DOCUMENT #2215024

Page 1

FORM 4 Rev 12/05

State of Colorado
Oil and Gas Conservation Commission

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

DE | ET | DE | ES

RECEIVED 6/29/2011

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.)

1. OGCC Operator Number: 96850
2. Name of Operator: Williams Production RMT
3. Address: 1058 County Road 215
City: Parachute State: CO Zip: 81635
4. Contact Name: Karolina Blaney
Phone: 970 683 2295
Fax: 970 285 9573

Complete the Attachment Checklist — OP OGCC

5. API Number 05- NA — OGCC Facility ID Number 422273
6. Well/Facility Name: — 7. Well/Facility Number TR 41-35-597 #1
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): NENE S35 T5S R97W 6th PM
9. County: Garfield — 10. Field Name: Trail Ridge
11. Federal, Indian or State Lease Number:

Attachment Checklist	OP	OGCC
Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page	X	
Other	X	

General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage **from** Exterior Section Lines:				
Change of **Surface** Footage **to** Exterior Section Lines:				
Change of **Bottomhole** Footage **from** Exterior Section Lines:				
Change of **Bottomhole** Footage **to** Exterior Section Lines:				attach directional survey

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude — Distance to nearest property line — Distance to nearest bldg, public rd, utility or RR

Longitude — Distance to nearest lease line — Is location in a High Density Area (rule 603b)? Yes/No

Ground Elevation — Distance to nearest well same formation — Surface owner consultation date:

GPS DATA:
Date of Measurement — PDOP Reading — Instrument Operator's Name

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):
Effective Date:
Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME NUMBER
From:
To:
Effective Date:

☐ ABANDONED LOCATION:
Was location ever built? ☐ Yes ☐ No
Is site ready for Inspection? ☐ Yes ☐ No
Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS
Date well shut in or temporarily abandoned:
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT

☐ SPUD DATE:

☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately
☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent
Approximate Start Date:

☒ Report of Work Done
Date Work Completed: 6/28/2011

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)	☐ Request to Vent or Flare	☐ E&P Waste Disposal
☐ Change Drilling Plans	☐ Repair Well	☐ Beneficial Reuse of E&P Waste
☐ Gross Interval Changed?	☐ Rule 502 variance requested	☐ Status Update/Change of Remediation Plans for Spills and Releases
☐ Casing/Cementing Program Change	☒ Other: Form 15 COAs	

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: 6/29/2011 — Email: Karolina.Blaney@Williams.com

Print Name: Karolina Blaney — Title: Environmental Specialist

COGCC Approved: Richard Allison — Title: OGLA - EPS II — Date: 11/16/2011

CONDITIONS OF APPROVAL, IF ANY:

Click here to reset form

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY

1. OGCC Operator Number: 96850 API Number:
2. Name of Operator: Williams Production RMT OGCC Facility ID # 422273
3. Well/Facility Name: Well/Facility Number: TR 41-35-597 #1
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NENE S35 T5S R97W 6th PM

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**

In accordance with the TR 41-35-597 #1 Pit Permit Form 15 conditions of approval (see attached), Williams is submiting the following documents in order to stay in compliance:

- Hydrostatic test of pit liner
- Analytical data of the grab water sample collected from pit
- As-built plat & cross section

Form 15

TR 41-35-597 open

FORM 15 Rev 6/99

State of Colorado
Oil and Gas Conservation Commission

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

FOR OGCC USE ONLY

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

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

FORM SUBMITTED FOR:

☐ Pit Report ☑ Pit Permit

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): ~~Applied For~~ 335750

Pit Location (QtrQtr, Sec, Twp, Rng, Meridian): Chevron TR 31-35-597 pad (NENE of Sec. 35; T5S-R97W 6th P.M.)

Latitude: N39.574473 NAD83 Longitude: W108.240640 NAD83 County: Garfield

Pit Use: ☐ Production ☐ Drilling (Attach mud program) ☑ Special Purpose (Describe Use): Multiwell Pit

Pit Type: ☑ Lined ☐ Unlined Surface Discharge Permit: ☐ Yes ☐ No

Offsite disposal of pit contents: ☐ Injection ☐ Commercial Pit/Facility Name: TR 31-35-597 Pit/Facility No: #1

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: +/- 2000' ground water: +/- 3245' water wells: +/- 1.0 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: 55

Soils Series Name: Parachute-Irigul Complex Horizon thickness (in inches): A: 0-10" ; B: 10-25" ; C: 25-29"

Soils Series Name: See attached Form 2A Horizon thickness (in inches): A: 0-6" ; B: 6-13" ; C: 13-17"

Attach detailed site plan and topo map with pit location.

Pit Design and Construction

Size of pit (feet): Length: ~~100~~ 115' Width: ~~50~~ 90' Depth: 15'

Calculated pit volume (bbls): ~~6,946bbls~~ 13,659 Daily inflow rate (bbls/day): 20

Daily disposal rates (attach calculations): Evaporation: ~~3.8~~ 16.8 bbls/day Percolation: none bbls/day

Type of liner material: Poly Thickness: 24mil X2

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 - Piceance Highlands Asset Team Date: 3/4/2009

OGCC Approved: Title: OGLA Supervisor Date: 3/22/11

CONDITIONS OF APPROVAL, IF ANY:

- OPERATOR WILL PROVIDE ANALYTICAL DATA FOR GRAB SAMPLE COLLECTED FROM PIT WATER ON FORM 4.
- OPERATOR WILL CONDUCT AND DOCUMENT TO COGCC A HYDROSTATIC TEST OF PIT LINER BY 6/30/2011.
- OPERATOR WILL PROVIDE AS-BUILT PLATS & CROSS SECTIONS TO COGCC BY 6/30/2011.

FACILITY NUMBER:

Hydrostatic Test Results

Hydrostatic Pit Testing
Data Collection & Computation Form

Fox Engineering Solutions

Pit Owner:	Williams Production RMT
Pit Name:	TR 41-35-597 Pit #1
COGCC Facility No.	422273
Pit Location:	NE1/4 NE1/4 S35, T5S, R97W, 6th P.M.
	Latitude: N 39.574473° Longitude: W108.240640° NAD83
	Garfield County, Colorado
Approximate Elevation:	8703 ft. MSL
Test Conducted By:	David Fox, Fox Engineering Solutions

Test Initiation:

Date: June 24, 2011
Time: 11:00 PM
Total Duration: 73 hours

Test Termination:

Date: June 27, 2011
Time: 12:01 PM

	Length	Width	Area		Comments
Tributary Pit Liner Surface Area (ft^2):	-	-	5907	$ft.^2$	**Surveyed by Bookcliff Survey**
Initial Pit Water Surface Area:	-	-	2995	$ft.^2$	**Surveyed by Bookcliff Survey**
Final Pit Water Surface Area:	-	-	2995	$ft.^2$	**Surveyed by Bookcliff Survey**
Average Pit Surface Area:			2995	$ft.^2$	

Initial Pit Fluid Level:	**93.92**	**ft.**
Final Pit Fluid Level:	**93.84**	**ft**
Difference	**0.08**	**ft or**
Est. Fluid Depth: 10 ft.	**0.96**	**inches**

Evaporation Pan Installed: Yes **Location:** SW of pit
Measured Pan Evaporation during Test Duration: **1.49 inches**

Rain Gauge Installed: Yes **Location:** SW of pit
Recorded Precipitation: **0.00 inches**
Equiv. 72-Hour Precip. Inflow: **0.00 inches**

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

Calculated Change in Inches:
(Precipitation - Evaporation + Inflows - Outflows) **-1.49 inches**

Measure Change in Inches: (+ indicates storage increased) **-0.96 inches**

Difference between Calculated and Measured Pit Fluid Level: **0.53** inches

Summary: No observed loss of liner integrity. Evaporation exceeded measured fluid level drop in pit.
Weather: Dry and hot 80 - 90° daytime temperatures.

