

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Final Report

Operator: J. Cleo Thompson Telephone: (432) 550-8887 e-mail address: jctwest@nts-online.net
Address: P. O. Box 12577 Odessa, TX 79768-2577
Facility or well name: Gainer 27 #1 API #: 30-025-38463 U/L or Qtr/Qtr F Sec 27 T 10S R 36E
County: Lea Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

Pit	Below-grade tank
Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>12,000</u> bbl	Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: _____
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) XXX 100 feet or more (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) No (0 points) XXX
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 1000 feet or more (0 points) XXX
Ranking Score (Total Points) 10 points	

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: A burial pit was constructed and lined with a 12 mil liner. The drilling pit contents were mixed with dry soil to stiffen the mud then placed in the burial pit. After all drilling pit contents were removed and placed in the burial pit, the burial pit was capped with a 20 mil liner with a minimum of 3 ft. overlap on all sides and a minimum of 3 ft. below ground surface. The burial pit was then backfilled with clean native soil. The bottom of the drilling pit will be sampled as per NMOCD Guidelines and The contamination under the pit was capped with a 20 mil liner then backfilled with clean native soil.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 5-21-08
Printed Name/Title: J. E. STEVENS OPERATIONS MANAGER Signature: J. E. Stevens
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: _____
Printed Name/Title: J. Signature: ENVIRONMENTAL ENGINEER Date: 7.21.08

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to
appropriate NMOCD District Office
For downstreet facilities, submit to
office

RECEIVED

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action. Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☒

APR 25 2008

HOBBS OCD

Operator: J Cleo Thompson Telephone: (432) 550-8887 e-mail address: jctwest@nms-online.net
Address: P. O. Box 12577 Odessa, TX 79768-2577
Facility or well name: Gamer 27 #1 API #: 30-025-38463 U/L or Qtr/Qtr F Sec 27 T 10S R 36E
County: Lea Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

Pit Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>12,000</u> bbl	Below-grade tank Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. <div style="text-align: right;">WTR TS!</div>
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) X 100 feet or more (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) No (0 points) X
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 1000 feet or more (0 points) X
Ranking Score (Total Points) 10 points	

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered No ☒ Yes ☐ If yes, show depth below ground surface _____ ft and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Excess water will be removed from the pit. A burial pit will be constructed and lined with a 12 mil liner. The drilling pit contents will be mixed with dry soil to stiffen the mud then placed in the burial pit. After all contents are stiffened and placed in the burial pit it will be covered with a 20 mil liner with a minimum of 3 ft. overlap on all sides and a minimum of 3 ft. below ground surface. The burial pit will then be covered with clean native soil. The bottom of the drilling pit will be sampled as per NMOCD Guidelines then backfilled after approval from the OCD. A final report will be submitted at the end of the job.

Notice to Hobbs OCD will be given 48 hrs before the start of the job and any sampling event.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 4-22-08

Printed Name/Title Logan Anderson - Agent

Signature 

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations

Approval.

Printed Name/Title _____

Signature 

ENVIRONMENTAL ENGINEER

Date: 4-23-08

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

May 21, 2008

New Mexico Oil Conservation Division
Mr. Chris Williams
1625 N. French Dr.
Hobbs, New Mexico 88240

Re: J Cleo Thompson – Gainer 27 #1
UL 'F' Sec. 27 T10S R36E Lea County, NM
API # 30-025-38463

Mr. Chris Williams,

Elke Environmental was contracted by J Cleo Thompson to complete the closure of the Gainer 27 #1 drilling pit. As per the C-144 filed and signed by Larry Johnson on 4-25-08 a burial pit was excavated and lined with a 12 mil liner. The drilling mud was mixed with dry soil to stiffen then placed in the burial pit. Once all mud was removed the burial pit was capped with a 20 mil liner overlapping 3' in all directions then backfilled with clean native soil. The pit bottoms were sampled per NMOCD Guidelines and did not meet NMOCD standards for this site. A delineation was performed and as per the conversation between Jason Jessup (Elke Environmental) and Chris Williams (NMOCD) the contaminated soil was capped with a 20 mil liner and the drilling pit was backfilled with clean native soil. If you have any questions about the enclosed report please contact me at the office.

