

1R - 124

REPORTS

DATE:

5-18-11



AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806.467.0607
Fax 806.467.0622

AUSTIN
3003 Tom Gary Cove
Building C-100
Round Rock, Texas 78664
Phone 512.989.3428
Fax 512.989.3487

MIDLAND
2901 State Highway 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

SAN ANTONIO
17170 Jordan Road
Suite 102
Selma, Texas 78154
Phone 210.579.0235
Fax 210.568.2191

TULSA
9906 East 43rd Street
Suite G
Tulsa, Oklahoma 74146
Phone 918.742.0871
Fax 918.742.0876

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88241
Phone 505.393.4261
Fax 505.393.4658

TYLER
719 West Front Street
Suite 255
Tyler, Texas 75702
Phone 903.531.9971
Fax 903.531.9979

HOUSTON
3233 West 11th Street
Suite 400
Houston, Texas 77008
Phone 713.861.0081
Fax 713.868.3208

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**MOBILE DUAL PHASE EXTRACTION REPORT
TNM MONUMENT 18 PIPELINE RELEASE
MONUMENT, LEA COUNTY, NEW MEXICO
SRS # TNM MONUMENT 18
TALON/LPE PROJECT # 700376.083.01**

PREPARED FOR:

**PLAINS MARKETING, L.P.
333 CLAY STREET
SUITE 1600
HOUSTON, TEXAS 77002**

PREPARED BY:

**TALON/LPE
921 N. BIVINS
AMARILLO, TEXAS 79107**

DISTRIBUTION:

**COPY 1 - PLAINS MARKETING, L.P. - MIDLAND
COPY 2 - PLAINS MARKETING, L.P. - HOUSTON
COPY 3 - NMOCD - SANTA FE
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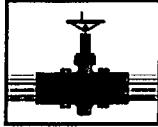
May 18, 2011

1R-124

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JUN 13 2011

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505



PLAINS
PIPELINE, L.P.

June 10, 2011

Mr. Edward Hansen
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Plains Pipeline, L.P.
Reports for MDPE Events at Four (4) Remediation Sites in Lea County, NM

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached reports which provide details regarding the Mobile Dual Phase Extraction (MDPE) events that were conducted at the following sites during May 2011:

DCP Plant to Lea Station 6-inch Sec. 31	NMOCD Reference #1R-2166
DCP Plant to Lea Station 6-inch #2	NMOCD Reference #1R-2136
Monument 10	NMOCD Reference #1R-0119
Monument 18	NMOCD Reference #1R-0124

Should you have any questions or comments, please contact me at (575) 441-1099.

Sincerely,

Jason Henry
Remediation Coordinator
Plains Pipeline, L.P.

Enclosure

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Attachments:

Attachment 1 - MDPE field logs
Attachment 2 - Laboratory Analytical Results
Attachment 3 – Oxidizer Charts

I. MDPE SUMMARY REPORT AND WASTE DISPOSITION

A. MDPE Results

The following report summarizes data collected during the 12-hour High Vacuum Multi-Phase Extraction (MDPE) event conducted from May 6, 2011 to May 7, 2011 at the TNM Monument 18 Pipeline release site, located in Lea County, New Mexico. The objective of the MDPE treatment was to remove both vapor and liquid phase separated hydrocarbons (PSH) from onsite groundwater wells. Talon/LPE utilized an MDPE unit which consisted of an SVE extraction pump capable of generating vacuum up to 25" hg. Off gas vapors extracted from the extraction wells were destroyed using a propane-fired 1000-SCFM thermal oxidizer capable of processing 172.96 lbs/hr of gasoline.

A total of 12 hours (0.5 days) of PSH recovery was performed. MW-3 & 4 for 12 hours.

Prior to and immediately following the event, the groundwater wells were gauged for groundwater elevation and PSH. Depth to groundwater ranges were measured in feet below the top of casing. Refer to Attachment 1 for a summary of data collected during the MDPE event.

The volume of PSH removed during the MDPE event is shown to reflect the portions of PSH in the liquid phase and as off-gas vapor. Air removal rates were calculated from velocity measurements recorded at the influent manifold prior to entry into the MDPE unit. PSH recovery and air flow data has been detailed and is contained in Table 1. Three influent air samples were collected over the course of the event. These samples were submitted for laboratory testing in order to compare the predicted vapor concentrations (based on field-screening or calculated based on fuel consumption) to the actual vapor concentrations. All three influent samples were tested for Total-Gas Analysis (Hydrocarbon Composition) by ASTM method D 1945. Laboratory analytical results can be found in Attachment 2.

Based on a combination of field vapor screening and collected laboratory samples, a combined estimated total of **29.76 equivalent gallons of PSH (Total)** were removed during the event. The combined volume of PSH was comprised of approximately **27 gallons of PSH (liquid phase)** and approximately **2.76 gallons as off-gas vapor**.

The cumulative air flow measurements for the MDPE event were calculated using a combination of field data measurements and Preso® B+ manufacturer provided formulas. **Air flow rates extracted from the recovery wells averaged 51.56 SCFM** during the event.

A portion of the extracted air flow rates measured is attributable to compressed air, which was "injected" into the extraction wells. This "injected" air is introduced into the extraction wells for the purpose of enhancing liquid recovery rates.

B. Air Quality

Three influent air samples were collected during the event. These samples were submitted for laboratory testing in order to compare the predicted vapor concentrations (based on field-screening or calculated based on fuel consumption) to the actual vapor concentrations. The maximum concentration in air influent was recorded as 4,256.25 ppmv for Hydrocarbon Composition.

C. Waste Management and Disposition

A cumulative total of 4,827 gallons of fluid were generated during this event. The fluids were transferred to an on-site storage tank.

II. SYSTEM OPERATION DATA AND MASS RECOVERY CALCULATIONS

Formulae:

$$\text{Concentration (C_mg/l)} = \frac{\text{C_ppmv} \times \text{Mol. wt. in mg(estimated)} \times 0.000001}{0.0821 \times \text{Temp (K)}}$$

$$\text{Recovery Rate (lbs/hr)} = \frac{(\text{C_mg/l}) \times 2.2 \times (\text{Flowrate}) \times 60 \times 28.32}{1,000,000}$$

$$\text{Recovery (lbs)} = (\text{lbs/hr}) \times (\text{hrs})$$

$$\text{Correction Factor (CF)} = \frac{\text{FID Reading(ppmv)}}{\text{FID Reading at Time of Laboratory Analysis}}$$

$$\frac{8.34 \text{ lbs}}{\text{gallon water}} \times 0.845 \text{ average specific gravity of light crude (estimated)} = \frac{7.047 \text{ lbs light crude}}{\text{gallon}}$$

Table 1
System Operation Data and Mass Recovery Calculations

Time	Period (hours)	Influent Temp. (°f)	Vacuum (In. hg)	Vacuum (In. h2O)	Differential pressure (In. h2O)	Flow (SCFM)	FID Readings (ppmv)	Lab Result (ppmv)	Assigned Lab Result (ppmv)	Correction Factor (CF)	Adjusted Lab Result (ppmv)	Adjusted Lab Result (mg/L)	Recovery (lbs/hr)	Recovery in Period (lbs)	Total Recovery (lbs)
15:30	0	93	21	285.79	4.2	38.35	50000	-	4256.25	1.00	4256	15.20	2.18	0.00	0.00
16:30	1	87	21	285.79	8.7	55.50	50000	4256.25	4256.25	1.00	4256	15.37	3.19	3.19	3.19
17:30	1	85	21	285.79	7.3	50.93	50000	-	4256.25	1.00	4256	15.43	2.94	2.94	6.13
18:30	1	87	21	285.79	7.5	51.53	50000	-	4256.25	1.00	4256	15.37	2.96	2.96	9.09
19:30	1	89	21	285.79	7.7	52.12	50000	-	1177.25	1.00	1177	4.24	0.83	0.83	9.91
20:30	1	84	21	285.79	7.6	52.01	50000	-	1177.25	1.00	1177	4.27	0.83	0.83	10.74
21:30	1	79	21	285.79	7.8	52.94	50000	1177.25	1177.25	1.00	1177	4.31	0.85	0.85	11.60
22:30	1	77	21	285.79	7.5	52.01	50000	-	1177.25	1.00	1177	4.33	0.84	0.84	12.44
23:30	1	75	21	285.79	7.7	52.79	50000	-	1177.25	1.00	1177	4.35	0.86	0.86	13.30
0:30	1	72	21	285.79	7.4	51.90	50000	-	2074.75	1.00	2075	7.70	1.49	1.49	14.79
1:30	1	69	21	285.79	7.6	52.75	50000	-	2074.75	1.00	2075	7.75	1.53	1.53	16.32
2:30	1	65	21	285.79	7.9	53.98	50000	2074.75	2074.75	1.00	2075	7.81	1.58	1.58	17.89
3:30	1	62	21	285.79	7.7	53.45	50000	-	2074.75	1.00	2075	7.85	1.57	1.57	19.46

Averages: 78.77 21.00 285.79 7.43 51.56 50000.00

Total 19.46

PSH Mass Recovered in Vapor Phase = 2.76 gallons

FID maximum Concentration = 50,000 PPM

Ex: Conversion from ppmv to mg/L (light crude)

Measured Conc.	Molecular Wt.	Pressure	Gas Constant	Temp.	Temp.	Conc.
(C_ppmv)	(Grams)	(atm)	(atm.liter/K.mole)	(F)	(K)	(C_mg/l)
4256	90	1	0.0821	93	306.88889	15.203561

Inputs are the green values.

Calculated values are yellow.

Constants are purple values.

Output is the blue values.

% Total Hydrocarbon to mg/m³ to ppmv			
% total Hydrocarbon	=	mg/m³	= ppmv
1.7025%		17,025.00	4256.25
0.4709%		4,709.00	1177.25
0.8299%		8,299.00	2074.75

Liquid-phase Hydrocarbon Recovery

(assumes gasoline product)

$V = r^2 \cdot h$ = volume

Gallons removed determined at time of pick up

PSH Volume in Gallons=

27

PSH Mass in Pounds=

190.2771

Total Hydrocarbon Recovery

PSH Mass Recovered in Vapor Phase =

19.46 lbs

2.76 gallons

PSH Mass Recovered in Liquid Phase =

190.28 lbs

27.00 gallons

TOTAL = 209.74 lbs

29.76 gallons

ATTACHMENT 1
MDPE Field Logs

MDPE FIELD NOTES					
Site Name	TNM MONUMENT #18			Event #	1
Location	MONUMENT,NM			Arrive at site:	5/6/2011 11 00
Date	5/6-7/2011				
Job#	700376.083 01	SRS#	TNM MONUMENT 18	Start Vac	5/6/2011 15 30
Phase	MDPE	Unit	1107	Stop Vac	5/7/2011 3 30
Onsite Personnel	R.BREEDING,M L COGGINS			Leave Site:	5/7/2011 4 00

WELL#	BEFORE			AFTER			COMMENTS	
	PSH	GW	PSH-T	PSH	GW	PSH-T		
MW7	-	31.77	-	-	31.80	-		
MW1	-	32.06	-	-	32.09	-		
MW5	-	33.57	-	-	33.61	-		
MW8	-	32.67	-	-	32.70	-		
MW9	-	33.44	-	-	33.47	-		
MW10	-	31.38	-	-	31.41	-		
MW6	-	30.85	-	-	30.90	-		
MW3	31.77	31.78	0.01	-	31.84	-		
MW4	31.10	31.11	0.01	31.33	31.70	0.37	DNAPL MAY BE INTERFERING WITH IP	
WASTE	H2O:	4800		PSH	27		TOTAL (GAL)	4827

[illegible]

Start Date 5/6/11

MDPE FIELD DATA

		Total Flow			Well Flow						Well Data									
TIME	SAMPLE TAKEN	Inflent temp. (°f)	Diff Pressure (INH2O) 6" Pitot	Pressure (In. h2O)	Inflent temp. (°f)	Diff. Pressure (INH2O) 2" Preso	Vac (In.Hg)	FID Composite (PPM)	Propane Tank (%-size) 500 Gal.	EXHAUST TEMP F	COMMENTS									
											MW3		MW4		VAC (INH2O)		VAC (INH2O)		VAC (INH2O)	
											VAC (INH2O)	PPM	VAC (INH2O)	PPM						
15 30		115	0.8	0.25	93	4.2	21	50K+	67%	1421	23.4	50K+	35.4	50K+						
16 30	*	110	0.8	0.25	87	8.7	21	50K+	62%	1408	46.7	50K+	82.6	50K+						
17.30		108	0.8	0.25	85	7.3	21	50K+	60%	1413	41.3	50K+	77.7	50K+						
18:30		108	0.8	0.25	87	7.5	21	50K+	57%	1410	43.5	50K+	78.4	50K+						
19 30		110	0.8	0.25	89	7.7	21	50K+	55%	1407	48.4	50K+	40.7	50K+						
20 30		107	0.8	0.25	84	7.6	21	50K+	53%	1415	48.2	50K+	40.9	50K+						
21 30	**	103	0.8	0.25	79	7.8	21	50K+	53%	1410	48.3	50K+	41.3	50K+						
22:30		100	0.8	0.25	77	7.5	21	50K+	52%	1413	48.5	50K+	41.2	50K+						
23 30		94	0.8	0.25	75	7.7	21	50K+	52%	1410	48.2	50K+	41.5	50K+						
0 30		90	0.8	0.25	72	7.4	21	50K+	50%	1413	47.6	50K+	40.9	50K+						
1 30		88	0.8	0.25	69	7.6	21	50K+	48%	1407	48.2	50K+	41.3	50K+						
2 30	*	85	0.8	0.25	65	7.9	21	50K+	46%	1410	47.8	50K+	41.1	50K+						
3 30		85	0.8	0.25	62	7.7	21	50K+	42%	1413	47.3	50K+	40.8	50K+						

Soil Vacuum Influence

Observation Well	MW1
Extraction Well (EW)	MW3
Distance (ft) to EW	65FT
Time	In.H2O
15:30	0.01
20:30	0.06
1:30	0.03

ATTACHMENT 2
Laboratory Analytical Results

806-665-0750
806-665-0753
877-788-0750

Midwest Precision Testing LLC
135 N Price Rd
Pampa, TX 79065

www.mwptlab.com

The following analytical results were produced using the strictest quality control and most current methods:

COC #: N/A

Lab #: 5233-5235

Quality Control #: 1507

Approved by:

Neil Ray

Neil Ray

Date: 5/16/11

806-665-0750
806-665-0753
877-788-0750

Midwest Precision Testing LLC

135 N Price Rd
Pampa, TX 79065

www.mwptlab.com

Sample Matrix: Gas
Sample Type: Spot
Preservative: N/A
Sample Container: Tedlar Bag

Method(s): ASTM D 1945
Gas Analysis by Gas
Chromatography

Client: Trace Analysis, Inc.
Project Location: TNM Monument #10

Sample Id.: Influent #1
700376.083.01
Trace: 266017

Sample Temp.: N/A
Atmospheric Temp.: N/A
Pressure: N/A
Field Data: N/A
Sample Date: 5/06/11 Time: 4:30 pm
Sampled By: N/A
Analysis Date: 5/13/11
Analysis By: Andrew Dunn

Lab #: 5233
Quality Control Report: 1507

Analytical Results

<u>Gas Composition</u>				
	<u>Mol %</u>	<u>GPM</u>	<u>Vol %</u>	<u>Wt. %</u>
Nitrogen (N2):	91.9555	10.0640	87.6760	88.2215
Carbon Dioxide (CO2):	7.1817	1.2112	10.6214	10.8011
<u>Hydrocarbon Composition</u>				
	<u>Mol %</u>	<u>GPM</u>	<u>Vol. %</u>	<u>Wt. %</u>
Methane (CH4):	0.6176	0.1049	0.9077	0.3385
Ethane (C2H6):	0.0000	0.0000	0.0000	0.0000
Propane (C3H8):	0.0046	0.0013	0.0109	0.0069
Iso-Butane (C4H10):	0.0108	0.0035	0.0307	0.0215
N-Butane (C4H10):	0.0440	0.0138	0.1202	0.0873
Iso-Pentane (C5H12):	0.0274	0.0100	0.0868	0.0674
N-Pentane (C5H12):	0.0179	0.0064	0.0562	0.0441
Hexane+ (C6H14):	0.1405	0.0607	0.4900	0.4118
Totals	100.0000	11.4757	100.0000	100.0000

Comments - Additional Data

BTU -dry (BTU/ft ³):	17.1	Z-Comp. Factor-dry:	0.99952
BTU -water vapor sat.(BTU/ft ³):	17.8	Z-Comp. Factor-water vapor sat.:	0.99441
Specific Gravity -dry:	1.0089	14.65 psi Pressure Base	
Specific Gravity-water vapor sat.:	1.0073		

806-665-0750
806-665-0753
877-788-0750

Midwest Precision Testing-LLC
135 N Price Rd
Pampa, TX 79065

www.mwptlab.com

Sample Matrix: Gas
Sample Type: Spot
Preservative: N/A
Sample Container: Tedlar Bag

Method(s): ASTM D 1945
Gas Analysis by Gas
Chromatography

Client: Trace Analysis, Inc.
Project Location: TNM Monument #10

Sample Id.: Influent #2
700376.083.01
Trace: 266018

Sample Temp.: N/A
Atmospheric Temp.: N/A
Pressure: N/A
Field Data: N/A
Sample Date: 5/06/11 Time: 9:30 pm
Sampled By: N/A
Analysis Date: 5/13/11
Analysis By: Andrew Dunn

Lab #: 5234
Quality Control Report: 1507

Analytical Results

<u>Gas Composition</u>				
	<u>Mol %</u>	<u>GPM</u>	<u>Vol %</u>	<u>Wt. %</u>
Nitrogen (N2):	99.0340	10.8369	98.3529	98.5106
Carbon Dioxide (CO2):	0.7635	0.1287	1.1762	1.1906
<u>Hydrocarbon Composition</u>				
	<u>Mol %</u>	<u>GPM</u>	<u>Vol. %</u>	<u>Wt. %</u>
Methane (CH4):	0.1045	0.0177	0.1600	0.0594
Ethane (C2H6):	0.0005	0.0001	0.0012	0.0005
Propane (C3H8):	0.0026	0.0007	0.0064	0.0040
Iso-Butane (C4H10):	0.0000	0.0000	0.0000	0.0000
N-Butane (C4H10):	0.0402	0.0126	0.1146	0.0828
Iso-Pentane (C5H12):	0.0180	0.0066	0.0594	0.0460
N-Pentane (C5H12):	0.0110	0.0040	0.0360	0.0281
Hexane+ (C6H14):	0.0257	0.0111	0.0933	0.0780
Totals	100.0000	11.0184	100.0000	100.0000

Comments - Additional Data

BTU -dry (BTU/ft ³):	4.9	Z-Comp. Factor-dry:	0.99969
BTU -water vapor sat.(BTU/ft ³):	5.7	Z-Comp. Factor-water vapor sat.:	0.99550
Specific Gravity -dry:	0.9724	14.65 psi Pressure Base	
Specific Gravity-water vapor sat.:	0.9704		

806-665-0750
806-665-0753
877-788-0750

Midwest Precision Testing LLC
135 N Price Rd
Pampa, TX 79065

www.mwptlab.com

Sample Matrix: Gas
Sample Type: Spot
Preservative: N/A
Sample Container: Tedlar Bag

Method(s): ASTM D 1945
Gas Analysis by Gas
Chromatography

Client: Trace Analysis, Inc.
Project Location: TNM Monument #10

Sample Id.: Influent #3
700376.083.01
Trace: 266019
Sample Temp.: N/A
Atmospheric Temp.: N/A
Pressure: N/A
Field Data: N/A
Sample Date: 5/07/11 Time: 10:30 pm
Sampled By: N/A
Analysis Date: 5/13/11
Analysis By: Andrew Dunn

Lab #: 5235
Quality Control Report: 1507

Analytical Results

Gas Composition				
	Mol %	GPM	Vol %	Wt. %
Nitrogen (N2):	98.4312	10.7712	97.2203	97.4623
Carbon Dioxide (CO2):	1.2320	0.2077	1.8875	1.9123
Hydrocarbon Composition				
	Mol %	GPM	Vol. %	Wt. %
Methane (CH4):	0.1253	0.0213	0.1908	0.0709
Ethane (C2H6):	0.0053	0.0014	0.0127	0.0056
Propane (C3H8):	0.0121	0.0033	0.0300	0.0189
Iso-Butane (C4H10):	0.0134	0.0044	0.0395	0.0275
N-Butane (C4H10):	0.0238	0.0074	0.0673	0.0487
Iso-Pentane (C5H12):	0.0190	0.0069	0.0623	0.0482
N-Pentane (C5H12):	0.0236	0.0085	0.0769	0.0601
Hexane+ (C6H14):	0.1142	0.0493	0.4127	0.3455
Totals	100.0000	11.0815	100.0000	100.0000

Comments - Additional Data

BTU -dry (BTU/ft ³):	10.4	Z-Comp. Factor-dry:	0.99967
BTU -water vapor sat.(BTU/ft ³):	11.2	Z-Comp. Factor-water vapor sat.:	0.99535
Specific Gravity -dry:	0.9772	14.65 psi Pressure Base	
Specific Gravity-water vapor sat.:	0.9752		

806-665-0750
806-665-0753
877-788-0750

Midwest Precision Testing LLC
135 N Price Rd
Pampa, TX 79065

www.mwptlab.com

Sample Type: Standard
Preservative: N/A
Sample Container: Industrial
Cylinder

Sample Id.: DCG
Reference Std. 47366AW
Sample Temp.: 120° F
Analysis Date: 5/13/11
Analysis By: Andrew Dunn

Method(s): ASTM D 1945
Gas Analysis by Gas
Chromatography

Quality Control Report#: 1507

Analytical Results

RESULTS	ACTUAL	ANALYSIS			
Gas Composition			MDL	RL	% Deviation
	Mol %	Mol %	Mol %	ppm mol	(90-100%)
Nitrogen (N2):	4.926	4.9080	0.0010	10	99.6
Carbon Dioxide (CO2):	1.489	1.5073	0.0010	10	98.8
Hydrocarbon Composition	Mol %	Mol %	MDL	RL	% Deviation
	Mol %	Mol %	Mol %	ppm mol	(90-100%)
Methane (CH4):	69.955	69.8646	0.0001	1	99.9
Ethane (C2H6):	9.138	9.1822	0.0001	1	99.5
Propane (C3H8):	5.947	5.9777	0.0001	1	99.5
Iso-Butane (C4H10):	3.018	3.0231	0.0001	1	99.8
N-Butane (C4H10):	3.021	3.0258	0.0001	1	99.8
Iso-Pentane (C5H12):	1.001	1.0035	0.0001	1	99.7
N-Pentane (C5H12):	1.007	1.0156	0.0001	1	99.1
Hexane+ (C6H14):	0.498	0.4922	0.0001	1	98.8
Totals	100.000	100.000			

Comments - Additional Data

ACTUAL		ANALYSIS	
BTU -dry (BTU/ft3):	1322.3	BTU -dry (BTU/ft ³):	1323.4
BTU -water vapor sat. (BTU/ft3):	1316.6	BTU -water vapor sat. (BTU/ft ³):	1317.7
Specific Gravity -dry:	0.8337	Specific Gravity -dry:	0.8345
Specific Gravity -water vapor sat.:	0.8406	Specific Gravity -water vapor sat.:	0.8415
Z-Comp. Factor -dry:	0.99565	Z-Comp. Factor -dry:	0.99564
Z-Comp. Factor -water vapor sat.:	0.98309	Z-Comp. Factor -water vapor sat.:	0.98307

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: TALON LPE Amarillo		Phone #: 866	
Address: (Street, City, Zip) 921 N. Bivins Amarillo TX 79107		Fax #:	
Contact Person: Simon Walsh		E-mail: swalsh@talonlpe.com	
Invoice to: (If different from above) Plains: Jason Henny			
Project #: 700376-083-01		Project Name: TNM Monument #18	
Project Location (including state): Monument, NM		Sampler Signature: <i>[Signature]</i>	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING		DATE	TIME	MTBE 8021 / 602 / 8260 / 624	STEX 8021 602 / 8260 / 624	TPH 418.1 (X1005) TX1005 Ex(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F1, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	ASTM D 1945	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE																								
266017	Influent 1	1	1L			X							X	6 May 11	1630																						
018	Influent 2	1	1L			X							X	6 May 11	2130																						
019	Influent 3	1	1L			X							X	7 May 11	02:30																						
020	Effluent 1	1	1L			X							X	6 May 11	2130	X	X																				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST <u>72</u>	OBS <u>22.4</u>	COR <u>22.3</u>
<i>R. Breeding</i>	Talon LPE	7 May 11	07:00	<i>R. Breeding</i>	TA	05/10/11	1000			
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR

LAB USE ONLY

Intact ☒ Y ☐ NHeadspace ☒ Y ☐ N ☐ NALog-in-Review ☒

REMARKS:

- ☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

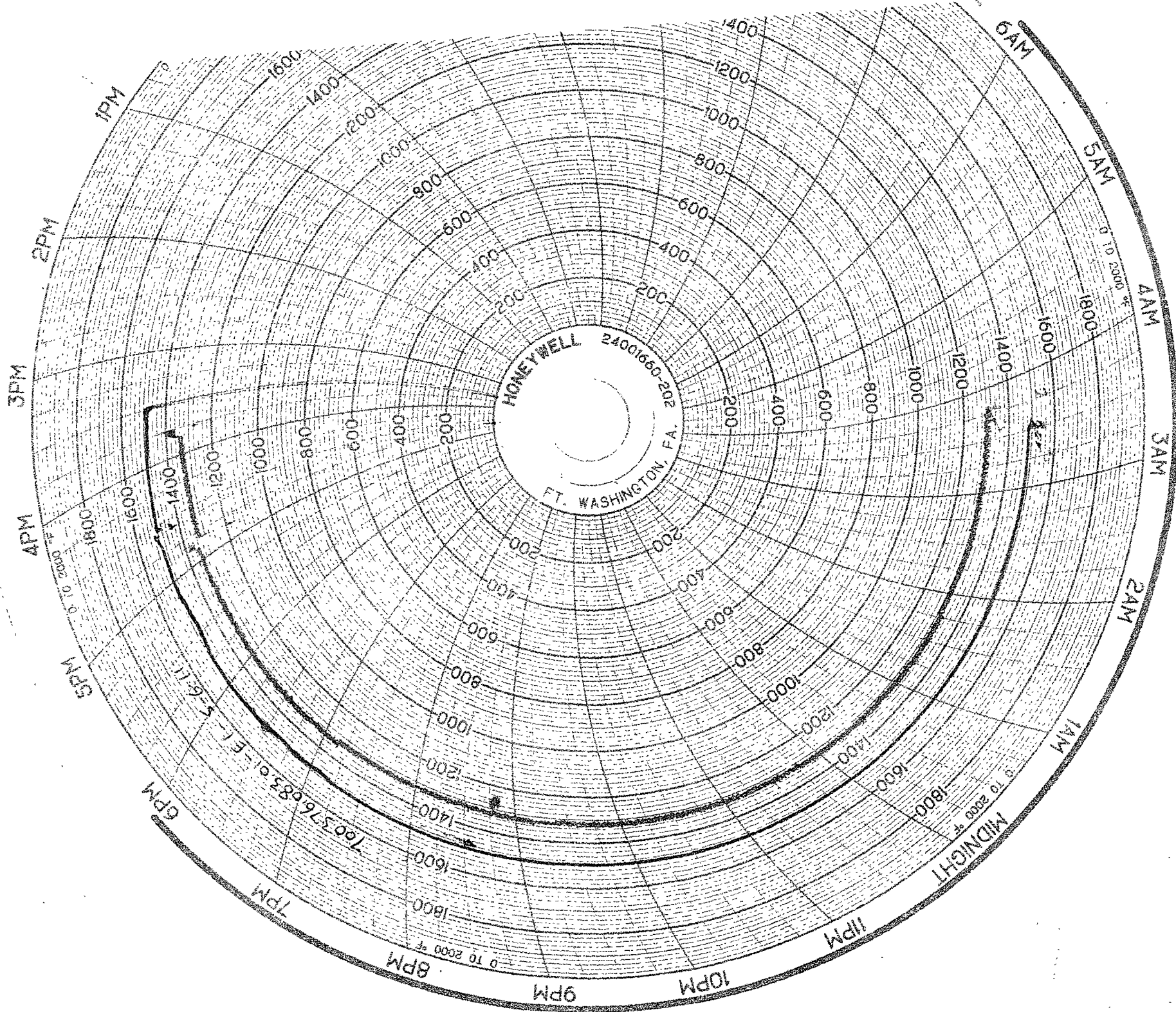
Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

Carrier # UPS J223 412 8859

MAY 17 2011 ASTM

ATTACHMENT 3
Oxidizer Charts





invoice

SRS TNM MON 18

PAGE 1

INVOICE DATE		INVOICE NO.	
5/30/11		197390	
QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
	05/07/11 WT. 444984 JOB 700607-083-01		
4.25	HRS HAZMAT, DOT, COATED VACUUM TRUCK W/OPER	108.00	459.00
115.00	BBLs DISPOSAL FEE	0.85	97.75
HAULED 115 BBLs PRODUCED WATER FROM LOCATION TO DISPOSAL.			
1003 1003 JUN 01			
SUBTOTAL TAX 5.5%			556.75 30.63
Thank You INVOICE TOTAL			587.38

TERMS: Net., Interest of 1 1/2% per month (18% per annum) added to accounts over 90 days.

24-HOUR SERVICE, CALL
LOVINGTON 395-4948
TATUM 398-4960

GANDY CORPORATION

KILL TRUCKS - VACUUM TRUCKS - WINCH TRUCKS
TANK CLEANING - ROUSTABOUTING
PRC #14225

P.O. BOX 2140
LOVINGTON, NEW MEXICO 88260

444984

Date 5/7/11 Truck No. 356
Company PLAINS PIPELINE Purchase Order No. _____ Invoice Number _____
From TNM Monument #18 Rig No. _____ Location _____
To Lease _____ Well No. _____ Location _____

Time Out	A.M.	P.M.	Time In	A.M.	P.M.	TIME	RATE	AMOUNT
Diesel								
Crude Oil	Brine Water	Fresh Water						
	<u>Salt Water</u>	Acid	Bbls. Hauled	<u>115</u>			<u>.85</u>	<u>97.75</u>
Driver, Operator or Pusher	<u>RICHARD L. LENNOX</u>					<u>4.25</u>	<u>108.00</u>	<u>459.00</u>
Helper								
Helper	<u>Job #</u>							
Helper	<u>70607.083.01</u>							
Other Charges								
	<u>4800 water</u>							
Description of Work:	<u>27 PSH</u>							
	<u>4827 TOTAL</u>							
	<u>Load and Transport to</u>							
	<u>SLVD - 115 BBLs SRS # TNM Mon. 18</u>							
Authorized by:	<u>James Henry / 05/20/2011</u>							

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