Texas Department of State Health Services Laboratory
Environmental Sciences Branch
Quality Assurance Report

Laboratory Case Narrative: The water samples identified below as AC70917, AC70918, AC70919 and AC70920 were collected on 10-29-2014 and 10-30-2014. A single cube container for each sample was received by the Texas Department of State Health Services Laboratory on 10-31-2014. The sample submission forms indicated that total analysis was requested for all samples. The samples were acidified on 10-31-2014 with 5 mL concentrated nitric acid. The pH < 2 verification was performed on 11-3-2014.

The client requested analyses for arsenic, cadmium, chromium, iron, lead, mercury, molybdenum, selenium, sodium and uranium on all water samples. The samples were treated as a batch throughout the sample digestion and analysis procedures. For the analyses of arsenic, cadmium, chromium, iron, lead, molybdenum, selenium, sodium and uranium, the initial sample volume was 50 mL and the final volume was 50 mL for the samples prepared by EPA 3010A and EPA 3020A. For the mercury analysis, the initial sample volume was 50 mL and the final volume was 100 mL for the samples prepared by EPA 7470A. All analyses were completed within the required holding times.

In order to match the 1% HNO_3 matrix for the ICP-MS calibration solutions, the sample digestates and batch quality control samples including the method blank were diluted by a factor of 3 with deionized reagent water during instrument testing. Serial dilutions of samples, if required, were made using a 1% HNO_3 solution. The dilution factors reported with the results for all analytes indicate the total dilution from the sample preparation and the bench analysis. The reporting levels shown in the quality control tables do not include dilution factors. The reporting limit for a specific result can be determined by multiplying the reporting limit (RL) for the undiluted sample by the dilution factor indicated for the result. Sample and sample duplicate were analyzed and reported separately.

DSHS Sample Number	Operator/Facility	Sample Location
AC70917	URI, Kingsville Dome	PA-3, MW-78
AC70918	URI, Kingsville Dome	PA-3, MW-AA24
AC70919	URI, Kingsville Dome	PA-3, MW-84
AC70920	URI, Kingsville Dome	PA-3, MW-85

Sample Batch ID	Preparation Method	Preparation Date	Analytes Tested	Analytical Method	Analytical Technique	Analysis Date
11-4-2014 (7470A)	EPA 7470A	11-4-2014	Hg	EPA 7470A	CVAAS	11-4-2014
11-3-2014 (3010A)	EPA 3010A	11-3-2014	Fe, Na	EPA 6010C	ICP	11-5-2014
11-3-2014 (3020A)	EPA 3020A	11-3-2014	As, Cd, Cr, Mo, Pb, Se, U	EPA 6020A	ICPMS	11-4-2014

Quality Control Results:

(1) Mercury Results for AC70917, AC70918, AC70919 and AC70920
Analysis Date: 11-4-2014

Analyte	Reporting Limit mg/L	Method Detection Limit mg/L	Initial Calibration Blank (ICB) mg/L	Final Calibration Blank (CCB) mg/L	Initial Calibration Verification (ICV) (2nd Source) % R	Final Calibration Verification (CCV) % R	Low Reporting Level (RL) Check % R
Mercury	0.000200	0.0000106	0.0000181	< 0.0000106	99	100	114
Acceptance Criteria			**< RL**	**< RL**	**90-110**	**80-120**	**70-130**

Analyte	Linear Dynamic Range (LDR) % R	Method Blank (M-BLK) mg/L	Laboratory Control Sample (LCS) % R	Matrix Duplicate (MD) AC70920 % RPD	Matrix Spike (MS) AC70920 % R	Matrix Spike Duplicate (MSD) AC70920 % R	MS/MSD % RPD	Spike Target Concentration Level mg
Mercury	99	0.0000289	101	NA	88	83	5.7	0.00200
Acceptance Criteria	**90-110**	**< RL**	**85-115**	**< 20**	**75-125**	**75-125**	**< 20**	

(2) Iron Results for AC70917, AC70918, AC70919 and AC70920
Analysis Date: 11-5-2014