Sincerely,

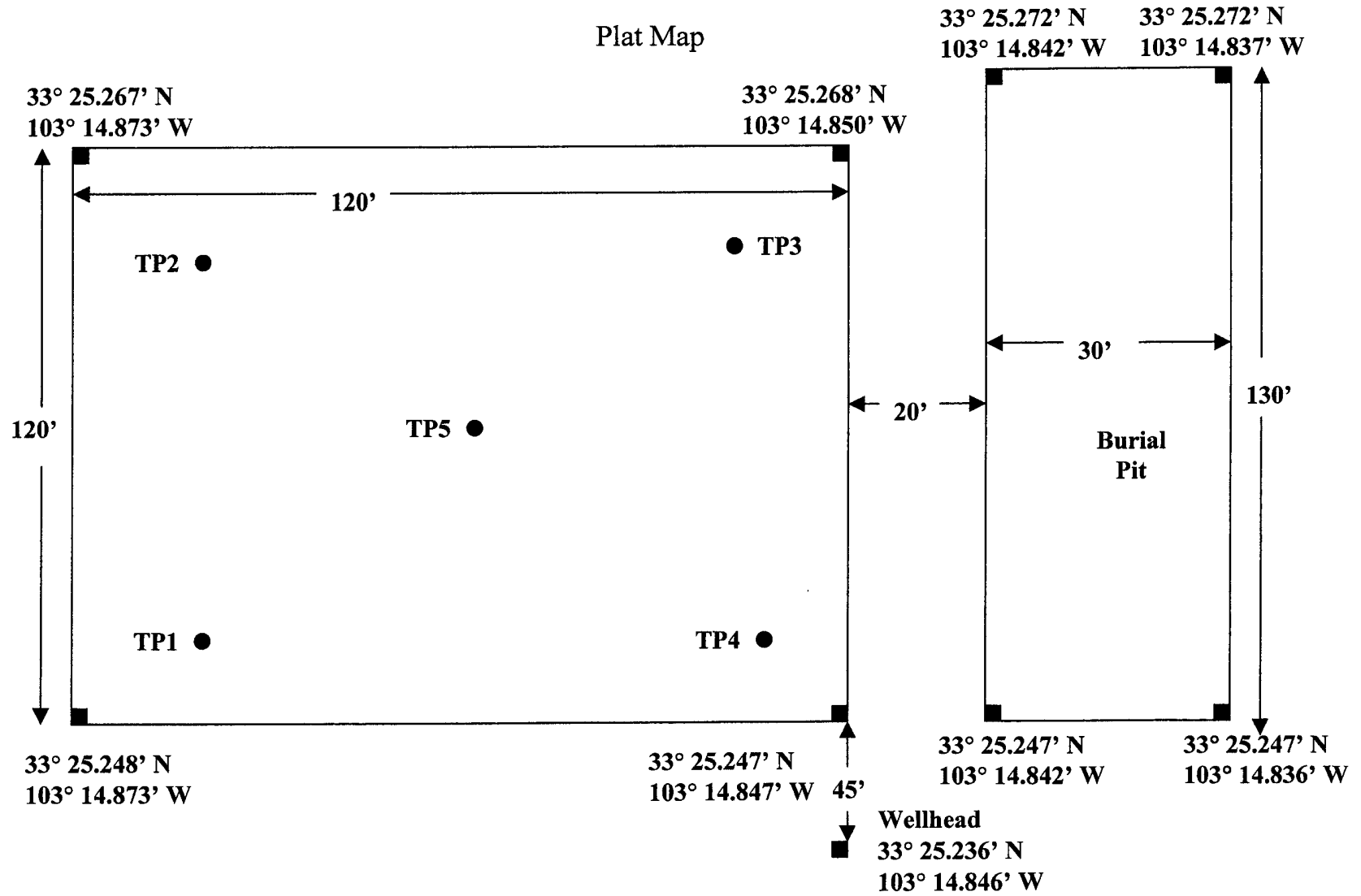


Logan Anderson



J Cleo Thompson
Gainer 27 #1

Plat Map



Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form**Client** J Cleo Thompson **Analyst** Jason Jessup**Site** Gainer 27 #1

