

LCRA Environmental Laboratory Services

Date: 28-Oct-11

CLIENT: URS Corporation
Lab Order: 1110641
Project: Colorado River Corridor - Groundwater
Lab ID: 1110641-007

Client Sample ID: CRCP-Holweger-013
Collection Date: 10/19/2011 2:55:00 PM
Matrix: GROUNDWATER
Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	117	0.200		mg/L	1	10/24/2011 3:05:12 PM
Magnesium	19.7	0.200		mg/L	1	10/24/2011 3:05:12 PM
Potassium	2.03	0.200		mg/L	1	10/24/2011 3:05:12 PM
Sodium	41.3	0.600		mg/L	1	10/24/2011 3:05:12 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: WR		
Chloride	32.2	5.00		mg/L	5	10/20/2011 8:37:00 PM
Fluoride	0.301	0.050		mg/L	5	10/20/2011 8:37:00 PM
Nitrogen, Nitrate (As N)	21.6	0.100	X	mg/L	10	10/21/2011 11:34:00 AM
Sulfate	31.4	5.00		mg/L	5	10/20/2011 8:37:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	310	2	A	mg/L CaCO ₃	1	10/25/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	10/25/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	10/21/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.1	1.1		mg/L	1.1	10/25/2011

Qualifiers:

A Not Available for Accreditation
E Value Above Quantitation Range
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

CLIENT: URS Corporation
Project: Colorado River Corridor - Groundwater
Lab Order: 1110641

CASE NARRATIVE

Analytical Comments for METHOD E300.0, SAMPLE 1110641-001A, Batch R85953A: The nitrate MCL of 10 mg/L has been exceeded under the EPA National Primary Drinking Water Standards.

Analytical Comments for METHOD E300.0, SAMPLE 1110641-004A, Batch R85953B: The nitrate MCL of 10 mg/L has been exceeded under the EPA National Primary Drinking Water Standards.

Analytical Comments for METHOD E300.0, SAMPLE 1110641-005A, Batch R85982A: The nitrate MCL of 10 mg/L has been exceeded under the EPA National Primary Drinking Water Standards.

Analytical Comments for METHOD E300.0, SAMPLE 1110641-007A, Batch R85982A: The nitrate MCL of 10 mg/L has been exceeded under the EPA National Primary Drinking Water Standards.

Analytical Comments for METHOD E200.7, SAMPLE 1110641-001BLFM, Batch R85992A: The calcium LFM recovery was not reported because the spike amount was less than 30 percent of the sample background concentration.

Analytical Comments for METHOD E200.7, SAMPLE 1110641-001BLFMD, Batch R85992A: The calcium LFMD recovery was not reported because the spike amount was less than 30 percent of the sample background concentration.

Analytical Comments for METHOD E200.7, SAMPLE 1110641-007BLFM, Batch R85992B: The calcium and sodium LFM recoveries were not reported because the spike amount was less than 30 percent of the sample background concentration.

Analytical Comments for METHOD E200.7, SAMPLE 1110641-007BLFMD, Batch R85992B: The calcium and sodium LFMD recoveries were not reported because the spike amount was less than 30 percent of the sample background concentration.

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT**BatchID: R85929F**

Sample ID: 1110623-001ALFM		SampType: LFM		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85929	
Client ID: ZZZZZZ		Batch ID: R85929F		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2903785			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	55.6	1.00	20.00	36.52	95.3	80	120				
Fluoride	1.19	0.010	1.000	0.2499	93.7	80	120				
Nitrogen, Nitrate (As N)	1.00	0.010	1.000	0.03330	97.0	80	120				
Sulfate	44.7	1.00	20.00	24.23	102	80	120				

Sample ID: 1110623-001ALFMD		SampType: LFMD		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85929	
Client ID: ZZZZZZ		Batch ID: R85929F		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2903786			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	55.6	1.00	20.00	36.52	95.3	0	2000	55.59	0.0263	20	
Fluoride	1.19	0.010	1.000	0.2499	93.7	0	2000	1.186	0.0506	20	
Nitrogen, Nitrate (As N)	1.00	0.010	1.000	0.03330	97.0	0	2000	1.003	0.0498	20	
Sulfate	44.7	1.00	20.00	24.23	102	0	2000	44.68	0.0107	20	

Sample ID: IC_111019_LFB		SampType: LFB		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85929	
Client ID: ZZZZZZ		Batch ID: R85929F		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2903787			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.4	1.00	30.00	0	101	90	110				
Fluoride	1.00	0.010	1.000	0	100	90	110				
Nitrogen, Nitrate (As N)	1.05	0.010	1.000	0	105	90	110				
Sulfate	30.9	1.00	30.00	0	103	90	110				

Sample ID: IC_111019_IPC		SampType: IPC		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85929	
Client ID: ZZZZZZ		Batch ID: R85929F		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2903788			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.4	1.00	30.00	0	101	90	110				

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85929F

Sample ID: IC_111019_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85929						
Client ID: ZZZZZZ	Batch ID: R85929F	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2903788						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.00	0.010	1.000	0	100	90	110				
Nitrogen, Nitrate (As N)	1.04	0.010	1.000	0	104	90	110				
Sulfate	30.9	1.00	30.00	0	103	90	110				

Sample ID: IC_111019_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85929						
Client ID: ZZZZZZ	Batch ID: R85929F	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2903789						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	< 1.00	1.00									
Fluoride	< 0.010	0.010									
Nitrogen, Nitrate (As N)	< 0.010	0.010									
Sulfate	< 1.00	1.00									

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
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ANALYTICAL QC SUMMARY REPORT

BatchID: R85940

Sample ID: MBLK	SampType: MBLK	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85940						
Client ID: PBW	Batch ID: R85940	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2904039						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) < 1.0 1.0

Sample ID: LCS	SampType: LCS	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85940						
Client ID: LCSW	Batch ID: R85940	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2904044						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 109 10.0 100.0 0 109 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85940						
Client ID: LCSS02	Batch ID: R85940	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2904045						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 118 10.0 100.0 0 118 0 2000 109.0 7.93 20

Sample ID: 1110638-003ADUP	SampType: DUP	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85940						
Client ID: ZZZZZZ	Batch ID: R85940	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2904052						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 2500 1000 2800 11.3 20

Qualifiers:
 A Not Available for Accreditation
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
 R RPD Outside Recovery Limits

CLIENT: URS Corporation
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ANALYTICAL QC SUMMARY REPORT

BatchID: R85953A

Sample ID: IC_111020_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: ZZZZZZ	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904548						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride
Fluoride
Nitrogen, Nitrate (As N)
Sulfate

< 1.00
< 0.010
< 0.010
< 1.00

1.00
0.010
0.010
1.00

Sample ID: IC_111020_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: ZZZZZZ	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904549						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride
Fluoride
Nitrogen, Nitrate (As N)
Sulfate

30.4
1.01
1.05
30.9

1.00
0.010
0.010
1.00

30.00
1.000
1.000
30.00

0
0
0
0

101
101
105
103

90
90
90
90

110
110
110
110

Sample ID: 1110641-001ALFM	SampType: LFM	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: CRCP-221049-010	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride
Fluoride
Nitrogen, Nitrate (As N)
Sulfate

214
9.82
23.5
218

10.0
0.100
0.100
10.0

200.0
10.00
10.00
200.0

14.23
0.1680
13.55
15.47

100
96.5
99.5
101

80
80
80
80

120
120
120
120

Sample ID: 1110641-001ALFMD	SampType: LFMD	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: CRCP-221049-010	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904563						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride
Fluoride
Nitrogen, Nitrate (As N)

214
9.83
23.5

10.0
0.100
0.100

200.0
10.00
10.00

14.23
0.1680
13.55

99.9
96.6
99.6

0
0
0

2000
2000
2000

214.1
9.821
23.50

0.0771
0.0509
0.0596

20
20
20

Qualifiers:
A Not Available for Accreditation
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85953A

Sample ID: 1110641-001ALFMD	SampType: LFMD	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: CRCP-221049-010	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904563						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	218	10.0	200.0	15.47	101	0	2000	218.4	0.0256	20	

Sample ID: IC_111020_LFB	SampType: LFB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: ZZZZZZ	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	1.00	0.010	1.000	0	100	90	110				
Nitrogen, Nitrate (As N)	1.04	0.010	1.000	0	104	90	110				
Sulfate	30.9	1.00	30.00	0	103	90	110				

Sample ID: IC_111020_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: ZZZZZZ	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904565						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	1.00	0.010	1.000	0	100	90	110				
Nitrogen, Nitrate (As N)	1.05	0.010	1.000	0	105	90	110				
Sulfate	30.9	1.00	30.00	0	103	90	110				

Sample ID: IC_111020_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: ZZZZZZ	Batch ID: R85953A	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	< 1.00	1.00									
Fluoride	< 0.010	0.010									
Nitrogen, Nitrate (As N)	< 0.010	0.010									
Sulfate	< 1.00	1.00									