Analyte	Method Detection Limit mg/L	Reporting Limit mg/L	Initial Calibration Blank (ICB) mg/L	Final Calibration Blank (CCB) mg/L	Initial Low Level Calibration Verification (LL-ICV) % R	Final Low Level Calibration Verification (LL-CCV) % R	Initial Calibration Verification (2nd Source) (ICV) % R	Final Calibration Verification (CCV) % R
Iron	0.00251	0.0100	< 0.00251	< 0.00251	106	98	104	96
Acceptance Criteria			< RL	< RL	70-130	70-130	90-110	90-110

Analyte	Interference Check Solution (ICS) %R	Method Blank (M-BLK) mg/L	Laboratory Control Sample (LCS) % R	Matrix Duplicate (MD) AC70920 % RPD	Matrix Spike (MS) AC70920 % R	Matrix Spike Duplicate (MSD) AC70920 % R	MS/MSD % RPD	Spike Target Concentration Level mg/L	Linear Dynamic Range (LDR) % R
Iron	98	< 0.00251	97	6.8	102	97	4.1	1.0	99
Acceptance Criteria	80-120	< RL	80-120	< 20	75-125	75-125	< 20		90-110

(2) Sodium Results for AC70917, AC70918, AC70919 and AC70920
Analysis Date: 12-4-2014

Analyte	Method Detection Limit mg/L	Reporting Limit mg/L	Initial Calibration Blank (ICB) mg/L	Continuing Calibration Blank (CCB) mg/L	Continuing Calibration Blank (CCB) mg/L	Final Calibration Blank (CCB) mg/L	Initial Low Level Calibration Verification (LL-ICV) % R	Continuing Low Level Calibration Verification (LL-ICV) % R	Continuing Low Level Calibration Verification (LL-ICV) % R
Sodium	0.0159	0.500	< 0.0159	< 0.0159	< 0.0159	< 0.0159	106	104	103
Acceptance Criteria			< RL	< RL	< RL	< RL	70-130	70-130	70-130

Analyte	Final Low Level Calibration Verification (LL-ICV) % R	Initial Calibration Verification (2nd Source) (ICV) % R	Continuing Calibration Verification (CCV) % R	Continuing Calibration Verification (CCV) % R	Final Calibration Verification (CCV) % R	Interference Check Solution (ICS) %R	Method Blank (M-BLK) mg/L	Laboratory Control Sample (LCS) % R	Matrix Duplicate (MD) AC70920 % RPD
Sodium	104	100	101	100	100	100	0.0743	102	3.5
Acceptance Criteria	**70-130**	**90-110**	**90-110**	**90-110**	**90-110**	**80-120**	**< RL**	**80-120**	**< 20**

Analyte	Matrix Spike (MS) AC70920 % R	Matrix Spike Duplicate (MSD) AC70920 % R	MS/MSD % RPD	Spike Target Concentration Level mg/L	Linear Dynamic Range (LDR) % R
Sodium	94	83	1.4	50	101
Acceptance Criteria	**75-125**	**75-125**	**< 20**		**90-110**

(3) Arsenic, Cadmium, Chromium Lead, Molybdenum Selenium and Uranium Results for AC70917, AC70918, AC70919 and AC70920
Analysis Date: 11-4-2014

Analyte	Method Detection Limit mg/L	Reporting Limit mg/L	Initial Calibration Blank (ICB) mg/L	Final Calibration Blank (CCB) mg/L	Initial Low Level Calibration Verification (LL-ICV) % R	Final Low Level Calibration Verification (LL-ICV) % R	Initial Calibration Verification (2nd Source) (ICV) % R
Arsenic	0.000177	0.00100	< 0.000177	< 0.000177	104	103	93
Cadmium	0.0000409	0.00100	< 0.0000409	< 0.0000409	98	102	102
Chromium	0.000113	0.00100	< 0.000113	< 0.000113	99	101	100
Lead	0.0000680	0.00100	< 0.0000680	< 0.0000680	102	101	102
Molybdenum	0.0000595	0.00100	0.000098	0.000072	104	103	100
Selenium	0.000471	0.00200	< 0.000471	< 0.000471	99	104	98
Uranium	0.0000177	0.00100	< 0.0000177	< 0.0000177	103	105	105
Acceptance Criteria			**< RL**	**< RL**	**70-130**	**70-130**	**90-110**

