



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109

**DOCUMENT**  
**#2221596**

**SUNDRY NOTICE**

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

**RECEIVED**  
**12/16/2011**

1. OGCC Operator Number: <u>96850</u>	4. Contact Name Karolina Blaney	Complete the Attachment Checklist  OP OGCC
2. Name of Operator: <u>Williams Production RMT</u>	Phone: <u>970 683 2295</u>	
3. Address: <u>1058 County Road 215</u> City: <u>Parachute</u> State: <u>CO</u> Zip: <u>81635</u>	Fax: <u>970 285 9573</u>	
5. API Number <u>05-045-11020</u>	OGCC Facility ID Number <u>279359</u>	Survey Plat
6. Well/Facility Name:	7. Well/Facility Number <u>AP 41-11-696</u>	Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): <u>NENE S11 T6S R95W 6pm</u>		Surface Eqpm Diagram
9. County: <u>Garfield</u>	10. Field Name: <u>Allan Point</u>	Technical Info Page <input checked="" type="checkbox"/>
11. Federal, Indian or State Lease Number:		Other <input checked="" type="checkbox"/>

**General Notice**

<input type="checkbox"/> <b>CHANGE OF LOCATION:</b> Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)													
Change of <b>Surface</b> Footage from Exterior Section Lines:	<table border="1"> <tr> <td></td> <td>FNL/FSL</td> <td>FEL/FWL</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>		FNL/FSL	FEL/FWL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	FNL/FSL	FEL/FWL											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
Change of <b>Surface</b> Footage to Exterior Section Lines:	<input type="checkbox"/>												
Change of <b>Bottomhole</b> Footage from Exterior Section Lines:	<input type="checkbox"/>												
Change of <b>Bottomhole</b> Footage to Exterior Section Lines:	<input type="checkbox"/> attach directional survey												
Bottomhole location Qtr/Sec, Twp, Rng, Mer													
Latitude	Distance to nearest property line												
Longitude	Distance to nearest bldg, public rd, utility or RR												
Ground Elevation	Distance to nearest lease line												
	Is location in a High Density Area (rule 603b)? Yes/No <input type="checkbox"/>												
	Distance to nearest well same formation												
	Surface owner consultation date:												
<b>GPS DATA:</b>													
Date of Measurement	PDOP Reading												
	Instrument Operator's Name												
<input type="checkbox"/> <b>CHANGE SPACING UNIT</b> Formation      Formation Code      Spacing order number      Unit Acreage      Unit configuration	<input type="checkbox"/> <b>Remove from surface bond</b> Signed surface use agreement attached												
<input type="checkbox"/> <b>CHANGE OF OPERATOR (prior to drilling):</b> Effective Date: _____ Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	<input type="checkbox"/> <b>CHANGE WELL NAME</b> NUMBER From: _____ To: _____ Effective Date: _____												
<input type="checkbox"/> <b>ABANDONED LOCATION:</b> Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No Date Ready for Inspection: _____	<input type="checkbox"/> <b>NOTICE OF CONTINUED SHUT IN STATUS</b> Date well shut in or temporarily abandoned: _____ Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No MIT required if shut in longer than two years. Date of last MIT _____												
<input type="checkbox"/> <b>SPUD DATE:</b> _____	<input type="checkbox"/> <b>REQUEST FOR CONFIDENTIAL STATUS</b> (6 mos from date casing set)												
<input type="checkbox"/> <b>SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK</b> *submit cbl and cement job summaries <table border="1"> <tr> <td>Method used</td> <td>Cementing tool setting/perf depth</td> <td>Cement volume</td> <td>Cement top</td> <td>Cement bottom</td> <td>Date</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date						
Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date								
<input type="checkbox"/> <b>RECLAMATION:</b> Attach technical page describing final reclamation procedures per Rule 1004. Final reclamation will commence on approximately _____ <input type="checkbox"/> Final reclamation is completed and site is ready for inspection.													