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
TP1	5-6-08	8'		9,359		33° 25.255' N 103° 14.872' W
TP1	5-6-08	10'		7,598		33° 25.255' N 103° 14.872' W
TP1	5-6-08	12'		601		33° 25.255' N 103° 14.872' W
TP1	5-6-08	14'		885		33° 25.255' N 103° 14.872' W
TP1	5-6-08	16'		150	15.7	33° 25.255' N 103° 14.872' W
TP2	5-6-08	8'		1,478		33° 25.263' N 103° 14.869' W
TP2	5-6-08	10'		8,010		33° 25.263' N 103° 14.869' W
TP2	5-6-08	12'		4,064		33° 25.263' N 103° 14.869' W
TP2	5-6-08	14'		441		33° 25.263' N 103° 14.869' W
TP2	5-6-08	16'		209	10.5	33° 25.263' N 103° 14.869' W
TP3	5-6-08	8'		362		33° 25.248' N 103° 14.850' W
TP3	5-6-08	10'		244	5.1	33° 25.248' N 103° 14.850' W
TP4	5-6-08	8'		463		33° 25.262' N 103° 14.854' W
TP4	5-6-08	10'		245	7.9	33° 25.262' N 103° 14.854' W
TP5	5-6-08	8'		7,331		33° 25.255' N 103° 14.861' W
TP5	5-6-08	10'		235	5.3	33° 25.255' N 103° 14.861' W

J Cleo Thompson – Gainer 27 #1



Drilling pit before closure.



Drilling pit before closure.

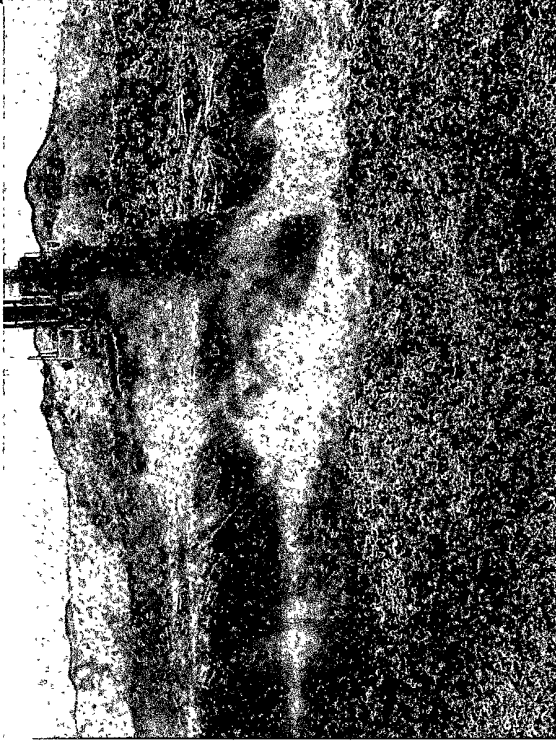


Excavation of the burial pit.

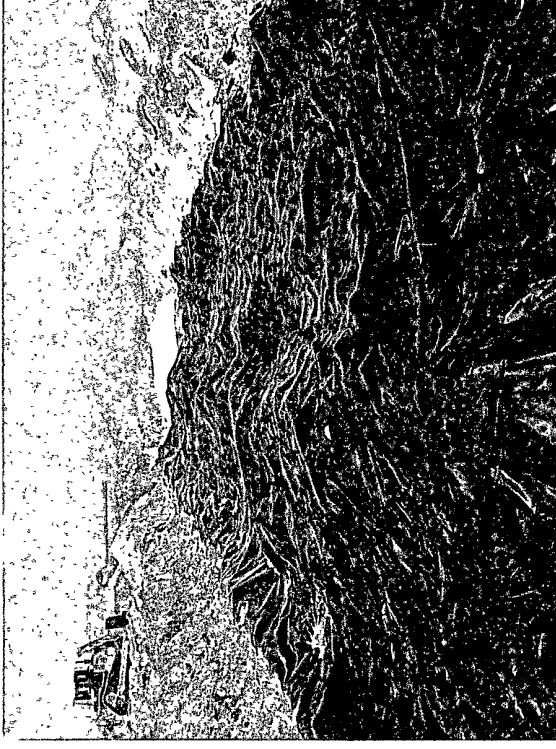


Burial pit lined with a 12 mil liner.

