

Arizona Department of Transportation Annual Report

Part 1: General Information

Permittee Name: Arizona Department of Transportation
Permit Number: AZS0000018-2008

Name of Stormwater Management Program Contact:
Leigh Waite, CMS4S

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Reporting Period: July 1, 2012 - June 30, 2013

Name of Certifying Official (*Refer to permit Section 11.3*):
Todd G. Williams, M.Sc.

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Part 2: Annual Report Certification

The Annual Report Form must be signed and certified by either a principal executive officer or ranking elected official; or by a "duly authorized representative" of that person in accordance with Section 11.3 of the permit.

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Todd G. Williams
Signature of Certifying Official

10/30/13
Date

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Part 3: Narrative Summary of Statewide Stormwater Management Program (SSWMP) Activities

Provide a summary of the status of the SSWMP each year, including a brief description of the implementation and progress of every individual best management practice (BMP). Also, provide an explanation of any significant developments or changes to the number or type of activities, the frequency or schedule of activities, or the priorities or procedures for implementation of specific management practices.

The following manuals pertain to the ADOT SSWMP and have been updated as indicated:

- *Erosion and Pollution Control Manual*; The Erosion and Pollution Control Manual for Highway Design and Construction has been completely revised to be more user friendly. Each control measure or BMP is organized into one of the following categories: Construction Site Planning and Management, Erosion Control, Runoff Control, Sediment Control, Good Housekeeping, Non-stormwater and Waste Management. Each information sheet includes a definition, purpose, and At-A-Glance section, which provides brief information to assist in the selection of the Best Management Practices applicable to the project. Photographs and specific information on appropriate applications, limitation, planning and design considerations, material specifications, design standards and inspection and maintenance requirements complete each sheet.
- *Post-Construction Stormwater Control BMP Manual*. The Post-Construction BMP manual is being revised to specify those stormwater control measures that are specific to water quality. This rewrite is being conducted as part of the Administrative Order on Consent, which is a result of the 2010 audit by the Environmental Protection Agency.
- *Maintenance and Facilities Best Management Practices (BMPs) Manual*; No changes
- *Stormwater Monitoring Guidance Manual for MS4 Activities*; No changes
- *Stormwater Monitoring Guidance Manual for Construction Activities*; No changes
- *Stormwater Monitoring Guidance Manual for Industrial Activities*; No changes

This year, ADOT has been focused on updating program elements, participating in permit negotiations, and identifying training needs. ADOT Environmental Services hired a training officer to be tasked with identifying the regulatory training requirements for various laws that impact ADOT business. District staff continues to provide tailgate or classroom outreach on various Clean Water Act permits in support of construction and maintenance projects. For example, Kingman District provided training to 76 personnel during the reporting period. While online training was made available during the 2011-2012 reporting period, in which 4,643 ADOT staff attended, this reporting period documented 1,249 ADOT staff attended classes.

Erosion Control Coordinator certification, specifically refresher training, is being mandated by ADOT specifications as modified in March 2013. As a result, multiple operators will undergo refresher training as required by May 2014, and recertification will occur every three years.

ADOT participates in outreach efforts collectively through the following organizations: Stormwater Outreach for Regional Municipalities, Pima Association of Governments Stormwater Management Working Group, and the Northern Arizona Stormwater Pollution Alliance. The STORM Annual Report is available at http://azstorm.org/assets/annual_reports/2013-annual-report.pdf.

ADOT initiated an erosion abatement program to address locations that exhibit slopes greater than 3:1, have active erosion, and sediment is leaving the right-of-way. In 2012, ADOT originally assessed 22 locations statewide and has established a budget of one

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million dollars per year. This reporting period ADOT bid a project that will stabilize 3.2 acres of right-of-way in the Phoenix metropolitan area. Approximately \$870,000 will be utilized to reduce sediment transport into the City of Phoenix municipal separate storm sewer system (MS4).

Provide a summary of updates to the Dry Weather Field Screening Portion of the Stormwater Monitoring Guidance Manual for MS4 Activities (Section 3.2.3.2.(c)); The ADOT dry weather field screening protocol has been reviewed due to the Administrative Order on Consent issued by the Environmental Protection Agency (refer to **Appendix A**). As a result of findings from the mapping and inspecting tasks and general program modifications, the MS4 Monitoring Manual may require significant updates. With the Administrative Order on Consent came a revised interpretation of outfall. As such, Part 4, Numeric Summary values are modified to be consistent with the Administrative Order on Consent. Outfalls have been mapped statewide and **Appendix B** contains a table of draft outfall information. This draft data will be reviewed according to the conditions of the Administrative Order on Consent.

Provide a list and description of all violations ADOT has determined at construction sites and their resolution, including any enforcement actions taken against ADOT contractors, in accordance with Section 5.3.1 (Section 5.3.4); **None**

Provide a map and summary of the status of each material source site (Section 6.8.3); present a list of all abandoned material source sites (unreclaimed sites where final stabilization was never completed), accompanied by a four year schedule to reclaim or utilize all Group B sites statewide (Section 6.8.4.1.(f)(ii)); describe the progress made toward reclaiming or utilizing Group B sites (Section 6.8.4.1.(f)(ii)); provide a summary of findings, deficiencies, and corrections made to each site in the inspection reports on Groups A, B and C material sources (Section 6.8.4.2.(a)). **Appendix C** provides the ADOT-Licensed Material Sources Inventory table with a summary of the status of each site and the Material Sources Inventory Location Map illustrates the position of these sites in the state.

Table 1 identifies ADOT's intentions with respect to renewal or reclamation and release of Group B sites.

Site No.	Source Name	District	County	Schedule			
				Year 3	Year 4	Year 5	2013-2014
3044	Board Tree Saddle	Globe	Gila	--	--	--	Permit Renewal
7225	Connor Canyon	Globe	Gila	--	--	--	Permit Renewal
8763	Fish Creek	Globe	Maricopa	--	--	--	Permit Renewal
6451	Slick Rock Wash	Safford	Graham	--	--	--	Returning to land manager Reclamation not required
478	Mohawk	Yuma	Yuma	--	--	--	Further Evaluation

Table 2 provides a summary of findings, deficiencies, and corrections recommended for each site. If a site is not listed in the table, it can be assumed that the facility was in compliance for the entire reporting period.

Site No. & Name	Findings	Deficiencies	Corrective Action
MS 2979 – Vicksburg	Ineffective perimeter control	Berm repair required	Reconstruct berm

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Site No. & Name	Findings	Deficiencies	Corrective Action
MS 5002 – Fortuna Wash	Leaking five gallon containers	Inadequate good housekeeping	Removal of containers and remediate soil
MS 5643 – Gila Bend South	Significant head cutting	Inadequate erosion control	Install erosion control measures; conduct maintenance, as required
MS 6183 – Dateland	Discharge of wastewater	Improper waste management	Remove impacted soil
MS 8400 – Sunflower	Discharge of sediment	Inadequate sediment control	Implement erosion and sediment control plan

Part 4: Numeric Summary of Stormwater Management Program Activities

Provide a numeric summary of BMPs and activities performed each year. Every year's Annual Report should include the numbers reported in the previous years.

Do not delete any of the existing measures listed in the table. Insert any additional measurable goals of BMP progress in the rows labeled as *Other numeric measurable goal(s)* or *Numeric measurable goal(s)*. Use italic font to clearly identify any additional measurable goals. If no measurable goal has been identified in the table below, the progress of the BMP must be described in Part 3 Narrative Summary of SSWMP Activities.

Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
MEASURES TO CONTROL DISCHARGES THROUGH EDUCATION						
3.2.2.1(a)(ii)(1)	Train ADOT Employees - Illicit discharges and illegal dumping (IDDE) (Combined with 3.2.2.1.(a)(ii)(2)					
	Number of trainings offered	7	17	13	Online	Online
	Number of employees trained	35	112	33	973	194
	(Other numeric measurable goal(s))					
3.2.2.1(a)(ii)(2)	Train ADOT Employees - Non-stormwater discharges (Combined with 3.2.2.1.(a)(ii)(1)					
	Number of trainings offered	7	17	13	Online	Online
	Number of employees trained	35	112	33	See IDDE	See 3.2.2.1(a)(ii)(1)
	(Other numeric measurable goal(s))					

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Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
3.2.2.1(a)(ii)(3)	Train ADOT Employees- New construction and land disturbances (Combined with 3.2.2.1.(a)(ii)(4) – named Stormwater Management of Construction Discharges)					
	Number of trainings offered	7	17	13	Online	Online
	Number of employees trained	35	112	33	See IDDE	168
	<i>(Other numeric measurable goal(s))</i>					
3.2.2.1(a)(ii)(4)	Train ADOT Employees - New development and significant redevelopment (Combined with 3.2.2.1.(a)(ii)(3))					
	Number of trainings offered	7	17	13	Online	Online
	Number of employees trained	35	112	33	932	See 3.2.2.1(a)(ii)(3)
	<i>(Other numeric measurable goal(s))</i>					
3.2.2.1(a)(ii)(5)	Train ADOT Employees - Storm sewer system and highway maintenance					
	Number of trainings offered	7	17	13	Online	Online
	Number of employees trained	35	112	33	906	179
	<i>(Other numeric measurable goal(s))</i>					
3.2.2.1(a)(ii)(6)	Train ADOT Employees - Good housekeeping and material BMPs (Combined some modules and changed the title) Spill Prevention and Response are part of General Awareness; Pesticides and Fertilizers are stand alone; Industrial is lumped with Waste Disposal					
	Spill Prevention and Response - Number of trainings offered	7	17	1	Online	Online
	Spill Prevention and Response - Number of employees trained	35	112	36	654	369
	Pesticides, Herbicides, and Fertilizer Application - Number of trainings offered	7	17	1	Online	Online

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Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
	Pesticides, Herbicides, and Fertilizer Application - Number of employees trained	35	112	36	See Spill	141
	Industrial Sites - Number of trainings offered	7	17	1	Online	Online
	Industrial Sites - Number of employees trained	35	112	36	971	196
	(Other numeric measurable goal(s))					
3.2.2.1(a)(iii)	Develop Stormwater Library					
	Number of times accessed or visited	N/A	N/A	N/A	365	3764
	(Other numeric measurable goal(s))					
3.2.2.1(b)	ADOT Construction Contractor Training and Certification					
	Number of trainings offered: 16hr; 6hr refresher	7	6	8	11	7; 5
	Number of ADOT employees trained/certified	35	22	34	46	42
	Number of ADOT employees re-certified	5	28	5	14	12
	Number of non-ADOT employees certified	N/A	129	53	132	95
	Number of non-ADOT employees re-certified	N/A	N/A	N/A	N/A	51
	(Other numeric measurable goal(s))					
3.2.2.2(b)(i)	Distribution of Educational Materials Through Public Places					
	Number of materials (posters, brochures, signs, etc.) distributed	2,600	4,577	5,200	See STORM	See STORM Annual Report
	Number of public events ADOT attended with displays	5	65	119	See STORM	See STORM Annual Report
	Estimated Audience from TV, movie, radio, billboard PSAs	N/A	13,534,800	4,268,300	See STORM	See STORM Annual Report
	Educational items (coloring books, wrist bands, magnet)	N/A	6,129	8,000	See STORM	See STORM Annual Report
	Construction seminar attendees	N/A	N/A	80	N/A	N/A
	(Other numeric measurable goal(s))					

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Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
3.2.2.2(b)(ii)	Distribution of Educational Materials Through ADOT's Stormwater Webpage					
	Number of hits on webpage	0	0	0	365	5,018
	(Other numeric measurable goal(s))					
3.2.2.3(b)	Record and Consider Public Comments					
	Number of public comments received	0	0	0	0	1
	(Other numeric measurable goal(s))					
3.2.2.3(c)	Implement a Public Reporting System					
	Number of reports received from public	0	0	0	0	1
	Number of reports investigated	0	0	0	0	1
	(Other numeric measurable goal(s))					
3.2.2.3(d)	Develop a Stormwater Component of the Adopt-a-Highway Litter Initiative					
	Number of volunteer groups participating	1,835	1,609	1,569	1,618	264
	Number of miles cleaned	2,291	2,026	3,935	4,108	86
	Amount of trash collected	246	211	224	Unreported	523
	(Other numeric measurable goal(s))					
3.2.2.3(e)	Continue Implementation of Litter Hotline					
	Number of calls received	3,389	2,864	2,776	Unreported	Unreported
	(Other numeric measurable goal(s))					
ILLCIT DISCHARGE/ILLEGAL DUMPING DETECTION AND ELIMINATION MEASURES						
3.2.3.1(a)	Maintain Illicit Discharge Authority					
	(Numeric measurable goal(s))					
3.2.3.1(b)	Enforce Standard Encroachment Permit					
	Number of enforcement actions	0	0	0	0	0
	(Other Numeric measurable goal(s))					
3.2.3.1(d)	Implement Non-Stormwater BMPs					
	(Numeric measurable goal(s))					

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Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
3.2.3.2(d)	Inspect Outfalls for Dry Weather Discharges					
	Number of major outfalls inspected	35	35	0	51	68
	Number of priority outfalls inspected	7	0	0	N/A	See Narrative
	Number of storm drain cross connection detected	0	0	0	N/A	3
	Number of illicit discharges detected	1	1	0	6	1
	Number of other dry weather flows detected	0	0	0	7	7
	Administrative Order on Consent Outfalls Identified	N/A	N/A	N/A	N/A	222
	Administrative Order on Consent Outfalls Inspected	N/A	N/A	N/A	N/A	218
	(Numeric measurable goal(s))					
3.2.3.3(b)	Investigate Illicit Discharges (Source Identification)					
	Number of storm drain cross connection investigated	0	0	0	N/A	4
	Number of illicit discharges investigated	0	0	7	9	4
	Number of other dry weather flows investigated	0	0	0	7	7
	(Other numeric measurable goal(s))					
3.2.3.3(c)	Respond to Complaints					
	Number of complaints received	0	0	0	0	1
	Number of complaints responded to	0	0	0	0	1
	Average response time (in days)	0	0	0	0	2
	(Other numeric measurable goal(s))					
3.2.3.3(d)	Report Incidental Dry Weather Discharges					
	Number of discharges reported to ADEQ	1	1	0	0	0
	(Other numeric measurable goal(s))					
3.2.3.4(a)	Take Action to Eliminate Existing Dry Weather Flows					
	Number of existing dry weather discharges eliminated	0	0	0	0	1
	(Other numeric measurable goal(s))					
3.2.3.4(b)	Take Action to Eliminate Sources of Illicit Discharges					
	Number of storm drain cross connection eliminated	0	0	0	0	0
	Number of illicit discharges eliminated	1	1	7	7	1
	Number of dry weather discharges eliminated	1	1	0	6	1

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Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
	<i>(Other numeric measurable goal(s))</i>					
3.2.3.4(c)	Coordinate with Local Jurisdictions for Complaint Response and Investigation					
	Number of illicit discharges reported to other jurisdictions for follow-up	1	0	0	5	6
	<i>(Other numeric measurable goal(s))</i>					
3.2.3.5	Responding to Spills					
	Number of highway accident spills responded to	0	156	180	196	196
	Number of highway accident spills prioritized (potential for discharge)	0	156	10	17	19
	Hazardous materials released	N/A	N/A	50	17	19
	<i>(Other numeric measurable goal(s))</i>					
MEASURES TO CONTROL DISCHARGES FROM NEW DEVELOPMENT AND REDEVELOPMENT						
3.2.5.2	Install Post-Construction Stormwater Control BMPs					
	Number of new post-construction stormwater control BMPs installed	N/A	0	0	0	0
	<i>(Other numeric measurable goal(s))</i>					
MEASURES TO CONTROL DISCHARGES FROM ROADWAYS						
3.2.6.1(b)	Inspect Storm Sewer System					
	Number of inspections performed	0	51	51	51	6,933
	<i>(Other numeric measurable goal(s))</i>					
3.2.6.1(c)	Develop Maintenance Schedules and Priorities					
	<i>(Numeric measurable goal(s))</i>					
3.2.6.1(d)	Perform Repair, Maintenance, and Cleaning					
	Number of miles of roadways repaired/maintained	0	0	0	0	26,144
	Number of inlets cleaned	0	0	0	0	2,631
	Number of drain inlets containing significant materials	0	0	0	0	223
	Number of miles of canal/open-channel cleaned	N/A	N/A	N/A	N/A	32

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Section Number	Stormwater BMP or Activity	Annual Reporting Year (July 1 – June 30)				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
	(Other numeric measurable goal(s))					
3.2.6.2(c)(ii)	Require Certification/License					
	Number of licensed ADOT applicators	41	41	40	Unreported	50
3.2.6.2(d)	Stabilize Roadway Slopes (attach summary of tracking & prioritization –					
	Acres of roadway slopes stabilized	0	0	0	0	39
MEASURES TO CONTROL DISCHARGES FROM ADOT MAINTENANCE FACILITIES						
4.1.5.3	Stencil Drain Inlets at ADOT Facilities					
	Number of new catch basins installed	0	0	0	0	0
	Number of catch basins marked or stenciled	15	0	0	0	3
	(Other numeric measurable goal(s))					

Part 5: Evaluation of the Statewide Stormwater Management Program

In accordance with Section 3.1.5 of the permit, provide an evaluation of the progress and success of the SSWMP each year, including an assessment of the effectiveness of stormwater management practices in reducing the discharge of pollutants to and from the municipal storm sewer system. ADOT continues to make progress in implementing the SSWMP. Each annual report highlights areas where ADOT exceeds in compliance and identifies areas where the agency can improve. The recently issued Administrative Order on Consent further memorializes progress that the agency makes in following regulations intended for municipal systems.

Part 6: Statewide Stormwater Management Program Modifications

In accordance with Section 3.1.6 of the permit, provide a description of modifications to the SSWMP each year as follows:

1. Addition of New BMPs: Summarize the development and implementation of any new stormwater management practices or pollution controls each year. None.
2. Adding Temporary or Experimental BMPs: Describe the initiation and cessation of such BMPs and the perceived success of the temporary or experimental stormwater control. None.
3. Increase of Existing BMPs: Summarize modifications to existing stormwater management practices that increase the number of activities, increase the frequency of activities, or other increases in the level of implementation. ADOT commenced a program to implement facility pollution prevention plans as a standard document for all maintenance facilities. This increased the number of formalized stormwater plans for facilities with materials exposed to rain, wind, or snow melt from 18 to 95. This standardization does several things; 1) enables the staff who report to work every day at a given facility to identify, track, and minimize sources of,

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and practices to prevent, pollutants from affecting the natural environment; 2) provides a tangible source of information for tenants that also may be potentially accountable; and 3) exemplifies the ADOT commitment to pollution.

4. Replacement of Existing BMPs: Describe modifications to replace an ineffective stormwater management practice with an alternate practice by demonstrating that the change will continue to achieve an equivalent reduction in pollutants and will not cause or contribute to a violation of any applicable water quality standard. [None](#).

Part 7: MS4 Monitoring Locations

Provide a brief description of each stormwater monitoring location (outfall), including the following information:

1. The outfall identification number or name;
2. Address or physical location of the site, including the latitude and longitude of the outfall;
3. Size of outfall's drainage area;
4. Land use(s) with an estimated percentage of each use;
5. Name and description of the receiving water; and
6. Type of monitoring equipment used.

ADOT has five fixed monitors in the MS4 – Flagstaff, Sedona, Phoenix, Tucson, and Nogales. Refer to [Appendix D AZPDES Permit Renewal Items Memo pages 2 and 3](#) for general description information and [Appendix D AZPDES Permit Renewal Items Attachment 3](#) for illustrations.

Part 8: Storm Event Records (MS4)

For each MS4 outfall monitoring location, provide a summary of all subsequent representative storm events necessary to collect at least one representative stormwater sample (greater than 0.1 inch rainfall) occurring within the reporting period, including the date of each event, the amount of precipitation (inches) for each event, and whether a sample was collected, or if not collected, information on the conditions that prevented sampling. [Refer to Appendix D AZPDES Permit Renewal Items Attachments 1 and 2](#) for required information.

Part 9: Summary of MS4 Monitoring Data (By Location)

Use a separate table for each outfall monitoring location. Provide the outfall identification number, the receiving water, designated uses, and the lowest surface water quality standards applicable to the receiving water. Enter the analytical results for the stormwater samples collected for each season of the reporting period for each year. Enter subsequent monitoring data for each location on the same form. Include, as an attachment, the laboratory reports for stormwater samples. [Refer to Appendix D AZPDES Permit Renewal Items Attachment 2](#) for required monitoring data and [Appendix E](#) for laboratory reports. A short reference table of lab information is included below.

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Location	Sampling Season	Collection Date	Report Date	Lab Report Number
Flagstaff	Summer	10/12/2012	10/22/2012	L600743
Flagstaff	Winter	01/25/2013	02/06/2013	L617489
Sedona	Summer	Not applicable	Not applicable	Not applicable
Sedona	Winter	01/25/2013	02/06/2013	L617505
Phoenix	Summer	Not applicable	Not applicable	Not applicable
Phoenix	Winter	12/14/2012	12/27/2012 and 12/28/2012	L611442 and L611431, respectively
Tucson	Summer	08/22/2012	08/22/2012	PVH1801-01
Tucson	Winter	12/13/2012	12/17/2012	PVL1141-01 and PVL1141-02
Nogales	Summer	Not applicable	Not applicable	Not applicable
Nogales	Winter	12/14/2012	12/31/2012	PVL1139-01

Part 10: Summary of Industrial and Construction Monitoring Data

Provide a summary of monitoring performed at industrial and construction sites as required in the permit. Monitoring regularly occurs at the Durango Sign Factory, which is one of multiple industrial facilities managed by ADOT. Three ADOT Maintenance Yards occur within ¼ mile of an impaired water and are included as industrial facilities that require monitoring. The following information summarizes the lab report information for these four sites.

Location	Sampling Season	Collection Date	Report Date	Lab Report Number
Durango Sign Factory	Summer	08/24/2012	08/31/2012	PVH1953-01
Durango Sign Factory	Winter	12/19/2012	12/30/2012	L612346
Superior Yard	Summer	Not applicable	Not applicable	Not applicable
Superior Yard	Winter	12/14/2012	12/24/2012	L611716
Superior Fuel Depot	Summer	Not applicable	Not applicable	Not applicable
Superior Fuel Depot	Winter	12/14/2012	12/24/2012	L611713
Nogales Yard	Summer	08/16/2012	08/28/2012	PVH1436-01
Nogales Yard	Winter	12/14/2012	12/31/2012	PVL1140-01

In addition to the industrial monitoring, seven construction sites were subject to monitoring in the reporting period. The following projects adhered to approved monitoring plans as listed below. The table contains the associated construction authorization number, the number of events that resulted in discharge and were sampled, the results of sampling, and whether exceedance of a water quality standard (WQS) was noted. Discharge Monitoring Reports will be retained by ADOT in project SWPPPs until September 2018 and are included in **Appendix F**.

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Project Name	Contractor AZCON number	Discharge Sampled?	Lab Report Attached?	Exceedance of WQS?	ADOT assumed project after contractor filed for termination?
Alamo Lake	72735	No discharges	Not applicable	Not applicable	No
Boyce Thompson	528824	No discharges	Not applicable	Not applicable	No
Marsh Station (II)	520904	No discharges	Not applicable	Not applicable	No
Marsh Station (III)	74798	No discharges	Not applicable	Not applicable	Ongoing
San Pedro River	72275	No discharges	Not applicable	Not applicable	Ongoing
Doubtful Canyon	57907	Turbidity (Jan 2013)	Not applicable	Not applicable	Ongoing
SR 260 Elk Fencing	529084	No discharges	Not applicable	Not applicable	No

Part 11: Assessment of Monitoring Data

- A. Stormwater Quality: Provide an evaluation of the sampling results for each outfall monitoring location, including an assessment of any trends, improvements, or degradation of stormwater quality from each drainage area. Discuss possible explanations for stormwater quality trends, including the implementation of stormwater management practices to reduce the discharge of pollutants to and from the storm sewer system. [Refer to Appendix D AZPDES Permit Renewal Items Memo Pages for required information.](#)
- B. Water Quality Standards (WQS): Compare the sampling results for each outfall monitoring location with the applicable surface water quality standards for the receiving water. Provide an assessment of stormwater quality relative to water quality standards, including the progress towards reducing the discharge of pollutants to the maximum extent practicable and protecting receiving water quality. [Refer to Appendix D AZPDES Permit Renewal Items Memo Pages for required information.](#)
- C. Exceeding a WQS: Describe any exceedance of a surface water quality standard during the reporting year. [Refer to Appendix D AZPDES Permit Renewal Items Memo Pages for required information.](#)
- D. Total Maximum Daily Loads: Assess the effectiveness of BMPs in meeting wasteload allocations or load allocations associated with any TMDL established for any receiving water. [Refer to Appendix D AZPDES Permit Renewal Items Memo Pages for required information.](#)

Part 12: Assessment of Pollutant Loadings

In accordance with Section 8.7.7 of the permit, provide an estimate of the pollutant loadings each year from the storm sewer system to waters of the U.S. for each constituent detected by stormwater monitoring within the permit term. Include an estimate of the event mean concentration of each pollutant for a representative storm event each year. Provide the seasonal (winter and summer) and

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annual (total) pollutant loadings. Pollutant loadings and event mean concentrations may be estimated from sampling data collected at the representative monitoring locations, taking into consideration land uses and drainage areas for the outfall. Include a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis, and calculation methods. Compare the pollutant loadings estimated each year to previous estimates of pollutant loadings to identify trends in stormwater quality. Refer to [Appendix D AZPDES Permit Renewal Items Attachment 5](#) for required information.

Part 13: Annual Expenditures

Provide a summary of the expenditures incurred each reporting period (July 1-June 30) to implement and maintain the stormwater management program, including associated monitoring and reporting activities. Provide the estimated budget for implementing and maintaining the stormwater program in the subsequent reporting period. Include a brief description of the funding sources used to support program expenditures. Various programs support the ADOT mission. State and Federal dollars are allocated for infrastructure improvements and associated maintenance. Private investments in the form of volunteer programs such as Adopt-A-Highway and Arizona Clean and Beautiful are also utilized. ADOT stormwater costs exceeded 11.4 million dollars.

Organization	Maintenance	Construction
Holbrook	604,947	551,469
Phoenix Maintenance	5,559,270	Not applicable
Kingman	301,683	27,408
Yuma	451,713	147,765
Globe	Unreported	1,087,763
Flagstaff	346,888	821,170
Prescott	34,804	Unreported
Environmental Services	591,000	870,000
Total	7,890,305	3,511,575

Part 14: Attachments

Appendix A – Administrative Order on Consent (AOC)
Appendix B – AOC Draft Outfall Information
Appendix C – Material Sources
Appendix D – AZPDES Permit Renewal Report
Appendix E – Lab Reports
Appendix F – Discharge Monitoring Reports
Appendix G – Illicit Discharge / Illicit Connection Coordination
Appendix H – Compliance Evaluation Reports

Appendix A

Administrative Order on Consent

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 9**

IN THE MATTER OF:

Arizona Department of Transportation

*Proceedings under Sections 308(a)
and 309(a) of the Clean Water Act,
as amended, 33 U.S.C. §§ 1318(a)
& 1319(a)*

EPA Docket No. CWA-09-2012-2004

**ADMINISTRATIVE ORDER ON
CONSENT**

I. INTRODUCTION

1. This Administrative Order on Consent ("AOC") is entered into voluntarily by the United States Environmental Protection Agency, Region 9 ("EPA") and the Arizona Department of Transportation ("Respondent"). This AOC requires Respondent to remedy deficiencies, as specified herein, in its storm water management and control program under its current Statewide National Pollutant Discharge Elimination System ("NPDES") permit, issued by the Arizona Department of Environmental Quality ("ADEQ") in implementation of the Clean Water Act ("CWA"), 33 U.S.C. § 1251, et seq.

2. EPA will provide notice of the AOC to the State of Arizona upon execution.

3. EPA and Respondent acknowledge that this AOC has been negotiated in good faith, is fair and reasonable, and is in the public interest.

II. JURISDICTION

4. The following Findings are made and the AOC is issued under the authority vested in the EPA Administrator under CWA Sections 308(a) and 309(a), 33 U.S.C. §§ 1318(a) and 1319(a). This authority has been re-delegated to the Director of the Enforcement Division, EPA Region 9.

5. Respondent expressly consents and agrees as follows:

- a. Respondent agrees to undertake and complete all actions required by the terms and conditions of this AOC;
- b. In any action by EPA to enforce the AOC, Respondent agrees not to contest EPA's jurisdiction or authority to enter into or enforce this AOC or the validity of any terms and conditions of this AOC; and
- c. Respondent agrees to waive any and all claims for relief and otherwise available rights or remedies to judicial or administrative review it may have with respect to any issue of fact or law set forth in the AOC, including but not limited to any right of

judicial review of this AOC under the Administrative Procedure Act, 5 U.S.C. §§ 701-708.

III. PARTIES BOUND

6. This AOC shall be binding on Respondent and its officials, officers, directors, partners, agents, employees, successors and assigns, and on all persons, independent contractors, contractors, and consultants acting in concert with Respondent.

7. No transfer of any interest in real property owned, operated or controlled by Respondent shall alter or relieve Respondent of its obligations under this AOC. Respondent shall reserve all rights necessary to comply with this AOC as a condition of the transfer and shall provide a copy of this AOC to the successor in interest at least thirty (30) days prior to the transfer.

8. The undersigned signatory for Respondent certifies that he has the authority to legally bind Respondent.

9. By executing and taking actions under this AOC, Respondent is not admitting to any liability or agreeing with the findings or conclusions set forth in Section IV below.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

10. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant by any person into a water of the United States except in compliance with, *inter alia*, a permit issued under Section 402 of the CWA, 33 U.S.C. § 1342.

11. Section 402 of the CWA establishes the NPDES program, under which EPA or an EPA-authorized state, such as the State of Arizona, may issue a permit authorizing the discharge of a pollutant into waters of the United States.

12. Section 402(p) of the CWA, 33 U.S.C. § 1342(p), requires NPDES permits for certain municipal and industrial storm water discharges. EPA's implementing regulations at 40 C.F.R. § 122.26 require NPDES permits for, among other things: storm water discharges from a "municipal separate storm sewer system" ("MS4") serving a population meeting certain threshold sizes, 40 C.F.R. § 122.26(a)(3), (b)(4), (b)(7) and (b)(8); and storm water discharges associated with enumerated categories of industrial activity, including construction activity that result in disturbance of one acre or more, 40 C.F.R. § 122.26(a)(1), (b)(14) and (b)(15).

13. The Arizona Department of Transportation ("ADOT" or "Respondent") is a state agency and a "person" as defined by Section 502(5) of the CWA, 33 U.S.C. § 1362(5).

14. Respondent has its headquarters in Phoenix and operates nine engineering and maintenance districts: Flagstaff, Globe, Holbrook, Kingman, Phoenix, Prescott, Safford, Tucson, and Yuma.

15. Respondent is primarily responsible for the design, construction, management and maintenance of Arizona's highway system. It operates or controls, on a statewide basis:

- a. an MS4, including drainage systems, catch basins, curbs, gutters, ditches, man-made channels, and storm drains;
- b. construction activities resulting in disturbance of at least one acre of total land area;
- c. maintenance activities, including highway maintenance (such as slope stabilization, vegetation control, and drain inlet cleaning) and storm sewer maintenance (such as spill and illicit connection/discharge reporting and response); and
- d. maintenance facilities, including vehicle maintenance facilities, salt and sand storage facilities, material and equipment storage facilities.

16. Storm water discharges from Respondent's above-listed activities and facilities to "waters of the United States," as defined in 40 C.F.R. §122.2, in the State of Arizona are regulated under AZPDES No. AZS0000018-2008 (the Permit), a statewide NPDES permit issued by the ADEQ. The Permit has been in effect since September 18, 2008.

17. From October 25 through 29, 2010, EPA representatives audited Respondent's compliance with the Permit at its headquarters and four of its districts: Phoenix, Flagstaff, Tucson and Prescott. The audit included interviews with Respondent's headquarters and district representatives, document reviews, and inspections of approximately 57 individual construction activities, maintenance facilities, and maintenance activities located in Respondent's rights-of-way or served by Respondent's MS4 in those four districts. The audit results, which indicated multiple deficiencies in Respondent's stormwater program, are summarized in EPA's May 10, 2011 report (the "Audit Report"), attached hereto as **Exhibit 1**.

18. On October 28, 2011, Respondent responded to the Audit Report in writing (the "Audit Response"), attached hereto as **Exhibit 2**, and proposed a schedule to comply with the relevant permit requirements. Since then, Respondent has modified and provided several updates on its schedule and corrective efforts.

19. Respondent has made progress in addressing the issues identified in the EPA Audit; however, compliance with the following Permit requirements and deadlines must be delivered:

- a. **Illicit Discharges/Illegal Dumping Detection and Elimination Measures** (Permit Section 3.2.3)
 - i. **Map Storm Sewer System:**
 - 1) Permit Section 3.2.3.2.b requires Respondent to develop, by September 19, 2012, a storm sewer system map "identifying the location of all its major outfalls identified to date and their receiving waters in Arizona statewide" and containing specified details.
 - 2) As more fully set forth in Section 2.2.5 of the Audit Report, Respondent has not yet completed the required mapping for the following districts: Globe, Holbrook, Phoenix, Prescott, Safford, and Tucson.
 - ii. **Inspect and Track Outfalls for Dry Weather Discharges:**
 - 1) Permit Section 3.2.3.2.d requires Respondent to inspect 35 of the 71 major outfalls already identified in its *September 2005 Phase I and Phase II Storm Water Systems Maps* (the "71 Major Outfalls") for dry weather

discharges by September 2009, and to inspect the remainder by September 2010. Permit Section 3.2.3.2.e further requires Respondent to implement and maintain a system to track and record findings of outfall inspections, including the conditions of outfalls, potential sources of pollutants, and maintenance needs.

- 2) As more fully set forth in Section 2.2.1 of the Audit Report, Respondent did not complete the dry weather screening of the 71 Major Outfalls by the permit deadlines, or create a system to track and record results of the dry weather screening program. From July 1, 2011 to June 30, 2012, Respondent completed dry weather screening for 51 of the 71 Major Outfalls.

b. Inventory, Inspection and Maintenance of Post-Construction Best Management Practices ("BMPs") (Permit Section 3.2.5)

- i. Permit Section 3.2.5.3 requires Respondent to "inventory, inspect, and maintain all post-construction stormwater pollution control BMPs in accordance with its *Post-Construction Stormwater Control BMP Manual*."
- ii. As more fully set forth in Section 2.3.3 of the Audit Report, Respondent is still in the process of developing the required inventory of its post-construction BMPs.
- iii. As more fully set forth in Section 2.3.4 of the Audit Report, Respondent has not yet commenced the required inspection and maintenance of its post-construction BMPs.

c. Enforcement of Applicable Construction Project Requirements (Permit Section 5.3.1)

- i. Permit Section 5.3.1 requires, among other things, that Respondent ensure compliance by its contractors with the AZPDES Construction General Permit ("Construction General Permit") for regulated projects (Section 5.3.1.1), implement a system to enforce the Construction General Permit and the Permit for its projects, and be responsible for inspection oversight (Section 5.3.1.3).
- ii. As more fully set forth in Section 2.6.3 of the Audit Report, Respondent has lagged behind in carrying out its inspection oversight responsibility and implementing the enforcement system to ensure compliance with applicable permit requirements at its construction projects in various districts.

20. By failing to comply fully with the above-referenced permit requirements, Respondent has violated and continues to violate CWA Section 301(a), 33 U.S.C. § 1311(a).

V. WORK TO BE PERFORMED

21. **Definitions for the “Work to Be Performed” Section.** The following definitions shall apply to this section. Other terms used in this section that are defined in the Permit shall have the meaning assigned to them in the Permit.

- a. “AOC” shall mean this Administrative Order on Consent and any amendments thereto.
- b. “AOC Outfall” or “Outfall” shall mean any and all of the following:
 - i. any of the 71 Major Outfalls;
 - ii. any outfall, regardless of size, that discharges to any “impaired water,” as the term is defined in Permit Section 12 at page 103;
 - iii. any outfall, regardless of size, that discharges to any “unique (or outstanding) water,” as the term is defined in Permit Section 12 at page 108; and
 - iv. any outfall, regardless of size, that is known to have an illicit discharge that is ongoing or intermittent, excluding:
 - 1) spills from accidents and other isolated events that Respondent may respond to during the term of this AOC or has responded to in the past five years; and
 - 2) incoming or run-on flow from an adjacent municipality which passes through Respondent’s storm water conveyances and for which Respondent has an agreement in place with the municipality or has documentation to characterize such pass-through.
- c. “Task I AOC Outfalls” shall mean any and all of the following:
 - i. any and all of the 71 Major Outfalls; and
 - ii. other AOC outfalls in Respondent’s Globe, Holbrook and Phoenix Districts.
- d. “Task II AOC Outfalls” shall mean any and all AOC Outfalls in Respondent’s Prescott, Safford and Tucson Districts, excluding the 71 Major Outfalls.
- e. “Water Quality Post-Construction BMPs” shall mean the post-construction stormwater BMPs for the following structures, as described in Respondent’s Water Quality Post-Construction BMP Manual:
 - i. manufactured treatment devices;
 - ii. bioretention structures;
 - iii. filtration structures;
 - iv. infiltration basins;
 - v. infiltration trenches; and
 - vi. retention and detention basins (designed for water quality improvements prior to discharge)¹.

¹ Any basins or infiltration devices included in and subject to the prescriptions or guidance in the Manual will be mapped only if designed for water quality improvements prior to discharge; those constructed to retain, detain, or infiltrate for traffic interchanges, or created for managing source materials or other flood containment would not be captured in this data.

- f. "Water Quality Post-Construction BMP Manual" (Manual) shall mean Respondent's document entitled "Water Quality Post-Construction Best Management Practices" and any amendments and revisions thereto made in accordance with applicable requirements of the Permit.
- g. "Work" shall mean all the actions and measures Respondent is required to undertake by this AOC.

22. To address the program deficiencies set forth in the Findings section above, Respondent shall complete the Work as specified below. Should the due date fall on a Saturday, Sunday or a federal holiday, it shall automatically extend to the close of business of the next business day.

23. Description of Task I Work.

- a. **No later than April 15, 2013**, Respondent shall complete the following Work:
 - i. ***Ensure Placement of Contractor Oversight and Compliance Personnel in All Nine Districts:*** Respondent shall have in place, for each of its districts, a Resident Engineer or equivalent who shall have the authority and responsibility for:
 - 1) overseeing, directing, and conducting inspections of all construction activities initiated or controlled by Respondent within the district; and
 - 2) taking appropriate enforcement actions to ensure compliance by Respondent's contractors with the General Construction Permit and this Permit.
 - ii. Submit a report with the name and contact information for the designated Residential Engineer or equivalent for each district.
- b. **No later than May 15, 2013**, Respondent shall obtain a draft Water Quality Post-construction BMP Manual from its consultant for review and comment.
- c. **No later than June 30, 2013**, Respondent shall provide its comments on the draft Water Quality Post-construction BMP Manual to its consultant.
- d. **No later than August 30, 2013**, Respondent shall complete the following Work:
 - i. ***Complete Mapping of the Task I AOC Outfalls:*** The storm sewer system map(s) for each identified Outfall shall contain the following information for:
 - 1) its location;
 - 2) its drainage pattern and the water quality status (impaired or unique/outstanding) of its receiving water;
 - 3) the associated storm water collection and conveyance structures (e.g. drainage pipes, streets, floodway structures, AOC Outfalls, drywells, retention/detention basins);
 - 4) its surrounding highway system; and

- 5) its relevant district boundary.
- ii. ***Complete Water Quality Post-Construction BMP Manual modifications:*** Respondent shall update the Manual with BMPs utilized by the State for a water quality benefit.
- e. **No later than September 15, 2013 ,** Respondent shall complete the following Work:
 - i. ***Submit 1st Compliance Report:*** Respondent shall submit a compliance report with the following information:
 - 1) verification of compliance with the required mapping for the reporting period;
 - 2) a summary of the mapping work performed during the reporting period; and
 - 3) any amendment or revision made to the Water Quality Post-Construction BMP Manual during the reporting period.
- f. **No later than October 31, 2013 ,** Respondent shall complete the following Work:
 - i. ***Complete Dry Weather Outfall Screening Work for Task I AOC Outfalls:*** Respondent shall complete inspection of Task I AOC Outfalls for any dry weather discharges in accordance with the updated Dry Weather Field Screening Sites part of its Stormwater Monitoring Guidance Manual for MS4 Activities.
 - ii. ***Complete Water Quality Post-Construction BMP Mapping, Inspection and Maintenance Work for Globe, Holbrook and Phoenix:*** Respondent shall complete the Work in accordance with the updated Water Quality Post-Construction BMP Manual, including the inspection requirements listed in the BMP Sheets.
- g. **No later than November 15, 2013,** Respondent shall complete the following Work:
 - i. ***Submit 2nd Compliance Report:*** The Compliance Report shall contain the following information:
 - 1) verification of compliance with the AOC requirements for the reporting period;
 - 2) a summary table of the location of each Task I AOC Outfall screened within the reporting period, the inspection date, the inspection finding, and any follow-up action taken or planned;
 - 3) a summary table of the location of each Water Quality Post-Construction BMP inspected, the inspection date, the inspection finding, and any follow-up action taken or planned; and a summary table of the construction sites inspected within the reporting period for each of the nine districts, the inspection date, the inspection finding, and any follow-up action taken or planned.

24. Description of Task II Work.

a. No later than January 15, 2014, Respondent shall complete the following Work:

- i. ***Complete Mapping and Dry Weather Screening for Task II AOC Outfalls:*** The storm sewer system map(s) for the Task II AOC Outfalls shall contain information for each identified Outfall as specified in 23.d.i.
- ii. ***Complete Water Quality Post-Construction BMP Inventory Mapping, Inspection and Maintenance for Prescott, Safford and Tucson:*** Respondent shall conduct the inventory mapping in accordance with the updated Water Quality Post-Construction BMP Manual.

b. No later than March 15, 2014, Respondent shall complete the following Work:

- i. ***Submit 3rd Compliance Report:*** The Compliance Report shall contain the following information:
 - 1) verification of compliance with the AOC requirements for the reporting period;
 - 2) a summary of the mapping work performed during the reporting period;
 - 3) a summary table of the construction sites inspected within the reporting period for each of the nine districts, the inspection date, the inspection finding, and any follow-up action taken or planned;
 - 4) a summary table of the location of each Task II AOC Outfall screened within the reporting period, the inspection date, the inspection finding, and any follow-up action taken or planned; and
 - 5) a summary table of the location of each Water Quality Post-Construction BMP inspected, the inspection date, the inspection finding, and any follow-up action taken or planned.

25. **AOC Compliance Schedule Table.** The following table summarizes the Work required for each phase and the accompanying deadlines:

AOC COMPLIANCE SCHEDULE TABLE				
Task I	Deadline	Mapping	Inspection & Maintenance	Contractor Oversight
	4/15/13	NA	NA	Have designated personnel in place for every district. Submit list of personnel to EPA.
	5/15/13	Draft Water Quality Post-Construction BMP Manual submitted from consultant to ADOT for review and comment.	NA	NA
	6/30/13	ADOT comments to consultant.	NA	NA
	8/30/13	Complete mapping of Task I AOC Outfalls in Globe, Holbrook and Phoenix. Finalize modification of the Water Quality Post-Construction BMP Manual.	NA	NA
	9/15/13	<i>First Compliance Report Due</i>		
	10/31/13	Complete Water Quality Post-Construction BMPs mapping for Globe, Holbrook and Phoenix.	Complete dry weather screening of Task I AOC Outfalls. Complete inspection and maintenance of Water Quality Post-Construction BMPs mapped for Globe, Holbrook and Phoenix.	NA
	11/15/13	<i>Second Compliance Report Due</i>		
Task II	1/15/14	Complete outfall mapping for Prescott, Safford and Tucson. Complete Water Quality Post-Construction BMP inventory mapping for Prescott, Safford and Tucson.	Complete dry weather screening of all Task II AOC Outfalls. Complete inspection and maintenance of Water Quality Post-Construction BMPs for Prescott, Safford and Tucson.	NA
	3/15/14	<i>Third Compliance Report Due</i>		

VI. SUBMISSIONS AND NOTIFICATIONS

26. All submittals required by this AOC shall be signed by a principal executive officer, ranking elected official, or duly authorized representative of Respondent, as specified by 40 C.F.R. § 122.22(b), and shall include the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified persons properly gather and evaluate the information submitted. Based on my inquiry of those responsible for managing or gathering the information, the submitted information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

27. Unless otherwise specified by EPA, Respondent shall make all submittals required by this AOC by first-class mail or email to:

U.S. ENVIRONMENTAL PROTECTION AGENCY
75 Hawthorne Street
San Francisco, CA 94105
Attn: Rick Sakow, Clean Water Act Compliance Office
Sakow.rick@epa.gov

VII. DELAY OF PERFORMANCE/FORCE MAJEURE

28. Respondent shall perform the Work required under this AOC within the time limits set forth or approved herein, unless the performance is prevented or delayed by a Force Majeure event, or as otherwise agreed to in writing by EPA and Respondent.

29. For purposes of this AOC, a "Force Majeure" event is any event arising from causes beyond the control of Respondent or any entity controlled by Respondent that, notwithstanding due diligence by Respondent or any entity controlled by Respondent, delays or prevents performance of an obligation under this AOC. The due diligence requirement includes using due diligence to anticipate any such event and to minimize the delay caused by any such event to the greatest extent practicable. A Force Majeure event does not include, inter alia, increased costs of performance, changed labor relations, financial or business difficulties, normal inclement weather, or changed circumstances arising from the sale, lease or other transfer or conveyance of real estate interest.

30. If Respondent believes that a Force Majeure event is likely to occur, is occurring, or has occurred that may affect its ability to perform an obligation under this AOC, Respondent shall notify EPA by telephone or email within two (2) business days of when Respondent first became

aware of such event, and shall follow up with a formal notice to EPA within 15 days after the event with the following information:

- a. the action that may be or has been affected;
- b. the reasons for the delay;
- c. the length or anticipated duration of the delay;
- d. the measures taken or to be taken to prevent or minimize the delay;
- e. a schedule for implementing such measures; and
- f. any additional information deemed appropriate by Respondent to support its Force Majeure claim.

Failure to comply with the notice requirement of this paragraph shall constitute a waiver of any Force Majeure claim by Respondent as to the event in question.

31. If EPA agrees that an actual or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligation shall be extended by written agreement of the parties. An extension of the time for performing an obligation affected by a Force Majeure event shall not, of itself, extend the time for performing a subsequent obligation.

32. Respondent shall have the burden of proving that a Force Majeure event was the cause of the noncompliance and the duration of the noncompliance.

33. For any other non-Force Majeure event that nevertheless may delay the performance of any obligation under the AOC, Respondent shall notify EPA in writing as soon as it becomes aware of such event and provide the same information as specified in Paragraph 30 above.

VIII. SCOPE OF THE AOC

34. This AOC is not a CWA permit.

35. Compliance with this AOC shall be no defense to any actions commenced pursuant to any applicable federal, state or local laws, regulations or permits.

36. Issuance of and compliance with this AOC shall in no way affect the rights of EPA or the United States with respect to any person not a party hereto.

37. This AOC shall in no way affect EPA's authority to enter, inspect, sample or monitor compliance under any law, permit, court order or agreement, and Respondent shall use its best efforts to arrange for access by EPA or its authorized representatives for determining compliance with this AOC. For purposes of this AOC, EPA's authorized representatives shall include all EPA employees and contractors and such other persons as EPA may designate.

IX. RESERVATION OF RIGHTS/FAILURE TO COMPLY WITH THE AOC

38. EPA reserves all rights, claims and remedies available under the law to enforce CWA violations, including without limitation any violation of the Permit or this AOC.

39. Failure to comply with this AOC is a violation of the CWA and may subject Respondent to civil penalties not to exceed \$37,500 per day for each violation under CWA § 309(d), 33 U.S.C. § 1319(d), and 40 C.F.R. § 19.4.

X. TERMINATION AND SATISFACTION

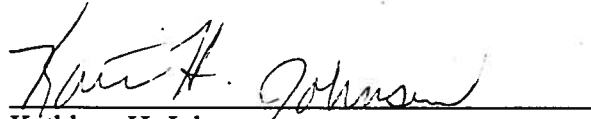
40. This AOC shall terminate upon written notice from EPA to the effect that it considers Respondent to have addressed the requirements of this AOC in a satisfactory manner; or, as otherwise ordered by a court of competent jurisdiction.

XI. EFFECTIVE DATE

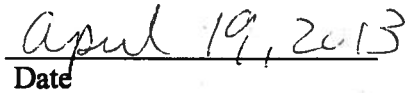
41. This AOC shall become effective upon signature by EPA and Respondent.

IT IS SO AGREED AND ORDERED:

**FOR U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 9**

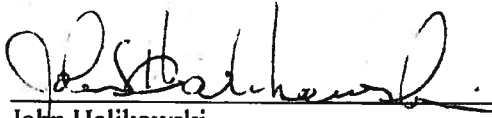
A handwritten signature in cursive script, appearing to read "Kathleen H. Johnson", is written over a horizontal line.

**Kathleen H. Johnson
Director
Enforcement Division
Environmental Protection Agency, Region 9**

A handwritten date "April 19, 2013" is written over a horizontal line.

Date

FOR ARIZONA DEPARTMENT OF TRANSPORTATION

A handwritten signature in dark ink, appearing to read "John Halikowski", written over a horizontal line.

John Halikowski

Director

Arizona Department of Transportation

4/16/13

Date

Appendix B

AOC Draft Outfalls

Appendix B - AOC Draft Outfalls

ADOT District	Original ID	Water Quality	Water Body ID	Flow Direction	Inspection Date	Flow	Smell	Floatables
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15010010	S	04/04/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/17/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	E	04/17/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	E	04/17/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/17/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/17/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff	89A-371.74	Impaired	AZ15060202	N/A	04/17/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15010010	S	Incomplete	Unk	Unk	Unk
Flagstaff		Impaired	AZ15010010	S	04/04/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15010010	S	04/04/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15010010	S	04/04/2013	Dry	None	None
Flagstaff		Impaired	AZ15010010	S	04/04/2013	Dry	None	None
Flagstaff	B40-196.14	MS4	AZ15020015	W	04/18/2013	Dry	None	None
Flagstaff	40-195.27	MS4	AZ15020015	W	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15060202	S	04/18/2013	Dry	None	None
Flagstaff		Impaired	AZ15010010	S	04/04/2013	Dry	None	None
Globe		Impaired	AZ 15060103	W	04/24/2013	Dry	None	None
Globe		Impaired	AA15050100	S	04/24/2013	Dry	None	None
Globe		Impaired	AZ 15050100	S	04/24/2013	Dry	None	None
Globe		Impaired	AZ 15050100	S	04/24/2013	Dry	None	None
Globe		Impaired	AZ 15060103	S	04/24/2013	Dry	None	None
Globe		Impaired	AZ15060103	W	04/23/2013	Dry	None	None
Globe		Impaired	AZ15060103	W	Incomplete	Unk	Unk	Unk
Globe		Impaired	AZ15060103	N	04/23/2013	Dry	None	None
Globe		Impaired	AZ15050100	N	04/24/2013	Dry	None	None
Globe		Outstanding	AZ15020001	SW	04/22/2013	Dry	None	None
Globe		Impaired	AZ15050100	S	04/24/2013	Dry	None	None

Appendix B - AOC Draft Outfalls

ADOT District	Original ID	Water Quality	Water Body ID	Flow Direction	Inspection Date	Flow	Smell	Floatables
Globe		Impaired	AZ15060103	S	04/22/2013	Dry	None	None
Globe		Impaired	AZ15020001	N	04/22/2013	Dry	None	None
Globe		Impaired	AZ15050100	N	04/24/2013	Dry	None	None
Globe		Impaired	AZ15020001	N	04/22/2013	Dry	None	None
Globe		Impaired	AZ15050100	E	04/24/2013	Dry	None	None
Globe		Impaired	AZ15020001	N	04/22/2013	Dry	None	None
Globe		Impaired	AZ15020001	S	04/23/2013	Dry	None	None
Globe		Outstanding	AZ15020001	SW	04/22/2013	Dry	None	None
Globe		Outstanding	AZ15020001	SW	04/22/2013	Dry	None	None
Globe		Impaired	AZ15050100	S	04/22/2013	Dry	None	None
Globe		Impaired	AZ15050100	S	04/24/2013	Dry	None	None
Globe		Impaired	AZ15050100	N	04/24/2013	Dry	None	None
Phoenix	10-149.18	MS4	AZ15060106	W	05/21/2013	Slow	None	None
Phoenix	202 - 14.22	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	101 - 50.87	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	202-5.14	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	10-145.17	MS4	AZ15060106	W	05/21/2013	Standing	None	None
Phoenix	202-7.44	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	202-8.28	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	202-8.65	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	202-5.90	MS4	AZ15060106	W	05/20/2013	Dry	None	None
Phoenix	10-151.06	MS4	AZ15060106	W	05/21/2013	Dry	None	None
Phoenix	17 - 198.48	Impaired	AZ15060106	W	05/21/2013	Dry	None	None
Phoenix	101-13.68	MS4	AZ15070102	SW	05/21/2013	Dry	None	None
Phoenix	10-150.44	MS4	AZ15060106	W	05/21/2013	Dry	None	None
Phoenix	10 - 162.44	MS4	N/A	SW	05/21/2013	Dry	None	None
Phoenix	143-2.90	MS4	AZ15060106	S	05/21/2013	Dry	None	None
Phoenix	202-7.44	MS4	AZ15060106	W	Incomplete	Unk	Unk	Unk
Phoenix	60-189.65	MS4	AZ15050100	S	05/21/2013	Standing	None	None
Phoenix	101-51.07	MS4	AZ15060106	W	05/20/2013	Standing	None	None
Phoenix	51 - 10.91	MS4	AZ15060106	S	05/20/2013	Dry	None	None
Phoenix	101-21.87A	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101-21.23 B	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101-21.23 A	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101-21.83	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101-20.19	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101 - 25.92	MS4	AZ15060106	NE	05/20/2013	Dry	None	None
Phoenix	101-16.62	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101-16.31	MS4	AZ15070102	SW	05/20/2013	Dry	None	None

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ADOT District	Original ID	Water Quality	Water Body ID	Flow Direction	Inspection Date	Flow	Smell	Floatables
Phoenix	101-16.74	MS4	AZ15070102	SW	05/20/2013	Dry	None	None
Phoenix	101-15.18	MS4	AZ15070102	W	05/20/2013	Dry	None	None
Phoenix	101-14.38	MS4	AZ15070102	S	Incomplete	Unk	Unk	Unk
Phoenix	101-13.44	MS4	AZ15070102	S	05/21/2013	Dry	None	None
Phoenix	60-187.43	MS4	AZ15050100	S	05/21/2013	Dry	None	None
Phoenix	51 - 11.62	MS4	AZ15060106	S	05/20/2013	Dry	None	None
Phoenix		Impaired	AZ15060106	S	04/24/2013	Dry	None	None
Phoenix	10-130.3	MS4	AZ15070102	S	05/21/2013	Slow	None	None
Phoenix	10-130.2	MS4	AZ15070102	S	05/21/2013	Dry	None	None
Phoenix	87-178.55	MS4	AZ15060106	W	05/20/2013	Standing	None	None
Phoenix	60-159.51	MS4	N/A	S	05/21/2013	Standing	None	None
Phoenix		Impaired	AZ15060106	S	04/24/2013	Dry	None	None
Phoenix		MS4	AZ15060106	S	05/20/2013	Dry	None	None
Phoenix	101-6.05	MS4	AZ15070102	SW	05/21/2013	Dry	None	None
Phoenix	101-11.85	MS4	AZ15070102	SW	05/21/2013	Slow	None	None
Phoenix	101-7.76	MS4	AZ15070102	SW	05/21/2013	Standing	None	None
Phoenix	51-7.04	MS4	AZ15060106	SW	05/20/2013	Dry	None	None
Phoenix	51-8.22	MS4	AZ15060106	S	05/20/2013	Dry	None	None
Phoenix	17-208.2	MS4	N/A	W	05/21/2013	Dry	None	None
Phoenix	101-10.84	MS4	AZ15070102	SW	05/21/2013	Standing	None	None
Phoenix	202-3.57	MS4	AZ15060106	S	05/21/2013	Dry	None	None
Phoenix	51-5.45	MS4	AZ15060106	SE	05/20/2013	Dry	None	None
Phoenix	10-150.45	MS4	AZ15060106	W	05/21/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060203	S	04/22/2013	Dry	None	None
Prescott		Impaired	AZ15060105	S	04/22/2013	Dry	None	None
Prescott		Impaired	AZ15060105	S	04/22/2013	Dry	None	None
Prescott		Impaired	AZ15060105	S	04/22/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/10/2013	Dry	None	None
Prescott	260-221.66	Impaired	AZ15060203	S	05/09/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/09/2013	Dry	None	None
Prescott	260-351.91	MS4	AZ15060202	NE	Incomplete	Unk	Unk	Unk
Prescott		Impaired	AZ15060105	S	04/22/2013	Dry	None	None

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ADOT District	Original ID	Water Quality	Water Body ID	Flow Direction	Inspection Date	Flow	Smell	Floatables
Prescott		Impaired	AZ15060203	S	05/09/2013	Dry	None	None
Prescott	260-352.33	MS4	AZ15060202	NE	05/09/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/09/2013	Dry	None	None
Prescott		Impaired	AZ15060202	SW	04/17/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/09/2013	Dry	None	None
Prescott		MS4	AZ15070102	W	05/10/2013	Dry	None	None
Prescott	69-287.9	MS4	AZ15070102	W	04/18/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/09/2013	Dry	None	None
Prescott		Impaired	AZ15060202	SW	04/17/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/09/2013	Dry	None	None
Prescott		Impaired	AZ15060202	S	05/09/2013	Dry	None	None
Safford		Impaired	AZ15050202	SW	05/06/2013	Dry	Musty	None
Safford		Impaired	AZ15050202	E	05/06/2013	Dry	None	None
Safford		Impaired	AZ15050202	NW	05/06/2013	Dry	None	None
Safford		MS4	AZ15050202	N	05/06/2013	Dry	None	None
Safford		MS4	AZ15050202	N	05/06/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		MS4	AZ15050202	N	05/06/2013	Dry	None	None
Safford		MS4	AZ15050202	N	05/06/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15040002	SW	05/07/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SW	05/08/2013	Dry	None	None
Safford		MS4	AZ15050202	N	05/06/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15040002	SW	05/07/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/06/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		Impaired	AZ15040002	SW	05/07/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None

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ADOT District	Original ID	Water Quality	Water Body ID	Flow Direction	Inspection Date	Flow	Smell	Floatables
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	SE	05/08/2013	Dry	None	None
Safford		Impaired	AZ15080301	E	05/08/2013	Dry	None	None
Safford		Impaired	AZ15040002	N	05/07/2013	Dry	None	None
Safford		Impaired	AZ15040002	N	05/07/2013	Dry	None	None
Safford		Impaired	AZ15050202	SW	05/06/2013	Dry	None	None
Safford		Impaired	AZ15040002	N	05/07/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson	189-2.89	Impaired	AZ15050301	E	06/18/2013	Dry	None	None
Tucson	77-71.8	MS4	AZ15050302	N	04/29/2013	Dry	None	None
Tucson	82-0.57	Impaired	AZ15050301	SW	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	S	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	Az15050301	W	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	S	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	SW	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	S	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	SW	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	S	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	S	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	E	04/30/2013	Dry	None	None
Tucson	19-59.0	MS4	AZ15050301	W	06/18/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	05/01/2013	Dry	None	None
Tucson	210-2.7	MS4	AZ15050301	NE	04/29/2013	Dry	None	None
Tucson	10-260.7	MS4	AZ15050301	S	04/29/2013	Dry	None	None
Tucson	10-261.5	MS4	AZ15050301	S	04/29/2013	Dry	None	None

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ADOT District	Original ID	Water Quality	Water Body ID	Flow Direction	Inspection Date	Flow	Smell	Floatables
Tucson	86-171.1	MS4	AZ15050301	S	04/30/2013	Dry	None	None
Tucson	77-71.74	MS4	AZ15050302	N	04/29/2013	Dry	None	None
Tucson	10-264.6	MS4	AZ15050301	W	04/29/2013	Dry	None	None
Tucson		MS4	AZ15050302	N	04/29/2013	Dry	None	None
Tucson		Outstanding	AZ15050302	S	04/29/2013	Dry	None	None
Tucson		Outstanding	AZ15050302	SW	04/29/2013	Dry	Musty	None
Tucson		Outstanding	AZ15050302	W	04/29/2013	Dry	None	None
Tucson		Outstanding	AZ15050302	E	04/29/2013	Dry	None	None
Tucson		Outstanding	AZ15050302	NE	04/29/2013	Dry	None	None
Tucson		Outstanding	AZ15050302	S	04/29/2013	Dry	None	None
Tucson	19-61.7	MS4	AZ15050301	E	04/30/2013	Dry	None	None
Tucson		Impaired	AZ15050301	W	05/01/2013	Dry	None	None
Tucson		Impaired	AZ15050301	NW	05/01/2013	Dry	None	None
Tucson		Outstanding	AZ15050302	S	04/29/2013	Dry	None	None
Tucson		Impaired	AZ15050301	NW	05/01/2013	Dry	None	None
Tucson	210-1.2	MS4	AZ15050301	N	04/29/2013	Dry	None	None
Tucson		Impaired	AZ15050301	NW	05/01/2013	Dry	None	None
Tucson	77-85.97	MS4	AZ15050301	S	04/29/2013	Dry	None	None
Tucson		Impaired	AZ15050301	N	05/01/2013	Dry	None	None
Tucson	77-80.8	MS4	AZ15050301	W	04/29/2013	Dry	None	None
Tucson	77-79.9	MS4	AZ15050301	SW	04/29/2013	Dry	None	None
Tucson	77-78.7	MS4	AZ15050301	SW	04/29/2013	Dry	None	None
Tucson		MS4	AZ15050301	S	06/18/2013	Dry	None	None
Tucson		Impaired	AZ15050301	NW	05/01/2013	Dry	None	None
Yuma		Impaired	AZ15030107	W	04/11/2013	Dry	None	None
Yuma		Impaired	AZ15070101	W	04/11/2013	Dry	None	None
Yuma		Impaired	AZ15030107	W	04/11/2013	Dry	None	None

Appendix C

Material Sources

ADOT-Licensed Material Sources Inventory

Material Source (MS) No.	Source Name	ADOT District	County	Owner Code	Township	Range	Sec	Hwy	MP	Latitude ° - ' - " N	Longitude ° - ' - " W	Total Acres	SIC Code	Site Use	Non-Exclusive Use	Potential Non-SW Discharge	Stockpiled Material	Water of US	Distance to Waters (miles)	U / I Waters
GROUP A : A materials source in this group will include a place where work or other activities related to the extraction, processing, removal or recovery of minerals is being conducted. Group A may also include a site or portion of site where mining has occurred in the past, yet currently mining is not being actively undertaken and the facility may or may not be covered by an active mining permit issued by the landowner(s), applicable State or Federal government agency.																				
A1. These sources are expected to be used at least annually. Inspections are conducted at least quarterly.																				
1563	Pole Knoll	Globe	Apache	3	08 N	27 E	30	260	381	34-03-21.83	109-31-58.04	5	1429	20,22	No	HH,LL	Yes	Yes	0.25	No
3043	Squaw Peak	Globe	Gila	3	08 N	14 E	30	288	298	34-00-41.82	110-57-24.16	4	1499	20	Yes	HH	Yes	Yes	0.25	No
3512	Burnt Corral	Globe	Maricopa	3	03 N	11 E	1	88	236	33-38-04.52	111-11-18.65	11	1499	20	Yes	HH	Yes	Yes	0.25	No
5154	JMP Ranches Inc.	Globe	Apache	7	13 N	28 E	30	180	366	34-30-29.37	109-24-52.86	80	1499	22	No	HH	No	Yes	<0.25	No
8109	BVD	Holbrook	Coconino	1,5	19 N	15 E	21	I-40	250	35-01-54.56	110-45-32.79	80	1499	20,22,23	No	HH,MM,NN	Yes	Yes	>0.50	No
7810	Crabtree	Safford	Greenlee	3	02 N	29 E	14	191	217	33-31-04.55	109-18-59.02	10	1429	20,22	Yes	HH	Yes	Yes	0.25	No
6662	Val Vista	Tucson	Pinal	4	05 S	06 E	23	I-10	187	32-58-35.18	111-43-04.41	120	1499	22,23	Yes	HH	No	Yes	On-site	No
1662	Tanner	Yuma	Yuma	4	08 S	21 W	9	95	38	32-44-35.30	114-25-33.55	25	1442	20,22,24	Yes	HH,II,JJ	Yes	Yes	On-site	No
2979	Vicksburg	Yuma	La Paz	4	05 N	15 W	23	72	44	33-45-45.94	113-47-39.44	60	1499	20	Yes	HH	Yes	Yes	<0.25	No
3547	Gila Bend North	Yuma	Maricopa	4	06 S	03 W	7	I-8	124	32-54-57.00	112-35-53.80	19	1499	20,22	Yes	HH	Yes	Yes	On-site	No
5474	Castle Dome	Yuma	Yuma	9	06 S	20 W	3	95	53	32-56-15.13	114-18-32.26	14	1442	20,22	No	HH	Yes	Yes	0.25	No
A2. These sources are used less than annually. Inspections are conducted at least annually.																				
8135	Warm Springs	Globe	Apache	3	07 N	30 E	5	180	411	34-01-33.25	109-11-53.27	42	1429	20,24	Yes	HH	Yes	Yes	On-site	No
8706	Yucca	Kingman	Mohave	1,2,4,7	18 N	17 W	30	I-40	29	34-55-04.24	114-07-02.16	133	1442	20,23	Yes	HH,MM	Yes	Yes	On-site	No
8569	Dugas	Prescott	Yavapai	3	12 N	03 E	27	I-17	270	34-23-29.20	112-02-26.61	40	1429	20	Yes	HH	Yes	Yes	<0.25	No
6022	Bowie	Safford	Cochise	2,4	13 S	28 E	32	I-10	365	32-15-20.64	109-30-02.93	134	1442	20,23	Yes	HH,MM	Yes	Yes	On-site	No
5058	Picacho	Tucson	Pinal	1	08 S	08 E	15	87	115	32-43-49.69	111-30-43.93	52	1429	20	No	HH,MM	Yes	Yes	On-site	No
5643	Gila Bend South	Yuma	Maricopa	4	06 S	03 W	19	I-8	123	32-53-16.92	112-36-42.77	256	1442	20,23	Yes	HH,MM	Yes	Yes	On-site	No
8268	Tiger Wash West	Yuma	Maricopa	4	04 N	10 W	16	I-10	73	33-41-29.35	113-18-02.48	69	1442	20,23	Yes	HH	Yes	Yes	On-site	No
TOTAL SITES IN GROUP A = 18																				
GROUP B : A material source in this group will include a site or portion of a site where mining occurred in the past but is not an active facility. A site that is no longer being used will remain in this group until it can be reclaimed, at which time it would be moved to Group C.																				
3044	Board Tree Saddle	Globe	Gila	3	07 N	14 E	7	288	295	33-57-37.32	110-57-11.80	3	1499	1,20	Yes	HH	Yes	Yes	<0.25	No
7225	Connor Canyon	Globe	Gila	3	06 N	13 E	36	288	280	33-48-45.14	110-58-31.83	9	1499	1,20	Yes	HH	Yes	Yes	< 0.25	No
8763	Fish Creek	Globe	Maricopa	3	02 N	11 E	5	88	227	33-32-39.06	111-15-15.76	4	1429	1,20	Yes	HH,JJ	Yes	Yes	0.25	No
6451	Slick Rock Wash	Safford	Graham	4	08 S	29 E	10	70	361	32-45-32.29	109-21-28.43	25	1442	20,26	Yes	N/A	Yes	Yes	On-site	No
478	Mohawk	Yuma	Yuma	4	08 S	14 W	17	I-8	54	32-43-55.91	113-43-53.95	20	1499	26	Yes	N/A	No	Yes	On-site	No
TOTAL SITES IN GROUP B = 5																				
GROUP C : Includes activities intended to return the land to its pre-mining state. (Once a site is reclaimed, it will be removed from this Group)																				
3562	Beaver Creek	Flagstaff	Yavapai	3	15 N	05 E	12	179	302	34-42-35.03	111-46-45.18	2	Not 14XX	1,19	Yes	HH,MM	Yes	Yes	<0.25	No
8629	Sevenmile Wash	Globe	Gila	3	03 N	16 E	23	60	268	33-35-09.99	110-38-51.68	1	Not 14XX	1,19	Yes	HH,MM	Yes	Yes	On-site	No
TOTAL SITES IN GROUP C = 2																				
GROUP I : Non-Mining Sites. These regulated stockpile sites will be inspected at least quarterly.																				
5781	Blue Grade	Flagstaff	Yavapai	3	16 N	06 E	35	I-17	304	34-44-17.12	111-40-58.62	17	Not 14XX	20,22	Yes	HH,LL,MM	Yes	Yes	0.25	No
7625	Fort Tuthill	Flagstaff	Coconino	1,3	21 N	07 E	31	89A	400	35-09-11.40	111-41-33.75	80	Not 14XX	20,22	No	HH,LL,MM	Yes	Yes	On-site	No
1061	Second Knoll	Globe	Navajo	3	10 N	23 E	18	60	347	34-15-25.88	109-56-19.91	6	Not 14XX	20,22	Yes	HH,LL	Yes	Yes	0.25	No
3591	Carol Spring Mountain	Globe	Gila	3	04 N	17 E	33	60	278	33-39-05.12	110-34-06.08	6	Not 14XX	20,22	No	HH,LL,MM	Yes	Yes	<0.25	No
7525	Defiance	Globe	Pinal	3	2 S	12 E	11	177	167	33-16-04.92	111-05-38.06	7	Not 14XX	20	Yes	HH,MM	Yes	Yes	< 0.25	No
1245	Sunset Pass	Holbrook	Coconino	2,7	17 N	13 E	13	87	325	34-51-59.87	110-54-29.34	10	Not 14XX	20,22	No	HH,LL,MM	Yes	Yes	On-site	No
8400	Sunflower	Phoenix	Maricopa	3	06 N	09 E	19	87	217	33-51-03.28	111-28-30.29	2	Not 14XX	20	Yes	HH	Yes	Yes	<0.25	No
999	Tubac	Tucson	Santa Cruz	1	20 S	13 E	31	I-19	24	31-38-42.19	111-03-19.16	14	Not 14XX	20,22	No	HH,MM	Yes	Yes	On-site	No
7885	Sahuarita	Tucson	Pima	1	17 S	13 E	27	I-19	44	31-55-09.96	111-00-01.88	37	Not 14XX	20,22	No	HH,MM	Yes	Yes	<0.25	No
5002	Fortuna/Blaisedell	Yuma	Yuma	1	08 S	21 W	33	95	33	32-41-57.32	114-25-34.73	40	Not 14XX	20,26	No	HH,MM	Yes	Yes	On-site	No
6183	Dateland	Yuma	Yuma	2	06 S	13 W	36	I-8	67	32-51-32.30	113-33-07.68	85	Not 14XX	20,22	Yes	HH,MM	Yes	Yes	On-site	No
7287	Centennial	Yuma	La Paz	1	03 N	11 W	27	I-10	68	33-34-34.62	113-22-48.65	40	Not 14XX	20	No	HH,MM	Yes	Yes	On-site	No
TOTAL SITES IN GROUP I = 12																				

ADOT-Licensed Material Source Inventory

Definitions: **Group A** : A materials source in this group will include a place where work or other activities related to the extraction, processing, removal or recovery of minerals is being conducted. Group A may also include a site or portion of a site where mining has occurred in the past, yet currently mining is not being actively undertaken and the facility may or may not be covered by an active mining permit issued by the landowner(s), applicable State or Federal government agency.

Group B : A material source in this group will include a site or portion of a site where mining occurred in the past but is not an active facility. A site that is no longer being used will remain in this group until it can be reclaimed, at which time it would be moved to Group C.

Group C : Includes activities intended to return the land to its pre-mining state. (Once a site is reclaimed, it will be removed from this Group).

Group I : Non-mining sites. These regulated stockpile sites will be inspected at least quarterly.

Waters of the US: Based on review of topographic maps and/or on-site review

Latitude/Longitude: Latitude/Longitude are expressed in NAD 83

N/A: Not Applicable

Site Use Codes:

- 1 Expired permit or license
- 2 Never used - will not be inspected until pit is developed
- 18 Undergoing reclamation
- 19 Requires revegetation or contouring
- 20 Stockpiles present
- 21 Released from site by land owner/manager
- 22 Maintenance only
- 23 Construction only
- 24 Multiple permittees
- 25 To be sold
- 26 Requires further evaluation

Standard Industrial Classification (SIC) Codes:

- 1429 Crushed and broken stone (basalt and volcanic rock)
- 1442 Sand and gravel
- 1499 Borrow or fill dirt
- Not 14XX Non-mining sites; material storage area only

Ownership Codes:

- 1 ADOT
- 2 Arizona State Land Department
- 3 USDA Forest Service
- 4 Bureau of Land Management
- 5 Tribal
- 7 Private
- 9 Department of the Army

Non-Stormwater Discharge Codes:

- HH Water for dust control (not wastewater)
- II Uncontaminated groundwater
- JJ Diverted stream flow
- KK Coring and drilling water - without additives
- LL Deicing chemicals or products
- MM Petroleum-containing materials
- NN Fertilizers - herbicide application to invasives

ADOT Districts:

Address:

Flagstaff District	1801 S. Milton Road, Flagstaff, AZ 86001
Globe District	P.O. Box 2717, Globe, AZ 85502-2717
Holbrook District	2407 E. Navajo Blvd., Holbrook, AZ 86025
Kingman District	3660 E. Andy Devine, Kingman, AZ 86401
Phoenix Construction	4550 N. Black Canyon Hwy., Phoenix, AZ 85017
Phoenix Maintenance	2140 W. Hilton Ave., Phoenix, AZ 85009-3740
Prescott District	1109 Commerce Drive, Prescott, AZ 86305
Safford District	2082 U.S. Hwy. 70, Safford, AZ 85546
Tucson District	1221 South 2 nd Ave., Tucson, AZ 85713-1602
Yuma District	2243 East Gila Ridge Road, Yuma, AZ 85365-2101

District Engineers:

Audra Merrick
Jesus (Jesse) Gutierrez
Lynn Johnson
Mike Kondelis
Julie Kliewer
Tim Wolfe
Alvin Stump
Bill Harmon
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Paul Patane

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ADOT-Licensed Material Sources Inventory Location Map

Permit Year 5

- Group_A
- Group_B
- Group_C
- Group_I

Legend

- AZ_state
- counties
- map_book_cities
- AmerInd_ft_2005

0 25 50 100 Miles

Prepared by:
Arizona Department of Transportation
Materials Section - Sergio Montañez
Phone: 602-712-7448
Date: August 2013

Prepared by:
Arizona Department of Transportation
Materials Section - Sergio Montañez
Phone: 602-712-7448
Date: August 2013

Appendix D

AZPDES Permit Renewal Report



June 14, 2013

Ms. Wendy Terlizzi
Water Quality Manager
Arizona Department of Transportation
1611 West Jackson St, Mail Drop EM02
Phoenix, AZ 85007-3217

Via email to: WTerlizzi@azdot.gov
SWaite@azdot.gov
Original is **NOT** being mailed

**Re: Summary of Arizona Pollutant Discharge Elimination System (AZPDES)
Permit Renewal Application Items – Stormwater Characterization
Contract Number T0804P0002
EEC Job No. 308032.22**

Dear Ms. Terlizzi:

Engineering and Environmental Consultants, Inc. (EEC) is pleased to provide a summary of requested stormwater sampling information to Arizona Department of Transportation (ADOT) in order to assist with the completion of the Arizona Pollutant Discharge Elimination System (AZPDES) permit renewal application. This letter contains an introduction and purpose, discharge characterization of the five MS4 outfall locations, existing quantitative data taken from the outfall locations, characterization of the data, assessment of the controls and a conclusion.

Introduction and Purpose

EEC has been contracted by ADOT to assist with the preparation of several AZPDES Permit Renewal Application items. These items generally include historical data associated with stormwater discharge and characterization of ADOTs Municipal Separate Storm Sewer System (MS4). The purpose of this submittal is to provide support documentation for the following four AZPDES permit renewal task items:

- Task 1 - Discharge Characterization: Monthly mean rain/snowfall estimates and monthly average number of storm events
- Task 2 - Existing Quantitative Data: Volume and quality of discharges including a description of outfalls sampled, sampling procedures, and analytical methods.
- Task 3 - Characterization Data: Quality and quantity of discharges to include pollutant loading estimates.
- Task 4 – Assessment of Controls: Estimated reductions in loading of pollutants from discharges of the MS4.

EEC has addressed the renewal application request for information regarding discharge characterization of the five MS4 monitoring locations, existing quantitative data for each MS4 monitoring locations, characterization of the data and assessment of the controls.

Task 1 - Discharge Characterization

The monthly mean rainfall and the monthly average number of storm events are provided in Attachment 1. Data sources include each MS4 monitoring location and/or local municipality source where and when available. Rain events were qualified by as having 0.1 inches of precipitation separated by at least 24 hours from the previous event.

Task 2 - Existing Quantitative Data

Existing quantitative data obtained from the MS4 stormwater sampling efforts includes the volume and quality of discharge from the five MS4 monitoring locations. A description of the volume and quality of discharge, description of outfalls, stormwater sampling procedures, and analytical methods is provided in Table 1 below.

Volume and Quality of Discharge

The volume and quality of discharge from the MS4 monitoring locations is provided in table format in Attachment 2. The table includes ADOT monitoring parameters and the associated laboratory results collected over the monitoring seasons during the time period of 2009 through 2012.

Descriptions of Outfalls

Site maps of the five MS4 monitoring locations are included in Attachment 3. The table below identifies the five ADOT MS4 monitoring locations followed by a narrative description of each one.

Table 1: ADOT MS4 Monitoring Locations

OUTFALL NAME	PHYSICAL LOCATION	APPROXIMATE DRAINAGE AREA	LAND USE	RECEIVING WATER/ DESIGNATED USE	MONITORING EQUIPMENT
B40-196.14	Flagstaff: South side of intersection at Business 40 and SR180	29.30 Acres	Rural Highway (80%) & Commercial Streets (20%)	Rio de Flag / A&Wedw PBC	ISCO Avalanche Full-Size Portable Sampler (refrigerated unit)
	Latitude: 35°11'53.39"N Longitude: 111°39'05.48"W				
101-13.68	Phoenix (Peoria): Loop 101 Mile marker 13.68; East side	17.5 Acres	Urban Highway (90%) & Commercial Streets (10%)	Skunk Creek / A reach of Cave Creek/ A&Wedw PBC	ISCO 6712 Full-Size Portable Sampler
	Latitude: 33°37'19.84"N Longitude: 112°14'21.61"W				
82.0.57	Nogales: Intersection of I-19 and SR82 in NE quadrant	59.5 Acres	Urban Highway (80%) & Residential Streets (20%)	Nogales Wash (Impaired waterway) / A&Ww PBC	ISCO 6712 Full-Size Portable Sampler (refrigerated unit)
	Latitude: 31°21'02.10"N Longitude: 110°55'24.48"W				
179-313.3	Sedona: At SR-179 bridge over Oak Creek; West side	7.35 Acres	State Route/Business Route (90%) & Commercial (10%)	Oak Creek (Outstanding waterway) / A&Wc FBC, FC, AgL	ISCO Avalanche Full-Size Portable Sampler (refrigerated unit)
	Latitude: 34°51'43.93"N Longitude: 111°45'42.68"W				
10-255.8	Tucson: I-10 & Grant Rd, within Grant Rd. Maintenance Yard	4.8 Acres	Urban Highway (90%) & ADOT Facility (10%)	Santa Cruz / A&Wedw PBC	ISCO 6712 Full-Size Portable Sampler
	Latitude: 32°15'17.19"N Longitude: 110°59'49.39"W				

A&Wedw – Aquatic and Wildlife (effluent-dependent water)
A&Ww – Aquatic and Wildlife warmwater
A&Wc – Aquatic and Wildlife coldwater
AgL – Agricultural Livestock Watering

FBC – Full Body Contact
FC – Fish consumption
PBC – Partial Body Contact

- **Outfall B40-196.14** – This outfall discharges into Rio de Flag located along the south side of the intersection at N. Humphreys. St. and E. Santa Fe Ave. at Business 40 mile marker 196.14 in Flagstaff, Arizona. The associated drainage channel to this outfall consists of a 36 inch Corrugated Metal Pipe (CMP). The drainage area for this outfall is approximately 29.30 acres and associated land use consists of approximately 80% rural highway and 20% commercial streets. The designated receiving water use for Rio de Flag is Aquatic and Wildlife (effluent-dependent water) and Partial Body Contact. Sampling equipment consists of an ISCO Avalanche Full-Size Portable Sampler, flow sensor, rain gauge, and modem.
- **Outfall 101-13.68** – This outfall discharges into Skunk Creek and is located approximately 500 feet west of N. 83rd Ave. and 550 feet north of W. Country Gables Dr. along the east side of the Loop 101 at mile marker 13.68 in Peoria, Arizona, which characterizes stormwater from the Phoenix metropolitan region. The associated drainage channel to this outfall consists of a 22 foot wide and 4 foot deep trapezoidal channel. The drainage area for this outfall is approximately 17.5 acres and associated land use consists of approximately 90% urban highway and 10% commercial street/parking runoff. Skunk Creek has no designated receiving water use, but is considered a reach of Cave Creek which is designated for use as Aquatic and Wildlife, Partial Body Contact, and Agricultural Livestock Watering. Sampling equipment consists of an ISCO 6712 Full-Size Portable Sampler, flow sensor, rain gauge, and modem.
- **Outfall 82.0.57** – This outfall discharges into Nogales Wash and is located on the north side of E. Morley Ave. and approximately 150 feet northwest of SR-82 at mile marker 0.57 in Nogales, Arizona. The associated drainage channel to this outfall consists of a 48 inch below grade storm drain that discharges via through two concrete-lined 8 foot by 5 foot Concrete Box Culvert (CBC). The drainage area for this outfall is approximately 59.5 acres and associated land use consists of approximately 80% urban highway and 20% residential streets. Nogales Wash is an impaired waterway and designated receiving water use is designated for use as Aquatic and Wildlife (warmwater) and Partial Body Contact. Sampling equipment consists of an ISCO 6712 Full-Size Portable Sampler, flow sensor, rain gauge, and modem.
- **Outfall 179-313.3** – This outfall discharges into Oak Creek and is located on the west side beneath the SR-179 Bridge that passes over Oak Creek at SR-179 mile marker 313.3 in Sedona, Arizona. The associated drainage channel to this outfall consists of an approximately 47 inch CMP. The drainage area for this outfall is approximately 7.35 acres and associated land use consists of approximately 90% state/business route and 10% commercial streets. Oak Creek is an outstanding waterway and designated receiving water use is for Aquatic and Wildlife (coldwater), Full Body Contact, Fish consumption and Agricultural Livestock Watering. Sampling equipment consists of an ISCO Avalanche Full-Size Portable Sampler, flow sensor, rain gauge, and modem.
- **Outfall 10-255.8** – This outfall discharges into Santa Cruz and is located approximately 30 feet west of I-10 and 1,600 feet (0.03 miles) north of W. Grant Road, within the ADOT Grant Road Maintenance Yard at I-10 mile marker 255.8 in Tucson, Arizona. The associated drainage channel to this outfall is a CBC. The drainage area for this outfall is approximately 4.8 acres and associated land use consists of approximately 90% urban highway and 10% ADOT facility. The designated receiving

water use for Santa Cruz is Aquatic and Wildlife (effluent-dependent water) and Partial Body Contact. Sampling equipment consists of an ISCO 6712 Full-Size Portable Sampler, flow sensor, rain gauge, and modem.

Stormwater Sampling Procedures

Stormwater sampling is conducted in accordance with ADOT's *Stormwater Monitoring Guidance Manual for MS4 Activities*, dated July 2009. A representative sample is collected once each wet season for each of the five monitoring locations. The wet season is identified as June 1–October 31 (summer) and November 1–May 31 (winter). A representative storm event consists of greater than 0.1 inch of rainfall and that occurs at least 72 hours after the previously measurable (greater than 0.1 inch of rainfall) storm event. Sampling efforts include the “first flush” (first 30 minutes of stormwater discharge) when possible and conducted over the first 3 hours of the discharge or for the entire discharge period, if the discharge is less than 3 hours. Sampling procedures generally include:

- Discrete manual samples for cyanide, oil and grease, TPH, *E. coli*, and VOCs
- Flow-weighted composite samples via the Isco sampler for all other parameters
- Filed measurements for flow, pH, and temperature

The collected sample is then placed into appropriate sample jars by the field technician and transported under chain-of-custody to a state-certified laboratory for analysis. Additional sampling protocol is further defined in ADOT's Quality Assurance Manual to include collection methods, quality assurance/quality control (QA/QC) samples, preservative to use, and holding times for the samples.

Analytical Methods

Stormwater sampling parameters and analytical methods are provided in table format in Attachment 4.

Task 3 - Characterization Data

A summary table of the qualitative data obtained during sampling activities of the five ADOT MS4 monitoring locations is provided in Attachment 2. Pollutant loading estimates for required chemical constituents for the sampling years 2009 through 2012 are provided in Attachment 5. Pollutant loading estimates were calculated using the Simple Method which estimates pollutant loads for chemical constituents as a product of annual runoff volume and pollutant concentration using the following equation:

$$L = 0.226 * R * C * A$$

Where:

- L = Annual loads (lbs)
- R = Annual runoff (inches)
- C = Pollutant concentration (mg/l)
- A = Area (acres)
- 0.226 = Unit conversion factor

The equation used for calculating bacteria pollutant loading is slightly different as follows:

$$L = 103 * R * C * A$$

Where:

- L = Annual loads (Billion Colonies)
- R = Annual runoff (inches)
- C = Bacteria concentration (col/100ml)
- A = Area (acres)
- 103 = Unit conversion factor

Site specific data from each MS4 monitoring location is used to calculate pollutant loading.

Task 4 - Assessment of Controls

Assessment in the reduction in pollutant loading from the result of ADOT's stormwater quality management program is currently difficult to assess due to the limited data from the five MS4 monitoring locations. The qualitative results will require additional time to qualify the outcome of ADOT's ongoing programs in comparison to end of pipe analyses. However, a review of available sampling data from Attachment 2 indicates the following most common constituents in stormwater highway runoff:

- Biological Oxygen Demand (BOD)
- Chemical Oxygen Demand (COD)
- Total Suspended Solids (TSS)
- Total Dissolved Solids (TDS)
- Total Nitrogen
- Total Kjeldahl Nitrogen (TKN)
- Total Petroleum Hydrocarbons (TPH)
- Total Phosphorous
- Various metals (cadmium, lead, copper, zinc)

ADOT's ongoing program of street sweeping and trash removal within its MS4 has been successful at removing these items from entering its stormwater drainage system and thus into waterways. However, data is currently not available to correlate these activities to reduction in pollutants through the monitoring program. No impacts to groundwater have been identified from a result of stormwater controls.

Should you have any questions or require additional information, please contact me at (602) 248-7702, Extension 7319.

Sincerely,
ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.



John P. Burton
Project Manager



Jim D. Lemon, P.E.
Vice President/Phoenix Branch Manager

Attachments:

- Attachment 1 – Monthly Mean Rainfall and Storm Events
- Attachment 2 – MS4 Characterization Sampling Data
- Attachment 3 – MS4 Monitoring Location Site Maps
- Attachment 4 – MS4 Stormwater Sampling Parameters and Analytical Methods
- Attachment 5 – MS4 Pollutant Loading Calculations

Attachment 1 Monthly Mean Rainfall and Storm Events

Phoenix MS4 - Monthly Mean Rainfall and Storm Events																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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* Dash (-) indicates monitoring equipment was not operating

ASSUMPTIONS:

* Storm Event = 10 or more

* Separate Storm Event = storm events must be separated by 24 hours

* Monthly mean divided by number of wet days

Flagstaff M54 - Monthly Mean Rainfall and Storm Events																																																	
Year	January				February				March				April				May				June				July				August				September				October				November				December				Year
	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events					
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2008			
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2009			
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2010			
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2011			
2012	0.00	0.00	0	0	0.01	0.00	0	0	0.41	0.21	2	1	0.67	0.34	2	1	0.00	1.65	0	0	0.00	0.00	0	0	0.86	0.29	3	1	1.09	0.36	3	1	2.17	0.72	3	1	1.01	0.51	2	1	0.00	0.00	0	0	0.09	0.00	0	0	2012
2013	1.65	1.65	1	1	0.04	0.00	0	0	0.25	0	1	1	0.11	0	1	1	0.17	1.65	0	0	-	-	-	-	3.32	1.11	3	1	3.42	3.42	1	1	0.55	0.55	1	1	0.80	0.80	1	1	0.01	0.00	0	0	0.33	0.17	2	1	2013
Monthly Average	0.83	0.83	1	1	0.04	0.00	0	0	0.33	0.23	2	1	0.39	0.22	2	1	0.09	1.65	0	0	0.00	0.00	0	0	2.09	0.70	3	1	2.25	1.89	2	1	1.36	0.64	2	1	0.91	0.65	2	1	0.01	0.00	0	0	0.21	0.08	1	1	Monthly Average

* Dash (-) indicates monitoring equipment was not operating

ASSUMPTIONS:

* Storm Event = 10 or more

* Separate Storm Event = storm events must be separated by 24 hours

*Monthly mean divided by number of wet days

Nogales M54 - Monthly Mean Rainfall and Storm Events

Year	January				February				March				April				May				June				July				August				September				October				November				December				Year
	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events													
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2008												
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2009												
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2010												
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2011												
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2012												
2013	0.85	0.85	1	1	0.55	0.28	2	1	0.18	0	1	1	0.00	0	0	0	0.01	0.00	0	0	0.00	0.00	0	0	-	-	-	-	2.03	1.02	2	2	2.43	0.81	3	1	0.01	0.00	0	0	0.20	0.10	2	1	1.15	1.02	2	2	2013
Monthly Average	0.85	0.85	1	1	0.55	0.28	2	1	0.18	0.18	1	1	0.00	0.00	0	0	0.01	0.00	0	0	0.00	0.00	0	0	-	-	-	-	2.03	1.02	2	2	2.43	0.81	3	1	0.01	0.00	0	0	0.20	0.10	2	1	1.15	1.02	2	2	Monthly Average

* Dash (-) indicates monitoring equipment was not operating

ASSUMPTIONS:

* Storm Event = 10 or more

* Separate Storm Event = storm events must be separated by 24 hours

* Monthly mean divided by number of wet days

Sedona MS4 - Monthly Mean Rainfall and Storm Events

		January				February				March				April				May				June				July				August				September				October				November				December				Year																																																																																																																																																																																																																																																																																																					
Year	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events	Monthly Average Number of Storm Events	Total Rainfall	Monthly Average Rainfall	Total Number of Storm Events</

* Dash (-) indicates monitoring equipment was not operating

ASSUMPTIONS:

* Storm Event = .10 or more

* Separate Storm Event = storm events must be separated by 24 hours

*Monthly mean divided by number of wet days

Tucson MS4 - Monthly Mean Rainfall and Storm Events

Year		January				February				March				April				May				June				July				August				September				October				November				December				Year
Total Rainfall		Monthly Average Rainfall		Total Number of Storm Events		Monthly Average Number of Storm Events		Total Rainfall		Monthly Average Rainfall		Total Number of Storm Events		Monthly Average Number of Storm Events		Total Rainfall		Monthly Average Rainfall		Total Number of Storm Events		Monthly Average Number of Storm Events		Total Rainfall		Monthly Average Rainfall		Total Number of Storm Events		Monthly Average Number of Storm Events		Total Rainfall		Monthly Average Rainfall		Total Number of Storm Events		Monthly Average Number of Storm Events		Total Rainfall		Monthly Average Rainfall		Total Number of Storm Events		Monthly Average Number of Storm Events				
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2008						
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2009						
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2010						
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2011						
2012	0.22	0.22	1	1	0.06	0.00	0	0	0.47	0.47	1	1	0.10	0.10	1	1	0.00	0.00	0	0	0.52	0.26	2	1	2.28	0.46	5	1	3.56	1.78	2	1	0.16	0.16	1	1	0.00	0.00	0	0	0.32	0.47	3	1	1.84	0.61	3	1	2012	
2013	0.70	0.70	1	1	0.80	0.27	3	1	0.06	0.00	0	0	0.13	0.13	1	1	0.01	0.00	0	0	0.00	0.00	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2013				
Monthly Average		0.46	0.46	1	1	0.43	0.13	2	1	0.27	0.24	1	1	0.12	0.12	1	1	0.01	0.00	0	0	0.26	0.13	1	1	1.30	0.39	3	1	2.07	1.04	2	1	1.14	0.61	2	1	0.07	0.07	1	1	0.70	0.47	2	1	1.40	0.55	3	1	Monthly Average

* Dash (-) indicates monitoring equipment was not operating

ASSUMPTIONS:

* Storm Event = .10 or more

* Separate Storm Event = storm events must be separated by 24 hours

* Monthly mean divided by number of wet days

Attachment 2 MS4 Characterization Sampling Data

**MS4 Monitoring Data
Phoenix**

OUTFALL ID: 101-13.68 RECEIVING WATER: Skunk Creek (a reach of Cave Creek) WATERSHED: Middle Gila DESIGNATED USES: A&We, PBC AUTOSAMPLER STARTUP DATE: July 13, 2011 (previous sampling conducted with passive samplers)		MONITORING SEASONS									
		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
		2008-09	2009	2009-10	2010	2010-11	2011	2011-12	2012	2012-13	2013
SAMPLING DATE		12/17/08	7/21/09	2/28/10	NS	NS	NS	11/5/11	EF/NS	12/14/12	Pending
MONITORING PARAMETERS		WQS									
Flow (gpm = gallons per minute)	NNS	1.7gpm	1.4gpm	-	NS	NS	EF/NS	42	EF/NS	117	
pH	5.0-9.0	7.75	7.21	8.52	NS	NS	EF/NS	7.23	EF/NS	7.2	
Temperature (F°)	NNS	54.4	96.9	56.5	NS	NS	EF/NS	57.2	EF/NS	62.3	
Hardness	NNS	180	-	60	NS	NS	EF/NS	IS	EF/NS	130	
Specific conductance (mg/L)	NNS	550	900	1500	NS	NS	EF/NS	IS	EF/NS	320	
Total Dissolved Solids (TDS) (mg/L)	500.00	290	720*	97	NS	NS	EF/NS	IS	EF/NS	310	
Total Suspended Solids (TSS) (mg/L)	NNS	85	-	76	NS	NS	EF/NS	IS	EF/NS	53	
Turbidity (NTU)	NNS	49	21	100	NS	NS	EF/NS	IS	EF/NS	130	
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	13	40	<5.0	NS	NS	EF/NS	IS	EF/NS	68	
Chemical Oxygen Demand (COD) (mg/L)	NNS	110	350	70	NS	NS	EF/NS	IS	EF/NS	420	
Surfactants (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	0.89	
Inorganics											
Cyanide (mg/L)	0.20	<0.0050	<0.0050	<0.0050	NS	NS	EF/NS	<0.0080	EF/NS	<0.0050	
Sulfates (mg/L)	250.00	56	69	7.6	NS	NS	EF/NS	IS	EF/NS	26	
Nutrients											
Nitrate (mg/L)	10.00	3.3	4	1.1	NS	NS	EF/NS	IS	EF/NS	2.5	
Nitrite (mg/L)	1.00	0.19	0.77	<0.10	NS	NS	EF/NS	IS	EF/NS	0.34	
Total Ammonia (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	4.1	
Total Kjeldahl Nitrogen (TKN) (mg/L)	NNS	3	12	1.5	NS	NS	EF/NS	IS	EF/NS	9.1	
Total Phosphorous (mg/L)	NNS	-	1.1	0.25	NS	NS	EF/NS	IS	EF/NS	0.92	
Phosphate, Ortho (mg/L)	NNS	<0.12	0.46	0.48	NS	NS	EF/NS	IS	EF/NS	1.8	
Sodium (mg/L)	NNS	49	85	1.3	NS	NS	EF/NS	IS	EF/NS	15	
Calcium (mg/L)	NNS	46	64	150	NS	NS	EF/NS	IS	EF/NS	41	
Chloride (mg/L)	NNS	69	130	6.9	NS	NS	EF/NS	IS	EF/NS	16	
Microbiological											
Coliform, fecal (col/100 ml)	NNS	>1,200	-	>200	NS	NS	EF/NS	IS	EF/NS	>400	
E.Coli (MPN/100 ml)	100.00	>24,200	-	-	NS	NS	EF/NS	170	EF/NS	>2400	

**MS4 Monitoring Data
Phoenix**

RECEIVING WATER: Skunk Creek (a reach of Cave Creek) WATERSHED: Middle Gila DESIGNATED USES: A&We, PBC AUTOSAMPLER STARTUP DATE: July 13, 2011 (previous sampling conducted with passive samplers)		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/17/08	7/21/09	2/28/10	NS	NS	NS	11/5/11	EF/NS	12/14/12	Pending
Total Metals											
Antimony (mg/L)	0.006	<0.020	0.0037	<0.020	NS	NS	EF/NS	IS	EF/NS	<0.020	
Arsenic (mg/L)	0.050	<0.021	0.0064	<0.020	NS	NS	EF/NS	IS	EF/NS	<0.020	
Barium (mg/L)	2.000	0.098	0.14	0.074	NS	NS	EF/NS	IS	EF/NS	0.13	
Beryllium (mg/L)	0.004	<0.0020	<0.0020	<0.0020	NS	NS	EF/NS	IS	EF/NS	<0.0020	
Cadmium (mg/L)	0.005	<0.0050	<0.0050	<0.0050	NS	NS	EF/NS	IS	EF/NS	<0.0050	
Chromium (mg/L)	0.100	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	0.023	
Copper (mg/L)	1.300	0.023	0.073	<0.020	NS	NS	EF/NS	IS	EF/NS	0.090	
Lead (mg/L)	0.015	0.0084	0.006	0.0064	NS	NS	EF/NS	IS	EF/NS	0.0084	
Mercury (mg/L)	0.002	<0.00020	<0.00020	<0.0002	NS	NS	EF/NS	IS	EF/NS	<0.00020	
Nickel (mg/L)	0.140	<0.020	<0.020	<0.020	NS	NS	EF/NS	IS	EF/NS	0.025	
Selenium (mg/L)	0.020	<0.020	<0.020	<0.020	NS	NS	EF/NS	IS	EF/NS	<0.020	
Silver (mg/L)	NNS	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	
Zinc (mg/L)	2.10	0.053	0.14	4.7	NS	NS	EF/NS	IS	EF/NS	0.25	
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	0.73	2.7	0.32	NS	NS	EF/NS	0.29	EF/NS	<5.0	
Oil & Grease (Hexane Extr) (mg/L)	NNS	<5.0	<5.9	<5.3	NS	NS	EF/NS	7.3	EF/NS	<5.0	
Chlorine, residual (mg/L)	0.70000	0.2	<0.10	<0.10	NS	NS	EF/NS	IS	EF/NS	<5.0	
BTEX Compounds											
Benzene (mg/L)	0.0050	<0.00050	<0.00050	<0.0010	NS	NS	EF/NS	<0.50	EF/NS	<0.00050	ANR
Ethylbenzene (mg/L)	0.0050	0.00068	<0.00050	<0.0010	NS	NS	EF/NS	<1.0	EF/NS	<0.00050	ANR
Toluene (mg/L)	1.00	<0.0050	<0.0050	<0.0050	NS	NS	EF/NS	<1.0	EF/NS	<0.0050	ANR
Total Xylene (mg/L)	10.00	0.0039	<0.0015	<0.0030	NS	NS	EF/NS	<1.5	EF/NS	<0.0015	ANR

**MS4 Monitoring Data
Phoenix**

RECEIVING WATER: Skunk Creek (a reach of Cave Creek)		Summer: June 1- October 31									
WATERSHED: Middle Gila		Winter: November 1- May 31									
DESIGNATED USES: A&We, PBC		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
AUTOSAMPLER STARTUP DATE: July 13, 2011 (previous sampling conducted with passive samplers)		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/17/08	7/21/09	2/28/10	NS	NS	NS	11/5/11	EF/NS	12/14/12	Pending
Acid Compounds											
2-Chlorophenol (mg/L)	0.035	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
2,4-Dichlorophenol (mg/L)	0.021	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
2,4-Dimethylphenol (mg/L)	0.140	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
4,6-Dinitrocreosol (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
2,4-Dinitrophenol (mg/L)	0.014	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
2-Nitrophenol (mg/L)	NNS	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
4-Nitrophenol (mg/L)	NNS	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
P-Chloro-m-cresol (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
Pentachlorophenol (mg/L)	0.001	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
Phenol (mg/L)	4.20	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
2,4,6-Trichlorophenol (mg/L)	0.00320	<0.010	<0.010	<0.010	NS	NS	EF/NS	IS	EF/NS	<0.010	ANR
Bases/Neutrals											
Acenaphthene (mg/L)	0.42	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Acenaphthylene (mg/L)	NNS	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Anthracene (mg/L)	2.10	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Benzo(a)anthracene (mg/L)	0.00190	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Benzo(a)pyrene (mg/L)	0.00020	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Benzo(b)fluoranthene (mg/L)	NNS	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Benzo(g,h,i)perylene (mg/L)	NNS	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Benzo(k)fluoranthene (mg/L)	0.0480	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Chrysene (mg/L)	0.00479	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Dibenzo(a,h)anthracene (mg/L)	0.00190	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Diethyl phthalate (mg/L)	5.60	<0.010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	0.0012	ANR
Dimethyl phthalate (mg/L)	NNS	<0.010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Di-n-butyl phthalate (mg/L)	NNS	<0.010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Di-n-octyl phthalate (mg/L)	2.80	<0.010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
1,2-Diphenylhydrazine (Azobenzene) (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Fluoranthene (mg/L)	0.28	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Fluorene (mg/L)	0.28	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Indeno(1,2,3-cd)pyrene (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Naphthalene (mg/L)	0.14	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Phenanthrene (mg/L)	NNS	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR
Pyrene (mg/L)	0.21	<0.0010	<0.010	<0.0010	NS	NS	EF/NS	IS	EF/NS	<0.0010	ANR

**MS4 Monitoring Data
Phoenix**

RECEIVING WATER: Skunk Creek (a reach of Cave Creek) WATERSHED: Middle Gila DESIGNATED USES: A&We, PBC AUTOSAMPLER STARTUP DATE: July 13, 2011 (previous sampling conducted with passive samplers)		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/17/08	7/21/09	2/28/10	NS	NS	NS	11/5/11	EF/NS	12/14/12	Pending
Pesticides											
Aldrin (mg/L)	0.0020	<0.00050	<0.00051	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Alpha BHC (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Beta BHC (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Delta BHC (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Gamma BHC (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Chlordane (mg/L)	0.0020	<0.0050	<0.00050	<0.00050	NS	NS	EF/NS	IS	EF/NS	<0.00005	ANR
4,4-DDD (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
4,4-DDE (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
4,4-DDT (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Dieldrin (mg/L)	0.0020	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Alpha-endenosulfan (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Beta-endenosulfan (mg/L)	NNS	NS	NS	NS	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Endosulfan sulfate (mg/L)	NNS	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Endrin (mg/L)	0.0020	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Endrin aldehyde (mg/L)	NNS	<0.00050	0.000088	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Heptachlor (mg/L)	0.00040	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Heptachlor epoxide (mg/L)	0.00020	<0.00050	<0.000050	<0.000050	NS	NS	EF/NS	IS	EF/NS	<0.000050	ANR
Toxaphene (mg/L)	NNS	<0.010	<0.00050	<0.00050	NS	NS	EF/NS	IS	EF/NS	<0.00005	ANR

NNS - No Numerical Standard

EF - Equipment Failure

IS - Insufficient Sample

NS - Not Sampled

ANR - Analyses Not Required

**MS4 Monitoring Data
Tucson**

OUTFALL ID: Tucson MS4 Grant Road RECEIVING WATER: Santa Cruz WATERSHED: Sanata Cruz DESIGNATED USES: A&We, PBC AUTOSAMPLER STARTUP DATE: March 21, 2011 (previous sampling conducted with passive samplers)		MONITORING SEASONS									
		Summer: June 1 - October 31									
		Winter: November 1 - May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/1/08	6/30/09	4/23/10	NS	NS	NS	11/7/11	8/22/12	12/13/12	Pending
MONITORING PARAMETERS		WQS									
Flow (gpm = gallons per minute)	NNS	-	-	-	NS	NS	NS	276	523	318	
pH	6.5-8.5	-	-	7.3	NS	NS	NS	7.1	8.57	7.2	
Temperature (F°)	NNS	62.3	88.1	64.4	NS	NS	NS	65.1	84.3	67.8	
Hardness	NNS	250		470	NS	NS	NS	NS	35	28	
Specific conductance (umhos/cm)	500	NS	NS	NS	NS	NS	NS	235	92	89	
Total Dissolved Solids (TDS) (mg/L)	500	680*	680*	910	NS	NS	NS	IS	72	66	
Total Suspended Solids (TSS) (mg/L)	NNS	110	160	130	NS	NS	NS	IS	65	69	
Turbidity (NTU)	NNS	94	-	58	NS	NS	NS	IS	82	46	
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	65	44	90	NS	NS	NS	IS	<5.0	5.8	
Chemical Oxygen Demand (COD) (mg/L)	NNS	560	640	490	NS	NS	NS	IS	62	95	
Surfactants (mg/L)	NNS	NS	NS	NS	NS	NS	NS	IS	0.06	0.122	
Inorganics											
Cyanide, total (mg/L)	0.2	0.0059	<0.0050	<0.10	NS	NS	NS	<0.0080	<0.050	<0.050	
Sulfates (mg/L)	250	110	68	-	NS	NS	NS	IS	4.2	7.5	
Nutrients											
Nitrate (mg/L)	1	<0.10	0.21	9.9	NS	NS	NS	IS	1	2.5	
Nitrite (mg/L)	10	<0.10	<0.10	1.9	NS	NS	NS	IS	<0.20	0.34	
Total Ammonia (mg/L)	NNS	6.2	6.7	<0.50	NS	NS	NS	IS	<0.50	<0.50	
Total Kjeldahl Nitrogen (TKN) (mg/L)	NNS	12	14	7.8	NS	NS	NS	IS	1	1.6	
Total Phosphorous (mg/L)	NNS	0.42	0.36	0.58	NS	NS	NS	IS	0.24	0.18	
Phosphate, Ortho (mg/L)	NNS	0.62	<0.12	310	NS	NS	NS	IS	<0.20	<0.20	
Sodium (mg/L)	NNS	-	18	18	NS	NS	NS	IS	3.5	4.9	
Calcium (mg/L)	NNS	-	100	150	NS	NS	NS	IS	14	11	
Chloride (mg/L)	10	26	19	14	NS	NS	NS	IS	<2.0	2.8	
Microbiological											
Coliform, fecal (CFU/100 ml)	NNS	-	-	2400*	NS	NS	NS	IS	<1	2200	
<i>E.Coli</i> (MPN/100 ml)	100.00	-	-	390	NS	NS	NS	<2	300	300	

**MS4 Monitoring Data
Tucson**

RECEIVING WATER: Santa Cruz WATERSHED: Sanata Cruz DESIGNATED USES: A&We, PBC AUTOSAMPLER STARTUP DATE: March 21, 2011 (previous sampling conducted with passive samplers)		Summer: June 1 - October 31									
		Winter: November 1 - May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/1/08	6/30/09	4/23/10	NS	NS	NS	11/7/11	8/22/12	12/13/12	Pending
Total Metals											
Antimony (mg/L)	0.00600	-	0.0046	<0.20	NS	NS	NS	IS	<0.0030	0.0045	
Arsenic (mg/L)	0.05000	<0.020	0.003	<0.040	NS	NS	NS	IS	<0.10	<0.10	
Barium (mg/L)	2.0T	0.2	0.2	0.2	NS	NS	NS	IS	0.053	0.070	
Beryllium (mg/L)	0.00400	<0.0050	<0.0020	<0.0020	NS	NS	NS	IS	<0.0010	<0.0010	
Cadmium (mg/L)	0.00500	-	<0.0050	<0.0020	NS	NS	NS	IS	<0.0010	<0.0010	
Chromium (mg/L)	0.1T	<0.010	<0.010	<0.030	NS	NS	NS	IS	<0.010	<0.010	
Copper (mg/L)	1.3T	-	0.033	0.13	NS	NS	NS	IS	0.05	0.080	
Lead (mg/L)	0.015T	0.015	<0.0050	<0.040	NS	NS	NS	IS	<0.015	<0.015	
Mercury (mg/L)	0.00200	<0.00020	<0.00020	<0.0010	NS	NS	NS	IS	<0.00020	<0.00020	
Nickel (mg/L)	0.14000	-	<0.020	<0.050	NS	NS	NS	IS	<0.010	<0.010	
Selenium (mg/L)	0.02000	<0.020	0.02	<0.040	NS	NS	NS	IS	<0.0020	<0.0030	
Silver (mg/L)	NNS	<0.010	<0.010	<0.010	NS	NS	NS	IS	<0.010	<0.010	
Zinc (mg/L)	2.1T	-	0.18	0.41	NS	NS	NS	IS	0.09	0.13	
Organic Toxic Pollutnats											
Total Petroleum Hydrobarbons (TPH) (mg/L)	NNS	6.2	-	-	NS	NS	NS	1.8	<5.0	<5.0	
Oil & Grease (Hexane Extr) (mg/L)	NNS	<5.6	<6.7	9.2	NS	NS	NS	9.9	11	<5.0	
Chlorine, residual (mg/L)	0.7	<0.10	-	<0.10	NS	NS	NS	IS	0.13	<0.050	
BTEX Compounds											
Benzene (ug/L)	0.005	<0.0010	<0.00050	<0.50	NS	NS	NS	<0.50	<2.0	<2.0	ANR
Ethylbenzene (ug/L)	0.70000	<0.0010	<0.00050	<0.50	NS	NS	NS	<1.0	<2.0	<2.0	ANR
Toluene (ug/L)	1.00000	<0.0050	<0.0050	<0.50	NS	NS	NS	<1.0	<2.0	<2.0	ANR
Total Xylene (ug/L)	10.00000	<0.0030	<0.0015	<0.50	NS	NS	NS	<1.5	<2.0	<2.0	ANR

**MS4 Monitoring Data
Tucson**

RECEIVING WATER: Santa Cruz		Summer: June 1 - October 31									
WATERSHED: Sanata Cruz		Winter: November 1 - May 31									
DESIGNATED USES: A&We, PBC		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
AUTOSAMPLER STARTUP DATE: March 21, 2011 (previous sampling conducted with passive samplers)		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/1/08	6/30/09	4/23/10	NS	NS	NS	11/7/11	8/22/12	12/13/12	Pending
Acid Compounds											
2-Chlorophenol (ug/L)	0.03500	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
2,4-Dichlorophenol (mg/L)	0.02100	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
2,4-Dimethylphenol (ug/L)	0.14000	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
2,4-Dinitrophenol (ug/L)	0.01400	-	<0.010	<480	NS	NS	NS	IS	<50	ANR	ANR
2-Nitrophenol (ug/L)	NNS	-	<0.010	<96	NS	NS	NS	IS	<15	ANR	ANR
4-Nitrophenol (ug/L)	NNS	-	<0.010	<480	NS	NS	NS	IS	<25	ANR	ANR
Pentachlorophenol (ug/L)	0.00100	-	<0.010	<290	NS	NS	NS	IS	<50	ANR	ANR
Phenol (ug/L)	4.20000	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
2,4,6-Trichlorophenol (ug/L)	0.00320	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
Bases/Neutrals											
Acenaphthene(ug/L)	0.42000	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Acenaphthylene (ug/L)	NNS	-	<0.010	<48	NS	NS	NS	IS	NS	ANR	ANR
Anthracene (ug/L)	2.10000	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Benzo(a)anthracene (ug/L)	0.00190	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Benzo(a)pyrene (ug/L)	0.00020	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Benzo(b)fluoranthene (ug/L)	NNS	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
Benzo(g,h,i)perylene (ug/L)	NNS	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Benzo(k)fluoranthene (ug/L)	0.04800	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
Chrysene (ug/L)	0.00479	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Dibenz(a,h)anthracene (ug/L)	0.00190	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Diethyl phthalate (ug/L)	5.60000	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
Dimethyl phthalate (ug/L)	NNS	-	<0.010	<96	NS	NS	NS	IS	<20	ANR	ANR
Di-n-butyl phthalate (ug/L)	NNS	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
Di-n-octyl phthalate (ug/L)	2.80000	-	<0.010	<96	NS	NS	NS	IS	<10	ANR	ANR
Fluoranthene (ug/L)	0.28000	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Fluorene (ug/L)	0.28000	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Indeno(1,2,3-cd)pyrene (ug/L)	0.00048	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Naphthalene (ug/L)	0.14000	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Phenanthrene (ug/L)	NNS	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR
Pyrene (ug/L)	0.21000	-	<0.010	<48	NS	NS	NS	IS	<10	ANR	ANR

**MS4 Monitoring Data
Tucson**

RECEIVING WATER: Santa Cruz WATERSHED: Sanata Cruz DESIGNATED USES: A&We, PBC AUTOSAMPLER STARTUP DATE: March 21, 2011 (previous sampling conducted with passive samplers)		Summer: June 1 - October 31									
		Winter: November 1 - May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		12/1/08	6/30/09	4/23/10	NS	NS	NS	11/7/11	8/22/12	12/13/12	Pending
Pesticides											
Aldrin (ug/L)	0.00200	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Alpha BHC (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Beta BHC (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Delta BHC (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Gamma BHC (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Chlordane (ug/L)	0.00200	-	<0.00050	<96	NS	NS	NS	IS	<5.0	ANR	ANR
4,4-DDD (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
4,4-DDE (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
4,4-DDT (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Dieldrin (ug/L)	0.00200	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Endosulfan I (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Endosulfan II (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Endosulfan sulfate (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Endrin (ug/L)	0.00200	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Endrin aldehyde (ug/L)	NNS	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Heptachlor (ug/L)	0.00040	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Heptachlor epoxide (ug/L)	0.00020	-	<0.000050	<96	NS	NS	NS	IS	<0.50	ANR	ANR
Toxaphene (ug/L)	NNS	-	<0.00050	<0.00096	NS	NS	NS	IS	<10	ANR	ANR

NNS - No Numerical Standard

EF - Equipment Failure

IS - Insufficient Sample

NS - Not Sampled

ANR - Analyses Not Required

**MS4 Monitoring Data
Sedona**

OUTFALL ID: SR179 Bridge Over Oak Creek RECEIVING WATER: Oak Creek WATERSHED: Verde River DESIGNATED USES: Outstanding Arizona Water (OAW) AUTOSAMPLER STARTUP DATE: January 17, 2012		MONITORING SEASONS									
		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
MONITORING PARAMETERS		WQS									
Flow (gpm = gallons per minute)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	133	
pH	5.0-9.0	--	--	--	--	--	--	EF/NS	EF/NS	6.23	
Temperature (F°)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	58.7	
Hardness	NNS	--	--	--	--	--	--	EF/NS	EF/NS	113	
Specific conductance (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	81	
Total Dissolved Solids (TDS) (mg/L)	500.00	--	--	--	--	--	--	EF/NS	EF/NS	78	
Total Suspended Solids (TSS) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	120	
Turbidity (NTU)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	190	
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	7.6	
Chemical Oxygen Demand (COD) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	47	
Surfactants (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.05	
Inorganics											
Cyanide (mg/L)	0.20	--	--	--	--	--	--	EF/NS	EF/NS	0.05	
Sulfates (mg/L)	250.00	--	--	--	--	--	--	EF/NS	EF/NS	4.2	
Nutrients											
Nitrate (mg/L)	10.00	--	--	--	--	--	--	EF/NS	EF/NS	0.19	
Nitrite (mg/L)	1.00	--	--	--	--	--	--	EF/NS	EF/NS	0.27	
Total Ammonia (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.5	
Total Kjeldahl Nitrogen (TKN) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<1	
Total Phosphorous (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	0.17	
Phosphate, Ortho (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.2	
Sodium (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	2.8	
Calcium (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	11	
Chloride (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	2.6	
Microbiological											
Coliform, fecal (col/100 ml)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	20000	
E.Coli (cfu/100 ml)	100.00	--	--	--	--	--	--	EF/NS	EF/NS	9000	

**MS4 Monitoring Data
Sedona**

RECEIVING WATER: Oak Creek WATERSHED: Verde River DESIGNATED USES: Outstanding Arizona Water (OAW) AUTOSAMPLER STARTUP DATE: January 17, 2012		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
Total Metals											
Antimony (mg/L)	0.006	--	--	--	--	--	--	EF/NS	EF/NS	<0.0030	
Arsenic (mg/L)	0.050	--	--	--	--	--	--	EF/NS	EF/NS	<0.10	
Barium (mg/L)	2.000	--	--	--	--	--	--	EF/NS	EF/NS	<0.0010	
Beryllium (mg/L)	0.004	--	--	--	--	--	--	EF/NS	EF/NS	<0.0010	
Cadmium (mg/L)	0.005	--	--	--	--	--	--	EF/NS	EF/NS	<0.0010	
Chromium (mg/L)	0.100	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	
Copper (mg/L)	1.300	--	--	--	--	--	--	EF/NS	EF/NS	0.034	
Lead (mg/L)	0.015	--	--	--	--	--	--	EF/NS	EF/NS	<0.015	
Mercury (mg/L)	0.002	--	--	--	--	--	--	EF/NS	EF/NS	<0.0002	
Nickel (mg/L)	0.140	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	
Selenium (mg/L)	0.020	--	--	--	--	--	--	EF/NS	EF/NS	<0.0030	
Silver (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	
Zinc (mg/L)	2.10	--	--	--	--	--	--	EF/NS	EF/NS	0.078	
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<10	
Oil & Grease (Hexane Extr) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	5.7	
Chlorine, residual (mg/L)	0.70000	--	--	--	--	--	--	EF/NS	EF/NS	<0.1	
VOCs, Semi-VOCs and Pesticides											
Benzene (mg/L)	0.0050	--	--	--	--	--	--	EF/NS	EF/NS	<2	ANR
Ethylbenzene (mg/L)	0.0050	--	--	--	--	--	--	EF/NS	EF/NS	<2	ANR
Toluene (mg/L)	1.00	--	--	--	--	--	--	EF/NS	EF/NS	<2	ANR
Total Xylene (mg/L)	10.00	--	--	--	--	--	--	EF/NS	EF/NS	<2	ANR

**MS4 Monitoring Data
Sedona**

RECEIVING WATER: Oak Creek		Summer: June 1- October 31									
WATERSHED: Verde River		Winter: November 1- May 31									
DESIGNATED USES: Outstanding Arizona Water (OAW)		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
AUTOSAMPLER STARTUP DATE: January 17, 2012		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
Acid Compounds											
2-Chlorophenol (mg/L)	0.035	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
2,4-Dichlorophenol (mg/L)	0.021	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
2,4-Dimethylphenol (mg/L)	0.140	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
4,6-Dinitrocreosol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
2,4-Dinitrophenol (mg/L)	0.014	--	--	--	--	--	--	EF/NS	EF/NS	<30	ANR
2-Nitrophenol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
4-Nitrophenol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
P-Chloro-m-cresol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
Pentachlorophenol (mg/L)	0.001	--	--	--	--	--	--	EF/NS	EF/NS	<50	ANR
Phenol (mg/L)	4.20	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
2,4,6-Trichlorophenol (mg/L)	0.00320	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR
Bases/Neutrals											
Acenaphthene (mg/L)	0.42	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Acenaphthylene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Anthracene (mg/L)	2.10	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Benzo(a)anthracene (mg/L)	0.00190	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Benzo(a)pyrene (mg/L)	0.00020	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Benzo(b)fluoranthene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Benzo(g,h,i)perylene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Benzo(k)fluoranthene (mg/L)	0.0480	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Chrysene (mg/L)	0.00479	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Dibenzo(a,h)anthracene (mg/L)	0.00190	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Diethyl phthalate (mg/L)	5.60	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Dimethyl phthalate (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Di-n-butyl phthalate (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Di-n-octyl phthalate (mg/L)	2.80	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
1,2-Diphenylhydrazine (Azobenzene) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Fluoranthene (mg/L)	0.28	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Fluorene (mg/L)	0.28	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Indeno(1,2,3-cd)pyrene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Naphthalene (mg/L)	0.14	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Phenanthrene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<4	ANR
Pyrene (mg/L)	0.21	--	--	--	--	--	--	EF/NS	EF/NS	<10	ANR

**MS4 Monitoring Data
Sedona**

RECEIVING WATER: Oak Creek WATERSHED: Verde River DESIGNATED USES: Outstanding Arizona Water (OAW) AUTOSAMPLER STARTUP DATE: January 17, 2012		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
Pesticides											
Aldrin (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Alpha BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Beta BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Delta BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Gamma BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Chlordane (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
4,4-DDD (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
4,4-DDE (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
4,4-DDT (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Dieldrin (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Alpha-endenosulfan (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Beta-endenosulfan (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Endosulfan sulfate (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Endrin (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Endrin aldehyde (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Heptachlor (mg/L)	0.00040	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Heptachlor epoxide (mg/L)	0.00020	--	--	--	--	--	--	EF/NS	EF/NS	<0.051	ANR
Toxaphene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<2.5	ANR

NNS - No Numerical Standard

EF - Equipment Failure

IS - Insufficient Sample

NS - Not Sampled

ANR - Analyses Not Required

Note - High dilution due to matrix interference caused increased reporting limits for Base/Neutrals

**MS4 Monitoring Data
Flagstaff**

OUTFALL ID: B40-196.14 RECEIVING WATER: Rio De Flag WATERSHED: Little Colorado DESIGNATED USES: Aquatic & Wildlife EDW, PBC AUTOSAMPLER STARTUP DATE: August 11, 2011		MONITORING SEASONS Summer: June 1- October 31 Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013
		SAMPLING DATE									
		--	--	--	--	--	EF/NS	EF/NS	10/12/12	1/25/13	Pending
MONITORING PARAMETERS	WQS										
Flow (gpm = gallons per minute)	NNS	--	--	--	--	--	EF/NS	EF/NS	187	75	
pH	5.0-9.0	--	--	--	--	--	EF/NS	EF/NS	6.88	7.23	
Temperature (F°)	NNS	--	--	--	--	--	EF/NS	EF/NS	54.4	53	
Hardness	NNS	--	--	--	--	--	EF/NS	EF/NS	67	120	
Specific conductance (umhos/cm)	NNS	--	--	--	--	--	EF/NS	EF/NS	160	220	
Total Dissolved Solids (TDS) (mg/L)	500.00	--	--	--	--	--	EF/NS	EF/NS	100	120	
Total Suspended Solids (TSS) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	95	260	
Turbidity (NTU)	NNS	--	--	--	--	--	EF/NS	EF/NS	33	180	
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	<5.00	15	
Chemical Oxygen Demand (COD) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	44	200	
Surfactants (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	0.13	<0.10	
Inorganics											
Cyanide (mg/L)	0.20	--	--	--	--	--	EF/NS	EF/NS	<0.0050	0.016	
Sulfates (mg/L)	250.00	--	--	--	--	--	EF/NS	EF/NS	<5.0	<5.0	
Nutrients											
Nitrate (mg/L)	10.00	--	--	--	--	--	EF/NS	EF/NS	0.63	0.16	
Nitrite (mg/L)	1.00	--	--	--	--	--	EF/NS	EF/NS	0.19	0.18	
Total Ammonia (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	0.12	0.34	
Total Kjeldahl Nitrogen (TKN) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	1.1	3.2	
Total Phosphorous (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	0.34	2	
Phosphate, Ortho (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	0.18	0.36	
Sodium (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	13	30	
Calcium (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	18	31	
Chloride (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	14	36	