Analyte	Final Calibration Verification (CCV) % R	Interference Check Solution (ICS) AB %R	Method Blank (M-BLK) mg/L	Laboratory Control Sample (LCS) % R	Matrix Duplicate (MD) AC70920 % RPD	Matrix Spike (MS) AC70920 % R	Matrix Spike Duplicate (MSD) AC70920 % R	MS/MSD % RPD	Spike Target Concentration Level mg/L	Linear Dynamic Range (LDR) % R
Arsenic	101	94	< 0.000177	93	NA	102	100	1.6	0.150	97
Cadmium	99	99	< 0.0000409	96	NA	98	98	0.2	0.150	100
Chromium	99	101	< 0.000113	99	NA	96	96	0.8	0.150	103
Lead	100	103	< 0.0000680	99	NA	102	101	0.9	0.150	100
Molybdenum	98	105	< 0.0000595	98	2.1	101	104	1.3	0.150	101
Selenium	102	101	< 0.000471	93	0.5	104	103	1.2	0.300	100
Uranium	105	104	< 0.0000177	101	3.0	104	108	1.9	0.150	93
Acceptance Criteria	**90-110**	**80-120**	**< RL**	**80-120**	**< 20**	**75-125**	**75-125**	**< 20**		**90-110**

Analyte	Internal Standard (Analyte)	Internal Standard AC70917 % R	Internal Standard AC70918 % R	Internal Standard AC70919 % R	Internal Standard AC70920 % R	Internal Standard AC70920 (MD) % R
Arsenic	Y	104	103	106	105	102
Cadmium	In	102	104	103	106	103
Chromium	Sc	100	100	100	106	103
Lead	Bi	100	100	99	101	98
Molybdenum	Rh	98	97	98	99	97
Selenium	Y	104	103	106	105	102
Uranium	Bi	100	100	99	101	98
Acceptance Criteria		**> 70**	**> 70**	**> 70**	**> 70**	**> 70**

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. I affirm that this data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached deficiency reports. I further affirm to the best of my knowledge that all problems/anomalies observed by this laboratory, or if applicable, any and all subcontracted laboratories that might affect the quality of the data have been identified in the laboratory review checklist, and no information or data have been withheld that would affect the quality of the data.

Evelyn Boyer	Evelyn Boyer	1-6-2015	Team Leader
Name (printed)	Signature	Date	Official Title (printed)

JAN - 6 2015 MBP
date reported

NON-Potable H_2O

AC70917 EU A 10/31/2014

MISC METALS

TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

TEXAS COMMISSION on ENVIRONMENTAL QUALITY (TCEQ)

Handling Instructions: ☐ Routine ☒ Urgent ☐ Priority (short half-life)
Purpose: ☐ Close Out/Groundwater Restoration ☐ Baseline (Pre-Operation) ☒ Compliance
Sample Collected From: ☐ Unrestricted Area ☒ Restricted/Controlled Area
☒ Radiological Analysis Also Performed **PCA #** _____ **Index No** _____
Water only: ☐ Acidified ☐ Filtered
☒ Not Acidified ☒ Not Filtered

Contact: M. Abbaszadeh
Phone/MC: (512) 239-6078 / M
Submitter No. M000000 70
Suspected Radionuclides: Uranium

Type: ☐ Soil ☐ Sediment ☐ Vegetation ☐ Wipe ☐ Other _____

Type: Water ☒ Monitor Well ☐ Baseline Well ☐ Surface Water ☐ Other _____

Facility Category: ☒ Uranium Recovery ☐ Waste Processing ☐ Low Level Radioactive Waste/Material ☐ Buried Radioactive Waste ☐ Mixed Waste Treatment Facility ☐ By-Product Waste/Material ☐ Other _____

Radiation Survey Results: BKG: 5-6 UR/hr Sample: BKG
Sample Number 2 of 12
Sample location PA3, MW-78
Operator / Facility HRI, Kingsville Dome
Permit/License No UR02827
Notes _____

I certify this sample was collected by me at 2 : 09 PM
on 10/29/14 and remained in my custody until
transfer to DSHS Lab
at 10 : 47 AM on 10/31/14
Signature: M. Abbaszadeh

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to metal lab
at 11 : 10 AM on 10-31-14
Signature: [signature]

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to _____
at _____ : _____ M on _____
Signature: _____

FOR USE BY LABORATORY ONLY

Laboratory Identification No. _____
Date Received _____
Condition of Seals ☐ Satisfactory ☐ Not Satisfactory
Comments _____
Wet (as received) Weight _____
Dry Weight _____ Ash Weight _____
Notes _____

I certify this sample was constantly in the laboratory custody from the time of receipt and after the report date listed below until transferred to the TCEQ staff.

