



**MWH**

**LABORATORIES**

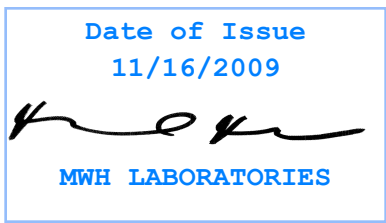
*A Division of MWH Americas, Inc.*

750 Royal Oak Dr., Suite 100  
Monrovia, California, 91016-3629  
Tel: 626 386 1100  
Fax: 626 386 1101  
1 800 566 LABS (1 800 566 5227)

**Laboratory Report**

for

City of Phoenix  
Public Works Department  
3060 South 27th Avenue  
Phoenix, AZ 85009-6810  
Attention: Hillary Hartline  
Fax: (602) 534-9872



TDF: Thomas.D.French  
Project Manager



Report#: 318264  
Project: SR85  
Group: SR85 NO3RFA  
Resample

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

**Acknowledgement of Samples Received**
**City of Phoenix**

 Public Works Department  
 3060 South 27th Avenue  
 Phoenix, AZ 85009-6810  
 Attn: Hillary Hartline  
 Phone: (602) 534 6655

 Customer Code: PHOENIX-LF  
 Group #: 318264  
 Project #: SR85  
 Sample Group: SR85 NO3RFA Resample  
 Project Manager: Thomas.D.French  
 Phone: (480) 778-1558

The following samples were received from you on **November 02, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
200911020142	85A-409	02-Nov-2009 09:27
	Sample Type: FO Well Id: MW-3 Variable ID: 64809	
	Nitrate as N by RFA Low Level	
200911020143	85A-409 MS	02-Nov-2009 09:27
	Sample Type: QC Well Id: MW-3 Variable ID: 64809	
	Nitrate as N by RFA Low Level	
200911020144	85A-409 MSD	02-Nov-2009 09:27
	Sample Type: QC Well Id: MW-3 Variable ID: 64809	
	Nitrate as N by RFA Low Level	
200911020145	85B-409	02-Nov-2009 09:28
	Sample Type: FB Well Id: MW-3 Variable ID: 64809	
	Nitrate as N by RFA Low Level	
200911020146	85C-409	02-Nov-2009 10:07
	Sample Type: FO Well Id: MW-4 Variable ID: 64810	
	Nitrate as N by RFA Low Level	
200911020147	85D-409	02-Nov-2009 10:08
	Sample Type: FD Well Id: MW-4 Variable ID: 64810	
	Nitrate as N by RFA Low Level	
200911020148	85E-409	02-Nov-2009 11:15
	Sample Type: FO Well Id: MW-2 Variable ID: 64808	
	Nitrate as N by RFA Low Level	
200911020149	85F-409	02-Nov-2009 11:48
	Sample Type: FO Well Id: MW-1 Variable ID: 64807	

**Acknowledgement of Samples Received****City of Phoenix**Public Works Department  
3060 South 27th Avenue  
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Attn: Hillary Hartline  
Phone: (602) 534 6655Customer Code: PHOENIX-LF  
Group #: 318264  
Project #: SR85  
Sample Group: SR85 NO3RFA Resample  
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The following samples were received from you on **November 02, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

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Sample #	Sample Id	Sample Date
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	Nitrate as N by RFA Low Level	
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**Test Description**

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# CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

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750 Royal Oaks, Suite 100  
Monrovia, California 91016  
Phone: (626) 386-1100  
(800) 566-5227  
Fax: (626) 386-1101

LOGIN COMMENTS: \_\_\_\_\_

SAMPLES CHECKED AGAINST COC BY: SM

SAMPLES LOGGED IN BY: \_\_\_\_\_

SAMPLES REC'D DAY OF COLLECTION \_\_\_\_\_ (check for yes)

