TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-84945-1
TestAmerica Sample Delivery Group: Cholla
Client Project/Site: APS - Four Corners CCR

For:
Arizona Public Service Company
4801 Cholla Lake Rd
Joseph City, Arizona 86032

Attn: Doug Lavarnway

Authorized for release by:
7/12/2017 9:25:52 AM

Ken Baker, Project Manager II
(602)659-7624
ken.baker@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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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
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
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: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-84945-1
SDG: Cholla

Job ID: 550-84945-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-84945-1

Comments
No additional comments.

Receipt
The samples were received on 6/24/2017 8:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.6º C, 1.0º C, 1.1º C and 1.3º C.

Lab Admin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work
Method Radium 226/228: This method was subcontracted to Radiation Safety. The subcontract laboratory certification is different from that of the facility issuing the final report.

Sample Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-84945-1
SDG: Cholla

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-84945-1	FC-CCR-MW7-62217	Water	06/22/17 13:40	06/24/17 08:25
550-84945-2	FC-CCR-MW49A-62217	Water	06/22/17 14:27	06/24/17 08:25
550-84945-3	FC-CCR-MW60-62217	Water	06/22/17 11:11	06/24/17 08:25
550-84945-4	FC-CCR-MW61-62217	Water	06/22/17 11:56	06/24/17 08:25
550-84945-5	FC-CCR-MW62-62117	Water	06/21/17 09:08	06/24/17 08:25
550-84945-6	FC-CCR-MW63-62117	Water	06/21/17 10:50	06/24/17 08:25
550-84945-7	FC-CCR-MW64-62117	Water	06/21/17 11:27	06/24/17 08:25
550-84945-8	FC-CCR-MW65-62117	Water	06/21/17 08:20	06/24/17 08:25
550-84945-9	FC-CCR-FD01-62117	Water	06/21/17 08:20	06/24/17 08:25
550-84945-10	FC-CCR-MW66-62117	Water	06/21/17 09:44	06/24/17 08:25
550-84945-11	FC-CCR-MW67-62117	Water	06/21/17 13:26	06/24/17 08:25
550-84945-12	FC-CCR-MW68-62117	Water	06/21/17 14:08	06/24/17 08:25
550-84945-13	FC-CCR-MW69-62117	Water	06/21/17 12:44	06/24/17 08:25
550-84945-14	FC-CCR-MW70-62117	Water	06/21/17 12:05	06/24/17 08:25
550-84945-15	FC-CCR-MW71-62217	Water	06/22/17 08:43	06/24/17 08:25
550-84945-16	FC-CCR-MW72-62217	Water	06/22/17 07:59	06/24/17 08:25
550-84945-17	FC-CCR-FD02-62217	Water	06/22/17 07:59	06/24/17 08:25
550-84945-18	FC-CCR-MW73-62217	Water	06/22/17 09:24	06/24/17 08:25
550-84945-19	FC-CCR-MW74-62217	Water	06/22/17 10:04	06/24/17 08:25
550-84945-20	FC-CCR-MW75-62217	Water	06/22/17 12:38	06/24/17 08:25

Accreditation/Certification Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-84945-1
SDG: Cholla

Laboratory: TestAmerica Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arizona	State Program	9	AZ0728	06-09-18

Method Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-84945-1
SDG: Cholla

Method	Method Description	Protocol	Laboratory
Radium 226/228	General Sub Contract Method	NONE	Radiation

Protocol References:

NONE = NONE

Laboratory References:

Radiation = Radiation Safety, 3245 North Washington Street, Chandler, AZ 85225

Radiation Safety Engineering, Inc.

3245 N. WASHINGTON ST. • CHANDLER, ARIZONA 85225-1121 (480) 897-9459
Website: www.radsafe.com FAX (480) 892-5446

Radiochemical Activity in Water (pCi/L)

TestAmerica Analytical Testing Corporation
4645 E. Cotton Center Blvd
Building #3, Suite #189
Phoenix, AZ 85040