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85953B

Sample ID: 1110641-007ALFM		SampType: LFM		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85953	
Client ID: CRCP-Holweger-013		Batch ID: R85953B		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2904577			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	135	5.00	100.0	32.17	103	80	120				
Fluoride	5.01	0.050	5.000	0.3010	94.1	80	120				
Sulfate	135	5.00	100.0	31.43	103	80	120				

Sample ID: 1110641-007ALFMD		SampType: LFMD		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85953	
Client ID: CRCP-Holweger-013		Batch ID: R85953B		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2904578			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	135	5.00	100.0	32.17	103	0	2000	134.8	0.0204	20	
Fluoride	5.01	0.050	5.000	0.3010	94.1	0	2000	5.006	0	20	
Sulfate	135	5.00	100.0	31.43	103	0	2000	134.6	0.0215	20	

Sample ID: IC_111020_LFB		SampType: LFB		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85953	
Client ID: ZZZZZZ		Batch ID: R85953B		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2904579			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	31.0	1.00	30.00	0	103	90	110				
Fluoride	1.01	0.010	1.000	0	101	90	110				
Nitrogen, Nitrate (As N)	1.07	0.010	1.000	0	107	90	110				
Sulfate	31.5	1.00	30.00	0	105	90	110				

Sample ID: IC_111020_IPC		SampType: IPC		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 85953	
Client ID: ZZZZZZ		Batch ID: R85953B		TestNo: E300.0		Analysis Date: 10/20/2011		SeqNo: 2904580			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	31.0	1.00	30.00	0	103	90	110				
Fluoride	1.01	0.010	1.000	0	101	90	110				
Nitrogen, Nitrate (As N)	1.07	0.010	1.000	0	107	90	110				
Sulfate	31.4	1.00	30.00	0	105	90	110				

Qualifiers: A Not Available for Accreditation
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits
 B Analyte Detected in Method Blank
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
 R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85953B

Sample ID: IC_111020_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85953						
Client ID: ZZZZZZ	Batch ID: R85953B	TestNo: E300.0		Analysis Date: 10/20/2011	SeqNo: 2904581						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	< 1.00	1.00									
Fluoride	< 0.010	0.010									
Nitrogen, Nitrate (As N)	< 0.010	0.010									
Sulfate	< 1.00	1.00									

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85971C

Sample ID: 1110641-001CMS	SampType: MS	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 85971						
Client ID: CRCP-221049-010	Batch ID: R85971C	TestNo: E350.1		Analysis Date: 10/21/2011	SeqNo: 2905222						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.02	0.020	1.000	0	102	90	110				

Sample ID: NH3_LFB3	SampType: LFB	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 85971						
Client ID: ZZZZZZ	Batch ID: R85971C	TestNo: E350.1		Analysis Date: 10/21/2011	SeqNo: 2905223						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.987	0.020	1.000	0	98.7	90	110				

Sample ID: NH3_LRB3	SampType: LRB	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 85971						
Client ID: ZZZZZZ	Batch ID: R85971C	TestNo: E350.1		Analysis Date: 10/21/2011	SeqNo: 2905225						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	< 0.020	0.020									

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85971D

Sample ID: 1110641-007CMS	SampType: MS	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 85971						
Client ID: CRCP-Holweger-013	Batch ID: R85971D	TestNo: E350.1		Analysis Date: 10/21/2011	SeqNo: 2905236						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.933	0.020	1.000	0.01972	91.3	90	110				

Sample ID: NH3_LFB4	SampType: LFB	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 85971						
Client ID: ZZZZZZ	Batch ID: R85971D	TestNo: E350.1		Analysis Date: 10/21/2011	SeqNo: 2905237						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.969	0.020	1.000	0	96.9	90	110				

Sample ID: NH3_LRB4	SampType: LRB	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 85971						
Client ID: ZZZZZZ	Batch ID: R85971D	TestNo: E350.1		Analysis Date: 10/21/2011	SeqNo: 2905239						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	< 0.020	0.020									

Qualifiers:

A Not Available for Accreditation
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85982A

Sample ID: IC_111021_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: ZZZZZZ	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	< 1.00	1.00									
Fluoride	< 0.010	0.010									
Nitrogen, Nitrate (As N)	< 0.010	0.010									
Sulfate	< 1.00	1.00									

Sample ID: IC_111021_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: ZZZZZZ	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905600						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	0.987	0.010	1.000	0	98.7	90	110				
Nitrogen, Nitrate (As N)	1.05	0.010	1.000	0	105	90	110				
Sulfate	30.8	1.00	30.00	0	103	90	110				

Sample ID: 1110641-007ALFM	SampType: LFM	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: CRCP-Holweger-013	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905613						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	211	10.0	200.0	29.99	90.5	80	120				
Fluoride	8.79	0.100	10.00	0.3640	84.3	80	120				
Nitrogen, Nitrate (As N)	29.8	0.100	10.00	21.64	81.8	80	120				
Sulfate	211	10.0	200.0	31.03	90.2	80	120				

Sample ID: 1110641-007ALFMD	SampType: LFMD	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: CRCP-Holweger-013	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905614						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	211	10.0	200.0	29.99	90.6	0	2000	210.9	0.114	20	
Fluoride	8.87	0.100	10.00	0.3640	85.0	0	2000	8.792	0.849	20	
Nitrogen, Nitrate (As N)	29.8	0.100	10.00	21.64	81.7	0	2000	29.82	0.0537	20	

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85982A

Sample ID: 1110641-007ALFMD	SampType: LFMD	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: CRCP-Holweger-013	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905614						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	212	10.0	200.0	31.03	90.4	0	2000	211.4	0.168	20	

Sample ID: IC_111021_LFB	SampType: LFB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: ZZZZZZ	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905615						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	0.999	0.010	1.000	0	99.9	90	110				
Nitrogen, Nitrate (As N)	1.05	0.010	1.000	0	105	90	110				
Sulfate	30.8	1.00	30.00	0	103	90	110				

Sample ID: IC_111021_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: ZZZZZZ	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	0.998	0.010	1.000	0	99.8	90	110				
Nitrogen, Nitrate (As N)	1.04	0.010	1.000	0	104	90	110				
Sulfate	30.9	1.00	30.00	0	103	90	110				

Sample ID: IC_111021_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 85982						
Client ID: ZZZZZZ	Batch ID: R85982A	TestNo: E300.0		Analysis Date: 10/21/2011	SeqNo: 2905617						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	< 1.00	1.00									
Fluoride	< 0.010	0.010									
Nitrogen, Nitrate (As N)	< 0.010	0.010									
Sulfate	< 1.00	1.00									

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85992A

Sample ID: LFB-28571	SampType: LFB	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: ZZZZZZ	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905824						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	9.82	0.200	10.00	0	98.2	85	115				
Magnesium	10.0	0.200	10.00	0	100	85	115				
Potassium	10.2	0.200	10.00	0	102	85	115				
Sodium	10.3	0.600	10.00	0	103	85	115				

Sample ID: LFB-28571	SampType: LFB	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: ZZZZZZ	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905825						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	9.84	0.200	10.00	0	98.4	0	2000	9.819	0.193	20	
Magnesium	10.0	0.200	10.00	0	100	0	2000	10.04	0.0118	20	
Potassium	10.3	0.200	10.00	0	103	0	2000	10.20	1.32	20	
Sodium	10.5	0.600	10.00	0	105	0	2000	10.33	1.67	20	

Sample ID: LRB-28571	SampType: LRB	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: ZZZZZZ	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905826						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	< 0.200	0.200									
Magnesium	< 0.200	0.200									
Potassium	< 0.200	0.200									
Sodium	< 0.600	0.600									

Sample ID: 1110641-001BLFM	SampType: LFM	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: CRCP-221049-010	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Magnesium	23.0	0.200	10.00	12.31	107	70	130				
Potassium	12.1	0.200	10.00	1.825	102	70	130				
Sodium	38.5	0.600	10.00	28.99	95.1	70	130				

Qualifiers:

A Not Available for Accreditation
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85992A

Sample ID: 1110641-001BLFMD	SampType: LFMD	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: CRCP-221049-010	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905834						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	22.9	0.200	10.00	12.31	106	0	2000	23.01	0.626	20	
Potassium	12.0	0.200	10.00	1.825	102	0	2000	12.07	0.328	20	
Sodium	38.3	0.600	10.00	28.99	93.2	0	2000	38.50	0.478	20	

Sample ID: CCB2	SampType: CCB	TestCode: 200.7	Units: mg/L	Prep Date:	RunNo: 85992						
Client ID: CCB	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905839						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	< 0.200	0.200									
Magnesium	< 0.200	0.200									
Potassium	< 0.200	0.200									
Sodium	< 0.600	0.600									

Sample ID: IPC2	SampType: IPC	TestCode: 200.7	Units: mg/L	Prep Date:	RunNo: 85992						
Client ID: ZZZZZZ	Batch ID: R85992A	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	97.9	0.200	100.0	0	97.9	90	110				
Magnesium	109	0.200	100.0	0	109	90	110				
Potassium	99.9	0.200	100.0	0	99.9	90	110				
Sodium	93.1	0.600	100.0	0	93.1	90	110				

