LABORATORY REPORTS

July 10, 2014

TURNER
LABORATORIES INC.

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Once Per Season

Work Order No.: 14G0296
Order Name: Storm Water Grab Site

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 07/03/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Dawn Weyer

Dawn Weyer
Project Manager

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0296
Date Received: 07/03/2014

Order: Storm Water Grab Site 1

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0296-01	Grab	Storm Water	07/03/2014 1608

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0296
Date Received: 07/03/2014

Case Narrative

E Value is above quantitation range.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0296
Lab Sample ID: 14G0296-01

Client Sample ID: Grab
Collection Date/Time: 07/03/2014 1608
Matrix: Storm Water
Order Name: Storm Water Grab Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	2400		1.0	E	MPN/100 mL	1	07/03/2014 2150	07/04/2014 2300	EW
Total Coliform	2400		1.0	E	MPN/100 mL	1	07/03/2014 2150	07/04/2014 2300	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0296
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407049 - Micro										
Duplicate (1407049-DUP1)	**Source: 14G0014-01**			Prepared: 07/03/2014 Analyzed: 07/04/2014						
E.Coli	ND	1.0	MPN/100mL		0.0				20	
Total Coliform	ND	1.0	MPN/100mL		0.0				20	

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460296 DATE 7-3-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE C McNellis

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX: MPN
Grab	7/3/14	5:08PM		Storm Water	1	X

1. RELINQUISHED BY:
Signature: C McNellis
Printed Name: Chris McNellis
Firm: City of Tucson Trans. Dept
Date/Time: 7/3/14 9:21:38

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature: Erika Weidenseller
Printed Name
Firm: TURNER LABORATORIES, INC.
Date/Time: 7-3-14/2138

TURNAROUND REQUIREMENTS:
____Standard (approx.10 days)*
____Next day ____2 Day ____5 Day*
____Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
____I. Routine Report
____II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____Y ____N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 1
Temperature 5.3
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes	☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes	☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes	☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

July 10, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Once Per Season

Work Order No.: 14G0298
Order Name: Storm Water Grab Site

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 07/03/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

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Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Dawn Weyer

Dawn Weyer
Project Manager

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0298
Date Received: 07/03/2014

Order: Storm Water Grab Site 5

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0298-01	Grab	Storm Water	07/03/2014 1738

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0298
Date Received: 07/03/2014

Case Narrative

E Value is above quantitation range.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Turner Laboratories, Inc.

Date: 07/10/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0298
Lab Sample ID: 14G0298-01

Client Sample ID: Grab
Collection Date/Time: 07/03/2014 1738
Matrix: Storm Water
Order Name: Storm Water Grab Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	580		1.0		MPN/100 mL	1	07/03/2014 2150	07/04/2014 2300	EW
Total Coliform	2400		1.0	E	MPN/100 mL	1	07/03/2014 2150	07/04/2014 2300	EW

Turner Laboratories, Inc.

Date: 07/10/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0298
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407049 - Micro										
Duplicate (1407049-DUP1)	**Source: 14G0014-01**			Prepared: 07/03/2014 Analyzed: 07/04/2014						
E.Coli	ND	1.0	MPN/100mL		0.0				20	
Total Coliform	ND	1.0	MPN/100mL		0.0				20	

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 14G0298- DATE 7-3-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN
Grab	7-3-14	5:38		Storm Water	1	X

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY:
Signature: Eric Ross
Printed Name: ERIC ROSS
Firm: City of Tucson Trans. Dept
Date/Time: 7-3-14 / 21:40

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature: Erika Wunderlich
Printed Name: TURNER LABORATORIES, INC.
Firm
Date/Time: 7-3-14 / 2140

TURNAROUND REQUIREMENTS:
____ Standard (approx.10 days)*
____ Next day ____ 2 Day ____ 5 Day*
____ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
____ I. Routine Report
____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____ III. Date Validation Report (includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. # _____
Bill to: _____

SAMPLE RECEIPT:
Total Containers 1
Temperature 6.1°
☒ Wet Ice ☐ Blue Ice

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

July 25, 2014

TURNER
LABORATORIES INC.

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14G0297
Order Name: Sample Site #1

RE: Storm Water Once Per Season

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 07/03/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

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Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

Order: Sample Site #1

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0297-01	Composite	Storm Water	07/03/2014 1808
14G0297-02	Grab	Storm Water	07/03/2014 1708

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

Case Narrative

E4 Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.

E8 Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

K2 The sample dilutions set-up for the BOD/CBOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Reported result is an estimated value.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Lab Sample ID: 14G0297-01

Client Sample ID: Composite
Collection Date/Time: 07/03/2014 1808
Matrix: Storm Water
Order Name: Sample Site #1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	110				mg/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	1.7		0.10		mg/L	1	07/04/2014 1100	07/04/2014 1343	EW
ICP Total Metals-E200.7									
Arsenic	9.0	4.5	40	E4	ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Barium	160		50		ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Calcium	35000		4000		ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Chromium	8.1	0.61	30	E4	ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Copper	110		20		ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Magnesium	5600		3000		ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Nickel	16	1.8	50	E4	ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
Zinc	310		40		ug/L	1	07/09/2014 0905	07/12/2014 1451	RAD
ICP/MS Total Metals-E200.8									
Antimony	1.9		0.50		ug/L	1	07/15/2014 1420	07/17/2014 1353	RAD
Lead	20		0.50		ug/L	1	07/15/2014 1420	07/17/2014 1353	RAD
Selenium	1.1	0.082	2.5	E4	ug/L	1	07/15/2014 1420	07/17/2014 1353	RAD
Silver	ND	0.029	0.50	E4	ug/L	1	07/15/2014 1420	07/17/2014 1353	RAD
Thallium	ND	0.013	0.50	E8	ug/L	1	07/15/2014 1420	07/17/2014 1353	RAD
CVAA Total Mercury-E245.1									
Mercury	ND	0.039	1.0	E8	ug/L	1	07/21/2014 1045	07/22/2014 1010	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	1.7		0.50		mg/L	1	07/04/2014 1100	07/04/2014 1343	EW
Nitrogen, Nitrite (As N)	ND		0.10		mg/L	1	07/04/2014 1100	07/04/2014 1343	EW
Phosphorus, Dissolved Orthophosphate (As P)	0.65		0.50		mg/L	1	07/04/2014 1100	07/04/2014 1343	EW
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	2.1		1.0		mg/L	10	07/11/2014 0940	07/11/2014 1655	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Lab Sample ID: 14G0297-01

Client Sample ID: Composite
Collection Date/Time: 07/03/2014 1808
Matrix: Storm Water
Order Name: Sample Site #1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	750		20		mg/L	1	07/16/2014 1110	07/16/2014 1705	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	23		5.0		mg/L	10	07/21/2014 1600	07/23/2014 1535	EW
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	390		20		mg/L	1	07/07/2014 1420	07/08/2014 1435	AC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	310		10		mg/L	1	07/10/2014 0848	07/11/2014 1005	AC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	3.7		0.50		mg/L	1	07/10/2014 0900	07/10/2014 1455	EW
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	21		2.0	K2	mg/L	1	07/04/2014 1135	07/09/2014 1135	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Lab Sample ID: 14G0297-02

Client Sample ID: Grab
Collection Date/Time: 07/03/2014 1708
Matrix: Storm Water
Order Name: Sample Site #1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664A									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	07/22/2014 0845	07/22/2014 1700	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	6.40		5.00		mg/L	1	07/16/2014 0830	07/16/2014 1745	AC
Cyanide-SM4500-CN BE									
Cyanide	41		100		ug/L	1	07/08/2014 0730	07/09/2014 1320	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407114 - E 200.2 ICP										
Blank (1407114-BLK1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	0.91	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1407114-BS1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1760	40	ug/L	2000		88	85-115			
Barium	1900	50	ug/L	2000		96	85-115			
Beryllium	49	2.0	ug/L	50.00		98	85-115			
Cadmium	48	2.0	ug/L	50.00		96	85-115			
Calcium	9500	4000	ug/L	10000		95	85-115			
Chromium	200	30	ug/L	200.0		98	85-115			
Copper	250	20	ug/L	250.0		100	85-115			
Magnesium	9600	3000	ug/L	10000		96	85-115			
Nickel	470	50	ug/L	500.0		94	85-115			
Zinc	510	40	ug/L	500.0		102	85-115			
LCS Dup (1407114-BSD1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1770	40	ug/L	2000		89	85-115	0.6	20	
Barium	1900	50	ug/L	2000		97	85-115	0.06	20	
Beryllium	49	2.0	ug/L	50.00		98	85-115	0.6	20	
Cadmium	48	2.0	ug/L	50.00		95	85-115	0.3	20	
Calcium	9700	4000	ug/L	10000		97	85-115	2	20	
Chromium	200	30	ug/L	200.0		98	85-115	0.02	20	
Copper	250	20	ug/L	250.0		101	85-115	0.3	20	
Magnesium	9600	3000	ug/L	10000		96	85-115	0.4	20	
Nickel	470	50	ug/L	500.0		95	85-115	0.3	20	
Zinc	510	40	ug/L	500.0		102	85-115	0.6	20	
Matrix Spike (1407114-MS1)	**Source: 14G0007-02**			Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	2080	40	ug/L	2000	18.9	103	70-130			
Barium	2100	50	ug/L	2000	140	99	70-130			
Beryllium	53	2.0	ug/L	50.00	ND	106	70-130			
Cadmium	47	2.0	ug/L	50.00	ND	94	70-130			
Calcium	200000	4000	ug/L	10000	190000	90	70-130			
Chromium	220	30	ug/L	200.0	2.6	106	70-130			
Copper	490	20	ug/L	250.0	170	129	70-130			
Magnesium	51000	3000	ug/L	10000	40000	114	70-130			
Nickel	550	50	ug/L	500.0	ND	110	70-130			
Zinc	800	40	ug/L	500.0	220	117	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407114 - E 200.2 ICP										
Matrix Spike (1407114-MS2)	Source: 14G0338-01			Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1880	40	ug/L	2000	14.6	93	70-130			
Barium	2100	50	ug/L	2000	140	97	70-130			
Beryllium	50	2.0	ug/L	50.00	ND	99	70-130			
Cadmium	49	2.0	ug/L	50.00	2.8	92	70-130			
Calcium	95000	4000	ug/L	10000	88000	66	70-130			M3
Chromium	200	30	ug/L	200.0	6.4	99	70-130			
Copper	320	20	ug/L	250.0	37	112	70-130			
Magnesium	23000	3000	ug/L	10000	13000	97	70-130			
Nickel	500	50	ug/L	500.0	ND	100	70-130			
Zinc	660	40	ug/L	500.0	83	116	70-130			
Batch 1407156 - E 200.8 ICP/MS										
Blank (1407156-BLK1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							
LCS (1407156-BS1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	50	0.50	ug/L	50.00		101	85-115			
Lead	49	0.50	ug/L	50.00		98	85-115			
Selenium	250	2.5	ug/L	250.0		100	85-115			
Silver	50	0.50	ug/L	50.00		101	85-115			
Thallium	47	0.50	ug/L	50.00		94	85-115			
LCS Dup (1407156-BSD1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	50	0.50	ug/L	50.00		100	85-115	1	20	
Lead	49	0.50	ug/L	50.00		98	85-115	0.2	20	
Selenium	250	2.5	ug/L	250.0		101	85-115	0.5	20	
Silver	50	0.50	ug/L	50.00		101	85-115	0.3	20	
Thallium	47	0.50	ug/L	50.00		94	85-115	0.3	20	
Matrix Spike (1407156-MS1)	Source: 14G0383-03			Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	45	0.50	ug/L	50.00	0.24	90	70-130			
Lead	45	0.50	ug/L	50.00	1.5	88	70-130			
Selenium	220	2.5	ug/L	250.0	3.5	88	70-130			
Silver	39	0.50	ug/L	50.00	0.15	78	70-130			
Thallium	40	0.50	ug/L	50.00	ND	80	70-130			
Matrix Spike (1407156-MS2)	Source: 14G0520-01			Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	44	0.50	ug/L	50.00	0.59	86	70-130			
Lead	45	0.50	ug/L	50.00	2.0	87	70-130			
Selenium	220	2.5	ug/L	250.0	0.66	87	70-130			
Silver	42	0.50	ug/L	50.00	ND	83	70-130			
Thallium	41	0.50	ug/L	50.00	0.055	81	70-130			
Batch 1407236 - E 245.1										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407236 - E 245.1										
Blank (1407236-BLK1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	ND	1.0	ug/L							
LCS (1407236-BS1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.0	1.0	ug/L	5.000		99	85-115			
LCS Dup (1407236-BSD1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.0	1.0	ug/L	5.000		100	85-115	0.7	20	
Matrix Spike (1407236-MS1)		Source: 14G0627-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115			
Matrix Spike (1407236-MS2)		Source: 14G0629-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	95	85-115			
Matrix Spike Dup (1407236-MSD1)		Source: 14G0627-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115	0.4	20	
Matrix Spike Dup (1407236-MSD2)		Source: 14G0629-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115	1	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407082 - SPECTRO PREP										
Blank (1407082-BLK1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	ND	100	ug/L							
LCS (1407082-BS1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000		92	90-110			
LCS Dup (1407082-BSD1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000		92	90-110	0.3	20	
Matrix Spike (1407082-MS1)		Source: 14G0008-02		Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000	59	89	70-130			
Matrix Spike Dup (1407082-MSD1)		Source: 14G0008-02		Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000	59	86	70-130	3	20	
Batch 1407091 - GEN CHEM										
Duplicate (1407091-DUP1)		Source: 14G0297-01		Prepared: 07/10/2014 Analyzed: 07/11/2014						
Total Suspended Solids	300	10	mg/L		310			3	5	
Duplicate (1407091-DUP2)		Source: 14G0383-02		Prepared: 07/10/2014 Analyzed: 07/11/2014						
Total Suspended Solids	2500	10	mg/L		2500			0.4	5	
Batch 1407092 - GEN CHEM										
Duplicate (1407092-DUP1)		Source: 14G0007-01		Prepared: 07/07/2014 Analyzed: 07/08/2014						
Total Dissolved Solids (Residue, Filterable)	1100	20	mg/L		1100			0.2	5	
Batch 1407093 - GEN CHEM										
Blank (1407093-BLK1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1407093-BS1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		102	90-110			
LCS Dup (1407093-BSD1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000		99	90-110	3	10	
Matrix Spike (1407093-MS1)		Source: 14G0373-03		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	4.7	0.50	mg/L	5.000	ND	94	70-130			
Matrix Spike (1407093-MS2)		Source: 14G0501-01		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	99	70-130			
Matrix Spike Dup (1407093-MSD1)		Source: 14G0373-03		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	4.8	0.50	mg/L	5.000	ND	95	70-130	1	20	
Matrix Spike Dup (1407093-MSD2)		Source: 14G0501-01		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000	ND	101	70-130	2	20	
Batch 1407107 - SPECTRO PREP										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407107 - SPECTRO PREP										
Blank (1407107-BLK1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1407107-BS1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.51	0.10	mg/L	0.5000		102	90-110			
LCS Dup (1407107-BSD1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.51	0.10	mg/L	0.5000		102	90-110	0	10	
Matrix Spike (1407107-MS1)	**Source: 14F0787-01**			Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.67	0.10	mg/L	0.5000	0.18	98	70-130			
Matrix Spike Dup (1407107-MSD1)	**Source: 14F0787-01**			Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.67	0.10	mg/L	0.5000	0.18	98	70-130	0	15	
Batch 1407145 - SPECTRO PREP										
Blank (1407145-BLK1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1407145-BS1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	540	20	mg/L	500.0		107	70-130			
LCS Dup (1407145-BSD1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	520	20	mg/L	500.0		104	70-130	3	20	
Matrix Spike (1407145-MS1)	**Source: 14G0114-01**			Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	540	20	mg/L	500.0	ND	108	70-130			
Matrix Spike Dup (1407145-MSD1)	**Source: 14G0114-01**			Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	530	20	mg/L	500.0	ND	105	70-130	2	20	
Batch 1407200 - GEN CHEM										
Blank (1407200-BLK1)				Prepared: 07/18/2014 Analyzed: 07/23/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1407200-BS1)				Prepared: 07/18/2014 Analyzed: 07/20/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		101	80-120			
LCS Dup (1407200-BSD1)				Prepared: 07/18/2014 Analyzed: 07/20/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000		99	80-120	2	20	
Matrix Spike (1407200-MS3)	**Source: 14G0297-01RE1**			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	79	5.0	mg/L	50.00	23	111	80-120			
Matrix Spike (1407200-MS4)	**Source: 14G0303-01RE1**			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	69	5.0	mg/L	50.00	17	105	80-120			
Matrix Spike Dup (1407200-MSD3)	**Source: 14G0297-01RE1**			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	76	5.0	mg/L	50.00	23	106	80-120	3	20	
Matrix Spike Dup (1407200-MSD4)	**Source: 14G0303-01RE1**			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	68	5.0	mg/L	50.00	17	103	80-120	1	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407251 - GEN CHEM										
Blank (1407251-BLK1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1407251-BS1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	39.8	5.00	mg/L	40.00		100	78-114			
LCS Dup (1407251-BSD1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	37.1	5.00	mg/L	40.00		93	78-114	7	18	
Matrix Spike (1407251-MS1)		**Source: 14G0239-02**		Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	45.7	5.00	mg/L	40.00	0.600	113	78-114			
Batch 1407268 - GEN CHEM										
Blank (1407268-BLK1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1407268-BS1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.6	5.00	mg/L	20.00		98	64-132			
LCS Dup (1407268-BSD1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.6	5.00	mg/L	20.00		93	64-132	5	34	
Matrix Spike (1407268-MS1)		**Source: 14G0297-02**		Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.3	5.00	mg/L	20.00	0.600	89	64-132			
Batch 1407281 - GEN CHEM										
Blank (1407281-BLK1)				Prepared: 07/04/2014 Analyzed: 07/09/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1407281-BS1)				Prepared: 07/04/2014 Analyzed: 07/09/2014						
Biochemical Oxygen Demand	190		mg/L	198.0		98	85-115			

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0297
Date Received: 07/03/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407043 - IC PREP										
Blank (1407043-BLK1)				Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1407043-BS1)				Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500		97	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		97	90-110			
LCS Dup (1407043-BSD1)				Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110	0.06	10	
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500		98	90-110	0.2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		96	90-110	1	10	
Matrix Spike (1407043-MS1)	**Source: 14G0299-01**			Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	6.6	0.50	mg/L	5.000	1.8	96	80-120			
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500	ND	90	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	0.23	99	80-120			
Matrix Spike Dup (1407043-MSD1)	**Source: 14G0299-01**			Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	6.6	0.50	mg/L	5.000	1.8	96	80-120	0.3	10	
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500	ND	90	80-120	0.04	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	0.23	100	80-120	0.9	10	

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460297 DATE 7-3-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # (1), 2, 3, 4, 5 (circle)
CONTACT NAME Chris McNellis, Eric Ross, (Bev Hester)
COMPANY NAME City of Tucson - Transportation Dept
ADDRESS P.O. Box 27210 CITY Tucson STATE AZ 85726-7210
PHONE: 837-6583 (Chris), 837-6582 (Eric), 8374935 (Bev)
FAX (520) 791-4373
SAMPLER'S SIGNATURE C McNellis

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Total Metals *	Chemical Oxygen Demand (CO	Hardness Ca & Mg	Biological Oxygen Demand (BO	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Orthophosphate by Ion Chromatography	Nitrate + Nitrite	Total Phosphorus	TKN	NH3	TPH 1664	O & G	CN
Composite	7/3/14	6:08 AM		Storm Water	9	X	X	X	X	X	X	X	X	X	X	X			
Grab	7/3/14	5:08 PM		Storm Water	4												X	X	X

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY: C McNellis
Signature: Chris McNellis
Printed Name: City of Tucson Trans. Dept
Firm:
Date/Time: 7/3/14 21:38

2. RECEIVED BY:
Signature:
Printed Name:
Firm:
Date/Time:

3. RELINQUISHED BY:
Signature:
Printed Name:
Firm:
Date/Time:

4. RECEIVED BY:
Signature: Erika Weidenschilling
Printed Name: TURNER LABORATORIES, INC.
Firm:
Date/Time: 7-3-14/2138

TURNAROUND REQUIREMENTS:
____ Standard (approx. 10 days)*
____ Next day ____ 2 Day ____ 5 Day*
____ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
____ I. Routine Report
____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 13
Temperature 1.8
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No		Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms: ☐ Yes ☐ No		Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms: ☐ Yes ☐ No		COC/Labels Agree	☒	Received Within Hold Time	☒

*Ni, Hg, Ag, Cr, Cd, Be, Ba, As, Cu, Sb, Zn, Se, Pb, Tl
Composite poured at lab per C.O.T. Specifications

July 25, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14G0299
Order Name: Sample Site #5

RE: Storm Water Once Per Season

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 07/04/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

Order: Sample Site #5

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0299-01	Composite	Storm Water	07/03/2014 1738
14G0299-02	Grab	Storm Water	07/03/2014 1738

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

Case Narrative

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
K2	The sample dilutions set-up for the BOD/CBOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Reported result is an estimated value.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Lab Sample ID: 14G0299-01

Client Sample ID: Composite
Collection Date/Time: 07/03/2014 1738
Matrix: Storm Water
Order Name: Sample Site #5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	130				mg/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	1.8		0.10		mg/L	1	07/04/2014 1100	07/04/2014 1402	EW
ICP Total Metals-E200.7									
Arsenic	8.4	4.5	40	E4	ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Barium	150		50		ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Calcium	43000		4000		ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Chromium	8.1	0.61	30	E4	ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Copper	130		20		ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Magnesium	5500		3000		ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Nickel	7.4	1.8	50	E4	ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
Zinc	1000		40		ug/L	1	07/09/2014 0905	07/12/2014 1455	RAD
ICP/MS Total Metals-E200.8									
Antimony	4.0		0.50		ug/L	1	07/15/2014 1420	07/17/2014 1358	RAD
Lead	20		0.50		ug/L	1	07/15/2014 1420	07/17/2014 1358	RAD
Selenium	1.0	0.082	2.5	E4	ug/L	1	07/15/2014 1420	07/17/2014 1358	RAD
Silver	ND	0.029	0.50	E4	ug/L	1	07/15/2014 1420	07/17/2014 1358	RAD
Thallium	ND	0.013	0.50	E8	ug/L	1	07/15/2014 1420	07/17/2014 1358	RAD
CVAA Total Mercury-E245.1									
Mercury	0.056	0.039	1.0	E4	ug/L	1	07/21/2014 1045	07/22/2014 1012	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	1.8		0.50		mg/L	1	07/04/2014 1100	07/04/2014 1402	EW
Nitrogen, Nitrite (As N)	ND		0.10		mg/L	1	07/04/2014 1100	07/04/2014 1402	EW
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.22	0.50	E4	mg/L	1	07/04/2014 1100	07/04/2014 1402	EW
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	1.1		1.0		mg/L	10	07/11/2014 0940	07/11/2014 1655	EW

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Lab Sample ID: 14G0299-01

Client Sample ID: Composite
Collection Date/Time: 07/03/2014 1738
Matrix: Storm Water
Order Name: Sample Site #5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	540		20		mg/L	1	07/16/2014 1110	07/16/2014 1705	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	13		2.5		mg/L	5	07/21/2014 1600	07/22/2014 1300	EW
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	330		20		mg/L	1	07/07/2014 1420	07/08/2014 1435	AC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	260		10		mg/L	1	07/10/2014 0848	07/11/2014 1005	AC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	3.3		0.50		mg/L	1	07/10/2014 0900	07/10/2014 1455	EW
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	21		2.0	K2	mg/L	1	07/04/2014 1135	07/09/2014 1135	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Lab Sample ID: 14G0299-02

Client Sample ID: Grab
Collection Date/Time: 07/03/2014 1738
Matrix: Storm Water
Order Name: Sample Site #5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664A									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	07/22/2014 0845	07/22/2014 1700	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	5.60		5.00		mg/L	1	07/16/2014 0830	07/16/2014 1745	AC
Cyanide-SM4500-CN BE									
Cyanide	53		100		ug/L	1	07/08/2014 0730	07/09/2014 1320	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407114 - E 200.2 ICP										
Blank (1407114-BLK1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	0.91	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1407114-BS1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1760	40	ug/L	2000		88	85-115			
Barium	1900	50	ug/L	2000		96	85-115			
Beryllium	49	2.0	ug/L	50.00		98	85-115			
Cadmium	48	2.0	ug/L	50.00		96	85-115			
Calcium	9500	4000	ug/L	10000		95	85-115			
Chromium	200	30	ug/L	200.0		98	85-115			
Copper	250	20	ug/L	250.0		100	85-115			
Magnesium	9600	3000	ug/L	10000		96	85-115			
Nickel	470	50	ug/L	500.0		94	85-115			
Zinc	510	40	ug/L	500.0		102	85-115			
LCS Dup (1407114-BSD1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1770	40	ug/L	2000		89	85-115	0.6	20	
Barium	1900	50	ug/L	2000		97	85-115	0.06	20	
Beryllium	49	2.0	ug/L	50.00		98	85-115	0.6	20	
Cadmium	48	2.0	ug/L	50.00		95	85-115	0.3	20	
Calcium	9700	4000	ug/L	10000		97	85-115	2	20	
Chromium	200	30	ug/L	200.0		98	85-115	0.02	20	
Copper	250	20	ug/L	250.0		101	85-115	0.3	20	
Magnesium	9600	3000	ug/L	10000		96	85-115	0.4	20	
Nickel	470	50	ug/L	500.0		95	85-115	0.3	20	
Zinc	510	40	ug/L	500.0		102	85-115	0.6	20	
Matrix Spike (1407114-MS1)	**Source: 14G0007-02**			Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	2080	40	ug/L	2000	18.9	103	70-130			
Barium	2100	50	ug/L	2000	140	99	70-130			
Beryllium	53	2.0	ug/L	50.00	ND	106	70-130			
Cadmium	47	2.0	ug/L	50.00	ND	94	70-130			
Calcium	200000	4000	ug/L	10000	190000	90	70-130			
Chromium	220	30	ug/L	200.0	2.6	106	70-130			
Copper	490	20	ug/L	250.0	170	129	70-130			
Magnesium	51000	3000	ug/L	10000	40000	114	70-130			
Nickel	550	50	ug/L	500.0	ND	110	70-130			
Zinc	800	40	ug/L	500.0	220	117	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407114 - E 200.2 ICP										
Matrix Spike (1407114-MS2)	**Source: 14G0338-01**			Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1880	40	ug/L	2000	14.6	93	70-130			
Barium	2100	50	ug/L	2000	140	97	70-130			
Beryllium	50	2.0	ug/L	50.00	ND	99	70-130			
Cadmium	49	2.0	ug/L	50.00	2.8	92	70-130			
Calcium	95000	4000	ug/L	10000	88000	66	70-130			M3
Chromium	200	30	ug/L	200.0	6.4	99	70-130			
Copper	320	20	ug/L	250.0	37	112	70-130			
Magnesium	23000	3000	ug/L	10000	13000	97	70-130			
Nickel	500	50	ug/L	500.0	ND	100	70-130			
Zinc	660	40	ug/L	500.0	83	116	70-130			
Batch 1407156 - E 200.8 ICP/MS										
Blank (1407156-BLK1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							
LCS (1407156-BS1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	50	0.50	ug/L	50.00		101	85-115			
Lead	49	0.50	ug/L	50.00		98	85-115			
Selenium	250	2.5	ug/L	250.0		100	85-115			
Silver	50	0.50	ug/L	50.00		101	85-115			
Thallium	47	0.50	ug/L	50.00		94	85-115			
LCS Dup (1407156-BSD1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	50	0.50	ug/L	50.00		100	85-115	1	20	
Lead	49	0.50	ug/L	50.00		98	85-115	0.2	20	
Selenium	250	2.5	ug/L	250.0		101	85-115	0.5	20	
Silver	50	0.50	ug/L	50.00		101	85-115	0.3	20	
Thallium	47	0.50	ug/L	50.00		94	85-115	0.3	20	
Matrix Spike (1407156-MS1)	**Source: 14G0383-03**			Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	45	0.50	ug/L	50.00	0.24	90	70-130			
Lead	45	0.50	ug/L	50.00	1.5	88	70-130			
Selenium	220	2.5	ug/L	250.0	3.5	88	70-130			
Silver	39	0.50	ug/L	50.00	0.15	78	70-130			
Thallium	40	0.50	ug/L	50.00	ND	80	70-130			
Matrix Spike (1407156-MS2)	**Source: 14G0520-01**			Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	44	0.50	ug/L	50.00	0.59	86	70-130			
Lead	45	0.50	ug/L	50.00	2.0	87	70-130			
Selenium	220	2.5	ug/L	250.0	0.66	87	70-130			
Silver	42	0.50	ug/L	50.00	ND	83	70-130			
Thallium	41	0.50	ug/L	50.00	0.055	81	70-130			
Batch 1407236 - E 245.1										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407236 - E 245.1										
Blank (1407236-BLK1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	ND	1.0	ug/L							
LCS (1407236-BS1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.0	1.0	ug/L	5.000		99	85-115			
LCS Dup (1407236-BSD1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.0	1.0	ug/L	5.000		100	85-115	0.7	20	
Matrix Spike (1407236-MS1)		**Source: 14G0627-01**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115			
Matrix Spike (1407236-MS2)		**Source: 14G0629-01**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	95	85-115			
Matrix Spike Dup (1407236-MSD1)		**Source: 14G0627-01**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115	0.4	20	
Matrix Spike Dup (1407236-MSD2)		**Source: 14G0629-01**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115	1	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407082 - SPECTRO PREP										
Blank (1407082-BLK1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	ND	100	ug/L							
LCS (1407082-BS1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000		92	90-110			
LCS Dup (1407082-BSD1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000		92	90-110	0.3	20	
Matrix Spike (1407082-MS1)		Source: 14G0008-02		Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000	59	89	70-130			
Matrix Spike Dup (1407082-MSD1)		Source: 14G0008-02		Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000	59	86	70-130	3	20	
Batch 1407091 - GEN CHEM										
Duplicate (1407091-DUP1)		Source: 14G0297-01		Prepared: 07/10/2014 Analyzed: 07/11/2014						
Total Suspended Solids	300	10	mg/L		310			3	5	
Duplicate (1407091-DUP2)		Source: 14G0383-02		Prepared: 07/10/2014 Analyzed: 07/11/2014						
Total Suspended Solids	2500	10	mg/L		2500			0.4	5	
Batch 1407092 - GEN CHEM										
Duplicate (1407092-DUP1)		Source: 14G0007-01		Prepared: 07/07/2014 Analyzed: 07/08/2014						
Total Dissolved Solids (Residue, Filterable)	1100	20	mg/L		1100			0.2	5	
Batch 1407093 - GEN CHEM										
Blank (1407093-BLK1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1407093-BS1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		102	90-110			
LCS Dup (1407093-BSD1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000		99	90-110	3	10	
Matrix Spike (1407093-MS1)		Source: 14G0373-03		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	4.7	0.50	mg/L	5.000	ND	94	70-130			
Matrix Spike (1407093-MS2)		Source: 14G0501-01		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	99	70-130			
Matrix Spike Dup (1407093-MSD1)		Source: 14G0373-03		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	4.8	0.50	mg/L	5.000	ND	95	70-130	1	20	
Matrix Spike Dup (1407093-MSD2)		Source: 14G0501-01		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000	ND	101	70-130	2	20	
Batch 1407107 - SPECTRO PREP										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407107 - SPECTRO PREP										
Blank (1407107-BLK1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1407107-BS1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.51	0.10	mg/L	0.5000		102	90-110			
LCS Dup (1407107-BSD1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.51	0.10	mg/L	0.5000		102	90-110	0	10	
Matrix Spike (1407107-MS1)		Source: 14F0787-01		Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.67	0.10	mg/L	0.5000	0.18	98	70-130			
Matrix Spike Dup (1407107-MSD1)		Source: 14F0787-01		Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.67	0.10	mg/L	0.5000	0.18	98	70-130	0	15	
Batch 1407145 - SPECTRO PREP										
Blank (1407145-BLK1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1407145-BS1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	540	20	mg/L	500.0		107	70-130			
LCS Dup (1407145-BSD1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	520	20	mg/L	500.0		104	70-130	3	20	
Matrix Spike (1407145-MS1)		Source: 14G0114-01		Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	540	20	mg/L	500.0	ND	108	70-130			
Matrix Spike Dup (1407145-MSD1)		Source: 14G0114-01		Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	530	20	mg/L	500.0	ND	105	70-130	2	20	
Batch 1407200 - GEN CHEM										
Blank (1407200-BLK1)				Prepared: 07/18/2014 Analyzed: 07/23/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1407200-BS1)				Prepared: 07/18/2014 Analyzed: 07/20/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		101	80-120			
LCS Dup (1407200-BSD1)				Prepared: 07/18/2014 Analyzed: 07/20/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000		99	80-120	2	20	
Matrix Spike (1407200-MS3)		Source: 14G0297-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	79	5.0	mg/L	50.00	23	111	80-120			
Matrix Spike (1407200-MS4)		Source: 14G0303-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	69	5.0	mg/L	50.00	17	105	80-120			
Matrix Spike Dup (1407200-MSD3)		Source: 14G0297-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	76	5.0	mg/L	50.00	23	106	80-120	3	20	
Matrix Spike Dup (1407200-MSD4)		Source: 14G0303-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	68	5.0	mg/L	50.00	17	103	80-120	1	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407225 - GEN CHEM										
Blank (1407225-BLK1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1407225-BS1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	5.4	0.50	mg/L	5.000		107	80-120			
LCS Dup (1407225-BSD1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	5.3	0.50	mg/L	5.000		106	80-120	1	20	
Matrix Spike (1407225-MS1)		**Source: 14G0391-04**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	82	5.0	mg/L	50.00	30	104	80-120			
Matrix Spike (1407225-MS2)		**Source: 14G0391-10**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	52	5.0	mg/L	50.00	0.29	103	80-120			
Matrix Spike Dup (1407225-MSD1)		**Source: 14G0391-04**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	81	5.0	mg/L	50.00	30	101	80-120	1	20	
Matrix Spike Dup (1407225-MSD2)		**Source: 14G0391-10**		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	52	5.0	mg/L	50.00	0.29	104	80-120	0.8	20	
Batch 1407251 - GEN CHEM										
Blank (1407251-BLK1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1407251-BS1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	39.8	5.00	mg/L	40.00		100	78-114			
LCS Dup (1407251-BSD1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	37.1	5.00	mg/L	40.00		93	78-114	7	18	
Matrix Spike (1407251-MS1)		**Source: 14G0239-02**		Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	45.7	5.00	mg/L	40.00	0.600	113	78-114			
Batch 1407268 - GEN CHEM										
Blank (1407268-BLK1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1407268-BS1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.6	5.00	mg/L	20.00		98	64-132			
LCS Dup (1407268-BSD1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.6	5.00	mg/L	20.00		93	64-132	5	34	
Matrix Spike (1407268-MS1)		**Source: 14G0297-02**		Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.3	5.00	mg/L	20.00	0.600	89	64-132			
Batch 1407281 - GEN CHEM										

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407281 - GEN CHEM										
Blank (1407281-BLK1)				Prepared: 07/04/2014 Analyzed: 07/09/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1407281-BS1)				Prepared: 07/04/2014 Analyzed: 07/09/2014						
Biochemical Oxygen Demand	190		mg/L	198.0		98	85-115			

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0299
Date Received: 07/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407043 - IC PREP										
Blank (1407043-BLK1)				Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1407043-BS1)				Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500		97	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		97	90-110			
LCS Dup (1407043-BSD1)				Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110	0.06	10	
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500		98	90-110	0.2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		96	90-110	1	10	
Matrix Spike (1407043-MS1)	Source: 14G0299-01			Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	6.6	0.50	mg/L	5.000	1.8	96	80-120			
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500	ND	90	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	0.23	99	80-120			
Matrix Spike Dup (1407043-MSD1)	Source: 14G0299-01			Prepared & Analyzed: 07/04/2014						
Nitrogen, Nitrate (As N)	6.6	0.50	mg/L	5.000	1.8	96	80-120	0.3	10	
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500	ND	90	80-120	0.04	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	0.23	100	80-120	0.9	10	

TURNER LABORATORIES INC.
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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460299 DATE 7-3-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, (5) (circle)
CONTACT NAME Chris McNellis, Eric Ross, (Bev Hester)
COMPANY NAME City of Tucson - Transportation Dept
ADDRESS P.O. Box 27210 CITY Tucson STATE AZ 85726-7210
PHONE: 837-6583 (Chris), 837-6582 (Eric), 8374935 (Bev)
FAX (520) 791-4373
SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Total Metals *	Chemical Oxygen Demand (COD)	Hardness Ca & Mg	Biological Oxygen Demand (BOD)	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Orthophosphate by Ion Chromatography	Nitrate + Nitrite	Total Phosphorus	TKN	NH3	TPH 1664 x2	O & G	CN
Composite	7-3-14	5:38		Storm Water	20	X	X	X	X	X	X	X	X	X	X	X			
Grab	7-3-14	5:38		Storm Water	4												X	X	X

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY: Eric Ross
Signature: Eric Ross
Printed Name: Eric Ross
Firm: City of Tucson Trans. Dept
Date/Time: 7-3-14 / 21:40

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature: Erika Vandewalle
Printed Name: TURNER LABORATORIES, INC.
Firm
Date/Time: 7-3-14/2140

TURNAROUND REQUIREMENTS:
____Standard (approx.10 days)*
____Next day ____2 Day ____5 Day*
____Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
____ I. Routine Report
____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. # ____
Bill to: ____

SAMPLE RECEIPT:
Total Containers 21
Temperature 1.2
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No	Custody Seals ☐	Preservation Confirmation ☒
ADEQ Forms: ☐ Yes ☐ No	Container Intact ☒	Appropriate Head Space ☒
Mail ADEQ Forms: ☐ Yes ☐ No	COC/Labels Agree ☒	Received Within Hold Time ☒

*Ni, Hg, Ag, Cr, Cd, Be, Ba, As, Cu, Sb, Zn, Se, Pb, Tl
Composite poured at lab per C.O.T. Specifications

July 10, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14G0302
RE: Storm Water Once Per Season
Order Name: Storm Water Grab Site

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 07/05/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Dawn Weyer

Dawn Weyer
Project Manager

Turner Laboratories, Inc.

Date: 07/10/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0302
Date Received: 07/05/2014

Order: Storm Water Grab Site 4

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0302-01	Grab	Storm Water	07/05/2014 1805

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0302
Date Received: 07/05/2014

Case Narrative

E Value is above quantitation range.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0302
Lab Sample ID: 14G0302-01

Client Sample ID: Grab
Collection Date/Time: 07/05/2014 1805
Matrix: Storm Water
Order Name: Storm Water Grab Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	2400		1.0	E	MPN/100 mL	1	07/05/2014 2035	07/06/2014 2050	EW
Total Coliform	2400		1.0	E	MPN/100 mL	1	07/05/2014 2035	07/06/2014 2050	EW

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460302 DATE 7-5-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, (4) 5 (circle)

CONTACT NAME Chris McNellis, Eric Ross, (Bev Hester)

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX: MPN
Grab	7-3-14	10:05		Storm Water	1	X

1. RELINQUISHED BY:
Eric Ross
Signature
ERICROSS
Printed Name
City of Tucson Trans. Dept
Firm
7-5-14 / 20:20
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Erika Weidenschilling
Printed Name
TURNER LABORATORIES, INC.
Firm
7-5-14 / 2020
Date/Time

TURNAROUND REQUIREMENTS:
____ Standard (approx.10 days)*
____ Next day ____ 2 Day ____ 5 Day*
____ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
____ I. Routine Report
____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. # ____
Bill to: ____

SAMPLE RECEIPT:
Total Containers 1
Temperature 7.2
☒ Wet Ice ☐ Blue Ice

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

July 25, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14G0303
Order Name: Sample Site #4

RE: Storm Water Once Per Season

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 07/05/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

Order: Sample Site #4

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0303-01	Composite	Storm Water	07/05/2014 1805
14G0303-02	Grab	Storm Water	07/05/2014 1805

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

Case Narrative

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
K2	The sample dilutions set-up for the BOD/CBOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Reported result is an estimated value.
K6	Glucose/glutamic acid BOD/CBOD was below the method acceptance criteria.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Lab Sample ID: 14G0303-01

Client Sample ID: Composite
Collection Date/Time: 07/05/2014 1805
Matrix: Storm Water
Order Name: Sample Site #4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	170				mg/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	3.5		0.10		mg/L	1	07/06/2014 1400	07/06/2014 1726	EW
ICP Total Metals-E200.7									
Arsenic	12	4.5	40	E4	ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Barium	190		50		ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Calcium	54000		4000		ug/L	1	07/09/2014 0905	07/12/2014 1458	RAD
Chromium	11	0.61	30	E4	ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Copper	190		20		ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Magnesium	7800		3000		ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Nickel	6.3	1.8	50	E4	ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
Zinc	690		40		ug/L	1	07/09/2014 0905	07/12/2014 1459	RAD
ICP/MS Total Metals-E200.8									
Antimony	4.0		0.50		ug/L	1	07/15/2014 1420	07/17/2014 1403	RAD
Lead	20		0.50		ug/L	1	07/15/2014 1420	07/17/2014 1403	RAD
Selenium	1.7	0.082	2.5	E4	ug/L	1	07/15/2014 1420	07/17/2014 1403	RAD
Silver	ND	0.029	0.50	E4	ug/L	1	07/15/2014 1420	07/17/2014 1403	RAD
Thallium	ND	0.013	0.50	E8	ug/L	1	07/15/2014 1420	07/17/2014 1403	RAD
CVAA Total Mercury-E245.1									
Mercury	ND	0.039	1.0	E8	ug/L	1	07/21/2014 1045	07/22/2014 1015	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	3.5		0.50		mg/L	1	07/06/2014 1400	07/06/2014 1726	EW
Nitrogen, Nitrite (As N)	ND		0.10		mg/L	1	07/06/2014 1400	07/06/2014 1726	EW
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.22	0.50	E4	mg/L	1	07/06/2014 1400	07/06/2014 1726	EW
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	1.3		1.0		mg/L	10	07/11/2014 0940	07/11/2014 1655	EW

Client:	City of Tucson - Transportation Department	**Client Sample ID:**	Composite
Project:	Storm Water Once Per Season	**Collection Date/Time:**	07/05/2014 1805
Work Order:	14G0303	**Matrix:**	Storm Water
Lab Sample ID:	14G0303-01	**Order Name:**	Sample Site #4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	660		20		mg/L	1	07/16/2014 1110	07/16/2014 1705	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	17		5.0		mg/L	10	07/21/2014 1600	07/23/2014 1535	EW
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	490		20		mg/L	1	07/07/2014 1420	07/08/2014 1435	AC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	300		10		mg/L	1	07/10/2014 0848	07/11/2014 1005	AC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	3.2		0.50		mg/L	1	07/10/2014 0900	07/10/2014 1455	EW
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	23		2.0	K2	mg/L	1	07/06/2014 1515	07/11/2014 1515	AC

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Lab Sample ID: 14G0303-02

Client Sample ID: Grab
Collection Date/Time: 07/05/2014 1805
Matrix: Storm Water
Order Name: Sample Site #4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664A									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	07/22/2014 0845	07/22/2014 1700	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	ND		5.00		mg/L	1	07/16/2014 0830	07/16/2014 1745	AC
Cyanide-SM4500-CN BE									
Cyanide	65		100		ug/L	1	07/08/2014 0730	07/09/2014 1320	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407114 - E 200.2 ICP										
Blank (1407114-BLK1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	0.91	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1407114-BS1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1760	40	ug/L	2000		88	85-115			
Barium	1900	50	ug/L	2000		96	85-115			
Beryllium	49	2.0	ug/L	50.00		98	85-115			
Cadmium	48	2.0	ug/L	50.00		96	85-115			
Calcium	9500	4000	ug/L	10000		95	85-115			
Chromium	200	30	ug/L	200.0		98	85-115			
Copper	250	20	ug/L	250.0		100	85-115			
Magnesium	9600	3000	ug/L	10000		96	85-115			
Nickel	470	50	ug/L	500.0		94	85-115			
Zinc	510	40	ug/L	500.0		102	85-115			
LCS Dup (1407114-BSD1)				Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1770	40	ug/L	2000		89	85-115	0.6	20	
Barium	1900	50	ug/L	2000		97	85-115	0.06	20	
Beryllium	49	2.0	ug/L	50.00		98	85-115	0.6	20	
Cadmium	48	2.0	ug/L	50.00		95	85-115	0.3	20	
Calcium	9700	4000	ug/L	10000		97	85-115	2	20	
Chromium	200	30	ug/L	200.0		98	85-115	0.02	20	
Copper	250	20	ug/L	250.0		101	85-115	0.3	20	
Magnesium	9600	3000	ug/L	10000		96	85-115	0.4	20	
Nickel	470	50	ug/L	500.0		95	85-115	0.3	20	
Zinc	510	40	ug/L	500.0		102	85-115	0.6	20	
Matrix Spike (1407114-MS1)	**Source: 14G0007-02**			Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	2080	40	ug/L	2000	18.9	103	70-130			
Barium	2100	50	ug/L	2000	140	99	70-130			
Beryllium	53	2.0	ug/L	50.00	ND	106	70-130			
Cadmium	47	2.0	ug/L	50.00	ND	94	70-130			
Calcium	200000	4000	ug/L	10000	190000	90	70-130			
Chromium	220	30	ug/L	200.0	2.6	106	70-130			
Copper	490	20	ug/L	250.0	170	129	70-130			
Magnesium	51000	3000	ug/L	10000	40000	114	70-130			
Nickel	550	50	ug/L	500.0	ND	110	70-130			
Zinc	800	40	ug/L	500.0	220	117	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407114 - E 200.2 ICP										
Matrix Spike (1407114-MS2)	**Source: 14G0338-01**			Prepared: 07/11/2014 Analyzed: 07/12/2014						
Arsenic	1880	40	ug/L	2000	14.6	93	70-130			
Barium	2100	50	ug/L	2000	140	97	70-130			
Beryllium	50	2.0	ug/L	50.00	ND	99	70-130			
Cadmium	49	2.0	ug/L	50.00	2.8	92	70-130			
Calcium	95000	4000	ug/L	10000	88000	66	70-130			M3
Chromium	200	30	ug/L	200.0	6.4	99	70-130			
Copper	320	20	ug/L	250.0	37	112	70-130			
Magnesium	23000	3000	ug/L	10000	13000	97	70-130			
Nickel	500	50	ug/L	500.0	ND	100	70-130			
Zinc	660	40	ug/L	500.0	83	116	70-130			
Batch 1407156 - E 200.8 ICP/MS										
Blank (1407156-BLK1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							
LCS (1407156-BS1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	50	0.50	ug/L	50.00		101	85-115			
Lead	49	0.50	ug/L	50.00		98	85-115			
Selenium	250	2.5	ug/L	250.0		100	85-115			
Silver	50	0.50	ug/L	50.00		101	85-115			
Thallium	47	0.50	ug/L	50.00		94	85-115			
LCS Dup (1407156-BSD1)				Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	50	0.50	ug/L	50.00		100	85-115	1	20	
Lead	49	0.50	ug/L	50.00		98	85-115	0.2	20	
Selenium	250	2.5	ug/L	250.0		101	85-115	0.5	20	
Silver	50	0.50	ug/L	50.00		101	85-115	0.3	20	
Thallium	47	0.50	ug/L	50.00		94	85-115	0.3	20	
Matrix Spike (1407156-MS1)	**Source: 14G0383-03**			Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	45	0.50	ug/L	50.00	0.24	90	70-130			
Lead	45	0.50	ug/L	50.00	1.5	88	70-130			
Selenium	220	2.5	ug/L	250.0	3.5	88	70-130			
Silver	39	0.50	ug/L	50.00	0.15	78	70-130			
Thallium	40	0.50	ug/L	50.00	ND	80	70-130			
Matrix Spike (1407156-MS2)	**Source: 14G0520-01**			Prepared: 07/15/2014 Analyzed: 07/17/2014						
Antimony	44	0.50	ug/L	50.00	0.59	86	70-130			
Lead	45	0.50	ug/L	50.00	2.0	87	70-130			
Selenium	220	2.5	ug/L	250.0	0.66	87	70-130			
Silver	42	0.50	ug/L	50.00	ND	83	70-130			
Thallium	41	0.50	ug/L	50.00	0.055	81	70-130			
Batch 1407236 - E 245.1										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407236 - E 245.1										
Blank (1407236-BLK1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	ND	1.0	ug/L							
LCS (1407236-BS1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.0	1.0	ug/L	5.000		99	85-115			
LCS Dup (1407236-BSD1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.0	1.0	ug/L	5.000		100	85-115	0.7	20	
Matrix Spike (1407236-MS1)		Source: 14G0627-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115			
Matrix Spike (1407236-MS2)		Source: 14G0629-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	95	85-115			
Matrix Spike Dup (1407236-MSD1)		Source: 14G0627-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115	0.4	20	
Matrix Spike Dup (1407236-MSD2)		Source: 14G0629-01		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	96	85-115	1	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407082 - SPECTRO PREP										
Blank (1407082-BLK1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	ND	100	ug/L							
LCS (1407082-BS1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000		92	90-110			
LCS Dup (1407082-BSD1)				Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000		92	90-110	0.3	20	
Matrix Spike (1407082-MS1)		Source: 14G0008-02		Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000	59	89	70-130			
Matrix Spike Dup (1407082-MSD1)		Source: 14G0008-02		Prepared: 07/08/2014 Analyzed: 07/09/2014						
Cyanide	1800	100	ug/L	2000	59	86	70-130	3	20	
Batch 1407091 - GEN CHEM										
Duplicate (1407091-DUP1)		Source: 14G0297-01		Prepared: 07/10/2014 Analyzed: 07/11/2014						
Total Suspended Solids	300	10	mg/L		310			3	5	
Duplicate (1407091-DUP2)		Source: 14G0383-02		Prepared: 07/10/2014 Analyzed: 07/11/2014						
Total Suspended Solids	2500	10	mg/L		2500			0.4	5	
Batch 1407092 - GEN CHEM										
Duplicate (1407092-DUP1)		Source: 14G0007-01		Prepared: 07/07/2014 Analyzed: 07/08/2014						
Total Dissolved Solids (Residue, Filterable)	1100	20	mg/L		1100			0.2	5	
Batch 1407093 - GEN CHEM										
Blank (1407093-BLK1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1407093-BS1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		102	90-110			
LCS Dup (1407093-BSD1)				Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000		99	90-110	3	10	
Matrix Spike (1407093-MS1)		Source: 14G0373-03		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	4.7	0.50	mg/L	5.000	ND	94	70-130			
Matrix Spike (1407093-MS2)		Source: 14G0501-01		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	99	70-130			
Matrix Spike Dup (1407093-MSD1)		Source: 14G0373-03		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	4.8	0.50	mg/L	5.000	ND	95	70-130	1	20	
Matrix Spike Dup (1407093-MSD2)		Source: 14G0501-01		Prepared & Analyzed: 07/10/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000	ND	101	70-130	2	20	
Batch 1407107 - SPECTRO PREP										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407107 - SPECTRO PREP										
Blank (1407107-BLK1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1407107-BS1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.51	0.10	mg/L	0.5000		102	90-110			
LCS Dup (1407107-BSD1)				Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.51	0.10	mg/L	0.5000		102	90-110	0	10	
Matrix Spike (1407107-MS1)		Source: 14F0787-01		Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.67	0.10	mg/L	0.5000	0.18	98	70-130			
Matrix Spike Dup (1407107-MSD1)		Source: 14F0787-01		Prepared & Analyzed: 07/11/2014						
Total Phosphorus (as P)	0.67	0.10	mg/L	0.5000	0.18	98	70-130	0	15	
Batch 1407145 - SPECTRO PREP										
Blank (1407145-BLK1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1407145-BS1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	540	20	mg/L	500.0		107	70-130			
LCS Dup (1407145-BSD1)				Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	520	20	mg/L	500.0		104	70-130	3	20	
Matrix Spike (1407145-MS1)		Source: 14G0114-01		Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	540	20	mg/L	500.0	ND	108	70-130			
Matrix Spike Dup (1407145-MSD1)		Source: 14G0114-01		Prepared & Analyzed: 07/16/2014						
Chemical Oxygen Demand	530	20	mg/L	500.0	ND	105	70-130	2	20	
Batch 1407200 - GEN CHEM										
Blank (1407200-BLK1)				Prepared: 07/18/2014 Analyzed: 07/23/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1407200-BS1)				Prepared: 07/18/2014 Analyzed: 07/20/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		101	80-120			
LCS Dup (1407200-BSD1)				Prepared: 07/18/2014 Analyzed: 07/20/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000		99	80-120	2	20	
Matrix Spike (1407200-MS3)		Source: 14G0297-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	79	5.0	mg/L	50.00	23	111	80-120			
Matrix Spike (1407200-MS4)		Source: 14G0303-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	69	5.0	mg/L	50.00	17	105	80-120			
Matrix Spike Dup (1407200-MSD3)		Source: 14G0297-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	76	5.0	mg/L	50.00	23	106	80-120	3	20	
Matrix Spike Dup (1407200-MSD4)		Source: 14G0303-01RE1		Prepared: 07/21/2014 Analyzed: 07/22/2014						
Nitrogen, Total Kjeldahl	68	5.0	mg/L	50.00	17	103	80-120	1	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407251 - GEN CHEM										
Blank (1407251-BLK1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1407251-BS1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	39.8	5.00	mg/L	40.00		100	78-114			
LCS Dup (1407251-BSD1)				Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	37.1	5.00	mg/L	40.00		93	78-114	7	18	
Matrix Spike (1407251-MS1)	**Source: 14G0239-02**			Prepared & Analyzed: 07/16/2014						
Oil & Grease (HEM)	45.7	5.00	mg/L	40.00	0.600	113	78-114			
Batch 1407268 - GEN CHEM										
Blank (1407268-BLK1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1407268-BS1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.6	5.00	mg/L	20.00		98	64-132			
LCS Dup (1407268-BSD1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.6	5.00	mg/L	20.00		93	64-132	5	34	
Matrix Spike (1407268-MS1)	**Source: 14G0297-02**			Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.3	5.00	mg/L	20.00	0.600	89	64-132			
Batch 1407284 - GEN CHEM										
Blank (1407284-BLK1)				Prepared: 07/06/2014 Analyzed: 07/11/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1407284-BS1)				Prepared: 07/06/2014 Analyzed: 07/11/2014						
Biochemical Oxygen Demand	160		mg/L	198.0		81	85-115			K6

Turner Laboratories, Inc.

Date: 07/25/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0303
Date Received: 07/05/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407044 - IC PREP										
Blank (1407044-BLK1)				Prepared & Analyzed: 07/06/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1407044-BS1)				Prepared & Analyzed: 07/06/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		100	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		97	90-110			
LCS Dup (1407044-BSD1)				Prepared & Analyzed: 07/06/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		97	90-110	0.3	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		100	90-110	0.04	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		97	90-110	0.7	10	
Matrix Spike (1407044-MS1)	**Source: 14G0303-01**			Prepared & Analyzed: 07/06/2014						
Nitrogen, Nitrate (As N)	8.5	0.50	mg/L	5.000	3.5	101	80-120			
Nitrogen, Nitrite (As N)	2.2	0.10	mg/L	2.500	ND	86	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	3.0	0.50	mg/L	2.500	0.40	103	80-120			
Matrix Spike Dup (1407044-MSD1)	**Source: 14G0303-01**			Prepared & Analyzed: 07/06/2014						
Nitrogen, Nitrate (As N)	8.5	0.50	mg/L	5.000	3.5	101	80-120	0.3	10	
Nitrogen, Nitrite (As N)	2.1	0.10	mg/L	2.500	ND	85	80-120	2	10	
Phosphorus, Dissolved Orthophosphate (As P)	3.0	0.50	mg/L	2.500	0.40	104	80-120	0.4	10	

TURNER LABORATORIES INC.
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Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460303 DATE 7-5-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, (4) 5 (circle)

CONTACT NAME Chris McNellis, Eric Ross, (Bev Hester)

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210 CITY Tucson STATE AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 8374935 (Bev)

FAX (520) 791-4373

SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Total Metals *	Chemical Oxygen Demand (COD)	Hardness Ca & Mg	Biological Oxygen Demand (BOD)	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Orthophosphate by Ion Chromatography	Nitrate + Nitrite	Total Phosphorus	TKN	NH3	TPH 1664 x 2	O & G	CN
Composite	7-5-14	6:05		Storm Water	11	X	X	X	X	X	X	X	X	X	X	X			
Grab	7-5-14	6:05		Storm Water	4												X	X	X

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY: Eric Ross
Signature
Eric Ross
Printed Name
City of Tucson Trans. Dept
Firm
7-5-14 1720:20
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Erika Wiersch/Tmg
Printed Name
TURNER LABORATORIES, INC.
Firm
7-5-14 2020
Date/Time

TURNAROUND REQUIREMENTS:
___Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___Y ___N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 15
Temperature 17.9
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No	Custody Seals ☐	Preservation Confirmation ☒
ADEQ Forms: ☐ Yes ☐ No	Container Intact ☒	Appropriate Head Space ☒
Mail ADEQ Forms: ☐ Yes ☐ No	COC/Labels Agree ☒	Received Within Hold Time ☒

*Ni, Hg, Ag, Cr, Cd, Be, Ba, As, Cu, Sb, Zn, Se, Pb, Tl
Composite poured at lab per C.O.T. Specifications

July 18, 2014

TURNER
LABORATORIES INC.

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14G0558
Order Name: Storm Water Grab Site

RE: Storm Water Once Per Season

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 07/13/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Dawn Weyer

Dawn Weyer
Project Manager

Turner Laboratories, Inc.

Date: 07/18/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0558
Date Received: 07/13/2014

Order: Storm Water Grab Site 3

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0558-01	Grab	Storm Water	07/13/2014 1737

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0558
Date Received: 07/13/2014

Case Narrative

E Value is above quantitation range.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Turner Laboratories, Inc.

