

LFM Closure-16m

85-SDP-16-04

p 1A



IOWA DEPARTMENT OF NATURAL RESOURCES

PETROLEUM CONTAMINATED SOIL SINGLE USE LANDFARM EARLY CLOSURE FORM



Single-use landfarming agencies shall submit the following closure form to the department and department field office with jurisdiction over the landfarm if the single use landfarm is to be closed before 3 years after the last application date.

Send the completed application with attached information to:

Planning, Permitting & Engineering Section
Energy & Waste Management Bureau
Iowa Department of Natural Resources
502 E 9th Street
Des Moines, IA 50319
Fax: (515)-281-8895

Con 12-1-1
Doc # 14635

Visit <http://www.iowadnr.com/fo> for a listing of field offices addresses and jurisdictions

Questions contact Matt McDonald at (515)-281-8150 or matt.mcdonald@dnr.state.ia.us

For information on Emergency Response Spills, call (515)-281-8694 or visit <http://www.iowadnr.com/spills/>

SECTION 1. CONTACT INFORMATION

Provide the name, address and telephone number for the following:

Landfarming Agency Owner(s)

Name: E-Farm™
Street Address: 616 Billy Sunday Rd., Suite 100
City: Ames State: IA Zip Code: 50010
Phone Number: 515-232-3276
IDNR Existing Permit Number for Agency: 85-SDP-16-04P-PCS

PCS Landfarming/Storage Location Owner

Name: Darrell Engler
Street Address: 31099 137th Avenue
City: Long Grove State: IA Zip Code: 52756
Phone Number: 563-285-7171

Legal Description of Property that will be Utilized for Landfarming/Storage:
(you may attach a legal description from your county assessor)

NE 1/4 of NE 1/4 of NE 1/4 Section 08 Township 80 N Range 03 E County Scott

13557 03/09/06 PM 3:10

DATE STAMP

SECTION 2: LANDFARM CLOSURE INFORMATION

Date PCS was last land applied: 8/22/05	Total area in square feet of landfarm plot to be closed: 4,050
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SECTION 3. CLOSURE FORM CHECKLIST

Checking the appropriate boxes below certifies that the attachments submitted in conjunction with this closure form are complete and in compliance with the applicable chapters of the Iowa Administrative Code. While some of the attachments below may have been submitted previously, updated copies of each is required to be provided with the closure form.

Required Document	Attached
Section A. Map of Landfarm	<input checked="" type="checkbox"/>
Section B. Documentation that Landfarm is Eligible for Early Closure [IAC 567 Chapter 120.12(2)]	<input checked="" type="checkbox"/>
Section C. Chemical Analysis of Petroleum Contaminated Soil [IAC 567 Chapter 120.12(2)"a"]	<input checked="" type="checkbox"/>

SECTION 4. LANDFARMING AGENCY OWNER CERTIFICATION FOR SINGLE USE LANDFARM CLOSURE

I certify under penalty of law that I am the owner or a authorized representative of the landfarming agency for which this Petroleum Contaminated Soil Closure Form is submitted, and that I have examined and am familiar with the closure requirements in accordance with Iowa Administrative Code 567-Chapter 120, and that the information I have provided is true, accurate and complete.

Signature: Steven B. Squines

Date: 3-6-06

Printed Name: Steven B. Squines

SECTION 5. LANDFARMING SITE OWNER CERTIFICATION FOR LANDFARMING AND STORAGE OF PCS

I certify I own the application or storage site for the petroleum contaminated soil referenced above and I acknowledge the landfarming practices described in this closure form and the closure requirements contained in Iowa Administrative (IAC) Code 567-Chapter 120.

Signature: _____

Date: 11-10-05

Printed Name: Darrell A. Egler

DOCUMENTS TO BE ATTACHED

SECTION A. MAP OF LANDFARM

- ➡ Provide a map that shows the location of the landfarm plot to be closed. Clearly mark the following on the map:
- Landfarm plot site boundary that is to be closed
 - Dimensions of landfarm plot to be closed
 - Other landfarm plots that have been utilized
 - Locations where the landfarm closure soil samples were obtained in the landfarm plot

SECTION B. DOCUMENTATION THAT LANDFARM IS ELIGIBLE FOR EARLY CLOSURE

- ➡ Provide documentation that landfarm has met the following requirements for early closure:
- A minimum of 6 months has past since PCS has been land applied.

SECTION C. CHEMICAL ANALYSIS OF PETROLEUM CONTAMINATED SOIL [IAC 567 CHAPTER 120.12(2)"A"]

- ➡ The following analyses shall be performed. Samples shall be acquired, stored, handled, tested and reported in accordance with the required methodology and accepted scientific procedures. A laboratory certified for UST petroleum analyses pursuant to IAC 567-Chapter 83 shall test samples. The analysis shall utilize the most recent version of Method OA-1 and OA-2, "Method for Determination of Volatile Petroleum Hydrocarbons (Gasoline)," University of Iowa Hygienic Laboratory. A copy of the results including the chain of custody must be attached to this form.
- BTEX testing. The landfarm plot shall be tested for benzene, toluene, and ethylbenzene.
 - TEH-diesel testing. The landfarm plot shall be tested for total extractable hydrocarbons.
 - MTBE testing. The landfarm plot shall be tested for methyl tertiary-butyl ether unless prior analysis of the soil has shown that MTBE is not present in the soil.

Limits to be met by each sample:

- Benzene – 0.54 mg/kg
- Toluene – 42 mg/kg
- Ethylbenzene – 15 mg/kg
- TEH-diesel – 3800 mg/kg
- MTBE – 0.02 mg/kg

One sample shall be taken from each 10,000 ft² (e.g., 100-foot x 100-foot area) of landfarm plot area and be analyzed for the above constituents. Soil samples shall be taken from the top 2 to 6 inches of soil. Place the results in the table below in milligrams per kilogram (mg/kg).

	Benzene	Toluene	Ethylbenzene	TEH-diesel	MTBE
Sample #1	<0.005	<0.005	<0.005	<5.00	<0.010
Sample #2					
Sample #3					
Sample #4					
Sample #5					
Sample #6					
Sample #7					
Sample #8					
Sample #9					
Sample #10					

Section A

Map of Landfarm
(Single-Use Landfarm)

Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

Grand Mound, Iowa (1991)

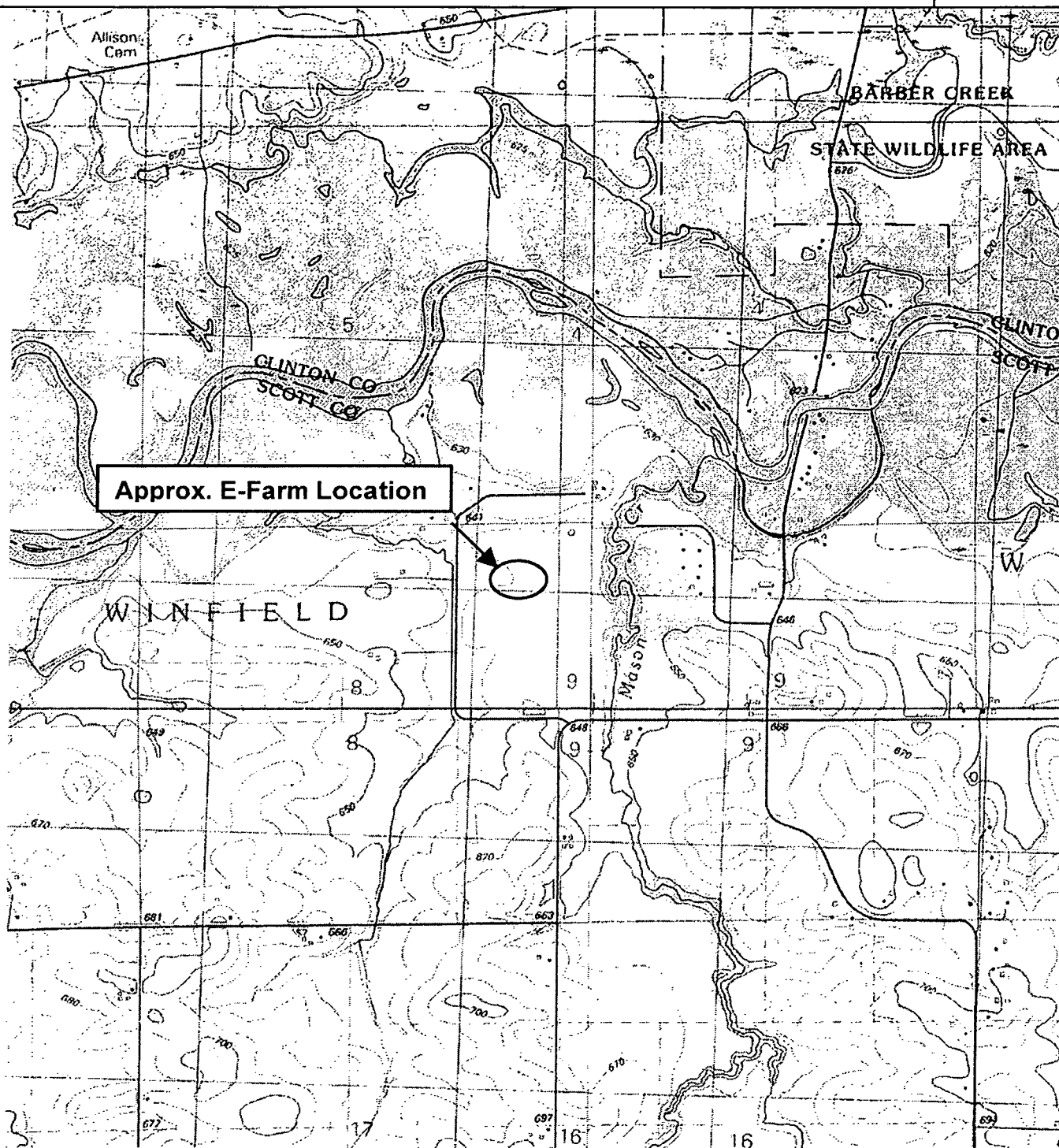
NE¼ of the NE¼ of the NE¼ of Section 08, Township: 80 N, Range: 03 E
Contour Interval = 10 Feet