**Technical Engineering/Environmental Notice**

<input type="checkbox"/> Notice of Intent Approximate Start Date: _____	<input checked="" type="checkbox"/> Report of Work Done Date Work Completed: <u>12/15/2011</u>
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)	
<input type="checkbox"/> Intent to Recomplete (submit form 2) <input type="checkbox"/> Change Drilling Plans <input type="checkbox"/> Gross Interval Changed? <input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Request to Vent or Flare <input type="checkbox"/> Repair Well <input type="checkbox"/> Rule 502 variance requested <input checked="" type="checkbox"/> Other: <u>Form 15 COAs</u>
	<input type="checkbox"/> E&P Waste Disposal <input type="checkbox"/> Beneficial Reuse of E&P Waste <input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Karolina Blaney      Date: 12/16/2011      Email: Karolina.Blaney@Williams.com  
 Print Name: Karolina Blaney      Title: Environmental Specialist

COGCC Approved: Richard Allin      Title: OGLA - EPS II      Date: 12/22/2011  
 CONDITIONS OF APPROVAL, IF ANY:

**TECHNICAL INFORMATION PAGE**



FOR OGCC USE ONLY

1. OGCC Operator Number: _____	API Number: _____
2. Name of Operator: _____	OGCC Facility ID # _____
3. Well/Facility Name: _____	Well/Facility Number: _____
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): _____	

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

Form 15

State of Colorado  
**Oil and Gas Conservation Commission**



FOR OGCC USE ONLY

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

**EARTHEN PIT REPORT/PERMIT**

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days, is required for pits. Submit required attachments and forms.

**Complete the Attachment Checklist**

**FORM SUBMITTED FOR:**

Pit Report  Pit Permit

Oper OGCC

Detailed Site Plan	✓	
Topo Map w/ Pit Location	✓	
Water Analysis (Form 25)		
Source Wells (Form 26)	✓	
Pit Design/Plan & Cross Sect		
Design Calculations	✓	
Sensitive Area Determ.		
Mud Program		
Form 2A	✓	

OGCC Operator Number: 96850  
Name of Operator: Williams Production RMT Co  
Address: 1515 Arapahoe St., Tower 3, Suite 1000  
City: Denver State: Co Zip: 80202

Contact Name and Telephone:  
Lisa Dee  
No: (303) 260-4538  
Fax: (303) 629-8268

API Number (of associated well): See attached Form 26 OGCC Facility ID (of other associated facility): 279359 *LocID: 335874*  
Pit Location (QtrQtr, Sec, Twp, Rng, Meridian): AP 41-11-696 (NENE of Sec. 11: T6S-R96W)  
Latitude: N39.542304 NAD83 Longitude: W108.071163 NAD83 County: Garfield  
Pit Use:  Production  Drilling (Attach mud program)  Special Purpose (Describe Use): Multiwell  
Pit Type:  Lined  Unlined Surface Discharge Permit:  Yes  No  
Offsite disposal of pit contents:  Injection  Commercial Pit/Facility Name: AP 41-11-696 Pit/Facility No: \_\_\_\_\_  
**Attach Form 26 to identify Source Wells and Form 25 to provide Produced Water Analysis results.**

**Existing Site Conditions**

Is the location in a "Sensitive Area?"  Yes  No Attach data used for determination.  
Distance (in feet) to nearest surface water: +/- 825' ground water: +/- 3500' water wells: +/- 2.2 mi  
**LAND USE (or attach copy of Form 2A if previously submitted for associated well) Select one which best describes land use:**  
Crop Land:  Irrigated  Dry Land  Improved Pasture  Hay Meadow  CRP  
Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_  
Subdivided:  Industrial  Commercial  Residential  
**SOILS (or attach copy of Form 2A if previously submitted for associated well)**  
Soil map units form USNRCS survey: Sheet No: Website Data Soil Complex/Series No: 53  
Soils Series Name: Parachute Rhone Loams Horizon thickness (in inches): A: 0-56" ; B: ; C:  
Soils Series Name: See attached Form 2A Horizon thickness (in inches): A: ; B: ; C:  
**Attach detailed site plan and topo map with pit location.**