Date: 07/18/2014

Client:	City of Tucson - Transportation Department	**Client Sample ID:**	Grab
Project:	Storm Water Once Per Season	**Collection Date/Time:**	07/13/2014 1737
Work Order:	14G0558	**Matrix:**	Storm Water
Lab Sample ID:	14G0558-01	**Order Name:**	Storm Water Grab Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	1600		1.0		MPN/100 mL	1	07/13/2014 2125	07/14/2014 2125	AC
Total Coliform	2400		1.0	E	MPN/100 mL	1	07/13/2014 2125	07/14/2014 2125	AC

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460558 DATE 7-13-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)
CONTACT NAME Chris McNellis, Eric Ross, Bev Hester
COMPANY NAME City of Tucson - Transportation Dept
ADDRESS P.O. Box 27210
CITY Tucson STATE AZ ZIP CODE 85726
PHONE (520) 837-6583 FAX (520) 791-4373
SAMPLER'S SIGNATURE Eric Ross

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN
Grab	7/13/14	5:37 pm		Storm Water	1	X

1. RELINQUISHED BY:
Eric Ross
Signature
ERIC ROSS
Printed Name
City of Tucson Trans. Dept
Firm
7-13-14 / 21:17
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Time

4. RECEIVED BY:
Signature
Erika Weilenschilling
Printed Name
TURNER LABORATORIES, INC.
Firm
7-13-14 / 21:17
Date/Time

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. # ___
Bill to: ___

SAMPLE RECEIPT:
Total Containers 1
Temperature 4.8
[X] Wet Ice [ ] Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	[ ] Yes [ ] No	Custody Seals	[ ]	Preservation Confirmation	[X]
ADEQ Forms:	[ ] Yes [ ] No	Container Intact	[X]	Appropriate Head Space	[X]
Mail ADEQ Forms:	[ ] Yes [ ] No	COC/Labels Agree	[X]	Received Within Hold Time	[X]

August 13, 2014

TURNER
LABORATORIES INC.

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14G0559
RE: Storm Water Once Per Season
Order Name: Sample Site #3

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 07/13/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Date Received: 07/13/2014

Order: Sample Site #3

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14G0559-01	Composite	Storm Water	07/13/2014 1957
14G0559-02	Grab	Storm Water	07/13/2014 1737

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Date Received: 07/13/2014

Case Narrative

C4 Confirmatory analysis was past holding time

E4 Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.

E8 Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Turner Laboratories, Inc.

Date: 08/13/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Lab Sample ID: 14G0559-01

Client Sample ID: Composite
Collection Date/Time: 07/13/2014 1957
Matrix: Storm Water
Order Name: Sample Site #3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	51				mg/L	1	07/16/2014 0915	07/21/2014 1322	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.57		0.10		mg/L	1	07/14/2014 0900	07/14/2014 1626	EW
ICP Total Metals-E200.7									
Arsenic	8.4	4.5	40	E4	ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
Barium	60		50		ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	07/16/2014 0915	07/21/2014 1322	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
Calcium	20000		4000		ug/L	1	07/16/2014 0915	07/21/2014 1322	RAD
Chromium	3.7	0.61	30	E4	ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
Copper	35		20		ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
Magnesium	ND	400	3000	E4	ug/L	1	07/16/2014 0915	07/21/2014 1322	RAD
Nickel	4.3	1.8	50	E4	ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
Zinc	120		40		ug/L	1	07/16/2014 0915	07/21/2014 1323	RAD
ICP/MS Total Metals-E200.8									
Antimony	3.9		2.0		ug/L	4	07/25/2014 0825	07/30/2014 1124	RAD
Lead	14		2.0		ug/L	4	07/25/2014 0825	07/30/2014 1124	RAD
Selenium	ND	0.082	2.5	E8	ug/L	1	07/25/2014 0825	07/28/2014 1723	RAD
Silver	ND	0.12	2.0	E4	ug/L	4	07/25/2014 0825	07/30/2014 1124	RAD
Thallium	ND	0.052	2.0	E8	ug/L	4	07/25/2014 0825	07/30/2014 1124	RAD
CVAA Total Mercury-E245.1									
Mercury	0.058	0.039	1.0	E4	ug/L	1	07/21/2014 1345	07/22/2014 1159	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.57		0.50		mg/L	1	07/14/2014 0900	07/14/2014 1626	EW
Nitrogen, Nitrite (As N)	ND		0.10		mg/L	1	07/14/2014 0900	07/14/2014 1626	EW
Phosphorus, Dissolved Orthophosphate (As P)	ND		0.50	C4	mg/L	1	08/07/2014 0900	08/07/2014 1532	EW
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.23		0.10		mg/L	1	07/30/2014 0800	07/30/2014 1210	EW

Turner Laboratories, Inc.

Date: 08/13/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Lab Sample ID: 14G0559-01

Client Sample ID: Composite
Collection Date/Time: 07/13/2014 1957
Matrix: Storm Water
Order Name: Sample Site #3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	110		20		mg/L	1	07/28/2014 0745	07/28/2014 1405	EW
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	0.63		0.50		mg/L	1	08/01/2014 1630	08/02/2014 1200	AC
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	66		20		mg/L	1	07/14/2014 1550	07/16/2014 1120	AC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	100		10		mg/L	1	07/17/2014 1128	07/18/2014 1010	AC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	1.1		0.50		mg/L	1	07/24/2014 0800	07/24/2014 1255	EW
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	11		2.0		mg/L	1	07/15/2014 1530	07/20/2014 1530	AC

Turner Laboratories, Inc.

Date: 08/13/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Lab Sample ID: 14G0559-02

Client Sample ID: Grab
Collection Date/Time: 07/13/2014 1737
Matrix: Storm Water
Order Name: Sample Site #3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664A									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	07/22/2014 0845	07/22/2014 1700	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	ND	0.420	5.00	E8	mg/L	1	07/18/2014 0840	07/19/2014 1710	AC
Cyanide-SM4500-CN BE									
Cyanide	85	38	100	E4	ug/L	1	07/18/2014 0730	07/18/2014 1705	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Date Received: 07/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407212 - E 200.2 ICP										
Blank (1407212-BLK1)				Prepared: 07/16/2014 Analyzed: 07/21/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1407212-BS1)				Prepared: 07/16/2014 Analyzed: 07/21/2014						
Arsenic	1950	40	ug/L	2000		98	85-115			
Barium	2000	50	ug/L	2000		98	85-115			
Beryllium	50	2.0	ug/L	50.00		100	85-115			
Cadmium	49	2.0	ug/L	50.00		99	85-115			
Calcium	9800	4000	ug/L	10000		98	85-115			
Chromium	200	30	ug/L	200.0		101	85-115			
Copper	250	20	ug/L	250.0		100	85-115			
Magnesium	9600	3000	ug/L	10000		96	85-115			
Nickel	490	50	ug/L	500.0		98	85-115			
Zinc	500	40	ug/L	500.0		101	85-115			
LCS Dup (1407212-BSD1)				Prepared: 07/16/2014 Analyzed: 07/21/2014						
Arsenic	1960	40	ug/L	2000		98	85-115	0.5	20	
Barium	2000	50	ug/L	2000		99	85-115	0.9	20	
Beryllium	50	2.0	ug/L	50.00		101	85-115	1	20	
Cadmium	50	2.0	ug/L	50.00		99	85-115	0.5	20	
Calcium	10000	4000	ug/L	10000		100	85-115	2	20	
Chromium	200	30	ug/L	200.0		101	85-115	0.5	20	
Copper	250	20	ug/L	250.0		102	85-115	2	20	
Magnesium	9600	3000	ug/L	10000		96	85-115	0.08	20	
Nickel	490	50	ug/L	500.0		99	85-115	0.1	20	
Zinc	510	40	ug/L	500.0		102	85-115	0.8	20	
Matrix Spike (1407212-MS1)	**Source: 14G0139-02**			Prepared: 07/16/2014 Analyzed: 07/21/2014						
Arsenic	2020	40	ug/L	2000	23.9	100	70-130			
Barium	1900	50	ug/L	2000	120	90	70-130			
Beryllium	48	2.0	ug/L	50.00	ND	95	70-130			
Cadmium	42	2.0	ug/L	50.00	ND	84	70-130			
Calcium	190000	4000	ug/L	10000	190000	65	70-130			M3
Chromium	190	30	ug/L	200.0	2.8	95	70-130			
Copper	410	20	ug/L	250.0	130	112	70-130			
Magnesium	45000	3000	ug/L	10000	36000	96	70-130			
Nickel	500	50	ug/L	500.0	7.6	99	70-130			
Zinc	630	40	ug/L	500.0	150	97	70-130			

Client: City of Tucson - Transportation Department
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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407212 - E 200.2 ICP										
Matrix Spike (1407212-MS2)	Source: 14G0577-01			Prepared: 07/16/2014 Analyzed: 07/21/2014						
Arsenic	2000	40	ug/L	2000	21.4	99	70-130			
Barium	2000	50	ug/L	2000	110	94	70-130			
Beryllium	48	2.0	ug/L	50.00	ND	96	70-130			
Cadmium	46	2.0	ug/L	50.00	ND	91	70-130			
Calcium	71000	4000	ug/L	10000	62000	95	70-130			
Chromium	230	30	ug/L	200.0	35	96	70-130			
Copper	260	20	ug/L	250.0	6.6	103	70-130			
Magnesium	14000	3000	ug/L	10000	4700	97	70-130			
Nickel	500	50	ug/L	500.0	17	97	70-130			
Zinc	670	40	ug/L	500.0	180	98	70-130			
Batch 1407237 - E 245.1										
Blank (1407237-BLK1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	ND	1.0	ug/L							
LCS (1407237-BS1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.3	1.0	ug/L	5.000		106	85-115			
LCS Dup (1407237-BSD1)				Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.3	1.0	ug/L	5.000		106	85-115	0.1	20	
Matrix Spike (1407237-MS1)	Source: 14G0614-07			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.2	1.0	ug/L	5.000	ND	103	85-115			
Matrix Spike (1407237-MS2)	Source: 14G0444-01			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.4	1.0	ug/L	5.000	ND	107	85-115			
Matrix Spike Dup (1407237-MSD1)	Source: 14G0614-07			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.3	1.0	ug/L	5.000	ND	105	85-115	2	20	
Matrix Spike Dup (1407237-MSD2)	Source: 14G0444-01			Prepared: 07/21/2014 Analyzed: 07/22/2014						
Mercury	5.4	1.0	ug/L	5.000	ND	108	85-115	0.8	20	
Batch 1407314 - E 200.8 ICP/MS										
Blank (1407314-BLK1)				Prepared: 07/25/2014 Analyzed: 07/28/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							
LCS (1407314-BS1)				Prepared: 07/25/2014 Analyzed: 07/28/2014						
Antimony	49	0.50	ug/L	50.00		98	85-115			
Lead	48	0.50	ug/L	50.00		97	85-115			
Selenium	250	2.5	ug/L	250.0		100	85-115			
Silver	51	0.50	ug/L	50.00		102	85-115			
Thallium	51	0.50	ug/L	50.00		101	85-115			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407314 - E 200.8 ICP/MS										
LCS Dup (1407314-BSD1)				Prepared: 07/25/2014 Analyzed: 07/28/2014						
Antimony	50	0.50	ug/L	50.00		99	85-115	1	20	
Lead	49	0.50	ug/L	50.00		98	85-115	1	20	
Selenium	250	2.5	ug/L	250.0		100	85-115	0.8	20	
Silver	50	0.50	ug/L	50.00		101	85-115	1	20	
Thallium	50	0.50	ug/L	50.00		100	85-115	0.9	20	
Matrix Spike (1407314-MS1)	**Source: 14G0743-01**			Prepared: 07/25/2014 Analyzed: 07/28/2014						
Antimony	49	0.50	ug/L	50.00	0.24	97	70-130			
Lead	65	0.50	ug/L	50.00	12	107	70-130			
Selenium	230	2.5	ug/L	250.0	0.25	92	70-130			
Silver	53	0.50	ug/L	50.00	0.11	106	70-130			
Thallium	54	0.50	ug/L	50.00	ND	108	70-130			
Matrix Spike (1407314-MS2)	**Source: 14G0810-05**			Prepared: 07/25/2014 Analyzed: 07/28/2014						
Antimony	49	0.50	ug/L	50.00	0.14	98	70-130			
Lead	52	0.50	ug/L	50.00	3.6	98	70-130			
Selenium	230	2.5	ug/L	250.0	2.1	92	70-130			
Silver	46	0.50	ug/L	50.00	0.065	92	70-130			
Thallium	50	0.50	ug/L	50.00	0.072	101	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407183 - GEN CHEM										
Duplicate (1407183-DUP1)		**Source: 14G0571-03**		Prepared: 07/14/2014 Analyzed: 07/16/2014						
Total Dissolved Solids (Residue, Filterable)	280	20	mg/L		290			3	5	
Batch 1407195 - GEN CHEM										
Duplicate (1407195-DUP1)		**Source: 14G0123-01**		Prepared: 07/17/2014 Analyzed: 07/18/2014						
Total Suspended Solids	120	10	mg/L		130			2	5	
Duplicate (1407195-DUP2)		**Source: 14G0612-04**		Prepared: 07/17/2014 Analyzed: 07/18/2014						
Total Suspended Solids	8500	10	mg/L		8500			0.6	5	
Batch 1407197 - SPECTRO PREP										
Blank (1407197-BLK1)				Prepared & Analyzed: 07/18/2014						
Cyanide	ND	100	ug/L							
LCS (1407197-BS1)				Prepared & Analyzed: 07/18/2014						
Cyanide	2100	100	ug/L	2000		106	90-110			
LCS Dup (1407197-BSD1)				Prepared & Analyzed: 07/18/2014						
Cyanide	2000	100	ug/L	2000		98	90-110	7	20	
Matrix Spike (1407197-MS1)		**Source: 14G0559-02**		Prepared & Analyzed: 07/18/2014						
Cyanide	1800	100	ug/L	2000	85	84	70-130			
Matrix Spike Dup (1407197-MSD1)		**Source: 14G0559-02**		Prepared & Analyzed: 07/18/2014						
Cyanide	1800	100	ug/L	2000	85	84	70-130	0.4	20	
Batch 1407216 - GEN CHEM										
Blank (1407216-BLK1)				Prepared: 07/18/2014 Analyzed: 07/19/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1407216-BS1)				Prepared: 07/18/2014 Analyzed: 07/19/2014						
Oil & Grease (HEM)	37.7	5.00	mg/L	40.00		94	78-114			
LCS Dup (1407216-BSD1)				Prepared: 07/18/2014 Analyzed: 07/19/2014						
Oil & Grease (HEM)	34.6	5.00	mg/L	40.00		87	78-114	9	18	
Matrix Spike (1407216-MS1)		**Source: 14G0263-02**		Prepared: 07/18/2014 Analyzed: 07/19/2014						
Oil & Grease (HEM)	50.2	5.00	mg/L	40.00	15.3	87	78-114			
Batch 1407268 - GEN CHEM										
Blank (1407268-BLK1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1407268-BS1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.6	5.00	mg/L	20.00		98	64-132			

Client: City of Tucson - Transportation Department
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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407268 - GEN CHEM										
LCS Dup (1407268-BSD1)				Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.6	5.00	mg/L	20.00		93	64-132	5	34	
Matrix Spike (1407268-MS1)	Source: 14G0297-02			Prepared & Analyzed: 07/22/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.3	5.00	mg/L	20.00	0.600	89	64-132			
Batch 1407273 - GEN CHEM										
Blank (1407273-BLK1)				Prepared & Analyzed: 07/24/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1407273-BS1)				Prepared & Analyzed: 07/24/2014						
Nitrogen, Ammonia (As N)	5.2	0.50	mg/L	5.000		103	90-110			
LCS Dup (1407273-BSD1)				Prepared & Analyzed: 07/24/2014						
Nitrogen, Ammonia (As N)	5.4	0.50	mg/L	5.000		108	90-110	4	10	
Matrix Spike (1407273-MS1)	Source: 14G0559-01			Prepared & Analyzed: 07/24/2014						
Nitrogen, Ammonia (As N)	6.1	0.50	mg/L	5.000	1.1	100	70-130			
Matrix Spike Dup (1407273-MSD1)	Source: 14G0559-01			Prepared & Analyzed: 07/24/2014						
Nitrogen, Ammonia (As N)	6.1	0.50	mg/L	5.000	1.1	100	70-130	0.3	20	
Batch 1407283 - GEN CHEM										
Blank (1407283-BLK1)				Prepared: 07/15/2014 Analyzed: 07/20/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1407283-BS1)				Prepared: 07/15/2014 Analyzed: 07/20/2014						
Biochemical Oxygen Demand	190		mg/L	198.0		96	85-115			
Batch 1407306 - SPECTRO PREP										
Blank (1407306-BLK1)				Prepared & Analyzed: 07/28/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1407306-BS1)				Prepared & Analyzed: 07/28/2014						
Chemical Oxygen Demand	550	20	mg/L	500.0		110	70-130			
LCS Dup (1407306-BSD1)				Prepared & Analyzed: 07/28/2014						
Chemical Oxygen Demand	550	20	mg/L	500.0		109	70-130	0.5	20	
Matrix Spike (1407306-MS1)	Source: 14G0118-01			Prepared & Analyzed: 07/28/2014						
Chemical Oxygen Demand	520	20	mg/L	500.0	9.0	102	70-130			
Matrix Spike Dup (1407306-MSD1)	Source: 14G0118-01			Prepared & Analyzed: 07/28/2014						
Chemical Oxygen Demand	570	20	mg/L	500.0	9.0	112	70-130	10	20	
Batch 1407343 - SPECTRO PREP										
Blank (1407343-BLK1)				Prepared & Analyzed: 07/30/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407343 - SPECTRO PREP										
LCS (1407343-BS1)				Prepared & Analyzed: 07/30/2014						
Total Phosphorus (as P)	0.54	0.10	mg/L	0.5000		108	90-110			
LCS Dup (1407343-BSD1)				Prepared & Analyzed: 07/30/2014						
Total Phosphorus (as P)	0.55	0.10	mg/L	0.5000		110	90-110	2	10	
Matrix Spike (1407343-MS1)		Source: 14G0742-07		Prepared & Analyzed: 07/30/2014						
Total Phosphorus (as P)	3.2	0.50	mg/L	2.500	0.75	96	70-130			
Matrix Spike Dup (1407343-MSD1)		Source: 14G0742-07		Prepared & Analyzed: 07/30/2014						
Total Phosphorus (as P)	3.3	0.50	mg/L	2.500	0.75	100	70-130	3	15	
Batch 1407381 - GEN CHEM										
Blank (1407381-BLK1)				Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1407381-BS1)				Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000		97	80-120			
LCS Dup (1407381-BSD1)				Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	4.7	0.50	mg/L	5.000		95	80-120	2	20	
Matrix Spike (1407381-MS1)		Source: 14G0577-01		Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000	ND	100	80-120			
Matrix Spike (1407381-MS2)		Source: 14G0579-01		Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000	ND	95	80-120			
Matrix Spike Dup (1407381-MSD1)		Source: 14G0577-01		Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	ND	98	80-120	2	20	
Matrix Spike Dup (1407381-MSD2)		Source: 14G0579-01		Prepared: 08/01/2014 Analyzed: 08/02/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	ND	97	80-120	2	20	

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1407125 - IC PREP										
Blank (1407125-BLK1)				Prepared & Analyzed: 07/14/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
LCS (1407125-BS1)				Prepared & Analyzed: 07/14/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		97	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		99	90-110			
LCS Dup (1407125-BSD1)				Prepared & Analyzed: 07/14/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		97	90-110	0.2	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		100	90-110	0.4	10	
Matrix Spike (1407125-MS1)	**Source: 14G0561-01**			Prepared & Analyzed: 07/14/2014						
Nitrogen, Nitrate (As N)	8.6	0.50	mg/L	5.000	3.7	99	80-120			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	ND	96	80-120			
Matrix Spike (1407125-MS2)	**Source: 14G0559-01**			Prepared: 07/14/2014 Analyzed: 07/15/2014						
Nitrogen, Nitrate (As N)	5.2	0.50	mg/L	5.000	0.57	93	80-120			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	0.046	96	80-120			
Matrix Spike (1407125-MS3)	**Source: 14G0571-03**			Prepared: 07/14/2014 Analyzed: 07/15/2014						
Nitrogen, Nitrate (As N)	5.3	0.50	mg/L	5.000	0.61	94	80-120			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	0.074	96	80-120			
Matrix Spike (1407125-MS4)	**Source: 14G0571-04**			Prepared: 07/14/2014 Analyzed: 07/15/2014						
Nitrogen, Nitrate (As N)	5.5	0.50	mg/L	5.000	0.69	95	80-120			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	0.068	97	80-120			
Matrix Spike Dup (1407125-MSD1)	**Source: 14G0561-01**			Prepared & Analyzed: 07/14/2014						
Nitrogen, Nitrate (As N)	8.5	0.50	mg/L	5.000	3.7	97	80-120	1	10	
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	ND	94	80-120	2	10	
Matrix Spike Dup (1407125-MSD2)	**Source: 14G0559-01**			Prepared: 07/14/2014 Analyzed: 07/15/2014						
Nitrogen, Nitrate (As N)	5.2	0.50	mg/L	5.000	0.57	93	80-120	0.08	10	
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	0.046	96	80-120	0.5	10	
Matrix Spike Dup (1407125-MSD3)	**Source: 14G0571-03**			Prepared: 07/14/2014 Analyzed: 07/15/2014						
Nitrogen, Nitrate (As N)	5.4	0.50	mg/L	5.000	0.61	97	80-120	3	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	0.074	98	80-120	3	10	
Matrix Spike Dup (1407125-MSD4)	**Source: 14G0571-04**			Prepared: 07/14/2014 Analyzed: 07/15/2014						
Nitrogen, Nitrate (As N)	5.4	0.50	mg/L	5.000	0.69	95	80-120	0.5	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	0.068	97	80-120	0	10	
Batch 1408059 - IC PREP										
Blank (1408059-BLK1)				Prepared & Analyzed: 08/07/2014						
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1408059-BS1)				Prepared & Analyzed: 08/07/2014						
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		97	90-110			

Turner Laboratories, Inc.

Date: 08/13/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14G0559
Date Received: 07/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408059 - IC PREP										
LCS Dup (1408059-BSD1)				Prepared & Analyzed: 08/07/2014						
Phosphorus, Dissolved Orthophosphate (As P)	2.5	0.50	mg/L	2.500		98	90-110	0.7	10	
Matrix Spike (1408059-MS1)	**Source: 14H0384-02**			Prepared & Analyzed: 08/07/2014						
Phosphorus, Dissolved Orthophosphate (As P)	2.6		mg/L	2.500	0.10	101	80-120			
Matrix Spike Dup (1408059-MSD1)	**Source: 14H0384-02**			Prepared & Analyzed: 08/07/2014						
Phosphorus, Dissolved Orthophosphate (As P)	2.7		mg/L	2.500	0.10	102	80-120	0.6	10	

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460 559 DATE 7-13-14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)
CONTACT NAME Chris McNellis, Eric Ross, Bev Hester
COMPANY NAME City of Tucson - Transportation Dept
ADDRESS P.O. Box 27210 CITY Tucson STATE AZ 85726-7210
PHONE: 837-6583 (Chris), 837-6582 (Eric), 8374935 (Bev)
FAX (520) 791-4373
SAMPLER'S SIGNATURE Eric Ross

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Total Metals *	Chemical Oxygen Demand (CO	Hardness Ca & Mg	Biological Oxygen Demand (BO	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Orthophosphate by Ion Chromatography	Nitrate + Nitrite	Total Phosphorus	TKN	NH3	TPH 1664 2 Containers	O & G	CN
Composite	7/13/14	7:57 pm		Storm Water	17	X	X	X	X	X	X	X	X	X	X	X			
Grab	7/13/14	5:37 pm		Storm Water	4												X	X	X

1. RELINQUISHED BY:
Signature Eric Ross
Printed Name ERIC ROSS
Firm City of Tucson Trans. Dept
Date/Time 7-13-14 / 21:17

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name Erika Weidenschilling
Firm TURNER LABORATORIES, INC.
Date/Time 7-13-14 / 21:17

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers
Temperature 4.3
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

*Ni, Hg, Ag, Cr, Cd, Be, Ba, As, Cu, Sb, Zn, Se, Pb, Tl
Composite poured at lab per C.O.T. Specifications

August 22, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Once Per Season

Work Order No.: 14H0052
Order Name: Storm Water Grab Site

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 08/12/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Dawn Weyer

Dawn Weyer
Project Manager

Turner Laboratories, Inc.

Date: 08/22/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0052
Date Received: 08/12/2014

Order: Storm Water Grab Site 2

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14H0052-01	Grab	Storm Water	08/12/2014 1452

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0052
Date Received: 08/12/2014

Case Narrative

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0052
Lab Sample ID: 14H0052-01

Client Sample ID: Grab
Collection Date/Time: 08/12/2014 1452
Matrix: Storm Water
Order Name: Storm Water Grab Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	32		1.0		MPN/100 mL	1	08/12/2014 1600	08/13/2014 1610	RAD
Total Coliform	2400		1.0	E3	MPN/100 mL	1	08/12/2014 1600	08/13/2014 1610	RAD

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www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 14H0052 DATE 8/12/14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, (2), 3, 4, 5 (circle)

CONTACT NAME Chris McNellis, Eric Ross, (Bev Hester)

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX
Grab	8-12-14	2:52		Storm Water	1	X	

1. RELINQUISHED BY: Eric Ross
Signature: ERIC ROSS
Printed Name: City of Tucson Trans. Dept
Firm:
Date/Time: 8-12-14 / 3:20PM

2. RECEIVED BY: Chris McNellis
Signature: Chris McNellis
Printed Name: COT Trans
Firm:
Date/Time: 8/12/14 3:20pm

3. RELINQUISHED BY: Chris McNellis
Signature: Chris McNellis
Printed Name: COT Trans
Firm:
Date/Time: 8/12/14 15:45

4. RECEIVED BY:
Signature: Ken Ibarra
Printed Name:
Firm: TURNER LABORATORIES, INC.
Date/Time: 8/12/14 1545

TURNAROUND REQUIREMENTS:
____ Standard (approx. 10 days)*
____ Next day ____ 2 Day ____ 5 Day*
____ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
____ I. Routine Report
____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____ III. Date Validation Report (includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. # ____
Bill to: ____

SAMPLE RECEIPT:
Total Containers 1
Temperature 3.6
[X] Wet Ice [ ] Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	[ ] Yes [ ] No	Custody Seals	[ ]	Preservation Confirmation	[Y]
ADEQ Forms:	[ ] Yes [ ] No	Container Intact	[Y]	Appropriate Head Space	[Y]
Mail ADEQ Forms:	[ ] Yes [ ] No	COC/Labels Agree	[Y]	Received Within Hold Time	[Y]

TURNER
LABORATORIES INC.

September 04, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Once Per Season

Work Order No.: 14H0053
Order Name: Sample Site #2

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 08/12/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 09/04/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

Order: Sample Site #2

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14H0053-01	Composite	Storm Water	08/12/2014 1452
14H0053-02	Grab	Storm Water	08/12/2014 1452

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

Case Narrative

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M1	Matrix spike recovery was high; the associated LCS/LCSD was acceptable.
M2	Matrix spike recovery was low; the associated LCS/LCSD was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Lab Sample ID: 14H0053-01

Client Sample ID: Composite
Collection Date/Time: 08/12/2014 1452
Matrix: Storm Water
Order Name: Sample Site #2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	32				mg/L	1	08/19/2014 0850	09/02/2014 1603	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.74		0.10		mg/L	1	08/14/2014 0730	08/14/2014 1046	EW
ICP Total Metals-E200.7									
Arsenic	8.0	4.5	40	E4	ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Barium	ND		50		ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Calcium	13000		4000		ug/L	1	08/19/2014 0850	09/02/2014 1603	RAD
Chromium	2.8	0.61	30	E4	ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Copper	23		20		ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Magnesium	ND		3000		ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Nickel	2.4	1.8	50	E4	ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
Zinc	76		40		ug/L	1	08/19/2014 0850	08/20/2014 1723	RAD
ICP/MS Total Metals-E200.8									
Antimony	ND		0.50		ug/L	1	08/22/2014 0750	08/25/2014 1402	RAD
Lead	3.8		0.50		ug/L	1	08/22/2014 0750	08/25/2014 1402	RAD
Selenium	0.39	0.082	2.5	E4	ug/L	1	08/22/2014 0750	08/25/2014 1402	RAD
Silver	ND	0.029	0.50	E4	ug/L	1	08/22/2014 0750	08/25/2014 1402	RAD
Thallium	ND	0.013	0.50	E8	ug/L	1	08/22/2014 0750	08/25/2014 1402	RAD
CVAA Total Mercury-E245.1									
Mercury	ND	0.039	1.0	E8	ug/L	1	08/19/2014 0915	08/20/2014 1044	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.74		0.50		mg/L	1	08/14/2014 0730	08/14/2014 1046	EW
Nitrogen, Nitrite (As N)	ND		0.10		mg/L	1	08/14/2014 0730	08/14/2014 1046	EW
Phosphorus, Dissolved Orthophosphate (As P)	ND		0.50		mg/L	1	08/14/2014 0730	08/14/2014 1046	EW
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.40		0.10		mg/L	1	08/28/2014 0820	08/28/2014 1445	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Lab Sample ID: 14H0053-01

Client Sample ID: Composite
Collection Date/Time: 08/12/2014 1452
Matrix: Storm Water
Order Name: Sample Site #2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	110		20		mg/L	1	08/25/2014 0815	08/25/2014 1515	EW
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	2.8		0.50		mg/L	1	08/28/2014 1600	08/29/2014 1310	EW
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	71		20		mg/L	1	08/18/2014 1555	08/19/2014 1700	AC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	87		10		mg/L	1	08/18/2014 1122	08/19/2014 1255	AC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	0.72		0.50		mg/L	1	08/15/2014 1420	08/18/2014 1133	EW
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	15		2.0		mg/L	1	08/14/2014 0730	08/19/2014 0930	AC

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Lab Sample ID: 14H0053-02

Client Sample ID: Grab
Collection Date/Time: 08/12/2014 1452
Matrix: Storm Water
Order Name: Sample Site #2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664A									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	08/29/2014 0920	08/29/2014 1725	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	ND		5.00		mg/L	1	08/22/2014 0830	08/22/2014 1715	AC
Cyanide-SM4500-CN BE									
Cyanide	ND	38	100	E8	ug/L	1	08/21/2014 1000	08/21/2014 1650	EW

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408179 - E 245.1										
Blank (1408179-BLK1)				Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	ND	1.0	ug/L							
LCS (1408179-BS1)				Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	5.4	1.0	ug/L	5.000		107	85-115			
LCS Dup (1408179-BSD1)				Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	5.3	1.0	ug/L	5.000		106	85-115	1	20	
Matrix Spike (1408179-MS1)	Source: 14H0477-01			Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	4.9	1.0	ug/L	5.000	ND	98	85-115			
Matrix Spike (1408179-MS2)	Source: 14H0515-01			Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	5.2	1.0	ug/L	5.000	0.051	104	85-115			
Matrix Spike Dup (1408179-MSD1)	Source: 14H0477-01			Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	4.8	1.0	ug/L	5.000	ND	97	85-115	2	20	
Matrix Spike Dup (1408179-MSD2)	Source: 14H0515-01			Prepared: 08/19/2014 Analyzed: 08/20/2014						
Mercury	5.2	1.0	ug/L	5.000	0.051	104	85-115	0.2	20	
Batch 1408204 - E 200.2 ICP										
Blank (1408204-BLK1)				Prepared: 08/19/2014 Analyzed: 08/20/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1408204-BS1)				Prepared: 08/19/2014 Analyzed: 08/20/2014						
Arsenic	1900	40	ug/L	2000		95	85-115			
Barium	1900	50	ug/L	2000		97	85-115			
Beryllium	48	2.0	ug/L	50.00		96	85-115			
Cadmium	48	2.0	ug/L	50.00		96	85-115			
Calcium	9800	4000	ug/L	10000		98	85-115			
Chromium	200	30	ug/L	200.0		100	85-115			
Copper	250	20	ug/L	250.0		99	85-115			
Magnesium	10000	3000	ug/L	10000		101	85-115			
Nickel	480	50	ug/L	500.0		96	85-115			
Zinc	490	40	ug/L	500.0		97	85-115			

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408204 - E 200.2 ICP										
LCS Dup (1408204-BSD1)				Prepared: 08/19/2014 Analyzed: 08/20/2014						
Arsenic	1900	40	ug/L	2000		95	85-115	0.2	20	
Barium	2000	50	ug/L	2000		98	85-115	0.4	20	
Beryllium	49	2.0	ug/L	50.00		97	85-115	1	20	
Cadmium	48	2.0	ug/L	50.00		95	85-115	1	20	
Calcium	9900	4000	ug/L	10000		99	85-115	1	20	
Chromium	200	30	ug/L	200.0		99	85-115	0.3	20	
Copper	250	20	ug/L	250.0		99	85-115	0.1	20	
Magnesium	10000	3000	ug/L	10000		100	85-115	0.8	20	
Nickel	480	50	ug/L	500.0		96	85-115	0.4	20	
Zinc	490	40	ug/L	500.0		97	85-115	0.1	20	
Matrix Spike (1408204-MS1)		Source: 14H0510-02		Prepared: 08/19/2014 Analyzed: 08/20/2014						
Arsenic	1840	40	ug/L	2000	14.2	92	70-130			
Barium	1900	50	ug/L	2000	82	93	70-130			
Beryllium	46	2.0	ug/L	50.00	ND	91	70-130			
Cadmium	43	2.0	ug/L	50.00	ND	86	70-130			
Calcium	74000	4000	ug/L	10000	69000	56	70-130			M3
Chromium	190	30	ug/L	200.0	2.0	94	70-130			
Copper	340	20	ug/L	250.0	83	102	70-130			
Magnesium	18000	3000	ug/L	10000	9100	88	70-130			
Nickel	490	50	ug/L	500.0	16	95	70-130			
Zinc	650	40	ug/L	500.0	190	92	70-130			
Matrix Spike (1408204-MS2)		Source: 14H0605-01		Prepared: 08/19/2014 Analyzed: 08/20/2014						
Arsenic	1950	40	ug/L	2000	16.1	97	70-130			
Barium	1300	50	ug/L	2000	14	63	70-130			M2
Beryllium	44	2.0	ug/L	50.00	ND	88	70-130			
Cadmium	46	2.0	ug/L	50.00	2.8	86	70-130			
Calcium	340000	4000	ug/L	10000	340000	NR	70-130			M3
Chromium	180	30	ug/L	200.0	4.0	90	70-130			
Copper	320	20	ug/L	250.0	11	123	70-130			
Magnesium	300000	3000	ug/L	10000	300000	17	70-130			M3
Nickel	530	50	ug/L	500.0	17	102	70-130			
Zinc	2000	40	ug/L	500.0	1600	89	70-130			
Batch 1408228 - E 200.8 ICP/MS										
Blank (1408228-BLK1)				Prepared: 08/22/2014 Analyzed: 08/25/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408228 - E 200.8 ICP/MS										
LCS (1408228-BS1)				Prepared: 08/22/2014 Analyzed: 08/25/2014						
Antimony	46	0.50	ug/L	50.00		93	85-115			
Lead	47	0.50	ug/L	50.00		93	85-115			
Selenium	230	2.5	ug/L	250.0		94	85-115			
Silver	47	0.50	ug/L	50.00		94	85-115			
Thallium	46	0.50	ug/L	50.00		93	85-115			
LCS Dup (1408228-BSD1)				Prepared: 08/22/2014 Analyzed: 08/25/2014						
Antimony	46	0.50	ug/L	50.00		93	85-115	0.4	20	
Lead	47	0.50	ug/L	50.00		93	85-115	0.2	20	
Selenium	240	2.5	ug/L	250.0		95	85-115	0.9	20	
Silver	48	0.50	ug/L	50.00		95	85-115	1	20	
Thallium	46	0.50	ug/L	50.00		93	85-115	0.03	20	
Matrix Spike (1408228-MS1)	**Source: 14H0605-01**			Prepared: 08/22/2014 Analyzed: 08/25/2014						
Antimony	41	0.50	ug/L	50.00	0.19	82	70-130			
Lead	44	0.50	ug/L	50.00	0.82	86	70-130			
Selenium	310	2.5	ug/L	250.0	0.78	122	70-130			
Silver	54	0.50	ug/L	50.00	0.046	109	70-130			
Thallium	43	0.50	ug/L	50.00	ND	87	70-130			
Matrix Spike (1408228-MS2)	**Source: 14H0676-01**			Prepared: 08/22/2014 Analyzed: 08/25/2014						
Antimony	26	0.50	ug/L	50.00	0.17	52	70-130			M2
Lead	48	0.50	ug/L	50.00	7.1	82	70-130			
Selenium	200	2.5	ug/L	250.0	0.25	80	70-130			
Silver	65	0.50	ug/L	50.00	0.075	131	70-130			M1
Thallium	40	0.50	ug/L	50.00	ND	80	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408135 - GEN CHEM										
Blank (1408135-BLK1)				Prepared & Analyzed: 08/15/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1408135-BS1)				Prepared & Analyzed: 08/15/2014						
Nitrogen, Ammonia (As N)	5.4	0.50	mg/L	5.000		107	90-110			
LCS Dup (1408135-BSD1)				Prepared & Analyzed: 08/15/2014						
Nitrogen, Ammonia (As N)	5.2	0.50	mg/L	5.000		103	90-110	3	10	
Matrix Spike (1408135-MS1)	Source: 14H0001-02			Prepared & Analyzed: 08/15/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000	ND	101	70-130			
Matrix Spike Dup (1408135-MSD1)	Source: 14H0001-02			Prepared & Analyzed: 08/15/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000	ND	97	70-130	4	20	
Batch 1408147 - GEN CHEM										
Blank (1408147-BLK1)				Prepared: 08/14/2014 Analyzed: 08/19/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1408147-BS1)				Prepared: 08/14/2014 Analyzed: 08/19/2014						
Biochemical Oxygen Demand	170		mg/L	198.0		85	85-115			
Batch 1408166 - GEN CHEM										
Duplicate (1408166-DUP1)	Source: 14H0026-01			Prepared: 08/18/2014 Analyzed: 08/19/2014						
Total Suspended Solids	150	10	mg/L		150			1	5	
Duplicate (1408166-DUP2)	Source: 14H0546-02			Prepared: 08/18/2014 Analyzed: 08/19/2014						
Total Suspended Solids	450	10	mg/L		460			0.9	5	
Batch 1408206 - GEN CHEM										
Duplicate (1408206-DUP1)	Source: 14H0053-01			Prepared: 08/18/2014 Analyzed: 08/20/2014						
Total Dissolved Solids (Residue, Filterable)	73	20	mg/L		71			3	5	
Batch 1408241 - SPECTRO PREP										
Blank (1408241-BLK1)				Prepared & Analyzed: 08/21/2014						
Cyanide	ND	100	ug/L							
LCS (1408241-BS1)				Prepared & Analyzed: 08/21/2014						
Cyanide	2000	100	ug/L	2000		99	90-110			
LCS Dup (1408241-BSD1)				Prepared & Analyzed: 08/21/2014						
Cyanide	2000	100	ug/L	2000		99	90-110	0.6	20	
Matrix Spike (1408241-MS1)	Source: 14H0672-04			Prepared & Analyzed: 08/21/2014						
Cyanide	1800	100	ug/L	2000	ND	90	70-130			
Matrix Spike Dup (1408241-MSD1)	Source: 14H0672-04			Prepared & Analyzed: 08/21/2014						
Cyanide	1700	100	ug/L	2000	ND	86	70-130	5	20	
Batch 1408248 - SPECTRO PREP										

Turner Laboratories, Inc.

Date: 09/04/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408248 - SPECTRO PREP										
Blank (1408248-BLK1)				Prepared & Analyzed: 08/25/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1408248-BS1)				Prepared & Analyzed: 08/25/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		102	70-130			
LCS Dup (1408248-BSD1)				Prepared & Analyzed: 08/25/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		102	70-130	0.8	20	
Matrix Spike (1408248-MS1)	Source: 14H0013-01			Prepared & Analyzed: 08/25/2014						
Chemical Oxygen Demand	690	20	mg/L	500.0	180	101	70-130			
Matrix Spike Dup (1408248-MSD1)	Source: 14H0013-01			Prepared & Analyzed: 08/25/2014						
Chemical Oxygen Demand	700	20	mg/L	500.0	180	102	70-130	0.9	20	
Batch 1408254 - GEN CHEM										
Blank (1408254-BLK1)				Prepared & Analyzed: 08/22/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1408254-BS1)				Prepared & Analyzed: 08/22/2014						
Oil & Grease (HEM)	40.6	5.00	mg/L	40.00		102	78-114			
LCS Dup (1408254-BSD1)				Prepared & Analyzed: 08/22/2014						
Oil & Grease (HEM)	37.3	5.00	mg/L	40.00		93	78-114	8	18	
Matrix Spike (1408254-MS1)	Source: 14H0013-02			Prepared & Analyzed: 08/22/2014						
Oil & Grease (HEM)	37.9	5.00	mg/L	40.00	3.80	85	78-114			
Batch 1408273 - GEN CHEM										
Blank (1408273-BLK1)				Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1408273-BS1)				Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		99	80-120			
LCS Dup (1408273-BSD1)				Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	5.1	0.50	mg/L	5.000		103	80-120	3	20	
Matrix Spike (1408273-MS1)	Source: 14H0524-03			Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	5.2	0.50	mg/L	5.000	0.13	102	80-120			
Matrix Spike (1408273-MS2)	Source: 14H0663-03			Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	ND	98	80-120			
Matrix Spike Dup (1408273-MSD1)	Source: 14H0524-03			Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	5.2	0.50	mg/L	5.000	0.13	101	80-120	2	20	
Matrix Spike Dup (1408273-MSD2)	Source: 14H0663-03			Prepared: 08/28/2014 Analyzed: 08/29/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000	ND	99	80-120	2	20	
Batch 1409013 - GEN CHEM										

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1409013 - GEN CHEM										
Blank (1409013-BLK1)				Prepared & Analyzed: 08/29/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1409013-BS1)				Prepared & Analyzed: 08/29/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	18.7	5.00	mg/L	20.00		94	64-132			
LCS Dup (1409013-BSD1)				Prepared & Analyzed: 08/29/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.9	5.00	mg/L	20.00		100	64-132	6	34	
Matrix Spike (1409013-MS1)	**Source: 14H0053-02**			Prepared & Analyzed: 08/29/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	14.3	5.00	mg/L	20.00	1.00	67	64-132			
Batch 1409018 - SPECTRO PREP										
Blank (1409018-BLK1)				Prepared & Analyzed: 08/28/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1409018-BS1)				Prepared & Analyzed: 08/28/2014						
Total Phosphorus (as P)	0.53	0.10	mg/L	0.5000		106	90-110			
LCS Dup (1409018-BSD1)				Prepared & Analyzed: 08/28/2014						
Total Phosphorus (as P)	0.53	0.10	mg/L	0.5000		106	90-110	0	10	
Matrix Spike (1409018-MS1)	**Source: 14H0053-01**			Prepared & Analyzed: 08/28/2014						
Total Phosphorus (as P)	0.60		mg/L	0.5000	0.080	104	70-130			
Matrix Spike Dup (1409018-MSD1)	**Source: 14H0053-01**			Prepared & Analyzed: 08/28/2014						
Total Phosphorus (as P)	0.62		mg/L	0.5000	0.080	108	70-130	3	15	

Client: City of Tucson - Transportation Department
Project: Storm Water Once Per Season
Work Order: 14H0053
Date Received: 08/12/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1408130 - IC PREP										
Blank (1408130-BLK1)				Prepared & Analyzed: 08/14/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1408130-BS1)				Prepared & Analyzed: 08/14/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110			
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500		91	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		96	90-110			
LCS Dup (1408130-BSD1)				Prepared & Analyzed: 08/14/2014						
Nitrogen, Nitrate (As N)	4.9	0.50	mg/L	5.000		98	90-110	0.2	10	
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500		91	90-110	0.3	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.4	0.50	mg/L	2.500		95	90-110	0.6	10	
Matrix Spike (1408130-MS1)	**Source: 14H0053-01**			Prepared & Analyzed: 08/14/2014						
Nitrogen, Nitrate (As N)	5.6	0.50	mg/L	5.000	0.74	97	80-120			
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500	0.062	90	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	ND	107	80-120			
Matrix Spike Dup (1408130-MSD1)	**Source: 14H0053-01**			Prepared & Analyzed: 08/14/2014						
Nitrogen, Nitrate (As N)	5.5	0.50	mg/L	5.000	0.74	96	80-120	1	10	
Nitrogen, Nitrite (As N)	2.3	0.10	mg/L	2.500	0.062	89	80-120	1	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	ND	108	80-120	0.9	10	

TURNER LABORATORIES INC.
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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 14N0053 DATE 8/12/14 PAGE 1 OF

PROJECT NAME: Stormwater Samples Site # 1, (2), 3, 4, 5 (circle)

CONTACT NAME Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210 CITY Tucson STATE AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 8374935 (Bev)

FAX (520) 791-4373

SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Total Metals *	Chemical Oxygen Demand (CO	Hardness Ca & Mg	Biological Oxygen Demand (BO	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Orthophosphate by Ion Chromatography	Nitrate + Nitrite	Total Phosphorus	TKN	NH3	TPH 1664 x 2	O & G	CN
Composite	8-12-14	2:52		Storm Water	10	X	X	X	X	X	X	X	X	X	X	X			
Grab	8-12-14	2:52		Storm Water	4												X	X	X

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY: Eric Ross
Signature: ERIC ROSS
Printed Name: City of Tucson Trans. Dept
Firm: 8-12-14 / 16:50
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name: TURNER LABORATORIES, INC.
Firm: 8/12/14 1650
Date/Time

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 14
Temperature 14.4
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No		Custody Seals	☐
ADEQ Forms: ☐ Yes ☐ No		Container Intact	☒
Mail ADEQ Forms: ☐ Yes ☐ No		COC/Labels Agree	☒
Preservation Confirmation	☒		
Appropriate Head Space	☒		
Received Within Hold Time	☒		

*Ni, Hg, Ag, Cr, Cd, Be, Ba, As, Cu, Sb, Zn, Se, Pb, Tl

Composite poured at lab per C.O.T. Specifications

December 26, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Biannual

Work Order No.: 14L0348
Order Name: Sample Site 5

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 12/04/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0348
Date Received: 12/04/2014

Order: Sample Site 5

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0348-01	Grab	Storm Water	12/04/2014 0745

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0348
Date Received: 12/04/2014

Case Narrative

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Turner Laboratories, Inc.

Date: 12/26/2014

Client:	City of Tucson - Transportation Department	**Client Sample ID:**	Grab
Project:	Storm Water Biannual	**Collection Date/Time:**	12/04/2014 0745
Work Order:	14L0348	**Matrix:**	Storm Water
Lab Sample ID:	14L0348-01	**Order Name:**	Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	2400		1.0	E3	MPN/100 mL	1	12/04/2014 1315	12/05/2014 1330	CC
Total Coliform	2400		1.0	E3	MPN/100 mL	1	12/04/2014 1315	12/05/2014 1330	CC

Turner Laboratories, Inc.

Date: 12/26/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0348
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412085 - Micro										
Duplicate (1412085-DUP1)	**Source: 14L0018-01**			Prepared: 12/04/2014 Analyzed: 12/05/2014						
E.Coli	ND	1.0	MPN/100mL		0.0				20	
Total Coliform	ND	1.0	MPN/100mL		0.0				20	

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1410348 DATE 12/4/14 PAGE 1 OF

ROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

ONTACT NAME Chris McNellis, Eric Ross, Bev Hester

OMPANY NAME City of Tucson - Transportation Dept

DDRESS P.O. Box 27210

ITY Tucson STATE AZ ZIP CODE 85726

HONE (520) 837-6583 FAX (520) 791-4373

AMPLER'S SIGNATURE C McNellis

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX
Grab	12/4/14	7:45 AM		Storm Water	1	X	

ELINQUISHED BY:
ature C McNellis
d Name Chris McNellis
f Tucson Trans. Dept
Time 12/4/14 12:43pm

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

ELINQUISHED BY:
ure
Name
me

4. RECEIVED BY:
Signature
Printed Name
TURNER LABORATORIES, INC.
Firm 12/4/14 1243
Date/Time

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:
* Working Days

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 1
Temperature 3.6
☒ Wet Ice ☐ Blue Ice

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No		Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms: ☐ Yes ☐ No		Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms: ☐ Yes ☐ No		COC/Labels Agree	☒	Received Within Hold Time	☒

December 26, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14L0350
Order Name: Sample Site 2

RE: Storm Water Biannual

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 12/04/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0350
Date Received: 12/04/2014

Order: Sample Site 2

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0350-01	Grab	Storm Water	12/04/2014 0853

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0350
Date Received: 12/04/2014

Case Narrative

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0350
Lab Sample ID: 14L0350-01

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	2400		1.0		MPN/100 mL	1	12/04/2014 1315	12/05/2014 1330	CC
Total Coliform	2400		1.0	E3	MPN/100 mL	1	12/04/2014 1315	12/05/2014 1330	CC

Turner Laboratories, Inc.

Date: 12/26/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0350
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412085 - Micro										
Duplicate (1412085-DUP1)	**Source: 14L0018-01**			Prepared: 12/04/2014 Analyzed: 12/05/2014						
E.Coli	ND	1.0	MPN/100mL		0.0				20	
Total Coliform	ND	1.0	MPN/100mL		0.0				20	

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 14L0350 DATE 12/4/14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME Chris McNellis (BEV HESTER)

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX
Grab	12-4-14	8:53		Storm Water	1	X	

1. RELINQUISHED BY:
Signature: Eric Ross
Printed Name: Eric Ross
Firm: City of Tucson Trans. Dept
Date/Time: 12-4-14 / 12:54

2. RECEIVED BY:
Signature:
Printed Name:
Firm:
Date/Time:

3. RELINQUISHED BY:
Signature:
Printed Name:
Firm:
Date/Time:

4. RECEIVED BY:
Signature:
Printed Name:
Firm: TURNER LABORATORIES, INC.
Date/Time: 12/4/14 1254

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers: 1
Temperature: 4.0
☑ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No		Custody Seals ☐	Preservation Confirmation ☑
ADEQ Forms: ☐ Yes ☐ No		Container Intact ☑	Appropriate Head Space ☑
Mail ADEQ Forms ☐ Yes ☐ No		COC/Labels Agree ☑	Received Within Hold Time ☑

December 26, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Biannual

Work Order No.: 14L0352
Order Name: Sample Site 3

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 12/04/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 12/26/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0352
Date Received: 12/04/2014

Order: Sample Site 3

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0352-01	Grab	Storm Water	12/04/2014 0620

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0352
Date Received: 12/04/2014

Case Narrative

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0352
Lab Sample ID: 14L0352-01

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	610		1.0		MPN/100 mL	1	12/04/2014 1315	12/05/2014 1330	CC
Total Coliform	2400		1.0	E3	MPN/100 mL	1	12/04/2014 1315	12/05/2014 1330	CC

Turner Laboratories, Inc.

Date: 12/26/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0352
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412085 - Micro										
Duplicate (1412085-DUP1)	**Source: 14L0018-01**			Prepared: 12/04/2014 Analyzed: 12/05/2014						
E.Coli	ND	1.0	MPN/100mL		0.0				20	
Total Coliform	ND	1.0	MPN/100mL		0.0				20	

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1410352 DATE 12/4/14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, (3) 4, 5 (circle)

CONTACT NAME Chris McNellis (BEV HESTER)

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX
Grab	12-4-14	10:20AM		Storm Water	1	X	

1. RELINQUISHED BY:
Signature: Eric Ross
Printed Name: ERIC ROSS
Firm: City of Tucson Trans. Dept
Date/Time: 12-4-14 / 12:54

2. RECEIVED BY:
Signature:
Printed Name:
Firm:
Date/Time:

3. RELINQUISHED BY:
Signature:
Printed Name:
Time:

4. RECEIVED BY:
Signature:
Printed Name: TURNER LABORATORIES, INC.
Firm: 12/4/14 1254
Date/Time:

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (includes All Raw Data)
Add 10% to Invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. # ___
Bill to: ___

SAMPLE RECEIPT:
Total Containers 1
Temperature 5.3
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No		Custody Seals ☐	Preservation Confirmation ☒
ADEQ Forms: ☐ Yes ☐ No		Container Intact ☒	Appropriate Head Space ☒
Mail ADEQ Forms: ☐ Yes ☐ No		COC/Labels Agree ☒	Received Within Hold Time ☒

*Ni, Hg, Ag, Cr, Cd, Be, Ba, As, Cu, Sb, Zn, Se, Pb, Tl, Ca, Mg

Composite poured at lab per C.O.T. Specifications

TURNER
LABORATORIES INC.

December 29, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14L0349
Order Name: Sample Site 5

RE: Storm Water Biannual

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 12/04/2014 for the analyses presented in the following report.

The attached report has been revised. Please refer to the Case Narrative page for an explanation of the changes. We apologize for any inconvenience this may have caused you.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,
Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

Order: Sample Site 5

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0349-01	Composite	Storm Water	12/04/2014 0745
14L0349-02	Grab	Storm Water	12/04/2014 0745

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

Case Narrative

This report was originally generated on 12/26/2014. It is being revised on 12/29/2014 to report Aroclors to the MRL, which was to the PQL on the original report.

C4	Confirmatory analysis was past holding time
E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated LCS/LCSD was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.
R1	RPD/RSD exceeded the method acceptance limit. See case narrative.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met the acceptance criteria.
T2	Cited ADHS Licensed method does not contain this analyte as part of the method compound list.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Turner Laboratories, Inc.