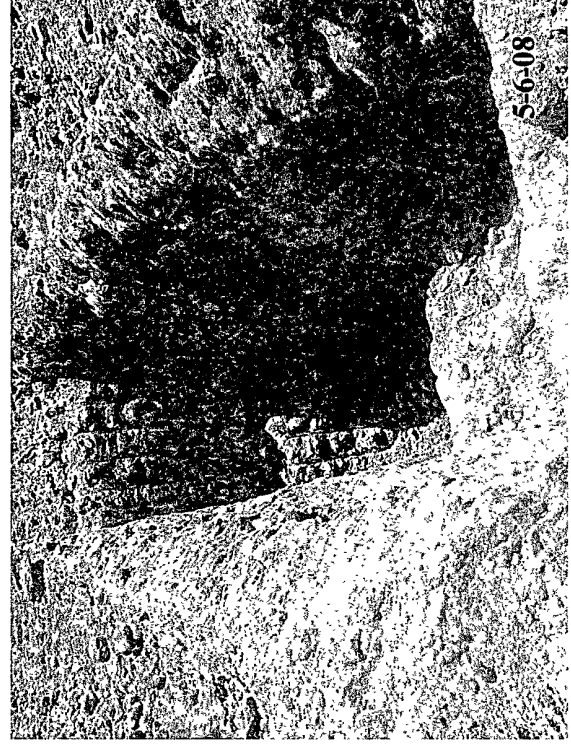
J Cleo Thompson – Gainer 27 #1



Placing drilling mud in burial pit.



20 mil liner cap on the burial pit.



Delineation trench of TP1.



Delineation trench of TP2.

5-6-08

5-6-08

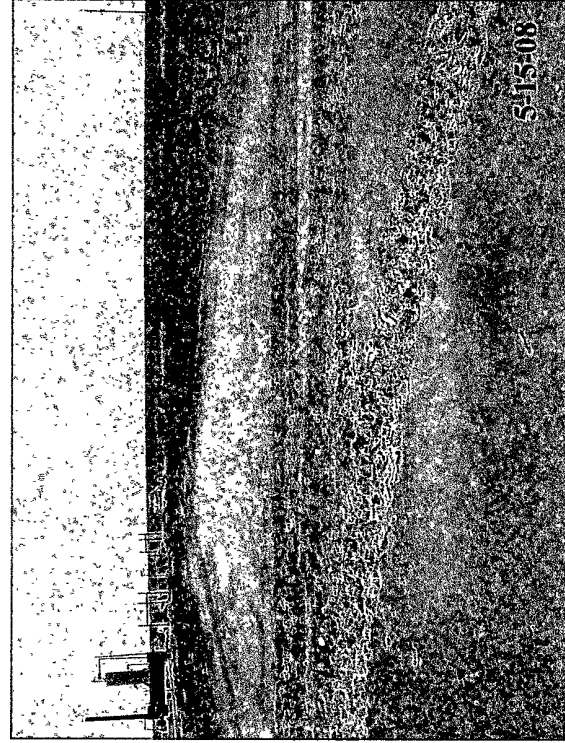
J Cleo Thompson – Gainer 27 #1



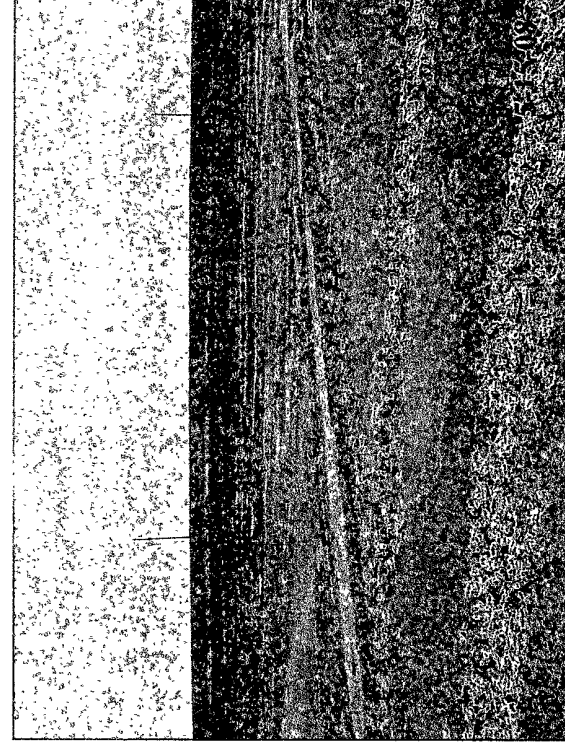
Delineation trench of TP5.



20 mil liner on TP1 & TP2 for risk based closure.



Drilling pit and burial pit after backfill and contouring.



Drilling pit and burial pit after backfill and contouring.

Analytical Report 303829

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

J Cleo Thompson

20-MAY-08



12600 West I-20 East Odessa, Texas 79765

**Texas certification numbers:
Houston, TX T104704215**

**Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429**

**South Carolina certification numbers:
Norcross(Atlanta), GA 98015**

**North Carolina certification numbers:
Norcross(Atlanta), GA 483**

**Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta**



20-MAY-08

Project Manager: **Logan Anderson**
Elke Environmental, Inc.
4817 Andrews Hwy
P.O. Box 14167 Odessa, tx 79768
Odessa, TX 79762

Reference: XENCO Report No: **303829**
J Cleo Thompson
Project Address: Gainer 27 # 1

Logan Anderson:

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 303829. 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. 303829 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

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Sample Cross Reference 303829



Elke Environmental, Inc., Odessa, TX

J Cleo Thompson

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 16'	S	May-06-08 13:20		303829-001
TP 2 @ 16'	S	May-06-08 13:40		303829-002
TP 3 @ 10'	S	May-06-08 10:40		303829-003
TP 4 @ 10'	S	May-06-08 11:05		303829-004
TP 5 @ 10'	S	May-06-08 11:40		303829-005



Certificate of Analysis Summary 303829

Elke Environmental, Inc., Odessa, TX

Project Name: J Cleo Thompson

Project Id:

Contact: Logan Anderson

Project Location: Gainer 27 # 1

Date Received in Lab: Wed May-14-08 01:50 pm


Report Date: 20-MAY-08

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	303829-001	303829-002	303829-003	303829-004	303829-005	
	<i>Field Id:</i>	TP 1 @ 16'	TP 2 @ 16'	TP 3 @ 10'	TP 4 @ 10'	TP 5 @ 10'	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	May-06-08 13:20	May-06-08 13:40	May-06-08 10:40	May-06-08 11:05	May-06-08 11:40	
Chloride by SM4500-CI- B	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-15-08 09:15	May-15-08 09:15	May-15-08 09:15	May-15-08 09:15	May-15-08 09:15	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		31.91 5.000	42.54 5.000	106.4 5.000	170.2 5.000	170.2 5.000	
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-15-08 07:54	May-15-08 07:55	May-15-08 07:56	May-15-08 07:57	May-15-08 07:58	
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.4	6.54	13.1	20.5	13.7	
TPH by SW8015 Mod	<i>Extracted:</i>	May-16-08 09:50	May-16-08 09:50	May-16-08 09:50	May-16-08 09:50	May-16-08 16:30	
	<i>Analyzed:</i>	May-17-08 18:37	May-17-08 19:02	May-17-08 19:28	May-17-08 19:55	May-17-08 10:20	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.9	ND 16.0	ND 17.3	ND 18.9	ND 17.4	
C12-C28 Diesel Range Hydrocarbons		ND 15.9	ND 16.0	ND 17.3	ND 18.9	ND 17.4	
C28-C35 Oil Range Hydrocarbons		ND 15.9	ND 16.0	ND 17.3	ND 18.9	ND 17.4	
Total TPH		ND	ND	ND	ND	ND	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi


Brent Barron
Odessa Laboratory Director

- 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(PQL) and above the SQL(MDL).
- 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.
- * Outside XENCO'S scope of NELAC Accreditation

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5332 Blackberry Drive, Suite 104, San Antonio, TX 78238
2505 N. Falkenburg Rd., Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
6017 Financial Dr., Norcross, GA 30071

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477

Form 2 - Surrogate Recoveries

Project Name: J Cleo Thompson

Work Order #: 303829

Project ID:

Lab Batch #: 722980

Sample: 303829-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	84.4	100	84	70-135	
o-Terphenyl	45.7	50.0	91	70-135	

Lab Batch #: 722980

Sample: 303829-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.0	100	86	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 722980

Sample: 303829-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.9	100	86	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

Lab Batch #: 722980

Sample: 303829-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	84.8	100	85	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 722980

Sample: 303938-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	83.3	100	83	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

** 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.



Form 2 - Surrogate Recoveries

Project Name: J Cleo Thompson



Work Order #: 303829

Project ID:

Lab Batch #: 722980

Sample: 303938-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	88.3	100	88	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 722980

Sample: 509228-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.1	100	98	70-135	
o-Terphenyl	53.5	50.0	107	70-135	

Lab Batch #: 722980

Sample: 509228-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.0	100	87	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 722980

Sample: 509228-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	54.0	50.0	108	70-135	

Lab Batch #: 722990

Sample: 303829-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.4	100	87	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

** 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.

Work Order #: 303829

Project ID:

Lab Batch #: 722990

Sample: 303829-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	94.2	100	94	70-135	
o-Terphenyl	44.5	50.0	89	70-135	

Lab Batch #: 722990

Sample: 303829-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	91.2	100	91	70-135	
o-Terphenyl	43.0	50.0	86	70-135	

Lab Batch #: 722990

Sample: 509232-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	94.8	100	95	70-135	
o-Terphenyl	44.8	50.0	90	70-135	

Lab Batch #: 722990

Sample: 509232-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.7	100	88	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 722990

Sample: 509232-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	93.0	100	93	70-135	
o-Terphenyl	44.0	50.0	88	70-135	

** 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.



Blank Spike Recovery



Project Name: J Cleo Thompson

Work Order #: 303829

Project ID:

Lab Batch #: 722687

Sample: 722687-1-BKS

Matrix: Solid

Date Analyzed: 05/15/2008

Date Prepared: 05/15/2008

Analyst: IRO

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chloride by SM4500-CI- B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	100.0	91.46	91	70-125	

Blank Spike Recovery $[D] = 100 * [C] / [B]$

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



BS / BSD Recoveries



Project Name: J Cleo Thompson

Work Order #: 303829

Analyst: ASA

Date Prepared: 05/16/2008

Project ID:

Date Analyzed: 05/17/2008

Lab Batch ID: 722980

Sample: 509228-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1000	100	1000	1020	102	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	993	99	1000	1010	101	2	70-135	35	

Analyst: ASA

Date Prepared: 05/16/2008

Date Analyzed: 05/17/2008

Lab Batch ID: 722990

Sample: 509232-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1020	102	1000	1000	100	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	987	99	1000	978	98	1	70-135	35	

Relative Percent Difference RPD = $200 * [(D-F)/(D+F)]$

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 / MSD Recoveries



Project Name: J Cleo Thompson

Work Order #: 303829

Project ID:

Lab Batch ID: 722687

QC- Sample ID: 303557-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/15/2008

Date Prepared: 05/15/2008

Analyst: IRO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Chloride by SM4500-Cl- B	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
Analytes											
Chloride	382.9	2000	2297	96	2000	2297	96	0	70-125	25	

Lab Batch ID: 722980

QC- Sample ID: 303938-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2008

Date Prepared: 05/16/2008

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1130	957	85	1130	1010	89	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1130	947	84	1130	999	88	5	70-135	35	

Lab Batch ID: 722990

QC- Sample ID: 303829-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2008

Date Prepared: 05/16/2008

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1160	1160	100	1160	1120	97	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1160	1120	97	1160	1080	93	4	70-135	35	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times (D-G)/(D+G)$

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

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



Sample Duplicate Recovery



Project Name: J Cleo Thompson

Work Order #: 303829

Lab Batch #: 722649

Date Analyzed: 05/15/2008

QC- Sample ID: 303797-007 D

Reporting Units: %

Project ID:

Analyst: IRO

Date Prepared: 05/15/2008

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	10.7	11.2	5	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: like Env.
Date/ Time: 5-14-08 1:50
Lab ID #: 303829
Initials: AL

Sample Receipt Checklist

			Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>-35 °C</u>
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	<u>Not Present</u>
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	<u>ID written on Cont./ Lid</u>
#9	Container label(s) legible and intact?	<u>Yes</u>	No	<u>Not Applicable</u>
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	<u>See Below</u>
#13	Samples properly preserved?	<u>Yes</u>	No	<u>See Below</u>
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	<u>See Below</u>
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	<u>See Below</u>
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	<u>Not Applicable</u>

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that Apply.
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event