**MS4 Monitoring Data
Flagstaff**

RECEIVING WATER: Rio De Flag WATERSHED: Little Colorado DESIGNATED USES: Aquatic & Wildlife EDW, PBC AUTOSAMPLER STARTUP DATE: August 11, 2011		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012- 13	Summer 2013
SAMPLING DATE		--	--	--	--	--	EF/NS	EF/NS	10/12/12	1/25/13	Pending
Microbiological											
Coliform, fecal (MPN/100 ml)	NNS	--	--	--	--	--	EF/NS	EF/NS	<9700	120	
E.Coli (MPN/100 ml)	100.00	--	--	--	--	--	EF/NS	EF/NS	<9700	140	
Total Metals											
Antimony (mg/L)	0.006	--	--	--	--	--	EF/NS	EF/NS	<0.020	<0.020	
Arsenic (mg/L)	0.050	--	--	--	--	--	EF/NS	EF/NS	<0.020	<0.020	
Barium (mg/L)	2.000	--	--	--	--	--	EF/NS	EF/NS	0.070	0.260	
Beryllium (mg/L)	0.004	--	--	--	--	--	EF/NS	EF/NS	<0.0020	<0.0040	
Cadmium (mg/L)	0.005	--	--	--	--	--	EF/NS	EF/NS	<0.0050	<0.0050	
Chromium (mg/L)	0.100	--	--	--	--	--	EF/NS	EF/NS	<0.010	0.015	
Copper (mg/L)	1.300	--	--	--	--	--	EF/NS	EF/NS	<0.020	0.044	
Lead (mg/L)	0.015	--	--	--	--	--	EF/NS	EF/NS	<0.0050	0.037	
Mercury (mg/L)	0.002	--	--	--	--	--	EF/NS	EF/NS	<0.0020	<0.00020	
Nickel (mg/L)	0.140	--	--	--	--	--	EF/NS	EF/NS	<0.020	<0.020	
Selenium (mg/L)	0.020	--	--	--	--	--	EF/NS	EF/NS	<0.020	<0.020	
Silver (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	<0.010	<0.010	
Zinc (mg/L)	2.10	--	--	--	--	--	EF/NS	EF/NS	0.085	0.3	
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	0.86	0.14	
Oil & Grease (Hexane Extr) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	<5.0	7.6	
Chlorine, residual (mg/L)	0.70000	--	--	--	--	--	EF/NS	EF/NS	<0.10	0.14	
VOCs, Semi-VOCs and Pesticides											
Benzene (mg/L)	0.0050	--	--	--	--	--	EF/NS	EF/NS	IS	<0.0005	ANR
Ethylbenzene (mg/L)	0.0050	--	--	--	--	--	EF/NS	EF/NS	IS	<0.0005	ANR
Toluene (mg/L)	1.00	--	--	--	--	--	EF/NS	EF/NS	IS	<0.005	ANR
Total Xylene (mg/L)	10.00	--	--	--	--	--	EF/NS	EF/NS	IS	<0.0015	ANR

**MS4 Monitoring Data
Flagstaff**

RECEIVING WATER: Rio De Flag WATERSHED: Little Colorado DESIGNATED USES: Aquatic & Wildlife EDW, PBC AUTOSAMPLER STARTUP DATE: August 11, 2011		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012- 13	Summer 2013
SAMPLING DATE		--	--	--	--	--	EF/NS	EF/NS	10/12/12	1/25/13	Pending
Acid Compounds											
2-Chlorophenol (mg/L)	0.035	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
2,4-Dichlorophenol (mg/L)	0.021	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
2,4-Dimethylphenol (mg/L)	0.140	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
4,6-Dinitrocreosol (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
2,4-Dinitrophenol (mg/L)	0.014	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
2-Nitrophenol (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
4-Nitrophenol (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
P-Chloro-m-cresol (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
Pentachlorophenol (mg/L)	0.001	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
Phenol (mg/L)	4.20	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
2,4,6-Trichlorophenol (mg/L)	0.00320	--	--	--	--	--	EF/NS	EF/NS	IS	<0.010	ANR
Bases/Neutrals											
Acenaphthene (mg/L)	0.42	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Acenaphthylene (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Anthracene (mg/L)	2.10	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Benzo(a)anthracene (mg/L)	0.00190	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Benzo(a)pyrene (mg/L)	0.00020	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Benzo(b)fluoranthene (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Benzo(g,h,i)perylene (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Benzo(k)fluoranthene (mg/L)	0.0480	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Chrysene (mg/L)	0.00479	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Dibenzo(a,h)anthracene (mg/L)	0.00190	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Diethyl phthalate (mg/L)	5.60	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Dimethyl phthalate (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Di-n-butyl phthalate (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Di-n-octyl phthalate (mg/L)	2.80	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
1,2-Diphenylhydrazine (Azobenzene) (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Fluoranthene (mg/L)	0.28	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Fluorene (mg/L)	0.28	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Indeno(1,2,3-cd)pyrene (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Naphthalene (mg/L)	0.14	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Phenanthrene (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR
Pyrene (mg/L)	0.21	--	--	--	--	--	EF/NS	EF/NS	IS	<0.001	ANR

**MS4 Monitoring Data
Flagstaff**

RECEIVING WATER: Rio De Flag WATERSHED: Little Colorado DESIGNATED USES: Aquatic & Wildlife EDW, PBC AUTOSAMPLER STARTUP DATE: August 11, 2011		Summer: June 1- October 31 Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012- 13	Summer 2013
		SAMPLING DATE	--	--	--	--	EF/NS	EF/NS	10/12/12	1/25/13	Pending
Pesticides											
Aldrin (mg/L)	0.0020	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Alpha BHC (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Beta BHC (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Delta BHC (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Gamma BHC (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Chlordane (mg/L)	0.0020	--	--	--	--	--	EF/NS	EF/NS	IS	<0.0005	ANR
4,4-DDD (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
4,4-DDE (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
4,4-DDT (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Dieldrin (mg/L)	0.0020	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Alpha-endosulfan (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Beta-endosulfan (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Endosulfan sulfate (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Endrin (mg/L)	0.0020	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Endrin aldehyde (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Heptachlor (mg/L)	0.00040	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Heptachlor epoxide (mg/L)	0.00020	--	--	--	--	--	EF/NS	EF/NS	IS	<0.00005	ANR
Toxaphene (mg/L)	NNS	--	--	--	--	--	EF/NS	EF/NS	IS	<0.0005	ANR

NNS - No Numerical Standard
 EF - Equipment Failure
 IS - Insufficient Sample
 NS - Not Sampled
 ANR - Analyses Not Required

**MS4 Monitoring Data
Nogales**

OUTFALL ID: 82-0.57 RECEIVING WATER: Nogales Wash WATERSHED: Santa Cruz DESIGNATED USES: A&Ww, PBC AUTOSAMPLER STARTUP DATE: October 6, 2011		MONITORING SEASONS									
		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
MONITORING PARAMETERS		WQS									
Flow (gpm = gallons per minute)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	118	
pH	5.0-9.0	--	--	--	--	--	--	EF/NS	EF/NS	7.13	
Temperature (F°)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	63.2	
Hardness	NNS	--	--	--	--	--	--	EF/NS	EF/NS	27	
Specific conductance (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	81	
Total Dissolved Solids (TDS) (mg/L)	500.00	--	--	--	--	--	--	EF/NS	EF/NS	78	
Total Suspended Solids (TSS) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	120	
Turbidity (NTU)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	190	
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	7.6	
Chemical Oxygen Demand (COD) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	47	
Surfactants (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<1.0	
Inorganics											
Cyanide (mg/L)	0.20	--	--	--	--	--	--	EF/NS	EF/NS	<0.050	
Sulfates (mg/L)	250.00	--	--	--	--	--	--	EF/NS	EF/NS	4.2	
Nutrients											
Nitrate (mg/L)	10.00	--	--	--	--	--	--	EF/NS	EF/NS	2.6	
Nitrite (mg/L)	1.00	--	--	--	--	--	--	EF/NS	EF/NS	0.37	
Total Ammonia (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.50	
Total Kjeldahl Nitrogen (TKN) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<1	
Total Phosphorous (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	0.17	
Phosphate, Ortho (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<2.0	
Sodium (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	2.8	
Calcium (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	11	
Chloride (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	2.6	
Microbiological											
Coliform, fecal (CFU/100 ml)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	20000	
E.Coli (MPN/100 ml)	100.00	--	--	--	--	--	--	EF/NS	EF/NS	9000	

**MS4 Monitoring Data
Nogales**

RECEIVING WATER: Nogales Wash WATERSHED: Santa Cruz DESIGNATED USES: A&Ww, PBC AUTOSAMPLER STARTUP DATE: October 6, 2011		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
Total Metals											
Antimony (mg/L)	0.006	--	--	--	--	--	--	EF/NS	EF/NS	<0.0030	
Arsenic (mg/L)	0.050	--	--	--	--	--	--	EF/NS	EF/NS	<0.10	
Barium (mg/L)	2.000	--	--	--	--	--	--	EF/NS	EF/NS	0.033	
Beryllium (mg/L)	0.004	--	--	--	--	--	--	EF/NS	EF/NS	<0.0010	
Cadmium (mg/L)	0.005	--	--	--	--	--	--	EF/NS	EF/NS	<0.0010	
Chromium (mg/L)	0.100	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	
Copper (mg/L)	1.300	--	--	--	--	--	--	EF/NS	EF/NS	0.034	
Lead (mg/L)	0.015	--	--	--	--	--	--	EF/NS	EF/NS	<0.015	
Mercury (mg/L)	0.002	--	--	--	--	--	--	EF/NS	EF/NS	<0.00020	
Nickel (mg/L)	0.140	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	
Selenium (mg/L)	0.020	--	--	--	--	--	--	EF/NS	EF/NS	<0.0030	
Silver (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	
Zinc (mg/L)	2.10	--	--	--	--	--	--	EF/NS	EF/NS	0.078	
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	5.7	
Oil & Grease (Hexane Extr) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<10	
Chlorine, residual (mg/L)	0.70000	--	--	--	--	--	--	EF/NS	EF/NS	NS	
VOCs, Semi-VOCs and Pesticides											
Benzene (mg/L)	0.0050	--	--	--	--	--	--	EF/NS	EF/NS	<0.002	ANR
Ethylbenzene (mg/L)	0.0050	--	--	--	--	--	--	EF/NS	EF/NS	<0.002	ANR
Toluene (mg/L)	1.00	--	--	--	--	--	--	EF/NS	EF/NS	<0.002	ANR
Total Xylene (mg/L)	10.00	--	--	--	--	--	--	EF/NS	EF/NS	<0.002	ANR

**MS4 Monitoring Data
Nogales**

RECEIVING WATER: Nogales Wash WATERSHED: Santa Cruz DESIGNATED USES: A&Ww, PBC AUTOSAMPLER STARTUP DATE: October 6, 2011		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
Acid Compounds											
2-Chlorophenol (mg/L)	0.035	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
2,4-Dichlorophenol (mg/L)	0.021	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
2,4-Dimethylphenol (mg/L)	0.140	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
4,6-Dinitrocreosol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0030	ANR
2,4-Dinitrophenol (mg/L)	0.014	--	--	--	--	--	--	EF/NS	EF/NS	<0.0030	ANR
2-Nitrophenol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
4-Nitrophenol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
P-Chloro-m-cresol (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
Pentachlorophenol (mg/L)	0.001	--	--	--	--	--	--	EF/NS	EF/NS	<0.0050	ANR
Phenol (mg/L)	4.20	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
2,4,6-Trichlorophenol (mg/L)	0.00320	--	--	--	--	--	--	EF/NS	EF/NS	<0.010	ANR
Bases/Neutrals											
Acenaphthene (mg/L)	0.42	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Acenaphthylene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Anthracene (mg/L)	2.10	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Benzo(a)anthracene (mg/L)	0.00190	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Benzo(a)pyrene (mg/L)	0.00020	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Benzo(b)fluoranthene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Benzo(g,h,i)perylene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Benzo(k)fluoranthene (mg/L)	0.0480	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Chrysene (mg/L)	0.00479	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Dibenzo(a,h)anthracene (mg/L)	0.00190	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Diethyl phthalate (mg/L)	5.60	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Dimethyl phthalate (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Di-n-butyl phthalate (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Di-n-octyl phthalate (mg/L)	2.80	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
1,2-Diphenylhydrazine (Azobenzene) (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Fluoranthene (mg/L)	0.28	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Fluorene (mg/L)	0.28	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Indeno(1,2,3-cd)pyrene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Naphthalene (mg/L)	0.14	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Phenanthrene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR
Pyrene (mg/L)	0.21	--	--	--	--	--	--	EF/NS	EF/NS	<0.0040	ANR

**MS4 Monitoring Data
Nogales**

RECEIVING WATER: Nogales Wash WATERSHED: Santa Cruz DESIGNATED USES: A&Ww, PBC AUTOSAMPLER STARTUP DATE: October 6, 2011		Summer: June 1- October 31									
		Winter: November 1- May 31									
		Permit Year 1		Permit Year 2		Permit Year 3		Permit Year 4		Permit Year 5	
		Winter 2008-09	Summer 2009	Winter 2009-10	Summer 2010	Winter 2010-11	Summer 2011	Winter 2011- 12	Summer 2012	Winter 2012-13	Summer 2013
SAMPLING DATE		--	--	--	--	--	--	EF/NS	EF/NS	12/14/12	Pending
Pesticides											
Aldrin (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Alpha BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Beta BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Delta BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Gamma BHC (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Chlordane (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
4,4-DDD (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
4,4-DDE (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
4,4-DDT (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Dieldrin (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Alpha-endenosulfan (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Beta-endenosulfan (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Endosulfan sulfate (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Endrin (mg/L)	0.0020	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Endrin aldehyde (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Heptachlor (mg/L)	0.00040	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Heptachlor epoxide (mg/L)	0.00020	--	--	--	--	--	--	EF/NS	EF/NS	<0.00051	ANR
Toxaphene (mg/L)	NNS	--	--	--	--	--	--	EF/NS	EF/NS	<0.00025	ANR

NNS - No Numerical Standard

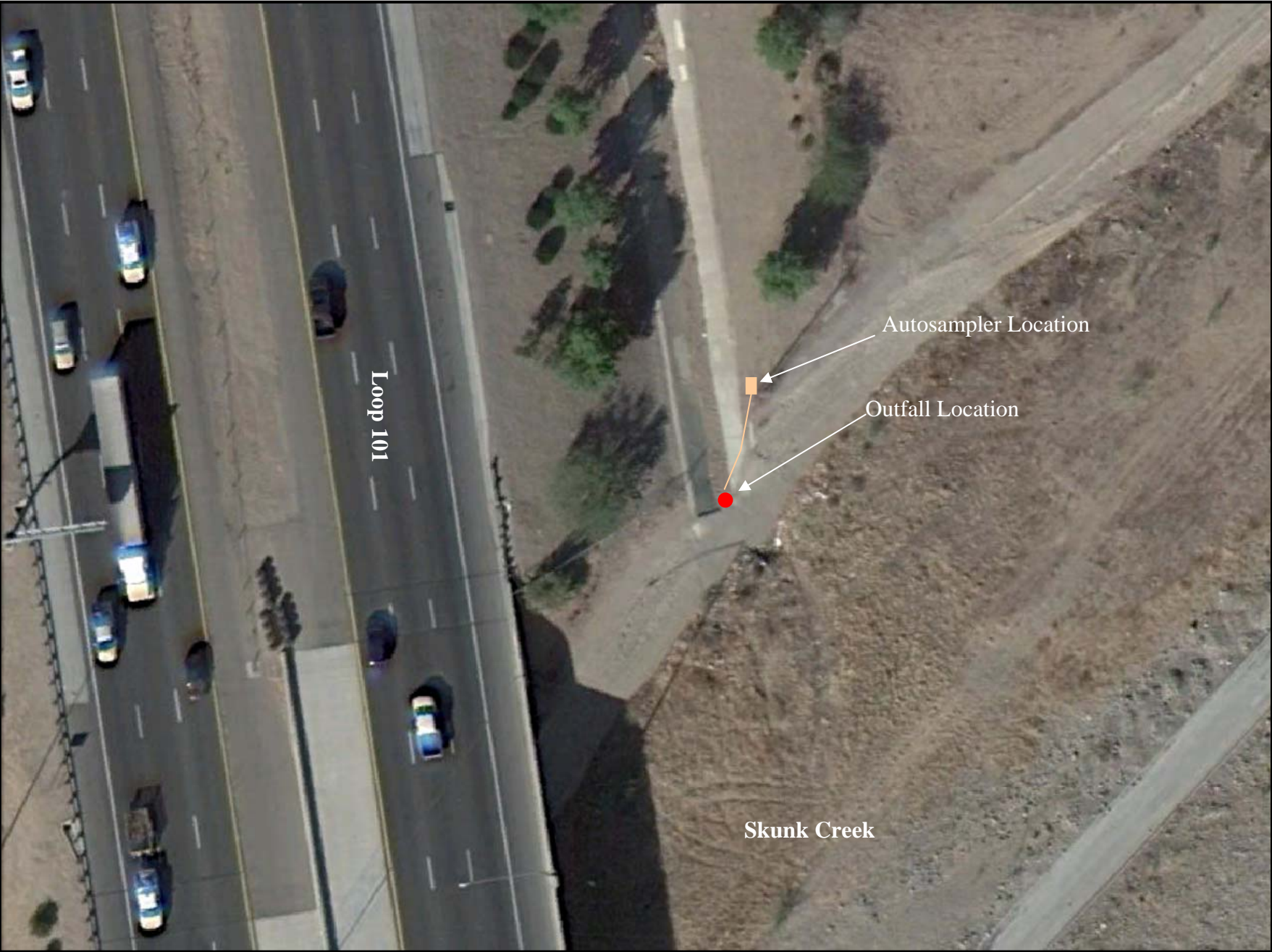
EF - Equipment Failure

IS - Insufficient Sample

NS - Not Sampled

ANR - Analyses Not Required

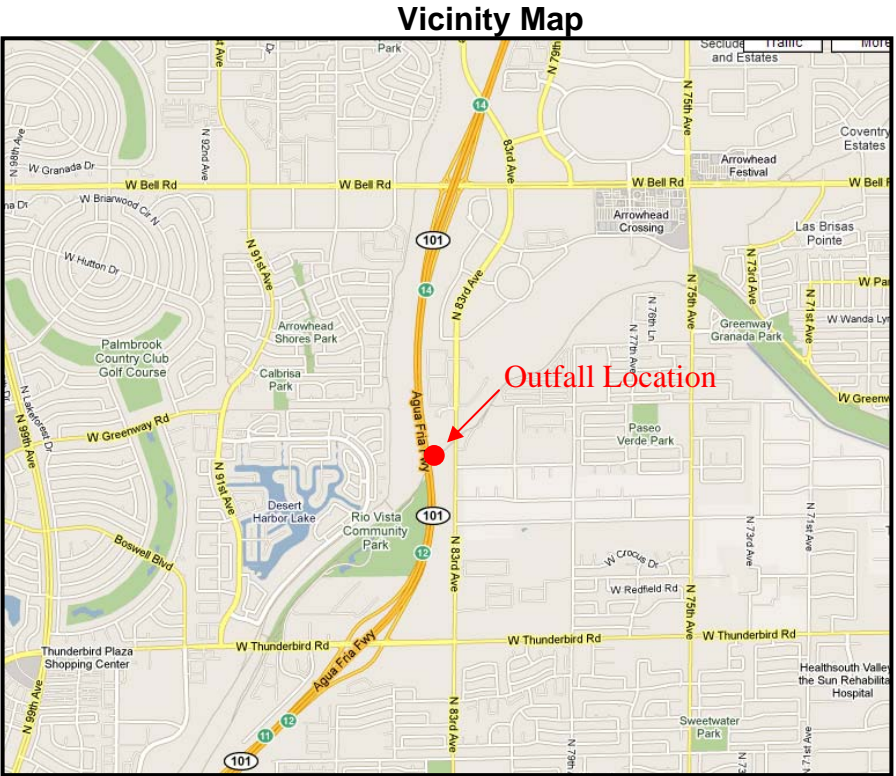
Attachment 3 MS4 Monitoring Location Site Maps



ADOT Outfall 101-13.68
Northeast Corner of Loop 101 and Skunk Creek Bridge, Peoria, Arizona



ARIZONA DEPARTMENT OF TRANSPORTATION
STORMWATER MONITORING SITE

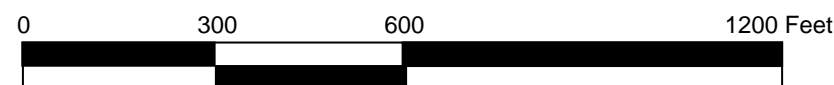


Photograph: Looking south along north bank of Skunk Creek



MS4 Sampling Location
Phoenix, Arizona

eec Engineering and Environmental Consultants, Inc.
7878 North 16th Street, Suite 140, Phoenix, AZ 85020



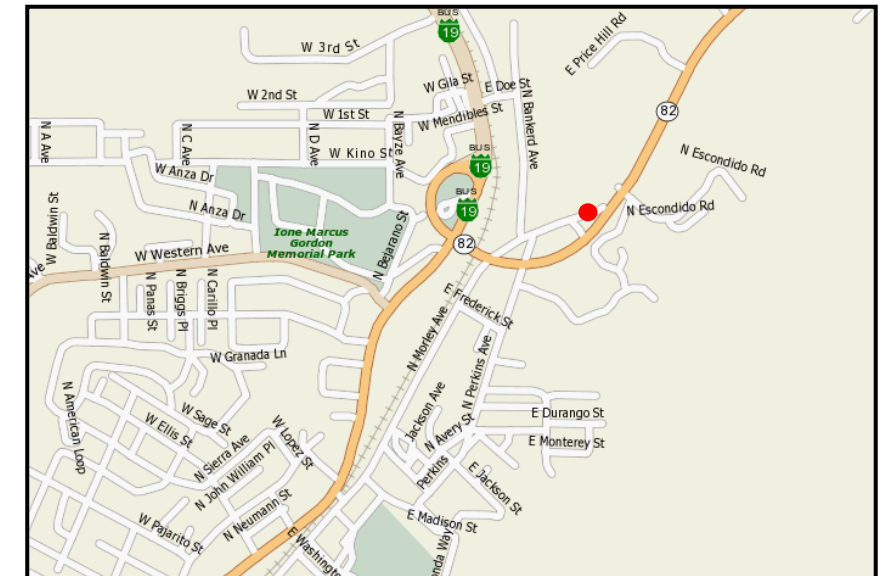
Legend

- Stormwater Sampling Location
- Nogales Wash
- Stormwater Conveyance



ARIZONA DEPARTMENT OF TRANSPORTATION
STORMWATER MONITORING SITE

Vicinity Map

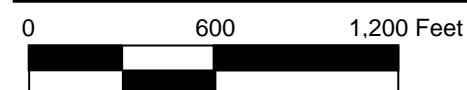
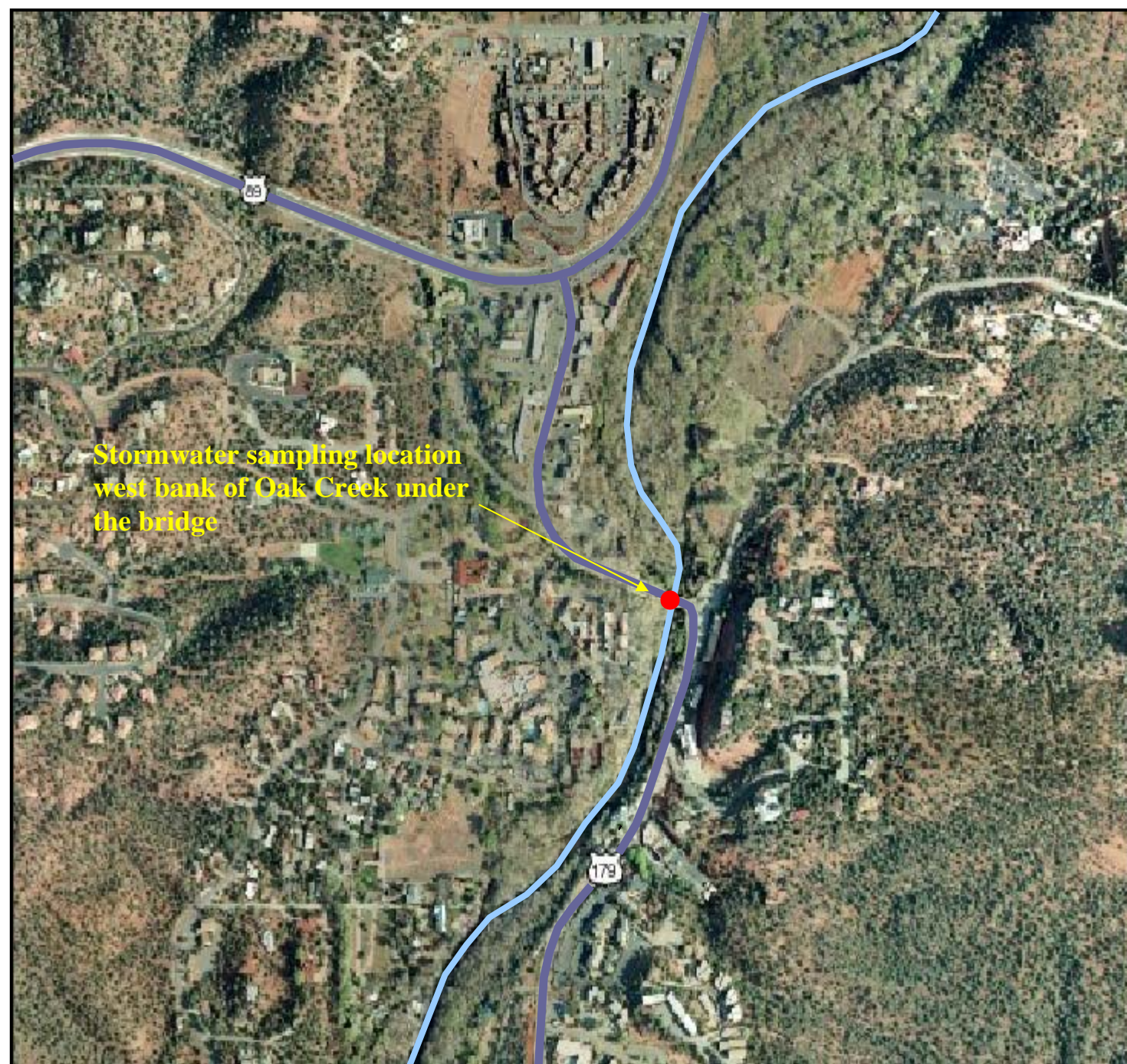


Photograph: Looking north at sampling location along north side of SR 82 in Nogales, AZ



**MS4 Sampling Location
Nogales, Arizona**

eec Engineering and Environmental Consultants, Inc.
7878 North 16th Street, Suite 140, Phoenix, AZ 85020



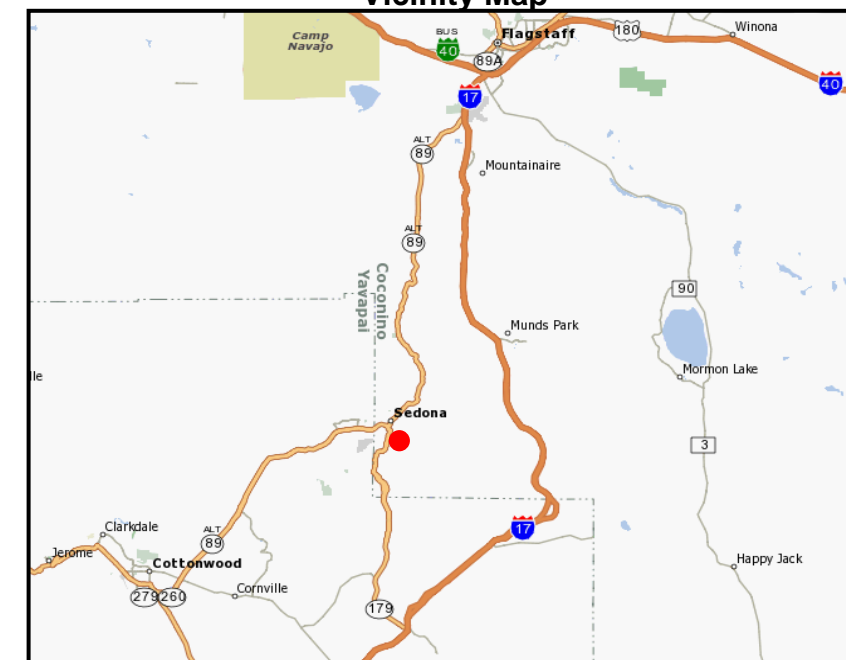
Legend

- Stormwater Sampling Location
- Oak Creek
- State Routes 89 & 179



ARIZONA DEPARTMENT OF TRANSPORTATION
STORMWATER MONITORING SITE

Vicinity Map

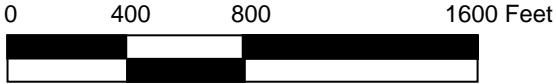
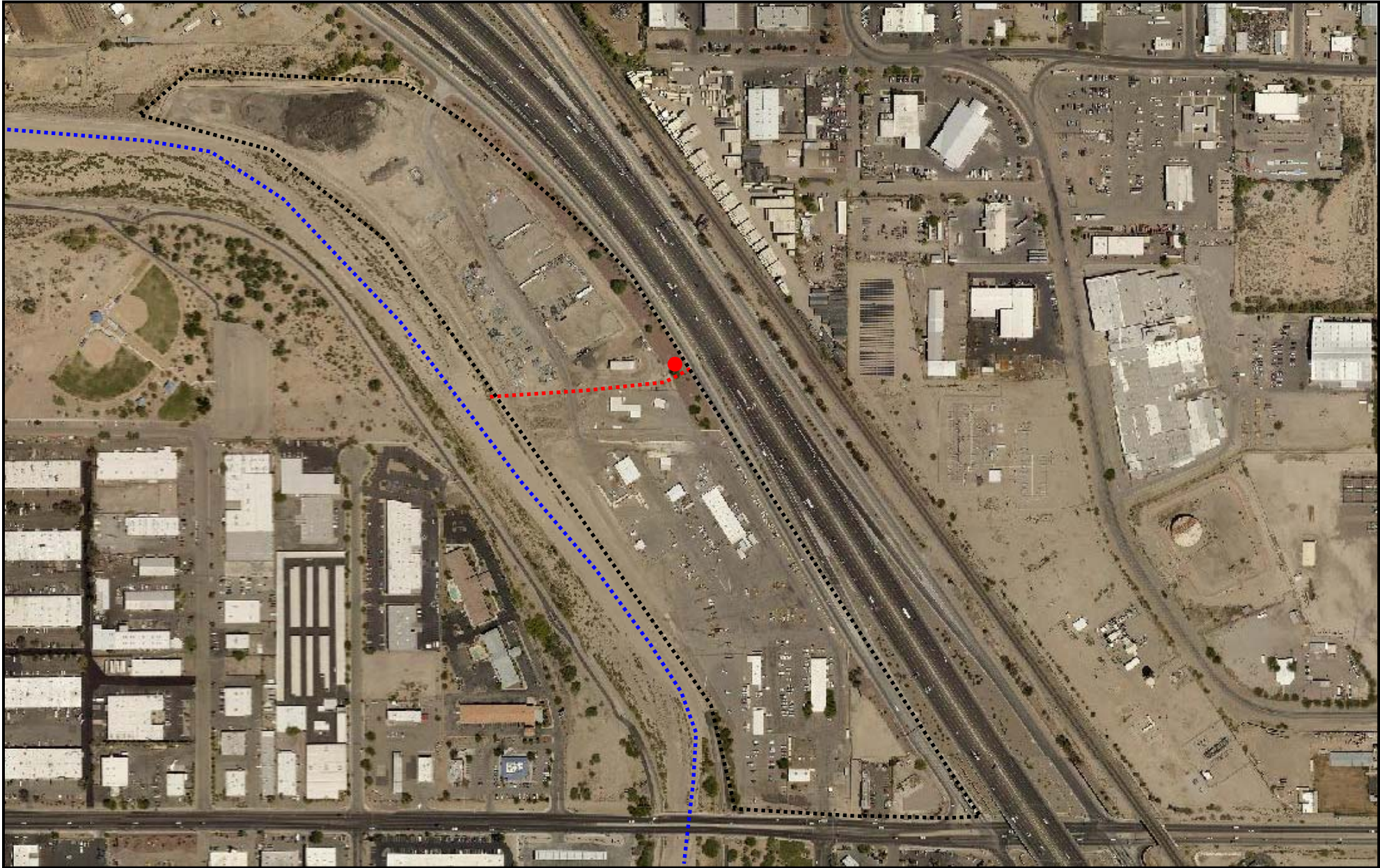


Photograph: Looking southwest at west bank of Oak Creek beneath SR179 Bridge over Oak Creek, Sedona, AZ



**MS4 Sampling Location
Sedona, AZ**

eec Engineering and Environmental Consultants, Inc.
7878 North 16th Street, Suite 140, Phoenix, AZ 85020

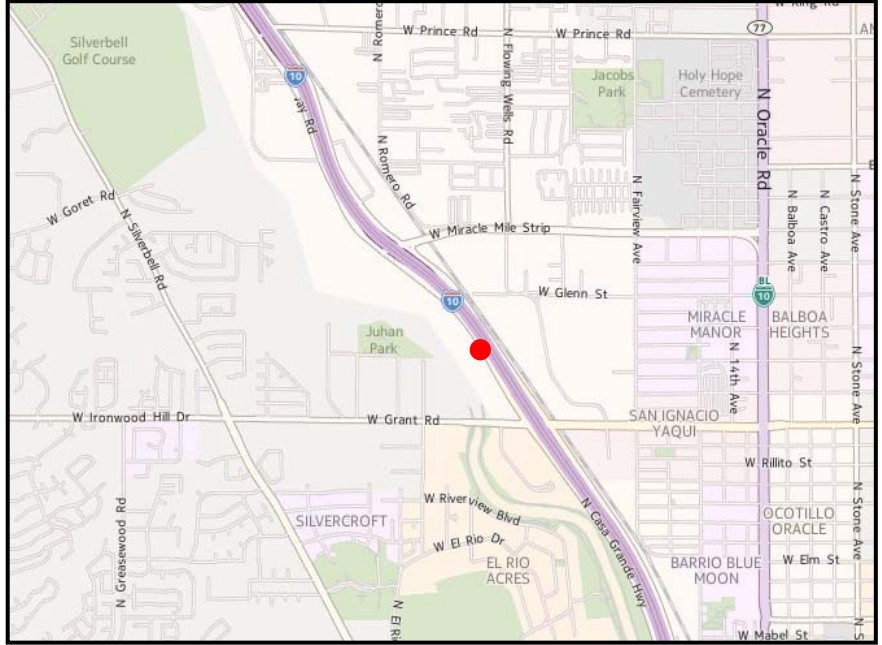


ARIZONA DEPARTMENT OF TRANSPORTATION
AZPDES STORM WATER MONITORING SITE

Legend

- Stormwater Sampling Location
- Santa Cruz
- Stormwater Conveyance
- ADOT Grant Road Maintenance Yard

Vicinity Map



Photograph: Looking north at sampling location located within ADOT Grant Road Maintenance Yard in Tucson, AZ



**MS4 Sampling Location
Tucson, Arizona**

eec Engineering and Environmental Consultants, Inc.
7878 North 16th Street, Suite 140, Phoenix, AZ 85020

Attachment 4

MS4 Stormwater Sampling Parameters and Analytical Methods

ADOT Stormwater Sampling Parameters, Analytical Methods, and Frequency

PARAMETER	METHOD NO.	SAMPLING FREQUENCY
Flow	Field	Each time an outfall is sampled
pH	Field/Grab	Once each wet season
Temperature	Field/Grab	Once each wet season
Hardness	130.1	Once each wet season
Specific conductance (umhos/cm)	120.1	Once each wet season
Total Dissolved Solids (TDS) (mg/L)	2540 C-2011	Once each wet season
Total Suspended Solids (TSS) (mg/L)	2540 D-2011	Once each wet season
Turbidity (NTU)	2130 B-2011	Once each wet season
Biochemical Oxygen Demand (BOD) (mg/L)	5210 B-2011	Once each wet season
Chemical Oxygen Demand (COD) (mg/L)	410.4	Once each wet season
Surfactants (MBAS)	5540 C-2011	Once each wet season
Inorganics (mg/L)		
Cyanide, total	4500CN E-2011/ Grab	Once each wet season
Sulphates	300.0	Once each wet season
Nutrients (mg/L)		
Nitrate (NO3-N)	353.2	Once each wet season
Nitrite (NO2-N)	353.2	Once each wet season
Ammonia as N	350.1	Once each wet season
Total Kjeldahl Nitrogen (TKN) as N	351.2	Once each wet season
Total Phosphorus	365.4	Once each wet season
Ortho-P	4500P-E	Once each wet season
Sodium	200.7	Once each wet season
Calcium	200.7	Once each wet season
Chloride	300.0	Once each wet season
Microbiological		
<i>Escherichia coli</i> (<i>E. coli</i>) (MPN /100 ml)	9223B-2004/ Grab	Once each wet season
Fecal Coliform (col/100ml)	SM9222D	Once each wet season
Metals¹ (mg/L)		
Antimony	200.7	Once each wet season
Arsenic	200.7	Once each wet season
Barium	200.7	Once each wet season
Beryllium	200.7	Once each wet season
Cadmium	200.7	Once each wet season
Chromium	200.7	Once each wet season
Copper	200.7	Once each wet season
Lead	200.7	Once each wet season
Mercury	245.1	Once each wet season
Nickel	200.7	Once each wet season
Selenium	200.7	Once each wet season
Silver	200.7	Once each wet season
Zinc	200.7	Once each wet season
Organic Toxic Pollutants (mg/L)		
Total Petroleum Hydrocarbons (TPH)	3510C/DRO/ Grab	Once each wet season
Total Oil and Grease	1664A/ Grab	Once each wet season
Chlorine	4500CI G-2011	Once each wet season

PARAMETER	METHOD NO.	SAMPLING FREQUENCY
Volatile Organic Compounds (mg/L)		
Benzene	602/ Grab	Once each wet season for years 2 & 4
Ethylbenzene	602/ Grab	Once each wet season for years 2 & 4
Toluene	602/ Grab	Once each wet season for years 2 & 4
Total xylene ²	602/ Grab	Once each wet season for years 2 & 4
Acid Compounds (mg/L)		
2-chlorophenol	8270 C	Once each wet season for years 2 & 4
2,4-dichlorophenol	8270 C	Once each wet season for years 2 & 4
2,4-dimethylphenol	8270 C	Once each wet season for years 2 & 4
4,6-dinitro-o-cresol	8270 C	Once each wet season for years 2 & 4
2,4-dinitrophenol	8270 C	Once each wet season for years 2 & 4
2-nitrophenol	8270 C	Once each wet season for years 2 & 4
4-nitrophenol	8270 C	Once each wet season for years 2 & 4
p-chloro-m-cresol	8270 C	Once each wet season for years 2 & 4
Pentachlorophenol	8270 C	Once each wet season for years 2 & 4
Phenol	8270 C	Once each wet season for years 2 & 4
2,4,6-trichlorophenol	8270 C	Once each wet season for years 2 & 4
Bases/Neutrals (mg/L)		
Acenaphthene (PAH)	8270 C	Once each wet season for years 2 & 4
Acenaphthylene (PAH)	8270 C	Once each wet season for years 2 & 4
Anthracene (PAH)	8270 C	Once each wet season for years 2 & 4
Benz(a)anthracene (PAH)	8270 C	Once each wet season for years 2 & 4
Benzo(a)pyrene (PAH)	8270 C	Once each wet season for years 2 & 4
Benzo(b)fluoranthene (PAH)	8270 C	Once each wet season for years 2 & 4
Benzo(g,h,i)perylene (PAH)	8270 C	Once each wet season for years 2 & 4
Benzo(k)fluoranthene (PAH)	8270 C	Once each wet season for years 2 & 4
Chrysene (PAH)	8270 C	Once each wet season for years 2 & 4
Dibenzo(a,h)anthracene (PAH)	8270 C	Once each wet season for years 2 & 4
Diethyl phthalate	8270 C	Once each wet season for years 2 & 4
Dimethyl phthalate	8270 C	Once each wet season for years 2 & 4
Di-n-butyl phthalate	8270 C	Once each wet season for years 2 & 4
Di-n-octyl phthalate	8270 C	Once each wet season for years 2 & 4
1,2-diphenylhydrazine (as azobenzene)	8270 C	Once each wet season for years 2 & 4
Fluoranthene (PAH)	8270 C	Once each wet season for years 2 & 4
Fluorene (PAH)	8270 C	Once each wet season for years 2 & 4
Indeno(1,2,3-cd)pyrene (PAH)	8270 C	Once each wet season for years 2 & 4
Naphthalene (PAH)	8270 C	Once each wet season for years 2 & 4
Phenanthrene (PAH)	8270 C	Once each wet season for years 2 & 4
Pyrene (PAH)	8270 C	Once each wet season for years 2 & 4
Pesticides (mg/L)		
Aldrin	8081 A	Once each wet season for years 2 & 4
Alpha-BHC	8081 A	Once each wet season for years 2 & 4
Beta-BHC	8081 A	Once each wet season for years 2 & 4
Gamma-BHC	8081 A	Once each wet season for years 2 & 4
Delta-BHC	8081 A	Once each wet season for years 2 & 4
Chlordane	8081 A	Once each wet season for years 2 & 4
4,4'-DDT	8081 A	Once each wet season for years 2 & 4
4,4'-DDE	8081 A	Once each wet season for years 2 & 4
4,4'-DDD	8081 A	Once each wet season for years 2 & 4
Dieldrin	8081 A	Once each wet season for years 2 & 4

PARAMETER	METHOD NO.	SAMPLING FREQUENCY
Alpha-endosulfan	8081 A	Once each wet season for years 2 & 4
Beta-endosulfan	8081 A	Once each wet season for years 2 & 4
Endosulfan sulfate	8081 A	Once each wet season for years 2 & 4
Endrin	8081 A	Once each wet season for years 2 & 4
Endrin aldehyde	8081 A	Once each wet season for years 2 & 4
Heptachlor	8081 A	Once each wet season for years 2 & 4
Heptachlor epoxide	8081 A	Once each wet season for years 2 & 4
Toxaphene	8081 A	Once each wet season for years 2 & 4

Attachment 5 MS4 Pollutant Loading Calculations

2009 Pollutant Loading Estimates
Phoenix MS4 Monitoring Location

Annual Pollutant Loading: ADOT's Phoenix Area MS4-Winter				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Winter Event Load (lbs)
BOD	0.19665	13	3.7	2.52
COD	0.19665	110	3.7	21.29
TSS	0.19665	85	3.7	16.45
TDS	0.19665	290	3.7	47.69
Total Nitrogen	0.19665	4.15	3.7	0.68
Total Amonia	0.19665	0.66	3.7	0.11
TKN	0.19665	3	3.7	0.49
Total Phosphorous	0.19665	NA	3.7	0.00
Barium	0.19665	0.098	3.7	0.02
Calcium	0.19665	46	3.7	7.56
Copper	0.19665	0.023	3.7	0.0038
Lead	0.19665	0.0084	3.7	0.0014
Sodium	0.19665	49	3.7	8.06
Zinc	0.19665	0.053	3.7	0.01
Specific conductance (mg/L)	0.19665	550	3.7	90.44
Turbidity (NTU)	0.19665	49	3.7	8.06
Sulfates (mg/L)	0.19665	56	3.7	9.21
Nitrate (mg/L)	0.19665	3.3	3.7	0.54
Nitrite (mg/L)	0.19665	0.19	3.7	0.03
Phosphate, Ortho (mg/L)	0.19665	NA	3.7	0.00
Chloride (mg/L)	0.19665	69	3.7	11.35
Ethylbenzene (mg/L)	0.19665	0.00068	3.7	0.00011
Coliform, fecal (col/100 ml)	0.19665	1,200	3.7	0.90
E.Coli (cfu/100 ml)	0.19665	24,200	3.7	18.14
Antimony (mg/L)	0.19665	<0.020	3.7	0.00
Arsenic (mg/L)	0.19665	<0.020	3.7	0.00
Total Petroleum Hydrobarbons (TPH) (mg/L)	0.19665	<5.0	3.7	0.00
Chlorine, residual (mg/L)	0.19665	0.2	3.7	0.03
Total Xylene (mg/L)	0.19665	0.0039	3.7	0.0006
MBAS (mg/L)	0.19665	0.3	3.7	0.05

Winter Event Runoff	0.19665
Winter Event Rainfall	0.23
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	100%
Runoff Factor	0.95

NA: Not Analyzed

2009 Pollutant Loading Estimates
Phoenix MS4 Monitoring Location

Annual Pollutant Loading: ADOT's Phoenix Area MS4- Mean/Annual Loading				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Annual Load (lbs)
BOD	8.83215	13	3.7	96.01
COD	8.83215	110	3.7	812.40
TSS	8.83215	85	3.7	627.76
TDS	8.83215	290	3.7	2,141.78
Total Nitrogen	8.83215	4.15	3.7	30.65
Total Amonia	8.83215	0.66	3.7	4.87
TKN	8.83215	3	3.7	22.16
Total Phosphorous	8.83215	NA	3.7	0.00
Barium	8.83215	0.098	3.7	0.72
Calcium	8.83215	46	3.7	339.73
Copper	8.83215	0.023	3.7	0.17
Lead	8.83215	0.0084	3.7	0.06
Sodium	8.83215	49	3.7	361.89
Zinc	8.83215	0.053	3.7	0.39
Specific conductance (mg/L)	8.83215	550	3.7	4,061.99
Turbidity (NTU)	8.83215	49	3.7	361.89
Sulfates (mg/L)	8.83215	56	3.7	413.58
Nitrate (mg/L)	8.83215	3.3	3.7	24.37
Nitrite (mg/L)	8.83215	0.19	3.7	1.40
Phosphate, Ortho (mg/L)	8.83215	NA	3.7	0.00
Chloride (mg/L)	8.83215	69	3.7	509.60
Ethylbenzene (mg/L)	8.83215	0.00068	3.7	0.00502
Coliform, fecal (col/100 ml)	8.83215	1,200	3.7	40.39
E.Coli (cfu/100 ml)	8.83215	24,200	3.7	814.56
Antimony (mg/L)	8.83215	<0.020	3.7	0.00
Arsenic (mg/L)	8.83215	<0.020	3.7	0.00
Total Petroleum Hydrobarbons (TPH) (mg/L)	8.83215	<5.0	3.7	0.00
Chlorine, residual (mg/L)	8.83215	0.2	3.7	1.48
Total Xylene (mg/L)	8.83215	0.0039	3.7	0.0288
MBAS (mg/L)	8.83215	0.3	3.7	2.22

Winter Runoff	8.83215
Winter Rainfall	10.33
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	100%
Runoff Factor	0.95

NA: Not Analyzed

2009 Pollutant Loading Estimates
Tucson MS4 Monitoring Location

Annual Pollutant Loading: ADOT's Tucson Area MS4- Winter				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Annual Load (lbs)
BOD	0.45315	65	4.8	31.95
COD	0.45315	560	4.8	275.28
TSS	0.45315	110	4.8	54.07
TDS	0.45315	680	4.8	334.27
Total Nitrogen	0.45315	12	4.8	5.90
Total Ammonia	0.45315	6.2	4.8	3.05
TKN	0.45315	12	4.8	5.90
Total Phosphorous	0.45315	0.42	4.8	0.21
Copper (mg/L)	0.45315	NA	4.8	0.00
Turbidity (NTU)	0.45315	94	4.8	46.21
Cyanide, total (mg/L)	0.45315	0.0059	4.8	0.0029
Sulfates (mg/L)	0.45315	110	4.8	54.07
Nitrate (mg/L)	0.45315	NA	4.8	0.00
Phosphate, Ortho (mg/L)	0.45315	0.62	4.8	0.30
Sodium	0.45315	NA	4.8	0.00
Barium (mg/L)	0.45315	0.2	4.8	0.10
Lead (mg/L)	0.45315	0.015	4.8	0.01
Calcium	0.45315	NA	4.8	0.00
Chloride (mg/L)	0.45315	26	4.8	12.78
Antimony (mg/L)	0.45315	NA	4.8	0.00
Arsenic (mg/L)	0.45315	<0.020	4.8	0.00
Selenium (mg/L)	0.45315	NA	4.8	0.00
Zinc (mg/L)	0.45315	NA	4.8	0.00
Total Petroleum Hydrocarbons (TPH) (mg/L)	0.45315	<5.6	4.8	0.00
Ethylbenzene	0.45315	<0.0010	4.8	0.00
MBAS (mg/L)	0.45315	NA	4.8	0.00
Specific conductance (mg/L)	0.45315	720	4.8	353.94
Toluene - d8 (mg/L)	0.45315	99	4.8	48.67
Dibromofluoromethane (mg/L)	0.45315	100	4.8	49.16

Annual Runoff	0.45315
Annual Rainfall	0.53
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	100%
Runoff Factor	0.95

NA: Not Analyzed

2009 Pollutant Loading Estimates
Tucson MS4 Monitoring Location

Annual Pollutant Loading: ADOT's Tucson Area MS4- Summer				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Annual Load (lbs)
BOD	0.342	44	4.8	16.32
COD	0.342	640	4.8	237.44
TSS	0.342	160	4.8	59.36
TDS	0.342	680	4.8	252.28
Total Nitrogen	0.342	7.01	4.8	2.60
Total Ammonia	0.342	6.7	4.8	2.49
TKN	0.342	14	4.8	5.19
Total Phosphorous	0.342	0.36	4.8	0.13
Copper	0.342	0.033	4.8	0.01
Turbidity (NTU)	0.342	NA	4.8	0.00
Cyanide, total (mg/L)	0.342	NA	4.8	0.00
Sulfates (mg/L)	0.342	68	4.8	25.23
Nitrate (mg/L)	0.342	0.21	4.8	0.08
Phosphate, Ortho (mg/L)	0.342	NA	4.8	0.00
Sodium	0.342	18	4.8	6.68
Barium (mg/L)	0.34	0.20	4.8	0.07
Lead	0.34	NA	4.8	0.00
Calcium	0.342	100	4.8	37.10
Chloride (mg/L)	0.342	19	4.8	7.05
Antimony (mg/L)	0.342	0.0046	4.8	0.0017
Arsenic (mg/L)	0.342	0.003	4.8	0.0011
Selenium (mg/L)	0.342	0.2	4.8	0.0742
Zinc (mg/L)	0.342	0.18	4.8	0.07
Total Petroleum Hydrocarbons (TPH) (mg/L)	0.342	<6.7	4.8	0.0000
Ethylbenzene	0.342	<0.00050	4.8	0.0000
MBAS (mg/L)	0.342	11	4.8	4.0810
Specific conductance (mg/L)	0.342	690	4.8	255.99
Toluene - d8 (mg/L)	0.342	NA	4.8	0.0000
Dibromofluoromethane (mg/L)	0.342	NA	4.8	0.0000

Annual Runoff	0.342
Annual Rainfall	0.4
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	100%
Runoff Factor	0.95

NA: Not Analyzed

2009 Pollutant Loading Estimates
Tucson MS4 Monitoring Location

Annual Pollutant Loading: ADOT's Tucson Area MS4- Mean/Annual				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Annual Load (lbs)
BOD	9.1143	54.5	4.8	538.85
COD	9.1143	600	4.8	5,932.32
TSS	9.1143	135	4.8	1,334.77
TDS	9.1143	680	4.8	6,723.29
Total Nitrogen	9.1143	9.505	4.8	93.98
Total Ammonia	9.1143	6.45	4.8	63.77
TKN	9.1143	13	4.8	128.53
Total Phosphorous	9.1143	0.39	4.8	3.86
Copper	9.1143	0.0165	4.8	0.16
Turbidity (NTU)	9.1143	47	4.8	464.70
Cyanide, total (mg/L)	9.1143	0.00295	4.8	0.03
Sulfates (mg/L)	9.1143	89	4.8	879.96
Nitrate (mg/L)	9.1143	0.105	4.8	1.04
Phosphate, Ortho (mg/L)	9.1143	0.31	4.8	3.07
Sodium	9.1143	9	4.8	88.98
Barium	9.1143	0.2	4.8	1.98
Lead	9.1143	0.0075	4.8	0.07
Calcium	9.1143	50	4.8	494.36
Chloride (mg/L)	9.1143	22.5	4.8	222.46
Antimony (mg/L)	9.1143	9.5	4.8	93.928
Arsenic (mg/L)	9.1143	0.0015	4.8	0.015
Selenium (mg/L)	9.1143	0.1	4.8	0.989
Zinc (mg/L)	9.1143	0.09	4.8	0.89
Total Petroleum Hydrocarbons (TPH) (mg/L)	9.1143	3.1	4.8	30.650
Ethylbenzene	9.1143	<5.6	4.8	0.000
MBAS (mg/L)	9.1143	5.5	4.8	54.380
Specific conductance (mg/L)	9.1143	705	4.8	6,970.47
Toluene - d8 (mg/L)	9.1143	49.5	4.8	489.416
Dibromofluoromethane (mg/L)	9.1143	50	4.8	494.360

Annual Runoff	9.1143
Annual Rainfall	10.66
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	100%
Runoff Factor	0.95

NA: Not Analyzed

Pollutant Loading Estimate
 ADOT Phoenix MS4
 2010 Reporting Period

Annual Miscellaneous Pollutant Loading: Phoenix MS4-Summer (7/21/10)				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Summer Event Load (lbs)
Sulfates	0.47025	69	3.7	27.13
Phosphate, Ortho	0.47025	46	3.7	18.09
Total Amonia	0.47025	2.6	3.7	NA
Sodium (mg/L)	0.47025	85	3.7	33.42
Calcium (mg/L)	0.47025	64	3.7	25.17
Chloride (mg/L)	0.47025	130	3.7	51.12
MBAS	0.47025	1.1	3.7	0.43

Summer Event Runoff	0.47025
Summer Event Rainfall	0.55
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	100%
Runoff Factor	0.95

Pollutant Loading Estimate
 ADOT Phoenix MS4
 2010 Reporting Period

Annual Miscellaneous Pollutant Loading: Phoenix MS4-Winter (3/1/10)				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Winter Event Load (lbs)
Sulfates	0.23	7.6	3.7	1.46
Phosphate, Ortho	0.23	0.48	3.7	0.09
Total Amonia	0.23	0.48	3.7	NA
Sodium (mg/L)	0.23	1.3	3.7	0.25
Calcium (mg/L)	0.23	150	3.7	28.85
Chloride (mg/L)	0.23	6.9	3.7	1.33
Winter Event Rainfall	0			
Percent of Rainfall Runoff	0.9			
Percent of Site Impervious	100%			
Runoff Factor	0.95			

Pollutant Loading Estimate
 ADOT Phoenix MS4
 2010 Reporting Period

Annual Miscellaneous Pollutant Loading: Phoenix MS4- Mean				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Annual Load (lbs)
Sulfates	12.02985	38.3	3.7	385.27
Phosphate, Ortho	12.02985	23.24	3.7	233.78
Total Amonia	12.02985	1.54	3.7	15.49
Sodium (mg/L)	12.02985	43.15	3.7	434.06
Calcium (mg/L)	12.02985	107	3.7	1,076.35
Chloride (mg/L)	12.02985	68045	3.7	684,489.19
MBAS	12.02985	0.55	3.7	5.53
Annual Runoff	12.02985			
Annual Rainfall	14.07			
Percent of Rainfall Runoff	0.9			
Percent of Site Impervious	100%			
Runoff Factor	0.95			

Pollutant Loading Estimate
 ADOT Tucson MS4
 2010 Reporting Period

Annual Miscellaneous Pollutant Loading: Tucson MS4- Summer (6/30/09)				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Summer Event Load (lbs)
Sulfates	0.342	68	4.8	25.23
Total Amonia	0.342	6.7	4.8	2.49
Sodium (mg/L)	0.342	18	4.8	6.68
Calcium (mg/L)	0.342	100	4.8	37.10
Chloride (mg/L)	0.342	19	4.8	7.05
Selenium (mg/L)	0.342	0.02	4.8	0.01
MBAS	0.342	11	4.8	4.08
Summer Event Runoff	0.342			
Summer Event Rainfall	0.4			
Percent of Rainfall Runoff	0.9			
Percent of Site Impervious	100%			
Runoff Factor	0.95			

Pollutant Loading Estimate
 ADOT Tucson MS4
 2010 Reporting Period

Annual Miscellaneous Pollutant Loading: Tucson MS4- Winter (4/23/10)				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Winter Event Load (lbs)
Phosphate, Ortho	0.11115	310	4.8	37.38
Sodium (mg/L)	0.11115	18	4.8	2.17
Calcium (mg/L)	0.11115	150	4.8	18.09
Chloride (mg/L)	0.11115	14	4.8	1.69
Oil & Grease Hexane	0.11115	9.2	4.8	1.11
Summer Event Runoff	0.11115			
Summer Event Rainfall	0.13			
Percent of Rainfall Runoff	0.9			
Percent of Site Impervious	100%			
Runoff Factor	0.95			

Pollutant Loading Estimate
 ADOT Tucson MS4
 2010 Reporting Period

Annual Miscellaneous Pollutant Loading: Tucson MS4- Mean				
Pollutant	Annual Runoff	Pollutant Concentration	Area	Annual Load (lbs)
Sulfates	9.1143	189	4.8	1,868.68
Total Amonia	9.1143	3.35	4.8	33.12
Sodium (mg/L)	9.1143	18	4.8	177.97
Calcium (mg/L)	9.1143	125	4.8	1,235.90
Chloride (mg/L)	9.1143	16.5	4.8	163.14
Selenium (mg/L)	9.1143	0.01	4.8	0.10
MBAS	9.1143	5.5	4.8	54.38
Phosphate, Ortho	9.1143	155	4.8	1,532.51
Oil & Grease Hexane	9.1143	4.6	4.8	45.48109
Annual Runoff	9.1143			
Annual Rainfall	10.66			
Percent of Rainfall Runoff	0.9			
Percent of Site Impervious	100%			
Runoff Factor	0.95			

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Pollutant Loading: Phoenix MS4-Summer Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	17.50	0.00
TPH (grab)	0.226	0	NS	17.50	0.00
E. Coli (grab)	103	0	NS	17.50	0.00
BOD	0.226	0	NS	17.50	0.00
COD	0.226	0	NS	17.50	0.00
TSS	0.226	0	NS	17.50	0.00
TDS	0.226	0	NS	17.50	0.00
Total Nitrogen	0.226	0	NS	17.50	0.00
TKN	0.226	0	NS	17.50	0.00
Total Phosphorous	0.226	0	NS	17.50	0.00
Metals - varies	0.226	0	NS	17.50	0.00
Drainage Area (acres)	17.5				
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Miscellaneous Pollutant Loading Estimate
ADOT Tucson MS4
2011/2012 Reporting Period

Pollutant Loading: Tucson MS4-Summer Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	4.80	0.00
TPH (grab)	0.226	0	NS	4.80	0.00
E. Coli (grab)	103	0	NS	4.80	0.00
BOD	0.226	0	NS	4.80	0.00
COD	0.226	0	NS	4.80	0.00
TSS	0.226	0	NS	4.80	0.00
TDS	0.226	0	NS	4.80	0.00
Total Nitrogen	0.226	0	NS	4.80	0.00
TKN	0.226	0	NS	4.80	0.00
Total Phosphorous	0.226	0	NS	4.80	0.00
Metals - varies	0.226	0	NS	4.80	0.00
Drainage Area (acres)	4.8				
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Miscellaneous Pollutant Loading Estimate
ADOT Tucson MS4
2011/2012 Reporting Period

Pollutant Loading: Tucson MS4-Winter Season (Partial sample collected 11/7/11)					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.2052	9.9	4.80	2.20
TPH (grab)	0.226	0.2052	1.8	4.80	0.40
E. Coli (grab)	103	0.2052	ND	4.80	0.00
BOD	0.226	0.2052	NS	4.80	0.00
COD	0.226	0.2052	NS	4.80	0.00
TSS	0.226	0.2052	NS	4.80	0.00
TDS	0.226	0.2052	NS	4.80	0.00
Total Nitrogen	0.226	0.2052	NS	4.80	0.00
TKN	0.226	0.2052	NS	4.80	0.00
Total Phosphorous	0.226	0.2052	NS	4.80	0.00
Metals - varies	0.226	0.2052	NS	4.80	0.00
Drainage Area (acres)	4.8				
Winter Runoff	0.2052				
Winter Rainfall	0.24				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

Note - billion colonies

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

NS = No Sample; ND = Non Detect

Miscellaneous Pollutant Loading Estimate
ADOT Tucson MS4
2011/2012 Reporting Period

Annual Pollutant Loading: Tucson MS4- Event Mean Concentration					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	EMC (mg/L)	Area (acres)	Pollutant (lbs)
BOD	0.226	0.2052	NS	4.80	0.00
COD	0.226	0.2052	NS	4.80	0.00
TSS	0.226	0.2052	NS	4.80	0.00
TDS	0.226	0.2052	NS	4.80	0.00
Total Nitrogen	0.226	0.2052	NS	4.80	0.00
TKN	0.226	0.2052	NS	4.80	0.00
Total Phosphorous	0.226	0.2052	NS	4.80	0.00
Metals - varies	0.226	0.2052	NS	4.80	0.00
Drainage Area (acres)	4.8				
Winter Runoff	0.2052				
Winter Rainfall	0.24				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

Note: Event Mean Concentration (EMC) is the pollutant concentration of flow-weighted sampling (multiple aliquots) collected during the course of a storm.