Liner and Pit Condition: Fluid level at approximate 3' below freeboard.
Visible portion of liner, approximately the top 5 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, Brandon Baker, notified about 72-hour hydrostatic testing.
Williams staff and security guards reported no inflows or outflows during testing period.
Williams place a security guard at the site during the duration of the test.

Hydrostatic Testing Procedures for COGCC Earthen Pits

Version 5.0

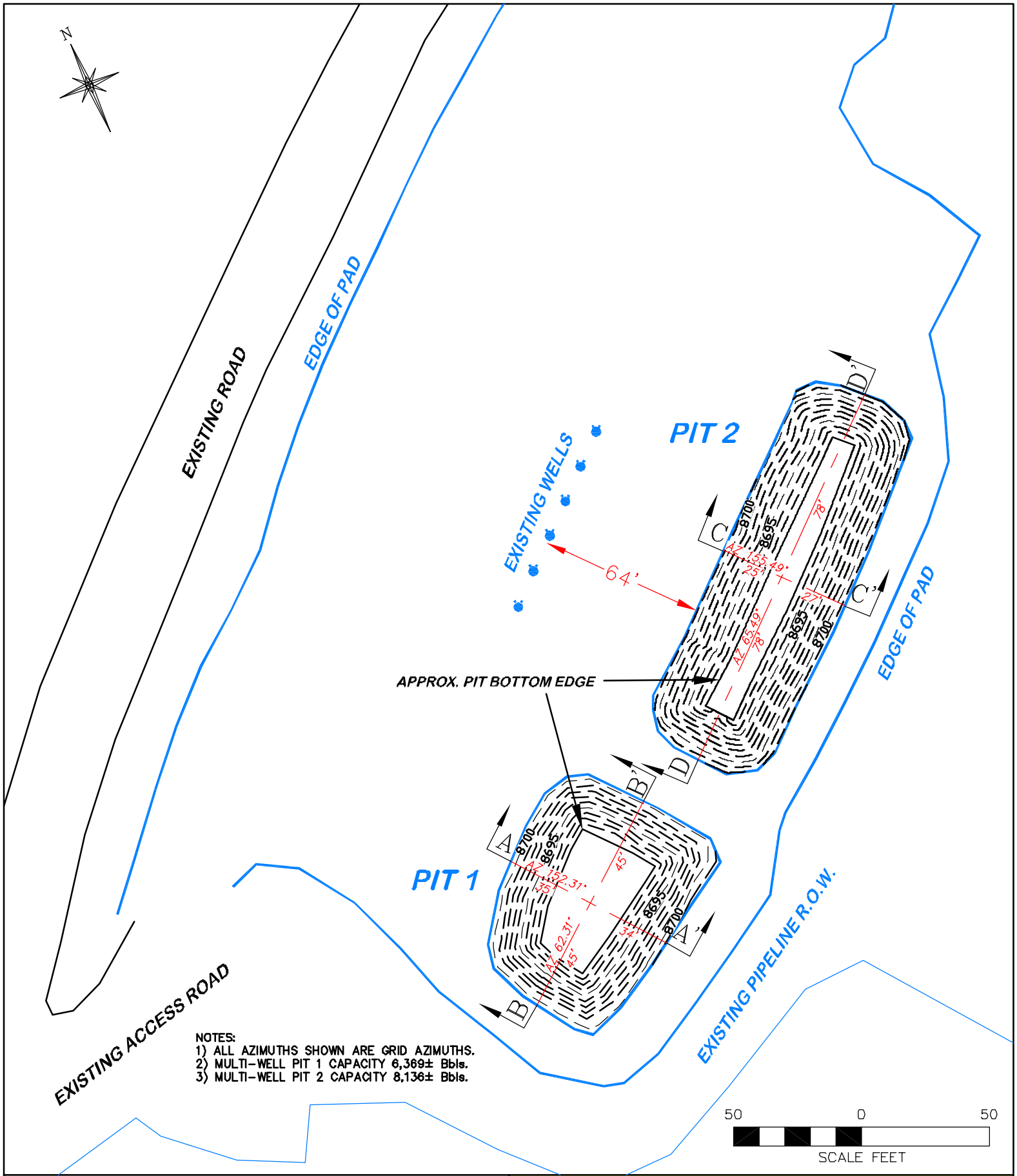
Fox Engineering Solutions

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.
- 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.
- 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.
- If precipitation has occurred during the test, precipitation falling onto tributary portions of the liner, outside of the fluid surface area, must be added as an inflow to the pit and converted into inches of depth over the fluid surface area.
- The calculated change in pit level during the test is: $\Delta S = P + I - O - E$ (all measurements converted to inches)

  Where: ΔS = Change in pit storage
  P = Precipitation Inflow
  I = Measured Inflows
  O = Measured Outflows
  E = Evaporation
- 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.

As-built Plat & Cross Sections



NOTES:
1) ALL AZIMUTHS SHOWN ARE GRID AZIMUTHS.
2) MULTI-WELL PIT 1 CAPACITY 6,369± Bbls.
3) MULTI-WELL PIT 2 CAPACITY 8,136± Bbls.

DRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 6/21/11 - RAB	SCALE: 1" = 50'
REVISED: 6/27/11 - RAB	DRG JOB No. 14321
CHANGED PIT NAMES	MULTI - WELL EXHIBIT

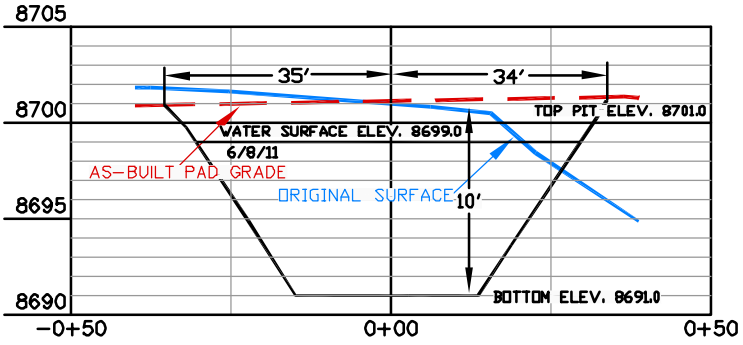
CONSTRUCTION LAYOUT

WILLIAMS PRODUCTION RMT COMPANY

TR 41-35-597 MULTI-WELL PIT LAYOUT

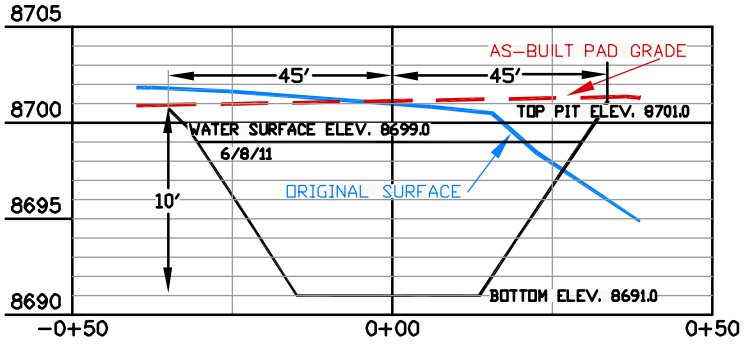
NENE, SECTION 35, T5S, R97W, 6th P.M.