Date: 12/29/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	34				mg/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.79		0.10		mg/L	1	12/05/2014 1200	12/05/2014 1455	AC
ICP Total Metals-E200.7									
Arsenic	6.9	4.5	40	E4	ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Barium	70		50		ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Calcium	14000		4000		ug/L	1	12/08/2014 0950	12/09/2014 1257	RAD
Chromium	3.4	0.61	30	E4	ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Copper	38		20		ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Magnesium	ND		3000		ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Nickel	6.0	1.8	50	E4	ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
Zinc	240		40		ug/L	1	12/08/2014 0950	12/09/2014 1258	RAD
ICP/MS Total Metals-E200.8									
Antimony	2.1		0.50		ug/L	1	12/09/2014 1310	12/10/2014 1240	RAD
Lead	12		0.50		ug/L	1	12/09/2014 1310	12/10/2014 1240	RAD
Selenium	0.24	0.082	2.5	E4	ug/L	1	12/09/2014 1310	12/10/2014 1240	RAD
Silver	0.15	0.029	0.50	E4	ug/L	1	12/09/2014 1310	12/10/2014 1240	RAD
Thallium	0.10	0.013	0.50	E4	ug/L	1	12/09/2014 1310	12/10/2014 1240	RAD
CVAA Total Mercury-E245.1									
Mercury	0.12	0.039	1.0	E4	ug/L	1	12/12/2014 1138	12/15/2014 1053	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.68		0.50		mg/L	1	12/05/2014 1200	12/05/2014 1455	AC
Nitrogen, Nitrite (As N)	0.11		0.10		mg/L	1	12/05/2014 1200	12/05/2014 1455	AC
Phosphorus, Dissolved Orthophosphate (As P)	ND		0.50		mg/L	1	12/05/2014 1200	12/05/2014 1455	AC
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.48		0.10		mg/L	1	12/19/2014 0940	12/19/2014 1840	AC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	120		20		mg/L	1	12/15/2014 0810	12/15/2014 1730	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	2.1		0.50		mg/L	1	12/15/2014 1645	12/16/2014 1110	AC
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	27		20	C4	mg/L	1	12/18/2014 1540	12/19/2014 1640	CC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	110		10		mg/L	1	12/10/2014 0755	12/10/2014 1500	CC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	ND		0.50		mg/L	1	12/16/2014 0840	12/16/2014 1035	AC
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	31		2.0		mg/L	1	12/04/2014 1735	12/09/2014 1600	AC
Organochlorine Pesticides-SW8081A									
4,4′-DDD	ND		0.10	V1	ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
4,4′-DDE	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
4,4′-DDT	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Aldrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
alpha-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
alpha-Chlordane	ND		0.10		ug/L	1	12/09/2014 1116	12/17/2014 0258	MD
beta-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
delta-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Dieldrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Endosulfan I	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Endosulfan II	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Endosulfan sulfate	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Endrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Endrin aldehyde	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Endrin ketone	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
gamma-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
gamma-Chlordane	ND		0.10		ug/L	1	12/09/2014 1116	12/17/2014 0258	MD
Heptachlor	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Heptachlor epoxide	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Methoxychlor	ND		0.10	V1	ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Toxaphene	ND		1.0		ug/L	1	12/09/2014 1116	12/16/2014 1959	MD
Surr: Decachlorobiphenyl	*74*	*38.8-124*			*%REC*	*1*	*12/09/2014 1116*	*12/16/2014 1959*	*MD*
Surr: Tetrachloro-m-xylene	*81*	*40-118.3*			*%REC*	*1*	*12/09/2014 1116*	*12/16/2014 1959*	*MD*
PCBs-SW8082									
Aroclor 1016	ND		0.98		ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Aroclor 1221	ND		0.98		ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Aroclor 1232	ND		0.98		ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Aroclor 1242	ND		0.98		ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Aroclor 1248	ND		0.98		ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Aroclor 1254	ND		0.98		ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Aroclor 1260	ND		0.98	V1	ug/L	1	12/08/2014 1359	12/15/2014 2133	MD
Surr: Decachlorobiphenyl	*78*	*45.9-122.8*			*%REC*	*1*	*12/08/2014 1359*	*12/15/2014 2133*	*MD*
Semivolatile Organic Compounds-SW8270C									
1,2,4-Trichlorobenzene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
1,2-Dichlorobenzene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
1,2-Diphenylhydrazine	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
1,3-Dichlorobenzene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
1,4-Dichlorobenzene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,4,5-Trichlorophenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,4,6-Trichlorophenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,4-Dichlorophenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,4-Dimethylphenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,4-Dinitrophenol	ND		49		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,4-Dinitrotoluene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2,6-Dinitrotoluene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2-Chloronaphthalene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2-Chlorophenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2-Methylnaphthalene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2-Methylphenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
2-Nitroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
2-Nitrophenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
3,3'-Dichlorobenzidine	ND	1.5	20	E8	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
3,4-Methylphenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
3-Nitroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4,6-Dinitro-2-methylphenol	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Bromophenyl phenyl ether	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Chloro-3-methylphenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Chloroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Chlorophenyl phenyl ether	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Methylphenol	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Nitroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
4-Nitrophenol	ND		49		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Acenaphthene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Acenaphthylene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Aniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Anthracene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Benzo[a]anthracene	ND	0.75	4.9	E8	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Benzo[a]pyrene	ND	0.55	4.9	E8	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Benzo[b,k]fluoranthene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Benzo[g,h,i]perylene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Benzoic acid	5.5		49		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Benzyl alcohol	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Bis(2-chloroethoxy)methane	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Bis(2-chloroethyl)ether	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Bis(2-chloroisopropyl)ether	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Bis(2-ethylhexyl)phthalate	12		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Butyl benzyl phthalate	1.5		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Chrysene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Dibenzo[a,h]anthracene	ND	0.90	4.9	E8	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Dibenzofuran	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Diethyl phthalate	1.4		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Dimethyl phthalate	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Di-n-butyl phthalate	12		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Di-n-octyl phthalate	1.8		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Fluoranthene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Fluorene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Hexachlorobenzene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Hexachlorobutadiene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Hexachlorocyclopentadiene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Hexachloroethane	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Indeno[1,2,3-cd]pyrene	ND	1.2	4.9	E8	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Isophorone	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Naphthalene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Nitrobenzene	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
N-Nitrosodimethylamine	ND	2.2	9.9	E8	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
N-Nitrosodiphenylamine	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
N-Nitrosodipropylamine	ND		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Pentachlorophenol	3.4	1.0	30	E4	ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Phenanthrene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Phenol	1.3		9.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Pyrene	ND		4.9		ug/L	1	12/11/2014 0600	12/20/2014 0014	MD
Surr: 2,4,6-Tribromophenol	*86*	*61-118*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 014*	*MD*
Surr: 2-Fluorobiphenyl	*75*	*30.9-111*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 014*	*MD*
Surr: 2-Fluorophenol	*54*	*15.2-68.1*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 014*	*MD*
Surr: 4-Terphenyl-d14	*71*	*0-123*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 014*	*MD*
Surr: Nitrobenzene-d5	*84*	*35-99*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 014*	*MD*
Surr: Phenol-d6	*57*	*0-115*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 014*	*MD*

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-02

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664B									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	12/09/2014 0830	12/09/2014 1455	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	ND		5.00		mg/L	1	12/17/2014 0800	12/17/2014 1655	CC
Additional Compounds by GCMS-E624									
2-Chloroethylvinylether	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2053	KP
Acrolein	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2053	KP
Acrylonitrile	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2053	KP
Surr: 1,2-Dichloroethane-d4	*103*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2053*	*KP*
Surr: 4-Bromofluorobenzene	*99*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2053*	*KP*
Surr: Fluorobenzene	*102*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2053*	*KP*
Volatile Organic Compounds by GCMS-EPA 624									
1,1,1-Trichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,1,2-Trichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,1-Dichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,1-Dichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,2,4-Trimethylbenzene	ND		2.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,2-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,2-Dichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,2-Dichloropropane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,3,5-Trimethylbenzene	ND		2.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,3-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
1,4-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
2-Chloroethylvinylether	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Acetone	21		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Acrolein	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Acrylonitrile	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Benzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Bromodichloromethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Bromoform	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Bromomethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Carbon tetrachloride	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Lab Sample ID: 14L0349-02

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0745
Matrix: Storm Water
Order Name: Sample Site 5

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Chloroethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Chloroform	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Chloromethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
cis-1,3-Dichloropropene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Dibromochloromethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Dichlorodifluoromethane	ND		5.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Ethylbenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Methyl Isobutyl Ketone (MIBK)	ND		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Methylene chloride	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Tetrachloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Tetrahydrofuran	ND		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Toluene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
trans-1,2-Dichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
trans-1,3-Dichloropropene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Trichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Trichlorofluoromethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Vinyl chloride	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Xylenes, Total	ND		6.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0044	KP
Surr: 1,2-Dichloroethane-d4	*105*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 044*	*KP*
Surr: 4-Bromofluorobenzene	*102*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 044*	*KP*
Surr: Fluorobenzene	*105*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 044*	*KP*
Cyanide-SM4500-CN BE									
Cyanide	ND	82	100	E8	ug/L	1	12/11/2014 0810	12/11/2014 1420	CC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412097 - E 200.2 ICP										
Blank (1412097-BLK1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1412097-BS1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1840	40	ug/L	2000		92	85-115			
Barium	1900	50	ug/L	2000		94	85-115			
Beryllium	47	2.0	ug/L	50.00		94	85-115			
Cadmium	47	2.0	ug/L	50.00		93	85-115			
Calcium	10000	4000	ug/L	10000		103	85-115			
Chromium	190	30	ug/L	200.0		95	85-115			
Copper	230	20	ug/L	250.0		93	85-115			
Magnesium	10000	3000	ug/L	10000		101	85-115			
Nickel	470	50	ug/L	500.0		94	85-115			
Zinc	470	40	ug/L	500.0		93	85-115			
LCS Dup (1412097-BSD1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1810	40	ug/L	2000		91	85-115	1	20	
Barium	1900	50	ug/L	2000		93	85-115	0.7	20	
Beryllium	47	2.0	ug/L	50.00		94	85-115	0.6	20	
Cadmium	46	2.0	ug/L	50.00		92	85-115	1	20	
Calcium	10000	4000	ug/L	10000		100	85-115	3	20	
Chromium	190	30	ug/L	200.0		94	85-115	2	20	
Copper	230	20	ug/L	250.0		92	85-115	1	20	
Magnesium	10000	3000	ug/L	10000		100	85-115	1	20	
Nickel	460	50	ug/L	500.0		92	85-115	2	20	
Zinc	460	40	ug/L	500.0		92	85-115	1	20	
Matrix Spike (1412097-MS1)	**Source: 14L0008-02**			Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1960	40	ug/L	2000	12.8	98	70-130			
Barium	1900	50	ug/L	2000	110	90	70-130			
Beryllium	47	2.0	ug/L	50.00	ND	94	70-130			
Cadmium	43	2.0	ug/L	50.00	ND	86	70-130			
Calcium	150000	4000	ug/L	10000	140000	50	70-130			M3
Chromium	190	30	ug/L	200.0	1.4	93	70-130			
Copper	330	20	ug/L	250.0	55	109	70-130			
Magnesium	40000	3000	ug/L	10000	29000	108	70-130			
Nickel	480	50	ug/L	500.0	4.7	95	70-130			
Zinc	580	40	ug/L	500.0	98	96	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412097 - E 200.2 ICP										
Matrix Spike (1412097-MS2)	**Source: 14L0241-02**			Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	2070	40	ug/L	2000	137	97	70-130			
Barium	1500	50	ug/L	2000	380	54	70-130			M2
Beryllium	46	2.0	ug/L	50.00	ND	92	70-130			
Cadmium	36	2.0	ug/L	50.00	ND	73	70-130			
Calcium	380000	4000	ug/L	10000	390000	NR	70-130			M3
Chromium	200	30	ug/L	200.0	26	88	70-130			
Copper	270	20	ug/L	250.0	11	105	70-130			
Magnesium	57000	3000	ug/L	10000	50000	74	70-130			
Nickel	480	50	ug/L	500.0	3.5	96	70-130			
Zinc	500	40	ug/L	500.0	11	97	70-130			
Batch 1412108 - E 200.8 ICP/MS										
Blank (1412108-BLK1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	0.082	0.50	ug/L							
LCS (1412108-BS1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00		96	85-115			
Lead	47	0.50	ug/L	50.00		95	85-115			
Selenium	260	2.5	ug/L	250.0		103	85-115			
Silver	47	0.50	ug/L	50.00		95	85-115			
Thallium	46	0.50	ug/L	50.00		91	85-115			
LCS Dup (1412108-BSD1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00		96	85-115	0.4	20	
Lead	48	0.50	ug/L	50.00		96	85-115	1	20	
Selenium	260	2.5	ug/L	250.0		102	85-115	0.5	20	
Silver	47	0.50	ug/L	50.00		94	85-115	0.6	20	
Thallium	46	0.50	ug/L	50.00		93	85-115	1	20	
Matrix Spike (1412108-MS1)	**Source: 14L0331-01**			Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	50	0.50	ug/L	50.00	0.072	100	70-130			
Lead	49	0.50	ug/L	50.00	1.0	97	70-130			
Selenium	240	2.5	ug/L	250.0	0.46	97	70-130			
Silver	49	0.50	ug/L	50.00	0.068	98	70-130			
Thallium	46	0.50	ug/L	50.00	ND	92	70-130			
Matrix Spike (1412108-MS2)	**Source: 14L0392-01**			Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00	0.079	96	70-130			
Lead	46	0.50	ug/L	50.00	0.35	91	70-130			
Selenium	240	2.5	ug/L	250.0	0.51	95	70-130			
Silver	47	0.50	ug/L	50.00	0.074	93	70-130			
Thallium	43	0.50	ug/L	50.00	0.067	86	70-130			
Batch 1412152 - E 245.1										

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412152 - E 245.1										
Blank (1412152-BLK1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	0.11	1.0	ug/L							
LCS (1412152-BS1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000		103	85-115			
LCS Dup (1412152-BSD1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000		103	85-115	0.06	20	
Matrix Spike (1412152-MS1)		Source: 14L0396-01		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000	0.10	100	85-115			
Matrix Spike (1412152-MS2)		Source: 14L0363-01		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	4.7	1.0	ug/L	5.000	0.21	91	85-115			
Matrix Spike Dup (1412152-MSD1)		Source: 14L0396-01		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000	0.10	100	85-115	0.5	20	
Matrix Spike Dup (1412152-MSD2)		Source: 14L0363-01		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.0	1.0	ug/L	5.000	0.21	96	85-115	6	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412071 - GEN CHEM										
Blank (1412071-BLK1)				Prepared: 12/04/2014 Analyzed: 12/09/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1412071-BS1)				Prepared: 12/04/2014 Analyzed: 12/09/2014						
Biochemical Oxygen Demand	170		mg/L	198.0		86	85-115			
Batch 1412111 - GEN CHEM										
Blank (1412111-BLK1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1412111-BS1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	23.8	5.00	mg/L	20.00		119	64-132			
LCS Dup (1412111-BSD1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	26.2	5.00	mg/L	20.00		131	64-132	10	34	
Matrix Spike (1412111-MS1)	Source: 14L0351-02			Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.3	5.00	mg/L	20.00	ND	97	64-132			
Batch 1412112 - GEN CHEM										
Duplicate (1412112-DUP1)	Source: 14L0298-01			Prepared & Analyzed: 12/10/2014						
Total Suspended Solids	3.0	10	mg/L		2.0			40	5	
Duplicate (1412112-DUP2)	Source: 14L0397-01			Prepared & Analyzed: 12/10/2014						
Total Suspended Solids	310	10	mg/L		320			2	5	
Batch 1412130 - SPECTRO PREP										
Blank (1412130-BLK1)				Prepared & Analyzed: 12/11/2014						
Cyanide	ND	100	ug/L							
LCS (1412130-BS1)				Prepared & Analyzed: 12/11/2014						
Cyanide	1800	100	ug/L	2000		91	90-110			
LCS Dup (1412130-BSD1)				Prepared & Analyzed: 12/11/2014						
Cyanide	2000	100	ug/L	2000		98	90-110	8	20	
Matrix Spike (1412130-MS1)	Source: 14L0349-02			Prepared & Analyzed: 12/11/2014						
Cyanide	1900	100	ug/L	2000	ND	95	70-130			
Matrix Spike Dup (1412130-MSD1)	Source: 14L0349-02			Prepared & Analyzed: 12/11/2014						
Cyanide	1900	100	ug/L	2000	ND	95	70-130	0.6	20	
Batch 1412184 - GEN CHEM										
Blank (1412184-BLK1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412184 - GEN CHEM										
LCS (1412184-BS1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		101	90-110			
LCS Dup (1412184-BSD1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000		98	90-110	3	10	
Matrix Spike (1412184-MS1)	Source: 14L0001-02			Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000	ND	97	70-130			
Matrix Spike Dup (1412184-MSD1)	Source: 14L0001-02			Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	99	70-130	2	20	
Batch 1412206 - GEN CHEM										
Blank (1412206-BLK1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1412206-BS1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	34.8	5.00	mg/L	40.00		87	78-114			
LCS Dup (1412206-BSD1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	33.1	5.00	mg/L	40.00		83	78-114	5	18	
Matrix Spike (1412206-MS1)	Source: 14L0261-02			Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	38.2	5.00	mg/L	40.00	ND	96	78-114			
Batch 1412228 - GEN CHEM										
Duplicate (1412228-DUP1)	Source: 14L0620-01			Prepared: 12/18/2014 Analyzed: 12/19/2014						
Total Dissolved Solids (Residue, Filterable)	610	20	mg/L		600			1	5	
Batch 1412234 - SPECTRO PREP										
Blank (1412234-BLK1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1412234-BS1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	500	20	mg/L	500.0		100	70-130			
LCS Dup (1412234-BSD1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		103	70-130	2	20	
Matrix Spike (1412234-MS1)	Source: 14L0009-01			Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	600	20	mg/L	500.0	89	102	70-130			
Matrix Spike Dup (1412234-MSD1)	Source: 14L0009-01			Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	600	20	mg/L	500.0	89	101	70-130	0.7	20	
Batch 1412249 - GEN CHEM										
Blank (1412249-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							

Turner Laboratories, Inc.

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412249 - GEN CHEM										
LCS (1412249-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		100	80-120			
LCS Dup (1412249-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000		96	80-120	3	20	
Matrix Spike (1412249-MS1)		Source: 14L0001-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.7	0.50	mg/L	5.000	0.19	91	80-120			
Matrix Spike (1412249-MS2)		Source: 14L0474-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	0.22	94	80-120			
Matrix Spike Dup (1412249-MSD1)		Source: 14L0001-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	0.19	95	80-120	4	20	
Matrix Spike Dup (1412249-MSD2)		Source: 14L0474-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000	0.22	91	80-120	3	20	
Batch 1412252 - SPECTRO PREP										
Blank (1412252-BLK1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1412252-BS1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.54	0.10	mg/L	0.5000		108	90-110			
LCS Dup (1412252-BSD1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.52	0.10	mg/L	0.5000		104	90-110	4	10	
Matrix Spike (1412252-MS1)		Source: 14L0521-02		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.75	0.10	mg/L	0.5000	0.17	116	70-130			
Matrix Spike Dup (1412252-MSD1)		Source: 14L0521-02		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.72	0.10	mg/L	0.5000	0.17	110	70-130	4	15	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412095 - SW 846 3520C										
Blank (1412095-BLK1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	ND	1.0	ug/L							
Aroclor 1221	ND	1.0	ug/L							
Aroclor 1232	ND	1.0	ug/L							
Aroclor 1242	ND	1.0	ug/L							
Aroclor 1248	ND	1.0	ug/L							
Aroclor 1254	ND	1.0	ug/L							
Aroclor 1260	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*1.98*		*ug/L*	*2.000*		*99*	*45.9-122.8*			
LCS (1412095-BS1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	10	1.0	ug/L	10.00		100	59.5-122.8			
Aroclor 1221	ND	1.0	ug/L				0-200			
Aroclor 1232	ND	1.0	ug/L				0-200			
Aroclor 1242	ND	1.0	ug/L				0-200			
Aroclor 1248	ND	1.0	ug/L				0-200			
Aroclor 1254	ND	1.0	ug/L				70-130			
Aroclor 1260	9.6	1.0	ug/L	10.00		96	65.7-112.7			
Surrogate: Decachlorobiphenyl	*1.87*		*ug/L*	*2.000*		*93*	*63-121*			
LCS Dup (1412095-BSD1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	10	1.0	ug/L	10.00		103	59.5-122.8	2	30	
Aroclor 1221	ND	1.0	ug/L				0-200		200	
Aroclor 1232	ND	1.0	ug/L				0-200		200	
Aroclor 1242	ND	1.0	ug/L				0-200		200	
Aroclor 1248	ND	1.0	ug/L				0-200		200	
Aroclor 1254	ND	1.0	ug/L				70-130		30	
Aroclor 1260	10	1.0	ug/L	10.00		101	65.7-112.7	5	30	
Surrogate: Decachlorobiphenyl	*1.95*		*ug/L*	*2.000*		*97*	*63-121*			
Matrix Spike (1412095-MS1)	**Source: 14L0349-01**			Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	6.1	0.98	ug/L	9.823	ND	62	20.9-169			
Aroclor 1221	ND	0.98	ug/L		0.0		0-200			
Aroclor 1232	ND	0.98	ug/L		0.0		0-200			
Aroclor 1242	ND	0.98	ug/L		0.0		0-200			
Aroclor 1248	ND	0.98	ug/L		0.0		0-200			
Aroclor 1254	ND	0.98	ug/L		0.0		70-130			
Aroclor 1260	6.7	0.98	ug/L	9.823	ND	68	25.2-124.7			
Surrogate: Decachlorobiphenyl	*1.49*		*ug/L*	*1.965*		*76*	*45.9-122.8*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412095 - SW 846 3520C										
Matrix Spike Dup (1412095-MSD1)	**Source: 14L0349-01**			Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	6.7	0.99	ug/L	9.930	ND	67	20.9-169	10	30	
Aroclor 1221	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1232	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1242	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1248	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1254	ND	0.99	ug/L		0.0		70-130		30	
Aroclor 1260	6.9	0.99	ug/L	9.930	ND	69	25.2-124.7	3	30	
Surrogate: Decachlorobiphenyl	*1.50*		*ug/L*	*1.986*		*76*	*45.9-122.8*			
Batch 1412106 - SW 846 3520C										
Blank (1412106-BLK1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDD	ND	0.10	ug/L							
4,4'-DDE	ND	0.10	ug/L							
4,4'-DDT	ND	0.10	ug/L							
Aldrin	ND	0.10	ug/L							
alpha-BHC	ND	0.10	ug/L							
alpha-Chlordane	ND	0.10	ug/L							
beta-BHC	ND	0.10	ug/L							
delta-BHC	ND	0.10	ug/L							
Dieldrin	ND	0.10	ug/L							
Endosulfan I	ND	0.10	ug/L							
Endosulfan II	ND	0.10	ug/L							
Endosulfan sulfate	ND	0.10	ug/L							
Endrin	ND	0.10	ug/L							
Endrin aldehyde	ND	0.10	ug/L							
Endrin ketone	ND	0.10	ug/L							
gamma-BHC	ND	0.10	ug/L							
gamma-Chlordane	ND	0.10	ug/L							
Heptachlor	ND	0.10	ug/L							
Heptachlor epoxide	ND	0.10	ug/L							
Methoxychlor	ND	0.10	ug/L							
Toxaphene	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*0.953*		*ug/L*	*1.000*		*95*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.680*		*ug/L*	*1.000*		*68*	*40-118.3*			
LCS (1412106-BS1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.89	0.10	ug/L	1.000		89	54.8-117.2			
Aldrin	0.38	0.10	ug/L	0.5000		76	53.1-105			
Dieldrin	0.70	0.10	ug/L	1.000		70	59.5-100.2			
Endrin	0.81	0.10	ug/L	1.000		81	58.1-100.7			
gamma-BHC	0.37	0.10	ug/L	0.5000		75	56.5-117.1			
Heptachlor	0.36	0.10	ug/L	0.5000		72	51.5-104.5			
Surrogate: Decachlorobiphenyl	*0.911*		*ug/L*	*1.000*		*91*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.550*		*ug/L*	*1.000*		*55*	*37.5-105.7*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412106 - SW 846 3520C										
LCS Dup (1412106-BSD1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.95	0.10	ug/L	1.000		95	54.8-117.2	7	30	
Aldrin	0.42	0.10	ug/L	0.5000		84	53.1-105	9	30	
Dieldrin	0.75	0.10	ug/L	1.000		75	59.5-100.2	6	30	
Endrin	0.88	0.10	ug/L	1.000		88	58.1-100.7	8	30	
gamma-BHC	0.41	0.10	ug/L	0.5000		82	56.5-117.1	9	30	
Heptachlor	0.40	0.10	ug/L	0.5000		80	51.5-104.5	10	30	
Surrogate: Decachlorobiphenyl	*0.962*		*ug/L*	*1.000*		*96*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.674*		*ug/L*	*1.000*		*67*	*37.5-105.7*			
Matrix Spike (1412106-MS1)	**Source: 14L0351-01**			Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.60	0.11	ug/L	1.063	ND	56	10.1-142.2			
Aldrin	0.28	0.11	ug/L	0.5313	ND	52	23.2-118.8			
Dieldrin	0.63	0.11	ug/L	1.063	ND	59	43.8-113.4			
Endrin	0.80	0.11	ug/L	1.063	ND	75	28.1-131.1			
gamma-BHC	0.35	0.11	ug/L	0.5313	ND	66	58-115.5			
Heptachlor	0.30	0.11	ug/L	0.5313	ND	56	32.4-137			
Surrogate: Decachlorobiphenyl	*0.876*		*ug/L*	*1.063*		*82*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.640*		*ug/L*	*1.063*		*60*	*40-118.3*			
Matrix Spike Dup (1412106-MSD1)	**Source: 14L0351-01**			Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.49	0.099	ug/L	0.9911	ND	49	10.1-142.2	20	30	
Aldrin	0.23	0.099	ug/L	0.4955	ND	47	23.2-118.8	17	30	
Dieldrin	0.55	0.099	ug/L	0.9911	ND	55	43.8-113.4	14	30	
Endrin	0.69	0.099	ug/L	0.9911	ND	70	28.1-131.1	14	30	
gamma-BHC	0.31	0.099	ug/L	0.4955	ND	63	58-115.5	12	30	
Heptachlor	0.26	0.099	ug/L	0.4955	ND	52	32.4-137	14	30	
Surrogate: Decachlorobiphenyl	*0.786*		*ug/L*	*0.9911*		*79*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.602*		*ug/L*	*0.9911*		*61*	*40-118.3*			
Batch 1412128 - SW 846 3535										

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Blank (1412128-BLK1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,2-Diphenylhydrazine	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
2,4,5-Trichlorophenol	ND	10	ug/L							
2,4,6-Trichlorophenol	ND	10	ug/L							
2,4-Dichlorophenol	ND	10	ug/L							
2,4-Dimethylphenol	ND	10	ug/L							
2,4-Dinitrophenol	ND	50	ug/L							
2,4-Dinitrotoluene	ND	10	ug/L							
2,6-Dinitrotoluene	ND	10	ug/L							
2-Chloronaphthalene	ND	10	ug/L							
2-Chlorophenol	ND	10	ug/L							
2-Methylnaphthalene	ND	5.0	ug/L							
2-Methylphenol	ND	10	ug/L							
2-Nitroaniline	ND	20	ug/L							
2-Nitrophenol	ND	10	ug/L							
3,3'-Dichlorobenzidine	ND	20	ug/L							
3,4-Methylphenol	ND	10	ug/L							
3-Nitroaniline	ND	20	ug/L							
4,6-Dinitro-2-methylphenol	ND	20	ug/L							
4-Bromophenyl phenyl ether	ND	10	ug/L							
4-Chloro-3-methylphenol	ND	10	ug/L							
4-Chloroaniline	ND	20	ug/L							
4-Chlorophenyl phenyl ether	ND	10	ug/L							
4-Methylphenol	ND	10	ug/L							
4-Nitroaniline	ND	20	ug/L							
4-Nitrophenol	ND	50	ug/L							
Acenaphthene	ND	5.0	ug/L							
Acenaphthylene	ND	5.0	ug/L							
Aniline	ND	20	ug/L							
Anthracene	ND	5.0	ug/L							
Benzo[a]anthracene	ND	5.0	ug/L							
Benzo[a]pyrene	ND	5.0	ug/L							
Benzo[b,k]fluoranthene	ND	10	ug/L							
Benzo[g,h,i]perylene	ND	5.0	ug/L							
Benzoic acid	ND	50	ug/L							
Benzyl alcohol	ND	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	10	ug/L							
Bis(2-chloroethyl)ether	ND	10	ug/L							
Bis(2-chloroisopropyl)ether	ND	10	ug/L							
Bis(2-ethylhexyl)phthalate	ND	10	ug/L							
Butyl benzyl phthalate	ND	10	ug/L							
Chrysene	ND	5.0	ug/L							
Dibenzo[a,h]anthracene	ND	5.0	ug/L							
Dibenzofuran	ND	5.0	ug/L							

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Blank (1412128-BLK1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
Diethyl phthalate	ND	10	ug/L							
Dimethyl phthalate	ND	10	ug/L							
Di-n-butyl phthalate	ND	10	ug/L							
Di-n-octyl phthalate	ND	10	ug/L							
Fluoranthene	ND	5.0	ug/L							
Fluorene	ND	5.0	ug/L							
Hexachlorobenzene	ND	10	ug/L							
Hexachlorobutadiene	ND	10	ug/L							
Hexachlorocyclopentadiene	ND	10	ug/L							
Hexachloroethane	ND	10	ug/L							
Indeno[1,2,3-cd]pyrene	ND	5.0	ug/L							
Isophorone	ND	10	ug/L							
Naphthalene	ND	5.0	ug/L							
Nitrobenzene	ND	10	ug/L							
N-Nitrosodimethylamine	ND	10	ug/L							
N-Nitrosodiphenylamine	ND	10	ug/L							
N-Nitrosodipropylamine	ND	10	ug/L							
Pentachlorophenol	ND	30	ug/L							
Phenanthrene	ND	5.0	ug/L							
Phenol	ND	10	ug/L							
Pyrene	ND	5.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*78.9*		*ug/L*	*100.0*		*79*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*65.9*		*ug/L*	*100.0*		*66*	*30.9-111*			
Surrogate: 2-Fluorophenol	*40.1*		*ug/L*	*100.0*		*40*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*69.9*		*ug/L*	*100.0*		*70*	*0-123*			
Surrogate: Nitrobenzene-d5	*53.9*		*ug/L*	*100.0*		*54*	*35-99*			
Surrogate: Phenol-d6	*46.7*		*ug/L*	*100.0*		*47*	*0-115*			
LCS (1412128-BS1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	20	10	ug/L	50.00		40	29.5-92.8			
1,4-Dichlorobenzene	14	10	ug/L	50.00		27	21.9-69.5			
2,4-Dinitrotoluene	32	10	ug/L	50.00		63	40.6-90			
2-Chlorophenol	41	10	ug/L	100.0		41	33-82.4			
4-Chloro-3-methylphenol	64	10	ug/L	100.0		64	39.5-87.3			
4-Nitrophenol	66	50	ug/L	100.0		66	41.7-99.9			
Acenaphthene	29	5.0	ug/L	50.00		59	38.3-91.1			
N-Nitrosodipropylamine	28	10	ug/L	50.00		56	40.5-95.8			
Pentachlorophenol	63	30	ug/L	100.0		63	32.5-106			
Phenol	39	10	ug/L	100.0		39	8.08-78.4			
Pyrene	32	5.0	ug/L	50.00		65	34.9-95.9			
Surrogate: 2,4,6-Tribromophenol	*71.2*		*ug/L*	*100.0*		*71*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*60.3*		*ug/L*	*100.0*		*60*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*33.3*		*ug/L*	*100.0*		*33*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*58.2*		*ug/L*	*100.0*		*58*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*47.0*		*ug/L*	*100.0*		*47*	*38.4-84.6*			
Surrogate: Phenol-d6	*39.7*		*ug/L*	*100.0*		*40*	*18.3-88.5*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
LCS Dup (1412128-BSD1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	24	10	ug/L	50.00		47	29.5-92.8	16	30	
1,4-Dichlorobenzene	17	10	ug/L	50.00		35	21.9-69.5	25	30	
2,4-Dinitrotoluene	32	10	ug/L	50.00		64	40.6-90	0.6	30	
2-Chlorophenol	46	10	ug/L	100.0		46	33-82.4	12	30	
4-Chloro-3-methylphenol	67	10	ug/L	100.0		67	39.5-87.3	4	30	
4-Nitrophenol	65	50	ug/L	100.0		65	41.7-99.9	0.5	30	
Acenaphthene	30	5.0	ug/L	50.00		60	38.3-91.1	3	30	
N-Nitrosodipropylamine	28	10	ug/L	50.00		55	40.5-95.8	0.8	30	
Pentachlorophenol	69	30	ug/L	100.0		69	32.5-106	10	30	
Phenol	42	10	ug/L	100.0		42	8.08-78.4	7	30	
Pyrene	38	5.0	ug/L	50.00		77	34.9-95.9	17	30	
Surrogate: 2,4,6-Tribromophenol	*83.8*		*ug/L*	*100.0*		*84*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*63.7*		*ug/L*	*100.0*		*64*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*39.4*		*ug/L*	*100.0*		*39*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*67.5*		*ug/L*	*100.0*		*67*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*55.0*		*ug/L*	*100.0*		*55*	*38.4-84.6*			
Surrogate: Phenol-d6	*42.7*		*ug/L*	*100.0*		*43*	*18.3-88.5*			
Matrix Spike (1412128-MS1)	**Source: 14L0351-01**			Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	17	10	ug/L	50.35	ND	33	26.6-89.9			
1,4-Dichlorobenzene	8.8	10	ug/L	50.35	ND	18	19.9-65.5			M2
2,4-Dinitrotoluene	35	10	ug/L	50.35	ND	69	34-105			
2-Chlorophenol	41	10	ug/L	100.7	ND	40	36.6-79.1			
4-Chloro-3-methylphenol	70	10	ug/L	100.7	ND	69	37.3-97.9			
4-Nitrophenol	70	50	ug/L	100.7	ND	70	13.5-140			
Acenaphthene	32	5.0	ug/L	50.35	ND	64	33.3-99.9			
N-Nitrosodipropylamine	27	10	ug/L	50.35	ND	54	24.1-125			
Pentachlorophenol	86	30	ug/L	100.7	ND	85	16.1-135			
Phenol	44	10	ug/L	100.7	ND	43	13.6-83.9			
Pyrene	34	5.0	ug/L	50.35	ND	68	5.95-112			
Surrogate: 2,4,6-Tribromophenol	*89.5*		*ug/L*	*100.7*		*89*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*63.8*		*ug/L*	*100.7*		*63*	*30.9-111*			
Surrogate: 2-Fluorophenol	*28.5*		*ug/L*	*100.7*		*28*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*65.6*		*ug/L*	*100.7*		*65*	*0-123*			
Surrogate: Nitrobenzene-d5	*42.9*		*ug/L*	*100.7*		*43*	*35-99*			
Surrogate: Phenol-d6	*44.2*		*ug/L*	*100.7*		*44*	*0-115*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Matrix Spike Dup (1412128-MSD1)	**Source: 14L0351-01**			Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	26	10	ug/L	50.97	ND	50	26.6-89.9	42	30	R4
1,4-Dichlorobenzene	19	10	ug/L	50.97	ND	37	19.9-65.5	71	30	R1
2,4-Dinitrotoluene	38	10	ug/L	50.97	ND	74	34-105	8	30	
2-Chlorophenol	52	10	ug/L	101.9	ND	51	36.6-79.1	25	30	
4-Chloro-3-methylphenol	73	10	ug/L	101.9	ND	72	37.3-97.9	5	30	
4-Nitrophenol	84	51	ug/L	101.9	ND	82	13.5-140	18	30	
Acenaphthene	34	5.1	ug/L	50.97	ND	66	33.3-99.9	4	30	
N-Nitrosodipropylamine	34	10	ug/L	50.97	ND	67	24.1-125	23	30	
Pentachlorophenol	90	31	ug/L	101.9	ND	88	16.1-135	4	30	
Phenol	49	10	ug/L	101.9	ND	48	13.6-83.9	11	30	
Pyrene	37	5.1	ug/L	50.97	ND	72	5.95-112	6	30	
Surrogate: 2,4,6-Tribromophenol	*90.5*		*ug/L*	*101.9*		*89*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*67.8*		*ug/L*	*101.9*		*66*	*30.9-111*			
Surrogate: 2-Fluorophenol	*42.3*		*ug/L*	*101.9*		*42*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*64.6*		*ug/L*	*101.9*		*63*	*0-123*			
Surrogate: Nitrobenzene-d5	*62.2*		*ug/L*	*101.9*		*61*	*35-99*			
Surrogate: Phenol-d6	*49.9*		*ug/L*	*101.9*		*49*	*0-115*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
Blank (1412154-BLK1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	ND	2.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L							
1,1,2-Trichloroethane	ND	2.0	ug/L							
1,1-Dichloroethane	ND	2.0	ug/L							
1,1-Dichloroethene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	2.0	ug/L							
1,2-Dichlorobenzene	ND	2.0	ug/L							
1,2-Dichloroethane	ND	2.0	ug/L							
1,2-Dichloropropane	ND	2.0	ug/L							
1,3,5-Trimethylbenzene	ND	2.0	ug/L							
1,3-Dichlorobenzene	ND	2.0	ug/L							
1,4-Dichlorobenzene	ND	2.0	ug/L							
2-Chloroethylvinylether	ND	10	ug/L							
Acetone	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Benzene	ND	2.0	ug/L							
Bromodichloromethane	ND	2.0	ug/L							
Bromoform	ND	2.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon tetrachloride	ND	2.0	ug/L							
Chlorobenzene	ND	2.0	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	2.0	ug/L							
Chloromethane	ND	5.0	ug/L							
cis-1,3-Dichloropropene	ND	2.0	ug/L							
Dibromochloromethane	ND	2.0	ug/L							
Dichlorodifluoromethane	ND	5.0	ug/L							
Ethylbenzene	ND	2.0	ug/L							
Methyl Isobutyl Ketone (MIBK)	ND	10	ug/L							
Methylene chloride	ND	10	ug/L							
Tetrachloroethene	ND	2.0	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	2.0	ug/L							
trans-1,2-Dichloroethene	ND	2.0	ug/L							
trans-1,3-Dichloropropene	ND	2.0	ug/L							
Trichloroethene	ND	2.0	ug/L							
Trichlorofluoromethane	ND	5.0	ug/L							
Vinyl chloride	ND	2.0	ug/L							
Xylenes, Total	ND	6.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*29.3*		*ug/L*	*28.00*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.2*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*28.9*		*ug/L*	*28.00*		*103*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
LCS (1412154-BS1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		99	52-162			
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		99	46-157			
1,1,2-Trichloroethane	19		ug/L	20.00		93	52-150			
1,1-Dichloroethane	20		ug/L	20.00		100	59-155			
1,1-Dichloroethene	20		ug/L	20.00		101	2-234			
1,2,4-Trimethylbenzene	20		ug/L	20.00		102	0-200			
1,2-Dichlorobenzene	21		ug/L	20.00		103	18-190			
1,2-Dichloroethane	20		ug/L	20.00		102	49-155			
1,2-Dichloropropane	20		ug/L	20.00		99	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00		103	0-200			
1,3-Dichlorobenzene	20		ug/L	20.00		100	59-156			
1,4-Dichlorobenzene	20		ug/L	20.00		100	18-190			
2-Chloroethylvinylether	19		ug/L	20.00		96	10-305			
Acetone	92		ug/L	100.0		92	70-130			
Acrolein	0.0		ug/L	100.0			88-118			
Acrylonitrile	0.0		ug/L	100.0			71-135			
Benzene	20		ug/L	20.00		102	37-151			
Bromodichloromethane	20		ug/L	20.00		99	35-155			
Bromoform	19		ug/L	20.00		96	45-169			
Bromomethane	20		ug/L	20.00		98	2-242			
Carbon tetrachloride	20		ug/L	20.00		100	70-140			
Chlorobenzene	20		ug/L	20.00		99	37-160			
Chloroethane	20		ug/L	20.00		101	14-230			
Chloroform	20		ug/L	20.00		100	51-138			
Chloromethane	21		ug/L	20.00		104	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00		99	2-227			
Dibromochloromethane	18		ug/L	20.00		92	53-149			
Dichlorodifluoromethane	21		ug/L	20.00		103	5-273			
Ethylbenzene	20		ug/L	20.00		101	37-162			
Isopropyl Alcohol	1000		ug/L	1000		104	70-130			
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		101	70-130			
Methylene chloride	19		ug/L	20.00		97	10-221			
Tetrachloroethene	20		ug/L	20.00		100	64-148			
Tetrahydrofuran	99		ug/L	100.0		99	70-130			
Toluene	20		ug/L	20.00		98	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156			
trans-1,3-Dichloropropene	18		ug/L	20.00		92	17-183			
Trichloroethene	20		ug/L	20.00		101	71-157			
Trichlorofluoromethane	20		ug/L	20.00		99	17-181			
Vinyl chloride	20		ug/L	20.00		102	2-251			
Xylenes, Total	59		ug/L	60.00		98	37-162			
Surrogate: 1,2-Dichloroethane-d4	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*28.7*		*ug/L*	*28.00*		*103*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
LCS Dup (1412154-BSD1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		99	52-162	0.4	30	
1,1,2,2-Tetrachloroethane	19		ug/L	20.00		97	46-157	3	30	
1,1,2-Trichloroethane	19		ug/L	20.00		96	52-150	3	30	
1,1-Dichloroethane	20		ug/L	20.00		98	59-155	2	30	
1,1-Dichloroethene	21		ug/L	20.00		103	2-234	2	30	
1,2,4-Trimethylbenzene	19		ug/L	20.00		97	0-200	5	200	
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190	1	30	
1,2-Dichloroethane	21		ug/L	20.00		105	49-155	3	30	
1,2-Dichloropropane	20		ug/L	20.00		100	2-210	2	30	
1,3,5-Trimethylbenzene	20		ug/L	20.00		100	0-200	2	200	
1,3-Dichlorobenzene	20		ug/L	20.00		100	59-156	0.2	30	
1,4-Dichlorobenzene	20		ug/L	20.00		99	18-190	2	30	
2-Chloroethylvinylether	19		ug/L	20.00		96	10-305	0	30	
Acetone	100		ug/L	100.0		101	70-130	10	30	
Acrolein	0.0		ug/L	100.0			88-118		30	
Acrylonitrile	0.0		ug/L	100.0			71-135		30	
Benzene	21		ug/L	20.00		103	37-151	0.5	30	
Bromodichloromethane	20		ug/L	20.00		102	35-155	2	30	
Bromoform	20		ug/L	20.00		99	45-169	3	30	
Bromomethane	20		ug/L	20.00		100	2-242	2	30	
Carbon tetrachloride	20		ug/L	20.00		100	70-140	0.4	30	
Chlorobenzene	20		ug/L	20.00		99	37-160	0.1	30	
Chloroethane	20		ug/L	20.00		101	14-230	0.3	30	
Chloroform	20		ug/L	20.00		101	51-138	1	30	
Chloromethane	21		ug/L	20.00		104	5-273	0.1	30	
cis-1,3-Dichloropropene	19		ug/L	20.00		94	2-227	5	30	
Dibromochloromethane	19		ug/L	20.00		95	53-149	3	30	
Dichlorodifluoromethane	20		ug/L	20.00		102	5-273	1	30	
Ethylbenzene	20		ug/L	20.00		99	37-162	2	30	
Isopropyl Alcohol	1100		ug/L	1000		109	70-130	5	200	
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		103	70-130	2	30	
Methylene chloride	19		ug/L	20.00		96	10-221	0.9	30	
Tetrachloroethene	19		ug/L	20.00		96	64-148	5	30	
Tetrahydrofuran	100		ug/L	100.0		105	70-130	6	30	
Toluene	19		ug/L	20.00		97	47-150	0.8	30	
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156	0.4	30	
trans-1,3-Dichloropropene	19		ug/L	20.00		96	17-183	5	30	
Trichloroethene	21		ug/L	20.00		106	71-157	4	30	
Trichlorofluoromethane	20		ug/L	20.00		100	17-181	0.9	30	
Vinyl chloride	20		ug/L	20.00		102	2-251	0.8	30	
Xylenes, Total	59		ug/L	60.00		98	37-162	0.3	30	
Surrogate: 1,2-Dichloroethane-d4	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: Fluorobenzene	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			

Turner Laboratories, Inc.

Date: 12/29/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
Matrix Spike (1412154-MS2)	**Source: 14L0351-02**			Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00	ND	99	52-162			
1,1,2,2-Tetrachloroethane	21		ug/L	20.00	ND	107	46-157			
1,1,2-Trichloroethane	20		ug/L	20.00	ND	100	52-150			
1,1-Dichloroethane	21		ug/L	20.00	ND	104	59-155			
1,1-Dichloroethene	20		ug/L	20.00	ND	99	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00	0.0	105	0-200			
1,2-Dichlorobenzene	21		ug/L	20.00	ND	106	18-190			
1,2-Dichloroethane	21		ug/L	20.00	ND	105	49-155			
1,2-Dichloropropane	21		ug/L	20.00	0.0	105	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00	0.0	106	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00	ND	105	59-156			
1,4-Dichlorobenzene	21		ug/L	20.00	ND	105	18-190			
2-Chloroethylvinylether	0.0		ug/L	20.00	ND		10-305			
Acetone	99		ug/L	100.0	16	83	70-130			
Acrolein	0.0		ug/L	100.0	0.0		88-118			
Acrylonitrile	0.0		ug/L	100.0	ND		71-135			
Benzene	21		ug/L	20.00	ND	106	37-151			
Bromodichloromethane	21		ug/L	20.00	ND	104	35-155			
Bromoform	20		ug/L	20.00	ND	98	45-169			
Bromomethane	20		ug/L	20.00	ND	98	2-242			
Carbon tetrachloride	21		ug/L	20.00	ND	103	70-140			
Chlorobenzene	20		ug/L	20.00	ND	101	37-160			
Chloroethane	21		ug/L	20.00	ND	103	14-230			
Chloroform	21		ug/L	20.00	ND	103	51-138			
Chloromethane	20		ug/L	20.00	ND	101	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00	ND	102	2-221			
Dibromochloromethane	20		ug/L	20.00	ND	100	53-149			
Dichlorodifluoromethane	20		ug/L	20.00	ND	99	5-273			
Ethylbenzene	21		ug/L	20.00	ND	104	37-162			
Isopropyl Alcohol	1000		ug/L	1000	ND	103	70-130			
Methyl Isobutyl Ketone (MIBK)	110		ug/L	100.0	ND	106	70-130			
Methylene chloride	21		ug/L	20.00	ND	104	10-221			
Tetrachloroethene	20		ug/L	20.00	ND	101	64-148			
Tetrahydrofuran	96		ug/L	100.0	ND	96	70-130			
Toluene	20		ug/L	20.00	ND	102	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00	ND	105	54-156			
trans-1,3-Dichloropropene	21		ug/L	20.00	0.28	102	17-183			
Trichloroethene	21		ug/L	20.00	ND	103	71-157			
Trichlorofluoromethane	20		ug/L	20.00	ND	100	17-181			
Vinyl chloride	21		ug/L	20.00	ND	103	2-251			
Xylenes, Total	62		ug/L	60.00	ND	104	37-162			
Surrogate: 1,2-Dichloroethane-d4	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.8*		*ug/L*	*28.00*		*103*	*70-130*			
Batch 1412176 - VOA_GCMS										

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Blank (1412176-BLK1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.6*		*ug/L*	*28.00*		*106*	*70-130*			
Surrogate: Fluorobenzene	*28.0*		*ug/L*	*28.00*		*100*	*70-130*			
LCS (1412176-BS1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305			
Acrolein	94		ug/L	100.0		94	88-118			
Acrylonitrile	100		ug/L	100.0		100	71-135			
Surrogate: 1,2-Dichloroethane-d4	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.0*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*27.9*		*ug/L*	*28.00*		*100*	*70-130*			
LCS Dup (1412176-BSD1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305	0.2	30	
Acrolein	96		ug/L	100.0		96	88-118	2	30	
Acrylonitrile	100		ug/L	100.0		101	71-135	2	30	
Surrogate: 1,2-Dichloroethane-d4	*28.2*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.6*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			
Matrix Spike (1412176-MS1)	**Source: 14L0351-02**			Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	22		ug/L	20.00	ND	109	10-305			
Acrolein	96		ug/L	100.0	ND	96	88-118			
Acrylonitrile	100		ug/L	100.0	ND	101	71-135			
Surrogate: 1,2-Dichloroethane-d4	*26.8*		*ug/L*	*28.00*		*96*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.4*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: Fluorobenzene	*26.7*		*ug/L*	*28.00*		*96*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0349
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412077 - IC PREP										
Blank (1412077-BLK1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1412077-BS1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000		100	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		102	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		103	90-110			
LCS Dup (1412077-BSD1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000		100	90-110	0.4	10	
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500		102	90-110	0.5	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.5	0.50	mg/L	2.500		101	90-110	2	10	
Matrix Spike (1412077-MS1)	**Source: 14L0353-01**			Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.3	0.50	mg/L	5.000	0.49	96	80-120			
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500	0.10	101	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	ND	109	80-120			
Matrix Spike Dup (1412077-MSD1)	**Source: 14L0353-01**			Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.4	0.50	mg/L	5.000	0.49	98	80-120	2	10	
Nitrogen, Nitrite (As N)	2.7	0.10	mg/L	2.500	0.10	103	80-120	2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.8	0.50	mg/L	2.500	ND	111	80-120	2	10	

TURNER LABORATORIES, INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1410349 DATE 12/4/14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME: Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME: City of Tucson

ADDRESS: PO Box 27210, Tucson AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 837-4935 (Bev)

FAX: 791-4343 EMAIL: stormwater@tucsonaz.gov

SAMPLER'S SIGNATURE: C McNellis

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Hardness Ca & Mg	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Biological Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Cyanide	Total Metals*	Nitrate and Nitrite Sum	NH3	TKN	Total Phosphours	Orthophosphate by Ion Chromatography	TPH 1664	Oil & Grease	Volatile Organic Compounds by 624	Semivolatile Organic by SW 8270	PCBs by SW 8082	Organochlorine Pesticides by SW 8081		
Composite	12/4	7:45 AM		ST	33	X	X	X	X	X		X	X	X	X	X	X				X	X	X		
Grab/Discrete	12/4	7:45 AM		ST	9						X							X	X	X					

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY: C McNellis
Signature: C McNellis Printed Name:
Department of Transporation
Firm: City of Tucson
Date/Time 12/4/14 12:43 PM

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name TURNER LABORATORIES, INC.
Firm 12/4/14 1243
Date/Time

TURNAROUND REQUIREMENTS:
__X__ Standard (approx.10 days)*
____ Next day ____ 2 Day ____ 5 Day*
__X__ Email Preliminary Results To: Stormwater@tucsonaz.gov
* Working Days

REPORT REQUIREMENTS:
____ I. Routine Report
____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
____ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. # ____
Bill to: ____

SAMPLE RECEIPT:
Total Containers 42
Temperature 3.8
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS: Composite poured at lab per COT Specifications

Compliance Analysis:	☐ Yes	☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes	☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes	☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

* (200.7); As, Ba, Be, Cd, Cr, Cu, Hg, Ni, Zn. (200.8); Ag, Pb, Sb, Se, Tl. Cyanide, Metals, VOCs, sVOCs, PCBs, Pesticides; report in ug/L

TURNER
LABORATORIES INC.

December 29, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14L0351
Order Name: Sample Site 2

RE: Storm Water Biannual

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 12/04/2014 for the analyses presented in the following report.

The attached report has been revised. Please refer to the Case Narrative page for an explanation of the changes. We apologize for any inconvenience this may have caused you.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,
Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

Order: Sample Site 2

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0351-01	Composite	Storm Water	12/04/2014 0853
14L0351-02	Grab	Storm Water	12/04/2014 0853

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

Case Narrative

This report was originally generated on 12/26/2014. It is being revised on 12/29/2014 to report Aroclors to the PQL, which was to the MDL on the original report.

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated LCS/LCSD was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.
R1	RPD/RSD exceeded the method acceptance limit. See case narrative.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met the acceptance criteria.
T2	Cited ADHS Licensed method does not contain this analyte as part of the method compound list.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Turner Laboratories, Inc.

Date: 12/29/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	11				mg/L	1	12/08/2014 0950	12/09/2014 1301	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.50		0.10		mg/L	1	12/05/2014 1200	12/05/2014 1513	AC
ICP Total Metals-E200.7									
Arsenic	ND	4.5	40	E8	ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Barium	ND		50		ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Calcium	4300		4000		ug/L	1	12/08/2014 0950	12/09/2014 1301	RAD
Chromium	ND	0.61	30	E8	ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Copper	ND		20		ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Magnesium	ND	400	3000	E4	ug/L	1	12/08/2014 0950	12/09/2014 1301	RAD
Nickel	2.2	1.8	50	E4	ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
Zinc	ND		40		ug/L	1	12/08/2014 0950	12/09/2014 1302	RAD
ICP/MS Total Metals-E200.8									
Antimony	ND		0.50		ug/L	1	12/09/2014 1310	12/10/2014 1245	RAD
Lead	ND		0.50		ug/L	1	12/09/2014 1310	12/10/2014 1245	RAD
Selenium	ND	0.082	2.5	E8	ug/L	1	12/09/2014 1310	12/10/2014 1245	RAD
Silver	0.049	0.029	0.50	E4	ug/L	1	12/09/2014 1310	12/10/2014 1245	RAD
Thallium	ND	0.013	0.50	E8	ug/L	1	12/09/2014 1310	12/10/2014 1245	RAD
CVAA Total Mercury-E245.1									
Mercury	0.11	0.039	1.0	E4	ug/L	1	12/12/2014 1138	12/15/2014 1106	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.40	0.047	0.50	E4	mg/L	1	12/05/2014 1200	12/05/2014 1513	AC
Nitrogen, Nitrite (As N)	0.096	0.016	0.10	E4	mg/L	1	12/05/2014 1200	12/05/2014 1513	AC
Phosphorus, Dissolved Orthophosphate (As P)	ND		0.50		mg/L	1	12/05/2014 1200	12/05/2014 1513	AC
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.38		0.10		mg/L	1	12/19/2014 0940	12/19/2014 1840	AC

Turner Laboratories, Inc.

Date: 12/29/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	42		20		mg/L	1	12/15/2014 0810	12/15/2014 1730	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	1.0		0.50		mg/L	1	12/15/2014 1645	12/16/2014 1110	AC
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	34		20		mg/L	1	12/10/2014 0820	12/11/2014 1200	CC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	ND		10		mg/L	1	12/10/2014 0755	12/10/2014 1500	CC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	ND		0.50		mg/L	1	12/16/2014 0840	12/16/2014 1035	AC
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	12		2.0		mg/L	1	12/04/2014 1735	12/09/2014 1600	AC
Organochlorine Pesticides-SW8081A									
4,4'-DDD	ND		0.10	V1	ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
4,4'-DDE	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
4,4'-DDT	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Aldrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
alpha-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
alpha-Chlordane	ND		0.10		ug/L	1	12/09/2014 1116	12/17/2014 0324	MD
beta-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
delta-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Dieldrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Endosulfan I	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Endosulfan II	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Endosulfan sulfate	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Endrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Endrin aldehyde	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-01
Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Endrin ketone	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
gamma-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
gamma-Chlordane	ND		0.10		ug/L	1	12/09/2014 1116	12/17/2014 0324	MD
Heptachlor	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Heptachlor epoxide	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Methoxychlor	ND		0.10	V1	ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Toxaphene	ND		1.0		ug/L	1	12/09/2014 1116	12/16/2014 2026	MD
Surr: Decachlorobiphenyl	*74*	*38.8-124*			*%REC*	*1*	*12/09/2014 1116*	*12/16/2014 2026*	*MD*
Surr: Tetrachloro-m-xylene	*54*	*40-118.3*			*%REC*	*1*	*12/09/2014 1116*	*12/16/2014 2026*	*MD*
PCBs-SW8082									
Aroclor 1016	ND		0.99		ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Aroclor 1221	ND		0.99		ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Aroclor 1232	ND		0.99		ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Aroclor 1242	ND		0.99		ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Aroclor 1248	ND		0.99		ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Aroclor 1254	ND		0.99		ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Aroclor 1260	ND		0.99	V1	ug/L	1	12/08/2014 1359	12/15/2014 2205	MD
Surr: Decachlorobiphenyl	*69*	*45.9-122.8*			*%REC*	*1*	*12/08/2014 1359*	*12/15/2014 2205*	*MD*
Semivolatile Organic Compounds-SW8270C									
1,2,4-Trichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
1,2-Dichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
1,2-Diphenylhydrazine	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
1,3-Dichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
1,4-Dichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,4,5-Trichlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,4,6-Trichlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,4-Dichlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,4-Dimethylphenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,4-Dinitrophenol	ND		51		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,4-Dinitrotoluene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2,6-Dinitrotoluene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2-Chloronaphthalene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2-Chlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2-Methylnaphthalene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2-Methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
2-Nitroaniline	ND		21		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
2-Nitrophenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
3,3'-Dichlorobenzidine	ND	1.5	21	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
3,4-Methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
3-Nitroaniline	ND		21		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4,6-Dinitro-2-methylphenol	ND		21		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Bromophenyl phenyl ether	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Chloro-3-methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Chloroaniline	ND		21		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Chlorophenyl phenyl ether	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Nitroaniline	ND		21		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
4-Nitrophenol	ND		51		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Acenaphthene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Acenaphthylene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Aniline	ND		21		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Anthracene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Benzo[a]anthracene	ND	0.78	5.1	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Benzo[a]pyrene	ND	0.57	5.1	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Benzo[b,k]fluoranthene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Benzo[g,h,i]perylene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Benzoic acid	ND		51		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Benzyl alcohol	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Bis(2-chloroethoxy)methane	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Bis(2-chloroethyl)ether	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Bis(2-chloroisopropyl)ether	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Bis(2-ethylhexyl)phthalate	1.0		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Butyl benzyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Chrysene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Dibenzo[a,h]anthracene	ND	0.93	5.1	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Dibenzofuran	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Diethyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Dimethyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Di-n-butyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Di-n-octyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Fluoranthene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Fluorene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Hexachlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Hexachlorobutadiene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Hexachlorocyclopentadiene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Hexachloroethane	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Indeno[1,2,3-cd]pyrene	ND	1.2	5.1	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Isophorone	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Naphthalene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Nitrobenzene	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
N-Nitrosodimethylamine	ND	2.3	10	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
N-Nitrosodiphenylamine	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
N-Nitrosodipropylamine	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Pentachlorophenol	ND	1.0	31	E8	ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Phenanthrene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Phenol	ND		10		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Pyrene	ND		5.1		ug/L	1	12/11/2014 0600	12/19/2014 2338	MD
Surr: 2,4,6-Tribromophenol	*88*	*61-118*			*%REC*	*1*	*12/11/2014 0600*	*12/19/2014 2338*	*MD*
Surr: 2-Fluorobiphenyl	*72*	*30.9-111*			*%REC*	*1*	*12/11/2014 0600*	*12/19/2014 2338*	*MD*
Surr: 2-Fluorophenol	*44*	*15.2-68.1*			*%REC*	*1*	*12/11/2014 0600*	*12/19/2014 2338*	*MD*
Surr: 4-Terphenyl-d14	*64*	*0-123*			*%REC*	*1*	*12/11/2014 0600*	*12/19/2014 2338*	*MD*
Surr: Nitrobenzene-d5	*67*	*35-99*			*%REC*	*1*	*12/11/2014 0600*	*12/19/2014 2338*	*MD*
Surr: Phenol-d6	*49*	*0-115*			*%REC*	*1*	*12/11/2014 0600*	*12/19/2014 2338*	*MD*

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-02

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664B									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	12/09/2014 0830	12/09/2014 1345	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	ND		5.00		mg/L	1	12/17/2014 0800	12/17/2014 1655	CC
Additional Compounds by GCMS-E624									
2-Chloroethylvinylether	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2127	KP
Acrolein	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2127	KP
Acrylonitrile	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2127	KP
Surr: 1,2-Dichloroethane-d4	*98*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2127*	*KP*
Surr: 4-Bromofluorobenzene	*105*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2127*	*KP*
Surr: Fluorobenzene	*96*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2127*	*KP*
Volatile Organic Compounds by GCMS-EPA 624									
1,1,1-Trichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,1,2-Trichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,1-Dichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,1-Dichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,2,4-Trimethylbenzene	ND		2.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,2-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,2-Dichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,2-Dichloropropane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,3,5-Trimethylbenzene	ND		2.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,3-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
1,4-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
2-Chloroethylvinylether	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Acetone	16		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Acrolein	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Acrylonitrile	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Benzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Bromodichloromethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Bromoform	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Bromomethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Carbon tetrachloride	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Lab Sample ID: 14L0351-02

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0853
Matrix: Storm Water
Order Name: Sample Site 2

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Chloroethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Chloroform	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Chloromethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
cis-1,3-Dichloropropene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Dibromochloromethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Dichlorodifluoromethane	ND		5.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Ethylbenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Methyl Isobutyl Ketone (MIBK)	ND		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Methylene chloride	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Tetrachloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Tetrahydrofuran	ND		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Toluene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
trans-1,2-Dichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
trans-1,3-Dichloropropene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Trichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Trichlorofluoromethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Vinyl chloride	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Xylenes, Total	ND		6.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0151	KP
Surr: 1,2-Dichloroethane-d4	*108*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 151*	*KP*
Surr: 4-Bromofluorobenzene	*107*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 151*	*KP*
Surr: Fluorobenzene	*108*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 151*	*KP*
Cyanide-SM4500-CN BE									
Cyanide	ND	82	100	E8	ug/L	1	12/11/2014 0810	12/11/2014 1420	CC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412097 - E 200.2 ICP										
Blank (1412097-BLK1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1412097-BS1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1840	40	ug/L	2000		92	85-115			
Barium	1900	50	ug/L	2000		94	85-115			
Beryllium	47	2.0	ug/L	50.00		94	85-115			
Cadmium	47	2.0	ug/L	50.00		93	85-115			
Calcium	10000	4000	ug/L	10000		103	85-115			
Chromium	190	30	ug/L	200.0		95	85-115			
Copper	230	20	ug/L	250.0		93	85-115			
Magnesium	10000	3000	ug/L	10000		101	85-115			
Nickel	470	50	ug/L	500.0		94	85-115			
Zinc	470	40	ug/L	500.0		93	85-115			
LCS Dup (1412097-BSD1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1810	40	ug/L	2000		91	85-115	1	20	
Barium	1900	50	ug/L	2000		93	85-115	0.7	20	
Beryllium	47	2.0	ug/L	50.00		94	85-115	0.6	20	
Cadmium	46	2.0	ug/L	50.00		92	85-115	1	20	
Calcium	10000	4000	ug/L	10000		100	85-115	3	20	
Chromium	190	30	ug/L	200.0		94	85-115	2	20	
Copper	230	20	ug/L	250.0		92	85-115	1	20	
Magnesium	10000	3000	ug/L	10000		100	85-115	1	20	
Nickel	460	50	ug/L	500.0		92	85-115	2	20	
Zinc	460	40	ug/L	500.0		92	85-115	1	20	
Matrix Spike (1412097-MS1)	**Source: 14L0008-02**			Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1960	40	ug/L	2000	12.8	98	70-130			
Barium	1900	50	ug/L	2000	110	90	70-130			
Beryllium	47	2.0	ug/L	50.00	ND	94	70-130			
Cadmium	43	2.0	ug/L	50.00	ND	86	70-130			
Calcium	150000	4000	ug/L	10000	140000	50	70-130			M3
Chromium	190	30	ug/L	200.0	1.4	93	70-130			
Copper	330	20	ug/L	250.0	55	109	70-130			
Magnesium	40000	3000	ug/L	10000	29000	108	70-130			
Nickel	480	50	ug/L	500.0	4.7	95	70-130			
Zinc	580	40	ug/L	500.0	98	96	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412097 - E 200.2 ICP										
Matrix Spike (1412097-MS2)	**Source: 14L0241-02**			Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	2070	40	ug/L	2000	137	97	70-130			
Barium	1500	50	ug/L	2000	380	54	70-130			M2
Beryllium	46	2.0	ug/L	50.00	ND	92	70-130			
Cadmium	36	2.0	ug/L	50.00	ND	73	70-130			
Calcium	380000	4000	ug/L	10000	390000	NR	70-130			M3
Chromium	200	30	ug/L	200.0	26	88	70-130			
Copper	270	20	ug/L	250.0	11	105	70-130			
Magnesium	57000	3000	ug/L	10000	50000	74	70-130			
Nickel	480	50	ug/L	500.0	3.5	96	70-130			
Zinc	500	40	ug/L	500.0	11	97	70-130			
Batch 1412108 - E 200.8 ICP/MS										
Blank (1412108-BLK1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	0.082	0.50	ug/L							
LCS (1412108-BS1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00		96	85-115			
Lead	47	0.50	ug/L	50.00		95	85-115			
Selenium	260	2.5	ug/L	250.0		103	85-115			
Silver	47	0.50	ug/L	50.00		95	85-115			
Thallium	46	0.50	ug/L	50.00		91	85-115			
LCS Dup (1412108-BSD1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00		96	85-115	0.4	20	
Lead	48	0.50	ug/L	50.00		96	85-115	1	20	
Selenium	260	2.5	ug/L	250.0		102	85-115	0.5	20	
Silver	47	0.50	ug/L	50.00		94	85-115	0.6	20	
Thallium	46	0.50	ug/L	50.00		93	85-115	1	20	
Matrix Spike (1412108-MS1)	**Source: 14L0331-01**			Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	50	0.50	ug/L	50.00	0.072	100	70-130			
Lead	49	0.50	ug/L	50.00	1.0	97	70-130			
Selenium	240	2.5	ug/L	250.0	0.46	97	70-130			
Silver	49	0.50	ug/L	50.00	0.068	98	70-130			
Thallium	46	0.50	ug/L	50.00	ND	92	70-130			
Matrix Spike (1412108-MS2)	**Source: 14L0392-01**			Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00	0.079	96	70-130			
Lead	46	0.50	ug/L	50.00	0.35	91	70-130			
Selenium	240	2.5	ug/L	250.0	0.51	95	70-130			
Silver	47	0.50	ug/L	50.00	0.074	93	70-130			
Thallium	43	0.50	ug/L	50.00	0.067	86	70-130			
Batch 1412152 - E 245.1										

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412152 - E 245.1										
Blank (1412152-BLK1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	0.11	1.0	ug/L							
LCS (1412152-BS1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000		103	85-115			
LCS Dup (1412152-BSD1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000		103	85-115	0.06	20	
Matrix Spike (1412152-MS1)		**Source: 14L0396-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000	0.10	100	85-115			
Matrix Spike (1412152-MS2)		**Source: 14L0363-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	4.7	1.0	ug/L	5.000	0.21	91	85-115			
Matrix Spike Dup (1412152-MSD1)		**Source: 14L0396-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000	0.10	100	85-115	0.5	20	
Matrix Spike Dup (1412152-MSD2)		**Source: 14L0363-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.0	1.0	ug/L	5.000	0.21	96	85-115	6	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412071 - GEN CHEM										
Blank (1412071-BLK1)				Prepared: 12/04/2014 Analyzed: 12/09/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1412071-BS1)				Prepared: 12/04/2014 Analyzed: 12/09/2014						
Biochemical Oxygen Demand	170		mg/L	198.0		86	85-115			
Batch 1412111 - GEN CHEM										
Blank (1412111-BLK1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1412111-BS1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	23.8	5.00	mg/L	20.00		119	64-132			
LCS Dup (1412111-BSD1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	26.2	5.00	mg/L	20.00		131	64-132	10	34	
Matrix Spike (1412111-MS1)	**Source: 14L0351-02**			Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.3	5.00	mg/L	20.00	ND	97	64-132			
Batch 1412112 - GEN CHEM										
Duplicate (1412112-DUP1)	**Source: 14L0298-01**			Prepared & Analyzed: 12/10/2014						
Total Suspended Solids	3.0	10	mg/L		2.0			40	5	
Duplicate (1412112-DUP2)	**Source: 14L0397-01**			Prepared & Analyzed: 12/10/2014						
Total Suspended Solids	310	10	mg/L		320			2	5	
Batch 1412127 - GEN CHEM										
Duplicate (1412127-DUP1)	**Source: 14L0298-01**			Prepared: 12/10/2014 Analyzed: 12/11/2014						
Total Dissolved Solids (Residue, Filterable)	900	20	mg/L		910			0.9	5	
Duplicate (1412127-DUP2)	**Source: 14L0441-02**			Prepared: 12/10/2014 Analyzed: 12/11/2014						
Total Dissolved Solids (Residue, Filterable)	920	20	mg/L		910			0.7	5	
Batch 1412130 - SPECTRO PREP										
Blank (1412130-BLK1)				Prepared & Analyzed: 12/11/2014						
Cyanide	ND	100	ug/L							
LCS (1412130-BS1)				Prepared & Analyzed: 12/11/2014						
Cyanide	1800	100	ug/L	2000		91	90-110			
LCS Dup (1412130-BSD1)				Prepared & Analyzed: 12/11/2014						
Cyanide	2000	100	ug/L	2000		98	90-110	8	20	
Matrix Spike (1412130-MS1)	**Source: 14L0349-02**			Prepared & Analyzed: 12/11/2014						
Cyanide	1900	100	ug/L	2000	ND	95	70-130			

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Batch 1412130 - SPECTRO PREP										
Matrix Spike Dup (1412130-MSD1)	**Source: 14L0349-02**			Prepared & Analyzed: 12/11/2014						
Cyanide	1900	100	ug/L	2000	ND	95	70-130	0.6	20	
Batch 1412184 - GEN CHEM										
Blank (1412184-BLK1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1412184-BS1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		101	90-110			
LCS Dup (1412184-BSD1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000		98	90-110	3	10	
Matrix Spike (1412184-MS1)	**Source: 14L0001-02**			Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000	ND	97	70-130			
Matrix Spike Dup (1412184-MSD1)	**Source: 14L0001-02**			Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	99	70-130	2	20	
Batch 1412206 - GEN CHEM										
Blank (1412206-BLK1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1412206-BS1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	34.8	5.00	mg/L	40.00		87	78-114			
LCS Dup (1412206-BSD1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	33.1	5.00	mg/L	40.00		83	78-114	5	18	
Matrix Spike (1412206-MS1)	**Source: 14L0261-02**			Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	38.2	5.00	mg/L	40.00	ND	96	78-114			
Batch 1412234 - SPECTRO PREP										
Blank (1412234-BLK1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1412234-BS1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	500	20	mg/L	500.0		100	70-130			
LCS Dup (1412234-BSD1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		103	70-130	2	20	
Matrix Spike (1412234-MS1)	**Source: 14L0009-01**			Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	600	20	mg/L	500.0	89	102	70-130			
Matrix Spike Dup (1412234-MSD1)	**Source: 14L0009-01**			Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	600	20	mg/L	500.0	89	101	70-130	0.7	20	
Batch 1412249 - GEN CHEM										
Blank (1412249-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							

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Batch 1412249 - GEN CHEM										
LCS (1412249-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		100	80-120			
LCS Dup (1412249-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000		96	80-120	3	20	
Matrix Spike (1412249-MS1)		Source: 14L0001-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.7	0.50	mg/L	5.000	0.19	91	80-120			
Matrix Spike (1412249-MS2)		Source: 14L0474-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	0.22	94	80-120			
Matrix Spike Dup (1412249-MSD1)		Source: 14L0001-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	0.19	95	80-120	4	20	
Matrix Spike Dup (1412249-MSD2)		Source: 14L0474-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000	0.22	91	80-120	3	20	
Batch 1412252 - SPECTRO PREP										
Blank (1412252-BLK1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1412252-BS1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.54	0.10	mg/L	0.5000		108	90-110			
LCS Dup (1412252-BSD1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.52	0.10	mg/L	0.5000		104	90-110	4	10	
Matrix Spike (1412252-MS1)		Source: 14L0521-02		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.75	0.10	mg/L	0.5000	0.17	116	70-130			
Matrix Spike Dup (1412252-MSD1)		Source: 14L0521-02		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.72	0.10	mg/L	0.5000	0.17	110	70-130	4	15	

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Batch 1412095 - SW 846 3520C										
Blank (1412095-BLK1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	ND	1.0	ug/L							
Aroclor 1221	ND	1.0	ug/L							
Aroclor 1232	ND	1.0	ug/L							
Aroclor 1242	ND	1.0	ug/L							
Aroclor 1248	ND	1.0	ug/L							
Aroclor 1254	ND	1.0	ug/L							
Aroclor 1260	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*1.98*		*ug/L*	*2.000*		*99*	*45.9-122.8*			
LCS (1412095-BS1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	10	1.0	ug/L	10.00		100	59.5-122.8			
Aroclor 1221	ND	1.0	ug/L				0-200			
Aroclor 1232	ND	1.0	ug/L				0-200			
Aroclor 1242	ND	1.0	ug/L				0-200			
Aroclor 1248	ND	1.0	ug/L				0-200			
Aroclor 1254	ND	1.0	ug/L				70-130			
Aroclor 1260	9.6	1.0	ug/L	10.00		96	65.7-112.7			
Surrogate: Decachlorobiphenyl	*1.87*		*ug/L*	*2.000*		*93*	*63-121*			
LCS Dup (1412095-BSD1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	10	1.0	ug/L	10.00		103	59.5-122.8	2	30	
Aroclor 1221	ND	1.0	ug/L				0-200		200	
Aroclor 1232	ND	1.0	ug/L				0-200		200	
Aroclor 1242	ND	1.0	ug/L				0-200		200	
Aroclor 1248	ND	1.0	ug/L				0-200		200	
Aroclor 1254	ND	1.0	ug/L				70-130		30	
Aroclor 1260	10	1.0	ug/L	10.00		101	65.7-112.7	5	30	
Surrogate: Decachlorobiphenyl	*1.95*		*ug/L*	*2.000*		*97*	*63-121*			
Matrix Spike (1412095-MS1)	**Source: 14L0349-01**			Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	6.1	0.98	ug/L	9.823	ND	62	20.9-169			
Aroclor 1221	ND	0.98	ug/L		0.0		0-200			
Aroclor 1232	ND	0.98	ug/L		0.0		0-200			
Aroclor 1242	ND	0.98	ug/L		0.0		0-200			
Aroclor 1248	ND	0.98	ug/L		0.0		0-200			
Aroclor 1254	ND	0.98	ug/L		0.0		70-130			
Aroclor 1260	6.7	0.98	ug/L	9.823	ND	68	25.2-124.7			
Surrogate: Decachlorobiphenyl	*1.49*		*ug/L*	*1.965*		*76*	*45.9-122.8*			

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Batch 1412095 - SW 846 3520C										
Matrix Spike Dup (1412095-MSD1)	**Source: 14L0349-01**			Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	6.7	0.99	ug/L	9.930	ND	67	20.9-169	10	30	
Aroclor 1221	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1232	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1242	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1248	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1254	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1260	6.9	0.99	ug/L	9.930	ND	69	70-130	3	30	
Surrogate: Decachlorobiphenyl	*1.50*		*ug/L*	*1.986*		*76*	*25.2-124.7*			
Batch 1412106 - SW 846 3520C										
Blank (1412106-BLK1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDD	ND	0.10	ug/L							
4,4'-DDE	ND	0.10	ug/L							
4,4'-DDT	ND	0.10	ug/L							
Aldrin	ND	0.10	ug/L							
alpha-BHC	ND	0.10	ug/L							
alpha-Chlordane	ND	0.10	ug/L							
beta-BHC	ND	0.10	ug/L							
delta-BHC	ND	0.10	ug/L							
Dieldrin	ND	0.10	ug/L							
Endosulfan I	ND	0.10	ug/L							
Endosulfan II	ND	0.10	ug/L							
Endosulfan sulfate	ND	0.10	ug/L							
Endrin	ND	0.10	ug/L							
Endrin aldehyde	ND	0.10	ug/L							
Endrin ketone	ND	0.10	ug/L							
gamma-BHC	ND	0.10	ug/L							
gamma-Chlordane	ND	0.10	ug/L							
Heptachlor	ND	0.10	ug/L							
Heptachlor epoxide	ND	0.10	ug/L							
Methoxychlor	ND	0.10	ug/L							
Toxaphene	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*0.953*		*ug/L*	*1.000*		*95*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.680*		*ug/L*	*1.000*		*68*	*40-118.3*			
LCS (1412106-BS1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.89	0.10	ug/L	1.000		89	54.8-117.2			
Aldrin	0.38	0.10	ug/L	0.5000		76	53.1-105			
Dieldrin	0.70	0.10	ug/L	1.000		70	59.5-100.2			
Endrin	0.81	0.10	ug/L	1.000		81	58.1-100.7			
gamma-BHC	0.37	0.10	ug/L	0.5000		75	56.5-117.1			
Heptachlor	0.36	0.10	ug/L	0.5000		72	51.5-104.5			
Surrogate: Decachlorobiphenyl	*0.911*		*ug/L*	*1.000*		*91*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.550*		*ug/L*	*1.000*		*55*	*37.5-105.7*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412106 - SW 846 3520C										
LCS Dup (1412106-BSD1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.95	0.10	ug/L	1.000		95	54.8-117.2	7	30	
Aldrin	0.42	0.10	ug/L	0.5000		84	53.1-105	9	30	
Dieldrin	0.75	0.10	ug/L	1.000		75	59.5-100.2	6	30	
Endrin	0.88	0.10	ug/L	1.000		88	58.1-100.7	8	30	
gamma-BHC	0.41	0.10	ug/L	0.5000		82	56.5-117.1	9	30	
Heptachlor	0.40	0.10	ug/L	0.5000		80	51.5-104.5	10	30	
Surrogate: Decachlorobiphenyl	*0.962*		*ug/L*	*1.000*		*96*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.674*		*ug/L*	*1.000*		*67*	*37.5-105.7*			
Matrix Spike (1412106-MS1)		**Source: 14L0351-01**		Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.60	0.11	ug/L	1.063	ND	56	10.1-142.2			
Aldrin	0.28	0.11	ug/L	0.5313	ND	52	23.2-118.8			
Dieldrin	0.63	0.11	ug/L	1.063	ND	59	43.8-113.4			
Endrin	0.80	0.11	ug/L	1.063	ND	75	28.1-131.1			
gamma-BHC	0.35	0.11	ug/L	0.5313	ND	66	58-115.5			
Heptachlor	0.30	0.11	ug/L	0.5313	ND	56	32.4-137			
Surrogate: Decachlorobiphenyl	*0.876*		*ug/L*	*1.063*		*82*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.640*		*ug/L*	*1.063*		*60*	*40-118.3*			
Matrix Spike Dup (1412106-MSD1)		**Source: 14L0351-01**		Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.49	0.099	ug/L	0.9911	ND	49	10.1-142.2	20	30	
Aldrin	0.23	0.099	ug/L	0.4955	ND	47	23.2-118.8	17	30	
Dieldrin	0.55	0.099	ug/L	0.9911	ND	55	43.8-113.4	14	30	
Endrin	0.69	0.099	ug/L	0.9911	ND	70	28.1-131.1	14	30	
gamma-BHC	0.31	0.099	ug/L	0.4955	ND	63	58-115.5	12	30	
Heptachlor	0.26	0.099	ug/L	0.4955	ND	52	32.4-137	14	30	
Surrogate: Decachlorobiphenyl	*0.786*		*ug/L*	*0.9911*		*79*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.602*		*ug/L*	*0.9911*		*61*	*40-118.3*			
Batch 1412128 - SW 846 3535										

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Blank (1412128-BLK1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,2-Diphenylhydrazine	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
2,4,5-Trichlorophenol	ND	10	ug/L							
2,4,6-Trichlorophenol	ND	10	ug/L							
2,4-Dichlorophenol	ND	10	ug/L							
2,4-Dimethylphenol	ND	10	ug/L							
2,4-Dinitrophenol	ND	50	ug/L							
2,4-Dinitrotoluene	ND	10	ug/L							
2,6-Dinitrotoluene	ND	10	ug/L							
2-Chloronaphthalene	ND	10	ug/L							
2-Chlorophenol	ND	10	ug/L							
2-Methylnaphthalene	ND	5.0	ug/L							
2-Methylphenol	ND	10	ug/L							
2-Nitroaniline	ND	20	ug/L							
2-Nitrophenol	ND	10	ug/L							
3,3'-Dichlorobenzidine	ND	20	ug/L							
3,4-Methylphenol	ND	10	ug/L							
3-Nitroaniline	ND	20	ug/L							
4,6-Dinitro-2-methylphenol	ND	20	ug/L							
4-Bromophenyl phenyl ether	ND	10	ug/L							
4-Chloro-3-methylphenol	ND	10	ug/L							
4-Chloroaniline	ND	20	ug/L							
4-Chlorophenyl phenyl ether	ND	10	ug/L							
4-Methylphenol	ND	10	ug/L							
4-Nitroaniline	ND	20	ug/L							
4-Nitrophenol	ND	50	ug/L							
Acenaphthene	ND	5.0	ug/L							
Acenaphthylene	ND	5.0	ug/L							
Aniline	ND	20	ug/L							
Anthracene	ND	5.0	ug/L							
Benzo[a]anthracene	ND	5.0	ug/L							
Benzo[a]pyrene	ND	5.0	ug/L							
Benzo[b,k]fluoranthene	ND	10	ug/L							
Benzo[g,h,i]perylene	ND	5.0	ug/L							
Benzoic acid	ND	50	ug/L							
Benzyl alcohol	ND	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	10	ug/L							
Bis(2-chloroethyl)ether	ND	10	ug/L							
Bis(2-chloroisopropyl)ether	ND	10	ug/L							
Bis(2-ethylhexyl)phthalate	ND	10	ug/L							
Butyl benzyl phthalate	ND	10	ug/L							
Chrysene	ND	5.0	ug/L							
Dibenzo[a,h]anthracene	ND	5.0	ug/L							
Dibenzofuran	ND	5.0	ug/L							

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Blank (1412128-BLK1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
Diethyl phthalate	ND	10	ug/L							
Dimethyl phthalate	ND	10	ug/L							
Di-n-butyl phthalate	ND	10	ug/L							
Di-n-octyl phthalate	ND	10	ug/L							
Fluoranthene	ND	5.0	ug/L							
Fluorene	ND	5.0	ug/L							
Hexachlorobenzene	ND	10	ug/L							
Hexachlorobutadiene	ND	10	ug/L							
Hexachlorocyclopentadiene	ND	10	ug/L							
Hexachloroethane	ND	10	ug/L							
Indeno[1,2,3-cd]pyrene	ND	5.0	ug/L							
Isophorone	ND	10	ug/L							
Naphthalene	ND	5.0	ug/L							
Nitrobenzene	ND	10	ug/L							
N-Nitrosodimethylamine	ND	10	ug/L							
N-Nitrosodiphenylamine	ND	10	ug/L							
N-Nitrosodipropylamine	ND	10	ug/L							
Pentachlorophenol	ND	30	ug/L							
Phenanthrene	ND	5.0	ug/L							
Phenol	ND	10	ug/L							
Pyrene	ND	5.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*78.9*		*ug/L*	*100.0*		*79*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*65.9*		*ug/L*	*100.0*		*66*	*30.9-111*			
Surrogate: 2-Fluorophenol	*40.1*		*ug/L*	*100.0*		*40*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*69.9*		*ug/L*	*100.0*		*70*	*0-123*			
Surrogate: Nitrobenzene-d5	*53.9*		*ug/L*	*100.0*		*54*	*35-99*			
Surrogate: Phenol-d6	*46.7*		*ug/L*	*100.0*		*47*	*0-115*			
LCS (1412128-BS1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	20	10	ug/L	50.00		40	29.5-92.8			
1,4-Dichlorobenzene	14	10	ug/L	50.00		27	21.9-69.5			
2,4-Dinitrotoluene	32	10	ug/L	50.00		63	40.6-90			
2-Chlorophenol	41	10	ug/L	100.0		41	33-82.4			
4-Chloro-3-methylphenol	64	10	ug/L	100.0		64	39.5-87.3			
4-Nitrophenol	66	50	ug/L	100.0		66	41.7-99.9			
Acenaphthene	29	5.0	ug/L	50.00		59	38.3-91.1			
N-Nitrosodipropylamine	28	10	ug/L	50.00		56	40.5-95.8			
Pentachlorophenol	63	30	ug/L	100.0		63	32.5-106			
Phenol	39	10	ug/L	100.0		39	8.08-78.4			
Pyrene	32	5.0	ug/L	50.00		65	34.9-95.9			
Surrogate: 2,4,6-Tribromophenol	*71.2*		*ug/L*	*100.0*		*71*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*60.3*		*ug/L*	*100.0*		*60*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*33.3*		*ug/L*	*100.0*		*33*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*58.2*		*ug/L*	*100.0*		*58*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*47.0*		*ug/L*	*100.0*		*47*	*38.4-84.6*			
Surrogate: Phenol-d6	*39.7*		*ug/L*	*100.0*		*40*	*18.3-88.5*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
LCS Dup (1412128-BSD1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	24	10	ug/L	50.00		47	29.5-92.8	16	30	
1,4-Dichlorobenzene	17	10	ug/L	50.00		35	21.9-69.5	25	30	
2,4-Dinitrotoluene	32	10	ug/L	50.00		64	40.6-90	0.6	30	
2-Chlorophenol	46	10	ug/L	100.0		46	33-82.4	12	30	
4-Chloro-3-methylphenol	67	10	ug/L	100.0		67	39.5-87.3	4	30	
4-Nitrophenol	65	50	ug/L	100.0		65	41.7-99.9	0.5	30	
Acenaphthene	30	5.0	ug/L	50.00		60	38.3-91.1	3	30	
N-Nitrosodipropylamine	28	10	ug/L	50.00		55	40.5-95.8	0.8	30	
Pentachlorophenol	69	30	ug/L	100.0		69	32.5-106	10	30	
Phenol	42	10	ug/L	100.0		42	8.08-78.4	7	30	
Pyrene	38	5.0	ug/L	50.00		77	34.9-95.9	17	30	
Surrogate: 2,4,6-Tribromophenol	*83.8*		*ug/L*	*100.0*		*84*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*63.7*		*ug/L*	*100.0*		*64*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*39.4*		*ug/L*	*100.0*		*39*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*67.5*		*ug/L*	*100.0*		*67*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*55.0*		*ug/L*	*100.0*		*55*	*38.4-84.6*			
Surrogate: Phenol-d6	*42.7*		*ug/L*	*100.0*		*43*	*18.3-88.5*			
Matrix Spike (1412128-MS1)	**Source: 14L0351-01**			Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	17	10	ug/L	50.35	ND	33	26.6-89.9			
1,4-Dichlorobenzene	8.8	10	ug/L	50.35	ND	18	19.9-65.5			M2
2,4-Dinitrotoluene	35	10	ug/L	50.35	ND	69	34-105			
2-Chlorophenol	41	10	ug/L	100.7	ND	40	36.6-79.1			
4-Chloro-3-methylphenol	70	10	ug/L	100.7	ND	69	37.3-97.9			
4-Nitrophenol	70	50	ug/L	100.7	ND	70	13.5-140			
Acenaphthene	32	5.0	ug/L	50.35	ND	64	33.3-99.9			
N-Nitrosodipropylamine	27	10	ug/L	50.35	ND	54	24.1-125			
Pentachlorophenol	86	30	ug/L	100.7	ND	85	16.1-135			
Phenol	44	10	ug/L	100.7	ND	43	13.6-83.9			
Pyrene	34	5.0	ug/L	50.35	ND	68	5.95-112			
Surrogate: 2,4,6-Tribromophenol	*89.5*		*ug/L*	*100.7*		*89*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*63.8*		*ug/L*	*100.7*		*63*	*30.9-111*			
Surrogate: 2-Fluorophenol	*28.5*		*ug/L*	*100.7*		*28*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*65.6*		*ug/L*	*100.7*		*65*	*0-123*			
Surrogate: Nitrobenzene-d5	*42.9*		*ug/L*	*100.7*		*43*	*35-99*			
Surrogate: Phenol-d6	*44.2*		*ug/L*	*100.7*		*44*	*0-115*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Matrix Spike Dup (1412128-MSD1)	**Source: 14L0351-01**			Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	26	10	ug/L	50.97	ND	50	26.6-89.9	42	30	R4
1,4-Dichlorobenzene	19	10	ug/L	50.97	ND	37	19.9-65.5	71	30	R1
2,4-Dinitrotoluene	38	10	ug/L	50.97	ND	74	34-105	8	30	
2-Chlorophenol	52	10	ug/L	101.9	ND	51	36.6-79.1	25	30	
4-Chloro-3-methylphenol	73	10	ug/L	101.9	ND	72	37.3-97.9	5	30	
4-Nitrophenol	84	51	ug/L	101.9	ND	82	13.5-140	18	30	
Acenaphthene	34	5.1	ug/L	50.97	ND	66	33.3-99.9	4	30	
N-Nitrosodipropylamine	34	10	ug/L	50.97	ND	67	24.1-125	23	30	
Pentachlorophenol	90	31	ug/L	101.9	ND	88	16.1-135	4	30	
Phenol	49	10	ug/L	101.9	ND	48	13.6-83.9	11	30	
Pyrene	37	5.1	ug/L	50.97	ND	72	5.95-112	6	30	
Surrogate: 2,4,6-Tribromophenol	*90.5*		*ug/L*	*101.9*		*89*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*67.8*		*ug/L*	*101.9*		*66*	*30.9-111*			
Surrogate: 2-Fluorophenol	*42.3*		*ug/L*	*101.9*		*42*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*64.6*		*ug/L*	*101.9*		*63*	*0-123*			
Surrogate: Nitrobenzene-d5	*62.2*		*ug/L*	*101.9*		*61*	*35-99*			
Surrogate: Phenol-d6	*49.9*		*ug/L*	*101.9*		*49*	*0-115*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
Blank (1412154-BLK1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	ND	2.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L							
1,1,2-Trichloroethane	ND	2.0	ug/L							
1,1-Dichloroethane	ND	2.0	ug/L							
1,1-Dichloroethene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	2.0	ug/L							
1,2-Dichlorobenzene	ND	2.0	ug/L							
1,2-Dichloroethane	ND	2.0	ug/L							
1,2-Dichloropropane	ND	2.0	ug/L							
1,3,5-Trimethylbenzene	ND	2.0	ug/L							
1,3-Dichlorobenzene	ND	2.0	ug/L							
1,4-Dichlorobenzene	ND	2.0	ug/L							
2-Chloroethylvinylether	ND	10	ug/L							
Acetone	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Benzene	ND	2.0	ug/L							
Bromodichloromethane	ND	2.0	ug/L							
Bromoform	ND	2.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon tetrachloride	ND	2.0	ug/L							
Chlorobenzene	ND	2.0	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	2.0	ug/L							
Chloromethane	ND	5.0	ug/L							
cis-1,3-Dichloropropene	ND	2.0	ug/L							
Dibromochloromethane	ND	2.0	ug/L							
Dichlorodifluoromethane	ND	5.0	ug/L							
Ethylbenzene	ND	2.0	ug/L							
Methyl Isobutyl Ketone (MIBK)	ND	10	ug/L							
Methylene chloride	ND	10	ug/L							
Tetrachloroethene	ND	2.0	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	2.0	ug/L							
trans-1,2-Dichloroethene	ND	2.0	ug/L							
trans-1,3-Dichloropropene	ND	2.0	ug/L							
Trichloroethene	ND	2.0	ug/L							
Trichlorofluoromethane	ND	5.0	ug/L							
Vinyl chloride	ND	2.0	ug/L							
Xylenes, Total	ND	6.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*29.3*		*ug/L*	*28.00*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.2*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*28.9*		*ug/L*	*28.00*		*103*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
LCS (1412154-BS1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		99	52-162			
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		99	46-157			
1,1,2-Trichloroethane	19		ug/L	20.00		93	52-150			
1,1-Dichloroethane	20		ug/L	20.00		100	59-155			
1,1-Dichloroethene	20		ug/L	20.00		101	2-234			
1,2,4-Trimethylbenzene	20		ug/L	20.00		102	0-200			
1,2-Dichlorobenzene	21		ug/L	20.00		103	18-190			
1,2-Dichloroethane	20		ug/L	20.00		102	49-155			
1,2-Dichloropropane	20		ug/L	20.00		99	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00		103	0-200			
1,3-Dichlorobenzene	20		ug/L	20.00		100	59-156			
1,4-Dichlorobenzene	20		ug/L	20.00		100	18-190			
2-Chloroethylvinylether	19		ug/L	20.00		96	10-305			
Acetone	92		ug/L	100.0		92	70-130			
Acrolein	0.0		ug/L	100.0			88-118			
Acrylonitrile	0.0		ug/L	100.0			71-135			
Benzene	20		ug/L	20.00		102	37-151			
Bromodichloromethane	20		ug/L	20.00		99	35-155			
Bromoform	19		ug/L	20.00		96	45-169			
Bromomethane	20		ug/L	20.00		98	2-242			
Carbon tetrachloride	20		ug/L	20.00		100	70-140			
Chlorobenzene	20		ug/L	20.00		99	37-160			
Chloroethane	20		ug/L	20.00		101	14-230			
Chloroform	20		ug/L	20.00		100	51-138			
Chloromethane	21		ug/L	20.00		104	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00		99	2-227			
Dibromochloromethane	18		ug/L	20.00		92	53-149			
Dichlorodifluoromethane	21		ug/L	20.00		103	5-273			
Ethylbenzene	20		ug/L	20.00		101	37-162			
Isopropyl Alcohol	1000		ug/L	1000		104	70-130			
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		101	70-130			
Methylene chloride	19		ug/L	20.00		97	10-221			
Tetrachloroethene	20		ug/L	20.00		100	64-148			
Tetrahydrofuran	99		ug/L	100.0		99	70-130			
Toluene	20		ug/L	20.00		98	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156			
trans-1,3-Dichloropropene	18		ug/L	20.00		92	17-183			
Trichloroethene	20		ug/L	20.00		101	71-157			
Trichlorofluoromethane	20		ug/L	20.00		99	17-181			
Vinyl chloride	20		ug/L	20.00		102	2-251			
Xylenes, Total	59		ug/L	60.00		98	37-162			
Surrogate: 1,2-Dichloroethane-d4	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*28.7*		*ug/L*	*28.00*		*103*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
LCS Dup (1412154-BSD1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		99	52-162	0.4	30	
1,1,2,2-Tetrachloroethane	19		ug/L	20.00		97	46-157	3	30	
1,1,2-Trichloroethane	19		ug/L	20.00		96	52-150	3	30	
1,1-Dichloroethane	20		ug/L	20.00		98	59-155	2	30	
1,1-Dichloroethene	21		ug/L	20.00		103	2-234	2	30	
1,2,4-Trimethylbenzene	19		ug/L	20.00		97	0-200	5	200	
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190	1	30	
1,2-Dichloroethane	21		ug/L	20.00		105	49-155	3	30	
1,2-Dichloropropane	20		ug/L	20.00		100	2-210	2	30	
1,3,5-Trimethylbenzene	20		ug/L	20.00		100	0-200	2	200	
1,3-Dichlorobenzene	20		ug/L	20.00		100	59-156	0.2	30	
1,4-Dichlorobenzene	20		ug/L	20.00		99	18-190	2	30	
2-Chloroethylvinylether	19		ug/L	20.00		96	10-305	0	30	
Acetone	100		ug/L	100.0		101	70-130	10	30	
Acrolein	0.0		ug/L	100.0			88-118		30	
Acrylonitrile	0.0		ug/L	100.0			71-135		30	
Benzene	21		ug/L	20.00		103	37-151	0.5	30	
Bromodichloromethane	20		ug/L	20.00		102	35-155	2	30	
Bromoform	20		ug/L	20.00		99	45-169	3	30	
Bromomethane	20		ug/L	20.00		100	2-242	2	30	
Carbon tetrachloride	20		ug/L	20.00		100	70-140	0.4	30	
Chlorobenzene	20		ug/L	20.00		99	37-160	0.1	30	
Chloroethane	20		ug/L	20.00		101	14-230	0.3	30	
Chloroform	20		ug/L	20.00		101	51-138	1	30	
Chloromethane	21		ug/L	20.00		104	5-273	0.1	30	
cis-1,3-Dichloropropene	19		ug/L	20.00		94	2-227	5	30	
Dibromochloromethane	19		ug/L	20.00		95	53-149	3	30	
Dichlorodifluoromethane	20		ug/L	20.00		102	5-273	1	30	
Ethylbenzene	20		ug/L	20.00		99	37-162	2	30	
Isopropyl Alcohol	1100		ug/L	1000		109	70-130	5	200	
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		103	70-130	2	30	
Methylene chloride	19		ug/L	20.00		96	10-221	0.9	30	
Tetrachloroethene	19		ug/L	20.00		96	64-148	5	30	
Tetrahydrofuran	100		ug/L	100.0		105	70-130	6	30	
Toluene	19		ug/L	20.00		97	47-150	0.8	30	
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156	0.4	30	
trans-1,3-Dichloropropene	19		ug/L	20.00		96	17-183	5	30	
Trichloroethene	21		ug/L	20.00		106	71-157	4	30	
Trichlorofluoromethane	20		ug/L	20.00		100	17-181	0.9	30	
Vinyl chloride	20		ug/L	20.00		102	2-251	0.8	30	
Xylenes, Total	59		ug/L	60.00		98	37-162	0.3	30	
Surrogate: 1,2-Dichloroethane-d4	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: Fluorobenzene	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
Matrix Spike (1412154-MS2)	**Source: 14L0351-02**			Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00	ND	99	52-162			
1,1,2,2-Tetrachloroethane	21		ug/L	20.00	ND	107	46-157			
1,1,2-Trichloroethane	20		ug/L	20.00	ND	100	52-150			
1,1-Dichloroethane	21		ug/L	20.00	ND	104	59-155			
1,1-Dichloroethene	20		ug/L	20.00	ND	99	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00	0.0	105	0-200			
1,2-Dichlorobenzene	21		ug/L	20.00	ND	106	18-190			
1,2-Dichloroethane	21		ug/L	20.00	ND	105	49-155			
1,2-Dichloropropane	21		ug/L	20.00	0.0	105	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00	0.0	106	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00	ND	105	59-156			
1,4-Dichlorobenzene	21		ug/L	20.00	ND	105	18-190			
2-Chloroethylvinylether	0.0		ug/L	20.00	ND		10-305			
Acetone	99		ug/L	100.0	16	83	70-130			
Acrolein	0.0		ug/L	100.0	0.0		88-118			
Acrylonitrile	0.0		ug/L	100.0	ND		71-135			
Benzene	21		ug/L	20.00	ND	106	37-151			
Bromodichloromethane	21		ug/L	20.00	ND	104	35-155			
Bromoform	20		ug/L	20.00	ND	98	45-169			
Bromomethane	20		ug/L	20.00	ND	98	2-242			
Carbon tetrachloride	21		ug/L	20.00	ND	103	70-140			
Chlorobenzene	20		ug/L	20.00	ND	101	37-160			
Chloroethane	21		ug/L	20.00	ND	103	14-230			
Chloroform	21		ug/L	20.00	ND	103	51-138			
Chloromethane	20		ug/L	20.00	ND	101	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00	ND	102	2-221			
Dibromochloromethane	20		ug/L	20.00	ND	100	53-149			
Dichlorodifluoromethane	20		ug/L	20.00	ND	99	5-273			
Ethylbenzene	21		ug/L	20.00	ND	104	37-162			
Isopropyl Alcohol	1000		ug/L	1000	ND	103	70-130			
Methyl Isobutyl Ketone (MIBK)	110		ug/L	100.0	ND	106	70-130			
Methylene chloride	21		ug/L	20.00	ND	104	10-221			
Tetrachloroethene	20		ug/L	20.00	ND	101	64-148			
Tetrahydrofuran	96		ug/L	100.0	ND	96	70-130			
Toluene	20		ug/L	20.00	ND	102	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00	ND	105	54-156			
trans-1,3-Dichloropropene	21		ug/L	20.00	0.28	102	17-183			
Trichloroethene	21		ug/L	20.00	ND	103	71-157			
Trichlorofluoromethane	20		ug/L	20.00	ND	100	17-181			
Vinyl chloride	21		ug/L	20.00	ND	103	2-251			
Xylenes, Total	62		ug/L	60.00	ND	104	37-162			
Surrogate: 1,2-Dichloroethane-d4	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.8*		*ug/L*	*28.00*		*103*	*70-130*			
Batch 1412176 - VOA_GCMS										

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Blank (1412176-BLK1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.6*		*ug/L*	*28.00*		*106*	*70-130*			
Surrogate: Fluorobenzene	*28.0*		*ug/L*	*28.00*		*100*	*70-130*			
LCS (1412176-BS1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305			
Acrolein	94		ug/L	100.0		94	88-118			
Acrylonitrile	100		ug/L	100.0		100	71-135			
Surrogate: 1,2-Dichloroethane-d4	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.0*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*27.9*		*ug/L*	*28.00*		*100*	*70-130*			
LCS Dup (1412176-BSD1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305	0.2	30	
Acrolein	96		ug/L	100.0		96	88-118	2	30	
Acrylonitrile	100		ug/L	100.0		101	71-135	2	30	
Surrogate: 1,2-Dichloroethane-d4	*28.2*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.6*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			
Matrix Spike (1412176-MS1)	**Source: 14L0351-02**			Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	22		ug/L	20.00	ND	109	10-305			
Acrolein	96		ug/L	100.0	ND	96	88-118			
Acrylonitrile	100		ug/L	100.0	ND	101	71-135			
Surrogate: 1,2-Dichloroethane-d4	*26.8*		*ug/L*	*28.00*		*96*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.4*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: Fluorobenzene	*26.7*		*ug/L*	*28.00*		*96*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0351
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412077 - IC PREP										
Blank (1412077-BLK1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1412077-BS1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000		100	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		102	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		103	90-110			
LCS Dup (1412077-BSD1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000		100	90-110	0.4	10	
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500		102	90-110	0.5	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.5	0.50	mg/L	2.500		101	90-110	2	10	
Matrix Spike (1412077-MS1)	**Source: 14L0353-01**			Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.3	0.50	mg/L	5.000	0.49	96	80-120			
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500	0.10	101	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	ND	109	80-120			
Matrix Spike Dup (1412077-MSD1)	**Source: 14L0353-01**			Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.4	0.50	mg/L	5.000	0.49	98	80-120	2	10	
Nitrogen, Nitrite (As N)	2.7	0.10	mg/L	2.500	0.10	103	80-120	2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.8	0.50	mg/L	2.500	ND	111	80-120	2	10	

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1410351 DATE 12/4/14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME: Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME: City of Tucson

ADDRESS: PO Box 27210, Tucson AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 837-4935 (Bev)

FAX: 791-4343 EMAIL: stormwater@tucsonaz.gov

SAMPLER'S SIGNATURE: Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Hardness Ca & Mg	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Biological Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Cyanide	Total Metals*	Nitrate and Nitrite Sum	NH3	TKN	Total Phosphours	Orthophosphate by Ion Chromatography	TPH 1664	Oil & Grease	Volatile Organic Compounds by 624	Semivolatile Organic by SW 8270	PCBs by SW 8082	Organochlorine Pesticides by SW 8081		
Composite	12-4-14	8:53		ST	27	x	x	x	x	x		x	x	x	x	x	x				x	x	x		
Grab/Discrete	12-4-14	8:53		ST	9						x							x	x	x					

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY:
Eric Ross
Signature
Eric Ross Printed
Name:
Department of Transporation
Firm: City of Tucson
Date/Time 12-4-14 / 12:54

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name
TURNER LABORATORIES, INC.
Firm
12/4/14 1254
Date/Time

TURNAROUND REQUIREMENTS:
__X__ Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
__X__ Email Preliminary Results To: Stormwater@tucsonaz.gov
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___Y___N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 36
Temperature 4.8
☒ Wet Ice ☐ Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS: Composite poured at lab per COT Specifications

Compliance Analysis:	☐ Yes	☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes	☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes	☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

* (200.7); As, Ba, Be, Cd, Cr, Cu, Hg, Ni, Zn. (200.8); Ag, Pb, Sb, Se, Tl. Cyanide, Metals, VOCs, sVOCs, PCBs, Pesticides; report in ug/L

TURNER
LABORATORIES INC.

December 29, 2014

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14L0353
Order Name: Sample Site 3

RE: Storm Water Biannual

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 12/04/2014 for the analyses presented in the following report.

The attached report has been revised. Please refer to the Case Narrative page for an explanation of the changes. We apologize for any inconvenience this may have caused you.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,
Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 12/29/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

Order: Sample Site 3

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0353-01	Composite	Storm Water	12/04/2014 0620
14L0353-02	Grab	Storm Water	12/04/2014 0620

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

Case Narrative

This report was originally generated on 12/26/2014. It is being revised on 12/29/2014 to report Aroclors to the PQL, which was to the MDL on the original report.

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated LCS/LCSD was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.
R1	RPD/RSD exceeded the method acceptance limit. See case narrative.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met the acceptance criteria.
T2	Cited ADHS Licensed method does not contain this analyte as part of the method compound list.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Turner Laboratories, Inc.

Date: 12/29/2014

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	21				mg/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.59		0.10		mg/L	1	12/05/2014 1200	12/05/2014 1532	AC
ICP Total Metals-E200.7									
Arsenic	6.1	4.5	40	E4	ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Barium	ND		50		ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Calcium	8600		4000		ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Chromium	1.8	0.61	30	E4	ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Copper	37		20		ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Magnesium	ND		3000		ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Nickel	3.5	1.8	50	E4	ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
Zinc	160		40		ug/L	1	12/08/2014 0950	12/09/2014 1305	RAD
ICP/MS Total Metals-E200.8									
Antimony	2.0		0.50		ug/L	1	12/09/2014 1310	12/10/2014 1301	RAD
Lead	6.4		0.50		ug/L	1	12/09/2014 1310	12/10/2014 1301	RAD
Selenium	0.12	0.082	2.5	E4	ug/L	1	12/09/2014 1310	12/10/2014 1301	RAD
Silver	0.13	0.029	0.50	E4	ug/L	1	12/09/2014 1310	12/10/2014 1301	RAD
Thallium	ND	0.013	0.50	E8	ug/L	1	12/09/2014 1310	12/10/2014 1301	RAD
CVAA Total Mercury-E245.1									
Mercury	0.12	0.039	1.0	E4	ug/L	1	12/12/2014 1138	12/15/2014 1056	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.49	0.047	0.50	E4	mg/L	1	12/05/2014 1200	12/05/2014 1532	AC
Nitrogen, Nitrite (As N)	0.10		0.10		mg/L	1	12/05/2014 1200	12/05/2014 1532	AC
Phosphorus, Dissolved Orthophosphate (As P)	ND		0.50		mg/L	1	12/05/2014 1200	12/05/2014 1532	AC
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.39		0.10		mg/L	1	12/19/2014 0940	12/19/2014 1840	AC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	120		20		mg/L	1	12/15/2014 0810	12/15/2014 1730	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	2.0		0.50		mg/L	1	12/15/2014 1645	12/16/2014 1110	AC
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	48		20		mg/L	1	12/10/2014 0820	12/11/2014 1200	CC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	52		10		mg/L	1	12/10/2014 0755	12/10/2014 1500	CC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	0.72		0.50		mg/L	1	12/16/2014 0840	12/16/2014 1035	AC
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	24		2.0		mg/L	1	12/04/2014 1735	12/09/2014 1600	AC
Organochlorine Pesticides-SW8081A									
4,4'-DDD	ND		0.10	V1	ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
4,4'-DDE	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
4,4'-DDT	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Aldrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
alpha-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
alpha-Chlordane	ND		0.10		ug/L	1	12/09/2014 1116	12/17/2014 0350	MD
beta-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
delta-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Dieldrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Endosulfan I	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Endosulfan II	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Endosulfan sulfate	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Endrin	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Endrin aldehyde	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Endrin ketone	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
gamma-BHC	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
gamma-Chlordane	ND		0.10		ug/L	1	12/09/2014 1116	12/17/2014 0350	MD
Heptachlor	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Heptachlor epoxide	ND		0.10		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Methoxychlor	ND		0.10	V1	ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Toxaphene	ND		1.0		ug/L	1	12/09/2014 1116	12/16/2014 2052	MD
Surr: Decachlorobiphenyl	*72*	*38.8-124*			*%REC*	*1*	*12/09/2014 1116*	*12/16/2014 2052*	*MD*
Surr: Tetrachloro-m-xylene	*91*	*40-118.3*			*%REC*	*1*	*12/09/2014 1116*	*12/16/2014 2052*	*MD*
PCBs-SW8082									
Aroclor 1016	ND		1.0		ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Aroclor 1221	ND		1.0		ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Aroclor 1232	ND		1.0		ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Aroclor 1242	ND		1.0		ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Aroclor 1248	ND		1.0		ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Aroclor 1254	ND		1.0		ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Aroclor 1260	ND		1.0	V1	ug/L	1	12/08/2014 1359	12/15/2014 2236	MD
Surr: Decachlorobiphenyl	*79*	*45.9-122.8*			*%REC*	*1*	*12/08/2014 1359*	*12/15/2014 2236*	*MD*
Semivolatile Organic Compounds-SW8270C									
1,2,4-Trichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
1,2-Dichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
1,2-Diphenylhydrazine	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
1,3-Dichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
1,4-Dichlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,4,5-Trichlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,4,6-Trichlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,4-Dichlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,4-Dimethylphenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,4-Dinitrophenol	ND		50		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,4-Dinitrotoluene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2,6-Dinitrotoluene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2-Chloronaphthalene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2-Chlorophenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2-Methylnaphthalene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2-Methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
2-Nitroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
2-Nitrophenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
3,3'-Dichlorobenzidine	ND	1.5	20	E8	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
3,4-Methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
3-Nitroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4,6-Dinitro-2-methylphenol	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Bromophenyl phenyl ether	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Chloro-3-methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Chloroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Chlorophenyl phenyl ether	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Methylphenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Nitroaniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
4-Nitrophenol	ND		50		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Acenaphthene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Acenaphthylene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Aniline	ND		20		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Anthracene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Benzo[a]anthracene	ND	0.76	5.0	E8	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Benzo[a]pyrene	ND	0.56	5.0	E8	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Benzo[b,k]fluoranthene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Benzo[g,h,i]perylene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Benzoic acid	5.2		50		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Benzyl alcohol	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Bis(2-chloroethoxy)methane	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Bis(2-chloroethyl)ether	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Bis(2-chloroisopropyl)ether	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Bis(2-ethylhexyl)phthalate	6.7		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Butyl benzyl phthalate	1.4		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Chrysene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Dibenzo[a,h]anthracene	ND	0.91	5.0	E8	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Dibenzofuran	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Diethyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Dimethyl phthalate	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Di-n-butyl phthalate	3.1		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Di-n-octyl phthalate	1.2		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Fluoranthene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Fluorene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Hexachlorobenzene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Hexachlorobutadiene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Hexachlorocyclopentadiene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Hexachloroethane	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Indeno[1,2,3-cd]pyrene	ND	1.2	5.0	E8	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-01

Client Sample ID: Composite
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Isophorone	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Naphthalene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Nitrobenzene	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
N-Nitrosodimethylamine	ND	2.3	10	E8	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
N-Nitrosodiphenylamine	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
N-Nitrosodipropylamine	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Pentachlorophenol	3.4	1.0	30	E4	ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Phenanthrene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Phenol	ND		10		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Pyrene	ND		5.0		ug/L	1	12/11/2014 0600	12/20/2014 0051	MD
Surr: 2,4,6-Tribromophenol	*85*	*61-118*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 051*	*MD*
Surr: 2-Fluorobiphenyl	*76*	*30.9-111*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 051*	*MD*
Surr: 2-Fluorophenol	*40*	*15.2-68.1*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 051*	*MD*
Surr: 4-Terphenyl-d14	*71*	*0-123*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 051*	*MD*
Surr: Nitrobenzene-d5	*66*	*35-99*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 051*	*MD*
Surr: Phenol-d6	*45*	*0-115*			*%REC*	*1*	*12/11/2014 0600*	*12/20/2014 051*	*MD*

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-02

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664B									
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.00		mg/L	1	12/09/2014 0830	12/09/2014 1455	AC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	ND		5.00		mg/L	1	12/17/2014 0800	12/17/2014 1655	CC
Additional Compounds by GCMS-E624									
2-Chloroethylvinylether	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2201	KP
Acrolein	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2201	KP
Acrylonitrile	ND		10		ug/L	1	12/15/2014 1619	12/15/2014 2201	KP
Surr: 1,2-Dichloroethane-d4	*99*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2201*	*KP*
Surr: 4-Bromofluorobenzene	*101*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2201*	*KP*
Surr: Fluorobenzene	*100*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2201*	*KP*
Volatile Organic Compounds by GCMS-EPA 624									
1,1,1-Trichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,1,2-Trichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,1-Dichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,1-Dichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,2,4-Trimethylbenzene	ND		2.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,2-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,2-Dichloroethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,2-Dichloropropane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,3,5-Trimethylbenzene	ND		2.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,3-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
1,4-Dichlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
2-Chloroethylvinylether	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Acetone	18		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Acrolein	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Acrylonitrile	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Benzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Bromodichloromethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Bromoform	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Bromomethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Carbon tetrachloride	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Lab Sample ID: 14L0353-02

Client Sample ID: Grab
Collection Date/Time: 12/04/2014 0620
Matrix: Storm Water
Order Name: Sample Site 3

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chlorobenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Chloroethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Chloroform	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Chloromethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
cis-1,3-Dichloropropene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Dibromochloromethane	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Dichlorodifluoromethane	ND		5.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Ethylbenzene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Methyl Isobutyl Ketone (MIBK)	ND		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Methylene chloride	ND		10		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Tetrachloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Tetrahydrofuran	ND		10	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Toluene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
trans-1,2-Dichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
trans-1,3-Dichloropropene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Trichloroethene	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Trichlorofluoromethane	ND		5.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Vinyl chloride	ND		2.0		ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Xylenes, Total	ND		6.0	T2	ug/L	1	12/12/2014 1235	12/13/2014 0303	KP
Surr: 1,2-Dichloroethane-d4	*109*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 303*	*KP*
Surr: 4-Bromofluorobenzene	*105*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 303*	*KP*
Surr: Fluorobenzene	*114*	*70-130*			*%REC*	*1*	*12/12/2014 1235*	*12/13/2014 303*	*KP*
Cyanide-SM4500-CN BE									
Cyanide	ND	82	100	E8	ug/L	1	12/11/2014 0810	12/11/2014 1420	CC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412097 - E 200.2 ICP										
Blank (1412097-BLK1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	ND	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1412097-BS1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1840	40	ug/L	2000		92	85-115			
Barium	1900	50	ug/L	2000		94	85-115			
Beryllium	47	2.0	ug/L	50.00		94	85-115			
Cadmium	47	2.0	ug/L	50.00		93	85-115			
Calcium	10000	4000	ug/L	10000		103	85-115			
Chromium	190	30	ug/L	200.0		95	85-115			
Copper	230	20	ug/L	250.0		93	85-115			
Magnesium	10000	3000	ug/L	10000		101	85-115			
Nickel	470	50	ug/L	500.0		94	85-115			
Zinc	470	40	ug/L	500.0		93	85-115			
LCS Dup (1412097-BSD1)				Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1810	40	ug/L	2000		91	85-115	1	20	
Barium	1900	50	ug/L	2000		93	85-115	0.7	20	
Beryllium	47	2.0	ug/L	50.00		94	85-115	0.6	20	
Cadmium	46	2.0	ug/L	50.00		92	85-115	1	20	
Calcium	10000	4000	ug/L	10000		100	85-115	3	20	
Chromium	190	30	ug/L	200.0		94	85-115	2	20	
Copper	230	20	ug/L	250.0		92	85-115	1	20	
Magnesium	10000	3000	ug/L	10000		100	85-115	1	20	
Nickel	460	50	ug/L	500.0		92	85-115	2	20	
Zinc	460	40	ug/L	500.0		92	85-115	1	20	
Matrix Spike (1412097-MS1)	**Source: 14L0008-02**			Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	1960	40	ug/L	2000	12.8	98	70-130			
Barium	1900	50	ug/L	2000	110	90	70-130			
Beryllium	47	2.0	ug/L	50.00	ND	94	70-130			
Cadmium	43	2.0	ug/L	50.00	ND	86	70-130			
Calcium	150000	4000	ug/L	10000	140000	50	70-130			M3
Chromium	190	30	ug/L	200.0	1.4	93	70-130			
Copper	330	20	ug/L	250.0	55	109	70-130			
Magnesium	40000	3000	ug/L	10000	29000	108	70-130			
Nickel	480	50	ug/L	500.0	4.7	95	70-130			
Zinc	580	40	ug/L	500.0	98	96	70-130			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412097 - E 200.2 ICP										
Matrix Spike (1412097-MS2)	**Source: 14L0241-02**			Prepared: 12/08/2014 Analyzed: 12/09/2014						
Arsenic	2070	40	ug/L	2000	137	97	70-130			
Barium	1500	50	ug/L	2000	380	54	70-130			M2
Beryllium	46	2.0	ug/L	50.00	ND	92	70-130			
Cadmium	36	2.0	ug/L	50.00	ND	73	70-130			
Calcium	380000	4000	ug/L	10000	390000	NR	70-130			M3
Chromium	200	30	ug/L	200.0	26	88	70-130			
Copper	270	20	ug/L	250.0	11	105	70-130			
Magnesium	57000	3000	ug/L	10000	50000	74	70-130			
Nickel	480	50	ug/L	500.0	3.5	96	70-130			
Zinc	500	40	ug/L	500.0	11	97	70-130			
Batch 1412108 - E 200.8 ICP/MS										
Blank (1412108-BLK1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	ND	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	0.082	0.50	ug/L							
LCS (1412108-BS1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00		96	85-115			
Lead	47	0.50	ug/L	50.00		95	85-115			
Selenium	260	2.5	ug/L	250.0		103	85-115			
Silver	47	0.50	ug/L	50.00		95	85-115			
Thallium	46	0.50	ug/L	50.00		91	85-115			
LCS Dup (1412108-BSD1)				Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00		96	85-115	0.4	20	
Lead	48	0.50	ug/L	50.00		96	85-115	1	20	
Selenium	260	2.5	ug/L	250.0		102	85-115	0.5	20	
Silver	47	0.50	ug/L	50.00		94	85-115	0.6	20	
Thallium	46	0.50	ug/L	50.00		93	85-115	1	20	
Matrix Spike (1412108-MS1)	**Source: 14L0331-01**			Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	50	0.50	ug/L	50.00	0.072	100	70-130			
Lead	49	0.50	ug/L	50.00	1.0	97	70-130			
Selenium	240	2.5	ug/L	250.0	0.46	97	70-130			
Silver	49	0.50	ug/L	50.00	0.068	98	70-130			
Thallium	46	0.50	ug/L	50.00	ND	92	70-130			
Matrix Spike (1412108-MS2)	**Source: 14L0392-01**			Prepared: 12/09/2014 Analyzed: 12/10/2014						
Antimony	48	0.50	ug/L	50.00	0.079	96	70-130			
Lead	46	0.50	ug/L	50.00	0.35	91	70-130			
Selenium	240	2.5	ug/L	250.0	0.51	95	70-130			
Silver	47	0.50	ug/L	50.00	0.074	93	70-130			
Thallium	43	0.50	ug/L	50.00	0.067	86	70-130			
Batch 1412152 - E 245.1										