No flow weighted composite samples collected/analyed due to equipment issues

NS = No Sample

Miscellaneous Pollutant Loading Estimate
ADOT Phoenix MS4
2011/2012 Reporting Period

Pollutant Loading: Phoenix MS4-Winter Season (Partial sample collected 11/5/11)							
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)		
Oil & Grease (grab)	0.226	0.2052	7.3	17.50	5.92		
TPH (grab)	0.226	0.2052	0.29	17.50	0.24		
E. Coli (grab)	103	0.2052	170	17.50	62,878.41		
BOD	0.226	0.2052	NS	17.50	0.00		
COD	0.226	0.2052	NS	17.50	0.00		
TSS	0.226	0.2052	NS	17.50	0.00		
TDS	0.226	0.2052	NS	17.50	0.00		
Total Nitrogen	0.226	0.2052	NS	17.50	0.00		
TKN	0.226	0.2052	NS	17.50	0.00		
Total Phosphorous	0.226	0.2052	NS	17.50	0.00		
Metals - varies	0.226	0.2052	NS	17.50	0.00		
Simple Method Pollutant Calculation: L=0.226*R*C*A Simple Method Bacteria Calculation: L=103*R*C*A							
						Drainage Area (acres)	17.5
						Winter Runoff	0.2052
						Winter Rainfall	0.24
						Percent of Rainfall Runoff	0.9
						Percent of Site Impervious	0.95
Runoff Factor	0.905						
NS = No Sample							

Note - billion colonies

Miscellaneous Pollutant Loading Estimate
ADOT Phoenix MS4
2011/2012 Reporting Period

Annual Pollutant Loading: Phoenix MS4- Event Mean Concentration					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	EMC (mg/L)	Area (acres)	Pollutant (lbs)
BOD	0.226	0.2052	NS	17.50	0.00
COD	0.226	0.2052	NS	17.50	0.00
TSS	0.226	0.2052	NS	17.50	0.00
TDS	0.226	0.2052	NS	17.50	0.00
Total Nitrogen	0.226	0.2052	NS	17.50	0.00
TKN	0.226	0.2052	NS	17.50	0.00
Total Phosphorous	0.226	0.2052	NS	17.50	0.00
Metals - varies	0.226	0.2052	NS	17.50	0.00
Drainage Area (acres)	17.5	Note: Event Mean Concentration (EMC) is the pollutant concentration of flow-weighted sampling (multiple aliquots) collected during the course of a storm. No flow weighted composite samples collected/analyed due to equipment issues			
Winter Runoff	0.2052				
Winter Rainfall	0.24				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Pollutant Loading: Nogales MS4-Summer Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	59.50	0.00
TPH (grab)	0.226	0	NS	59.50	0.00
E. Coli (grab)	103	0	NS	59.50	0.00
BOD	0.226	0	NS	59.50	0.00
COD	0.226	0	NS	59.50	0.00
TSS	0.226	0	NS	59.50	0.00
TDS	0.226	0	NS	59.50	0.00
Total Nitrogen	0.226	0	NS	59.50	0.00
TKN	0.226	0	NS	59.50	0.00
Total Phosphorous	0.226	0	NS	59.50	0.00
Metals - varies	0.226	0	NS	59.50	0.00

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Drainage Area (acres)	59.5
Winter Runoff	0
Winter Rainfall	0
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$

Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Pollutant Loading: Nogales MS4-Winter Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	59.50	0.00
TPH (grab)	0.226	0	NS	59.50	0.00
E. Coli (grab)	103	0	NS	59.50	0.00
BOD	0.226	0	NS	59.50	0.00
COD	0.226	0	NS	59.50	0.00
TSS	0.226	0	NS	59.50	0.00
TDS	0.226	0	NS	59.50	0.00
Total Nitrogen	0.226	0	NS	59.50	0.00
TKN	0.226	0	NS	59.50	0.00
Total Phosphorous	0.226	0	NS	59.50	0.00
Metals - varies	0.226	0	NS	59.50	0.00

Note - billion colonies

Drainage Area (acres)	59.5
Winter Runoff	0
Winter Rainfall	0
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$

Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Annual Pollutant Loading: Nogales MS4- Event Mean Concentration					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	EMC (mg/L)	Area (acres)	Pollutant (lbs)
BOD	0.226	0.2052	NS	59.50	0.00
COD	0.226	0.2052	NS	59.50	0.00
TSS	0.226	0.2052	NS	59.50	0.00
TDS	0.226	0.2052	NS	59.50	0.00
Total Nitrogen	0.226	0.2052	NS	59.50	0.00
TKN	0.226	0.2052	NS	59.50	0.00
Total Phosphorous	0.226	0.2052	NS	59.50	0.00
Metals - varies	0.226	0.2052	NS	59.50	0.00
Drainage Area (acres)	59.5				
Winter Runoff	0.2052				
Winter Rainfall	0.24				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

Note: Event Mean Concentration (EMC) is the pollutant concentration of flow-weighted sampling (multiple aliquots) collected during the course of a storm.
 No flow weighted composite samples collected/analyed due to equipment issues

NS = No Sample

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Pollutant Loading: Sedona MS4-Summer Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	7.35	0.00
TPH (grab)	0.226	0	NS	7.35	0.00
E. Coli (grab)	103	0	NS	7.35	0.00
BOD	0.226	0	NS	7.35	0.00
COD	0.226	0	NS	7.35	0.00
TSS	0.226	0	NS	7.35	0.00
TDS	0.226	0	NS	7.35	0.00
Total Nitrogen	0.226	0	NS	7.35	0.00
TKN	0.226	0	NS	7.35	0.00
Total Phosphorous	0.226	0	NS	7.35	0.00
Metals - varies	0.226	0	NS	7.35	0.00
Drainage Area (acres)	7.35				
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Percent of Site Impervious	0.95
Runoff Factor	0.905

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Pollutant Loading: Sedona MS4-Winter Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	7.35	0.00
TPH (grab)	0.226	0	NS	7.35	0.00
E. Coli (grab)	103	0	NS	7.35	0.00
BOD	0.226	0	NS	7.35	0.00
COD	0.226	0	NS	7.35	0.00
TSS	0.226	0	NS	7.35	0.00
TDS	0.226	0	NS	7.35	0.00
Total Nitrogen	0.226	0	NS	7.35	0.00
TKN	0.226	0	NS	7.35	0.00
Total Phosphorous	0.226	0	NS	7.35	0.00
Metals - varies	0.226	0	NS	7.35	0.00
Drainage Area (acres)	7.35				
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Note - billion colonies

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Annual Pollutant Loading: Sedona MS4- Event Mean Concentration					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	EMC (mg/L)	Area (acres)	Pollutant (lbs)
BOD	0.226	0	NS	7.35	0.00
COD	0.226	0	NS	7.35	0.00
TSS	0.226	0	NS	7.35	0.00
TDS	0.226	0	NS	7.35	0.00
Total Nitrogen	0.226	0	NS	7.35	0.00
TKN	0.226	0	NS	7.35	0.00
Total Phosphorous	0.226	0	NS	7.35	0.00
Metals - varies	0.226	0	NS	7.35	0.00
Drainage Area (acres)	7.35	Note: Event Mean Concentration (EMC) is the pollutant concentration of flow-weighted sampling (multiple aliquots) collected during the course of a storm. No flow weighted composite samples collected/analyed due to equipment issues			
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Pollutant Loading: Flagstaff MS4-Summer Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	20.00	0.00
TPH (grab)	0.226	0	NS	20.00	0.00
E. Coli (grab)	103	0	NS	20.00	0.00
BOD	0.226	0	NS	20.00	0.00
COD	0.226	0	NS	20.00	0.00
TSS	0.226	0	NS	20.00	0.00
TDS	0.226	0	NS	20.00	0.00
Total Nitrogen	0.226	0	NS	20.00	0.00
TKN	0.226	0	NS	20.00	0.00
Total Phosphorous	0.226	0	NS	20.00	0.00
Metals - varies	0.226	0	NS	20.00	0.00
Drainage Area (acres)	20				
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$

Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Pollutant Loading: Flagstaff MS4-Winter Season (No Sample collected due to equipment failure)					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0	NS	20.00	0.00
TPH (grab)	0.226	0	NS	20.00	0.00
E. Coli (grab)	103	0	NS	20.00	0.00
BOD	0.226	0	NS	20.00	0.00
COD	0.226	0	NS	20.00	0.00
TSS	0.226	0	NS	20.00	0.00
TDS	0.226	0	NS	20.00	0.00
Total Nitrogen	0.226	0	NS	20.00	0.00
TKN	0.226	0	NS	20.00	0.00
Total Phosphorous	0.226	0	NS	20.00	0.00
Metals - varies	0.226	0	NS	20.00	0.00

Note - billion colonies

Drainage Area (acres)	20
Winter Runoff	0
Winter Rainfall	0
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

NS = No Sample

Miscellaneous Pollutant Loading Estimate
 ADOT Phoenix MS4
 2011/2012 Reporting Period

Annual Pollutant Loading: Flagstaff MS4- Event Mean Concentration					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	EMC (mg/L)	Area (acres)	Pollutant (lbs)
BOD	0.226	0	NS	20.00	0.00
COD	0.226	0	NS	20.00	0.00
TSS	0.226	0	NS	20.00	0.00
TDS	0.226	0	NS	20.00	0.00
Total Nitrogen	0.226	0	NS	20.00	0.00
TKN	0.226	0	NS	20.00	0.00
Total Phosphorous	0.226	0	NS	20.00	0.00
Metals - varies	0.226	0	NS	20.00	0.00
Drainage Area (acres)	20	Note: Event Mean Concentration (EMC) is the pollutant concentration of flow-weighted sampling (multiple aliquots) collected during the course of a storm. No flow weighted composite samples collected/analyed due to equipment issues			
Winter Runoff	0				
Winter Rainfall	0				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

NS = No Sample

Pollutant Loading Estimate
 ADOT Phoenix MS4 Monitoring Station
 2012/2013 Reporting Period (partial)

Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Pollutant Loading: Phoenix MS4-Winter Season - Sample Collected 12/14/12					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.62415	5	17.50	12.34
TPH (grab)	0.226	0.62415	5	17.50	12.34
E. Coli (grab)	103	0.62415	2400	17.50	2,700,072.90
BOD	0.226	0.62415	68	17.50	167.86
COD	0.226	0.62415	420	17.50	1,036.78
TSS	0.226	0.62415	53	17.50	130.83
TDS	0.226	0.62415	310	17.50	765.24
Total Nitrogen	0.226	0.62415	2.84	17.50	7.01
TKN	0.226	0.62415	9.1	17.50	22.46
Total Phosphorous	0.226	0.62415	0.92	17.50	2.27
Metals - cadmium, copper, lead, zinc	0.226	0.62415	0.116	17.50	0.29
Drainage Area (acres)	17.5				
Winter Runoff	0.62415				
Winter Rainfall	0.73				
Percent of Rainfall Runoff	0.9				

Note - billion colonies

Note: E. Coli pollutant loading result is in billion colonies
 Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Pollutant Loading Estimate
 ADOT Tucson MS4 Monitoring Station
 2012/2013 Reporting Period (partial)

Pollutant Loading: Tucson MS4-Winter Season - Sample collected 12/13/12					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.31635	5	4.80	1.72
TPH (grab)	0.226	0.31635	5	4.80	1.72
E. Coli (grab)	103	0.31635	300	4.80	46,921.03
BOD	0.226	0.31635	5.8	4.80	1.99
COD	0.226	0.31635	95	4.80	32.60
TSS	0.226	0.31635	69	4.80	23.68
TDS	0.226	0.31635	66	4.80	22.65
Total Nitrogen	0.226	0.31635	2.84	4.80	0.97
TKN	0.226	0.31635	1.6	4.80	0.55
Total Phosphorous	0.226	0.31635	0.18	4.80	0.06
Metals - cadmmium, copper, lead, zinc	0.226	0.31635	0.226	4.80	0.08
Drainage Area (acres)	4.8				
Winter Runoff	0.31635				
Winter Rainfall	0.37				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

Note - billion colonies

Note: E. Coli pollutant loading result is in billion colonies
 Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

NS = No Sample; ND = Non Detect

Pollutant Loading Estimate
ADOT Nogales MS4 Monitoring Station
2012/2013 Reporting Period (partial)

Pollutant Loading: Nogales MS4-Winter Season - Sample Collected 12/14/12					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.29925	10	59.50	40.24
TPH (grab)	0.226	0.29925	5.7	59.50	22.94
E. Coli (grab)	103	0.29925	9000	59.50	16,505,582.63
BOD	0.226	0.29925	7.6	59.50	30.58
COD	0.226	0.29925	47	59.50	189.13
TSS	0.226	0.29925	120	59.50	482.88
TDS	0.226	0.29925	78	59.50	313.87
Total Nitrogen	0.226	0.29925	2.97	59.50	11.95
TKN	0.226	0.29925	1	59.50	4.02
Total Phosphorous	0.226	0.29925	0.17	59.50	0.68
Metals - cadmium, copper, lead, zin	0.226	0.29925	0.128	59.50	0.52
Drainage Area (acres)	59.5				
Winter Runoff	0.29925				
Winter Rainfall	0.35				
Percent of Rainfall Runoff	0.9				
Percent of Site Impervious	0.95				
Runoff Factor	0.905				

Note - billion colonies

Note: E. Coli pollutant loading result is in billion colonies
Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

Pollutant Loading Estimate
ADOT Sedona MS4 Monitoring Station
2012/2013 Reporting Period (partial)

Pollutant Loading: Sedona MS4-Winter Season - Sampled 12/14/12					
Pollutant	Unit Conversion Factor	Runoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.19665	5.7	7.35	1.86
TPH (grab)	0.226	0.19665	1	7.35	0.33
E. Coli (grab)	103	0.19665	9000	7.35	1,339,864.94
BOD	0.226	0.19665	7.6	7.35	2.48
COD	0.226	0.19665	47	7.35	15.35
TSS	0.226	0.19665	120	7.35	39.20
TDS	0.226	0.19665	78	7.35	25.48
Total Nitrogen	0.226	0.19665	0.46	7.35	0.15
TKN	0.226	0.19665	1	7.35	0.33
Total Phosphorous	0.226	0.19665	0.17	7.35	0.06
Metals - cadmium, copper, lead, zinc	0.226	0.19665	0.128	7.35	0.04

Note - billion colonies

Drainage Area (acres)	7.35
Winter Runoff	0.19665
Winter Rainfall	0.23
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

Note: E. Coli pollutant loading result is in billion colonies
Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

NS = No Sample

Miscellaneous Pollutant Loading Estimate
 ADOT Flagstaff MS4 Monitoring Station
 2012/2013 Reporting Period (partial)

Pollutant Loading: Flagstaff MS4-Winter Season - Sampled 12/14/12					
Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.36765	5	20.00	8.31
TPH (grab)	0.226	0.36765	5	20.00	8.31
E. Coli (grab)	103	0.36765	2400	20.00	1,817,661.60
BOD	0.226	0.36765	68	20.00	113.00
COD	0.226	0.36765	420	20.00	697.95
TSS	0.226	0.36765	53	20.00	88.07
TDS	0.226	0.36765	310	20.00	515.15
Total Nitrogen	0.226	0.36765	2.84	20.00	4.72
TKN	0.226	0.36765	9.1	20.00	15.12
Total Phosphorous	0.226	0.36765	0.92	20.00	1.53
Metals - cadmium, copper, lead, zin	0.226	0.36765	0.3534	20.00	0.59

Note - billion colonies

Drainage Area (acres)	20
Winter Runoff	0.36765
Winter Rainfall	0.43
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

Note: E. Coli pollutant loading result is in billion colonies
 Simple Method Pollutant Calculation: $L=0.226 \cdot R \cdot C \cdot A$
 Simple Method Bacteria Calculation: $L=103 \cdot R \cdot C \cdot A$

NS = No Sample

Appendix E

Lab Reports

LABORATORY REPORT

Prepared For: Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project: ADOT

Sampled: 08/22/12
Received: 08/23/12
Issued: 08/31/12 18:09

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PVH1801-01
PVH1801-02

CLIENT ID

Tucson Yard G
Trip Blank

MATRIX

Water
Water

SAMPLE RECEIPT: Samples were received intact, at 0°C, on ice and with chain of custody documentation.

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.

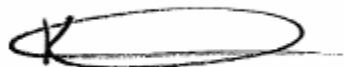
PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:



TestAmerica Phoenix

Kylie Emily
Project Manager

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1801-01 (Tucson Yard G - Water)								
Reporting Units: mg/l								
N-Hexane Extractable (HEM)	EPA 1664A	12H1371	5.0	11	1	8/30/2012	8/30/2012	
N-Hexane Extractable Silica Gel Treated (SGT)	EPA 1664A SGT	12H1371	10	ND	1	8/30/2012	8/30/2012	

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVH1801 <Page 2 of 12>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1801-01 (Tucson Yard G - Water)								
Reporting Units: ug/l								
Benzene	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	
Ethylbenzene	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	
Toluene	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	
Xylenes, Total	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	T2
<i>Surrogate: Dibromofluoromethane (70-130%)</i>				103 %				
<i>Surrogate: Toluene-d8 (70-130%)</i>				99 %				
<i>Surrogate: 4-Bromofluorobenzene (70-130%)</i>				94 %				
Sample ID: PVH1801-02 (Trip Blank - Water)								
Reporting Units: ug/l								
Benzene	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	
Ethylbenzene	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	
Toluene	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	
Xylenes, Total	EPA 624	12H1185	2.0	ND	1	8/28/2012	8/28/2012	T2
<i>Surrogate: Dibromofluoromethane (70-130%)</i>				100 %				
<i>Surrogate: Toluene-d8 (70-130%)</i>				102 %				
<i>Surrogate: 4-Bromofluorobenzene (70-130%)</i>				93 %				

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Kylie Emily
Project Manager

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PVH1801 <Page 3 of 12>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1801-01 (Tucson Yard G - Water)								
Reporting Units: mg/l								
Cyanide, Total	SM 4500CN-E	12H1298	0.050	ND	1	8/29/2012	8/30/2012	
Sample ID: PVH1801-01 (Tucson Yard G - Water)								
Reporting Units: pH Units								
pH	SM 4500H+	12H1032	1.68	8.57	1	8/23/2012	8/23/2012	H5
Temperature - °C	SM 4500H+	12H1032	NA	19.8	1	8/23/2012	8/23/2012	H5

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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

MICROBIOLOGICALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1801-01 (Tucson Yard G - Water)								
Reporting Units: MPN/100 ml								
E. Coli - MPN	SM 9221F	12H1103	2	300	1	8/23/2012	8/25/2012	H3

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Tucson Yard G (PVH1801-01) - Water					
SM 4500H+	1	08/22/2012 09:00	08/23/2012 10:30	08/23/2012 14:40	08/23/2012 21:24
SM 9221F	0	08/22/2012 09:00	08/23/2012 10:30	08/23/2012 15:30	08/25/2012 16:30

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1371 Extracted: 08/30/12										
Blank Analyzed: 08/30/2012 (12H1371-BLK1)										
N-Hexane Extractable (HEM)	ND	5.0	mg/l							
N-Hexane Extractable Silica Gel Treated (SGT)	ND	10	mg/l							
LCS Analyzed: 08/30/2012 (12H1371-BS1)										
N-Hexane Extractable (HEM)	45.3	5.0	mg/l	40.0		113	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	22.2	10	mg/l	20.0		111	64-132			
LCS Dup Analyzed: 08/30/2012 (12H1371-BSD1)										
N-Hexane Extractable (HEM)	45.0	5.0	mg/l	40.0		112	78-114	0.8	18	
N-Hexane Extractable Silica Gel Treated (SGT)	20.1	10	mg/l	20.0		100	64-132	10	34	
Matrix Spike Analyzed: 08/30/2012 (12H1371-MS1)										
					Source: PVH1733-01					
N-Hexane Extractable (HEM)	47.9	5.0	mg/l	40.0	4.93	107	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	21.5	10	mg/l	20.0	ND	107	64-132			

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PVH1801 <Page 7 of 12>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1185 Extracted: 08/28/12										
Blank Analyzed: 08/28/2012 (12H1185-BLK1)										
Benzene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
Xylenes, Total	ND	2.0	ug/l							T2
Surrogate: Dibromofluoromethane	24.9		ug/l	25.0		99	70-130			
Surrogate: Toluene-d8	24.8		ug/l	25.0		99	70-130			
Surrogate: 4-Bromofluorobenzene	23.4		ug/l	25.0		93	70-130			
LCS Analyzed: 08/28/2012 (12H1185-BS1)										
Benzene	25.2	2.0	ug/l	25.0		101	37-151			
Ethylbenzene	24.6	2.0	ug/l	25.0		98	37-162			
Toluene	26.5	2.0	ug/l	25.0		106	47-150			
Xylenes, Total	50.2	2.0	ug/l	50.0		100	70-130			T2
Surrogate: Dibromofluoromethane	25.8		ug/l	25.0		103	70-130			
Surrogate: Toluene-d8	25.2		ug/l	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	24.1		ug/l	25.0		96	70-130			
LCS Dup Analyzed: 08/28/2012 (12H1185-BSD1)										
Benzene	25.0	2.0	ug/l	25.0		100	37-151	0.8	20	
Ethylbenzene	23.4	2.0	ug/l	25.0		93	37-162	5	20	
Toluene	26.2	2.0	ug/l	25.0		105	47-150	1	20	
Xylenes, Total	48.4	2.0	ug/l	50.0		97	70-130	4	20	T2
Surrogate: Dibromofluoromethane	25.6		ug/l	25.0		102	70-130			
Surrogate: Toluene-d8	25.2		ug/l	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	23.6		ug/l	25.0		94	70-130			
Matrix Spike Analyzed: 08/28/2012 (12H1185-MS1)										
					Source: PVH2005-01					
Benzene	23.7	2.0	ug/l	25.0	ND	95	37-151			
Ethylbenzene	22.8	2.0	ug/l	25.0	ND	91	37-162			
Toluene	24.7	2.0	ug/l	25.0	ND	99	47-150			
Xylenes, Total	47.2	2.0	ug/l	50.0	ND	94	68-131			T2
Surrogate: Dibromofluoromethane	24.4		ug/l	25.0		98	70-130			
Surrogate: Toluene-d8	25.0		ug/l	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	23.3		ug/l	25.0		93	70-130			

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Project Manager

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Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1185 Extracted: 08/28/12										
Matrix Spike Dup Analyzed: 08/28/2012 (12H1185-MSD1)					Source: PVH2005-01					
Benzene	24.4	2.0	ug/l	25.0	ND	98	37-151	3	20	
Ethylbenzene	23.6	2.0	ug/l	25.0	ND	94	37-162	3	20	
Toluene	25.6	2.0	ug/l	25.0	ND	102	47-150	3	20	
Xylenes, Total	48.1	2.0	ug/l	50.0	ND	96	68-131	2	31	T2
Surrogate: Dibromofluoromethane	25.6		ug/l	25.0		102	70-130			
Surrogate: Toluene-d8	25.2		ug/l	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	23.4		ug/l	25.0		94	70-130			

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1032 Extracted: 08/23/12										
Duplicate Analyzed: 08/23/2012 (12H1032-DUP1)										
pH	8.16	1.68	pH Units		8.16			0	10	H5
Duplicate Analyzed: 08/23/2012 (12H1032-DUP2)										
pH	7.38	1.68	pH Units		7.40			0.3	10	H5
Reference Analyzed: 08/23/2012 (12H1032-SRM1)										
pH	7.00	1.68	pH Units	7.00		100	99-101			
Reference Analyzed: 08/23/2012 (12H1032-SRM2)										
pH	7.00	1.68	pH Units	7.00		100	99-101			
Batch: 12H1298 Extracted: 08/29/12										
Blank Analyzed: 08/30/2012 (12H1298-BLK1)										
Cyanide, Total	ND	0.050	mg/l							
LCS Analyzed: 08/30/2012 (12H1298-BS1)										
Cyanide, Total	0.0990	0.050	mg/l	0.100		99	90-110			
LCS Dup Analyzed: 08/30/2012 (12H1298-BSD1)										
Cyanide, Total	0.103	0.050	mg/l	0.100		103	90-110	4	20	
Matrix Spike Analyzed: 08/30/2012 (12H1298-MS1)										
Cyanide, Total	0.105	0.050	mg/l	0.100	ND	105	80-120			
Matrix Spike Dup Analyzed: 08/30/2012 (12H1298-MSD1)										
Cyanide, Total	0.112	0.050	mg/l	0.100	ND	112	80-120	7	20	

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Project Manager

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PVH1801 <Page 10 of 12>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

DATA QUALIFIERS AND DEFINITIONS

H3	Sample was received and analyzed past holding time.
H5	Field parameter with a holding time of 15 minutes.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Kylie Emily
Project Manager

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PVH1801 <Page 11 of 12>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: ADOT

Report Number: PVH1801

Sampled: 08/22/12

Received: 08/23/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1664A SGT	Water		X
EPA 1664A	Water		X
EPA 624	Water	X	X
SM 4500CN-E	Water		X
SM 4500H+	Water		X
SM 9221F	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVH1801 <Page 12 of 12>

CHAIN OF CUSTODY FORM

Page 1 of 1[illegible]

5



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Monday December 24, 2012

Report Number: L611716


Samples Received: 12/15/12

Client Project: 308032.19

Description: ADOT Stormwater - Superior Yard

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 24, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater - Superior Yard
Sample ID : SUPY121412
Collected By : RS
Collection Date : 12/14/12 09:35

ESC Sample # : L611716-01

Site ID : SUP. YARD

Project # : 308032.19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Hardness, Total (mg/L as CaCO3)	52.	30.	mg/l	130.1	12/19/12	1
Dissolved Solids	78.	10.	mg/l	2540C	12/24/12	1
Suspended Solids	84.	1.0	mg/l	2540D	12/21/12	1
TPH - Oil & Grease	BDL	11.	mg/l	1664A	12/21/12	1
Copper	0.17	0.020	mg/l	200.7	12/22/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/24/12 12:47 Printed: 12/24/12 12:47

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L611716-01	WG629417	SAMP	TPH - Oil & Grease	R2490321	L3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
L3	(ESC) Sample reanalysis and/or spiking could not be performed due to lack of additional volume.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/24/12 at 12:47:54

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L611716-01 Account: ENGENVPAZ Received: 12/15/12 10:00 Due Date: 12/21/12 00:00 RPT Date: 12/24/12 12:47



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140

Phoenix, AZ 85020

Quality Assurance Report
Level II

L611716

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 24, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Hardness, Total (mg/L as CaCO ₃)	< 30	mg/l			WG628801	12/19/12 15:27
Suspended Solids	< 1	mg/l			WG628812	12/21/12 09:10
TPH - Oil & Grease	< 5	mg/l			WG629417	12/21/12 16:47
Copper	< .02	mg/l			WG629335	12/22/12 00:04
Dissolved Solids	< 10	mg/l			WG629022	12/24/12 11:16

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Hardness, Total (mg/L as CaCO ₃)	mg/l	180.	180.	0	20	L610967-01	WG628801
Hardness, Total (mg/L as CaCO ₃)	mg/l	63.0	60.0	4.88	20	L610756-01	WG628801
Suspended Solids	mg/l	52.0	53.0	1.90	5	L611431-01	WG628812
Copper	mg/l	0	0.00210	NA	20	L611556-01	WG629335
Dissolved Solids	mg/l	330.	338.	3.61	5	L611707-05	WG629022

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Sample Result			
Hardness, Total (mg/L as CaCO ₃)	mg/l	200	190.	95.0	85-115	WG628801
Suspended Solids	mg/l	773	768.	99.4	85-115	WG628812
TPH - Oil & Grease	mg/l	20	19.3	96.5	78-114	WG629417
Copper	mg/l	1	0.984	98.4	85-115	WG629335
Dissolved Solids	mg/l	8800	8670	98.5	85-115	WG629022

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hardness, Total (mg/L as CaCO ₃)	mg/l	186.	190.	93.0	85-115	2.13	20	WG628801
Suspended Solids	mg/l	768.	768.	99.0	85-115	0	5	WG628812
TPH - Oil & Grease	mg/l	20.5	19.3	102.	78-114	6.03	18	WG629417
Dissolved Solids	mg/l	8580	8670	98.0	85-115	1.07	5	WG629022

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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December 24, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Hardness, Total (mg/L as CaCO ₃)	mg/l	290.	200.	150	60.0*	80-120	L611257-07	WG628801
Copper	mg/l	0.968	0.00210	1	96.6	75-125	L611556-01	WG629335

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Hardness, Total (mg/L as CaCO ₃)	mg/l	292.	290.	61.3*	80-120	0.687	20	L611257-07	WG628801
Copper	mg/l	0.998	0.968	99.6	75-125	3.05	20	L611556-01	WG629335

Batch number /Run number / Sample number cross reference

WG628801: R2485599: L611716-01
WG628812: R2488918: L611716-01
WG629417: R2490321: L611716-01
WG629335: R2490892: L611716-01
WG629022: R2491417: L611716-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Est. 1970

December 24, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address EEC 7878 N. 16th St., Suite 140 PHOENIX, AZ 85020				Alternate Billing Report to: E-mail to:				Analysis/Container/Preservative						Chain of Custody Page <u>1</u> of <u>1</u> F057 Prepared by: ENVIRONMENTAL SCIENCE CORP 12065 Lebanon Road Mt. Juliet TN 37122 Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859	
								TDS 250ml HDPE No Pres TSS 1L HDPE No Pres TPHOGHEX 1L Clear HCL Total Cu 500ml HDPE HNO3 Hardness							
Project Description: Superior FUEL YARD				City/State Collected:				CoCode (lab use only) ENGENVPAZ Template/Prelogin Shipped Via: Remarks/contaminant Sample # (lab only)							
PHONE: 602-248-7702		Client Project No.		Lab Project #		P.O.#									
FAX: 602-248-7851															
Collected by: Rick Salinas		Site/Facility ID#		Date Results Needed		No									
Collected by (signature):		<input checked="" type="checkbox"/> Rush? (Lab MUST be Notified) _____ Next Day.....100% _____ Two Day.....50% _____ Three Day.....25%		Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes		of									
Packed on Ice N ___ Y ___															
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs									
						4									

Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other _____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Relinquisher by: (Signature)	Date: 12.14.12	Time: 2:14	Received by: (Signature)	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Other <input type="checkbox"/>		Condition (lab use only) 2
Relinquisher by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7°C	Bottles Received: 4	COCSI
Relinquisher by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/15/12	Time: 1000	
				pH Checked: 22		NCF: X



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Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Monday December 24, 2012

Report Number: L611713


Samples Received: 12/15/12

Client Project: 308032.19

Description: ADOT Stormwater - Superior Fuel

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 24, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater - Superior Fuel
Sample ID : SUPF121412
Collected By : RS
Collection Date : 12/14/12 10:15

ESC Sample # : L611713-01

Site ID : SUP. FUEL

Project # : 308032.19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Hardness, Total (mg/L as CaCO3)	160	30.	mg/l	130.1	12/19/12	1
Dissolved Solids	380	10.	mg/l	2540C	12/24/12	1
Suspended Solids	150	1.0	mg/l	2540D	12/21/12	1
TPH - Oil & Grease	BDL	6.7	mg/l	1664A	12/21/12	1
Copper	0.18	0.020	mg/l	200.7	12/22/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/24/12 12:47 Printed: 12/24/12 12:47

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L611713-01	WG629417	SAMP	TPH - Oil & Grease	R2490321	L3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
L3	(ESC) Sample reanalysis and/or spiking could not be performed due to lack of additional volume.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/24/12 at 12:47:58

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L611713-01 Account: ENGENVPAZ Received: 12/15/12 10:00 Due Date: 12/21/12 00:00 RPT Date: 12/24/12 12:47



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Engineering & Env. Consultants, INC. -AZ
John Burton
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Quality Assurance Report
Level II

L611713

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Tax I.D. 62-0814289

Est. 1970

December 24, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Hardness, Total (mg/L as CaCO ₃)	< 30	mg/l			WG628801	12/19/12 15:27
Suspended Solids	< 1	mg/l			WG628812	12/21/12 09:10
TPH - Oil & Grease	< 5	mg/l			WG629417	12/21/12 16:47
Copper	< .02	mg/l			WG629335	12/22/12 00:04
Dissolved Solids	< 10	mg/l			WG629022	12/24/12 11:16

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Hardness, Total (mg/L as CaCO ₃)	mg/l	180.	180.	0	20	L610967-01	WG628801
Hardness, Total (mg/L as CaCO ₃)	mg/l	63.0	60.0	4.88	20	L610756-01	WG628801
Suspended Solids	mg/l	52.0	53.0	1.90	5	L611431-01	WG628812
Copper	mg/l	0	0.00210	NA	20	L611556-01	WG629335
Dissolved Solids	mg/l	330.	338.	3.61	5	L611707-05	WG629022

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Sample Result			
Hardness, Total (mg/L as CaCO ₃)	mg/l	200	190.	95.0	85-115	WG628801
Suspended Solids	mg/l	773	768.	99.4	85-115	WG628812
TPH - Oil & Grease	mg/l	20	19.3	96.5	78-114	WG629417
Copper	mg/l	1	0.984	98.4	85-115	WG629335
Dissolved Solids	mg/l	8800	8670	98.5	85-115	WG629022

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hardness, Total (mg/L as CaCO ₃)	mg/l	186.	190.	93.0	85-115	2.13	20	WG628801
Suspended Solids	mg/l	768.	768.	99.0	85-115	0	5	WG628812
TPH - Oil & Grease	mg/l	20.5	19.3	102.	78-114	6.03	18	WG629417
Dissolved Solids	mg/l	8580	8670	98.0	85-115	1.07	5	WG629022

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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December 24, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Hardness, Total (mg/L as CaCO ₃)	mg/l	290.	200.	150	60.0*	80-120	L611257-07	WG628801
Copper	mg/l	0.968	0.00210	1	96.6	75-125	L611556-01	WG629335

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Hardness, Total (mg/L as CaCO ₃)	mg/l	292.	290.	61.3*	80-120	0.687	20	L611257-07	WG628801
Copper	mg/l	0.998	0.968	99.6	75-125	3.05	20	L611556-01	WG629335

Batch number /Run number / Sample number cross reference

WG628801: R2485599: L611713-01
WG628812: R2488918: L611713-01
WG629417: R2490321: L611713-01
WG629335: R2490892: L611713-01
WG629022: R2491417: L611713-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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December 24, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

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Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Est. 1970

John Burton
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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Wednesday February 06, 2013

Report Number: L617505

Samples Received: 01/29/13

Client Project: 308032.20

Description: ADOT Stormwater - Sedona

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Sedona
Sample ID : SED012513-G
Collected By : John Burton
Collection Date : 01/28/13 08:47

ESC Sample # : L617505-01
Site ID : SEDONA SAMPLER
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Coliform, fecal	<9		col/100ml	SM9222D	01/30/13	1
Cyanide	0.016	0.0050	mg/l	4500CN E-2011	02/01/13	1
Oil & Grease (Hexane Extr)	BDL	5.0	mg/l	1664A	02/04/13	1
E.Coli	4.0	4.0	MPN/100ml	9223B-2004	01/30/13	4
Coliform, Total	3500	4.0	MPN/100ml	9223B-2004	01/30/13	4
TPH (GC/FID) High Fraction	0.13	0.10	mg/l	3510C/DRO	02/01/13	1
Surrogate recovery(%) o-Terphenyl	90.6		% Rec.	3510C/DRO	02/01/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/06/13 13:46 Printed: 02/06/13 15:04



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Sedona
Sample ID : SED012513-C
Collected By : John Burton
Collection Date : 01/28/13 09:45

ESC Sample # : L617505-02
Site ID : SEDONA SAMPLER
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	11.	1.0	mg/l	300.0	01/29/13	1
Sulfate	8.0	5.0	mg/l	300.0	01/29/13	1
BOD	BDL	5.00	mg/l	5210 B-2011	02/03/13	1
Chlorine, residual	1.5	1.0	mg/l	4500Cl G-2011	01/31/13	10
COD	84.	10.	mg/l	410.4	01/31/13	1
Hardness, Total (mg/L as CaCO3)	190	30.	mg/l	130.1	02/05/13	1
MBAS	BDL	0.10	mg/l	5540 C-2011	01/30/13	1
Ammonia Nitrogen	0.85	0.10	mg/l	350.1	01/30/13	1
Nitrate-Nitrite	1.7	0.10	mg/l	353.2	02/02/13	1
Phosphate, Ortho	0.21	0.12	mg/l	4500P-E	01/30/13	5
Phosphorus, Total	5.7	0.20	mg/l	365.4	02/01/13	2
Specific Conductance	160		umhos/cm	120.1	02/05/13	1
Kjeldahl Nitrogen, TKN	2.5	0.10	mg/l	351.2	02/01/13	1
Turbidity	1100	0.10	NTU	2130 B-2011	01/31/13	1
Dissolved Solids	180	10.	mg/l	2540 C-2011	02/01/13	1
Suspended Solids	1200	1.0	mg/l	2540 D-2011	02/04/13	1
Mercury	0.00037	0.00020	mg/l	245.1	01/30/13	1
Antimony	BDL	0.020	mg/l	200.7	01/29/13	1
Arsenic	BDL	0.020	mg/l	200.7	01/29/13	1
Barium	0.080	0.0050	mg/l	200.7	01/29/13	1
Beryllium	BDL	0.0020	mg/l	200.7	01/29/13	1
Cadmium	BDL	0.0050	mg/l	200.7	01/29/13	1
Calcium	53.	0.50	mg/l	200.7	01/29/13	1
Chromium	BDL	0.010	mg/l	200.7	01/29/13	1
Copper	0.046	0.020	mg/l	200.7	01/29/13	1
Lead	0.83	0.0050	mg/l	200.7	01/29/13	1
Nickel	BDL	0.020	mg/l	200.7	01/29/13	1
Selenium	BDL	0.020	mg/l	200.7	01/29/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Sedona
Sample ID : SED012513-C
Collected By : John Burton
Collection Date : 01/28/13 09:45

ESC Sample # : L617505-02
Site ID : SEDONA SAMPLER
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Silver	BDL	0.010	mg/l	200.7	01/29/13	1
Sodium	3.5	0.50	mg/l	200.7	01/29/13	1
Zinc	0.36	0.030	mg/l	200.7	01/29/13	1
Benzene	BDL	0.00050	mg/l	602	01/30/13	1
Toluene	BDL	0.0050	mg/l	602	01/30/13	1
Ethylbenzene	BDL	0.00050	mg/l	602	01/30/13	1
Total Xylene	BDL	0.0015	mg/l	602	01/30/13	1
Surrogate Recovery(%)						
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	602	01/30/13	1
Pesticides						
Aldrin	BDL	0.000050	mg/l	8081 A	02/01/13	1
Alpha BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Beta BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Delta BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Gamma BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Chlordane	BDL	0.00050	mg/l	8081 A	02/01/13	1
4,4-DDD	BDL	0.000050	mg/l	8081 A	02/01/13	1
4,4-DDE	BDL	0.000050	mg/l	8081 A	02/01/13	1
4,4-DDT	BDL	0.000050	mg/l	8081 A	02/01/13	1
Dieldrin	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endosulfan I	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endosulfan II	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endosulfan sulfate	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endrin	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endrin aldehyde	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endrin ketone	BDL	0.000050	mg/l	8081 A	02/01/13	1
Hexachlorobenzene	BDL	0.000050	mg/l	8081 A	02/01/13	1
Heptachlor	BDL	0.000050	mg/l	8081 A	02/01/13	1
Heptachlor epoxide	BDL	0.000050	mg/l	8081 A	02/01/13	1
Methoxychlor	BDL	0.000050	mg/l	8081 A	02/01/13	1
Toxaphene	BDL	0.00050	mg/l	8081 A	02/01/13	1
Pesticides Surrogates						
Decachlorobiphenyl	73.1		% Rec.	8081 A	02/01/13	1
Tetrachloro-m-xylene	63.1		% Rec.	8081 A	02/01/13	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Anthracene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzidine	BDL	0.010	mg/l	8270 C	01/31/13	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	01/31/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Sedona

ESC Sample # : L617505-02

Sample ID : SED012513-C

Site ID : SEDONA SAMPLER

Collected By : John Burton
Collection Date : 01/28/13 09:45

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	01/31/13	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	01/31/13	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	01/31/13	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	01/31/13	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	01/31/13	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	01/31/13	1
Chrysene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	01/31/13	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	01/31/13	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	01/31/13	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Fluorene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	01/31/13	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	01/31/13	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	01/31/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Isophorone	BDL	0.010	mg/l	8270 C	01/31/13	1
Naphthalene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	01/31/13	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	01/31/13	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	01/31/13	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	01/31/13	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Pyrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	01/31/13	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	01/31/13	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	01/31/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Sedona
Sample ID : SED012513-C
Collected By : John Burton
Collection Date : 01/28/13 09:45

ESC Sample # : L617505-02
Site ID : SEDONA SAMPLER
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Nitrophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
Phenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
Surrogate Recovery						
2-Fluorophenol	51.7		% Rec.	8270 C	01/31/13	1
Phenol-d5	36.6		% Rec.	8270 C	01/31/13	1
Nitrobenzene-d5	81.2		% Rec.	8270 C	01/31/13	1
2-Fluorobiphenyl	91.2		% Rec.	8270 C	01/31/13	1
2,4,6-Tribromophenol	92.6		% Rec.	8270 C	01/31/13	1
p-Terphenyl-d14	100.		% Rec.	8270 C	01/31/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/06/13 13:46 Printed: 02/06/13 15:04

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L617505-01	WG635165	SAMP	Oil & Grease (Hexane Extr)	R2528138	L3
	WG635274	SAMP	Coliform,fecal	R2529137	T8
	WG635192	SAMP	E.Coli	R2527841	T8
	WG635192	SAMP	Coliform,Total	R2527841	T8
	WG634647	SAMP	Cyanide	R2526177	W
L617505-02	WG634587	SAMP	Phosphate,Ortho	R2526438	T8
	WG634335	SAMP	BOD	R2527239	J4T8
	WG634625	SAMP	Chlorine,residual	R2524278	T8
	WG634555	SAMP	MBAS	R2523377	T8
	WG634449	SAMP	Suspended Solids	R2527521	J3
	WG634793	SAMP	Turbidity	R2525358	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
L3	(ESC) Sample reanalysis and/or spiking could not be performed due to lack of additional volume.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
W	(ESC)-The laboratory analysis was from a sample collected in an improper container

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



YOUR LAB OF CHOICE

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Phoenix, AZ 85020

Quality Assurance Report
Level II

L617505

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Est. 1970

February 06, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Antimony	< .02	mg/l			WG634418	01/29/13 22:13
Arsenic	< .02	mg/l			WG634418	01/29/13 22:13
Barium	< .005	mg/l			WG634418	01/29/13 22:13
Beryllium	< .002	mg/l			WG634418	01/29/13 22:13
Cadmium	< .005	mg/l			WG634418	01/29/13 22:13
Calcium	< .5	mg/l			WG634418	01/29/13 22:13
Chromium	< .01	mg/l			WG634418	01/29/13 22:13
Copper	< .02	mg/l			WG634418	01/29/13 22:13
Lead	< .005	mg/l			WG634418	01/29/13 22:13
Nickel	< .02	mg/l			WG634418	01/29/13 22:13
Selenium	< .02	mg/l			WG634418	01/29/13 22:13
Silver	< .01	mg/l			WG634418	01/29/13 22:13
Sodium	< .5	mg/l			WG634418	01/29/13 22:13
Zinc	< .03	mg/l			WG634418	01/29/13 22:13
Chloride	< 1	mg/l			WG634319	01/29/13 07:44
Sulfate	< 5	mg/l			WG634319	01/29/13 07:44
Benzene	< .0005	mg/l			WG634494	01/29/13 23:45
Ethylbenzene	< .0005	mg/l			WG634494	01/29/13 23:45
Toluene	< .005	mg/l			WG634494	01/29/13 23:45
Total Xylene	< .0015	mg/l			WG634494	01/29/13 23:45
a,a,a-Trifluorotoluene(PID)		% Rec.	101.7	55-122	WG634494	01/29/13 23:45
Ammonia Nitrogen	< .1	mg/l			WG634372	01/30/13 14:44
MBAS	< .1	mg/l			WG634555	01/30/13 15:46
Mercury	< .0002	mg/l			WG634524	01/30/13 20:21
Chlorine, residual	< .1	mg/l			WG634625	01/31/13 13:06
1,2,4-Trichlorobenzene	< .01	mg/l			WG634623	01/31/13 04:53
2,4,6-Trichlorophenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dichlorophenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dimethylphenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dinitrophenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dinitrotoluene	< .01	mg/l			WG634623	01/31/13 04:53
2,6-Dinitrotoluene	< .01	mg/l			WG634623	01/31/13 04:53
2-Chloronaphthalene	< .001	mg/l			WG634623	01/31/13 04:53
2-Chlorophenol	< .01	mg/l			WG634623	01/31/13 04:53
2-Nitrophenol	< .01	mg/l			WG634623	01/31/13 04:53
3,3-Dichlorobenzidine	< .01	mg/l			WG634623	01/31/13 04:53
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG634623	01/31/13 04:53
4-Bromophenyl-phenylether	< .01	mg/l			WG634623	01/31/13 04:53
4-Chloro-3-methylphenol	< .01	mg/l			WG634623	01/31/13 04:53
4-Chlorophenyl-phenylether	< .01	mg/l			WG634623	01/31/13 04:53
4-Nitrophenol	< .01	mg/l			WG634623	01/31/13 04:53
Acenaphthene	< .001	mg/l			WG634623	01/31/13 04:53
Acenaphthylene	< .001	mg/l			WG634623	01/31/13 04:53
Anthracene	< .001	mg/l			WG634623	01/31/13 04:53
Benzidine	< .01	mg/l			WG634623	01/31/13 04:53

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Est. 1970

February 06, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(a)anthracene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(a)pyrene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(b)fluoranthene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(g,h,i)perylene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(k)fluoranthene	< .001	mg/l			WG634623	01/31/13 04:53
Benzylbutyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Bis(2-chloroethoxy)methane	< .01	mg/l			WG634623	01/31/13 04:53
Bis(2-chloroethyl)ether	< .01	mg/l			WG634623	01/31/13 04:53
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG634623	01/31/13 04:53
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Chrysene	< .001	mg/l			WG634623	01/31/13 04:53
Di-n-butyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Di-n-octyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Dibenz(a,h)anthracene	< .001	mg/l			WG634623	01/31/13 04:53
Diethyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Dimethyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Fluoranthene	< .001	mg/l			WG634623	01/31/13 04:53
Fluorene	< .001	mg/l			WG634623	01/31/13 04:53
Hexachloro-1,3-butadiene	< .01	mg/l			WG634623	01/31/13 04:53
Hexachlorobenzene	< .001	mg/l			WG634623	01/31/13 04:53
Hexachlorocyclopentadiene	< .01	mg/l			WG634623	01/31/13 04:53
Hexachloroethane	< .01	mg/l			WG634623	01/31/13 04:53
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG634623	01/31/13 04:53
Isophorone	< .01	mg/l			WG634623	01/31/13 04:53
n-Nitrosodi-n-propylamine	< .01	mg/l			WG634623	01/31/13 04:53
n-Nitrosodimethylamine	< .01	mg/l			WG634623	01/31/13 04:53
n-Nitrosodiphenylamine	< .01	mg/l			WG634623	01/31/13 04:53
Naphthalene	< .001	mg/l			WG634623	01/31/13 04:53
Nitrobenzene	< .01	mg/l			WG634623	01/31/13 04:53
Pentachlorophenol	< .001	mg/l			WG634623	01/31/13 04:53
Phenanthrene	< .001	mg/l			WG634623	01/31/13 04:53
Phenol	< .01	mg/l			WG634623	01/31/13 04:53
Pyrene	< .001	mg/l			WG634623	01/31/13 04:53
2,4,6-Tribromophenol		% Rec.	63.80	16-147	WG634623	01/31/13 04:53
2-Fluorobiphenyl		% Rec.	82.30	29-127	WG634623	01/31/13 04:53
2-Fluorophenol		% Rec.	41.10	10-75	WG634623	01/31/13 04:53
Nitrobenzene-d5		% Rec.	74.10	17-119	WG634623	01/31/13 04:53
Phenol-d5		% Rec.	28.70	10-63	WG634623	01/31/13 04:53
p-Terphenyl-d14		% Rec.	94.10	40-174	WG634623	01/31/13 04:53
Turbidity	< .1	NTU			WG634793	01/31/13 15:45
COD	< 10	mg/l			WG634576	01/31/13 14:32
4,4-DDD	< .00005	mg/l			WG634514	02/01/13 10:59
4,4-DDE	< .00005	mg/l			WG634514	02/01/13 10:59
4,4-DDT	< .00005	mg/l			WG634514	02/01/13 10:59
Aldrin	< .00005	mg/l			WG634514	02/01/13 10:59
Alpha BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Beta BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Chlordane	< .005	mg/l			WG634514	02/01/13 10:59
Delta BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Dieldrin	< .00005	mg/l			WG634514	02/01/13 10:59
Endosulfan I	< .00005	mg/l			WG634514	02/01/13 10:59
Endosulfan II	< .00005	mg/l			WG634514	02/01/13 10:59
Endosulfan sulfate	< .00005	mg/l			WG634514	02/01/13 10:59

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Quality Assurance Report
Level II

L617505

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Tax I.D. 62-0814289

Est. 1970

February 06, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Endrin	< .00005	mg/l			WG634514	02/01/13 10:59
Endrin aldehyde	< .00005	mg/l			WG634514	02/01/13 10:59
Endrin ketone	< .00005	mg/l			WG634514	02/01/13 10:59
Gamma BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Heptachlor	< .00005	mg/l			WG634514	02/01/13 10:59
Heptachlor epoxide	< .00005	mg/l			WG634514	02/01/13 10:59
Hexachlorobenzene	< .00005	mg/l			WG634514	02/01/13 10:59
Methoxychlor	< .00005	mg/l			WG634514	02/01/13 10:59
Toxaphene	< .0005	mg/l			WG634514	02/01/13 10:59
Decachlorobiphenyl		% Rec.	80.30	10-141	WG634514	02/01/13 10:59
Tetrachloro-m-xylene		% Rec.	62.40	10-125	WG634514	02/01/13 10:59
Kjeldahl Nitrogen, TKN	< .1	mg/l			WG634374	02/01/13 12:06
Dissolved Solids	< 10	mg/l			WG634450	02/01/13 14:53
Cyanide	< .005	mg/l			WG634647	02/01/13 14:48
Phosphate, Ortho	< .025	mg/l			WG634587	01/30/13 16:30
Nitrate-Nitrite	< .1	mg/l			WG634963	02/02/13 14:51
BOD	0	mg/l			WG634335	02/03/13 09:57
Suspended Solids	< 1	mg/l			WG634449	02/04/13 12:14
Oil & Grease (Hexane Extr)	< 5	mg/l			WG635165	02/04/13 15:47
Specific Conductance	3.00	umhos/cm			WG635000	02/05/13 09:31
Hardness, Total (mg/L as CaCO3)	< 30	mg/l			WG635231	02/05/13 10:28

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Antimony	mg/l	0	0.00550	NA	20		L617511-01	WG634418
Arsenic	mg/l	0	0	0	20		L617511-01	WG634418
Barium	mg/l	0.170	0.160	6.06	20		L617511-01	WG634418
Beryllium	mg/l	0	0	0	20		L617511-01	WG634418
Cadmium	mg/l	0	0.000840	NA	20		L617511-01	WG634418
Calcium	mg/l	77.0	76.6	0.521	20		L617511-01	WG634418
Chromium	mg/l	0	0	0	20		L617511-01	WG634418
Copper	mg/l	0	0.00330	NA	20		L617511-01	WG634418
Lead	mg/l	0	0	0	20		L617511-01	WG634418
Nickel	mg/l	0	0	0	20		L617511-01	WG634418
Selenium	mg/l	0	0	0	20		L617511-01	WG634418
Silver	mg/l	0	0	0	20		L617511-01	WG634418
Sodium	mg/l	21.0	20.6	1.92	20		L617511-01	WG634418
Zinc	mg/l	0.110	0.107	2.76	20		L617511-01	WG634418

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Ammonia Nitrogen	mg/l	1.20	1.40	15.4	20	L617078-01	WG634372	
Ammonia Nitrogen	mg/l	0.840	0.850	1.18	20	L617505-02	WG634372	
MBAS	mg/l	0	0	0	20	L617678-02	WG634555	
Mercury	mg/l	0	0.0000231	16.1	20	L617620-01	WG634524	
Chlorine,residual	mg/l	0	0	0	20	L616890-01	WG634625	
Phosphorus,Total	mg/l	0	0	0	20	L617451-02	WG634373	
Phosphorus,Total	mg/l	4.80	4.90	2.06	20	L617072-01	WG634373	
Turbidity	NTU	150.	150.	0	20	L617732-03	WG634793	
COD	mg/l	460.	510.	10.3*	5	L617524-03	WG634576	
COD	mg/l	540.	540.	0	5	L617058-01	WG634576	
Kjeldahl Nitrogen, TKN	mg/l	2.10	2.10	1.89	20	L617195-01	WG634374	
Kjeldahl Nitrogen, TKN	mg/l	0	0	0	20	L617287-01	WG634374	
Dissolved Solids	mg/l	380.	387.	1.83	5	L617467-01	WG634450	
Cyanide	mg/l	0	0	0	20	L617536-02	WG634647	
Cyanide	mg/l	0	0	0	20	L617298-02	WG634647	
Nitrate-Nitrite	mg/l	0	0.110	NA	20	L617550-01	WG634963	
Nitrate-Nitrite	mg/l	1.50	1.60	6.45	20	L617003-02	WG634963	
BOD	mg/l	27.0	26.0	2.66	5	L617393-02	WG634335	
BOD	mg/l	0	0	0	5	L617451-07	WG634335	
BOD	mg/l	3500	3700	4.53	5	L617529-01	WG634335	
Suspended Solids	mg/l	1100	1200	8.03*	5	L617505-02	WG634449	
Specific Conductance	umhos/cm	220.	220.	0.905	20	L617489-01	WG635000	
Specific Conductance	umhos/cm	26000	26000	0.385	20	L618194-01	WG635000	
Hardness, Total (mg/L as CaCO3)	mg/l	4700	4700	0	20	L618194-01	WG635231	
Hardness, Total (mg/L as CaCO3)	mg/l	200.	200.	0	20	L617287-01	WG635231	

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Antimony	mg/l	1	1.02	102.	85-115	WG634418
Arsenic	mg/l	1	1.01	101.	85-115	WG634418

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Barium	mg/l	1	1.04	104.	85-115	WG634418
Beryllium	mg/l	1	1.01	101.	85-115	WG634418
Cadmium	mg/l	1	1.03	103.	85-115	WG634418
Calcium	mg/l	10	10.5	105.	85-115	WG634418
Chromium	mg/l	1	1.03	103.	85-115	WG634418
Copper	mg/l	1	1.00	100.	85-115	WG634418
Lead	mg/l	1	1.07	107.	85-115	WG634418
Nickel	mg/l	1	0.999	99.9	85-115	WG634418
Selenium	mg/l	1	1.01	101.	85-115	WG634418
Silver	mg/l	1	1.04	104.	85-115	WG634418
Sodium	mg/l	10	10.4	104.	85-115	WG634418
Zinc	mg/l	1	1.01	101.	85-115	WG634418
Chloride	mg/l	40	39.8	99.5	90-110	WG634319
Sulfate	mg/l	40	40.0	100.	90-110	WG634319
Benzene	mg/l	.05	0.0447	89.5	79-114	WG634494
Ethylbenzene	mg/l	.05	0.0524	105.	80-116	WG634494
Toluene	mg/l	.05	0.0491	98.3	79-112	WG634494
Total Xylene	mg/l	.15	0.156	104.	84-118	WG634494
a,a,a-Trifluorotoluene(PID)				100.6	55-122	WG634494
Ammonia Nitrogen	mg/l	7.5	8.01	107.	90-110	WG634372
MBAS	mg/l	1	0.934	93.4	85-115	WG634555
Mercury	mg/l	.003	0.00317	106.	85-115	WG634524
Chlorine, residual	mg/l	1.19	1.12	94.1	85-115	WG634625
1,2,4-Trichlorobenzene	mg/l	.01	0.00746	74.6	18-130	WG634623
2,4,6-Trichlorophenol	mg/l	.01	0.00730	73.0	12-147	WG634623
2,4-Dichlorophenol	mg/l	.01	0.00757	75.7	10-157	WG634623
2,4-Dimethylphenol	mg/l	.01	0.00729	72.9	19-160	WG634623
2,4-Dinitrophenol	mg/l	.01	0.00997	99.7	10-135	WG634623
2,4-Dinitrotoluene	mg/l	.01	0.00808	80.8	30-168	WG634623
2,6-Dinitrotoluene	mg/l	.01	0.00799	79.9	32-163	WG634623
2-Chloronaphthalene	mg/l	.01	0.00829	82.9	29-149	WG634623
2-Chlorophenol	mg/l	.01	0.00677	67.7	16-129	WG634623
2-Nitrophenol	mg/l	.01	0.00802	80.2	14-158	WG634623
3,3-Dichlorobenzidine	mg/l	.01	0.00774	77.4	42-150	WG634623
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00658	65.8	10-164	WG634623
4-Bromophenyl-phenylether	mg/l	.01	0.00843	84.3	40-166	WG634623
4-Chloro-3-methylphenol	mg/l	.01	0.00703	70.3	14-158	WG634623
4-Chlorophenyl-phenylether	mg/l	.01	0.00843	84.3	39-155	WG634623
4-Nitrophenol	mg/l	.01	0.00317	31.7	10-61	WG634623
Acenaphthene	mg/l	.01	0.00834	83.4	37-159	WG634623
Acenaphthylene	mg/l	.01	0.00844	84.4	34-162	WG634623
Anthracene	mg/l	.01	0.00873	87.3	48-167	WG634623
Benidine	mg/l	.01	0.00274	27.4	10-86	WG634623
Benzo(a)anthracene	mg/l	.01	0.00858	85.8	46-167	WG634623
Benzo(a)pyrene	mg/l	.01	0.00826	82.6	39-167	WG634623

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		Known Val	Result			
Benzo(b)fluoranthene	mg/l	.01	0.00834	83.4	39-173	WG634623
Benzo(g,h,i)perylene	mg/l	.01	0.00805	80.5	42-181	WG634623
Benzo(k)fluoranthene	mg/l	.01	0.00864	86.4	42-178	WG634623
Benzylbutyl phthalate	mg/l	.01	0.00916	91.6	10-178	WG634623
Bis(2-chloroethoxy)methane	mg/l	.01	0.00836	83.6	34-155	WG634623
Bis(2-chloroethyl)ether	mg/l	.01	0.00731	73.1	22-149	WG634623
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00793	79.3	26-149	WG634623
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0109	109.	42-191	WG634623
Chrysene	mg/l	.01	0.00911	91.1	46-170	WG634623
Di-n-butyl phthalate	mg/l	.01	0.00869	86.9	33-175	WG634623
Di-n-octyl phthalate	mg/l	.01	0.00912	91.2	40-170	WG634623
Dibenz(a,h)anthracene	mg/l	.01	0.00781	78.1	43-187	WG634623
Diethyl phthalate	mg/l	.01	0.00878	87.8	10-182	WG634623
Dimethyl phthalate	mg/l	.01	0.00879	87.9	10-165	WG634623
Fluoranthene	mg/l	.01	0.00864	86.4	46-171	WG634623
Fluorene	mg/l	.01	0.00852	85.2	39-163	WG634623
Hexachloro-1,3-butadiene	mg/l	.01	0.00763	76.3	18-136	WG634623
Hexachlorobenzene	mg/l	.01	0.00792	79.2	38-163	WG634623
Hexachlorocyclopentadiene	mg/l	.01	0.00792	79.2	10-142	WG634623
Hexachloroethane	mg/l	.01	0.00749	74.9	10-130	WG634623
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00776	77.6	42-184	WG634623
Isophorone	mg/l	.01	0.00833	83.3	36-166	WG634623
n-Nitrosodi-n-propylamine	mg/l	.01	0.00848	84.8	27-157	WG634623
n-Nitrosodimethylamine	mg/l	.01	0.00755	75.5	10-96	WG634623
n-Nitrosodiphenylamine	mg/l	.01	0.00870	87.0	41-168	WG634623
Naphthalene	mg/l	.01	0.00845	84.5	26-147	WG634623
Nitrobenzene	mg/l	.01	0.00790	79.0	22-154	WG634623
Pentachlorophenol	mg/l	.01	0.00735	73.5	10-128	WG634623
Phenanthrene	mg/l	.01	0.00845	84.5	46-163	WG634623
Phenol	mg/l	.01	0.00357	35.7	10-69	WG634623
Pyrene	mg/l	.01	0.00889	88.9	45-176	WG634623
2,4,6-Tribromophenol				76.90	16-147	WG634623
2-Fluorobiphenyl				77.90	29-127	WG634623
2-Fluorophenol				44.30	10-75	WG634623
Nitrobenzene-d5				76.90	17-119	WG634623
Phenol-d5				30.60	10-63	WG634623
p-Terphenyl-d14				82.80	40-174	WG634623
Phosphorus, Total	mg/l	1	1.01	101.	90-110	WG634373
Turbidity	NTU	40	40.5	101.	90-110	WG634793
COD	mg/l	230	234.	102.	90-110	WG634576
4,4-DDD	mg/l	.0002	0.000158	79.2	60-123	WG634514
4,4-DDE	mg/l	.0002	0.000144	72.0	50-120	WG634514
4,4-DDT	mg/l	.0002	0.000164	81.9	61-121	WG634514
Aldrin	mg/l	.0002	0.0000854	42.7	10-136	WG634514
Alpha BHC	mg/l	.0002	0.000155	77.3	58-114	WG634514
Beta BHC	mg/l	.0002	0.000154	77.0	61-120	WG634514
Delta BHC	mg/l	.0002	0.000153	76.4	57-120	WG634514
Dieldrin	mg/l	.0002	0.000163	81.3	62-123	WG634514
Endosulfan I	mg/l	.0002	0.000159	79.7	63-123	WG634514
Endosulfan II	mg/l	.0002	0.000167	83.4	63-124	WG634514
Endosulfan sulfate	mg/l	.0002	0.000146	72.9	59-125	WG634514

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Endrin	mg/l	.0002	0.000160	79.9	60-123	WG634514
Endrin aldehyde	mg/l	.0002	0.000159	79.7	42-92	WG634514
Endrin ketone	mg/l	.0002	0.000180	90.0	60-117	WG634514
Gamma BHC	mg/l	.0002	0.000157	78.6	59-116	WG634514
Heptachlor	mg/l	.0002	0.000101	50.4	10-131	WG634514
Heptachlor epoxide	mg/l	.0002	0.000157	78.6	61-118	WG634514
Hexachlorobenzene	mg/l	.0002	0.000102	51.0	28-116	WG634514
Methoxychlor	mg/l	.0002	0.000181	90.5	66-122	WG634514
Decachlorobiphenyl				98.80	10-141	WG634514
Tetrachloro-m-xylene				70.10	10-125	WG634514
Kjeldahl Nitrogen, TKN	mg/l	8.55	8.46	98.9	90-110	WG634374
Dissolved Solids	mg/l	8800	8510	96.7	85-115	WG634450
Cyanide	mg/l	.1	0.0975	97.5	90-110	WG634647
Phosphate, Ortho	mg/l	.75	0.849	113.	85-115	WG634587
Nitrate-Nitrite	mg/l	5	5.27	105.	90-110	WG634963
BOD	mg/l	198	199.	101.	84.6-115.4	WG634335
BOD	mg/l	198	187.	94.4	84.6-115.4	WG634335
BOD	mg/l	198	230.	116.*	84.6-115.4	WG634335
BOD	mg/l	198	193.	97.5	84.6-115.4	WG634335
BOD	mg/l	198	180.	90.9	84.6-115.4	WG634335
BOD	mg/l	198	192.	97.0	84.6-115.4	WG634335
Suspended Solids	mg/l	773	752.	97.3	85-115	WG634449
Oil & Grease (Hexane Extr)	mg/l	40	40.0	100.	78-114	WG635165
Specific Conductance	umhos/cm	878	899.	102.	85-115	WG635000
Hardness, Total (mg/L as CaCO3)	mg/l	200	209.	105.	85-115	WG635231

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chloride	mg/l	39.8	39.8	100.	90-110	0	20	WG634319
Sulfate	mg/l	40.0	40.0	100.	90-110	0	20	WG634319
Benzene	mg/l	0.0462	0.0447	92.0	79-114	3.26	20	WG634494
Ethylbenzene	mg/l	0.0540	0.0524	108.	80-116	2.92	20	WG634494
Toluene	mg/l	0.0505	0.0491	101.	79-112	2.69	20	WG634494
Total Xylene	mg/l	0.160	0.156	107.	84-118	2.38	20	WG634494
a,a,a-Trifluorotoluene(PID)				101.2	55-122			WG634494

* Performance of this Analyte is outside of established criteria.
For addit

[illegible]

Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT-Other SW - Stormwater

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Remarks:		Date:		Time:		Received by: (Signature)		Samples returned via: FedEx ___ UPS ___ Other ___		Condition	
Relinquished by: (Signature)		1-28-13		1040		Emily Vance		5413 4725 3157		JF (lab use only)	
Relinquished by: (Signature)								Temp: 4.3		Bottles Received: 18	
Relinquished by: (Signature)						Received for lab by: (Signature)		Date: 1/24/13		pH Checked: 4.2 7/13 NCF: X	



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Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Thursday December 27, 2012

Report Number: L611442

Samples Received: 12/15/12

Client Project: 308032.20

Description: ADOT Stormwater

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 27, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater
Sample ID : PHX 121412
Collected By :
Collection Date : 12/14/12 07:37

ESC Sample # : L611442-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Coliform, fecal	>400		col/100ml	SM9222D	12/14/12	1
E.Coli	>2400	1.0	MPN/100ml	9223B	12/14/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/27/12 13:41 Printed: 12/27/12 13:42

L611442-01 (COLIFORM, FECAL) - subcontracted to Legend Techn Services

L611442-01 (COLILERT) - subcontracted to Legend Techn Services

Summary of Remarks For Samples Printed
12/27/12 at 13:42:12

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L611442-01 Account: ENGENVPAZ Received: 12/15/12 10:00 Due Date: 12/21/12 00:00 RPT Date: 12/27/12 13:41
Subbed to Legendpaz direct jlc 12/17/12 PO#S17495



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140

Phoenix, AZ 85020

Quality Assurance Report
Level II

L611442

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Est. 1970

December 27, 2012

Batch number /Run number / Sample number cross reference

WG628557: R2493142: L611442-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140

Phoenix, AZ 85020

Quality Assurance Report
Level II

L611442

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December 27, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Laboratory Sample ID:

C611442

CHAIN OF CUSTODY RECORD

LEGEND

Technical Services, Inc.

www.legend-group.com

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☐ 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518Page of

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CLIENT INFORMATION

Client Name ESC Lab Sciences	Address 12065 Lebanon Rd	City Mount Juliet	State TN	Zip 37122	Phone 615-758-5858	Fax Number or Email Address jcorby@escsci.com
Project Name ADMT Stormwater	Project Number	Contact Janice Corby	P.O. No.	Fax Results <input type="checkbox"/>	QC Report <input type="checkbox"/> EDD <input type="checkbox"/>	Special Detection Limits <input type="checkbox"/>

[illegible]

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: OK to run over temp per Emily

SAMPLE CONDITION UPON RECEIPT (Lab Use)		
No. of Containers	2	
Temperature	11.7°C	
Custody Seals	Y	N
Seals Intact	Y	N
Preserved	Y	N

RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature <i>Emily V...</i> Sampler Printed Name <i>Emily V...</i>	Date <i>12/14/12</i> Time <i>1446</i>	Signature <i>AS</i> Printed Name <i>AS erome</i>
②	Sampler Signature Sampler Printed Name	Date Time	Signature Printed Name
③	Sampler Signature Sampler Printed Name	Date Time	Signature Printed Name

WHITE-LAB YELLOW-CLIENT

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
PHX 121412	2121152-01	Wastewater	Grab	12/14/12 07:37	12/14/12 14:26

Sample Condition Upon Receipt:

Temperature: 11.70 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: **AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.**

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Client notified of Fecal detection vi email. 12/17/12 CL

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

PHX 121412 (2121152-01) Wastewater (Grab) Sampled: 12/14/12 07:37 Received: 12/14/12 14:26

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli, MPN (WW-Colilert)	> 2419.6	1 MPN/100 mL	1	B2L0417	12/14/12 15:05	12/14/12 15:05	SM 9223B		
Fecal Coliforms, MF	>400	1 CFU/100 mL	1	B2L0403	12/14/12 15:05	12/14/12 15:05	SM 9222D	A1	

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

Microbiology - Quality Control
Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B2L0403 - micro_prep									
Blank (B2L0403-BLK1)									
Prepared & Analyzed: 12/14/12									
Fecal Coliforms, MF	<1	1	CFU/100 mL						
Batch B2L0417 - micro_prep									
Blank (B2L0417-BLK1)									
Prepared & Analyzed: 12/14/12									
E. coli, MPN (WW-Colilert)	<1	1	MPN/100 mL						
Duplicate (B2L0417-DUP1)									
Source: 2121116-01 Prepared & Analyzed: 12/14/12									
E. coli, MPN (WW-Colilert)	200	1	MPN/100 mL	<1				100	R2

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

Notes and Definitions

R2 RPD/RSD exceeded the laboratory control limit.

A1 Too numerous to count.

BLK Method Blank

LCS/Dup Laboratory Control Sample/Laboratory Fortified Blank/Duplicate

MS/Dup Matrix Spike/Duplicate

Dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

Laboratory Sample ID:
2121152

CHAIN OF CUSTODY RECORD



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Page 1 of 1

Please Print Clearly

CLIENT INFORMATION		Address		City	State	Zip	Phone	Fax Number or Email Address		
Client Name ESC Lab Sciences	Address 12065 Lebanon Rd	City Mount Juliet TN	State TN	Zip 37122	Phone 615-758-8888	Fax Number or Email Address JCozby@esc-lab.com				
Project Name ADOT Stormwater	Project Number	Contact Janice Cozby	P.O. No.	Fax Results	QC Report	EDD	Special Detection Limits			
SAMPLE TYPE CODES		TURN AROUND TIME		REQUESTED ANALYSES						
DW=Drinking Water WW=Wastewater SW=Surface Water G=Groundwater O=Other		Laboratory Authorization Required for Rush <input type="checkbox"/> Standard 10 - 15 Day <input type="checkbox"/> Other		LAB NO.						
Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH	Lab Use Only
Phx 121412	12/14/12	0837		X		ES		2	X	X

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: OK to run over temp per Emily - 12/14/12 & past hold

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	2
Temperature	11.7°C
Custody Seals	Y (N)
Seals Intact	Y (N)
Preserved	(N) N

WHITE-LAB YELLOW-CLIENT

RELINQUISHED BY		SAMPLES RECEIVED BY	
1. Sampler Signature Emily Vanderschuer	Date 12/14/12	Signature AS	Date 12/14/12
2. Sampler Printed Name Emily Vanderschuer	Time 1416	Printed Name AS	Time 1446 12/14/12
3. Sampler Signature	Date 12/14/12	Signature	Date
Sampler Printed Name	Time	Printed Name	Time

FORM GEN-170 (05/06)



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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Friday December 28, 2012

Report Number: L611431

Samples Received: 12/15/12

Client Project: 308032.20

Description: ADOT Stormwater

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

Laboratory Certification Numbers

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NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 28, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater
Sample ID : PHX 121412
Collected By : JB
Collection Date : 12/14/12 07:37

ESC Sample # : L611431-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	16.	1.0	mg/l	300.0	12/15/12	1
Nitrate	2.5	0.10	mg/l	300.0	12/15/12	1
Nitrite	0.34	0.10	mg/l	300.0	12/15/12	1
Sulfate	26.	5.0	mg/l	300.0	12/15/12	1
BOD	68.0	5.00	mg/l	SM5210B	12/20/12	1
COD	420	10.	mg/l	410.4	12/19/12	1
Hardness, Total (mg/L as CaCO3)	130	30.	mg/l	130.1	12/19/12	1
MBAS	0.89	0.10	mg/l	5540C	12/15/12	1
Ammonia Nitrogen	4.1	0.10	mg/l	350.1	12/20/12	1
pH	7.2		su	4500H-B	12/17/12	1
Phosphate, Ortho	1.8	0.50	mg/l	4500P-E	12/18/12	20
Phosphorus, Total	0.92	0.10	mg/l	365.4	12/21/12	1
Specific Conductance	320		umhos/cm	120.1	12/19/12	1
Kjeldahl Nitrogen, TKN	9.1	0.10	mg/l	351.2	12/22/12	1
Turbidity	130	0.10	NTU	SM2130B	12/15/12	1
Dissolved Solids	310	10.	mg/l	2540C	12/21/12	1
Suspended Solids	53.	1.0	mg/l	2540D	12/21/12	1
Mercury	BDL	0.00020	mg/l	245.1	12/17/12	1
Antimony	BDL	0.020	mg/l	200.7	12/24/12	1
Arsenic	BDL	0.020	mg/l	200.7	12/24/12	1
Barium	0.13	0.0050	mg/l	200.7	12/23/12	1
Beryllium	BDL	0.0020	mg/l	200.7	12/23/12	1
Cadmium	BDL	0.0050	mg/l	200.7	12/23/12	1
Calcium	41.	0.50	mg/l	200.7	12/23/12	1
Chromium	0.023	0.010	mg/l	200.7	12/23/12	1
Copper	0.090	0.020	mg/l	200.7	12/23/12	1
Lead	0.0084	0.0050	mg/l	200.7	12/23/12	1
Nickel	0.025	0.020	mg/l	200.7	12/23/12	1
Selenium	BDL	0.020	mg/l	200.7	12/24/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L611431-01 (PH) - 7.2@16.1c



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 28, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater
Sample ID : PHX 121412
Collected By : JB
Collection Date : 12/14/12 07:37

ESC Sample # : L611431-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Silver	BDL	0.010	mg/l	200.7	12/23/12	1
Sodium	15.	0.50	mg/l	200.7	12/23/12	1
Zinc	0.25	0.030	mg/l	200.7	12/23/12	1
Benzene	BDL	0.00050	mg/l	8021B	12/17/12	1
Toluene	BDL	0.0050	mg/l	8021B	12/17/12	1
Ethylbenzene	BDL	0.00050	mg/l	8021B	12/17/12	1
Total Xylene	BDL	0.0015	mg/l	8021B	12/17/12	1
Surrogate Recovery(%)						
a,a,a-Trifluorotoluene(PID)	109.		% Rec.	8021B	12/17/12	1
Pesticides						
Aldrin	BDL	0.000050	mg/l	8081 A	12/20/12	1
Alpha BHC	BDL	0.000050	mg/l	8081 A	12/20/12	1
Beta BHC	BDL	0.000050	mg/l	8081 A	12/20/12	1
Delta BHC	BDL	0.000050	mg/l	8081 A	12/20/12	1
Gamma BHC	BDL	0.000050	mg/l	8081 A	12/20/12	1
Chlordane	BDL	0.00050	mg/l	8081 A	12/20/12	1
4,4-DDD	BDL	0.000050	mg/l	8081 A	12/20/12	1
4,4-DDE	BDL	0.000050	mg/l	8081 A	12/20/12	1
4,4-DDT	BDL	0.000050	mg/l	8081 A	12/20/12	1
Dieldrin	BDL	0.000050	mg/l	8081 A	12/20/12	1
Endosulfan I	BDL	0.000050	mg/l	8081 A	12/20/12	1
Endosulfan II	BDL	0.000050	mg/l	8081 A	12/20/12	1
Endosulfan sulfate	BDL	0.000050	mg/l	8081 A	12/20/12	1
Endrin	BDL	0.000050	mg/l	8081 A	12/20/12	1
Endrin aldehyde	BDL	0.000050	mg/l	8081 A	12/20/12	1
Endrin ketone	BDL	0.000050	mg/l	8081 A	12/20/12	1
Hexachlorobenzene	BDL	0.000050	mg/l	8081 A	12/20/12	1
Heptachlor	BDL	0.000050	mg/l	8081 A	12/20/12	1
Heptachlor epoxide	BDL	0.000050	mg/l	8081 A	12/20/12	1
Methoxychlor	BDL	0.000050	mg/l	8081 A	12/20/12	1
Toxaphene	BDL	0.00050	mg/l	8081 A	12/20/12	1
Pesticides Surrogates						
Decachlorobiphenyl	48.4		% Rec.	8081 A	12/20/12	1
Tetrachloro-m-xylene	74.1		% Rec.	8081 A	12/20/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270C	12/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270C	12/18/12	1
Anthracene	BDL	0.0010	mg/l	8270C	12/18/12	1
Benzidine	BDL	0.010	mg/l	8270C	12/18/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270C	12/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270C	12/18/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L611431-01 (PH) - 7.2@16.1c



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 28, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater

ESC Sample # : L611431-01

Sample ID : PHX 121412

Site ID :

Collected By : JB
Collection Date : 12/14/12 07:37

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270C	12/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270C	12/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270C	12/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270C	12/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270C	12/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270C	12/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270C	12/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270C	12/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270C	12/18/12	1
Chrysene	BDL	0.0010	mg/l	8270C	12/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270C	12/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270C	12/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270C	12/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270C	12/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270C	12/18/12	1
Fluorene	BDL	0.0010	mg/l	8270C	12/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270C	12/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270C	12/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270C	12/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270C	12/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270C	12/18/12	1
Isophorone	BDL	0.010	mg/l	8270C	12/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270C	12/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270C	12/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270C	12/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270C	12/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270C	12/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270C	12/18/12	1
Benzylbutyl phthalate	BDL	0.0010	mg/l	8270C	12/18/12	1
Bis(2-ethylhexyl)phthalate	0.0024	0.0010	mg/l	8270C	12/18/12	1
Di-n-butyl phthalate	BDL	0.0010	mg/l	8270C	12/18/12	1
Diethyl phthalate	0.0012	0.0010	mg/l	8270C	12/18/12	1
Dimethyl phthalate	BDL	0.0010	mg/l	8270C	12/18/12	1
Di-n-octyl phthalate	BDL	0.0010	mg/l	8270C	12/18/12	1
Pyrene	BDL	0.0010	mg/l	8270C	12/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270C	12/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270C	12/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270C	12/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270C	12/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270C	12/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270C	12/18/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270C	12/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270C	12/18/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L611431-01 (PH) - 7.2@16.1c



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Mt. Juliet, TN 37122
(615) 758-5858
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Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 28, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater
Sample ID : PHX 121412
Collected By : JB
Collection Date : 12/14/12 07:37

ESC Sample # : L611431-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Nitrophenol	BDL	0.010	mg/l	8270C	12/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270C	12/18/12	1
Phenol	BDL	0.010	mg/l	8270C	12/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270C	12/18/12	1
Surrogate Recovery						
2-Fluorophenol	38.3		% Rec.	8270C	12/18/12	1
Phenol-d5	26.7		% Rec.	8270C	12/18/12	1
Nitrobenzene-d5	98.2		% Rec.	8270C	12/18/12	1
2-Fluorobiphenyl	86.3		% Rec.	8270C	12/18/12	1
2,4,6-Tribromophenol	104.		% Rec.	8270C	12/18/12	1
p-Terphenyl-d14	112.		% Rec.	8270C	12/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/28/12 10:12 Printed: 12/28/12 10:12
L611431-01 (PH) - 7.2@16.1c



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 28, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater
Sample ID : PHX 121412
Collected By : JB
Collection Date : 12/14/12 07:37

ESC Sample # : L611431-02

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	BDL	0.0050	mg/l	4500CN-E	12/19/12	1
Oil & Grease (Hexane Extr)	BDL	5.0	mg/l	1664A	12/18/12	1
TPH - Oil & Grease	BDL	5.0	mg/l	1664A	12/21/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/28/12 10:12 Printed: 12/28/12 10:13

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L611431-01	WG628366	SAMP	MBAS	R2479037	J6
	WG628395	SAMP	pH	R2479981	T8
	WG628799	SAMP	Phosphate,Ortho	R2483437	Q
	WG628475	SAMP	Endrin aldehyde	R2487857	J4
L611431-02	WG628860	SAMP	Cyanide	R2486079	W
	WG628528	SAMP	Oil & Grease (Hexane Extr)	R2481797	L3
	WG629417	SAMP	TPH - Oil & Grease	R2490321	L3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
L3	(ESC) Sample reanalysis and/or spiking could not be performed due to lack of additional volume.
Q	(ESC) Sample held beyond the accepted holding time.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
W	(ESC)-The laboratory analysis was from a sample collected in an improper container

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/28/12 at 10:13:01

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L611431-01 Account: ENGENVPAZ Received: 12/15/12 10:00 Due Date: 12/26/12 00:00 RPT Date: 12/28/12 10:12

Sample: L611431-02 Account: ENGENVPAZ Received: 12/15/12 10:00 Due Date: 12/26/12 00:00 RPT Date: 12/28/12 10:12



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Quality Assurance Report
Level II
L611431

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 28, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
MBAS	< .1	mg/l			WG628366	12/15/12 13:54
Chloride	< 1	mg/l			WG628362	12/15/12 07:43
Nitrate	< .1	mg/l			WG628362	12/15/12 07:43
Nitrite	< .1	mg/l			WG628362	12/15/12 07:43
Sulfate	< 5	mg/l			WG628362	12/15/12 07:43
Turbidity	< .1	NTU			WG628365	12/15/12 14:50
Mercury	< .0002	mg/l			WG628451	12/17/12 11:51
Oil & Grease (Hexane Extr)	< 5	mg/l			WG628528	12/18/12 06:15
Benzene	< .0005	mg/l			WG628435	12/17/12 02:36
Ethylbenzene	< .0005	mg/l			WG628435	12/17/12 02:36
Toluene	< .005	mg/l			WG628435	12/17/12 02:36
Total Xylene	< .0015	mg/l			WG628435	12/17/12 02:36
a,a,a-Trifluorotoluene(PID)		% Rec.	105.5	55-122	WG628435	12/17/12 02:36
1,2,4-Trichlorobenzene	< .01	mg/l			WG628471	12/17/12 19:30
2,4,6-Trichlorophenol	< .01	mg/l			WG628471	12/17/12 19:30
2,4-Dichlorophenol	< .01	mg/l			WG628471	12/17/12 19:30
2,4-Dimethylphenol	< .01	mg/l			WG628471	12/17/12 19:30
2,4-Dinitrophenol	< .01	mg/l			WG628471	12/17/12 19:30
2,4-Dinitrotoluene	< .01	mg/l			WG628471	12/17/12 19:30
2,6-Dinitrotoluene	< .01	mg/l			WG628471	12/17/12 19:30
2-Chloronaphthalene	< .001	mg/l			WG628471	12/17/12 19:30
2-Chlorophenol	< .01	mg/l			WG628471	12/17/12 19:30
2-Nitrophenol	< .01	mg/l			WG628471	12/17/12 19:30
3,3-Dichlorobenzidine	< .01	mg/l			WG628471	12/17/12 19:30
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG628471	12/17/12 19:30
4-Bromophenyl-phenylether	< .01	mg/l			WG628471	12/17/12 19:30
4-Chloro-3-methylphenol	< .01	mg/l			WG628471	12/17/12 19:30
4-Chlorophenyl-phenylether	< .01	mg/l			WG628471	12/17/12 19:30
4-Nitrophenol	< .01	mg/l			WG628471	12/17/12 19:30
Acenaphthene	< .001	mg/l			WG628471	12/17/12 19:30
Acenaphthylene	< .001	mg/l			WG628471	12/17/12 19:30
Anthracene	< .001	mg/l			WG628471	12/17/12 19:30
Benzidine	< .05	mg/l			WG628471	12/17/12 19:30
Benzo(a)anthracene	< .001	mg/l			WG628471	12/17/12 19:30
Benzo(a)pyrene	< .001	mg/l			WG628471	12/17/12 19:30
Benzo(b)fluoranthene	< .001	mg/l			WG628471	12/17/12 19:30
Benzo(g,h,i)perylene	< .001	mg/l			WG628471	12/17/12 19:30
Benzo(k)fluoranthene	< .001	mg/l			WG628471	12/17/12 19:30
Benzylbutyl phthalate	< .001	mg/l			WG628471	12/17/12 19:30
Bis(2-chlorethoxy)methane	< .01	mg/l			WG628471	12/17/12 19:30
Bis(2-chloroethyl)ether	< .01	mg/l			WG628471	12/17/12 19:30
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG628471	12/17/12 19:30
Bis(2-ethylhexyl)phthalate	< .001	mg/l			WG628471	12/17/12 19:30
Chrysene	< .001	mg/l			WG628471	12/17/12 19:30
Di-n-butyl phthalate	< .001	mg/l			WG628471	12/17/12 19:30
Di-n-octyl phthalate	< .001	mg/l			WG628471	12/17/12 19:30
Dibenz(a,h)anthracene	< .001	mg/l			WG628471	12/17/12 19:30

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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John Burton
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Phoenix, AZ 85020

Quality Assurance Report
Level II

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Est. 1970

December 28, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Diethyl phthalate	< .001	mg/l			WG628471	12/17/12 19:30
Dimethyl phthalate	< .001	mg/l			WG628471	12/17/12 19:30
Fluoranthene	< .001	mg/l			WG628471	12/17/12 19:30
Fluorene	< .001	mg/l			WG628471	12/17/12 19:30
Hexachloro-1,3-butadiene	< .01	mg/l			WG628471	12/17/12 19:30
Hexachlorobenzene	< .001	mg/l			WG628471	12/17/12 19:30
Hexachlorocyclopentadiene	< .01	mg/l			WG628471	12/17/12 19:30
Hexachloroethane	< .01	mg/l			WG628471	12/17/12 19:30
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG628471	12/17/12 19:30
Isophorone	< .01	mg/l			WG628471	12/17/12 19:30
n-Nitrosodi-n-propylamine	< .01	mg/l			WG628471	12/17/12 19:30
n-Nitros						

Relinquished by: (Signature) <i>John Butler</i>	Date: 12-14-12	Time: 1336	Received by: (Signature) <i>Erin Vann</i>	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Other <input type="checkbox"/>		Condition (lab use only) <i>✓</i>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1°C	Bottles Received: 16	CoC Seals Intact <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> n/a
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Ad E</i>	Date: 12/15/12	Time: 1000	pH Checked: <i>✓</i> NCF: <i>✓</i>



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John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Thursday December 27, 2012

Report Number: L611442

Samples Received: 12/15/12

Client Project: 308032.20

Description: ADOT Stormwater

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 27, 2012

Date Received : December 15, 2012
Description : ADOT Stormwater
Sample ID : PHX 121412
Collected By :
Collection Date : 12/14/12 07:37

ESC Sample # : L611442-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Coliform, fecal	>400		col/100ml	SM9222D	12/14/12	1
E.Coli	>2400	1.0	MPN/100ml	9223B	12/14/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/27/12 13:41 Printed: 12/27/12 13:42

L611442-01 (COLIFORM, FECAL) - subcontracted to Legend Techn Services

L611442-01 (COLILERT) - subcontracted to Legend Techn Services

Summary of Remarks For Samples Printed
12/27/12 at 13:42:12

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L611442-01 Account: ENGENVPAZ Received: 12/15/12 10:00 Due Date: 12/21/12 00:00 RPT Date: 12/27/12 13:41
Subbed to Legendpaz direct jlc 12/17/12 PO#S17495



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140

Phoenix, AZ 85020

Quality Assurance Report
Level II

L611442

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 27, 2012

Batch number /Run number / Sample number cross reference

WG628557: R2493142: L611442-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140

Phoenix, AZ 85020

Quality Assurance Report
Level II

L611442

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Est. 1970

December 27, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Laboratory Sample ID: U611442

CHAIN OF CUSTODY RECORD

LEGEND
Technical Services, Inc.
www.legend-group.com

Technical Services, Inc.

www.legend-group.com

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☐ 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page of _____

Please Print Clearly

CLIENT INFORMATION

Client Name ESC Lab Sciences	Address 12065 Lebanon Rd	City Mount Juliet	State TN	Zip 37122	Phone 615-758-5858	Fax Number or Email Address jcorby@escsci.com
Project Name ADMT Stormwater	Project Number	Contact Janice Corby	P.O. No.	Fax Results <input type="checkbox"/>	QC Report <input type="checkbox"/> EDD <input type="checkbox"/>	Special Detection Limits <input type="checkbox"/>

[illegible]

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: OK to run over temp per Emily

SAMPLE CONDITION UPON RECEIPT (Lab Use)		
No. of Containers	2	
Temperature	11.7°C	
Custody Seals	Y	N
Seals Intact	Y	N
Preserved	Y	N

RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature <i>Emily V...</i> Sampler Printed Name <i>Emily V...</i>	Date <i>12/14/12</i> Time <i>1416</i>	Signature <i>AS</i> Printed Name <i>AS</i> Date <i>12/14/12</i> Time <i>1446</i>
②	Sampler Signature _____ Sampler Printed Name _____	Date _____ Time _____	Signature _____ Printed Name _____ Date _____ Time _____
③	Sampler Signature _____ Sampler Printed Name _____	Date _____ Time _____	Signature _____ Printed Name _____ Date _____ Time _____

WHITE-LAB YELLOW-CLIENT

21 December 2012

Janice Cozby
Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

RE: Water Analysis

Laboratory Work Order No.: 2121152

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 12/14/12 14:26.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

LEGEND TECHNICAL SERVICES OF ARIZONA, INC.



Cory Lund
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
PHX 121412	2121152-01	Wastewater	Grab	12/14/12 07:37	12/14/12 14:26

Sample Condition Upon Receipt:

Temperature: 11.70 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: **AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.**

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Client notified of Fecal detection vi email. 12/17/12 CL

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

PHX 121412 (2121152-01) Wastewater (Grab) Sampled: 12/14/12 07:37 Received: 12/14/12 14:26

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli, MPN (WW-Colilert)	> 2419.6	1 MPN/100 mL	1	B2L0417	12/14/12 15:05	12/14/12 15:05	SM 9223B		
Fecal Coliforms, MF	>400	1 CFU/100 mL	1	B2L0403	12/14/12 15:05	12/14/12 15:05	SM 9222D	A1	

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

Microbiology - Quality Control
Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B2L0403 - micro_prep									
Blank (B2L0403-BLK1)									
Prepared & Analyzed: 12/14/12									
Fecal Coliforms, MF	<1	1	CFU/100 mL						
Batch B2L0417 - micro_prep									
Blank (B2L0417-BLK1)									
Prepared & Analyzed: 12/14/12									
E. coli, MPN (WW-Colilert)	<1	1	MPN/100 mL						
Duplicate (B2L0417-DUP1)									
Source: 2121116-01 Prepared & Analyzed: 12/14/12									
E. coli, MPN (WW-Colilert)	200	1	MPN/100 mL	<1				100	R2

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

Notes and Definitions

R2 RPD/RSD exceeded the laboratory control limit.

A1 Too numerous to count.

BLK Method Blank

LCS/Dup Laboratory Control Sample/Laboratory Fortified Blank/Duplicate

MS/Dup Matrix Spike/Duplicate

Dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Environmental Science Corp. (ESC)
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Project: Water Analysis
Project Number: ADOT Stormwater 12/14/12
Project Manager: Janice Cozby

Reported:
12/21/12 15:25

Laboratory Sample ID:
2121152

CHAIN OF CUSTODY RECORD



17631 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION		Address		City	State	Zip	Phone	Fax Number or Email Address		
Client Name <u>ESC Lab Sciences</u>	Address <u>12065 Lebanon Rd</u>	<u>Mount Juliet TN</u>		<u>37122</u>	<u>615-758-8888</u>	<u>Janice Cozby</u>				
Project Name <u>ADOT Stormwater</u>	Project Number	Contact <u>Janice Cozby</u>	P.O. No.	Fax Results <input type="checkbox"/>	QC Report <input type="checkbox"/>	EDD <input type="checkbox"/>	Special Detection Limits <input type="checkbox"/>			
SAMPLE TYPE CODES		TURN AROUND TIME		REQUESTED ANALYSES						
DW=Drinking Water WW=Wastewater SW=Surface Water G=Groundwater O=Other		Laboratory Authorization Required for Rush <input type="checkbox"/> Standard 10 - 15 Day <input type="checkbox"/> Other _____		LAB NO.						
Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only)	LAB NO.
<u>Phx 121412</u>	<u>12/14/12</u>	<u>0837</u>		<u>X</u>	<u>X</u>	<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>01</u>

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: OK to run over temp per Emily - 12/14/12
& past hold

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	<u>2</u>
Temperature	<u>11.7°C</u>
Custody Seals	<u>Y</u> <u>N</u>
Seals Intact	<u>Y</u> <u>N</u>
Preserved	<u>Y</u> <u>N</u>

WHITE-LAB YELLOW-CLIENT

RELINQUISHED BY		SAMPLES RECEIVED BY	
1. Sampler Signature <u>Emily V...</u>	Date <u>12/14/12</u>	Signature <u>AS</u>	Date <u>12/14/12</u>
Sampler Printed Name <u>Emily V...</u>	Time <u>1416</u>	Printed Name <u>AS</u>	Time <u>1416</u>
2. Sampler Signature	Date <u>12/14/12</u>	Signature	Date <u>1426</u>
Sampler Printed Name	Time <u>1416</u>	Printed Name	Time
3. Sampler Signature	Date	Signature	Date
Sampler Printed Name	Time	Printed Name	Time

FORM GEN-170 (05/06)

LABORATORY REPORT

Prepared For: Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project: 308032.20

Sampled: 12/14/12
Received: 12/17/12
Issued: 12/31/12 09:02

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PVL1139-01

CLIENT ID

ADOT-NOG-AUTO-G

MATRIX

Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
Cyanide samples are tested for the presence of sulfide within 24 hrs of sampling. The sample requiring cyanide was received and tested after the 24 hr period.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: N1-This analyte was reported as ND based on the "total" result of ND. No additional analysis was performed.

Reviewed By:



TestAmerica Phoenix

Kylie Emily
Project Manager

Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1139
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1139-01 (ADOT-NOG-AUTO-G - Water)								
Reporting Units: mg/l								
N-Hexane Extractable (HEM)	EPA 1664A	12L0909	5.0	5.7	1	12/24/2012	12/24/2012	
N-Hexane Extractable Silica Gel Treated (SGT)	EPA 1664A SGT	12L0909	10	ND	1	12/24/2012	12/24/2012	N1

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1139 <Page 2 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1139
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1139-01 (ADOT-NOG-AUTO-G - Water)								
Reporting Units: mg/l								
Cyanide, Total	SM 4500CN-E	12L0728	0.050	ND	1	12/18/2012	12/18/2012	

TestAmerica Phoenix

Kylie Emily
Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
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 Phoenix, AZ 85020 Report Number: PVL1139
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

MICROBIOLOGICALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1139-01 (ADOT-NOG-AUTO-G - Water)								
Reporting Units: CFU/100 ml								
Fecal Coliform	SM 9222D	12L0673	100	20000	100	12/18/2012	12/19/2012	>, H3
Sample ID: PVL1139-01 (ADOT-NOG-AUTO-G - Water)								
Reporting Units: MPN/100 ml								
E. Coli - MPN	SM 9221F	12L0667	20	9000	10	12/18/2012	12/21/2012	H3

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Kylie Emily
 Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1139
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: ADOT-NOG-AUTO-G (PVL1139-01) - Water					
SM 9221F	0	12/14/2012 13:00	12/17/2012 17:40	12/18/2012 13:25	12/21/2012 10:00
SM 9222D	0	12/14/2012 13:00	12/17/2012 17:40	12/18/2012 14:10	12/19/2012 14:10

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1139
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0909 Extracted: 12/24/12										
Blank Analyzed: 12/24/2012 (12L0909-BLK1)										
N-Hexane Extractable (HEM)	ND	5.0	mg/l							
N-Hexane Extractable Silica Gel Treated (SGT)	ND	10	mg/l							
LCS Analyzed: 12/24/2012 (12L0909-BS1)										
N-Hexane Extractable (HEM)	42.2	5.0	mg/l	40.0		106	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	19.5	10	mg/l	20.0		98	64-132			
LCS Dup Analyzed: 12/24/2012 (12L0909-BSD1)										
N-Hexane Extractable (HEM)	42.9	5.0	mg/l	40.0		107	78-114	2	18	
N-Hexane Extractable Silica Gel Treated (SGT)	20.3	10	mg/l	20.0		102	64-132	4	34	
Matrix Spike Analyzed: 12/24/2012 (12L0909-MS1)										
					Source: PVL1084-01					
N-Hexane Extractable (HEM)	45.5	5.0	mg/l	40.0	10.5	87	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	21.6	10	mg/l	20.0	6.30	76	64-132			

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Kylie Emily
 Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1139
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0728 Extracted: 12/18/12										
Blank Analyzed: 12/18/2012 (12L0728-BLK1)										
Cyanide, Total	ND	0.050	mg/l							
LCS Analyzed: 12/18/2012 (12L0728-BS1)										
Cyanide, Total	0.0909	0.050	mg/l	0.100		91	90-110			
LCS Dup Analyzed: 12/18/2012 (12L0728-BSD1)										
Cyanide, Total	0.0928	0.050	mg/l	0.100		93	90-110	2	20	
Matrix Spike Analyzed: 12/18/2012 (12L0728-MS1)					Source: PVL0976-01					
Cyanide, Total	0.106	0.050	mg/l	0.100	ND	106	80-120			
Matrix Spike Dup Analyzed: 12/18/2012 (12L0728-MSD1)					Source: PVL0976-01					
Cyanide, Total	0.0846	0.050	mg/l	0.100	ND	85	80-120	22	20	R4

TestAmerica Phoenix

Kylie Emily
 Project Manager

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PVL1139 <Page 7 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1139
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

MICROBIOLOGICALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0673 Extracted: 12/18/12										
Blank Analyzed: 12/19/2012 (12L0673-BLK1)										
Fecal Coliform	ND	1	CFU/100 ml							

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Kylie Emily
Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1139
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

DATA QUALIFIERS AND DEFINITIONS

> Greater than.
H3 Sample was received and analyzed past holding time.
N1 See case narrative.
R4 MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD Relative Percent Difference

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1139 <Page 9 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1139
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1664A SGT	Water		X
EPA 1664A	Water		X
SM 4500CN-E	Water		X
SM 9221F	Water		X
SM 9222D	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1139 <Page 10 of 10>

LABORATORY REPORT

Prepared For: Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project: 308032.19

Sampled: 12/14/12
Received: 12/17/12
Issued: 12/31/12 09:05

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PVL1140-01

CLIENT ID

ADOT-NOG-YD

MATRIX

Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
Cyanide samples are tested for the presence of sulfide within 24hrs of sampling. The sample requiring cyanide was recieved and tested after the 24hr period.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:



TestAmerica Phoenix

Kylie Emily
Project Manager

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1140
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1140-01 (ADOT-NOG-YD - Water)								
Reporting Units: mg/l								
N-Hexane Extractable (HEM)	EPA 1664A	12L0909	5.0	10	1	12/24/2012	12/24/2012	
N-Hexane Extractable Silica Gel Treated (SGT)	EPA 1664A SGT	12L0909	10	ND	1	12/24/2012	12/24/2012	

TestAmerica Phoenix

Kylie Emily
 Project Manager

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PVL1140 <Page 2 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1140
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1140-01 (ADOT-NOG-YD - Water)								
Reporting Units: mg/l								
Cyanide, Total	SM 4500CN-E	12L0728	0.050	ND	1	12/18/2012	12/18/2012	

TestAmerica Phoenix

Kylie Emily
 Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1140
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

MICROBIOLOGICALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1140-01 (ADOT-NOG-YD - Water)								
Reporting Units: CFU/100 ml								
Fecal Coliform	SM 9222D	12L0673	100	20000	100	12/18/2012	12/19/2012	>, H3
Sample ID: PVL1140-01 (ADOT-NOG-YD - Water)								
Reporting Units: MPN/100 ml								
E. Coli - MPN	SM 9221F	12L0667	20	1700	10	12/18/2012	12/21/2012	H3

TestAmerica Phoenix

Kylie Emily
 Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1140
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: ADOT-NOG-YD (PVL1140-01) - Water					
SM 9221F	0	12/14/2012 11:00	12/17/2012 17:40	12/18/2012 13:25	12/21/2012 10:00
SM 9222D	0	12/14/2012 11:00	12/17/2012 17:40	12/18/2012 14:10	12/19/2012 14:10

TestAmerica Phoenix

Kylie Emily
 Project Manager

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PVL1140 <Page 5 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1140
 Attention: John Burton

Sampled: 12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0909 Extracted: 12/24/12										
Blank Analyzed: 12/24/2012 (12L0909-BLK1)										
N-Hexane Extractable (HEM)	ND	5.0	mg/l							
N-Hexane Extractable Silica Gel Treated (SGT)	ND	10	mg/l							
LCS Analyzed: 12/24/2012 (12L0909-BS1)										
N-Hexane Extractable (HEM)	42.2	5.0	mg/l	40.0		106	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	19.5	10	mg/l	20.0		98	64-132			
LCS Dup Analyzed: 12/24/2012 (12L0909-BSD1)										
N-Hexane Extractable (HEM)	42.9	5.0	mg/l	40.0		107	78-114	2	18	
N-Hexane Extractable Silica Gel Treated (SGT)	20.3	10	mg/l	20.0		102	64-132	4	34	
Matrix Spike Analyzed: 12/24/2012 (12L0909-MS1)										
					Source: PVL1084-01					
N-Hexane Extractable (HEM)	45.5	5.0	mg/l	40.0	10.5	87	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	21.6	10	mg/l	20.0	6.30	76	64-132			

TestAmerica Phoenix

Kylie Emily
 Project Manager

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PVL1140 <Page 6 of 10>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.19

Report Number: PVL1140

Sampled: 12/14/12

Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0728 Extracted: 12/18/12										
Blank Analyzed: 12/18/2012 (12L0728-BLK1)										
Cyanide, Total	ND	0.050	mg/l							
LCS Analyzed: 12/18/2012 (12L0728-BS1)										
Cyanide, Total	0.0909	0.050	mg/l	0.100		91	90-110			
LCS Dup Analyzed: 12/18/2012 (12L0728-BSD1)										
Cyanide, Total	0.0928	0.050	mg/l	0.100		93	90-110	2	20	
Matrix Spike Analyzed: 12/18/2012 (12L0728-MS1)					Source: PVL0976-01					
Cyanide, Total	0.106	0.050	mg/l	0.100	ND	106	80-120			
Matrix Spike Dup Analyzed: 12/18/2012 (12L0728-MSD1)					Source: PVL0976-01					
Cyanide, Total	0.0846	0.050	mg/l	0.100	ND	85	80-120	22	20	R4

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1140 <Page 7 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1140
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

MICROBIOLOGICALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0673 Extracted: 12/18/12										
Blank Analyzed: 12/19/2012 (12L0673-BLK1)										
Fecal Coliform	ND	1	CFU/100 ml							

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1140 <Page 8 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1140
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

DATA QUALIFIERS AND DEFINITIONS

> Greater than.
H3 Sample was received and analyzed past holding time.
R4 MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD Relative Percent Difference

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1140 <Page 9 of 10>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1140
Attention: John Burton

Sampled: 12/14/12
Received: 12/17/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1664A SGT	Water		X
EPA 1664A	Water		X
SM 4500CN-E	Water		X
SM 9221F	Water		X
SM 9222D	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVL1140 <Page 10 of 10>

CHAIN OF CUSTODY FORM

Page 1 of 1Page 1 of 1

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21/11/21

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LABORATORY REPORT

Prepared For: Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project: 308032.02

Sampled: 08/16/12
Received: 08/17/12
Issued: 08/28/12 17:18

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PVH1436-01

CLIENT ID

Nogales M.F.

MATRIX

Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
H5-Field parameter with a holding time of 15 minutes. It is the laboratory's policy to analyze the sample within 24 hrs of sampleing. The sample was received and analyzed after this 24hr period.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.
N1a-pH = 6

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
N1-This analyte was reported as ND based on the "total" result of ND. No additional analysis was performed.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:



TestAmerica Phoenix

Kylie Emily
Project Manager

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVH1436
 Attention: John Burton

Sampled: 08/16/12
 Received: 08/17/12

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1436-01 (Nogales M.F. - Water)								
Reporting Units: mg/l								
N-Hexane Extractable Silica Gel Treated (SGT)	EPA 1664A SGT	12H1091	10	ND	1	8/24/2012	8/24/2012	N1

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 Project Manager

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PVH1436 <Page 2 of 14>

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVH1436
 Attention: John Burton

Sampled: 08/16/12
 Received: 08/17/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1436-01 (Nogales M.F. - Water)								
Reporting Units: mg/l								
Calcium	EPA 200.7	12H0832	2.0	31	1	8/20/2012	8/23/2012	
Hardness, Total	SM2340B	[CALC]	13	100	1	8/20/2012	8/23/2012	
Magnesium	EPA 200.7	12H0832	2.0	5.8	1	8/20/2012	8/23/2012	
Sample ID: PVH1436-01RE2 (Nogales M.F. - Water)								
Reporting Units: mg/l								
Copper	EPA 200.7	12H1129	0.010	0.016	1	8/26/2012	8/27/2012	

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PVH1436 <Page 3 of 14>

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1436
Attention: John Burton

Sampled: 08/16/12
Received: 08/17/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1436-01 (Nogales M.F. - Water)								
Reporting Units: mg/l								
Ammonia-N	SM 4500NH3-D	12H1073	0.50	ND	1	8/26/2012	8/26/2012	Q5, N1a
Chlorine, Total Residual	HACH 8167	12H0778	0.050	0.089	1	8/17/2012	8/17/2012	H5, Q10
Total Dissolved Solids	SM 2540C	12H0987	20	230	1	8/23/2012	8/23/2012	
Total Suspended Solids	SM 2540D	12H0952	10	43	1	8/22/2012	8/22/2012	

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PVH1436 <Page 4 of 14>

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVH1436
 Attention: John Burton

Sampled: 08/16/12
 Received: 08/17/12

MICROBIOLOGICALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1436-01 (Nogales M.F. - Water)								
Reporting Units: MPN/100 ml								
E. Coli - MPN	SM 9221F	12H0922	2	>1600	1	8/17/2012	8/19/2012	H3

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PVH1436 <Page 5 of 14>

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1436
Attention: John Burton

Sampled: 08/16/12
Received: 08/17/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Nogales M.F. (PVH1436-01) - Water					
HACH 8167	1	08/16/2012 12:00	08/17/2012 11:28	08/17/2012 17:20	08/17/2012 17:41
SM 9221F	0	08/16/2012 12:00	08/17/2012 11:28	08/17/2012 12:10	08/19/2012 13:20

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PVH1436 <Page 6 of 14>

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVH1436
 Attention: John Burton

Sampled: 08/16/12
 Received: 08/17/12

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1091 Extracted: 08/24/12										
Blank Analyzed: 08/24/2012 (12H1091-BLK1)										
N-Hexane Extractable Silica Gel Treated (SGT)	ND	10	mg/l							
LCS Analyzed: 08/24/2012 (12H1091-BS1)										
N-Hexane Extractable Silica Gel Treated (SGT)	17.4	10	mg/l	20.0		87	64-132			
LCS Dup Analyzed: 08/24/2012 (12H1091-BSD1)										
N-Hexane Extractable Silica Gel Treated (SGT)	17.5	10	mg/l	20.0		87	64-132	0.2	34	
Matrix Spike Analyzed: 08/24/2012 (12H1091-MS1)										
N-Hexane Extractable Silica Gel Treated (SGT)	17.7	10	mg/l	20.0	ND	88	64-132			
					Source: PVH1392-01					

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Engineering and Environmental Consultants Phoenix Project ID: 308032.02
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1436
Attention: John Burton

Sampled: 08/16/12
Received: 08/17/12

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H0832 Extracted: 08/20/12										
Blank Analyzed: 08/23/2012 (12H0832-BLK1)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	2.0	mg/l							
LCS Analyzed: 08/23/2012 (12H0832-BS1)										
Calcium	20.3	2.0	mg/l	21.0		97	85-115			
Magnesium	20.0	2.0	mg/l	21.0		95	85-115			
LCS Dup Analyzed: 08/23/2012 (12H0832-BSD1)										
Calcium	20.5	2.0	mg/l	21.0		97	85-115	0.6	20	
Magnesium	20.1	2.0	mg/l	21.0		96	85-115	0.8	20	
Matrix Spike Analyzed: 08/23/2012 (12H0832-MS1)										
Calcium	403	2.0	mg/l	21.0	405	-8	70-130			M3
Magnesium	86.3	2.0	mg/l	21.0	69.7	79	70-130			
Matrix Spike Dup Analyzed: 08/23/2012 (12H0832-MSD1)										
Calcium	411	2.0	mg/l	21.0	405	29	70-130	2	20	M3
Magnesium	87.4	2.0	mg/l	21.0	69.7	84	70-130	1	20	
Batch: 12H1129 Extracted: 08/26/12										
Blank Analyzed: 08/27/2012 (12H1129-BLK1)										
Copper	ND	0.010	mg/l							
LCS Analyzed: 08/27/2012 (12H1129-BS1)										
Copper	0.926	0.010	mg/l	1.00		93	85-115			

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PVH1436 <Page 8 of 14>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.02

Report Number: PVH1436

Sampled: 08/16/12

Received: 08/17/12

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1129 Extracted: 08/26/12										
LCS Dup Analyzed: 08/27/2012 (12H1129-BSD1)										
Copper	0.919	0.010	mg/l	1.00		92	85-115	0.7	20	
Matrix Spike Analyzed: 08/27/2012 (12H1129-MS1)										
Copper	0.956	0.010	mg/l	1.00	ND	96	70-130			
Matrix Spike Dup Analyzed: 08/27/2012 (12H1129-MSD1)										
Copper	0.962	0.010	mg/l	1.00	ND	96	70-130	0.5	20	

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PVH1436 <Page 9 of 14>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.02
Report Number: PVH1436

Sampled: 08/16/12
Received: 08/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H0778 Extracted: 08/17/12										
Blank Analyzed: 08/17/2012 (12H0778-BLK1)										
Chlorine, Total Residual	ND	0.050	mg/l							
LCS Analyzed: 08/17/2012 (12H0778-BS1)										
Chlorine, Total Residual	1.08	0.050	mg/l	0.999		108	90-110			
LCS Dup Analyzed: 08/17/2012 (12H0778-BSD1)										
Chlorine, Total Residual	1.07	0.050	mg/l	0.999		107	90-110	0.7	20	
Duplicate Analyzed: 08/17/2012 (12H0778-DUP1)										
Chlorine, Total Residual	0.0880	0.050	mg/l		Source: PVH1436-01 0.0890			1	20	H5
Batch: 12H0952 Extracted: 08/22/12										
Blank Analyzed: 08/22/2012 (12H0952-BLK1)										
Total Suspended Solids	ND	5.0	mg/l							
LCS Analyzed: 08/22/2012 (12H0952-BS1)										
Total Suspended Solids	202	10	mg/l	200		101	90-110			
LCS Dup Analyzed: 08/22/2012 (12H0952-BSD1)										
Total Suspended Solids	199	10	mg/l	200		100	90-110	1	10	
Duplicate Analyzed: 08/22/2012 (12H0952-DUP1)										
Total Suspended Solids	8220	200	mg/l		Source: PVH1423-01 8460			3	10	
Duplicate Analyzed: 08/22/2012 (12H0952-DUP2)										
Total Suspended Solids	784	40	mg/l		Source: PVH1481-01 684			14	10	R9

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PVH1436 <Page 10 of 14>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.02

Report Number: PVH1436

Sampled: 08/16/12

Received: 08/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H0987 Extracted: 08/23/12										
Blank Analyzed: 08/23/2012 (12H0987-BLK1)										
Total Dissolved Solids	ND	20	mg/l							
LCS Analyzed: 08/23/2012 (12H0987-BS1)										
Total Dissolved Solids	994	20	mg/l	1000		99	80-115			
LCS Dup Analyzed: 08/23/2012 (12H0987-BSD1)										
Total Dissolved Solids	1000	20	mg/l	1000		100	80-115	1	10	
Duplicate Analyzed: 08/23/2012 (12H0987-DUP1)										
Total Dissolved Solids	376	20	mg/l		Source: PVH1332-01 356			5	10	
Duplicate Analyzed: 08/23/2012 (12H0987-DUP2)										
Total Dissolved Solids	2000	40	mg/l		Source: PVH1743-01 2040			2	10	
Batch: 12H1073 Extracted: 08/26/12										
Blank Analyzed: 08/26/2012 (12H1073-BLK1)										
Ammonia-N	ND	0.50	mg/l							
LCS Analyzed: 08/26/2012 (12H1073-BS1)										
Ammonia-N	25.4	0.50	mg/l	25.0		102	80-120			
LCS Dup Analyzed: 08/26/2012 (12H1073-BSD1)										
Ammonia-N	25.8	0.50	mg/l	25.0		103	80-120	1	20	
Matrix Spike Analyzed: 08/26/2012 (12H1073-MS1)										
Ammonia-N	20.8	0.50	mg/l	25.0	Source: PVH1438-01RE1 0.544	81	80-120			

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PVH1436 <Page 11 of 14>

Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.02

Report Number: PVH1436

Sampled: 08/16/12

Received: 08/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1073 Extracted: 08/26/12										
Matrix Spike Dup Analyzed: 08/26/2012 (12H1073-MSD1)										
Ammonia-N	19.7	0.50	mg/l	25.0	0.544	77	80-120	5	20	M2

Source: PVH1438-01RE1

TestAmerica Phoenix

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PVH1436 <Page 12 of 14>

Engineering and Environmental Consultants Phoenix Project ID: 308032.02
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1436
Attention: John Burton

Sampled: 08/16/12
Received: 08/17/12

DATA QUALIFIERS AND DEFINITIONS

H3	Sample was received and analyzed past holding time.
H5	Field parameter with a holding time of 15 minutes.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
N1	See case narrative.
Q10	Sample received in inappropriate sample container.
Q5	Sample received with inadequate chemical preservation, but preserved by the laboratory.
R9	Sample RPD exceeded the laboratory acceptance limit
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Phoenix

Kylie Emily
Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.02
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1436
Attention: John Burton

Sampled: 08/16/12
Received: 08/17/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1664A SGT	Water		X
EPA 200.7	Water		X
HACH 8167	Water		X
SM 2540C	Water		X
SM 2540D	Water		X
SM 4500NH3-D	Water		X
SM 9221F	Water		X
SM2340B	Water		X

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Project Manager

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PVH1436 <Page 14 of 14>

CHAIN OF CUSTODY FORM

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

- [] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
- [] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
- [] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1[illegible]

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PHX
1.10c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Wednesday February 06, 2013

Report Number: L617489

Samples Received: 01/29/13

Client Project: 308032.20

Description: ADOT Stormwater - Flagstaff MS4

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Flagstaff MS4
Sample ID : FLAG012513 COMP
Collected By : John Burton
Collection Date : 01/25/13 06:33

ESC Sample # : L617489-01

Site ID : FLAGSTAFF MS4

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	36.	1.0	mg/l	300.0	01/29/13	1
Sulfate	BDL	5.0	mg/l	300.0	01/29/13	1
BOD	15.0	5.00	mg/l	5210 B-2011	02/03/13	1
Chlorine, residual	0.14	0.10	mg/l	4500Cl G-2011	01/31/13	1
COD	200	10.	mg/l	410.4	01/31/13	1
Hardness, Total (mg/L as CaCO3)	120	30.	mg/l	130.1	02/05/13	1
MBAS	BDL	0.10	mg/l	5540 C-2011	01/30/13	1
Ammonia Nitrogen	0.34	0.10	mg/l	350.1	01/30/13	1
Nitrate-Nitrite	0.16	0.10	mg/l	353.2	02/02/13	1
Phosphate, Ortho	0.36	0.25	mg/l	4500P-E	01/30/13	10
Phosphorus, Total	2.0	0.10	mg/l	365.4	01/31/13	1
Specific Conductance	220		umhos/cm	120.1	02/05/13	1
Kjeldahl Nitrogen, TKN	3.2	0.10	mg/l	351.2	02/01/13	1
Turbidity	180	0.10	NTU	2130 B-2011	01/31/13	1
Dissolved Solids	120	10.	mg/l	2540 C-2011	02/01/13	1
Suspended Solids	260	1.0	mg/l	2540 D-2011	02/04/13	1
Mercury	BDL	0.00020	mg/l	245.1	01/30/13	1
Antimony	BDL	0.020	mg/l	200.7	01/29/13	1
Arsenic	BDL	0.020	mg/l	200.7	01/29/13	1
Barium	0.26	0.0050	mg/l	200.7	01/29/13	1
Beryllium	BDL	0.0040	mg/l	200.7	01/30/13	2
Cadmium	BDL	0.0050	mg/l	200.7	01/29/13	1
Calcium	31.	0.50	mg/l	200.7	01/29/13	1
Chromium	0.015	0.010	mg/l	200.7	01/29/13	1
Copper	0.044	0.020	mg/l	200.7	01/29/13	1
Lead	0.037	0.0050	mg/l	200.7	01/29/13	1
Nickel	BDL	0.020	mg/l	200.7	01/29/13	1
Selenium	BDL	0.020	mg/l	200.7	01/29/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Flagstaff MS4
Sample ID : FLAG012513 COMP
Collected By : John Burton
Collection Date : 01/25/13 06:33

ESC Sample # : L617489-01
Site ID : FLAGSTAFF MS4
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Silver	BDL	0.010	mg/l	200.7	01/29/13	1
Sodium	30.	0.50	mg/l	200.7	01/29/13	1
Zinc	0.30	0.030	mg/l	200.7	01/29/13	1
Benzene	BDL	0.00050	mg/l	602	01/30/13	1
Toluene	BDL	0.0050	mg/l	602	01/30/13	1
Ethylbenzene	BDL	0.00050	mg/l	602	01/30/13	1
Total Xylene	BDL	0.0015	mg/l	602	01/30/13	1
Surrogate Recovery(%)						
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	602	01/30/13	1
Pesticides						
Aldrin	BDL	0.000050	mg/l	8081 A	02/01/13	1
Alpha BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Beta BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Delta BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Gamma BHC	BDL	0.000050	mg/l	8081 A	02/01/13	1
Chlordane	BDL	0.00050	mg/l	8081 A	02/01/13	1
4,4-DDD	BDL	0.000050	mg/l	8081 A	02/01/13	1
4,4-DDE	BDL	0.000050	mg/l	8081 A	02/01/13	1
4,4-DDT	BDL	0.000050	mg/l	8081 A	02/01/13	1
Dieldrin	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endosulfan I	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endosulfan II	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endosulfan sulfate	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endrin	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endrin aldehyde	BDL	0.000050	mg/l	8081 A	02/01/13	1
Endrin ketone	BDL	0.000050	mg/l	8081 A	02/01/13	1
Hexachlorobenzene	BDL	0.000050	mg/l	8081 A	02/01/13	1
Heptachlor	BDL	0.000050	mg/l	8081 A	02/01/13	1
Heptachlor epoxide	BDL	0.000050	mg/l	8081 A	02/01/13	1
Methoxychlor	BDL	0.000050	mg/l	8081 A	02/01/13	1
Toxaphene	BDL	0.00050	mg/l	8081 A	02/01/13	1
Pesticides Surrogates						
Decachlorobiphenyl	66.1		% Rec.	8081 A	02/01/13	1
Tetrachloro-m-xylene	71.7		% Rec.	8081 A	02/01/13	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Anthracene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzidine	BDL	0.010	mg/l	8270 C	01/31/13	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	01/31/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Flagstaff MS4

ESC Sample # : L617489-01

Sample ID : FLAG012513 COMP

Site ID : FLAGSTAFF MS4

Collected By : John Burton
Collection Date : 01/25/13 06:33

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	01/31/13	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	01/31/13	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	01/31/13	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	01/31/13	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	01/31/13	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	01/31/13	1
Chrysene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	01/31/13	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	01/31/13	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	01/31/13	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Fluorene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	01/31/13	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	01/31/13	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	01/31/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Isophorone	BDL	0.010	mg/l	8270 C	01/31/13	1
Naphthalene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	01/31/13	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	01/31/13	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	01/31/13	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	01/31/13	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	01/31/13	1
Pyrene	BDL	0.0010	mg/l	8270 C	01/31/13	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	01/31/13	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	01/31/13	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	01/31/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Flagstaff MS4
Sample ID : FLAG012513 COMP
Collected By : John Burton
Collection Date : 01/25/13 06:33

ESC Sample # : L617489-01
Site ID : FLAGSTAFF MS4
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Nitrophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
Phenol	BDL	0.010	mg/l	8270 C	01/31/13	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	01/31/13	1
Surrogate Recovery						
2-Fluorophenol	47.1		% Rec.	8270 C	01/31/13	1
Phenol-d5	34.0		% Rec.	8270 C	01/31/13	1
Nitrobenzene-d5	80.5		% Rec.	8270 C	01/31/13	1
2-Fluorobiphenyl	92.2		% Rec.	8270 C	01/31/13	1
2,4,6-Tribromophenol	92.2		% Rec.	8270 C	01/31/13	1
p-Terphenyl-d14	113.		% Rec.	8270 C	01/31/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

February 06, 2013

Date Received : January 29, 2013
Description : ADOT Stormwater - Flagstaff MS4
Sample ID : FLAG012513 GRAB
Collected By : John Burton
Collection Date : 01/25/13 06:33

ESC Sample # : L617489-02
Site ID : FLAGSTAFF MS4
Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH (On Site)	7.2		su			
Temperature (on-site)	53.		Deg. F			
Coliform, fecal	120		col/100ml	SM9222D	01/30/13	1
Cyanide	0.016	0.0050	mg/l	4500CN E-2011	02/01/13	1
Oil & Grease (Hexane Extr)	7.6	5.0	mg/l	1664A	02/04/13	1
E.Coli	140	10.	MPN/100ml	9223B-2004	01/30/13	10
Coliform, Total	4400	10.	MPN/100ml	9223B-2004	01/30/13	10
TPH (GC/FID) High Fraction	0.14	0.10	mg/l	3510C/DRO	02/01/13	1
Surrogate recovery(%)						
o-Terphenyl	91.1		% Rec.	3510C/DRO	02/01/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/06/13 13:46 Printed: 02/06/13 15:04

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L617489-01	WG634587	SAMP	Phosphate,Ortho	R2526438	T8
	WG634418	SAMP	Beryllium	R2521997	O
	WG634335	SAMP	BOD	R2527239	J4T8
	WG634625	SAMP	Chlorine,residual	R2524278	T8
	WG634555	SAMP	MBAS	R2523377	T8
	WG634793	SAMP	Turbidity	R2525358	T8
L617489-02	WG635164	SAMP	Oil & Grease (Hexane Extr)	R2527917	L3
	WG635274	SAMP	Coliform,fecal	R2529137	T8
	WG635192	SAMP	E.Coli	R2527841	T8
	WG635192	SAMP	Coliform,Total	R2527841	T8
	WG634647	SAMP	Cyanide	R2526177	W

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
L3	(ESC) Sample reanalysis and/or spiking could not be performed due to lack of additional volume.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
W	(ESC)-The laboratory analysis was from a sample collected in an improper container

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



YOUR LAB OF CHOICE

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Quality Assurance Report
Level II

L617489

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February 06, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Antimony	< .02	mg/l			WG634418	01/29/13 22:13
Arsenic	< .02	mg/l			WG634418	01/29/13 22:13
Barium	< .005	mg/l			WG634418	01/29/13 22:13
Beryllium	< .002	mg/l			WG634418	01/29/13 22:13
Cadmium	< .005	mg/l			WG634418	01/29/13 22:13
Calcium	< .5	mg/l			WG634418	01/29/13 22:13
Chromium	< .01	mg/l			WG634418	01/29/13 22:13
Copper	< .02	mg/l			WG634418	01/29/13 22:13
Lead	< .005	mg/l			WG634418	01/29/13 22:13
Nickel	< .02	mg/l			WG634418	01/29/13 22:13
Selenium	< .02	mg/l			WG634418	01/29/13 22:13
Silver	< .01	mg/l			WG634418	01/29/13 22:13
Sodium	< .5	mg/l			WG634418	01/29/13 22:13
Zinc	< .03	mg/l			WG634418	01/29/13 22:13
Chloride	< 1	mg/l			WG634319	01/29/13 07:44
Sulfate	< 5	mg/l			WG634319	01/29/13 07:44
Benzene	< .0005	mg/l			WG634494	01/29/13 23:45
Ethylbenzene	< .0005	mg/l			WG634494	01/29/13 23:45
Toluene	< .005	mg/l			WG634494	01/29/13 23:45
Total Xylene	< .0015	mg/l			WG634494	01/29/13 23:45
a,a,a-Trifluorotoluene(PID)		% Rec.	101.7	55-122	WG634494	01/29/13 23:45
Ammonia Nitrogen	< .1	mg/l			WG634372	01/30/13 14:44
MBAS	< .1	mg/l			WG634555	01/30/13 15:46
Mercury	< .0002	mg/l			WG634524	01/30/13 20:21
Chlorine, residual	< .1	mg/l			WG634625	01/31/13 13:06
1,2,4-Trichlorobenzene	< .01	mg/l			WG634623	01/31/13 04:53
2,4,6-Trichlorophenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dichlorophenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dimethylphenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dinitrophenol	< .01	mg/l			WG634623	01/31/13 04:53
2,4-Dinitrotoluene	< .01	mg/l			WG634623	01/31/13 04:53
2,6-Dinitrotoluene	< .01	mg/l			WG634623	01/31/13 04:53
2-Chloronaphthalene	< .001	mg/l			WG634623	01/31/13 04:53
2-Chlorophenol	< .01	mg/l			WG634623	01/31/13 04:53
2-Nitrophenol	< .01	mg/l			WG634623	01/31/13 04:53
3,3-Dichlorobenzidine	< .01	mg/l			WG634623	01/31/13 04:53
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG634623	01/31/13 04:53
4-Bromophenyl-phenylether	< .01	mg/l			WG634623	01/31/13 04:53
4-Chloro-3-methylphenol	< .01	mg/l			WG634623	01/31/13 04:53
4-Chlorophenyl-phenylether	< .01	mg/l			WG634623	01/31/13 04:53
4-Nitrophenol	< .01	mg/l			WG634623	01/31/13 04:53
Acenaphthene	< .001	mg/l			WG634623	01/31/13 04:53
Acenaphthylene	< .001	mg/l			WG634623	01/31/13 04:53
Anthracene	< .001	mg/l			WG634623	01/31/13 04:53
Benzidine	< .01	mg/l			WG634623	01/31/13 04:53

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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February 06, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(a)anthracene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(a)pyrene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(b)fluoranthene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(g,h,i)perylene	< .001	mg/l			WG634623	01/31/13 04:53
Benzo(k)fluoranthene	< .001	mg/l			WG634623	01/31/13 04:53
Benzylbutyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Bis(2-chloroethoxy)methane	< .01	mg/l			WG634623	01/31/13 04:53
Bis(2-chloroethyl)ether	< .01	mg/l			WG634623	01/31/13 04:53
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG634623	01/31/13 04:53
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Chrysene	< .001	mg/l			WG634623	01/31/13 04:53
Di-n-butyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Di-n-octyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Dibenz(a,h)anthracene	< .001	mg/l			WG634623	01/31/13 04:53
Diethyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Dimethyl phthalate	< .003	mg/l			WG634623	01/31/13 04:53
Fluoranthene	< .001	mg/l			WG634623	01/31/13 04:53
Fluorene	< .001	mg/l			WG634623	01/31/13 04:53
Hexachloro-1,3-butadiene	< .01	mg/l			WG634623	01/31/13 04:53
Hexachlorobenzene	< .001	mg/l			WG634623	01/31/13 04:53
Hexachlorocyclopentadiene	< .01	mg/l			WG634623	01/31/13 04:53
Hexachloroethane	< .01	mg/l			WG634623	01/31/13 04:53
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG634623	01/31/13 04:53
Isophorone	< .01	mg/l			WG634623	01/31/13 04:53
n-Nitrosodi-n-propylamine	< .01	mg/l			WG634623	01/31/13 04:53
n-Nitrosodimethylamine	< .01	mg/l			WG634623	01/31/13 04:53
n-Nitrosodiphenylamine	< .01	mg/l			WG634623	01/31/13 04:53
Naphthalene	< .001	mg/l			WG634623	01/31/13 04:53
Nitrobenzene	< .01	mg/l			WG634623	01/31/13 04:53
Pentachlorophenol	< .001	mg/l			WG634623	01/31/13 04:53
Phenanthrene	< .001	mg/l			WG634623	01/31/13 04:53
Phenol	< .01	mg/l			WG634623	01/31/13 04:53
Pyrene	< .001	mg/l			WG634623	01/31/13 04:53
2,4,6-Tribromophenol		% Rec.	63.80	16-147	WG634623	01/31/13 04:53
2-Fluorobiphenyl		% Rec.	82.30	29-127	WG634623	01/31/13 04:53
2-Fluorophenol		% Rec.	41.10	10-75	WG634623	01/31/13 04:53
Nitrobenzene-d5		% Rec.	74.10	17-119	WG634623	01/31/13 04:53
Phenol-d5		% Rec.	28.70	10-63	WG634623	01/31/13 04:53
p-Terphenyl-d14		% Rec.	94.10	40-174	WG634623	01/31/13 04:53
Turbidity	< .1	NTU			WG634793	01/31/13 15:45
COD	< 10	mg/l			WG634576	01/31/13 14:32
4,4-DDD	< .00005	mg/l			WG634514	02/01/13 10:59
4,4-DDE	< .00005	mg/l			WG634514	02/01/13 10:59
4,4-DDT	< .00005	mg/l			WG634514	02/01/13 10:59
Aldrin	< .00005	mg/l			WG634514	02/01/13 10:59
Alpha BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Beta BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Chlordane	< .005	mg/l			WG634514	02/01/13 10:59
Delta BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Dieldrin	< .00005	mg/l			WG634514	02/01/13 10:59
Endosulfan I	< .00005	mg/l			WG634514	02/01/13 10:59
Endosulfan II	< .00005	mg/l			WG634514	02/01/13 10:59
Endosulfan sulfate	< .00005	mg/l			WG634514	02/01/13 10:59

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Est. 1970

February 06, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Endrin	< .00005	mg/l			WG634514	02/01/13 10:59
Endrin aldehyde	< .00005	mg/l			WG634514	02/01/13 10:59
Endrin ketone	< .00005	mg/l			WG634514	02/01/13 10:59
Gamma BHC	< .00005	mg/l			WG634514	02/01/13 10:59
Heptachlor	< .00005	mg/l			WG634514	02/01/13 10:59
Heptachlor epoxide	< .00005	mg/l			WG634514	02/01/13 10:59
Hexachlorobenzene	< .00005	mg/l			WG634514	02/01/13 10:59
Methoxychlor	< .00005	mg/l			WG634514	02/01/13 10:59
Toxaphene	< .0005	mg/l			WG634514	02/01/13 10:59
Decachlorobiphenyl		% Rec.	80.30	10-141	WG634514	02/01/13 10:59
Tetrachloro-m-xylene		% Rec.	62.40	10-125	WG634514	02/01/13 10:59
Kjeldahl Nitrogen, TKN	< .1	mg/l			WG634374	02/01/13 12:06
Dissolved Solids	< 10	mg/l			WG634450	02/01/13 14:53
Cyanide	< .005	mg/l			WG634647	02/01/13 14:48
Phosphate, Ortho	< .025	mg/l			WG634587	01/30/13 16:30
Nitrate-Nitrite	< .1	mg/l			WG634963	02/02/13 14:51
BOD	0	mg/l			WG634335	02/03/13 09:57
Suspended Solids	< 1	mg/l			WG634449	02/04/13 12:14
Oil & Grease (Hexane Extr)	< 5	mg/l			WG635164	02/04/13 14:50
Specific Conductance	3.00	umhos/cm			WG635000	02/05/13 09:31
Hardness, Total (mg/L as CaCO3)	< 30	mg/l			WG635231	02/05/13 10:28

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Antimony	mg/l	0	0.00550	NA	20		L617511-01	WG634418
Arsenic	mg/l	0	0	0	20		L617511-01	WG634418
Barium	mg/l	0.170	0.160	6.06	20		L617511-01	WG634418
Beryllium	mg/l	0	0	0	20		L617511-01	WG634418
Cadmium	mg/l	0	0.000840	NA	20		L617511-01	WG634418
Calcium	mg/l	77.0	76.6	0.521	20		L617511-01	WG634418
Chromium	mg/l	0	0	0	20		L617511-01	WG634418
Copper	mg/l	0	0.00330	NA	20		L617511-01	WG634418
Lead	mg/l	0	0	0	20		L617511-01	WG634418
Nickel	mg/l	0	0	0	20		L617511-01	WG634418
Selenium	mg/l	0	0	0	20		L617511-01	WG634418
Silver	mg/l	0	0	0	20		L617511-01	WG634418
Sodium	mg/l	21.0	20.6	1.92	20		L617511-01	WG634418
Zinc	mg/l	0.110	0.107	2.76	20		L617511-01	WG634418

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate	Duplicate				
Ammonia Nitrogen	mg/l	1.20	1.40	15.4	20	L617078-01	WG634372	
Ammonia Nitrogen	mg/l	0.840	0.850	1.18	20	L617505-02	WG634372	
MBAS	mg/l	0	0	0	20	L617678-02	WG634555	
Mercury	mg/l	0	0.0000231	16.1	20	L617620-01	WG634524	
Chlorine, residual	mg/l	0	0	0	20	L616890-01	WG634625	
Phosphorus, Total	mg/l	0	0	0	20	L617451-02	WG634373	
Phosphorus, Total	mg/l	4.80	4.90	2.06	20	L617072-01	WG634373	
Turbidity	NTU	150.	150.	0	20	L617732-03	WG634793	
COD	mg/l	460.	510.	10.3*	5	L617524-03	WG634576	
COD	mg/l	540.	540.	0	5	L617058-01	WG634576	
Kjeldahl Nitrogen, TKN	mg/l	2.10	2.10	1.89	20	L617195-01	WG634374	
Kjeldahl Nitrogen, TKN	mg/l	0	0	0	20	L617287-01	WG634374	
Dissolved Solids	mg/l	380.	387.	1.83	5	L617467-01	WG634450	
Cyanide	mg/l	0	0	0	20	L617536-02	WG634647	
Cyanide	mg/l	0	0	0	20	L617298-02	WG634647	
Nitrate-Nitrite	mg/l	0	0.110	NA	20	L617550-01	WG634963	
Nitrate-Nitrite	mg/l	1.50	1.60	6.45	20	L617003-02	WG634963	
BOD	mg/l	27.0	26.0	2.66	5	L617393-02	WG634335	
BOD	mg/l	0	0	0	5	L617451-07	WG634335	
BOD	mg/l	3500	3700	4.53	5	L617529-01	WG634335	
Suspended Solids	mg/l	1100	1200	8.03*	5	L617505-02	WG634449	
Specific Conductance	umhos/cm	220.	220.	0.905	20	L617489-01	WG635000	
Specific Conductance	umhos/cm	26000	26000	0.385	20	L618194-01	WG635000	
Hardness, Total (mg/L as CaCO3)	mg/l	4700	4700	0	20	L618194-01	WG635231	
Hardness, Total (mg/L as CaCO3)	mg/l	200.	200.	0	20	L617287-01	WG635231	

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Antimony	mg/l	1	1.02	102.	85-115	WG634418
Arsenic	mg/l	1	1.01	101.	85-115	WG634418

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Barium	mg/l	1	1.04	104.	85-115	WG634418
Beryllium	mg/l	1	1.01	101.	85-115	WG634418
Cadmium	mg/l	1	1.03	103.	85-115	WG634418
Calcium	mg/l	10	10.5	105.	85-115	WG634418
Chromium	mg/l	1	1.03	103.	85-115	WG634418
Copper	mg/l	1	1.00	100.	85-115	WG634418
Lead	mg/l	1	1.07	107.	85-115	WG634418
Nickel	mg/l	1	0.999	99.9	85-115	WG634418
Selenium	mg/l	1	1.01	101.	85-115	WG634418
Silver	mg/l	1	1.04	104.	85-115	WG634418
Sodium	mg/l	10	10.4	104.	85-115	WG634418
Zinc	mg/l	1	1.01	101.	85-115	WG634418
Chloride	mg/l	40	39.8	99.5	90-110	WG634319
Sulfate	mg/l	40	40.0	100.	90-110	WG634319
Benzene	mg/l	.05	0.0447	89.5	79-114	WG634494
Ethylbenzene	mg/l	.05	0.0524	105.	80-116	WG634494
Toluene	mg/l	.05	0.0491	98.3	79-112	WG634494
Total Xylene	mg/l	.15	0.156	104.	84-118	WG634494
a,a,a-Trifluorotoluene(PID)				100.6	55-122	WG634494
Ammonia Nitrogen	mg/l	7.5	8.01	107.	90-110	WG634372
MBAS	mg/l	1	0.934	93.4	85-115	WG634555
Mercury	mg/l	.003	0.00317	106.	85-115	WG634524
Chlorine, residual	mg/l	1.19	1.12	94.1	85-115	WG634625
1,2,4-Trichlorobenzene	mg/l	.01	0.00746	74.6	18-130	WG634623
2,4,6-Trichlorophenol	mg/l	.01	0.00730	73.0	12-147	WG634623
2,4-Dichlorophenol	mg/l	.01	0.00757	75.7	10-157	WG634623
2,4-Dimethylphenol	mg/l	.01	0.00729	72.9	19-160	WG634623
2,4-Dinitrophenol	mg/l	.01	0.00997	99.7	10-135	WG634623
2,4-Dinitrotoluene	mg/l	.01	0.00808	80.8	30-168	WG634623
2,6-Dinitrotoluene	mg/l	.01	0.00799	79.9	32-163	WG634623
2-Chloronaphthalene	mg/l	.01	0.00829	82.9	29-149	WG634623
2-Chlorophenol	mg/l	.01	0.00677	67.7	16-129	WG634623
2-Nitrophenol	mg/l	.01	0.00802	80.2	14-158	WG634623
3,3-Dichlorobenzidine	mg/l	.01	0.00774	77.4	42-150	WG634623
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00658	65.8	10-164	WG634623
4-Bromophenyl-phenylether	mg/l	.01	0.00843	84.3	40-166	WG634623
4-Chloro-3-methylphenol	mg/l	.01	0.00703	70.3	14-158	WG634623
4-Chlorophenyl-phenylether	mg/l	.01	0.00843	84.3	39-155	WG634623
4-Nitrophenol	mg/l	.01	0.00317	31.7	10-61	WG634623
Acenaphthene	mg/l	.01	0.00834	83.4	37-159	WG634623
Acenaphthylene	mg/l	.01	0.00844	84.4	34-162	WG634623
Anthracene	mg/l	.01	0.00873	87.3	48-167	WG634623
Benidine	mg/l	.01	0.00274	27.4	10-86	WG634623
Benzo(a)anthracene	mg/l	.01	0.00858	85.8	46-167	WG634623
Benzo(a)pyrene	mg/l	.01	0.00826	82.6	39-167	WG634623

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		Known Val	Result			
Benzo(b)fluoranthene	mg/l	.01	0.00834	83.4	39-173	WG634623
Benzo(g,h,i)perylene	mg/l	.01	0.00805	80.5	42-181	WG634623
Benzo(k)fluoranthene	mg/l	.01	0.00864	86.4	42-178	WG634623
Benzylbutyl phthalate	mg/l	.01	0.00916	91.6	10-178	WG634623
Bis(2-chloroethoxy)methane	mg/l	.01	0.00836	83.6	34-155	WG634623
Bis(2-chloroethyl)ether	mg/l	.01	0.00731	73.1	22-149	WG634623
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00793	79.3	26-149	WG634623
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0109	109.	42-191	WG634623
Chrysene	mg/l	.01	0.00911	91.1	46-170	WG634623
Di-n-butyl phthalate	mg/l	.01	0.00869	86.9	33-175	WG634623
Di-n-octyl phthalate	mg/l	.01	0.00912	91.2	40-170	WG634623
Dibenz(a,h)anthracene	mg/l	.01	0.00781	78.1	43-187	WG634623
Diethyl phthalate	mg/l	.01	0.00878	87.8	10-182	WG634623
Dimethyl phthalate	mg/l	.01	0.00879	87.9	10-165	WG634623
Fluoranthene	mg/l	.01	0.00864	86.4	46-171	WG634623
Fluorene	mg/l	.01	0.00852	85.2	39-163	WG634623
Hexachloro-1,3-butadiene	mg/l	.01	0.00763	76.3	18-136	WG634623
Hexachlorobenzene	mg/l	.01	0.00792	79.2	38-163	WG634623
Hexachlorocyclopentadiene	mg/l	.01	0.00792	79.2	10-142	WG634623
Hexachloroethane	mg/l	.01	0.00749	74.9	10-130	WG634623
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00776	77.6	42-184	WG634623
Isophorone	mg/l	.01	0.00833	83.3	36-166	WG634623
n-Nitrosodi-n-propylamine	mg/l	.01	0.00848	84.8	27-157	WG634623
n-Nitrosodimethylamine	mg/l	.01	0.00755	75.5	10-96	WG634623
n-Nitrosodiphenylamine	mg/l	.01	0.00870	87.0	41-168	WG634623
Naphthalene	mg/l	.01	0.00845	84.5	26-147	WG634623
Nitrobenzene	mg/l	.01	0.00790	79.0	22-154	WG634623
Pentachlorophenol	mg/l	.01	0.00735	73.5	10-128	WG634623
Phenanthrene	mg/l	.01	0.00845	84.5	46-163	WG634623
Phenol	mg/l	.01	0.00357	35.7	10-69	WG634623
Pyrene	mg/l	.01	0.00889	88.9	45-176	WG634623
2,4,6-Tribromophenol				76.90	16-147	WG634623
2-Fluorobiphenyl				77.90	29-127	WG634623
2-Fluorophenol				44.30	10-75	WG634623
Nitrobenzene-d5				76.90	17-119	WG634623
Phenol-d5				30.60	10-63	WG634623
p-Terphenyl-d14				82.80	40-174	WG634623
Phosphorus, Total	mg/l	1	1.01	101.	90-110	WG634373
Turbidity	NTU	40	40.5	101.	90-110	WG634793
COD	mg/l	230	234.	102.	90-110	WG634576
4,4-DDD	mg/l	.0002	0.000158	79.2	60-123	WG634514
4,4-DDE	mg/l	.0002	0.000144	72.0	50-120	WG634514
4,4-DDT	mg/l	.0002	0.000164	81.9	61-121	WG634514
Aldrin	mg/l	.0002	0.0000854	42.7	10-136	WG634514
Alpha BHC	mg/l	.0002	0.000155	77.3	58-114	WG634514
Beta BHC	mg/l	.0002	0.000154	77.0	61-120	WG634514
Delta BHC	mg/l	.0002	0.000153	76.4	57-120	WG634514
Dieldrin	mg/l	.0002	0.000163	81.3	62-123	WG634514
Endosulfan I	mg/l	.0002	0.000159	79.7	63-123	WG634514
Endosulfan II	mg/l	.0002	0.000167	83.4	63-124	WG634514
Endosulfan sulfate	mg/l	.0002	0.000146	72.9	59-125	WG634514

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Endrin	mg/l	.0002	0.000160	79.9	60-123	WG634514
Endrin aldehyde	mg/l	.0002	0.000159	79.7	42-92	WG634514
Endrin ketone	mg/l	.0002	0.000180	90.0	60-117	WG634514
Gamma BHC	mg/l	.0002	0.000157	78.6	59-116	WG634514
Heptachlor	mg/l	.0002	0.000101	50.4	10-131	WG634514
Heptachlor epoxide	mg/l	.0002	0.000157	78.6	61-118	WG634514
Hexachlorobenzene	mg/l	.0002	0.000102	51.0	28-116	WG634514
Methoxychlor	mg/l	.0002	0.000181	90.5	66-122	WG634514
Decachlorobiphenyl				98.80	10-141	WG634514
Tetrachloro-m-xylene				70.10	10-125	WG634514
Kjeldahl Nitrogen, TKN	mg/l	8.55	8.46	98.9	90-110	WG634374
Dissolved Solids	mg/l	8800	8510	96.7	85-115	WG634450
Cyanide	mg/l	.1	0.0975	97.5	90-110	WG634647
Phosphate, Ortho	mg/l	.75	0.849	113.	85-115	WG634587
Nitrate-Nitrite	mg/l	5	5.27	105.	90-110	WG634963
BOD	mg/l	198	199.	101.	84.6-115.4	WG634335
BOD	mg/l	198	187.	94.4	84.6-115.4	WG634335
BOD	mg/l	198	230.	116.*	84.6-115.4	WG634335
BOD	mg/l	198	193.	97.5	84.6-115.4	WG634335
BOD	mg/l	198	180.	90.9	84.6-115.4	WG634335
BOD	mg/l	198	192.	97.0	84.6-115.4	WG634335
Suspended Solids	mg/l	773	752.	97.3	85-115	WG634449
Oil & Grease (Hexane Extr)	mg/l	40	40.2	101.	78-114	WG635164
Specific Conductance	umhos/cm	878	899.	102.	85-115	WG635000
Hardness, Total (mg/L as CaCO3)	mg/l	200	209.	105.	85-115	WG635231

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chloride	mg/l	39.8	39.8	100.	90-110	0	20	WG634319
Sulfate	mg/l	40.0	40.0	100.	90-110	0	20	WG634319
Benzene	mg/l	0.0462	0.0447	92.0	79-114	3.26	20	WG634494
Ethylbenzene	mg/l	0.0540	0.0524	108.	80-116	2.92	20	WG634494
Toluene	mg/l	0.0505	0.0491	101.	79-112	2.69	20	WG634494
Total Xylene	mg/l	0.160	0.156	107.	84-118	2.38	20	WG634494
a,a,a-Trifluorotoluene(PID)				101.2	55-122			WG634494

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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Quality Assurance Report
Level II

L617489

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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 06, 2013

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Ammonia Nitrogen	mg/l	7.86	8.01	105.	90-110	1.89	20	WG634372
MBAS	mg/l	0.940	0.934	94.0	85-115	0.640	20	WG634555
Chlorine, residual	mg/l	1.09	1.12	92.0	85-115	2.71	20	WG634625
1,2,4-Trichlorobenzene	mg/l	0.00688	0.00746	69.0	18-130	8.08	32	WG634623
2,4,6-Trichlorophenol	mg/l	0.00814	0.00730	81.0	12-147	10.9	40	WG634623
2,4-Dichlorophenol	mg/l	0.00832	0.00757	83.0	10-157	9.46	40	WG634623
2,4-Dimethylphenol	mg/l	0.00802	0.00729	80.0	19-160	9.46	40	WG634623
2,4-Dinitrophenol	mg/l	0.0107	0.00997	107.	10-135	7.44	40	WG634623
2,4-Dinitrotoluene	mg/l	0.00821	0.00808	82.0	30-168	1.59	32	WG634623
2,6-Dinitrotoluene	mg/l	0.00833	0.00799	83.0	32-163	4.14	30	WG634623
2-Chloronaphthalene	mg/l	0.00790	0.00829	79.0	29-149	4.78	34	WG634623
2-Chlorophenol	mg/l	0.00739	0.00677	74.0	16-129	8.79	40	WG634623
2-Nitrophenol	mg/l	0.00835	0.00802	83.0	14-158	3.96	40	WG634623
3,3-Dichlorobenzidine	mg/l	0.00797	0.00774	80.0	42-150	2.92	29	WG634623
4,6-Dinitro-2-methylphenol	mg/l	0.00763	0.00658	76.0	10-164	14.7	40	WG634623
4-Bromophenyl-phenylether	mg/l	0.00788	0.00843	79.0	40-166	6.70	36	WG634623
4-Chloro-3-methylphenol	mg/l	0.00809	0.00703	81.0	14-158	14.0	40	WG634623
4-Chlorophenyl-phenylether	mg/l	0.00818	0.00843	82.0	39-155	2.97	33	WG634623
4-Nitrophenol	mg/l	0.00346	0.00317	34.0	10-61	8.71	40	WG634623
Acenaphthene	mg/l	0.00812	0.00834	81.0	37-159	2.66	30	WG634623
Acenaphthylene	mg/l	0.00822	0.00844	82.0	34-162	2.69	31	WG634623
Anthracene	mg/l	0.00881	0.00873	88.0	48-167	0.890	26	WG634623
Benzidine	mg/l	0.00261	0.00274	26.0	10-86	5.02	40	WG634623
Benzo(a)anthracene	mg/l	0.00889	0.00858	89.0	46-167	3.64	29	WG634623
Benzo(a)pyrene	mg/l	0.00790	0.00826	79.0	39-167	4.37	29	WG634623
Benzo(b)fluoranthene	mg/l	0.00819	0.00834	82.0	39-173	1.76	32	WG634623
Benzo(g,h,i)perylene	mg/l	0.00794	0.00805	79.0	42-181	1.43	30	WG634623
Benzo(k)fluoranthene	mg/l	0.00904	0.00864	90.0	42-178	4.50	33	WG634623
Benzylbutyl phthalate	mg/l	0.00989	0.00916	99.0	10-178	7.73	40	WG634623
Bis(2-chloroethoxy)methane	mg/l	0.00805	0.00836	80.0	34-155	3.86	31	WG634623
Bis(2-chloroethyl)ether	mg/l	0.00815	0.00731	81.0	22-149	10.9	38	WG634623
Bis(2-chloroisopropyl)ether	mg/l	0.00757	0.00793	76.0	26-149	4.67	34	WG634623
Bis(2-ethylhexyl)phthalate	mg/l	0.0121	0.0109	121.	42-191	10.5	33	WG634623
Chrysene	mg/l	0.00899	0.00911	90.0	46-170	1.32	30	WG634623
Di-n-butyl phthalate	mg/l	0.00882	0.00869	88.0	33-175	1.47	39	WG634623
Di-n-octyl phthalate	mg/l	0.00981	0.00912	98.0	40-170	7.32	28	WG634623
Dibenz(a,h)anthracene	mg/l	0.00764	0.00781	76.0	43-187	2.22	31	WG634623
Diethyl phthalate	mg/l	0.00853	0.00878	85.0	10-182	2.91	35	WG634623
Dimethyl phthalate	mg/l	0.00876	0.00879	88.0	10-165	0.270	37	WG634623
Fluoranthene	mg/l	0.00879	0.00864	88.0	46-171	1.73	37	WG634623
Fluorene	mg/l	0.00862	0.00852	86.0	39-163	1.16	36	WG634623
Hexachloro-1,3-butadiene	mg/l	0.00733	0.00763	73.0	18-136	3.95	30	WG634623
Hexachlorobenzene	mg/l	0.00786	0.00792	78.0	38-163	0.810	35	WG634623
Hexachlorocyclopentadiene	mg/l	0.00766	0.00792	77.0	10-142	3.33	40	WG634623
Hexachloroethane	mg/l	0.00722	0.00749	72.0	10-130	3.68	39	WG634623
Indeno(1,2,3-cd)pyrene	mg/l	0.00778	0.00776	78.0	42-184	0.220	32	WG634623
Isophorone	mg/l	0.00808	0.00833	81.0	36-166	3.01	35	WG634623
n-Nitrosodi-n-propylamine	mg/l	0.00803	0.00848	80.0	27-157	5.48	31	WG634623
n-Nitrosodimethylamine	mg/l	0.00625	0.00755	62.0	10-96	18.7	36	WG634623
n-Nitrosodiphenylamine	mg/l	0.00882	0.00870	88.0	41-168	1.40	37	WG634623
Naphthalene	mg/l	0.00790	0.00845	79.0	26-147	6.72	31	WG634623
Nitrobenzene	mg/l	0.00741	0.00790	74.0	22-154	6.45	37	WG634623

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Pentachlorophenol	mg/l	0.00812	0.00735	81.0	10-128	9.94	40	WG634623
Phenanthrene	mg/l	0.00830	0.00845	83.0	46-163	1.78	29	WG634623
Phenol	mg/l	0.00376	0.00357	38.0	10-69	5.23	40	WG634623
Pyrene	mg/l	0.00887	0.00889	89.0	45-176	0.240	28	WG634623
2,4,6-Tribromophenol				82.70	16-147			WG634623
2-Fluorobiphenyl				73.60	29-127			WG634623
2-Fluorophenol				46.00	10-75			WG634623
Nitrobenzene-d5				73.80	17-119			WG634623
Phenol-d5				32.10	10-63			WG634623
p-Terphenyl-d14				81.70	40-174			WG634623
Phosphorus, Total	mg/l	1.01	1.01	101.	90-110	0	20	WG634373
Turbidity	NTU	40.2	40.5	100.	90-110	0.743	20	WG634793
COD	mg/l	237.	234.	103.	90-110	1.27	5	WG634576
4,4-DDD	mg/l	0.000166	0.000158	83.0	60-123	4.47	20	WG634514
4,4-DDE	mg/l	0.000153	0.000144	76.0	50-120	5.75	22	WG634514
4,4-DDT	mg/l	0.000173	0.000164	86.0	61-121	5.30	20	WG634514
Aldrin	mg/l	0.000103	0.0000854	52.0	10-136	18.9	33	WG634514
Alpha BHC	mg/l	0.000165	0.000155	82.0	58-114	6.23	21	WG634514
Beta BHC	mg/l	0.000162	0.000154	81.0	61-120	4.80	20	WG634514
Delta BHC	mg/l	0.000158	0.000153	79.0	57-120	3.53	21	WG634514
Dieldrin	mg/l	0.000170	0.000163	85.0	62-123	4.48	20	WG634514
Endosulfan I	mg/l	0.000167	0.000159	84.0	63-123	4.84	20	WG634514
Endosulfan II	mg/l	0.000170	0.000167	85.0	63-124	1.72	20	WG634514
Endosulfan sulfate	mg/l	0.000142	0.000146	71.0	59-125	2.41	21	WG634514
Endrin	mg/l	0.000168	0.000160	84.0	60-123	4.81	20	WG634514
Endrin aldehyde	mg/l	0.000154	0.000159	77.0	42-92	3.42	21	WG634514
Endrin ketone	mg/l	0.000181	0.000180	90.0	60-117	0.480	20	WG634514
Gamma BHC	mg/l	0.000166	0.000157	83.0	59-116	5.51	20	WG634514
Heptachlor	mg/l	0.000115	0.000101	58.0	10-131	13.4	28	WG634514
Heptachlor epoxide	mg/l	0.000165	0.000157	82.0	61-118	4.87	20	WG634514
Hexachlorobenzene	mg/l	0.000116	0.000102	58.0	28-116	12.5	27	WG634514
Methoxychlor	mg/l	0.000186	0.000181	93.0	66-122	2.72	20	WG634514
Decachlorobiphenyl				101.0	10-141			WG634514
Tetrachloro-m-xylene				73.90	10-125			WG634514
Kjeldahl Nitrogen, TKN	mg/l	8.26	8.46	97.0	90-110	2.39	20	WG634374
Dissolved Solids	mg/l	8510	8510	97.0	85-115	0	5	WG634450
Cyanide	mg/l	0.102	0.0975	102.	90-110	4.51	20	WG634647
Phosphate, Ortho	mg/l	0.845	0.849	113.	85-115	0.472	20	WG634587
Nitrate-Nitrite	mg/l	5.34	5.27	107.	90-110	1.32	20	WG634963

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Suspended Solids	mg/l	748.	752.	97.0	85-115	0.533	5	WG634449
Oil & Grease (Hexane Extr)	mg/l	39.8	40.2	100.	78-114	1.00	20	WG635164
Specific Conductance	umhos/	900.	899.	102.	85-115	0.111	20	WG635000
Hardness, Total (mg/L as CaCO3)	mg/l	210.	209.	105.	85-115	0.477	20	WG635231

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Antimony	mg/l	1.03	0.00550	1	102.	75-125	L617511-01	WG634418
Arsenic	mg/l	1.01	0	1	101.	75-125	L617511-01	WG634418
Barium	mg/l	1.19	0.160	1	103.	75-125	L617511-01	WG634418
Beryllium	mg/l	1.03	0	1	103.	75-125	L617511-01	WG634418
Cadmium	mg/l	1.02	0.000840	1	102.	75-125	L617511-01	WG634418
Calcium	mg/l	86.6	76.6	10	100.	75-125	L617511-01	WG634418
Chromium	mg/l	1.02	0	1	102.	75-125	L617511-01	WG634418
Copper	mg/l	1.00	0.00330	1	99.7	75-125	L617511-01	WG634418
Lead	mg/l	1.04	0	1	104.	75-125	L617511-01	WG634418
Nickel	mg/l	0.988	0	1	98.8	75-125	L617511-01	WG634418
Selenium	mg/l	1.03	0	1	103.	75-125	L617511-01	WG634418
Silver	mg/l	1.03	0	1	103.	75-125	L617511-01	WG634418
Sodium	mg/l	30.8	20.6	10	102.	75-125	L617511-01	WG634418
Zinc	mg/l	1.10	0.107	1	99.3	75-125	L617511-01	WG634418
Benzene	mg/l	0.0440	0.000390	.05	87.2	35-147	L617548-06	WG634494
Ethylbenzene	mg/l	0.0520	0.00120	.05	102.	39-141	L617548-06	WG634494
Toluene	mg/l	0.0473	0	.05	94.7	35-148	L617548-06	WG634494
Total Xylene	mg/l	0.151	0.000640	.15	100.	33-151	L617548-06	WG634494
a,a,a-Trifluorotoluene(PID)					100.4	55-122		WG634494
Ammonia Nitrogen	mg/l	5.09	0.340	5	95.0	90-110	L617489-01	WG634372
MBAS	mg/l	1.18	0.200	1	98.0	80-120	L617677-01	WG634555
Mercury	mg/l	0.00343	0.0000231	.003	114.	75-125	L617620-01	WG634524
Phosphorus, Total	mg/l	2.41	0	2.5	96.4	90-110	L617451-01	WG634373
COD	mg/l	417.	13.0	400	101.	90-110	L617078-01	WG634576
Kjeldahl Nitrogen, TKN	mg/l	5.96	1.50	5	89.2*	90-110	L617078-01	WG634374
Cyanide	mg/l	0.203	0	.2	102.	90-110	L617432-01	WG634647
Phosphate, Ortho	mg/l	0.512	0	.5	102.	80-120	L617642-06	WG634587

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Nitrate-Nitrite	mg/l	11.0	5.80	5	104.	90-110	L617034-01	WG634963
Hardness, Total (mg/L as CaCO3)	mg/l	169.	0	150	113.	80-120	L617633-01	WG635231

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Antimony	mg/l	1.03	1.03	102.	75-125	0	20	L617511-01	WG634418
Arsenic	mg/l	1.01	1.01	101.	75-125	0	20	L617511-01	WG634418
Barium	mg/l	1.20	1.19	104.	75-125	0.837	20	L617511-01	WG634418
Beryllium	mg/l	1.02	1.03	102.	75-125	0.976	20	L617511-01	WG634418
Cadmium	mg/l	1.02	1.02	102.	75-125	0	20	L617511-01	WG634418
Calcium	mg/l	86.2	86.6	96.0	75-125	0.463	20	L617511-01	WG634418
Chromium	mg/l	1.03	1.02	103.	75-125	0.976	20	L617511-01	WG634418
Copper	mg/l	1.01	1.00	101.	75-125	0.995	20	L617511-01	WG634418
Lead	mg/l	1.06	1.04	106.	75-125	1.90	20	L617511-01	WG634418
Nickel	mg/l	0.990	0.988	99.0	75-125	0.202	20	L617511-01	WG634418
Selenium	mg/l	1.04	1.03	104.	75-125	0.966	20	L617511-01	WG634418
Silver	mg/l	1.04	1.03	104.	75-125	0.966	20	L617511-01	WG634418
Sodium	mg/l	31.0	30.8	104.	75-125	0.647	20	L617511-01	WG634418
Zinc	mg/l	1.11	1.10	100.	75-125	0.905	20	L617511-01	WG634418
Benzene	mg/l	0.0468	0.0440	92.8	35-147	6.23	20	L617548-06	WG634494
Ethylbenzene	mg/l	0.0549	0.0520	107.	39-141	5.30	20	L617548-06	WG634494
Toluene	mg/l	0.0505	0.0473	101.	35-148	6.37	20	L617548-06	WG634494
Total Xylene	mg/l	0.161	0.151	107.	33-151	6.32	20	L617548-06	WG634494
a,a,a-Trifluorotoluene(PID)				100.5	55-122				WG634494
Ammonia Nitrogen	mg/l	5.23	5.09	97.8	90-110	2.71	20	L617489-01	WG634372
MBAS	mg/l	1.20	1.18	100.	80-120	1.68	20	L617677-01	WG634555
Mercury	mg/l	0.00299	0.00343	98.8	75-125	13.8	30	L617620-01	WG634524
Phosphorus, Total	mg/l	2.48	2.41	99.2	90-110	2.86	20	L617451-01	WG634373
COD	mg/l	416.	417.	101.	90-110	0.240	5	L617078-01	WG634576
Kjeldahl Nitrogen, TKN	mg/l	5.96	5.96	89.2*	90-110	0	20	L617078-01	WG634374
Cyanide	mg/l	0.201	0.203	100.	90-110	0.990	20	L617432-01	WG634647
Phosphate, Ortho	mg/l	0.513	0.512	103.	80-120	0.195	20	L617642-06	WG634587
Nitrate-Nitrite	mg/l	11.0	11.0	104.	90-110	0	20	L617034-01	WG634963
Hardness, Total (mg/L as CaCO3)	mg/l	169.	169.	113.	80-120	0	20	L617633-01	WG635231

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Serial Dilution

Batch number /Run number / Sample number cross reference

WG634418: R2521997: L617489-01
WG634319: R2522877: L617489-01
WG634494: R2523177: L617489-01
WG634372: R2523197: L617489-01
WG634555: R2523377: L617489-01
WG634524: R2523460: L617489-01
WG634625: R2524278: L617489-01
WG634623: R2524857: L617489-01
WG634373: R2525198: L617489-01
WG634793: R2525358: L617489-01
WG634576: R2525498: L617489-01
WG634514: R2525699: L617489-01
WG634374: R2525701: L617489-01
WG634450: R2525937: L617489-01
WG634647: R2526177: L617489-02
WG634620: R2526338: L617489-02
WG634587: R2526438: L617489-01
WG634963: R2526682: L617489-01
WG634335: R2527239: L617489-01
WG634449: R2527521: L617489-01
WG635192: R2527841: L617489-02
WG635164: R2527917: L617489-02
WG635000: R2528817: L617489-01
WG635231: R2528940: L617489-01
WG635274: R2529137: L617489-02

* * Calculations are performed prior to rounding of reported values.

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Monday October 22, 2012

Report Number: L600743

Samples Received: 10/13/12

Client Project: 308032.20

Description: ADOT Flagstaff Stormwater

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

October 22, 2012

Date Received : October 13, 2012
Description : ADOT Flagstaff Stormwater
Sample ID : FLAG101212
Collected By : John Burton
Collection Date : 10/12/12 10:43

ESC Sample # : L600743-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	14.	1.0	mg/l	300.0	10/18/12	1
Nitrate	0.63	0.10	mg/l	300.0	10/13/12	1
Nitrite	0.19	0.10	mg/l	300.0	10/13/12	1
Sulfate	BDL	5.0	mg/l	300.0	10/13/12	1
BOD	BDL	5.00	mg/l	SM5210B	10/18/12	1
Chlorine, Total	BDL	0.10	mg/l	4500Cl-G	10/19/12	1
COD	44.	10.	mg/l	410.4	10/19/12	1
Cyanide	BDL	0.0050	mg/l	4500CN-E	10/17/12	1
Hardness, Total (mg/L as CaCO3)	67.	30.	mg/l	130.1	10/19/12	1
MBAS	0.13	0.10	mg/l	5540C	10/17/12	1
Ammonia Nitrogen	0.12	0.10	mg/l	350.1	10/22/12	1
Oil & Grease (Hexane Extr)	BDL	5.0	mg/l	1664A	10/16/12	1
Phosphate, Ortho	0.18	0.025	mg/l	4500P-E	10/13/12	1
Phosphorus, Total	0.34	0.10	mg/l	365.1	10/18/12	1
E.Coli	<9700	4.0	MPN/100ml	9223B	10/13/12	4
Coliform, Total	<9700	4.0	MPN/100ml	9223B	10/13/12	4
Specific Conductance	160		umhos/cm	120.1	10/16/12	1
Kjeldahl Nitrogen, TKN	1.1	0.10	mg/l	351.2	10/17/12	1
Turbidity	33.	0.10	NTU	SM2130B	10/13/12	1
Dissolved Solids	100	10.	mg/l	2540C	10/19/12	1
Suspended Solids	95.	1.0	mg/l	2540D	10/19/12	1
Mercury	BDL	0.00020	mg/l	245.1	10/18/12	1
Antimony	BDL	0.020	mg/l	200.7	10/19/12	1
Arsenic	BDL	0.020	mg/l	200.7	10/19/12	1
Barium	0.070	0.0050	mg/l	200.7	10/19/12	1
Beryllium	BDL	0.0020	mg/l	200.7	10/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

October 22, 2012

Date Received : October 13, 2012
Description : ADOT Flagstaff Stormwater
Sample ID : FLAG101212
Collected By : John Burton
Collection Date : 10/12/12 10:43

ESC Sample # : L600743-01

Site ID :

Project # : 308032.20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cadmium	BDL	0.0050	mg/l	200.7	10/19/12	1
Calcium	18.	0.50	mg/l	200.7	10/19/12	1
Chromium	BDL	0.010	mg/l	200.7	10/19/12	1
Copper	BDL	0.020	mg/l	200.7	10/19/12	1
Lead	BDL	0.0050	mg/l	200.7	10/19/12	1
Nickel	BDL	0.020	mg/l	200.7	10/19/12	1
Selenium	BDL	0.020	mg/l	200.7	10/19/12	1
Silver	BDL	0.010	mg/l	200.7	10/19/12	1
Sodium	13.	0.50	mg/l	200.7	10/19/12	1
Zinc	0.085	0.030	mg/l	200.7	10/19/12	1
TPH (GC/FID) High Fraction	0.86	0.10	mg/l	3510C / DRO	10/22/12	1
Surrogate recovery(%) o-Terphenyl	108.		% Rec.	3510C / DRO	10/22/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/22/12 13:31 Printed: 10/22/12 13:31

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L600743-01	WG617975	SAMP	E.Coli	R2392139	T8
	WG617975	SAMP	Coliform,Total	R2392139	T8
	WG618322	SAMP	MBAS	R2396617	T8
	WG618672	SAMP	Chlorine,Total	R2399137	T8
	WG618077	SAMP	Oil & Grease (Hexane Extr)	R2391798	L3
	WG618949	SAMP	Ammonia Nitrogen	R2401819	P1

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
L3	(ESC) Sample reanalysis and/or spiking could not be performed due to lack of additional volume.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
10/22/12 at 13:31:41

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES

Sample: L600743-01 Account: ENGENVPAZ Received: 10/13/12 10:00 Due Date: 10/19/12 00:00 RPT Date: 10/22/12 13:31



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Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Report Summary

Sunday December 30, 2012

Report Number: L612346

Samples Received: 12/20/12

Client Project: 308032.19

Description: DURANGO SIGN FACTORY

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

December 30, 2012

Date Received : December 20, 2012
Description : DURANGO SIGN FACTORY
Sample ID : DUR 121912
Collected By : Rick S
Collection Date : 12/19/12 09:28

ESC Sample # : L612346-01

Site ID : DURANGO SIGN FACTORY

Project # : 308032.19

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate-Nitrite	0.65	0.10	mg/l	353.2	12/28/12	1
Suspended Solids	250	1.0	mg/l	2540D	12/25/12	1
Aluminum	2.1	0.10	mg/l	6010B	12/29/12	1
Iron	2.4	0.10	mg/l	6010B	12/29/12	1
Zinc	0.91	0.030	mg/l	6010B	12/29/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/30/12 07:45 Printed: 12/30/12 07:45

Summary of Remarks For Samples Printed
12/30/12 at 07:45:36

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-
15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L612346-01 Account: ENGENVPAZ Received: 12/20/12 10:00 Due Date: 12/28/12 00:00 RPT Date: 12/30/12 07:45



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020

Quality Assurance Report
Level II

L612346

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Tax I.D. 62-0814289

Est. 1970

December 30, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Suspended Solids	< 1	mg/l			WG629487	12/25/12 07:14
Nitrate-Nitrite	< .1	mg/l			WG630123	12/28/12 08:53
Aluminum	< .1	mg/l			WG630275	12/29/12 03:40
Iron	< .1	mg/l			WG630275	12/29/12 03:40
Zinc	< .03	mg/l			WG630275	12/29/12 03:40

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Suspended Solids	mg/l	36.0	37.0	2.74	5	L612189-01	WG629487
Suspended Solids	mg/l	2.20	2.25	0	5	L612288-01	WG629487
Nitrate-Nitrite	mg/l	0	0	0	20	L612159-01	WG630123
Nitrate-Nitrite	mg/l	0.160	0.160	0	20	L612367-02	WG630123
Aluminum	mg/l	0	0	0	20	L612305-28	WG630275
Iron	mg/l	0	0	0	20	L612305-28	WG630275
Zinc	mg/l	0	0.00120	NA	20	L612305-28	WG630275

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Suspended Solids	mg/l	773	764.	98.8	85-115	WG629487
Nitrate-Nitrite	mg/l	5	5.29	106.	90-110	WG630123
Aluminum	mg/l	1.11	1.12	101.	85-115	WG630275
Iron	mg/l	1.11	1.06	95.5	85-115	WG630275
Zinc	mg/l	1.11	1.09	98.2	85-115	WG630275

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Suspended Solids	mg/l	772.	764.	100.	85-115	1.04	5	WG629487
Nitrate-Nitrite	mg/l	5.50	5.29	110.	90-110	3.89	20	WG630123

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Nitrate-Nitrite	mg/l	5.05	0	5	101.	90-110	L612159-02	WG630123
Aluminum	mg/l	1.16	0	1.11	104.	75-125	L612305-28	WG630275
Iron	mg/l	1.06	0	1.11	95.5	75-125	L612305-28	WG630275
Zinc	mg/l	1.09	0.00120	1.11	98.1	75-125	L612305-28	WG630275

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Engineering & Env. Consultants, INC. -AZ
John Burton
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Phoenix, AZ 85020

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Est. 1970

December 30, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Nitrate-Nitrite	mg/l	5.00	5.05	100.	90-110	0.995	20	L612159-02	WG630123
Aluminum	mg/l	1.12	1.16	101.	75-125	3.51	20	L612305-28	WG630275
Iron	mg/l	1.05	1.06	94.6	75-125	0.948	20	L612305-28	WG630275
Zinc	mg/l	1.08	1.09	97.2	75-125	0.922	20	L612305-28	WG630275

Batch number /Run number / Sample number cross reference

WG629487: R2491751: L612346-01
WG630123: R2494097: L612346-01
WG630275: R2495186: L612346-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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Phoenix, AZ 85020

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Est. 1970

December 30, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

LABORATORY REPORT

Prepared For: Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project: 308032.19

Sampled: 08/24/12
Received: 08/24/12
Issued: 08/31/12 14:41

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PVH1953-01

CLIENT ID

DUR-082412

MATRIX

Water

SAMPLE RECEIPT: Samples were received intact, at 26°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:



TestAmerica Phoenix

Kylie Emily
Project Manager

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVH1953
 Attention: John Burton

Sampled: 08/24/12
 Received: 08/24/12

TOTAL METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1953-01 (DUR-082412 - Water)								
Reporting Units: mg/l								
Aluminum	EPA 200.7	12H1356	0.20	0.28	1	8/30/2012	8/31/2012	
Iron	EPA 200.7	12H1356	0.10	0.25	1	8/30/2012	8/31/2012	
Zinc	EPA 200.7	12H1356	0.050	0.19	1	8/30/2012	8/31/2012	

TestAmerica Phoenix

Kylie Emily
 Project Manager

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PVH1953 <Page 2 of 8>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1953
Attention: John Burton

Sampled: 08/24/12
Received: 08/24/12

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVH1953-01 (DUR-082412 - Water)								
Reporting Units: mg/l								
Nitrate-N	EPA 300.0	12H1067	0.20	0.28	1	8/24/2012	8/25/2012	
Nitrite-N	EPA 300.0	12H1067	0.20	ND	1	8/24/2012	8/25/2012	
Total Nitrate plus Nitrite (300.0)	Calculation	[CALC]	0.40	ND	1	8/24/2012	8/25/2012	

TestAmerica Phoenix

Kylie Emily
Project Manager

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PVH1953 <Page 3 of 8>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1953
Attention: John Burton

Sampled: 08/24/12
Received: 08/24/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: DUR-082412 (PVH1953-01) - Water					
Calculation	2	08/24/2012 09:00	08/24/2012 10:52	08/24/2012 16:30	08/25/2012 00:36
EPA 300.0	2	08/24/2012 09:00	08/24/2012 10:52	08/24/2012 16:30	08/25/2012 00:36

TestAmerica Phoenix

Kylie Emily
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

PVH1953 <Page 4 of 8>

Engineering and Environmental Consultants Phoenix Project ID: 308032.19
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVH1953
 Attention: John Burton

Sampled: 08/24/12
 Received: 08/24/12

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1356 Extracted: 08/30/12										
Blank Analyzed: 08/31/2012 (12H1356-BLK1)										
Aluminum	ND	0.20	mg/l							
Iron	ND	0.10	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 08/31/2012 (12H1356-BS1)										
Aluminum	2.12	0.20	mg/l	2.00		106	85-115			
Iron	1.02	0.10	mg/l	1.00		102	85-115			
Zinc	1.01	0.050	mg/l	1.00		101	85-115			
LCS Dup Analyzed: 08/31/2012 (12H1356-BSD1)										
Aluminum	2.14	0.20	mg/l	2.00		107	85-115	0.7	20	
Iron	1.02	0.10	mg/l	1.00		102	85-115	0.4	20	
Zinc	1.02	0.050	mg/l	1.00		102	85-115	1	20	
Matrix Spike Analyzed: 08/31/2012 (12H1356-MS1)										
					Source: PVH1962-01					
Aluminum	10.5	0.20	mg/l	2.00	7.08	170	70-130			M3
Iron	6.47	0.10	mg/l	1.00	5.44	103	70-130			M3
Zinc	1.06	0.050	mg/l	1.00	0.0353	103	70-130			
Matrix Spike Dup Analyzed: 08/31/2012 (12H1356-MSD1)										
					Source: PVH1962-01					
Aluminum	9.17	0.20	mg/l	2.00	7.08	105	70-130	13	20	M3
Iron	5.76	0.10	mg/l	1.00	5.44	31	70-130	12	20	M3
Zinc	1.11	0.050	mg/l	1.00	0.0353	107	70-130	4	20	

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.19

Report Number: PVH1953

Sampled: 08/24/12

Received: 08/24/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12H1067 Extracted: 08/24/12										
Blank Analyzed: 08/24/2012 (12H1067-BLK1)										
Nitrate-N	ND	0.20	mg/l							
Nitrite-N	ND	0.20	mg/l							
LCS Analyzed: 08/24/2012 (12H1067-BS1)										
Nitrate-N	4.01	0.20	mg/l	4.00		100	90-110			
Nitrite-N	4.01	0.20	mg/l	4.00		100	90-110			
LCS Dup Analyzed: 08/24/2012 (12H1067-BSD1)										
Nitrate-N	4.00	0.20	mg/l	4.00		100	90-110	0.1	15	
Nitrite-N	4.02	0.20	mg/l	4.00		101	90-110	0.3	15	
Duplicate Analyzed: 08/25/2012 (12H1067-DUP1)										
Nitrate-N	ND	0.20	mg/l		ND				20	
Nitrite-N	ND	0.20	mg/l		ND				20	
Duplicate Analyzed: 08/25/2012 (12H1067-DUP2)										
Nitrate-N	2.88	0.20	mg/l		2.89			0.2	20	
Nitrite-N	ND	0.20	mg/l		ND				20	
Matrix Spike Analyzed: 08/24/2012 (12H1067-MS1)										
Nitrate-N	6.21	0.20	mg/l	4.00	2.00	105	80-120			
Nitrite-N	4.44	0.20	mg/l	4.00	ND	111	80-120			
Matrix Spike Dup Analyzed: 08/24/2012 (12H1067-MSD1)										
Nitrate-N	6.18	0.20	mg/l	4.00	2.00	104	80-120	0.5	15	
Nitrite-N	4.38	0.20	mg/l	4.00	ND	109	80-120	1	15	

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Engineering and Environmental Consultants Phoenix Project ID: 308032.19
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVH1953
Attention: John Burton

Sampled: 08/24/12
Received: 08/24/12

DATA QUALIFIERS AND DEFINITIONS

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

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.19

Report Number: PVH1953

Sampled: 08/24/12

Received: 08/24/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
Calculation	Water		N/A
EPA 200.7	Water		X
EPA 300.0	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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CHAIN OF CUSTODY FORM

Page 1 of 1

Analysis Required

308032.19

Phone Number: 602.248.7102

Fax Number: 662-248-7851

[illegible]

25.7

LABORATORY REPORT

Prepared For: Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project: 308032.20

Sampled: 12/13/12-12/14/12

Received: 12/17/12

Issued: 01/13/13 11:57

NELAP #01109CA / AZ100001 Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID

PVL1141-01

PVL1141-02

CLIENT ID

ADOT-TUC-COMP

ADOT-TUC-G

MATRIX

Water

Water

TestAmerica Phoenix

Kylie Emily
Project Manager

Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

SAMPLE RECEIPT: Samples were received intact, at 1°C, on ice and with chain of custody documentation.

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
Cyanide samples are tested for the presence of sulfide within 24hrs of sampling. The sample requiring cyanide was received and tested after the 24hr period.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
L3-Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
N1a-RPD exceeded acceptance limits for the LCS/LCSD and the LCS and/or LCSD recovery exceeded acceptance limits. The analyte was not detected in the associated samples; therefore, the data is not impacted.