Samples Received: June 26, 2017
Analysis Completed: July 10, 2017

Sample ID	Radium 226 Activity Method GammaRay HPGE (pCi/L)	Radium 228 Activity Method GammaRay HPGE (pCi/L)	Total Radium (pCi/L)
FC-CCR-MW7-62217 (550-84945-1)	< 0.3	1.2 ± 0.3	1.2 ± 0.3
FC-CCR-MW49A-62217 (550-84945-2)	0.5 ± 0.2	2.2 ± 0.3	2.7 ± 0.4
FC-CCR-MW60-62217 (550-84945-3)	0.5 ± 0.2	0.9 ± 0.3	1.4 ± 0.4
FC-CCR-MW61-62217 (550-84945-4)	< 0.3	< 0.6	< 0.6
FC-CCR-MW62-62117 (550-84945-5)	< 0.3	< 0.6	< 0.6
FC-CCR-MW63-62117 (550-84945-6)	0.4 ± 0.1	< 0.6	0.4 ± 0.1
FC-CCR-MW64-62117 (550-84945-7)	< 0.3	< 0.6	< 0.6
FC-CCR-MW65-62117 (550-84945-8)	< 0.3	< 0.6	< 0.6
FC-CCR-FD01-62117 (550-84945-9)	0.5 ± 0.1	1.8 ± 0.3	2.3 ± 0.3
FC-CCR-MW66-62117 (550-84945-10)	1.2 ± 0.2	2.5 ± 0.3	3.7 ± 0.4
FC-CCR-MW67-62117 (550-84945-11)	1.3 ± 0.2	2.9 ± 0.4	4.2 ± 0.4
FC-CCR-MW68-62117 (550-84945-12)	0.4 ± 0.1	1.8 ± 0.3	2.2 ± 0.3
FC-CCR-MW69-62117 (550-84945-13)	1.7 ± 0.2	2.6 ± 0.3	4.3 ± 0.4
FC-CCR-MW70-62117 (550-84945-14)	0.7 ± 0.2	1.8 ± 0.3	2.5 ± 0.4
FC-CCR-MW71-62217 (550-84945-15)	1.2 ± 0.2	1.5 ± 0.3	2.7 ± 0.4
FC-CCR-MW72-62217 (550-84945-16)	0.6 ± 0.1	2.2 ± 0.3	2.8 ± 0.3
FC-CCR-FD02-62217 (550-84945-17)	0.5 ± 0.1	2.5 ± 0.3	3.0 ± 0.3
FC-CCR-MW73-62217 (550-84945-18)	1.5 ± 0.2	1.6 ± 0.3	3.1 ± 0.4
FC-CCR-MW74-62217 (550-84945-19)	< 0.3	< 0.6	< 0.6
FC-CCR-MW75-62217 (550-84945-20)	< 0.3	< 0.6	< 0.6

7/10/2017
Robert L. Metzger, Ph.D., C.H.P. Date
Laboratory License Number: AZ0462

TestAmerica Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone (602) 437-3340 Fax (602) 454-9303

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Baker, Ken	Carrier Tracking No(s):	COC No: 550-17943.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: ken.baker@testamericainc.com	State of Origin: Arizona	Page: Page 1 of 3
Company: Radiation Safety Eng., Inc.		Accreditations Required (See note): State Program - Arizona		Job #: 550-84945-1
Address: 3245 North Washington Street, ,	Due Date Requested: 7/3/2017			
City: Chandler	TAT Requested (days):			
State, Zip: AZ, 85225				
Phone:	PO #:			
Email:	WO #:			
Project Name: CCR	Project #: 55002281			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Radium 226/228)/ Radium 226/228											Total Number of containers	Special Instructions/Note:
			Preservation Code:																
FC-CCR-MW7-62217 (550-84945-1)	6/22/17	13:40 Arizona		Water			X				58431							1	R226/228
FC-CCR-MW49A-62217 (550-84945-2)	6/22/17	14:27 Arizona		Water			X				58432							2	R226/228
FC-CCR-MW60-62217 (550-84945-3)	6/22/17	11:11 Arizona		Water			X				58433							2	R226/228
FC-CCR-MW61-62217 (550-84945-4)	6/22/17	11:56 Arizona		Water			X				58434							2	R226/228
FC-CCR-MW62-62117 (550-84945-5)	6/21/17	09:08 Arizona		Water			X				58435							2	R226/228
FC-CCR-MW63-62117 (550-84945-6)	6/21/17	10:50 Arizona		Water			X				58436							2	R226/228
FC-CCR-MW64-62117 (550-84945-7)	6/21/17	11:27 Arizona		Water			X				58437							2	R226/228
FC-CCR-MW65-62117 (550-84945-8)	6/21/17	08:20 Arizona		Water			X				58438							2	R226/228
FC-CCR-FD01-62117 (550-84945-9)	6/21/17	08:20 Arizona		Water			X				58439							2	R226/228

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:	
Relinquished by: L BATEMAN	Date/Time: 6/26/17 1400	Company: T.A	Received by:		Date/Time: 1:00 6-26-17	Company: RSC
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

TestAmerica Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone (602) 437-3340 Fax (602) 454-9303

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Baker, Ken	Carrier Tracking No(s):	COC No: 550-17943.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: ken.baker@testamericainc.com	State of Origin: Arizona	Page: Page 2 of 3
Company: Radiation Safety Eng., Inc.		Accreditations Required (See note): State Program - Arizona		Job #: 550-84945-1
Address: 3245 North Washington Street, ,	Due Date Requested: 7/3/2017			
City: Chandler	TAT Requested (days):			
State, Zip: AZ, 85225				
Phone:	PO #:			
Email:	WO #:			
Project Name: CCR	Project #: 55002281			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Radium 226/228)/ Radium 226/228												Total Number of containers	Special Instructions/Note:
			Preservation Code:																	
FC-CCR-MW66-62117 (550-84945-10)	6/21/17	09:44 Arizona		Water			X					58440							2	R226/228
FC-CCR-MW67-62117 (550-84945-11)	6/21/17	13:26 Arizona		Water			X					58441							2	R226/228
FC-CCR-MW68-62117 (550-84945-12)	6/21/17	14:08 Arizona		Water			X					58442							2	R226/228
FC-CCR-MW69-62117 (550-84945-13)	6/21/17	12:44 Arizona		Water			X					58443							2	R226/228
FC-CCR-MW70-62117 (550-84945-14)	6/21/17	12:05 Arizona		Water			X					58444							2	R226/228
FC-CCR-MW71-62217 (550-84945-15)	6/22/17	08:43 Arizona		Water			X					58445							2	R226/228
FC-CCR-MW72-62217 (550-84945-16)	6/22/17	07:59 Arizona		Water			X					58446							2	R226/228
FC-CCR-FD02-62217 (550-84945-17)	6/22/17	07:59 Arizona		Water			X					58447							2	R226/228
FC-CCR-MW73-62217 (550-84945-18)	6/22/17	09:24 Arizona		Water			X					58448							2	R226/228

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: L BATEMAN	Date/Time: 6/26/17 14:00	Company: T.A	Received by:	Date/Time: 14:00 6-26-17	Company: RSC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone (602) 437-3340 Fax (602) 454-9303

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

7/12/2017

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Baker, Ken	Carrier Tracking No(s):	COC No: 550-17943.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: ken.baker@testamericainc.com	State of Origin: Arizona	Page: Page 3 of 3
Company: Radiation Safety Eng., Inc.		Accreditations Required (See note): State Program - Arizona		Job #: 550-84945-1
Address: 3245 North Washington Street, ,	Due Date Requested: 7/3/2017			
City: Chandler	TAT Requested (days):			
State, Zip: AZ, 85225				
Phone:	PO #:			
Email:	WO #:			
Project Name: CCR	Project #: 55002281			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Radium 226/228)/ Radium 226/228													Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
FC-CCR-MW74-62217 (550-84945-19)	6/22/17	10:04 Arizona		Water			X						5	8	4	4	9			2	R226/228
FC-CCR-MW75-62217 (550-84945-20)	6/22/17	12:38 Arizona		Water			X						5	8	4	5	0			2	R226/228

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:		Method of Shipment:	
Relinquished by: [signature]	Date/Time: 6/26/17 14:00	Company: T.A	Received by: [signature]		Date/Time: 6-26-17	Company: RSE
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Phoenix
4625 E Cotton Center Blvd
Suite 189
Phoenix, AZ 85040
phone 602.437.3340 fax 602.454.9303

Chain of Custody Record

84945

7/12/2017

Regulatory Program: CCR

TestAmerica Laboratories, Inc.

Client Contact	Doug Lavarnway	Doug Lavarnway	6/24/2017
APS Four Corners	928-587-0319	Lab Contact:	Carrier:
End of County Road 6675	**Analysis Turnaround Time**		
Fruitland, New Mexico 87416			
(928) 587-0319 Phone	TAT if different from Below _____		
(xxx) xxx-xxxx FAX			
Project Name: CCR			
Site: Cholla			
P O #			

COC No: 5 of 6 COCs

Sampler:

For Lab Use Only:
Walk-in Client:
Lab Sampling:

Job / SDG No.:

550-84945 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	932.0 Radium 226 and 228	Sample Specific Notes:
FC-CCR-MW7-62217	6/22/2017	1340	G	W	2	N	x	x	-01
FC-CCR-MW49A-62217	6/22/2017	1427	G	W	2	N	x	x	-02
FC-CCR-MW60-62217	6/22/2017	1111	G	W	2	N	x	x	-03
FC-CCR-MW61-62217	6/22/2017	1156	G	W	2	N	x	x	-04
FC-CCR-MW62-62117	6/21/2017	908	G	W	2	N	x	x	-05
FC-CCR-MW63-62117	6/21/2017	1050	G	W	2	N	x	x	-06
FC-CCR-MW64-62117	6/21/2017	1127	G	W	2	N	x	x	-07
FC-CCR-MW65-62117	6/21/2017	820	G	W	2	N	x	x	-08
FC-CCR-FD01-62117	6/21/2017	820	G	W	2	N	x	x	-09

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements & Comments:

(1.1°C, 0.6°C, 1.3°C, 1.0°C) PC

Custody Seals Intact:	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Doug Lavarnway	Company: APS	Date/Time: 6/23 1100	Received by: D Rogers	Company: RedJ	Date/Time: 6/23/17 11am
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 6/24/17 0625

Form No. CA-C-WI-002, Rev. 4.2, dated 04/02/2013

TestAmerica Phoenix
4625 E Cotton Center Blvd
Suite 189
Phoenix, AZ 85040
phone 602.437.3340 fax 602.454.9303

Chain of Custody Record

84945

7/12/2017

Regulatory Program: CCR

TestAmerica Laboratories, Inc.

Client Contact	Doug Lavarnway	Doug Lavarnway	6/24/2017
APS Four Corners	928-587-0319	Lab Contact:	Carrier:
End of County Road 6675	**Analysis Turnaround Time**		
Fruitland, New Mexico 87416			
(928) 587-0319 Phone	TAT if different from Below _____		
(xxx) xxx-xxxx FAX			
Project Name: CCR			
Site: Cholla			
P O #			

COC No: 6 of 6 COCs

Sampler:

For Lab Use Only:
Walk-in Client:
Lab Sampling:

Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	932.0 Radium 226 and 228	Sample Specific Notes:
FC-CCR-MW66-62117	6/21/2017	944	G	W	2	N	x	x	-10
FC-CCR-MW67-62117	6/21/2017	1326	G	W	2	N	x	x	-11
FC-CCR-MW68-62117	6/21/2017	1408	G	W	2	N	x	x	-12
FC-CCR-MW69-62117	6/21/2017	1244	G	W	2	N	x	x	-13
FC-CCR-MW70-62117	6/21/2017	1205	G	W	2	N	x	x	-14
FC-CCR-MW71-62217	6/22/2017	843	G	W	2	N	x	x	-15
FC-CCR-MW72-62217	6/22/2017	759	G	W	2	N	x	x	-16
FC-CCR-FD02-62217	6/22/2017	759	G	W	2	N	x	x	-17
FC-CCR-MW73-62217	6/22/2017	924	G	W	2	N	x	x	-18
FC-CCR-MW74-62217	6/22/2017	1004	G	W	2	N	x	x	-19
FC-CCR-MW75-62217	6/22/2017	1238	G	W	2	N	x	x	-20

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Doug Lavarnway	APS	6/23 1100	[illegible]	Rel	6/23/17 11am
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 6-24-17 0825

Login Sample Receipt Checklist

Client: Arizona Public Service Company

Job Number: 550-84945-1
SDG Number: Cholla

Login Number: 84945
List Number: 1
Creator: Doerr, Bret C

List Source: TestAmerica Phoenix

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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	
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	