Report Date/Signature 1-6-2015 [signature]

INDICATE THE REQUIRED ANALYSIS BELOW
☒ **Total Analysis** ☐ **TCLP** ☐ **Dissolved Analysis**
Detection Limit Requested _____

Arsenic		mg/
Barium		mg/
Boron		mg/
Cadmium		mg/
Calcium		mg/
Chromium		mg/
Copper		mg/
Iron		mg/
Lead		mg/
Magnesium		mg/
Manganese		mg/
Mercury		mg/
Molybdenum		mg/
Nickel		mg/
Potassium		mg/
Selenium		mg/
Silver		mg/
Sodium		mg/
Vanadium		mg/
Zinc		mg/
Uranium		mg/
TDS		mg/
Alkalinity		mg/
Ammonia-N		mg/
Bicarbonate		mg/
Carbonate		mg/
Chloride		mg/
Fluoride		mg/
Nitrate-N		mg/
Silica		mg/
Sulfate		mg/
		mg/
		mg/
		mg/
		mg/
Conductivity		µS/cm
Specific Conductance		µS/cm
pH		Std. Unit

MC 1947
1100 West 49th Street
PO Box 149347
Austin, Texas 78714-9347

Texas Department of State Health Services
Laboratory Services Section
Metals Analysis Report

Tel. (512) 776-7587
FAX (512) 776-7757

DSHS Lab Sample Number: AC70917
Submitter: TCEQ
Date Collected: 10/29/2014
Digestion Method: EPA 3010A (ICP Minerals)
EPA 3020A (ICP-MS Metals)
EPA 7470A (Hg)

Sample Type: Water
Sample Location: PA-3, MW-78
Date Received: 10/31/2014
Analytical Method: EPA 6010C (ICP Minerals)
EPA 6020A (ICP-MS Metals)
EPA 7470A (Hg)

Report ID#: 20150106METALAC70917

Analyte	Results (mg/L)	Dilution Factor	Reporting Limit (mg/L)	Analysis Date	Analyst
Arsenic	<0.00300	3	0.00100	11/04/2014	PG
Cadmium	<0.00300	3	0.00100	11/04/2014	PG
Chromium	<0.00300	3	0.00100	11/04/2014	PG
Iron	0.0436	1	0.0100	11/05/2014	JK
Lead	<0.00300	3	0.00100	11/04/2014	PG
Mercury	< 0.000400	2	0.000200	11/04/2014	JK
Molybdenum	0.0322	3	0.00100	11/04/2014	PG
Selenium	< 0.00600	3	0.00200	11/04/2014	PG
Sodium	471	20	0.500	12/04/2014	JK
Uranium	<0.00300	3	0.00100	11/04/2014	PG

Comments:

The test results on this report relate only to the sample identified on this report.

Team Leader Approval: Evelyn Boyer

Date Approved: 01-06-2015

Date Reported: JAN - 6 2015

Non-Potable H_2O

AC70918 A
EU 10/31/2014
MISC METALS

TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

TEXAS COMMISSION on ENVIRONMENTAL QUALITY (TCEQ)

Handling Instructions: ☐ Routine ☒ Urgent ☐ Priority (short half-life)
Purpose: ☐ Close Out/Groundwater Restoration ☐ Baseline (Pre-Operation) ☒ Compliance
Sample Collected From: ☐ Unrestricted Area ☒ Restricted/Controlled Area
☒ Radiological Analysis Also Performed **PCA #** _____ **Index No** _____
Water only: ☐ Acidified ☒ Not Acidified ☐ Filtered ☒ Not Filtered