SAMPLE TEMP RECEIVED AT: \_\_\_\_\_

Scottsdale 4.3 °C (Compliance: 4 +/- 2°C)

RECEIVED FROM CLIENT: REFRIGERATED \_\_\_\_\_ ON ICE

Monrovia 2 °C (Compliance: 4 +/- 2°C)

CONDITION OF ICE: FROZEN  PARTIALLY FROZEN \_\_\_\_\_ THAWED \_\_\_\_\_

TO BE COMPLETED BY SAMPLER: \_\_\_\_\_ (check for yes)

SAMPLE DATE	SAMPLE TIME	SITE NAME OR SAMPLE I.D.	STATION # or LOCATION	* MATRIX	COMP	TAT requested: rush by adv notice only STD ___ 1 week ___ 3 day ___ 2 day ___ 1 day	SYSTEM #:		COMPLIANCE SAMPLES		NON-COMPLIANCE SAMPLES		SAMPLER COMMENTS
							P.O.# / JOB # / PROJECT :	REGULATIONS INVOLVED:	Requires state forms	ROUTINE SPECIAL CONFIRMATION	ROUTINE SPECIAL CONFIRMATION	REGULATIONS INVOLVED:	
								SR-85 LF		<input checked="" type="checkbox"/>			
11/2	9:27	85A-409	SR-85 LF	RAW	✓				well mw-3				
11/2	9:28	85B-409			✓				well mw-3 FB				
11/2	10:01	85C-409			✓				well mw-4 FO				
11/2	10:08	85D-409			✓				well mw-4 FOP				
11/2	11:15	85E-409			✓				well mw-2 FO				
11/2	11:08	85F-409			✓				well mw-1 FO				

SEE ATTACHED BOTTLE ORDER FOR ANALYSES (check for yes),

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample)

\* MATRIX TYPES: RSW = Raw Surface Water, CFW = Chlor(am)inated Finished Water, CWW = Chlorinated Waste Water, BW = Bottled Water, SO = Soil  
 RGW = Raw Ground Water, FW = Other Finished Water, WW = Other Waste Water, WSW = Storm Water, SL = Sludge

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
	HARRY R. HARTLINE	CITY OF PHOENIX	11/2/09	1415
	L. Anulo	CPC	11-2-09	1415
	N. Anulo	CPC	11-2-09	1453
	Steve Wondolait	MWH	11-2-09	1453
	Steve Wondolait	MWH	11-2-09	1800
	Salvador Mota	MWH	11/3/09	1100



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Hillary Hartline  
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**Laboratory Comments**  
**Report: #318264**



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Laboratory  
Hits Report: 318264

**City of Phoenix**  
Hillary Hartline  
Public Works Department  
3060 South 27th Avenue  
Phoenix, AZ 85009-6810

Samples Received on:  
11/02/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
11/10/2009	19:47 Nitrate as N by RFA Low Level	<b>200911020142</b> <u><b>85A-409</b></u>	2.5		mg/L	0.03
11/12/2009	12:20 Nitrate as N by RFA Low Level	<b>200911020146</b> <u><b>85C-409</b></u>	5.6		mg/L	0.06
11/12/2009	12:22 Nitrate as N by RFA Low Level	<b>200911020147</b> <u><b>85D-409</b></u>	5.8		mg/L	0.06
11/12/2009	13:24 Nitrate as N by RFA Low Level	<b>200911020148</b> <u><b>85E-409</b></u>	12		mg/L	0.3
11/12/2009	13:25 Nitrate as N by RFA Low Level	<b>200911020149</b> <u><b>85F-409</b></u>	27		mg/L	0.3



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Laboratory Data
Report: 318264

City of Phoenix
Hillary Hartline
Public Works Department
3060 South 27th Avenue
Phoenix, AZ 85009-6810

Samples Received on:
11/02/2009

Table with columns: Prepared, Analyzed, QC Ref #, Method, Analyte, Result, Units, MRL, Dilution. Contains multiple rows for different samples (85A-409, 85A-409 MS, 85A-409 MSD, 85B-409, 85C-409, 85D-409, 85E-409) with their respective analysis details and results.

