	0.7	23	
1,3-Dichloropropane	933	50	ug/kg wet	1240	ND	75	63-116	5	21	
1,4-Dichlorobenzene	994	50	ug/kg wet	1240	ND	80	55-132	2	22	
2,2-Dichloropropane	809	100	ug/kg wet	1240	ND	65	50-123	6	26	
2-Butanone (MEK)	688	500	ug/kg wet	1240	ND	55	35-126	10	39	
2-Chlorotoluene	994	50	ug/kg wet	1240	ND	80	52-136	4	23	
2-Hexanone	808	250	ug/kg wet	1240	ND	65	30-115	12	36	
4-Chlorotoluene	1040	50	ug/kg wet	1240	ND	84	56-136	4	21	
4-Methyl-2-pentanone (MIBK)	848	250	ug/kg wet	1240	ND	68	50-124	0.5	29	
Acetone	767	500	ug/kg wet	1240	ND	62	16-149	11	40	
Benzene	881	50	ug/kg wet	1240	ND	71	55-123	4	20	
Bromobenzene	963	50	ug/kg wet	1240	ND	78	59-129	3	23	
Bromochloromethane	925	50	ug/kg wet	1240	ND	75	56-129	0.1	31	
Bromodichloromethane	1090	50	ug/kg wet	1240	ND	88	60-124	3	24	
Bromoform	819	50	ug/kg wet	1240	ND	66	51-109	8	27	
Bromomethane	658	250	ug/kg wet	1240	ND	53	39-123	2	35	
Carbon tetrachloride	914	50	ug/kg wet	1240	ND	74	45-140	2	23	
Chlorobenzene	989	50	ug/kg wet	1240	ND	80	61-123	1	21	

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Project ID: Sample group #11 DO# 12-22707

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0891 Extracted: 12/22/11										
Matrix Spike Dup Analyzed: 12/28/2011 (11L0891-MSD1)					**Source: PUL1463-01**					
Chloroethane	649	50	ug/kg wet	1240	ND	52	44-125	6	32	
Chloroform	1050	50	ug/kg wet	1240	ND	85	57-131	0.6	27	
Chloromethane	632	250	ug/kg wet	1240	ND	51	28-119	2	40	
cis-1,2-Dichloroethene	886	50	ug/kg wet	1240	ND	71	58-118	2	24	
cis-1,3-Dichloropropene	1000	50	ug/kg wet	1240	ND	81	50-139	3	25	
Dibromochloromethane	933	50	ug/kg wet	1240	ND	75	59-117	2	23	
Dichlorodifluoromethane	394	50	ug/kg wet	1240	ND	32	10-96	2	25	
Ethylbenzene	1020	50	ug/kg wet	1240	ND	82	54-133	2	27	
m,p-Xylenes	915	100	ug/kg wet	1240	ND	74	51-130	3	27	
Methyl-tert-butyl Ether (MTBE)	900	50	ug/kg wet	1240	ND	73	56-128	1	32	
Methylene Chloride	707	100	ug/kg wet	1240	ND	57	52-132	5	30	
n-Butylbenzene	973	50	ug/kg wet	1240	ND	78	41-150	4	28	
n-Propylbenzene	1000	50	ug/kg wet	1240	ND	81	50-148	3	29	
o-Xylene	960	50	ug/kg wet	1240	ND	77	45-137	4	28	
p-Isopropyltoluene	967	50	ug/kg wet	1240	ND	78	44-140	4	30	
sec-Butylbenzene	928	50	ug/kg wet	1240	ND	75	40-146	6	30	
Styrene	962	50	ug/kg wet	1240	ND	78	45-122	0.9	22	
tert-Butylbenzene	980	50	ug/kg wet	1240	ND	79	49-138	4	29	
Tetrachloroethene	863	50	ug/kg wet	1240	ND	70	47-138	3	31	
Toluene	1010	50	ug/kg wet	1240	12.0	80	59-129	3	20	
trans-1,2-Dichloroethene	744	50	ug/kg wet	1240	ND	60	57-128	3	27	
trans-1,3-Dichloropropene	1010	50	ug/kg wet	1240	ND	81	45-132	0.9	26	
Trichloroethene	941	50	ug/kg wet	1240	ND	76	56-136	4	26	
Trichlorofluoromethane	724	50	ug/kg wet	1240	13.5	57	41-148	5	27	
Vinyl Acetate	ND	50	ug/kg wet	1240	ND		10-150		40	*M2, N1d*
Vinyl chloride	418	50	ug/kg wet	1240	ND	34	12-97	3	40	
Surrogate: Dibromofluoromethane	*880*		*ug/kg wet*	*1240*		*71*	*57-129*			
Surrogate: Toluene-d8	*820*		*ug/kg wet*	*1240*		*66*	*59-134*			
Surrogate: 4-Bromofluorobenzene	*817*		*ug/kg wet*	*1240*		*66*	*56-127*			

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1101 Extracted: 12/29/11										
Blank Analyzed: 12/29/2011 (11L1101-BLK1)										
Mercury	ND	0.10	mg/kg wet							
LCS Analyzed: 12/29/2011 (11L1101-BS1)										
Mercury	1.86	0.10	mg/kg wet	1.82		102	80-120			
LCS Dup Analyzed: 12/29/2011 (11L1101-BSD1)										
Mercury	1.85	0.10	mg/kg wet	1.84		100	80-120	0.7	20	
Matrix Spike Analyzed: 12/29/2011 (11L1101-MS1)					**Source: PUL1413-04**					
Mercury	1.56	0.10	mg/kg wet	1.63	0.00158	96	75-125			
Matrix Spike Dup Analyzed: 12/29/2011 (11L1101-MSD1)					**Source: PUL1413-04**					
Mercury	1.51	0.10	mg/kg wet	1.59	0.00158	95	75-125	3	20	
Batch: 12A0443 Extracted: 01/13/12										
Blank Analyzed: 01/16/2012 (12A0443-BLK1)										
Antimony	ND	5.0	mg/kg wet							
Arsenic	ND	5.0	mg/kg wet							
Beryllium	ND	0.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Calcium	ND	25	mg/kg wet							
Chromium	ND	2.0	mg/kg wet							
Copper	ND	5.0	mg/kg wet							
Lead	ND	5.0	mg/kg wet							
Molybdenum	ND	2.0	mg/kg wet							
Nickel	ND	2.0	mg/kg wet							
Selenium	ND	5.0	mg/kg wet							
Silver	ND	2.5	mg/kg wet							
Thallium	ND	5.0	mg/kg wet							
Zinc	ND	10	mg/kg wet							

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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12A0443 Extracted: 01/13/12										
LCS Analyzed: 01/16/2012 (12A0443-BS1)										
Antimony	49.0	5.0	mg/kg wet	50.0		98	80-112			
Arsenic	48.6	5.0	mg/kg wet	50.0		97	81-109			
Beryllium	50.3	0.50	mg/kg wet	50.0		101	85-111			
Cadmium	48.3	0.50	mg/kg wet	50.0		97	83-110			
Calcium	1060	25	mg/kg wet	1050		101	84-112			
Chromium	49.8	2.0	mg/kg wet	50.0		100	86-112			
Copper	49.9	5.0	mg/kg wet	50.0		100	81-110			
Lead	49.2	5.0	mg/kg wet	50.0		98	83-113			
Molybdenum	49.5	2.0	mg/kg wet	50.0		99	83-114			
Nickel	48.8	2.0	mg/kg wet	50.0		98	81-114			
Selenium	47.0	5.0	mg/kg wet	50.0		94	78-110			
Silver	4.45	2.5	mg/kg wet	5.00		89	72-120			
Thallium	49.9	5.0	mg/kg wet	50.0		100	87-117			
Zinc	49.4	10	mg/kg wet	50.0		99	82-112			
LCS Dup Analyzed: 01/16/2012 (12A0443-BSD1)										
Antimony	49.0	5.0	mg/kg wet	49.7		98	80-112	0.1	20	
Arsenic	48.1	5.0	mg/kg wet	49.7		97	81-109	1	20	
Beryllium	51.1	0.50	mg/kg wet	49.7		103	85-111	2	20	
Cadmium	48.2	0.50	mg/kg wet	49.7		97	83-110	0.2	20	
Calcium	1130	25	mg/kg wet	1040		108	84-112	6	20	
Chromium	49.7	2.0	mg/kg wet	49.7		100	86-112	0.2	20	
Copper	49.7	5.0	mg/kg wet	49.7		100	81-110	0.5	20	
Lead	49.2	5.0	mg/kg wet	49.7		99	83-113	0.009	20	
Molybdenum	49.4	2.0	mg/kg wet	49.7		99	83-114	0.2	20	
Nickel	48.7	2.0	mg/kg wet	49.7		98	81-114	0.3	20	
Selenium	47.0	5.0	mg/kg wet	49.7		94	78-110	0.07	20	
Silver	4.47	2.5	mg/kg wet	4.97		90	72-120	0.4	20	
Thallium	49.5	5.0	mg/kg wet	49.7		100	87-117	0.8	20	
Zinc	49.4	10	mg/kg wet	49.7		99	82-112	0.08	20	

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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12A0443 Extracted: 01/13/12										
Matrix Spike Analyzed: 01/16/2012 (12A0443-MS1)					**Source: PVA0780-01**					
Antimony	15.0	5.0	mg/kg wet	49.8	0.983	28	75-125			*M2*
Arsenic	52.9	5.0	mg/kg wet	49.8	8.45	89	75-125			
Beryllium	47.0	0.50	mg/kg wet	49.8	0.714	93	75-125			
Cadmium	47.6	0.50	mg/kg wet	49.8	7.26	81	75-125			
Calcium	13100	25	mg/kg wet	1050	10900	213	75-125			*M3*
Chromium	69.7	2.0	mg/kg wet	49.8	25.2	89	75-125			
Copper	91.7	5.0	mg/kg wet	49.8	97.3	-11	75-125			*M2*
Lead	52.4	5.0	mg/kg wet	49.8	8.73	88	75-125			
Molybdenum	41.6	2.0	mg/kg wet	49.8	1.52	80	75-125			
Nickel	191	2.0	mg/kg wet	49.8	424	-467	75-125			*M3*
Selenium	47.4	5.0	mg/kg wet	49.8	3.40	88	75-125			
Silver	3.52	2.5	mg/kg wet	4.98	ND	71	75-125			*M2*
Thallium	37.7	5.0	mg/kg wet	49.8	ND	76	75-125			
Zinc	82.3	10	mg/kg wet	49.8	93.6	-23	75-125			*M3*
Matrix Spike Dup Analyzed: 01/16/2012 (12A0443-MSD1)					**Source: PVA0780-01**					
Antimony	15.1	5.0	mg/kg wet	49.7	0.983	28	75-125	1	20	*M2*
Arsenic	53.3	5.0	mg/kg wet	49.7	8.45	90	75-125	0.7	20	
Beryllium	47.5	0.50	mg/kg wet	49.7	0.714	94	75-125	1	20	
Cadmium	49.6	0.50	mg/kg wet	49.7	7.26	85	75-125	4	20	
Calcium	11700	25	mg/kg wet	1040	10900	76	75-125	12	20	*M3*
Chromium	72.0	2.0	mg/kg wet	49.7	25.2	94	75-125	3	20	
Copper	84.3	5.0	mg/kg wet	49.7	97.3	-26	75-125	8	20	*M2*
Lead	52.4	5.0	mg/kg wet	49.7	8.73	88	75-125	0.05	20	
Molybdenum	42.4	2.0	mg/kg wet	49.7	1.52	82	75-125	2	20	
Nickel	301	2.0	mg/kg wet	49.7	424	-248	75-125	44	20	*M3, N1d*
Selenium	47.8	5.0	mg/kg wet	49.7	3.40	89	75-125	0.8	20	
Silver	3.49	2.5	mg/kg wet	4.97	ND	70	75-125	0.6	20	*M2*
Thallium	38.0	5.0	mg/kg wet	49.7	ND	77	75-125	1	20	
Zinc	81.8	10	mg/kg wet	49.7	93.6	-24	75-125	0.6	20	*M3*

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Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0904 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L0904-BLK1)										
Chloride	ND	2.0	mg/l							
Fluoride	ND	0.40	mg/l							
Sulfate	ND	2.0	mg/l							
LCS Analyzed: 12/22/2011 (11L0904-BS1)										
Chloride	20.5	2.0	mg/l	20.0		103	90-110			*NI*
Fluoride	3.87	0.40	mg/l	4.00		97	90-110			
Sulfate	21.1	2.0	mg/l	20.0		106	90-110			*NI*
LCS Dup Analyzed: 12/22/2011 (11L0904-BSD1)										
Chloride	20.5	2.0	mg/l	20.0		102	90-110	0.04	15	*NI*
Fluoride	3.88	0.40	mg/l	4.00		97	90-110	0.3	20	
Sulfate	21.0	2.0	mg/l	20.0		105	90-110	0.5	15	*NI*
Matrix Spike Analyzed: 12/22/2011 (11L0904-MS1)					**Source: PUL1582-01**					
Fluoride	7.99	0.40	mg/l	4.00	3.63	109	80-120			
Matrix Spike Dup Analyzed: 12/22/2011 (11L0904-MSD1)					**Source: PUL1582-01**					
Fluoride	7.84	0.40	mg/l	4.00	3.63	105	80-120	2	20	
Batch: 11L0905 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L0905-BLK1)										
Chloride	ND	2.0	mg/l							
Nitrate-N	ND	0.20	mg/l							
Nitrite-N	ND	0.20	mg/l							
Sulfate	ND	2.0	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0905 Extracted: 12/22/11										
LCS Analyzed: 12/22/2011 (11L0905-BS1)										
Chloride	21.0	2.0	mg/l	20.0		105	90-110			*NI*
Nitrate-N	4.20	0.20	mg/l	4.00		105	90-110			
Nitrite-N	3.90	0.20	mg/l	4.00		97	90-110			
Sulfate	20.7	2.0	mg/l	20.0		104	90-110			*NI*
LCS Dup Analyzed: 12/22/2011 (11L0905-BSD1)										
Chloride	21.0	2.0	mg/l	20.0		105	90-110	0.01	15	*NI*
Nitrate-N	4.22	0.20	mg/l	4.00		105	90-110	0.5	15	
Nitrite-N	3.89	0.20	mg/l	4.00		97	90-110	0.3	15	
Sulfate	20.8	2.0	mg/l	20.0		104	90-110	0.2	15	*NI*
Matrix Spike Analyzed: 12/22/2011 (11L0905-MS1)					**Source: PUL1534-01**					
Nitrate-N	21.8	0.20	mg/l	4.00	17.9	97	80-120			
Nitrite-N	4.76	0.20	mg/l	4.00	ND	119	80-120			
Matrix Spike Dup Analyzed: 12/22/2011 (11L0905-MSD1)					**Source: PUL1534-01**					
Nitrate-N	21.9	0.20	mg/l	4.00	17.9	98	80-120	0.3	15	
Nitrite-N	4.82	0.20	mg/l	4.00	ND	120	80-120	1	15	
Batch: 11L0928 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L0928-BLK1)										
Percent Solids	ND	0.10	% by Weight							
Duplicate Analyzed: 12/22/2011 (11L0928-DUP1)					**Source: PUL1280-08**					
Percent Solids	14.0	0.10	% by Weight		15.1			8	10	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L0928 Extracted: 12/22/11										
Duplicate Analyzed: 12/22/2011 (11L0928-DUP2)					**Source: PUL1470-02**					
Percent Solids	2.19	0.10	% by Weight		2.18			0.2	10	
Batch: 11L0981 Extracted: 12/23/11										
Blank Analyzed: 12/23/2011 (11L0981-BLK1)										
Cyanide	ND	0.40	mg/kg wet							
LCS Analyzed: 12/23/2011 (11L0981-BS1)										
Cyanide	2.35	0.40	mg/kg wet	2.49		94	90-110			
LCS Dup Analyzed: 12/23/2011 (11L0981-BSD1)										
Cyanide	2.35	0.40	mg/kg wet	2.51		94	90-110	0.2	20	
Matrix Spike Analyzed: 12/23/2011 (11L0981-MS1)					**Source: PUL1285-11**					
Cyanide	10.3	0.52	mg/kg dry	6.34	5.58	74	80-120			*M2*
Matrix Spike Dup Analyzed: 12/23/2011 (11L0981-MSD1)					**Source: PUL1285-11**					
Cyanide	12.6	0.52	mg/kg dry	6.07	5.58	116	80-120	21	20	*R9*
Batch: 11L1038 Extracted: 12/27/11										
Blank Analyzed: 12/27/2011 (11L1038-BLK1)										
Nitrogen, Nitrate/Nitrite Total	ND	0.40	mg/l							
LCS Analyzed: 12/27/2011 (11L1038-BS1)										
Nitrogen, Nitrate/Nitrite Total	8.06	0.40	mg/l	8.00		101	90-110			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L1038 Extracted: 12/27/11										
LCS Dup Analyzed: 12/27/2011 (11L1038-BSD1)										
Nitrogen, Nitrate/Nitrite Total	8.10	0.40	mg/l	8.00		101	90-110	0.5	20	
Matrix Spike Analyzed: 12/27/2011 (11L1038-MS1)					**Source: PUL1675-01**					
Nitrogen, Nitrate/Nitrite Total	26.5	0.40	mg/l	8.00	18.2	104	80-120			
Matrix Spike Dup Analyzed: 12/27/2011 (11L1038-MSD1)					**Source: PUL1675-01**					
Nitrogen, Nitrate/Nitrite Total	26.3	0.40	mg/l	8.00	18.2	101	80-120	0.7	20	
Batch: 11L1172 Extracted: 12/30/11										
Blank Analyzed: 12/30/2011 (11L1172-BLK1)										
Ammonia-N	ND	0.50	mg/l							
LCS Analyzed: 12/30/2011 (11L1172-BS1)										
Ammonia-N	24.9	0.50	mg/l	25.0		100	80-120			
LCS Dup Analyzed: 12/30/2011 (11L1172-BSD1)										
Ammonia-N	25.3	0.50	mg/l	25.0		101	80-120	1	20	
Matrix Spike Analyzed: 12/30/2011 (11L1172-MS1)					**Source: PUL1470-01**					
Ammonia-N	23.9	0.50	mg/l	25.0	ND	95	80-120			
Matrix Spike Dup Analyzed: 12/30/2011 (11L1172-MSD1)					**Source: PUL1470-01**					
Ammonia-N	23.8	0.50	mg/l	25.0	ND	95	80-120	0.5	20	
Batch: 12A0270 Extracted: 01/09/12										
Blank Analyzed: 01/10/2012 (12A0270-BLK1)										
Total Kjeldahl Nitrogen	ND	1.0	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12A0270 Extracted: 01/09/12										
LCS Analyzed: 01/10/2012 (12A0270-BS1)										
Total Kjeldahl Nitrogen	57.2	1.0	mg/l	50.0		114	80-120			
LCS Dup Analyzed: 01/10/2012 (12A0270-BSD1)										
Total Kjeldahl Nitrogen	56.2	1.0	mg/l	50.0		112	80-120	2	20	
Matrix Spike Analyzed: 01/10/2012 (12A0270-MS1)					**Source: PUL1470-01RE1**					
Total Kjeldahl Nitrogen	59.7	1.0	mg/l	50.0	0.415	119	80-120			
Matrix Spike Dup Analyzed: 01/10/2012 (12A0270-MSD1)					**Source: PUL1470-01RE1**					
Total Kjeldahl Nitrogen	59.5	1.0	mg/l	50.0	0.415	118	80-120	0.4	20	

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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 #11 DO# 12-22707
Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L6793 Extracted: 12/23/11										
Blank Analyzed: 12/23/2011 (11L6793-BLK1)										
2-Chloroethylvinyl ether	ND	10.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.3*		*ug/L*	*25.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*25.9*		*ug/L*	*25.0*		*104*	*70-130*			
Surrogate: Toluene-d8	*23.2*		*ug/L*	*25.0*		*93*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.7*		*ug/L*	*25.0*		*103*	*70-130*			
LCS Analyzed: 12/23/2011 (11L6793-BS1)										
2-Chloroethylvinyl ether	181	NA	ug/L	250		73	58-136			
Surrogate: 1,2-Dichloroethane-d4	*25.5*		*ug/L*	*25.0*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*25.7*		*ug/L*	*25.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*23.7*		*ug/L*	*25.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.5*		*ug/L*	*25.0*		*98*	*70-130*			
LCS Dup Analyzed: 12/23/2011 (11L6793-BSD1)										
2-Chloroethylvinyl ether	181	NA	ug/L	250		72	58-136	0.1	25	
Surrogate: 1,2-Dichloroethane-d4	*27.3*		*ug/L*	*25.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*27.7*		*ug/L*	*25.0*		*111*	*70-130*			
Surrogate: Toluene-d8	*23.4*		*ug/L*	*25.0*		*94*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.2*		*ug/L*	*25.0*		*101*	*70-130*			
Matrix Spike Analyzed: 12/23/2011 (11L6793-MS1)					**Source: NVL2239-01RE1**					
2-Chloroethylvinyl ether	ND	100	ug/L	2500	ND		10-166			*M2, N1b*
Surrogate: 1,2-Dichloroethane-d4	*27.5*		*ug/L*	*25.0*		*110*	*70-130*			
Surrogate: Dibromofluoromethane	*28.0*		*ug/L*	*25.0*		*112*	*70-130*			
Surrogate: Toluene-d8	*23.8*		*ug/L*	*25.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.2*		*ug/L*	*25.0*		*101*	*70-130*			
Matrix Spike Dup Analyzed: 12/23/2011 (11L6793-MSD1)					**Source: NVL2239-01RE1**					
2-Chloroethylvinyl ether	ND	100	ug/L	2500	ND		10-166		25	*M2, N1b*
Surrogate: 1,2-Dichloroethane-d4	*25.7*		*ug/L*	*25.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*26.0*		*ug/L*	*25.0*		*104*	*70-130*			
Surrogate: Toluene-d8	*23.9*		*ug/L*	*25.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.4*		*ug/L*	*25.0*		*102*	*70-130*			

TestAmerica Phoenix

Suzanne Glass
Project Manager

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

METHOD BLANK/QC DATA

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12A3052 Extracted: 12/23/11										
Blank Analyzed: 12/23/2011 (12A3052-BLK1)										
2-Chloroethylvinyl ether	ND	0.0200	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*27.3*		*mg/kg wet*	*25.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*25.9*		*mg/kg wet*	*25.0*		*104*	*70-130*			
Surrogate: Toluene-d8	*23.2*		*mg/kg wet*	*25.0*		*93*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.7*		*mg/kg wet*	*25.0*		*103*	*70-130*			
LCS Analyzed: 12/23/2011 (12A3052-BS1)										
2-Chloroethylvinyl ether	181	NA	mg/kg wet	250		73	10-150			
Surrogate: 1,2-Dichloroethane-d4	*25.5*		*mg/kg wet*	*25.0*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*25.7*		*mg/kg wet*	*25.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*23.7*		*mg/kg wet*	*25.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.5*		*mg/kg wet*	*25.0*		*98*	*70-130*			
LCS Dup Analyzed: 12/23/2011 (12A3052-BSD1)										
2-Chloroethylvinyl ether	181	NA	mg/kg wet	250		72	10-150	0.1	50	
Surrogate: 1,2-Dichloroethane-d4	*27.3*		*mg/kg wet*	*25.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*27.7*		*mg/kg wet*	*25.0*		*111*	*70-130*			
Surrogate: Toluene-d8	*23.4*		*mg/kg wet*	*25.0*		*94*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.2*		*mg/kg wet*	*25.0*		*101*	*70-130*			
Matrix Spike Analyzed: 12/23/2011 (12A3052-MS1)					**Source: PUL1470-02**					
2-Chloroethylvinyl ether	95.4	10.0	mg/kg wet	125	ND	76	10-200			
Surrogate: 1,2-Dichloroethane-d4	*26.2*		*mg/kg wet*	*25.0*		*105*	*70-130*			
Surrogate: Dibromofluoromethane	*25.7*		*mg/kg wet*	*25.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*23.4*		*mg/kg wet*	*25.0*		*93*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*mg/kg wet*	*25.0*		*97*	*70-130*			
Matrix Spike Dup Analyzed: 12/23/2011 (12A3052-MSD1)					**Source: PUL1470-02**					
2-Chloroethylvinyl ether	89.1	10.0	mg/kg wet	125	ND	71	10-200	7	50	
Surrogate: 1,2-Dichloroethane-d4	*25.6*		*mg/kg wet*	*25.0*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*25.5*		*mg/kg wet*	*25.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*23.1*		*mg/kg wet*	*25.0*		*92*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*mg/kg wet*	*25.0*		*98*	*70-130*			

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Attention: Nancy Powell

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Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

DATA QUALIFIERS AND DEFINITIONS

D1	Sample required dilution due to matrix.
L3	The associated blank spike recovery was above method acceptance limits.
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.
R9	Sample RPD exceeded the laboratory acceptance limit
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Attention: Nancy Powell

Project ID: Sample group #11 DO# 12-22707

Report Number: PUL1470

Sampled: 12/20/11
Received: 12/21/11

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
EPA 8260B	Soil	X	X
EPA 8260B	Water	X	X
SM 2540G	Soil		X
SM 4500NH3-D	Water		X
SM4500-NH3 D	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 - Nashville, TN *Arizona Cert #AZ0473*
2960 Foster Creighton Drive - Nashville, TN 37204
Method Performed: SW846 8260B
Samples: PUL1470-02, PUL1470-05

TestAmerica Phoenix

Suzanne Glass
Project Manager

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 #11
PO# 12-22707

Project Manager:
Nancy Powell

Phone Number:
520-724-6183

Sampler:
Various

Fax Number:
520-724-6071

Analysis Required

GW = ground water
BS = biosolids
PUL 1470

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Ammonia SM4500-NH3-D	Chloride	Sulfate	Mercury 7471A mg/kg	Volatiles 8260 mg/kg	Cyanides total mg/kg	Total solid % for mg/kg	Total nitrogen	2-chloroethyl vinyl ether mg/kg	Special Instructions
Ina road Well SC-03-APP	GW	glass + HDPE	2	12-20-11	1020	H_2SO_4 + none	X	X	X					X		discrete - 01
20001-9020 20111121045																
Avra Valley Wet Haul Sludge	BS	glass + HDPE	4 5 COC 12-21-11	12-20-11	1000	NaOH, HNO_3 and none				X	X	X	X		X	discrete - 02
25003-1513 20111121044																
Ina road Well SC-05-APP	GW	glass + ~~72~~ HDPE	2	12-20-11	1105	H_2SO_4 and none	X	X	X					X		discrete 03
20001-9040 20111121047		COC 12-20-11														
Ina road Well SC-07-APP	GW	glass + HDPE	2	12-20-11	1159	H_2SO_4 and none	X	X	X					X		discrete 04
20001-9060 20111121046																
																TB 05

Relinquished By:	Date/Time:	Received By:	Date/Time:
for samplers			12/21/11 9:15
	12/21/11 11:00		12/21/11
		Received in Lab By:	12/21/11 1400

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

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.

13/25

4.3°C

SECTION 7

2011 PREPARER FORM
AZPDES NO. AZ0024937

GREEN VALLEY BNROD

PREPARER FORM

AZPDES NO. AZ0024937

ANNUAL BIOSOLIDS REPORT 2011

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@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"
2/14/2012	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 01/01/11	Class (A/B/N)	Alternative #	VAR #	Dry Tons stored 12/31/11	Class (A/B/N)	Alternative #	VAR #
Tucson	85745	5207246200	N	N							
Tucson	85735	5204436170									

Dry Tons stored 01/01/10	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
	529										

ADEQ Arizona Department of Environmental Quality

2011 Biosolids or Sewage Sludge Annual Report

Mail signed printout to: ADEQ Biosolids Coordinator,
1110 W. Washington St.,
Phoenix, AZ 85007
and email file to: dc5@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	105	B	2	7		ASARCO Mission Complex	Pima County Truck	5205498195	Tailing Impoundment
Land Apply									
Land Apply									
Land Apply									
Land Apply									
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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 of Treatment

SECTION 8

GREEN VALLEY BNROD
AZPDES NO. AZ0024937

SAMPLING AND ANALYSES

PRIORITY POLLUTANTS

TCLP

HAZARDOUSNESS

ANNUAL BIOSOLIDS REPORT 2011

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: 4/12/2011 11:30:26
Laboratory License #AZ0159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
January 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: **See Attachment.**

Notes:

2011010695 Sample sent to TestAmerica for TCLP Herbicides, Cyanide 9014, Ignitability, pH 9045D and Sulfide analyses 01-13-11.

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

04/13/11

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-North Aerobic Digester Sludge (25000-1950)											
2011010201	D	Solids, Total	1/4/11 7:28	SM 2540G	01/05/11 11:30	3.14	%		0.005		aellert
2011010201	D	Solids, Volatile	1/4/11 7:28	SM 2540G	01/05/11 11:30	83.8	%		0.005		aellert
BNROD-Biosolids from drying bed #5 (25000-1970)											
2011010695	C	Miscellaneous Note	1/12/11 13:00	None	Subcontracted						Other
2011010695	C	Mercury	1/12/11 13:00	EPA 7471A	01/20/11 10:37	1.400	mg/Kg	0.00023	0.057		khowell
2011010695	C	Antimony	1/12/11 13:00	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0136	6.2		jdoranski
2011010695	C	Arsenic	1/12/11 13:00	EPA 6010B	01/25/11 16:30	9.8	mg/Kg	0.0125	6.2		mbomar
2011010695	C	Beryllium	1/12/11 13:00	EPA 6010B	02/01/11 16:30	Trace	mg/Kg	0.00003	1.2		mbomar
2011010695	C	Cadmium	1/12/11 13:00	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0005	2.5		mbomar
2011010695	C	Chromium	1/12/11 13:00	EPA 6010B	02/01/11 16:30	15.4	mg/Kg	0.0007	6.2		mbomar
2011010695	C	Copper	1/12/11 13:00	EPA 6010B	02/01/11 16:30	438	mg/Kg	0.0037	6.2		mbomar
2011010695	C	Lead	1/12/11 13:00	EPA 6010B	01/25/11 16:30	17.0	mg/Kg	0.0080	6.2		mbomar
2011010695	C	Molybdenum	1/12/11 13:00	EPA 6010B	01/25/11 16:30	8.6	mg/Kg	0.0026	2.5		mbomar
2011010695	C	Nickel	1/12/11 13:00	EPA 6010B	02/01/11 16:30	15.6	mg/Kg	0.0086	6.2		mbomar
2011010695	C	Selenium	1/12/11 13:00	EPA 6010B	01/25/11 16:30	ND	mg/Kg	0.0122	6.2		mbomar
2011010695	C	Silver	1/12/11 13:00	EPA 6010B	02/01/11 16:30	4.9	mg/Kg	0.0011	0.6		mbomar
2011010695	C	Thallium	1/12/11 13:00	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0139	6.2		mbomar
2011010695	C	Zinc	1/12/11 13:00	EPA 6010B	01/25/11 16:30	675	mg/Kg	0.0033	31.0	D2	mbomar
2011010695	C	Mercury	1/12/11 13:00	EPA 7470A-TCLP	01/31/11 12:10	Trace	mg/l	0.00005	0.0002		khowell
2011010695	C	Arsenic	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	0.24	mg/l	0.0050	0.025	M5	mbomar
2011010695	C	Barium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	0.07	mg/l	0.0013	0.025		mbomar
2011010695	C	Cadmium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0007	0.010		mbomar
2011010695	C	Chromium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0016	0.025		mbomar
2011010695	C	Lead	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0079	0.025		mbomar
2011010695	C	Selenium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0114	0.025		mbomar
2011010695	C	Silver	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	ND	mg/l	0.00056	0.0025		mbomar
2011010695	C	Solids, Total	1/12/11 13:00	SM 2540G	01/13/11 6:30	87.30	%		0.005		jvriper
2011010695	C	Acrolein	1/12/11 13:00	EPA 603	01/16/11 18:40	ND	mg/Kg	0.00111	0.229	D1, D4, L4	dcorbett
2011010695	C	Acrylonitrile	1/12/11 13:00	EPA 603	01/16/11 18:40	ND	mg/Kg	0.00116	0.229	D1, D4	dcorbett
2011010695	C	1,2-Dibromo-3-chloropropane	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00052	0.1	D1, D4, Q5, L2, N1	dcorbett
2011010695	C	1,2-Dibromoethane	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2,4-Trichlorobenzene	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00011	0.01	D1, D4, Q5	dcorbett
2011010695	C	cis-1,2-Dichloroethene	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00002	0.01	D1, D4, Q5	dcorbett
2011010695	C	Styrene	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4	dcorbett
2011010695	C	Xylene, m- + p-	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00015	0.01	D1, D4, Q5	dcorbett
2011010695	C	Xylene, o-	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Xylene, Total	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg		0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1,1-Trichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	1,1,2-Trichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.0001	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1-Dichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1-Dichloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2-Dichlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00014	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2-Dichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2-Dichloropropane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,3-Dichlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,4-Dichlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00011	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1,2,2-Tetrachloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00026	0.01	D1, D4, Q5, N1	dcorbett

Lab Comments:

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Analysis Date represents the final reading date.
* Identifies results that are not approved.
IS identifies Investigative Samples
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Total Volatile Solids - Used for process control samples only.

Green Valley WRF

BNROD-Biosolids from drying bed #5 (25000-1970)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010695	C	2-Chloroethyl vinyl ether	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.0003	0.01	D1, D4	dcorbett
2011010695	C	Benzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	Bromodichloromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00018	0.01	D1, D4, Q5	dcorbett
2011010695	C	Bromoform	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Bromomethane	1/12/11 13:00	EPA 624	01/21/11 17:50	Trace	mg/Kg	0.00021	0.02	D1, D4, Q5	dcorbett
2011010695	C	Carbon tetrachloride	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.0001	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00015	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chloroform	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chloromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00019	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	cis-1,3-Dichloropropene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Dibromochloromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	Ethyl benzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Methylene chloride	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	Tetrachloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00011	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Toluene	1/12/11 13:00	EPA 624	01/21/11 17:50	0.02	mg/Kg	0.00007	0.01	D1, D4, Q5	dcorbett
2011010695	C	Trichlorofluoromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	Trichloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5, M1	dcorbett
2011010695	C	Trihalomethane, Total	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg		0.01	D1, D4, Q5	dcorbett
2011010695	C	trans-1,2-Dichloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00014	0.01	D1, D4, Q5	dcorbett
2011010695	C	trans-1,3-Dichloropropene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Vinyl chloride	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, S7	dcorbett
2011010695	C	4,4-DDD	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	4,4-DDE	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	4,4-DDT	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	11.455	D1, D4, N1	mmichel
2011010695	C	Aldrin	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	alpha-BHC	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4, V1	mmichel
2011010695	C	Aroclor 1016	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.1	57.275	D1, D4	mmichel
2011010695	C	Aroclor 1221	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.03	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1232	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.09	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1242	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.08	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1248	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1254	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.05	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1260	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.05	57.275	D1, D4	mmichel
2011010695	C	beta-BHC	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	11.455	D1, D4	mmichel
2011010695	C	Chlordane, Technical	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.48	114.55	D1, D4	mmichel
2011010695	C	delta-BHC	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	11.455	D1, D4, V1	mmichel
2011010695	C	Dieldrin	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	Endosulfan I	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	Endosulfan II	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.01	22.91	D1, D4	mmichel
2011010695	C	Endosulfan sulfate	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4, S4	mmichel
2011010695	C	Endrin	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.03	22.91	D1, D4, N1	mmichel
2011010695	C	Endrin aldehyde	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.01	11.455	D1, D4, N1	mmichel
2011010695	C	gamma-BHC (Lindane)	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	11.455	D1, D4	mmichel
2011010695	C	Heptachlor	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.03	11.455	D1, D4	mmichel
2011010695	C	Heptachlor epoxide	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	11.455	D1, D4	mmichel
2011010695	C	Toxaphene	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	5.29	1832.8	D1, D4	mmichel
2011010695	C	Methoxychlor	1/12/11 13:00	EPA 8270C	02/08/11 17:55	ND	ug/kg	0.03	11.455	D1, D4, N1	mmichel
2011010695	C	1,2,4-Trichlorobenzene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00054	0.22	D1, D4	smitchell
2011010695	C	1,2-Diphenylhydrazine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00101	0.22	D1, D4	smitchell

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Green Valley WRF

BNROD-Biosolids from drying bed #5 (25000-1970)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010695	C	2,3-Dichloroaniline	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00172	0.22	D1, D4	smitchell
2011010695	C	2,4,6-Trichlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00078	0.22	D1, D4	smitchell
2011010695	C	2,4-Dichlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00059	0.22	D1, D4	smitchell
2011010695	C	2,4-Dimethylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00253	0.22	D1, D4	smitchell
2011010695	C	2,4-Dinitrophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00489	1.1	D1, D4	smitchell
2011010695	C	2,4-Dinitrotoluene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00095	0.22	D1, D4	smitchell
2011010695	C	2,6-Dinitrotoluene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00113	0.22	D1, D4	smitchell
2011010695	C	2-Chloronaphthalene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00101	0.22	D1, D4	smitchell
2011010695	C	2-Chlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00065	0.22	D1, D4	smitchell
2011010695	C	2-Methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00118	0.22	D1, D4	smitchell
2011010695	C	2-Nitrophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00072	0.22	D1, D4	smitchell
2011010695	C	3,3-Dichlorobenzidine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00676	1.65	D1, D4	smitchell
2011010695	C	4,6-Dinitro-2-methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00119	0.66	D1, D4	smitchell
2011010695	C	4-Bromophenyl phenyl ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0008	0.22	D1, D4	smitchell
2011010695	C	4-Chloro-3-methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00071	0.22	D1, D4	smitchell
2011010695	C	4-Chlorophenyl phenyl ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00091	0.22	D1, D4	smitchell
2011010695	C	4-Methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	2.77	mg/Kg	0.0013	0.22	D1, D4	smitchell
2011010695	C	4-Nitrophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00352	0.22	D1, D4, V1	smitchell
2011010695	C	Acenaphthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00084	0.22	D1, D4	smitchell
2011010695	C	Acenaphthylene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00061	0.22	D1, D4	smitchell
2011010695	C	Anthracene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00092	0.22	D1, D4	smitchell
2011010695	C	Benzo(a)anthracene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00085	0.22	D1, D4	smitchell
2011010695	C	Benzidine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.01323	1.65	D1, D4, N1	smitchell
2011010695	C	Benzo(a)pyrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00119	0.22	D1, D4	smitchell
2011010695	C	Benzo(b)fluoranthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00137	0.22	D1, D4	smitchell
2011010695	C	Benzo(g,h,i)perylene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0027	0.22	D1, D4	smitchell
2011010695	C	Benzo(k)fluoranthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00187	0.22	D1, D4	smitchell
2011010695	C	Bis(2-Chloroisopropyl)ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00061	0.22	D1, D4	smitchell
2011010695	C	Bis(2-chloroethoxy)methane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00051	0.22	D1, D4	smitchell
2011010695	C	Bis(2-chloroethyl)ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00067	0.22	D1, D4	smitchell
2011010695	C	Bis(2-ethylhexyl) phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00511	0.22	D1, D4	smitchell
2011010695	C	Butylbenzyl phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00166	0.22	D1, D4	smitchell
2011010695	C	Carbazole	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00141	0.44	D1, D4	smitchell
2011010695	C	Chrysene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00099	0.22	D1, D4	smitchell
2011010695	C	Dibenz(a,h)anthracene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00226	0.22	D1, D4	smitchell
2011010695	C	Diethyl phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0007	0.22	D1, D4	smitchell
2011010695	C	Dimethylphthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00069	0.22	D1, D4	smitchell
2011010695	C	Di-n-butyl phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00191	0.22	D1, D4	smitchell
2011010695	C	Di-n-octylphthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00449	0.22	D1, D4	smitchell
2011010695	C	Fluoranthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00109	0.22	D1, D4	smitchell
2011010695	C	Fluorene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00094	0.22	D1, D4	smitchell
2011010695	C	Hexachlorobenzene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00059	0.22	D1, D4	smitchell
2011010695	C	Hexachlorobutadiene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00052	0.22	D1, D4	smitchell
2011010695	C	Hexachloroethane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00056	0.22	D1, D4	smitchell
2011010695	C	Hexachlorocyclopentadiene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00267	0.22	D1, D4	smitchell
2011010695	C	Indeno(1,2,3-cd)pyrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00204	0.22	D1, D4	smitchell
2011010695	C	Isophorone	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00325	0.22	D1, D4	smitchell
2011010695	C	Naphthalene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00072	0.22	D1, D4	smitchell
2011010695	C	n-Decane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00068	0.22	D1, D4	smitchell
2011010695	C	Nitrobenzene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0005	0.22	D1, D4	smitchell

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Green Valley WRF

BNROD-Biosolids from drying bed #5 (25000-1970)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010695	C	N-Nitroso-di-n-propylamine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00063	0.22	D1, D4	smitchell
2011010695	C	N-Nitrosodimethylamine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00064	0.22	D1, D4	smitchell
2011010695	C	N-Nitrosodiphenylamine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00102	0.22	D1, D4	smitchell
2011010695	C	n-Octadecane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00248	0.22	D1, D4	smitchell
2011010695	C	Pentachlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00076	0.66	D1, D4	smitchell
2011010695	C	Phenanthrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00097	0.22	D1, D4	smitchell
2011010695	C	Phenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00055	0.22	D1, D4	smitchell
2011010695	C	Pyrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00119	0.22	D1, D4	smitchell
2011010695	C	Chlordane, Technical	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.48	0.5		mmichel
2011010695	C	Endrin	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.03	0.1	M1	mmichel
2011010695	C	gamma-BHC (Lindane)	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.04	0.05	M1, R1	mmichel
2011010695	C	Heptachlor	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.03	0.05	R4	mmichel
2011010695	C	Heptachlor epoxide	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.04	0.05		mmichel
2011010695	C	Methoxychlor	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.03	0.05	R4	mmichel
2011010695	C	Toxaphene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	5.29	8		mmichel
2011010695	C	1,4-Dichlorobenzene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.81	2		smitchell
2011010695	C	2,4,5-Trichlorophenol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	8.64	10		smitchell
2011010695	C	2,4,6-Trichlorophenol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	4.72	5		smitchell
2011010695	C	2,4-Dinitrotoluene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	7.46	10		smitchell
2011010695	C	Hexachlorobenzene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	1.71	2		smitchell
2011010695	C	Hexachlorobutadiene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	1.19	2		smitchell
2011010695	C	Hexachloroethane	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.72	2		smitchell
2011010695	C	m+p-Cresols	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	14.27	ug/l	1.81	2		smitchell
2011010695	C	Nitrobenzene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.76	2		smitchell
2011010695	C	o-Cresol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.51	2		smitchell
2011010695	C	Pentachlorophenol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	20.15	25		smitchell
2011010695	C	Pyridine	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	1.62	2		smitchell
2011010695	C	1,1-Dichloroethene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.08	0.50		dcorbett
2011010695	C	1,2-Dichloroethane	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.05	0.50		dcorbett
2011010695	C	1,4-Dichlorobenzene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.11	0.50	N1	dcorbett
2011010695	C	Benzene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.05	0.50		dcorbett
2011010695	C	Carbon tetrachloride	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.10	0.50		dcorbett
2011010695	C	Chlorobenzene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.06	0.50		dcorbett
2011010695	C	Chloroform	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.05	0.50		dcorbett
2011010695	C	Hexachlorobutadiene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.16	0.50		dcorbett
2011010695	C	Methyl ethyl ketone	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	28.05	ug/l	0.55	2.0	B1	dcorbett
2011010695	C	Tetrachloroethene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.11	0.50		dcorbett
2011010695	C	Trichloroethene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.08	0.50		dcorbett
2011010695	C	Vinyl chloride	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.06	0.50		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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010195	D1	Sample required dilution due to matrix.	1/4/11
2011010195	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	1/4/11
2011010195	M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.	1/4/11
2011010195	R1	RPD/RSD exceeded the method acceptance limit.	1/4/11
2011010202	D2	Sample required dilution due to high concentration of target analyte.	1/4/11
2011010423	D1	Sample required dilution due to matrix.	1/7/11
2011010423	D2	Sample required dilution due to high concentration of target analyte.	1/7/11
2011010423	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/7/11
2011010423	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010423	N1	See case narrative.	1/7/11
2011010423	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/7/11
2011010424	D1	Sample required dilution due to matrix.	1/7/11
2011010424	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010424	N1	See case narrative.	1/7/11
2011010424	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/7/11
2011010677	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010688	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010695	B1	Target analyte detected in method blank at or above the method reporting limit.	1/12/11
2011010695	D1	Sample required dilution due to matrix.	1/12/11
2011010695	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010695	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/12/11
2011010695	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/12/11
2011010695	L4	The associated blank spike recovery was below method acceptance limits.	1/12/11

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010695	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	1/12/11
2011010695	M5	Analyte concentration was determined by the method of standard addition (MSA).	1/12/11
2011010695	N1	See case narrative.	1/12/11
2011010695	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/12/11
2011010695	R1	RPD/RSD exceeded the method acceptance limit.	1/12/11
2011010695	R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.	1/12/11
2011010695	S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.	1/12/11
2011010695	S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.	1/12/11
2011010695	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/12/11
2011011053	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/19/11
2011011053	N1	See case narrative.	1/19/11
2011011053	S6	Surrogate recovery was below laboratory and method acceptance limits.Reextraction and/or reanalysis confirms low recovery caused by matrix effect.	1/19/11
2011011232	N1	See case narrative.	1/21/11
2011011358	D2	Sample required dilution due to high concentration of target analyte.	1/24/11
2011011358	Q3	Sample received with improper chemical preservation.	1/24/11
2011011359	D2	Sample required dilution due to high concentration of target analyte.	1/24/11
2011011359	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/24/11
2011011359	N1	See case narrative.	1/24/11
2011011359	Q3	Sample received with improper chemical preservation.	1/24/11

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

Case Narrative

Sample ID: 2011010695
Permit Name: Green Valley WRF
Location Name: BNROD-Biosolids from drying bed #5

Green Valley WRF was sampled from its BNROD-Biosolids from drying bed #5 location on 01/12/11 and 01/31/11 for purgeable organics testing, EPA method 624 and method 8260. By means of the analysis performed, the matrix spike employed on a different sample within this batch failed either low or high for compounds qualified with N1.

2011010695 was extracted for EPA Method 625 Pesticides and Semi-Volatiles, each on 01/19/2011, target analytes flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

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 # 2011010695 **PO: 11024115**
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: 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: 4-21-11

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.	GOS	✓
PO received in Synergen	GOS	NA

Peer Review date and initials: GOS 04-21-11 **Final Review date and initials:** 5/6/11 BAE

Comments:

REVISED REPORT! INITIAL REPORT WAS CALCULATED INCORRECTLY.NP 4/21/11

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 Drying Bed #5

Sampled: 01/12/11
Received: 01/14/11
Revised: 04/19/11 14:45

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
PUA0922-01	2011010695	Soil

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

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. N1 - The recovery of the surrogate DCAA was below laboratory acceptance criteria in the Laboratory Control Sample and in the Matrix Spike. All other surrogate recoveries in the batch QC and samples met method criteria and therefore should not be impacted. Additionally, the Laboratory Control Sample recovered below laboratory acceptance criteria for Silvex. The recovery of Silvex was acceptable in all other batch QC meetin batch accuracy requirements.
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	Refer to the last page for specific subcontract laboratory information included in this report.
ADDITIONAL INFORMATION:	The report was revised to correct the percent solids result for PUA0922-01. The explanation for the revision is detailed in the included Corrective Action Report. Any dry weight corrected results for PUA0922-01 have also been adjusted as a result of the correction.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

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Sampled: 01/12/11
Received: 01/14/11

CORRECTIVE ACTION REPORT

Department: N_Wet Chemistry
Method: M2540G
QC Batch: 11A0495

Date: 03/23/2011
Matrix: Soil

Identification and Definition of Problem:

Beginning September 1, 2010 percent solid/percent moisture samples were being miscalculated. The weight being used for the calculation included the weight of the sample pan used for analysis. When correctly calculated, the weight of the sample pan is subtracted out. As a result the data spreadsheet incorrectly calculated the final percent solid/moisture. The extra weight of the sample pan caused the final percent solid to biased low and the percent moisture to be biased high. The problem was discovered during data review the first week of February 2011.

Determination of the Cause of the Problem:

The cause of the this problem was insufficient training on the proper method procedures. The issue started with the incorrect training of a new analyst. Upon further review the spreadsheet used for the calculations was unclear about the proper way to conduct the test. Additionally, the method Standard Operating Procedure needed clarification.

Corrective Action Taken:

The correct results were recalculated for all samples since all the necessary data was available on the spreadsheets. Retraining of all analysts was conducted. The spreadsheet has also been updated to make it clear where information and values are entered. The SOP will be revised to clearly state that the weight of the pan is subtracted from the final weight. A complete systems audit of the wet chemistry department was conducted to ensure that a similar lapse in training had not occurred with other methods. No additional problems were identified.

Mary L. Tyer

Quality Assurance Approval: Mary Tyer Date: 03/24/2011 01:40 PM

TestAmerica Phoenix

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Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: % by Weight								
Percent Solids	M2540G	11A0495	0.10	**87**	1	1/17/2011	1/17/2011	
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: I/NI								
Ignitability	EPA 1030	11A0721	NA	Not Ignitable	1	1/21/2011	1/21/2011	
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW9010C/9014	11A0606	0.46	7.7	0.988	1/19/2011	1/19/2011	
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: pH Units								
pH	SW9045D	11A0509	1.68	**7.10**	1	1/17/2011	1/17/2011	
Temperature - °C	SW9045D	11A0509	NA	**19.9**	1	1/17/2011	1/17/2011	

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Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

Cyanide, Reactive

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: mg/Kg								
Cyanide, Reactive	9014	124788	0.25	ND	1	1/26/2011	1/26/2011	

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Sampled: 01/12/11
Received: 01/14/11

Sulfide, Reactive

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: mg/Kg								
Sulfide, Reactive	9034	124790	150	ND	1	1/26/2011	1/26/2011	

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Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)									
Reporting Units: mg/l									
2,4,5-TP (Silvex)	SW1311/8151A	11A0661	0.013	ND	1	1.0	1/20/2011	1/24/2011	N1
2,4-D	SW1311/8151A	11A0661	0.013	ND	1	10.0	1/20/2011	1/24/2011	
Pentachlorophenol	SW1311/8151A	11A0661	0.013	ND	1	100.0	1/20/2011	1/24/2011	
Surrogate: DCAA (30-154%)				*30 %*					

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Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

TCLP EXTRACTION

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil) - cont.									
Reporting Units: None									
TCLP Extraction	EPA 1311	11A0475	1.00	ND	1	NA	1/17/2011	1/18/2011	

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Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

DATA QUALIFIERS AND DEFINITIONS

N1	See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1030	Soil		X
EPA 1311	Soil		X
M2540G	Soil		X
SW1311/8151A	Soil		X
SW9010C/9014	Soil		X
SW9045D	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

STL-Pensacola

3355 McLemore Drive - Pensacola, FL 32514

Method Performed: 9014
Samples: PUA0922-01

Method Performed: 9034
Samples: PUA0922-01

TestAmerica Phoenix

Suzanne Glass
Project Manager

Login Sample Receipt Check List

Client: TestAmerica Laboratories, Inc.

Job Number: 400-53287-1

Login Number: 53287
List Source: TestAmerica Pensacola
Creator: Hor, Koma
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM PWA0922-01

[ ] 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:	Project/PO Number:
Pima County RWRD 7101 N Casa Grande Hwy Tucson AZ 85743	Green Valley drying bed #5 PO# 11027038
Project Manager: Nancy Powell	**Phone Number:** 520-443-6183
Sampler: CARPENTER GUEBARA	**Fax Number:** 520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Ignitability	reactivity	total cyanide mg/kg	TCLP herbicides	corrosivity / pH	total solids % for mg/kg				Special Instructions
Green Valley BNROD	BS	soil jars	3	01-12-11	1300	none	✓	✓	✓	✓	✓	✓				hand composited
~~Biot~~ Biosolids from drying bed #5																
25000-1970																
Pima LIMS # 2011010695																
PO# 11027038																

GOS 01-12-11

BS = biosolids

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	01/12/10 1500	GOS 01-12-10 01-12-11	1500	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
	01/13/0 1017		1/13/11 1013	48 hours ____	normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
	1/13/11		1/14/11 1030	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.

2.5%

Barbara,
The only thing that was performed in Pensacola was the reactivity that we asked for but shouldn't have. The total cyanide was done in Phoenix. I have instructed Greg not to put reactivity on the chain anymore.
Nancy

ok
BAE
5/6/11

PIMA COUNTY WASTEWATER MANAGEMENT
WATER QUALITY
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: IWC (Organization) LAB ID: 2011010695

SAMPLERS: CARPENTER, GUEBARA (Print Last Names Only) FACILITY-LOCATION ID: 25000 - 1970

SAMPLE DATE: 01/12/11 (MM / DD / YY) SAMPLE TIME: 1300 hrs (24 Hour Clock)

SAMPLE LOCATION: Green Valley WWTF - BNROD - Biosolids From Drying Bed #5

PERMIT TYPE:
- ☐ APP
- ☐ Investigations
- ☐ IWC
- ■ AZPDES
- ☐ REUSE
- ☐ USFS
- ☐ 503
- ☐ Other

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Reclaimed Water

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	☐	☐	Thallium	☐	☐	Acrolein and Acrylonitrile	☐	■	Alkalinity	☐	☐
Antimony	☐	☐	Tin	☐	☐	Dioxin GC/SIM/MS Scan	☐	☐	Bicarbonate	☐	☐
Arsenic	☐	☐	Titanium	☐	☐	Organochlorine Pesticides & PCBs	☐	■	BOD	☐	☐
Barium	☐	☐	Vanadium	☐	☐	Purgeable Organics (GCMS)	☐	■	Carbonate	☐	☐
Beryllium	☐	☐	Zinc	☐	☐	Semivolatile Organics (GCMS)	☐	■	COD	☐	☐
Boron	☐	☐	ICP Scan *	☐	☐	Other	☐	☐	Coliform, Fecal ****	☐	☐
Cadmium	☐	☐	Priority Pollutant Metals **	☐	■	MISCELLANEOUS METHODS	D	C	Coliform, Sediment	☐	☐
Calcium	☐	☐	TCLP Metals	☐	■	Digester Gas	☐	☐	Coliform, Total ****	☐	☐
Chromium	☐	☐	503 Metals ***	☐	☐	Lindane	☐	☐	*E-coli* ****	☐	☐
Chromium +6	☐	☐	WET METHODS	D	C	Oil and Grease	☐	☐	Conductivity	☐	☐
Cobalt	☐	☐	Ammonia as N	☐	☐	Organic Carbon, Total	☐	☐	Ignitability (contract lab)	☐	■
Copper	☐	☐	Chloride	☐	☐	Organic Carbon, Dissolved	☐	☐	Oxygen, Dissolved	☐	☐
Hardness	☐	☐	Cyanide, T (contract lab)	☐	■	Organophosphorous Pesticides	☐	☐	pH	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐	TCLP Herbicides (contract lab)	☐	■	Solids, Settleable	☐	☐
Lead	☐	☐	Fluoride	☐	☐	TCLP Pesticides	☐	■	Solids, Total	☐	■
Magnesium	☐	☐	Nitrate as N	☐	☐	TCLP Semivolatile Organics	☐	■	(% solids mg/kg)		
Manganese	☐	☐	Nitrite as N	☐	☐	TCLP Volatile Organics	☐	■	Solids, Total Dissolved	☐	☐
Mercury	☐	☐	Nitrate & Nitrite as N	☐	☐	Total Petroleum Hydrocarbons	☐	☐	Solids, Total Suspended	☐	☐
Molybdenum	☐	☐	Nitrogen, Tot. Kjeldahl	☐	☐	Volatile Acids	☐	☐	Solids, Total Volatile	☐	☐
Nickel	☐	☐	Nitrogen, Total as N	☐	☐				Solids, Volatile Suspended	☐	☐
Potassium	☐	☐	Orthophosphate as P	☐	☐				Turbidity	☐	
Selenium	☐	☐	Phosphorus, Total as P	☐	☐	Other1,2-Dichlorobenzene	☐	☐	Reactivity (contract lab)	☐	■
Silver	☐	☐	Sulfate	☐	☐	Other1,2-Dichlorobenzene	☐	☐	Corrosivity (contract lab)	☐	■
Sodium	☐	☐	Sulfide	☐	☐	Other1,2-Dichlorobenzene	☐	☐			
Strontium	☐	☐	Other	☐	☐		☐	☐		☐	☐

Notes: COS per contract lab. 01-12-11 Contract lab is Test America. PO# 1102703B

[redacted] 77°F @ SAMPLING TIME HAND COMPOSITED 1304 1-13-11

Septum Prep Date: 01-04-11 JS TCLP volatiles and TCLP semi-volatiles in clear glass. 603 & 624 in same bag. COS 01-12-11

FIELD MEASUREMENTS

- ☐ Chlorine _____
- ☐ Oxygen (Dis.) _____
- ☐ Conductivity
- ☐ Temperature _____
- ☐ pH _____
- ☐ Other

Sample Receiving Temp.
≤4°C IR Thermo COS

Number of Sample Containers
(12) COS

Sampled by:	Received by:	Date/Time 01-12-11 1457
Relinquished by:	Received by:	Date/Time 1/13/11 10135
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 all bacteria samples in the "Notes Box" if different than the information provided in heading.

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 RWRD
7101 N Casa Grande Hwy
Tucson AZ 85743

Project / PO Number:
Green Valley drying bed #5
PO# 11027038

Project Manager: Nancy Powell

Phone Number:
520-443-6183

Sampler: CARPENTER
GUEBARA

Fax Number:
520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: ignitability	reactivity	total cyanide mg/kg	TCLP herbicides	corrosivity / pH	total solids % for mg/kg				Special Instructions
Green Valley BNROD	BS	soil jars	3	01-12-11	1300	none	✓	✓	✓	✓	✓	1				hand composited
Biot Biosolids from drying bed #5																
25000-1970																
Pima LIMS# 2011010695																
PO# 11027038																

BS = biosolids

Relinquished By: Date / Time: 01/12/10 1500
Received By: GGS 01-12-11 1500 (01-12-10)

Relinquished By: Date / Time: 01/13/0 1017
Received By: Date / Time: 1/13/10 1015

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 & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 2011010695 (yyyy/mm/xxxx – xxxx)

Facility or Submitter: IWC

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers received: 12
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☒ Yes ☐ No

Temperature of Samples: ≤4 °C ☒ IR ☐ LIG

INSPECTION	YES	NO	N/A	COMMENT
Chain of Custody relinquished by sampler?	✓			
Sample labels match COC?		✓		Lots of changes at SR
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?	SOS ✓	✓		TCLP semi-vol and TCLP volatile and 603 and 624
Are sample containers damaged or leaking?		✓		
40 ml vials headspace, or air bubbles?	✓			Dry biosolids
COC received by laboratory and signed?	✓			

PRESERVATIVE LABEL	# OF CONTAINERS
Non-preserved	11
HNO_3 (Nitric Acid)	1
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) 01-12-11 (mm/dd/yy)

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: 5/10/2011 11:29:05
Laboratory License #AZ0159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
March 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:

2011031735 Sample sent to Bio Aquatic Testing for Selenastrum capricornutum 03/28/11.

2011031560 Sample sent to Test America for Total Cyanide (mg/kg) and Total Solids analysis 03-24-11.

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 Rooke

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

05/16/11
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-Effluent-Process Control (25000-1925)											
2011030145	C	Alkalinity, Total	3/2/11 8:00	SM 2320B	03/03/11 14:30	178	mg/l		20		jvriper
2011030145	C	Alkalinity, Bicarbonate	3/2/11 8:00	SM 2320B	03/03/11 14:30	178	mg/l		20		jvriper
2011030145	C	Biochemical Oxygen Demand	3/2/11 8:00	SM 5210B	03/08/11 5:58	<2	mg/l		2	K5	snevius
2011030145	C	Alkalinity, Carbonate	3/2/11 8:00	SM 2320B	03/03/11 14:30	ND	mg/l		20		jvriper
2011030145	C	Solids, Total Suspended	3/2/11 8:00	SM 2540D	03/03/11 5:25	<2.5	mg/l		2.5		apagel
BNROD-MLSS-Process Control (25000-1940)											
2011030143	D	Solids, Total Suspended	3/2/11 7:20	SM 2540D	03/03/11 5:25	1940.0	mg/l		2.5		apagel
2011030143	D	Solids, Total Volatile Suspended	3/2/11 7:20	EPA 160.4	03/03/11 5:25	1660.0	mg/l		2.5		apagel
BNROD-North Aerobic Digester Sludge (25000-1950)											
2011030144	D	Solids, Total	3/2/11 7:35	SM 2540G	03/03/11 7:20	4.05	%		0.005		sdevito
2011030144	D	Solids, Volatile	3/2/11 7:35	SM 2540G	03/03/11 7:20	83.3	%		0.005		sdevito
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

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.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
March 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011030145	K5	The dilution water D.O. depletion was >0.2 mg/L.	3/2/11
2011030228	D2	Sample required dilution due to high concentration of target analyte.	3/3/11
2011030629	D2	Sample required dilution due to high concentration of target analyte.	3/9/11
2011030630	D2	Sample required dilution due to high concentration of target analyte.	3/9/11
2011031560	D2	Sample required dilution due to high concentration of target analyte.	3/24/11
2011031560	M5	Analyte concentration was determined by the method of standard addition (MSA).	3/24/11
2011031734	D1	Sample required dilution due to matrix.	3/28/11
2011031734	K1	The sample dilutions set-up for the BOD/CBOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.	3/28/11
2011031734	M5	Analyte concentration was determined by the method of standard addition (MSA).	3/28/11
2011031734	Q1	Sample integrity was not maintained. See case narrative.	3/28/11
2011031736	Q1	Sample integrity was not maintained. See case narrative.	3/28/11

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: 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: 4-21-11

Peer/Final Review

	P	
R		
	F	
R		
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 BAE

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

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

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

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:	Project/PO Number:
Pima County RWRD 7101 N Casa Grande Hwy Tucson AZ 85743	Green Valley #5 PO # 1103721U
Project Manager: Money Powell	**Phone Number:** 520-443-5183
Sampler: Roger Artz	**Fax Number:** 520-443-5071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total Cyanide 335.4	Analysis Required: Total Phenolics 420.1	Special Instructions
Green Valley Dump Lift Sta	Ww	HDPE	2	03-24-11	0943-0955	ice none	1	1	Hand composited
Test 2500.0-1971									Composited Location
Pima LIMS # 20110315-60									
PO# 1103721U									

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
For Roger Artz	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 1545		3/25/11 705	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 WASTEWATER MANAGEMENT
TECHNICAL SERVICES SECTION
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: **SUB-REGIONAL FACILITIES** (Organization) LAB ID: 20110315 57

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						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	☐	☐	[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:	Lab Fridge	3-24-11 0708
Relinquished by:	Received by:	Date/Time
Lab Fridge	Rick Anderson	3-24-11 / 08:34AM
Relinquished by:	Received by:	Date/Time
Rick Anderson		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) 03-24-11 (mm/dd/yy)

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)

PERMIT TYPE:
- ☐ APP
- ☐ APP Investigations
- ☐ IWC
- ■ [redacted]
- ☐ REUSE
- ☐ USFS
- ■ [redacted]
- ☐ PROCESS CONTROL

SAMPLE MATRIX:
- ■ [redacted]
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

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 (wet)	☐	☐	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# 110037214 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:	Received by: Lab Fridge	Date/Time 3-24-11 0708
Relinquished by: Lab Fridge	Received by: Rick Anderson	Date/Time 3-24-11 / 08:34 Am
Relinquished by: Rick Anderson	Received by:	Date/Time 03-24-11 1109
Relinquished by:	Received by:	Date/Time 3/24/11 13:00
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

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 #5
PO # 11037214

Project Manager:
Nancy Powell

Phone Number:
520-443-6183

Sampler:
Roger Artz

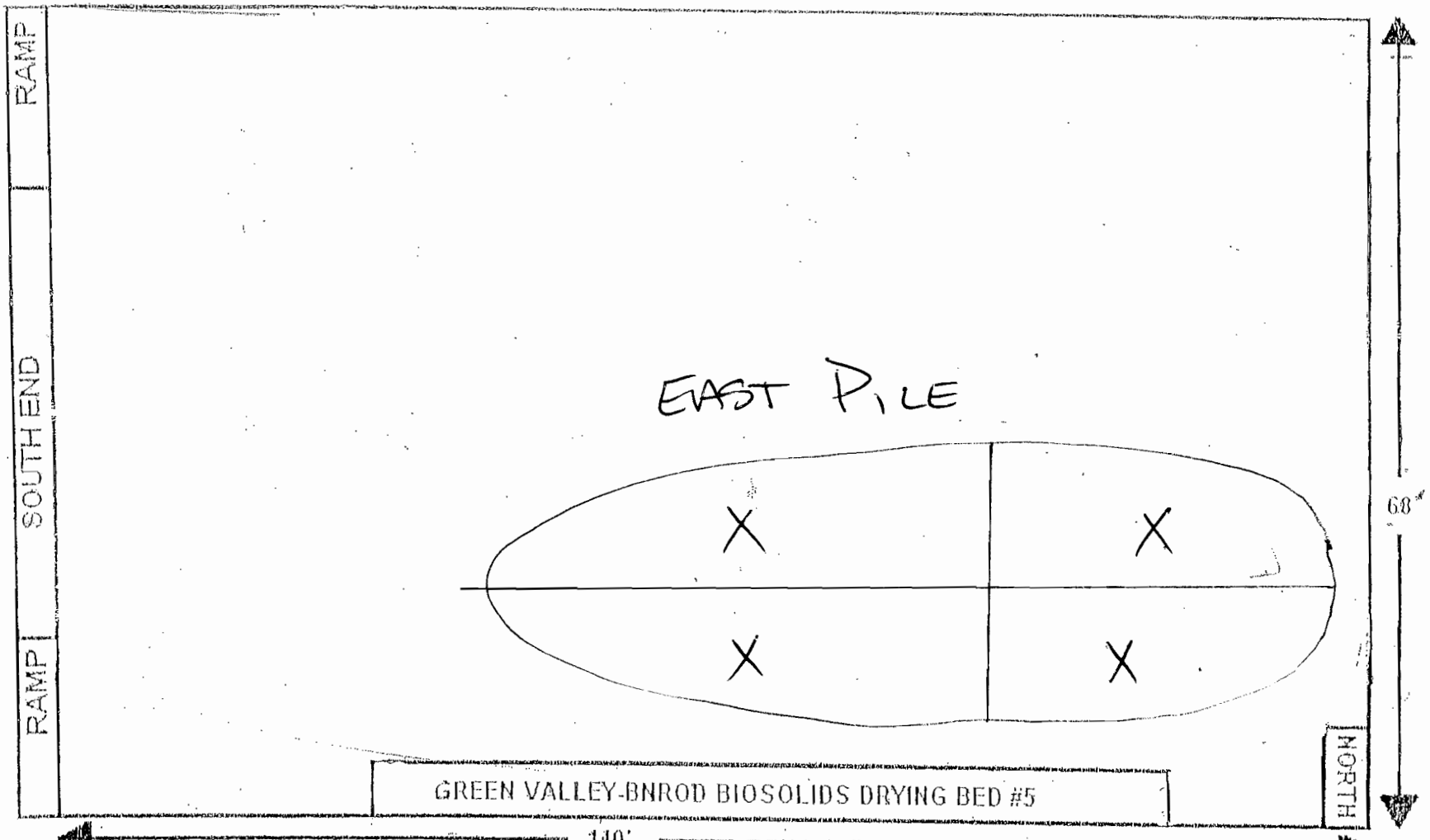
Fax Number:
520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total cyanide mg/kg	Analysis Required: 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:	Turnaround Time: (Check)	
for Roger Artz	03-24-11 1109		03-24-11 1109	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
			3/24/11 1300	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.

20110315 60



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER R. Arez 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: 2011031560
(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) 03-24-11 (mm/dd/yy)

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: 8/1/2011 12:23:48
Laboratory License #AZ0159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
June 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:

2011060879 Sample sent to Test America for cyanide analysis 06-16-11. GOS

2011060819 Sample sent to Test America for low level mercury 06-16-11. GOS
2011060818 Sample sent to BIO Aquatic Testing for WETT analysis 06-15-11. 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 Eswar

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

08/02/11

Date

Green Valley WRF

BNROD-Biosolids from drying bed #5 - East (25000-1971)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
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

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.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
June 2011

Data Qualifier(s):	Definition:
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
K2	The sample dilutions set-up for the BOD/CBOD analysis failed to meet the criteria of a residual dissolved oxygen of at least 1 mg/L. The reported result is an estimated value.
K5	The dilution water D.O. depletion was >0.2 mg/L.

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: 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: 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

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

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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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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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

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
7431 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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total cyanide mg/kg	Analysis Required: Total % solids for analytical calculations	Special Instructions
Green Valley RWRD biosolids	SS	HDPE	2	05-16-11	0845	none	1	1	Acetic Acid preserved
Green Valley bottles									
(East side)									
Pima LIMS # 20110519879									
PO# 11049243									
Location # 1500-1971									
Ice in cooler									

Relinquished By:	Date / Time:	Received By:	Date / Time:
for Roger Artz	05-16-11 1138		05-16-11 1138
Relinquished By:	Date / Time:	Received By:	Date / Time:
	05-16-11 1222		05-16-11 1222
Relinquished By:	Date / Time:	Received in Lab By:	Date / Time:
	05-16-11 1540		05-16-11 1540

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: 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
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 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 2 (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 sent Test America QUARTERLY SAMPLES PO# 11049243

# of Bottles Delivered: (5) GCS

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by: Lab Fridge	Date: 6-16-11	Time: (24 Hour Clock) 0700
Relinquished by: Lab Fridge	Received by: Rick Anderson	Date: 6-16-11	Time: (24 Hour Clock) 0850
Relinquished by: Rick Anderson	Received by:	Date: 06-16-11	Time: (24 Hour Clock) 1128
Relinquished by:	Received by:	Date: 6/16/11	Time: (24 Hour Clock) 12:26
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

Sample Integrity/Preservation:

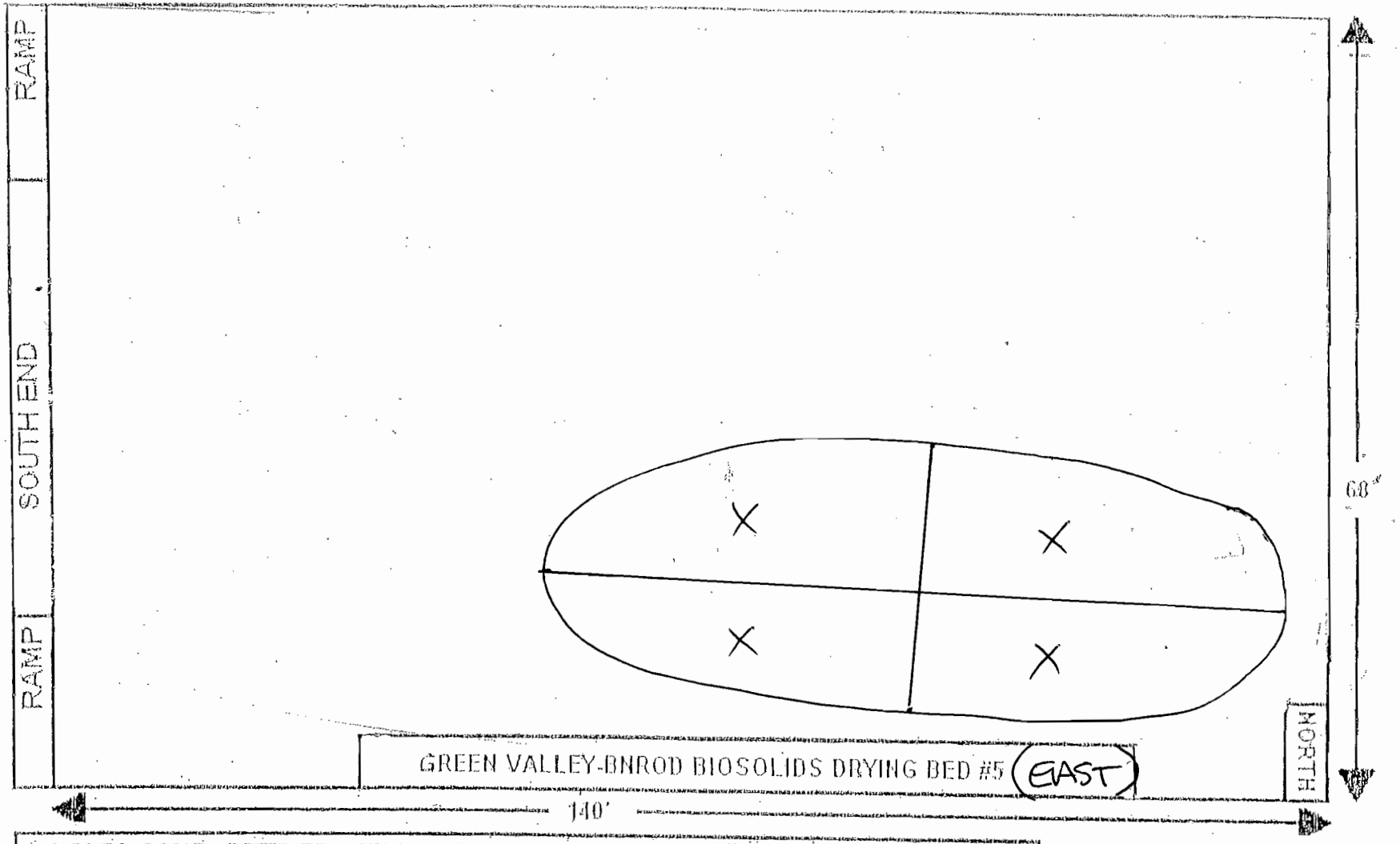
Temperature:	5	°C
Initials:	GCS	
Non-Preserved	4	#
HNO_3		#
H_2SO_4	1	#
HCl		#
NaOH		#
$Na_2S_2O_3$		#
$Zn(C_2H_3O_2)_2$		#

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

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)

Client Name / Address:	Project / PO Number:
Project Manager:	Phone Number:
Sampler:	Fax Number:

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required	Special Instructions

Relinquished By:	Date / Time:	Received By:	Date / Time:	Turnaround Time: (Check)
				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
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[ ] 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 cyanide
PO# 11049243

Project Manager:
Nancy Powell

Phone Number:
520-443-6183

Sampler:
Roger Artz

Fax Number:
520-443-6075

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total cyanide mg/kg	Analysis Required: 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 # 20110608 79									
PO# 11049243									
Location # 25000-1971									

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
for Roger Artz	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 1226		6/16/11 12:26	48 hours ____	normal ✓
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 (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 Esquivel

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.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
August 2011

Data Qualifier(s):	Definition:
D2	Sample required dilution due to high concentration of target analyte.

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
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	☐	☐
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) TS has to be taken out of same bottle. GDS 08-31-11

# of Bottles Delivered: 1 (GDS)

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	8-31-11	0705
Lab Fridge	Rick Anderson	8-31-11	0907
Rick Anderson		08-31-11	1208

LAB USE ONLY

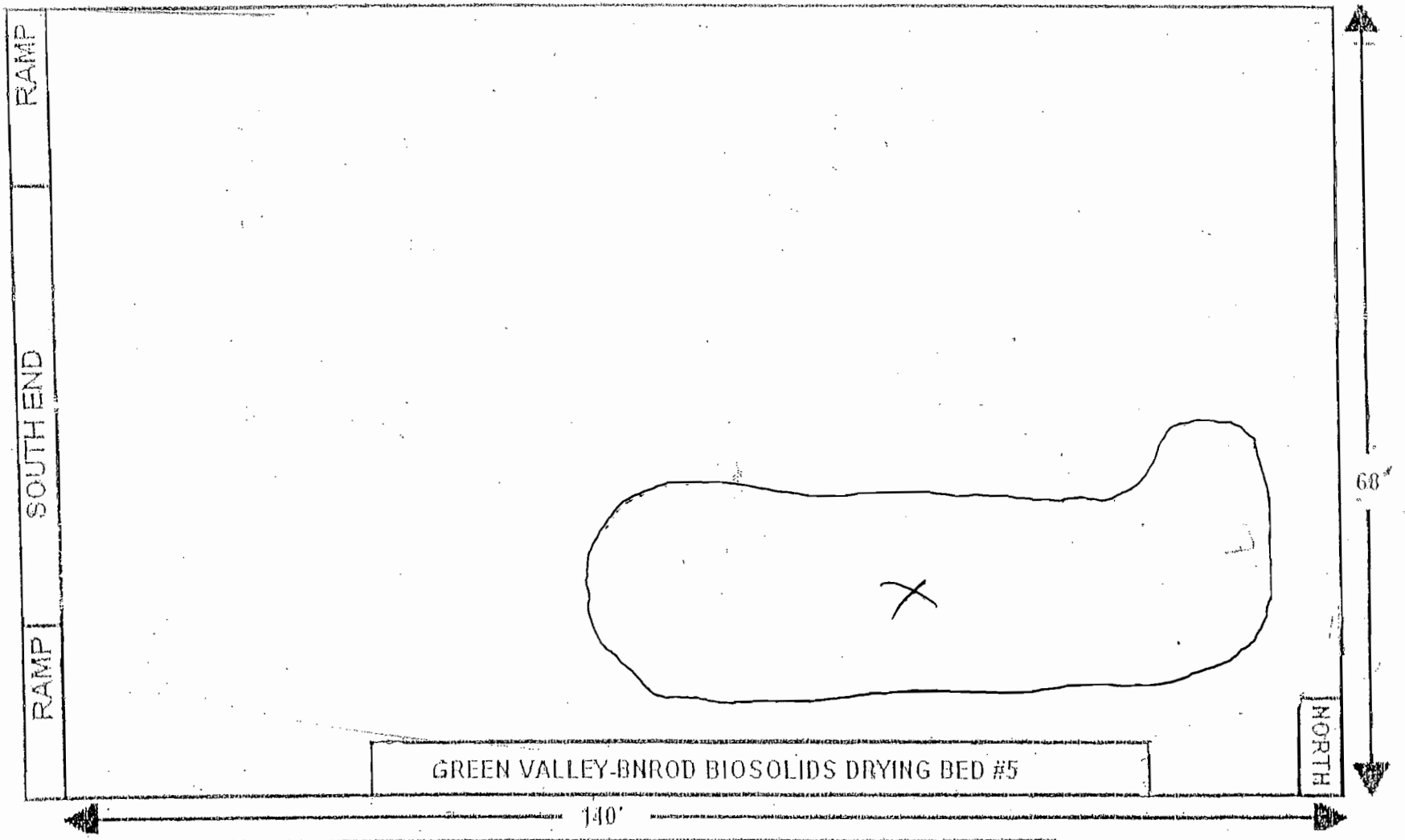
Sample Integrity/Preservation:

Temperature:	6	° C
Initials:	GDS	
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

2011031871



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER R. HARTZ 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: 20110818 72

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
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 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 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 (GCJ)

Transported on Ice: ☒ YES ☐ NO

Septum Blank Prep Date & Initials:

Chain of Custody Record (Signatures Only)

Relinquished by Sampler:	Received by: Lab fridge	Date: 8-31-11	Time: (24 Hour Clock) 0705
Relinquished by: Lab fridge	Received by: Rick Anderson	Date: 8-31-11	Time: (24 Hour Clock) 0907
Relinquished by: Rick Anderson	Received by:	Date: 08-31-11	Time: (24 Hour Clock) 1208
Relinquished by:	Received by:	Date: 9/1/11	Time: (24 Hour Clock) 1015
Relinquished by:	Received by:	Date:	Time: (24 Hour Clock)

LAB USE ONLY

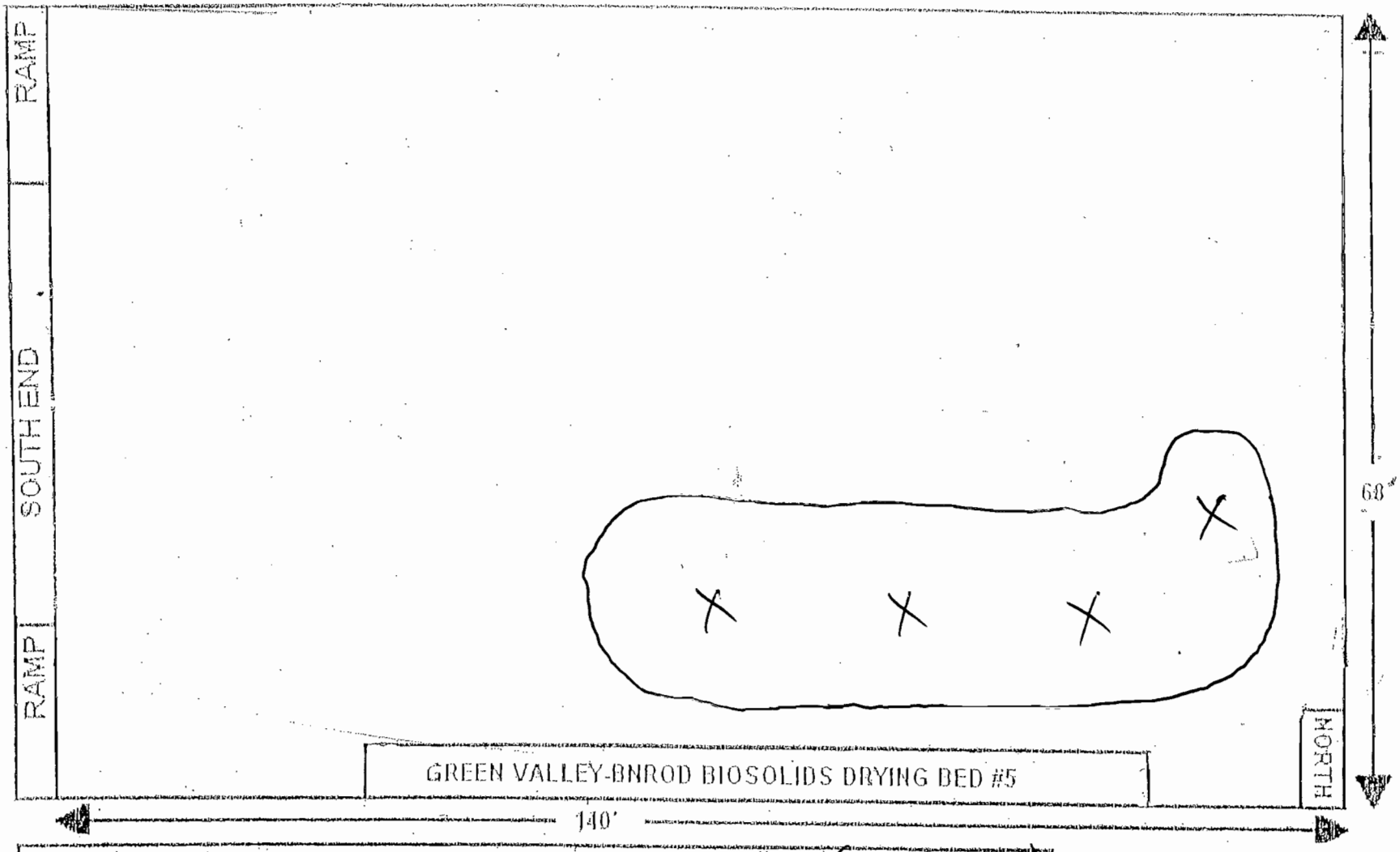
Sample Integrity/Preservation:

Temperature:	6	°C
Initials:	GCJ	
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. 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

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	0630-0650	None	1	1	Short composite.
biosolids from drying bed #5									
25000-1971									
Pima LIMS# 20110813T2									
DO# 12*7257									

Relinquished By:	Date / Time:	Received By:	Date / Time:
for Roger Artz	08-31-11 1328		08-31-11 1328
	09-01-11 1000		9/1/11 10:00
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 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

Table of Contents

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

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CHAIN OF CUSTODY FORM

PUIO105

[ ] 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:	Project / PO Number:
Pima County RWRD 7101 N Casa Grande Hwy Tucson AZ 85743	Green Valley DO# 12*7257
Project Manager: Nancy Powell	**Phone Number:** 520-443-6100
Sampler: Roger Artz	**Fax Number:** 520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total cyanide mg/kg	Analysis Required: Total % solids for mg/kg calculation	Special Instructions
Green Valley BNROD	BS	HDPE	2	08-31-11	0630-0650	None	1	1	Shut composite.
biosolids from drying bed #5									
25000-1971									
Pima LIMS# 2011081872 - 01									
DO# 12*7257									

BS = biosolids

1st Temp 4.2°C (1) 9/1/11 1015

Page 13 of 13

Relinquished By:	Date / Time:	Received By:	Date / Time:
for Roger Artz	08-31-11 1328		08-31-11 1328
	09-01-11 1000		9/1/11 1015
	9/1/11 1500	Fed Ex	

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

Sample Integrity: (Check)
intact ✓ on ice ✓

09/15/2011

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 (CRAO) Laboratory
3035 W. El Camino del Cerro, Tucson, AZ 85745-9750, Phone: (520) 724-6200

Report Date: 2/3/2012 14:36:15
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:

2011111117, 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 Sobba

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)											
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
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 09:43:48

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 - East (25000-1971)								
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			
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 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

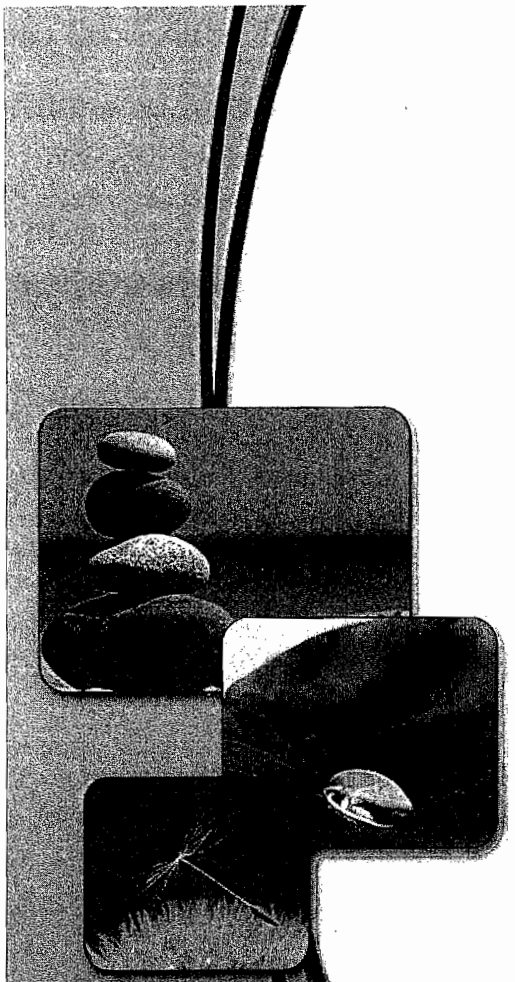
Copy of CoC included with Lab Report.	x
Sample IDs verified against C oC.	x
Sample dates and received dates are correct	x
Analyses and methods verified against CoC.	x
Sample holding times not exceeded.	x
Dilution on ND samples only in event of matrix interference.	**na**
Data packet includes QC Report 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 1/9/20



LINKS

Review your project results through TotalAccess

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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

Table of Contents

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 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

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

Lab Sample ID: PUK1343-02

Date Collected: 11/18/11 07:11
Matrix: Soil
Date Received: 11/19/11 10:00
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:
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. Puk1343
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			
(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

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:

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by:	Pima County RWRD	11-18-11 1520	Received by:	TA-TUC	11/18/11 1320
Relinquished by:	TA-TUC	11/18/11 1520	Received by:		
Relinquished by:			Received by:	TA	11/19/11 1000

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~~ CB 1-31-12 **Final Review date and initials:** BAS 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:

20111118 CL PAM Siq removed, Added CL 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 CL 6010B Silver

Mercury not included in this report
Was Reported on a Prior Report # PUK 15498 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

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THE LEADER IN ENVIRONMENTAL TESTING

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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	

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Project ID: GV BS cyanides
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Sampled: 11/18/11
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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

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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

>>> Select a Laboratory Here <<<

#N/A
#N/A
#N/A
#N/A

Chain of Custody Record

TestAmerica
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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. PUK1343
Tucson/AZ/85743	Calendar (C) or Work Days (W) _____			
(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 (5:00)			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TA	11/19/11 1000

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. SacCA	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:

20111118, 20111117 and 20111289

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.

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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.

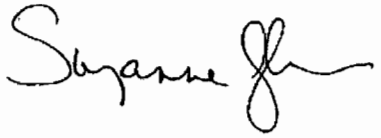
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

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:



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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	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	

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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 %*				

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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

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 %*				

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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	

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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	

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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

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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

>>> 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.

2.8°C

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by:	Pima CRAO Lab	11-22-11	Received by:	TA-TVL	11/22/11 14:25
Relinquished by:	TA-TVL	11/22/11 (5pm)	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	TA	11/23/11 1030

Form No. CA-C-WI-002, dated 04/07/2011

SECTION 9

GREEN VALLEY BNROD
AZPDES NO. AZ0024937

BIOSOLIDS BATCH

April 2011

DRYING BED#5

CLASS B ALT. 2 AND VAR #7

A.A.C. RULE 18.9.1005 METALS

ANNUAL BIOSOLIDS REPORT 2011

April 2011
BIOSOLIDS BATCH PRODUCTION CERTIFICATION
GREEN VALLEY BIOLOGICAL NUTRIENT REMOVAL OXIDATION DITCH (BNROD)
DRYING BED NO. 5 – EAST SIDE
'CLASS B' BIOSOLIDS

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: Frank Gall, WWTP Manager, Treatment Division, Sub Regional Facilities
Address: 4527 West Walker Road, Tucson, Arizona 85743
Telephone Number: (520) 443-6171

Biosolids Preparation

Processing Period: July 2010 to April 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 - Arithmetic Mean = 86.8 %

Sample Date	Total Solids – Analysis Results, (%)	Sample Number
12/21/2010	85.1	2010121310
01/12/2011	87.3	2011010695
03/24/2011	87.9	2011031560

The above data shows that the biosolids meet the vector attraction reduction requirements of R18-9-1010.

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 April 2011 batch of biosolids was processed as follows in the table below:

April 2011 Batch
Processing Period and Bed Location

	Air Drying		Batch Holding, Bed #5	
Drying Bed #	Begin	End	Begin	End
3	July 28, 2010	November 2, 2010	November 2, 2010	Hauling Date
1	August 29, 2010	November 28, 2010	November 28, 2010	Hauling Date
4	September 30, 2010	December 29, 2010	December 29, 2010	Hauling Date
2	October 31, 2010	January 30, 2011	January 30, 2011	Hauling Date
3	December 1, 2010	March 6, 2011	March 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	Nitrate / Nitrite mg/kg	Total Kjeldahl Nitrogen mg/kg	Total Nitrogen mg/kg	Sample Number
12/21/2010	193	60,052	60,245	2010121310
03/24/2011	303	68801	69104	2011031560

Pollutant Concentration

	Analysis Results, Pollutant Concentration; mg/kg					
	Sample Number Sample Date					
	2010121310 December 21, 2010	2011010695 January 12, 2011	2011031560 March 24, 2011	Maximum Value	Table 2 R18-9-1005 Monthly Average Pollutant Concentration	Table 1 R18-9-1005 Ceiling Concentration Limits for All Biosolids Applied to Land
Arsenic	11.5	9.8	< 18.0	< 18.0	41	75
Cadmium	< 2.5	< 2.5	< 7.2	< 7.2	39	85
Chromium	15.4	15.4	41.1	41.1	Not Applicable	3000
Copper	560	438	547	560	1500	4300
Lead	20.5	17.0	< 18.0	20.5	300	840
Mercury	1.6	1.4	2.8	2.8	17	57
Molybdenum	9.2	8.6	12.6	12.6	Not Applicable	75
Nickel	17.6	15.6	25.0	25.0	420	420
Selenium	< 6.2	< 0.012	< 18.0	< 18.0	100	100
Zinc	865	675	750	865	2800	7500

The above data show that the metals concentrations meet Table 1 and Table 2 requirements of R18-9-1005.

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.

Frank A. Gall — 4/7/2011

Frank A. Gall, WWTP Manager
Pima County Regional Wastewater Reclamation Department

Date

Attachment: Sample collection records and the sample analysis laboratory reports.

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 provided following the certification signature as a ready reference to the land applier.

Appendix A – Temperature Records
The Ambient Average Daily Temperature at Green Valley WRF, Arizona
July 2010 – February 2011

2010												2011			
July	°C	Aug.	°C	Sept.	°C	Oct.	°C	Nov.	°C	Dec.	°C	Jan.	°C	Feb.	°C
1		1	31.6	1	32.5	1	31.1	1	18.2	1	10.1	1	-0.2	1	9.8
2		2	32.8	2	33.8	2	27.9	2	22.2	2	14.0	2	4.6	2	0.6
3		3	32.6	3	30.3	3	28.3	3	27.5	3	15.5	3	6.3	3	-4.1
4		4	34.3	4	32.0	4	25.9	4	26.3	4	16.1	4	5.9	4	1.0
5		5	34.3	5	33.3	5	23.0	5	23.8	5	16.1	5	5.8	5	7.5
6		6	33.8	6	31.4	6	24.9	6	24.1	6	18.6	6	9.6	6	9.6
7		7	30.1	7	28.7	7	25.2	7	21.3	7	13.8	7	11.8	7	12.1
8		8	31.1	8	30.4	8	22.7	8	20.9	8	13.9	8	7.9	8	16.8
9		9	33.1	9	29.1	9	22.1	9	15.0	9	14.8	9	10.6	9	10.7
10		10	33.1	10	27.1	10	21.9	10	15.3	10	16.1	10	9.6	10	9.3
11		11	34.4	11	27.1	11	22.5	11	13.4	11	15.0	11	8.8	11	11.5
12		12	33.7	12	29.2	12	23.3	12	12.2	12	14.9	12	11.3	12	13.5
13		13	34.6	13	32.6	13	26.6	13	15.0	13	16.3	13	11.6	13	15.9
14		14	35.8	14	32.3	14	28.0	14	15.0	14	17.5	14	11.3	14	17.5
15		15	32.7	15	30.8	15	23.6	15	14.7	15	16.3	15	12.4	15	17.3
16		16	30.9	16	31.4	16	23.3	16	17.2	16	13.3	16	12.8	16	17.9
17		17	31.9	17	30.8	17	24.4	17	17.8	17	12.6	17	14.3	17	18.4
18		18	32.6	18	31.9	18	23.3	18	18.8	18	13.1	18	15.4	18	16.3
19		19	34.3	19	33.1	19	21.6	19	20.0	19	16.3	19	17.3	19	17.5
20		20	35.4	20	33.2	20	20.4	20	19.7	20	18.9	20	15.3	20	12.0
21		21	31.1	21	30.4	21	16.0	21	16.9	21	19.4	21	12.2	21	10.0
22		22	32.6	22	27.9	22	17.4	22	13.1	22	16.5	22	12.8	22	11.3
23		23	32.8	23	28.8	23	17.2	23	12.2	23	12.8	23	11.1	23	10.7
24		24	32.0	24	29.4	24	19.2	24	11.6	24	10.3	24	10.4	24	10.7
25		25	31.4	25	31.2	25	22.4	25	10.9	25	13.8	25	9.6	25	13.8
26		26	28.3	26	31.9	26	20.5	26	10.9	26	12.2	26	9.6	26	15.4
27		27	27.1	27	29.8	27	20.6	27	14.1	27	9.7	27	13.6	27	6.8
28	29.8	28	29.3	28	29.1	28	23.6	28	11.3	28	8.6	28	11.8	28	10.2
29	30.6	29	30.0	29	31.9	29	24.3	29	4.7	29	9.6	29	12.6		
30	28.4	30	29.6	30	34.4	30	22.3	30	5.9	30	6.6	30	13.7		
31	27.3	31	31.8			31	18.2			31	1.9	31	11.9		

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.

Green Valley WRF

Sample Number	Parameter	Sample Type	Sample Date	Analysis Method	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
BNROD-Effluent-Process Control (25000-1925)										
2010120475	Ammonia	C	12/07/10	EPA 350.1	12/16/10 7:24	0.5	mg/l	0.05	0.5	
2010120475	Nitrate/Nitrite	C	12/07/10	EPA 353.2	12/13/10 10:25	0.6	mg/l	0.04	0.2	
2010120475	Nitrogen, Total Kjeldahl	C	12/07/10	EPA 351.2	12/10/10 14:30	1.6	mg/l	0.45	0.8	
2010120475	Nitrogen, Total	C	12/07/10	Calculated	12/16/10 5:33	2.2	mg/l		0.8	
2010120475	Alkalinity, Total	C	12/07/10	SM 2320B	12/8/10 7:25	194	mg/l		20	
2010120475	Alkalinity, Bicarbonate	C	12/07/10	SM 2320B	12/8/10 7:25	194	mg/l		20	
2010120475	Biochemical Oxygen Demand	C	12/07/10	SM 5210B	12/13/10 7:03	3	mg/l		2	
2010120475	Alkalinity, Carbonate	C	12/07/10	SM 2320B	12/8/10 7:25	ND	mg/l		20	
2010120475	Solids, Total Suspended	C	12/07/10	SM 2540D	12/8/10 7:15	<2.5	mg/l		2.5	
BNROD-MLSS-Process Control (25000-1940)										
2010120484	Solids, Total Suspended	D	12/07/10	SM 2540D	12/8/10 7:15	2100.0	mg/l		2.5	
2010120484	Solids, Total Volatile Suspended	D	12/07/10	EPA 160.4	12/8/10 7:15	1900.0	mg/l		2.5	
BNROD-North Aerobic Digester Sludge (25000-1950)										
2010120483	Solids, Total	D	12/07/10	SM 2540G	12/8/10 13:00	3.33	%		0.005	
2010120483	Solids, Volatile	D	12/07/10	SM 2540G	12/8/10 13:00	83.0	%		0.005	
BNROD-Biosolids from drying bed #5 - East (25000-1971)										
2010121310	Miscellaneous Note	C	12/21/10	None		contract lab				
Samples sent to Test America for cyanide (T) mg/kg analysis 12-21-10.										
2010121310	Arsenic	C	12/21/10	EPA 6010B	1/18/11 14:13	11.5	mg/Kg	0.012	6.2	
2010121310	Cadmium	C	12/21/10	EPA 6010B	1/18/11 14:13	Trace	mg/Kg	0.0005	2.5	M5
2010121310	Chromium	C	12/21/10	EPA 6010B	1/19/11 9:18	15.4	mg/Kg	0.0007	6.2	
2010121310	Copper	C	12/21/10	EPA 6010B	1/18/11 14:13	560	mg/Kg	0.0037	6.2	M5
2010121310	Lead	C	12/21/10	EPA 6010B	1/18/11 14:13	20.5	mg/Kg	0.0080	6.2	M5
2010121310	Molybdenum	C	12/21/10	EPA 6010B	1/19/11 9:18	9.2	mg/Kg	0.0026	2.5	
2010121310	Nickel	C	12/21/10	EPA 6010B	1/19/11 9:18	17.6	mg/Kg	0.0086	6.2	M5
2010121310	Selenium	C	12/21/10	EPA 6010B	1/19/11 9:18	Trace	mg/Kg	0.012	6.2	
2010121310	Zinc	C	12/21/10	EPA 6010B	1/18/11 14:13	865	mg/Kg	0.0033	6.2	M5
2010121310	Silver	C	12/21/10	EPA 6010B	1/18/11 14:13	4.1	mg/Kg	0.0011	0.62	M5
2010121310	Mercury	C	12/21/10	EPA 7471A	12/26/10 14:22	1.600	mg/Kg	.00023	.059	
2010121310	Nitrate/Nitrite	C	12/21/10	EPA 353.2	12/28/10 9:35	192.7	mg/Kg	0.05	2.4	
2010121310	Nitrogen, Total Kjeldahl	C	12/21/10	EPA 351.2	12/29/10 14:31	9007.9	mg/Kg	52.1	106.8	D2
2010121310	Nitrogen, Total	C	12/21/10	Calculated	12/30/10 11:49	9200.6	mg/Kg		106.8	

ND = Not Detected (<MDL), 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
7101 N. Casa Grande Highway
Tucson, AZ 85743-9577
Laboratory License #AZ0159
Phone: (520) 443-6100

Green Valley WRF

Sample Number	Parameter	Sample Type	Sample Date	Analysis Method	Analysis Date	Analysis Value	Units	MDL	PQL	Data Qualifier(s)
BNROD-Biosolids from drying bed #5 - East (25000-1971)										
2010121310	Solids, Total	C	12/21/10	SM 2540G	12/23/10 11:20	85.14	%		0.005	

All results on this report intended for compliance submission must have all associated chain of custodies attached to the results as required by 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 complete copy.

Barbara A Esther — Laboratory Director/Alternate

01/31/11 — Date

ND = Not Detected (<MDL), 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.
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Field results are not subject to approval of Lab Supervisor.
Total Volatile Solids - Used for process control samples only.

PIMA COUNTY WASTEWATER MANAGEMENT
TECHNICAL SERVICES SECTION
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: SUB-REGIONAL FACILITIES (Organization) LAB ID: 201012 1310

SAMPLER: ARTZ (Print Last Names Only) FACILITY-LOCATION ID: 25000-1971-000

SAMPLE DATE: 12-21-10 (MM / DD / YY) 0727 - 0731 (24 Hour Clock) from labels GOS

SAMPLE LOCATION: GREEN VALLEY BNROD BIO-SOLIDS FROM DRYING BED #5 (EAST) 12-10

PERMIT TYPE:
- ☐ APP
- ☐ APP Investigations
- ☐ IWC
- ■ [redacted]
- ☐ REUSE
- ☐ USFS
- ■ [redacted]
- ☐ PROCESS CONTROL

SAMPLE MATRIX:
- ■ [redacted]
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

INDICATE ALL ANALYSES REQUIRED
Mark discrete (D) or composite (C) box corresponding to individual sample type

INORGANIC CHEMISTRY METALS	D	C	INORGANIC CHEMISTRY 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	☐	☐	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	☐	☐	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	☐	☐

(Contract lab) and in house both GOS 12-21-10

NOTES: THESE ARE MAN.COMPOSITE SAMPLES TAKEN FROM 4 DIFF. LOCATIONS @ 2 MIN. INTERVALS

QUARTERLY SAMPLES - TOTAL CYANIDE TO CONTRACT LAB

Cyanide and 1 of 2 TS sent to Test America. PO# 1102415

COMPLIANCE FIELD MEASUREMENTS

- ☐ Chlorine
- ☐ Oxygen (Dis.)
- ☐ Conductivity
- ☐ TEMP
- ☐ pH
- ☐ Other

Sample Receiving Temp.
≤4°C IR Therm GOS

Number of Sample Containers
(5) GOS

Sampled by:	Lab refrigerator	12-21-10 0738
Relinquished by: Lab refrigerator	Received by: Rick Anderson	Date/Time 12-21-10 / 08:27am
Relinquished by: Rick Anderson	Received by:	Date/Time 12-21-10 1031
Relinquished by:	Received by:	Date/Time 12/21/10 11:57
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.

2010121310

SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER: R. Aertz DATE: 12-21-10 TIME: 0727

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 Drying Bed
11024115

Project Manager:
Nancy Powell

Phone Number:
520-443-6100

Sampler:
Roger Artz

Fax Number:
520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total cyanide mg/kg	Analysis Required: Total solids %	Special Instructions
Green Valley BNROD	BS	plastic	2	12-21-10	0727-	none	✓	✓	Short composite /
Drying Bed #5 (East)		HDPE			0731				hand composite
25000-1971									
Pima LIMS # 201012 1310									
PO# 11024115									

BS= biosolids

Relinquished By: for sampler — Date / Time: 12-21-10 1031
Received By: — Date / Time: 12-21-10 1031

Relinquished By: — Date / Time: 12-21-10 1157
Received By: — Date / Time: 12/21/10 11:57

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 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 & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax: 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 2010121310
(yyyy/mm/xxxx – xxxx)

Facility or Submitter: SRF

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: 2.4 °C ☒ IR ☐ LIG

INSPECTION	YES	NO	N/A	COMMENT
Chain of Custody relinquished by sampler?	✓			Sample time section sort of wrong.
Sample labels match COC?	✓			Fixed COC to match labels.
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: _____ 12-21-10
(Signature) (mm/dd/yy)

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: 4/12/2011 11:30:26
Laboratory License #AZ0159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
January 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: **See Attachment.**

Notes:

2011010695 Sample sent to TestAmerica for TCLP Herbicides, Cyanide 9014, Ignitability, pH 9045D and Sulfide analyses 01-13-11.

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

04/13/11

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-North Aerobic Digester Sludge (25000-1950)											
2011010201	D	Solids, Total	1/4/11 7:28	SM 2540G	01/05/11 11:30	3.14	%		0.005		aellert
2011010201	D	Solids, Volatile	1/4/11 7:28	SM 2540G	01/05/11 11:30	83.8	%		0.005		aellert
BNROD-Biosolids from drying bed #5 (25000-1970)											
2011010695	C	Miscellaneous Note	1/12/11 13:00	None	Subcontracted						Other
2011010695	C	Mercury	1/12/11 13:00	EPA 7471A	01/20/11 10:37	1.400	mg/Kg	0.00023	0.057		khowell
2011010695	C	Antimony	1/12/11 13:00	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0136	6.2		jdoranski
2011010695	C	Arsenic	1/12/11 13:00	EPA 6010B	01/25/11 16:30	9.8	mg/Kg	0.0125	6.2		mbomar
2011010695	C	Beryllium	1/12/11 13:00	EPA 6010B	02/01/11 16:30	Trace	mg/Kg	0.00003	1.2		mbomar
2011010695	C	Cadmium	1/12/11 13:00	EPA 6010B	01/25/11 16:30	Trace	mg/Kg	0.0005	2.5		mbomar
2011010695	C	Chromium	1/12/11 13:00	EPA 6010B	02/01/11 16:30	15.4	mg/Kg	0.0007	6.2		mbomar
2011010695	C	Copper	1/12/11 13:00	EPA 6010B	02/01/11 16:30	438	mg/Kg	0.0037	6.2		mbomar
2011010695	C	Lead	1/12/11 13:00	EPA 6010B	01/25/11 16:30	17.0	mg/Kg	0.0080	6.2		mbomar
2011010695	C	Molybdenum	1/12/11 13:00	EPA 6010B	01/25/11 16:30	8.6	mg/Kg	0.0026	2.5		mbomar
2011010695	C	Nickel	1/12/11 13:00	EPA 6010B	02/01/11 16:30	15.6	mg/Kg	0.0086	6.2		mbomar
2011010695	C	Selenium	1/12/11 13:00	EPA 6010B	01/25/11 16:30	ND	mg/Kg	0.0122	6.2		mbomar
2011010695	C	Silver	1/12/11 13:00	EPA 6010B	02/01/11 16:30	4.9	mg/Kg	0.0011	0.6		mbomar
2011010695	C	Thallium	1/12/11 13:00	EPA 6010B	02/01/11 16:30	ND	mg/Kg	0.0139	6.2		mbomar
2011010695	C	Zinc	1/12/11 13:00	EPA 6010B	01/25/11 16:30	675	mg/Kg	0.0033	31.0	D2	mbomar
2011010695	C	Mercury	1/12/11 13:00	EPA 7470A-TCLP	01/31/11 12:10	Trace	mg/l	0.00005	0.0002		khowell
2011010695	C	Arsenic	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	0.24	mg/l	0.0050	0.025	M5	mbomar
2011010695	C	Barium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	0.07	mg/l	0.0013	0.025		mbomar
2011010695	C	Cadmium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0007	0.010		mbomar
2011010695	C	Chromium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0016	0.025		mbomar
2011010695	C	Lead	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0079	0.025		mbomar
2011010695	C	Selenium	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	Trace	mg/l	0.0114	0.025		mbomar
2011010695	C	Silver	1/12/11 13:00	EPA 6010B-TCLP	02/04/11 16:30	ND	mg/l	0.00056	0.0025		mbomar
2011010695	C	Solids, Total	1/12/11 13:00	SM 2540G	01/13/11 6:30	87.30	%		0.005		jvriper
2011010695	C	Acrolein	1/12/11 13:00	EPA 603	01/16/11 18:40	ND	mg/Kg	0.00111	0.229	D1, D4, L4	dcorbett
2011010695	C	Acrylonitrile	1/12/11 13:00	EPA 603	01/16/11 18:40	ND	mg/Kg	0.00116	0.229	D1, D4	dcorbett
2011010695	C	1,2-Dibromo-3-chloropropane	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00052	0.1	D1, D4, Q5, L2, N1	dcorbett
2011010695	C	1,2-Dibromoethane	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2,4-Trichlorobenzene	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00011	0.01	D1, D4, Q5	dcorbett
2011010695	C	cis-1,2-Dichloroethene	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00002	0.01	D1, D4, Q5	dcorbett
2011010695	C	Styrene	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4	dcorbett
2011010695	C	Xylene, m- + p-	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00015	0.01	D1, D4, Q5	dcorbett
2011010695	C	Xylene, o-	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Xylene, Total	1/12/11 13:00	EPA 8260B	01/21/11 17:50	ND	mg/Kg		0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1,1-Trichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	1,1,2-Trichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.0001	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1-Dichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1-Dichloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2-Dichlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00014	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2-Dichloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,2-Dichloropropane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,3-Dichlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,4-Dichlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00011	0.01	D1, D4, Q5	dcorbett
2011010695	C	1,1,2,2-Tetrachloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00026	0.01	D1, D4, Q5, N1	dcorbett

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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

BNROD-Biosolids from drying bed #5 (25000-1970)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010695	C	2-Chloroethyl vinyl ether	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.0003	0.01	D1, D4	dcorbett
2011010695	C	Benzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	Bromodichloromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00018	0.01	D1, D4, Q5	dcorbett
2011010695	C	Bromoform	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Bromomethane	1/12/11 13:00	EPA 624	01/21/11 17:50	Trace	mg/Kg	0.00021	0.02	D1, D4, Q5	dcorbett
2011010695	C	Carbon tetrachloride	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.0001	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chlorobenzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chloroethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00015	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chloroform	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00005	0.01	D1, D4, Q5	dcorbett
2011010695	C	Chloromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00019	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	cis-1,3-Dichloropropene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00007	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Dibromochloromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	Ethyl benzene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Methylene chloride	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	Tetrachloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00011	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Toluene	1/12/11 13:00	EPA 624	01/21/11 17:50	0.02	mg/Kg	0.00007	0.01	D1, D4, Q5	dcorbett
2011010695	C	Trichlorofluoromethane	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5	dcorbett
2011010695	C	Trichloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00008	0.01	D1, D4, Q5, M1	dcorbett
2011010695	C	Trihalomethane, Total	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg		0.01	D1, D4, Q5	dcorbett
2011010695	C	trans-1,2-Dichloroethene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00014	0.01	D1, D4, Q5	dcorbett
2011010695	C	trans-1,3-Dichloropropene	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, Q5, N1	dcorbett
2011010695	C	Vinyl chloride	1/12/11 13:00	EPA 624	01/21/11 17:50	ND	mg/Kg	0.00006	0.01	D1, D4, S7	dcorbett
2011010695	C	4,4-DDD	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	4,4-DDE	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	4,4-DDT	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	11.455	D1, D4, N1	mmichel
2011010695	C	Aldrin	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	alpha-BHC	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4, V1	mmichel
2011010695	C	Aroclor 1016	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.1	57.275	D1, D4	mmichel
2011010695	C	Aroclor 1221	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.03	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1232	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.09	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1242	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.08	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1248	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1254	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.05	114.55	D1, D4	mmichel
2011010695	C	Aroclor 1260	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.05	57.275	D1, D4	mmichel
2011010695	C	beta-BHC	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	11.455	D1, D4	mmichel
2011010695	C	Chlordane, Technical	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.48	114.55	D1, D4	mmichel
2011010695	C	delta-BHC	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	11.455	D1, D4, V1	mmichel
2011010695	C	Dieldrin	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	Endosulfan I	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4	mmichel
2011010695	C	Endosulfan II	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.01	22.91	D1, D4	mmichel
2011010695	C	Endosulfan sulfate	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.02	5.7275	D1, D4, S4	mmichel
2011010695	C	Endrin	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.03	22.91	D1, D4, N1	mmichel
2011010695	C	Endrin aldehyde	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.01	11.455	D1, D4, N1	mmichel
2011010695	C	gamma-BHC (Lindane)	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	11.455	D1, D4	mmichel
2011010695	C	Heptachlor	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.03	11.455	D1, D4	mmichel
2011010695	C	Heptachlor epoxide	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	0.04	11.455	D1, D4	mmichel
2011010695	C	Toxaphene	1/12/11 13:00	EPA 625	02/08/11 17:55	ND	ug/kg	5.29	1832.8	D1, D4	mmichel
2011010695	C	Methoxychlor	1/12/11 13:00	EPA 8270C	02/08/11 17:55	ND	ug/kg	0.03	11.455	D1, D4, N1	mmichel
2011010695	C	1,2,4-Trichlorobenzene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00054	0.22	D1, D4	smitchell
2011010695	C	1,2-Diphenylhydrazine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00101	0.22	D1, D4	smitchell

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Green Valley WRF

BNROD-Biosolids from drying bed #5 (25000-1970)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010695	C	2,3-Dichloroaniline	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00172	0.22	D1, D4	smitchell
2011010695	C	2,4,6-Trichlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00078	0.22	D1, D4	smitchell
2011010695	C	2,4-Dichlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00059	0.22	D1, D4	smitchell
2011010695	C	2,4-Dimethylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00253	0.22	D1, D4	smitchell
2011010695	C	2,4-Dinitrophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00489	1.1	D1, D4	smitchell
2011010695	C	2,4-Dinitrotoluene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00095	0.22	D1, D4	smitchell
2011010695	C	2,6-Dinitrotoluene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00113	0.22	D1, D4	smitchell
2011010695	C	2-Chloronaphthalene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00101	0.22	D1, D4	smitchell
2011010695	C	2-Chlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00065	0.22	D1, D4	smitchell
2011010695	C	2-Methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00118	0.22	D1, D4	smitchell
2011010695	C	2-Nitrophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00072	0.22	D1, D4	smitchell
2011010695	C	3,3-Dichlorobenzidine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00676	1.65	D1, D4	smitchell
2011010695	C	4,6-Dinitro-2-methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00119	0.66	D1, D4	smitchell
2011010695	C	4-Bromophenyl phenyl ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0008	0.22	D1, D4	smitchell
2011010695	C	4-Chloro-3-methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00071	0.22	D1, D4	smitchell
2011010695	C	4-Chlorophenyl phenyl ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00091	0.22	D1, D4	smitchell
2011010695	C	4-Methylphenol	1/12/11 13:00	EPA 625	02/02/11 19:22	2.77	mg/Kg	0.0013	0.22	D1, D4	smitchell
2011010695	C	4-Nitrophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00352	0.22	D1, D4, V1	smitchell
2011010695	C	Acenaphthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00084	0.22	D1, D4	smitchell
2011010695	C	Acenaphthylene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00061	0.22	D1, D4	smitchell
2011010695	C	Anthracene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00092	0.22	D1, D4	smitchell
2011010695	C	Benzo(a)anthracene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00085	0.22	D1, D4	smitchell
2011010695	C	Benzidine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.01323	1.65	D1, D4, N1	smitchell
2011010695	C	Benzo(a)pyrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00119	0.22	D1, D4	smitchell
2011010695	C	Benzo(b)fluoranthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00137	0.22	D1, D4	smitchell
2011010695	C	Benzo(g,h,i)perylene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0027	0.22	D1, D4	smitchell
2011010695	C	Benzo(k)fluoranthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00187	0.22	D1, D4	smitchell
2011010695	C	Bis(2-Chloroisopropyl)ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00061	0.22	D1, D4	smitchell
2011010695	C	Bis(2-chloroethoxy)methane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00051	0.22	D1, D4	smitchell
2011010695	C	Bis(2-chloroethyl)ether	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00067	0.22	D1, D4	smitchell
2011010695	C	Bis(2-ethylhexyl) phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00511	0.22	D1, D4	smitchell
2011010695	C	Butylbenzyl phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00166	0.22	D1, D4	smitchell
2011010695	C	Carbazole	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00141	0.44	D1, D4	smitchell
2011010695	C	Chrysene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00099	0.22	D1, D4	smitchell
2011010695	C	Dibenz(a,h)anthracene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00226	0.22	D1, D4	smitchell
2011010695	C	Diethyl phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0007	0.22	D1, D4	smitchell
2011010695	C	Dimethylphthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00069	0.22	D1, D4	smitchell
2011010695	C	Di-n-butyl phthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00191	0.22	D1, D4	smitchell
2011010695	C	Di-n-octylphthalate	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00449	0.22	D1, D4	smitchell
2011010695	C	Fluoranthene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00109	0.22	D1, D4	smitchell
2011010695	C	Fluorene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00094	0.22	D1, D4	smitchell
2011010695	C	Hexachlorobenzene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00059	0.22	D1, D4	smitchell
2011010695	C	Hexachlorobutadiene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00052	0.22	D1, D4	smitchell
2011010695	C	Hexachloroethane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00056	0.22	D1, D4	smitchell
2011010695	C	Hexachlorocyclopentadiene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00267	0.22	D1, D4	smitchell
2011010695	C	Indeno(1,2,3-cd)pyrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00204	0.22	D1, D4	smitchell
2011010695	C	Isophorone	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00325	0.22	D1, D4	smitchell
2011010695	C	Naphthalene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00072	0.22	D1, D4	smitchell
2011010695	C	n-Decane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00068	0.22	D1, D4	smitchell
2011010695	C	Nitrobenzene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.0005	0.22	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 Lab Supervisor.

Total Volatile Solids - Used for process control samples only.

Green Valley WRF

BNROD-Biosolids from drying bed #5 (25000-1970)

Sample Number	Type	Parameter	Sample Date/Time	Analysis Method	Analysis Date/Time	Analysis Value	Units	MDL	PQL	Data Qualifier(s)	Analyst
2011010695	C	N-Nitroso-di-n-propylamine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00063	0.22	D1, D4	smitchell
2011010695	C	N-Nitrosodimethylamine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00064	0.22	D1, D4	smitchell
2011010695	C	N-Nitrosodiphenylamine	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00102	0.22	D1, D4	smitchell
2011010695	C	n-Octadecane	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00248	0.22	D1, D4	smitchell
2011010695	C	Pentachlorophenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00076	0.66	D1, D4	smitchell
2011010695	C	Phenanthrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00097	0.22	D1, D4	smitchell
2011010695	C	Phenol	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00055	0.22	D1, D4	smitchell
2011010695	C	Pyrene	1/12/11 13:00	EPA 625	02/02/11 19:22	ND	mg/Kg	0.00119	0.22	D1, D4	smitchell
2011010695	C	Chlordane, Technical	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.48	0.5		mmichel
2011010695	C	Endrin	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.03	0.1	M1	mmichel
2011010695	C	gamma-BHC (Lindane)	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.04	0.05	M1, R1	mmichel
2011010695	C	Heptachlor	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.03	0.05	R4	mmichel
2011010695	C	Heptachlor epoxide	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.04	0.05		mmichel
2011010695	C	Methoxychlor	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	0.03	0.05	R4	mmichel
2011010695	C	Toxaphene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 15:53	ND	ug/l	5.29	8		mmichel
2011010695	C	1,4-Dichlorobenzene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.81	2		smitchell
2011010695	C	2,4,5-Trichlorophenol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	8.64	10		smitchell
2011010695	C	2,4,6-Trichlorophenol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	4.72	5		smitchell
2011010695	C	2,4-Dinitrotoluene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	7.46	10		smitchell
2011010695	C	Hexachlorobenzene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	1.71	2		smitchell
2011010695	C	Hexachlorobutadiene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	1.19	2		smitchell
2011010695	C	Hexachloroethane	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.72	2		smitchell
2011010695	C	m+p-Cresols	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	14.27	ug/l	1.81	2		smitchell
2011010695	C	Nitrobenzene	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.76	2		smitchell
2011010695	C	o-Cresol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	0.51	2		smitchell
2011010695	C	Pentachlorophenol	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	20.15	25		smitchell
2011010695	C	Pyridine	1/12/11 13:00	EPA 8270C-TCLP	02/08/11 12:41	ND	ug/l	1.62	2		smitchell
2011010695	C	1,1-Dichloroethene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.08	0.50		dcorbett
2011010695	C	1,2-Dichloroethane	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.05	0.50		dcorbett
2011010695	C	1,4-Dichlorobenzene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.11	0.50	N1	dcorbett
2011010695	C	Benzene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.05	0.50		dcorbett
2011010695	C	Carbon tetrachloride	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.10	0.50		dcorbett
2011010695	C	Chlorobenzene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.06	0.50		dcorbett
2011010695	C	Chloroform	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.05	0.50		dcorbett
2011010695	C	Hexachlorobutadiene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.16	0.50		dcorbett
2011010695	C	Methyl ethyl ketone	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	28.05	ug/l	0.55	2.0	B1	dcorbett
2011010695	C	Tetrachloroethene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.11	0.50		dcorbett
2011010695	C	Trichloroethene	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.08	0.50		dcorbett
2011010695	C	Vinyl chloride	1/12/11 13:00	EPA 8260B-TCLP	01/27/11 20:14	ND	ug/l	0.06	0.50		dcorbett

Lab Comments:

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Analysis Date represents the final reading date.
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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
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010195	D1	Sample required dilution due to matrix.	1/4/11
2011010195	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	1/4/11
2011010195	M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.	1/4/11
2011010195	R1	RPD/RSD exceeded the method acceptance limit.	1/4/11
2011010202	D2	Sample required dilution due to high concentration of target analyte.	1/4/11
2011010423	D1	Sample required dilution due to matrix.	1/7/11
2011010423	D2	Sample required dilution due to high concentration of target analyte.	1/7/11
2011010423	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/7/11
2011010423	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010423	N1	See case narrative.	1/7/11
2011010423	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/7/11
2011010424	D1	Sample required dilution due to matrix.	1/7/11
2011010424	L4	The associated blank spike recovery was below method acceptance limits.	1/7/11
2011010424	N1	See case narrative.	1/7/11
2011010424	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/7/11
2011010677	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010688	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010695	B1	Target analyte detected in method blank at or above the method reporting limit.	1/12/11
2011010695	D1	Sample required dilution due to matrix.	1/12/11
2011010695	D2	Sample required dilution due to high concentration of target analyte.	1/12/11
2011010695	D4	Minimum Reporting Limit (MRL=PQL) adjusted to reflect sample amount received and analyzed.	1/12/11
2011010695	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/12/11
2011010695	L4	The associated blank spike recovery was below method acceptance limits.	1/12/11

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
January 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011010695	M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable	1/12/11
2011010695	M5	Analyte concentration was determined by the method of standard addition (MSA).	1/12/11
2011010695	N1	See case narrative.	1/12/11
2011010695	Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.	1/12/11
2011010695	R1	RPD/RSD exceeded the method acceptance limit.	1/12/11
2011010695	R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.	1/12/11
2011010695	S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.	1/12/11
2011010695	S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.	1/12/11
2011010695	V1	CCV recovery was above method acceptance limit. This target analyte was not detected in the sample.	1/12/11
2011011053	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/19/11
2011011053	N1	See case narrative.	1/19/11
2011011053	S6	Surrogate recovery was below laboratory and method acceptance limits.Reextraction and/or reanalysis confirms low recovery caused by matrix effect.	1/19/11
2011011232	N1	See case narrative.	1/21/11
2011011358	D2	Sample required dilution due to high concentration of target analyte.	1/24/11
2011011358	Q3	Sample received with improper chemical preservation.	1/24/11
2011011359	D2	Sample required dilution due to high concentration of target analyte.	1/24/11
2011011359	L2	The associated blank spike recovery was below laboratory acceptance limits.	1/24/11
2011011359	N1	See case narrative.	1/24/11
2011011359	Q3	Sample received with improper chemical preservation.	1/24/11

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

Case Narrative

Sample ID: 2011010695
Permit Name: Green Valley WRF
Location Name: BNROD-Biosolids from drying bed #5

Green Valley WRF was sampled from its BNROD-Biosolids from drying bed #5 location on 01/12/11 and 01/31/11 for purgeable organics testing, EPA method 624 and method 8260. By means of the analysis performed, the matrix spike employed on a different sample within this batch failed either low or high for compounds qualified with N1.

2011010695 was extracted for EPA Method 625 Pesticides and Semi-Volatiles, each on 01/19/2011, target analytes flagged with N1 for this method failed the Matrix Spike from the same extraction batch but the spike was performed on a different sample.

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 # 2011010695 **PO: 11024115**
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: 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: 4-21-11

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.	GOS	✓
PO received in Synergen	GOS	NA

Peer Review date and initials: GOS 04-21-11 **Final Review date and initials:** 5/6/11 BAE

Comments:

REVISED REPORT! INITIAL REPORT WAS CALCULATED INCORRECTLY.NP 4/21/11

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 Drying Bed #5

Sampled: 01/12/11
Received: 01/14/11
Revised: 04/19/11 14:45

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
PUA0922-01	2011010695	Soil

TestAmerica Phoenix

Suzanne Glass
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Pima County WWTP
7101 N. Casa Grande Highway, Ina Road Wastewater Treatment Plant
Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

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. N1 - The recovery of the surrogate DCAA was below laboratory acceptance criteria in the Laboratory Control Sample and in the Matrix Spike. All other surrogate recoveries in the batch QC and samples met method criteria and therefore should not be impacted. Additionally, the Laboratory Control Sample recovered below laboratory acceptance criteria for Silvex. The recovery of Silvex was acceptable in all other batch QC meetin batch accuracy requirements.
COMMENTS:	No significant observations were made.
SUBCONTRACTED:	Refer to the last page for specific subcontract laboratory information included in this report.
ADDITIONAL INFORMATION:	The report was revised to correct the percent solids result for PUA0922-01. The explanation for the revision is detailed in the included Corrective Action Report. Any dry weight corrected results for PUA0922-01 have also been adjusted as a result of the correction.

Reviewed By:

TestAmerica Phoenix

Suzanne Glass
Project Manager

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Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

CORRECTIVE ACTION REPORT

Department: N_Wet Chemistry
Method: M2540G
QC Batch: 11A0495

Date: 03/23/2011
Matrix: Soil

Identification and Definition of Problem:

Beginning September 1, 2010 percent solid/percent moisture samples were being miscalculated. The weight being used for the calculation included the weight of the sample pan used for analysis. When correctly calculated, the weight of the sample pan is subtracted out. As a result the data spreadsheet incorrectly calculated the final percent solid/moisture. The extra weight of the sample pan caused the final percent solid to biased low and the percent moisture to be biased high. The problem was discovered during data review the first week of February 2011.

Determination of the Cause of the Problem:

The cause of the this problem was insufficient training on the proper method procedures. The issue started with the incorrect training of a new analyst. Upon further review the spreadsheet used for the calculations was unclear about the proper way to conduct the test. Additionally, the method Standard Operating Procedure needed clarification.

Corrective Action Taken:

The correct results were recalculated for all samples since all the necessary data was available on the spreadsheets. Retraining of all analysts was conducted. The spreadsheet has also been updated to make it clear where information and values are entered. The SOP will be revised to clearly state that the weight of the pan is subtracted from the final weight. A complete systems audit of the wet chemistry department was conducted to ensure that a similar lapse in training had not occurred with other methods. No additional problems were identified.

Mary L. Tyer

Quality Assurance Approval: Mary Tyer Date: 03/24/2011 01:40 PM

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Tucson, AZ 85743
Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: % by Weight								
Percent Solids	M2540G	11A0495	0.10	**87**	1	1/17/2011	1/17/2011	
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: I/NI								
Ignitability	EPA 1030	11A0721	NA	Not Ignitable	1	1/21/2011	1/21/2011	
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: mg/kg dry								
Cyanide	SW9010C/9014	11A0606	0.46	7.7	0.988	1/19/2011	1/19/2011	
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: pH Units								
pH	SW9045D	11A0509	1.68	**7.10**	1	1/17/2011	1/17/2011	
Temperature - °C	SW9045D	11A0509	NA	**19.9**	1	1/17/2011	1/17/2011	

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Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

Cyanide, Reactive

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: mg/Kg								
Cyanide, Reactive	9014	124788	0.25	ND	1	1/26/2011	1/26/2011	

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Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

Sulfide, Reactive

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)								
Reporting Units: mg/Kg								
Sulfide, Reactive	9034	124790	150	ND	1	1/26/2011	1/26/2011	

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Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

TCLP CHLORINATED HERBICIDES (EPA 1311/8151A)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil)									
Reporting Units: mg/l									
2,4,5-TP (Silvex)	SW1311/8151A	11A0661	0.013	ND	1	1.0	1/20/2011	1/24/2011	N1
2,4-D	SW1311/8151A	11A0661	0.013	ND	1	10.0	1/20/2011	1/24/2011	
Pentachlorophenol	SW1311/8151A	11A0661	0.013	ND	1	100.0	1/20/2011	1/24/2011	
Surrogate: DCAA (30-154%)				*30 %*					

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Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

TCLP EXTRACTION

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUA0922-01 (2011010695 - Soil) - cont.									
Reporting Units: None									
TCLP Extraction	EPA 1311	11A0475	1.00	ND	1	NA	1/17/2011	1/18/2011	

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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 Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
Received: 01/14/11

DATA QUALIFIERS AND DEFINITIONS

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

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
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Attention: Nancy Powell

Project ID: Green Valley Drying Bed #5
Report Number: PUA0922

Sampled: 01/12/11
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Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1030	Soil		X
EPA 1311	Soil		X
M2540G	Soil		X
SW1311/8151A	Soil		X
SW9010C/9014	Soil		X
SW9045D	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

STL-Pensacola

3355 McLemore Drive - Pensacola, FL 32514

Method Performed: 9014
Samples: PUA0922-01

Method Performed: 9034
Samples: PUA0922-01

TestAmerica Phoenix

Suzanne Glass
Project Manager

Login Sample Receipt Check List

Client: TestAmerica Laboratories, Inc.