Contact: [illegible]
Phone/MC: (512)239-6078 / [illegible]
Submitter No. M00000070
Suspected Radionuclides: Uranium

Type: ☐ Soil ☐ Sediment ☐ Vegetation ☐ Wipe ☐ Other _____

Type: Water ☒ Monitor Well ☐ Baseline Well ☐ Surface Water ☐ Other _____

Facility Category: ☒ Uranium Recovery ☐ Waste Processing ☐ Low Level Radioactive Waste/Material ☐ Buried Radioactive Waste ☐ Mixed Waste Treatment Facility ☐ By-Product Waste/Material ☐ Other _____

Radiation Survey Results: BKG: 5-6 uR/hr Sample: BKG
Sample Number 5 of 12
Sample location PA3, MW-AA24
Operator / Facility URI, Kingsville Dome
Permit/License No UR02827
Notes _____

I certify this sample was collected by me at 11 : 12 AM
on 10/30/14 and remained in my custody until
transfer to DSHS Lab
at 10 : 47 AM on 10/31/14
Signature: [illegible]

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to metal lab
at 11 : 10 AM on 10-31-14
Signature: Steve Leathing

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to _____
at _____ : _____ M on _____
Signature: _____

FOR USE BY LABORATORY ONLY

Laboratory Identification No. _____
Date Received _____
Condition of Seals ☐ Satisfactory ☐ Not Satisfactory
Comments _____
Wet (as received) Weight _____
Dry Weight _____ Ash Weight _____
Notes _____

I certify this sample was constantly in the laboratory custody from the time of receipt and after the report date listed below until transferred to the TCEQ staff.

Report Date/Signature 1-6-2015 Carly Boyer

INDICATE THE REQUIRED ANALYSIS BELOW
☒ **Total Analysis** ☐ **TCLP** ☐ **Dissolved Analysis**
Detection Limit Requested _____

Arsenic		mg/
Barium		mg/
Boron		mg/
Cadmium		mg/
Calcium		mg/
Chromium		mg/
Copper		mg/
Iron		mg/
Lead		mg/
Magnesium		mg/
Manganese		mg/
Mercury		mg/
Molybdenum		mg/
Nickel		mg/
Potassium		mg/
Selenium		mg/
Silver		mg/
Sodium		mg/
Vanadium		mg/
Zinc		mg/
Uranium		mg/
TDS		mg/
Alkalinity		mg/
Ammonia-N		mg/
Bicarbonate		mg/
Carbonate		mg/
Chloride		mg/
Fluoride		mg/
Nitrate-N		mg/
Silica		mg/
Sulfate		mg/
		mg/
		mg/
		mg/
Conductivity		µS/cm
Specific Conductance		µS/cm
pH		Std. Unit

MC 1947
1100 West 49th Street
PO Box 149347
Austin, Texas 78714-9347

Texas Department of State Health Services
Laboratory Services Section
Metals Analysis Report

Tel. (512) 776-7587
FAX (512) 776-7757

DSHS Lab Sample Number: AC70918
Submitter: TCEQ
Date Collected: 10/30/14
Digestion Method: EPA 3010A (ICP Minerals)
EPA 3020A (ICP-MS Metals)
EPA 7470A (Hg)

Sample Type: Water
Sample Location: PA-3, MW-AA24
Date Received: 10/31/14
Analytical Method: EPA 6010C (ICP Minerals)
EPA 6020A (ICP-MS Metals)
EPA 7470A (Hg)

Report ID#: 20150106METALAC70918

Analyte	Results (mg/L)	Dilution Factor	Reporting Limit (mg/L)	Analysis Date	Analyst
Arsenic	<0.00300	3	0.00100	11/04/2014	PG
Cadmium	<0.00300	3	0.00100	11/04/2014	PG
Chromium	<0.00300	3	0.00100	11/04/2014	PG
Iron	0.0121	1	0.0100	11/05/2014	JK
Lead	<0.00300	3	0.00100	11/04/2014	PG
Mercury	< 0.000400	2	0.000200	11/04/2014	JK
Molybdenum	0.0509	3	0.00100	11/04/2014	PG
Selenium	< 0.00600	3	0.00200	11/04/2014	PG
Sodium	517	20	0.500	12/04/2014	JK
Uranium	<0.00300	3	0.00100	11/04/2014	PG

Comments:

The test results on this report relate only to the sample identified on this report.

Team Leader Approval: Evelyn Boyer
Date Reported: JAN - 6 2015

Date Approved: 01-06-2015

NO N - Potable H2O

AC70919 A
EU 10/31/2014
MISC METALS

TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

TEXAS COMMISSION on ENVIRONMENTAL QUALITY (TCEQ)

Handling Instructions: ☐ Routine ☒ Urgent ☐ Priority (short half-life)
Purpose: ☐ Close Out/Groundwater Restoration ☐ Baseline (Pre-Operation) ☒ Compliance
Sample Collected From: ☐ Unrestricted Area ☒ Restricted/Controlled Area
☒ Radiological Analysis Also Performed **PCA #** _____ **Index No** _____ **Submitter No.** M0000070
Water only: ☐ Acidified ☒ Not Acidified ☐ Filtered ☒ Not Filtered **Suspected Radionuclides:** Uranium

Contact: M. Abbaszadeh
Phone/MC: (512) 239-6078 / [illegible]

Type: ☐ Soil ☐ Sediment ☐ Vegetation ☐ Wipe ☐ Other _____

Type: Water ☒ Monitor Well ☐ Baseline Well ☐ Surface Water ☐ Other _____

Facility Category: ☒ Uranium Recovery ☐ Waste Processing ☐ Low Level Radioactive Waste/Material ☐ Buried Radioactive Waste ☐ Mixed Waste Treatment Facility ☐ By-Product Waste/Material ☐ Other _____

Radiation Survey Results: BKG: 5-6 uR/hr Sample: BKG
Sample Number 8 of 12
Sample location PA3, MW-94
Operator / Facility URI, Kingsville Dome
Permit/License No UR02827
Notes _____

I certify this sample was collected by me at 12:42 AM on 10/30/14 and remained in my custody until transfer to DSHS Lab at 10:47 AM on 10/31/14
Signature: M. Abbaszadeh

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to metal lab at 11:10 AM on 10-31-14
Signature: Sean Cochran

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to _____ at _____ : _____ M on _____
Signature: _____

INDICATE THE REQUIRED ANALYSIS BELOW
☒ **Total Analysis** ☐ **TCLP** ☐ **Dissolved Analysis**
Detection Limit Requested _____

Arsenic		mg/
Barium		mg/
Boron		mg/
Cadmium		mg/
Calcium		mg/
Chromium		mg/
Copper		mg/
Iron		mg/
Lead		mg/
Magnesium		mg/
Manganese		mg/
Mercury		mg/
Molybdenum		mg/
Nickel		mg/
Potassium		mg/
Selenium		mg/
Silver		mg/
Sodium		mg/
Vanadium		mg/
Zinc		mg/
Uranium		mg/
TDS		mg/
Alkalinity		mg/
Ammonia-N		mg/
Bicarbonate		mg/
Carbonate		mg/
Chloride		mg/
Fluoride		mg/
Nitrate-N		mg/
Silica		mg/
Sulfate		mg/
		mg/
		mg/
		mg/
Conductivity		µS/cm
Specific Conductance		µS/cm
pH		Std. Unit

FOR USE BY LABORATORY ONLY

Laboratory Identification No. _____
Date Received _____
Condition of Seals ☐ Satisfactory ☐ Not Satisfactory
Comments _____
Wet (as received) Weight _____
Dry Weight _____ Ash Weight _____
Notes _____

I certify this sample was constantly in the laboratory custody from the time of receipt and after the report date listed below until transferred to the TCEQ staff.

