CON 12-15
Doc #17266

GeoSource Inc.

109 West First Street
PO Box 347
Monticello, IA 52310

Phone 319-465-2030
800-317-2030
Fax 319-465-2040

August 26, 2002

Jack Friedman
Swiss Valley Farms
19157 Amber Road X-44
Monticello, IA 54310

Subject: Phase II Sampling
Cenex-Swiss Valley Bulk Petroleum Facility
600 East Maple Street
Maquoketa, Iowa

Dear Mr. Friedman:

Introduction

The purpose of this report is to present the field data for the referenced project. This work was performed in accordance with GeoSource Proposal No. 2002-520 and your signed authorization.

Background Information

The referenced site is the location of an active above ground bulk petroleum facility. Due to a potential property transaction, GeoSource recommended the installation of three temporary monitoring wells around the facility to investigate the potential for hydrocarbon contamination of the soil and/or groundwater.

Site Activity

On August 14, 2002, GeoSource, Inc. arrived at the site and advanced three borings/temporary wells. Temporary well (TMW1) was placed on the south side of the concrete containment wall within five feet of a coupler used for filling the bulk tanks. The second temporary well (TMW2) was placed on the west side of the concrete pad underneath the loading rack. The third temporary well (TMW3) was placed on the north side of the concrete containment wall in the area where accumulated liquid (presumably mostly water) inside the containment facility is pumped onto the ground. The borings were advanced to 12' below grade with the well screens installed at 10' below grade.

Soil screening with a photoionization detector (PID) was conducted as the borings were advanced. Soil samples for laboratory analysis were collected from the interval with the highest PID reading or from 5 feet below grade if hydrocarbons were not detected. Groundwater samples were collected from each well using a disposable polyethylene bailer. All soil and groundwater samples were analyzed according to Iowa OA-1/OA-2 methodology.

The attached laboratory analytical results indicate concentrations of benzene, toluene, ethylbenzene, and xylenes are below method detection limits for both soil and groundwater at all three locations. Concentrations of Total Extractable

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NATURAL RESOURCES

Hydrocarbons as Diesel (TEH-D) at TMW1 for soil and groundwater and in the soil sample from TMW2 were also below method detection limits. Analytical results indicated 781 parts per billion TEH-D in the groundwater sample collected from TMW2 and 76 parts per million TEH-D in the soil sample from TMW3. These concentrations are below IDNR Tier 1 limits. Concentrations of TEH-D in the groundwater at TMW3 was reported at 2,400 parts per billion which exceeds the Tier 1 limit of 1,200 parts per billion for actual drinking water wells. Although Tier 1 Risk Based Corrective Action limits are applicable to underground storage tank sites, these limits are also generally considered acceptable for evaluating above ground facilities.

Site stratigraphy was relatively consistent at all three boring locations. All sediment at the site was mixed alluvium composed of mostly silty clay and interbedded silty clay and sand. Static groundwater at the site is estimated to be between 4 to 6 feet below grade.

Discussion

Based on the results of the attached analytical report and data obtained from our field work it appears groundwater at the site has been impacted by petroleum related hydrocarbons in excess of IDNR reporting limits. GeoSource recommends the property owner provide a copy of this report to the Uncontrolled Sites Section of the Iowa Department of Natural Resources.