Rounding on totals after summation.
(c) - indicates calculated results



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**Laboratory Data**  
**Report: 318264**

**City of Phoenix**  
Hillary Hartline  
Public Works Department  
3060 South 27th Avenue  
Phoenix, AZ 85009-6810

Samples Received on:  
11/02/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
<b>EPA 353.2 - Nitrate as N by RFA Low Level</b>								
11/12/2009	13:24	531078	(EPA 353.2)	Nitrate as N by RFA Low Level	12	mg/L	0.3	10
<b>85F-409 (200911020149)</b>						<b>Sampled on 11/02/2009 11:48</b>		
Sample Type: FO								
Well Id: MW-1								
Variable ID: 64807								
<b>EPA 353.2 - Nitrate as N by RFA Low Level</b>								
11/12/2009	13:25	531078	(EPA 353.2)	Nitrate as N by RFA Low Level	27	mg/L	0.3	10





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Laboratory  
QC Summary: 318264

City of Phoenix

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**QC Ref # 530814 - Nitrate as N by RFA Low Level**

200911020142      85A-409  
200911020143      85A-409 MS  
200911020144      85A-409 MSD

**Analysis Date: 11/10/2009**

Analyzed by: AZS  
Analyzed by: AZS  
Analyzed by: AZS

**QC Ref # 531078 - Nitrate as N by RFA Low Level**

200911020145      85B-409  
200911020146      85C-409  
200911020147      85D-409  
200911020148      85E-409  
200911020149      85F-409

**Analysis Date: 11/12/2009**

Analyzed by: AZS  
Analyzed by: AZS  
Analyzed by: AZS  
Analyzed by: AZS  
Analyzed by: AZS



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Laboratory  
QC Report: 318264

City of Phoenix

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
<b>QC Ref# 530814 - Nitrate as N by RFA Low Level by EPA 353.2</b>					<b>Analysis Date: 11/10/2009</b>				
LCS1	Nitrate as N by RFA Low Level		1.0	0.990	mg/L	99	(90-110)		
LCS2	Nitrate as N by RFA Low Level		1.0	1	mg/L	100	(90-110)	20	1.0
MBLK	Nitrate as N by RFA Low Level			<0.03	mg/L				
MRL_CHK	Nitrate as N by RFA Low Level		0.03	0.0222	mg/L	74	(50-150)		
MS_200911020142	Nitrate as N by RFA Low Level	2.5	1.0	3.41	mg/L	92	(90-110)		
MSD_200911020142	Nitrate as N by RFA Low Level	2.5	1.0	3.45	mg/L	96	(90-110)	10	3.6
<b>QC Ref# 531078 - Nitrate as N by RFA Low Level by EPA 353.2</b>					<b>Analysis Date: 11/12/2009</b>				
LCS1	Nitrate as N by RFA Low Level		1.0	0.994	mg/L	99	(90-110)		
LCS2	Nitrate as N by RFA Low Level		1.0	0.957	mg/L	96	(90-110)	20	3.8
MBLK	Nitrate as N by RFA Low Level			<0.03	mg/L				
MRL_CHK	Nitrate as N by RFA Low Level		0.03	0.0395	mg/L	132	(50-150)		
MS_200911120074	Nitrate as N by RFA Low Level	7.2	1.0	12.7	mg/L	110	(90-110)		
MSD_200911120074	Nitrate as N by RFA Low Level	7.2	1.0	12.9	mg/L	<u>114</u>	(90-110)	10	3.6

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates

are advisory only, unless otherwise specified in the method.

(S) Indicates surrogate compound.

10/10

(I) Indicates internal standard compound.

RPD not calculated for LCS2 when different a concentration than LCS1 is used

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)