COMMENTS: Results that fall between the MDL and RL are 'E4' flagged.
N1-This analyte was reported as ND based on the "total" result of ND. No additional analysis was performed.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

Reviewed By:



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Kylie Emily
Project Manager

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PVL1141 <Page 2 of 32>

Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-02 (ADOT-TUC-G - Water)					Sampled: 12/13/12				
Reporting Units: mg/l									
N-Hexane Extractable (HEM)	EPA 1664A	12L0951	N/A	5.0	ND	1	12/26/12	12/26/12	M2
N-Hexane Extractable Silica Gel Treated (SGT)	EPA 1664A SGT	12L0951	N/A	10	ND	1	12/26/12	12/26/12	N1, M2

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-02 (ADOT-TUC-G - Water)					Sampled: 12/13/12				
Reporting Units: ug/l									
Benzene	EPA 624	12L0839	N/A	2.0	ND	1	12/21/12	12/21/12	
Ethylbenzene	EPA 624	12L0839	N/A	2.0	ND	1	12/21/12	12/21/12	
Toluene	EPA 624	12L0839	N/A	2.0	ND	1	12/21/12	12/21/12	
Xylenes, Total	EPA 624	12L0839	N/A	2.0	ND	1	12/21/12	12/21/12	
Surrogate: Dibromofluoromethane (70-130%)					109 %				
Surrogate: Toluene-d8 (70-130%)					102 %				
Surrogate: 4-Bromofluorobenzene (70-130%)					99 %				

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 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

ORGANOCHLORINE PESTICIDES AND PCBS BY GC (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				D1
Reporting Units: ug/l									
alpha-BHC	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	L3
gamma-BHC (Lindane)	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	L3
beta-BHC	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Heptachlor	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	L3
delta-BHC	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Aldrin	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	L3
Heptachlor epoxide	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Endosulfan I	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	V1
4,4'-DDE	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Dieldrin	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Endrin	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
4,4'-DDD	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Endosulfan II	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	V1
4,4'-DDT	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	
Endrin aldehyde	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	L3
Endosulfan sulfate	EPA 608	12L0746	N/A	1.0	ND	20	12/19/12	01/01/13	V1, L3
Toxaphene	EPA 608	12L0746	N/A	20	ND	20	12/19/12	01/01/13	
Chlordane	EPA 608	12L0746	N/A	10	ND	20	12/19/12	01/01/13	
Surrogate: Tetrachloro-m-xylene (10-132%)					107 %				S8
Surrogate: Decachlorobiphenyl (10-103%)					72 %				S8

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

TOTAL METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				
Reporting Units: mg/l									
Arsenic	EPA 200.7	12L0933	N/A	0.10	ND	1	12/26/12	12/27/12	
Barium	EPA 200.7	12L0933	N/A	0.010	0.070	1	12/26/12	12/27/12	
Beryllium	EPA 200.7	12L0933	N/A	0.0010	ND	1	12/26/12	12/27/12	
Cadmium	EPA 200.7	12L0933	N/A	0.0010	ND	1	12/26/12	12/27/12	
Calcium	EPA 200.7	12L0933	N/A	2.0	11	1	12/26/12	12/27/12	
Chromium	EPA 200.7	12L0933	N/A	0.010	ND	1	12/26/12	12/27/12	
Copper	EPA 200.7	12L0933	N/A	0.010	0.080	1	12/26/12	12/27/12	
Hardness, Total	SM2340B	[CALC]	N/A	13	28	1	12/26/12	12/27/12	
Lead	EPA 200.7	12L0933	N/A	0.015	ND	1	12/26/12	12/27/12	
Magnesium	EPA 200.7	12L0933	N/A	2.0	ND	1	12/26/12	12/27/12	
Mercury	EPA 245.1	12L0889	N/A	0.00020	ND	1	12/24/12	12/24/12	
Nickel	EPA 200.7	12L0933	N/A	0.010	ND	1	12/26/12	12/27/12	
Silver	EPA 200.7	12L0933	N/A	0.010	ND	1	12/26/12	12/27/12	
Sodium	EPA 200.7	12L0933	N/A	2.0	4.9	1	12/26/12	12/27/12	
Zinc	EPA 200.7	12L0933	N/A	0.050	0.13	1	12/26/12	12/27/12	

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

TOTAL METALS BY ICP/MS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				
Reporting Units: mg/l									
Antimony	EPA 200.8	12L0696	N/A	0.0030	0.0045	1	12/19/12	12/20/12	
Selenium	EPA 200.8	12L0696	N/A	0.0030	ND	1	12/19/12	12/20/12	

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				
Reporting Units: mg/l									
Ammonia-N	SM 4500NH3-D	12L0784	N/A	0.50	ND	1	12/20/12	12/20/12	H3
Biochemical Oxygen Demand	SM 5210B	12L0632	N/A	5.0	5.8	1	12/17/12	12/17/12	
Chemical Oxygen Demand	SM 5220D	12L0776	N/A	20	95	1	12/20/12	12/20/12	
Chloride	EPA 300.0	12L0639	N/A	2.0	2.8	1	12/17/12	12/17/12	
Chlorine, Total Residual	HACH 8167	12L0671	N/A	0.050	ND	1	12/18/12	12/18/12	H3
Orthophosphate - P	EPA 300.0	12L0639	N/A	0.20	ND	1	12/17/12	12/17/12	H3
Phosphorus,Total - P	SM 4500-P B, E	12L0669	N/A	0.10	0.18	1	12/18/12	12/19/12	
Sulfate	EPA 300.0	12L0639	N/A	2.0	7.5	1	12/17/12	12/17/12	
Total Dissolved Solids	SM 2540C	12L0666	N/A	20	66	1	12/18/12	12/18/12	
Total Suspended Solids	SM 2540D	12L0713	N/A	10	69	1	12/19/12	12/19/12	

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-02 (ADOT-TUC-G - Water)					Sampled: 12/13/12				
Reporting Units: mg/l									
Cyanide, Total	SM 4500CN-E	12L0728	N/A	0.050	ND	1	12/18/12	12/18/12	
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				
Reporting Units: NTU									
Turbidity	EPA 180.1	12L0676	N/A	0.40	46	2	12/18/12	12/18/12	H3
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				
Reporting Units: umhos/cm									
Specific Conductance	SM 2510B	12L0704	N/A	2.0	89	1	12/19/12	12/19/12	

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

MICROBIOLOGICALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-02 (ADOT-TUC-G - Water)					Sampled: 12/13/12				A13
Reporting Units: CFU/100 ml									
Fecal Coliform	SM 9222D	12L0673	N/A	100	2200	100	12/18/12	12/19/12	H3
Sample ID: PVL1141-02 (ADOT-TUC-G - Water)					Sampled: 12/13/12				
Reporting Units: MPN/100 ml									
E. Coli - MPN	SM 9221F	12L0667	N/A	20	300	10	12/18/12	12/21/12	H3

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 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

Nitrogen, Total Kjeldahl

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)					Sampled: 12/14/12				
Reporting Units: mg/L									
Kjeldahl Nitrogen as N	351.2	47712	0.060	0.10	1.6	1	12/31/12	01/02/13	B1

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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: ADOT-TUC-COMP (PVL1141-01) - Water					
EPA 180.1	2	12/14/2012 13:00	12/17/2012 17:40	12/18/2012 08:45	12/18/2012 10:30
EPA 300.0	2	12/14/2012 13:00	12/17/2012 17:40	12/17/2012 18:40	12/17/2012 23:09
HACH 8167	1	12/14/2012 13:00	12/17/2012 17:40	12/18/2012 09:50	12/18/2012 10:10
SM 5210B	2	12/14/2012 13:00	12/17/2012 17:40	12/17/2012 17:20	12/17/2012 18:49
Sample ID: ADOT-TUC-G (PVL1141-02) - Water					
SM 9221F	0	12/13/2012 23:00	12/17/2012 17:40	12/18/2012 13:25	12/21/2012 10:00
SM 9222D	0	12/13/2012 23:00	12/17/2012 17:40	12/18/2012 14:10	12/19/2012 14:10

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 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL BY EPA METHOD 1664A

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0951 Extracted: 12/26/12											
Blank Analyzed: 12/26/2012 (12L0951-BLK1)											
N-Hexane Extractable (HEM)	ND	5.0	N/A	mg/l							
N-Hexane Extractable Silica Gel Treated (SGT)	ND	10	N/A	mg/l							
LCS Analyzed: 12/26/2012 (12L0951-BS1)											
N-Hexane Extractable (HEM)	34.0	5.0	N/A	mg/l	40.0		85	78-114			
N-Hexane Extractable Silica Gel Treated (SGT)	14.1	10	N/A	mg/l	20.0		70	64-132			
LCS Dup Analyzed: 12/26/2012 (12L0951-BSD1)											
N-Hexane Extractable (HEM)	33.8	5.0	N/A	mg/l	40.0		84	78-114	0.6	18	
N-Hexane Extractable Silica Gel Treated (SGT)	14.7	10	N/A	mg/l	20.0		74	64-132	4	34	
Matrix Spike Analyzed: 12/26/2012 (12L0951-MS1)											
						Source: PVL1141-02					
N-Hexane Extractable (HEM)	31.2	5.0	N/A	mg/l	42.1	4.47	63	78-114			M2
N-Hexane Extractable Silica Gel Treated (SGT)	11.8	10	N/A	mg/l	21.1	ND	56	64-132			M2

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
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Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0839 Extracted: 12/21/12											
Blank Analyzed: 12/21/2012 (12L0839-BLK1)											
Benzene	ND	2.0	N/A	ug/l							
Ethylbenzene	ND	2.0	N/A	ug/l							
Toluene	ND	2.0	N/A	ug/l							
Xylenes, Total	ND	2.0	N/A	ug/l							
Surrogate: Dibromofluoromethane	27.1			ug/l	25.0		108	70-130			
Surrogate: Toluene-d8	26.8			ug/l	25.0		107	70-130			
Surrogate: 4-Bromofluorobenzene	24.4			ug/l	25.0		97	70-130			
LCS Analyzed: 12/21/2012 (12L0839-BS1)											
Benzene	26.7	2.0	N/A	ug/l	25.0		107	37-151			
Ethylbenzene	27.2	2.0	N/A	ug/l	25.0		109	37-162			
Toluene	26.5	2.0	N/A	ug/l	25.0		106	47-150			
Xylenes, Total	54.5	2.0	N/A	ug/l	50.0		109	70-130			
Surrogate: Dibromofluoromethane	27.1			ug/l	25.0		108	70-130			
Surrogate: Toluene-d8	24.8			ug/l	25.0		99	70-130			
Surrogate: 4-Bromofluorobenzene	23.6			ug/l	25.0		94	70-130			
LCS Dup Analyzed: 12/21/2012 (12L0839-BSD1)											
Benzene	26.0	2.0	N/A	ug/l	25.0		104	37-151	3	20	
Ethylbenzene	27.6	2.0	N/A	ug/l	25.0		110	37-162	2	20	
Toluene	27.4	2.0	N/A	ug/l	25.0		110	47-150	3	20	
Xylenes, Total	55.5	2.0	N/A	ug/l	50.0		111	70-130	2	20	
Surrogate: Dibromofluoromethane	26.2			ug/l	25.0		105	70-130			
Surrogate: Toluene-d8	24.6			ug/l	25.0		98	70-130			
Surrogate: 4-Bromofluorobenzene	23.4			ug/l	25.0		94	70-130			
Matrix Spike Analyzed: 12/21/2012 (12L0839-MS1)						Source: PVL1016-13					
Benzene	27.2	2.0	N/A	ug/l	25.0	0.300	108	37-151			
Ethylbenzene	27.2	2.0	N/A	ug/l	25.0	ND	109	37-162			
Toluene	28.9	2.0	N/A	ug/l	25.0	ND	116	47-150			
Xylenes, Total	54.8	2.0	N/A	ug/l	50.0	ND	110	68-131			
Surrogate: Dibromofluoromethane	28.4			ug/l	25.0		114	70-130			
Surrogate: Toluene-d8	25.4			ug/l	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	23.8			ug/l	25.0		95	70-130			

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0839 Extracted: 12/21/12											
Matrix Spike Dup Analyzed: 12/21/2012 (12L0839-MSD1)						Source: PVL1016-13					
Benzene	27.2	2.0	N/A	ug/l	25.0	0.300	107	37-151	0.2	20	
Ethylbenzene	27.6	2.0	N/A	ug/l	25.0	ND	110	37-162	2	20	
Toluene	28.7	2.0	N/A	ug/l	25.0	ND	115	47-150	0.6	20	
Xylenes, Total	56.2	2.0	N/A	ug/l	50.0	ND	112	68-131	3	31	
Surrogate: Dibromofluoromethane	28.6			ug/l	25.0		114	70-130			
Surrogate: Toluene-d8	25.3			ug/l	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	23.7			ug/l	25.0		95	70-130			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES AND PCBS BY GC (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 12L0746 Extracted: 12/19/12										
Blank Analyzed: 12/31/2012 (12L0746-BLK1)										
alpha-BHC	ND	0.050	N/A	ug/l						
gamma-BHC (Lindane)	ND	0.050	N/A	ug/l						
beta-BHC	ND	0.050	N/A	ug/l						
Heptachlor	ND	0.050	N/A	ug/l						
delta-BHC	ND	0.050	N/A	ug/l						
Aldrin	ND	0.050	N/A	ug/l						
Heptachlor epoxide	ND	0.050	N/A	ug/l						
Endosulfan I	ND	0.050	N/A	ug/l						
4,4'-DDE	ND	0.050	N/A	ug/l						
Dieldrin	ND	0.050	N/A	ug/l						
Endrin	ND	0.050	N/A	ug/l						
4,4'-DDD	ND	0.050	N/A	ug/l						
Endosulfan II	ND	0.050	N/A	ug/l						
4,4'-DDT	ND	0.050	N/A	ug/l						
Endrin aldehyde	ND	0.050	N/A	ug/l						
Endosulfan sulfate	ND	0.050	N/A	ug/l						
Toxaphene	ND	1.0	N/A	ug/l						
Chlordane	ND	0.50	N/A	ug/l						
Surrogate: Tetrachloro-m-xylene	0.856			ug/l	1.00		86 10-132			
Surrogate: Decachlorobiphenyl	0.557			ug/l	1.00		56 10-103			
LCS Analyzed: 12/31/2012 (12L0746-BS1)										
alpha-BHC	1.45	0.050	N/A	ug/l	1.00	145	37-134			M4 L3
gamma-BHC (Lindane)	1.47	0.050	N/A	ug/l	1.00	147	32-127			L3
beta-BHC	1.38	0.050	N/A	ug/l	1.00	138	17-147			
Heptachlor	1.36	0.050	N/A	ug/l	1.00	136	34-111			L3
delta-BHC	1.39	0.050	N/A	ug/l	1.00	139	19-140			
Aldrin	1.30	0.050	N/A	ug/l	1.00	130	42-122			L3
Heptachlor epoxide	1.42	0.050	N/A	ug/l	1.00	142	37-142			
Endosulfan I	1.47	0.050	N/A	ug/l	1.00	147	45-153			
4,4'-DDE	1.21	0.050	N/A	ug/l	1.00	121	30-145			
Dieldrin	1.41	0.050	N/A	ug/l	1.00	141	36-146			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES AND PCBS BY GC (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0746 Extracted: 12/19/12										
LCS Analyzed: 12/31/2012 (12L0746-BS1)										M4
Endrin	1.39	0.050	N/A	ug/l	1.00		139 30-147			
4,4'-DDD	1.31	0.050	N/A	ug/l	1.00		131 31-141			
Endosulfan II	1.46	0.050	N/A	ug/l	1.00		146 5-150			
4,4'-DDT	1.24	0.050	N/A	ug/l	1.00		124 25-160			
Endrin aldehyde	1.50	0.050	N/A	ug/l	1.00		150 60-130			L3
Endosulfan sulfate	1.47	0.050	N/A	ug/l	1.00		147 25-144			L3
Surrogate: Tetrachloro-m-xylene	1.27			ug/l	1.00		127 39-132			
Surrogate: Decachlorobiphenyl	0.812			ug/l	1.00		81 10-81			
LCS Dup Analyzed: 12/31/2012 (12L0746-BS1)										M4
alpha-BHC	0.977	0.050	N/A	ug/l	1.00		98 37-134	39	28	N1a
gamma-BHC (Lindane)	1.00	0.050	N/A	ug/l	1.00		100 32-127	38	28	N1a
beta-BHC	0.956	0.050	N/A	ug/l	1.00		96 17-147	36	28	R6
Heptachlor	0.980	0.050	N/A	ug/l	1.00		98 34-111	32	33	
delta-BHC	0.930	0.050	N/A	ug/l	1.00		93 19-140	40	28	R6
Aldrin	0.968	0.050	N/A	ug/l	1.00		97 42-122	29	33	
Heptachlor epoxide	1.04	0.050	N/A	ug/l	1.00		104 37-142	31	29	R6
Endosulfan I	1.06	0.050	N/A	ug/l	1.00		106 45-153	32	30	R6
4,4'-DDE	0.865	0.050	N/A	ug/l	1.00		87 30-145	33	35	
Dieldrin	1.02	0.050	N/A	ug/l	1.00		102 36-146	32	30	R6
Endrin	0.996	0.050	N/A	ug/l	1.00		100 30-147	33	35	
4,4'-DDD	0.926	0.050	N/A	ug/l	1.00		93 31-141	35	33	R6
Endosulfan II	1.04	0.050	N/A	ug/l	1.00		104 5-150	34	30	R6
4,4'-DDT	0.872	0.050	N/A	ug/l	1.00		87 25-160	35	35	
Endrin aldehyde	1.05	0.050	N/A	ug/l	1.00		105 60-130	36	30	N1a
Endosulfan sulfate	1.01	0.050	N/A	ug/l	1.00		101 25-144	37	30	N1a
Surrogate: Tetrachloro-m-xylene	0.911			ug/l	1.00		91 39-132			
Surrogate: Decachlorobiphenyl	0.527			ug/l	1.00		53 10-81			

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Attention: John Burton

Project ID: 308032.20

Report Number: PVL1141

Sampled: 12/13/12-12/14/12

Received: 12/17/12

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0889 Extracted: 12/24/12</u>											
Blank Analyzed: 12/24/2012 (12L0889-BLK1)											
Mercury	ND	0.00020	N/A	mg/l							
LCS Analyzed: 12/24/2012 (12L0889-BS1)											
Mercury	0.0100	0.00020	N/A	mg/l	0.0100		100	85-115			
LCS Dup Analyzed: 12/24/2012 (12L0889-BSD1)											
Mercury	0.0103	0.00020	N/A	mg/l	0.0100		103	85-115	2	20	
Matrix Spike Analyzed: 12/24/2012 (12L0889-MS1)											
						Source: PVL1078-01					
Mercury	0.0103	0.00020	N/A	mg/l	0.0100	ND	103	70-130			
Matrix Spike Dup Analyzed: 12/24/2012 (12L0889-MSD1)											
						Source: PVL1078-01					
Mercury	0.0105	0.00020	N/A	mg/l	0.0100	ND	105	70-130	2	20	
<u>Batch: 12L0933 Extracted: 12/26/12</u>											
Blank Analyzed: 12/27/2012 (12L0933-BLK1)											
Arsenic	ND	0.10	N/A	mg/l							
Barium	ND	0.010	N/A	mg/l							
Beryllium	ND	0.0010	N/A	mg/l							
Cadmium	ND	0.0010	N/A	mg/l							
Calcium	ND	2.0	N/A	mg/l							
Chromium	ND	0.010	N/A	mg/l							
Copper	ND	0.010	N/A	mg/l							
Lead	ND	0.015	N/A	mg/l							
Magnesium	ND	2.0	N/A	mg/l							
Nickel	ND	0.010	N/A	mg/l							
Silver	ND	0.010	N/A	mg/l							
Sodium	ND	2.0	N/A	mg/l							
Zinc	ND	0.050	N/A	mg/l							

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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0933 Extracted: 12/26/12											
LCS Analyzed: 12/27/2012 (12L0933-BS1)											
Arsenic	0.995	0.10	N/A	mg/l	1.00		99	85-115			
Barium	1.03	0.010	N/A	mg/l	1.00		103	85-115			
Beryllium	1.02	0.0010	N/A	mg/l	1.00		102	85-115			
Cadmium	1.02	0.0010	N/A	mg/l	1.00		102	85-115			
Calcium	21.7	2.0	N/A	mg/l	21.0		103	85-115			
Chromium	1.03	0.010	N/A	mg/l	1.00		103	85-115			
Copper	1.04	0.010	N/A	mg/l	1.00		104	85-115			
Lead	1.00	0.015	N/A	mg/l	1.00		100	85-115			
Magnesium	21.6	2.0	N/A	mg/l	21.0		103	85-115			
Nickel	1.02	0.010	N/A	mg/l	1.00		102	85-115			
Silver	0.0773	0.010	N/A	mg/l	0.0750		103	85-115			
Sodium	20.3	2.0	N/A	mg/l	20.0		101	85-115			
Zinc	1.05	0.050	N/A	mg/l	1.00		105	85-115			
LCS Dup Analyzed: 12/27/2012 (12L0933-BSD1)											
Arsenic	0.987	0.10	N/A	mg/l	1.00		99	85-115	0.8	20	
Barium	1.03	0.010	N/A	mg/l	1.00		103	85-115	0.3	20	
Beryllium	0.997	0.0010	N/A	mg/l	1.00		100	85-115	2	20	
Cadmium	1.01	0.0010	N/A	mg/l	1.00		101	85-115	1	20	
Calcium	21.5	2.0	N/A	mg/l	21.0		102	85-115	1	20	
Chromium	1.02	0.010	N/A	mg/l	1.00		102	85-115	0.5	20	
Copper	1.02	0.010	N/A	mg/l	1.00		102	85-115	1	20	
Lead	0.996	0.015	N/A	mg/l	1.00		100	85-115	0.3	20	
Magnesium	21.4	2.0	N/A	mg/l	21.0		102	85-115	1	20	
Nickel	1.02	0.010	N/A	mg/l	1.00		102	85-115	0.5	20	
Silver	0.0777	0.010	N/A	mg/l	0.0750		104	85-115	0.4	20	
Sodium	20.0	2.0	N/A	mg/l	20.0		100	85-115	1	20	
Zinc	1.05	0.050	N/A	mg/l	1.00		105	85-115	0.3	20	

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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0933 Extracted: 12/26/12											
Matrix Spike Analyzed: 12/27/2012 (12L0933-MS1)						Source: PVL1081-01					
Arsenic	0.995	0.10	N/A	mg/l	1.00	ND	99	70-130			
Barium	1.06	0.010	N/A	mg/l	1.00	0.0500	101	70-130			
Beryllium	0.982	0.0010	N/A	mg/l	1.00	ND	98	70-130			
Cadmium	0.999	0.0010	N/A	mg/l	1.00	ND	100	70-130			
Calcium	144	2.0	N/A	mg/l	21.0	130	65	70-130			M3
Chromium	0.996	0.010	N/A	mg/l	1.00	ND	100	70-130			
Copper	1.04	0.010	N/A	mg/l	1.00	0.00251	103	70-130			
Lead	0.976	0.015	N/A	mg/l	1.00	ND	98	70-130			
Magnesium	49.4	2.0	N/A	mg/l	21.0	29.8	93	70-130			
Nickel	0.972	0.010	N/A	mg/l	1.00	ND	97	70-130			
Silver	0.0769	0.010	N/A	mg/l	0.0750	ND	103	70-130			
Sodium	59.0	2.0	N/A	mg/l	20.0	40.7	92	70-130			
Zinc	1.02	0.050	N/A	mg/l	1.00	0.0169	100	70-130			
Matrix Spike Dup Analyzed: 12/27/2012 (12L0933-MSD1)						Source: PVL1081-01					
Arsenic	0.979	0.10	N/A	mg/l	1.00	ND	98	70-130	2	20	
Barium	1.06	0.010	N/A	mg/l	1.00	0.0500	101	70-130	0.2	20	
Beryllium	0.974	0.0010	N/A	mg/l	1.00	ND	97	70-130	0.9	20	
Cadmium	0.997	0.0010	N/A	mg/l	1.00	ND	100	70-130	0.2	20	
Calcium	139	2.0	N/A	mg/l	21.0	130	44	70-130	3	20	M3
Chromium	0.996	0.010	N/A	mg/l	1.00	ND	100	70-130	0.06	20	
Copper	1.04	0.010	N/A	mg/l	1.00	0.00251	104	70-130	0.5	20	
Lead	0.972	0.015	N/A	mg/l	1.00	ND	97	70-130	0.4	20	
Magnesium	48.2	2.0	N/A	mg/l	21.0	29.8	87	70-130	2	20	
Nickel	0.969	0.010	N/A	mg/l	1.00	ND	97	70-130	0.3	20	
Silver	0.0767	0.010	N/A	mg/l	0.0750	ND	102	70-130	0.3	20	
Sodium	58.0	2.0	N/A	mg/l	20.0	40.7	87	70-130	2	20	
Zinc	0.996	0.050	N/A	mg/l	1.00	0.0169	98	70-130	2	20	

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Attention: John Burton

Project ID: 308032.20

Report Number: PVL1141

Sampled: 12/13/12-12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

TOTAL METALS BY ICP/MS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0696 Extracted: 12/19/12											
Blank Analyzed: 12/20/2012 (12L0696-BLK1)											
Antimony	ND	0.0030	N/A	mg/l							
Selenium	ND	0.0030	N/A	mg/l							
LCS Analyzed: 12/20/2012 (12L0696-BS1)											
Antimony	0.0900	0.0030	N/A	mg/l	0.100		90	85-115			
Selenium	0.0857	0.0030	N/A	mg/l	0.100		86	85-115			
LCS Dup Analyzed: 12/20/2012 (12L0696-BSD1)											
Antimony	0.0938	0.0030	N/A	mg/l	0.100		94	85-115	4	20	
Selenium	0.0890	0.0030	N/A	mg/l	0.100		89	85-115	4	20	
Matrix Spike Analyzed: 12/20/2012 (12L0696-MS1)											
						Source: PVL1081-01					
Antimony	0.0872	0.0030	N/A	mg/l	0.100	ND	87	70-130			
Selenium	0.0887	0.0030	N/A	mg/l	0.100	0.000717	88	70-130			
Matrix Spike Dup Analyzed: 12/20/2012 (12L0696-MSD1)											
						Source: PVL1081-01					
Antimony	0.0879	0.0030	N/A	mg/l	0.100	ND	88	70-130	0.9	20	
Selenium	0.0880	0.0030	N/A	mg/l	0.100	0.000717	87	70-130	0.7	20	

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Kylie Emily
Project Manager

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.20

Report Number: PVL1141

Sampled: 12/13/12-12/14/12

Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0632 Extracted: 12/17/12</u>											
Blank Analyzed: 12/17/2012 (12L0632-BLK1)											
Biochemical Oxygen Demand	ND	5.0	N/A	mg/l							K5
Duplicate Analyzed: 12/17/2012 (12L0632-DUP1)						Source: PVL1113-01					
Biochemical Oxygen Demand	260	5.0	N/A	mg/l		266			2	20	
Reference Analyzed: 12/17/2012 (12L0632-SRM1)											
Biochemical Oxygen Demand	199	5.0	N/A	mg/l	198		100	0-200			
<u>Batch: 12L0639 Extracted: 12/17/12</u>											
Blank Analyzed: 12/17/2012 (12L0639-BLK1)											
Chloride	ND	2.0	N/A	mg/l							
Orthophosphate - P	ND	0.20	N/A	mg/l							
Sulfate	ND	2.0	N/A	mg/l							
LCS Analyzed: 12/17/2012 (12L0639-BS1)											
Chloride	20.0	2.0	N/A	mg/l	20.0		100	90-110			
Orthophosphate - P	1.96	0.20	N/A	mg/l	2.00		98	90-110			
Sulfate	19.8	2.0	N/A	mg/l	20.0		99	90-110			
LCS Dup Analyzed: 12/17/2012 (12L0639-BSD1)											
Chloride	20.0	2.0	N/A	mg/l	20.0		100	90-110	0.02	15	
Orthophosphate - P	1.97	0.20	N/A	mg/l	2.00		99	90-110	0.4	20	
Sulfate	19.7	2.0	N/A	mg/l	20.0		99	90-110	0.05	15	
Matrix Spike Analyzed: 12/17/2012 (12L0639-MS1)						Source: PVL1127-01					
Chloride	97.8	2.0	N/A	mg/l	20.0	81.1	83	80-120			
Orthophosphate - P	2.05	0.20	N/A	mg/l	2.00	ND	102	80-120			
Sulfate	21.4	2.0	N/A	mg/l	20.0	0.703	103	80-120			

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Project Manager

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0639 Extracted: 12/17/12</u>											
Matrix Spike Dup Analyzed: 12/17/2012 (12L0639-MSD1)						Source: PVL1127-01					
Chloride	97.8	2.0	N/A	mg/l	20.0	81.1	84	80-120	0.06	15	
Orthophosphate - P	2.07	0.20	N/A	mg/l	2.00	ND	103	80-120	1	20	
Sulfate	21.3	2.0	N/A	mg/l	20.0	0.703	103	80-120	0.2	15	
<u>Batch: 12L0666 Extracted: 12/18/12</u>											
Blank Analyzed: 12/18/2012 (12L0666-BLK1)											
Total Dissolved Solids	ND	20	N/A	mg/l							
LCS Analyzed: 12/18/2012 (12L0666-BS1)											
Total Dissolved Solids	1010	20	N/A	mg/l	1000		101	80-115			
LCS Dup Analyzed: 12/18/2012 (12L0666-BSD1)											
Total Dissolved Solids	994	20	N/A	mg/l	1000		99	80-115	1	10	
Duplicate Analyzed: 12/18/2012 (12L0666-DUP1)						Source: PVL0961-07					
Total Dissolved Solids	722	20	N/A	mg/l		702			3	10	
Duplicate Analyzed: 12/18/2012 (12L0666-DUP2)						Source: PVL1066-01					
Total Dissolved Solids	1220	20	N/A	mg/l		1220			0	10	
<u>Batch: 12L0669 Extracted: 12/18/12</u>											
Blank Analyzed: 12/19/2012 (12L0669-BLK1)											
Phosphorus, Total - P	ND	0.10	N/A	mg/l							

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0669 Extracted: 12/18/12</u>											
LCS Analyzed: 12/19/2012 (12L0669-BS1)											
Phosphorus, Total - P	0.309	0.10	N/A	mg/l	0.300		103	90-110			
LCS Dup Analyzed: 12/19/2012 (12L0669-BSD1)											
Phosphorus, Total - P	0.312	0.10	N/A	mg/l	0.300		104	90-110	1	20	
Matrix Spike Analyzed: 12/19/2012 (12L0669-MS1)						Source: PVL0921-01					
Phosphorus, Total - P	4.83	1.0	N/A	mg/l	0.300	4.52	103	80-120			
Matrix Spike Dup Analyzed: 12/19/2012 (12L0669-MSD1)						Source: PVL0921-01					
Phosphorus, Total - P	4.88	1.0	N/A	mg/l	0.300	4.52	120	80-120	1	20	
<u>Batch: 12L0671 Extracted: 12/18/12</u>											
Blank Analyzed: 12/18/2012 (12L0671-BLK1)											
Chlorine, Total Residual	ND	0.050	N/A	mg/l							
LCS Analyzed: 12/18/2012 (12L0671-BS1)											
Chlorine, Total Residual	1.04	0.050	N/A	mg/l	1.00		104	90-110			
LCS Dup Analyzed: 12/18/2012 (12L0671-BSD1)											
Chlorine, Total Residual	1.03	0.050	N/A	mg/l	1.00		103	90-110	2	20	
Duplicate Analyzed: 12/18/2012 (12L0671-DUP1)						Source: PVL1141-01					
Chlorine, Total Residual	ND	0.050	N/A	mg/l		ND				20	
<u>Batch: 12L0676 Extracted: 12/18/12</u>											
Blank Analyzed: 12/18/2012 (12L0676-BLK1)											
Turbidity	ND	0.20	N/A	NTU							

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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0676 Extracted: 12/18/12</u>											
LCS Analyzed: 12/18/2012 (12L0676-BS1)											
Turbidity	18.2	0.20	N/A	NTU	20.0		91	90-110			
LCS Dup Analyzed: 12/18/2012 (12L0676-BSD1)											
Turbidity	18.5	0.20	N/A	NTU	20.0		92	90-110	2	20	
Duplicate Analyzed: 12/18/2012 (12L0676-DUP1)						Source: PVL1141-01					
Turbidity	46.6	0.40	N/A	NTU		46.0			1	20	
<u>Batch: 12L0704 Extracted: 12/19/12</u>											
Blank Analyzed: 12/19/2012 (12L0704-BLK1)											
Specific Conductance	ND	2.0	N/A	umhos/cm							
LCS Analyzed: 12/19/2012 (12L0704-BS1)											
Specific Conductance	948	2.0	N/A	umhos/cm	998		95	90-110			
LCS Dup Analyzed: 12/19/2012 (12L0704-BSD1)											
Specific Conductance	957	2.0	N/A	umhos/cm	998		96	90-110	0.9	20	
Duplicate Analyzed: 12/19/2012 (12L0704-DUP1)						Source: PVL1136-01					
Specific Conductance	2510	2.0	N/A	umhos/cm		2470			2	20	
Duplicate Analyzed: 12/19/2012 (12L0704-DUP2)						Source: PVL1136-02					
Specific Conductance	15000	2.0	N/A	umhos/cm		14300			4	20	
<u>Batch: 12L0713 Extracted: 12/19/12</u>											
Blank Analyzed: 12/19/2012 (12L0713-BLK1)											
Total Suspended Solids	ND	1.0	N/A	mg/l							

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.20

Report Number: PVL1141

Sampled: 12/13/12-12/14/12

Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0713 Extracted: 12/19/12</u>											
LCS Analyzed: 12/19/2012 (12L0713-BS1)											
Total Suspended Solids	193	10	N/A	mg/l	200		96	90-110			
LCS Dup Analyzed: 12/19/2012 (12L0713-BSD1)											
Total Suspended Solids	188	10	N/A	mg/l	200		94	90-110	3	10	
Duplicate Analyzed: 12/19/2012 (12L0713-DUP1)						Source: PVL0970-01					
Total Suspended Solids	118	20	N/A	mg/l		126			7	10	
Duplicate Analyzed: 12/19/2012 (12L0713-DUP2)						Source: PVL1209-03					
Total Suspended Solids	ND	10	N/A	mg/l		2.00				10	
<u>Batch: 12L0728 Extracted: 12/18/12</u>											
Blank Analyzed: 12/18/2012 (12L0728-BLK1)											
Cyanide, Total	ND	0.050	N/A	mg/l							
LCS Analyzed: 12/18/2012 (12L0728-BS1)											
Cyanide, Total	0.0909	0.050	N/A	mg/l	0.100		91	90-110			
LCS Dup Analyzed: 12/18/2012 (12L0728-BSD1)											
Cyanide, Total	0.0928	0.050	N/A	mg/l	0.100		93	90-110	2	20	
Matrix Spike Analyzed: 12/18/2012 (12L0728-MS1)						Source: PVL0976-01					
Cyanide, Total	0.106	0.050	N/A	mg/l	0.100	ND	106	80-120			
Matrix Spike Dup Analyzed: 12/18/2012 (12L0728-MSD1)						Source: PVL0976-01					
Cyanide, Total	0.0846	0.050	N/A	mg/l	0.100	ND	85	80-120	22	20	R4

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 12L0776 Extracted: 12/20/12</u>											
Blank Analyzed: 12/20/2012 (12L0776-BLK1)											
Chemical Oxygen Demand	ND	20	N/A	mg/l							
LCS Analyzed: 12/20/2012 (12L0776-BS1)											
Chemical Oxygen Demand	209	20	N/A	mg/l	200		105	90-110			
LCS Dup Analyzed: 12/20/2012 (12L0776-BSD1)											
Chemical Oxygen Demand	213	20	N/A	mg/l	200		106	90-110	2	20	
Matrix Spike Analyzed: 12/20/2012 (12L0776-MS1)						Source: PVL0731-01					
Chemical Oxygen Demand	205	20	N/A	mg/l	200	10.1	97	80-120			
Matrix Spike Dup Analyzed: 12/20/2012 (12L0776-MSD1)						Source: PVL0731-01					
Chemical Oxygen Demand	207	20	N/A	mg/l	200	10.1	98	80-120	0.7	20	
<u>Batch: 12L0784 Extracted: 12/20/12</u>											
Blank Analyzed: 12/20/2012 (12L0784-BLK1)											
Ammonia-N	ND	0.50	N/A	mg/l							
LCS Analyzed: 12/20/2012 (12L0784-BS1)											
Ammonia-N	21.0	0.50	N/A	mg/l	25.0		84	80-120			
LCS Dup Analyzed: 12/20/2012 (12L0784-BSD1)											
Ammonia-N	22.8	0.50	N/A	mg/l	25.0		91	80-120	8	20	
Matrix Spike Analyzed: 12/20/2012 (12L0784-MS1)						Source: PVL0977-01					
Ammonia-N	18.0	0.50	N/A	mg/l	25.0	ND	72	80-120			M2

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7878 N. 16th Street, Suite 140
Phoenix, AZ 85020 Report Number: PVL1141
Attention: John Burton

Sampled: 12/13/12-12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12L0784 Extracted: 12/20/12											
Matrix Spike Dup Analyzed: 12/20/2012 (12L0784-MSD1)						Source: PVL0977-01					
Ammonia-N	18.2	0.50	N/A	mg/l	25.0	ND	73	80-120	1	20	M2

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Engineering and Environmental Consultants Phoenix
7878 N. 16th Street, Suite 140
Phoenix, AZ 85020
Attention: John Burton

Project ID: 308032.20

Report Number: PVL1141

Sampled: 12/13/12-12/14/12
Received: 12/17/12

METHOD BLANK/QC DATA

MICROBIOLOGICALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Data Qualifiers
<u>Batch: 12L0673 Extracted: 12/18/12</u>									
Blank Analyzed: 12/19/2012 (12L0673-BLK1)									
Fecal Coliform	ND	1	N/A	CFU/100 m					

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Engineering and Environmental Consultants Phoenix Project ID: 308032.20
 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

METHOD BLANK/QC DATA

Nitrogen, Total Kjeldahl

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 47712 Extracted: 12/31/12</u>										
Blank Analyzed: 01/02/2013 (48039-4)										
Kjeldahl Nitrogen as N	0.114	0.10	0.060	mg/L			-			
LCS Analyzed: 01/02/2013 (48039-5)										
Kjeldahl Nitrogen as N	2.53	0.10	0.060	mg/L	2.50		101	90-110		
LCS Dup Analyzed: 01/02/2013 (48039-6)										
Kjeldahl Nitrogen as N	2.57	0.10	0.060	mg/L	2.50		103	90-110	2	20

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Sampled: 12/13/12-12/14/12
Received: 12/17/12

DATA QUALIFIERS AND DEFINITIONS

A13	Atypical growth appears to have a toxic effect on surrounding growth, thus affecting the plate count.
B1	Target analyte detected in method blank at or above the method reporting limit (AZ Rev 3).
D1	Sample required dilution due to matrix.
H3	Sample was received and analyzed past holding time.
K5	The dilution water D.O. depletion was > 0.2 mg/L.
L3	The associated blank spike recovery was above method acceptance limits.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The associated blank spike recovery was acceptable.
N1	See case narrative.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
R6	LFB/LFBD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
S8	The analysis of the sample required a dilution such that the surrogate recovery calculation does not provide useful information. The associated blank spike recovery was acceptable.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Kylie Emily
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 7878 N. 16th Street, Suite 140
 Phoenix, AZ 85020 Report Number: PVL1141
 Attention: John Burton

Sampled: 12/13/12-12/14/12
 Received: 12/17/12

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 1664A SGT	Water		X
EPA 1664A	Water		X
EPA 180.1	Water		X
EPA 200.7	Water		X
EPA 200.8	Water		X
EPA 245.1	Water		X
EPA 300.0	Water		X
EPA 608	Water		X
EPA 624	Water	X	X
HACH 8167	Water		X
SM 2510B	Water		X
SM 2540C	Water		X
SM 2540D	Water		X
SM 4500CN-E	Water		X
SM 4500NH3-D	Water		X
SM 4500-P B, E	Water		X
SM 5210B	Water		X
SM 5220D	Water		X
SM 9221F	Water		X
SM 9222D	Water		X
SM2340B	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

Subcontracted Laboratories

Aquatic Consulting & Testing

1525 W. University, Suite 106 - Tempe, AZ 85281

Analysis Performed: Surfactants-I

Samples: PVL1141-01

TestAmerica - Nashville, TN *Arizona Cert #AZ0473*

2960 Foster Creighton Drive - Nashville, TN 37204

Method Performed: 351.2

Samples: PVL1141-01

TestAmerica Phoenix

Kylie Emily
 Project Manager

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PVL1141 <Page 32 of 32>

COOLER RECEIPT FORM



490-15127 Chain of Custody

Cooler Received/Opened On 12/19/2012 @ 0820

1. Tracking # 0491 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 96210146

2. Temperature of rep. sample or temp blank when opened: 0.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #

I certify that I unloaded the cooler and answered questions 7-14 (initial)

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial)

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial)

I certify that I attached a label with the unique LIMS number to each container (initial)

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#

Subcontract Order - TestAmerica Phoenix (PVL1141)

Please enter the following code into the Job PO Number field for automated UDZ transfer files: **Sub PHX PVL1141**

SENDING LABORATORY:

TestAmerica Phoenix
4625 East Cotton Center Blvd. Ste 189
Phoenix, AZ 85040
Phone: (602) 437-3340
Fax: (602) 454-9303
Project Manager: Kylie Emily
Client: Engineering and Environmental Consultants Tucson

RECEIVING LABORATORY:

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone: (800) 765-0980
Fax: 615-726-0954
Project Location: Arizona
Receipt Temperature: 0.2 °C
Ice: Y / N

Loc: 490

15127

Analysis	Units	Due	Expires	Interlab Price Surch	Comments
----------	-------	-----	---------	----------------------	----------

Sample ID: PVL1141-01 (ADOT-TUC-COMP - Water)

Sampled: 12/14/12 13:00

TKN	mg/l	12/27/12	01/11/13 13:00	\$37.50	0%
-----	------	----------	----------------	---------	----

Containers Supplied:

250 ml Poly w/H2SO4
(G)

Sharon Malone
Released By

12-18-12 1700
Date/Time

Paul G
Received By

12-18-12 1700
Date/Time

Released By

Date/Time

Received By

Date/Time

Page 1 of 1

TestAmerica

CHAIN OF CUSTODY FORM

PUL1141

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

[] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
 [] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
 [] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name / Address: EEC 7878 N. 16th ST, Suite 140 Phoenix, AZ 85020				Project / PO Number: 308032.20		Analysis Required														
Project Manager: John Burton				Phone Number: 602-248-7702		Special Instructions														
Sampler: John Ross				Fax Number: 602-248-7851																
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Surfactants	Metals/Hardness	Ammonia & N	Total Phosphorus	TKN, COD, BOD, TSS, TOS, Cl2	Turbidity, Sulfate	Conductivity	Ortho-P, Chloride	BTEX	Pesticides	BTEX, CN	E. coli / Fecal	Oil & Grease	TPH
ADST-74C-Comp	WU		9	12/17/12	2:00 - 2:30		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ADST-74C-G	WU		5	12/13/12	2300															
Relinquished By: <u>[Signature]</u> Date/Time: <u>12/17/12 14:57</u> Received By: <u>[Signature]</u> Date/Time: <u>12/17/12 13:00</u> Relinquished By: <u>[Signature]</u> Date/Time: <u>12/17/12 17:00</u> Received By: <u>[Signature]</u> Date/Time: <u>12/17/12 14:57</u> Relinquished By: <u>[Signature]</u> Date/Time: <u>12/17/12 17:40</u> Received By: <u>[Signature]</u> Date/Time: <u>12/17/12 17:40</u>																				
Turnaround Time: (Check)																		Special Instructions		
same day _____																		72 hours _____		
24 hours _____																		5 days _____		
48 hours _____																		normal _____		
Sample Integrity: (Check)																				
Intact <u>✓</u>																		on ice <u>✓</u>		

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

201 1.05 P.H.C.



AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • Fax: (480) 921-0049

Lic. No. AZ0003

LABORATORY REPORT

Client: TestAmerica
4625 E. Cotton Center Blvd.
Building 3, Suite 189
Phoenix, AZ 85040
Attn: Kylie Emily

Date Submitted: 12/18/12
Date Reported: 01/08/13

Project: PVL1141

RESULTS

Client ID: PVL1141-01
ACT Lab No.: BU12883

Sample Type: Water
Sample Time: 12/14/12 13:00

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>MDL</u>	<u>Result</u>	<u>Unit</u>	<u>Analyst</u>
	<u>Start</u>	<u>End</u>					
MBAS Surfactants	12/20/12	12/20/12	SM5540 C	0.05	0.122	mg/L as LAS	AZ
H3 - Sample receive and analyzed past hold time.							

Reviewed by:

Frederick A. Amalfi, Ph.D.

Laboratory Director



AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • Fax: (480) 921-0049

Lic. No. AZ0003

QC Report

QC Parameter		Sample Result	Method Blank Result	QCS % Rec	Duplicate Result	Duplicate RPD	Spike Result	Spike % Rec
Batch ID:	MBAS-63092	QC ID:	BU12883	Samples: BU12883				
MBAS Surfactants		0.122		95.9			0.433	93.4

SUBCONTRACT ORDER

TestAmerica Phoenix

PVL1141

SENDING LABORATORY:

TestAmerica Phoenix
4625 East Cotton Center Blvd. Ste 189
Phoenix, AZ 85040
Phone: (602) 437-3340
Fax: (602) 454-9303
Project Manager: Kylie Emily

RECEIVING LABORATORY:

Aquatic Consulting & Testing
1525 W. University, Suite 106
Tempe, AZ 85281
Phone : (480) 921-8044
Fax: (480) 921-0049

4°C, wet ice

Analysis	Due	Expires	Laboratory ID	Comments
----------	-----	---------	---------------	----------

Sample ID: PVL1141-01	Water	Sampled: 12/14/12 13:00		
-----------------------	-------	-------------------------	--	--

Surfactants-I	12/27/12 23:59	12/16/12 13:00		
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Containers Supplied:

BU-12883

Run
Past
Hold

Released By

Date

Received By

Date

Released By

Date

Received By

Date

Appendix F

Discharge Monitoring Reports

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Boyce Thompson Arboretum
37615 US 60
Superior AZ 85273

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1,2,3
MONITORING POINT ID

1 1 2 0 1 2
MONTH YEAR

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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	Monthly Mean		
	Highest Value		
	Lowest Value		
	Number of Exceedances		

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jeffrey A. Keen
NAME OF PRINCIPAL EXECUTIVE OFFICER

12/12/12
DATE
480-833-9448
TELEPHONE

[Signature]
NAME OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
Boyle Thompson Alburton
37615 US 60
Superior AZ 85273

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1, 2, and 3
MONITORING POINT ID

1 2 2 0 1 2
MONTH YEAR

PARAMETERS	ANALYSIS TYPE (Field, Lab, Calculation*)	TURBIDITY				Streamflow	
						Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min						TMDL Info Only
	Mean						
	Max						
DAY OF THE MONTH	1						
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	Monthly Mean						
	Highest Value						
	Lowest Value						
	Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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Jeffrey A. Kere
NAME OF PRINCIPAL EXECUTIVE OFFICER
CEO
TITLE OF PRINCIPAL EXECUTIVE OFFICER
Jeffrey A. Kere
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/11/13
DATE
480-833-8268
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

*Boyle Thompson Associates
37615 US 60
Superior AZ 85273*

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1, 2 and 3
MONITORING POINT ID

0 1 2 0 1 3
MONTH YEAR

PARAMETERS	ANALYSIS TYPE (Field, Lab, Calculation*)	UNITS	PERMIT LIMITS	TURBIDITY		Streamflow	
				Field	Calc.*	Field	Calc.*
		NTUs				ft ³ /sec	kg/day
	Min						TMDL Info Only
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Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ; g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

JEFFREY A KELL
NAME OF PRINCIPAL EXECUTIVE OFFICER
CEO
TITLE OF PRINCIPAL EXECUTIVE OFFICER
[Signature]
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/25/13
DATE
480-833-8268
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Boyle Thompson ALBUQUERQUE
37015 US 60
Superior AZ 85213

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

12 MA 3
MONITORING POINT ID

0 2 2 0 1 3
MONTH YEAR

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS			TMDL Info Only
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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Jeffrey Akore
NAME OF PRINCIPAL EXECUTIVE OFFICER

3/12/13

AK
NAME OF PRINCIPAL EXECUTIVE OFFICER

480-833-8268
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Boyer Thompson AcBortum
37615 US 60
Superior AZ 85273

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1, 2A003
MONITORING POINT ID

03 2013
MONTH YEAR

PARAMETERS	ANALYSIS TYPE (Field, Lab, Calculation*)	TURBIDITY	Field	Calc.*	Streamflow	Field	Calc.*
UNITS		NTUs			ft ³ /sec		kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
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Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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Jeffrey A Kera 4/11/13
NAME OF PRINCIPAL EXECUTIVE OFFICER DATE
480-833-8268
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Boyle Thompson Airsortum
37615 US 60
Superior AZ 85273

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1, 2 and 3
MONITORING POINT ID

042013
MONTH YEAR

PARAMETERS	TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field				Field	Calc.*
UNITS	NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min					TMDL
	Mean					Info
	Max					Only
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Highest Value						
Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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JEFFREY A KERR 5/8/13
NAME OF PRINCIPAL EXECUTIVE OFFICER DATE
420-833-8268
TELEPHONE
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
Boyle Thompson Albertson
37615 US 60
Superior AZ 85273

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1, 2 and 3
MONITORING POINT ID

052013
MONTH YEAR

PARAMETERS	TURBIDITY	Streamflow	
ANALYSIS TYPE (Field, Lab, Calculation)	Field	Field	Calc.*
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS			TMDL Info Only
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Highest Value			
Lowest Value			
Number of Exceedances			

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ; g/L x Streamflow x 0.0024465

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Jeffrey A. Kerr *6/6/13*
NAME OF PRINCIPAL EXECUTIVE OFFICER DATE
(Signature) *480-833-8268*
TITLE OF PRINCIPAL EXECUTIVE OFFICER TELEPHONE
(Signature)
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#11
MONITORING POINT ID

07	09	12
MONTH	YEAR	

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
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DAY OF THE MONTH	1							
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Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICER
ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7/9/12
DATE
480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#2
MONITORING POINT ID

07 09 12
MONTH YEAR

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only	
	Mean							
	Max.							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICER

ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7/9/12
DATE

480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh Station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#3
MONITORING POINT ID

07	09	12
MONTH	YEAR	

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
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DAY OF THE MONTH	1							
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	31							
Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICER

ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7/9/12
DATE

480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(2010)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#1
MONITORING POINT ID

08	1312
MONTH	YEAR

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

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Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICER

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

8/14/12
DATE
480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARPA-010-E(201)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#2
MONITORING POINT ID

08	13	12
MONTH	YEAR	

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL Info Only
	Mean		
	Max.		
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

8/14/12
DATE

480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

*I-10 Marsh station to
Cienega Creek
ARRA-010-E(201)A & 010-E-NFA*

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

<i>#3</i>
MONITORING POINT ID

<i>08</i>	<i>13</i>	<i>12</i>
MONTH	YEAR	

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
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Tom Billings
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ECC
 TITLE OF PRINCIPAL EXECUTIVE OFFICER

[Signature]
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

8/13/12
 DATE

480-784-2910
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ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:

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ARRA-010-E(201)A & 010-E-NFA*

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#1
MONITORING POINT ID

0	9	1	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
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Tom Billings
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ECC
 TITLE OF PRINCIPAL EXECUTIVE OFFICER
[Signature]
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

9/12/12
 DATE
 480-784-2910
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ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARPA-010-E(201)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#2
MONITORING POINT ID

0	9	1	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only	
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Highest Value								
Lowest Value								
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9/12/12
DATE

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ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARPA-010-E(201)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#3
MONITORING POINT ID

091012
MONTH YEAR

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

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ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

9/12/12
DATE
480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#1
MONITORING POINT ID

1	0	0	8	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

10/8/12
DATE
480-784-2910
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ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

*I-10 Marsh station to
Cienega Creek
ARRA-010-E(201)A & 010-E-NFA*

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#2
MONITORING POINT ID

10	08	12
MONTH	YEAR	

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
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Tom Billings
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[Signature]
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10/8/12
 DATE
480-784-2910
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ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh Station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#3
MONITORING POINT ID

10	08	12
MONTH	YEAR	

PARAMETERS		TURBIDITY	Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field	Calc.*
UNITS		NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.			TMDL Info Only
	Mean			
	Max.			
DAY OF THE MONTH	1			
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Monthly Mean				
Highest Value				
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Number of Exceedances				

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

10/8/12
DATE
480-784-2910
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ARIZONA DEPARTMENT OF TRANSPORTATION

Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#1
MONITORING POINT ID

1	1	2	1	2
MONTH	YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only	
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICERECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/13/12
DATE480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(201)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#2
MONITORING POINT ID

1	1	1	2	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICER
ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/13/12
DATE
480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION

Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARPA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#3
MONITORING POINT ID

1	1	1	2	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$:g/L x Streamflow x 0.0024465

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Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICERECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/13/12
DATE480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

*I-10 Marsh station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA*

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#1
MONITORING POINT ID

1	2	1	0	1	2
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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Tom Billings
 NAME OF PRINCIPAL EXECUTIVE OFFICER

ECC
 TITLE OF PRINCIPAL EXECUTIVE OFFICER

[Signature]
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/11/12
 DATE

480-784-2910
 TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
Cienega Creek
ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#2
MONITORING POINT ID

1	2	1	0	1	2
MONTH		YEAR			

PARAMETERS	TURBIDITY					Streamflow	
		Field				Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field						
UNITS	NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
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Lowest Value							
Number of Exceedances							

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Tom Billings
NAME OF PRINCIPAL EXECUTIVE OFFICER
ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/11/12
DATE
480-784-2910
TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

I-10 Marsh station to
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ARRA-010-E(20)A & 010-E-NFA

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

#3
MONITORING POINT ID

1	2	1	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
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DAY OF THE MONTH	1						
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Tom Billings
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ECC
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/11/12
DATE

480-784-2910
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON 74798

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE (Field, Lab, Calculation*)		Field	Field		Calc.*	
UNITS		NTUs	ft ³ /sec		kg/day	
PERMIT LIMITS	Min.				TMDL	
	Mean				Info	
	Max.				Only	
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
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Number of Exceedances						

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON 74798
AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE (Field, Lab, Calculation*)		Field	Field			
UNITS		NTUs	ft ³ /sec			
PERMIT LIMITS	Min.					
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Monthly Mean						
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Lowest Value						
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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON 74798

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

1	2	2	0	1	2
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
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DAY OF THE MONTH	1							
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Number of Exceedances								

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON 74798

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min							TMDL
	Mean							Info
	Max							Only
DAY OF THE MONTH	1							
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Monthly Mean								
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Number of Exceedances								

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCOW 74798

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
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Attachment E
 ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
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☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
 I-10 Cienega Creek to Marsh Creek

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Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
 PERMIT NUMBER

2
 MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY					Streamflow	
		Field				Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	NTUs					ft ³ /sec	kg/day
UNITS							
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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John J Baker, CPESC ECC
 NAME OF PRINCIPAL EXECUTIVE OFFICER
 Regional Environmental Manager
 TITLE OF PRINCIPAL EXECUTIVE OFFICER
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
 DATE
 (602) 370-6387
 TELEPHONE

Attachment E

ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

AZCOP 74798

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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 NAME OF PRINCIPAL EXECUTIVE OFFICER
 Regional Environmental Manager
 TITLE OF PRINCIPAL EXECUTIVE OFFICER
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
 DATE
 (602) 370-6387
 TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0 2 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field		Calc.*	
UNITS		NTUs	ft ³ /sec		kg/day	
PERMIT LIMITS	Min.				TMDL	
	Mean				Info	
	Max.				Only	
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-14-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCOR 74798

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	3	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			
UNITS		NTUs	ft ³ /sec			
PERMIT LIMITS	Min.					
	Mcan					
	Max.					
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
DATE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON 74798

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
 ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
 I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
 PERMIT NUMBER

1
 MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
 NAME OF PRINCIPAL EXECUTIVE OFFICER
 Regional Environmental Manager
 TITLE OF PRINCIPAL EXECUTIVE OFFICER
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
 DATE
 (602) 370-6387
 TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCOW 74798
AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	4	2	0	1	3
MONTH		YEAR			

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZL07 74798
AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	5	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON 74798
AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	5	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field
UNITS		NTUs					ft ³ /sec
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
(602) 370-6387
TELEPHONE

Attachment E
 ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
 I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

AZCOP 74798

AZS000018-2008	1	0	6	2	0	1	3
PERMIT NUMBER	MONITORING POINT ID	MONTH		YEAR			

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

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John J Baker, CPESC ECC
 NAME OF PRINCIPAL EXECUTIVE OFFICER
 Regional Environmental Manager
 TITLE OF PRINCIPAL EXECUTIVE OFFICER
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
 DATE
 (602) 370-6387
 TELEPHONE

Attachment E
 ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
 I-10 Cienega Creek to Marsh Creek

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
 PERMIT NUMBER

2
 MONITORING POINT ID

0	6	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc. *
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

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John J Baker, CPESC ECC
 NAME OF PRINCIPAL EXECUTIVE OFFICER
 Regional Environmental Manager
 TITLE OF PRINCIPAL EXECUTIVE OFFICER
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

7-16-13
 DATE
 (602) 370-6387
 TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP1
MONITORING POINT ID

MONTH	October	YEAR	2012		

PARAMETERS:		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS:		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 µg/L x Streamflow x 0.0024465							

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Ronald Kelton

NAME OF PRINCIPAL EXECUTIVE OFFICER

Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11-1-12

DATE

480-837-3684

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION

Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP2
MONITORING POINT ID

MONTH	October	YEAR	2012
-------	---------	------	------

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$;g/L. x Streamflow x 0.0024465							

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Ronald Kelton

NAME OF PRINCIPAL EXECUTIVE OFFICER

Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11-1-12

DATE

480-837-3684

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP3
MONITORING POINT ID

MONTH October YEAR 2012

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$;g/l. x Streamflow x 0.0024465							

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ronald Kelton

NAME OF PRINCIPAL EXECUTIVE OFFICER

Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11-1-12

DATE

480-837-3684

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
 Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZCON-72735
 PERMIT NUMBER

MPI
 MONITORING POINT ID

MONTH November YEAR 2012

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465							

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Ronald Kelton

NAME OF PRINCIPAL EXECUTIVE OFFICER

Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12-1-12

DATE

480-837-3684

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP2
MONITORING POINT ID

MONTH November YEAR 2012

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465							

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Ronald Kelton

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Sr. Vice President

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ARIZONA DEPARTMENT OF TRANSPORTATION

Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP3
MONITORING POINT ID

MONTH November YEAR 2012

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$ $\text{:g/L} \times \text{Streamflow} \times 0.0024465$							

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Ronald Kellon

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Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

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ARIZONA DEPARTMENT OF TRANSPORTATION

Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

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Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP1
MONITORING POINT ID

MONTH	December	YEAR	2012
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PARAMETERS	ANALYSIS TYPE: (Field, Lab, Calculation*)	TURBIDITY	Field					Streamflow	Field	Calc.*
UNITS		NTUs						ft ³ /sec		kg/day
PERMIT LIMITS	Min.									TMDL
	Mean									Info
	Max.									Only
DAY OF THE MONTH	1									
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	Monthly Mean									
	Highest Value									

Lowest Value							
Number of Exceedances							
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Ronald Kellon

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Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1-1-13

DATE

480-837-3684

TELEPHONE

**ARIZONA DEPARTMENT OF TRANSPORTATION**Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP2
MONITORING POINT ID

MONTH	December	YEAR	2012
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PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							

Lowest Value							
Number of Exceedances							
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Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

DATE

1-1-13

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480-837-3684



ARIZONA DEPARTMENT OF TRANSPORTATION

Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

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Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZCON-72735
PERMIT NUMBER

MP3
MONITORING POINT ID

MONTH	December	YEAR	2012
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DAY OF THE MONTH	PARAMETERS	TURBIDITY					Streamflow	
	ANALYSIS TYPE (Field, Lab, Calculation*)	Field					Field	Calc.*
	UNITS	NTUs					ft ³ /sec	kg/day
	PERMIT LIMITS	Min. Mean Max.						TMDL Info Only
	1							
	2							
	3							
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	Highest Value							

Lowest Value								
Number of Exceedances								
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Sr. Vice President

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1-1-13

DATE

480-837-3684

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
 Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

MP1
MONITORING POINT ID

MONTH	January	YEAR	2013		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$:g/L x Streamflow x 0.0024465							

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Daniel R. Monks

NAME OF PRINCIPAL EXECUTIVE OFFICER

Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/11/2013

DATE

719-495-3621

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
 Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

MP2
MONITORING POINT ID

MONTH	January	YEAR	2013		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
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Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

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2/11/2013

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ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
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THIS MONTH**

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Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

MP3
MONITORING POINT ID

MONTH	January	YEAR	2013		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							

Lowest Value							
Number of Exceedances							
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2/11/2013

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Manager

719-495-3621

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
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Alamo Lake State Park

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Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

MP1
MONITORING POINT ID

MONTH	February	YEAR	2013		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
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 for the ADOT Statewide Permit #AZS000018-2008

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 Parking Lot & Cholla Boat Ramp

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 1611 W Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

MP2
MONITORING POINT ID

MONTH	February	YEAR	2013		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
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Number of Exceedances							
* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$: $\text{g/L} \times \text{Streamflow} \times 0.0024465$							

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Daniel R. Monks

NAME OF PRINCIPAL EXECUTIVE OFFICER

Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/11/2013

DATE

719-495-3621

TELEPHONE



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:

Alamo Lake High Water Boat Ramp &
Parking Lot & Cholla Boat Ramp

Alamo Lake State Park

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

MP3
MONITORING POINT ID

MONTH	February	YEAR	2013		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								

Lowest Value							
Number of Exceedances							
* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$:g/L x Streamflow x 0.0024465							

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Daniel R. Monks

NAME OF PRINCIPAL EXECUTIVE OFFICER

Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/11/2013

DATE

719-495-3621

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc. #
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER

Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12

DATE

(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS	TURBIDITY					Streamflow	
						Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field						
UNITS	NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager

DATE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12

DATE
(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

DAY OF THE MONTH	PARAMETERS	TURBIDITY	Streamflow			
	ANALYSIS TYPE: (Field, Lab, Calculation*)	Field	Field			
	UNITS	NTUs	ft ³ /sec			
	PERMIT LIMITS	Min Mean Max	kg/day TMDL Info Only			
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Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12

DATE
(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
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Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

12/31/12

NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager

DATE
(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL Info Only
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	Max.		
DAY OF THE MONTH	1		
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Number of Exceedances			

* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$; $\text{g/L} \times \text{Streamflow} \times 0.0024465$

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Highest Value							
Lowest Value							
Number of Exceedances							

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			
UNITS		NTUs	ft ³ /sec			
PERMIT LIMITS	Min.					
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-6387
TELEPHONE

Attachment E

ADOT Discharge Monitoring Report for Analytical Monitoring


ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008
☒ **NO DISCHARGE
THIS MONTH**
PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge
COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT
Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

 AZS000018-2008
 PERMIT NUMBER

 1
 MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			Calc.*
UNITS		NTUs	ft ³ /sec			kg/day
PERMIT LIMITS	Min.					TMDL Info Only
	Mean					
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DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
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Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER

Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13

DATE

(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	3	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY					Streamflow	
		Field				Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	NTUs					ft ³ /sec	kg/day
UNITS							
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER

Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13

DATE

(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	5	2	0	1	3
MONTH			YEAR		

DAY OF THE MONTH	PARAMETERS	TURBIDITY	Streamflow			
	ANALYSIS TYPE: (Field, Lab, Calculation*)	Field	Field		Calc.*	
	UNITS	NTUs	ft ³ /sec		kg/day	
	PERMIT LIMITS	Min. Mean Max.			TMDL Info Only	
	1					
	2					
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	Monthly Mean					
	Highest Value					
	Lowest Value					
	Number of Exceedances					

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E

ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
 SR-90 San Pedro River Bridge

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Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	5	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field
UNITS		NTUs					ft ³ /sec
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

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Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13

DATE

(602) 370-6387

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Attachment E

ADOT Discharge Monitoring Report for Analytical Monitoring


ARIZONA DEPARTMENT OF TRANSPORTATION
 Monthly Discharge Monitoring Report (DMR) Form
 for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

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 SR-90 San Pedro River Bridge

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 Mail to: ADOT Office of Environmental Services
 Water Quality Group
 1611 W. Jackson Street, MD EM02
 Phoenix, AZ 85007

 AZS000018-2008
 PERMIT NUMBER

 1
 MONITORING POINT ID

0	6	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field
UNITS		NTUs					ft ³ /sec
PERMIT LIMITS	Min.						kg/day
	Mean						TMDL Info Only
	Max.						
DAY OF THE MONTH	1						
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Highest Value							
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Number of Exceedances							

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NAME OF PRINCIPAL EXECUTIVE OFFICER

Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

6/30/13

DATE

(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
SR-90 San Pedro River Bridge

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0 6 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

6/30/13

DATE

(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS	TURBIDITY				Streamflow	
	Field				Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)						
UNITS	NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.					TMDL Info Only
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$; $\text{g/L} \times \text{Streamflow} \times 0.0024465$

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NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY		Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field		Field	
UNITS		NTUs		ft ³ /sec	
PERMIT LIMITS	Min.				TMDL Info Only
	Mean				
	Max.				
DAY OF THE MONTH	1				
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Monthly Mean					
Highest Value					
Lowest Value					
Number of Exceedances					

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

1	1	2	0	1	2
MONTH		YEAR			

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL Info Only
	Mean		
	Max.		
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS	ANALYSIS TYPE: (Field, Lab, Calculation*)	TURBIDITY					Streamflow	
			Field				Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
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Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

1 1 2 0 1 2
MONTH YEAR

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL Info Only
	Mean		
	Max.		
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TIME OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

1	1	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			Calc.*
UNITS		NTUs	ft ³ /sec			kg/day
PERMIT LIMITS	Min.					TMDL
	Mean					Info
	Max.					Only
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$; $\text{g/L} \times \text{Streamflow} \times 0.0024465$

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John J Baker, CPESC ECC

11/30/12

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Regional Environmental Manager

(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

8
MONITORING POINT ID

1	1	2	0	1	2
MONTH		YEAR			

PARAMETERS	TURBIDITY	Streamflow			
		Field	Calc. *		
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field				
UNITS	NTUs	ft ³ /sec	kg/day		
PERMIT LIMITS	Min.				
	Mean				
	Max.				
DAY OF THE MONTH	1				
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Monthly Mean					
Highest Value					
Lowest Value					
Number of Exceedances					

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

11/30/12
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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for the ADOT Statewide Permit #AZS000018-2008

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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

1	2	2	0	1	2
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH

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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

1 2 2 0 1 2
MONTH YEAR

PARAMETERS ANALYSIS TYPE: (Field, Lab, Calculation*)	TURBIDITY Field	Streamflow				
		Field	Calc.*			
UNITS	NTUs	ft ³ /sec	kg/day			
PERMIT LIMITS	Min.			TMDL Info Only		
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedences						

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John J Baker, CPESC ECC
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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for the ADOT Statewide Permit #AZS000018-2008

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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

1	2	2	0	1	2
MONTH		YEAR			

DAY OF THE MONTH	PARAMETERS	TURBIDITY	Streamflow			
	ANALYSIS TYPE: (Field, Lab, Calculation*)	Field	Field		Calc.*	
	UNITS	NTUs	ft ³ /sec		kg/day	
	PERMIT LIMITS	Min. Mean Max.			TMDL Info Only	
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
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THIS MONTH**

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			
UNITS		NTUs	ft ³ /sec			
PERMIT LIMITS	Min.					
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Highest Value						
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12
DATE
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

PARAMETERS ANALYSIS TYPE: (Field, Lab, Calculation*)	TURBIDITY						Streamflow	
	Field						Field	Calc.*
UNITS	NTUs						ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
DATE 12/31/12
(602) 370-6387
TELEPHONE
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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for the ADOT Statewide Permit #AZS000018-2008

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

PARAMETERS	TURBIDITY				Streamflow	
	Field				Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)						
UNITS	NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.					TMDL
	Mean					Info
	Max.					Only
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

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NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

1	2	2	0	1	2
MONTH		YEAR			

PARAMETERS	TURBIDITY					Streamflow	
	Field					Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)							
UNITS	NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Highest Value							
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Number of Exceedances							

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NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

12/31/12
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

85
MONITORING POINT ID

1	2	2	0	1	2
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow	
		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		
UNITS	NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.		TMDL
	Mean		Info
	Max.		Only
DAY OF THE MONTH	1		
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Monthly Mean			
Highest Value			
Lowest Value			
Number of Exceedances			

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12/31/12

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Regional Environmental Manager

(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



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for the ADOT Statewide Permit #AZS000018-2008

**NO DISCHARGE
THIS MONTH**

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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field		Calc.*	
UNITS		NTUs	ft ³ /sec		kg/day	
PERMIT LIMITS	Min.				TMDL	
	Mean				Info	
	Max.				Only	
DAY OF THE MONTH	1					
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	22					
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	25					
	26					
	27					
	28	780.0				
	29					
	30					
	31					
Monthly Mean		780.0				
Highest Value		780.0				
Lowest Value		780.0				
Number of Exceedences		0				

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC

NAME OF PRINCIPAL EXECUTIVE OFFICER

Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13

DATE

(602) 370-6387

TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☐ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD 6M02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
	2							
	3							
	4							
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	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28		754.0					
	29							
	30							
	31							
Monthly Mean		754.0						
Highest Value		754.0						
Lowest Value		754.0						
Number of Exceedances		0						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☐ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

DAY OF THE MONTH	PARAMETERS		TURBIDITY					Streamflow	
	ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
	UNITS		NTUs					ft ³ /sec	kg/dry
	PERMIT LIMITS	Min. Mean Max.							TMDL Info Only
1									
2									
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21									
22									
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24									
25									
26									
27									
28			N/A (see CMR)						
29									
30									
31									
Monthly Mean									
Highest Value									
Lowest Value									
Number of Exceedances									

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

**11 NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM62
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
	2							
	3							
	4							
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	21							
	22							
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	24							
	25							
	26							
	27							
	28	N/A (see CMR)						
	29							
	30							
	31							
Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$; $\text{g/L} \times \text{Streamflow} \times 0.0024465$

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

**NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
	2						
	3						
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	24						
	25						
	26						
	27						
	28	254.0					
	29						
	30						
	31						
	Monthly Mean	254.0					
	Highest Value	254.0					
	Lowest Value	254.0					
	Number of Exceedances	0					

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☐ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

0 1 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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	23							
	24							
	25							
	26							
	27							
	28		305.0					
	29							
	30							
	31							
Monthly Mean		305.0						
Highest Value		305.0						
Lowest Value		305.0						
Number of Exceedances		0						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MDEM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
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	3						
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	23						
	24						
	25						
	26						
	27						
	28	325.0					
	29						
	30						
	31						
	Monthly Mean	325.0					
	Highest Value	325.0					
	Lowest Value	325.0					
	Number of Exceedances	0					

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

1/31/13
DATE
(602) 370-6367
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

**NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

8
MONITORING POINT ID

0	1	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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	27						
	28	401.0					
	29						
	30						
	31						
Monthly Mean		401.0					
Highest Value		401.0					
Lowest Value		401.0					
Number of Exceedances		0					

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

1/31/13

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Regional Environmental Manager

(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD BM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Mio.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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	31							
Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 :g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-8387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY				Streamflow	
	Field				Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)						
UNITS	NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.					TMDL Info Only
	Mean					
	Max.					
DAY OF THE MONTH	1					
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	30					
	31					
Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

2/28/13

NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager

DATE
(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow			
		Field	Calc.*	Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field				
UNITS	NTUs	ft ³ /sec	kg/day		
PERMIT LIMITS	Min.				
	Mean				
	Max.				
DAY OF THE MONTH	1				
	2				
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	29				
	30				
	31				
Monthly Mean					
Highest Value					
Lowest Value					
Number of Exceedances					

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC

2/28/13

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE
(602) 370-6387

Regional Environmental Manager

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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	31							
Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedences								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY	Streamflow			
		Field	Calc.*		
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field				
UNITS	NTUs	ft ³ /sec	kg/day		
PERMIT LIMITS	Min.		TMDL		
	Mean		Info		
	Max.		Only		
DAY OF THE MONTH	1				
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Monthly Mean					
Highest Value					
Lowest Value					
Number of Exceedances					

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John J Baker, CPESC ECC
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			
UNITS		NTUs	ft ³ /sec			
PERMIT LIMITS	Min.					
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
Number of Exceedances						

* TMDL Loading Calculations in kg/day: $\text{mg/L} \times \text{Streamflow} \times 2.4465$; $\text{g/L} \times \text{Streamflow} \times 0.0024465$

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John J Baker, CPESC ECC
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

0	2	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Highest Value								
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD BM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

8
MONITORING POINT ID

0 2 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
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John J Baker, CPESC ECC
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

2/28/13
DATE
(802) 370-8387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/dry
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	3	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field			
UNITS		NTUs	ft ³ /sec			
PERMIT LIMITS	Min.					
	Mean					
	Max.					
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
Lowest Value						
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
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(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mcau							
	Max.							
DAY OF THE MONTH	1							
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Highest Value								
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Number of Exceedances								

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
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(602) 370-6387
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Attachment E
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THIS MONTH

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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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	Highest Value						
	Lowest Value						
	Number of Exceedances						

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3/31/13
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



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for the ADOT Statewide Permit #AZS000018-2008

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PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
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Number of Exceedances								

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TITLE OF PRINCIPAL EXECUTIVE OFFICER
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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	Monthly Mean							
	Highest Value							
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	Number of Exceedances							

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

0	3	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field		Calc.*	
UNITS		NTUs	ft ³ /sec		kg/day	
PERMIT LIMITS	Min.				TMDL	
	Mean				Info	
	Max.				Only	
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Number of Exceedances						

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

8
MONITORING POINT ID

0	3	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field
UNITS		NTUs					ft ³ /sec
PERMIT LIMITS	Min.						kg/day
	Mean						TMDL
	Max.						Info Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

3/31/13
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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for the ADOT Statewide Permit #AZS000018-2008

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PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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John J Baker, CPESC ECC
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	4	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
DATE
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field		Calc. *	
UNITS		NTUs	ft ³ /sec		kg/day	
PERMIT LIMITS	Min.				TMDL	
	Mean				Info	
	Max.				Only	
DAY OF THE MONTH	1					
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Monthly Mean						
Highest Value						
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John J Baker, CPESC ECC

4/30/13

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Regional Environmental Manager

(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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	Highest Value							
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	Number of Exceedances							

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
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(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
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for the ADOT Statewide Permit #AZS000018-2008

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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Highest Value								
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
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(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

0	4	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

4/30/13
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Attachment E
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for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008	8	0	4	2	0	1	3
PERMIT NUMBER	MONITORING POINT ID	MONTH	YEAR				

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PBRMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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	Number of Exceedences							

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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0	5	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13
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1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0 5 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

0	5	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedences								

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John J Baker, CPESC ECC
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

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SR 260 Doubtful Canyon Section

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Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

0	5	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

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SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

0 5 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY	Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field	Calc.*
UNITS		NTUs	ft ³ /sec	kg/day
PERMIT LIMITS	Min.			TMDL
	Mean			Info
	Max.			Only
DAY OF THE MONTH	1			
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Monthly Mean				
Highest Value				
Lowest Value				
Number of Exceedances				

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John J Baker, CPESC ECC

5/31/13

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Regional Environmental Manager

(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

0	5	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13
DATE
(602) 370-6387
TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

0	5	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Highest Value								
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

5/31/13
DATE
(602) 370-6387
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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

8
MONITORING POINT ID

0	5	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/dwy
PERMIT LIMITS	Min.							TMDL Info Only
	Mean							
	Max.							
DAY OF THE MONTH	1							
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Highest Value								
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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
DATE: 5/31/13
TITLE OF PRINCIPAL EXECUTIVE OFFICER
(502) 370-6387
TELEPHONE
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH

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SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

1
MONITORING POINT ID

0 6 2 0 1 3
MONTH YEAR

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Monthly Mean								
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NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
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6/30/13
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(602) 370-6387
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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

2
MONITORING POINT ID

0	6	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
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Highest Value								
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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

6/30/13
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Attachment E
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for the ADOT Statewide Permit #AZS000018-2008

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THIS MONTH

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

3
MONITORING POINT ID

0	6	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY				Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field				Field	Calc.*
UNITS		NTUs				ft ³ /sec	kg/day
PERMIT LIMITS	Min.						TMDL
	Mean						Info
	Max.						Only
DAY OF THE MONTH	1						
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	Highest Value						
	Lowest Value						
	Number of Exceedances						

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Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

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Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



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THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

4
MONITORING POINT ID

0	6	2	0	1	3
MONTH			YEAR		

PARAMETERS	TURBIDITY		Streamflow	
	Field	Calc.*	Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	Field		Field	
UNITS	NTUs		ft ³ /sec	
PERMIT LIMITS	Min.			kg/day
	Mean			TMDL
	Max.			Info Only
DAY OF THE MONTH	1			
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Monthly Mean				
Highest Value				
Lowest Value				
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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

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Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

5
MONITORING POINT ID

0	6	2	0	1	3
MONTH		YEAR			

PARAMETERS		TURBIDITY	Streamflow			
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field	Field		Calc.*	
UNITS		NTUs	ft ³ /sec		kg/day	
PERMIT LIMITS	Min.				TMDL Info Only	
	Mean					
	Max.					
DAY OF THE MONTH	1					
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John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

6/30/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ NO DISCHARGE
THIS MONTH

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

6
MONITORING POINT ID

0	6	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow	
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field	Calc.*
UNITS		NTUs					ft ³ /sec	kg/day
PERMIT LIMITS	Min.							TMDL
	Mean							Info
	Max.							Only
DAY OF THE MONTH	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
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	14							
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	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							
	30							
	31							
Monthly Mean								
Highest Value								
Lowest Value								
Number of Exceedances								

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC
NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager
TITLE OF PRINCIPAL EXECUTIVE OFFICER
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

6/30/13
DATE
(602) 370-6387
TELEPHONE

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

7
MONITORING POINT ID

0	6	2	0	1	3
MONTH			YEAR		

PARAMETERS		TURBIDITY					Streamflow
ANALYSIS TYPE: (Field, Lab, Calculation*)		Field					Field
UNITS		NTUs					ft ³ /sec
PERMIT LIMITS	Min.						kg/day TMDL Info Only
	Mean						
	Max.						
DAY OF THE MONTH	1						
	2						
	3						
	4						
	5						
	6						
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	8						
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	26						
	27						
	28						
	29						
	30						
	31						
Monthly Mean							
Highest Value							
Lowest Value							
Number of Exceedances							

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC

6/30/13

NAME OF PRINCIPAL EXECUTIVE OFFICER
Regional Environmental Manager

DATE
(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Attachment E
ADOT Discharge Monitoring Report for Analytical Monitoring



ARIZONA DEPARTMENT OF TRANSPORTATION
Monthly Discharge Monitoring Report (DMR) Form
for the ADOT Statewide Permit #AZS000018-2008

☒ **NO DISCHARGE
THIS MONTH**

PROJECT NAME AND ADDRESS:
SR 260 Doubtful Canyon Section

COMPLETE AND SUBMIT ONE COPY PER MONITORING POINT

Mail to: ADOT Office of Environmental Services
Water Quality Group
1611 W. Jackson Street, MD EM02
Phoenix, AZ 85007

AZS000018-2008
PERMIT NUMBER

8
MONITORING POINT ID

0	6	2	0	1	3
MONTH		YEAR			

PARAMETERS	TURBIDITY		Streamflow	
	Field		Field	Calc.*
ANALYSIS TYPE: (Field, Lab, Calculation*)	NTUs		R ³ /sec	kg/day
UNITS				
PERMIT LIMITS	Min.			TMDL Info Only
	Mean			
	Max.			
DAY OF THE MONTH	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
	14			
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	25			
	26			
	27			
	28			
	29			
	30			
	31			
Monthly Mean				
Highest Value				
Lowest Value				
Number of Exceedances				

* TMDL Loading Calculations in kg/day: mg/L x Streamflow x 2.4465 ;g/L x Streamflow x 0.0024465

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John J Baker, CPESC ECC

6/30/13

NAME OF PRINCIPAL EXECUTIVE OFFICER

DATE

Regional Environmental Manager

(602) 370-6387

TITLE OF PRINCIPAL EXECUTIVE OFFICER

TELEPHONE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-3(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Colcord Elk Fence Project
Monitoring Period (yr/mo/day): 12/13/13 to 3/11/13

Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (units)	Turbidity (units = NTU)	pH	Other (specify)	Other (specify)
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4838 Suite C100	PE/CPEsc												
Phone Number: 602-329-3399													
III. Monitoring Location	IV. Sample Date/Time												
1	12-3-12												
2	12-3-12												
3	12-3-12												
4	12-3-12												

VI. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST: _____

VII. CERTIFICATION: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / ECC Phone: 928-537-1133

Signature: Dave Dalberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-3(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Colcord
Monitoring Period (yr/mo/day): 12/3/13 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		A. Visual Assessment:						B. Analytical Monitoring:					
Name: Edward Henan Title: PE/CPESC Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4838 Suite E-10 Phone Number: 602-329-3399		Shreen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (units)	Turbidity (units = NTU)	pH	Other (specify)	Other (specify)
1	12/10/13	NO	DISCHARGE										
2	12/10/13	NO	DISCHARGE										
3	12/10/13	NO	DISCHARGE										
4	12/10/13	NO	DISCHARGE										

VI. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST:

VII. CERTIFICATION: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent
Signature: Dave Dalberg Date: 09-19-13 Phone: 928-537-1133
June 2013

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-B(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Colcord Elk Fence Project
Monitoring Period (yr/mo/day): 12/3/13 to 3/11/13
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored															
		A. Visual Assessment:					B. Analytical Monitoring:										
Name:	Title:	Address:	Phone Number:	Monitoring Location	IV. Sample Date/Time	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)	
Edward Heman	PE/CPESC	2990 E. Northern Ave. Phoenix, AZ 85028-4834	602-329-3399		12/17/12	NO	Discharge										
					12/17/12	NO	Discharge										
					12/17/12	NO	Discharge										
					12/17/12	NO	Discharge										

VI. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST: _____
VII. CERTIFICATION: I, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Palberg Title: Superintendent/ECC Phone: 928-537-1133
Signature: Dave Palberg Date: 09-19-13
June 2013 Page 1 of 1

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-31208JT
H820201c



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Calcarif
Monitoring Period (yr/mo/day): 12/27/13 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored															
		A. Visual Assessment:					B. Analytical Monitoring:										
Name:	Title:	Address:	Phone Number:	Monitoring Location	Sample Date/Time	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)	
Edward Heman	PE/CPESC	2990 E. Northern Ave. Phoenix, AZ 85028-4839	602-329-3399	Sheen	12/27/12	NO Discharge											
					12/27/12	NO Discharge											
					12/27/12	NO Discharge											
					12/27/12	NO Discharge											

VII. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST: _____
 VII. CERTIFICATION: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
 Printed Name: Dave Palberg Title: Superintendent/ECC Phone: 928-537-7133
 Signature: Dave Palberg Date: 09-19-13
 June 2013 Page 1 of ____

Stormwater Construction General Permit AZG2013-001

Discharge Monitoring Report (DMR) Form

260-B(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Colcord Elk Fence Project
Monitoring Period (yr/mo/day): 1/1/13 to 3/11/13
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
Edward Heman	PE/CPESC												
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4839 Suite E-100													
Phone Number: 602-329-3399													
III. Monitoring Location	IV. Sample Date/Time												
1	1/1/2013												
2	1/1/2013												
3	1/1/2013												
4	1/1/2013												

VI. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST:

VII. CERTIFICATION: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / E.C.C. Phone: 928-537-1133
Signature: Dave Dalberg Date: 09-19-13
June 2013 Page 1 of 1

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-3(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Calcará
Monitoring Period (yr/mo/day): 12/31/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
Edward Heman	PE/CPEsc												
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4839	Phone Number: 602-329-3399	1/7/13	NO	DISCHARGE									
		2/7/13	NO	DISCHARGE									
		3/7/13	NO	DISCHARGE									
		4/7/13	NO	DISCHARGE									

VI. ATTACHMENTS: Y ☐ N ☐ IF "YES," LIST: _____
VII. CERTIFICATION: _____
"I, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Palberg Title: Superintendent/ECC Phone: 928-537-1133
Signature: Dave Palberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001

Discharge Monitoring Report (DMR) Form

260-B(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Teate Cr. to Colcord
Monitoring Period (yr/mo/day): 12/8/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		A. Visual Assessment:						B. Analytical Monitoring:										
Name:	Title:	Address:	Phone Number:	III. Monitoring Location	IV. Sample Date/Time	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)	
Edward Heman	PE/CPESC	2990 E. Northern Ave. Phoenix, AZ 85028-4838 Suite E100	602-329-3399		1/14/13	NO		DISCHARGE										
					1/14/13	NO		DISCHARGE										
					1/14/13	NO		DISCHARGE										
					1/14/13	NO		DISCHARGE										

VI. ATTACHMENTS: Y ☐ N ☐ IF "YES," LIST: _____
 VII. CERTIFICATION: _____
 "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
 Printed Name: Dave Dalburg Title: Superintendent / E.C.C. Phone: 928-537-1133
 Signature: Dave Dalburg Date: 09-19-13
 June 2013 Page 1 of _____

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-31208JT
H820201c



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Colcord
Monitoring Period (yr/mo/day): 12/18/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (units)	Turbidity (units = NTU)	pH	Other (specify)	Other (specify)
Edward Heman	PE/CPEsc												
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4834 Site Evido													
Phone Number: 602-329-3399													
III. Monitoring Location	IV. Sample Date/Time												
1	1/21/13		NO	DISCHARGE									
2	1/21/13		NO	DISCHARGE									
3	1/21/13		NO	DISCHARGE									
4	1/21/13		NO	DISCHARGE									

VI. ATTACHMENTS: Y ☐ N ☐ IF "YES," LIST:

VII. CERTIFICATION: "I, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / ECC Phone: 928-537-1133
Signature: Dave Dalberg Date: 09-19-13
June 2013

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-3(208)T
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Calcard
Monitoring Period (yr/mo/day): 12/3/12 to 3/11/13 Elk Fence Project

Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		A. Visual Assessment:						V. Pollutants / Parameters Monitored									
Name: Edward Heman Title: PE/CPESC Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4839 Phone Number: 602-329-3399		III. Monitoring Location		IV. Sample Date/Time		Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (units)	Turbidity (units = NTU)	pH	Other (specify)	Other (specify)	
1	1/28/13					NO	DISCHARGE										
2	1/28/13					NO	DISCHARGE										
3	1/28/13					NO	DISCHARGE										
4	1/28/13					NO	DISCHARGE										

VI. ATTACHMENTS: Y ☐ N ☐ IF "YES," LIST:

VII. CERTIFICATION: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / E.C.C. Phone: 928-537-1133
Signature: Dave Dalberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001

Discharge Monitoring Report (DMR) Form

260-36208JT
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Teuto Cr. to Colcord
Monitoring Period (yr/mo/day): 12/31/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		A. Visual Assessment:							B. Analytical Monitoring:				
Name: Edward Heman		Title: PE/CPESC		Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4834		Phone Number: 602-329-3399		III. Monitoring Location		IV. Sample Date/Time		V. Pollutants / Parameters Monitored	
		Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
1	2/4/13	NO		DISCHARGES									
2	2/4/13	NO		DISCHARGES									
3	2/4/13	NO		DISCHARGES									
4	2/4/13	NO		DISCHARGES									

VI. ATTACHMENTS: ☐ Y ☐ N IF "YES," LIST:

VII. CERTIFICATION: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / E C C Phone: 928-537-1133
Signature: Dave Dalberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-B(208)T
H820201C



I. Authorization # AZCON-529084 Project Site Name: SR 260 Tests Cr. to Celcard
Monitoring Period (yr/mo/day): 12/3/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4834 Suite 4100	PE/CPEsc												
Phone Number: 602-329-3399													
III. Monitoring Location	IV. Sample Date/Time												
1	2/11/13	NO		DISCHARGE									
2	2/11/13	NO		DISCHARGE									
3	2/11/13	NO		DISCHARGE									
4	2/11/13	NO		DISCHARGE									

VI. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST: _____
VII. CERTIFICATION: _____
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / ECC Phone: 928-537-1133
Signature: Dave Dalberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-36208JT
H820201c



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Calceva
Monitoring Period (yr/mo/day): 12/31/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
Edward Heman	PE/CPEsc												
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4834	Phone Number: 602-329-3399												
III. Monitoring Location	IV. Sample Date/Time												
1	2/19/13	NO		DISCHARGE									
2	2/19/13	NO		DISCHARGE									
3	2/19/13	NO		DISCHARGE									
4	2/19/13	NO		DISCHARGE									

VII. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST:

"I, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Dalberg Title: Superintendent / ECC Phone: 928-537-1133

Signature: Dave Dalberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001 Discharge Monitoring Report (DMR) Form

260-31208JT
H/820201c



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Celcord
Monitoring Period (yr/mo/day): 2/18/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (units)	Turbidity (units = NTU)	pH	Other (specify)	Other (specify)
Edward Heman	DE/CPEsc												
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4839	Phone Number: 602-329-3399	1	2/25/13	NO	DISCHARGE								
		2	2/25/13	NO	DISCHARGE								
		3	2/25/13	NO	DISCHARGE								
		4	2/25/13	NO	DISCHARGE								

VI. ATTACHMENTS: ☐ Y ☒ N IF "YES," LIST: _____
VII. CERTIFICATION: _____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Palberg Title: Superintendent/ECC Phone: 928-537-1133
Signature: Dave Palberg Date: 09-19-13

Stormwater Construction General Permit AZG2013-001

Discharge Monitoring Report (DMR) Form

260-36208JT
H820201C



I. Authorization # AZCON-529084 Project/Site Name: SR 260 Tonto Cr. to Colcord
Monitoring Period (yr/mo/day): 12/31/12 to 3/11/13 Elk Fence Project
Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling		V. Pollutants / Parameters Monitored											
		A. Visual Assessment:					B. Analytical Monitoring:						
Name:	Title:	Sheen	Color	Foam	Solids (Susp. or Settled)	Odor (specify)	Other (specify)	Other (specify)	TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
Address: 2990 E. Northern Ave. Phoenix, AZ 85028-4834	PE/CPEsc												
Phone Number: 602-329-3399													
III. Monitoring Location	IV. Sample Date/Time												
1	3/4/13	NO	DISCHARGE										
2	3/4/13	NO	DISCHARGE										
3	3/4/13	NO	DISCHARGE										
4	3/4/13	NO	DISCHARGE										

VI. ATTACHMENTS: Y ☐ N ☒ IF "YES," LIST: _____
VII. CERTIFICATION: _____
"I, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Dave Polberg Title: Superintendent / ECC Phone: 928-537-1133
Signature: Dave Polberg Date: 09-19-13
June 2013 Page 1 of _____

Appendix G

Illicit Discharge; Illicit Connection



Arizona Department of Transportation
Administrative Services Division
206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janice K. Brewer
Governor

John H. Nichols
Division Director

September 28, 2012

John S. Halikowski
Director

NOTICE OF ILLEGAL DISCHARGE OR CONNECTION

PetSmart
7650 West Latham Street
Phoenix, Arizona 85043

Dear Sir or Madam:

The Arizona Department of Transportation (ADOT) is responsible for maintaining not only roadways, but also the extensive storm drain network located within the State rights-of-way. The Arizona Pollutant Discharge Elimination System (AZPDES) Program, which is a component of the Clean Water Act of 1972, requires ADOT to control the amount of pollutants entering the drainage system. Part of this charge is the detection and elimination of illegal discharges or connections to the system that may contain pollutants or are otherwise not allowed. Left uncorrected, any pollutants entering the system will ultimately affect nearby streams, as storm drainage is not treated at any sort of treatment facility. In addition, neighboring property owners are not allowed to occupy, use or interfere with public right of way without permission. Any discharge without permission is an illegal encroachment on ADOT right of way.

On August 21 and August 23, 2012 two separate discharges of stormwater and sediment entered ADOT's roadway. Since this was not a permitted action, it is an illicit discharge into our storm system. It is the understanding of the ADOT Water Quality Group that PetSmart is taking corrective action to remediate the problem. We request that once a permanent fix is identified that we are notified.

If you do not understand this notice, or you disagree that an illegal discharge occurred from your property, please contact me with further details or explanation by calling 602.712.8353 or by email at wterlizzi@azdot.gov.

Sincerely,

Wendy Terlizzi
ADOT Office of Environmental Services Water Quality Manager
1611 W Jackson Street, MD EM04
Phoenix, Arizona 85383

cc: Todd G. Williams, ADOT Office of Environmental Services Director
Tim Wolfe, ADOT Phoenix Maintenance District Engineer
Lisa Andersen, ADOT Phoenix Maintenance District Environmental Coordinator



Arizona Department of Transportation
Administrative Services Division
206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janice K. Brewer
Governor

John H. Nichols
Division Director

September 28, 2012

John S. Halikowski
Director

NOTICE OF ILLEGAL DISCHARGE OR CONNECTION

Mr. John Berookhim and/or Mr. Farid Moradi
10814 Rochester Avenue
Los Angeles, CA 90024-4910

Dear Mr. Berookhim and Mr. Moradi:

The Arizona Department of Transportation (ADOT) is responsible for maintaining not only roadways, but also the extensive storm drain network located within the State rights-of-way. The Arizona Pollutant Discharge Elimination System (AZPDES) Program, which is a component of the Clean Water Act of 1972, requires ADOT to control the amount of pollutants entering the drainage system. Part of this charge is the detection and elimination of illegal discharges or connections to the system that may contain pollutants or are otherwise not allowed. Left uncorrected, any pollutants entering the system will ultimately impact nearby streams, as storm drainage is not treated at any sort of treatment facility. In addition, neighboring property owners are not allowed to occupy, use or interfere with public right of way without permission. Any discharge/connection without permission is an illegal encroachment on ADOT right of way.

An inspection of the drainage system has occurred on September 21, 2012 near your property located at the Loop 202 (Santan Freeway) and McQueen Road and an illegal connection was discovered entering into the ADOT system. Photographs of this connection are enclosed with this letter.

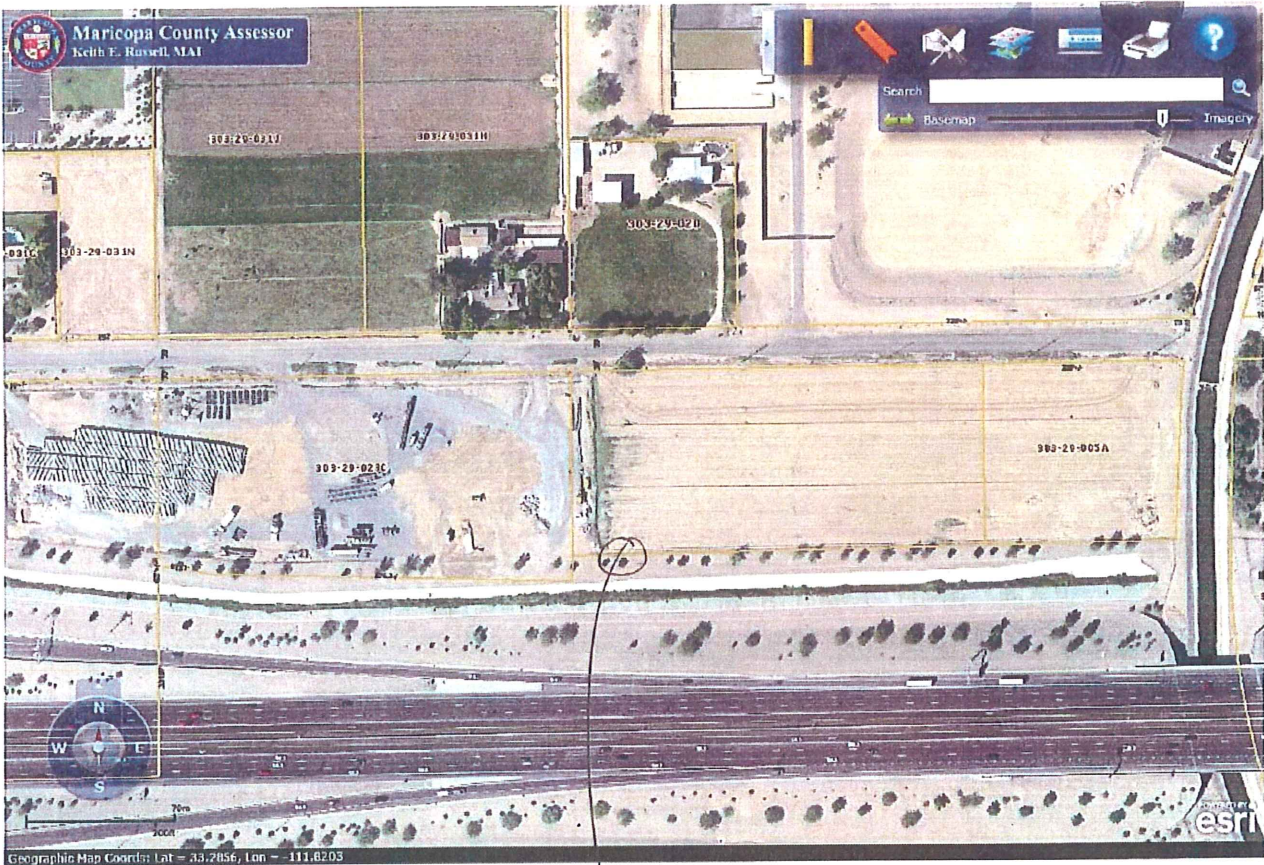
This connection must be removed within 30 days. A follow-up investigation will be conducted after that time to ensure compliance. If the situation is not corrected, ADOT will remove the connection and bill you directly pursuant to A.R.S. § 28-7053. In the alternative, ADOT can forward this matter to the Arizona Office of the Attorney General so that a lawsuit may be filed.

If the illegal connection cannot be removed within 30 days, you do not understand this notice, or you disagree that an illegal connection exists at your property, please contact me with further details or explanation by calling 602.712.8353 or by email at wterlizzi@azdot.gov.

Sincerely,

Wendy Terlizzi
ADOT Office of Environmental Services Water Quality Manager
1611 W Jackson Street, MD EM04
Phoenix, Arizona 85383

cc: Todd G. Williams, M.Sc, ADOT Office of Environmental Services Director
Tim Wolfe, ADOT Phoenix Maintenance District Engineer
Lisa Andersen, ADOT Phoenix Maintenance District Environmental Coordinator



DISCHARGE





Environmental Services

Janice K. Brewer, Governor
John S. Halikowski, Director
John H. Nichols, Deputy Director

July 2, 2013

Angelo Yializis, Owner
10960 North Stallard Place
Tucson, AZ 85737

NOTICE OF ILLEGAL DISCHARGE OR CONNECTION

Dear Mr. Yializis:

The Arizona Department of Transportation (ADOT) is responsible for maintaining not only roadways, but also the extensive storm drain network located within the State rights-of-way. The Arizona Pollutant Discharge Elimination System (AZPDES) Program, which is a component of the Clean Water Act of 1972, requires ADOT to control the amount of pollutants entering the drainage system. Part of this charge is the detection and elimination of illegal discharges or connections to the system that may contain pollutants or are otherwise not allowed. Left uncorrected, any pollutants entering the system will ultimately impact nearby streams, as storm drainage is not treated at any sort of treatment facility. In addition, neighboring property owners are not allowed to occupy, use or interfere with public right of way without permission. Any discharge/connection without permission is an illegal encroachment on ADOT right of way.

An inspection of the drainage system occurred on April 29, 2013 near your property located along SR 77, North Oracle Road and an illegal connection was discovered entering into the ADOT system. Photographs of this connection are enclosed with this letter.

This connection must be removed within 30 days. A follow-up investigation will be conducted after that time to ensure compliance. If the situation is not corrected, ADOT will remove the connection and bill you directly pursuant to A.R.S. § 28-7053. In the alternative, ADOT can forward this matter to the Arizona Office of the Attorney General so that a lawsuit may be filed.

If the illegal connection cannot be removed within 30 days, you do not understand this notice, or you disagree that an illegal connection exists at your property, please contact Leigh Waite with further details or explanation by calling 602.712.6170 or by email at lwaite@azdot.gov.

Sincerely,

Wendy Terlizzi, CMS4S
Water Quality Manager

cc: Todd G. Williams, M.Sc, ADOT Environmental Services Director
Rod Lane, ADOT Tucson District Engineer
Melissa Reuter, ADOT Tucson District Environmental Coordinator



Appendix H

Compliance Evaluation Reports



Arizona Department of Transportation
Administrative Services Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janice K. Brewer
Governor

John S. Halikowski
Director

John H. Nichols
Division Director

December 5, 2012

Mr. Michael Halpin
General Manager
Grand Canyon Airport
P.O. Box 3399
Grand Canyon, AZ 86023-3399

Dear Mr. Halpin:

Enclosed is a copy of the annual multi tenant environmental compliance inspection report for Grand Canyon Airport. The environmental compliance inspection was conducted on October 3, 2012. All four tenants at the airport are required to submit a copy of their site specific Spill Prevention, Control, and Countermeasures plan (**cover page only**) within 90 days of this report unless other arrangements are made. Tenants will send the cover page to:

ADOT
Attn. Kent Haugerud, Compliance Evaluator
1901 S. Milton Rd., MD 500
Flagstaff, AZ 86001.

Contact Kent Haugerud, at (602) 376-8532 or by email at khaugetud@azdot.gov, if you have questions regarding this report.

Thanks for helping ADOT maintain compliance,

Chuck Howe, Compliance Manager
Office of Environmental Services
1611 W. Jackson St., MD EM02
Phoenix, AZ 85007
928-310-6844

Copy: Mike Cochrum, P.O. Box 3188, Hwy 64, Grand Canyon, AZ 86023
Mike Vessey, P.O. Box 3188, Hwy 64, Grand Canyon, AZ 86023
Wendy Terlizzi, WQG, 1611 W. Jackson St., MD EM02, Phoenix, AZ 85007

Enclosure: Annual Multi Tenant Compliance Inspection

Annual Multi Tenant Inspection Summary

Inspectors Comments: Grand Canyon Airport (GCN) is owned and operated by ADOT under the Administrative Services Division (ASD). In addition to ADOT operated facilities, there are four commercial operating tenants located on the airport property. Airport operations at this facility are regulated by EPA, ADEQ, FAA and OSHA related to environmental regulations (air quality, stormwater, spill prevention, safety and health, and hazardous materials). The airport is currently operating under a Stormwater Pollution Prevention (SWPPP) plan in accordance with ADOT's Statewide Stormwater Discharge Permit. ADOT is completing a Facility Pollution Prevention Plan (FPPP) which will satisfy EPA's requirement for a SWPPP plan as well as a Spill Prevention, Control, and Countermeasures (SPCC) plan. **In addition, a determination has been made by ADOT Office of Environmental Services (OES) Water Quality Group that each tenant operating fuel systems on GCN property will be required to establish and maintain an SPCC for each site under their control.**

Air quality permits are required for all emergency generators located at the airport to comply with ADEQ Air Quality rules. An Approval to Operate (ATO) for each of four ADOT-owned and operated generators was observed at the time of the inspection. The ATO for an additional generator located at the FAA Air Traffic Control Tower was not observed at the time of this inspection, but is on file at OES and is maintained and permitted by FAA (Los Angeles District Office).

Many of the items noted in previous annual facility inspections were corrected. Following is a list of **deficiencies** which are required to be corrected under State or Federal Law and **recommendations** which should be complied with in order to be in compliance with various ADOT plans and standards. Deficiencies or recommendations that are followed by "**Repeat**" are issues that were noted on a previous inspection, corrected, and occurred again. Deficiencies or recommendations that are followed by "**Continued**" are issues that were noted on a previous inspection and never corrected.

GCN ADOT Operations:

Deficiencies:

1. Twenty sites are required to be inspected quarterly under the Grand Canyon Airport Stormwater Pollution Prevention Plan (SWPPP). Inspection reports for the third quarter of 2012(ending September) were not available at the time of the inspection. Sixteen of the twenty site inspections required has not been completed.
Complete as necessary.

ADOT Maintenance site:

Deficiencies:

1. Correctly label all 55-gallon drums. **Continued**
2. Post appropriate safety signage around grinder, i.e. "Eye Protection Required," "Gloves Required," etc. **Continued**

Recommendations:

1. Housekeeping: Although progress has been made removing trash around the outside of the building, more effort is necessary inside the building (Photo 1e and 5e).
 - a. Replace makeshift oil containment area with an appropriate containment pallet. This will help with housekeeping, as well as provide a clean secondary containment reducing fire hazard. (Photo 4e) **Continued**

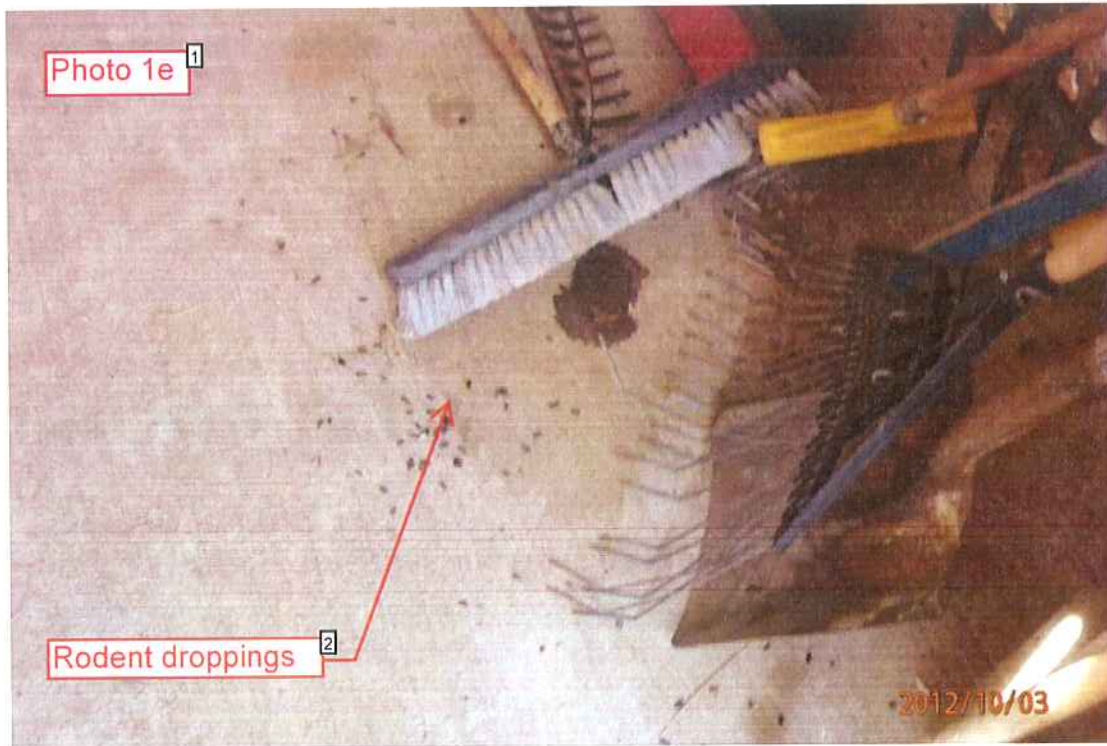
- b. Clean up all oils leaks or spills at the time they occur so that concrete or pavement is not permanently stained.
2. Fire extinguisher sign is not above the fire extinguisher. Move sign as necessary. **Continued**
3. Parts washer is sitting on top of a 5-gallon bucket. Place parts washer on a permanent support structure.
4. Remove mop bucket from makeshift secondary containment. Photo **Continued**
5. Follow good housekeeping procedures to prevent spillage of materials during liquid transfers at the drum storage area. Remove oily residues around oil drums, and liquid accumulated in containment pallets.
6. Clean up oil spills and leaks at the time of release. Place oil drip pans under leaking vehicles parked for an extended time.
7. Provide secondary containment for five gallon buckets containing petroleum products unless they are stored in a protected storage area. (Photos 2e and 3e)
8. Place sign above sink stating "Do Not Dump Chemicals Down This Drain." Remove stored washing machine (not connected for use).

ARFF Site:

Deficiencies: None

Recommendations:

1. Clean up oil spills and leaks at the time of release to prevent permanent staining on concrete or pavement. Place oil drip pans under leaking vehicles when parked in or around building.
Repeat
2. Install a collection device for the Caterpillar emergency genet. Flexible hose outside unit is discharging to ground.
3. Provide spill containment in an appropriate location for 5-gallon buckets of petroleum products that are not stored in a protected area. (Photo 2e and 3e) **Continued**



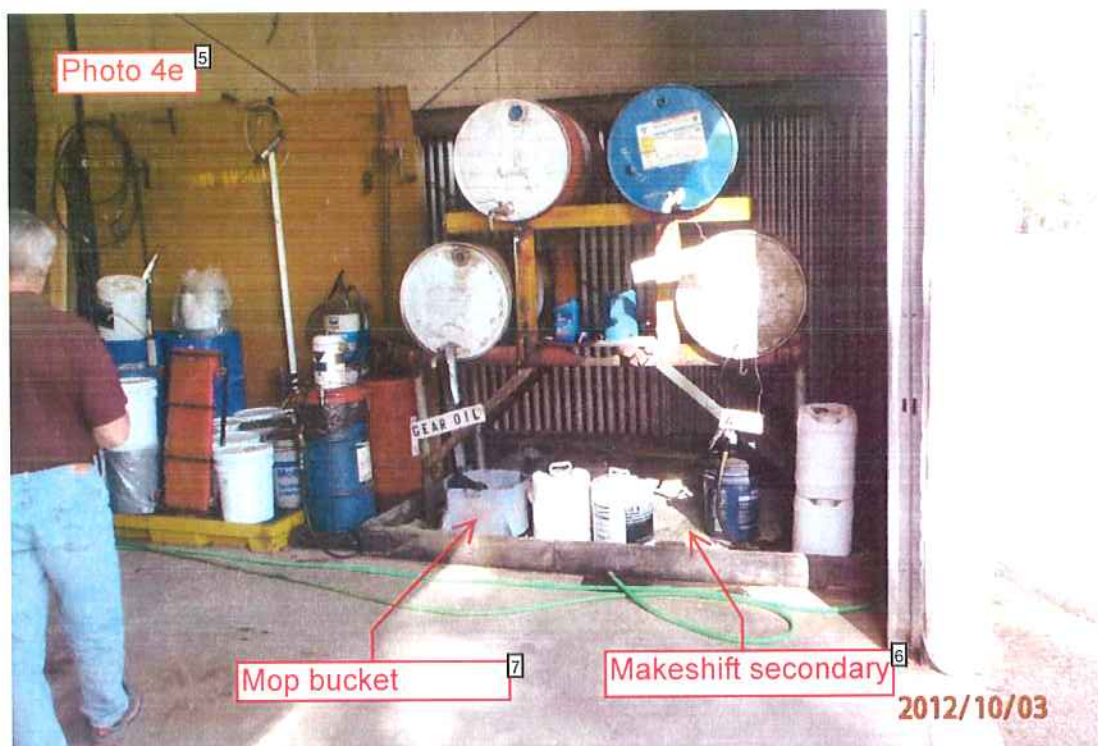
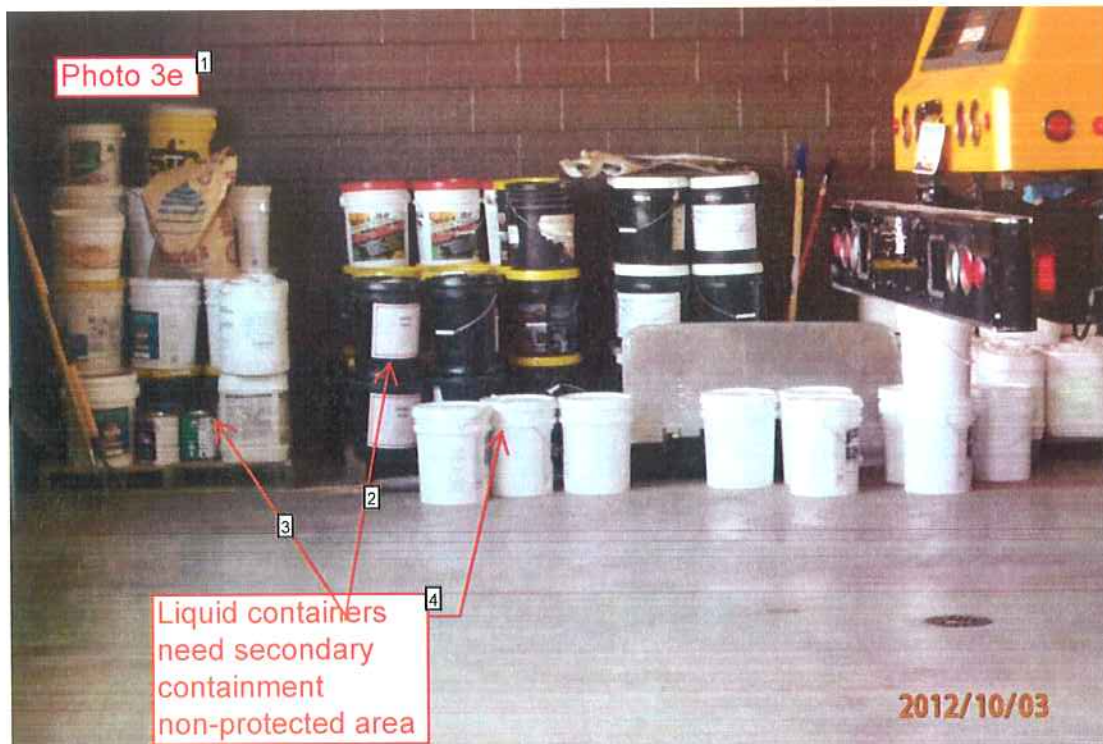




Photo 5e ¹

²
Rodent droppings. Clean
and maintain.
Maintenance Building

2012/10/03

Following is a summary of the actions, recommendations and deficiencies noted during the non-ADOT tenant inspections.

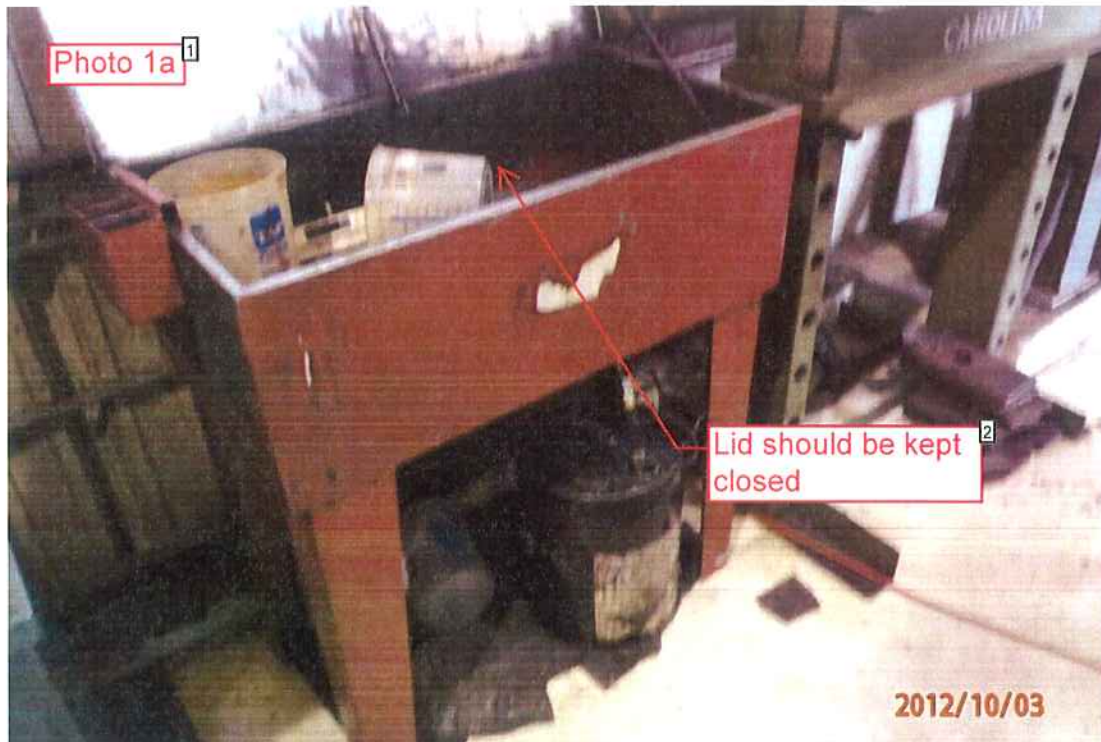
Grand Canyon Airlines:

Deficiencies:

1. Under ADOT requirements established by ADOT Office of Environmental Services, Grand Canyon Airlines must develop and maintain a Spill Prevention, Control, and Countermeasure (SPCC) plan in accordance with EPA and Title 40 of the Code of Federal Regulations, Part 112 (40CFR112). Since the facility has more than 10,000 gallons of fuel storage, or individual tanks exceeding 5,000 gallon capacity, the plan must be certified by a Professional Engineer registered in the State of Arizona.
2. Provide the appropriate signage, (NFPA diamond, No Smoking, Product name) on the double wall used oil tank in accordance with the NFPA 704 standard and Compressed Gas Association. **Continued**
3. Provide appropriate signage on propane tanks adjacent to GCA hanger in accordance with the International Fire Code and NFPA 704 standard. **Continued**
4. Provide full containment of 55-gallon containers. Maintain containment basins by pumping when necessary. This should be done to comply with all SPCC requirements.

Recommendations:

1. Since no oil / water separator is located at this facility, place a sign stating "Do Not Dump Chemicals or Oily Mop Water Down the Drain" above the sink.
2. Separate corrosive materials from flammable materials inside all flammable storage units to avoid possible dangerous reaction.
3. A plastic gasoline container in one of the flammable storage units is marked with "MEK." Methyl Ethyl Ketone (MEK) should be stored in an approved safety container in accordance with 1910.1200.
4. Follow good housekeeping procedures to prevent spillage of materials during liquid transfers at the used oil and solvent drum storage shed. The used oil transfer and storage area is in need of cleanup. Secondary containment for used oil needs to be pumped out. **Continued**
5. Lid should be kept closed on parts solvent washer.
6. Keep area around the spill response kit clear to ensure easy access and high visibility.







Papillon Helicopters

Deficiencies:

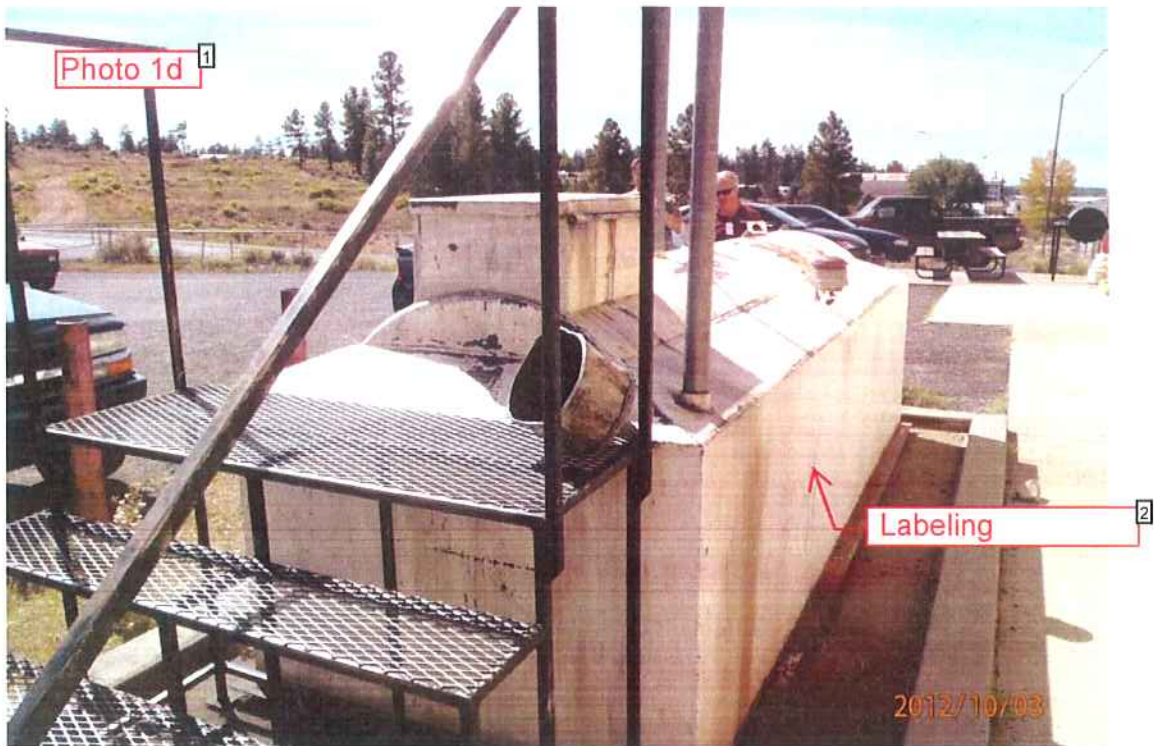
1. Under ADOT requirements established by the Office of Environmental Services, Papillon Helicopters must develop and maintain a Spill Prevention, Control, and Countermeasure (SPCC) plan in accordance with EPA and Title 40 of the Code of Federal Regulations, Part 112 (40CFR112). If the facility has more than 10,000 gallons of fuel storage, or individual tanks exceeding 5,000 gallon capacity, the plan must be sealed by a Professional Engineer registered in the State of Arizona. Otherwise, a plan may be developed and self certified by the owner or operator.
2. An NFPA diamond is needed on the used oil storage tank in accordance with NFPA 704.

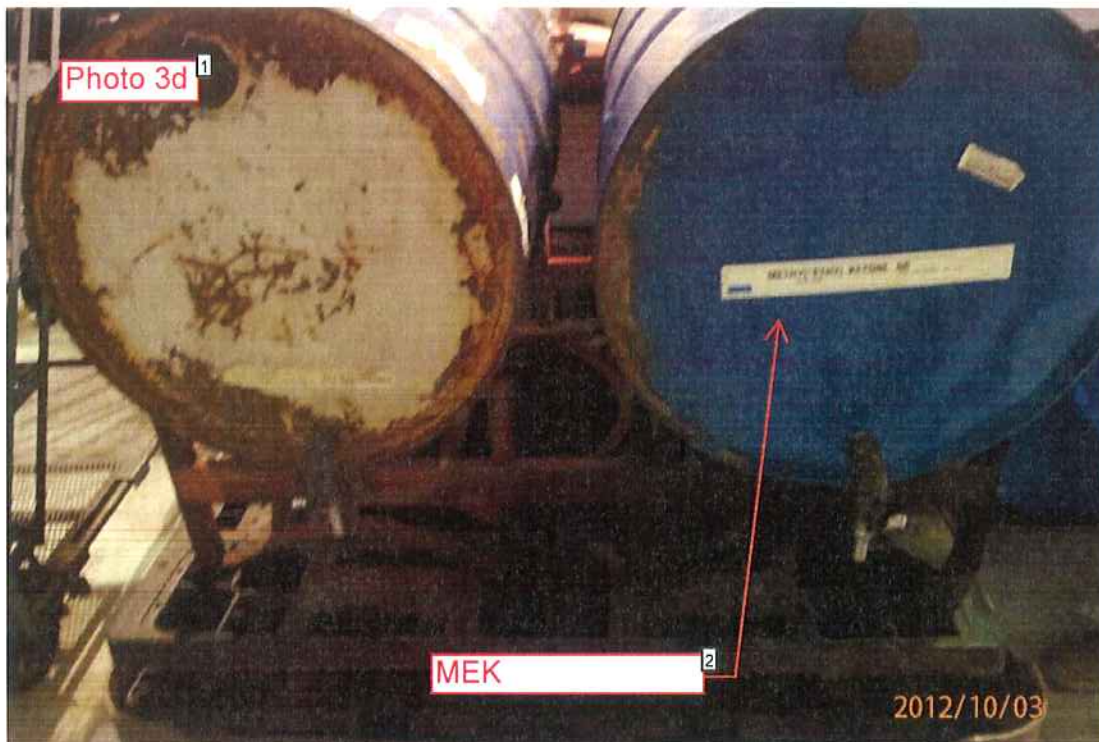
Continued

3. Need proper labeling, and bonding and grounding wires for Class I, MEK 55-gallon drums in accordance with OSHA labeling requirements 1910.1200.

Recommendations:

1. Remove stains at used oil containment transfer area.
2. Clear area around propane storage tank located near bone yard. General housekeeping near propane tank and bone yard can be improved.





Grand Canyon Helicopter

Deficiencies:

1. Under ADOT requirements established by ADOT Office of Environmental Services, GCH must develop and maintain a Spill Prevention, Control, and Countermeasure (SPCC) plan in accordance with EPA and Title 40 of the Code of Federal Regulations, Part 112 (40CFR112). If the facility has more than 10,000 gallons of fuel storage, or individual tanks exceeding 5,000 gallon capacity, the plan must be sealed by a Professional Engineer registered in the State of Arizona. Otherwise, a plan may be developed and self certified by the owner or operator.
2. Need NFPA label on used oil tank in accordance with NFPA 704. **Continued**
3. Need appropriate labeling on propane tank in accordance with the International Fire Code and NFPA 704 standard. **Continued**

Recommendations:

1. Repair leaky fuel hose near fuel containment.
2. Keep hoses rolled up off the ground when not in use.
3. Sign stating "No Chemicals Down The Drain" above sink.





Maverick Helicopters

Deficiencies:

1. Under ADOT requirements established by ADOT Office of Environmental Services, Maverick Helicopters must develop a Spill Prevention, Control, and Countermeasure (SPCC) plan in accordance with EPA and Title 40 of the Code of Federal Regulations, Part 112 (40CFR112). If the facility has more than 10,000 gallons of fuel storage, or individual tanks exceeding 5,000 gallon capacity, the plan must be sealed by a Professional Engineer registered in the State of Arizona. Otherwise, a plan may be developed and self certified by the owner or operator.

Recommendations:

1. Recommend placing filter fabric and two check dams at eroded drainage channel from parking area. Placing filter fabric and rock check dams on the channel will allow contaminants to settle and slow the water velocity down so that erosion will not continue. This should be completed so that we maintain compliance with the Stormwater Pollution Prevention Plan (SWPPP).

Continued

2. Broken concrete near drainage area should be disposed of off site if there is no use for it.
3. Spoils pile located near drainage should be moved away from the edge of the drainage and straw waddles placed around the base to prevent sediment from washing away.
4. Drainage culvert needs to be cleared of debris at inflow point.
5. Proper containment for fuel nozzles should be provided.
6. Crash protection (bollards) should be placed around the double walled above ground storage tank.

Please contact Kent Haugerud at 602-376-8532 if you have questions regarding this inspection report.



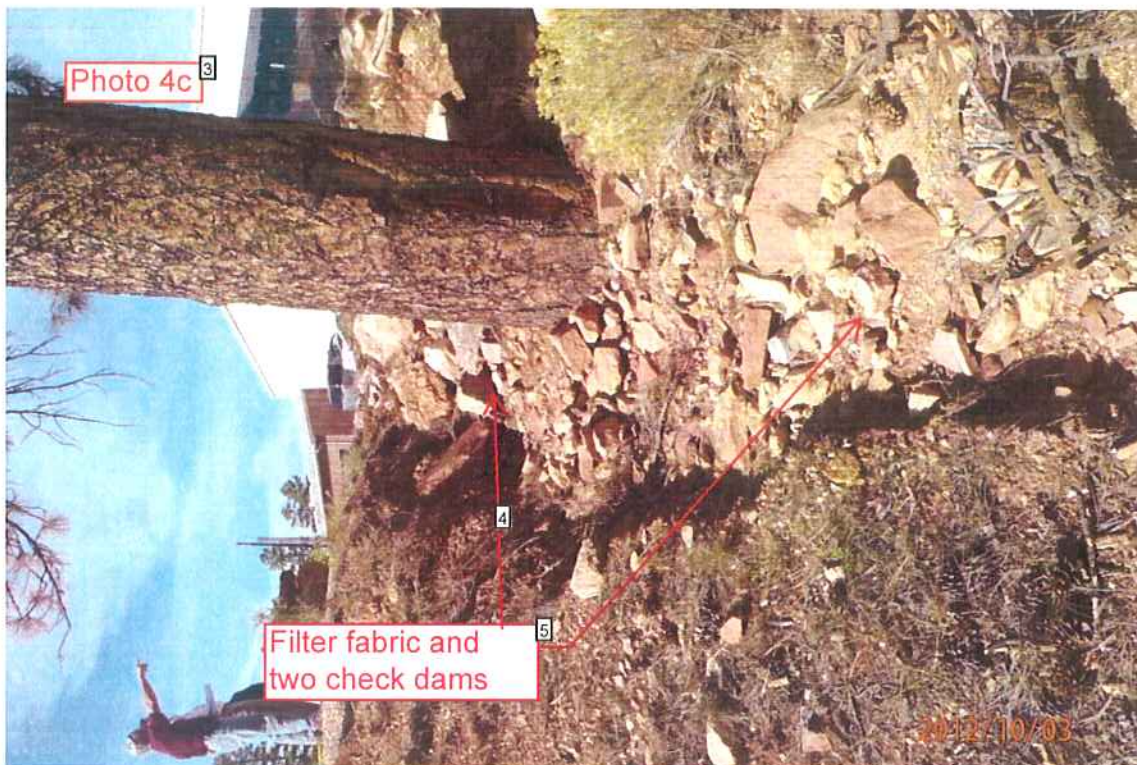
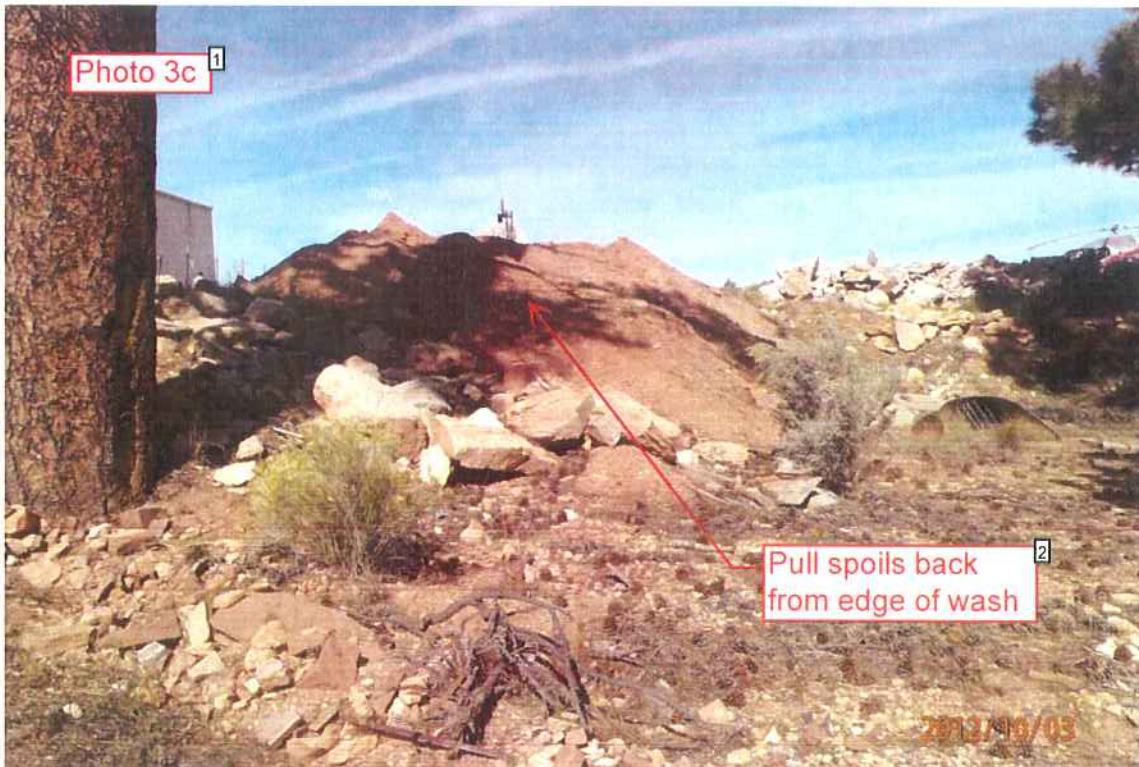


Photo 5c ¹

²
Clean drainage
CMP inlet

2012/10/03