**Pit Design and Construction**

Size of pit (feet): Length: 100' Width: 50' Depth: 15'  
Calculated pit volume (bbls): 6,946 bbls *9,694 bbls Accounting for 2' freeboard*  
Daily inflow rate (bbls/day): 20  
Daily disposal rates (attach calculations): Evaporation: 3.9 bbls/day Percolation: none bbls/day  
Type of liner material: Poly Thickness: 24 mil  
**Attach description of proposed design and construction (include sketches and calculations).**  
Method of treatment of produced water prior to discharge into pit (separator, heater treater, other): Separator  
Is pit fenced?  Yes  No Is pit netted?  Yes  No

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Lisa Dee Signed: \_\_\_\_\_  
Title: Regulatory Specialist - Highlands Asset Team Date: 3/10/2009

OGCC Approved: \_\_\_\_\_ Title: OGCA SUPERVISOR Date: 4/27/11

**CONDITIONS OF APPROVAL, IF ANY:**

**FACILITY NUMBER: 279359**

- OPERATOR WILL CONDUCT AND DOCUMENT LINER WITHIN 3 MONTHS TO OGCC A HYDROSTATIC TEST OF PIT
- OPERATOR WILL CONDUCT AND MAINTAIN RECORDS OF HYDROSTATIC TESTS OF PIT LINER SYSTEM TWICE PER YEAR UNTIL REMOVED FROM SERVICE OR UPGRADED w/ SECOND MINIMUM 24mil LINER
- PROVIDE ANALYTICAL RESULTS OF GRAB SAMPLES OF PIT WATER ON FORM 4.

Hydrostatic Test Results

Pit Liner Verification

# Hydrostatic Pit Testing

## Data Collection & Computation Form

Fox Engineering Solutions



**Pit Owner:** Williams Production RMT Company  
**Pit Name:** AP 41-11-696  
**COGCC Facility No.** 279359  
**Pit Location:** NE 1/4 NE 1/4 Sec. 11, T6S, R96W, 6th P.M.  
 Latitude: N 39.5423° Longitude: W108.0712° NAD83  
**Reported Liner:** Two - 30 mil Polypropylene Liners  
**Approximate Elevation:** 7990 ft. MSL  
**Test Conducted By:** David Fox, Fox Engineering Solutions

<b>Test Initiation:</b>		<b>Test Termination:</b>	
Date:	9/12/2011	Date:	9/15/2011
Time:	10:30 AM	Time:	10:30 AM
Total Duration:	72 hours		

	<u>Length</u>	<u>Width</u>	<u>Area</u>		<u>Comments</u>
Tributary Pit Liner Surface Area (ft <sup>2</sup> ):	-	-	6,071	ft. <sup>2</sup>	Surveyed by Bookcliff Survey
Initial Pit Water Surface Area:	-	-	2,149	ft. <sup>2</sup>	Surveyed by Bookcliff Survey
Final Pit Water Surface Area:	-	-	2,149	ft. <sup>2</sup>	Surveyed by Bookcliff Survey
Average Pit Surface Area:			2149	ft. <sup>2</sup>	

Initial Pit Fluid Level:		983.37 ft.
Final Pit Fluid Level:		<u>983.39</u> ft
Difference		-0.02 ft or
Est. Fluid Depth:	6 ft.	-0.24 inches

Evaporation Pan Installed: No	Location:	Measured Pan Evaporation:	0 inches
Note: Frozen conditions with pit iced over.		during Test Duration	
		Evaporation w/ Pan Coeff. 0.72	0.00 inches

Rain Gauge Installed: Yes	Location: West side of pit	Recorded Precipitation:	0.25 inches
Note: Snowfall in rain gage had a water equivalent of 0.25 inches of water		Equiv. 72-Hour Precip. Inflow:	0.25 inches

Other Inflow/Outflow:	Inflow (gal)	0	Equivalent Inflow:	0.00 inches
	Outflow (gal)	0	Equivalent Outflow:	0.00 inches

Calculated Fluid Level Change in Inches:	(+ indicates fluid level increased)	
	(Precipitation - Pan Evaporation + Inflows - Outflows)	0.25 inches

Measure Change in Inches:	(+ indicates fluid level increased)	0.24 inches
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Difference between Calculated and Measured Pit Fluid Level:	-0.01 inches
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**Summary:** No observed loss in liner integrity. Reasonable correlation between measured and calculated pit fluid levels.