PIT 1



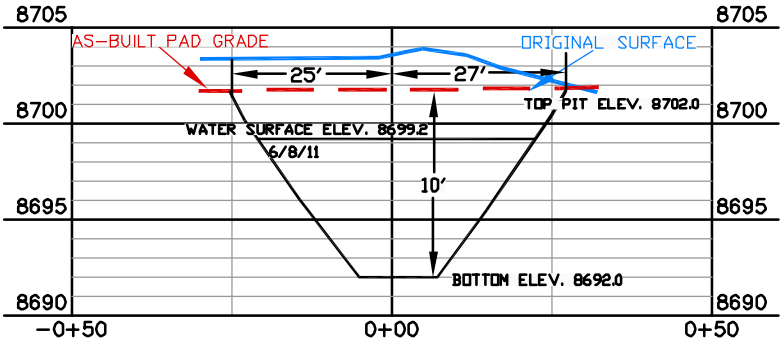
A–A'

PIT 1



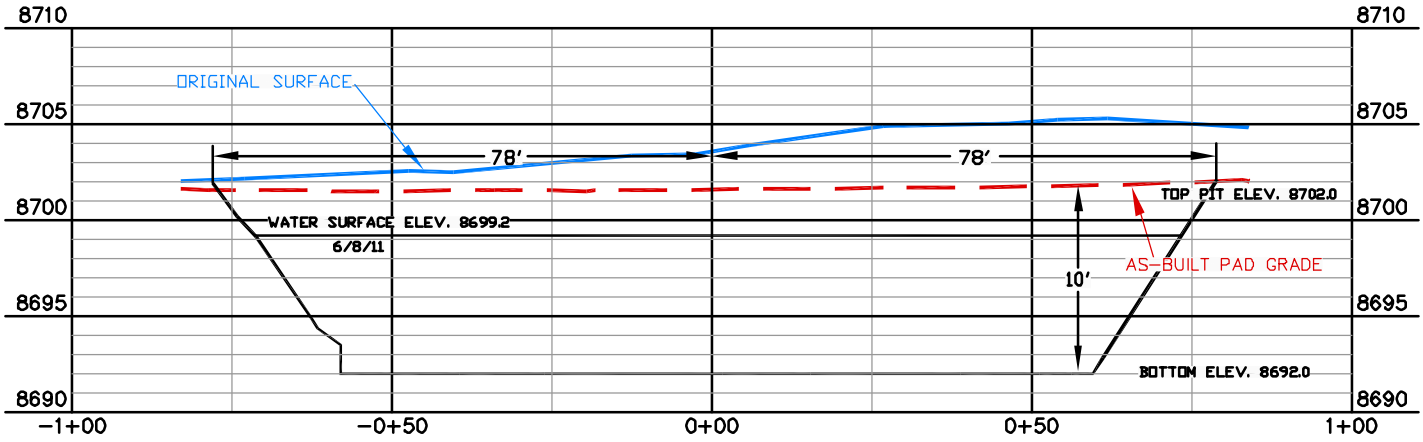
B–B'

PIT 2



C–C'

PIT 2



D–D'

RIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 6/21/11 - RAB	HORZ. 1" = 30' VERT. 1" = 10'
REVISED: 6/27/11	DRG JOB No. 14321
REVISED PIT NAMES	MUTLI - WELL EXHIBIT

CONSTRUCTION LAYOUT CROSS SECTIONS

WILLIAMS PRODUCTION RMT COMPANY
TR 41-35-597 MULTI-WELL PIT LAYOUT
NENE, SECTION 35, T5S, R97W, 6th P.M.

Analytical Data

Gulf Coast ACCUTEST LABORATORIES

06/15/11

Technical Report for

Williams Production RMT Company

TR 40-35-597 Pit 1

Accutest Job Number: T77679

Sampling Date: 06/03/11

Report to:

Williams Production RMT Company
1058 County Road 215
Parachute, CO 81635
karolina.blaney@williams.com

ATTN: Karolina Blaney

Total number of pages in report: **42**

ACCREDITED IN ACCORDANCE WITH nelac

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 K Canevaro

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)

Sections: 1 2 3 4 5 6 7

Table of Contents

Sample Summary

Williams Production RMT Company

Job No: T77679

TR 40-35-597 Pit 1

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
T77679-1	06/03/11	13:00	RW	06/04/11	AQ	Water	TR 41-35 PIT 1
T77679-1F	06/03/11	13:00	RW	06/04/11	AQ	Water Filtered	TR 41-35 PIT 1 (DISSOLVED)

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	TR 41-35 PIT 1		
Lab Sample ID:	T77679-1	**Date Sampled:**	06/03/11
Matrix:	AQ - Water	**Date Received:**	06/04/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	TR 40-35-597 Pit 1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G001610.D	1	06/08/11	JL	n/a	n/a	VG70
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	66.6	50	4.7	ug/l	
71-43-2	Benzene	63.2	2.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.49	ug/l	
75-25-2	Bromoform	ND	2.0	1.4	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.56	ug/l	
75-00-3	Chloroethane	ND	2.0	0.92	ug/l	
67-66-3	Chloroform	ND	2.0	0.64	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.66	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.62	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.62	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.56	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.68	ug/l	
100-41-4	Ethylbenzene	5.5	2.0	0.55	ug/l	
591-78-6	2-Hexanone	ND	10	3.2	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	9.9	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.94	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.84	ug/l	
75-09-2	Methylene chloride	ND	5.0	0.41	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	3.9	ug/l	
100-42-5	Styrene	ND	2.0	0.56	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.62	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.98	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.91	ug/l	
108-88-3	Toluene	168	2.0	0.43	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.52	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

Accutest Laboratories

Report of Analysis

Client Sample ID:	TR 41-35 PIT 1		
Lab Sample ID:	T77679-1	**Date Sampled:**	06/03/11
Matrix:	AQ - Water	**Date Received:**	06/04/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	TR 40-35-597 Pit 1		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	198	6.0	1.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		79-122%
17060-07-0	1,2-Dichloroethane-D4	93%		75-121%
2037-26-5	Toluene-D8	95%		87-119%
460-00-4	4-Bromofluorobenzene	94%		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

Accutest Laboratories

Report of Analysis

Client Sample ID: TR 41-35 PIT 1
Lab Sample ID: T77679-1
Matrix: AQ - Water
Method: SW846 8270C SW846 3510C
Project: TR 40-35-597 Pit 1

Date Sampled: 06/03/11
Date Received: 06/04/11
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W5822.D	1	06/06/11	SG	06/06/11	OP18745	EW298
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	19.0	10	5.1	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	1.2	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	2.3	5.2	1.3	ug/l	J
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	ND	5.2	0.86	ug/l	
	3&4-Methylphenol	ND	5.2	1.6	ug/l	
88-75-5	2-Nitrophenol	ND	5.2	2.0	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	ND	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	1.2	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	0.89	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	1.3	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	1.5	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	1.3	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

