AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pGVG0703762845

AP - 70

DAVID H ARRINGTON OIL & GAS INC

7/26/2016

Analytical Report 394644

for

Basin Enivronmental Services

Project Manager: Camille Bryant

Mallon Drake 16 State # 1

28-OCT-10

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

28-OCT-10

Project Manager: **Camille Bryant**
Basin Enivronmental Services
P.O. Box 301
Lovington, NM 88260

Reference: XENCO Report No: **394644**
Mallon Drake 16 State # 1
Project Address: Lea County, NM

Camille Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 394644. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 394644 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 394644

Basin Enivronmental Services, Lovington, NM

Mallon Drake 16 State # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
N SW-1 @ 6'	S	Oct-21-10 09:00		394644-001
N SW-2 @ 4.5'	S	Oct-21-10 09:15		394644-002
E SW-1 @ 5'	S	Oct-21-10 09:30		394644-003
E SW-2 @ 5'	S	Oct-21-10 09:40		394644-004
W SW-1 @ 6'	S	Oct-21-10 09:50		394644-005
W SW-2 @ 6'	S	Oct-21-10 10:00		394644-006
S SW-1 @ 6'	S	Oct-21-10 10:10		394644-007
S SW-2 @ 5'	S	Oct-21-10 10:20		394644-008
Floor @ 10'	S	Oct-21-10 10:30		394644-009

CASE NARRATIVE

Client Name: Basin Enivronmental Services
Project Name: Mallon Drake 16 State # 1

Project ID:
Work Order Number: 394644

Report Date: 28-OCT-10
Date Received: 10/22/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-829023 TPH By SW8015 Mod

Batch: LBA-829248 BTEX by EPA 8021B

Certificate of Analysis Summary 394644

Basin Enivronmental Services, Lovington, NM

Project Name: Mallon Drake 16 State # 1

Project Id:

Contact: Camille Bryant

Project Location: Lea County, NM

Date Received in Lab: Fri Oct-22-10 02:35 pm

Report Date: 28-OCT-10

Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	394644-001		394644-002		394644-003		394644-004		394644-005		394644-006	
	Field Id:	N SW-1 @ 6'		N SW-2 @ 4.5'		E SW-1 @ 5'		E SW-2 @ 5'		W SW-1 @ 6'		W SW-2 @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-21-10 09:00		Oct-21-10 09:15		Oct-21-10 09:30		Oct-21-10 09:40		Oct-21-10 09:50		Oct-21-10 10:00	
Anions by E300	*Extracted:*												
	Analyzed:	Oct-25-10 08:30		Oct-25-10 08:30		Oct-25-10 08:30		Oct-25-10 08:30		Oct-25-10 08:30		Oct-25-10 08:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		505	18.7	1780	90.8	1250	44.7	161	8.75	332	9.18	1230	22.5
BTEX by EPA 8021B	*Extracted:*	Oct-26-10 15:00		Oct-26-10 15:00		Oct-26-10 15:00		Oct-26-10 15:00		Oct-26-10 15:00		Oct-26-10 15:00	
	Analyzed:	Oct-26-10 17:36		Oct-26-10 17:59		Oct-26-10 18:21		Oct-26-10 18:44		Oct-26-10 19:07		Oct-26-10 19:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011
Toluene		ND	0.0022	ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0022	ND	0.0021
Ethylbenzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011
m,p-Xylenes		ND	0.0022	ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0022	ND	0.0021
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011
Total Xylenes		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011
Total BTEX		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011
Percent Moisture	*Extracted:*												
	Analyzed:	Oct-26-10 09:35		Oct-26-10 09:35		Oct-26-10 09:35		Oct-26-10 09:35		Oct-26-10 09:35		Oct-26-10 09:35	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		10.3	1.00	7.44	1.00	6.01	1.00	3.97	1.00	8.50	1.00	6.57	1.00
TPH By SW8015 Mod	*Extracted:*	Oct-25-10 09:45		Oct-25-10 09:45		Oct-25-10 09:45		Oct-25-10 09:45		Oct-25-10 09:45		Oct-25-10 09:45	
	Analyzed:	Oct-25-10 13:01		Oct-25-10 13:21		Oct-25-10 13:41		Oct-25-10 14:01		Oct-25-10 14:21		Oct-25-10 14:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0
C12-C28 Diesel Range Hydrocarbons		ND	15.0	27.4	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0
Total TPH		ND	15.0	27.4	14.9	ND	15.0	ND	15.0	ND	15.0	ND	15.0

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 394644

Basin Enivronmental Services, Lovington, NM

Project Name: Mallon Drake 16 State # 1

Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-22-10 02:35 pm
Report Date: 28-OCT-10
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	394644-007		394644-008		394644-009					
	Field Id:	S SW-1 @ 6'		S SW-2 @ 5'		Floor @ 10'					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Oct-21-10 10:10		Oct-21-10 10:20		Oct-21-10 10:30					
Anions by E300	*Extracted:*										
	Analyzed:	Oct-25-10 08:30		Oct-25-10 08:30		Oct-25-10 08:30					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		31.0	4.67	13.9	4.63	520	45.2				
BTEX by EPA 8021B	*Extracted:*	Oct-26-10 15:00		Oct-26-10 15:00		Oct-26-10 15:00					
	Analyzed:	Oct-26-10 19:52		Oct-26-10 20:15		Oct-26-10 20:38					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0011	ND	0.0011	ND	0.0011				
Toluene		ND	0.0022	ND	0.0022	ND	0.0022				
Ethylbenzene		ND	0.0011	ND	0.0011	ND	0.0011				
m,p-Xylenes		ND	0.0022	ND	0.0022	ND	0.0022				
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0011				
Total Xylenes		ND	0.0011	ND	0.0011	ND	0.0011				
Total BTEX		ND	0.0011	ND	0.0011	ND	0.0011				
Percent Moisture	*Extracted:*										
	Analyzed:	Oct-26-10 09:35		Oct-26-10 09:35		Oct-26-10 09:35					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		10.0	1.00	9.37	1.00	7.16	1.00				
TPH By SW8015 Mod	*Extracted:*	Oct-25-10 09:45		Oct-25-10 09:45		Oct-25-10 09:45					
	Analyzed:	Oct-25-10 15:01		Oct-25-10 15:21		Oct-25-10 15:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.1	ND	14.9	ND	15.0				
C12-C28 Diesel Range Hydrocarbons		ND	15.1	ND	14.9	ND	15.0				
C28-C35 Oil Range Hydrocarbons		ND	15.1	ND	14.9	ND	15.0				
Total TPH		ND	15.1	ND	14.9	ND	15.0				

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Mallon Drake 16 State # 1

Work Orders : 394644,

Project ID:

Lab Batch #: 829248 **Sample:** 577123-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/26/10 15:43

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 829248 **Sample:** 577123-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/26/10 16:06

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 829248 **Sample:** 577123-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/26/10 17:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 829248 **Sample:** 394644-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 17:36

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 829248 **Sample:** 394644-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 17:59

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Mallon Drake 16 State # 1

Work Orders : 394644,

Project ID:

Lab Batch #: 829248 **Sample:** 394644-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 18:21

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 829248 **Sample:** 394644-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 18:44

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 829248 **Sample:** 394644-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 19:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 829248 **Sample:** 394644-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 19:30

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 829248 **Sample:** 394644-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 19:52

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Mallon Drake 16 State # 1

Work Orders : 394644,

Project ID:

Lab Batch #: 829248 **Sample:** 394644-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 20:15

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 829248 **Sample:** 394644-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 20:38

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 829248 **Sample:** 394644-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/10 21:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 829023 **Sample:** 576960-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/10 12:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	158	200	79	70-135	
o-Terphenyl	84.8	99.8	85	70-135	

Lab Batch #: 829023 **Sample:** 576960-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/10 12:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.1	100	82	70-135	
o-Terphenyl	51.9	50.1	104	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Mallon Drake 16 State # 1

Work Orders : 394644,

Project ID:

Lab Batch #: 829023 **Sample:** 576960-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/10 12:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.4	100	81	70-135	
o-Terphenyl	44.0	50.2	88	70-135	

Lab Batch #: 829023 **Sample:** 394644-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 13:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	99.9	88	70-135	
o-Terphenyl	48.0	50.0	96	70-135	

Lab Batch #: 829023 **Sample:** 394644-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 13:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.6	88	70-135	
o-Terphenyl	47.2	49.8	95	70-135	

Lab Batch #: 829023 **Sample:** 394644-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 13:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.9	100	82	70-135	
o-Terphenyl	43.9	50.1	88	70-135	

Lab Batch #: 829023 **Sample:** 394644-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 14:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.1	99.8	89	70-135	
o-Terphenyl	47.6	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Mallon Drake 16 State # 1

Work Orders : 394644,

Project ID:

Lab Batch #: 829023 **Sample:** 394644-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 14:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	99.7	85	70-135	
o-Terphenyl	45.8	49.9	92	70-135	

Lab Batch #: 829023 **Sample:** 394644-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 14:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.8	100	71	70-135	
o-Terphenyl	38.0	50.1	76	70-135	

Lab Batch #: 829023 **Sample:** 394644-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 15:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.1	100	84	70-135	
o-Terphenyl	45.3	50.2	90	70-135	

Lab Batch #: 829023 **Sample:** 394644-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 15:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	99.5	86	70-135	
o-Terphenyl	45.9	49.8	92	70-135	

Lab Batch #: 829023 **Sample:** 394644-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 15:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Mallon Drake 16 State # 1

Work Orders : 394644,

Project ID:

Lab Batch #: 829023 **Sample:** 394644-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 20:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	99.8	87	70-135	
o-Terphenyl	59.8	49.9	120	70-135	

Lab Batch #: 829023 **Sample:** 394644-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/10 20:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	55.4	50.1	111	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Mallon Drake 16 State # 1

Work Order #: 394644 **Project ID:**

Analyst: ASA **Date Prepared:** 10/26/2010 **Date Analyzed:** 10/26/2010

Lab Batch ID: 829248 **Sample:** 577123-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0914	91	0.1	0.0926	93	1	70-130	35	
Toluene	ND	0.1000	0.0893	89	0.1	0.0909	91	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0938	94	0.1	0.0964	96	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.1915	96	0.2	0.1968	98	3	70-135	35	
o-Xylene	ND	0.1000	0.0946	95	0.1	0.0973	97	3	71-133	35	

Analyst: LATCOR **Date Prepared:** 10/25/2010 **Date Analyzed:** 10/25/2010

Lab Batch ID: 829043 **Sample:** 829043-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	ND	10.0	10.3	103	10	9.84	98	5	75-125	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Mallon Drake 16 State # 1

Work Order #: 394644 **Project ID:**

Analyst: BEV **Date Prepared:** 10/25/2010 **Date Analyzed:** 10/25/2010

Lab Batch ID: 829023 **Sample:** 576960-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	998	970	97	1000	963	96	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	998	1020	102	1000	868	87	16	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Mallon Drake 16 State # 1

Work Order #: 394644

Lab Batch #: 829043 **Project ID:**

Date Analyzed: 10/25/2010 **Date Prepared:** 10/25/2010 **Analyst:** LATCOR

QC- Sample ID: 394629-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	343	208	543	96	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: Mallon Drake 16 State # 1

Work Order # : 394644 **Project ID:**

Lab Batch ID: 829023 **QC- Sample ID:** 394644-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2010 **Date Prepared:** 10/25/2010 **Analyst:** BEV

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	998	962	96	1000	981	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	998	925	93	1000	849	85	9	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Mallon Drake 16 State # 1

Work Order #: 394644

Lab Batch #: 829043 **Project ID:**

Date Analyzed: 10/25/2010 **Date Prepared:** 10/25/2010 **Analyst:** LATCOR

QC- Sample ID: 394629-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	343	340	1	20	

Lab Batch #: 829248

Date Analyzed: 10/26/2010 **Date Prepared:** 10/26/2010 **Analyst:** ASA

QC- Sample ID: 394644-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	ND	ND	NC	35	
m,p-Xylenes	ND	ND	NC	35	
o-Xylene	ND	ND	NC	35	

Lab Batch #: 829028

Date Analyzed: 10/26/2010 **Date Prepared:** 10/26/2010 **Analyst:** JLG

QC- Sample ID: 394649-021 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.76	7.86	1	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant, Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Camille Bryant e-mail: pm@basinenv.com

Project Name: Mallon Drake 16 State #1

Project #:

Project Loc: Lea County, NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 314644

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 / 8015M	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides 300.1	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	N SW-1 @ 6'			10/21/2010	0900		1	x								Soil	x								X			X		X
02	N SW-2 @ 4.5'			10/21/2010	0915		1	x								Soil	x								X			X		X
03	E SW-1 @ 5'			10/21/2010	0930		1	x								Soil	x								X			X		X
04	E SW-2 @ 5'			10/21/2010	0940		1	x								Soil	x								X			X		X
05	W SW-1 @ 6'			10/21/2010	0950		1	x								Soil	x								X			X		X
06	W SW-2 @ 6'			10/21/2010	1000		1	x								Soil	x								X			X		X
07	S SW-1 @ 6'			10/21/2010	1010		1	x								Soil	x								X			X		X
08	S SW-2 @ 5'			10/21/2010	1020		1	x								Soil	x								X			X		X
09	Floor @ 10'			10/21/2010	1030		1	x								Soil	x								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	10/22/10	0930		10/22/10	0930
Relinquished by:	Date	Time	Received by:	Date	Time
	10/22/10	1435			
Relinquished by:	Date	Time	Received by ELOT: Lisa Murdock	Date	Time
				10/22/10	14:35

Laboratory Comments:

Sample Containers Intact? Y N

VOCs Free of Headspace? Y N NA

Labels on container(s) Y N

Custody seals on container(s) Y N

Custody seals on cooler(s) Y N

Sample Hand Delivered by Sampler/Client Rep. ? Y N

by Courier? UPS DHL FedEx Lone Star

402 Glass

Temperature Upon Receipt: 2.6 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Environmental Service Technologies, LLC

Date/Time: 10/22/10 14:35

Lab ID #: 394644

Initials: KM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping (container (cooler) and bottles)?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. *Sample instructions complete on chain of custody?*	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	Yes	No	(N/A)	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	2.6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact: _____ Contacted by: _____ Date/Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ *Client understands and would like to proceed with analysis*

Analytical Report 397212

for

Basin Environmental Consulting, LLC

Project Manager: Ben Arguijo

Mallon Drake 16 State #1

16-NOV-10

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

16-NOV-10

Project Manager: **Ben Arguijo**
Basin Environmental Consulting, LLC
P.O. Box 381
Lovington, NM 88260

Reference: XENCO Report No: **397212**
Mallon Drake 16 State #1
Project Address: Lea County, NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 397212. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 397212 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 397212

Basin Environmental Consulting, LLC, Lovington, NM

Mallon Drake 16 State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Nov-10-10 14:00		397212-001
MW-2	W	Nov-10-10 14:35		397212-002
MW-3	W	Nov-10-10 13:45		397212-003

CASE NARRATIVE

Client Name: Basin Environmental Consulting, LLC
Project Name: Mallon Drake 16 State #1

Project ID:
Work Order Number: 397212

Report Date: 16-NOV-10
Date Received: 11/12/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-832059 Anions by E300
E300MI

Batch 832059, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 397212-003, -002, -001.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analysis Summary 397212

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Mallon Drake 16 State #1

Project Id:

Contact: Ben Arguijo

Project Location: Lea County, NM

Date Received in Lab: Fri Nov-12-10 04:20 pm

Report Date: 16-NOV-10

Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	397212-001		397212-002		397212-003					
	Field Id:	MW-1		MW-2		MW-3					
	Depth:										
	Matrix:	WATER		WATER		WATER					
	Sampled:	Nov-10-10 14:00		Nov-10-10 14:35		Nov-10-10 13:45					
Anions by E300	*Extracted:*										
	Analyzed:	Nov-15-10 15:50		Nov-15-10 15:50		Nov-15-10 15:50					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL				
Chloride		4250	100	34.1	5.00	1680	25.0				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Mallon Drake 16 State #1

Work Order #: 397212 **Project ID:**

Analyst: LATCOR **Date Prepared:** 11/15/2010 **Date Analyzed:** 11/15/2010

Lab Batch ID: 832059 **Sample:** 832059-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	ND	10.0	10.1	101	10	10.6	106	5	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Mallon Drake 16 State #1

Work Order #: 397212
Lab Batch #: 832059
Project ID:
Date Analyzed: 11/15/2010
Date Prepared: 11/15/2010
Analyst: LATCOR
QC- Sample ID: 397115-001 S
Batch #: 1
Matrix: Water
Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	189	100	274	85	90-110	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Mallon Drake 16 State #1

Work Order #: 397212

Lab Batch #: 832059 **Project ID:**

Date Analyzed: 11/15/2010 **Date Prepared:** 11/15/2010 **Analyst:** LATCOR

QC- Sample ID: 397115-001 D **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Anions by E300 **Analyte**	**Parent Sample Result [A]**	**Sample Duplicate Result [B]**	**RPD**	**Control Limits %RPD**	**Flag**
Chloride	189	189	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: bjarguijo@basinenv.com

Project Name: Mallon Drake 16 State #1
Project #:
Project Loc: Lea County, NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 397212

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For. TCLP: TPH: 418.1 8015M	TOTAL: TPH: 8015B TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides 300.1			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	MW-1			11/10/2010	1400		1	x								GW												X				X
	MW-2			11/10/2010	1435		1	x								GW												X				X
	MW-3			11/10/2010	1345		1	x								GW												X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
BSA 11/10/10	11/12/10	0645	3PL courier	11/12/10	0645
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	11/12/10	1620	Received by ELOT: Lisa Murdock	11-12-10	16:20

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

250 ~~VOID~~ LM

Temperature Upon Receipt: 3.1 °C

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Environmental
Date/Time: 11-12-10 16:20
Lab ID #: 397212
Initials: KM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	(N/A) KM	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	Yes	(No)	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	°C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis