Springdale Water Utilities

526 Oak Avenue P.O. Box 769 Springdale, Arkansas 72765-0769 (479) 751-5751

Enforcement Branch
Arkansas Dept. of Environmental Quality
5301 Northshore Dr.
North Little Rock, AR 72118-5317

RE: NPDES Permit No. AR0022063
AFIN #72-00003
Springdale, AR

April 15, 2016

Dear Sir or Madame:

Enclosed please find the results of first quarter Ceriodaphnia dubia and Pimephales promelas analyses, and first quarter Table III analyses conducted on Springdale Water Utilities' wastewater treatment facility influent, effluent, and sludge (belt press influent) for 2016. These analyses are required by our NPDES Permit.

Please feel free to call Ms. Jennifer Enos at (479)756-3657 if you have any questions concerning these analyses.

Sincerely yours,

Heath A. Ward
Executive Director

JEE/jee
Enclosures
Cc: Jennifer Enos, SWU
Mary Barnett, ADEQ
File

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

March 21, 2016

Brad Stewart
Springdale Water Utilities
2910 Silent Grove Road
Springdale, AR 72762

RE: Project: CHRONIC WET TEST
Pace Project No.: 60214378

Dear Brad Stewart:
Enclosed are the analytical results for sample(s) received by the laboratory on March 08, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: CHRONIC WET TEST
Pace Project No.: 60214378

Southeast Kansas Certification IDs
808 West McKay, Frontenac, KS 66763
Arkansas Certification #: 13-012-0
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Oklahoma Certification #: 2012-051
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Minnesota Certification #: 495004

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: CHRONIC WET TEST
Pace Project No.: 60214378

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60214378001	**SWU EFFLUENT**	Water	03/07/16 08:00	03/08/16 08:00

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Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: CHRONIC WET TEST
Pace Project No.: 60214378

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60214378001	**SWU EFFLUENT**	EPA 821/R-02/013	TDH	1	PASI-SE

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: CHRONIC WET TEST
Pace Project No.: 60214378

Sample: SWU EFFLUENT **Lab ID: 60214378001** Collected: 03/07/16 08:00 Received: 03/08/16 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chronic Toxicity	Analytical Method: EPA 821/R-02/013							
Toxicity, Chronic	**Complete**		1.0	1		03/08/16 14:00		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: CHRONIC WET TEST
Pace Project No.: 60214378

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-SE Pace Analytical Services - SE Kansas

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Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CHRONIC WET TEST
Pace Project No.: 60214378

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60214378001	**SWU EFFLUENT**	EPA 821/R-02/013	BIO/1886		

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Sample Condition Upon Receipt

WO#: 60214378

60214378

Client Name: Springdale water utilities

AFT

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☐ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: T-111

Type of Ice: (Wet) Blue None ☒ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 3/8/16 EC 8:00

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC: WT Includes date/time/ID/analyses Matrix:	☒Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☒N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:
Additional labels attached to 5035A vials in the field?	☐Yes ☐No ☒N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Springdale Water Utilities	Report To:	Brad Stewart	Attention:	BRAD STEWART
Address:	2910 Silent Grove Road	Copy To:		Company Name:	SPRINGDALE WATER UTILITIES
	Springdale, AR 72762			Address:	P.O. Box 769. SPRINGDALE AR.
Email To:	bstewart@springdalewater.com	Purchase Order No.:	001902 00	Pace Quote Reference:	
Phone:	479-756-3657 Fax:	Project Name:	Chronic WET Test	Pace Project Manager:	Alice Flanagan
Requested Due Date/TAT:	10 bus days	Project Number:		Pace Profile #:	9250, 1

REGULATORY AGENCY: ☑ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: AR

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chronic WET Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SWU EFFLUENT	WW	C	03/06/16	0800	03/07/16	0800	5°	1	1								X		N	16021437801
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	SWU	3/7/16	1545	Ethan Cistagno PACE	3/8/16	8:00	2.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brad Stewart

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/7/16

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Sample Condition Upon Receipt

WO#: 60214378

60214378

Client Name: Springdale

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Optional
Proj Due Date:
Proj Name:

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: T-111

Cooler Temperature: 3.0

Type of Ice: (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 3/10/16 MB 0800

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC:	☒Yes ☐No ☐N/A	
-Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☒No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☒N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	
		16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:
Additional labels attached to 5035A vials in the field?	☐Yes ☐No ☒N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Springdale Water Utilities	Report To:	Brad Stewart	Attention:	BRAD STEWART
Address:	2910 Silent Grove Road	Copy To:		Company Name:	SPRINGDALE WATER UTILITIES
	Springdale, AR 72762			Address:	P.O. Box 769 Springdale AR.
Email To:	bstewart@springdalewater.com	Purchase Order No.:	0019012 00	Pace Quote Reference:	
Phone:	479-756-3657 Fax:	Project Name:	Chronic WET Test	Pace Project Manager:	Alice Flanagan
Requested Due Date/TAT:	10 bus days	Project Number:		Pace Profile #:	9250, 1

REGULATORY AGENCY: ☑ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: AR

Requested Analysis Filtered (Y/N)

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chronic WET Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SWCA EFFLUENT	SW	C	03/09/16	0800	03/09/16	0800	5°C	1	1								X	X	N	6406-001
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Lee 214378

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Mike Phillips / SWCA	03/09/16	1415	[signature]	3/10/16	0800	3.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MIKE Phillips

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/09/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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REFERENCE #60214378

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

March 17, 2016

Brad Stewart
Springdale Water Utilities
2910 Silent Grove Road
Springdale, AR 72762

Re: Lab Project Number: 60214378
Client Project ID: Wet Test

Dear:

Enclosed are the analytical results for sample(s) received by the laboratory. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any question concerning this report, please feel free to contact me.

Sincerely,

Tim Harrell
Tim.Harrell@pacelabs.com
Technical Director

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical®
www.pacelabs.com

REFERENCE #60214378

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

CHRONIC TOXICITY TEST FOR SPRINGDALE WATER UTILITIES

PERMIT # AR 0021768
AFIN # 72-00003

PERFORMED ON:

Pimephales promelas

and

Ceriodaphnia dubia

PREPARED FOR:

Springdale Water Utilities
Brad Stewart
2910 Silent Grove Road
Springdale, AR 72762
479-756-3657

PREPARED BY:
Pace Analytical Services, Inc.
808 West McKay
Frontenac, KS 66763
1-620-235-0003

March 17, 2016

REPORT OF LABORATORY ANALYSIS

nelac

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

TABLE OF CONTENTS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

SUMMARY

A Chronic Whole Effluent Toxicity Test using the 7-day chronic fathead minnows (Pimephales promelas), static renewal larval survival and growth test, and three brood 7-day chronic Cladoceran (Ceriodaphnia dubia), static renewal survival and reproduction test, was conducted on effluent discharge water collected at the Springdale Water Utilities effluent discharge from March 7, 2016 to March 11, 2016. All the test methods followed are as listed in EPA 821-R-02-013, "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms."

Statistically significant ($p<0.05$) mortality is determined by Dunnet's procedure using average percent survival of each test concentration versus the average survival of the controls. If significant mortality occurs, median lethal concentrations (LC50) are calculated using effluent concentrations and their corresponding percent mortality data. The LC50's and the 95% confidence intervals are calculated where appropriate by the Spearman-Karber method. Statistical analysis is accomplished by following steps in EPA 821-R-02-013, November 2002 and by use of Toxstat version 3.4.

In minnow section of testing, it was observed that the effluent had no significant effect on the survival of the larvae at the 97% concentration. No significant mortality was observed in the other effluent concentrations after the 7-day exposure period. The No Observed Effect Concentration (NOEC) was determined to be 97% for survival. The LC50 was estimated to be >97% effluent. No significant reduction in growth was observed in the 97% effluent concentration. The Toxic Units is <1. The IC25 is >100. The NOEC for growth in effluent was determined to be 97%. The PMSD was 11.9.

In Cladoceran section of testing, it was observed that the effluent had no significant effect on the survival of the organisms in the 97% effluent concentration. No significant mortality was observed in the other effluent concentrations after the 7-day exposure period. The No Observed Effect Concentration (NOEC) was determined to be 97% for survival. The LC50 was estimated to be >97% effluent. No significant reduction in reproduction was observed in the 97% effluent concentrations. The Toxic Units is <1. The IC25 is >100. The NOEC for reproduction in effluent was determined to be 97%. The PMSD was 15.0.

The chronic toxicity exhibited by the fathead minnows and the Ceriodaphnia treated by the effluent sampled from March 7 to March 11 from the Springdale Water Utilities effluent discharge, is acceptable as described in EPA 821-R-02-013.

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

INTRODUCTION

Pace Analytical was contracted to perform this chronic toxicity test on effluent from the Springdale Water Utilities effluent discharge. Chronic toxicity was measured using the Pimephales promelas at larval for survival and growth test and the Ceriodaphnia dubia survival and reproduction test described in EPA 821-R-02-013, "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The raw data of the study is stored at Pace Analytical Services, INC. 808 West McKay, Frontenac, KS 66763.

TEST MATERIAL

Springdale Water Utilities personnel collected sampling of the effluent. A sample of the effluent was delivered to Pace by commercial carrier on 3-8-16. Subsequent samples followed by delivery on 3-10-16 and on 3-12-16. All samples were stored at ≤ 6° Celsius. Moderately Hard Synthetic Water was used as a control and also to make the required dilutions in the test as described in EPA 821-R-02-013.

TEST METHODS

Pace used EPA test method 1000.0 for conducting the Fathead Minnow, Pimephales promelas, Larval Survival and Growth Test. EPA test method 1002.0 was used for conducting the Cladoceran, Ceriodaphnia dubia, Survival and Reproduction Test. The tests were conducted to estimate the LC50, NOEC, and LOEC for survival, growth, and reproduction of these test species.

The Pimephales and Ceriodaphnia tests were initiated on 3-8-16 and carried out until 3-15-16. The Pimephales tests were conducted in 500 ml plastic jars with 250 ml of test solution. Eight larvae were placed in each of at least 5 replicates to make a total of 40 larvae per sample concentration. The Ceriodaphnia tests were carried out in 35ml vials containing 25 ml of test solution. One Neonate was placed in each of 10 replicates to make a total of 10 neonates per sample concentration.

TEST ORGANISMS

The organisms used in these tests were cultured at Pace under controlled temperature and photoperiod conditions and/or were purchased from an external supplier. Pace maintains records of all culture techniques used in producing organisms.

Pace Analytical Services, Inc.
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Lenexa, KS 66219
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RESULTS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

TABLE 1

Permittee: Springdale Water Utilities Effluent discharge.

Date Sampled No. 1: 3-7-16 8:00

No. 2: 3-9-16 8:00

No. 3: 3-11-16 8:00

Test Initiated: 14:00 Date: 3-8-16

Dilution Water used: Moderately Hard Synthetic Water

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL
(Pimephales promelas)

DATA TABLE FOR GROWTH OF FATHEAD MINNOWS

Effluent Concentration (%)	Average Dry Weight in Milligrams in Replicate Chambers A	B	C	D	E	Mean Dry Weight (mg)	CV% *
Control 0%	0.407	0.474	0.396	0.452	0.422	0.430	7.50
Dilution 1 31%	0.441	0.460	0.426	0.364	0.432	0.425	8.53
Dilution 2 41%	0.498	0.455	0.435	0.476	0.394	0.452	8.82
Dilution 3 55%	0.457	0.463	0.440	0.437	0.399	0.439	5.70
Dilution 4 73%	0.415	0.389	0.404	0.432	0.421	0.412	3.99
Dilution 5 97%	0.463	0.459	0.474	0.469	0.362	0.445	10.55

* Coefficient of Variation = Standard Deviation X 100 / Mean

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Phone: 913.599.5665
Fax: 913.599.1759

Permittee: Springdale Water Utilities Effluent discharge.

FATHEAD MINNOW SURVIVAL

Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV %
	A	B	C	D	E	24hr	48hr	7 day	
Control 0%	100	100	100	100	100	100	100	100	0.00
Dilution 1 31%	100	100	100	100	100	100	100	100	0.00
Dilution 2 41%	100	100	100	100	100	100	100	100	0.00
Dilution 3 55%	100	100	100	100	100	100	100	100	0.00
Dilution 4 73%	100	100	100	100	100	100	100	100	0.00
Dilution 5 97%	100	100	100	100	87.5	100	100	97.5	4.79

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

Permittee: Springdale Water Utilities Effluent discharge.

CERIODAPHNIA SURVIVAL AND REPRODUCTION

DATA TABLE FOR CERIODAPHNIA YOUNG PRODUCTION

Replicate	Control 0%	Dilution 1 31%	Dilution 2 41%	Dilution 3 55%	Dilution 4 73%	Dilution 5 97%
1	20	18	22	22	22	24
2	16	20	27	25	19	23
3	22	23	18	23	23	20
4	18	22	17	24	17	23
5	19	22	24	23	24	18
6	21	24	18	18	18	22
7	24	17	24	19	20	25
8	21	18	17	23	23	24
9	15	22	22	24	26	19
10	24	25	20	21	26	26
Mean	20.0	21.1	20.9	22.2	21.8	22.4
SD	3.055	2.726	3.446	2.251	3.190	2.633
CV %	15.28	12.92	16.49	10.14	14.63	11.76

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Permittee: Springdale Water Utilities Effluent discharge.

CERIODAPHNIA MEAN PERCENT SURVIVAL

	Percent Effluent (%)					
Time Elapsed	Control 0%	Dilution 1 31%	Dilution 2 41%	Dilution 3 55%	Dilution 4 73%	Dilution 5 97%
24 hrs	100	100	100	100	100	100
48 hrs	100	100	100	100	100	100
7-day	100	100	100	100	100	100
SD	0.000	0.000	0.000	0.000	0.000	0.000
CV %	0.00	0.00	0.00	0.00	0.000	0.000

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TABLE 2
SUMMARY OF TEST CONDITIONS FOR THE FATHEAD MINNOW (Pimephales promelas) LARVAL SURVIVAL AND GROWTH TEST

1. Test type	Static renewal
2. Temperature	25 degrees Celsius
3. Light quality	Ambient laboratory light
4. Light intensity	Ambient laboratory levels
5. Photoperiod	16 hr light, 8 hr dark
6. Test chamber size	500 ml
7. Test solution volume	250 ml
8. Renewal of test concentrations	Daily
9. Age of test organism	< 24 hours
10. No. larvae/chamber	8
11. No. replicates/concentration	5
12. No. larvae/concentration	40
13. Feeding regime	Feed 0.1 ml newly hatched brine shrimp nauplii three times daily. Larvae are not fed 12 hours prior to termination of test.
14. Cleaning	Siphon daily, immediately before test solution renewal
16. Aeration	None

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TABLE 2 (CONT.)

16. Dilution Water	Moderately Hard Synthetic Water prepared with MILLI-Q deionized water and reagent grade chemicals
17. Effluent concentrations	0%, 31%, 41%, 55%, 73%, 97%
18. Test duration	7 days
19. Endpoints	Survival and growth
20. Test acceptability	80% or greater survival in the controls, Average dry weight in controls >0.25 mg, Coefficient of variation in the control must not exceed 40%.

TABLE 2 (CONT.)
SUMMARY OF TEST CONDITIONS FOR THE CLADOCERAN (Ceriodaphnia dubia) SURVIVAL AND REPRODUCTION TEST

1. Test type	Static renewal
2. Temperature	25 degrees Celsius
3. Light quality	Ambient laboratory light
4. Light intensity	Ambient laboratory levels
5. Photoperiod	16 hr light, 8 hr dark
6. Test chamber size	30 ml
7. Test solution volume	25 ml

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TABLE 2 (CONT.)

8. Renewal of test concentrations	Daily
9. Age of test organism	< 24 hours
10. No. larvae/chamber	1
11. No. replicates/concentration	10
12. No. larvae/concentration	10
13. Feeding regime	Feed 0.1 ml YCT three times daily. Larvae are not fed 12 hours prior to termination of test.
14. Cleaning	Siphon daily, immediately before test solution renewal
16. Aeration	None
16. Dilution Water	Moderately Hard Synthetic Water prepared with MILLI-Q deionized water and reagent grade chemicals
17. Effluent concentrations	0%, 31%, 41%, 55%, 73%, 97%
18. Test duration	Until 60% or more surviving control females have three broods or a maximum of 8 days.
19. Endpoints	Survival and Reproduction
20. Test acceptability	80% or greater survival in the controls, Average reproduction rate of 16 young / adult. Coefficient of variation in the control must not exceed 40%.

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TABLE 2 (SECTION 2)

BIOMONITORING CHRONIC TOXICITY REPORT
FATHEAD MINNOW (Pimephales promelas)
CHEMICAL PARAMETERS CHART

Permittee: Springdale Water Utilities Effluent discharge.

ANALYSTS: Pace Analytical Services, Inc.
Timothy Harrell
Mike Bollin

SAMPLE NO. 1 COLLECTED: DATE: 3-7-16

SAMPLE NO. 2 COLLECTED: DATE: 3-9-16

SAMPLE NO. 3 COLLECTED: DATE: 3-11-16

TABLE 2 (SECTION 2)
INITIAL WATER QUALITY
EFFLUENT CONCENTRATION

	Control	100%
PH	7.65	8.07
D.O.	7.90	8.00
Temp	25.0	25.0
Alk	60	90
Hard	82	86
Cond	317	626
Chlorine	<0.1	<0.1

* D.O. is reported as mg/L
Alkalinity is reported as mg/L CaCO3
Hardness is reported as mg/L CaCO3
Conductance is reported as umhos
Ammonia is reported as mg/L
Chlorine is reported as mg/L

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TEST WATER QUALITY

24-Hour Water Quality Measurements

Effluent Concentration (%)	PH	D.O. (mg/l)	Temperature (C)
0% Control	7.53	7.30	25.0
31% Effluent	7.70	7.30	25.0
41% Effluent	7.92	7.40	25.0
55% Effluent	8.03	7.40	25.0
73% Effluent	8.25	7.40	25.0
97% Effluent	8.44	7.50	25.0

48-Hour Water Quality Measurements

Effluent Concentration (%)	PH	D.O. (mg/l)	Temperature (C)
0% Control	7.59	6.90	24.9
31% Effluent	8.01	7.00	25.0
41% Effluent	8.09	7.10	25.0
55% Effluent	8.12	7.10	25.0
73% Effluent	8.19	7.20	25.0
97% Effluent	8.23	7.30	25.0

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FINAL WATER QUALITY

EFFLUENT CONCENTRATION

	Control	97%
pH	7.65	8.09
D.O.	7.10	6.80
Temp	25.1	25.2
Alk	62	88
Hard	96	92
Cond	488	877

* D.O. is reported as mg/L
Alkalinity is reported as mg/L CaCO3
Hardness is reported as mg/L CaCO3
Conductance is reported as umhos

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TEST VALIDITY

The Pimephales promelas control survival rate was 100%. The mean dry weight (growth) of the Pimephales promelas was determined at 0.430 mg/organism in the controls. The percent coefficient of variation (%CV) values for the fathead minnow control for survival and growth were 0.00 and 7.50. The Ceriodaphnia dubia survival rates were 100 in the control. The Ceriodaphnia in the control produced an average of 20.0 young over the seven-day exposure period. Percent CV values for Ceriodaphnia dubia control survival and reproduction was 0.00 and 15.28. Control data met or exceeded all criteria set out by EPA 821-R-02-013 for test acceptance.

CONCLUSIONS

The No Observed Effect Concentration (NOEC) for Pimephales promelas was 97% for survival and 97% for growth. The No Observed Effect Concentration (NOEC) for Ceriodaphnia dubia was 97% for Survival and 97% for Reproduction. The tests were ran using a synthetic control against effluent concentrations of 31%, 41%, 55%, 73%, and 97%. The effluent sampled on 3-7-16, 3-9-16, and 3-11-16 exhibited acceptable chronic toxicity in Pimephales promelas and in Ceriodaphnia dubia during the exposure period as described in EPA 821-R-02-013.

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APPENDIX C

REFERENCE TOXICANTS

The absence of significant control mortality during this test indicated the health of the organisms and indicated that any significant mortality in the test concentrations was not due to contaminants or variations in testing conditions.

Reference toxicity testing is routinely performed by staff members in our biomonitoring - bioassay laboratory.

Start: 2/9/16 11:40 End: 2/16/16 11:45

Reference Toxicant (NaCl) Pimephales promelas

Concentration of Toxicant	Avg. # of Live Organisms/replicate			
	0 hrs	24 hrs	48 hrs	7 days
10 g/l	40	6	1	0
8 g/l	40	36	24	3
6 g/l	40	38	32	23
4 g/l	40	40	40	39
2 g/l	40	40	40	40

IC25 (4.93 g/l Sodium Chloride)

Survival NOEC: 4.0 g/l

Reference Toxicant (NaCl) Ceriodaphnia Dubia

Concentration of Toxicant	Avg. # of Live Organisms/replicate			
	0 hrs	24 hrs	48 hrs	7 days
2.5 g/l	10	5	0	0
2.0 g/l	10	10	8	1
1.5 g/l	10	10	10	10
1.0 g/l	10	10	10	10
0.5 g/l	10	10	10	10

IC25 (1.11 g/l Sodium Chloride)

Survival NOEC: 1.5 g/l

Submitted By: Tim Harrell
Timothy Harrell, Technical Director

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

Chi-square test for normality: actual and expected frequencies

INTERVAL	<-1.5	-1.5 to <-0.5	-0.5 to 0.5	>0.5 to 1.5	>1.5
EXPECTED	2.010	7.260	11.460	7.260	2.010
OBSERVED	1	0	29	0	0

Calculated Chi-Square goodness of fit test statistic = 43.8832
Table Chi-Square value (alpha = 0.01) = 13.277

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.011

W = 0.416

Critical W (P = 0.05) (n = 30) = 0.927
Critical W (P = 0.01) (n = 30) = 0.900

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	5	1.107	1.107	1.107
2	31%	5	1.107	1.107	1.107
3	41%	5	1.107	1.107	1.107
4	55%	5	1.107	1.107	1.107
5	73%	5	1.107	1.107	1.107
6	97%	5	0.991	1.107	1.084

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	0.000	0.000	0.000	0.00
2	31%	0.000	0.000	0.000	0.00
3	41%	0.000	0.000	0.000	0.00
4	55%	0.000	0.000	0.000	0.00
5	73%	0.000	0.000	0.000	0.00
6	97%	0.003	0.052	0.023	4.79

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.002	0.000	1.000
Within (Error)	24	0.011	0.000	
Total	29	0.013		

Critical F value = 2.62 (0.05,5,24)
Since F < Critical F FAIL TO REJECT Ho: All equal

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	CONTROL	1.107	0.800		
2	31%	1.107	0.800	0.000	
3	41%	1.107	0.800	0.000	
4	55%	1.107	0.800	0.000	
5	73%	1.107	0.800	0.000	
6	97%	1.084	0.780	1.732	

Dunnett table value = 2.36 (1 Tailed Value, P=0.05, df=24,5)

60214378 Springdale FATHEAD SURVIVAL
File: 6214378A Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	CONTROL	5			
2	31%	5	0.026	3.2	0.000
3	41%	5	0.026	3.2	0.000
4	55%	5	0.026	3.2	0.000
5	73%	5	0.026	3.2	0.000
6	97%	5	0.026	3.2	0.020

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

D = 0.028

W = 0.928

Critical W (P = 0.05) (n = 30) = 0.927
Critical W (P = 0.01) (n = 30) = 0.900

Data PASS normality test at P=0.01 level. Continue analysis.

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 4.27

Table Chi-square value = 15.09 (alpha = 0.01, df = 5)
Table Chi-square value = 11.07 (alpha = 0.05, df = 5)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	Control	5	0.396	0.474	0.430
2	31%	5	0.364	0.460	0.425
3	41%	5	0.394	0.498	0.452
4	55%	5	0.399	0.463	0.439
5	73%	5	0.389	0.432	0.412
6	97%	5	0.362	0.474	0.445

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	Control	0.001	0.032	0.014	7.50
2	31%	0.001	0.036	0.016	8.53
3	41%	0.002	0.040	0.018	8.82
4	55%	0.001	0.025	0.011	5.70
5	73%	0.000	0.016	0.007	3.99
6	97%	0.002	0..047	0.021	10.55

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.005	0.001	0.890
Within (Error)	24	0.028	0.001	
Total	29	0.033		

Critical F value = 2.62 (0.05,5,24)
Since F < Critical F FAIL TO REJECT Ho: All equal

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	Control	0.430	0.430		
2	31%	0.425	0.425	0.258	
3	41%	0.452	0.452	-0.987	
4	55%	0.439	0.439	-0.415	
5	73%	0.412	0.412	0.830	
6	97%	0.445	0.445	-0.701	

Dunnett table value = 2.36 (1 Tailed Value, P=0.05, df=24,5)

60214378 Springdale FATHEAD GROWTH
File: 6214378B Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	Control	5			
2	31%	5	0.051	11.9	0.006
3	41%	5	0.051	11.9	-0.021
4	55%	5	0.051	11.9	-0.009
5	73%	5	0.051	11.9	0.018
6	97%	5	0.051	11.9	-0.015

FISHER'S EXACT TEST

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
31%	10	0	10
TOTAL	20	0	20

CRITICAL FISHER'S VALUE (10,10,10) (p=0.05) IS 6. b VALUE IS 10.
Since b is greater than 6 there is no significant difference between CONTROL and TREATMENT at the 0.05 level.

FISHER'S EXACT TEST

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
41%	10	0	10
TOTAL	20	0	20

CRITICAL FISHER'S VALUE (10,10,10) (p=0.05) IS 6. b VALUE IS 10.
Since b is greater than 6 there is no significant difference between CONTROL and TREATMENT at the 0.05 level.

FISHER'S EXACT TEST

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
55%	10	0	10

TOTAL	20	0	20

CRITICAL FISHER'S VALUE (10,10,10) (p=0.05) IS 6. b VALUE IS 10.
Since b is greater than 6 there is no significant difference between CONTROL and TREATMENT at the 0.05 level.

FISHER'S EXACT TEST

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
73%	10	0	10
TOTAL	20	0	20

CRITICAL FISHER'S VALUE (10,10,10) (p=0.05) IS 6. b VALUE IS 10.
Since b is greater than 6 there is no significant difference between CONTROL and TREATMENT at the 0.05 level.

FISHER'S EXACT TEST

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
97%	10	0	10
TOTAL	20	0	20

CRITICAL FISHER'S VALUE (10,10,10) (p=0.05) IS 6. b VALUE IS 10.
Since b is greater than 6 there is no significant difference between CONTROL and TREATMENT at the 0.05 level.

SUMMARY OF FISHER'S EXACT TESTS

	NUMBER	NUMBER	SIG

GROUP	IDENTIFICATION	EXPOSED	DEAD	(P=.05)
	CONTROL	10	0	
1	31%	10	0	
2	41%	10	0	
3	55%	10	0	
4	73%	10	0	
5	97%	10	0	

60214378 Springdale CERIODAPHNIA DUBIA SURVIVAl
File: 6214378D Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	10	1.000	1.000	1.000
2	31%	10	1.000	1.000	1.000
3	41%	10	1.000	1.000	1.000
4	55%	10	1.000	1.000	1.000
5	73%	10	1.000	1.000	1.000
6	97%	10	1.000	1.000	1.000

60214378 Springdale CERIODAPHNIA DUBIA SURVIVAl
File: 6214378D Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	0.000	0.000	0.000	0.00
2	31%	0.000	0.000	0.000	0.00
3	41%	0.000	0.000	0.000	0.00
4	55%	0.000	0.000	0.000	0.00
5	73%	0.000	0.000	0.000	0.00
6	97%	0.000	0.000	0.000	0.00

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

Chi-square test for normality: actual and expected frequencies

INTERVAL	<-1.5	-1.5 to <-0.5	-0.5 to 0.5	>0.5 to 1.5	>1.5
EXPECTED	4.020	14.520	22.920	14.520	4.020
OBSERVED	5	15	21	18	1

Calculated Chi-Square goodness of fit test statistic = 3.5184
Table Chi-Square value (alpha = 0.01) = 13.277

Data PASS normality test. Continue analysis.

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 1.95

Table Chi-square value = 15.09 (alpha = 0.01, df = 5)
Table Chi-square value = 11.07 (alpha = 0.05, df = 5)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	10	15.000	24.000	20.000
2	31%	10	17.000	25.000	21.100
3	41%	10	17.000	27.000	20.900
4	55%	10	18.000	25.000	22.200
5	73%	10	17.000	26.000	21.800
6	97%	10	18.000	26.000	22.400

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	9.333	3.055	0.966	15.28
2	31%	7.433	2.726	0.862	12.92
3	41%	11.878	3.446	1.090	16.49
4	55%	5.067	2.251	0.712	10.14
5	73%	10.178	3.190	1.009	14.63
6	97%	6.933	2.633	0.833	11.76

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	41.000	8.200	0.968
Within (Error)	54	457.400	8.470	
Total	59	498.400		

Critical F value = 2.45 (0.05,5,40)
Since F < Critical F FAIL TO REJECT Ho: All equal

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	CONTROL	20.000	20.000		
2	31%	21.100	21.100	-0.845	
3	41%	20.900	20.900	-0.691	
4	55%	22.200	22.200	-1.690	
5	73%	21.800	21.800	-1.383	
6	97%	22.400	22.400	-1.844	

Dunnett table value = 2.31 (1 Tailed Value, P=0.05, df=40,5)

60214378 Springdale CERIODAPHNIA DUBIA REPRODU
File: 6214378E Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	CONTROL	10			
2	31%	10	3.007	15.0	-1.100
3	41%	10	3.007	15.0	-0.900
4	55%	10	3.007	15.0	-2.200
5	73%	10	3.007	15.0	-1.800
6	97%	10	3.007	15.0	-2.400

Conc. ID	1	2	3	4	5	6
Conc. Tested	0	31	41	55	73	97
Response 1	20	18	22	22	22	24
Response 2	16	20	27	25	19	23
Response 3	22	23	18	23	23	20
Response 4	18	22	17	24	17	23
Response 5	19	22	24	23	24	18
Response 6	21	24	18	18	18	22
Response 7	24	17	24	19	20	25
Response 8	21	18	17	23	23	24
Response 9	15	22	22	24	26	19
Response 10	24	25	20	21	26	26

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Springdale
Test Start Date: 3/8/16 Test Ending Date: 3/15/16
Test Species: Dubia
Test Duration: 7 Day
DATA FILE:

Conc. ID	Number Replicates	Concentration	Response Means	Std. Dev.	Pooled Response Means
1	10	0.000	20.000	3.055	21.400
2	10	31.000	21.100	2.726	21.400
3	10	41.000	20.900	3.446	21.400
4	10	55.000	22.200	2.251	21.400
5	10	73.000	21.800	3.190	21.400
6	10	97.000	22.400	2.633	21.400

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

Conc. ID		1	2	3	4	5	6
Conc. Tested		0	31	41	55	73	97
Response	1	.407	.441	.498	.457	.415	.463
Response	2	.474	.460	.455	.463	.389	.459
Response	3	.396	.426	.435	.440	.404	.474
Response	4	.452	.364	.476	.437	.432	.469
Response	5	.422	.432	.394	.399	.421	.362

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Springdale
Test Start Date: 3/8/16 Test Ending Date: 3/15/16
Test Species: Fathead
Test Duration: 7 Day
DATA FILE:

Conc. ID	Number Replicates	Concentration	Response Means	Std. Dev.	Pooled Response Means
1	5	0.000	0.430	0.032	0.436
2	5	31.000	0.425	0.036	0.436
3	5	41.000	0.452	0.040	0.436
4	5	55.000	0.439	0.025	0.436
5	5	73.000	0.412	0.016	0.429
6	5	97.000	0.445	0.047	0.429

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Springdale Water Utilities	Report To:	Brad Stewart	Attention:	BRAD STEWART
Address:	2910 Silent Grove Road	Copy To:		Company Name:	SPRINGDALE WATER UTILITIES
	Springdale, AR 72762			Address:	P.O. Box 769, SPRINGDALE AR
Email To:	bstewart@springdalewater.com	Purchase Order No.:	001902.00	Pace Quote Reference:	
Phone:	479-756-3657 Fax:	Project Name:	Chronic WET Test	Pace Project Manager:	Alice Flanagan
Requested Due Date/TAT:	10 bus days	Project Number:		Pace Profile #:	9250, 1

REGULATORY AGENCY: ☑ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: AR

Requested Analysis Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Chronic WET Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SWLA EFFLUENT	SW	C	03/04/16	0800	03/07/16	0800	5°	1	1								X	N	16214378
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	SWLA / SWU	3/7/16	1545	Alice Flanagan Pace	3/8/16	8:00	2.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Brad Stewart		
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY):	3/7/16

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Springdale Water Utilities	Report To: Brad Stewart	Attention: BRAD STEWART
Address: 2910 Silent Grove Road	Copy To:	Company Name: SPRINGDALE WATER UTILITIES
Springdale, AR 72762		Address: P.O. Box 769 Springdale AR
Email To: bstewart@springdalewater.com	Purchase Order No.: 0019012 00	Pace Quote Reference:
Phone: 479-756-3657 Fax:	Project Name: Chronic WET Test	Pace Project Manager: Alice Flanagan
Requested Due Date/TAT: 10 bus days	Project Number:	Pace Profile #: 9250, 1

REGULATORY AGENCY

☑ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: AR

Requested Analysis Filtered (Y/N)

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Chronic WET Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SWTR EFFLUENT	WW	C	03/08/16	0900	03/09/16	0800	4°C	1	1								X	N	Cec 214378 Lab - 001
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Mike Phillips / SWA	03/09/16	1415	[signature]	3/10/16	0800	3.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mike Phillips

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/09/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Sample Condition Upon Receipt

WO#: 60214378

60214378

1 COC

Client Name: Spindale

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☐ No ☐ Seals Intact: Yes ☐ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: T-111

Cooler Temperature: 3.0

Type of Ice: (Wet) Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and Initials of person examining contents: 3/10/16 MB 0800

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC:	☒Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: Lut		13.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☒No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☒N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	
		16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:
Additional labels attached to 5035A vials in the field?	☐Yes ☐No ☒N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 01 of 01

Section A Required Client Information:

Company:	Springdale Water Utilities
Address:	2910 Silent Grove Road
	Springdale, AR 72762
Email To:	bstewart@springdalewater.com
Phone: 479-756-3657	Fax:
Requested Due Date/TAT:	10 bus days

Section B Required Project Information:

Report To:	Brad Stewart
Copy To:	
Purchase Order No.:	0019012 00
Project Name:	Chronic WET Test
Project Number:	

Section C Invoice Information:

Attention:	BRAD STEWART
Company Name:	SPRINGDALE WATER UTILITIES
Address:	P.O. Box 769 SPRINGDALE AR.
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	9250, 1

REGULATORY AGENCY

☑ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: AR

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chronic WET Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SWTR EFFLUENT	WW	C	3/10/16	0800	3/11/16	0800	5°	1	1								X	X	N	16466001
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
				Ethan Cosgrove Pace	3/12/16	8:00	2.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh Weaver

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/11/16

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Sample Condition Upon Receipt

Client Name: Spring Dale

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☐ No ☐ Seals intact: Yes ☐ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: T-111 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.2

Date and initials of person examining contents: 3/12/16 EC 8:00

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC:	☒Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: Lqt		13.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☒N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:
Additional labels attached to 5035A vials in the field?	☐Yes ☐No ☒N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Chain of Custody

Mercury One Ltd.
2241 Pinnacle Parkway, Suite B
Twinsburg, OH 44087

Phone: 330-963-0843
Fax: 330-963-1016
E-Mail: customerservice@mercuryoneltd.com

Method 1631 Mercury

Other:

ATTN: BRAD STEWART

Client: SPRINGDALE WATER UTILITIES

Address: P.O. BOX 769

City: SPRINGDALE **State:** AR **Zip:** 72762

Phone: 479-756-3659 **Fax:** 479-750-7195 **E-Mail:**

Sampled By: LAB STAFF

Collection Date	Time	Sample Matrix	Comp/ Grab	Sample Description/Comments	Mercury One Lab ID
03/14/16	0900	WATER	GRAB	INFLUENT	
03/14/16	1300	WATER	GRAB	INFLUENT — COMPOSITE	
03/14/16	1700	WATER	GRAB	INFLUENT — INF. GRABS	
03/15/16	0900	WATER	GRAB	INFLUENT	
03/17/16	0900	WATER	GRAB	EFFLUENT	
03/17/16	1300	WATER	GRAB	EFFLUENT — COMPOSITE	
03/17/16	1700	WATER	GRAB	EFFLUENT — EFF. GRABS	
03/18/16	0900	WATER	GRAB	EFFLUENT	
03/17/16	1300	WATER	—	BLANK	

Relinquished By: Josh Weaver **Date:** 03/21/16 **Time:** 0950

Received By: **Date:** **Time:**

Relinquished By: **Date:** **Time:**

Received By: **Date:** **Time:**

Use multiple lines for description if necessary.

Temp

Other:

ATTN: BRAD STEWART

Client: SPRINGDALE WATER UTILITIES

Address: P.O. BOX 769

City: SPRINGDALE **State:** AR **Zip:** 72762

Phone: 479-756-3659 **Fax:** 479-750-7195 **E-Mail:**

Sampled By: LAB STAFF

Collection Date	Time	Sample Matrix	Comp/ Grab	Sample Description/Comments	Mercury One Lab ID
03/14/16	0900	WATER	GRAB	INFLUENT	
03/14/16	1300	WATER	GRAB	INFLUENT — COMPOSITE	
03/14/16	1700	WATER	GRAB	INFLUENT — INF. GRABS	
03/15/16	0900	WATER	GRAB	INFLUENT	
03/17/16	0900	WATER	GRAB	EFFLUENT	
03/17/16	1300	WATER	GRAB	EFFLUENT — COMPOSITE	
03/17/16	1700	WATER	GRAB	EFFLUENT — EFF. GRABS	
03/18/16	0900	WATER	GRAB	EFFLUENT	
03/17/16	1300	WATER	—	BLANK	

Relinquished By: Josh Warner **Date:** 03/21/16 **Time:** 0750

Received By: **Date:** **Time:**

Relinquished By: **Date:** **Time:**

Received By: **Date:** **Time:**

Use multiple lines for description if necessary.

Temp

NOT A SHIPPING FORM. PROCESSING CENTER ONLY. USE A SHIPPING FORM TO PROCESS IN CENTER ONLY.

FedEx Ground

Order Form

Must be processed at a FedEx shipping counter.

Sender's Copy

1 From *Please print and press hard.*

Date _____ Sender's FedEx Account Number _____

Sender's Name BRAD STEWART Phone (479) 756-3659

Company SPRINGDALE WATER UTILITIES

Address 2910 SILENT GROVE RD.

Address _____ Dept./Floor/Suite/Room

City SPRINGDALE State AR ZIP 72762

2 To

Recipient's Name SAMPLE RECEIVING Phone (330) 963-0843

Company MERCURY ONE LTD.

Address 2241 PINNACLE PARKWAY (No P.O. Boxes)

Address SUITE B Dept./Floor/Suite/Room ☐ HOLD at Location FedEx Office address REQUIRED.

City TWINSBURG State Province OH

Country USA ZIP Postal Code 44087

3 Package Information

☐ Residential Delivery Address ☑ Nonresidential (Business) Delivery Address

Number of Packages 1 **Weight** _____ **Declared Value $** _____

Our liability is limited to $100 per package unless you declare a higher value. See back for details. Declared value of $500 or more will default to Direct Signature required. For multiple packages to one delivery address, see the shipping agent to declare a value for each package.

The FedEx Ground Order Form is for FedEx Ground shipments within the U.S., and for FedEx International Ground shipments from the U.S. to Canada. By using this FedEx Ground Order Form, you agree to the service conditions on the back of the Sender's Copy of this document and in the current FedEx Service Guide, including terms that limit our liability. Hazardous materials cannot be shipped using this FedEx Ground Order Form.

4 Delivery Signature Options If you require a signature, check Direct or Indirect.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Anyone at the delivery address may sign for delivery. Fee applies.

☐ Indirect Signature — If no one is available at delivery address, anyone at a neighboring address may sign for delivery. Available for U.S. residential shipments only. Fee applies.

5 FedEx Home Delivery® Convenient Delivery Options

U.S. residential deliveries for packages up to 70 lbs.

☐ FedEx Date Certain Home Delivery® — Delivery on a specific date you select, Tuesday through Saturday, provided the date is not before the standard delivery time and is within two weeks after it. Fee applies.

☐ FedEx Evening Home Delivery® — Delivery between 5 and 8 p.m. on the scheduled date of delivery. Fee applies.

☐ FedEx Appointment Home Delivery® — Delivery on a specific date and time you select. We attempt to contact the recipient in advance. Fee applies.

6 Payment

Bill transportation charges to:

Enter FedEx Acct. No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☑ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. 3089-374-88

7 FedEx International Ground Information

Commodity Description REQUIRED	Value for Customs REQUIRED
Total Value for Customs USD	

Bill duties and taxes to:

☐ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party Enter FedEx Acct. No. below.

ALL FedEx International Ground shipments may be subject to duties and taxes, which FedEx does not estimate prior to clearance.

FedEx Acct. No.

FedEx Use Only	Base Rate $	Total Charge $
Tracking Number		
Employee Number		372634

Part 156276 Rev. Date 9/12 DP-253WSC • ©1994–2012 FedEx • PRINTED IN U.S.A. RRDO

fedex.com 1000

Springdale Water Utilities
P.O. Box 769
Springdale, AR 72765-0769

UNITED STATES POSTAL SERVICE®

1000

72118

U.S. POSTAGE
PAID
GREENLAND, AR
72737
APR 15, 16
AMOUNT
$2.83
R2305E126078-07

Mary Barnett
Arkansas Dept. of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317