Scale

1 Inch = 2,000 Feet



North



USGS Topographic Map

Long Grove E-Farm
Darrel Engler
Near Long Grove, Iowa



Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

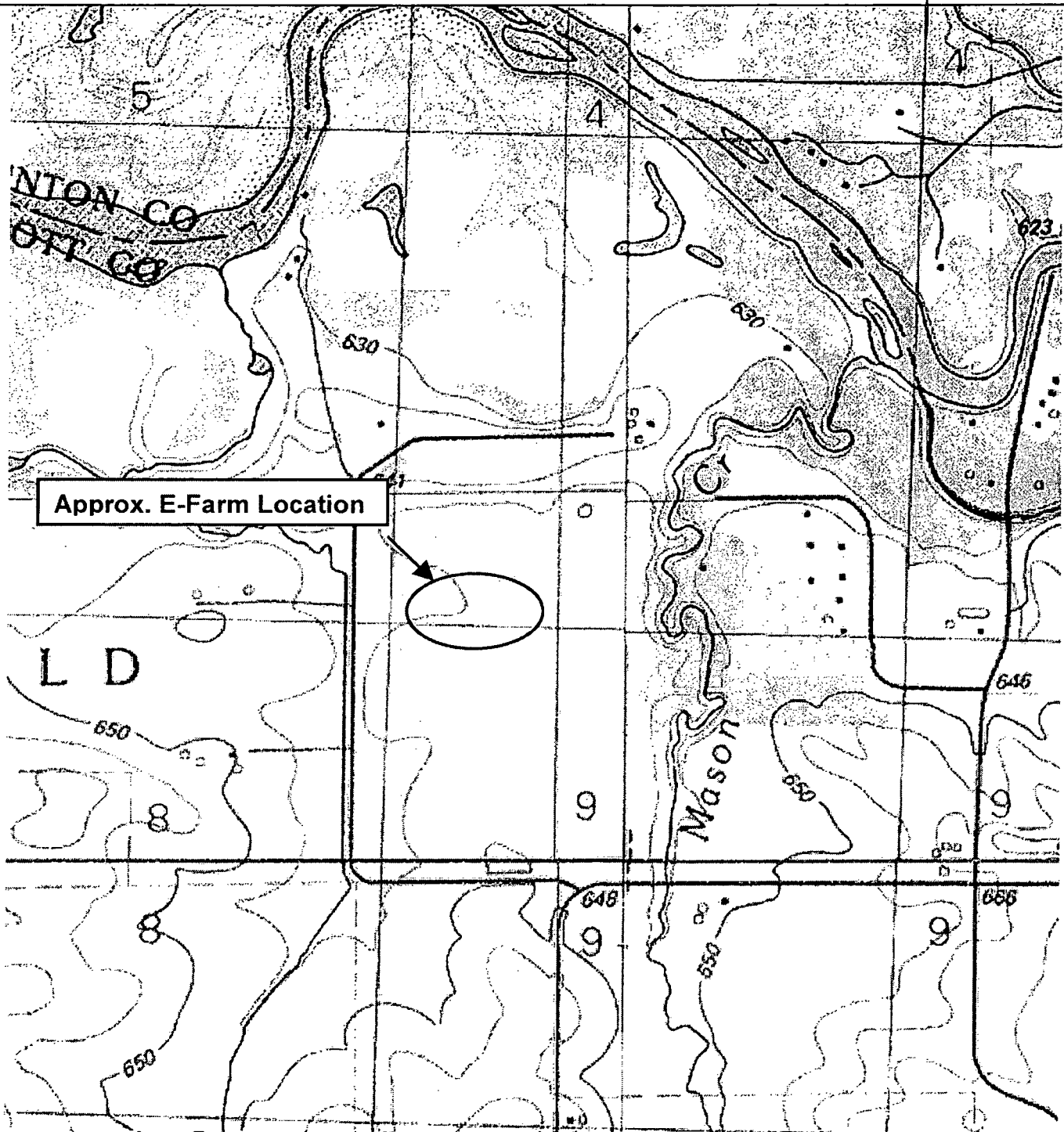
Grand Mound, Iowa (1991)

NE¼ of the NE¼ of the NE¼ of Section 08, Township: 80 N, Range: 03 E
Contour Interval = 10 Feet