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85992B

Sample ID: 1110641-007BLFM	SampType: LFM	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: CRCP-Holweger-013	Batch ID: R85992B	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905843						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	30.6	0.200	10.00	19.72	109	70	130				
Potassium	12.3	0.200	10.00	2.031	102	70	130				

Sample ID: 1110641-007BLFMD	SampType: LFMD	TestCode: 200.7	Units: mg/L	Prep Date: 10/21/2011	RunNo: 85992						
Client ID: CRCP-Holweger-013	Batch ID: R85992B	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905844						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	31.0	0.200	10.00	19.72	112	0	2000	30.59	1.23	20	
Potassium	12.2	0.200	10.00	2.031	102	0	2000	12.26	0.0640	20	

Sample ID: CCB3	SampType: CCB	TestCode: 200.7	Units: mg/L	Prep Date:	RunNo: 85992						
Client ID: CCB	Batch ID: R85992B	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905845						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	< 0.200	0.200									
Magnesium	< 0.200	0.200									
Potassium	< 0.200	0.200									
Sodium	< 0.600	0.600									

Sample ID: IPC3	SampType: IPC	TestCode: 200.7	Units: mg/L	Prep Date:	RunNo: 85992						
Client ID: ZZZZZZ	Batch ID: R85992B	TestNo: E200.7		Analysis Date: 10/24/2011	SeqNo: 2905846						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	97.0	0.200	100.0	0	97.0	90	110				
Magnesium	109	0.200	100.0	0	109	90	110				
Potassium	99.2	0.200	100.0	0	99.2	90	110				
Sodium	92.0	0.600	100.0	0	92.0	90	110				

Qualifiers: A Not Available for Accreditation
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits
 B Analyte Detected in Method Blank
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
 R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R85994

Sample ID: MBLK	SampType: MBLK	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85994						
Client ID: PBW	Batch ID: R85994	TestNo: SM2540D		Analysis Date: 10/25/2011	SeqNo: 2905852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) < 1.0 1.0

Sample ID: LCS	SampType: LCS	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85994						
Client ID: LCSW	Batch ID: R85994	TestNo: SM2540D		Analysis Date: 10/25/2011	SeqNo: 2905853						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 90.0 10.0 100.0 0 90.0 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85994						
Client ID: LCSS02	Batch ID: R85994	TestNo: SM2540D		Analysis Date: 10/25/2011	SeqNo: 2905854						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 90.0 10.0 100.0 0 90.0 0 2000 90.00 0 20

Sample ID: 1110641-007DDUP	SampType: DUP	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 85994						
Client ID: CRCP-Holweger-013	Batch ID: R85994	TestNo: SM2540D		Analysis Date: 10/25/2011	SeqNo: 2905861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) < 1.1 1.1 0 0 20

Qualifiers:
A Not Available for Accreditation
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1110641
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86020

Sample ID: Blank	SampType: MBLK	TestCode: ALK	Units: mg/L CaCO3	Prep Date:	RunNo: 86020						
Client ID: PBW	Batch ID: R86020	TestNo: SM2320 B		Analysis Date: 10/25/2011	SeqNo: 2906589						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	< 2	2									A
Alkalinity, Carbonate (As CaCO3)	< 2	2									A

Sample ID: 1110641-007ADUP	SampType: DUP	TestCode: ALK	Units: mg/L CaCO3	Prep Date:	RunNo: 86020						
Client ID: CRCP-Holweger-013	Batch ID: R86020	TestNo: SM2320 B		Analysis Date: 10/25/2011	SeqNo: 2906593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	314	2						309.8	1.41	0	A
Alkalinity, Carbonate (As CaCO3)	< 2	2						0	0	0	A

Sample ID: Blank	SampType: MBLK	TestCode: ALK	Units: mg/L CaCO3	Prep Date:	RunNo: 86020						
Client ID: PBW	Batch ID: R86020	TestNo: SM2320 B		Analysis Date: 10/25/2011	SeqNo: 2906615						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	< 2	2									A
Alkalinity, Carbonate (As CaCO3)	< 2	2									A

Qualifiers: A Not Available for Accreditation
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
R RPD Outside Recovery Limits



LCRA ENVIRONMENTAL LABORATORY SERVICES (ELS) CHAIN OF CUSTODY RECORD

Target Due Date: 11/2/11
Work Order No.: 1110691
COC No.: 107817
Page 1 of 1

NOTE: Relinquishing sample(s) to ELS obligates the submitter to all Standard Terms and Conditions stated on the back of this form.

Results To: Kevin Pasternak 9400 Amberglan Blvd Austin TX 78729
NAME ADDRESS CITY STATE ZIP
Bill To: Travis County - Colorado River Corridor Plan
NAME ADDRESS CITY STATE ZIP
Phone No.: 5124544797 Fax No.: 5124548807 Method of Transport: Hand delivery TAT Requested: Standard Working days E-mail: kevin.pasternak@traviscountytx.gov
Relinquished By: [Signature] Date: 10/19/11 Time: 1600 Received By: _____ Date: _____ Time: _____ Relinquished By: _____ Date: _____ Time: _____

Report Requirements: ☒ Hardcopy ☒ E-mail ☐ Fax
Regulatory Requirements: ☒ None ☐ NELAP
Received at ELS By: [Signature] Date: 10/19/11 Time: 1600
☒ Received on Ice Temp: 33 °C (F) 91
Login Review: [Signature] Date: 10/19/11
ELS Mgmt. Approval for RUSH: _____
Surcharge for RUSH: _____ %

ELS ID:	SAMPLE DESCRIPTION Custody Seals (circle): Cooler Bottles None	MATRIX	SAMPLE COLLECTION		CONTAINERS			ANALYSIS REQUESTED - Place an "X" in the box below to indicate request.										PRESERVATIVES	pH
			DATE	TIME	NUMBER	SIZE	TYPE	E350.1	E300.06	E302.208	E200.7	SM2540.0	(HES)						
001	CRCP-221049-010	W	10/19/11	0840	4	Var	Plast	X	X	X	X							H ₂ SO ₄	
002	CRCP-Buchert-010			1000															
003	CRCP-58522-010			1150															
004	CRCP-NTNW2-010			1255															
005	CRCP-NTNW2-011			1255															
006	CRCP-ATF1-010			1355	↓														
007	CRCP-Holweger-013	✓	✓	1455	5	↓	↓	↓	↓	↓	↓	↓						MSI ↓, MSD	

Special Instructions: Metal samples
ELS Comments: PRESERVED IN LAB 1:1 HNO₃ 09/19/11
BY: AB DATE/TIME: 10/19/11 @ 1900

LCRA Environmental Laboratory Services

REMIT TO: Lower Colorado River Authority
P. O. Box 200870
Houston, Texas 77216-0870
TEL: (512) 356-6022

INVOICE

DATE: December 08, 2011

Invoice No:	LB90240
Customer No:	000000

Invoice TO: Environmental and Regulatory Affairs
Mail Stop: EL-101
3505 Montopolis Drive
Austin, TX 78744

PO Number:
2282009

Attn: Alicia C. Gill
Phone: (512) 356-6022

Work Order: 1111895 Order Name Colorado River Corridor - Grou Date Received 11/29/2011

Item	Remarks	Matrix	Qty	Mult	Quoted	Test Total
ALKALINITY	HCO3,CO3	Aqueous	6	1	\$24.00	\$144.00
AMMONIA as N	Ammonia-N	Aqueous	6	1	\$15.00	\$90.00
ANIONS by ION CHROMATOGRAPHY	Cl,F,NO3,SO4	Aqueous	6	1	\$72.00	\$432.00
AQPREP TOTAL RECOVERABLE METALS: I	Prep Ca,Mg,Na	Aqueous	6	1	\$15.00	\$90.00
ICP METALS, TOTAL RECOVERABLE	Ca,Mg,Na,K	Aqueous	6	1	\$48.00	\$288.00
TOTAL SUSPENDED SOLIDS	TSS	Aqueous	6	1	\$12.00	\$72.00

Subtotal: \$1,116.00

Misc Charges: \$0.00

INVOICE Total: \$1,116.00

This is an internal billing for your records. Please do not forward to Accounts Payable.



December 08, 2011

Kevin Pasternak
URS Corporation
9400 Amberglen Blvd
Austin, TX 78729

TEL: (512) 419-5293
FAX

RE: Colorado River Corridor - Groundwater

COC ID.: 109064

Order No.: 1111895

Dear Kevin Pasternak:

On 11/29/2011, LCRA Environmental Laboratory Services (ELS) received 6 sample(s) for analyses under Lab Order No. 1111895. This final report provides results related only to the sample(s) as received for the above referenced lab order number.

ELS is accredited under the National Environmental Laboratory Accreditation Program (NELAP) and certifies that all reported results meet NELAP requirements, unless otherwise noted. The Case Narrative provides explanations for any deviations, additions to, or exclusions from the method requirements.