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412152 - E 245.1										
Blank (1412152-BLK1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	0.11	1.0	ug/L							
LCS (1412152-BS1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000		103	85-115			
LCS Dup (1412152-BSD1)				Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000		103	85-115	0.06	20	
Matrix Spike (1412152-MS1)		**Source: 14L0396-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000	0.10	100	85-115			
Matrix Spike (1412152-MS2)		**Source: 14L0363-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	4.7	1.0	ug/L	5.000	0.21	91	85-115			
Matrix Spike Dup (1412152-MSD1)		**Source: 14L0396-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.1	1.0	ug/L	5.000	0.10	100	85-115	0.5	20	
Matrix Spike Dup (1412152-MSD2)		**Source: 14L0363-01**		Prepared: 12/12/2014 Analyzed: 12/15/2014						
Mercury	5.0	1.0	ug/L	5.000	0.21	96	85-115	6	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412071 - GEN CHEM										
Blank (1412071-BLK1)				Prepared: 12/04/2014 Analyzed: 12/09/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1412071-BS1)				Prepared: 12/04/2014 Analyzed: 12/09/2014						
Biochemical Oxygen Demand	170		mg/L	198.0		86	85-115			
Batch 1412111 - GEN CHEM										
Blank (1412111-BLK1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	mg/L							
LCS (1412111-BS1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	23.8	5.00	mg/L	20.00		119	64-132			
LCS Dup (1412111-BSD1)				Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	26.2	5.00	mg/L	20.00		131	64-132	10	34	
Matrix Spike (1412111-MS1)	**Source: 14L0351-02**			Prepared & Analyzed: 12/09/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	19.3	5.00	mg/L	20.00	ND	97	64-132			
Batch 1412112 - GEN CHEM										
Duplicate (1412112-DUP1)	**Source: 14L0298-01**			Prepared & Analyzed: 12/10/2014						
Total Suspended Solids	3.0	10	mg/L		2.0			40	5	
Duplicate (1412112-DUP2)	**Source: 14L0397-01**			Prepared & Analyzed: 12/10/2014						
Total Suspended Solids	310	10	mg/L		320			2	5	
Batch 1412127 - GEN CHEM										
Duplicate (1412127-DUP1)	**Source: 14L0298-01**			Prepared: 12/10/2014 Analyzed: 12/11/2014						
Total Dissolved Solids (Residue, Filterable)	900	20	mg/L		910			0.9	5	
Duplicate (1412127-DUP2)	**Source: 14L0441-02**			Prepared: 12/10/2014 Analyzed: 12/11/2014						
Total Dissolved Solids (Residue, Filterable)	920	20	mg/L		910			0.7	5	
Batch 1412130 - SPECTRO PREP										
Blank (1412130-BLK1)				Prepared & Analyzed: 12/11/2014						
Cyanide	ND	100	ug/L							
LCS (1412130-BS1)				Prepared & Analyzed: 12/11/2014						
Cyanide	1800	100	ug/L	2000		91	90-110			
LCS Dup (1412130-BSD1)				Prepared & Analyzed: 12/11/2014						
Cyanide	2000	100	ug/L	2000		98	90-110	8	20	
Matrix Spike (1412130-MS1)	**Source: 14L0349-02**			Prepared & Analyzed: 12/11/2014						
Cyanide	1900	100	ug/L	2000	ND	95	70-130			

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Batch 1412130 - SPECTRO PREP										
Matrix Spike Dup (1412130-MSD1)	**Source: 14L0349-02**			Prepared & Analyzed: 12/11/2014						
Cyanide	1900	100	ug/L	2000	ND	95	70-130	0.6	20	
Batch 1412184 - GEN CHEM										
Blank (1412184-BLK1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1412184-BS1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		101	90-110			
LCS Dup (1412184-BSD1)				Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000		98	90-110	3	10	
Matrix Spike (1412184-MS1)	**Source: 14L0001-02**			Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	4.9	0.50	mg/L	5.000	ND	97	70-130			
Matrix Spike Dup (1412184-MSD1)	**Source: 14L0001-02**			Prepared & Analyzed: 12/16/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	99	70-130	2	20	
Batch 1412206 - GEN CHEM										
Blank (1412206-BLK1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1412206-BS1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	34.8	5.00	mg/L	40.00		87	78-114			
LCS Dup (1412206-BSD1)				Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	33.1	5.00	mg/L	40.00		83	78-114	5	18	
Matrix Spike (1412206-MS1)	**Source: 14L0261-02**			Prepared & Analyzed: 12/17/2014						
Oil & Grease (HEM)	38.2	5.00	mg/L	40.00	ND	96	78-114			
Batch 1412234 - SPECTRO PREP										
Blank (1412234-BLK1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1412234-BS1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	500	20	mg/L	500.0		100	70-130			
LCS Dup (1412234-BSD1)				Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		103	70-130	2	20	
Matrix Spike (1412234-MS1)	**Source: 14L0009-01**			Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	600	20	mg/L	500.0	89	102	70-130			
Matrix Spike Dup (1412234-MSD1)	**Source: 14L0009-01**			Prepared & Analyzed: 12/15/2014						
Chemical Oxygen Demand	600	20	mg/L	500.0	89	101	70-130	0.7	20	
Batch 1412249 - GEN CHEM										
Blank (1412249-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							

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Batch 1412249 - GEN CHEM										
LCS (1412249-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		100	80-120			
LCS Dup (1412249-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000		96	80-120	3	20	
Matrix Spike (1412249-MS1)		Source: 14L0001-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.7	0.50	mg/L	5.000	0.19	91	80-120			
Matrix Spike (1412249-MS2)		Source: 14L0474-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	0.22	94	80-120			
Matrix Spike Dup (1412249-MSD1)		Source: 14L0001-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000	0.19	95	80-120	4	20	
Matrix Spike Dup (1412249-MSD2)		Source: 14L0474-01		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Nitrogen, Total Kjeldahl	4.8	0.50	mg/L	5.000	0.22	91	80-120	3	20	
Batch 1412252 - SPECTRO PREP										
Blank (1412252-BLK1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1412252-BS1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.54	0.10	mg/L	0.5000		108	90-110			
LCS Dup (1412252-BSD1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.52	0.10	mg/L	0.5000		104	90-110	4	10	
Matrix Spike (1412252-MS1)		Source: 14L0521-02		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.75	0.10	mg/L	0.5000	0.17	116	70-130			
Matrix Spike Dup (1412252-MSD1)		Source: 14L0521-02		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.72	0.10	mg/L	0.5000	0.17	110	70-130	4	15	

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Batch 1412095 - SW 846 3520C										
Blank (1412095-BLK1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	ND	1.0	ug/L							
Aroclor 1221	ND	1.0	ug/L							
Aroclor 1232	ND	1.0	ug/L							
Aroclor 1242	ND	1.0	ug/L							
Aroclor 1248	ND	1.0	ug/L							
Aroclor 1254	ND	1.0	ug/L							
Aroclor 1260	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*1.98*		*ug/L*	*2.000*		*99*	*45.9-122.8*			
LCS (1412095-BS1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	10	1.0	ug/L	10.00		100	59.5-122.8			
Aroclor 1221	ND	1.0	ug/L				0-200			
Aroclor 1232	ND	1.0	ug/L				0-200			
Aroclor 1242	ND	1.0	ug/L				0-200			
Aroclor 1248	ND	1.0	ug/L				0-200			
Aroclor 1254	ND	1.0	ug/L				70-130			
Aroclor 1260	9.6	1.0	ug/L	10.00		96	65.7-112.7			
Surrogate: Decachlorobiphenyl	*1.87*		*ug/L*	*2.000*		*93*	*63-121*			
LCS Dup (1412095-BSD1)				Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	10	1.0	ug/L	10.00		103	59.5-122.8	2	30	
Aroclor 1221	ND	1.0	ug/L				0-200		200	
Aroclor 1232	ND	1.0	ug/L				0-200		200	
Aroclor 1242	ND	1.0	ug/L				0-200		200	
Aroclor 1248	ND	1.0	ug/L				0-200		200	
Aroclor 1254	ND	1.0	ug/L				70-130		30	
Aroclor 1260	10	1.0	ug/L	10.00		101	65.7-112.7	5	30	
Surrogate: Decachlorobiphenyl	*1.95*		*ug/L*	*2.000*		*97*	*63-121*			
Matrix Spike (1412095-MS1)	**Source: 14L0349-01**			Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	6.1	0.98	ug/L	9.823	ND	62	20.9-169			
Aroclor 1221	ND	0.98	ug/L		0.0		0-200			
Aroclor 1232	ND	0.98	ug/L		0.0		0-200			
Aroclor 1242	ND	0.98	ug/L		0.0		0-200			
Aroclor 1248	ND	0.98	ug/L		0.0		0-200			
Aroclor 1254	ND	0.98	ug/L		0.0		70-130			
Aroclor 1260	6.7	0.98	ug/L	9.823	ND	68	25.2-124.7			
Surrogate: Decachlorobiphenyl	*1.49*		*ug/L*	*1.965*		*76*	*45.9-122.8*			

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Batch 1412095 - SW 846 3520C										
Matrix Spike Dup (1412095-MSD1)	**Source: 14L0349-01**			Prepared: 12/08/2014 Analyzed: 12/15/2014						
Aroclor 1016	6.7	0.99	ug/L	9.930	ND	67	20.9-169	10	30	
Aroclor 1221	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1232	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1242	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1248	ND	0.99	ug/L		0.0		0-200		200	
Aroclor 1254	ND	0.99	ug/L		0.0		70-130		30	
Aroclor 1260	6.9	0.99	ug/L	9.930	ND	69	25.2-124.7	3	30	
Surrogate: Decachlorobiphenyl	*1.50*		*ug/L*	*1.986*		*76*	*45.9-122.8*			
Batch 1412106 - SW 846 3520C										
Blank (1412106-BLK1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDD	ND	0.10	ug/L							
4,4'-DDE	ND	0.10	ug/L							
4,4'-DDT	ND	0.10	ug/L							
Aldrin	ND	0.10	ug/L							
alpha-BHC	ND	0.10	ug/L							
alpha-Chlordane	ND	0.10	ug/L							
beta-BHC	ND	0.10	ug/L							
delta-BHC	ND	0.10	ug/L							
Dieldrin	ND	0.10	ug/L							
Endosulfan I	ND	0.10	ug/L							
Endosulfan II	ND	0.10	ug/L							
Endosulfan sulfate	ND	0.10	ug/L							
Endrin	ND	0.10	ug/L							
Endrin aldehyde	ND	0.10	ug/L							
Endrin ketone	ND	0.10	ug/L							
gamma-BHC	ND	0.10	ug/L							
gamma-Chlordane	ND	0.10	ug/L							
Heptachlor	ND	0.10	ug/L							
Heptachlor epoxide	ND	0.10	ug/L							
Methoxychlor	ND	0.10	ug/L							
Toxaphene	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*0.953*		*ug/L*	*1.000*		*95*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.680*		*ug/L*	*1.000*		*68*	*40-118.3*			
LCS (1412106-BS1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.89	0.10	ug/L	1.000		89	54.8-117.2			
Aldrin	0.38	0.10	ug/L	0.5000		76	53.1-105			
Dieldrin	0.70	0.10	ug/L	1.000		70	59.5-100.2			
Endrin	0.81	0.10	ug/L	1.000		81	58.1-100.7			
gamma-BHC	0.37	0.10	ug/L	0.5000		75	56.5-117.1			
Heptachlor	0.36	0.10	ug/L	0.5000		72	51.5-104.5			
Surrogate: Decachlorobiphenyl	*0.911*		*ug/L*	*1.000*		*91*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.550*		*ug/L*	*1.000*		*55*	*37.5-105.7*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412106 - SW 846 3520C										
LCS Dup (1412106-BSD1)				Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.95	0.10	ug/L	1.000		95	54.8-117.2	7	30	
Aldrin	0.42	0.10	ug/L	0.5000		84	53.1-105	9	30	
Dieldrin	0.75	0.10	ug/L	1.000		75	59.5-100.2	6	30	
Endrin	0.88	0.10	ug/L	1.000		88	58.1-100.7	8	30	
gamma-BHC	0.41	0.10	ug/L	0.5000		82	56.5-117.1	9	30	
Heptachlor	0.40	0.10	ug/L	0.5000		80	51.5-104.5	10	30	
Surrogate: Decachlorobiphenyl	*0.962*		*ug/L*	*1.000*		*96*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.674*		*ug/L*	*1.000*		*67*	*37.5-105.7*			
Matrix Spike (1412106-MS1)		**Source: 14L0351-01**		Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.60	0.11	ug/L	1.063	ND	56	10.1-142.2			
Aldrin	0.28	0.11	ug/L	0.5313	ND	52	23.2-118.8			
Dieldrin	0.63	0.11	ug/L	1.063	ND	59	43.8-113.4			
Endrin	0.80	0.11	ug/L	1.063	ND	75	28.1-131.1			
gamma-BHC	0.35	0.11	ug/L	0.5313	ND	66	58-115.5			
Heptachlor	0.30	0.11	ug/L	0.5313	ND	56	32.4-137			
Surrogate: Decachlorobiphenyl	*0.876*		*ug/L*	*1.063*		*82*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.640*		*ug/L*	*1.063*		*60*	*40-118.3*			
Matrix Spike Dup (1412106-MSD1)		**Source: 14L0351-01**		Prepared: 12/09/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.49	0.099	ug/L	0.9911	ND	49	10.1-142.2	20	30	
Aldrin	0.23	0.099	ug/L	0.4955	ND	47	23.2-118.8	17	30	
Dieldrin	0.55	0.099	ug/L	0.9911	ND	55	43.8-113.4	14	30	
Endrin	0.69	0.099	ug/L	0.9911	ND	70	28.1-131.1	14	30	
gamma-BHC	0.31	0.099	ug/L	0.4955	ND	63	58-115.5	12	30	
Heptachlor	0.26	0.099	ug/L	0.4955	ND	52	32.4-137	14	30	
Surrogate: Decachlorobiphenyl	*0.786*		*ug/L*	*0.9911*		*79*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.602*		*ug/L*	*0.9911*		*61*	*40-118.3*			
Batch 1412128 - SW 846 3535										

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Batch 1412128 - SW 846 3535										
Blank (1412128-BLK1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,2-Diphenylhydrazine	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
2,4,5-Trichlorophenol	ND	10	ug/L							
2,4,6-Trichlorophenol	ND	10	ug/L							
2,4-Dichlorophenol	ND	10	ug/L							
2,4-Dimethylphenol	ND	10	ug/L							
2,4-Dinitrophenol	ND	50	ug/L							
2,4-Dinitrotoluene	ND	10	ug/L							
2,6-Dinitrotoluene	ND	10	ug/L							
2-Chloronaphthalene	ND	10	ug/L							
2-Chlorophenol	ND	10	ug/L							
2-Methylnaphthalene	ND	5.0	ug/L							
2-Methylphenol	ND	10	ug/L							
2-Nitroaniline	ND	20	ug/L							
2-Nitrophenol	ND	10	ug/L							
3,3'-Dichlorobenzidine	ND	20	ug/L							
3,4-Methylphenol	ND	10	ug/L							
3-Nitroaniline	ND	20	ug/L							
4,6-Dinitro-2-methylphenol	ND	20	ug/L							
4-Bromophenyl phenyl ether	ND	10	ug/L							
4-Chloro-3-methylphenol	ND	10	ug/L							
4-Chloroaniline	ND	20	ug/L							
4-Chlorophenyl phenyl ether	ND	10	ug/L							
4-Methylphenol	ND	10	ug/L							
4-Nitroaniline	ND	20	ug/L							
4-Nitrophenol	ND	50	ug/L							
Acenaphthene	ND	5.0	ug/L							
Acenaphthylene	ND	5.0	ug/L							
Aniline	ND	20	ug/L							
Anthracene	ND	5.0	ug/L							
Benzo[a]anthracene	ND	5.0	ug/L							
Benzo[a]pyrene	ND	5.0	ug/L							
Benzo[b,k]fluoranthene	ND	10	ug/L							
Benzo[g,h,i]perylene	ND	5.0	ug/L							
Benzoic acid	ND	50	ug/L							
Benzyl alcohol	ND	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	10	ug/L							
Bis(2-chloroethyl)ether	ND	10	ug/L							
Bis(2-chloroisopropyl)ether	ND	10	ug/L							
Bis(2-ethylhexyl)phthalate	ND	10	ug/L							
Butyl benzyl phthalate	ND	10	ug/L							
Chrysene	ND	5.0	ug/L							
Dibenzo[a,h]anthracene	ND	5.0	ug/L							
Dibenzofuran	ND	5.0	ug/L							

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Batch 1412128 - SW 846 3535										
Blank (1412128-BLK1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
Diethyl phthalate	ND	10	ug/L							
Dimethyl phthalate	ND	10	ug/L							
Di-n-butyl phthalate	ND	10	ug/L							
Di-n-octyl phthalate	ND	10	ug/L							
Fluoranthene	ND	5.0	ug/L							
Fluorene	ND	5.0	ug/L							
Hexachlorobenzene	ND	10	ug/L							
Hexachlorobutadiene	ND	10	ug/L							
Hexachlorocyclopentadiene	ND	10	ug/L							
Hexachloroethane	ND	10	ug/L							
Indeno[1,2,3-cd]pyrene	ND	5.0	ug/L							
Isophorone	ND	10	ug/L							
Naphthalene	ND	5.0	ug/L							
Nitrobenzene	ND	10	ug/L							
N-Nitrosodimethylamine	ND	10	ug/L							
N-Nitrosodiphenylamine	ND	10	ug/L							
N-Nitrosodipropylamine	ND	10	ug/L							
Pentachlorophenol	ND	30	ug/L							
Phenanthrene	ND	5.0	ug/L							
Phenol	ND	10	ug/L							
Pyrene	ND	5.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*78.9*		*ug/L*	*100.0*		*79*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*65.9*		*ug/L*	*100.0*		*66*	*30.9-111*			
Surrogate: 2-Fluorophenol	*40.1*		*ug/L*	*100.0*		*40*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*69.9*		*ug/L*	*100.0*		*70*	*0-123*			
Surrogate: Nitrobenzene-d5	*53.9*		*ug/L*	*100.0*		*54*	*35-99*			
Surrogate: Phenol-d6	*46.7*		*ug/L*	*100.0*		*47*	*0-115*			
LCS (1412128-BS1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	20	10	ug/L	50.00		40	29.5-92.8			
1,4-Dichlorobenzene	14	10	ug/L	50.00		27	21.9-69.5			
2,4-Dinitrotoluene	32	10	ug/L	50.00		63	40.6-90			
2-Chlorophenol	41	10	ug/L	100.0		41	33-82.4			
4-Chloro-3-methylphenol	64	10	ug/L	100.0		64	39.5-87.3			
4-Nitrophenol	66	50	ug/L	100.0		66	41.7-99.9			
Acenaphthene	29	5.0	ug/L	50.00		59	38.3-91.1			
N-Nitrosodipropylamine	28	10	ug/L	50.00		56	40.5-95.8			
Pentachlorophenol	63	30	ug/L	100.0		63	32.5-106			
Phenol	39	10	ug/L	100.0		39	8.08-78.4			
Pyrene	32	5.0	ug/L	50.00		65	34.9-95.9			
Surrogate: 2,4,6-Tribromophenol	*71.2*		*ug/L*	*100.0*		*71*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*60.3*		*ug/L*	*100.0*		*60*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*33.3*		*ug/L*	*100.0*		*33*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*58.2*		*ug/L*	*100.0*		*58*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*47.0*		*ug/L*	*100.0*		*47*	*38.4-84.6*			
Surrogate: Phenol-d6	*39.7*		*ug/L*	*100.0*		*40*	*18.3-88.5*			

Client: City of Tucson - Transportation Department
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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
LCS Dup (1412128-BSD1)				Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	24	10	ug/L	50.00		47	29.5-92.8	16	30	
1,4-Dichlorobenzene	17	10	ug/L	50.00		35	21.9-69.5	25	30	
2,4-Dinitrotoluene	32	10	ug/L	50.00		64	40.6-90	0.6	30	
2-Chlorophenol	46	10	ug/L	100.0		46	33-82.4	12	30	
4-Chloro-3-methylphenol	67	10	ug/L	100.0		67	39.5-87.3	4	30	
4-Nitrophenol	65	50	ug/L	100.0		65	41.7-99.9	0.5	30	
Acenaphthene	30	5.0	ug/L	50.00		60	38.3-91.1	3	30	
N-Nitrosodipropylamine	28	10	ug/L	50.00		55	40.5-95.8	0.8	30	
Pentachlorophenol	69	30	ug/L	100.0		69	32.5-106	10	30	
Phenol	42	10	ug/L	100.0		42	8.08-78.4	7	30	
Pyrene	38	5.0	ug/L	50.00		77	34.9-95.9	17	30	
Surrogate: 2,4,6-Tribromophenol	*83.8*		*ug/L*	*100.0*		*84*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*63.7*		*ug/L*	*100.0*		*64*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*39.4*		*ug/L*	*100.0*		*39*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*67.5*		*ug/L*	*100.0*		*67*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*55.0*		*ug/L*	*100.0*		*55*	*38.4-84.6*			
Surrogate: Phenol-d6	*42.7*		*ug/L*	*100.0*		*43*	*18.3-88.5*			
Matrix Spike (1412128-MS1)	**Source: 14L0351-01**			Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	17	10	ug/L	50.35	ND	33	26.6-89.9			
1,4-Dichlorobenzene	8.8	10	ug/L	50.35	ND	18	19.9-65.5			M2
2,4-Dinitrotoluene	35	10	ug/L	50.35	ND	69	34-105			
2-Chlorophenol	41	10	ug/L	100.7	ND	40	36.6-79.1			
4-Chloro-3-methylphenol	70	10	ug/L	100.7	ND	69	37.3-97.9			
4-Nitrophenol	70	50	ug/L	100.7	ND	70	13.5-140			
Acenaphthene	32	5.0	ug/L	50.35	ND	64	33.3-99.9			
N-Nitrosodipropylamine	27	10	ug/L	50.35	ND	54	24.1-125			
Pentachlorophenol	86	30	ug/L	100.7	ND	85	16.1-135			
Phenol	44	10	ug/L	100.7	ND	43	13.6-83.9			
Pyrene	34	5.0	ug/L	50.35	ND	68	5.95-112			
Surrogate: 2,4,6-Tribromophenol	*89.5*		*ug/L*	*100.7*		*89*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*63.8*		*ug/L*	*100.7*		*63*	*30.9-111*			
Surrogate: 2-Fluorophenol	*28.5*		*ug/L*	*100.7*		*28*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*65.6*		*ug/L*	*100.7*		*65*	*0-123*			
Surrogate: Nitrobenzene-d5	*42.9*		*ug/L*	*100.7*		*43*	*35-99*			
Surrogate: Phenol-d6	*44.2*		*ug/L*	*100.7*		*44*	*0-115*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412128 - SW 846 3535										
Matrix Spike Dup (1412128-MSD1)	Source: 14L0351-01			Prepared: 12/11/2014 Analyzed: 12/19/2014						
1,2,4-Trichlorobenzene	26	10	ug/L	50.97	ND	50	26.6-89.9	42	30	R4
1,4-Dichlorobenzene	19	10	ug/L	50.97	ND	37	19.9-65.5	71	30	R1
2,4-Dinitrotoluene	38	10	ug/L	50.97	ND	74	34-105	8	30	
2-Chlorophenol	52	10	ug/L	101.9	ND	51	36.6-79.1	25	30	
4-Chloro-3-methylphenol	73	10	ug/L	101.9	ND	72	37.3-97.9	5	30	
4-Nitrophenol	84	51	ug/L	101.9	ND	82	13.5-140	18	30	
Acenaphthene	34	5.1	ug/L	50.97	ND	66	33.3-99.9	4	30	
N-Nitrosodipropylamine	34	10	ug/L	50.97	ND	67	24.1-125	23	30	
Pentachlorophenol	90	31	ug/L	101.9	ND	88	16.1-135	4	30	
Phenol	49	10	ug/L	101.9	ND	48	13.6-83.9	11	30	
Pyrene	37	5.1	ug/L	50.97	ND	72	5.95-112	6	30	
Surrogate: 2,4,6-Tribromophenol	*90.5*		*ug/L*	*101.9*		*89*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*67.8*		*ug/L*	*101.9*		*66*	*30.9-111*			
Surrogate: 2-Fluorophenol	*42.3*		*ug/L*	*101.9*		*42*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*64.6*		*ug/L*	*101.9*		*63*	*0-123*			
Surrogate: Nitrobenzene-d5	*62.2*		*ug/L*	*101.9*		*61*	*35-99*			
Surrogate: Phenol-d6	*49.9*		*ug/L*	*101.9*		*49*	*0-115*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
Blank (1412154-BLK1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	ND	2.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L							
1,1,2-Trichloroethane	ND	2.0	ug/L							
1,1-Dichloroethane	ND	2.0	ug/L							
1,1-Dichloroethene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	2.0	ug/L							
1,2-Dichlorobenzene	ND	2.0	ug/L							
1,2-Dichloroethane	ND	2.0	ug/L							
1,2-Dichloropropane	ND	2.0	ug/L							
1,3,5-Trimethylbenzene	ND	2.0	ug/L							
1,3-Dichlorobenzene	ND	2.0	ug/L							
1,4-Dichlorobenzene	ND	2.0	ug/L							
2-Chloroethylvinylether	ND	10	ug/L							
Acetone	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Benzene	ND	2.0	ug/L							
Bromodichloromethane	ND	2.0	ug/L							
Bromoform	ND	2.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon tetrachloride	ND	2.0	ug/L							
Chlorobenzene	ND	2.0	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	2.0	ug/L							
Chloromethane	ND	5.0	ug/L							
cis-1,3-Dichloropropene	ND	2.0	ug/L							
Dibromochloromethane	ND	2.0	ug/L							
Dichlorodifluoromethane	ND	5.0	ug/L							
Ethylbenzene	ND	2.0	ug/L							
Methyl Isobutyl Ketone (MIBK)	ND	10	ug/L							
Methylene chloride	ND	10	ug/L							
Tetrachloroethene	ND	2.0	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	2.0	ug/L							
trans-1,2-Dichloroethene	ND	2.0	ug/L							
trans-1,3-Dichloropropene	ND	2.0	ug/L							
Trichloroethene	ND	2.0	ug/L							
Trichlorofluoromethane	ND	5.0	ug/L							
Vinyl chloride	ND	2.0	ug/L							
Xylenes, Total	ND	6.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*29.3*		*ug/L*	*28.00*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.2*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*28.9*		*ug/L*	*28.00*		*103*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
LCS (1412154-BS1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		99	52-162			
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		99	46-157			
1,1,2-Trichloroethane	19		ug/L	20.00		93	52-150			
1,1-Dichloroethane	20		ug/L	20.00		100	59-155			
1,1-Dichloroethene	20		ug/L	20.00		101	2-234			
1,2,4-Trimethylbenzene	20		ug/L	20.00		102	0-200			
1,2-Dichlorobenzene	21		ug/L	20.00		103	18-190			
1,2-Dichloroethane	20		ug/L	20.00		102	49-155			
1,2-Dichloropropane	20		ug/L	20.00		99	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00		103	0-200			
1,3-Dichlorobenzene	20		ug/L	20.00		100	59-156			
1,4-Dichlorobenzene	20		ug/L	20.00		100	18-190			
2-Chloroethylvinylether	19		ug/L	20.00		96	10-305			
Acetone	92		ug/L	100.0		92	70-130			
Acrolein	0.0		ug/L	100.0			88-118			
Acrylonitrile	0.0		ug/L	100.0			71-135			
Benzene	20		ug/L	20.00		102	37-151			
Bromodichloromethane	20		ug/L	20.00		99	35-155			
Bromoform	19		ug/L	20.00		96	45-169			
Bromomethane	20		ug/L	20.00		98	2-242			
Carbon tetrachloride	20		ug/L	20.00		100	70-140			
Chlorobenzene	20		ug/L	20.00		99	37-160			
Chloroethane	20		ug/L	20.00		101	14-230			
Chloroform	20		ug/L	20.00		100	51-138			
Chloromethane	21		ug/L	20.00		104	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00		99	2-227			
Dibromochloromethane	18		ug/L	20.00		92	53-149			
Dichlorodifluoromethane	21		ug/L	20.00		103	5-273			
Ethylbenzene	20		ug/L	20.00		101	37-162			
Isopropyl Alcohol	1000		ug/L	1000		104	70-130			
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		101	70-130			
Methylene chloride	19		ug/L	20.00		97	10-221			
Tetrachloroethene	20		ug/L	20.00		100	64-148			
Tetrahydrofuran	99		ug/L	100.0		99	70-130			
Toluene	20		ug/L	20.00		98	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156			
trans-1,3-Dichloropropene	18		ug/L	20.00		92	17-183			
Trichloroethene	20		ug/L	20.00		101	71-157			
Trichlorofluoromethane	20		ug/L	20.00		99	17-181			
Vinyl chloride	20		ug/L	20.00		102	2-251			
Xylenes, Total	59		ug/L	60.00		98	37-162			
Surrogate: 1,2-Dichloroethane-d4	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*28.7*		*ug/L*	*28.00*		*103*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
LCS Dup (1412154-BSD1)				Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		99	52-162	0.4	30	
1,1,2,2-Tetrachloroethane	19		ug/L	20.00		97	46-157	3	30	
1,1,2-Trichloroethane	19		ug/L	20.00		96	52-150	3	30	
1,1-Dichloroethane	20		ug/L	20.00		98	59-155	2	30	
1,1-Dichloroethene	21		ug/L	20.00		103	2-234	2	30	
1,2,4-Trimethylbenzene	19		ug/L	20.00		97	0-200	5	200	
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190	1	30	
1,2-Dichloroethane	21		ug/L	20.00		105	49-155	3	30	
1,2-Dichloropropane	20		ug/L	20.00		100	2-210	2	30	
1,3,5-Trimethylbenzene	20		ug/L	20.00		100	0-200	2	200	
1,3-Dichlorobenzene	20		ug/L	20.00		100	59-156	0.2	30	
1,4-Dichlorobenzene	20		ug/L	20.00		99	18-190	2	30	
2-Chloroethylvinylether	19		ug/L	20.00		96	10-305	0	30	
Acetone	100		ug/L	100.0		101	70-130	10	30	
Acrolein	0.0		ug/L	100.0			88-118		30	
Acrylonitrile	0.0		ug/L	100.0			71-135		30	
Benzene	21		ug/L	20.00		103	37-151	0.5	30	
Bromodichloromethane	20		ug/L	20.00		102	35-155	2	30	
Bromoform	20		ug/L	20.00		99	45-169	3	30	
Bromomethane	20		ug/L	20.00		100	2-242	2	30	
Carbon tetrachloride	20		ug/L	20.00		100	70-140	0.4	30	
Chlorobenzene	20		ug/L	20.00		99	37-160	0.1	30	
Chloroethane	20		ug/L	20.00		101	14-230	0.3	30	
Chloroform	20		ug/L	20.00		101	51-138	1	30	
Chloromethane	21		ug/L	20.00		104	5-273	0.1	30	
cis-1,3-Dichloropropene	19		ug/L	20.00		94	2-227	5	30	
Dibromochloromethane	19		ug/L	20.00		95	53-149	3	30	
Dichlorodifluoromethane	20		ug/L	20.00		102	5-273	1	30	
Ethylbenzene	20		ug/L	20.00		99	37-162	2	30	
Isopropyl Alcohol	1100		ug/L	1000		109	70-130	5	200	
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		103	70-130	2	30	
Methylene chloride	19		ug/L	20.00		96	10-221	0.9	30	
Tetrachloroethene	19		ug/L	20.00		96	64-148	5	30	
Tetrahydrofuran	100		ug/L	100.0		105	70-130	6	30	
Toluene	19		ug/L	20.00		97	47-150	0.8	30	
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156	0.4	30	
trans-1,3-Dichloropropene	19		ug/L	20.00		96	17-183	5	30	
Trichloroethene	21		ug/L	20.00		106	71-157	4	30	
Trichlorofluoromethane	20		ug/L	20.00		100	17-181	0.9	30	
Vinyl chloride	20		ug/L	20.00		102	2-251	0.8	30	
Xylenes, Total	59		ug/L	60.00		98	37-162	0.3	30	
Surrogate: 1,2-Dichloroethane-d4	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: Fluorobenzene	*29.1*		*ug/L*	*28.00*		*104*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412154 - VOA_GCMS										
Matrix Spike (1412154-MS2)	Source: 14L0351-02			Prepared & Analyzed: 12/12/2014						
1,1,1-Trichloroethane	20		ug/L	20.00	ND	99	52-162			
1,1,2,2-Tetrachloroethane	21		ug/L	20.00	ND	107	46-157			
1,1,2-Trichloroethane	20		ug/L	20.00	ND	100	52-150			
1,1-Dichloroethane	21		ug/L	20.00	ND	104	59-155			
1,1-Dichloroethene	20		ug/L	20.00	ND	99	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00	0.0	105	0-200			
1,2-Dichlorobenzene	21		ug/L	20.00	ND	106	18-190			
1,2-Dichloroethane	21		ug/L	20.00	ND	105	49-155			
1,2-Dichloropropane	21		ug/L	20.00	0.0	105	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00	0.0	106	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00	ND	105	59-156			
1,4-Dichlorobenzene	21		ug/L	20.00	ND	105	18-190			
2-Chloroethylvinylether	0.0		ug/L	20.00	ND		10-305			
Acetone	99		ug/L	100.0	16	83	70-130			
Acrolein	0.0		ug/L	100.0	0.0		88-118			
Acrylonitrile	0.0		ug/L	100.0	ND		71-135			
Benzene	21		ug/L	20.00	ND	106	37-151			
Bromodichloromethane	21		ug/L	20.00	ND	104	35-155			
Bromoform	20		ug/L	20.00	ND	98	45-169			
Bromomethane	20		ug/L	20.00	ND	98	2-242			
Carbon tetrachloride	21		ug/L	20.00	ND	103	70-140			
Chlorobenzene	20		ug/L	20.00	ND	101	37-160			
Chloroethane	21		ug/L	20.00	ND	103	14-230			
Chloroform	21		ug/L	20.00	ND	103	51-138			
Chloromethane	20		ug/L	20.00	ND	101	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00	ND	102	2-221			
Dibromochloromethane	20		ug/L	20.00	ND	100	53-149			
Dichlorodifluoromethane	20		ug/L	20.00	ND	99	5-273			
Ethylbenzene	21		ug/L	20.00	ND	104	37-162			
Isopropyl Alcohol	1000		ug/L	1000	ND	103	70-130			
Methyl Isobutyl Ketone (MIBK)	110		ug/L	100.0	ND	106	70-130			
Methylene chloride	21		ug/L	20.00	ND	104	10-221			
Tetrachloroethene	20		ug/L	20.00	ND	101	64-148			
Tetrahydrofuran	96		ug/L	100.0	ND	96	70-130			
Toluene	20		ug/L	20.00	ND	102	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00	ND	105	54-156			
trans-1,3-Dichloropropene	21		ug/L	20.00	0.28	102	17-183			
Trichloroethene	21		ug/L	20.00	ND	103	71-157			
Trichlorofluoromethane	20		ug/L	20.00	ND	100	17-181			
Vinyl chloride	21		ug/L	20.00	ND	103	2-251			
Xylenes, Total	62		ug/L	60.00	ND	104	37-162			
Surrogate: 1,2-Dichloroethane-d4	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.8*		*ug/L*	*28.00*		*103*	*70-130*			
Batch 1412176 - VOA_GCMS										

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Blank (1412176-BLK1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.6*		*ug/L*	*28.00*		*106*	*70-130*			
Surrogate: Fluorobenzene	*28.0*		*ug/L*	*28.00*		*100*	*70-130*			
LCS (1412176-BS1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305			
Acrolein	94		ug/L	100.0		94	88-118			
Acrylonitrile	100		ug/L	100.0		100	71-135			
Surrogate: 1,2-Dichloroethane-d4	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.0*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*27.9*		*ug/L*	*28.00*		*100*	*70-130*			
LCS Dup (1412176-BSD1)				Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305	0.2	30	
Acrolein	96		ug/L	100.0		96	88-118	2	30	
Acrylonitrile	100		ug/L	100.0		101	71-135	2	30	
Surrogate: 1,2-Dichloroethane-d4	*28.2*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.6*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			
Matrix Spike (1412176-MS1)	**Source: 14L0351-02**			Prepared & Analyzed: 12/15/2014						
2-Chloroethylvinylether	22		ug/L	20.00	ND	109	10-305			
Acrolein	96		ug/L	100.0	ND	96	88-118			
Acrylonitrile	100		ug/L	100.0	ND	101	71-135			
Surrogate: 1,2-Dichloroethane-d4	*26.8*		*ug/L*	*28.00*		*96*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.4*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: Fluorobenzene	*26.7*		*ug/L*	*28.00*		*96*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0353
Date Received: 12/04/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412077 - IC PREP										
Blank (1412077-BLK1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1412077-BS1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000		100	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		102	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		103	90-110			
LCS Dup (1412077-BSD1)				Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.0	0.50	mg/L	5.000		100	90-110	0.4	10	
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500		102	90-110	0.5	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.5	0.50	mg/L	2.500		101	90-110	2	10	
Matrix Spike (1412077-MS1)	**Source: 14L0353-01**			Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.3	0.50	mg/L	5.000	0.49	96	80-120			
Nitrogen, Nitrite (As N)	2.6	0.10	mg/L	2.500	0.10	101	80-120			
Phosphorus, Dissolved Orthophosphate (As P)	2.7	0.50	mg/L	2.500	ND	109	80-120			
Matrix Spike Dup (1412077-MSD1)	**Source: 14L0353-01**			Prepared & Analyzed: 12/05/2014						
Nitrogen, Nitrate (As N)	5.4	0.50	mg/L	5.000	0.49	98	80-120	2	10	
Nitrogen, Nitrite (As N)	2.7	0.10	mg/L	2.500	0.10	103	80-120	2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.8	0.50	mg/L	2.500	ND	111	80-120	2	10	

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1410353 DATE 12/4/14 PAGE 1 OF 1

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME: Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME: City of Tucson

ADDRESS: PO Box 27210, Tucson AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 837-4935 (Bev)

FAX: 791-4343 EMAIL: stormwater@tucsonaz.gov

SAMPLER'S SIGNATURE: Eric Ross

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Hardness Ca & Mg	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Biological Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Cyanide	Total Metals*	Nitrate and Nitrite Sum	NH3	TKN	Total Phosphours	Orthophosphate by Ion Chromatography	TPH 1664	Oil & Grease	Volatile Organic Compounds by 624	Semivolatile Organic by SW 8270	PCBs by SW 8082	Organochlorine Pesticides by SW 8081		
Composite	12-4-14	10:20		ST	30	X	X	X	X	X		X	X	X	X	X	X				X	X	X		
Grab/Discrete	12-4-14	10:20		ST	9						X							X	X	X					

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY:
Signature: Eric Ross
Printed Name: ERIC ROSS
Firm: Department of Transporation
Date/Time: City of Tucson 12-4-14 / 12:54

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name: TURNER LABORATORIES, INC.
Firm
Date/Time: 12/4/14 1254

TURNAROUND REQUIREMENTS:
- X Standard (approx.10 days)*
- Next day ___ 2 Day ___ 5 Day*
- X Email Preliminary Results To: Stormwater@tucsonaz.gov

* Working Days

REPORT REQUIREMENTS:
- ___ I. Routine Report
- ___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
- ___ III. Date Validation Report (Includes All Raw Data)

Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. # ___
Bill to: ___

SAMPLE RECEIPT:
Total Containers 39
Temperature 5.3
☒ Wet Ice ☐ Blue Ice

***LEGEND**
- DW = DRINKING WATER
- GW = GROUNDWATER
- SD = SOLID
- SG = SLUDGE
- SL = SOIL
- ST = STORMWATER
- WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS: Composite poured at lab per COT Specifications

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

* (200.7); As, Ba, Be, Cd, Cr, Cu, Hg, Ni, Zn. (200.8); Ag, Pb, Sb, Se, Tl. Cyanide, Metals, VOCs, sVOCs, PCBs, Pesticides; report in ug/L

January 04, 2015

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Biannual

Work Order No.: 14L0546
Order Name: Sample Site 1

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 12/13/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 01/04/2015

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0546
Date Received: 12/13/2014

Order: Sample Site 1

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0546-01	Grab	Storm Water	12/13/2014 1110

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0546
Date Received: 12/13/2014

Case Narrative

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0546
Lab Sample ID: 14L0546-01

Client Sample ID: Grab
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	2400		1.0	E3	MPN/100 mL	1	12/13/2014 1605	12/14/2014 1605	CC
Total Coliform	2400		1.0	E3	MPN/100 mL	1	12/13/2014 1605	12/14/2014 1605	CC

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 14L0546 DATE _____ PAGE _____ OF

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, 4, 5 (circle)

CONTACT NAME ~~Chris McNellis~~, Eric Ross, Bev Hester

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE C McNellis

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX
					MPN	
Grab	12/13	11:10 am		Storm Water	1	X

RELINQUISHED BY:
Signature C McNellis
Printed Name Chris McNellis
Firm City of Tucson Trans. Dept
Time 12/13/14 1600

2. RECEIVED BY:
Signature Cindy Cox
Printed Name Cindy Cox
Firm TLI
Date/Time 12/13/14 1600

RELINQUISHED BY:
Signature
Printed Name
Time

4. RECEIVED BY:
Signature
Printed Name
Firm TURNER LABORATORIES, INC.
Date/Time

TURNAROUND REQUIREMENTS:
___ Standard (approx.10 days)*
___ Next day ___ 2 Day ___ 5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
___ I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ___ Y ___ N
P.O. # _____
Bill to: _____

SAMPLE RECEIPT:
Total Containers 1
Temperature 5.9 °C
☒ Wet Ice ☐ Blue Ice

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

January 04, 2015

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Biannual

Work Order No.: 14L0547
Order Name: Sample Site 4

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 12/13/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Date Received: 12/13/2014

Order: Sample Site 4

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0547-01	Composite	Storm Water	12/13/2014 1125
14L0547-02	Grab	Storm Water	12/13/2014 1125

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Date Received: 12/13/2014

Case Narrative

EPA 8081: There is insufficient sample available to perform method-required Matrix Spike and Matrix Spike Duplicate.

EPA 8082: There is insufficient sample available to perform method-required Matrix Spike and Matrix Spike Duplicate.

EPA 8270C: There is insufficient sample available to perform method-required Matrix Spike and Matrix Spike Duplicate.

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated LCS/LCSD was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.
R6	LCS/LCSD RPD exceeded the method acceptance limit. Recovery met the acceptance criteria.
T2	Cited ADHS Licensed method does not contain this analyte as part of the method compound list.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	42				mg/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.61	0.016	0.10		mg/L	1	12/15/2014 0900	12/15/2014 1038	AC
ICP Total Metals-E200.7									
Arsenic	7.7	4.5	40	E4	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Barium	45	0.54	50	E4	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Calcium	13000	320	4000		ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Chromium	3.5	0.61	30	E4	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Copper	24	1.0	20		ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Magnesium	2000	400	3000	E4	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Nickel	2.6	1.8	50	E4	ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
Zinc	110	1.7	40		ug/L	1	12/16/2014 1520	12/18/2014 1925	RAD
ICP/MS Total Metals-E200.8									
Antimony	1.3	0.045	0.50		ug/L	1	12/15/2014 0950	12/16/2014 1910	RAD
Lead	7.6	0.031	0.50		ug/L	1	12/15/2014 0950	12/16/2014 1910	RAD
Selenium	ND	0.082	2.5	E8	ug/L	1	12/15/2014 0950	12/16/2014 1910	RAD
Silver	0.19	0.029	0.50	E4	ug/L	1	12/15/2014 0950	12/16/2014 1910	RAD
Thallium	0.022	0.013	0.50	E4	ug/L	1	12/15/2014 0950	12/16/2014 1910	RAD
CVAA Total Mercury-E245.1									
Mercury	0.081	0.039	1.0	E4	ug/L	1	12/17/2014 1255	12/18/2014 1134	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.55	0.047	0.50		mg/L	1	12/15/2014 0900	12/15/2014 1038	AC
Nitrogen, Nitrite (As N)	0.062	0.016	0.10	E4	mg/L	1	12/15/2014 0900	12/15/2014 1038	AC
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.22	0.50	E8	mg/L	1	12/15/2014 0900	12/15/2014 1038	AC
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.25	0.022	0.10		mg/L	1	12/19/2014 0940	12/19/2014 1840	AC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	76	6.5	20		mg/L	1	12/29/2014 1010	12/29/2014 1715	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	1.6	0.043	0.50		mg/L	1	12/29/2014 1650	12/30/2014 1000	AC
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	64		20		mg/L	1	12/17/2014 1145	12/18/2014 1255	CC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	77		10		mg/L	1	12/15/2014 0724	12/15/2014 1355	CC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	ND	0.083	0.50	E8	mg/L	1	12/22/2014 0950	12/22/2014 1710	AC
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	25		2.0		mg/L	1	12/13/2014 1740	12/18/2014 1625	CC
Organochlorine Pesticides-SW8081A									
4,4'-DDD	ND	0.0099	0.099	E8, V1	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
4,4'-DDE	ND	0.0099	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
4,4'-DDT	ND	0.014	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Aldrin	ND	0.016	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
alpha-BHC	ND	0.0099	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
alpha-Chlordane	ND	0.0059	0.099	E8	ug/L	1	12/15/2014 1055	12/17/2014 0442	MD
beta-BHC	ND	0.017	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
delta-BHC	ND	0.012	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Dieldrin	ND	0.0083	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Endosulfan I	ND	0.0090	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Endosulfan II	ND	0.0061	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Endosulfan sulfate	ND	0.059	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Endrin	ND	0.011	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-01
Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Endrin aldehyde	ND	0.0089	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Endrin ketone	ND	0.0083	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
gamma-BHC	ND	0.023	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
gamma-Chlordane	ND	0.0077	0.099	E8	ug/L	1	12/15/2014 1055	12/17/2014 0442	MD
Heptachlor	ND	0.0082	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Heptachlor epoxide	ND	0.013	0.099	E8	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Methoxychlor	ND	0.015	0.099	E8, V1	ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Toxaphene	ND		0.99		ug/L	1	12/15/2014 1055	12/16/2014 2236	MD
Surr: Decachlorobiphenyl	*75*	*38.8-124*			*%REC*	*1*	*12/15/2014 1055*	*12/16/2014 2236*	*MD*
Surr: Tetrachloro-m-xylene	*71*	*40-118.3*			*%REC*	*1*	*12/15/2014 1055*	*12/16/2014 2236*	*MD*
PCBs-SW8082									
Aroclor 1016	ND	0.92	0.99	E8	ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Aroclor 1221	ND		0.99		ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Aroclor 1232	ND		0.99		ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Aroclor 1242	ND		0.99		ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Aroclor 1248	ND		0.99		ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Aroclor 1254	ND		0.99		ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Aroclor 1260	ND	0.61	0.99	E8	ug/L	1	12/16/2014 0913	12/24/2014 1800	MD
Surr: Decachlorobiphenyl	*80*	*45.9-122.8*			*%REC*	*1*	*12/16/2014 0913*	*12/24/2014 1800*	*MD*
Semivolatile Organic Compounds-SW8270C									
1,2,4-Trichlorobenzene	ND	0.96	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
1,2-Dichlorobenzene	ND	1.2	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
1,2-Diphenylhydrazine	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
1,3-Dichlorobenzene	ND	1.2	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
1,4-Dichlorobenzene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,4,5-Trichlorophenol	ND	0.85	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,4,6-Trichlorophenol	ND	0.82	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,4-Dichlorophenol	ND	0.63	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,4-Dimethylphenol	ND	0.54	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,4-Dinitrophenol	ND	5.0	50	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,4-Dinitrotoluene	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2,6-Dinitrotoluene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2-Chloronaphthalene	ND	0.57	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2-Chlorophenol	ND	0.77	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2-Methylnaphthalene	ND	0.58	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
2-Methylphenol	ND	1.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2-Nitroaniline	ND	1.1	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
2-Nitrophenol	ND	3.6	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
3,3'-Dichlorobenzidine	ND	1.5	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
3,4-Methylphenol	ND	1.4	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
3-Nitroaniline	ND	0.62	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4,6-Dinitro-2-methylphenol	ND	0.89	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Bromophenyl phenyl ether	ND	0.52	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Chloro-3-methylphenol	ND	0.62	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Chloroaniline	ND	0.96	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Chlorophenyl phenyl ether	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Methylphenol	ND	0.40	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Nitroaniline	ND	1.2	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
4-Nitrophenol	ND	0.54	50	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Acenaphthene	ND	0.73	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Acenaphthylene	ND	0.62	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Aniline	ND	1.0	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Anthracene	ND	0.70	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Benzo[a]anthracene	ND	0.76	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Benzo[a]pyrene	ND	0.56	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Benzo[b,k]fluoranthene	ND	1.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Benzo[g,h,i]perylene	ND	1.5	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Benzoic acid	23	3.8	50	E4	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Benzyl alcohol	ND	3.6	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Bis(2-chloroethoxy)methane	ND	0.80	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Bis(2-chloroethyl)ether	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Bis(2-chloroisopropyl)ether	ND	1.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Bis(2-ethylhexyl)phthalate	4.0	0.84	10	E4	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Butyl benzyl phthalate	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Chrysene	ND	0.67	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Dibenzo[a,h]anthracene	ND	0.91	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Dibenzofuran	ND	0.52	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Diethyl phthalate	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Dimethyl phthalate	ND	0.56	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Di-n-butyl phthalate	ND	2.7	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Di-n-octyl phthalate	ND	0.76	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Fluoranthene	ND	0.81	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Fluorene	ND	0.60	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Hexachlorobenzene	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Hexachlorobutadiene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Hexachlorocyclopentadiene	ND	0.71	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Hexachloroethane	ND	1.4	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Indeno[1,2,3-cd]pyrene	ND	1.2	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Isophorone	ND	0.82	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Naphthalene	ND	0.78	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Nitrobenzene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
N-Nitrosodimethylamine	ND	2.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
N-Nitrosodiphenylamine	ND	0.89	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
N-Nitrosodipropylamine	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Pentachlorophenol	3.4	1.0	30	E4	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Phenanthrene	ND	0.63	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Phenol	ND	0.90	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Pyrene	ND	0.57	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0203	MD
Surr: 2,4,6-Tribromophenol	*78*	*61-118*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 203*	*MD*
Surr: 2-Fluorobiphenyl	*67*	*30.9-111*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 203*	*MD*
Surr: 2-Fluorophenol	*44*	*15.2-68.1*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 203*	*MD*
Surr: 4-Terphenyl-d14	*67*	*0-123*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 203*	*MD*
Surr: Nitrobenzene-d5	*70*	*35-99*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 203*	*MD*
Surr: Phenol-d6	*42*	*0-115*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 203*	*MD*

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-02

Client Sample ID: Grab
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664B									
Total Petroleum Hydrocarbons (SGT-HEM)	2.70	0.390	5.00	E4	mg/L	1	12/23/2014 0815	12/23/2014 1515	CC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	5.80	0.420	5.00		mg/L	1	12/31/2014 0815	12/31/2014 1430	CC
Volatile Organic Compounds by GCMS-EPA 624									
1,1,1-Trichloroethane	ND	0.23	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,1,2,2-Tetrachloroethane	ND	0.50	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,1,2-Trichloroethane	ND	0.32	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,1-Dichloroethane	ND	0.17	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,1-Dichloroethene	ND	0.28	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,2,4-Trimethylbenzene	ND		2.0		ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,2-Dichlorobenzene	ND	0.49	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,2-Dichloroethane	ND	0.21	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,2-Dichloropropane	ND		2.0		ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,3,5-Trimethylbenzene	ND		2.0		ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,3-Dichlorobenzene	ND	0.35	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
1,4-Dichlorobenzene	ND	0.41	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
2-Chloroethylvinylether	ND	0.56	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Acetone	ND	2.0	10	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Acrolein	ND	0.76	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Acrylonitrile	ND	0.65	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Benzene	ND	0.25	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Bromodichloromethane	ND	0.20	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Bromoform	ND	0.33	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Bromomethane	ND	0.21	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Carbon tetrachloride	ND	0.18	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Chlorobenzene	ND	0.24	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Chloroethane	ND	0.17	5.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Chloroform	ND	0.19	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Chloromethane	ND	0.28	5.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
cis-1,3-Dichloropropene	ND	0.30	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Dibromochloromethane	ND	0.21	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Dichlorodifluoromethane	ND	0.23	5.0	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Ethylbenzene	ND	0.24	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Lab Sample ID: 14L0547-02

Client Sample ID: Grab
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Methyl Isobutyl Ketone (MIBK)	ND	1.1	10	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Methylene chloride	ND	0.28	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Tetrachloroethene	ND	0.29	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Tetrahydrofuran	ND	1.6	10	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Toluene	ND	0.22	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
trans-1,2-Dichloroethene	ND	0.23	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
trans-1,3-Dichloropropene	ND	0.17	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Trichloroethene	ND	0.19	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Trichlorofluoromethane	ND	0.20	5.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Vinyl chloride	ND	0.32	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Xylenes, Total	ND	0.63	6.0	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 1946	KP
Surr: 1,2-Dichloroethane-d4	*104*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 1946*	*KP*
Surr: 4-Bromofluorobenzene	*98*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 1946*	*KP*
Surr: Fluorobenzene	*105*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 1946*	*KP*
Cyanide-SM4500-CN BE									
Cyanide	ND	82	100	E8	ug/L	1	12/16/2014 0810	12/16/2014 1430	CC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412181 - E 200.8 ICP/MS										
Blank (1412181-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	0.10	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							
LCS (1412181-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	49	0.50	ug/L	50.00		99	85-115			
Lead	50	0.50	ug/L	50.00		101	85-115			
Selenium	260	2.5	ug/L	250.0		103	85-115			
Silver	50	0.50	ug/L	50.00		101	85-115			
Thallium	49	0.50	ug/L	50.00		97	85-115			
LCS Dup (1412181-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	49	0.50	ug/L	50.00		99	85-115	0.03	20	
Lead	51	0.50	ug/L	50.00		101	85-115	0.3	20	
Selenium	260	2.5	ug/L	250.0		103	85-115	0.3	20	
Silver	50	0.50	ug/L	50.00		100	85-115	0.4	20	
Thallium	48	0.50	ug/L	50.00		96	85-115	2	20	
Matrix Spike (1412181-MS1)		**Source: 14L0491-01**		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	48	0.50	ug/L	50.00	0.060	96	70-130			
Lead	51	0.50	ug/L	50.00	1.6	99	70-130			
Selenium	230	2.5	ug/L	250.0	0.76	92	70-130			
Silver	48	0.50	ug/L	50.00	0.15	96	70-130			
Thallium	46	0.50	ug/L	50.00	ND	93	70-130			
Matrix Spike (1412181-MS2)		**Source: 14L0512-01**		Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	49	0.50	ug/L	50.00	0.14	98	70-130			
Lead	51	0.50	ug/L	50.00	0.38	102	70-130			
Selenium	230	2.5	ug/L	250.0	0.26	92	70-130			
Silver	46	0.50	ug/L	50.00	0.14	91	70-130			
Thallium	49	0.50	ug/L	50.00	0.086	98	70-130			
Batch 1412205 - E 245.1										
Blank (1412205-BLK1)				Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	0.071	1.0	ug/L							
LCS (1412205-BS1)				Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000		105	85-115			
LCS Dup (1412205-BSD1)				Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.3	1.0	ug/L	5.000		105	85-115	0.4	20	
Matrix Spike (1412205-MS1)		**Source: 14L0494-01**		Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.070	102	85-115			
Matrix Spike (1412205-MS2)		**Source: 14L0553-01**		Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.069	102	85-115			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0547
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412205 - E 245.1										
Matrix Spike Dup (1412205-MSD1)	Source: 14L0494-01			Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.070	102	85-115	0.4	20	
Matrix Spike Dup (1412205-MSD2)	Source: 14L0553-01			Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.069	102	85-115	0.1	20	
Batch 1412210 - E 200.2 ICP										
Blank (1412210-BLK1)				Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	1.1	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1412210-BS1)				Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1900	40	ug/L	2000		95	85-115			
Barium	2000	50	ug/L	2000		98	85-115			
Beryllium	48	2.0	ug/L	50.00		96	85-115			
Cadmium	49	2.0	ug/L	50.00		98	85-115			
Calcium	9800	4000	ug/L	10000		98	85-115			
Chromium	200	30	ug/L	200.0		98	85-115			
Copper	240	20	ug/L	250.0		94	85-115			
Magnesium	10000	3000	ug/L	10000		100	85-115			
Nickel	470	50	ug/L	500.0		95	85-115			
Zinc	490	40	ug/L	500.0		98	85-115			
LCS Dup (1412210-BSD1)				Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1920	40	ug/L	2000		96	85-115	0.7	20	
Barium	2000	50	ug/L	2000		98	85-115	0.5	20	
Beryllium	48	2.0	ug/L	50.00		97	85-115	0.3	20	
Cadmium	49	2.0	ug/L	50.00		98	85-115	0.1	20	
Calcium	9700	4000	ug/L	10000		97	85-115	1	20	
Chromium	200	30	ug/L	200.0		98	85-115	0.05	20	
Copper	240	20	ug/L	250.0		94	85-115	0.2	20	
Magnesium	10000	3000	ug/L	10000		100	85-115	0.5	20	
Nickel	470	50	ug/L	500.0		95	85-115	0.08	20	
Zinc	490	40	ug/L	500.0		98	85-115	0.6	20	

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Batch 1412210 - E 200.2 ICP										
Matrix Spike (1412210-MS1)	**Source: 14L0306-01**			Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	2040	40	ug/L	2000	106	97	70-130			
Barium	2000	50	ug/L	2000	130	92	70-130			
Beryllium	45	2.0	ug/L	50.00	ND	90	70-130			
Cadmium	42	2.0	ug/L	50.00	ND	83	70-130			
Calcium	140000	4000	ug/L	10000	140000	46	70-130			M3
Chromium	200	30	ug/L	200.0	14	91	70-130			
Copper	300	20	ug/L	250.0	45	102	70-130			
Magnesium	26000	3000	ug/L	10000	16000	98	70-130			
Nickel	470	50	ug/L	500.0	4.7	93	70-130			
Zinc	500	40	ug/L	500.0	23	95	70-130			
Matrix Spike (1412210-MS2)	**Source: 14L0571-01**			Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1970	40	ug/L	2000	10.5	98	70-130			
Barium	1900	50	ug/L	2000	23	94	70-130			
Beryllium	45	2.0	ug/L	50.00	ND	90	70-130			
Cadmium	44	2.0	ug/L	50.00	ND	89	70-130			
Calcium	65000	4000	ug/L	10000	57000	79	70-130			
Chromium	290	30	ug/L	200.0	100	91	70-130			
Copper	320	20	ug/L	250.0	75	99	70-130			
Magnesium	11000	3000	ug/L	10000	1800	96	70-130			
Nickel	680	50	ug/L	500.0	230	91	70-130			
Zinc	500	40	ug/L	500.0	24	95	70-130			
Matrix Spike (1412210-MS3)	**Source: 14L0438-01RE1**			Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1930	40	ug/L	2000	13.1	96	70-130			
Barium	1900	50	ug/L	2000	94	93	70-130			
Beryllium	45	2.0	ug/L	50.00	ND	91	70-130			
Cadmium	45	2.0	ug/L	50.00	ND	90	70-130			
Calcium	72000	4000	ug/L	10000	66000	58	70-130			M3
Chromium	190	30	ug/L	200.0	5.0	93	70-130			
Copper	280	20	ug/L	250.0	34	97	70-130			
Magnesium	18000	3000	ug/L	10000	8300	95	70-130			
Nickel	460	50	ug/L	500.0	2.6	92	70-130			
Zinc	580	40	ug/L	500.0	120	92	70-130			

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Batch 1412162 - GEN CHEM										
Duplicate (1412162-DUP1)	Source: 14L0537-01			Prepared & Analyzed: 12/15/2014						
Total Suspended Solids	1.0	10	mg/L		1.0			0	5	
Batch 1412186 - SPECTRO PREP										
Blank (1412186-BLK1)				Prepared & Analyzed: 12/16/2014						
Cyanide	ND	100	ug/L							
LCS (1412186-BS1)				Prepared & Analyzed: 12/16/2014						
Cyanide	1800	100	ug/L	2000		90	90-110			
LCS Dup (1412186-BSD1)				Prepared & Analyzed: 12/16/2014						
Cyanide	1800	100	ug/L	2000		91	90-110	0.7	20	
Matrix Spike (1412186-MS1)	Source: 14L0302-02			Prepared & Analyzed: 12/16/2014						
Cyanide	1900	100	ug/L	2000	ND	93	70-130			
Matrix Spike Dup (1412186-MSD1)	Source: 14L0302-02			Prepared & Analyzed: 12/16/2014						
Cyanide	1700	100	ug/L	2000	ND	86	70-130	7	20	
Batch 1412199 - GEN CHEM										
Duplicate (1412199-DUP1)	Source: 14L0586-01			Prepared: 12/17/2014 Analyzed: 12/18/2014						
Total Dissolved Solids (Residue, Filterable)	270	20	mg/L		270			1	5	
Batch 1412200 - GEN CHEM										
Blank (1412200-BLK1)				Prepared: 12/13/2014 Analyzed: 12/18/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1412200-BS1)				Prepared: 12/13/2014 Analyzed: 12/18/2014						
Biochemical Oxygen Demand	190		mg/L	198.0		94	85-115			
Batch 1412248 - GEN CHEM										
Blank (1412248-BLK1)				Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1412248-BS1)				Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		103	90-110			
LCS Dup (1412248-BSD1)				Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.2	0.50	mg/L	5.000		104	90-110	2	10	
Matrix Spike (1412248-MS1)	Source: 14L0409-01			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	100	70-130			
Matrix Spike (1412248-MS2)	Source: 14L0646-01			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.2	0.50	mg/L	5.000	ND	103	70-130			
Matrix Spike Dup (1412248-MSD1)	Source: 14L0409-01			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000	ND	102	70-130	2	20	

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Batch 1412248 - GEN CHEM										
Matrix Spike Dup (1412248-MSD2)	**Source: 14L0646-01**			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.4	0.50	mg/L	5.000	ND	107	70-130	3	20	
Batch 1412252 - SPECTRO PREP										
Blank (1412252-BLK1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1412252-BS1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.54	0.10	mg/L	0.5000		108	90-110			
LCS Dup (1412252-BSD1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.52	0.10	mg/L	0.5000		104	90-110	4	10	
Matrix Spike (1412252-MS1)	**Source: 14L0521-02**			Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.75	0.10	mg/L	0.5000	0.17	116	70-130			
Matrix Spike Dup (1412252-MSD1)	**Source: 14L0521-02**			Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.72	0.10	mg/L	0.5000	0.17	110	70-130	4	15	
Batch 1412254 - GEN CHEM										
Blank (1412254-BLK1)				Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	0.500	5.00	mg/L							
LCS (1412254-BS1)				Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	17.3	5.00	mg/L	20.00		87	64-132			
LCS Dup (1412254-BSD1)				Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	20.3	5.00	mg/L	20.00		102	64-132	16	34	
Matrix Spike (1412254-MS1)	**Source: 14L0547-02**			Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	26.2	5.00	mg/L	20.00	2.70	118	64-132			
Batch 1412290 - GEN CHEM										
Blank (1412290-BLK1)				Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1412290-BS1)				Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000		98	80-120			
LCS Dup (1412290-BSD1)				Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		100	80-120	2	20	
Matrix Spike (1412290-MS1)	**Source: 14L0567-01**			Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.2	0.50	mg/L	5.000	0.66	90	80-120			
Matrix Spike (1412290-MS2)	**Source: 14L0680-03**			Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000	0.15	97	80-120			

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Batch 1412290 - GEN CHEM										
Matrix Spike Dup (1412290-MSD1)	**Source: 14L0567-01**			Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.3	0.50	mg/L	5.000	0.66	93	80-120	3	20	
Matrix Spike Dup (1412290-MSD2)	**Source: 14L0680-03**			Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.1	0.50	mg/L	5.000	0.15	99	80-120	2	20	
Batch 1412292 - SPECTRO PREP										
Blank (1412292-BLK1)				Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1412292-BS1)				Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		102	70-130			
LCS Dup (1412292-BSD1)				Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		102	70-130	0.2	20	
Matrix Spike (1412292-MS1)	**Source: 14L0537-01**			Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	500	20	mg/L	500.0	ND	100	70-130			
Matrix Spike Dup (1412292-MSD1)	**Source: 14L0537-01**			Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0	ND	103	70-130	2	20	
Batch 1412302 - GEN CHEM										
Blank (1412302-BLK1)				Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	0.500	5.00	mg/L							
LCS (1412302-BS1)				Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	42.6	5.00	mg/L	40.00		107	78-114			
LCS Dup (1412302-BSD1)				Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	42.5	5.00	mg/L	40.00		106	78-114	0.2	18	
Matrix Spike (1412302-MS1)	**Source: 14L0319-02**			Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	41.5	5.00	mg/L	40.00	8.30	83	78-114			

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Batch 1412168 - SW 846 3520C										
Blank (1412168-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
4,4'-DDD	ND	0.10	ug/L							
4,4'-DDE	ND	0.10	ug/L							
4,4'-DDT	ND	0.10	ug/L							
Aldrin	ND	0.10	ug/L							
alpha-BHC	ND	0.10	ug/L							
alpha-Chlordane	ND	0.10	ug/L							
beta-BHC	ND	0.10	ug/L							
delta-BHC	ND	0.10	ug/L							
Dieldrin	ND	0.10	ug/L							
Endosulfan I	ND	0.10	ug/L							
Endosulfan II	ND	0.10	ug/L							
Endosulfan sulfate	ND	0.10	ug/L							
Endrin	ND	0.10	ug/L							
Endrin aldehyde	ND	0.10	ug/L							
Endrin ketone	ND	0.10	ug/L							
gamma-BHC	ND	0.10	ug/L							
gamma-Chlordane	ND	0.10	ug/L							
Heptachlor	ND	0.10	ug/L							
Heptachlor epoxide	ND	0.10	ug/L							
Methoxychlor	ND	0.10	ug/L							
Toxaphene	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*0.839*		*ug/L*	*1.000*		*84*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.687*		*ug/L*	*1.000*		*69*	*40-118.3*			
LCS (1412168-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.94	0.10	ug/L	1.000		94	54.8-117.2			
Aldrin	0.40	0.10	ug/L	0.5000		79	53.1-105			
Dieldrin	0.72	0.10	ug/L	1.000		72	59.5-100.2			
Endrin	0.85	0.10	ug/L	1.000		85	58.1-100.7			
gamma-BHC	0.40	0.10	ug/L	0.5000		80	56.5-117.1			
Heptachlor	0.40	0.10	ug/L	0.5000		80	51.5-104.5			
Surrogate: Decachlorobiphenyl	*0.882*		*ug/L*	*1.000*		*88*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.673*		*ug/L*	*1.000*		*67*	*37.5-105.7*			
LCS Dup (1412168-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
4,4'-DDT	1.0	0.10	ug/L	1.000		100	54.8-117.2	7	30	
Aldrin	0.43	0.10	ug/L	0.5000		85	53.1-105	7	30	
Dieldrin	0.76	0.10	ug/L	1.000		76	59.5-100.2	6	30	
Endrin	0.92	0.10	ug/L	1.000		92	58.1-100.7	8	30	
gamma-BHC	0.43	0.10	ug/L	0.5000		86	56.5-117.1	7	30	
Heptachlor	0.42	0.10	ug/L	0.5000		85	51.5-104.5	6	30	
Surrogate: Decachlorobiphenyl	*0.960*		*ug/L*	*1.000*		*96*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.699*		*ug/L*	*1.000*		*70*	*37.5-105.7*			
Batch 1412179 - SW 846 3520C										

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Batch 1412179 - SW 846 3520C										
Blank (1412179-BLK1)				Prepared: 12/16/2014 Analyzed: 12/24/2014						
Aroclor 1016	ND	1.0	ug/L							
Aroclor 1221	ND	1.0	ug/L							
Aroclor 1232	ND	1.0	ug/L							
Aroclor 1242	ND	1.0	ug/L							
Aroclor 1248	ND	1.0	ug/L							
Aroclor 1254	ND	1.0	ug/L							
Aroclor 1260	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*1.97*		*ug/L*	*2.000*		*98*	*45.9-122.8*			
LCS (1412179-BS1)				Prepared: 12/16/2014 Analyzed: 12/24/2014						
Aroclor 1016	10	1.0	ug/L	10.00		102	59.5-122.8			
Aroclor 1221	ND	1.0	ug/L				0-200			
Aroclor 1232	ND	1.0	ug/L				0-200			
Aroclor 1242	ND	1.0	ug/L				0-200			
Aroclor 1248	ND	1.0	ug/L				0-200			
Aroclor 1254	ND	1.0	ug/L				70-130			
Aroclor 1260	10	1.0	ug/L	10.00		100	65.7-112.7			
Surrogate: Decachlorobiphenyl	*1.93*		*ug/L*	*2.000*		*97*	*63-121*			
LCS Dup (1412179-BSD1)				Prepared: 12/16/2014 Analyzed: 12/24/2014						
Aroclor 1016	10	1.0	ug/L	10.00		104	59.5-122.8	2	30	
Aroclor 1221	ND	1.0	ug/L				0-200		200	
Aroclor 1232	ND	1.0	ug/L				0-200		200	
Aroclor 1242	ND	1.0	ug/L				0-200		200	
Aroclor 1248	ND	1.0	ug/L				0-200		200	
Aroclor 1254	ND	1.0	ug/L				70-130		30	
Aroclor 1260	10	1.0	ug/L	10.00		103	65.7-112.7	3	30	
Surrogate: Decachlorobiphenyl	*1.97*		*ug/L*	*2.000*		*99*	*63-121*			
Batch 1412208 - SW 846 3535										

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412208 - SW 846 3535										
Blank (1412208-BLK1)				Prepared: 12/18/2014 Analyzed: 12/20/2014						
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,2-Diphenylhydrazine	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
2,4,5-Trichlorophenol	ND	10	ug/L							
2,4,6-Trichlorophenol	ND	10	ug/L							
2,4-Dichlorophenol	ND	10	ug/L							
2,4-Dimethylphenol	ND	10	ug/L							
2,4-Dinitrophenol	ND	50	ug/L							
2,4-Dinitrotoluene	ND	10	ug/L							
2,6-Dinitrotoluene	ND	10	ug/L							
2-Chloronaphthalene	ND	10	ug/L							
2-Chlorophenol	ND	10	ug/L							
2-Methylnaphthalene	ND	5.0	ug/L							
2-Methylphenol	ND	10	ug/L							
2-Nitroaniline	ND	20	ug/L							
2-Nitrophenol	ND	10	ug/L							
3,3'-Dichlorobenzidine	ND	20	ug/L							
3,4-Methylphenol	ND	10	ug/L							
3-Nitroaniline	ND	20	ug/L							
4,6-Dinitro-2-methylphenol	ND	20	ug/L							
4-Bromophenyl phenyl ether	ND	10	ug/L							
4-Chloro-3-methylphenol	ND	10	ug/L							
4-Chloroaniline	ND	20	ug/L							
4-Chlorophenyl phenyl ether	ND	10	ug/L							
4-Methylphenol	ND	10	ug/L							
4-Nitroaniline	ND	20	ug/L							
4-Nitrophenol	ND	50	ug/L							
Acenaphthene	ND	5.0	ug/L							
Acenaphthylene	ND	5.0	ug/L							
Aniline	ND	20	ug/L							
Anthracene	ND	5.0	ug/L							
Benzo[a]anthracene	ND	5.0	ug/L							
Benzo[a]pyrene	ND	5.0	ug/L							
Benzo[b,k]fluoranthene	ND	10	ug/L							
Benzo[g,h,i]perylene	ND	5.0	ug/L							
Benzoic acid	ND	50	ug/L							
Benzyl alcohol	ND	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	10	ug/L							
Bis(2-chloroethyl)ether	ND	10	ug/L							
Bis(2-chloroisopropyl)ether	ND	10	ug/L							
Bis(2-ethylhexyl)phthalate	ND	10	ug/L							
Butyl benzyl phthalate	ND	10	ug/L							
Chrysene	ND	5.0	ug/L							
Dibenzo[a,h]anthracene	ND	5.0	ug/L							
Dibenzofuran	ND	5.0	ug/L							

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412208 - SW 846 3535										
Blank (1412208-BLK1)				Prepared: 12/18/2014 Analyzed: 12/20/2014						
Diethyl phthalate	ND	10	ug/L							
Dimethyl phthalate	ND	10	ug/L							
Di-n-butyl phthalate	ND	10	ug/L							
Di-n-octyl phthalate	ND	10	ug/L							
Fluoranthene	ND	5.0	ug/L							
Fluorene	ND	5.0	ug/L							
Hexachlorobenzene	ND	10	ug/L							
Hexachlorobutadiene	ND	10	ug/L							
Hexachlorocyclopentadiene	ND	10	ug/L							
Hexachloroethane	ND	10	ug/L							
Indeno[1,2,3-cd]pyrene	ND	5.0	ug/L							
Isophorone	ND	10	ug/L							
Naphthalene	ND	5.0	ug/L							
Nitrobenzene	ND	10	ug/L							
N-Nitrosodimethylamine	ND	10	ug/L							
N-Nitrosodiphenylamine	ND	10	ug/L							
N-Nitrosodipropylamine	ND	10	ug/L							
Pentachlorophenol	ND	30	ug/L							
Phenanthrene	ND	5.0	ug/L							
Phenol	ND	10	ug/L							
Pyrene	ND	5.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*78.0*		*ug/L*	*100.0*		*78*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*64.7*		*ug/L*	*100.0*		*65*	*30.9-111*			
Surrogate: 2-Fluorophenol	*42.1*		*ug/L*	*100.0*		*42*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*63.4*		*ug/L*	*100.0*		*63*	*0-123*			
Surrogate: Nitrobenzene-d5	*57.1*		*ug/L*	*100.0*		*57*	*35-99*			
Surrogate: Phenol-d6	*45.9*		*ug/L*	*100.0*		*46*	*0-115*			
LCS (1412208-BS1)				Prepared: 12/18/2014 Analyzed: 12/20/2014						
1,2,4-Trichlorobenzene	27	10	ug/L	50.00		54	29.5-92.8			
1,4-Dichlorobenzene	22	10	ug/L	50.00		43	21.9-69.5			
2,4-Dinitrotoluene	37	10	ug/L	50.00		73	40.6-90			
2-Chlorophenol	54	10	ug/L	100.0		54	33-82.4			
4-Chloro-3-methylphenol	73	10	ug/L	100.0		73	39.5-87.3			
4-Nitrophenol	79	50	ug/L	100.0		79	41.7-99.9			
Acenaphthene	30	5.0	ug/L	50.00		59	38.3-91.1			
N-Nitrosodipropylamine	31	10	ug/L	50.00		62	40.5-95.8			
Pentachlorophenol	82	30	ug/L	100.0		82	32.5-106			
Phenol	47	10	ug/L	100.0		47	8.08-78.4			
Pyrene	38	5.0	ug/L	50.00		77	34.9-95.9			
Surrogate: 2,4,6-Tribromophenol	*86.6*		*ug/L*	*100.0*		*87*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*61.9*		*ug/L*	*100.0*		*62*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*45.0*		*ug/L*	*100.0*		*45*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*68.8*		*ug/L*	*100.0*		*69*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*62.1*		*ug/L*	*100.0*		*62*	*38.4-84.6*			
Surrogate: Phenol-d6	*48.2*		*ug/L*	*100.0*		*48*	*18.3-88.5*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412208 - SW 846 3535										
LCS Dup (1412208-BSD1)				Prepared: 12/18/2014 Analyzed: 12/23/2014						
1,2,4-Trichlorobenzene	22	10	ug/L	50.00		44	29.5-92.8	21	30	
1,4-Dichlorobenzene	14	10	ug/L	50.00		28	21.9-69.5	41	30	R6
2,4-Dinitrotoluene	35	10	ug/L	50.00		70	40.6-90	4	30	
2-Chlorophenol	39	10	ug/L	100.0		39	33-82.4	31	30	R6
4-Chloro-3-methylphenol	70	10	ug/L	100.0		70	39.5-87.3	5	30	
4-Nitrophenol	68	50	ug/L	100.0		68	41.7-99.9	15	30	
Acenaphthene	28	5.0	ug/L	50.00		55	38.3-91.1	6	30	
N-Nitrosodipropylamine	23	10	ug/L	50.00		46	40.5-95.8	29	30	
Pentachlorophenol	65	30	ug/L	100.0		65	32.5-106	23	30	
Phenol	37	10	ug/L	100.0		37	8.08-78.4	25	30	
Pyrene	35	5.0	ug/L	50.00		71	34.9-95.9	9	30	
Surrogate: 2,4,6-Tribromophenol	*84.2*		*ug/L*	*100.0*		*84*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*56.0*		*ug/L*	*100.0*		*56*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*32.7*		*ug/L*	*100.0*		*33*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*62.4*		*ug/L*	*100.0*		*62*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*43.9*		*ug/L*	*100.0*		*44*	*38.4-84.6*			
Surrogate: Phenol-d6	*37.1*		*ug/L*	*100.0*		*37*	*18.3-88.5*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Blank (1412176-BLK1)				Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	ND	2.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L							
1,1,2-Trichloroethane	ND	2.0	ug/L							
1,1-Dichloroethane	ND	2.0	ug/L							
1,1-Dichloroethene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	2.0	ug/L							
1,2-Dichlorobenzene	ND	2.0	ug/L							
1,2-Dichloroethane	ND	2.0	ug/L							
1,2-Dichloropropane	ND	2.0	ug/L							
1,3,5-Trimethylbenzene	ND	2.0	ug/L							
1,3-Dichlorobenzene	ND	2.0	ug/L							
1,4-Dichlorobenzene	ND	2.0	ug/L							
2-Chloroethylvinylether	ND	10	ug/L							
Acetone	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Benzene	ND	2.0	ug/L							
Bromodichloromethane	ND	2.0	ug/L							
Bromoform	ND	2.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon tetrachloride	ND	2.0	ug/L							
Chlorobenzene	ND	2.0	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	2.0	ug/L							
Chloromethane	ND	5.0	ug/L							
cis-1,3-Dichloropropene	ND	2.0	ug/L							
Dibromochloromethane	ND	2.0	ug/L							
Dichlorodifluoromethane	ND	5.0	ug/L							
Ethylbenzene	ND	2.0	ug/L							
Methyl Isobutyl Ketone (MIBK)	ND	10	ug/L							
Methylene chloride	ND	10	ug/L							
Tetrachloroethene	ND	2.0	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	2.0	ug/L							
trans-1,2-Dichloroethene	ND	2.0	ug/L							
trans-1,3-Dichloropropene	ND	2.0	ug/L							
Trichloroethene	ND	2.0	ug/L							
Trichlorofluoromethane	ND	5.0	ug/L							
Vinyl chloride	ND	2.0	ug/L							
Xylenes, Total	ND	6.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.6*		*ug/L*	*28.00*		*106*	*70-130*			
Surrogate: Fluorobenzene	*28.0*		*ug/L*	*28.00*		*100*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
LCS (1412176-BS1)				Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	19		ug/L	20.00		97	52-162			
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		102	46-157			
1,1,2-Trichloroethane	20		ug/L	20.00		102	52-150			
1,1-Dichloroethane	19		ug/L	20.00		97	59-155			
1,1-Dichloroethene	20		ug/L	20.00		100	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00		103	0-200			
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190			
1,2-Dichloroethane	20		ug/L	20.00		100	49-155			
1,2-Dichloropropane	21		ug/L	20.00		103	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00		106	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00		104	59-156			
1,4-Dichlorobenzene	20		ug/L	20.00		101	18-190			
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305			
Acetone	94		ug/L	100.0		94	70-130			
Acrolein	94		ug/L	100.0		94	88-118			
Acrylonitrile	100		ug/L	100.0		100	71-135			
Benzene	20		ug/L	20.00		102	37-151			
Bromodichloromethane	20		ug/L	20.00		98	35-155			
Bromoform	20		ug/L	20.00		99	45-169			
Bromomethane	21		ug/L	20.00		107	2-242			
Carbon tetrachloride	20		ug/L	20.00		98	70-140			
Chlorobenzene	20		ug/L	20.00		101	37-160			
Chloroethane	19		ug/L	20.00		97	14-230			
Chloroform	19		ug/L	20.00		96	51-138			
Chloromethane	20		ug/L	20.00		98	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00		101	2-227			
Dibromochloromethane	19		ug/L	20.00		97	53-149			
Dichlorodifluoromethane	20		ug/L	20.00		101	5-273			
Ethylbenzene	21		ug/L	20.00		103	37-162			
Isopropyl Alcohol	1200		ug/L	1000		124	70-130			
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		100	70-130			
Methylene chloride	20		ug/L	20.00		98	10-221			
Tetrachloroethene	20		ug/L	20.00		99	64-148			
Tetrahydrofuran	97		ug/L	100.0		97	70-130			
Toluene	20		ug/L	20.00		102	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156			
trans-1,3-Dichloropropene	20		ug/L	20.00		99	17-183			
Trichloroethene	20		ug/L	20.00		98	71-157			
Trichlorofluoromethane	19		ug/L	20.00		96	17-181			
Vinyl chloride	20		ug/L	20.00		100	2-251			
Xylenes, Total	61		ug/L	60.00		102	37-162			
Surrogate: 1,2-Dichloroethane-d4	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.0*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*27.9*		*ug/L*	*28.00*		*100*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
LCS Dup (1412176-BSD1)				Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		100	52-162	3	30	
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		100	46-157	3	30	
1,1,2-Trichloroethane	20		ug/L	20.00		101	52-150	0.2	30	
1,1-Dichloroethane	20		ug/L	20.00		100	59-155	3	30	
1,1-Dichloroethene	20		ug/L	20.00		98	2-234	3	30	
1,2,4-Trimethylbenzene	20		ug/L	20.00		102	0-200	1	200	
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190	0.2	30	
1,2-Dichloroethane	21		ug/L	20.00		105	49-155	4	30	
1,2-Dichloropropane	21		ug/L	20.00		104	2-210	1	30	
1,3,5-Trimethylbenzene	21		ug/L	20.00		105	0-200	0.9	200	
1,3-Dichlorobenzene	20		ug/L	20.00		102	59-156	1	30	
1,4-Dichlorobenzene	20		ug/L	20.00		100	18-190	0.3	30	
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305	0.2	30	
Acetone	99		ug/L	100.0		99	70-130	5	30	
Acrolein	96		ug/L	100.0		96	88-118	2	30	
Acrylonitrile	100		ug/L	100.0		101	71-135	2	30	
Benzene	21		ug/L	20.00		104	37-151	2	30	
Bromodichloromethane	20		ug/L	20.00		99	35-155	1	30	
Bromoform	20		ug/L	20.00		102	45-169	3	30	
Bromomethane	21		ug/L	20.00		106	2-242	0.8	30	
Carbon tetrachloride	20		ug/L	20.00		99	70-140	0.7	30	
Chlorobenzene	21		ug/L	20.00		105	37-160	4	30	
Chloroethane	19		ug/L	20.00		95	14-230	2	30	
Chloroform	20		ug/L	20.00		99	51-138	3	30	
Chloromethane	19		ug/L	20.00		94	5-273	4	30	
cis-1,3-Dichloropropene	20		ug/L	20.00		98	2-227	3	30	
Dibromochloromethane	20		ug/L	20.00		100	53-149	4	30	
Dichlorodifluoromethane	20		ug/L	20.00		101	5-273	0.2	30	
Ethylbenzene	21		ug/L	20.00		103	37-162	0.3	30	
Isopropyl Alcohol	1200		ug/L	1000		121	70-130	3	200	
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		102	70-130	2	30	
Methylene chloride	20		ug/L	20.00		98	10-221	0.7	30	
Tetrachloroethene	21		ug/L	20.00		103	64-148	4	30	
Tetrahydrofuran	95		ug/L	100.0		95	70-130	2	30	
Toluene	21		ug/L	20.00		104	47-150	2	30	
trans-1,2-Dichloroethene	20		ug/L	20.00		101	54-156	2	30	
trans-1,3-Dichloropropene	20		ug/L	20.00		98	17-183	0.4	30	
Trichloroethene	20		ug/L	20.00		101	71-157	4	30	
Trichlorofluoromethane	19		ug/L	20.00		96	17-181	0.1	30	
Vinyl chloride	20		ug/L	20.00		100	2-251	0.5	30	
Xylenes, Total	62		ug/L	60.00		104	37-162	2	30	
Surrogate: 1,2-Dichloroethane-d4	*28.2*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.6*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Matrix Spike (1412176-MS2)	**Source: 14L0548-02**			Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	22		ug/L	20.00	ND	108	52-162			
1,1,2,2-Tetrachloroethane	21		ug/L	20.00	ND	105	46-157			
1,1,2-Trichloroethane	22		ug/L	20.00	ND	109	52-150			
1,1-Dichloroethane	20		ug/L	20.00	ND	102	59-155			
1,1-Dichloroethene	21		ug/L	20.00	ND	107	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00	0.14	107	0-200			
1,2-Dichlorobenzene	22		ug/L	20.00	ND	108	18-190			
1,2-Dichloroethane	22		ug/L	20.00	ND	109	49-155			
1,2-Dichloropropane	22		ug/L	20.00	0.0	108	2-210			
1,3,5-Trimethylbenzene	22		ug/L	20.00	0.0	108	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00	ND	107	59-156			
1,4-Dichlorobenzene	21		ug/L	20.00	ND	107	18-190			
2-Chloroethylvinylether	21		ug/L	20.00	ND	107	10-305			
Acetone	100		ug/L	100.0	5.0	95	70-130			
Acrolein	24		ug/L	100.0	0.0	24	88-118			M2
Acrylonitrile	98		ug/L	100.0	ND	98	71-135			
Benzene	22		ug/L	20.00	ND	109	37-151			
Bromodichloromethane	21		ug/L	20.00	ND	103	35-155			
Bromoform	21		ug/L	20.00	ND	106	45-169			
Bromomethane	17		ug/L	20.00	ND	83	2-242			
Carbon tetrachloride	21		ug/L	20.00	ND	105	70-140			
Chlorobenzene	22		ug/L	20.00	ND	112	37-160			
Chloroethane	19		ug/L	20.00	ND	95	14-230			
Chloroform	21		ug/L	20.00	ND	103	51-138			
Chloromethane	19		ug/L	20.00	ND	96	5-273			
cis-1,3-Dichloropropene	19		ug/L	20.00	ND	93	2-221			
Dibromochloromethane	21		ug/L	20.00	ND	106	53-149			
Dichlorodifluoromethane	20		ug/L	20.00	ND	101	5-273			
Ethylbenzene	23		ug/L	20.00	0.17	113	37-162			
Isopropyl Alcohol	1300		ug/L	1000	ND	128	70-130			
Methyl Isobutyl Ketone (MIBK)	110		ug/L	100.0	ND	112	70-130			
Methylene chloride	20		ug/L	20.00	ND	99	10-221			
Tetrachloroethene	23		ug/L	20.00	ND	115	64-148			
Tetrahydrofuran	100		ug/L	100.0	ND	104	70-130			
Toluene	23		ug/L	20.00	0.26	114	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00	ND	105	54-156			
trans-1,3-Dichloropropene	20		ug/L	20.00	ND	102	17-183			
Trichloroethene	22		ug/L	20.00	ND	109	71-157			
Trichlorofluoromethane	21		ug/L	20.00	ND	103	17-181			
Vinyl chloride	21		ug/L	20.00	ND	106	2-251			
Xylenes, Total	68		ug/L	60.00	ND	113	37-162			
Surrogate: 1,2-Dichloroethane-d4	*26.7*		*ug/L*	*28.00*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: Fluorobenzene	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			

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QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412163 - IC PREP										
Blank (1412163-BLK1)				Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1412163-BS1)				Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.1	0.50	mg/L	5.000		103	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		99	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		104	90-110			
LCS Dup (1412163-BSD1)				Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.1	0.50	mg/L	5.000		103	90-110	0.2	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		101	90-110	2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		105	90-110	0.3	10	
Matrix Spike (1412163-MS1)		**Source: 14L0554-01**		Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.1	0.50	mg/L	5.000	0.25	98	80-120			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	ND	98	80-120			
Matrix Spike (1412163-MS2)		**Source: 14L0567-04**		Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	9.2	0.50	mg/L	5.000	3.9	106	80-120			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	ND	98	80-120			
Matrix Spike Dup (1412163-MSD1)		**Source: 14L0554-01**		Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.2	0.50	mg/L	5.000	0.25	98	80-120	0.5	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	ND	100	80-120	2	10	
Matrix Spike Dup (1412163-MSD2)		**Source: 14L0567-04**		Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	9.2	0.50	mg/L	5.000	3.9	107	80-120	0.6	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	ND	100	80-120	3	10	

TURNER LABORATORIES, INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1460547 DATE _____ PAGE _____ OF _____

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, (4), 5 (circle)

CONTACT NAME: Chris McNellis, Eric Ross, (Bev Hester)

COMPANY NAME: City of Tucson

ADDRESS: PO Box 27210, Tucson AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 837-4935 (Bev)

FAX: 791-4343 EMAIL: stormwater@tucsonaz.gov

SAMPLER'S SIGNATURE: Eric Ross

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Hardness Ca & Mg	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Biological Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Cyanide	Total Metals*	Nitrate and Nitrite Sum	NH3	TKN	Total Phosphours	Orthophosphate by Ion Chromatography	TPH 1664	Oil & Grease	Volatile Organic Compounds by 624	Semivolatile Organic by SW 8270	PCBs by SW 8082	Organochlorine Pesticides by SW 8081
Composite	12-13-14	11:25AM		ST	33	x	x	x	x	x		x	x	x	x	x	x				x	x	x
Grab/Discrete	12-13-14	11:25AM		ST	9						x							x	x	x			

1. RELINQUISHED BY:
Signature: Eric Ross
Printed Name: ERIC ROSS
Department of Transporation
Firm: City of Tucson
Date/Time 12-13-14 / 15:58

2. RECEIVED BY:
Signature Cindy Cook
Printed Name Cindy Cook
Firm TLI
Date/Time 12/13/14 1558

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name
TURNER LABORATORIES, INC.
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
Next day 2 Day 5 Day*
X Email Preliminary Results To: Stormwater@tucsonaz.gov
* Working Days

REPORT REQUIREMENTS:
I. Routine Report
II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account Y N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 42
Temperature 4.4 °C
Wet Ice Blue Ice

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS: Composite poured at lab per COT Specifications

Compliance Analysis:	Yes No	Custody Seals		Preservation Confirmation	
ADEQ Forms:	Yes No	Container Intact		Appropriate Head Space	
Mail ADEQ Forms:	Yes No	COC/Labels Agree		Received Within Hold Time	

* (200.7); As, Ba, Be, Cd, Cr, Cu, Hg, Ni, Zn. (200.8); Ag, Pb, Sb, Se, Tl. Cyanide, Metals, VOCs, sVOCs, PCBs, Pesticides; report in ug/L

TURNER
LABORATORIES INC.

January 04, 2015

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

RE: Storm Water Biannual

Work Order No.: 14L0545
Order Name: Sample Site 4

Dear Beverley Hester,

Turner Laboratories, Inc. received 1 sample(s) on 12/13/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 01/04/2015

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0545
Date Received: 12/13/2014

Order: Sample Site 4

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0545-01	Grab	Storm Water	12/13/2014 1125

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0545
Date Received: 12/13/2014

Case Narrative

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND Not Detected at or above the PQL

PQL Practical Quantitation Limit

DF Dilution Factor

Turner Laboratories, Inc.

Date: 01/04/2015

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0545
Lab Sample ID: 14L0545-01

Client Sample ID: Grab
Collection Date/Time: 12/13/2014 1125
Matrix: Storm Water
Order Name: Sample Site 4

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Total Coliform & E. Coli, MPN-SM9223B									
E.Coli	2400		1.0	E3	MPN/100 mL	1	12/13/2014 1605	12/14/2014 1605	CC
Total Coliform	2400		1.0	E3	MPN/100 mL	1	12/13/2014 1605	12/14/2014 1605	CC

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 14L0545 DATE _____ PAGE 1 OF

PROJECT NAME: Stormwater Samples Site # 1, 2, 3, (4) 5 (circle)

CONTACT NAME Chris McNellis (BEV HESTER)

COMPANY NAME City of Tucson - Transportation Dept

ADDRESS P.O. Box 27210

CITY Tucson STATE AZ ZIP CODE 85726

PHONE (520) 837-6583 FAX (520) 791-4373

SAMPLER'S SIGNATURE _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	MPN	CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX
Grab	12-13-14	11:25AM		Storm Water	1	X	

1. RELINQUISHED BY:
Signature: Eric Ross
Printed Name: ERIC ROSS
Firm: City of Tucson Trans. Dept
Date/Time: 12-13-14 / 15:53

2. RECEIVED BY:
Signature: Cindy Cook
Printed Name: Cindy Cook
Firm: TL
Date/Time: 12/13/14 1555

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name: TURNER LABORATORIES, INC.
Firm
Date/Time

TURNAROUND REQUIREMENTS:
_____ Standard (approx.10 days)*
_____ Next day ____ 2 Day ____ 5 Day*
_____ Email Preliminary Results To:

REPORT REQUIREMENTS:
_____ I. Routine Report
_____ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
_____ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account ____ Y ____ N
P.O. # _____
Bill to: _____

SAMPLE RECEIPT:
Total Containers 1
Temperature 4.4 °C
☑ Wet Ice ☐ Blue Ice

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No	Custody Seals ☐	Preservation Confirmation ☒
ADEQ Forms: ☐ Yes ☐ No	Container Intact ☒	Appropriate Head Space ☒
Mail ADEQ Forms ☐ Yes ☐ No	COC/Labels Agree ☒	Received Within Hold Time ☒

January 04, 2015

Beverley Hester
City of Tucson - Transportation Department
PO Box 27210
Tucson, AZ 85726-7210

TEL 520-837-4935
FAX (520) 791-4373

Work Order No.: 14L0548
Order Name: Sample Site 1

RE: Storm Water Biannual

Dear Beverley Hester,

Turner Laboratories, Inc. received 2 sample(s) on 12/13/2014 for the analyses presented in the following report.

All results are intended to be considered in their entirety, and Turner Laboratories, Inc. is not responsible for use of less than the complete report. Results apply only to the samples analyzed. Samples will be disposed of 30 days after issue of our report unless special arrangements are made.

The pages that follow may contain sensitive, privileged or confidential information intended solely for the addressee named above. If you receive this message and are not the agent or employee of the addressee, this communication has been sent in error. Please do not disseminate or copy any of the attached and notify the sender immediately by telephone. Please also return the attached sheet(s) to the sender by mail.

Please call if you have any questions.

Respectfully submitted,

Turner Laboratories, Inc.
ADHS License AZ0066

Terri L. Garcia

Terri Garcia
Technical Director

Turner Laboratories, Inc.

Date: 01/04/2015

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

Order: Sample Site 1

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date/Time
14L0548-01	Composite	Storm Water	12/13/2014 1110
14L0548-02	Grab	Storm Water	12/13/2014 1110

Client:	City of Tucson - Transportation Department
Project:	Storm Water Biannual
Work Order:	14L0548
Date Received:	12/13/2014

Case Narrative

EPA 8081: There is insufficient sample available to perform method-required Matrix Spike and Matrix Spike Duplicate.

EPA 8082: There is insufficient sample available to perform method-required Matrix Spike and Matrix Spike Duplicate.

EPA 8270C: There is insufficient sample available to perform method-required Matrix Spike and Matrix Spike Duplicate.

E4	Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M2	Matrix spike recovery was low; the associated LCS/LCSD was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS/LCSD recovery was acceptable.
R6	LCS/LCSD RPD exceeded the method acceptance limit. Recovery met the acceptance criteria.
T2	Cited ADHS Licensed method does not contain this analyte as part of the method compound list.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

All soil, sludge, and solid matrix determinations are reported on a wet weight basis unless otherwise noted.

ND	Not Detected at or above the PQL
PQL	Practical Quantitation Limit
DF	Dilution Factor

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Hardness-Calculation									
Hardness, Calcium/Magnesium (As CaCO3)	30				mg/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Nitrate + Nitrite Sum-Calculation									
Nitrate and Nitrite Sum	0.89	0.016	0.10		mg/L	1	12/15/2014 0900	12/15/2014 1056	AC
ICP Total Metals-E200.7									
Arsenic	4.6	4.5	40	E4	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Barium	47	0.54	50	E4	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Beryllium	ND	0.93	2.0	E8	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Cadmium	ND	0.82	2.0	E8	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Calcium	9500	320	4000		ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Chromium	3.1	0.61	30	E4	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Copper	22	1.0	20		ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Magnesium	1500	400	3000	E4	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Nickel	1.9	1.8	50	E4	ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
Zinc	88	1.7	40		ug/L	1	12/16/2014 1520	12/18/2014 1929	RAD
ICP/MS Total Metals-E200.8									
Antimony	1.7	0.045	0.50		ug/L	1	12/15/2014 0950	12/16/2014 1915	RAD
Lead	10	0.031	0.50		ug/L	1	12/15/2014 0950	12/16/2014 1915	RAD
Selenium	ND	0.082	2.5	E8	ug/L	1	12/15/2014 0950	12/16/2014 1915	RAD
Silver	0.20	0.029	0.50	E4	ug/L	1	12/15/2014 0950	12/16/2014 1915	RAD
Thallium	0.023	0.013	0.50	E4	ug/L	1	12/15/2014 0950	12/16/2014 1915	RAD
CVAA Total Mercury-E245.1									
Mercury	0.077	0.039	1.0	E4	ug/L	1	12/17/2014 1255	12/18/2014 1119	RAD
Anions by Ion Chromatography-E300									
Nitrogen, Nitrate (As N)	0.83	0.047	0.50		mg/L	1	12/15/2014 0900	12/15/2014 1056	AC
Nitrogen, Nitrite (As N)	0.060	0.016	0.10	E4	mg/L	1	12/15/2014 0900	12/15/2014 1056	AC
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.22	0.50	E8	mg/L	1	12/15/2014 0900	12/15/2014 1056	AC
Total Phosphorous as P-H8190									
Total Phosphorus (as P)	0.34	0.022	0.10		mg/L	1	12/19/2014 0940	12/19/2014 1840	AC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-01
Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Chemical Oxygen Demand-Hach 8000									
Chemical Oxygen Demand	70	6.5	20		mg/L	1	12/29/2014 1010	12/29/2014 1715	AC
Total Kjeldahl Nitrogen-PAI-DK01									
Nitrogen, Total Kjeldahl	1.5	0.043	0.50		mg/L	1	12/29/2014 1650	12/30/2014 1000	AC
Total Dissolved Solids (Residue, Filterable)-SM2540 C									
Total Dissolved Solids (Residue, Filterable)	60		20		mg/L	1	12/17/2014 1145	12/18/2014 1255	CC
Total Suspended Solids (Residue, Non-Filterable)-SM2540 D									
Total Suspended Solids	68		10		mg/L	1	12/15/2014 0724	12/15/2014 1355	CC
Ammonia as N-SM4500-NH3 B,C									
Nitrogen, Ammonia (As N)	ND	0.083	0.50	E8	mg/L	1	12/22/2014 0950	12/22/2014 1710	AC
BOD, 5 day-SM5210 B									
Biochemical Oxygen Demand	29		2.0		mg/L	1	12/13/2014 1740	12/18/2014 1625	CC
Organochlorine Pesticides-SW8081A									
4,4′-DDD	ND	0.010	0.10	E8, V1	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
4,4′-DDE	ND	0.010	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
4,4′-DDT	ND	0.014	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Aldrin	ND	0.016	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
alpha-BHC	ND	0.010	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
alpha-Chlordane	ND	0.0059	0.10	E8	ug/L	1	12/15/2014 1055	12/17/2014 0508	MD
beta-BHC	ND	0.017	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
delta-BHC	ND	0.012	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Dieldrin	ND	0.0084	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Endosulfan I	ND	0.0091	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Endosulfan II	ND	0.0061	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Endosulfan sulfate	ND	0.059	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Endrin	ND	0.011	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Endrin aldehyde	ND	0.0090	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Endrin ketone	ND	0.0084	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
gamma-BHC	ND	0.023	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
gamma-Chlordane	ND	0.0078	0.10	E8	ug/L	1	12/15/2014 1055	12/17/2014 0508	MD
Heptachlor	ND	0.0083	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Heptachlor epoxide	ND	0.013	0.10	E8	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Methoxychlor	ND	0.015	0.10	E8, V1	ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Toxaphene	ND		1.0		ug/L	1	12/15/2014 1055	12/16/2014 2303	MD
Surr: Decachlorobiphenyl	*77*	*38.8-124*			*%REC*	*1*	*12/15/2014 1055*	*12/16/2014 2303*	*MD*
Surr: Tetrachloro-m-xylene	*70*	*40-118.3*			*%REC*	*1*	*12/15/2014 1055*	*12/16/2014 2303*	*MD*
PCBs-SW8082									
Aroclor 1016	ND	0.93	1.0	E8	ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Aroclor 1221	ND		1.0		ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Aroclor 1232	ND		1.0		ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Aroclor 1242	ND		1.0		ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Aroclor 1248	ND		1.0		ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Aroclor 1254	ND		1.0		ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Aroclor 1260	ND	0.61	1.0	E8	ug/L	1	12/16/2014 0913	12/24/2014 1831	MD
Surr: Decachlorobiphenyl	*82*	*45.9-122.8*			*%REC*	*1*	*12/16/2014 0913*	*12/24/2014 1831*	*MD*
Semivolatile Organic Compounds-SW8270C									
1,2,4-Trichlorobenzene	ND	0.96	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
1,2-Dichlorobenzene	ND	1.2	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
1,2-Diphenylhydrazine	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
1,3-Dichlorobenzene	ND	1.2	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
1,4-Dichlorobenzene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,4,5-Trichlorophenol	ND	0.85	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,4,6-Trichlorophenol	ND	0.82	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,4-Dichlorophenol	ND	0.63	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,4-Dimethylphenol	ND	0.54	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,4-Dinitrophenol	ND	5.0	50	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,4-Dinitrotoluene	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2,6-Dinitrotoluene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2-Chloronaphthalene	ND	0.57	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2-Chlorophenol	ND	0.77	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2-Methylnaphthalene	ND	0.58	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
2-Methylphenol	ND	1.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2-Nitroaniline	ND	1.1	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
2-Nitrophenol	ND	3.6	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
3,3'-Dichlorobenzidine	ND	1.5	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
3,4-Methylphenol	ND	1.4	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
3-Nitroaniline	ND	0.62	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4,6-Dinitro-2-methylphenol	ND	0.89	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Bromophenyl phenyl ether	ND	0.52	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Chloro-3-methylphenol	ND	0.62	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Chloroaniline	ND	0.96	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Chlorophenyl phenyl ether	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Methylphenol	ND	0.40	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Nitroaniline	ND	1.2	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
4-Nitrophenol	ND	0.54	50	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Acenaphthene	ND	0.73	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Acenaphthylene	ND	0.62	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Aniline	ND	1.0	20	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Anthracene	ND	0.70	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Benzo[a]anthracene	ND	0.76	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Benzo[a]pyrene	ND	0.56	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Benzo[b,k]fluoranthene	ND	1.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Benzo[g,h,i]perylene	ND	1.6	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Benzoic acid	8.2	3.8	50	E4	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Benzyl alcohol	ND	3.6	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Bis(2-chloroethoxy)methane	ND	0.80	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Bis(2-chloroethyl)ether	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Bis(2-chloroisopropyl)ether	ND	1.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Bis(2-ethylhexyl)phthalate	6.5	0.84	10	E4	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Butyl benzyl phthalate	ND	1.0	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Chrysene	ND	0.67	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Dibenzo[a,h]anthracene	ND	0.91	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Dibenzofuran	ND	0.52	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Diethyl phthalate	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Dimethyl phthalate	ND	0.56	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Di-n-butyl phthalate	3.1	2.7	10	E4	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Di-n-octyl phthalate	1.3	0.76	10	E4	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Fluoranthene	ND	0.81	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Fluorene	ND	0.60	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Hexachlorobenzene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Hexachlorobutadiene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Hexachlorocyclopentadiene	ND	0.71	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Hexachloroethane	ND	1.4	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-01

Client Sample ID: Composite
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Indeno[1,2,3-cd]pyrene	ND	1.2	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Isophorone	ND	0.82	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Naphthalene	ND	0.78	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Nitrobenzene	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
N-Nitrosodimethylamine	ND	2.3	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
N-Nitrosodiphenylamine	ND	0.89	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
N-Nitrosodipropylamine	ND	1.1	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Pentachlorophenol	3.6	1.0	30	E4	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Phenanthrene	ND	0.63	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Phenol	ND	0.90	10	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Pyrene	ND	0.57	5.0	E8	ug/L	1	12/18/2014 0758	12/20/2014 0240	MD
Surr: 2,4,6-Tribromophenol	*79*	*61-118*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 240*	*MD*
Surr: 2-Fluorobiphenyl	*71*	*30.9-111*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 240*	*MD*
Surr: 2-Fluorophenol	*41*	*15.2-68.1*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 240*	*MD*
Surr: 4-Terphenyl-d14	*62*	*0-123*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 240*	*MD*
Surr: Nitrobenzene-d5	*74*	*35-99*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 240*	*MD*
Surr: Phenol-d6	*43*	*0-115*			*%REC*	*1*	*12/18/2014 0758*	*12/20/2014 240*	*MD*

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-02

Client Sample ID: Grab
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
N-Hexane Extractable Material (SGT-HEM)-E 1664B									
Total Petroleum Hydrocarbons (SGT-HEM)	3.10	0.390	5.00	E4	mg/L	1	12/23/2014 0815	12/23/2014 1515	CC
N-Hexane Extractable Material (HEM)-E1664B									
Oil & Grease (HEM)	3.80	0.420	5.00	E4	mg/L	1	12/31/2014 0815	12/31/2014 1430	CC
Volatile Organic Compounds by GCMS-EPA 624									
1,1,1-Trichloroethane	ND	0.23	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,1,2,2-Tetrachloroethane	ND	0.50	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,1,2-Trichloroethane	ND	0.32	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,1-Dichloroethane	ND	0.17	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,1-Dichloroethene	ND	0.28	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,2,4-Trimethylbenzene	ND		2.0		ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,2-Dichlorobenzene	ND	0.49	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,2-Dichloroethane	ND	0.21	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,2-Dichloropropane	ND		2.0		ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,3,5-Trimethylbenzene	ND		2.0		ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,3-Dichlorobenzene	ND	0.35	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
1,4-Dichlorobenzene	ND	0.41	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
2-Chloroethylvinylether	ND	0.56	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Acetone	5.0	2.0	10	E4, T2	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Acrolein	ND	0.76	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Acrylonitrile	ND	0.65	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Benzene	ND	0.25	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Bromodichloromethane	ND	0.20	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Bromoform	ND	0.33	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Bromomethane	ND	0.21	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Carbon tetrachloride	ND	0.18	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Chlorobenzene	ND	0.24	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Chloroethane	ND	0.17	5.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Chloroform	ND	0.19	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Chloromethane	ND	0.28	5.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
cis-1,3-Dichloropropene	ND	0.30	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Dibromochloromethane	ND	0.21	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Dichlorodifluoromethane	ND	0.23	5.0	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Ethylbenzene	ND	0.24	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Lab Sample ID: 14L0548-02

Client Sample ID: Grab
Collection Date/Time: 12/13/2014 1110
Matrix: Storm Water
Order Name: Sample Site 1

Analyses	Result	MDL	PQL	Qual	Units	DF	Prep Date	Analysis Date	Analyst
Methyl Isobutyl Ketone (MIBK)	ND	1.1	10	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Methylene chloride	ND	0.28	10	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Tetrachloroethene	ND	0.29	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Tetrahydrofuran	ND	1.6	10	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Toluene	0.26	0.22	2.0	E4	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
trans-1,2-Dichloroethene	ND	0.23	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
trans-1,3-Dichloropropene	ND	0.17	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Trichloroethene	ND	0.19	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Trichlorofluoromethane	ND	0.20	5.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Vinyl chloride	ND	0.32	2.0	E8	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Xylenes, Total	ND	0.63	6.0	E8, T2	ug/L	1	12/15/2014 1619	12/15/2014 2020	KP
Surr: 1,2-Dichloroethane-d4	*103*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2020*	*KP*
Surr: 4-Bromofluorobenzene	*100*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2020*	*KP*
Surr: Fluorobenzene	*102*	*70-130*			*%REC*	*1*	*12/15/2014 1619*	*12/15/2014 2020*	*KP*
Cyanide-SM4500-CN BE									
Cyanide	ND	82	100	E8	ug/L	1	12/16/2014 0810	12/16/2014 1430	CC

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412181 - E 200.8 ICP/MS										
Blank (1412181-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	ND	0.50	ug/L							
Lead	ND	0.50	ug/L							
Selenium	0.10	2.5	ug/L							
Silver	ND	0.50	ug/L							
Thallium	ND	0.50	ug/L							
LCS (1412181-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	49	0.50	ug/L	50.00		99	85-115			
Lead	50	0.50	ug/L	50.00		101	85-115			
Selenium	260	2.5	ug/L	250.0		103	85-115			
Silver	50	0.50	ug/L	50.00		101	85-115			
Thallium	49	0.50	ug/L	50.00		97	85-115			
LCS Dup (1412181-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	49	0.50	ug/L	50.00		99	85-115	0.03	20	
Lead	51	0.50	ug/L	50.00		101	85-115	0.3	20	
Selenium	260	2.5	ug/L	250.0		103	85-115	0.3	20	
Silver	50	0.50	ug/L	50.00		100	85-115	0.4	20	
Thallium	48	0.50	ug/L	50.00		96	85-115	2	20	
Matrix Spike (1412181-MS1)	**Source: 14L0491-01**			Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	48	0.50	ug/L	50.00	0.060	96	70-130			
Lead	51	0.50	ug/L	50.00	1.6	99	70-130			
Selenium	230	2.5	ug/L	250.0	0.76	92	70-130			
Silver	48	0.50	ug/L	50.00	0.15	96	70-130			
Thallium	46	0.50	ug/L	50.00	ND	93	70-130			
Matrix Spike (1412181-MS2)	**Source: 14L0512-01**			Prepared: 12/15/2014 Analyzed: 12/16/2014						
Antimony	49	0.50	ug/L	50.00	0.14	98	70-130			
Lead	51	0.50	ug/L	50.00	0.38	102	70-130			
Selenium	230	2.5	ug/L	250.0	0.26	92	70-130			
Silver	46	0.50	ug/L	50.00	0.14	91	70-130			
Thallium	49	0.50	ug/L	50.00	0.086	98	70-130			
Batch 1412205 - E 245.1										
Blank (1412205-BLK1)				Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	0.071	1.0	ug/L							
LCS (1412205-BS1)				Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000		105	85-115			
LCS Dup (1412205-BSD1)				Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.3	1.0	ug/L	5.000		105	85-115	0.4	20	
Matrix Spike (1412205-MS1)	**Source: 14L0494-01**			Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.070	102	85-115			
Matrix Spike (1412205-MS2)	**Source: 14L0553-01**			Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.069	102	85-115			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412205 - E 245.1										
Matrix Spike Dup (1412205-MSD1)		**Source: 14L0494-01**		Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.070	102	85-115	0.4	20	
Matrix Spike Dup (1412205-MSD2)		**Source: 14L0553-01**		Prepared: 12/17/2014 Analyzed: 12/18/2014						
Mercury	5.2	1.0	ug/L	5.000	0.069	102	85-115	0.1	20	
Batch 1412210 - E 200.2 ICP										
Blank (1412210-BLK1)				Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	ND	40	ug/L							
Barium	ND	50	ug/L							
Beryllium	ND	2.0	ug/L							
Cadmium	ND	2.0	ug/L							
Calcium	ND	4000	ug/L							
Chromium	ND	30	ug/L							
Copper	1.1	20	ug/L							
Magnesium	ND	3000	ug/L							
Nickel	ND	50	ug/L							
Zinc	ND	40	ug/L							
LCS (1412210-BS1)				Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1900	40	ug/L	2000		95	85-115			
Barium	2000	50	ug/L	2000		98	85-115			
Beryllium	48	2.0	ug/L	50.00		96	85-115			
Cadmium	49	2.0	ug/L	50.00		98	85-115			
Calcium	9800	4000	ug/L	10000		98	85-115			
Chromium	200	30	ug/L	200.0		98	85-115			
Copper	240	20	ug/L	250.0		94	85-115			
Magnesium	10000	3000	ug/L	10000		100	85-115			
Nickel	470	50	ug/L	500.0		95	85-115			
Zinc	490	40	ug/L	500.0		98	85-115			
LCS Dup (1412210-BSD1)				Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1920	40	ug/L	2000		96	85-115	0.7	20	
Barium	2000	50	ug/L	2000		98	85-115	0.5	20	
Beryllium	48	2.0	ug/L	50.00		97	85-115	0.3	20	
Cadmium	49	2.0	ug/L	50.00		98	85-115	0.1	20	
Calcium	9700	4000	ug/L	10000		97	85-115	1	20	
Chromium	200	30	ug/L	200.0		98	85-115	0.05	20	
Copper	240	20	ug/L	250.0		94	85-115	0.2	20	
Magnesium	10000	3000	ug/L	10000		100	85-115	0.5	20	
Nickel	470	50	ug/L	500.0		95	85-115	0.08	20	
Zinc	490	40	ug/L	500.0		98	85-115	0.6	20	

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412210 - E 200.2 ICP										
Matrix Spike (1412210-MS1)	**Source: 14L0306-01**			Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	2040	40	ug/L	2000	106	97	70-130			
Barium	2000	50	ug/L	2000	130	92	70-130			
Beryllium	45	2.0	ug/L	50.00	ND	90	70-130			
Cadmium	42	2.0	ug/L	50.00	ND	83	70-130			
Calcium	140000	4000	ug/L	10000	140000	46	70-130			M3
Chromium	200	30	ug/L	200.0	14	91	70-130			
Copper	300	20	ug/L	250.0	45	102	70-130			
Magnesium	26000	3000	ug/L	10000	16000	98	70-130			
Nickel	470	50	ug/L	500.0	4.7	93	70-130			
Zinc	500	40	ug/L	500.0	23	95	70-130			
Matrix Spike (1412210-MS2)	**Source: 14L0571-01**			Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1970	40	ug/L	2000	10.5	98	70-130			
Barium	1900	50	ug/L	2000	23	94	70-130			
Beryllium	45	2.0	ug/L	50.00	ND	90	70-130			
Cadmium	44	2.0	ug/L	50.00	ND	89	70-130			
Calcium	65000	4000	ug/L	10000	57000	79	70-130			
Chromium	290	30	ug/L	200.0	100	91	70-130			
Copper	320	20	ug/L	250.0	75	99	70-130			
Magnesium	11000	3000	ug/L	10000	1800	96	70-130			
Nickel	680	50	ug/L	500.0	230	91	70-130			
Zinc	500	40	ug/L	500.0	24	95	70-130			
Matrix Spike (1412210-MS3)	**Source: 14L0438-01RE1**			Prepared: 12/16/2014 Analyzed: 12/18/2014						
Arsenic	1930	40	ug/L	2000	13.1	96	70-130			
Barium	1900	50	ug/L	2000	94	93	70-130			
Beryllium	45	2.0	ug/L	50.00	ND	91	70-130			
Cadmium	45	2.0	ug/L	50.00	ND	90	70-130			
Calcium	72000	4000	ug/L	10000	66000	58	70-130			M3
Chromium	190	30	ug/L	200.0	5.0	93	70-130			
Copper	280	20	ug/L	250.0	34	97	70-130			
Magnesium	18000	3000	ug/L	10000	8300	95	70-130			
Nickel	460	50	ug/L	500.0	2.6	92	70-130			
Zinc	580	40	ug/L	500.0	120	92	70-130			