Accutest Laboratories

Report of Analysis

Client Sample ID:	TR 41-35 PIT 1		
Lab Sample ID:	T77679-1	**Date Sampled:**	06/03/11
Matrix:	AQ - Water	**Date Received:**	06/04/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	TR 40-35-597 Pit 1		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	2.0	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	5.3	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	1.2	ug/l	
91-57-6	2-Methylnaphthalene	1.8	5.2	1.3	ug/l	J
88-74-4	2-Nitroaniline	ND	5.2	1.5	ug/l	
99-09-2	3-Nitroaniline	ND	5.2	3.4	ug/l	
100-01-6	4-Nitroaniline	ND	5.2	2.4	ug/l	
91-20-3	Naphthalene	ND	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	ND	5.2	1.0	ug/l	
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	21%		10-66%
4165-62-2	Phenol-d5	19%		10-53%
118-79-6	2,4,6-Tribromophenol	43%		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

Accutest Laboratories

Report of Analysis

Client Sample ID:	TR 41-35 PIT 1		
Lab Sample ID:	T77679-1	**Date Sampled:**	06/03/11
Matrix:	AQ - Water	**Date Received:**	06/04/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	TR 40-35-597 Pit 1		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	39%		29-115%
321-60-8	2-Fluorobiphenyl	40%		34-113%
1718-51-0	Terphenyl-d14	38%		12-145%

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

Accutest Laboratories

Report of Analysis

Client Sample ID: TR 41-35 PIT 1
Lab Sample ID: T77679-1
Matrix: AQ - Water
Project: TR 40-35-597 Pit 1

Date Sampled: 06/03/11
Date Received: 06/04/11
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate	126	5.0	0.66	mg/l	1	06/13/11	MC	SM 4500 CO2 D
Alkalinity, Carbonate	0.66 U	5.0	0.66	mg/l	1	06/13/11	MC	SM18 2320B
Alkalinity, Total as CaCO3	126	5.0	1.7	mg/l	1	06/13/11 10:00	MC	SM 2320B
Bromide	16.4	1.0		mg/l	2	06/04/11	BF	SM18 4500BRB
Chloride	1970	250	0.38	mg/l	500	06/04/11	BF	SM 4500 CL C
Hydroxide Alkalinity	0.66 U	5.0	0.66	mg/l	1	06/13/11	MC	SM18 4500CO2D
Solids, Total Dissolved	3130	40	10	mg/l	1	06/08/11	BG	SM 2540C
Specific Conductivity	6100	1.0		umhos/cm	1	06/14/11 13:00	KD	EPA 120.1
Sulfate	6.5	0.50	3.1	mg/l	1	06/04/11	BF	SM 4500 SO4
pH	7.17			su	1	06/04/11 13:10	KD	SM 4500H+ B/9040

RL = Reporting Limit
MDL = Method Detection Limit

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

Accutest Laboratories

Report of Analysis

Client Sample ID: TR 41-35 PIT 1 (DISSOLVED)
Lab Sample ID: T77679-1F
Matrix: AQ - Water Filtered
Project: TR 40-35-597 Pit 1

Date Sampled: 06/03/11
Date Received: 06/04/11
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	48500	5000	25	ug/l	1	06/07/11	06/09/11	NS	SW846 6010B [1]	SW846 3010A [2]
Iron	559	100	23	ug/l	1	06/07/11	06/09/11	NS	SW846 6010B [1]	SW846 3010A [2]
Magnesium	5500	5000	7.9	ug/l	1	06/07/11	06/09/11	NS	SW846 6010B [1]	SW846 3010A [2]
Manganese	233	15	1.9	ug/l	1	06/07/11	06/09/11	NS	SW846 6010B [1]	SW846 3010A [2]
Potassium	22400	5000	45	ug/l	1	06/07/11	06/09/11	NS	SW846 6010B [1]	SW846 3010A [2]
Sodium	1140000	25000	520	ug/l	5	06/07/11	06/09/11	NS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5800
(2) Prep QC Batch: MP14895

RL = Reporting Limit
MDL = Method Detection Limit

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST Laboratories
10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: T77679

Client / Reporting Information

Company Name: Williams Production
Street Address: 1058 Cty Rd 215
City: Parachute State: CO Zip: 81635
Project Contact: Karolina.Blaney@Williams.com
Phone #: 970 683 2295 Fax #: 970 285 9573
Sampler(s) Name(s): Reed Walker

Project Information

Project Name: TR 41-35-597 Small Pit
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention: Karolina Blaney

Requested Analyses

See Attached

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	LAB USE ONLY
1	TR 41-35 Small Pit	6/3/11	1:00	RW	W	9	X											X	

Turnaround Time (Business days)

- [ ] Standard
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [x] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Labtink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler: Reed Walker	6/3/11	1	2		2
Relinquished by Sampler: Fed Ex	6/4/11 1010	3 ALAC Witness Huddleston	4		4
Relinquished by:		5	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice ✓	Cooler Temp. 4.4°C

T77679: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: T77679 **Client:** WILLIAMS PRODUCTION **Project:** TR 41-35-597 SMALL PIT

Date / Time Received: 6/4/2011 10:10 **Delivery Method:** FedEx **Airbill #'s:** 874632744048

No. Coolers: 1 **Therm ID:** IRGUN4; **Temp Adjustment Factor:** -0.1;

Cooler Temps (Initial/Adjusted): #1: (4.5/4.4);

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

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	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	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

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

Sample Integrity - Instructions	Y	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

6/4/11

Accutest Laboratories
V:713.271.4700

10165 Harwin Drive
F: 713.271.4770

Houston, TX 77036
www/accutest.com

T77679: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES

Sample Receipt Log

Job #: T77679 **Date / Time Received:** 6/4/2011 10:10:00 AM **Initials:** DARRELLH

Client: WILLIAMS PRODUCTION

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	T77679-1	1 LAG	1	1 I	N/P	Note #2 - Preservative check not applicable.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	1 LAG	2	1 I	N/P	Note #2 - Preservative check not applicable.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	500 ml	3	1 I	N/P	Note #2 - Preservative check not applicable.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	1000 ml	4	3 C	N/P	Note #2 - Preservative check not applicable.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	1000 ml	5	3 C	N/P	Note #2 - Preservative check not applicable.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	1000 ml	6	3 C	N/P	Note #2 - Preservative check not applicable.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	40 ml	7	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	40 ml	8	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	4.5	-0.1	4.4
1	T77679-1	40 ml	9	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	4.5	-0.1	4.4

T77679: Chain of Custody

Page 3 of 3

Gulf Coast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG70-MB	G001600.D	1	06/08/11	JL	n/a	n/a	VG70

The QC reported here applies to the following samples: **Method:** SW846 8260B

T77679-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	4.7	ug/l	
71-43-2	Benzene	ND	2.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.49	ug/l	
75-25-2	Bromoform	ND	2.0	1.4	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.56	ug/l	
75-00-3	Chloroethane	ND	2.0	0.92	ug/l	
67-66-3	Chloroform	ND	2.0	0.64	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.66	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.62	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.62	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.56	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.68	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.55	ug/l	
591-78-6	2-Hexanone	ND	10	3.2	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	9.9	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.94	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.84	ug/l	
75-09-2	Methylene chloride	ND	5.0	0.41	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	3.9	ug/l	
100-42-5	Styrene	ND	2.0	0.56	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.62	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.98	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.91	ug/l	
108-88-3	Toluene	ND	2.0	0.43	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.52	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.7	ug/l	

Method Blank Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG70-MB	G001600.D	1	06/08/11	JL	n/a	n/a	VG70

The QC reported here applies to the following samples: **Method:** SW846 8260B

T77679-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	79-122%
17060-07-0	1,2-Dichloroethane-D4	94%	75-121%
2037-26-5	Toluene-D8	97%	87-119%
460-00-4	4-Bromofluorobenzene	94%	80-133%

Blank Spike Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG70-BS	G001598.D	1	06/08/11	JL	n/a	n/a	VG70

The QC reported here applies to the following samples: **Method:** SW846 8260B

T77679-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	125	100	62-124
71-43-2	Benzene	25	24.6	98	76-118
75-27-4	Bromodichloromethane	25	25.1	100	68-107
75-25-2	Bromoform	25	24.8	99	64-103
108-90-7	Chlorobenzene	25	25.2	101	74-111
75-00-3	Chloroethane	25	26.7	107	75-135
67-66-3	Chloroform	25	24.3	97	75-117
75-15-0	Carbon disulfide	25	28.5	114	57-126
56-23-5	Carbon tetrachloride	25	26.5	106	75-125
75-34-3	1,1-Dichloroethane	25	24.5	98	76-121
75-35-4	1,1-Dichloroethylene	25	28.0	112	71-128
107-06-2	1,2-Dichloroethane	25	24.6	98	70-111
78-87-5	1,2-Dichloropropane	25	24.9	100	71-113
124-48-1	Dibromochloromethane	25	25.1	100	69-104
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	68-113
10061-01-5	cis-1,3-Dichloropropene	25	24.8	99	71-111
156-60-5	trans-1,2-Dichloroethylene	25	24.8	99	70-125
10061-02-6	trans-1,3-Dichloropropene	25	27.5	110	75-111
100-41-4	Ethylbenzene	25	25.3	101	75-112
591-78-6	2-Hexanone	125	114	91	60-113
108-10-1	4-Methyl-2-pentanone	125	116	93	63-115
74-83-9	Methyl bromide	25	25.0	100	59-132
74-87-3	Methyl chloride	25	24.1	96	56-150
75-09-2	Methylene chloride	25	24.9	100	70-113
78-93-3	Methyl ethyl ketone	125	81.4	65	62-117
100-42-5	Styrene	25	25.6	102* [a]	66-100
71-55-6	1,1,1-Trichloroethane	25	26.5	106	76-125
79-34-5	1,1,2,2-Tetrachloroethane	25	23.3	93	67-110
79-00-5	1,1,2-Trichloroethane	25	25.2	101	69-107
127-18-4	Tetrachloroethylene	25	25.0	100	77-120
108-88-3	Toluene	25	25.2	101	77-114
79-01-6	Trichloroethylene	25	23.3	93	74-117
75-01-4	Vinyl chloride	25	21.9	88	64-121
1330-20-7	Xylene (total)	75	76.8	102	75-111

Blank Spike Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG70-BS	G001598.D	1	06/08/11	JL	n/a	n/a	VG70

The QC reported here applies to the following samples: **Method:** SW846 8260B

T77679-1

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	79-122%
17060-07-0	1,2-Dichloroethane-D4	92%	75-121%
2037-26-5	Toluene-D8	96%	87-119%
460-00-4	4-Bromofluorobenzene	94%	80-133%

(a) Outside control limits biased high. Only ND results for this compound are reported for all the samples associated with this BS.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T77661-7MS	G001602.D	1	06/08/11	JL	n/a	n/a	VG70
T77661-7MSD	G001603.D	1	06/08/11	JL	n/a	n/a	VG70
T77661-7	G001601.D	1	06/08/11	JL	n/a	n/a	VG70

The QC reported here applies to the following samples: **Method:** SW846 8260B

T77679-1

CAS No.	Compound	T77661-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	U	125	129	103	126	101	2	62-124/21
71-43-2	Benzene	2.0	U	25	24.5	98	23.9	96	2	76-118/16
75-27-4	Bromodichloromethane	2.0	U	25	24.8	99	24.3	97	2	68-107/12
75-25-2	Bromoform	2.0	U	25	23.7	95	23.8	95	0	64-103/14
108-90-7	Chlorobenzene	2.0	U	25	25.0	100	24.1	96	4	74-111/11
75-00-3	Chloroethane	2.0	U	25	25.7	103	25.7	103	0	75-135/15
67-66-3	Chloroform	2.0	U	25	24.3	97	24.2	97	0	75-117/12
75-15-0	Carbon disulfide	2.0	U	25	27.4	110	27.6	110	1	57-126/13
56-23-5	Carbon tetrachloride	2.0	U	25	25.9	104	25.3	101	2	75-125/12
75-34-3	1,1-Dichloroethane	2.0	U	25	24.8	99	24.3	97	2	76-121/13
75-35-4	1,1-Dichloroethylene	2.0	U	25	28.3	113	27.5	110	3	71-128/19
107-06-2	1,2-Dichloroethane	2.0	U	25	24.9	100	24.0	96	4	70-111/14
78-87-5	1,2-Dichloropropane	2.0	U	25	24.8	99	23.7	95	5	71-113/12
124-48-1	Dibromochloromethane	2.0	U	25	24.4	98	24.4	98	0	69-104/12
156-59-2	cis-1,2-Dichloroethylene	2.0	U	25	24.1	96	23.3	93	3	68-113/13
10061-01-5	cis-1,3-Dichloropropene	2.0	U	25	25.0	100	24.4	98	2	71-111/12
156-60-5	trans-1,2-Dichloroethylene	2.0	U	25	24.7	99	24.2	97	2	70-125/14
10061-02-6	trans-1,3-Dichloropropene	2.0	U	25	26.9	108	25.9	104	4	75-111/12
100-41-4	Ethylbenzene	2.0	U	25	25.3	101	24.3	97	4	75-112/12
591-78-6	2-Hexanone	10	U	125	118	94	115	92	3	60-113/18
108-10-1	4-Methyl-2-pentanone	10	U	125	119	95	117	94	2	63-115/21
74-83-9	Methyl bromide	2.0	U	25	24.9	100	25.1	100	1	59-132/15
74-87-3	Methyl chloride	2.0	U	25	24.8	99	23.9	96	4	56-150/17
75-09-2	Methylene chloride	5.0	U	25	24.0	96	23.3	93	3	70-113/13
78-93-3	Methyl ethyl ketone	10	U	125	91.7	73	104	83	13	62-117/21
100-42-5	Styrene	2.0	U	25	17.1	68	12.2	49*	33*	66-100/11
71-55-6	1,1,1-Trichloroethane	2.0	U	25	25.7	103	25.1	100	2	76-125/11
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	25	23.8	95	23.1	92	3	67-110/20
79-00-5	1,1,2-Trichloroethane	2.0	U	25	24.8	99	24.1	96	3	69-107/14
127-18-4	Tetrachloroethylene	2.0	U	25	23.8	95	22.9	92	4	77-120/13
108-88-3	Toluene	2.0	U	25	24.9	100	24.0	96	4	77-114/12
79-01-6	Trichloroethylene	2.0	U	25	22.9	92	22.5	90	2	74-117/12
75-01-4	Vinyl chloride	2.0	U	25	22.7	91	22.4	90	1	64-121/19
1330-20-7	Xylene (total)	6.0	U	75	76.5	102	74.5	99	3	75-111/12

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T77661-7MS	G001602.D	1	06/08/11	JL	n/a	n/a	VG70
T77661-7MSD	G001603.D	1	06/08/11	JL	n/a	n/a	VG70
T77661-7	G001601.D	1	06/08/11	JL	n/a	n/a	VG70

The QC reported here applies to the following samples: **Method:** SW846 8260B

T77679-1

CAS No.	Surrogate Recoveries	MS	MSD	T77661-7	Limits
1868-53-7	Dibromofluoromethane	97%	96%	96%	79-122%
17060-07-0	1,2-Dichloroethane-D4	96%	93%	95%	75-121%
2037-26-5	Toluene-D8	99%	96%	99%	87-119%
460-00-4	4-Bromofluorobenzene	98%	96%	96%	80-133%

Gulf Coast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-MB	J159885.D	1	06/06/11	SC	06/06/11	OP18745	EJ1170

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	5.0	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	1.2	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.2	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	2.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	15	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.83	ug/l	
	3&4-Methylphenol	ND	5.0	1.6	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	2.0	ug/l	
100-02-7	4-Nitrophenol	ND	25	6.7	ug/l	
87-86-5	Pentachlorophenol	ND	25	13	ug/l	
108-95-2	Phenol	ND	5.0	0.75	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.1	ug/l	
83-32-9	Acenaphthene	ND	5.0	1.6	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.2	ug/l	
120-12-7	Anthracene	ND	5.0	1.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.87	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.7	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.1	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	1.4	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.6	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	1.4	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	4.3	ug/l	
86-74-8	Carbazole	ND	5.0	1.5	ug/l	
218-01-9	Chrysene	ND	5.0	0.98	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	1.3	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	1.3	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	2.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	1.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.3	ug/l	

Method Blank Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-MB	J159885.D	1	06/06/11	SC	06/06/11	OP18745	EJ1170

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.4	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	1.3	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	3.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.6	ug/l	
132-64-9	Dibenzofuran	ND	5.0	1.3	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	1.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.3	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	1.1	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.8	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.97	ug/l	
86-73-7	Fluorene	ND	5.0	1.3	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	1.3	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.1	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	5.2	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.97	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.8	ug/l	
78-59-1	Isophorone	ND	5.0	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.3	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.4	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	3.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	2.3	ug/l	
91-20-3	Naphthalene	ND	5.0	1.1	ug/l	
98-95-3	Nitrobenzene	ND	5.0	1.7	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	1.4	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.7	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.97	ug/l	
129-00-0	Pyrene	ND	5.0	1.7	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.3	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	30%	10-66%
4165-62-2	Phenol-d5	21%	10-53%

Method Blank Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-MB	J159885.D	1	06/06/11	SC	06/06/11	OP18745	EJ1170

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	55%	32-128%
4165-60-0	Nitrobenzene-d5	59%	29-115%
321-60-8	2-Fluorobiphenyl	57%	34-113%
1718-51-0	Terphenyl-d14	82%	12-145%

Blank Spike Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-BS	J159888.D	1	06/06/11	SC	06/06/11	OP18745	EJ1170

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	13.3	27	10-68
95-57-8	2-Chlorophenol	50	37.9	76	39-93
59-50-7	4-Chloro-3-methyl phenol	50	40.1	80	43-109
120-83-2	2,4-Dichlorophenol	50	40.1	80	42-106
105-67-9	2,4-Dimethylphenol	50	42.3	85	27-87
51-28-5	2,4-Dinitrophenol	50	21.6	43	43-107
534-52-1	4,6-Dinitro-o-cresol	50	38.8	78	47-112
95-48-7	2-Methylphenol	50	35.5	71	25-84
	3&4-Methylphenol	100	50.0	50	25-77
88-75-5	2-Nitrophenol	50	36.7	73	38-96
100-02-7	4-Nitrophenol	50	14.6	29	13-70
87-86-5	Pentachlorophenol	50	30.1	60	46-153
108-95-2	Phenol	50	18.3	37	10-53
95-95-4	2,4,5-Trichlorophenol	50	33.2	66	40-101
88-06-2	2,4,6-Trichlorophenol	50	39.3	79	41-102
83-32-9	Acenaphthene	50	40.2	80	41-110
208-96-8	Acenaphthylene	50	40.7	81	49-113
120-12-7	Anthracene	50	49.0	98	59-105
56-55-3	Benzo(a)anthracene	50	50.8	102	64-112
50-32-8	Benzo(a)pyrene	50	46.8	94	62-116
205-99-2	Benzo(b)fluoranthene	50	50.1	100	62-114
191-24-2	Benzo(g,h,i)perylene	50	62.2	124	55-124
207-08-9	Benzo(k)fluoranthene	50	52.4	105	62-119
101-55-3	4-Bromophenyl phenyl ether	50	48.8	98	56-99
85-68-7	Butyl benzyl phthalate	50	51.2	102	52-125
100-51-6	Benzyl Alcohol	50	34.9	70	28-83
91-58-7	2-Chloronaphthalene	50	28.1	56	42-97
106-47-8	4-Chloroaniline	50	27.9	56	37-128
86-74-8	Carbazole	50	45.7	91	59-142
218-01-9	Chrysene	50	52.7	105	67-112
111-91-1	bis(2-Chloroethoxy)methane	50	42.0	84	38-96
111-44-4	bis(2-Chloroethyl)ether	50	39.3	79	37-91
108-60-1	bis(2-Chloroisopropyl)ether	50	45.1	90	36-102
7005-72-3	4-Chlorophenyl phenyl ether	50	41.2	82	48-101
95-50-1	1,2-Dichlorobenzene	50	34.6	69	33-86
541-73-1	1,3-Dichlorobenzene	50	33.5	67	21-88

Blank Spike Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-BS	J159888.D	1	06/06/11	SC	06/06/11	OP18745	EJ1170

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	34.1	68	31-86
121-14-2	2,4-Dinitrotoluene	50	43.1	86	55-112
606-20-2	2,6-Dinitrotoluene	50	45.3	91	57-105
91-94-1	3,3'-Dichlorobenzidine	50	44.2	88	50-142
53-70-3	Dibenzo(a,h)anthracene	50	58.0	116	55-123
132-64-9	Dibenzofuran	50	39.0	78	45-99
84-74-2	Di-n-butyl phthalate	50	51.4	103	64-114
117-84-0	Di-n-octyl phthalate	50	45.3	91	55-118
84-66-2	Diethyl phthalate	50	50.4	101	52-113
131-11-3	Dimethyl phthalate	50	48.2	96	38-112
117-81-7	bis(2-Ethylhexyl)phthalate	50	50.3	101	56-131
206-44-0	Fluoranthene	50	49.3	99	62-116
86-73-7	Fluorene	50	39.8	80	47-99
118-74-1	Hexachlorobenzene	50	52.7	105* [a]	62-102
87-68-3	Hexachlorobutadiene	50	35.0	70	37-91
77-47-4	Hexachlorocyclopentadiene	50	16.7	33	23-102
67-72-1	Hexachloroethane	50	32.5	65	33-86
193-39-5	Indeno(1,2,3-cd)pyrene	50	60.1	120	52-126
78-59-1	Isophorone	50	43.9	88	42-105
91-57-6	2-Methylnaphthalene	50	36.4	73	36-91
88-74-4	2-Nitroaniline	50	44.7	89	49-109
99-09-2	3-Nitroaniline	50	37.3	75	46-139
100-01-6	4-Nitroaniline	50	41.1	82	73-174
91-20-3	Naphthalene	50	37.1	74	37-89
98-95-3	Nitrobenzene	50	40.2	80	42-97
621-64-7	N-Nitroso-di-n-propylamine	50	41.9	84	42-102
86-30-6	N-Nitrosodiphenylamine	50	42.0	84	64-119
85-01-8	Phenanthrene	50	48.3	97	59-103
129-00-0	Pyrene	50	50.1	100	58-110
120-82-1	1,2,4-Trichlorobenzene	50	33.5	67	37-88