This report contains a total of 17 pages (including the cover letter) and may not be reproduced, except in full, without written approval from ELS.

Thank you for selecting ELS for your analytical needs. If you have questions regarding this report, please contact us at (512) 356-6022. We look forward to assisting you again.

Sincerely,

Tess Abbott
Project Manager

Certificate: T104704218-11-5



CLIENT: URS Corporation
Project: Colorado River Corridor - Groundwater
Lab Order: 1111895

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Date Collected	Date Received
1111895-001A	CRCP-5852213-020		11/29/2011 10:10:00 AM	11/29/2011 4:15:00 PM
1111895-001B	CRCP-5852213-020		11/29/2011 10:10:00 AM	11/29/2011 4:15:00 PM
1111895-001C	CRCP-5852213-020		11/29/2011 10:10:00 AM	11/29/2011 4:15:00 PM
1111895-001D	CRCP-5852213-020		11/29/2011 10:10:00 AM	11/29/2011 4:15:00 PM
1111895-002A	CRCP-WISIANW1-020		11/29/2011 12:00:00 PM	11/29/2011 4:15:00 PM
1111895-002B	CRCP-WISIANW1-020		11/29/2011 12:00:00 PM	11/29/2011 4:15:00 PM
1111895-002C	CRCP-WISIANW1-020		11/29/2011 12:00:00 PM	11/29/2011 4:15:00 PM
1111895-002D	CRCP-WISIANW1-020		11/29/2011 12:00:00 PM	11/29/2011 4:15:00 PM
1111895-003A	CRCP-WISIANW1-025		11/29/2011 12:10:00 PM	11/29/2011 4:15:00 PM
1111895-003B	CRCP-WISIANW1-025		11/29/2011 12:10:00 PM	11/29/2011 4:15:00 PM
1111895-003C	CRCP-WISIANW1-025		11/29/2011 12:10:00 PM	11/29/2011 4:15:00 PM
1111895-003D	CRCP-WISIANW1-025		11/29/2011 12:10:00 PM	11/29/2011 4:15:00 PM
1111895-004A	CRCP-ATF1-020		11/29/2011 1:25:00 PM	11/29/2011 4:15:00 PM
1111895-004B	CRCP-ATF1-020		11/29/2011 1:25:00 PM	11/29/2011 4:15:00 PM
1111895-004C	CRCP-ATF1-020		11/29/2011 1:25:00 PM	11/29/2011 4:15:00 PM
1111895-004D	CRCP-ATF1-020		11/29/2011 1:25:00 PM	11/29/2011 4:15:00 PM
1111895-005A	CRCP-WISIANW2-020		11/29/2011 2:20:00 PM	11/29/2011 4:15:00 PM
1111895-005B	CRCP-WISIANW2-020		11/29/2011 2:20:00 PM	11/29/2011 4:15:00 PM
1111895-005C	CRCP-WISIANW2-020		11/29/2011 2:20:00 PM	11/29/2011 4:15:00 PM
1111895-005D	CRCP-WISIANW2-020		11/29/2011 2:20:00 PM	11/29/2011 4:15:00 PM
1111895-006A	CRCP-58522-020		11/29/2011 3:10:00 PM	11/29/2011 4:15:00 PM
1111895-006B	CRCP-58522-020		11/29/2011 3:10:00 PM	11/29/2011 4:15:00 PM
1111895-006C	CRCP-58522-020		11/29/2011 3:10:00 PM	11/29/2011 4:15:00 PM
1111895-006D	CRCP-58522-020		11/29/2011 3:10:00 PM	11/29/2011 4:15:00 PM

Final Analysis Report

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT:	URS Corporation	Client Sample ID:	CRCP-5852213-020
Lab Order:	1111895	Collection Date:	11/29/2011 10:10:00 AM
Project:	Colorado River Corridor - Groundwater	Matrix:	GROUNDWATER
Lab ID:	1111895-001	Tag No:	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	133	0.200		mg/L	1	12/7/2011 11:44:52 AM
Magnesium	21.2	0.200		mg/L	1	12/7/2011 11:44:52 AM
Potassium	4.70	0.200		mg/L	1	12/7/2011 11:44:52 AM
Sodium	28.9	0.600		mg/L	1	12/7/2011 11:44:52 AM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: JB		
Chloride	19.8	5.00		mg/L	5	11/30/2011 2:04:00 PM
Fluoride	0.360	0.050		mg/L	5	11/30/2011 2:04:00 PM
Nitrogen, Nitrate (As N)	< 0.050	0.050		mg/L	5	11/30/2011 2:04:00 PM
Sulfate	9.84	5.00		mg/L	5	11/30/2011 2:04:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO3)	420	2	A	mg/L CaCO3	1	12/1/2011
Alkalinity, Carbonate (As CaCO3)	< 2	2	A	mg/L CaCO3	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	3.57	0.040		mg/L	2	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	18.2	2.2		mg/L	2.2	12/2/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT:	URS Corporation	Client Sample ID:	CRCP-WISIANW1-020
Lab Order:	1111895	Collection Date:	11/29/2011 12:00:00 PM
Project:	Colorado River Corridor - Groundwater	Matrix:	GROUNDWATER
Lab ID:	1111895-002	Tag No:	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	91.4	0.200		mg/L	1	12/7/2011 11:52:39 AM
Magnesium	10.8	0.200		mg/L	1	12/7/2011 11:52:39 AM
Potassium	2.65	0.200		mg/L	1	12/7/2011 11:52:39 AM
Sodium	62.8	0.600		mg/L	1	12/7/2011 11:52:39 AM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: JB		
Chloride	14.5	5.00		mg/L	5	11/30/2011 2:20:00 PM
Fluoride	0.300	0.050		mg/L	5	11/30/2011 2:20:00 PM
Nitrogen, Nitrate (As N)	8.80	0.050		mg/L	5	11/30/2011 2:20:00 PM
Sulfate	24.2	5.00		mg/L	5	11/30/2011 2:20:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO3)	305	2	A	mg/L CaCO3	1	12/1/2011
Alkalinity, Carbonate (As CaCO3)	< 2	2	A	mg/L CaCO3	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.0	1.0		mg/L	1	12/2/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT: URS Corporation
Lab Order: 1111895
Project: Colorado River Corridor - Groundwater
Lab ID: 1111895-003

Client Sample ID: CRCP-WISIANW1-025
Collection Date: 11/29/2011 12:10:00 PM
Matrix: GROUNDWATER
Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	3.72	0.200		mg/L	1	12/7/2011 12:16:55 PM
Magnesium	< 0.200	0.200		mg/L	1	12/7/2011 12:16:55 PM
Potassium	< 0.200	0.200		mg/L	1	12/7/2011 12:16:55 PM
Sodium	< 0.600	0.600		mg/L	1	12/7/2011 12:16:55 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: JB		
Chloride	< 5.00	5.00		mg/L	5	11/30/2011 2:36:00 PM
Fluoride	< 0.050	0.050		mg/L	5	11/30/2011 2:36:00 PM
Nitrogen, Nitrate (As N)	0.225	0.050		mg/L	5	11/30/2011 2:36:00 PM
Sulfate	< 5.00	5.00		mg/L	5	11/30/2011 2:36:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	2	2	A	mg/L CaCO ₃	1	12/1/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	2.9	1.0		mg/L	1	12/2/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT: URS Corporation
Lab Order: 1111895
Project: Colorado River Corridor - Groundwater
Lab ID: 1111895-004

Client Sample ID: CRCP-ATF1-020
Collection Date: 11/29/2011 1:25:00 PM
Matrix: GROUNDWATER
Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	203	0.200		mg/L	1	12/7/2011 12:22:28 PM
Magnesium	45.0	0.200		mg/L	1	12/7/2011 12:22:28 PM
Potassium	3.57	0.200		mg/L	1	12/7/2011 12:22:28 PM
Sodium	46.3	0.600		mg/L	1	12/7/2011 12:22:28 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: JB		
Chloride	79.4	5.00		mg/L	5	11/30/2011 2:52:00 PM
Fluoride	0.230	0.050		mg/L	5	11/30/2011 2:52:00 PM
Nitrogen, Nitrate (As N)	6.46	0.050		mg/L	5	11/30/2011 2:52:00 PM
Sulfate	170	5.00		mg/L	5	11/30/2011 2:52:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO3)	490	2	A	mg/L CaCO3	1	12/1/2011
Alkalinity, Carbonate (As CaCO3)	< 2	2	A	mg/L CaCO3	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.0	1.0		mg/L	1	12/2/2011

Qualifiers:

A Not Available for Accreditation
E Value Above Quantitation Range
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT: URS Corporation
Lab Order: 1111895
Project: Colorado River Corridor - Groundwater
Lab ID: 1111895-005