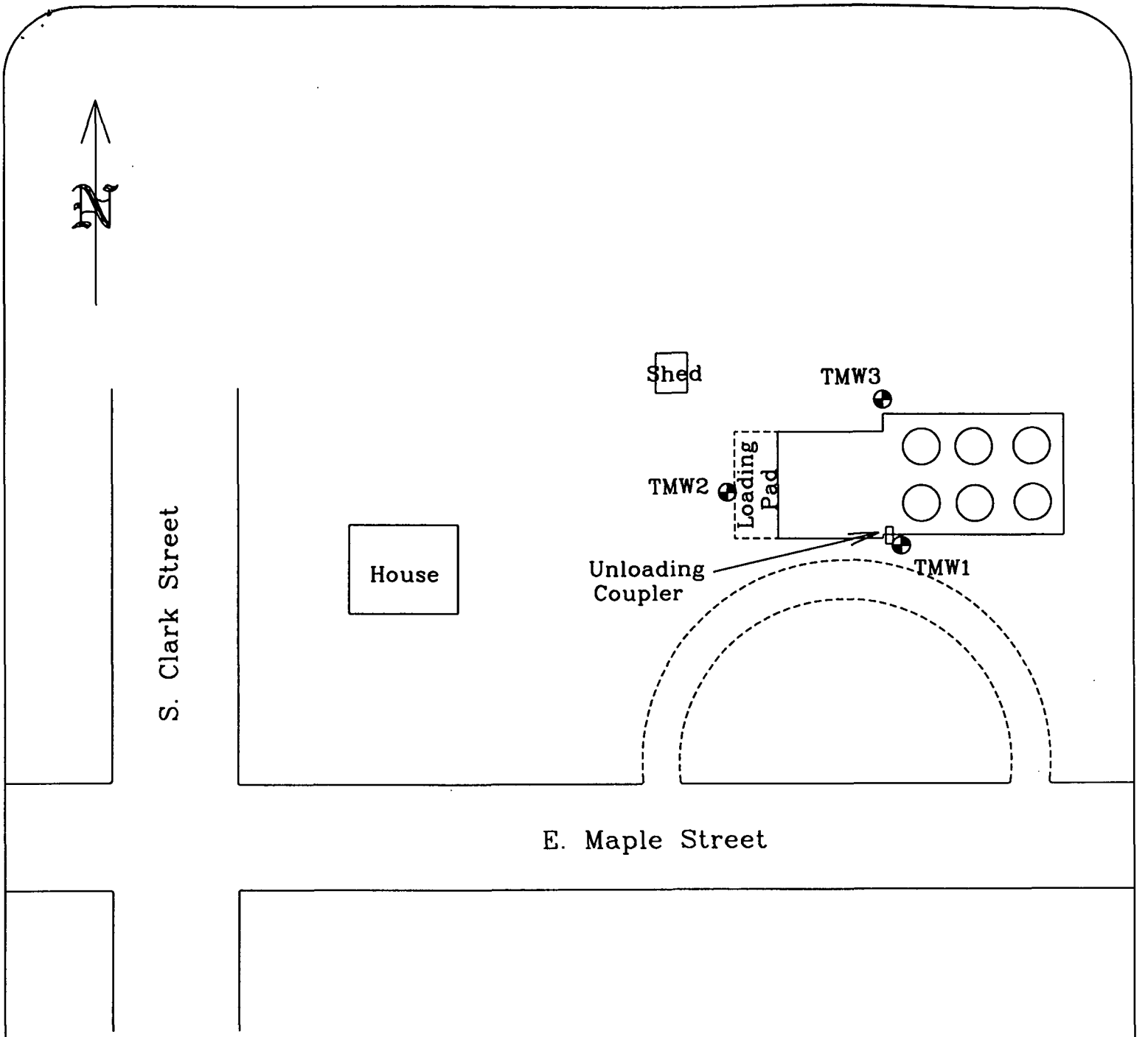
Standard of Care

The data contained in this report was collected in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this no warranty is implied or intended.

This report was prepared by:

Scott A. Behrends, Geologist
Project Manager
Certified Groundwater Professional No. 1083

Attachments:
Site Map
Boring Logs
Analytical Report
Chain-of-Custody Record



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Vapor Well Location

SCALE: 1" = 40'

Site Plan Map

Swiss Valley Farms
600 E. Maple St.
Maquoketa, IA

GeoSource, Inc.

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number:	Facility Name:	Facility Street Address:
TMW1	Cenex-Swiss Valley	600 E. Maple St. Maquoketa, IA
Boring Depth (ft) X Diameter (in):	12' x 7"	Drilling Method: 3.25" HSA
Well Contractor Name: Scott Behrends		Logged by:
Registration Number: 40712		Scott Behrends
Ground Surface Elevation (ASL): n/a		Top of Casing Elevation (ASL): n/a
Date: 08/14/02	Date: 08/14/02	UST Number: n/a
Start Time: 945	End Time: 1040	LUST Number: n/a

Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Sample Depth	Sample Type	PID/FID Reading	Rock Formations, Soil, Color and Classifications
0	----------						----------Gravel----------
–			1	1.5'	SS	0	Silty sand, fine-grained organic
2	Temporary						dark brown to black,no odor (SM)
–	Well		2	3'	SS	0	----------
4	Screen Only						Sand, fine-grained
–			3	5'	SS	0*	dark brown to black
6							(SW)
–	V		4	7'	SS	0	----------
8			5	8.5'	SS	0	Silty clay,greenish gray,no odor
–							(CL)
10	----------		6	10'	SS	0	----------
–	Well @ 10.0'						Interbedded Silty clay and sand
12			7	12'	SS	0	fine to med., brown (CL-ML)
–							----------
14							E.O.B. 12.0'
–							
16							
–							
18							
–							
20							
–							
22							
–							
24							
–							
26							
–							
28							
–							
30							

*SS (split spoon) HSA (hollow stem auger)

Observations	Date:	08/14/02				
Water Levels (ASL)	Level:	4.20'				
Static Water Level Symbol v	Time:	1205				

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SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number:	Facility Name:	Facility Street Address:
TMW2	Cenex-Swiss Valley	600 E. Maple St. Maquoketa, IA
Boring Depth (ft) X Diameter (in):	12' x 7"	Drilling Method: 3.25" HSA
Well Contractor Name: Scott Behrends		Logged by:
Registration Number: 40712		Scott Behrends
Ground Surface Elevation (ASL): n/a		Top of Casing Elevation (ASL): n/a
Date: 08/14/02	Date: 08/14/02	UST Number: n/a
Start Time: 1045	End Time: 1115	LUST Number: n/a

Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Sample Depth	Sample Type	PID/FID Reading	Rock Formations, Soil, Color and Classifications
0	----------						----------Gravel----------
--							Clay, brown
2	Temporary		1	2'	SS	0	(CH)
--	Well						----------
4	Screen Only		2	4'	SS	0	Clayey sand
--			3	5'	SS	0*	fine to medium, brown
6							(SC)
--	▽		4	7'	SS	0	
8							----------
--			5	9'	SS	0	Interbedded silty clay and sand
10	----------		6	10'	SS	0	fine to medium
--	Well @ 10.0'						brown
12			7	12'	SS	0	(CL-ML)
--							----------
14							E.O.B. 12.0'
--							
16							
--							
18							
--							
20							
--							
22							
--							
24							
--							
26							
--							
28							
--							
30							

*SS (split spoon) HSA (hollow stem auger)

Observations	Date:	08/14/02				
Water Levels (ASL)	Level:	6.30'				
Static Water Level Symbol v	Time:	1210				

DNR FORM 542-1392

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: TMW3	Facility Name: Cenex-Swiss Valley	Facility Street Address: 600 E. Maple St. Maquoketa, IA
Boring Depth (ft) X Diameter (in):	12' x 7"	Drilling Method: 3.25" HSA
Well Contractor Name: Scott Behrends		Logged by: Scott Behrends
Registration Number:	40712	
Ground Surface Elevation (ASL): n/a	Top of Casing Elevation (ASL): n/a	
Date: 08/14/02 Start Time: 1130	Date: 08/14/02 End Time: 1200	UST Number: n/a / LUST Number: n/a

Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Sample Depth	Sample Type	PID/FID Reading	Rock Formations, Soil, Color and Classifications
0	----------						----------Grass----------
--							Silty Clay, Dark Brown
2	Temporary		1	2'	SS	0	(CL)
--	Well						----------
4	Screen Only		2	4'	SS	0	
--			3	5'	SS	0*	Interbedded silty clay and sand
6							fine to medium
--	V		4	7'	SS	0	brown
8							(CL-ML)
--			5	9'	SS	0	
10	----------		6	10'	SS	0	
--	Well @ 10.0'						
12			7	12'	SS	0	
--							----------
14							E.O.B. 12.0'
--							
16							
--							
18							
--							
20							
--							
22							
--							
24							
--							
26							
--							
28							
--							
30							

*SS (split spoon) HSA (hollow stem auger)

Observations	Date:	08/14/02				
Water Levels (ASL)	Level:	7.40'				
Static Water Level Symbol v	Time:	1215				

DNR FORM 542-1392

Nebraska Analytical Testing Laboratories
4123 South 67th Street ▪ Omaha, NE 68117
402-331-0935 ▪ FAX: 402-331-8779

ORGANICS REPORT

Project Name:	BTEX and TEH Analysis on Water and Soil		
Location:	Cenex, Swiss Valley, Maquoketa, IA		
Client:	GeoSource, Inc. Attn: Scott Behrends 109 West 1st Street Monticello, Iowa 52310	Job No.: Lab No.:	GEO-02-27 C 1243-1248
Ordered by:	S. Behrends 319-465-2030	Date Rec'd: Report Date:	8-16-02 8-23-02
Submitted by:	Geo Source	Fax Date:	8-23-02
Test Method:	Purge & Trap, OA-1, OA-2		

TEST RESULTS

Lab No:	C 1243	C 1244	C 1245	C 1246	C 1247	C 1248
Sample ID:	TMW-1	TMW-2	TMW-3	TMW-1	TMW-2	TMW-3
Sample Type:	Water	Water	Water	Soil	Soil	Soil
Sample Date:	8-14-02	8-14	8-14	8-14	8-14	8-14
Sample Depth:	---	---	---	5'	5'	5'
pH (Std Units)	<2	<2	<2	---	---	---
Benzene:	<1	<1	<1	<1	<1	<1
Toluene:	<1	<1	<1	<1	<1	<1
Ethylbenzene:	<1	<1	<1	<1	<1	<1
Total Xylene:	<2	<2	<2	<2	<2	<2
TEH as Gasoline:	<100	<100	<100	<10	<10	<10
TEH as Diesel:	<100	781	2,400	<10	<10	76
TEH as Waste Oil:	<200	<200	<200	<20	<20	<20
% Surrogate Recovery:	99	99	99	99	99	99
Analyst/Date:	SF/8-21	8-21	8-22	8-19	8-19	8-19

Comments: All units are µg/L (ppb) for water, µg/Kg (ppb) for soil unless otherwise noted
Method Detection Limits: BTE= 1 ppb; Xylene = 2 ppb;
TEH as Gasoline and Diesel = 10 ppm for soil, 100 ppb for water
TEH as Waste Oil = 20 ppm for soil, 200 ppb for water
TEH = Total Extractable Hydrocarbons (ppm = mg/Kg for soil, ppb = µg/L for water)
IA Lab Certification No: 139
(2) Client

Submitted by:

Seth Frishman, Chief Scientist
SF/pt

SAMPLE IDENTIFICATION/FIELD CHAIN OF CUSTODY RECORD

NEL AT LABORATORIES

Lab Project No. G60-02-27

Client GeoSource, Inc.	P.O. No.
Address 109 West First St.	Project No.
Monticello, Ia 52310	Project Name Cenex -
Client Contact GeoSource	Project Location Swiss Valley
Phone/Fax 319-465-2030	Maquoketa, Ia
Comments: NO MTBE	Sampled By Scott Behrends

ANALYSIS

8021	8142								

Preservative
A: None
B: HNO_3
C: H_2SO_4
D: NaOH
E: HCl

Sample I.D.	Sample Depth	Time Sampled	Date Sampled	Sample Type	No. of containers	Preserv.									Lab I.D.
1. 814 1210 TMW1	-	1210	8-14-02	H_2O	1		X	X							C1243
2. 814 1215 TMW2	-	1215	8-14-02	H_2O	1		X	X							C1244
3. 814 1220 TMW3	-	1220	8-14-02	H_2O	1		X	X							C1245
4. 814 1030 TMW1	5' bg	1030	8-14-02	soil	1		X	X							C1246
5. 814 1100 TMW2	5' bg	1100	8-14-02	soil	1		X	X							C1247
6. 814 1140 TMW3	5' bg	1140	8-14-02	soil	1		X	X							C1248
7.															
8.															
9.															
10.															

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Betty Moe 8-15-02	1430		

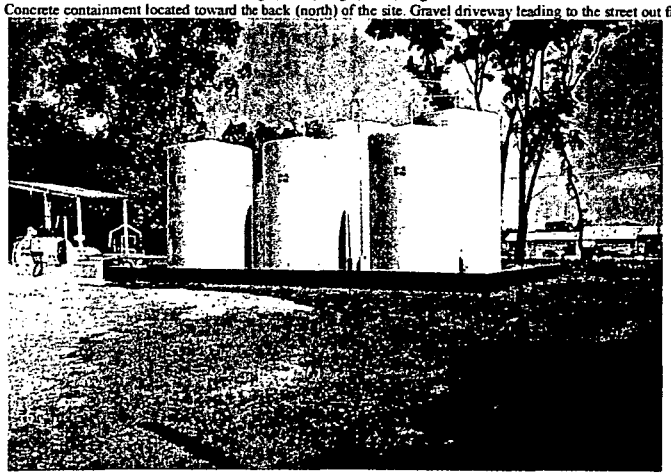
Hazardous Material Suspected?	Yes / No
Disposal by Lab?	Yes / No
Shipment Method:	
Expected turnaround time:	

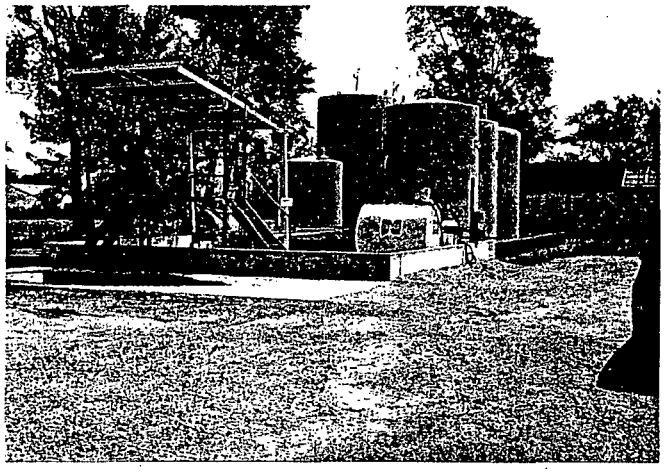
Received for lab by (signature) [signature] Date/Time 8/16/02 1615 RECEIVING LABORATORY: Please return original after signing for receipt of samples.

Nebraska Analytical Testing Laboratories, Inc

4123 So. 67th Street • Omaha, NE 68117 • 402-331-0935 • FAX: 402-331-8779

Concret loading pad located at the west end of containment under the loading rack surrounded by gravel driveway.
6 Bulk Tanks located on the site. 1-4,000gal, 3-10,000gal, 2-15,000gal.
Concrete containment located toward the back (north) of the site. Gravel driveway leading to the street out front





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