



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 # 5439

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: 5613 Gateway Dr., Suite 500 City: Grimes State: IA Zip Code: 50111 Phone Number: 515-986-5151 IDNR Existing Permit Number for Agency: 85-SDP-16-04P-PCS

PCS Landfarming/Storage Location Owner

Name: Bonnie Drape Street Address: 2065 Hawthorne Avenue City: Waverly State: IA Zip Code: 50677 Phone Number: 319-352-2588

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

SW 1/4 of SW 1/4 of SW 1/4 Section 29 Township 92 N Range 13 W County Bremer

RECEIVED JUL 13 2007

SECTION 2: LANDFARM CLOSURE INFORMATION

Date PCS was last land applied: <i>10/22/06</i>	Total area in square feet of landfarm plot to be closed: <i>2,430</i>
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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: *Matt Hjortshoj*

Date: *4/11/07*

Printed Name: *Matt Hjortshoj*

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: *Bonnie Drape*

Date: *Mar. 24-06*

Printed Name: *Bonnie Drape*

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:

- a. Landfarm plot site boundary that is to be closed
- b. Dimensions of landfarm plot to be closed
- c. Other landfarm plots that have been utilized
- d. 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. 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.

- a. BTEX testing. The landfarm plot shall be tested for benzene, toluene, and ethylbenzene.
- b. TEH-diesel testing. The landfarm plot shall be tested for total extractable hydrocarbons.
- c. 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

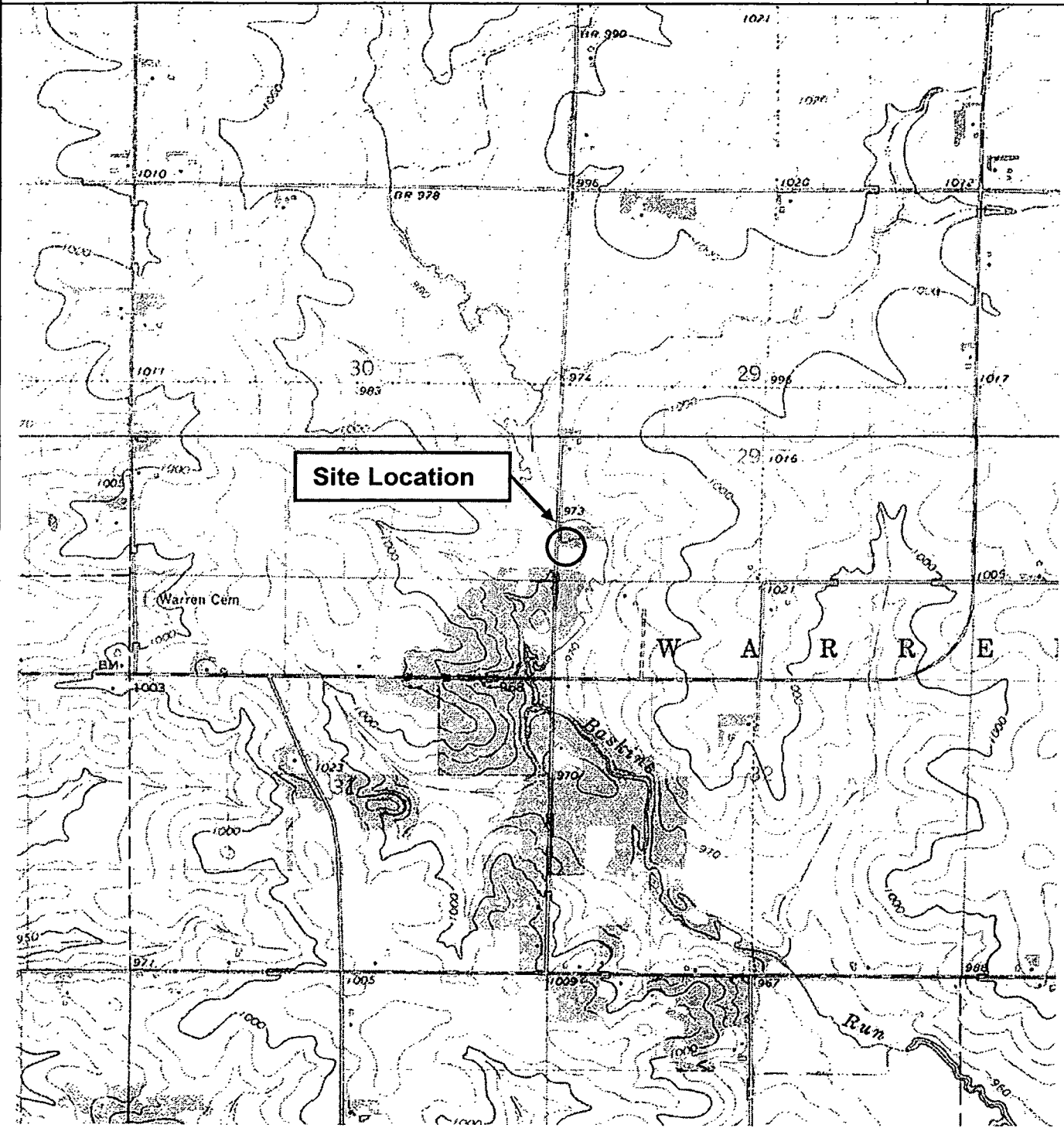
Map of Landfarm
(Single-Use Landfarm)