Client Sample ID: CRCP-WISIANW2-020
Collection Date: 11/29/2011 2:20:00 PM
Matrix: GROUNDWATER
Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	95.7	0.200		mg/L	1	12/7/2011 12:30:27 PM
Magnesium	12.0	0.200		mg/L	1	12/7/2011 12:30:27 PM
Potassium	2.51	0.200		mg/L	1	12/7/2011 12:30:27 PM
Sodium	106	0.600		mg/L	1	12/7/2011 12:30:27 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: JB		
Chloride	12.2	5.00		mg/L	5	11/30/2011 3:08:00 PM
Fluoride	0.140	0.050		mg/L	5	11/30/2011 3:08:00 PM
Nitrogen, Nitrate (As N)	9.93	0.050		mg/L	5	11/30/2011 3:08:00 PM
Sulfate	30.0	5.00		mg/L	5	11/30/2011 3:08:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	391	2	A	mg/L CaCO ₃	1	12/1/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	1.6	1.0		mg/L	1	12/2/2011

Qualifiers:

A Not Available for Accreditation
E Value Above Quantitation Range
N Not Accredited
X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
H Holding Time Exceeded
S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT:	URS Corporation	Client Sample ID:	CRCP-58522-020
Lab Order:	1111895	Collection Date:	11/29/2011 3:10:00 PM
Project:	Colorado River Corridor - Groundwater	Matrix:	GROUNDWATER
Lab ID:	1111895-006	Tag No:	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	122	0.200		mg/L	1	12/7/2011 12:38:18 PM
Magnesium	36.2	0.200		mg/L	1	12/7/2011 12:38:18 PM
Potassium	2.00	0.200		mg/L	1	12/7/2011 12:38:18 PM
Sodium	73.9	0.600		mg/L	1	12/7/2011 12:38:18 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: JB		
Chloride	87.8	5.00		mg/L	5	11/30/2011 3:24:00 PM
Fluoride	0.320	0.050		mg/L	5	11/30/2011 3:24:00 PM
Nitrogen, Nitrate (As N)	3.88	0.050		mg/L	5	11/30/2011 3:24:00 PM
Sulfate	81.0	5.00		mg/L	5	11/30/2011 3:24:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO3)	374	2	A	mg/L CaCO3	1	12/1/2011
Alkalinity, Carbonate (As CaCO3)	< 2	2	A	mg/L CaCO3	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.0	1.0		mg/L	1	12/5/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 08-Dec-11

CLIENT: URS Corporation
Project: Colorado River Corridor - Groundwater
Lab Order: 1111895

CASE NARRATIVE

Analytical Comments for METHOD E200.7, SAMPLE 1111895-002BLFM, Batch R86955A: The calcium and sodium LFM recoveries were not reported because the spike amount was less than 30 percent of the sample background concentration.

Analytical Comments for METHOD E200.7, SAMPLE 1111895-002BLFMD, Batch R86955A: The calcium and sodium LFMD recoveries were not reported because the spike amount was less than 30 percent of the sample background concentration.

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT**BatchID: R86817A**

Sample ID: IC_111130_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934847						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	< 1.00	1.00
Fluoride	< 0.010	0.010
Nitrogen, Nitrate (As N)	< 0.010	0.010
Sulfate	< 1.00	1.00

Sample ID: IC_111130_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934848						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	30.4	1.00	30.00	0	101	90	110
Fluoride	1.01	0.010	1.000	0	101	90	110
Nitrogen, Nitrate (As N)	1.02	0.010	1.000	0	102	90	110
Sulfate	30.3	1.00	30.00	0	101	90	110

Sample ID: IC_111130_LFB		SampType: LFB		TestCode: 300_48H		Units: mg/L		Prep Date:		RunNo: 86817			
Client ID: ZZZZZZ		Batch ID: R86817A		TestNo: E300.0				Analysis Date: 11/30/2011		SeqNo: 2934863			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	30.3	1.00	30.00	0	101	90	110
Fluoride	1.01	0.010	1.000	0	101	90	110
Nitrogen, Nitrate (As N)	1.02	0.010	1.000	0	102	90	110
Sulfate	30.2	1.00	30.00	0	101	90	110

Sample ID: IC_111130_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	30.3	1.00	30.00	0	101	90	110
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Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86817A

Sample ID: IC_111130_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	1.01	0.010	1.000	0	101	90	110				
Nitrogen, Nitrate (As N)	1.02	0.010	1.000	0	102	90	110				
Sulfate	30.3	1.00	30.00	0	101	90	110				

Sample ID: IC_111130_LRB	SampType: LRB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934865						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	< 1.00	1.00									
Fluoride	< 0.010	0.010									
Nitrogen, Nitrate (As N)	< 0.010	0.010									
Sulfate	< 1.00	1.00									

Sample ID: 1111903-001ALFM	SampType: LFM	TestCode: 300_48H_DW	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	119	5.00	100.0	15.42	103	80	120				
Fluoride	6.06	0.050	5.000	1.085	99.4	80	120				
Nitrogen, Nitrate (As N)	5.30	0.050	5.000	0	106	80	120				
Sulfate	146	5.00	100.0	36.69	109	80	120				

Sample ID: 1111903-001ALFMD	SampType: LFMD	TestCode: 300_48H_DW	Units: mg/L	Prep Date:	RunNo: 86817						
Client ID: ZZZZZZ	Batch ID: R86817A	TestNo: E300.0		Analysis Date: 11/30/2011	SeqNo: 2934862						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	119	5.00	100.0	15.42	103	0	2000	118.9	0.0336	20	
Fluoride	6.04	0.050	5.000	1.085	99.2	0	2000	6.055	0.165	20	
Nitrogen, Nitrate (As N)	5.31	0.050	5.000	0	106	0	2000	5.305	0.0942	20	
Sulfate	146	5.00	100.0	36.69	109	0	2000	145.6	0.0240	20	

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86840

Sample ID: MBLK	SampType: MBLK	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86840						
Client ID: PBW	Batch ID: R86840	TestNo: SM2540D		Analysis Date: 12/2/2011	SeqNo: 2935087						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) < 1.0 1.0

Sample ID: LCS	SampType: LCS	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86840						
Client ID: LCSW	Batch ID: R86840	TestNo: SM2540D		Analysis Date: 12/2/2011	SeqNo: 2935088						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 112 10.0 100.0 0 112 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86840						
Client ID: LCSS02	Batch ID: R86840	TestNo: SM2540D		Analysis Date: 12/2/2011	SeqNo: 2935089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 110 10.0 100.0 0 110 0 2000 112.0 1.80 20

Sample ID: 1111895-001DDUP	SampType: DUP	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86840						
Client ID: CRCP-5852213-020	Batch ID: R86840	TestNo: SM2540D		Analysis Date: 12/2/2011	SeqNo: 2935095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 17.0 2.0 18.22 6.94 20

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86847B

Sample ID: 1111941-003DMS	SampType: MS	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 86847						
Client ID: ZZZZZZ	Batch ID: R86847B	TestNo: E350.1		Analysis Date: 12/2/2011	SeqNo: 2935330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.996	0.020	1.000	0	99.6	90	110				

Sample ID: NH3_LFB2	SampType: LFB	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 86847						
Client ID: ZZZZZZ	Batch ID: R86847B	TestNo: E350.1		Analysis Date: 12/2/2011	SeqNo: 2935331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.981	0.020	1.000	0	98.1	90	110				

Sample ID: NH3_LRB2	SampType: LRB	TestCode: NH3-N	Units: mg/L	Prep Date:	RunNo: 86847						
Client ID: ZZZZZZ	Batch ID: R86847B	TestNo: E350.1		Anaalysis Date: 12/2/2011	SeqNo: 2935333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	< 0.020	0.020									

Qualifiers:
 A Not Available for Accreditation
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

B Analyte Detected in Method Blank
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

E Value Above Quantitation Range
 R RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86859

Sample ID: Blank	SampType: MBLK	TestCode: ALK	Units: mg/L CaCO3	Prep Date:	RunNo: 86859						
Client ID: PBW	Batch ID: R86859	TestNo: SM2320 B		Analysis Date: 12/1/2011	SeqNo: 2935934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	< 2	2									A
Alkalinity, Carbonate (As CaCO3)	< 2	2									A

Sample ID: 1111895-001ADUP	SampType: DUP	TestCode: ALK	Units: mg/L CaCO3	Prep Date:	RunNo: 86859						
Client ID: CRCP-5852213-020	Batch ID: R86859	TestNo: SM2320 B		Analysis Date: 12/1/2011	SeqNo: 2935938						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	427	2						420.3	1.56	0	A
Alkalinity, Carbonate (As CaCO3)	< 2	2						0	0	0	A

Sample ID: Blank	SampType: MBLK	TestCode: ALK	Units: mg/L CaCO3	Prep Date:	RunNo: 86859						
Client ID: PBW	Batch ID: R86859	TestNo: SM2320 B		Analysis Date: 12/1/2011	SeqNo: 2935960						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	< 2	2									A
Alkalinity, Carbonate (As CaCO3)	< 2	2									A

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86865

Sample ID: MBLK	SampType: MBLK	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86865						
Client ID: PBW	Batch ID: R86865	TestNo: SM2540D		Analysis Date: 12/5/2011	SeqNo: 2936135						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) < 1.0 1.0

Sample ID: LCS	SampType: LCS	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86865						
Client ID: LCSW	Batch ID: R86865	TestNo: SM2540D		Analysis Date: 12/5/2011	SeqNo: 2936136						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 84.0 10.0 100.0 0 84.0 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86865						
Client ID: LCSS02	Batch ID: R86865	TestNo: SM2540D		Analysis Date: 12/5/2011	SeqNo: 2936137						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 97.0 10.0 100.0 0 97.0 0 2000 84.00 14.4 20

Sample ID: 1111965-005DDUP	SampType: DUP	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86865						
Client ID: ZZZZZZ	Batch ID: R86865	TestNo: SM2540D		Analysis Date: 12/5/2011	SeqNo: 2936146						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) < 1.0 1.0 0 0 20

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86955A

Sample ID: LFB-28863	SampType: LFB	TestCode: 200.7	Units: mg/L	Prep Date: 12/6/2011	RunNo: 86955						
Client ID: ZZZZZZ	Batch ID: R86955A	TestNo: E200.7		Analysis Date: 12/7/2011	SeqNo: 2937984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	10.5	0.200	10.00	0	105	85	115				
Magnesium	9.53	0.200	10.00	0	95.3	85	115				
Potassium	9.90	0.200	10.00	0	99.0	85	115				
Sodium	10.2	0.600	10.00	0	102	85	115				

Sample ID: LFBD-28863	SampType: LFBD	TestCode: 200.7	Units: mg/L	Prep Date: 12/6/2011	RunNo: 86955						
Client ID: ZZZZZZ	Batch ID: R86955A	TestNo: E200.7		Analysis Date: 12/7/2011	SeqNo: 2937985						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	10.6	0.200	10.00	0	106	0	2000	10.48	1.30	20	
Magnesium	9.73	0.200	10.00	0	97.3	0	2000	9.527	2.09	20	
Potassium	10.2	0.200	10.00	0	102	0	2000	9.896	2.61	20	
Sodium	10.4	0.600	10.00	0	104	0	2000	10.17	1.87	20	

Sample ID: LRB-28863	SampType: LRB	TestCode: 200.7	Units: mg/L	Prep Date: 12/6/2011	RunNo: 86955						
Client ID: ZZZZZZ	Batch ID: R86955A	TestNo: E200.7		Analysis Date: 12/7/2011	SeqNo: 2937986						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	< 0.200	0.200									
Magnesium	< 0.200	0.200									
Potassium	< 0.200	0.200									
Sodium	< 0.600	0.600									

Sample ID: 1111895-002BLFM		SampType: LFM		TestCode: 200.7		Units: mg/L		Prep Date: 12/6/2011		RunNo: 86955			
Client ID: CRCP-WISIANW1-02		Batch ID: R86955A		TestNo: E200.7				Analysis Date: 12/7/2011		SeqNo: 2937992			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Magnesium	20.8	0.200	10.00	10.81	100	70	130				
Potassium	13.0	0.200	10.00	2.648	104	70	130				

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank	E	Value Above Quantitation Range
H	Holding Time Exceeded	N	Not Accredited	R	RPD Outside Recovery Limits
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)		

CLIENT: URS Corporation
Work Order: 1111895
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86955A

Sample ID: 1111895-002BLFMD		SampType: LFMD	TestCode: 200.7		Units: mg/L	Prep Date: 12/6/2011			RunNo: 86955		
Client ID: CRCP-WISIANW1-02		Batch ID: R86955A	TestNo: E200.7			Analysis Date: 12/7/2011			SeqNo: 2937993		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	20.5	0.200	10.00	10.81	97.0	0	2000	20.81	1.48	20	
Potassium	12.7	0.200	10.00	2.648	101	0	2000	13.01	2.08	20	

Sample ID: CCB2		SampType: CCB	TestCode: 200.7		Units: mg/L	Prep Date:			RunNo: 86955		
Client ID: CCB		Batch ID: R86955A	TestNo: E200.7			Analysis Date: 12/7/2011			SeqNo: 2937998		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	< 0.200	0.200									
Magnesium	< 0.200	0.200									
Potassium	< 0.200	0.200									
Sodium	< 0.600	0.600									

Sample ID: IPC2		SampType: IPC	TestCode: 200.7		Units: mg/L	Prep Date:			RunNo: 86955		
Client ID: ZZZZZZ		Batch ID: R86955A	TestNo: E200.7			Analysis Date: 12/7/2011			SeqNo: 2937999		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	100	0.200	100.0	0	100	90	110				
Magnesium	105	0.200	100.0	0	105	90	110				
Potassium	103	0.200	100.0	0	103	90	110				
Sodium	101	0.600	100.0	0	101	90	110				

Qualifiers:	A	Not Available for Accreditation	B	Analyte Detected in Method Blank	E	Value Above Quantitation Range
	H	Holding Time Exceeded	N	Not Accredited	R	RPD Outside Recovery Limits
	S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)		



LCRA ENVIRONMENTAL LABORATORY SERVICES (ELS) CHAIN OF CUSTODY RECORD

NOTE: Relinquishing sample(s) to ELS obligates the submitter to all Standard Terms and Conditions stated on the back of this form.

Target Due Date: 12/13/11
Work Order No.: 111825
COC No.: 102064
Page 1 of 1

Results To: Kevin Pasternak 9400 Amberglen Blvd Austin, TX 78729 Sampled By: Kim Nguyen
Bill To: Travis County PO No.:
Phone No.: 5124544797 Fax No.: 5124548807 Method of Transport: Hand Delivered TAT Requested: Normal Working days E-mail: Kevin.pasternak@urs.com
Relinquished By: [Signature] Date: 11/29/11 Time: 1615 Received By: _____ Date: _____ Time: _____ Relinquished By: _____ Date: _____ Time: _____

Report Requirements
☐ Hardcopy ☒ E-mail ☐ Fax
☐ EDD (Generic)

Regulatory Requirements
☒ None ☐ NELAP

Received at ELS By: _____ Date: 11/29/11 Time: 1615
☒ Received on Ice Temp: 2.6 °C
Login Review: [Signature] Date: 11/29/11

ELS Mgmt. Approval for RUSH: _____
Surcharge for RUSH: _____ %

ELS ID:	SAMPLE DESCRIPTION Custody Seals (circle): (Cooler) Bottles None	MATRIX	SAMPLE COLLECTION		CONTAINERS			ANALYSIS REQUESTED: Place an "X" in the box below to indicate request.										PRESERVATIVES		pH
			DATE	TIME	NUMBER	SIZE	TYPE	E35C.1	E35C.2	E35C.3	E35C.4	E35C.5	E35C.6	E35C.7	E35C.8	E35C.9	E35C.10			
001	CRCP-5852213-020	W	11/29/11	1010	4	mg	Plast	X	X	X	X							HNO ₃ , H ₂ SO ₄		
002	-WisianW1-020			1200				X	X	X	X									
003	-WisianW1-025			1210				X	X	X	X									
004	-ATF1-020			1325				X	X	X	X									
005	-WisianW2-020			1420				X	X	X	X									
006	✓ -58522-020	✓	✓	1510	✓	✓	✓	X	X	X	X									✓

Special Instructions: _____

ELS Comments: _____

LCRA Environmental Laboratory Services

REMIT TO: Lower Colorado River Authority
P. O. Box 200870
Houston, Texas 77216-0870
TEL: (512) 356-6022

INVOICE

DATE: December 09, 2011

Invoice No: LB90247
Customer No: 000000

Invoice TO: Environmental and Regulatory Affairs
Mail Stop: EL-101
3505 Montopolis Drive
Austin, TX 78744

PO Number:
2282009

Attn: Alicia C. Gill
Phone: (512) 356-6022

Work Order: 1111965 Order Name Colorado River Corridor - Grou Date Received 11/30/2011

Item	Remarks	Matrix	Qty	Mult	Quoted	Test Total
ALKALINITY	HCO3,CO3	Aqueous	6	1	\$24.00	\$144.00
AMMONIA as N	Ammonia-N	Aqueous	6	1	\$15.00	\$90.00
ANIONS by ION CHROMATOGRAPHY	Cl,F,NO3,SO4	Aqueous	6	1	\$72.00	\$432.00
AQPREP TOTAL RECOVERABLE METALS: I	Prep Ca,Mg,Na,	Aqueous	6	1	\$15.00	\$90.00
ICP METALS, TOTAL RECOVERABLE	Ca,Mg,Na,K	Aqueous	6	1	\$48.00	\$288.00
TOTAL SUSPENDED SOLIDS	TSS	Aqueous	6	1	\$12.00	\$72.00

Subtotal: \$1,116.00

Misc Charges: \$0.00

INVOICE Total: \$1,116.00

This is an internal billing for your records. Please do not forward to Accounts Payable.