Report Date/Signature 1-6-2015 [illegible]

MC 1947
1100 West 49th Street
PO Box 149347
Austin, Texas 78714-9347

Texas Department of State Health Services
Laboratory Services Section
Metals Analysis Report

Tel. (512) 776-7587
FAX (512) 776-7757

DSHS Lab Sample Number: AC70919
Submitter: TCEQ
Date Collected: 10/30/14
Digestion Method: EPA 3010A (ICP Minerals)
EPA 3020A (ICP-MS Metals)
EPA 7470A (Hg)

Sample Type: Water
Sample Location: PA-3, MW-84
Date Received: 10/31/14
Analytical Method: EPA 6010C (ICP Minerals)
EPA 6020A (ICP-MS Metals)
EPA 7470A (Hg)

Report ID#: 20150106METALAC70919

Analyte	Results (mg/L)	Dilution Factor	Reporting Limit (mg/L)	Analysis Date	Analyst
Arsenic	<0.00300	3	0.00100	11/04/2014	PG
Cadmium	<0.00300	3	0.00100	11/04/2014	PG
Chromium	<0.00300	3	0.00100	11/04/2014	PG
Iron	0.0215	1	0.0100	11/05/2014	JK
Lead	<0.00300	3	0.00100	11/04/2014	PG
Mercury	< 0.000400	2	0.000200	11/04/2014	JK
Molybdenum	0.0634	3	0.00100	11/04/2014	PG
Selenium	0.00623	3	0.00200	11/04/2014	PG
Sodium	463	20	0.500	12/04/2014	JK
Uranium	<0.00300	3	0.00100	11/04/2014	PG

Comments:

The test results on this report relate only to the sample identified on this report.

Team Leader Approval: Evelyn Borg

Date Approved: 01-06-2015

Date Reported: JAN - 6 2015 mbp

NON-Potable H_2O

AC70920 A
EU 10/31/2014
MISC METALS

TCEQ CHEMICAL ANALYSIS LABORATORY REPORT

TEXAS COMMISSION on ENVIRONMENTAL QUALITY (TCEQ)

Handling Instructions: ☐ Routine ☒ Urgent ☐ Priority (short half-life)
Purpose: ☐ Close Out/Groundwater Restoration ☐ Baseline (Pre-Operation) ☒ Compliance
Sample Collected From: ☐ Unrestricted Area ☒ Restricted/Controlled Area
☒ Radiological Analysis Also Performed **PCA #** _____ **Index No** _____
Water only: ☐ Acidified ☐ Filtered
☒ Not Acidified ☒ Not Filtered

Contact: M. Abbaszade
Phone/MC: (512) 239-6078 /1
Submitter No. M0000070
Suspected Radionuclides: Uranium

Type: ☐ Soil ☐ Sediment ☐ Vegetation ☐ Wipe ☐ Other _____

Type: Water ☒ Monitor Well ☐ Baseline Well ☐ Surface Water ☐ Other _____

Facility Category: ☒ Uranium Recovery ☐ Waste Processing ☐ Low Level Radioactive Waste/Material ☐ Buried Radioactive Waste ☐ Mixed Waste Treatment Facility ☐ By-Product Waste/Material ☐ Other _____

Radiation Survey Results: BKG: 5-6 uR/hr Sample: BKG
Sample Number 11 of 12
Sample location PA3, MW-85
Operator / Facility URI, Kingsville Dome
Permit/License No UR028827
Notes _____

I certify this sample was collected by me at 2:57 PM
on 10/30/14 and remained in my custody until
transfer to DSHS Lab
at 10:47 AM on 10/31/14
Signature: M. Abbaszadeh

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to metal lab
at 11:10 AM on 10-31-14
Signature: Steve Cooley

I certify this sample was constantly in my custody from the time of receipt listed hereon until transferred to _____
at _____ : _____ M on _____
Signature: _____

FOR USE BY LABORATORY ONLY

Laboratory Identification No. _____
Date Received _____
Condition of Seals ☐ Satisfactory ☐ Not Satisfactory
Comments _____
Wet (as received) Weight _____
Dry Weight _____ Ash Weight _____
Notes _____

I certify this sample was constantly in the laboratory custody from the time of receipt and after the report date listed below until transferred to the TCEQ staff.