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Batch 1412162 - GEN CHEM										
Duplicate (1412162-DUP1)	**Source: 14L0537-01**			Prepared & Analyzed: 12/15/2014						
Total Suspended Solids	1.0	10	mg/L		1.0			0	5	
Batch 1412186 - SPECTRO PREP										
Blank (1412186-BLK1)				Prepared & Analyzed: 12/16/2014						
Cyanide	ND	100	ug/L							
LCS (1412186-BS1)				Prepared & Analyzed: 12/16/2014						
Cyanide	1800	100	ug/L	2000		90	90-110			
LCS Dup (1412186-BSD1)				Prepared & Analyzed: 12/16/2014						
Cyanide	1800	100	ug/L	2000		91	90-110	0.7	20	
Matrix Spike (1412186-MS1)	**Source: 14L0302-02**			Prepared & Analyzed: 12/16/2014						
Cyanide	1900	100	ug/L	2000	ND	93	70-130			
Matrix Spike Dup (1412186-MSD1)	**Source: 14L0302-02**			Prepared & Analyzed: 12/16/2014						
Cyanide	1700	100	ug/L	2000	ND	86	70-130	7	20	
Batch 1412199 - GEN CHEM										
Duplicate (1412199-DUP1)	**Source: 14L0586-01**			Prepared: 12/17/2014 Analyzed: 12/18/2014						
Total Dissolved Solids (Residue, Filterable)	270	20	mg/L		270			1	5	
Batch 1412200 - GEN CHEM										
Blank (1412200-BLK1)				Prepared: 12/13/2014 Analyzed: 12/18/2014						
Biochemical Oxygen Demand	ND	2.0	mg/L							
LCS (1412200-BS1)				Prepared: 12/13/2014 Analyzed: 12/18/2014						
Biochemical Oxygen Demand	190		mg/L	198.0		94	85-115			
Batch 1412248 - GEN CHEM										
Blank (1412248-BLK1)				Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	ND	0.50	mg/L							
LCS (1412248-BS1)				Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000		103	90-110			
LCS Dup (1412248-BSD1)				Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.2	0.50	mg/L	5.000		104	90-110	2	10	
Matrix Spike (1412248-MS1)	**Source: 14L0409-01**			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.0	0.50	mg/L	5.000	ND	100	70-130			
Matrix Spike (1412248-MS2)	**Source: 14L0646-01**			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.2	0.50	mg/L	5.000	ND	103	70-130			
Matrix Spike Dup (1412248-MSD1)	**Source: 14L0409-01**			Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.1	0.50	mg/L	5.000	ND	102	70-130	2	20	

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Batch 1412248 - GEN CHEM										
Matrix Spike Dup (1412248-MSD2)		**Source: 14L0646-01**		Prepared & Analyzed: 12/22/2014						
Nitrogen, Ammonia (As N)	5.4	0.50	mg/L	5.000	ND	107	70-130	3	20	
Batch 1412252 - SPECTRO PREP										
Blank (1412252-BLK1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	ND	0.10	mg/L							
LCS (1412252-BS1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.54	0.10	mg/L	0.5000		108	90-110			
LCS Dup (1412252-BSD1)				Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.52	0.10	mg/L	0.5000		104	90-110	4	10	
Matrix Spike (1412252-MS1)		**Source: 14L0521-02**		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.75	0.10	mg/L	0.5000	0.17	116	70-130			
Matrix Spike Dup (1412252-MSD1)		**Source: 14L0521-02**		Prepared & Analyzed: 12/19/2014						
Total Phosphorus (as P)	0.72	0.10	mg/L	0.5000	0.17	110	70-130	4	15	
Batch 1412254 - GEN CHEM										
Blank (1412254-BLK1)				Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	0.500	5.00	mg/L							
LCS (1412254-BS1)				Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	17.3	5.00	mg/L	20.00		87	64-132			
LCS Dup (1412254-BSD1)				Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	20.3	5.00	mg/L	20.00		102	64-132	16	34	
Matrix Spike (1412254-MS1)		**Source: 14L0547-02**		Prepared & Analyzed: 12/23/2014						
Total Petroleum Hydrocarbons (SGT-HEM)	26.2	5.00	mg/L	20.00	2.70	118	64-132			
Batch 1412290 - GEN CHEM										
Blank (1412290-BLK1)				Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	ND	0.50	mg/L							
LCS (1412290-BS1)				Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	4.9	0.50	mg/L	5.000		98	80-120			
LCS Dup (1412290-BSD1)				Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000		100	80-120	2	20	
Matrix Spike (1412290-MS1)		**Source: 14L0567-01**		Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.2	0.50	mg/L	5.000	0.66	90	80-120			
Matrix Spike (1412290-MS2)		**Source: 14L0680-03**		Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.0	0.50	mg/L	5.000	0.15	97	80-120			

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Batch 1412290 - GEN CHEM										
Matrix Spike Dup (1412290-MSD1)	Source: 14L0567-01			Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.3	0.50	mg/L	5.000	0.66	93	80-120	3	20	
Matrix Spike Dup (1412290-MSD2)	Source: 14L0680-03			Prepared: 12/29/2014 Analyzed: 12/30/2014						
Nitrogen, Total Kjeldahl	5.1	0.50	mg/L	5.000	0.15	99	80-120	2	20	
Batch 1412292 - SPECTRO PREP										
Blank (1412292-BLK1)				Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	ND	20	mg/L							
LCS (1412292-BS1)				Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		102	70-130			
LCS Dup (1412292-BSD1)				Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0		102	70-130	0.2	20	
Matrix Spike (1412292-MS1)	Source: 14L0537-01			Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	500	20	mg/L	500.0	ND	100	70-130			
Matrix Spike Dup (1412292-MSD1)	Source: 14L0537-01			Prepared & Analyzed: 12/29/2014						
Chemical Oxygen Demand	510	20	mg/L	500.0	ND	103	70-130	2	20	
Batch 1412302 - GEN CHEM										
Blank (1412302-BLK1)				Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	0.500	5.00	mg/L							
LCS (1412302-BS1)				Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	42.6	5.00	mg/L	40.00		107	78-114			
LCS Dup (1412302-BSD1)				Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	42.5	5.00	mg/L	40.00		106	78-114	0.2	18	
Matrix Spike (1412302-MS1)	Source: 14L0319-02			Prepared & Analyzed: 12/31/2014						
Oil & Grease (HEM)	41.5	5.00	mg/L	40.00	8.30	83	78-114			

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Batch 1412168 - SW 846 3520C										
Blank (1412168-BLK1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
4,4'-DDD	ND	0.10	ug/L							
4,4'-DDE	ND	0.10	ug/L							
4,4'-DDT	ND	0.10	ug/L							
Aldrin	ND	0.10	ug/L							
alpha-BHC	ND	0.10	ug/L							
alpha-Chlordane	ND	0.10	ug/L							
beta-BHC	ND	0.10	ug/L							
delta-BHC	ND	0.10	ug/L							
Dieldrin	ND	0.10	ug/L							
Endosulfan I	ND	0.10	ug/L							
Endosulfan II	ND	0.10	ug/L							
Endosulfan sulfate	ND	0.10	ug/L							
Endrin	ND	0.10	ug/L							
Endrin aldehyde	ND	0.10	ug/L							
Endrin ketone	ND	0.10	ug/L							
gamma-BHC	ND	0.10	ug/L							
gamma-Chlordane	ND	0.10	ug/L							
Heptachlor	ND	0.10	ug/L							
Heptachlor epoxide	ND	0.10	ug/L							
Methoxychlor	ND	0.10	ug/L							
Toxaphene	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*0.839*		*ug/L*	*1.000*		*84*	*38.8-124*			
Surrogate: Tetrachloro-m-xylene	*0.687*		*ug/L*	*1.000*		*69*	*40-118.3*			
LCS (1412168-BS1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
4,4'-DDT	0.94	0.10	ug/L	1.000		94	54.8-117.2			
Aldrin	0.40	0.10	ug/L	0.5000		79	53.1-105			
Dieldrin	0.72	0.10	ug/L	1.000		72	59.5-100.2			
Endrin	0.85	0.10	ug/L	1.000		85	58.1-100.7			
gamma-BHC	0.40	0.10	ug/L	0.5000		80	56.5-117.1			
Heptachlor	0.40	0.10	ug/L	0.5000		80	51.5-104.5			
Surrogate: Decachlorobiphenyl	*0.882*		*ug/L*	*1.000*		*88*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.673*		*ug/L*	*1.000*		*67*	*37.5-105.7*			
LCS Dup (1412168-BSD1)				Prepared: 12/15/2014 Analyzed: 12/16/2014						
4,4'-DDT	1.0	0.10	ug/L	1.000		100	54.8-117.2	7	30	
Aldrin	0.43	0.10	ug/L	0.5000		85	53.1-105	7	30	
Dieldrin	0.76	0.10	ug/L	1.000		76	59.5-100.2	6	30	
Endrin	0.92	0.10	ug/L	1.000		92	58.1-100.7	8	30	
gamma-BHC	0.43	0.10	ug/L	0.5000		86	56.5-117.1	7	30	
Heptachlor	0.42	0.10	ug/L	0.5000		85	51.5-104.5	6	30	
Surrogate: Decachlorobiphenyl	*0.960*		*ug/L*	*1.000*		*96*	*54.4-123.3*			
Surrogate: Tetrachloro-m-xylene	*0.699*		*ug/L*	*1.000*		*70*	*37.5-105.7*			
Batch 1412179 - SW 846 3520C										

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Batch 1412179 - SW 846 3520C										
Blank (1412179-BLK1)				Prepared: 12/16/2014 Analyzed: 12/24/2014						
Aroclor 1016	ND	1.0	ug/L							
Aroclor 1221	ND	1.0	ug/L							
Aroclor 1232	ND	1.0	ug/L							
Aroclor 1242	ND	1.0	ug/L							
Aroclor 1248	ND	1.0	ug/L							
Aroclor 1254	ND	1.0	ug/L							
Aroclor 1260	ND	1.0	ug/L							
Surrogate: Decachlorobiphenyl	*1.97*		*ug/L*	*2.000*		*98*	*45.9-122.8*			
LCS (1412179-BS1)				Prepared: 12/16/2014 Analyzed: 12/24/2014						
Aroclor 1016	10	1.0	ug/L	10.00		102	59.5-122.8			
Aroclor 1221	ND	1.0	ug/L				0-200			
Aroclor 1232	ND	1.0	ug/L				0-200			
Aroclor 1242	ND	1.0	ug/L				0-200			
Aroclor 1248	ND	1.0	ug/L				0-200			
Aroclor 1254	ND	1.0	ug/L				70-130			
Aroclor 1260	10	1.0	ug/L	10.00		100	65.7-112.7			
Surrogate: Decachlorobiphenyl	*1.93*		*ug/L*	*2.000*		*97*	*63-121*			
LCS Dup (1412179-BSD1)				Prepared: 12/16/2014 Analyzed: 12/24/2014						
Aroclor 1016	10	1.0	ug/L	10.00		104	59.5-122.8	2	30	
Aroclor 1221	ND	1.0	ug/L				0-200		200	
Aroclor 1232	ND	1.0	ug/L				0-200		200	
Aroclor 1242	ND	1.0	ug/L				0-200		200	
Aroclor 1248	ND	1.0	ug/L				0-200		200	
Aroclor 1254	ND	1.0	ug/L				70-130		30	
Aroclor 1260	10	1.0	ug/L	10.00		103	65.7-112.7	3	30	
Surrogate: Decachlorobiphenyl	*1.97*		*ug/L*	*2.000*		*99*	*63-121*			
Batch 1412208 - SW 846 3535										

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Batch 1412208 - SW 846 3535										
Blank (1412208-BLK1)				Prepared: 12/18/2014 Analyzed: 12/20/2014						
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,2-Diphenylhydrazine	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
2,4,5-Trichlorophenol	ND	10	ug/L							
2,4,6-Trichlorophenol	ND	10	ug/L							
2,4-Dichlorophenol	ND	10	ug/L							
2,4-Dimethylphenol	ND	10	ug/L							
2,4-Dinitrophenol	ND	50	ug/L							
2,4-Dinitrotoluene	ND	10	ug/L							
2,6-Dinitrotoluene	ND	10	ug/L							
2-Chloronaphthalene	ND	10	ug/L							
2-Chlorophenol	ND	10	ug/L							
2-Methylnaphthalene	ND	5.0	ug/L							
2-Methylphenol	ND	10	ug/L							
2-Nitroaniline	ND	20	ug/L							
2-Nitrophenol	ND	10	ug/L							
3,3'-Dichlorobenzidine	ND	20	ug/L							
3,4-Methylphenol	ND	10	ug/L							
3-Nitroaniline	ND	20	ug/L							
4,6-Dinitro-2-methylphenol	ND	20	ug/L							
4-Bromophenyl phenyl ether	ND	10	ug/L							
4-Chloro-3-methylphenol	ND	10	ug/L							
4-Chloroaniline	ND	20	ug/L							
4-Chlorophenyl phenyl ether	ND	10	ug/L							
4-Methylphenol	ND	10	ug/L							
4-Nitroaniline	ND	20	ug/L							
4-Nitrophenol	ND	50	ug/L							
Acenaphthene	ND	5.0	ug/L							
Acenaphthylene	ND	5.0	ug/L							
Aniline	ND	20	ug/L							
Anthracene	ND	5.0	ug/L							
Benzo[a]anthracene	ND	5.0	ug/L							
Benzo[a]pyrene	ND	5.0	ug/L							
Benzo[b,k]fluoranthene	ND	10	ug/L							
Benzo[g,h,i]perylene	ND	5.0	ug/L							
Benzoic acid	ND	50	ug/L							
Benzyl alcohol	ND	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	10	ug/L							
Bis(2-chloroethyl)ether	ND	10	ug/L							
Bis(2-chloroisopropyl)ether	ND	10	ug/L							
Bis(2-ethylhexyl)phthalate	ND	10	ug/L							
Butyl benzyl phthalate	ND	10	ug/L							
Chrysene	ND	5.0	ug/L							
Dibenzo[a,h]anthracene	ND	5.0	ug/L							
Dibenzofuran	ND	5.0	ug/L							

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Batch 1412208 - SW 846 3535										
Blank (1412208-BLK1)				Prepared: 12/18/2014 Analyzed: 12/20/2014						
Diethyl phthalate	ND	10	ug/L							
Dimethyl phthalate	ND	10	ug/L							
Di-n-butyl phthalate	ND	10	ug/L							
Di-n-octyl phthalate	ND	10	ug/L							
Fluoranthene	ND	5.0	ug/L							
Fluorene	ND	5.0	ug/L							
Hexachlorobenzene	ND	10	ug/L							
Hexachlorobutadiene	ND	10	ug/L							
Hexachlorocyclopentadiene	ND	10	ug/L							
Hexachloroethane	ND	10	ug/L							
Indeno[1,2,3-cd]pyrene	ND	5.0	ug/L							
Isophorone	ND	10	ug/L							
Naphthalene	ND	5.0	ug/L							
Nitrobenzene	ND	10	ug/L							
N-Nitrosodimethylamine	ND	10	ug/L							
N-Nitrosodiphenylamine	ND	10	ug/L							
N-Nitrosodipropylamine	ND	10	ug/L							
Pentachlorophenol	ND	30	ug/L							
Phenanthrene	ND	5.0	ug/L							
Phenol	ND	10	ug/L							
Pyrene	ND	5.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*78.0*		*ug/L*	*100.0*		*78*	*61-118*			
Surrogate: 2-Fluorobiphenyl	*64.7*		*ug/L*	*100.0*		*65*	*30.9-111*			
Surrogate: 2-Fluorophenol	*42.1*		*ug/L*	*100.0*		*42*	*15.2-68.1*			
Surrogate: 4-Terphenyl-d14	*63.4*		*ug/L*	*100.0*		*63*	*0-123*			
Surrogate: Nitrobenzene-d5	*57.1*		*ug/L*	*100.0*		*57*	*35-99*			
Surrogate: Phenol-d6	*45.9*		*ug/L*	*100.0*		*46*	*0-115*			
LCS (1412208-BS1)				Prepared: 12/18/2014 Analyzed: 12/20/2014						
1,2,4-Trichlorobenzene	27	10	ug/L	50.00		54	29.5-92.8			
1,4-Dichlorobenzene	22	10	ug/L	50.00		43	21.9-69.5			
2,4-Dinitrotoluene	37	10	ug/L	50.00		73	40.6-90			
2-Chlorophenol	54	10	ug/L	100.0		54	33-82.4			
4-Chloro-3-methylphenol	73	10	ug/L	100.0		73	39.5-87.3			
4-Nitrophenol	79	50	ug/L	100.0		79	41.7-99.9			
Acenaphthene	30	5.0	ug/L	50.00		59	38.3-91.1			
N-Nitrosodipropylamine	31	10	ug/L	50.00		62	40.5-95.8			
Pentachlorophenol	82	30	ug/L	100.0		82	32.5-106			
Phenol	47	10	ug/L	100.0		47	8.08-78.4			
Pyrene	38	5.0	ug/L	50.00		77	34.9-95.9			
Surrogate: 2,4,6-Tribromophenol	*86.6*		*ug/L*	*100.0*		*87*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*61.9*		*ug/L*	*100.0*		*62*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*45.0*		*ug/L*	*100.0*		*45*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*68.8*		*ug/L*	*100.0*		*69*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*62.1*		*ug/L*	*100.0*		*62*	*38.4-84.6*			
Surrogate: Phenol-d6	*48.2*		*ug/L*	*100.0*		*48*	*18.3-88.5*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412208 - SW 846 3535										
LCS Dup (1412208-BSD1)				Prepared: 12/18/2014 Analyzed: 12/23/2014						
1,2,4-Trichlorobenzene	22	10	ug/L	50.00		44	29.5-92.8	21	30	
1,4-Dichlorobenzene	14	10	ug/L	50.00		28	21.9-69.5	41	30	R6
2,4-Dinitrotoluene	35	10	ug/L	50.00		70	40.6-90	4	30	
2-Chlorophenol	39	10	ug/L	100.0		39	33-82.4	31	30	R6
4-Chloro-3-methylphenol	70	10	ug/L	100.0		70	39.5-87.3	5	30	
4-Nitrophenol	68	50	ug/L	100.0		68	41.7-99.9	15	30	
Acenaphthene	28	5.0	ug/L	50.00		55	38.3-91.1	6	30	
N-Nitrosodipropylamine	23	10	ug/L	50.00		46	40.5-95.8	29	30	
Pentachlorophenol	65	30	ug/L	100.0		65	32.5-106	23	30	
Phenol	37	10	ug/L	100.0		37	8.08-78.4	25	30	
Pyrene	35	5.0	ug/L	50.00		71	34.9-95.9	9	30	
Surrogate: 2,4,6-Tribromophenol	*84.2*		*ug/L*	*100.0*		*84*	*56.4-119*			
Surrogate: 2-Fluorobiphenyl	*56.0*		*ug/L*	*100.0*		*56*	*39.7-99.4*			
Surrogate: 2-Fluorophenol	*32.7*		*ug/L*	*100.0*		*33*	*24.4-64.9*			
Surrogate: 4-Terphenyl-d14	*62.4*		*ug/L*	*100.0*		*62*	*28.3-82.4*			
Surrogate: Nitrobenzene-d5	*43.9*		*ug/L*	*100.0*		*44*	*38.4-84.6*			
Surrogate: Phenol-d6	*37.1*		*ug/L*	*100.0*		*37*	*18.3-88.5*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Blank (1412176-BLK1)				Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	ND	2.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L							
1,1,2-Trichloroethane	ND	2.0	ug/L							
1,1-Dichloroethane	ND	2.0	ug/L							
1,1-Dichloroethene	ND	2.0	ug/L							
1,2,4-Trimethylbenzene	ND	2.0	ug/L							
1,2-Dichlorobenzene	ND	2.0	ug/L							
1,2-Dichloroethane	ND	2.0	ug/L							
1,2-Dichloropropane	ND	2.0	ug/L							
1,3,5-Trimethylbenzene	ND	2.0	ug/L							
1,3-Dichlorobenzene	ND	2.0	ug/L							
1,4-Dichlorobenzene	ND	2.0	ug/L							
2-Chloroethylvinylether	ND	10	ug/L							
Acetone	ND	10	ug/L							
Acrolein	ND	10	ug/L							
Acrylonitrile	ND	10	ug/L							
Benzene	ND	2.0	ug/L							
Bromodichloromethane	ND	2.0	ug/L							
Bromoform	ND	2.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon tetrachloride	ND	2.0	ug/L							
Chlorobenzene	ND	2.0	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	2.0	ug/L							
Chloromethane	ND	5.0	ug/L							
cis-1,3-Dichloropropene	ND	2.0	ug/L							
Dibromochloromethane	ND	2.0	ug/L							
Dichlorodifluoromethane	ND	5.0	ug/L							
Ethylbenzene	ND	2.0	ug/L							
Methyl Isobutyl Ketone (MIBK)	ND	10	ug/L							
Methylene chloride	ND	10	ug/L							
Tetrachloroethene	ND	2.0	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	2.0	ug/L							
trans-1,2-Dichloroethene	ND	2.0	ug/L							
trans-1,3-Dichloropropene	ND	2.0	ug/L							
Trichloroethene	ND	2.0	ug/L							
Trichlorofluoromethane	ND	5.0	ug/L							
Vinyl chloride	ND	2.0	ug/L							
Xylenes, Total	ND	6.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.6*		*ug/L*	*28.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.6*		*ug/L*	*28.00*		*106*	*70-130*			
Surrogate: Fluorobenzene	*28.0*		*ug/L*	*28.00*		*100*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
LCS (1412176-BS1)				Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	19		ug/L	20.00		97	52-162			
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		102	46-157			
1,1,2-Trichloroethane	20		ug/L	20.00		102	52-150			
1,1-Dichloroethane	19		ug/L	20.00		97	59-155			
1,1-Dichloroethene	20		ug/L	20.00		100	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00		103	0-200			
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190			
1,2-Dichloroethane	20		ug/L	20.00		100	49-155			
1,2-Dichloropropane	21		ug/L	20.00		103	2-210			
1,3,5-Trimethylbenzene	21		ug/L	20.00		106	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00		104	59-156			
1,4-Dichlorobenzene	20		ug/L	20.00		101	18-190			
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305			
Acetone	94		ug/L	100.0		94	70-130			
Acrolein	94		ug/L	100.0		94	88-118			
Acrylonitrile	100		ug/L	100.0		100	71-135			
Benzene	20		ug/L	20.00		102	37-151			
Bromodichloromethane	20		ug/L	20.00		98	35-155			
Bromoform	20		ug/L	20.00		99	45-169			
Bromomethane	21		ug/L	20.00		107	2-242			
Carbon tetrachloride	20		ug/L	20.00		98	70-140			
Chlorobenzene	20		ug/L	20.00		101	37-160			
Chloroethane	19		ug/L	20.00		97	14-230			
Chloroform	19		ug/L	20.00		96	51-138			
Chloromethane	20		ug/L	20.00		98	5-273			
cis-1,3-Dichloropropene	20		ug/L	20.00		101	2-227			
Dibromochloromethane	19		ug/L	20.00		97	53-149			
Dichlorodifluoromethane	20		ug/L	20.00		101	5-273			
Ethylbenzene	21		ug/L	20.00		103	37-162			
Isopropyl Alcohol	1200		ug/L	1000		124	70-130			
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		100	70-130			
Methylene chloride	20		ug/L	20.00		98	10-221			
Tetrachloroethene	20		ug/L	20.00		99	64-148			
Tetrahydrofuran	97		ug/L	100.0		97	70-130			
Toluene	20		ug/L	20.00		102	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00		104	54-156			
trans-1,3-Dichloropropene	20		ug/L	20.00		99	17-183			
Trichloroethene	20		ug/L	20.00		98	71-157			
Trichlorofluoromethane	19		ug/L	20.00		96	17-181			
Vinyl chloride	20		ug/L	20.00		100	2-251			
Xylenes, Total	61		ug/L	60.00		102	37-162			
Surrogate: 1,2-Dichloroethane-d4	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*29.0*		*ug/L*	*28.00*		*104*	*70-130*			
Surrogate: Fluorobenzene	*27.9*		*ug/L*	*28.00*		*100*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
LCS Dup (1412176-BSD1)				Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	20		ug/L	20.00		100	52-162	3	30	
1,1,2,2-Tetrachloroethane	20		ug/L	20.00		100	46-157	3	30	
1,1,2-Trichloroethane	20		ug/L	20.00		101	52-150	0.2	30	
1,1-Dichloroethane	20		ug/L	20.00		100	59-155	3	30	
1,1-Dichloroethene	20		ug/L	20.00		98	2-234	3	30	
1,2,4-Trimethylbenzene	20		ug/L	20.00		102	0-200	1	200	
1,2-Dichlorobenzene	20		ug/L	20.00		102	18-190	0.2	30	
1,2-Dichloroethane	21		ug/L	20.00		105	49-155	4	30	
1,2-Dichloropropane	21		ug/L	20.00		104	2-210	1	30	
1,3,5-Trimethylbenzene	21		ug/L	20.00		105	0-200	0.9	200	
1,3-Dichlorobenzene	20		ug/L	20.00		102	59-156	1	30	
1,4-Dichlorobenzene	20		ug/L	20.00		100	18-190	0.3	30	
2-Chloroethylvinylether	21		ug/L	20.00		104	10-305	0.2	30	
Acetone	99		ug/L	100.0		99	70-130	5	30	
Acrolein	96		ug/L	100.0		96	88-118	2	30	
Acrylonitrile	100		ug/L	100.0		101	71-135	2	30	
Benzene	21		ug/L	20.00		104	37-151	2	30	
Bromodichloromethane	20		ug/L	20.00		99	35-155	1	30	
Bromoform	20		ug/L	20.00		102	45-169	3	30	
Bromomethane	21		ug/L	20.00		106	2-242	0.8	30	
Carbon tetrachloride	20		ug/L	20.00		99	70-140	0.7	30	
Chlorobenzene	21		ug/L	20.00		105	37-160	4	30	
Chloroethane	19		ug/L	20.00		95	14-230	2	30	
Chloroform	20		ug/L	20.00		99	51-138	3	30	
Chloromethane	19		ug/L	20.00		94	5-273	4	30	
cis-1,3-Dichloropropene	20		ug/L	20.00		98	2-227	3	30	
Dibromochloromethane	20		ug/L	20.00		100	53-149	4	30	
Dichlorodifluoromethane	20		ug/L	20.00		101	5-273	0.2	30	
Ethylbenzene	21		ug/L	20.00		103	37-162	0.3	30	
Isopropyl Alcohol	1200		ug/L	1000		121	70-130	3	200	
Methyl Isobutyl Ketone (MIBK)	100		ug/L	100.0		102	70-130	2	30	
Methylene chloride	20		ug/L	20.00		98	10-221	0.7	30	
Tetrachloroethene	21		ug/L	20.00		103	64-148	4	30	
Tetrahydrofuran	95		ug/L	100.0		95	70-130	2	30	
Toluene	21		ug/L	20.00		104	47-150	2	30	
trans-1,2-Dichloroethene	20		ug/L	20.00		101	54-156	2	30	
trans-1,3-Dichloropropene	20		ug/L	20.00		98	17-183	0.4	30	
Trichloroethene	20		ug/L	20.00		101	71-157	4	30	
Trichlorofluoromethane	19		ug/L	20.00		96	17-181	0.1	30	
Vinyl chloride	20		ug/L	20.00		100	2-251	0.5	30	
Xylenes, Total	62		ug/L	60.00		104	37-162	2	30	
Surrogate: 1,2-Dichloroethane-d4	*28.2*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.6*		*ug/L*	*28.00*		*102*	*70-130*			
Surrogate: Fluorobenzene	*28.5*		*ug/L*	*28.00*		*102*	*70-130*			

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412176 - VOA_GCMS										
Matrix Spike (1412176-MS2)	**Source: 14L0548-02**			Prepared & Analyzed: 12/15/2014						
1,1,1-Trichloroethane	22		ug/L	20.00	ND	108	52-162			
1,1,2,2-Tetrachloroethane	21		ug/L	20.00	ND	105	46-157			
1,1,2-Trichloroethane	22		ug/L	20.00	ND	109	52-150			
1,1-Dichloroethane	20		ug/L	20.00	ND	102	59-155			
1,1-Dichloroethene	21		ug/L	20.00	ND	107	2-234			
1,2,4-Trimethylbenzene	21		ug/L	20.00	0.0	107	0-200			
1,2-Dichlorobenzene	22		ug/L	20.00	ND	108	18-190			
1,2-Dichloroethane	22		ug/L	20.00	ND	109	49-155			
1,2-Dichloropropane	22		ug/L	20.00	0.0	108	2-210			
1,3,5-Trimethylbenzene	22		ug/L	20.00	0.0	108	0-200			
1,3-Dichlorobenzene	21		ug/L	20.00	ND	107	59-156			
1,4-Dichlorobenzene	21		ug/L	20.00	ND	107	18-190			
2-Chloroethylvinylether	21		ug/L	20.00	ND	107	10-305			
Acetone	100		ug/L	100.0	5.0	95	70-130			
Acrolein	24		ug/L	100.0	ND	24	88-118			M2
Acrylonitrile	98		ug/L	100.0	ND	98	71-135			
Benzene	22		ug/L	20.00	ND	109	37-151			
Bromodichloromethane	21		ug/L	20.00	ND	103	35-155			
Bromoform	21		ug/L	20.00	ND	106	45-169			
Bromomethane	17		ug/L	20.00	ND	83	2-242			
Carbon tetrachloride	21		ug/L	20.00	ND	105	70-140			
Chlorobenzene	22		ug/L	20.00	ND	112	37-160			
Chloroethane	19		ug/L	20.00	ND	95	14-230			
Chloroform	21		ug/L	20.00	ND	103	51-138			
Chloromethane	19		ug/L	20.00	ND	96	5-273			
cis-1,3-Dichloropropene	19		ug/L	20.00	ND	93	2-221			
Dibromochloromethane	21		ug/L	20.00	ND	106	53-149			
Dichlorodifluoromethane	20		ug/L	20.00	ND	101	5-273			
Ethylbenzene	23		ug/L	20.00	0.17	113	37-162			
Isopropyl Alcohol	1300		ug/L	1000	ND	128	70-130			
Methyl Isobutyl Ketone (MIBK)	110		ug/L	100.0	ND	112	70-130			
Methylene chloride	20		ug/L	20.00	ND	99	10-221			
Tetrachloroethene	23		ug/L	20.00	ND	115	64-148			
Tetrahydrofuran	100		ug/L	100.0	ND	104	70-130			
Toluene	23		ug/L	20.00	0.26	114	47-150			
trans-1,2-Dichloroethene	21		ug/L	20.00	ND	105	54-156			
trans-1,3-Dichloropropene	20		ug/L	20.00	ND	102	17-183			
Trichloroethene	22		ug/L	20.00	ND	109	71-157			
Trichlorofluoromethane	21		ug/L	20.00	ND	103	17-181			
Vinyl chloride	21		ug/L	20.00	ND	106	2-251			
Xylenes, Total	68		ug/L	60.00	ND	113	37-162			
Surrogate: 1,2-Dichloroethane-d4	*26.7*		*ug/L*	*28.00*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*28.3*		*ug/L*	*28.00*		*101*	*70-130*			
Surrogate: Fluorobenzene	*27.5*		*ug/L*	*28.00*		*98*	*70-130*			

Turner Laboratories, Inc.

Date: 01/04/2015

Client: City of Tucson - Transportation Department
Project: Storm Water Biannual
Work Order: 14L0548
Date Received: 12/13/2014

QC Summary

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 1412163 - IC PREP										
Blank (1412163-BLK1)				Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	ND	0.50	mg/L							
Nitrogen, Nitrite (As N)	ND	0.10	mg/L							
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.50	mg/L							
LCS (1412163-BS1)				Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.1	0.50	mg/L	5.000		103	90-110			
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		99	90-110			
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		104	90-110			
LCS Dup (1412163-BSD1)				Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.1	0.50	mg/L	5.000		103	90-110	0.2	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500		101	90-110	2	10	
Phosphorus, Dissolved Orthophosphate (As P)	2.6	0.50	mg/L	2.500		105	90-110	0.3	10	
Matrix Spike (1412163-MS1)	**Source: 14L0554-01**			Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.1	0.50	mg/L	5.000	0.25	98	80-120			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	ND	98	80-120			
Matrix Spike (1412163-MS2)	**Source: 14L0567-04**			Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	9.2	0.50	mg/L	5.000	3.9	106	80-120			
Nitrogen, Nitrite (As N)	2.4	0.10	mg/L	2.500	ND	98	80-120			
Matrix Spike Dup (1412163-MSD1)	**Source: 14L0554-01**			Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	5.2	0.50	mg/L	5.000	0.25	98	80-120	0.5	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	ND	100	80-120	2	10	
Matrix Spike Dup (1412163-MSD2)	**Source: 14L0567-04**			Prepared & Analyzed: 12/15/2014						
Nitrogen, Nitrate (As N)	9.2	0.50	mg/L	5.000	3.9	107	80-120	0.6	10	
Nitrogen, Nitrite (As N)	2.5	0.10	mg/L	2.500	ND	100	80-120	3	10	

TURNER LABORATORIES, INC.
2445 N. Coyote Drive, Suite 104
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(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # 1410548 DATE _____ PAGE _____ OF _____

PROJECT NAME: Stormwater Samples Site #(1) 2, 3, 4, 5 (circle)

CONTACT NAME: Chris McNellis, Eric Ross, Bev Hester

COMPANY NAME: City of Tucson

ADDRESS: PO Box 27210, Tucson AZ 85726-7210

PHONE: 837-6583 (Chris), 837-6582 (Eric), 837-4935 (Bev)

FAX: 791-4343 EMAIL: stormwater@tucsonaz.gov

SAMPLER'S SIGNATURE: C McNellis

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS	Hardness Ca & Mg	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)	Biological Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Cyanide	Total Metals*	Nitrate and Nitrite Sum	NH3	TKN	Total Phosphours	Orthophosphate by Ion Chromatography	TPH 1664	Oil & Grease	Volatile Organic Compounds by 624	Semivolatile Organic by SW 8270	PCBs by SW 8082	Organochlorine Pesticides by SW 8081		
Composite	12/13	11:10am		ST	33	X	X	X	X	X		X	X	X	X	X	X				X	X	X		
Grab/Discrete	12/13	11:10am		ST	9						X							X	X	X					

1. RELINQUISHED BY: C McNellis
Signature: Chris McNellis Printed Name:
Department of Transporation
Firm: City of Tucson
Date/Time 12/13/14 1600

2. RECEIVED BY: Cindy Cook
Signature: Cindy Cook Printed Name
Firm TLI
Date/Time 12/13/14 1600

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name TURNER LABORATORIES, INC.
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard [approx.10 days]*
Next day 2 Day 5 Day*
X Email Preliminary Results To: Stormwater@tucsonaz.gov
* Working Days

REPORT REQUIREMENTS:
I. Routine Report
II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account Y N
P.O. #
Bill to:

SAMPLE RECEIPT:
Total Containers 42
Temperature 5.9°
☑ Wet Ice ☐ Blue Ice

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS: Composite poured at lab per COT Specifications

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☒
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☒	Appropriate Head Space	☒
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☒	Received Within Hold Time	☒

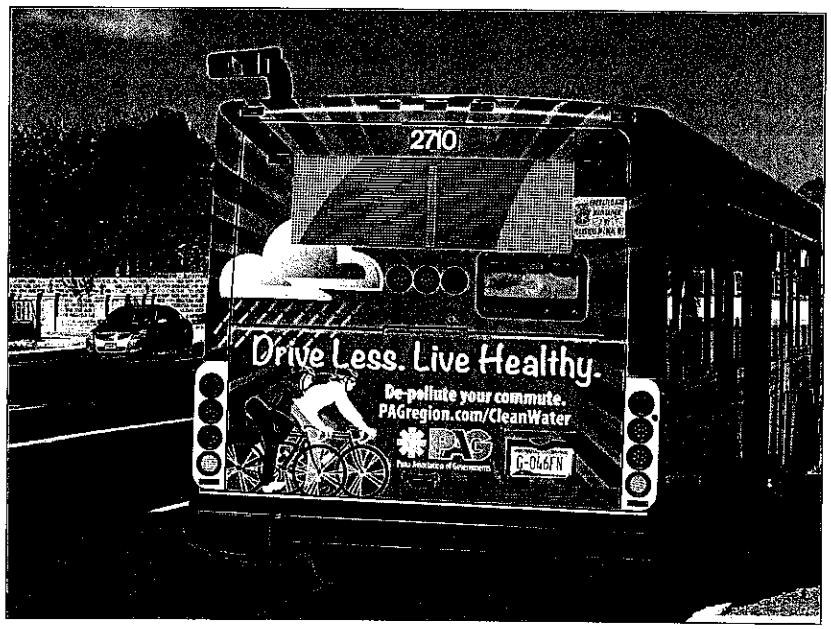
* (200.7); As, Ba, Be, Cd, Cr, Cu, Hg, Ni, Zn. (200.8); Ag, Pb, Sb, Se, Tl. Cyanide, Metals, VOCs, sVOCs, PCBs, Pesticides; report in ug/L

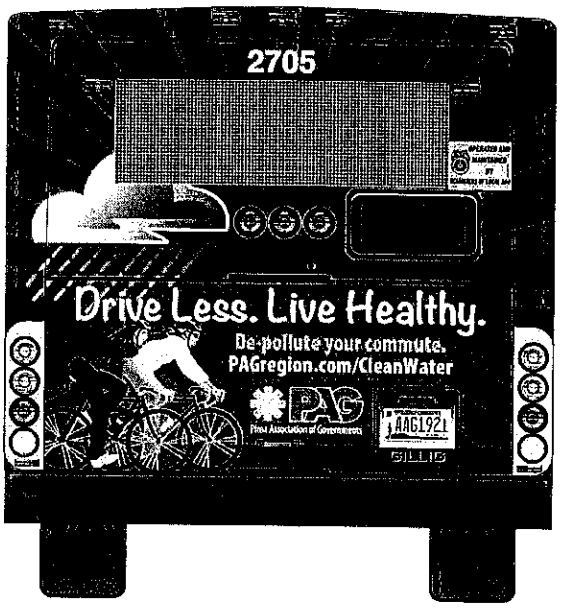
PIMA ASSOCIATION OF GOVERNMENTS OUTREACH ACTIVITIES

Appendix: FY 2014-15 Outreach Visuals Guide

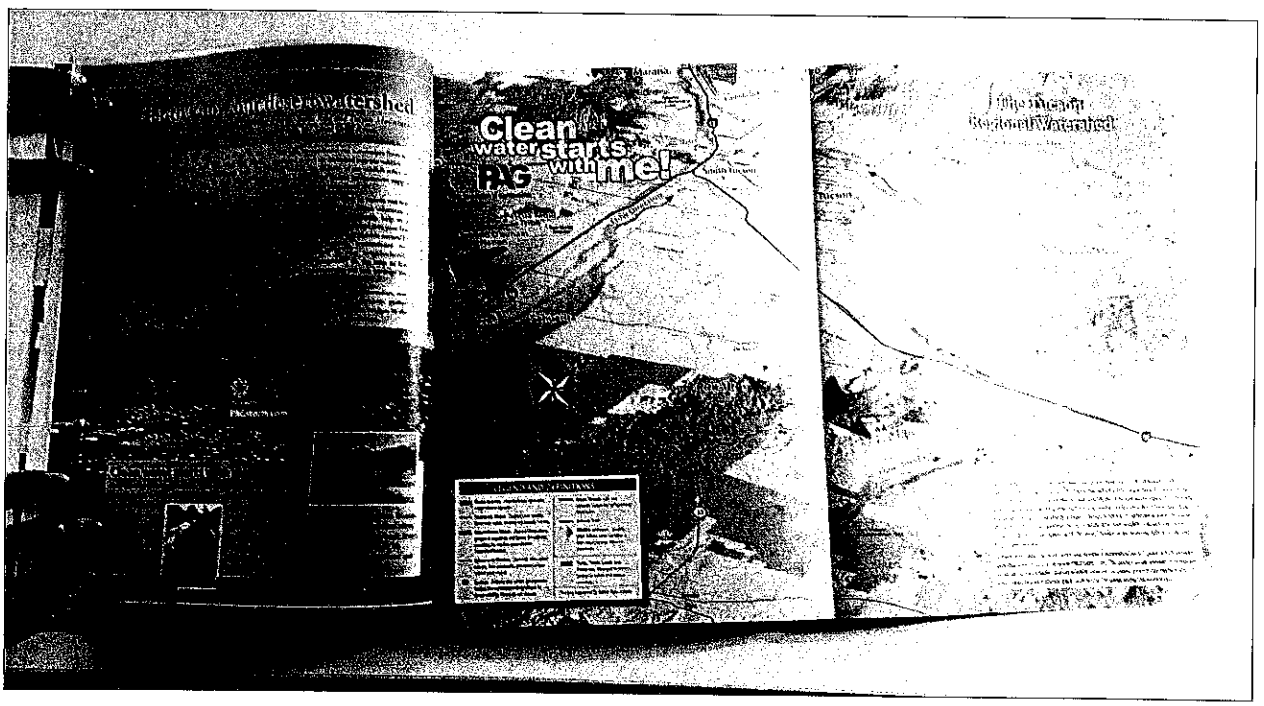
New Ads and Venues

Back of bus ads (Sun Tran buses) – new venue

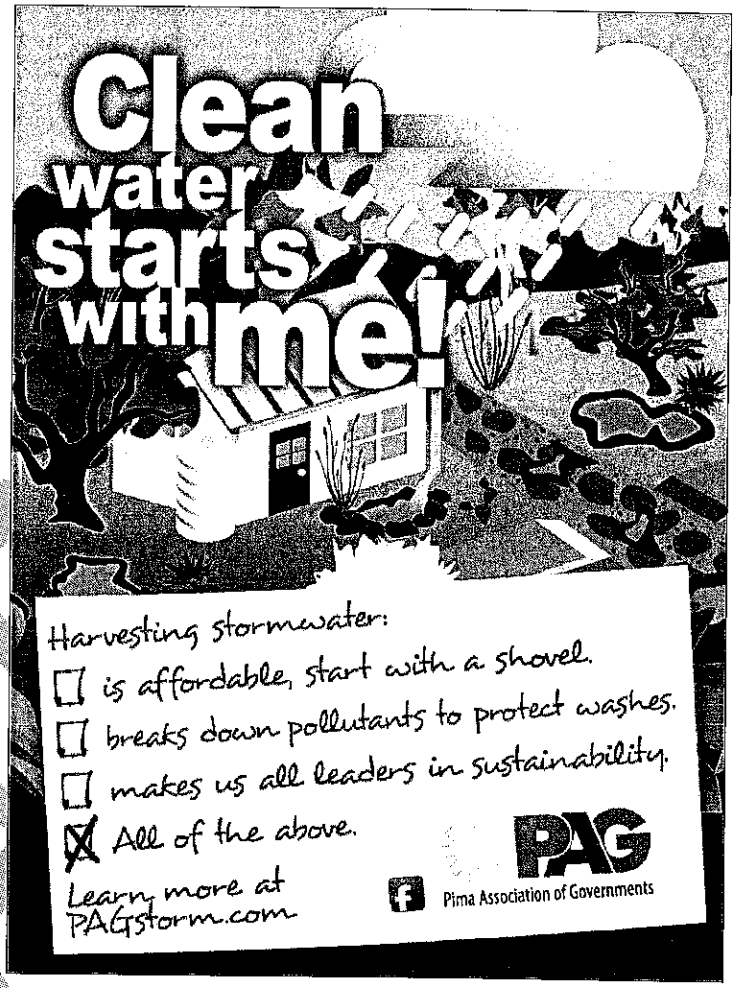


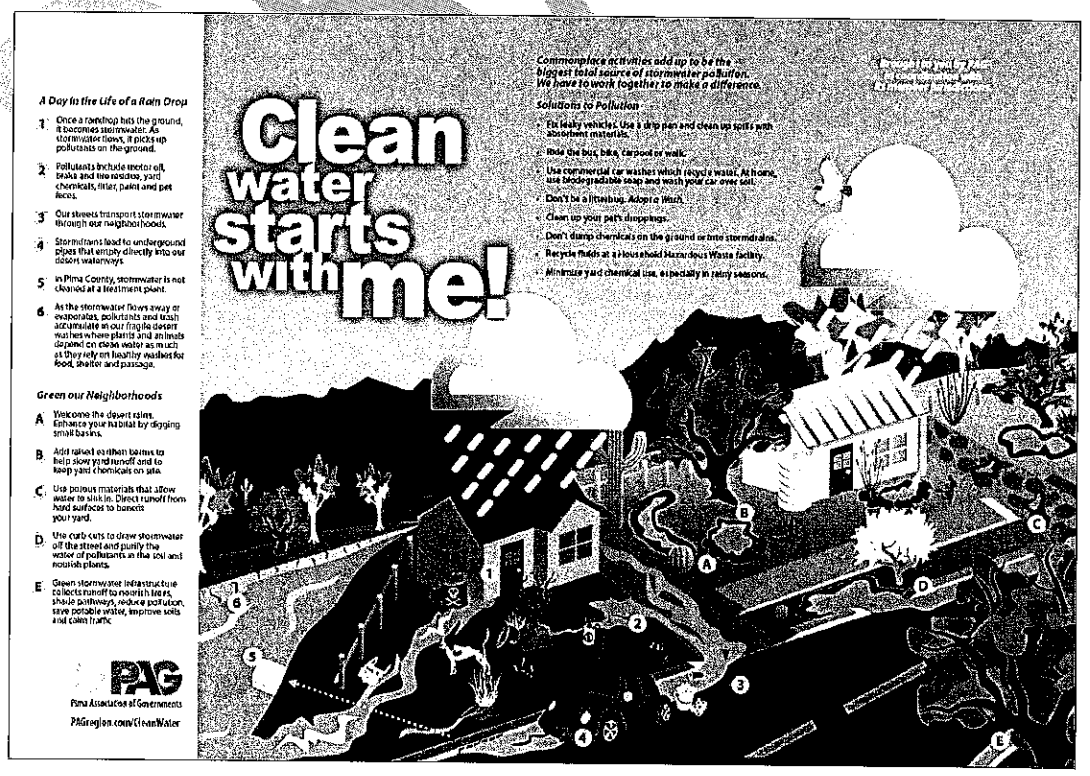


Edible Baja Arizona – new venue

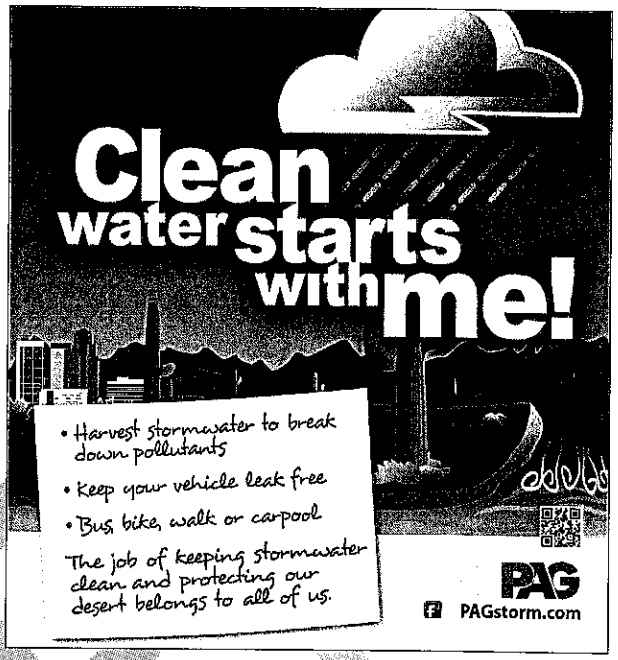


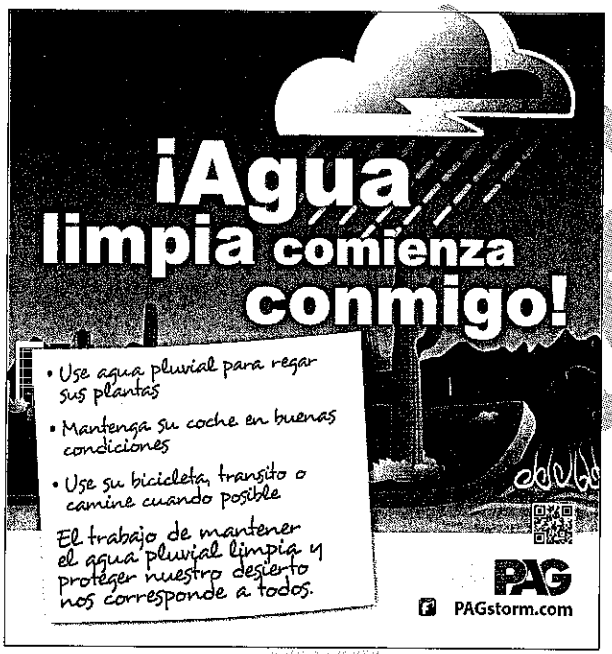
Edible Baja Arizona (continued)

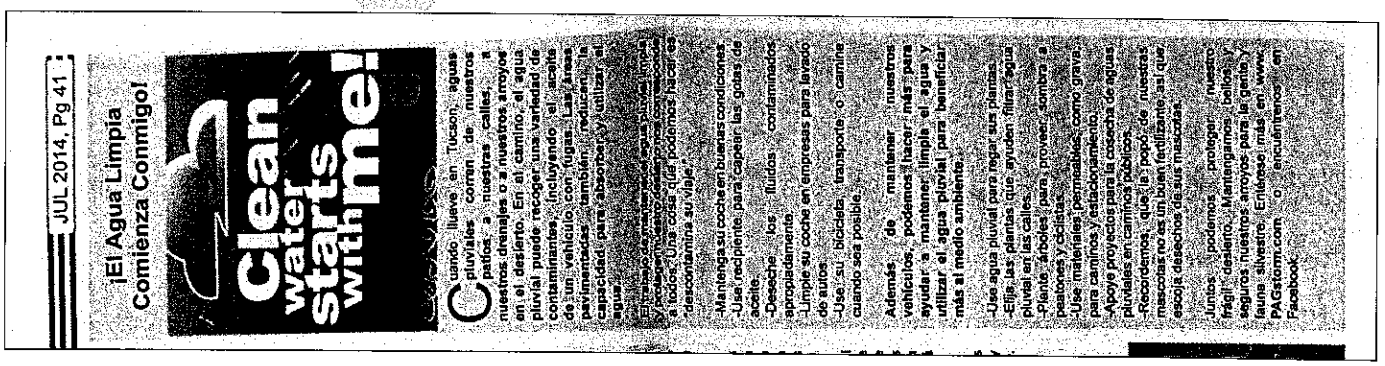




Arizona Bilingual Magazine (English and Spanish)






JUL 2014, Pg 41

¡El Agua Limpia Comienza Conmigo!

Clean water starts with me!

Cuando llueve en Tucson, aguas pluviales corren de nuestros patios a nuestras calles, a nuestros drenajes o a nuestros arroyos en el desierto. En el camino, el agua pluvial puede recoger una variedad de contaminantes, incluyendo el aceite de un vehículo con fugas. Las áreas pavimentadas también reducen la capacidad para absorber y utilizar el agua. El desarrollo puede aumentar la escorrentía de agua pluvial y transportar contaminantes a nuestros arroyos. Una cosa que podemos hacer es disminuirla su vida."

-Mantenga su coche en buenas condiciones
-Use recipiente para capsar las gotas de aceite
-Deseche los fluidos contaminados apropiadamente
-Limpie su coche en empresas para lavado de autos
-Use su bicicleta, transporte o camine cuando sea posible

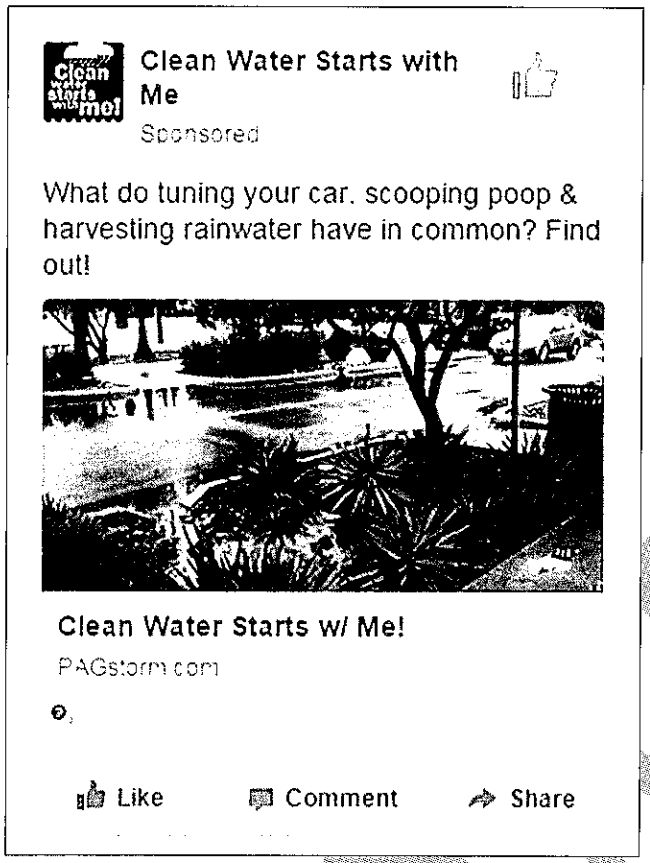
Además de mantener nuestros vehículos, podemos hacer más para ayudar a mantener limpio el agua y utilizar el agua pluvial para beneficiar más al medio ambiente.