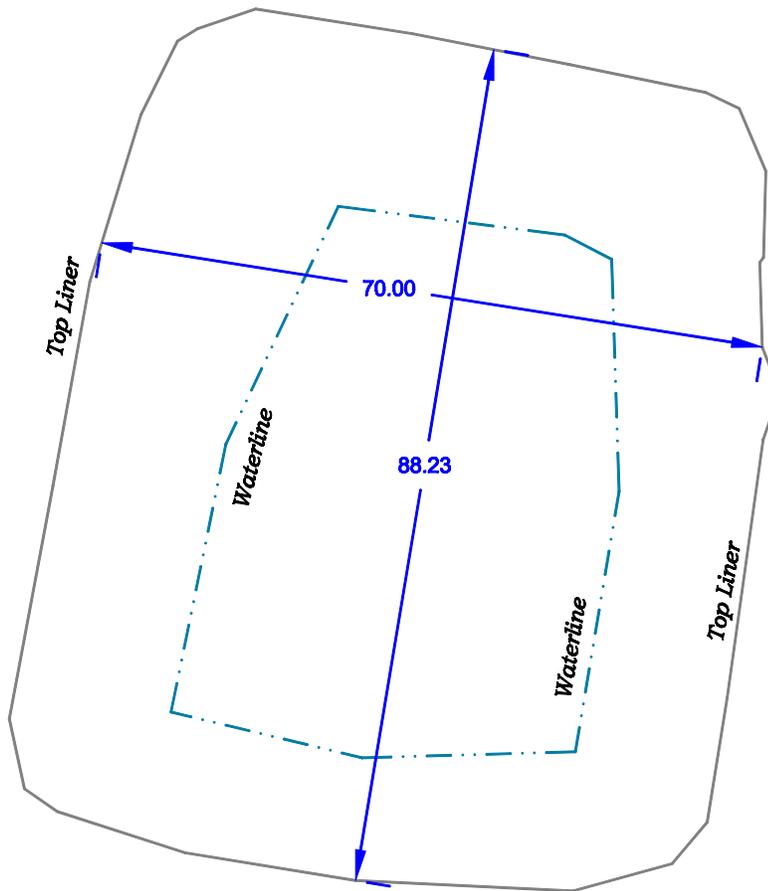
**Weather:** Cold, 15 -20° temperatures with 4 in. of snowfall during test period.

**Liner and Pit Condition:** Produced water fluid level at approximate 6 ft depth.  
 Visible portion of liner, approximately the top 14-15 ft., had no apparent tears, delamination or seam failures.

**Comments:** Bookcliff Survey utilized a Trimble Total Station for required area and elevation measurements.  
 Williams staff indicated that no fluids were transferred from or to the pit during the duration of the test.  
 No snow or moisture at start of test with pit surface frozen. Snow was frozen on sidewalls of pit at termination of test.

# HYDROTEST EXHIBIT

ALLEN POINT 41-11-696



Benchmark  
Elevation= 1000.00'



SCALE: 1" = 20'

## ALLEN POINT 41-11-696 PIT DETAILS

TEST @ 10:30A.M.

TOP WATER ELEV. (DECEMBER =12, 2011)= 983.37'  
TOP WATER ELEV. (DECEMBER 15, 2011)= 983.39'  
TOP WATER SURFACE AREA (DECEMBER 12, 2011)= 2,149 sq. ft.

TOP OF LINER SURFACE AREA = 6,071 sq. ft.

## ALLEN POINT 41-11-696 PIT LOCATION

SECTION 11,  
TOWNSHIP 6 SOUTH,  
RANGE 96 WEST OF THE SIXTH P.M.

\* ELEVATIONS AND COORDINATES ARE ASSUMED.

136 East Third Street  
Rifle, Colorado 81650  
Ph. (970) 625-1330  
Fax (970) 625-2773



Fox Engineering Solutions  
670 Canyon Creek Dr.  
Grand Junction, CO 81503

ALLEN POINT  
41-11-696

DATE: 12/15/11  
SHEET: 1 OF 1  
PROJECT: HYDROTEST  
DFT: SRB

# Hydrostatic Testing Procedures for COGCC Earthen Pits

Vers. 6.0 12-15-11 ©



The purpose for hydrostatic testing earthen pits is to comply with COGCC approval conditions for verifying the fluid holding integrity of the pit lining system. These procedures are specific to existing or active earthen pits holding oil and gas related fluids including, but not limited to, produced water. During testing, the pit shall have fluid level as high as practical, without encroaching into the 2 ft. freeboard, and the test shall be conducted for a minimum of 72 hours, if practical. Visible portions of the liner, including the anchor trench and seams, shall be inspected for defects. The test shall be scheduled and coordinated with personnel to ensure that oil and gas activities do not interfere with the test. Testing procedures may be subject to changes as dictated by field and climatic factors. All personnel involved with testing, while onsite, shall comply with their respective EH&S requirements.

- If practical, a sign shall be placed in a conspicuous location during the test stating “Hydrostatic testing in Progress, Pit Closed to All Water Hauling Activities”. Contact information shall also be placed on the sign.
- A semi-permanent datum elevation point shall be established at the pit location. The surface area of the water surface and the surface area of the liner area, tributary to the pit shall be measured. The date and time of each measurement shall be documented.
- The pit fluid level; fluid surface area; and the lined surface area, tributary to the pit, shall be measured and recorded at the beginning of the test. The pit fluid level shall be measured again at the end of the test. A survey grade total station shall be utilized for accuracy to capture this information. The date and time of measurements shall be documented.
- A 4” diameter official rain gauge with funnel inlet shall be installed at the pit site. Precipitation shall be recorded for the duration of the hydrostatic test.
- During ice-free periods, pan evaporation shall be measured during the duration of the test following the procedures established by the National Weather Service – NOAA in the document entitled “National Weather Service - Observing Handbook No. 2, dated July 1989. A Class A evaporation pan shall be placed at the site, or as near as practical, with evaporation measured per established procedures. During ice-over periods at the pit, evaporation is assumed negligible and evaporation measurements will not be taken.
- For the duration of the test, all inflows and outflows, such as truck and piped transfers, shall cease. If the cessation of inflows and outflows is not practical, all pit inflows and outflows shall be accurately metered and documented during the test. 24-hour surveillance monitoring may be warranted.
- If no precipitation has occurred during the test, compare the change in the pit fluid level with the recorded pan evaporation. During ice-over periods, compare the pit levels taken at the start and end of the tests.
- If precipitation has occurred during the test, precipitation falling onto tributary portions of the liner, outside of the fluid surface area, may be added as an inflow to the pit and converted into inches of depth over the fluid surface area. During ice-over and snow conditions, precipitation inflow from tributary portions of the liner may be estimated from snow depth and corresponding water equivalent comparisons at the start and termination of the test. Other factors may also be utilized.
- The calculated change in pit level during the test is:  $\Delta L = P + I - O - E$  (all measurements converted to inches)  
Where:  $\Delta L$  = Change in pit fluid level      P = Precipitation Inflow      E = Evaporation  
          I = Measured Inflows                    O = Measured Outflows
- The measured change in the pit fluid level shall be compared to the calculated change, utilizing precipitation and evaporation data, in the pit fluid level during the test duration. The test procedures and results will be reviewed and analyzed for discrepancies. If the test results indicate integrity issues with the lining system, the test will be repeated.

Analytical Data

**Technical Report for**

**Williams Production RMT Company**

**AP 41-11-696 Pad LOE**

**Accutest Job Number: T78179**

**Sampling Date: 06/08/11**

**Report to:**

**Williams Production RMT Company**

**karolina.blaney@williams.com**

**ATTN: Karolina Blaney**

**Total number of pages in report: 15**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

**Paul Canevaro**  
**Laboratory Director**

**Client Service contact: Sylvia Garza 713-271-4700**

Certifications: TX (T104704220-10-3) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)  
OK (9103)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

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## Sample Summary

Williams Production RMT Company

Job No: T78179

AP 41-11-696 Pad LOE

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
T78179-1	06/08/11	11:00	06/09/11	AQ	Water	AP 44-11 PIT
T78179-1F	06/08/11	11:00	06/09/11	AQ	Water Filtered	AP 44-11 PIT (DISSOLVED)

Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b>	AP 44-11 PIT	<b>Date Sampled:</b>	06/08/11
<b>Lab Sample ID:</b>	T78179-1	<b>Date Received:</b>	06/09/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	AP 41-11-696 Pad LOE		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0008450.D	25	06/19/11	LT	n/a	n/a	VE426
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	539	1300	250	ug/l	J
71-43-2	Benzene	1080	25	6.2	ug/l	
75-27-4	Bromodichloromethane	ND	25	6.4	ug/l	
75-25-2	Bromoform	ND	25	8.8	ug/l	
108-90-7	Chlorobenzene	ND	25	5.4	ug/l	
75-00-3	Chloroethane	ND	25	11	ug/l	
67-66-3	Chloroform	ND	25	5.1	ug/l	
75-15-0	Carbon disulfide	ND	25	9.0	ug/l	
56-23-5	Carbon tetrachloride	ND	25	9.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	25	7.2	ug/l	
75-35-4	1,1-Dichloroethylene	ND	25	10	ug/l	
107-06-2	1,2-Dichloroethane	ND	25	4.9	ug/l	
78-87-5	1,2-Dichloropropane	ND	25	6.3	ug/l	
124-48-1	Dibromochloromethane	ND	25	7.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	25	5.9	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	25	5.1	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	25	7.6	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	25	5.3	ug/l	
100-41-4	Ethylbenzene	158	25	6.3	ug/l	
591-78-6	2-Hexanone	ND	250	61	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	250	47	ug/l	
74-83-9	Methyl bromide	ND	25	7.8	ug/l	
74-87-3	Methyl chloride	ND	25	6.7	ug/l	
75-09-2	Methylene chloride	27.9	130	25	ug/l	J
78-93-3	Methyl ethyl ketone	ND	250	46	ug/l	
100-42-5	Styrene	ND	25	5.6	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	25	7.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	25	9.6	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	25	9.1	ug/l	
127-18-4	Tetrachloroethylene	ND	25	8.3	ug/l	
108-88-3	Toluene	3740	25	6.4	ug/l	
79-01-6	Trichloroethylene	ND	25	8.9	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AP 44-11 PIT	<b>Date Sampled:</b>	06/08/11
<b>Lab Sample ID:</b>	T78179-1	<b>Date Received:</b>	06/09/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	AP 41-11-696 Pad LOE		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	25	9.9	ug/l	
1330-20-7	Xylene (total)	2340	75	18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		79-122%
17060-07-0	1,2-Dichloroethane-D4	89%		75-121%
2037-26-5	Toluene-D8	92%		87-119%
460-00-4	4-Bromofluorobenzene	91%		80-133%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AP 44-11 PIT	<b>Date Sampled:</b>	06/08/11
<b>Lab Sample ID:</b>	T78179-1	<b>Date Received:</b>	06/09/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8270C SW846 3510C		
<b>Project:</b>	AP 41-11-696 Pad LOE		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P18450.D	1	06/16/11	GJ	06/14/11	OP18846	EP884
Run #2	J160156.D	4	06/16/11	SC	06/14/11	OP18846	EJ1180

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2	960 ml	1.0 ml

## ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	420 <sup>a</sup>	42	21	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	1.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.2	1.2	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.2	2.3	ug/l	
105-67-9	2,4-Dimethylphenol	15.0	5.2	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	26	16	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	ug/l	
95-48-7	2-Methylphenol	41.6	5.2	0.87	ug/l	
	3&4-Methylphenol	28.8	5.2	1.6	ug/l	
88-75-5	2-Nitrophenol	ND	5.2	2.1	ug/l	
100-02-7	4-Nitrophenol	ND	26	6.9	ug/l	
87-86-5	Pentachlorophenol	ND	26	14	ug/l	
108-95-2	Phenol	33.8	5.2	0.78	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.2	1.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.2	1.2	ug/l	
83-32-9	Acenaphthene	ND	5.2	1.6	ug/l	
208-96-8	Acenaphthylene	ND	5.2	1.3	ug/l	
120-12-7	Anthracene	ND	5.2	1.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	1.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	1.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	0.90	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	1.7	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	1.1	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	1.4	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	1.7	ug/l	
100-51-6	Benzyl Alcohol	ND	5.2	1.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	1.4	ug/l	
106-47-8	4-Chloroaniline	ND	5.2	4.4	ug/l	
86-74-8	Carbazole	ND	5.2	1.6	ug/l	
218-01-9	Chrysene	ND	5.2	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	1.3	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	1.4	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AP 44-11 PIT	<b>Date Sampled:</b>	06/08/11
<b>Lab Sample ID:</b>	T78179-1	<b>Date Received:</b>	06/09/11
<b>Matrix:</b>	AQ - Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8270C SW846 3510C		
<b>Project:</b>	AP 41-11-696 Pad LOE		

## ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	2.1	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	1.4	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.2	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.2	1.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.2	1.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.2	1.5	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.2	1.4	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	10	3.3	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	1.6	ug/l	
132-64-9	Dibenzofuran	ND	5.2	1.4	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	1.1	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	1.4	ug/l	
84-66-2	Diethyl phthalate	ND	5.2	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	1.1	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.2	1.8	ug/l	
206-44-0	Fluoranthene	ND	5.2	1.0	ug/l	
86-73-7	Fluorene	ND	5.2	1.4	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	1.4	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.2	1.1	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	5.4	ug/l	
67-72-1	Hexachloroethane	ND	5.2	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	1.9	ug/l	
78-59-1	Isophorone	ND	5.2	1.3	ug/l	
91-57-6	2-Methylnaphthalene	7.8	5.2	1.3	ug/l	
88-74-4	2-Nitroaniline	ND	5.2	1.5	ug/l	
99-09-2	3-Nitroaniline	ND	5.2	3.5	ug/l	
100-01-6	4-Nitroaniline	ND	5.2	2.4	ug/l	
91-20-3	Naphthalene	6.7	5.2	1.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	1.8	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	1.5	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	1.7	ug/l	
85-01-8	Phenanthrene	1.1	5.2	1.0	ug/l	J
129-00-0	Pyrene	ND	5.2	1.7	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.2	1.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	18%	24%	10-66%
4165-62-2	Phenol-d5	21%	19%	10-53%
118-79-6	2,4,6-Tribromophenol	84%	65%	32-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> AP 44-11 PIT		<b>Date Sampled:</b> 06/08/11
<b>Lab Sample ID:</b> T78179-1		<b>Date Received:</b> 06/09/11
<b>Matrix:</b> AQ - Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270C SW846 3510C		
<b>Project:</b> AP 41-11-696 Pad LOE		

### ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	46%	46%	29-115%
321-60-8	2-Fluorobiphenyl	65%	46%	34-113%
1718-51-0	Terphenyl-d14	86%	73%	12-145%

(a) Result is from Run# 2

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> AP 44-11 PIT	<b>Date Sampled:</b> 06/08/11
<b>Lab Sample ID:</b> T78179-1	<b>Date Received:</b> 06/09/11
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> AP 41-11-696 Pad LOE	

### General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate	130	5.0	0.66	mg/l	1	06/20/11	MC	SM 4500 CO2 D
Alkalinity, Carbonate	0.66 U	5.0	0.66	mg/l	1	06/20/11	MC	SM18 2320B
Alkalinity, Total as CaCO3	130	5.0	1.7	mg/l	1	06/20/11 09:00	MC	SM 2320B
Bromide	25.9	1.0	0.20	mg/l	2	06/18/11 20:37	ES	EPA 300/SW846 9056
Chloride	3360	250	96	mg/l	500	06/18/11 15:48	ES	EPA 300/SW846 9056
Hydroxide Alkalinity	0.66 U	5.0	0.66	mg/l	1	06/20/11	MC	SM18 4500CO2D
Solids, Total Dissolved	5720	40	10	mg/l	1	06/15/11	BG	SM 2540C
Specific Conductivity	9980	1.0		umhos/cm	1	06/20/11 13:30	KD	EPA 120.1
Sulfate	2.4	0.50	0.15	mg/l	1	06/18/11 13:22	ES	EPA 300/SW846 9056
pH	6.91			su	1	06/09/11 21:30	SS	SM 4500H+ B/9040

RL = Reporting Limit  
 MDL = Method Detection Limit

U = Indicates a result < MDL  
 J = Indicates a result > = MDL but < RL

## Report of Analysis

<b>Client Sample ID:</b>	AP 44-11 PIT (DISSOLVED)	<b>Date Sampled:</b>	06/08/11
<b>Lab Sample ID:</b>	T78179-1F	<b>Date Received:</b>	06/09/11
<b>Matrix:</b>	AQ - Water Filtered	<b>Percent Solids:</b>	n/a
<b>Project:</b>	AP 41-11-696 Pad LOE		

### Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	69000	5000	25	ug/l	1	06/13/11	06/13/11 NS	SW846 6010B <sup>1</sup>	SW846 3010A <sup>3</sup>
Iron	185	100	23	ug/l	1	06/13/11	06/16/11 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>3</sup>
Magnesium	6110	5000	7.9	ug/l	1	06/13/11	06/13/11 NS	SW846 6010B <sup>1</sup>	SW846 3010A <sup>3</sup>
Manganese	145	15	1.9	ug/l	1	06/13/11	06/13/11 NS	SW846 6010B <sup>1</sup>	SW846 3010A <sup>3</sup>
Potassium	62400	5000	45	ug/l	1	06/13/11	06/13/11 NS	SW846 6010B <sup>1</sup>	SW846 3010A <sup>3</sup>
Sodium	1860000	25000	520	ug/l	5	06/13/11	06/13/11 NS	SW846 6010B <sup>1</sup>	SW846 3010A <sup>3</sup>

- (1) Instrument QC Batch: MA5811
- (2) Instrument QC Batch: MA5817
- (3) Prep QC Batch: MP14947

RL = Reporting Limit  
MDL = Method Detection Limit

U = Indicates a result < MDL  
J = Indicates a result > = MDL but < RL

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



**Accutest Job Number:** T78179      **Client:** WILLIAMS PRODUCTION      **Project:** AP 41-11- 696 PAD LOE  
**Date / Time Received:** 6/9/2011      **Delivery Method:** \_\_\_\_\_      **Airbill #'s:** 874632744060  
**No. Coolers:** 1      **Therm ID:** 110;      **Temp Adjustment Factor:** -0.5;  
**Cooler Temps (Initial/Adjusted):** #1: (6/5.5);

**Cooler Security**      Y or N      Y or N  
 1. Custody Seals Present:        3. COC Present:    
 2. Custody Seals Intact:        4. Smpl Dates/Time OK

**Cooler Temperature**      Y or N  
 1. Temp criteria achieved:    
 2. Cooler temp verification: Glass Thermometer  
 3. Cooler media: Ice (Bag)

**Quality Control Preservation**      Y or N      N/A      WTB      STB  
 1. Trip Blank present / cooler:            
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:     
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y or N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y or N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact

**Sample Integrity - Instructions**      Y or N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

*William D. King 6/9/11*

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Job #: T78179

Date / Time Received: 6/9/2011 9:15:00 AM

Initials: VG

Client: WILLIAMS PRODUCTION

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	T78179-1	1000 ml	1	3H	N/P	Note #2 - Preservative check not applicable.	110	6	-0.5	5.5
1	T78179-1	1000 ml	2	3H	N/P	Note #2 - Preservative check not applicable.	110	6	-0.5	5.5
1	T78179-1	1000 ml	3	3H	N/P	Note #2 - Preservative check not applicable.	110	6	-0.5	5.5
1	T78179-1	500 ml	4	1L	N/P	Note #2 - Preservative check not applicable.	110	6	-0.5	5.5
1	T78179-1	LAG	5	1L	N/P	Note #2 - Preservative check not applicable.	110	6	-0.5	5.5
1	T78179-1	LAG	6	1L	N/P	Note #2 - Preservative check not applicable.	110	6	-0.5	5.5
1	T78179-1	40 ml	7	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	110	6	-0.5	5.5
1	T78179-1	40 ml	8	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	110	6	-0.5	5.5
1	T78179-1	40 ml	9	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	110	6	-0.5	5.5

T78179: Chain of Custody

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