



Exploration & Production
PO Box 640
Aztec, NM 84710
505/634-4219
505/634-4205 Fax

May 22, 2007

Mr. William Jones
New Mexico Oil Conservation Division
Engineering and Geological Services Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Request to Accept Produced Water for Injection
Williams Field Service Facilities

Dear Mr. Jones:

Williams Four Corners, LLC (WFS) would like to use the following injections wells operated by Williams Production Company, LLC (WPX) for the disposal of recovered produced water from some of their facilities located in Rio Arriba Co., New Mexico.

WPX Salt Water Disposal Wells:

API Number **ULSTR** **Footages**
3003923035 K-16-31N-5W 1650 FSL & 1820 FWL
Well Name & Number: ROSA UNIT No. 094
Operator: WILLIAMS PRODUCTION COMPANY, LLC

*Case 9401
order R-*

API Number **ULSTR** **Footages**
3003927055 I-23-31N-6W 2420 FSL & 1210 FEL
Well Name & Number: ROSA UNIT SWD No. 001
Operator: WILLIAMS PRODUCTION COMPANY, LLC

Swg-916

The produced water will be coming from the following compressor stations/CDP operated by WFS and located in Rio Arriba Co, NM.

Facility	GW Discharge Permit	STR
Eul Canyon		S24 T32N R6W
Bancos Canyon		S32 T32N R5W
Quintana Mesa	GW 309	S32 T32N R5W
Laguna Seca	GW 307	S19 T31N R5W
Martinez Draw	GW 308	S17 T31N R5W
31-6 CDP	GW 118	S1 T31N R6W
30-5 CDP	GW 108	S18 T30N R5W

Produced water samples were collected from each of the listed sites earlier this spring and copies of the analytical are attached. All produced water to be received from WFS is according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, RCRA Exempt (Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste).

May 22, 2007

WPX would like permission from the New Mexico Oil Conservation Division (NMOCD) to receive produced water from WFS for disposal at the listed SWD disposal wells. Records will be maintained of the origin, the site delivered to and volumes.

If there are any other agencies to which Williams should request authorization please provide guidance.

Please contact myself (505) 634-4219 for Williams Production Co, LLC and Mr. David Bays of Williams Four Corners, LLC (505) 634-4951 if you require any additional information. Thank you for your time and consideration.

Respectfully submitted,



Michael K. Lane
EHS Specialist
Williams Production - San Juan Basin Operations

CC: David Bays, WFS
Mark Lepich, WPX Coal Team Lead
WPX Env. Well Files

Encl: Analytical

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

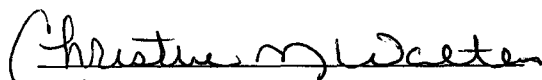
Client: Williams Four Corners
Sample ID: Produced Water
Laboratory Number: 40719
Chain of Custody: 2332
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

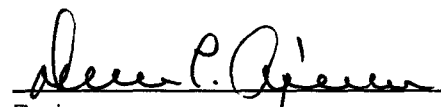
Project #: 00068-005
Date Reported: 04-06-07
Date Sampled: 04-03-07
Date Received: 04-03-07
Date Extracted: N/A
Date Analyzed: 04-05-07