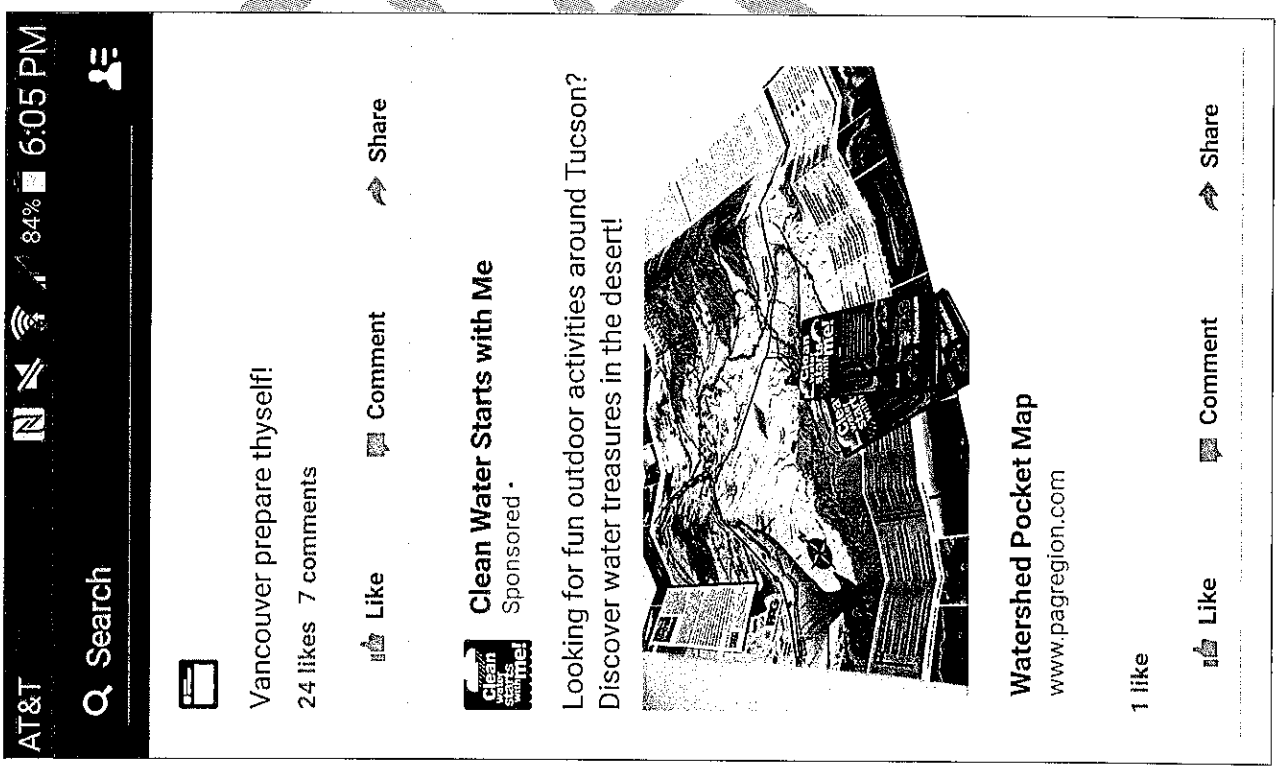
-Use agua pluvial para regar sus plantas
-Elija las plantas que ayuden filtrar agua pluvial en las calles, proveer sombra a peatones y ciclistas
-Plante árboles para proveer sombra a peatones y ciclistas
-Use materiales permeables, como grava, para caminos y estacionamiento
-Apoye proyectos para la cosecha de aguas pluviales en caminos públicos

Recordemos, que la "popó" de nuestras mascotas no es un bien fertilizante si que esoia desechos de sus mascotas

Juntos podemos proteger nuestro frágil desierto. Mantengamos bellos y seguros nuestros arroyos para la gente y la fauna silvestre. Enterese más en: www.PAGstorm.com o encuentranos en Facebook

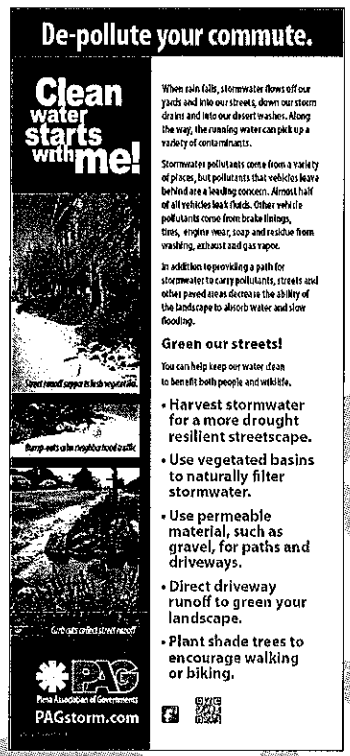
Facebook Ads

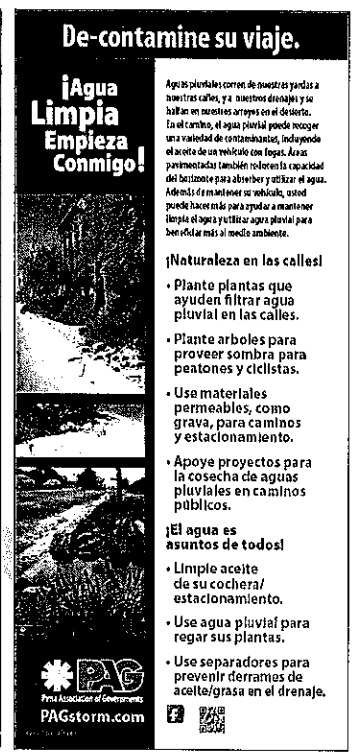




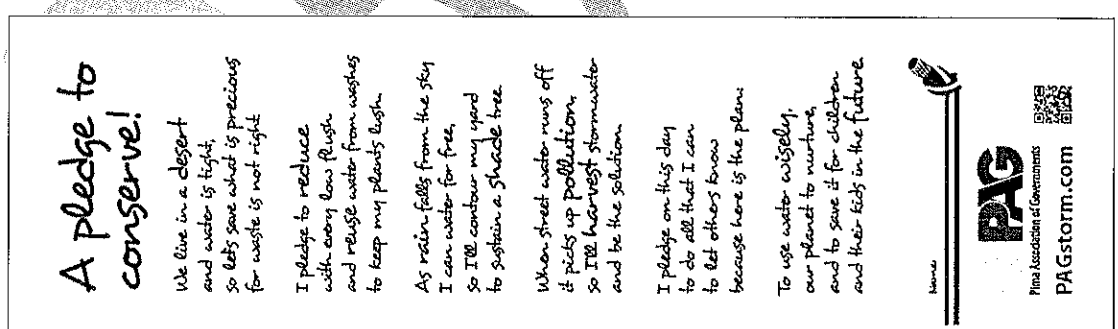
Newly Distributed Materials

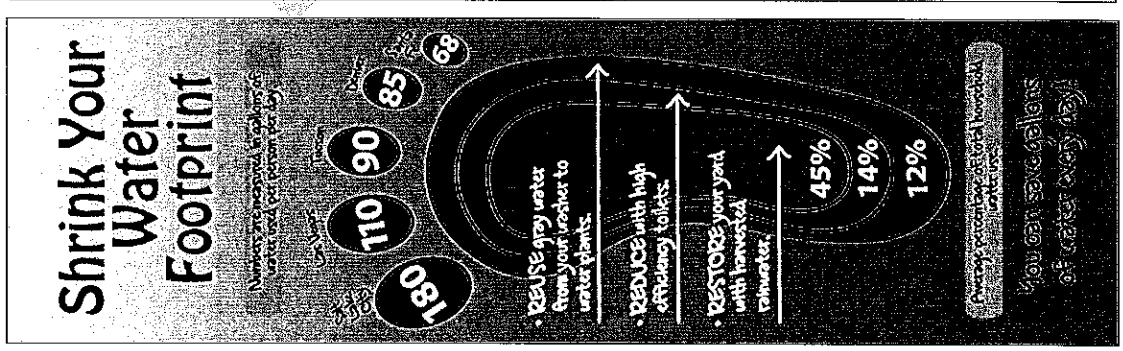
"De-pollute your commute" rack cards (English and Spanish)



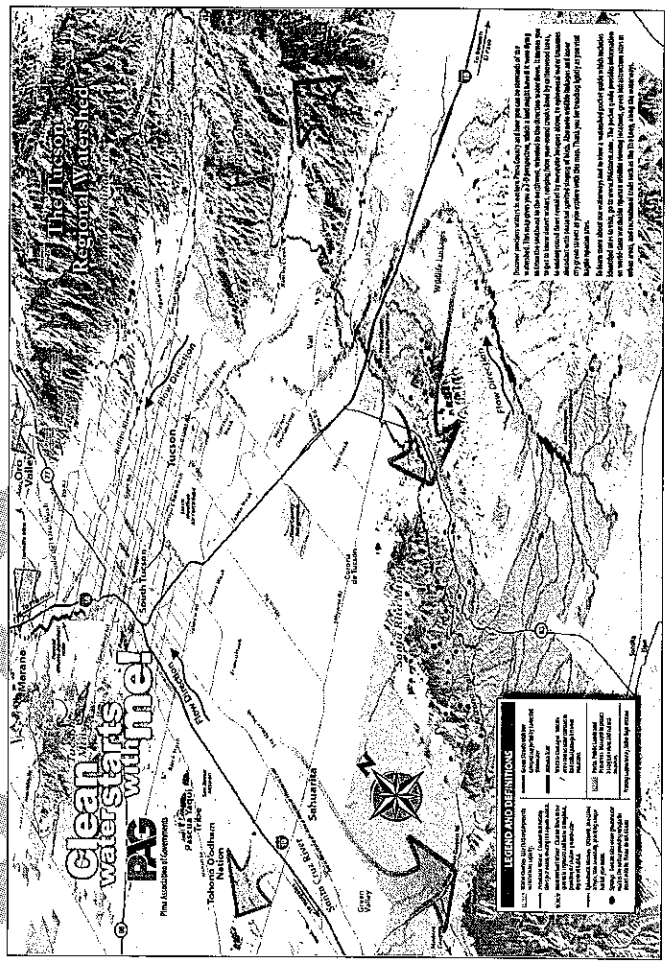


"Shrink Your Water Footprint" bookmarks



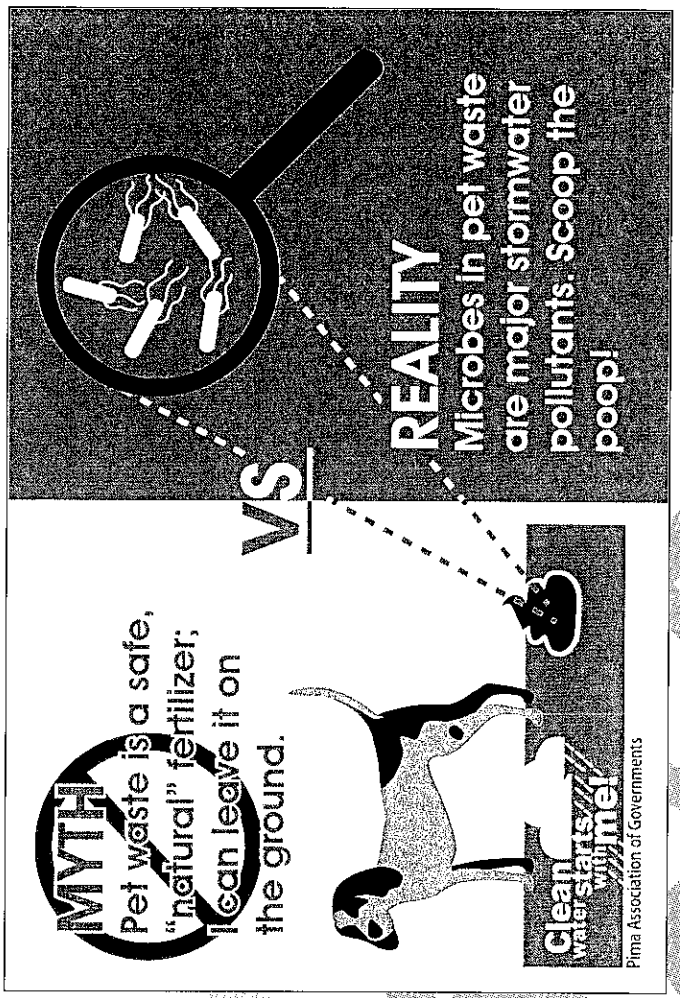


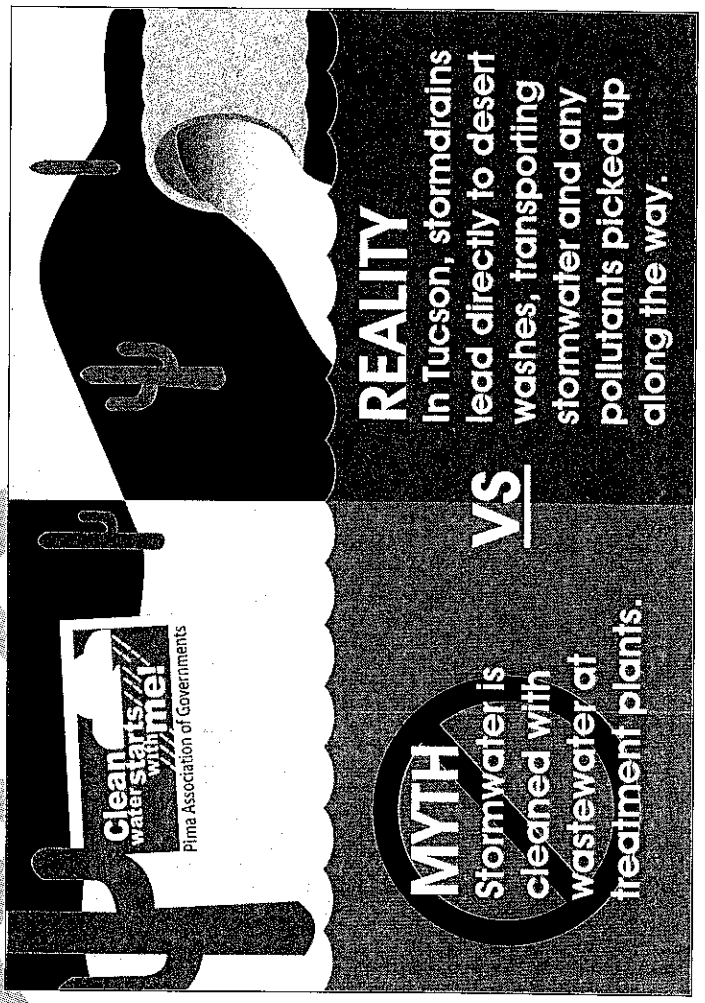
Watershed fold-out maps

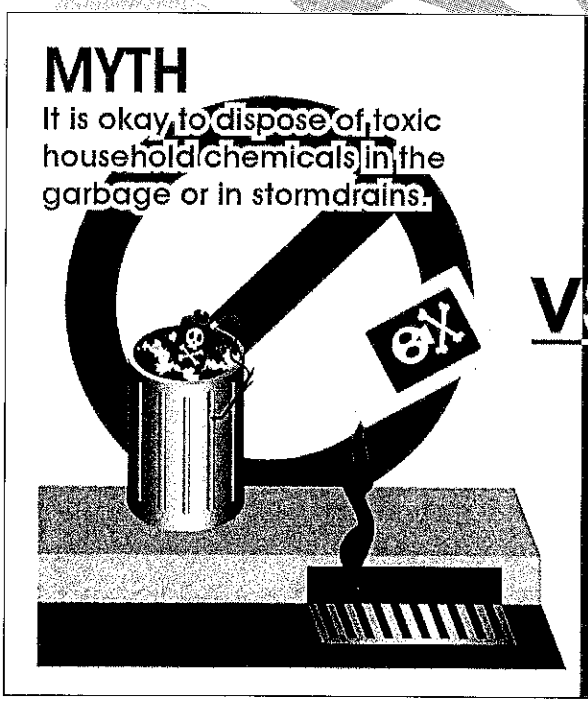


Spanish clean water posters

Myth-busting infographics (web and social media distribution)

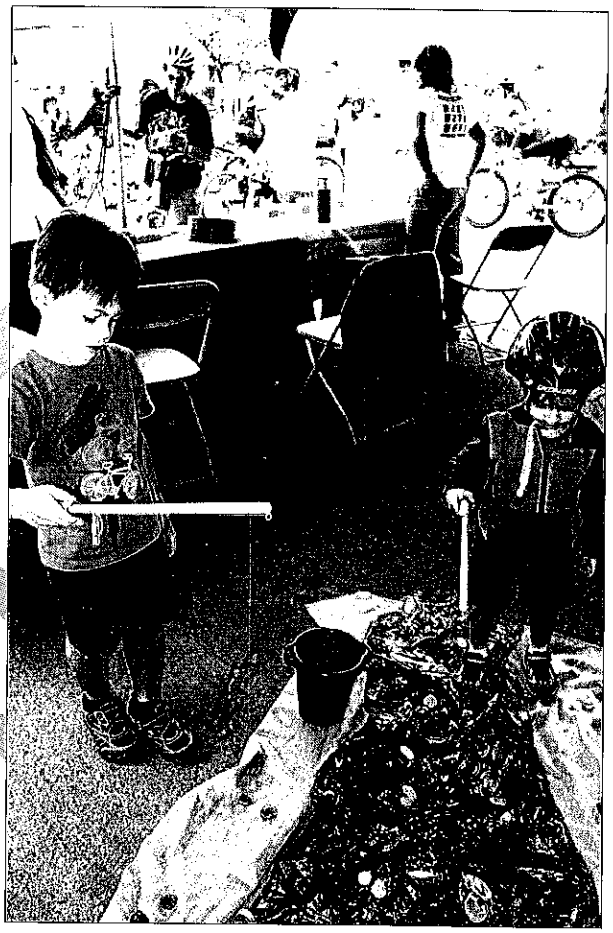






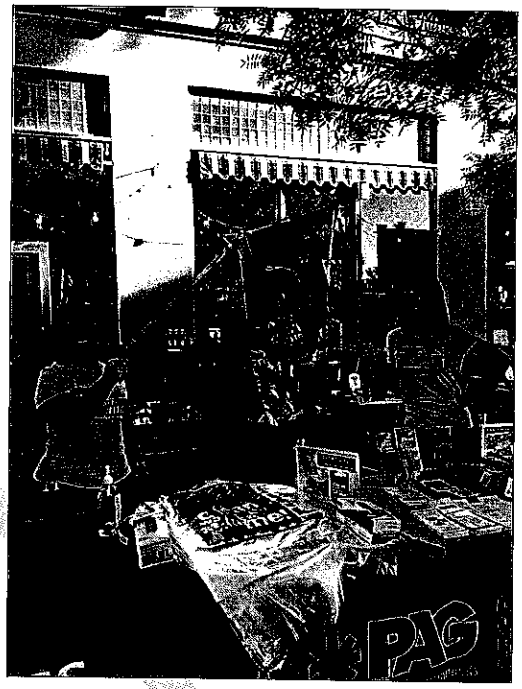
Outreach Events

Cyclovia Tucson, November 2014



Earth Day at Reid Park, April 2015

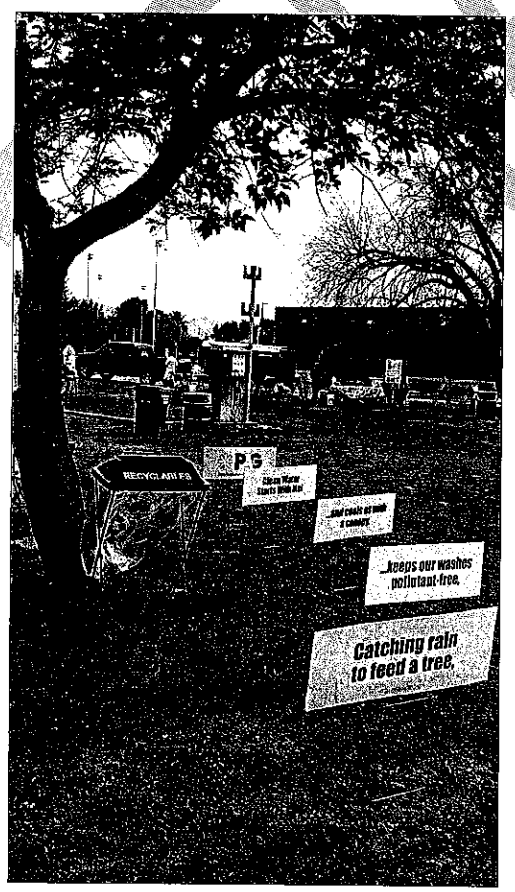
Meet Me at Maynards Trash Night, June 2015



Monsoon Safety Fair, June 2015

Living River Celebration, June 2015

Outreach event signage



Catching rain to feed a tree,

...keeps our washes pollutant-free,

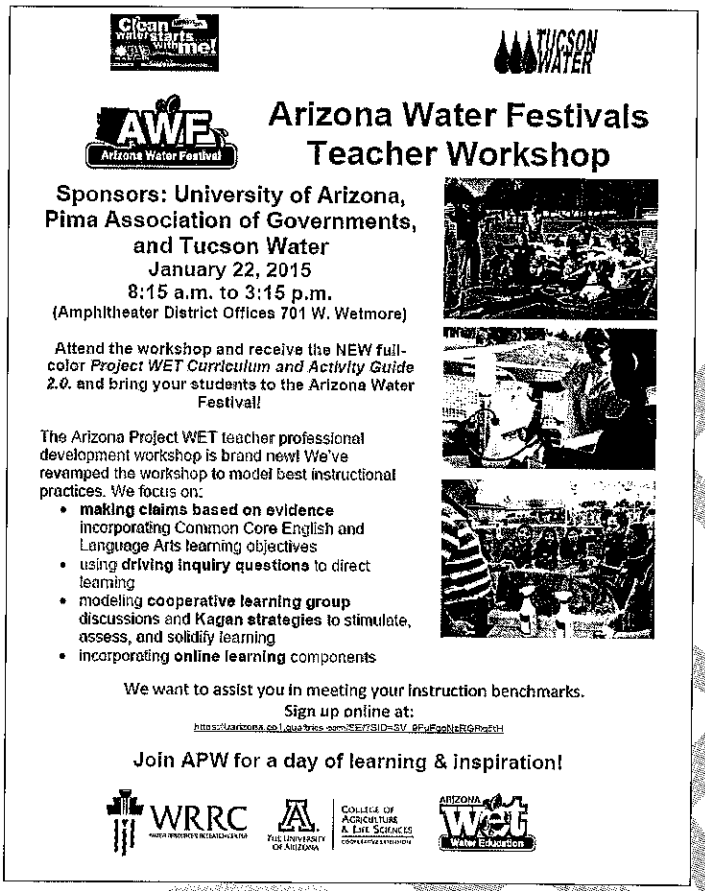
...and cools us with a canopy,

Clean Water Starts With Me!

PAG
Pima Association of Governments

Sponsorships and Professional Events

Arizona Project WET Sponsorship



Arizona Water Festivals Teacher Workshop

Sponsors: University of Arizona, Pima Association of Governments, and Tucson Water

January 22, 2015

8:15 a.m. to 3:15 p.m.

(Amphitheater District Offices 701 W. Wetmore)

Attend the workshop and receive the NEW full-color *Project WET Curriculum and Activity Guide 2.0*, and bring your students to the Arizona Water Festival!

The Arizona Project WET teacher professional development workshop is brand new! We've revamped the workshop to model best instructional practices. We focus on:

- **making claims based on evidence** incorporating Common Core English and Language Arts learning objectives
- using **driving inquiry questions** to direct learning
- modeling **cooperative learning group** discussions and **Kagan strategies** to stimulate, assess, and solidify learning
- incorporating **online learning** components

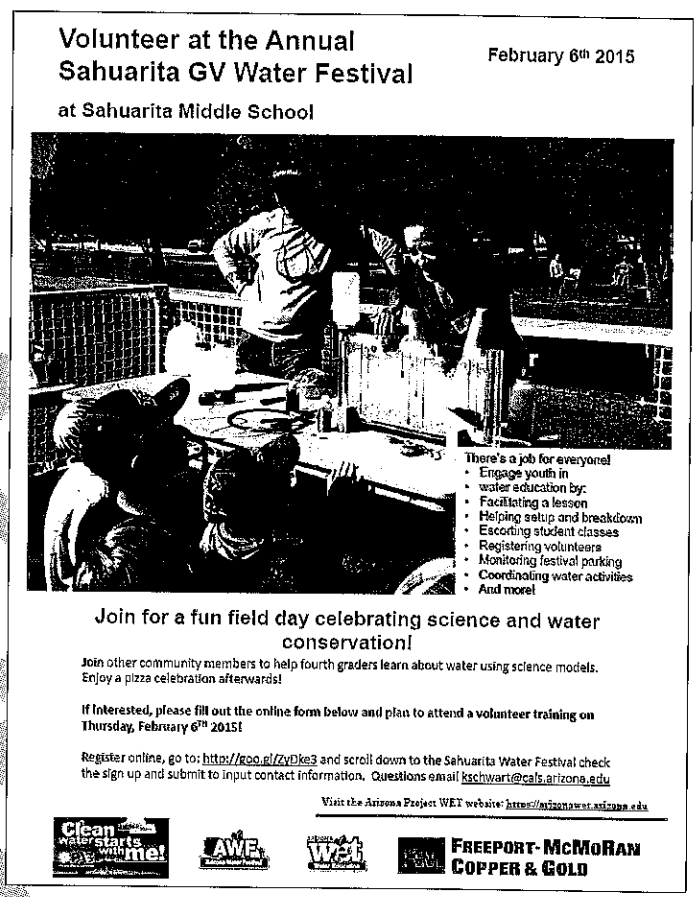
We want to assist you in meeting your instruction benchmarks.

Sign up online at:

https://arizona.qualtrics.com/SE/?SID=SV_8PuEqoNzRGRnzGH

Join APW for a day of learning & inspiration!

WRRC | The University of Arizona College of Agriculture & Life Sciences | Arizona WET Water Education



Volunteer at the Annual Sahuarita GV Water Festival

February 6th 2015

at Sahuarita Middle School

There's a job for everyone!

- Engage youth in water education by:
- Facilitating a lesson
- Helping setup and breakdown
- Escorting student classes
- Registering volunteers
- Monitoring festival parking
- Coordinating water activities
- And more!

Join for a fun field day celebrating science and water conservation!

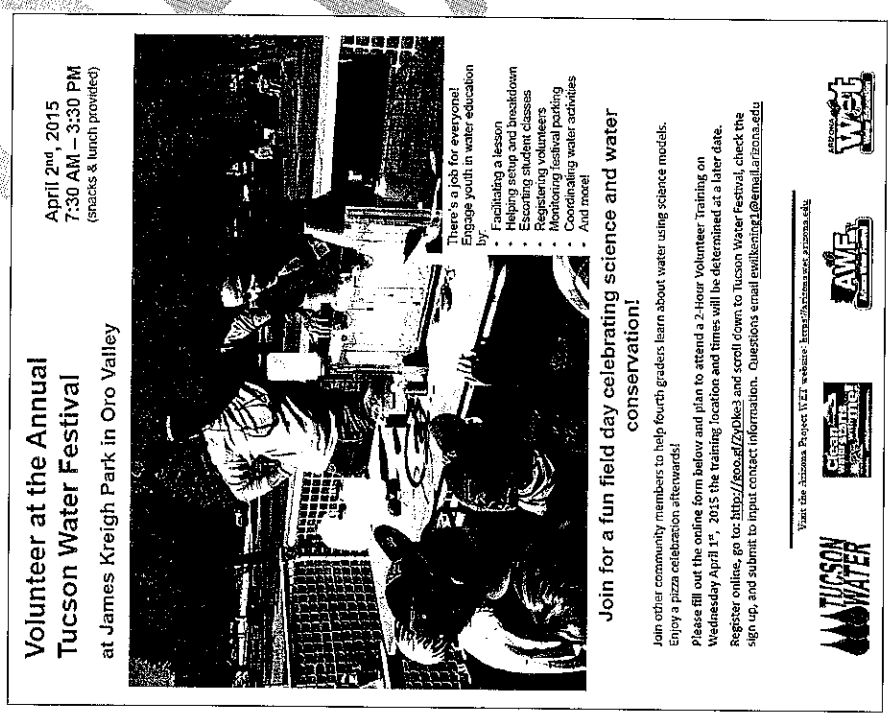
Join other community members to help fourth graders learn about water using science models. Enjoy a pizza celebration afterwards!

If interested, please fill out the online form below and plan to attend a volunteer training on Thursday, February 6th 2015!

Register online, go to: http://goo.gl/ZyDke3 and scroll down to the Sahuarita Water Festival check the sign up and submit to input contact information. Questions email kschwart@cals.arizona.edu

Visit the Arizona Project WET website: https://arizonawet.arizona.edu

Clean Water Starts with Me! | AWE Arizona Water Festival | Arizona WET Water Education | Freeport-McMoRan Copper & Gold



Volunteer at the Annual Tucson Water Festival

at James Kreigh Park in Oro Valley

April 2nd, 2015

7:30 AM – 3:30 PM

(snacks & lunch provided)

There's a job for everyone! Engage youth in water education by:

- Facilitating a lesson
- Helping setup and breakdown
- Escorting student classes
- Registering volunteers
- Monitoring festival parking
- Coordinating water activities
- And more!

Join for a fun field day celebrating science and water conservation!

Join other community members to help fourth graders learn about water using science models. Enjoy a pizza celebration afterwards!

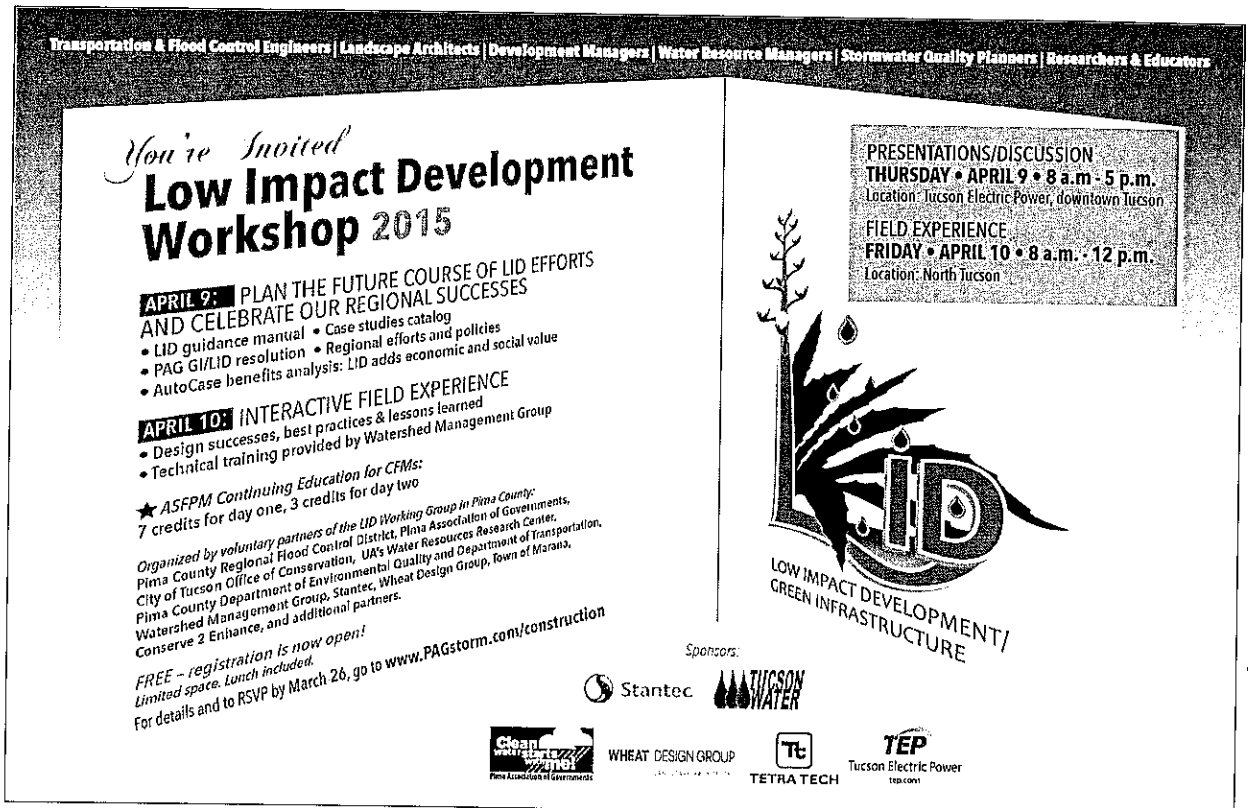
Please fill out the online form below and plan to attend a 2-Hour Volunteer Training on Wednesday April 1st, 2015 the training location and times will be determined at a later date.

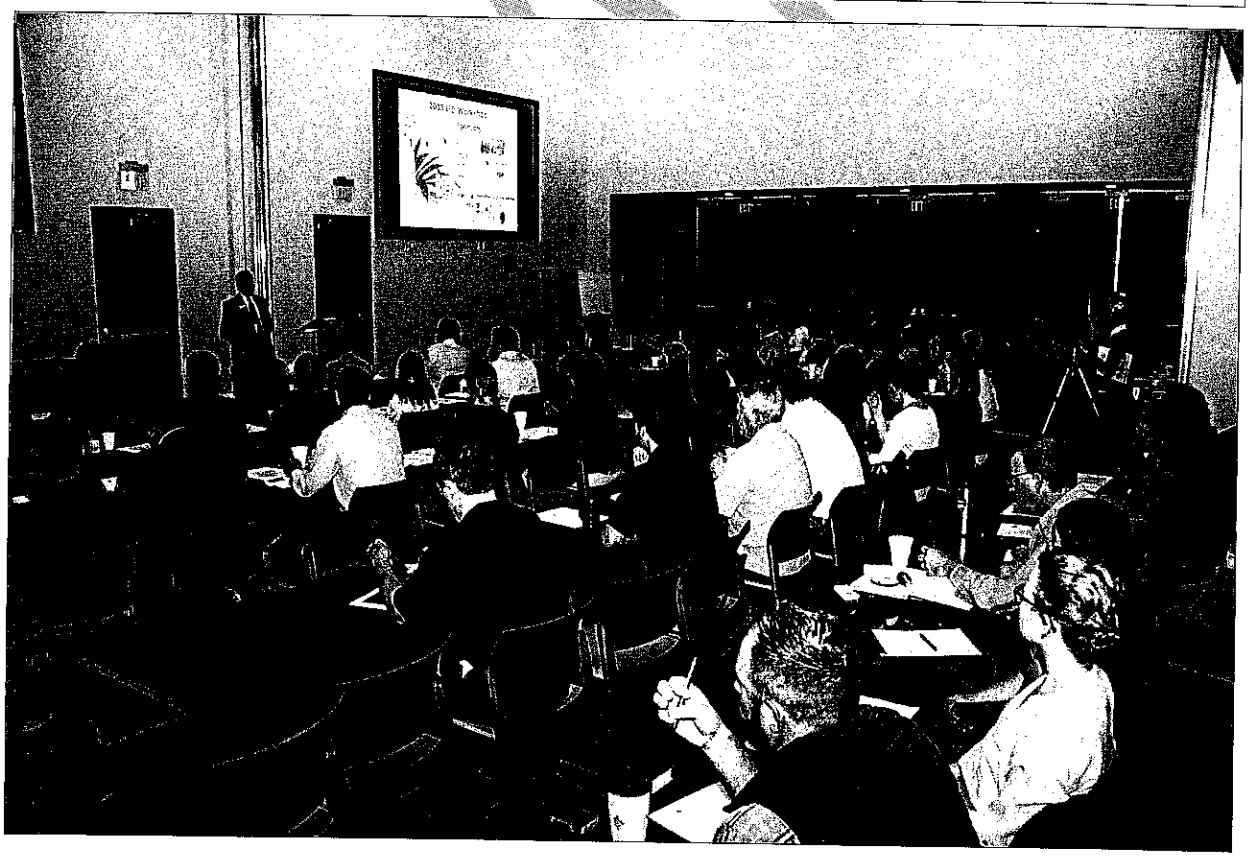
Register online, go to: http://goo.gl/ZyDke3 and scroll down to Tucson Water Festival, check the sign up, and submit to input contact information. Questions email ewilkening1@email.arizona.edu

Visit the Arizona Project WET website: http://arizonawet.arizona.edu

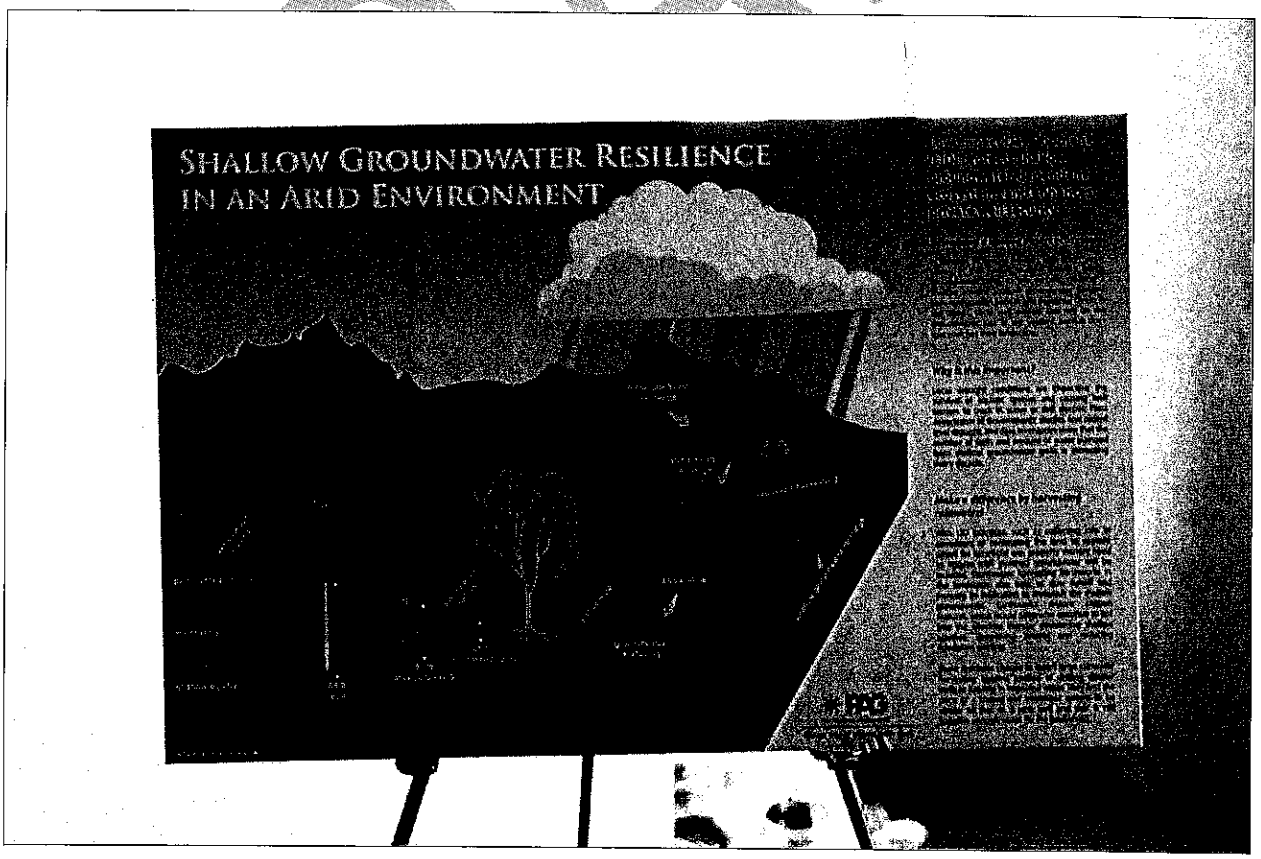
Tucson Water | Clean Water Starts with Me! | AWE Arizona Water Festival | Arizona WET Water Education

Low Impact Development Workshop



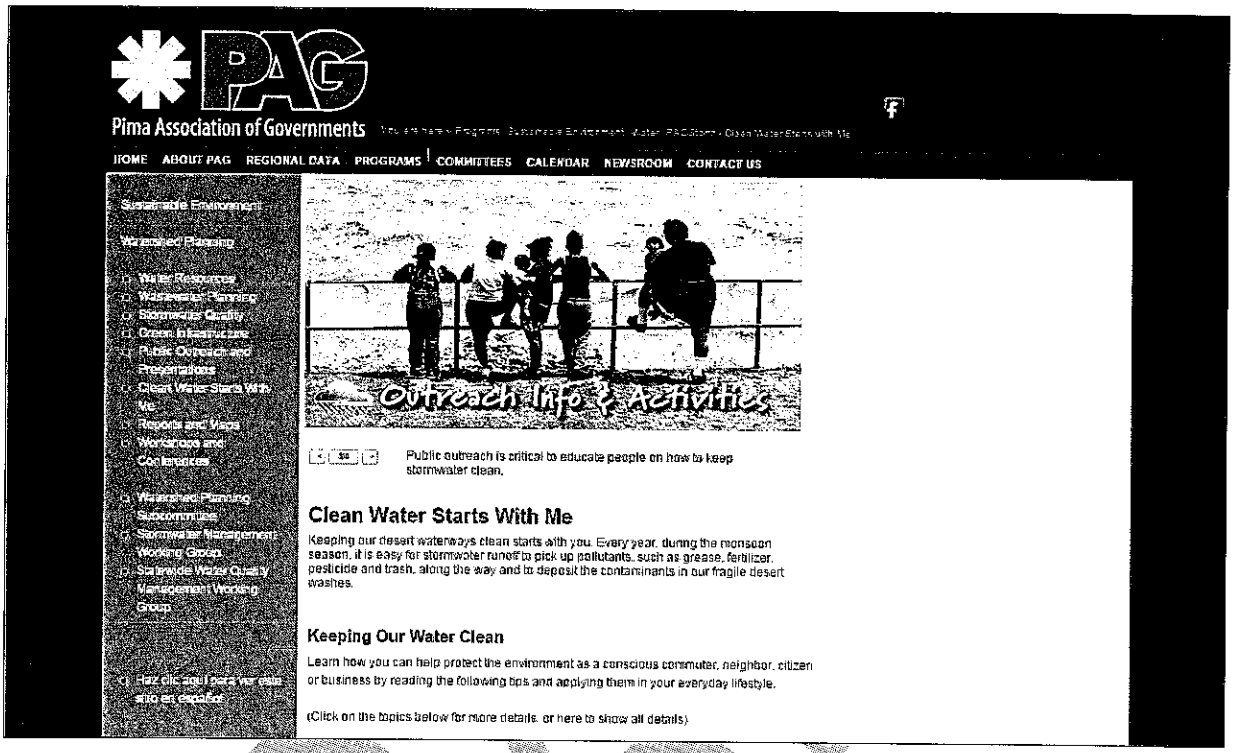


Conference Posters



Continuing Outreach

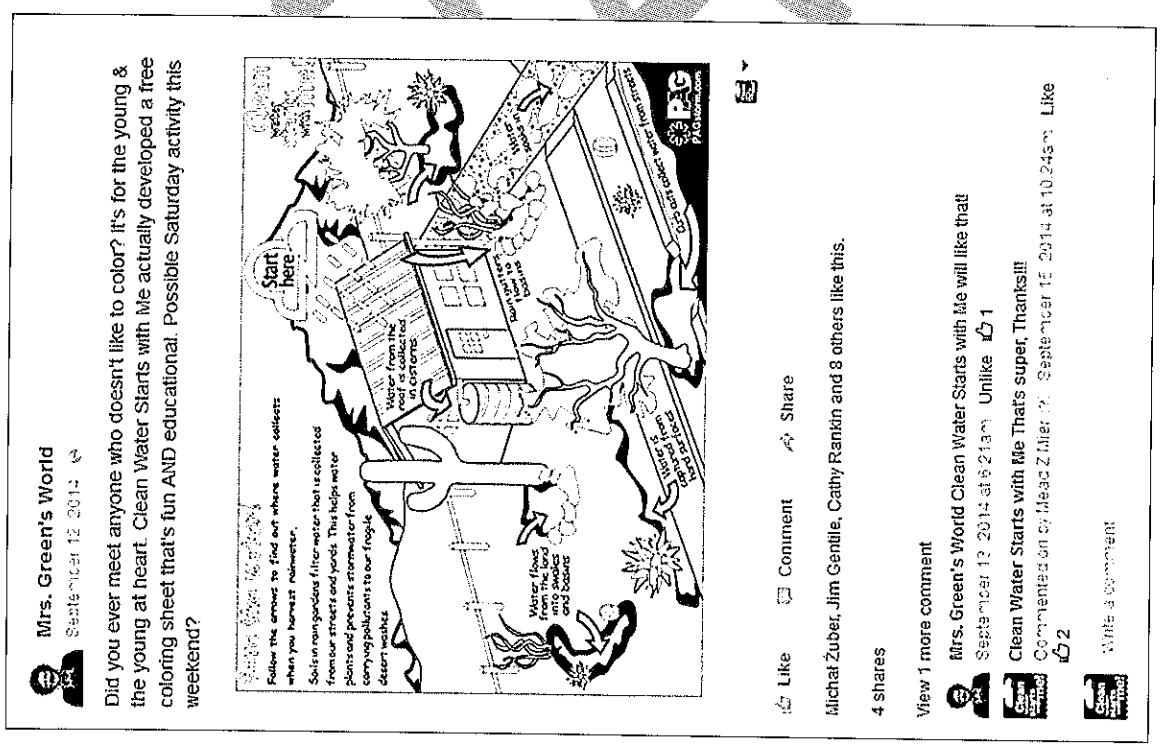
PAGstorm.com



Facebook Page

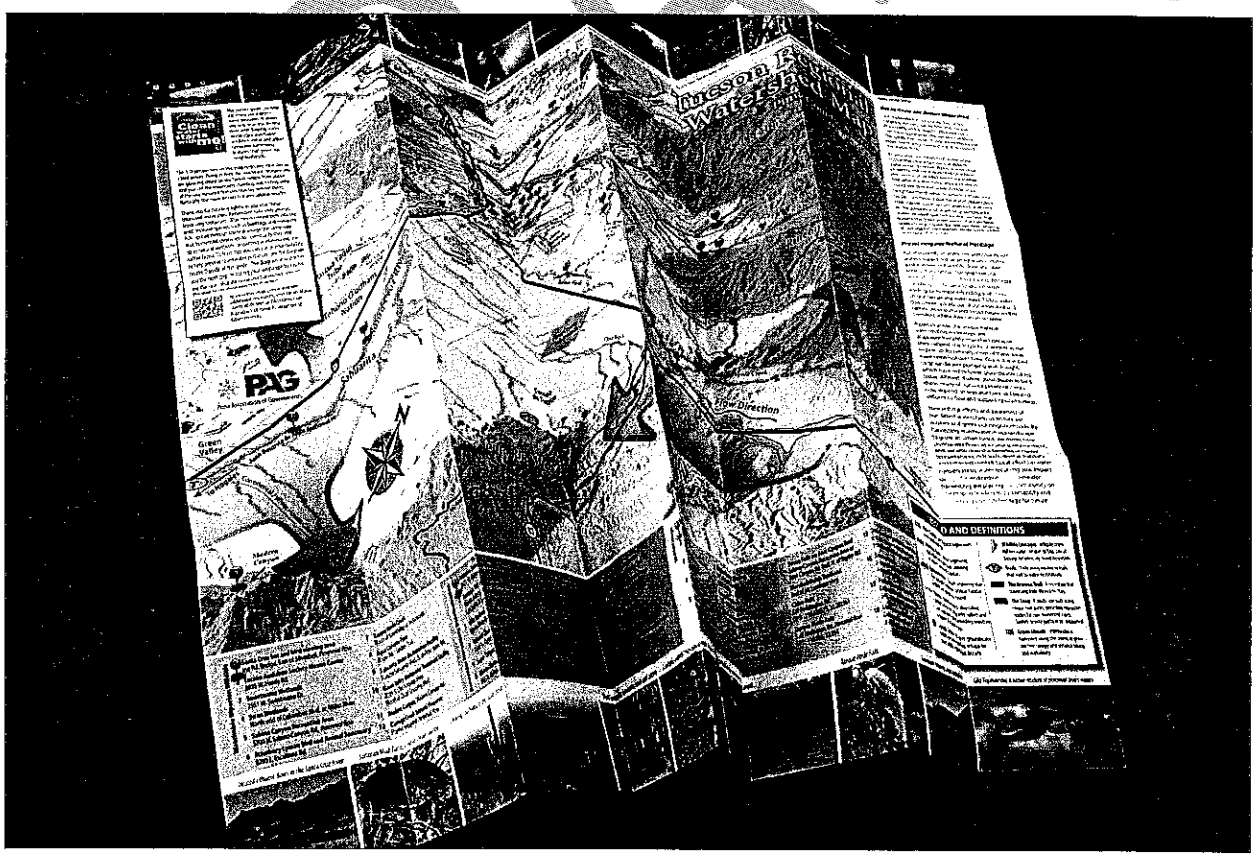
Mrs. Green Social Media & Blog

www.mrsgreensworld.com/2014/08/06/healthy-washes-healthy-children-healthy-you/

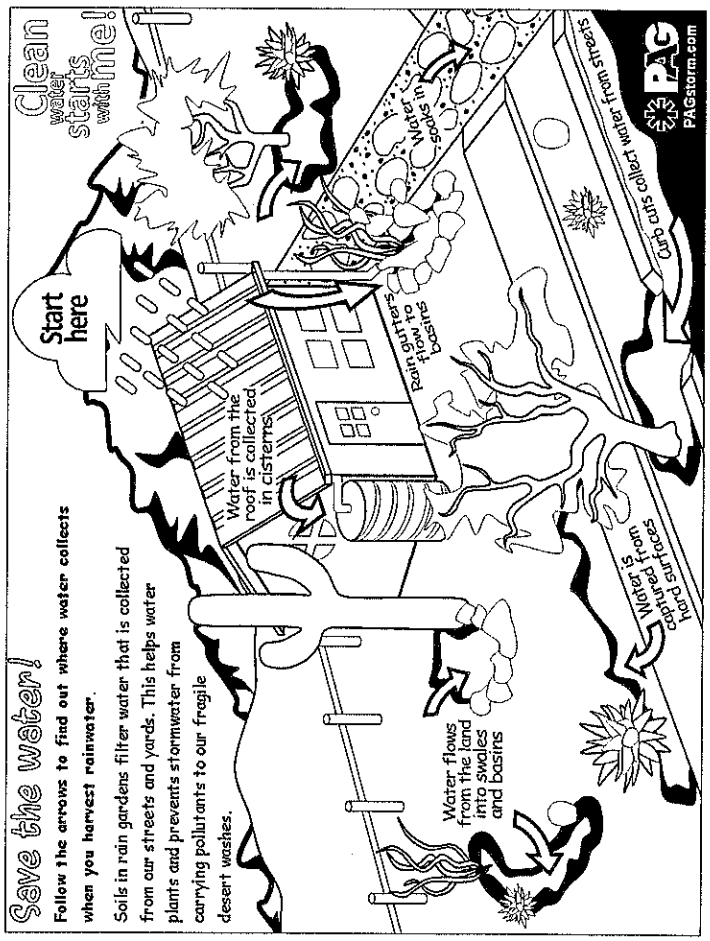


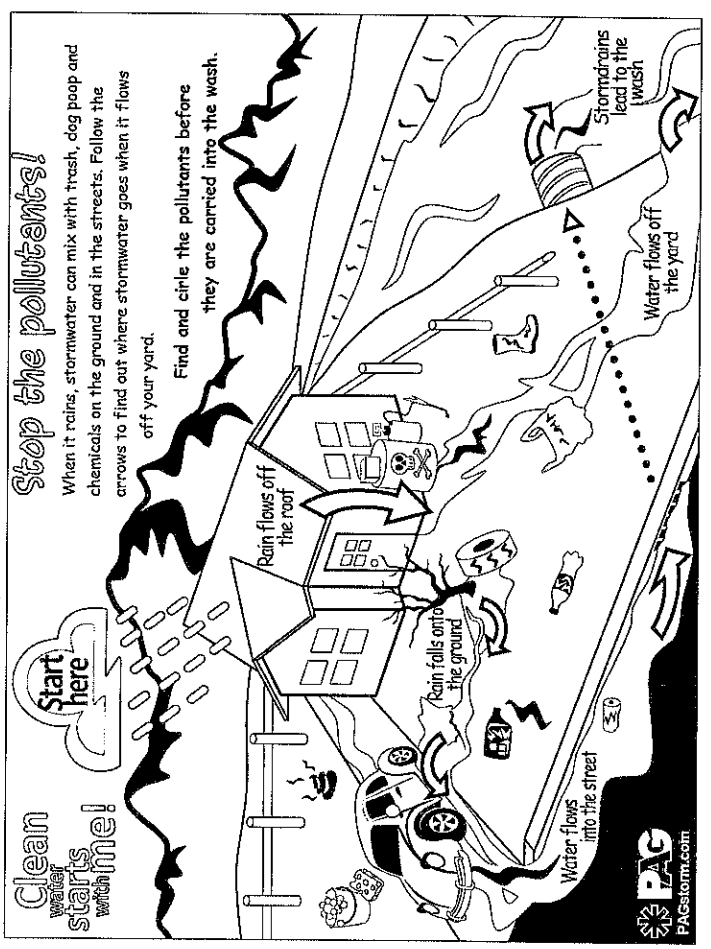
www.facebook.com/MrsGreensWorld

Watershed Pocket Guide

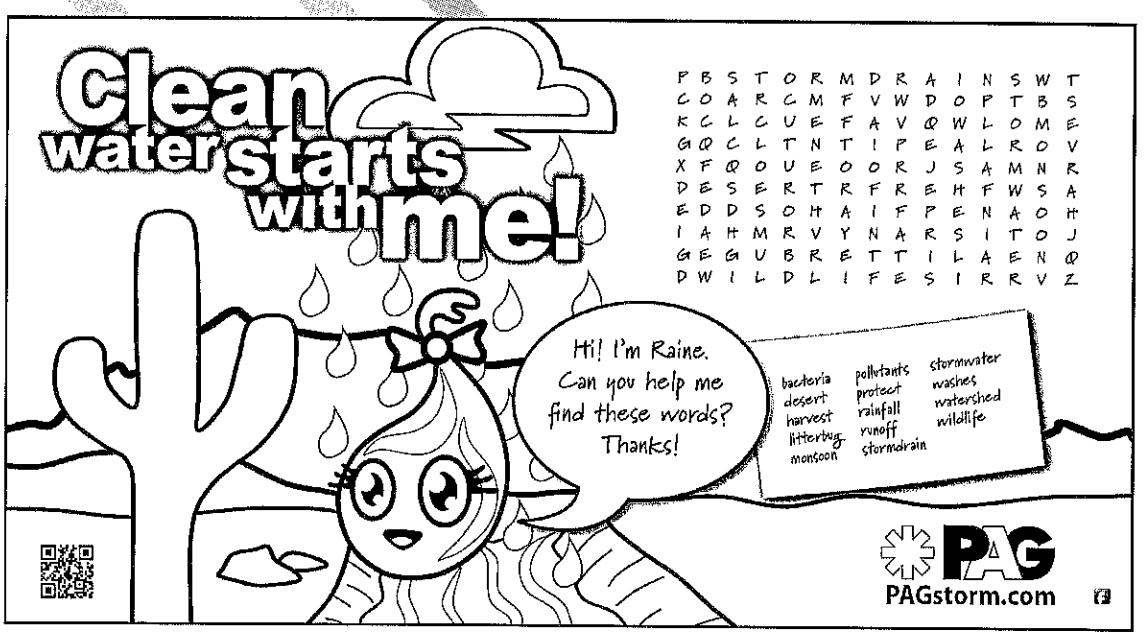


Coloring sheets

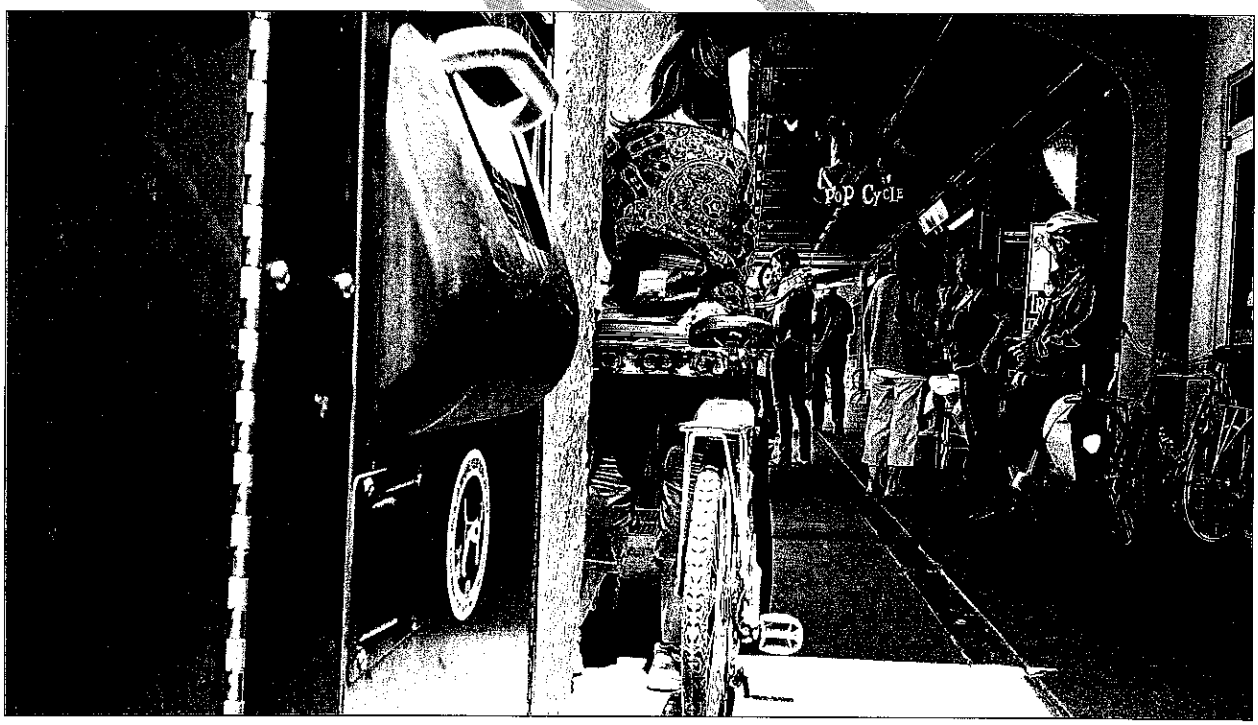




Word searches



"Scoop the Poop" Stickers



Trash Bags

Clean
water
starts
with me!
PAGstorm.com
TUCSON
CLEAN &
BEAUTIFUL INC.
PAG
In cooperation with PAG member jurisdictions.

Clean Air/Water Sunshades

ACTIVE PRACTICE GUIDELINES FOR STORMWATER INFRASTRUCTURE UPDATES

CITY OF TUCSON, ARIZONA
DEPARTMENT OF TRANSPORTATION

ENGINEERING DIVISION
ACTIVE PRACTICES GUIDELINES

PREPARED BY: _____ EFFECTIVE: _____

APPROVED BY: _____ DATE: _____
City Engineer

SUBJECT: STORM WATER INFRASTRUCTURE UPDATES

A. PURPOSE:
The purpose of this APG is to develop a procedure whereby all new infrastructure inventory is added to current stormwater infrastructure maps and to describe the department's effort to meet the City's obligation to the EPA.

B. GENERAL
The Tucson Department of Transportation has been tasked with the responsibility to administer the Stormwater Quality Program for the City of Tucson. In order to comply with EPA requirements, a reorganization of sections within the Engineering Division has been made to provide assistance to complete all necessary tasks.

C. DISCUSSION
The City of Tucson had a nominal staff to administer the Stormwater Quality Program. This included adding the stormwater infrastructure information to current maps. The two man inspection staff was tasked to perform all the other inspections required by the program. The department has analyzed the components to the program and determined the manpower needs. This APG will establish a procedure that will be folded into the construction inspection and closeout process typically followed on capital improvement proejcts.

D. DIVISION REORGANIZATION
The City of Tucson had a nominal staff of two inspectors to perform the stormwater quality inspections. Inspections included construction stormwater pollution protection, illicit discharge investigations, outfall inspections, commercial/industrial inspection, and stormwater quality sampling. The Department's Field Engineering Section has since established a cross training program for all construction inspection staff. This training will allow supervisors to distribute the inspection components of the program to more inspectors and make these reporting responsibilities manageable to achieve. This will still require the Environmental Inspectors (now classified as Construction Inspectors) to continue their industrial/commercial assignments, but add additional cross trained personnel to perform

illicit discharge, facility and outfall inspections, and construction stormwater pollution protection inspections. Stormwater quality sampling is still a department responsibility and may be contracted out to reduce health risks.

E. FACILTY INVENTORY UPDATE

The department has an inventory of all washes and storm drain facilities. New facilities are sometimes added or upgraded with the widening of existing roadways. The actual constructed information is shown on the plans in an as-built format.

1) The on-site inspector assigned to monitor stormwater pollution protection requirements for the project shall locate all drainage infrastructure inventory by adding longitude and latitude information to the as-built plans.
2) The same project inspector shall also compile a list of all structures, grates, manholes, pipes, and catch basins with longitude and latitude location information and provide the list to the GIS Map Technician.
3) The Program Manager shall use this information to update the City's drainage infrastructure inventory.

F. INVENTORY INSPECTION

The Field Engineering inspectors have assigned personnel to inspect construction excavations in the ROW. All contractors must follow best management practices regarding stormwater quality requirements. While at the location for the Excavation Permit inspection, the Inspector shall inspect drainage facilities adjacent to and potentially affected by the disturbance of earth. The inspection information shall be logged in the department's S drive under the following file folder:

S:engineering/stormwater/ inventory/inspection/.

The location, the date, time, and condition shall be recorded in the Excell Spreadsheet containing the respective infrastructure information. The Program Manager shall develop a spreadsheet that contains the current drainage infrastructure inventory.

Inspectors shall perform seasonal inspections on infrastructure programmed for inspection. The schedule for inspection shall be developed by the Program Manager. The requests shall be given to the Inspection Supervisors to include in daily/weekly inspection assignments.

Inspection reports shall include the date , time, location, the condition, and the action needed.

The inspector shall contact the respective Streets Department Area Supervisor to schedule any repair or maintenance discovered by the inspection. The program shall identify the type of improvement/infrastructure. The goal is to inspect all washes each year and underground infrastructure every two years.

G. REPORTING

The program manager shall use the inspection and inventory to update the City's yearly report.