Waverly, Iowa (1963, Photorevised 1972)
SW¼ of the SW¼ of the SW¼ of Section 29, Township: 92 N, Range: 13 W
Contour Interval = 10 Feet

Scale
1 Inch = 2,000 Feet



North



USGS Topographic Map

Waverly E-Farm
Charlie Drape
Near Waverly, Iowa



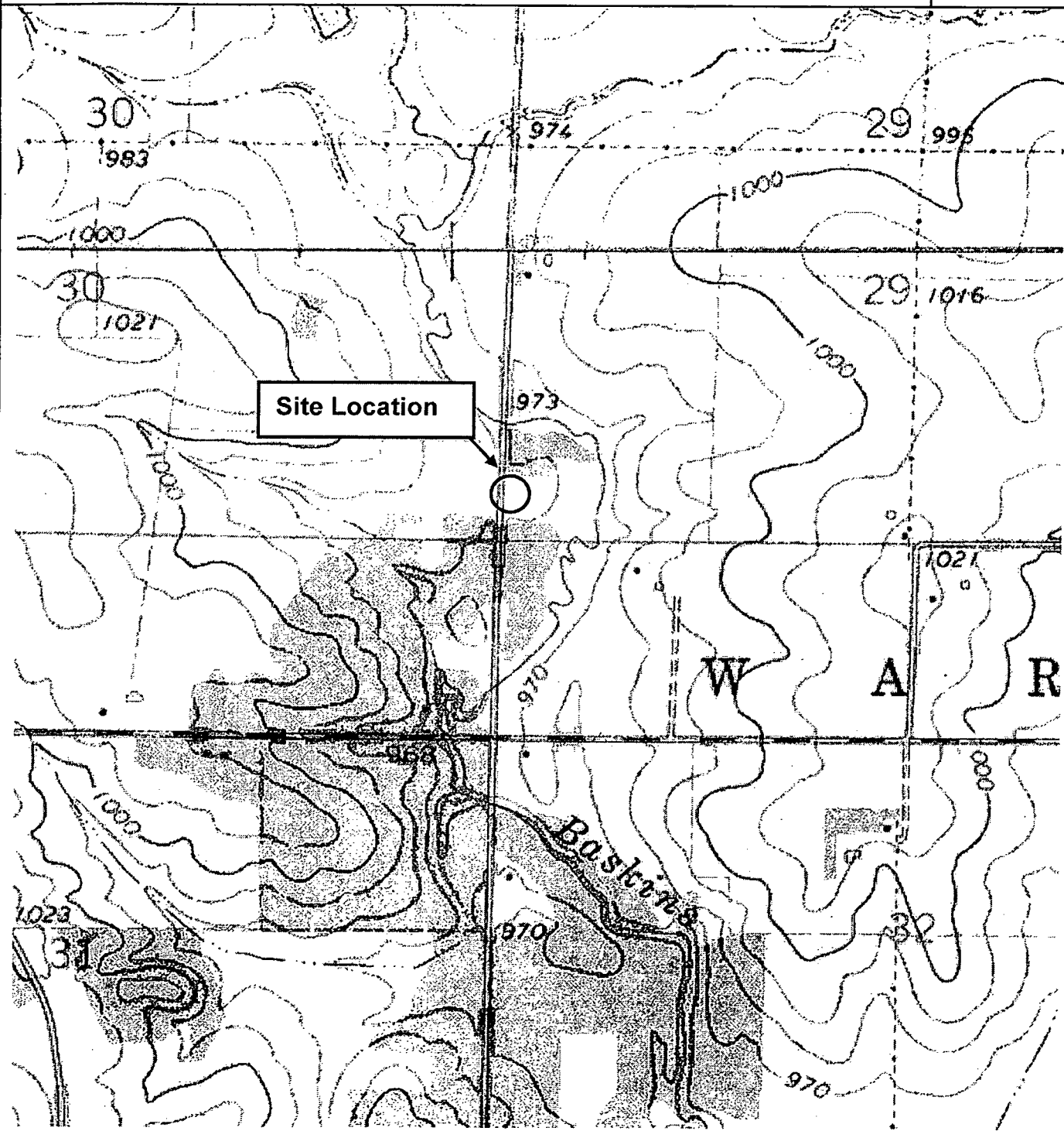
Landfarming by Environmental Professionals
5613 Gateway Dr., Suite 500, Grimes, Iowa