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	42%	10-66%
4165-62-2	Phenol-d5	29%	10-53%

Blank Spike Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-BS	J159888.D	1	06/06/11	SC	06/06/11	OP18745	EJ1170

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	82%	32-128%
4165-60-0	Nitrobenzene-d5	78%	29-115%
321-60-8	2-Fluorobiphenyl	74%	34-113%
1718-51-0	Terphenyl-d14	90%	12-145%

(a) Not detected in associated samples.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-MS	W5811A.D	4	06/06/11	SG	06/06/11	OP18745	EW298
OP18745-MSD	W5812A.D	4	06/06/11	SG	06/06/11	OP18745	EW298
T77594-1 [a]	W5810.D	4	06/06/11	SG	06/06/11	OP18745	EW298

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Compound	T77594-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	339		106	108	-217* [b]	89.8	-234* [b]	18	10-68/27
95-57-8	2-Chlorophenol	ND		106	63.1	59	57.8	54	9	39-93/28
59-50-7	4-Chloro-3-methyl phenol	ND		106	92.9	87	85.5	80	8	43-109/28
120-83-2	2,4-Dichlorophenol	ND		106	84.5	79	75.8	71	11	42-106/25
105-67-9	2,4-Dimethylphenol	134		106	235	95*	215	76	9	27-87/26
51-28-5	2,4-Dinitrophenol	ND		106	ND	0*	ND	0*	nc	43-107/44
534-52-1	4,6-Dinitro-o-cresol	ND		106	79.0	74	76.8	72	3	47-112/24
95-48-7	2-Methylphenol	155		106	276	114*	266	104*	4	25-84/31
	3&4-Methylphenol	202		213	414	100*	387	87*	7	25-77/25
88-75-5	2-Nitrophenol	ND		106	76.4	72	66.8	63	13	38-96/26
100-02-7	4-Nitrophenol	ND		106	72.6	68	65.8	62	10	13-70/25
87-86-5	Pentachlorophenol	ND		106	168	158*	164	154*	2	46-153/18
108-95-2	Phenol	242		106	502	244* [b]	459	204* [b]	9	10-53/35
95-95-4	2,4,5-Trichlorophenol	ND		106	89.7	84	84.4	79	6	40-101/22
88-06-2	2,4,6-Trichlorophenol	ND		106	78.6	74	74.3	70	6	41-102/22
83-32-9	Acenaphthene	ND		106	75.8	71	73.6	69	3	41-110/21
208-96-8	Acenaphthylene	ND		106	67.3	63	68.1	64	1	49-113/23
120-12-7	Anthracene	ND		106	92.2	87	88.2	83	4	59-105/18
56-55-3	Benzo(a)anthracene	ND		106	82.9	78	74.8	70	10	64-112/20
50-32-8	Benzo(a)pyrene	ND		106	71.6	67	62.4	59*	14	62-116/23
205-99-2	Benzo(b)fluoranthene	ND		106	84.4	79	78.9	74	7	62-114/22
191-24-2	Benzo(g,h,i)perylene	ND		106	114	107	92.1	87	21	55-124/36
207-08-9	Benzo(k)fluoranthene	ND		106	89.0	84	74.4	70	18	62-119/30
101-55-3	4-Bromophenyl phenyl ether	ND		106	71.1	67	64.6	61	10	56-99/20
85-68-7	Butyl benzyl phthalate	ND		106	96.6	91	86.3	81	11	52-125/25
100-51-6	Benzyl Alcohol	50.5		106	134	78	129	74	4	28-83/32
91-58-7	2-Chloronaphthalene	ND		106	61.6	58	58.9	55	4	42-97/27
106-47-8	4-Chloroaniline	ND		106	ND	0*	36.5	34*	200*	37-128/29
86-74-8	Carbazole	ND		106	90.8	85	86.5	81	5	59-142/19
218-01-9	Chrysene	ND		106	93.1	88	79.5	75	16	67-112/19
111-91-1	bis(2-Chloroethoxy)methane	ND		106	54.7	51	48.9	46	11	38-96/30
111-44-4	bis(2-Chloroethyl)ether	ND		106	111	104*	108	102*	3	37-91/33
108-60-1	bis(2-Chloroisopropyl)ether	ND		106	55.2	52	53.3	50	4	36-102/32
7005-72-3	4-Chlorophenyl phenyl ether	ND		106	71.7	67	70.0	66	2	48-101/21
95-50-1	1,2-Dichlorobenzene	ND		106	64.2	60	62.3	59	3	33-86/29
541-73-1	1,3-Dichlorobenzene	ND		106	64.0	60	59.0	55	8	32-88/32

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-MS	W5811A.D	4	06/06/11	SG	06/06/11	OP18745	EW298
OP18745-MSD	W5812A.D	4	06/06/11	SG	06/06/11	OP18745	EW298
T77594-1 [a]	W5810.D	4	06/06/11	SG	06/06/11	OP18745	EW298

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Compound	T77594-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		106	63.4	60	60.4	57	5	31-86/36
121-14-2	2,4-Dinitrotoluene	ND		106	88.6	83	84.2	79	5	55-112/23
606-20-2	2,6-Dinitrotoluene	ND		106	75.1	71	73.4	69	2	57-105/23
91-94-1	3,3'-Dichlorobenzidine	ND		106	ND	0*	ND	0*	nc	50-142/21
53-70-3	Dibenzo(a,h)anthracene	ND		106	119	112	102	96	15	55-123/37
132-64-9	Dibenzofuran	ND		106	81.1	76	81.9	77	1	45-99/20
84-74-2	Di-n-butyl phthalate	ND		106	96.7	91	95.5	90	1	64-114/16
117-84-0	Di-n-octyl phthalate	ND		106	73.1	69	67.3	63	8	55-118/25
84-66-2	Diethyl phthalate	ND		106	87.0	82	84.7	80	3	52-113/20
131-11-3	Dimethyl phthalate	ND		106	77.6	73	74.7	70	4	38-112/19
117-81-7	bis(2-Ethylhexyl)phthalate	ND		106	122	115	103	97	17	56-131/19
206-44-0	Fluoranthene	ND		106	87.5	82	84.3	79	4	62-116/24
86-73-7	Fluorene	ND		106	97.8	92	97.6	92	0	47-99/22
118-74-1	Hexachlorobenzene	ND		106	67.4	63	62.1	58*	8	62-102/21
87-68-3	Hexachlorobutadiene	ND		106	72.0	68	64.1	60	12	37-91/28
77-47-4	Hexachlorocyclopentadiene	ND		106	58.7	55	56.4	53	4	23-102/34
67-72-1	Hexachloroethane	ND		106	82.1	77	76.3	72	7	33-86/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		106	153	144*	132	124	15	52-126/30
78-59-1	Isophorone	ND		106	93.8	88	83.7	79	11	42-105/28
91-57-6	2-Methylnaphthalene	100		106	262	152*	228	120*	14	36-91/29
88-74-4	2-Nitroaniline	ND		106	82.4	77	79.0	74	4	49-109/22
99-09-2	3-Nitroaniline	ND		106	63.9	60	67.2	63	5	46-139/23
100-01-6	4-Nitroaniline	ND		106	71.4	67*	73.5	69*	3	73-174/24
91-20-3	Naphthalene	38.6		106	135	91*	123	79	9	37-89/24
98-95-3	Nitrobenzene	ND		106	79.7	75	69.8	66	13	42-97/26
621-64-7	N-Nitroso-di-n-propylamine	ND		106	125	117*	108	102	15	42-102/27
86-30-6	N-Nitrosodiphenylamine	ND		106	76.4	72	71.9	68	6	64-119/27
85-01-8	Phenanthrene	ND		106	100	94	93.0	87	7	59-103/19
129-00-0	Pyrene	ND		106	95.9	90	87.5	82	9	58-110/25
120-82-1	1,2,4-Trichlorobenzene	ND		106	68.9	65	61.9	58	11	37-88/23