Scale
1 Inch = 1,000 Feet



North



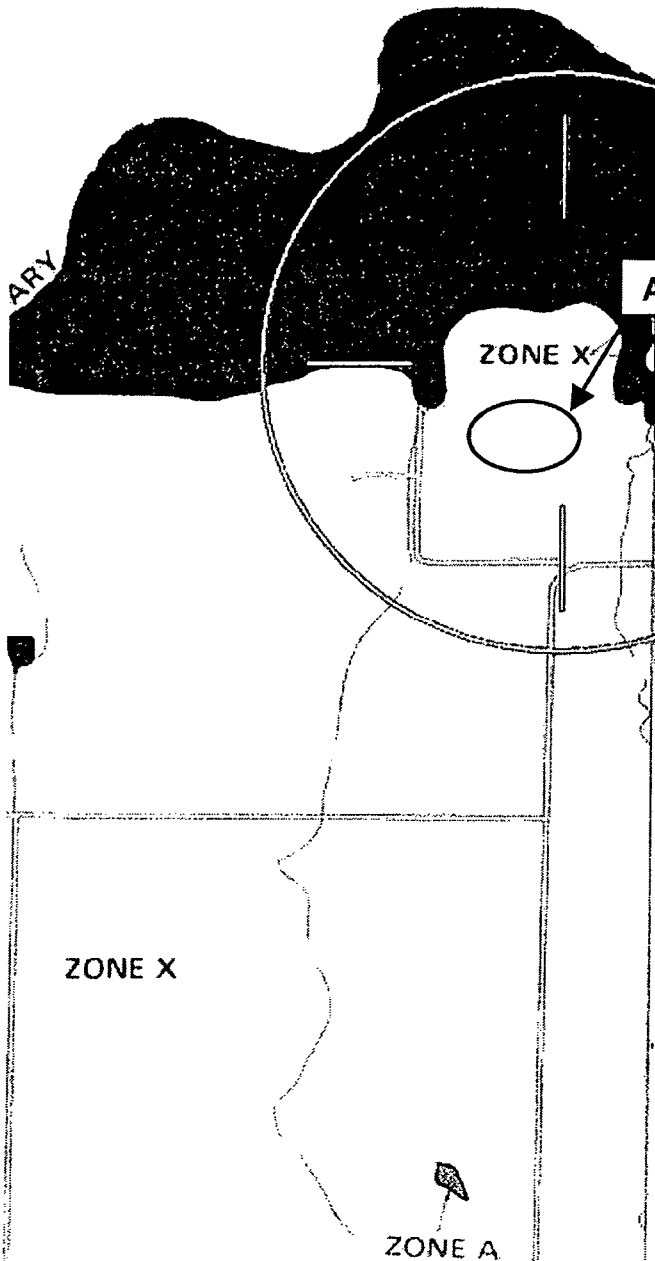
USGS Topographic Map

Long Grove E-Farm
Darrel Engler
Near Long Grove, Iowa

E FARM™

Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

Scott County, Iowa
Unincorporated Areas
January 6, 1993
Community Panel #:
1902390050B