Waverly, Iowa (1963, Photorevised 1972)
SW¼ of the SW¼ of the SW¼ of Section 29, Township: 92 N, Range: 13 W
Contour Interval = 10 Feet

Scale
1 Inch = 1,000 Feet



North



USGS Topographic Map

Waverly E-Farm
Charlie Drape
Near Waverly, Iowa



Landfarming by Environmental Professionals
5613 Gateway Dr., Suite 500, Grimes, Iowa

SCS Soil Survey Map of Bremer County, Iowa

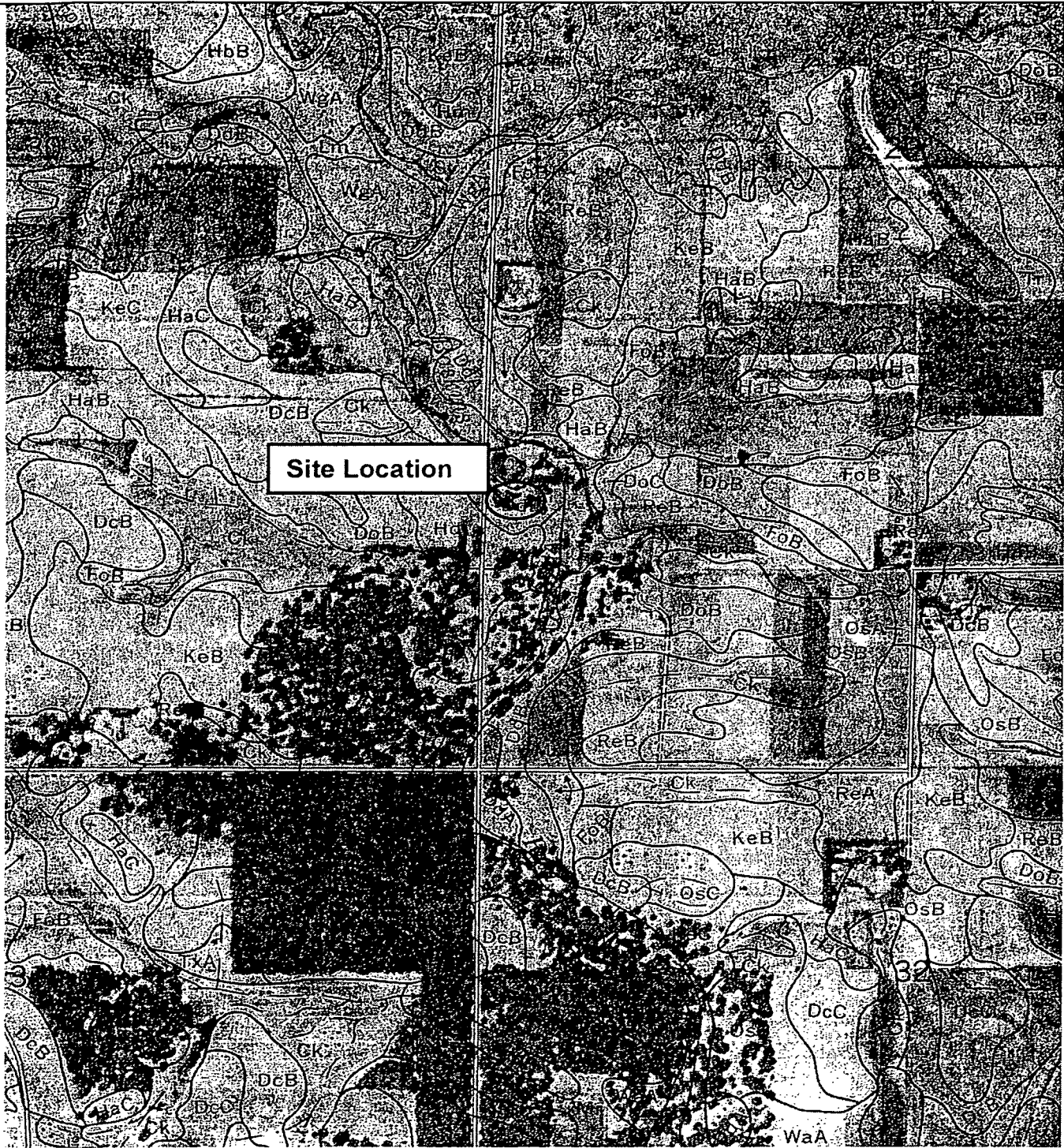
Date: 1967

Scale

1 Inch = ±1,000 Feet



North



SCS Soil Survey

Waverly E-Farm
Charlie Drape
Near Waverly, Iowa



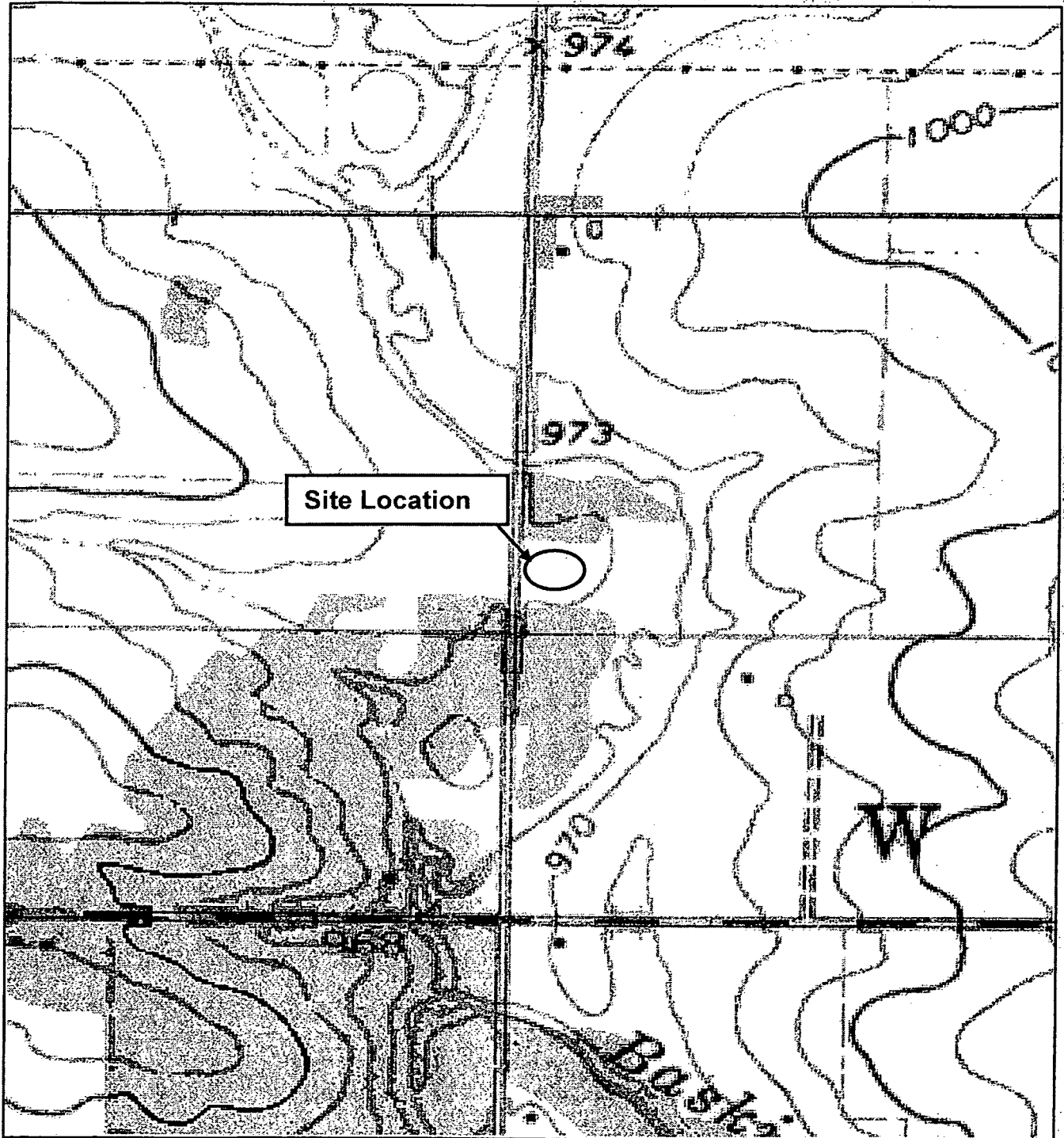
Landfarming by Environmental Professionals
5613 Gateway Dr., Suite 500, Grimes, Iowa

Waverly, Iowa (1963, Photorevised 1972)
SW¼ of the SW¼ of the SW¼ of Section 29, Township: 92 N, Range: 13 W
Contour Interval = 10 Feet

Scale
1 Inch = 500 Feet



North



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USGS Topographic Map

Waverly E-Farm
Charlie Drape
Near Waverly, Iowa



Landfarming by Environmental Professionals
5613 Gateway Dr., Suite 500, Grimes, 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 at Waverly was delivered to the landfarm on October 20th, 2006.

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

5613 Gateway Drive, Suite 500
Grimes, Iowa 50111
Tel: (515) 986-5601
Fax: (515) 986-5643

Waste Manifest

Load No. 3

LAST LOAD

General Contractor Name: <u>TRILEAF</u>	
City: <u>AMES</u>	
U.S. DOT Description	Yards
Non-Hazardous Gasoline Contaminated Soil	<u>10</u>
Non-Hazardous Diesel Fuel Contaminated Soil	
LUST Number: <u>7LTA38</u>	
Tank Registration: <u>8607330</u>	
Site Name: <u>D. HAVON OIL</u>	
Street: <u>600 W. BIRMINGHAM AVE</u> City: <u>WAVERLY</u>	
Transporter Receipt of Material	
Signature: <u>[Signature]</u>	Date: <u>10/20/06</u>
Waste Site Receipt of Material	
Signature: <u>[Signature]</u>	Date: <u>10/20/06</u>



LAND FARMING BY ENVIRONMENTAL PROFESSIONALS

5613 Gateway Drive, Suite 500
Grimes, Iowa 50111
Tel: (515) 986-5601
Fax: (515) 986-5643

Waste Manifest

Load No. 1

General Contractor Name: <u>TRILEAF</u>	
City: <u>AMES</u>	
U.S. DOT Description	Yards
Non-Hazardous Gasoline Contaminated Soil	<u>10</u>
Non-Hazardous Diesel Fuel Contaminated Soil	
LUST Number: <u>7LTA38</u>	
Tank Registration: <u>8607330</u>	
Site Name: <u>D. HAVON OIL</u>	
Street: <u>600 W BIRMINGHAM AVE</u> City: <u>WAVERLY</u>	
Transporter Receipt of Material	
Signature: <u>[Signature]</u>	Date: <u>10/20/06</u>
Waste Site Receipt of Material	
Signature: <u>[Signature]</u>	Date: <u>10/20/06</u>

Section C

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

(Single-Use Landfarm)

Trileaf Corporation
 5613 Gateway Drive, Suite 500
 Des Moines IA, 50111

Project: E Farm Closures
 Project Number: 7LTA38 (Waverly)
 Project Manager: Matt Hjortshoj

Reported
 06/26/07 14:28

A
17F1174-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Petroleum Hydrocarbons

Methyl-t-butyl Ether (MTBE)	ND	0.010	mg/kg	1	1F72213	06/21/07	06/22/07	OA-1 (GC/MS)	
Benzene	ND	0.005	"	"	"	"	"	"	
Toluene	ND	0.005	"	"	"	"	"	"	
Ethylbenzene	ND	0.005	"	"	"	"	"	"	
Xylenes, total	ND	0.010	"	"	"	"	"	"	
Ethyl-tert-Butyl Ether (ETBE)	ND	0.010	"	"	"	"	"	"	
Di-iso-Propyl Ether (DIPE)	ND	0.010	"	"	"	"	"	"	
tert-Amyl Methyl Ether (TAME)	ND	0.010	"	"	"	"	"	"	
tert-Butyl Alcohol (TBA)	ND	0.250	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		107 %	77-124		"	"	"	"	

Determination of Extractable Petroleum Hydrocarbons

TEH, as gasoline	ND	5	mg/kg	1	1F72235	06/22/07	06/23/07	Iowa OA-2	
TEH, as #2 diesel fuel	ND	5	"	"	"	"	"	"	
TEH, as waste oil	ND	5	"	"	"	"	"	"	
Total Extractable Hydrocarbons	ND	5	"	"	"	"	"	"	
<i>Surrogate: Pentacosane</i>		90.8 %	50-133		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
 This analytical report must be reproduced in its entirety:

Trileaf Corporation
 5613 Gateway Drive, Suite 500
 Des Moines IA, 50111

Project: E Farm Closures
 Project Number: 7LTA38 (Waverly)
 Project Manager: Matt Hjortshoj

Reported
 06/26/07 14:28

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 17F2204 - 1F72213

Calibration Check (17F2204-CCV1)

Prepared & Analyzed: 06/21/07

Methyl-t-butyl Ether (MTBE)	45.92		mg/kg	56.60		81.1	80-120			
Benzene	56.06		"	55.40		101	80-120			
Toluene	67.85		"	65.40		104	80-120			
Ethylbenzene	67.34		"	62.60		108	80-120			
Xylenes, total	149.2		"	133.6		112	80-120			
Ethyl-tert-Butyl Ether (ETBE)	56.74		"	63.20		89.8	80-120			
Di-iso-Propyl Ether (DIPE)	60.89		"	63.60		95.7	80-120			
tert-Amyl Methyl Ether (TAME)	41.40		"	43.20		95.8	80-120			
tert-Butyl Alcohol (TBA)	899.8		"	1036		86.8	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>53.6</i>		<i>"</i>	<i>50.00</i>		<i>107</i>	<i>77-124</i>			

Batch 1F72213 - EPA 5030B

Blank (1F72213-BLK1)

Prepared: 06/21/07 Analyzed: 06/22/07

Methyl-t-butyl Ether (MTBE)	ND	0.010	mg/kg							
Benzene	ND	0.005	"							
Toluene	ND	0.005	"							
Ethylbenzene	ND	0.005	"							
Xylenes, total	ND	0.010	"							
Ethyl-tert-Butyl Ether (ETBE)	ND	0.010	"							
Di-iso-Propyl Ether (DIPE)	ND	0.010	"							
tert-Amyl Methyl Ether (TAME)	ND	0.010	"							
tert-Butyl Alcohol (TBA)	ND	0.250	"							
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.276</i>		<i>"</i>	<i>0.2500</i>		<i>110</i>	<i>77-124</i>			

LCS (1F72213-BS1)

Prepared: 06/21/07 Analyzed: 06/22/07

Methyl-t-butyl Ether (MTBE)	0.2304	0.010	mg/kg	0.3160		72.9	60-140			
Benzene	0.2719	0.005	"	0.2940		92.5	70-136			
Toluene	0.2012	0.005	"	0.2090		96.3	66-140			
Ethylbenzene	0.3210	0.005	"	0.2900		111	69-140			
Xylenes, total	0.5433	0.010	"	0.5700		95.3	70-140			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.273</i>		<i>"</i>	<i>0.2500</i>		<i>109</i>	<i>77-124</i>			

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
 This analytical report must be reproduced in its entirety.

Trileaf Corporation
 5613 Gateway Drive, Suite 500
 Des Moines IA, 50111

Project: E Farm Closures
 Project Number: 7LTA38 (Waverly)
 Project Manager: Matt Hjortshoj

Reported
 06/26/07 14:28

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 1F72213 - EPA 5030B

Matrix Spike (1F72213-MS1) **Source: 17F1174-01** **Prepared: 06/21/07** **Analyzed: 06/22/07**

Methyl-t-butyl Ether (MTBE)	0.2188	0.010	mg/kg	0.3098	ND	70.6	60-127			
Benzene	0.2738	0.005	"	0.2882	ND	95.0	60-138			
Toluene	0.1939	0.005	"	0.2049	ND	94.6	60-140			
Ethylbenzene	0.2990	0.005	"	0.2843	ND	105	60-140			
Xylenes, total	0.5119	0.010	"	0.5588	ND	91.6	60-140			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.252</i>		<i>"</i>	<i>0.2451</i>		<i>103</i>	<i>77-124</i>			

Matrix Spike Dup (1F72213-MSD1) **Source: 17F1174-01** **Prepared: 06/21/07** **Analyzed: 06/22/07**

Methyl-t-butyl Ether (MTBE)	0.2150	0.010	mg/kg	0.3098	ND	69.4	60-127	1.76	27	
Benzene	0.2771	0.005	"	0.2882	ND	96.1	60-138	1.17	29	
Toluene	0.1892	0.005	"	0.2049	ND	92.3	60-140	2.46	30	
Ethylbenzene	0.2792	0.005	"	0.2843	ND	98.2	60-140	6.83	30	
Xylenes, total	0.4789	0.010	"	0.5588	ND	85.7	60-140	6.67	30	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.258</i>		<i>"</i>	<i>0.2451</i>		<i>105</i>	<i>77-124</i>			

Trileaf Corporation
 5613 Gateway Drive, Suite 500
 Des Moines IA, 50111

Project: E Farm Closures
 Project Number: 7LTA38 (Waverly)
 Project Manager: Matt Hjortshoj

Reported
 06/26/07 14:28

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 17F2305 - 1F72235

Calibration Check (17F2305-CCV1)

Prepared & Analyzed: 06/22/07

TEH, as gasoline	2023		mg/kg	2014		100	85-115			
TEH, as #2 diesel fuel	2180		"	2046		107	85-115			
TEH, as waste oil	2141		"	2058		104	85-115			
Surrogate: Pentacosane	49.6		"	50.20		98.9	85-115			

Batch 1F72235 - 3545 OA-2 PFE

Blank (1F72235-BLK1)

Prepared & Analyzed: 06/22/07

TEH, as gasoline	ND	5	mg/kg							
TEH, as #2 diesel fuel	ND	5	"							
TEH, as waste oil	ND	5	"							
Total Extractable Hydrocarbons	ND	5	"							
Surrogate: Pentacosane	2.78		"	3.105		89.4	50-133			

LCS (1F72235-BS1)

Prepared: 06/22/07 Analyzed: 06/23/07

TEH, as #2 diesel fuel	533.9	5	mg/kg	511.0		104	59-118			
Surrogate: Pentacosane	3.21		"	3.105		103	50-133			

Matrix Spike (1F72235-MS1)

Source: 17F1177-02

Prepared: 06/22/07 Analyzed: 06/23/07

TEH, as #2 diesel fuel	430.4	5	mg/kg	510.7	41.2	76.2	50-121			
Surrogate: Pentacosane	2.93		"	3.103		94.3	50-133			

Matrix Spike Dup (1F72235-MSD1)

Source: 17F1177-02

Prepared: 06/22/07 Analyzed: 06/23/07

TEH, as #2 diesel fuel	510.3	5	mg/kg	510.2	41.2	91.9	50-121	17.0	30	
Surrogate: Pentacosane	3.06		"	3.100		98.6	50-133			

Reference (1F72235-SRM1)

Prepared: 06/22/07 Analyzed: 06/23/07

TEH, as #2 diesel fuel	490.7	5	mg/kg	511.0		96.0	70-130			
Surrogate: Pentacosane	2.97		"	3.105		95.5	50-133			

Trileaf Corporation
5613 Gateway Drive, Suite 500
Des Moines IA, 50111

Project: E Farm Closures
Project Number: 7LTA38 (Waverly)
Project Manager: Matt Hjortshoj

Reported
06/26/07 14:28

Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
<i>Iowa OA-2 in Soil</i>	Total Extractable Hydrocarbons	IA-NT
<i>OA-1 (GC/MS) in Soil</i>	Methyl-t-butyl Ether (MTBE)	IA-NT
	Benzene	IA-NT
	Toluene	IA-NT
	Ethylbenzene	IA-NT
	Xylenes, total	IA-NT

Code	Certifying Authority	Certificate Number	Expires
IA-NT	Iowa Department of Natural Resources	095	02/01/2008

Trileaf Corporation
5613 Gateway Drive, Suite 500
Des Moines IA, 50111

Project: E Farm Closures
Project Number: 7LTA38 (Waverly)
Project Manager: Matt Hjortshoj

Reported
06/26/07 14:28

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

CHAIN OF CUSTODY RECORD



600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

3012 Ansbrough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480
www.keystonelabs.com

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

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW
 SAMPLER: Matt Hjortshoj
 SITE NAME: # 7LTA 38 (waverly)
 ADDRESS: _____
 CITY/ST/ZIP: _____
 PHONE: _____

REPORT TO:
 NAME: Matt Hjortshoj
 COMPANY NAME: Trileaf Corp.
 ADDRESS: 5613 Gateway Drive, Suite 500
 CITY/ST/ZIP: Des Moines, IA 50111
 PHONE: Ph. 515-986-5151
 FAX: Fax 515-986-5643

BILL TO:
 NAME: SAME
 COMPANY NAME: _____
 ADDRESS: _____
 CITY/ST/ZIP: _____
 PHONE: _____
 Keystone Quote No.: _____
(If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY		
							1	2	3	4	5	6	7	8	9	10	11	12	LABORATORY WORK ORDER NO.
(A)	6/20/07	2:00		1	Soil	X	X	X										17F1174	01

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>6/21/07</u> Time <u>10:00</u>	Received by: (Signature) <u>[Signature]</u>	Date _____ Time _____	Turn-Around: <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush <u>ASAP Please</u> Contact Lab Prior to Submission
Relinquished by: (Signature) <u>[Signature]</u>	Date _____ Time _____	Received for Lab by: (Signature) <u>Bill</u>	Date <u>6/21/07</u> Time <u>12:05 PM</u>	Remarks: <u>PLEASE set MTBE Detection Limit no higher than 0.02 mg/kg</u>