Report Date/Signature 1-6-2015 Emily Bonza

INDICATE THE REQUIRED ANALYSIS BELOW
☒ **Total Analysis** ☐ **TCLP** ☐ **Dissolved Analysis**
Detection Limit Requested _____

Arsenic		mg/
Barium		mg/
Boron		mg/
Cadmium		mg/
Calcium		mg/
Chromium		mg/
Copper		mg/
Iron		mg/
Lead		mg/
Magnesium		mg/
Manganese		mg/
Mercury		mg/
Molybdenum		mg/
Nickel		mg/
Potassium		mg/
Selenium		mg/
Silver		mg/
Sodium		mg/
Vanadium		mg/
Zinc		mg/
Uranium		mg/
TDS		mg/
Alkalinity		mg/
Ammonia-N		mg/
Bicarbonate		mg/
Carbonate		mg/
Chloride		mg/
Fluoride		mg/
Nitrate-N		mg/
Silica		mg/
Sulfate		mg/
		mg/
		mg/
		mg/
Conductivity		µS/cm
Specific Conductance		µS/cm
pH		Std. Unit

MC 1947
1100 West 49th Street
PO Box 149347
Austin, Texas 78714-9347

Texas Department of State Health Services
Laboratory Services Section
Metals Analysis Report

Tel. (512) 776-7587
FAX (512) 776-7757

DSHS Lab Sample Number: AC70920
Submitter: TCEQ
Date Collected: 10/30/14
Digestion Method: EPA 3010A (ICP Minerals)
EPA 3020A (ICP-MS Metals)
EPA 7470A (Hg)

Sample Type: Water
Sample Location: PA-3, MW-85
Date Received: 10/31/14
Analytical Method: EPA 6010C (ICP Minerals)
EPA 6020A (ICP-MS Metals)
EPA 7470A (Hg)

Report ID#: 20150106METALAC70920

Analyte	Results (mg/L)	Dilution Factor	Reporting Limit (mg/L)	Analysis Date	Analyst
Arsenic	<0.00300	3	0.00100	11/04/2014	PG
Cadmium	<0.00300	3	0.00100	11/04/2014	PG
Chromium	<0.00300	3	0.00100	11/04/2014	PG
Iron	0.0490	1	0.0100	11/05/2014	JK
Lead	<0.00300	3	0.00100	11/04/2014	PG
Mercury	< 0.000400	2	0.000200	11/04/2014	JK
Molybdenum	0.130	3	0.00100	11/04/2014	PG
Selenium	0.0105	3	0.00200	11/04/2014	PG
Sodium	347	10	0.500	12/04/2014	JK
Uranium	0.150	3	0.00100	11/04/2014	PG

Comments:

The test results on this report relate only to the sample identified on this report.

Team Leader Approval: Evelyn Borja

Date Approved: 01-06-2015

Date Reported: JAN - 6 2015 mbp

MC 1947
1100 West 49th Street
PO Box 149347
Austin, Texas 78714-9347

Texas Department of State Health Services
Laboratory Services Section
Metals Analysis Report

Tel. (512) 776-7587
FAX (512) 776-7757

DSHS Lab Sample Number: AC70920 (Duplicate)
Submitter: TCEQ
Date Collected: 10/30/14
Digestion Method: EPA 3010A (ICP Minerals)
EPA 3020A (ICP-MS Metals)
EPA 7470A (Hg)

Sample Type: Water
Sample Location: PA-3, MW-85
Date Received: 10/31/14
Analytical Method: EPA 6010C (ICP Minerals)
EPA 6020A (ICP-MS Metals)
EPA 7470A (Hg)

Report ID#: 20150106METALAC70920

Analyte	Results (mg/L)	Dilution Factor	Reporting Limit (mg/L)	Analysis Date	Analyst
Arsenic	<0.00300	3	0.00100	11/04/2014	PG
Cadmium	<0.00300	3	0.00100	11/04/2014	PG
Chromium	<0.00300	3	0.00100	11/04/2014	PG
Iron	0.0458	1	0.0100	11/05/2014	JK
Lead	<0.00300	3	0.00100	11/04/2014	PG
Mercury	< 0.000400	2	0.000200	11/04/2014	JK
Molybdenum	0.133	3	0.00100	11/04/2014	PG
Selenium	0.0105	3	0.00200	11/04/2014	PG
Sodium	335	10	0.500	12/04/2014	JK
Uranium	0.155	3	0.00100	11/04/2014	PG

Comments:

The test results on this report relate only to the sample identified on this report.

Team Leader Approval: [signature]
Date Reported: JAN - 6 2015 mlg

Date Approved: 01-06-2015