Approx. E-Farm Location

FLOODSCAPI

Flood Hazards

Map Number
1902390050B

Effective Date
January 6, 1993

For more information

FEMA Flood Insurance Rate Map

Long Grove E-Farm
Darrel Engler
Near Long Grove, Iowa

E FARM™

Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

SCS Soil Survey Map of Scott County, Iowa

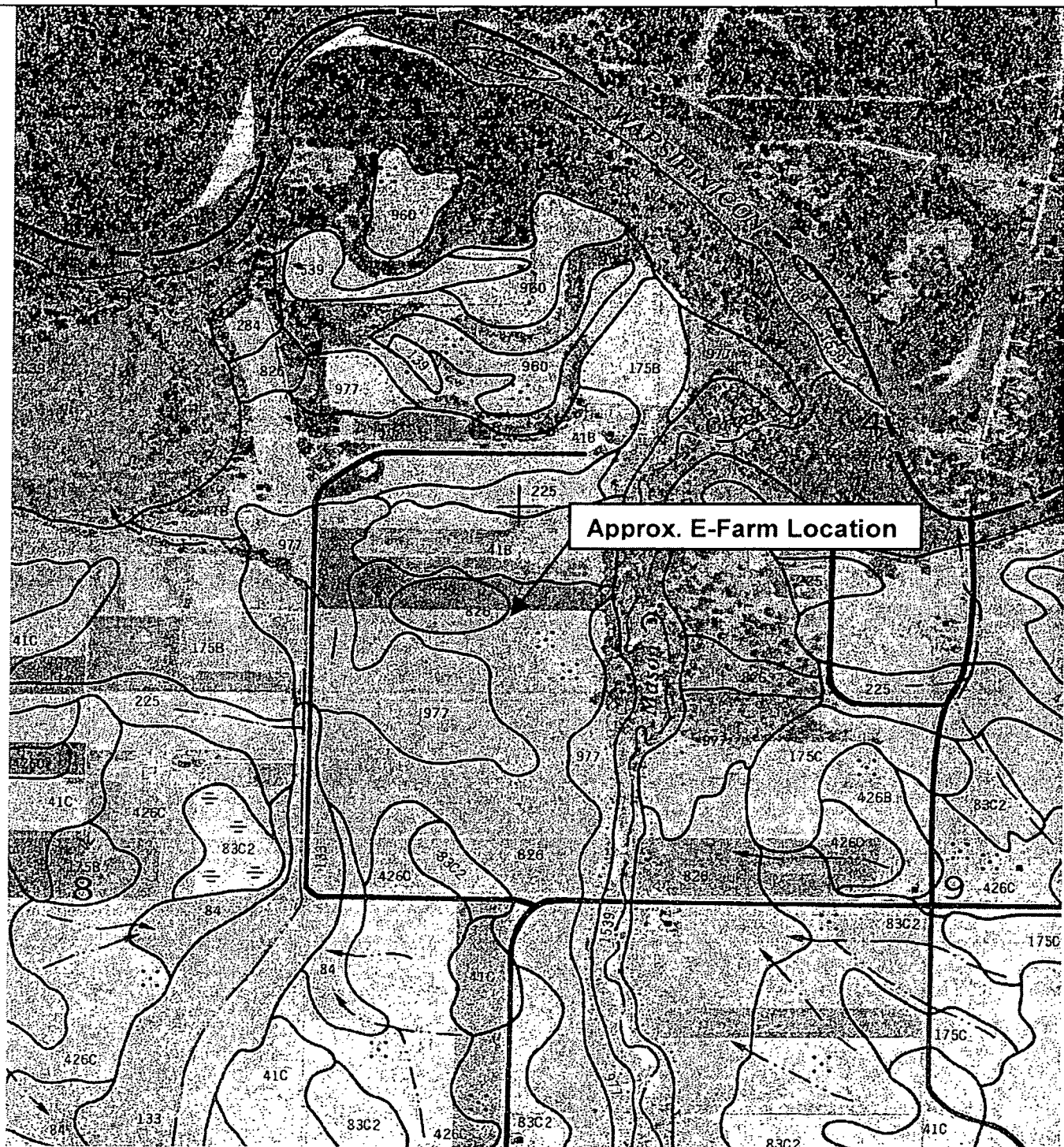
Date: 1996

Scale

1 Inch = $\pm 1,000$ Feet



North



SCS Soil Survey

Long Grove E-Farm
Darrel Engler
Near Long Grove, Iowa

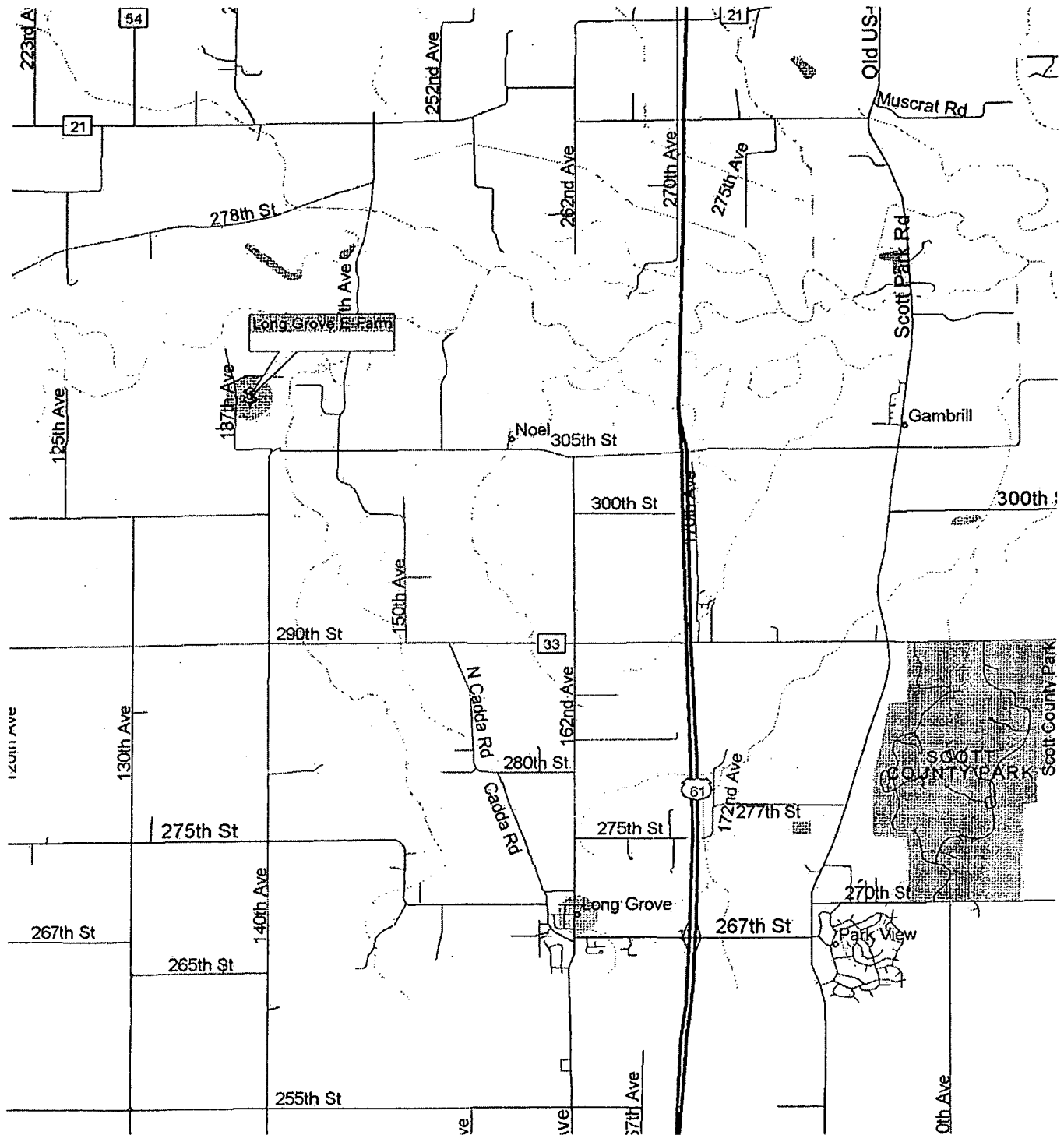


Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

Expedia™ Streets 98



North



Street Map

Long Grove E-Farm
Darrel Engler
Near Long Grove, Iowa



Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

Date: 1994



North



Approx. E-Farm Location

Aerial Photo

Long Grove E-Farm
Darrel Engler
Near Long Grove, Iowa



Landfarming by Environmental Professionals
616 Billy Sunday R., Suite 100, Ames, Iowa

Section B

**Documentation that Landfarm is Eligible for Early Closure [IAC
567 Chapter 120.12(2)]**

(Single-Use Landfarm)

Petroleum contaminated soil (PCS) for E-Farm # 31246 was delivered to the landfarm on August 22, 2005.

At least six months passed between landfarming of PCS and submittal of this single Use Landfarm Early Closure Form.

Attached in Section B are copies of both the initial and final load's Waste Manifest forms for the referenced landfarming project.



LAND FARMING BY ENVIRONMENTAL PROFESSIONALS

616 Billy Sunday Rd., Suite 100
Ames, IA 50010
Tel: (515) 232-3276
Fax: (515) 233-6874

Waste Manifest

Load No. 1

General Contractor Name: <u>Delta Env./Craig Zunk</u>	
City: <u>Bettendorf, IA</u>	
U.S. DOT Description	Yards
Non-Hazardous Gasoline Contaminated Soil	<u>16</u>
Non-Hazardous Diesel Fuel Contaminated Soil	
LUST Number: <u>BLTJ93</u>	
Tank Registration: <u>B604084</u>	
Site Name: <u>Wald's Petro Stop</u>	
Street: <u>402 11th St.</u> City: <u>DeWitt</u>	
Transporter Receipt of Material (Trucks met by	
Signature: <u>Darrell Engler - farm owner</u> Date: _____	
Waste Site Receipt of Material	
Signature: <u>Dan C Kelt</u> Date: <u>8-22-05</u>	



LAND FARMING BY ENVIRONMENTAL PROFESSIONALS

616 Billy Sunday Rd., Suite 100
Ames, IA 50010
Tel: (515) 232-3276
Fax: (515) 233-6874

Waste Manifest

Load No. 3

General Contractor Name: <u>Delta Env./Craig Zunk</u>	
City: <u>Bettendorf, IA</u>	
U.S. DOT Description	Yards
Non-Hazardous Gasoline Contaminated Soil	<u>18</u>
Non-Hazardous Diesel Fuel Contaminated Soil	
LUST Number: <u>BLTJ93</u>	
Tank Registration: <u>B604084</u>	
Site Name: <u>Wald's Petro Stop</u>	
Street: <u>402 11th St.</u> City: <u>DeWitt</u>	
Transporter Receipt of Material (Trucks met by	
Signature: <u>Darrell Engler - farm owner</u> Date: _____	
Waste Site Receipt of Material	
Signature: <u>Dan C Kelt</u> Date: <u>8-22-05</u>	

Section C

**Chemical Analysis of Petroleum Contaminated Soil [IAC 567
Chapter 120.12(2)"a"]**

(Single-Use Landfarm)

Accreditations:
Iowa DNR: 095
New Jersey DEP: 1A001
Kansas DHE: E-10287

ANALYTICAL REPORT

November 30, 2005

Work Order: 15K0604

Page 1 of 5

Report To

Dan Keltner
Trileaf Environmanagement
616 Billy Sunday Road Ste. 100
Ames, IA 50010