December 09, 2011

Kevin Pasternak
URS Corporation
9400 Amberglen Blvd
Austin, TX 78729

TEL: (512) 419-5293

FAX

RE: Colorado River Corridor - Groundwater

COC ID.: 109134

Order No.: 1111965

Dear Kevin Pasternak:

On 11/30/2011, LCRA Environmental Laboratory Services (ELS) received 6 sample(s) for analyses under Lab Order No. 1111965. This final report provides results related only to the sample(s) as received for the above referenced lab order number.

ELS is accredited under the National Environmental Laboratory Accreditation Program (NELAP) and certifies that all reported results meet NELAP requirements, unless otherwise noted. The Case Narrative provides explanations for any deviations, additions to, or exclusions from the method requirements.

This report contains a total of 21 pages (including the cover letter) and may not be reproduced, except in full, without written approval from ELS.

Thank you for selecting ELS for your analytical needs. If you have questions regarding this report, please contact us at (512) 356-6022. We look forward to assisting you again.

Sincerely,

Tess Abbott

Project Manager

Certificate: T104704218-11-5



CLIENT: URS Corporation
Project: Colorado River Corridor - Groundwater
Lab Order: 1111965

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Date Collected	Date Received
1111965-001A	CRCP-221049-020		11/30/2011 8:15:00 AM	11/30/2011 3:00:00 PM
1111965-001B	CRCP-221049-020		11/30/2011 8:15:00 AM	11/30/2011 3:00:00 PM
1111965-001C	CRCP-221049-020		11/30/2011 8:15:00 AM	11/30/2011 3:00:00 PM
1111965-001D	CRCP-221049-020		11/30/2011 8:15:00 AM	11/30/2011 3:00:00 PM
1111965-002A	CRCP-NTNW2-020		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-002B	CRCP-NTNW2-020		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-002C	CRCP-NTNW2-020		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-002D	CRCP-NTNW2-020		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-003A	CRCP-NTNW2-021		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-003B	CRCP-NTNW2-021		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-003C	CRCP-NTNW2-021		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-003D	CRCP-NTNW2-021		11/30/2011 9:30:00 AM	11/30/2011 3:00:00 PM
1111965-004A	CRCP-5852314-020		11/30/2011 10:35:00 AM	11/30/2011 3:00:00 PM
1111965-004B	CRCP-5852314-020		11/30/2011 10:35:00 AM	11/30/2011 3:00:00 PM
1111965-004C	CRCP-5852314-020		11/30/2011 10:35:00 AM	11/30/2011 3:00:00 PM
1111965-004D	CRCP-5852314-020		11/30/2011 10:35:00 AM	11/30/2011 3:00:00 PM
1111965-005A	CRCP-HOLWEGER-023		11/30/2011 12:10:00 PM	11/30/2011 3:00:00 PM
1111965-005B	CRCP-HOLWEGER-023		11/30/2011 12:10:00 PM	11/30/2011 3:00:00 PM
1111965-005C	CRCP-HOLWEGER-023		11/30/2011 12:10:00 PM	11/30/2011 3:00:00 PM
1111965-005D	CRCP-HOLWEGER-023		11/30/2011 12:10:00 PM	11/30/2011 3:00:00 PM
1111965-006A	CRCP-BUCHHEIT-020		11/30/2011 2:10:00 PM	11/30/2011 3:00:00 PM
1111965-006B	CRCP-BUCHHEIT-020		11/30/2011 2:10:00 PM	11/30/2011 3:00:00 PM
1111965-006C	CRCP-BUCHHEIT-020		11/30/2011 2:10:00 PM	11/30/2011 3:00:00 PM
1111965-006D	CRCP-BUCHHEIT-020		11/30/2011 2:10:00 PM	11/30/2011 3:00:00 PM

Final Analysis Report

LCRA Environmental Laboratory Services

Date: 09-Dec-11

CLIENT:	URS Corporation	Client Sample ID:	CRCP-221049-020
Lab Order:	1111965	Collection Date:	11/30/2011 8:15:00 AM
Project:	Colorado River Corridor - Groundwater	Matrix:	GROUNDWATER
Lab ID:	1111965-001	Tag No:	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE						
		E200.7				Analyst: MV
Calcium	106	0.200		mg/L	1	12/7/2011 1:37:28 PM
Magnesium	13.1	0.200		mg/L	1	12/7/2011 1:37:28 PM
Potassium	2.01	0.200		mg/L	1	12/7/2011 1:37:28 PM
Sodium	29.4	0.600		mg/L	1	12/7/2011 1:37:28 PM
ANIONS BY ION CHROMATOGRAPHY						
		E300.0				Analyst: WR
Chloride	13.7	1.00		mg/L	1	12/1/2011 10:13:00 PM
Fluoride	0.266	0.010		mg/L	1	12/1/2011 10:13:00 PM
Nitrogen, Nitrate (As N)	14.2	0.100	HX	mg/L	10	12/2/2011 11:35:00 AM
Nitrogen, Nitrate (As N)	11.3	0.010	EX	mg/L	1	12/1/2011 10:13:00 PM
Sulfate	17.8	1.00		mg/L	1	12/1/2011 10:13:00 PM
ALKALINITY						
		SM2320 B				Analyst: KH
Alkalinity, Bicarbonate (As CaCO3)	285	2	A	mg/L CaCO3	1	12/1/2011
Alkalinity, Carbonate (As CaCO3)	< 2	2	A	mg/L CaCO3	1	12/1/2011
AMMONIA AS N						
		E350.1				Analyst: JB
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS						
		SM2540D				Analyst: JB
Suspended Solids (Residue, Non-Filterable)	11.2	1.1		mg/L	1.1	12/1/2011

Qualifiers:

PQL: Practical Quantitation Limit

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 09-Dec-11

CLIENT: URS Corporation

Client Sample ID: CRCP-NTNW2-020

Lab Order: 1111965

Collection Date: 11/30/2011 9:30:00 AM

Project: Colorado River Corridor - Groundwater

Matrix: GROUNDWATER

Lab ID: 1111965-002

Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	192	0.200		mg/L	1	12/7/2011 1:45:15 PM
Magnesium	62.2	0.200		mg/L	1	12/7/2011 1:45:15 PM
Potassium	2.31	0.200		mg/L	1	12/7/2011 1:45:15 PM
Sodium	46.2	0.600		mg/L	1	12/7/2011 1:45:15 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: WR		
Chloride	41.3	1.00		mg/L	1	12/1/2011 10:29:00 PM
Fluoride	0.264	0.010		mg/L	1	12/1/2011 10:29:00 PM
Nitrogen, Nitrate (As N)	27.0	0.100	HX	mg/L	10	12/2/2011 11:51:00 AM
Nitrogen, Nitrate (As N)	17.9	0.010	EX	mg/L	1	12/1/2011 10:29:00 PM
Sulfate	302	10.0		mg/L	10	12/2/2011 11:51:00 AM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	340	2	A	mg/L CaCO ₃	1	12/1/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.0	1.0		mg/L	1	12/5/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 09-Dec-11

CLIENT:	URS Corporation	Client Sample ID:	CRCP-NTNW2-021
Lab Order:	1111965	Collection Date:	11/30/2011 9:30:00 AM
Project:	Colorado River Corridor - Groundwater	Matrix:	GROUNDWATER
Lab ID:	1111965-003	Tag No:	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	193	0.200		mg/L	1	12/7/2011 1:53:18 PM
Magnesium	63.3	0.200		mg/L	1	12/7/2011 1:53:18 PM
Potassium	2.28	0.200		mg/L	1	12/7/2011 1:53:18 PM
Sodium	46.5	0.600		mg/L	1	12/7/2011 1:53:18 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: WR		
Chloride	41.4	1.00		mg/L	1	12/1/2011 10:45:00 PM
Fluoride	0.270	0.010		mg/L	1	12/1/2011 10:45:00 PM
Nitrogen, Nitrate (As N)	26.7	0.100	HX	mg/L	10	12/2/2011 12:07:00 PM
Nitrogen, Nitrate (As N)	17.9	0.010	EX	mg/L	1	12/1/2011 10:45:00 PM
Sulfate	299	10.0		mg/L	10	12/2/2011 12:07:00 PM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO3)	341	2	A	mg/L CaCO3	1	12/1/2011
Alkalinity, Carbonate (As CaCO3)	< 2	2	A	mg/L CaCO3	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.0	1.0		mg/L	1	12/5/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 09-Dec-11

CLIENT: URS Corporation

Client Sample ID: CRCP-5852314-020

Lab Order: 1111965

Collection Date: 11/30/2011 10:35:00 AM

Project: Colorado River Corridor - Groundwater

Matrix: GROUNDWATER

Lab ID: 1111965-004

Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	140	0.200		mg/L	1	12/7/2011 2:01:21 PM
Magnesium	40.7	0.200		mg/L	1	12/7/2011 2:01:21 PM
Potassium	2.16	0.200		mg/L	1	12/7/2011 2:01:21 PM
Sodium	86.1	0.600		mg/L	1	12/7/2011 2:01:21 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: WR		
Chloride	60.9	1.00		mg/L	1	12/2/2011 12:22:00 AM
Fluoride	0.241	0.010		mg/L	1	12/2/2011 12:22:00 AM
Nitrogen, Nitrate (As N)	11.2	0.100	X	mg/L	10	12/2/2011 10:27:00 AM
Sulfate	190	10.0		mg/L	10	12/2/2011 10:27:00 AM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	356	2	A	mg/L CaCO ₃	1	12/1/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.1	1.1		mg/L	1.1	12/5/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 09-Dec-11

CLIENT: URS Corporation

Client Sample ID: CRCP-HOLWEGGER-023

Lab Order: 1111965

Collection Date: 11/30/2011 12:10:00 PM

Project: Colorado River Corridor - Groundwater

Matrix: GROUNDWATER

Lab ID: 1111965-005

Tag No:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	114	0.200		mg/L	1	12/7/2011 2:09:21 PM
Magnesium	18.3	0.200		mg/L	1	12/7/2011 2:09:21 PM
Potassium	1.88	0.200		mg/L	1	12/7/2011 2:09:21 PM
Sodium	45.2	0.600		mg/L	1	12/7/2011 2:09:21 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: WR		
Chloride	32.6	1.00		mg/L	1	12/2/2011 12:38:00 AM
Fluoride	0.286	0.010		mg/L	1	12/2/2011 12:38:00 AM
Nitrogen, Nitrate (As N)	20.7	0.100	X	mg/L	10	12/2/2011 11:03:00 AM
Sulfate	34.1	1.00		mg/L	1	12/2/2011 12:38:00 AM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	300	2	A	mg/L CaCO ₃	1	12/6/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	12/6/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.1	1.1		mg/L	1.1	12/5/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

LCRA Environmental Laboratory Services

Date: 09-Dec-11

CLIENT:	URS Corporation	Client Sample ID:	CRCP-BUCHHEIT-020
Lab Order:	1111965	Collection Date:	11/30/2011 2:10:00 PM
Project:	Colorado River Corridor - Groundwater	Matrix:	GROUNDWATER
Lab ID:	1111965-006	Tag No:	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE		E200.7		Analyst: MV		
Calcium	117	0.200		mg/L	1	12/7/2011 2:33:39 PM
Magnesium	12.4	0.200		mg/L	1	12/7/2011 2:33:39 PM
Potassium	2.30	0.200		mg/L	1	12/7/2011 2:33:39 PM
Sodium	58.1	0.600		mg/L	1	12/7/2011 2:33:39 PM
ANIONS BY ION CHROMATOGRAPHY		E300.0		Analyst: WR		
Chloride	37.0	1.00		mg/L	1	12/2/2011 12:54:00 AM
Fluoride	0.382	0.010		mg/L	1	12/2/2011 12:54:00 AM
Nitrogen, Nitrate (As N)	4.70	0.100		mg/L	10	12/2/2011 11:19:00 AM
Sulfate	78.2	10.0		mg/L	10	12/2/2011 11:19:00 AM
ALKALINITY		SM2320 B		Analyst: KH		
Alkalinity, Bicarbonate (As CaCO ₃)	311	2	A	mg/L CaCO ₃	1	12/1/2011
Alkalinity, Carbonate (As CaCO ₃)	< 2	2	A	mg/L CaCO ₃	1	12/1/2011
AMMONIA AS N		E350.1		Analyst: JB		
Nitrogen, Ammonia (As N)	< 0.020	0.020		mg/L	1	12/2/2011
TOTAL SUSPENDED SOLIDS		SM2540D		Analyst: JB		
Suspended Solids (Residue, Non-Filterable)	< 1.0	1.0		mg/L	1	12/5/2011

Qualifiers:

A Not Available for Accreditation
 E Value Above Quantitation Range
 N Not Accredited
 X Value Exceeds Maximum Contaminant Level (MCL)

B Analyte Detected in Method Blank
 H Holding Time Exceeded
 S Spike Recovery Outside Recovery Limits

PQL: Practical Quantitation Limit

Values Below PQL Considered Estimated

CLIENT: URS Corporation
Project: Colorado River Corridor - Groundwater
Lab Order: 1111965

CASE NARRATIVE

Analytical Comments for METHOD E300.0, SAMPLES 1111965-001A through 1111965-003A, Batch R86861A: Nitrogen, Nitrate (As N) results reported as Estimated (E flag) from the 1x analysis and past 48-hour method hold time (H flag) from the 10x dilution analysis. Both results were included in the final report as per client's request.

Analytical Comments for METHOD E300.0, SAMPLE 1111965-001A through SAMPLE 1111965-005A, Batch R86861A: The nitrate MCL of 10 mg/L has been exceeded under the EPA National Primary Drinking Water Standards.

Analytical Comments for METHOD E200.7, SAMPLE 1111965-005BLFM, Batch R86955B: The calcium and sodium LFM recoveries were not reported because the spike amount was less than 30 percent of the sample background concentration.

Analytical Comments for METHOD E200.7, SAMPLE 1111965-005BLFMD, Batch R86955B: The calcium and sodium LFMD recoveries were not reported because the spike amount was less than 30 percent of the sample background concentration.

CLIENT: URS Corporation
Work Order: 1111965
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT**BatchID: R86809**

Sample ID: MBLK	SampType: MBLK	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86809						
Client ID: PBW	Batch ID: R86809	TestNo: SM2540D		Analysis Date: 12/1/2011	SeqNo: 2934252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	< 1.0	1.0									

Sample ID: LCS	SampType: LCS	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86809						
Client ID: LCSW	Batch ID: R86809	TestNo: SM2540D		Analysis Date: 12/1/2011	SeqNo: 2934253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	113	10.0	100.0	0	113	80	120				

Sample ID: LCSD	SampType: LCSD	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86809						
Client ID: LCSS02	Batch ID: R86809	TestNo: SM2540D		Analysis Date: 12/1/2011	SeqNo: 2934254						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	117	10.0	100.0	0	117	0	2000	113.0	3.48	20	

Sample ID: 1111961-004ADUP	SampType: DUP	TestCode: TSS_SM	Units: mg/L	Prep Date:	RunNo: 86809						
Client ID: ZZZZZZ	Batch ID: R86809	TestNo: SM2540D		Analysis Date: 12/1/2011	SeqNo: 2934263						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	9600	1000						10400	8.00	20	

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank
H	Holding Time Exceeded	N	Not Accredited
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)

E	Value Above Quantitation Range
R	RPD Outside Recovery Limits

CLIENT: URS Corporation
Work Order: 1111965
Project: Colorado River Corridor - Groundwater

ANALYTICAL QC SUMMARY REPORT

BatchID: R86841B

Sample ID: 1111965-003ALFM	SampType: LFM	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86841						
Client ID: CRCP-NTNW2-021	Batch ID: R86841B	TestNo: E300.0		Analysis Date: 12/1/2011	SeqNo: 2935130						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	60.3	1.00	20.00	41.38	94.4	80	120				
Fluoride	1.30	0.010	1.000	0.2700	103	80	120				

Sample ID: 1111965-003ALFMD	SampType: LFMD	TestCode: 300_48H		Units: mg/L		Prep Date:			RunNo: 86841		
Client ID: CRCP-NTNW2-021	Batch ID: R86841B	TestNo: E300.0					Analysis Date: 12/1/2011			SeqNo: 2935131	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	60.3	1.00	20.00	41.38	94.4	0	2000	60.26	0.00332	20	
Fluoride	1.30	0.010	1.000	0.2700	103	0	2000	1.300	0.0770	20	

Sample ID: IC_111201_LFB	SampType: LFB	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86841						
Client ID: ZZZZZZ	Batch ID: R86841B	TestNo: E300.0		Analysis Date: 12/1/2011	SeqNo: 2935132						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	1.02	0.010	1.000	0	102	90	110				
Nitrogen, Nitrate (As N)	1.02	0.010	1.000	0	102	90	110				
Sulfate	30.6	1.00	30.00	0	102	90	110				

Sample ID: IC_111201_IPC	SampType: IPC	TestCode: 300_48H	Units: mg/L	Prep Date:	RunNo: 86841						
Client ID: ZZZZZZ	Batch ID: R86841B	TestNo: E300.0		Analysis Date: 12/1/2011	SeqNo: 2935133						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.3	1.00	30.00	0	101	90	110				
Fluoride	1.02	0.010	1.000	0	102	90	110				
Nitrogen, Nitrate (As N)	1.03	0.010	1.000	0	103	90	110				
Sulfate	30.6	1.00	30.00	0	102	90	110				

Qualifiers:

A	Not Available for Accreditation	B	Analyte Detected in Method Blank	E	Value Above Quantitation Range
H	Holding Time Exceeded	N	Not Accredited	R	RPD Outside Recovery Limits
S	Spike Recovery Outside Recovery Limits	X	Value Exceeds Maximum Contaminant Level (MCL)		