Job Number: 400-53287-1

Login Number: 53287
List Source: TestAmerica Pensacola
Creator: Hor, Koma
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM PWA0922-01

[ ] 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:	Project/PO Number:
Pima County RWRD 7101 N Casa Grande Hwy Tucson AZ 85743	Green Valley drying bed #5 PO# 11027038
Project Manager: Nancy Powell	**Phone Number:** 520-443-6183
Sampler: CARPENTER GUEBARA	**Fax Number:** 520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Ignitability	reactivity	total cyanide mg/kg	TCLP herbicides	corrosivity / pH	total solids % for mg/kg				Special Instructions
Green Valley BNROD	BS	soil jars	3	01-12-11	1300	none	✓	✓	✓	✓	✓	✓				hand composited
~~Biot~~ Biosolids from drying bed #5																
25000-1970																
Pima LIMS # 2011010695																
PO# 11027038																

GOS 01-12-11

BS = biosolids

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	01/12/10 1500	GOS 01-12-10 01-12-11	1500	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
	01/13/0 1017		1/13/11 1013	48 hours ____	normal ✓
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
	1/13/11		1/14/11 1030	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.

2.5%

Barbara,
The only thing that was performed in Pensacola was the reactivity that we asked for but shouldn't have. The total cyanide was done in Phoenix. I have instructed Greg not to put reactivity on the chain anymore.
Nancy

ok
BAE
5/6/11

PIMA COUNTY WASTEWATER MANAGEMENT
WATER QUALITY
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: IWC (Organization) LAB ID: 2011010695

SAMPLERS: CARPENTER, GUEBARA (Print Last Names Only) FACILITY-LOCATION ID: 25000 - 1970

SAMPLE DATE: 01/12/11 (MM / DD / YY) SAMPLE TIME: 1300 hrs (24 Hour Clock)

SAMPLE LOCATION: Green Valley WWTF - BNROD - Biosolids From Drying Bed #5

PERMIT TYPE:
- ☐ APP
- ☐ Investigations
- ☐ IWC
- ■ AZPDES
- ☐ REUSE
- ☐ USFS
- ☐ 503
- ☐ Other

SAMPLE MATRIX:
- ■ Biosolids
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Reclaimed Water

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	☐	☐	Thallium	☐	☐	Acrolein and Acrylonitrile	☐	■	Alkalinity	☐	☐
Antimony	☐	☐	Tin	☐	☐	Dioxin GC/SIM/MS Scan	☐	☐	Bicarbonate	☐	☐
Arsenic	☐	☐	Titanium	☐	☐	Organochlorine Pesticides & PCBs	☐	■	BOD	☐	☐
Barium	☐	☐	Vanadium	☐	☐	Purgeable Organics (GCMS)	☐	■	Carbonate	☐	☐
Beryllium	☐	☐	Zinc	☐	☐	Semivolatile Organics (GCMS)	☐	■	COD	☐	☐
Boron	☐	☐	ICP Scan *	☐	☐	Other	☐	☐	Coliform, Fecal ****	☐	☐
Cadmium	☐	☐	Priority Pollutant Metals **	☐	■	MISCELLANEOUS METHODS	D	C	Coliform, Sediment	☐	☐
Calcium	☐	☐	TCLP Metals	☐	■	Digester Gas	☐	☐	Coliform, Total ****	☐	☐
Chromium	☐	☐	503 Metals ***	☐	☐	Lindane	☐	☐	*E-coli* ****	☐	☐
Chromium +6	☐	☐	WET METHODS	D	C	Oil and Grease	☐	☐	Conductivity	☐	☐
Cobalt	☐	☐	Ammonia as N	☐	☐	Organic Carbon, Total	☐	☐	Ignitability (contract lab)	☐	■
Copper	☐	☐	Chloride	☐	☐	Organic Carbon, Dissolved	☐	☐	Oxygen, Dissolved	☐	☐
Hardness	☐	☐	Cyanide, T (contract lab)	☐	■	Organophosphorous Pesticides	☐	☐	pH	☐	☐
Iron	☐	☐	Cyanide, Amenable	☐	☐	TCLP Herbicides (contract lab)	☐	■	Solids, Settleable	☐	☐
Lead	☐	☐	Fluoride	☐	☐	TCLP Pesticides	☐	■	Solids, Total	☐	■
Magnesium	☐	☐	Nitrate as N	☐	☐	TCLP Semivolatile Organics	☐	■	(% solids mg/kg)		
Manganese	☐	☐	Nitrite as N	☐	☐	TCLP Volatile Organics	☐	■	Solids, Total Dissolved	☐	☐
Mercury	☐	☐	Nitrate & Nitrite as N	☐	☐	Total Petroleum Hydrocarbons	☐	☐	Solids, Total Suspended	☐	☐
Molybdenum	☐	☐	Nitrogen, Tot. Kjeldahl	☐	☐	Volatile Acids	☐	☐	Solids, Total Volatile	☐	☐
Nickel	☐	☐	Nitrogen, Total as N	☐	☐				Solids, Volatile Suspended	☐	☐
Potassium	☐	☐	Orthophosphate as P	☐	☐				Turbidity	☐	
Selenium	☐	☐	Phosphorus, Total as P	☐	☐	Other1,2-Dichlorobenzene	☐	☐	Reactivity (contract lab)	☐	■
Silver	☐	☐	Sulfate	☐	☐	Other1,2-Dichlorobenzene	☐	☐	Corrosivity (contract lab)	☐	■
Sodium	☐	☐	Sulfide	☐	☐	Other1,2-Dichlorobenzene	☐	☐			
Strontium	☐	☐	Other	☐	☐		☐	☐		☐	☐

Notes: COS per contract lab. 01-12-11 Contract lab is Test America. PO# 1102703B

[redacted] 77°F @ SAMPLING TIME HAND COMPOSITED 1304 1-13-11

Septum Prep Date: 01-04-11 JS TCLP volatiles and TCLP semi-volatiles in clear glass. 603 & 624 in same bag. COS 01-12-11

FIELD MEASUREMENTS

- ☐ Chlorine _____
- ☐ Oxygen (Dis.) _____
- ☐ Conductivity
- ☐ Temperature _____
- ☐ pH _____
- ☐ Other

Sample Receiving Temp.
≤4°C IR Thermo COS

Number of Sample Containers
(12) COS

Sampled by:	Received by:	Date/Time 01-12-11 1457
Relinquished by:	Received by:	Date/Time 1/13/11 10135
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 all bacteria samples in the "Notes Box" if different than the information provided in heading.

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 RWRD
7101 N Casa Grande Hwy
Tucson AZ 85743

Project / PO Number:
Green Valley drying bed #5
PO# 11027038

Project Manager: Nancy Powell

Phone Number:
520-443-6183

Sampler: CARPENTER
GUEBARA

Fax Number:
520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: ignitability	reactivity	total cyanide mg/kg	TCLP herbicides	corrosivity / pH	total solids % for mg/kg				Special Instructions
Green Valley BNROD	BS	soil jars	3	01-12-11	1300	none	✓	✓	✓	✓	✓	1				hand composited
Biot Biosolids from drying bed #5																
25000-1970																
Pima LIMS# 2011010695																
PO# 11027038																

BS = biosolids

Relinquished By: Date / Time: 01/12/10 1500
Received By: GGS 01-12-11 1500 (01-12-10)

Relinquished By: Date / Time: 01/13/0 1017
Received By: Date / Time: 1/13/10 1015

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 & REGULATORY AFFAIRS OFFICE
LABORATORY SERVICES
520-443-6100 (Fax 520-443-6071)

SAMPLE RECEIPT CHECKLIST

LIMS: 2011010695 (yyyy/mm/xxxx – xxxx)

Facility or Submitter: IWC

Retrieved from a refrigerator: ☐ Yes ☒ No ☐ N/A

Total number of containers received: 12
(Note: Septa set counts as '1' bottle)

Were samples transported on ice? ☒ Yes ☐ No

Temperature of Samples: ≤4 °C ☒ IR ☐ LIG

INSPECTION	YES	NO	N/A	COMMENT
Chain of Custody relinquished by sampler?	✓			
Sample labels match COC?		✓		Lots of changes at SR
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?	SOS ✓	✓		TCLP semi-vol and TCLP volatile and 603 and 624
Are sample containers damaged or leaking?		✓		
40 ml vials headspace, or air bubbles?	✓			Dry biosolids
COC received by laboratory and signed?	✓			

PRESERVATIVE LABEL	# OF CONTAINERS
Non-preserved	11
HNO_3 (Nitric Acid)	1
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) 01-12-11 (mm/dd/yy)

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: 5/10/2011 11:29:05
Laboratory License #AZ0159

Sample Analysis Report
Green Valley WRF - Permit Number 25000
March 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:

2011031735 Sample sent to Bio Aquatic Testing for Selenastrum capricornutum 03/28/11.

2011031560 Sample sent to Test America for Total Cyanide (mg/kg) and Total Solids analysis 03-24-11.

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 Rooke

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

05/16/11
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-Effluent-Process Control (25000-1925)											
2011030145	C	Alkalinity, Total	3/2/11 8:00	SM 2320B	03/03/11 14:30	178	mg/l		20		jvriper
2011030145	C	Alkalinity, Bicarbonate	3/2/11 8:00	SM 2320B	03/03/11 14:30	178	mg/l		20		jvriper
2011030145	C	Biochemical Oxygen Demand	3/2/11 8:00	SM 5210B	03/08/11 5:58	<2	mg/l		2	K5	snevius
2011030145	C	Alkalinity, Carbonate	3/2/11 8:00	SM 2320B	03/03/11 14:30	ND	mg/l		20		jvriper
2011030145	C	Solids, Total Suspended	3/2/11 8:00	SM 2540D	03/03/11 5:25	<2.5	mg/l		2.5		apagel
BNROD-MLSS-Process Control (25000-1940)											
2011030143	D	Solids, Total Suspended	3/2/11 7:20	SM 2540D	03/03/11 5:25	1940.0	mg/l		2.5		apagel
2011030143	D	Solids, Total Volatile Suspended	3/2/11 7:20	EPA 160.4	03/03/11 5:25	1660.0	mg/l		2.5		apagel
BNROD-North Aerobic Digester Sludge (25000-1950)											
2011030144	D	Solids, Total	3/2/11 7:35	SM 2540G	03/03/11 7:20	4.05	%		0.005		sdevito
2011030144	D	Solids, Volatile	3/2/11 7:35	SM 2540G	03/03/11 7:20	83.3	%		0.005		sdevito
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

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.

Data Qualifiers and Definitions for Permit 25000
Green Valley WRF
March 2011

Lab ID:	Data Qualifier(s):	Definition:	Sample Date:
2011030145	K5	The dilution water D.O. depletion was >0.2 mg/L.	3/2/11
2011030228	D2	Sample required dilution due to high concentration of target analyte.	3/3/11
2011030629	D2	Sample required dilution due to high concentration of target analyte.	3/9/11
2011030630	D2	Sample required dilution due to high concentration of target analyte.	3/9/11
2011031560	D2	Sample required dilution due to high concentration of target analyte.	3/24/11
2011031560	M5	Analyte concentration was determined by the method of standard addition (MSA).	3/24/11
2011031734	D1	Sample required dilution due to matrix.	3/28/11
2011031734	K1	The sample dilutions set-up for the BOD/CBOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.	3/28/11
2011031734	M5	Analyte concentration was determined by the method of standard addition (MSA).	3/28/11
2011031734	Q1	Sample integrity was not maintained. See case narrative.	3/28/11
2011031736	Q1	Sample integrity was not maintained. See case narrative.	3/28/11

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: 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: 4-21-11

Peer/Final Review

	P	
R		
	F	
R		
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 BAE

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	

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Sampled: 03/24/11
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DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

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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

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:	Project/PO Number:
Pima County RWRD 7101 N Casa Grande Hwy Tucson AZ 85743	Green Valley #5 PO # 1103721U
Project Manager: Money Powell	**Phone Number:** 520-443-5183
Sampler: Roger Artz	**Fax Number:** 520-443-5071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total Cyanide 335.4	Analysis Required: Total Phenolics 420.1	Special Instructions
Green Valley Dump Lift Sta	Ww	HDPE	2	03-24-11	0943-0955	ice none	1	1	Hand composited
Test 2500.0-1971									Composited Location
Pima LIMS # 20110315-60									
PO# 1103721U									

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
For Roger Artz	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 1545		3/25/11 705	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 WASTEWATER MANAGEMENT
TECHNICAL SERVICES SECTION
CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

SUBMITTER: **SUB-REGIONAL FACILITIES** (Organization) LAB ID: 20110315 57

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						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	☐	☐	[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:	Lab Fridge	3-24-11 0708
Relinquished by:	Received by:	Date/Time
Lab Fridge	Rick Anderson	3-24-11 / 08:34AM
Relinquished by:	Received by:	Date/Time
Rick Anderson		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) 03-24-11 (mm/dd/yy)

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)

PERMIT TYPE:
- ☐ APP
- ☐ APP Investigations
- ☐ IWC
- ■ [redacted]
- ☐ REUSE
- ☐ USFS
- ■ [redacted]
- ☐ PROCESS CONTROL

SAMPLE MATRIX:
- ■ [redacted]
- ☐ Groundwater
- ☐ Industrial Wastewater
- ☐ Soil
- ☐ Stormwater
- ☐ Surface Water
- ☐ Wastewater
- ☐ Other

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 (wet)	☐	☐	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# 110037214 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:	Received by: Lab Fridge	Date/Time 3-24-11 0708
Relinquished by: Lab Fridge	Received by: Rick Anderson	Date/Time 3-24-11 / 08:34 Am
Relinquished by: Rick Anderson	Received by:	Date/Time 03-24-11 1109
Relinquished by:	Received by:	Date/Time 3/24/11 13:00
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

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 #5
PO # 11037214

Project Manager:
Nancy Powell

Phone Number:
520-443-6183

Sampler:
Roger Artz

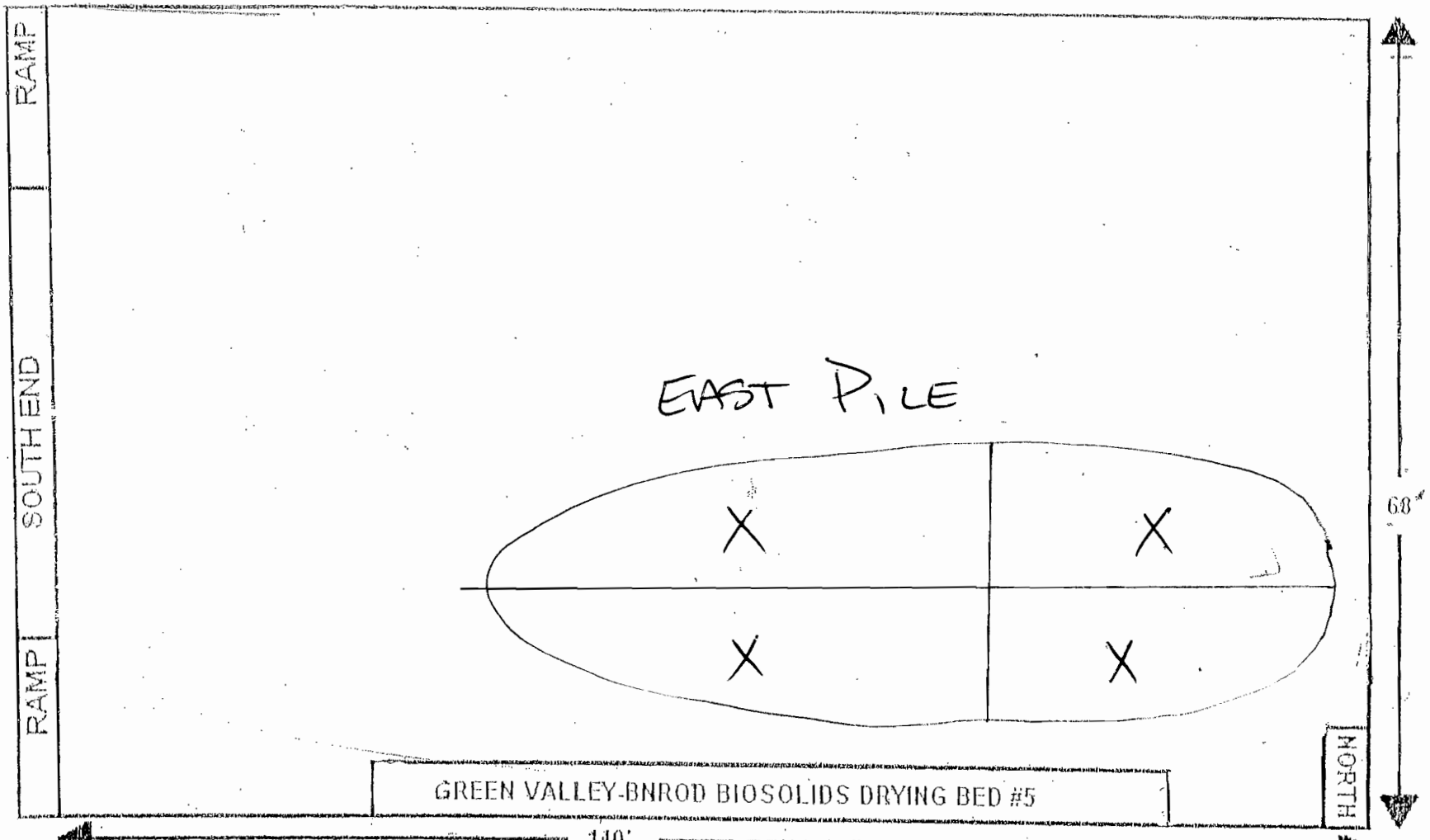
Fax Number:
520-443-6071

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Total cyanide mg/kg	Analysis Required: 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:	Turnaround Time: (Check)	
for Roger Artz	03-24-11 1109		03-24-11 1109	same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
			3/24/11 1300	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.

20110315 60



SAMPLES COMPOSITED FROM MARKED LOCATIONS OF EACH PILE

SAMPLER R. Arez 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: 2011031560
(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) 03-24-11 (mm/dd/yy)