Parameter	Analytical Result	Units			
pH	6.82	s.u.			
Conductivity @ 25° C	5,230	umhos/cm			
Total Dissolved Solids @ 180C	3,030	mg/L			
Total Dissolved Solids (Calc)	3,010	mg/L			
SAR	26.6	ratio			
Total Alkalinity as CaCO ₃	774	mg/L			
Total Hardness as CaCO ₃	294	mg/L			
Bicarbonate as HCO ₃	774	mg/L	12.69	meq/L	
Carbonate as CO ₃	<0.1	mg/L	0.00	meq/L	
Hydroxide as OH	<0.1	mg/L	0.00	meq/L	
Nitrate Nitrogen	2.3	mg/L	0.04	meq/L	
Nitrite Nitrogen	<0.001	mg/L	0.00	meq/L	
Chloride	1,360	mg/L	38.37	meq/L	
Fluoride	<0.01	mg/L	0.00	meq/L	
Phosphate	19.4	mg/L	0.61	meq/L	
Sulfate	<0.1	mg/L	0.00	meq/L	
Iron	14.7	mg/L	0.53	meq/L	
Calcium	93.6	mg/L	4.67	meq/L	
Magnesium	14.7	mg/L	1.21	meq/L	
Potassium	2.00	mg/L	0.05	meq/L	
Sodium	1,050	mg/L	45.68	meq/L	
Cations			51.60	meq/L	
Anions			51.70	meq/L	
Cation/Anion Difference			0.19%		

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Eul


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CATION / ANION ANALYSIS

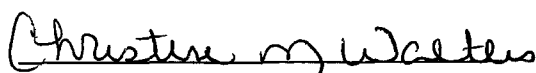
Client: Williams
Sample ID: Produced Water
Laboratory Number: 40720
Chain of Custody: 2333
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

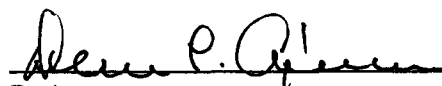
Project #: 00068-005
Date Reported: 04-06-07
Date Sampled: 04-03-07
Date Received: 04-03-07
Date Extracted: N/A
Date Analyzed: 04-05-07

Parameter	Analytical Result	Units		
pH	7.83	s.u.		
Conductivity @ 25° C	11,700	umhos/cm		
Total Dissolved Solids @ 180C	6,970	mg/L		
Total Dissolved Solids (Calc)	6,930	mg/L		
SAR	114	ratio		
Total Alkalinity as CaCO3	3,710	mg/L		
Total Hardness as CaCO3	102	mg/L		
Bicarbonate as HCO3	3,710	mg/L	60.81	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	2.7	mg/L	0.04	meq/L
Nitrite Nitrogen	0.006	mg/L	0.00	meq/L
Chloride	1,970	mg/L	55.57	meq/L
Fluoride	0.77	mg/L	0.04	meq/L
Phosphate	15.2	mg/L	0.48	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
Iron	1.23	mg/L	0.04	meq/L
Calcium	32.0	mg/L	1.60	meq/L
Magnesium	5.37	mg/L	0.44	meq/L
Potassium	8.85	mg/L	0.23	meq/L
Sodium	2,640	mg/L	114.84	meq/L
Cations			117.11	meq/L
Anions			116.94	meq/L
Cation/Anion Difference			0.14%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Bancos**


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

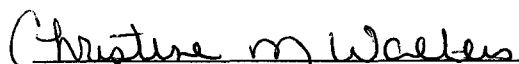
Client: Williams
Sample ID: Produced Water
Laboratory Number: 40721
Chain of Custody: 2334
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

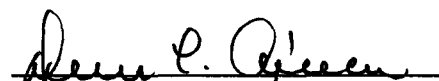
Project #: 00068-005
Date Reported: 04-06-07
Date Sampled: 04-03-07
Date Received: 04-03-07
Date Extracted: N/A
Date Analyzed: 04-05-07

Parameter	Analytical Result	Units		
pH	7.21	s.u.		
Conductivity @ 25° C	4,230	umhos/cm		
Total Dissolved Solids @ 180C	3,490	mg/L		
Total Dissolved Solids (Calc)	3,320	mg/L		
SAR	22.7	ratio		
Total Alkalinity as CaCO ₃	1,360	mg/L		
Total Hardness as CaCO ₃	436	mg/L		
Bicarbonate as HCO ₃	1,360	mg/L	22.29	meq/L
Carbonate as CO ₃	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	6.5	mg/L	0.10	meq/L
Nitrite Nitrogen	0.030	mg/L	0.00	meq/L
Chloride	1,160	mg/L	32.72	meq/L
Fluoride	<0.01	mg/L	0.00	meq/L
Phosphate	48.1	mg/L	1.52	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
Iron	0.495	mg/L	0.02	meq/L
Calcium	170	mg/L	8.46	meq/L
Magnesium	2.92	mg/L	0.24	meq/L
Potassium	19.2	mg/L	0.49	meq/L
Sodium	1,090	mg/L	47.42	meq/L
Cations			56.61	meq/L
Anions			56.64	meq/L
Cation/Anion Difference			0.05%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Quintana Mesa


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

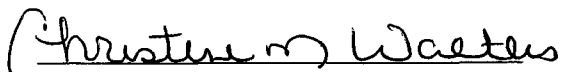
Client: Williams
Sample ID: Produced Water
Laboratory Number: 40722
Chain of Custody: 2335
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

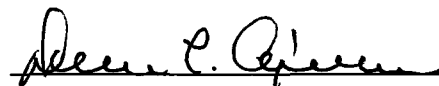
Project #: 00068-005
Date Reported: 04-06-07
Date Sampled: 04-03-07
Date Received: 04-03-07
Date Extracted: N/A
Date Analyzed: 04-05-07

Parameter	Analytical Result	Units		
pH	7.02	s.u.		
Conductivity @ 25° C	5,190	umhos/cm		
Total Dissolved Solids @ 180C	3,170	mg/L		
Total Dissolved Solids (Calc)	3,140	mg/L		
SAR	57.4	ratio		
Total Alkalinity as CaCO3	1,740	mg/L		
Total Hardness as CaCO3	80.0	mg/L		
Bicarbonate as HCO3	1,740	mg/L	28.52	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	17.5	mg/L	0.28	meq/L
Nitrite Nitrogen	0.002	mg/L	0.00	meq/L
Chloride	700	mg/L	19.75	meq/L
Fluoride	<0.01	mg/L	0.00	meq/L
Phosphate	147	mg/L	4.64	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
Iron	11.7	mg/L	0.42	meq/L
Calcium	32.0	mg/L	1.60	meq/L
Magnesium	<0.01	mg/L	0.00	meq/L
Potassium	7.00	mg/L	0.18	meq/L
Sodium	1,180	mg/L	51.33	meq/L
Cations			53.11	meq/L
Anions			53.19	meq/L
Cation/Anion Difference			0.16%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Laguna Seca**


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

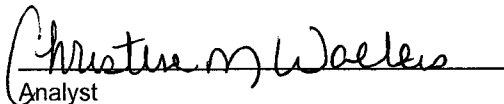
Client: Williams
Sample ID: Produced Water
Laboratory Number: 40723
Chain of Custody: 2336
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

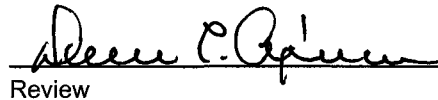
Project #: 00068-005
Date Reported: 04-06-07
Date Sampled: 04-03-07
Date Received: 04-03-07
Date Extracted: N/A
Date Analyzed: 04-05-07

Parameter	Analytical Result	Units		
pH	7.88	s.u.		
Conductivity @ 25° C	9,800	umhos/cm		
Total Dissolved Solids @ 180C	5,850	mg/L		
Total Dissolved Solids (Calc)	5,630	mg/L		
SAR	112	ratio		
Total Alkalinity as CaCO3	4,080	mg/L		
Total Hardness as CaCO3	66.0	mg/L		
Bicarbonate as HCO3	4,080	mg/L	66.87	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.0	mg/L	0.02	meq/L
Nitrite Nitrogen	0.017	mg/L	0.00	meq/L
Chloride	980	mg/L	27.65	meq/L
Fluoride	0.80	mg/L	0.04	meq/L
Phosphate	2.5	mg/L	0.08	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
Iron	0.137	mg/L	0.00	meq/L
Calcium	20.8	mg/L	1.04	meq/L
Magnesium	4.15	mg/L	0.34	meq/L
Potassium	0.20	mg/L	0.01	meq/L
Sodium	2,140	mg/L	93.09	meq/L
Cations			94.47	meq/L
Anions			94.65	meq/L
Cation/Anion Difference			0.19%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Martinez Draw**


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client: Williams
Sample ID: Produced Water
Laboratory Number: 40724
Chain of Custody: 2337
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 00068-005
Date Reported: 04-06-07
Date Sampled: 04-03-07
Date Received: 04-03-07
Date Extracted: N/A
Date Analyzed: 04-05-07

Parameter	Analytical Result	Units
pH	6.28	s.u.
Conductivity @ 25° C	742	umhos/cm
Total Dissolved Solids @ 180C	490	mg/L
Total Dissolved Solids (Calc)	426	mg/L
SAR	3.7	ratio
Total Alkalinity as CaCO3	168	mg/L
Total Hardness as CaCO3	140.0	mg/L

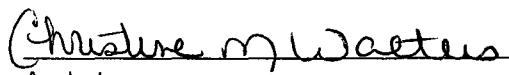
Bicarbonate as HCO3	168	mg/L	2.75	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.9	mg/L	0.03	meq/L
Nitrite Nitrogen	0.018	mg/L	0.00	meq/L
Chloride	108	mg/L	3.05	meq/L
Fluoride	0.13	mg/L	0.01	meq/L
Phosphate	8.0	mg/L	0.25	meq/L
Sulfate	51.0	mg/L	1.06	meq/L
Iron	76.9	mg/L	2.75	meq/L
Calcium	52.8	mg/L	2.63	meq/L
Magnesium	1.95	mg/L	0.16	meq/L
Potassium	0.73	mg/L	0.02	meq/L
Sodium	99.7	mg/L	4.34	meq/L

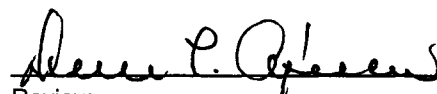
Cations 7.15 meq/L
Anions 7.15 meq/L

Cation/Anion Difference 0.03%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: 31-6 CDP


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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

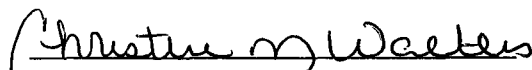
CATION / ANION ANALYSIS

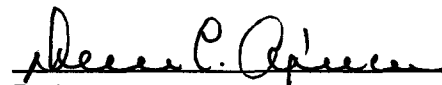
Client:	Williams	Project #:	00068-005
Sample ID:	Produced Water	Date Reported:	04-06-07
Laboratory Number:	40725	Date Sampled:	04-03-07
Chain of Custody:	2338	Date Received:	04-03-07
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	04-05-07
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	6.50	s.u.		
Conductivity @ 25° C	2,450	umhos/cm		
Total Dissolved Solids @ 180C	1,480	mg/L		
Total Dissolved Solids (Calc)	1,410	mg/L		
SAR	38.1	ratio		
Total Alkalinity as CaCO3	240	mg/L		
Total Hardness as CaCO3	32.0	mg/L		
Bicarbonate as HCO3	240	mg/L	3.93	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	4.9	mg/L	0.08	meq/L
Nitrite Nitrogen	0.094	mg/L	0.00	meq/L
Chloride	500	mg/L	14.11	meq/L
Fluoride	0.73	mg/L	0.04	meq/L
Phosphate	16.7	mg/L	0.53	meq/L
Sulfate	203	mg/L	4.22	meq/L
Iron	105	mg/L	3.75	meq/L
Calcium	9.60	mg/L	0.48	meq/L
Magnesium	1.95	mg/L	0.16	meq/L
Potassium	28.0	mg/L	0.72	meq/L
Sodium	495	mg/L	21.53	meq/L
Cations			22.89	meq/L
Anions			22.90	meq/L
Cation/Anion Difference			0.06%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: 30-5 CDP


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