Work Order Information

Date Received: 11/11/2005 10:00AM
Collector: Keltner, Dan
Phone: (515) 233-4282
PO Number:

Project : UST-Iowa
Project Number: #31246 Long Grove E-Farm

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
15K0604-01 E-Farm				Matrix:Soil		Collected: 11/10/05 11:15	
<i>Determination of Volatile Petroleum Hydrocarbons</i>							
Methyl-t-butyl Ether (MTBE)	<0.010 mg/kg	0.010	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Benzene	<0.005 mg/kg	0.005	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Toluene	<0.005 mg/kg	0.005	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Ethylbenzene	<0.005 mg/kg	0.005	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Xylenes, total	<0.010 mg/kg	0.010	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Ethyl-tert-Butyl Ether (ETBE)	<0.010 mg/kg	0.010	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Di-iso-Propyl Ether (DIPE)	<0.010 mg/kg	0.010	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
tert-Amyl Methyl Ether (TAME)	<0.010 mg/kg	0.010	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
tert-Butyl Alcohol (TBA)	<0.250 mg/kg	0.250	1K51712	OA-1 (GC/MS)	KRM	11/16/05 14:22	
Surrogate: 4-Bromofluorobenzene	107 %			65-133	KRM	11/16/05 14:22	
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
TEH, as gasoline	<5 mg/kg	5	1K52129	Iowa OA-2	SMG	11/23/05 1:45	
TEH, as #2 diesel fuel	<5 mg/kg	5	1K52129	Iowa OA-2	SMG	11/23/05 1:45	
TEH, as waste oil	53 mg/kg	5	1K52129	Iowa OA-2	SMG	11/23/05 1:45	
Total Extractable Hydrocarbons	53 mg/kg	5	1K52129	Iowa OA-2	SMG	11/23/05 1:45	
Surrogate: Pentacosane	109 %			50-131	SMG	11/23/05 1:45	

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Trileaf Environmanagement
616 Billy Sunday Road Ste. 100
Ames, IA 50010

November 30, 2005

Work Order: 15K0604

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Determination of Volatile Petroleum Hydrocarbons - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 15K1704 - 1K51712

Calibration Check (15K1704-CCV1)

Prepared: 11/15/05 Analyzed: 11/16/05

Surrogate: 4-Bromofluorobenzene	49.99		mg/kg	50.00		100	65-133			
Methyl-t-butyl Ether (MTBE)	62.23		"	58.00		107	80-120			
Benzene	65.92		"	65.00		101	80-120			
Toluene	74.48		"	74.50		100	80-120			
Ethylbenzene	63.00		"	63.50		99.2	80-120			
Xylenes, total	121.3		"	122.0		99.4	80-120			
Ethyl-tert-Butyl Ether (ETBE)	58.08		"	56.50		103	80-120			
Di-iso-Propyl Ether (DIPE)	59.11		"	57.00		104	80-120			
tert-Amyl Methyl Ether (TAME)	60.34		"	59.00		102	80-120			
tert-Butyl Alcohol (TBA)	1016		"	925.0		110	80-120			

Batch 1K51712 - EPA 5030 Soil MS

Blank (1K51712-BLK1)

Prepared: 11/15/05 Analyzed: 11/16/05

Surrogate: 4-Bromofluorobenzene	51.23		mg/kg	50.00		102	65-133			
Methyl-t-butyl Ether (MTBE)	ND	0.002	"							
Benzene	ND	0.001	"							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.002	"							
Ethyl-tert-Butyl Ether (ETBE)	ND	0.002	"							
Di-iso-Propyl Ether (DIPE)	ND	0.002	"							
tert-Amyl Methyl Ether (TAME)	ND	0.002	"							
tert-Butyl Alcohol (TBA)	ND	0.050	"							

LCS (1K51712-BS1)

Prepared: 11/15/05 Analyzed: 11/16/05

Surrogate: 4-Bromofluorobenzene	49.63		mg/kg	50.00		99.3	65-133			
Methyl-t-butyl Ether (MTBE)	0.1762	0.002	"	0.1550		114	56-117			
Benzene	0.0572	0.001	"	0.0510		112	61-128			
Toluene	0.0607	0.001	"	0.0580		105	83-145			
Ethylbenzene	0.0509	0.001	"	0.0520		97.9	79-148			
Xylenes, total	0.0951	0.002	"	0.1060		89.7	76-134			

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Trileaf Environmanagement
616 Billy Sunday Road Ste. 100
Ames, IA 50010

November 30, 2005

Work Order: 15K0604

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Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1K51712 - EPA 5030 Soil MS

Matrix Spike (1K51712-MS1) Source: 15K0605-01 Prepared: 11/15/05 Analyzed: 11/16/05

Surrogate: 4-Bromofluorobenzene	51.61		mg/kg	50.00		103	65-133			
Methyl-t-butyl Ether (MTBE)	0.8155	0.010	"	0.7176	ND	114	54-117			
Benzene	0.2164	0.005	"	0.2361	ND	91.7	56-127			
Toluene	0.2249	0.005	"	0.2685	ND	83.8	72-147			
Ethylbenzene	0.2204	0.005	"	0.2407	ND	91.6	60-150			
Xylenes, total	0.4294	0.010	"	0.4907	ND	87.5	56-145			

Matrix Spike Dup (1K51712-MSD1) Source: 15K0605-01 Prepared: 11/15/05 Analyzed: 11/16/05

Surrogate: 4-Bromofluorobenzene	52.18		mg/kg	50.00		104	65-133			
Methyl-t-butyl Ether (MTBE)	0.8207	0.010	"	0.7243	ND	113	54-117	0.636	27	
Benzene	0.2120	0.005	"	0.2383	ND	89.0	56-127	2.05	23	
Toluene	0.2148	0.005	"	0.2710	ND	79.3	72-147	4.59	25	
Ethylbenzene	0.2170	0.005	"	0.2430	ND	89.3	60-150	1.55	26	
Xylenes, total	0.4306	0.010	"	0.4953	ND	86.9	56-145	0.279	26	

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Trileaf Environmanagement
616 Billy Sunday Road Ste. 100
Ames, IA 50010

November 30, 2005

Work Order: 15K0604

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Determination of Extractable Petroleum Hydrocarbons - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 15K2816 - 1K52129

Calibration Check (15K2816-CCV1)

Prepared & Analyzed: 11/22/05

Surrogate: Pentacosane	54.2		mg/kg	52.6		103	50-131			
TEH, as gasoline	2146		"	2010		107	85-115			
TEH, as #2 diesel fuel	2159		"	2000		108	85-115			
TEH, as waste oil	2278		"	2030		112	85-115			

Calibration Check (15K2816-CCV2)

Prepared: 11/22/05 Analyzed: 11/23/05

Surrogate: Pentacosane	48.8		mg/kg	52.6		92.8	50-131			
TEH, as gasoline	2151		"	2010		107	85-115			
TEH, as #2 diesel fuel	1994		"	2000		99.7	85-115			
TEH, as waste oil	2044		"	2030		101	85-115			

Batch 1K52129 - 3545 OA-2 PFE

Blank (1K52129-BLK1)

Prepared: 11/21/05 Analyzed: 11/22/05

Surrogate: Pentacosane	2.82		mg/kg	2.58		109	50-131			
TEH, as gasoline	ND	5	"							
TEH, as #2 diesel fuel	ND	5	"							
TEH, as waste oil	ND	5	"							
Total Extractable Hydrocarbons	ND	5	"							

LCS (1K52129-BS1)

Prepared: 11/21/05 Analyzed: 11/22/05

Surrogate: Pentacosane	2.72		mg/kg	2.58		105	50-131			
TEH, as #2 diesel fuel	398.5	5	"	502.2		79.4	65-110			

Matrix Spike (1K52129-MS1)

Source: 15K0604-01

Prepared: 11/21/05 Analyzed: 11/23/05

Surrogate: Pentacosane	2.67		mg/kg	2.56		104	50-131			
TEH, as #2 diesel fuel	353.4	5	"	500.2	ND	70.7	50-110			

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Trileaf Environmanagement
616 Billy Sunday Road Ste. 100
Ames, IA 50010

November 30, 2005

Work Order: 15K0604

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Determination of Extractable Petroleum Hydrocarbons - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1K52129 - 3545 OA-2 PFE										
Matrix Spike Dup (1K52129-MSD1)			Source: 15K0604-01		Prepared: 11/21/05		Analyzed: 11/23/05			
Surrogate: Pentacosane	3.40		mg/kg	2.56		133	50-131			S-02
TEH, as #2 diesel fuel	404.5	5	"	500.2	ND	80.9	50-110	13.5	30	
Reference (1K52129-SRM1)					Prepared: 11/21/05		Analyzed: 11/23/05			
Surrogate: Pentacosane	2.86		mg/kg	2.58		111	50-131			
TEH, as #2 diesel fuel	482.3	5	"	502.2		96.0	70-130			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.


End of Report



Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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Keystone
LABORATORIES, INC.

 1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 1

BILL TO:
NAME: Same
COMPANY NAME: _____
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____
Keystone Quote No.: _____

Keystone Quote No.: _____ (If Applicable)

[illegible]

Relinquished by: (Signature) <i>Don C. Kelt</i>	Date <i>11-11-05</i>	Received by: (Signature)	Date	Turn-Around: <input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Rush	Contact Lab Prior to Submission
	Time <i>10:00 am</i>		Time			
Relinquished by: (Signature)	Date	Received for Lab by: (Signature)	Date <i>11/11/05</i>	Remarks:		
	Time	<i>Bill</i>	Time <i>10:00 AM</i>			

Original - Return with Report • Yellow - Lab Conv • Pink - Sampler Conv