CAS No.	Surrogate Recoveries	MS	MSD	T77594-1	Limits
367-12-4	2-Fluorophenol	59%	49%	37%	10-66%
4165-62-2	Phenol-d5	64%*	56%*	35%	10-53%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T77679
Account: WPRMTCOP Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18745-MS	W5811A.D	4	06/06/11	SG	06/06/11	OP18745	EW298
OP18745-MSD	W5812A.D	4	06/06/11	SG	06/06/11	OP18745	EW298
T77594-1 [a]	W5810.D	4	06/06/11	SG	06/06/11	OP18745	EW298

The QC reported here applies to the following samples: **Method:** SW846 8270C

T77679-1

CAS No.	Surrogate Recoveries	MS	MSD	T77594-1	Limits
118-79-6	2,4,6-Tribromophenol	121%	114%	111%	32-128%
4165-60-0	Nitrobenzene-d5	87%	76%	71%	29-115%
321-60-8	2-Fluorobiphenyl	79%	73%	67%	34-113%
1718-51-0	Terphenyl-d14	76%	67%	56%	12-145%

(a) Elevated reporting limits due to matrix interference. High concentration of non-target compounds were detected in the sample.
(b) Outside control limits due to high level in sample relative to spike amount.

Gulf Coast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

QC Batch ID: MP14895
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/07/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.3	12		
Antimony	5.0	1	1		
Arsenic	5.0	1.7	1		
Barium	200	.97	3.4		
Beryllium	5.0	.056	.16		
Boron	100	1.4	7.8		
Cadmium	4.0	.11	.09		
Calcium	5000	7.4	25	22.7	<5000
Chromium	10	.23	.27		
Cobalt	50	.15	.22		
Copper	25	1.1	5.9		
Iron	100	1.1	23	13.1	<100
Lead	3.0	1	1.8		
Lithium	300	2	2		
Magnesium	5000	7.7	7.9	-7.3	<5000
Manganese	15	.054	1.9	0.62	<15
Molybdenum	10	.39	.2		
Nickel	40	.69	1.4		
Potassium	5000	39	45	58.4	<5000
Selenium	5.0	1.5	.98		
Silver	10	1.2	.24		
Sodium	5000	9.2	100	13.3	<5000
Strontium	10	.061	.4		
Thallium	10	.67	1.2		
Tin	20	.69	2.8		
Titanium	20	.29	.3		
Vanadium	50	.3	.3		
Zinc	20	.51	3.5		

Associated samples MP14895: T77679-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

QC Batch ID: MP14895
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:			06/07/11					06/07/11	
Metal	T77634-1F Original	DUP	RPD	QC Limits	T77634-1F Original	MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic	anr								
Barium									
Beryllium									
Boron									
Cadmium									
Calcium	233000	237000	1.7	0-20	233000	281000	50000	96.0	80-120
Chromium									
Cobalt	anr								
Copper	anr								
Iron	6.3	7.6	18.7	0-20	6.3	45900	50000	91.8	80-120
Lead	anr								
Lithium									
Magnesium	151000	152000	0.7	0-20	151000	197000	50000	92.0	80-120
Manganese	5080	5130	1.0	0-20	5080	5320	400	60.0 (a)	80-120
Molybdenum									
Nickel	anr								
Potassium	5000	4950	1.0	0-20	5000	56600	50000	103.2	80-120
Selenium									
Silver									
Sodium	10200	10300	1.0	0-20	10200	64700	50000	109.0	80-120
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	anr								

Associated samples MP14895: T77679-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

QC Batch ID: MP14895 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/11

Metal	T77634-1F Original	MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	233000	280000	50000	94.0	0.4	20
Chromium						
Cobalt	anr					
Copper	anr					
Iron	6.3	47400	50000	94.8	3.2	20
Lead	anr					
Lithium						
Magnesium	151000	200000	50000	98.0	1.5	20
Manganese	5080	5330	400	62.5 (a)	0.2	20
Molybdenum						
Nickel	anr					
Potassium	5000	57300	50000	104.6	1.2	20
Selenium						
Silver						
Sodium	10200	64100	50000	107.8	0.9	20
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP14895: T77679-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

QC Batch ID: MP14895
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/07/11

Metal	BSP Result	Spikelot MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	54100	50000	108.2	80-120
Chromium				
Cobalt	anr			
Copper	anr			
Iron	48400	50000	96.8	80-120
Lead	anr			
Lithium				
Magnesium	49300	50000	98.6	80-120
Manganese	429	400	107.3	80-120
Molybdenum				
Nickel	anr			
Potassium	50800	50000	101.6	80-120
Selenium				
Silver				
Sodium	53100	50000	106.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP14895: T77679-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

QC Batch ID: MP14895
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/07/11

Metal	T77634-1F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	233000	235000	0.7	0-10
Chromium				
Cobalt	anr			
Copper	anr			
Iron	6.29	16.5	161.8(a)	0-10
Lead	anr			
Lithium				
Magnesium	151000	145000	4.0	0-10
Manganese	5080	5160	1.6	0-10
Molybdenum				
Nickel	anr			
Potassium	5000	4950	1.0	0-10
Selenium				
Silver				
Sodium	10200	9860	3.4	0-10
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP14895: T77679-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Gulf Coast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate	GN32043	5.0	1.0	mg/l				
Alkalinity, Carbonate	GN32042	5.0	0.0	mg/l				
Alkalinity, Total as CaCO3	GN31981	5.0	0.0	mg/l	2500	2480	99.0	80-120%
Hydroxide Alkalinity	GN32044	5.0	0.0	mg/l				
Solids, Total Dissolved	GN31859	10	0.0	mg/l	500	492	98.4	80-120%
Specific Conductivity	GN32039	1.0	<1.0	umhos/cm				
Sulfate	GP13280/GN31783	0.50	0.0	mg/l	10	10.3	103.0	80-120%

Associated Samples:
Batch GN31859: T77679-1
Batch GN31981: T77679-1
Batch GN32039: T77679-1
Batch GN32042: T77679-1
Batch GN32043: T77679-1
Batch GN32044: T77679-1
Batch GP13280: T77679-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN31981	T77595-1	mg/l	91.0	91.0	0.0	0-10%
Specific Conductivity	GN32039	T77679-1	umhos/cm	6100	6100	0.0	0-20%
Sulfate	GP13280/GN31783	T76341-18	mg/l	13000	13100	0.5	0-20%
pH	GN31796	T77682-1	su	7.91	7.91	0.0	0-6.8%

Associated Samples:
Batch GN31796: T77679-1
Batch GN31859: T77679-1
Batch GN31981: T77679-1
Batch GN32039: T77679-1
Batch GP13280: T77679-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T77679
Account: WPRMTCOP - Williams Production RMT Company
Project: TR 40-35-597 Pit 1

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN31981	T77595-1	mg/l	91.0	25	115	96.0	79-122%
Sulfate	GP13280/GN31783	T76341-18	mg/l	13000	10000	24300	113.0	75-125%

Associated Samples:
Batch GN31981: T77679-1
Batch GP13280: T77679-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits