CON 12-15 Coppola Property, Walnut
JC

CON 12-15
Doc #15996

PROJECT #6110906

PHASE II ENVIRONMENTAL SITE ASSESSMENT

FOR

1312-1324 WALNUT AVENUE

DES MOINES, IOWA

Seneca Environmental Services

Des Moines • Davenport

Seneca Environmental Services
Des Moines • Bettendorf

PROJECT #6110906

PHASE II ENVIRONMENTAL SITE ASSESSMENT

FOR

1312-1324 WALNUT AVENUE

DES MOINES, IOWA

PREPARED FOR:

Mr. Jeff Hunter

P. O. Box 7230

Des Moines, Iowa 50309

PREPARED BY:

Amy A. Linder

Seneca Environmental Services, Inc.

P. O. Box 3360

Des Moines, Iowa 50316

PHASE II ENVIRONMENTAL SITE ASSESSMENT

AT

1312-1324 WALNUT AVENUE

IN

DES MOINES, IOWA

Prepared for:

Mr. Jeff Hunter
P. O. Box 7230
Des Moines, Iowa 50309

Seneca Project No 6110906

by
SENECA Environmental Services

Amy A. Linder
Environmental Scientist/Property Transfer Consultant

November 17, 1998

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PHASE II ENVIRONMENTAL SITE ASSESSMENT FOR 1312-1324 WALNUT AVENUE LOCATED IN DES MOINES, IOWA

Introduction:

This report summarizes the data, observations, and conclusions of a Phase II Environmental Site Assessment conducted at 1312-1324 Walnut Avenue in Des Moines. The scope of work consisted of drilling two boreholes for the acquisition and analysis of soil and groundwater samples. This report was prepared for Mr. Jeff Hunter of Des Moines.

Module I. Site History:

Based on a Phase I Environmental Site Assessment performed by Seneca Environmental Services, Inc., the following recognized environmental conditions were cited:

- Historical use of the subject property as a battery manufacturer generating hazardous waste and solvents.
- Historical use of the subject property for tractor/vehicle maintenance and repair activities generating waste oils and solvents.
- Historical presence of two underground storage tanks (product unknown) located east of the subject property building.
- Presence of a 55 gallon corroded barrel with a spigot containing fuel of unknown content and volume located next to the boiler room.
- Presence of a 300 gallon above ground storage tank (no secondary containment) containing approximately four inches of petroleum product located along the south wall of the southwest portion of the subject property building. There are noticeable stains on the tank and detectable petroleum vapors.
- Presence of a corroded 55 gallon barrel that appears to have leaked petroleum product on the concrete along the south wall of the southwest portion of the subject property.
- Known TCE (trichloroethylene) contamination in groundwater to the northeast of the subject property.
- Historic use of the adjacent property to the west as a rubber manufacturer.
- Historic use of the surrounding properties for auto/machinery maintenance and repair activities generating waste oil and solvents.

- Long area history of commercial and industrial activities (I. e. gas stations located to the east, numerous garages, a railroad roundhouse and car department between Walnut and Mulberry, and equipment repair), on properties upgradient and in the vicinity of the subject property.

Based on the above recognized environmental conditions, a Phase II Environmental Site Assessment strategy was developed which included the drilling of two boreholes for the acquisition and analysis of soil and groundwater samples (please refer to the site map which is included as Appendix A for sample locations).

Module II. Drilling and Sampling:

The resulting scope of work consisted of the drilling of two boreholes on either side of the south edge of the subject property building. BH1 is located on the southeastern corner of the subject property, downgradient of the two former underground storage tanks. BH2 is located on the southwestern portion of the subject property. Both were drilled on October 29, 1998, with a truck-mounted drilling rig equipped with 6 ¼ inch outside diameter hollow stem augers and core barrel capable of providing a continuous soil sample. A photoionization detector (PID) was used for field screening soil samples at one foot intervals. A soil sample from one foot intervals of the sediment core was placed in a labeled zip-lock baggie. Following sufficient time for volatilization, the PID was used to detect volatile organic compounds inside the soil sample bags. No indications of petroleum contamination were indicated using this method. Soil samples were collected at the surface for each borehole for the analysis of metals in soils. A soil sample was obtained from six feet below grade from BH1 and at 14 feet below grade from BH2 for the analysis of petroleum compounds. All soil samples were stored on ice and sent to a certified laboratory for further analysis.

Boreholes BH1 and BH2 were drilled to a depth of 45 and 40 feet respectively at which depths it was determined that the water table had been sufficiently penetrated for the purposes of groundwater sampling. The sediments that were encountered at the site include an upper layer of silty and sandy clay from the surface to about two feet below grade underlain by sand units. Detailed lithologic logs documenting the sediments from both boreholes is included in Appendix B.

After temporary monitoring wells were installed at BH1 and BH2, both wells were developed by bailing greater than five casing volumes of water from each monitoring well. After sufficient time had passed for the wells to fully recover and return to a static water level, groundwater samples were then collected. Groundwater samples were analyzed for volatile organic compounds utilizing EPA Method 8260. An additional groundwater sample was collected and field filtered for the analysis of dissolved

RCRA metals. All groundwater samples were stored on ice until the time they were received by the laboratory for analysis. The following table is a summary of sampling activity and analysis procedure separated by media.

SAMPLE ID	MATRIX	SAMPLE DEPTH	ANALYSIS
BH1 S-Surface-1'	Soil	Surface to 1 foot	RCRA Metals
BH1 S-6'	Soil	6 feet	*IA Method OA1/OA2
BH2 S-Surface-1'	Soil	Surface to 1 foot	RCRA Metals
BH2 S-14'	Soil	14 feet	IA Method OA1/OA2
BH1	Groundwater	NA	IA Method OA1/OA2 **EPA Method 8260 Dissolved RCRA Metals
BH2	Groundwater	NA	IA Method OA1/OA2 EPA Method 8260 Dissolved RCRA Metals

*IA Method OA1/OA2: petroleum compounds
**EPA Method 8260: volatile organic compounds

After sampling activities were completed, both wells were plugged by a certified well contractor. Well plugging was in performed in accordance with the Iowa Department of Natural Resource's rule 567-39.8 of the Iowa Administrative Code (IAC). Copies of abandoned water well plugging records are included as Appendix C.

Module III. Results of Drilling:

A soil surface sample obtained from BH1 indicated concentrations of mercury, arsenic, barium, chromium, lead, and silver. A surface soil sample collected from BH2 was found to contained concentrations of mercury, arsenic, barium, cadmium, chromium, and lead. Arsenic was the only RCRA metal found to be over the action level. Groundwater samples obtained from each borehole revealed concentrations of barium and tetrachloroethene. A soil sample obtained at 14 feet below grade from BH1 contained a small concentration of motor oil. The analytical results of the soil and groundwater samples and the chain-of-custody form are included in Appendix D. Pictures taken during the drilling and sampling procedure are included as Appendix E. The following table summarizes all positive results for both soil and

groundwater samples followed by an explanation of the action level utilized. Those rows that appear in bold indicate compounds that exceed the action level.

WELL ID	MATRIX	COMPOUND	LAB RESULTS	ACTION LEVEL
BH1-S-Surface-1'	Soil	Mercury	0.029 ppm	1. 23 ppm* 2. 23 ppm** 3. 610 ppm***
BH1-S-Surface-1'	**Soil**	**Arsenic**	**9.6 ppm**	**1. 1.4 ppm** **2. 2.1 ppm** 3. 16 ppm
BH1-S-Surface-1'	Soil	Barium	52 ppm	1. 5500 ppm 2. 5500 ppm 3. 140,000 ppm
BH1-S-Surface-1'	Soil	Chromium	13 ppm	1. 78,000 ppm 2. 78,000 ppm 3. No Limit
BH1-S-Surface-1'	Soil	Lead	25 ppm	1. 400 ppm 2. 400 ppm 3. 800 ppm
BH1-S-Surface-1'	Soil	Silver	1.3 ppm	1. 390 ppm 2. 390 ppm 3. 10,000 ppm
BH2-S-Surface-1'	Soil	Mercury	0.062 ppm	1. 23 ppm 2. 23 ppm 3. 610 ppm

WELL ID	MATRIX	COMPOUND	LAB RESULTS	ACTION LEVEL
BH2-S-Surface-1'	**Soil**	**Arsenic**	**5.4 ppm**	**1. 1.4 ppm** **2. 2.1 ppm** 3. 16 ppm
BH2-S-Surface-1'	Soil	Barium	170 ppm	1. 5500 ppm 2. 5500 ppm 3. 140,000
BH2-S-Surface-1'	Soil	Cadmium	3.2 ppm	1. 39 ppm 2. 39 ppm 3. 1000 ppm
BH2-S-Surface-1'	Soil	Chromium	36 ppm	1. 78,000 ppm 2. 78,000 ppm 3. No Limit
BH2-S-Surface-1'	Soil	Lead	190 ppm	1. 400 ppm 2. 400 ppm 3. 800 ppm
BH2-S-14'	Soil	Motor Oil	11 ppm	400 ppm (IA Tier I action level)
BH1	Groundwater	Barium	0.042 ppm	2 ppm (EPA MCL)
BH1	**Groundwater**	**Tetrachloroethene**	**5.9 ppb**	**0.7 (EPA NRL*)**
BH2	Groundwater	Barium	0.023 ppm	2 ppm (EPA MCL*)
BH2	**Groundwater**	**Tetrachloroethene**	**1.1 ppb**	**0.7 (EPA NRL)**

*1—Statewide standard for residential setting, daily exposure, shallow depth sample (0-2 feet).
**2—Non-residential setting, exposure on a less than daily basis (i. e. a workplace), shallow depth sample (0-2 feet).
***3—Non-residential, restricted access area with institutional controls (i. e. psychical controls such as a fence), shallow depth sample (0-2 feet)

*Note that "NRL" means the negligible risk level for carcinogens established by the EPA, which is an estimate of one additional cancer case per million people exposed over a lifetime to the contaminant. "MCL" refers to the enforceable maximum contaminant level established by the EPA following the establishment of the Safe Drinking Water Act. IDNR guidance documents indicate the "action level" for groundwater as the following: "As defined by 567-133.2 (455B, 455E), action level means the HAL, if one exists. If there is no HAL, then the NRL (negligible risk level), if one exists. If there is no HAL or NRL, then the MCL (maximum contaminant level). If there is no HAL, NRL, or MCL, an action level may be established by the department based on current technical literature and recommended guidelines of EPA and recognized experts, on a case-by-case basis.

Information was obtained through interviews with Rita Gergely of the Iowa Department of Health (drinking water standards), and Bob Drustrup with the Iowa Department of Natural Resources, Solid Waste Division (statewide standards for metals in soil).

MODULE IV. Data Review and Recommendations:

As a result of drilling and sampling performed at the subject site, we have concluded that soil sampled at the surface to one foot below grade from BH1 and BH2 did contain concentrations of Arsenic in concentrations greater than the newly developed Iowa Land Recycling Act statewide standards. Concentrations of Mercury, Barium, Chromium, Lead, Silver, and Cadmium were detected below newly developed statewide standards and may be representative of background concentrations naturally occuring in soils. Soil samples obtained from six feet below grade from BH1 and at fourteen feet below grade from BH2 did not contain petroleum compounds above IDNR established action levels. A groundwater sample collected from each temporary well indicated concentrations of tetrachloroethene above EPA drinking water standards. Additional groundwater samples did not contain volatile organic compounds or petroleum compounds in concentrations above the reporting limits of each individual compound.

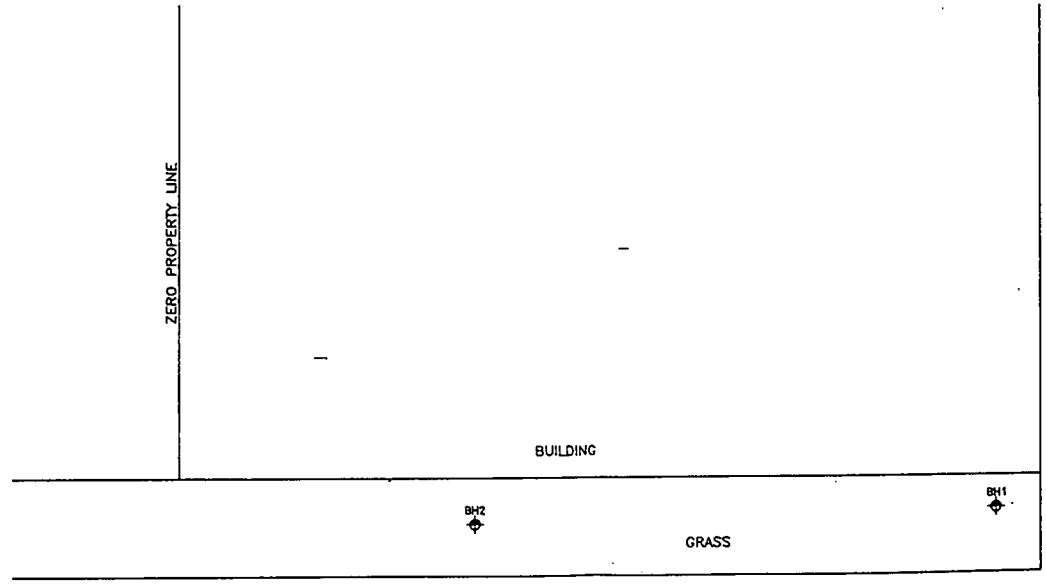
Upon receipt of this report, the property owner should be instructed to call Lavoy Haage at (515) 281-4968 and provide verbal notification of the findings. The property owner should forward a copy of this report to the IDNR at the following address:

Mr. Lavoy Haage
Iowa Department of Natural Resources
Wallace State Office Building
502 East 9th Street
Des Moines, IA 50319

The information contained in this report is based on a limited number of boreholes and a limited analytical suite. The groundwater and soil samples that were collected are assumed to be representative of the small area surrounding the borehole. Failure to discover hazardous substances or conditions at the time of this report through appropriate techniques does not guarantee that hazardous materials or substances do not exist at the site. We make no warranty, expressed or implied, for this property nor make certification of the suitability of future use of the property based on the results of this assessment, except that our services were performed in accordance with the level of care and skill ordinarily practiced by members of the profession in this area at this time under similar budget and time constraints.

This report has been prepared on behalf of and exclusively for the use of Mr. Jeff Hunter of Des Moines, Iowa. This report and the findings contained herein shall not, in whole or part, be disseminated or conveyed to any other party or be used or relied upon by any other party, in whole or in part, without the consultant's prior written consent.

APPENDIX A
SITE MAP



0 5' 10' 20' 40'

SCALE IN FEET

SENECA ENVIRONMENTAL SERVICES

1312-1320 WALNUT DES MOINES, IOWA

SCALED SITE PLAN

11/10/98

DARROCK WORRALL

AMY LINDER

1"=20'

6110906A

6110906

1 OF 1

APPENDIX B
LITHOLOGIC LOGS

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well Number:	Facility:	Facility Street Address:
BH1	Vacant	1312-1324 Walnut St., Des Moines
Boring Depth (ft) X Diameter (in): 45 ft X 6.25 in		Drilling Method: HS
Well contractor Name: Rewert's Drilling Service		Logged By: A. Linder
Registration Number: 40480		
Ground Surface Elevation (ASL): NA		Top of Casing Elevation (ASL): NA
Date: 10/29/98 Start Time: 9:00 AM	Date: 10/29/98 End Time: 10:00 AM	UST Number: NA / LUST Number: NA

Depth (feet)	Well Construction Details	Blow Count	Sample No.	Sample Type	PID/FID Reading	USCS Class.	Soil Classification
0							Overlay Material Grass
1			S-S-1'	Soil	0		Topsoil, organic debris, gravel, dry, no odor.
2					0		
3					0		Brown silty clay, hard, brittle, gravel intermixed, no
4							odor.
5							
6			S-6'	Soil	0		Fine-grained sand, most, some organic debris,
7							no odor.
8							
9							
10							
11					0		Fine-grained sand, light brown, intermixed with
12					0		various-sized pebbles, oxidized, moist, no odor.
13							
14							
15							
16							Mixed and coarse-grained sand, large pebbles
17							intermixed, moist, oxidized, no odor.
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30	V						
31							
32							
33							
34							
35							

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well Number: BH1 (continued)	Facility: Vacant	Facility Street Address: 1312-1324 Walnut St., Des Moines
Boring Depth (ft) X Diameter (in): 45 ft X 6.25 in		Drilling Method: HS
Well contractor Name: Rewert's Drilling Service Registration Number: 40480		Logged By: A. Linder
Ground Surface Elevation (ASL): NA		Top of Casing Elevation (ASL): NA
Date: 10/29/98 Start Time: 9:00 AM	Date: 10/29/98 End Time: 10:00 AM	UST Number: NA LUST Number: NA

Depth (feet)	Well Construction Details	Blow Count	Sample No.	Sample Type	PID/FID Reading	USCS Class.	Soil Classification
							Mixed, coarse-grained sand.
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							TD = 45 feet
46							
47							
48							
49							
50							

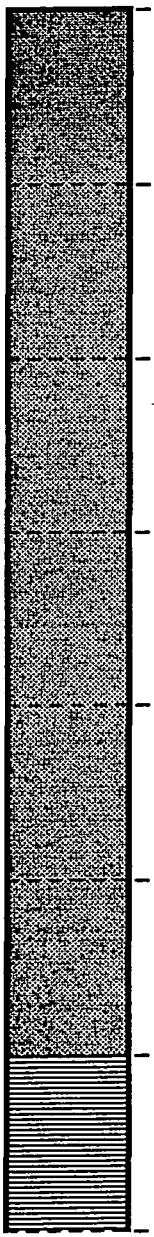
* SS (Split Spoon) HSA (Hollow Stem Auger)

Observations	Date:	NA				
Water Levels (ASL)	Level:	NA				
Static Water Level v	Time:	NA				

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

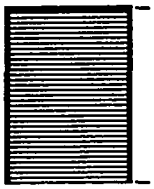
Boring/Well Number: BH2	Facility: Vacant	Facility Street Address: 1312-1324 Walnut St., Des Moines
Boring Depth (ft) X Diameter (in): 40 ft X 6.25 in		Drilling Method: HS
Well contractor Name: Rewert's Drilling Service Registration Number: 40480		Logged By: A. Linder
Ground Surface Elevation (ASL): NA		Top of Casing Elevation (ASL): NA
Date: 10/29/98 Start Time: 10:15 AM	Date: 10/29/98 End Time: 11:15 AM	UST Number: NA / LUST Number: NA

Depth (feet)	Well Construction Details	Blow Count	Sample No.	Sample Type	PID/FID Reading	USCS Class.	Soil Classification
0							Overlay Material Grass
1			S-S-1'	Soil	0		Topsoil mixed with gravel and cinder debris, dry,
2							no odor.
3							
4							
5							
6					0		Brick and metal debris intermixed with black silty clay,
7							some oxidation, no odor, moist.
8							
9							
10							
11					0		Black silty clay with fine-grained sand intermixed,
12					0		minor oxidation, moist, no odor.
13					0		
14			S-14'	Soil	0		
15					0		
16					0		Mostly fine-grained sand, moist, some brown silty
17					0		clay intermixed, no odor.
18					0		
19					0		
20					0		
21							Coarse-grained sand, wet, light brown, no odor.
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35	V						



SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well Number: BH2 *(continued)*	Facility: Vacant	Facility Street Address: 1312-1324 Walnut St., Des Moines
Boring Depth (ft) X Diameter (in): 40 ft X 6.25 in		Drilling Method: HS
Well contractor Name: Rewert's Drilling Service Registration Number: 40480		Logged By: A. Linder
Ground Surface Elevation (ASL): NA		Top of Casing Elevation (ASL): NA
Date: 10/29/98 Start Time: 10:15 AM	Date: 10/29/98 End Time: 11:15 AM	UST Number: NA LUST Number: NA

Depth (feet)	Well Construction Details	Blow Count	Sample No.	Sample Type	PID/FID Reading	USCS Class.	Soil Classification
							Coarse-grained sand.
36 37 38 39 40							TD = 40 feet
41 42 43 44 45							
46 47 48 49 50							

* SS (Split Spoon) HSA (Hollow Stem Auger)

Observations	Date:	NA				
Water Levels (ASL)	Level:	NA				
Static Water Level v	Time:	NA				

APPENDIX C
COPIES OF ABANDONED WATER WELL PLUGGING RECORDS

Iowa Department of Natural Resources

Abandoned Water Well
Plugging Record

1. Owner:

Name: _____ City: _____ State: _____

Address: _____ Zip: _____ Phone: ( )

2. Well (Cistern) Location:

NW 1/4 of, NW 1/4 of, NW 1/4 of, Section 9, Twp. 78 N,. Range 24 West/East (circle one)

Polk County, Describe well location on property: 3½ - 7' South and 47' west of SW corner of bldg. 8' N of alley + 90' W of SE corner of bldg

3. Description:

Well depth:	40 ft	Casing material: steel, (plastic), concrete, clay, brick, stone (circle one)	
Depth to water:	~35 ft		
Casing diameter:	2 in	Type of construction: (drilled), driven, bored, dug, augered (circle one)	
Yr. or decade constrd.:	1998		
Depth of casing:	40 ft	Check ☑ if this is a Monitoring Well	

Check ☐ if Cistern depth: _____ ft. diameter: _____ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: _____ Date Plugged: 10-29-98

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: Dick [illegible] Cert. No: 4C480

OR, If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: _____ **Date Approved:** _____

Eligible for Grants to Counties cost share: ☐ YES ☐ NO (Determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

or, only if no county agent is available, to:

Water Supply Section
Department of Natural Resources
900 East Grand Avenue
Des Moines, IA 50319-0034

Iowa Department of Natural Resources

Abandoned Water Well
Plugging Record

1. Owner:

Name: _____ City: _____ State: _____

Address: _____ Zip: _____ Phone: ( )

2. Well (Cistern) Location:

NW 1/4 of, NW 1/4 of, NW 1/4 of, Section 9, Twp. 78 N, Range 24 (West) East (circle one)

Polk County, Describe well location on property: BH - 7' in and 5' S of SE corner of bldg #11 N of alley

3. Description:

Well depth:	45 ft	Casing material: steel, (plastic,) concrete, clay, brick, stone (circle one)	
Depth to water:	~30' ft		
Casing diameter:	2 in	Type of construction: (drilled,) driven, bored, dug, augered (circle one)	
Yr. or decade constrd.:	1998		
Depth of casing:	45 ft	Check ☑ if this is a Monitoring Well	

Check ☐ if Cistern depth: _____ ft. diameter: _____ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: _____ Date Plugged: 10-29-98

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: Dick H Cert. No: 4C4185

OR, If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: _____ **Date Approved:** _____

Eligible for Grants to Counties cost share: ☐ YES ☐ NO (Determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

or, only if no county agent is available, to:

Water Supply Section
Department of Natural Resources
900 East Grand Avenue
Des Moines, IA 50319-0034

APPENDIX D
LABORATORY ANALYSIS OF SOIL AND GROUNDWATER SAMPLES
CHAIN OF CUSTODY FORM

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480044

NET Job No: 98.13867

Sample ID: BH1 S-Surface-1' Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Mercury,CVAA	0.029	mg/kg	11/05/1998	jcp	EPA 245.5	0.020
ICP Metals Prep (Solid)	Complete	g	11/03/1998	mpc		
ICP Metals-Solid	Complete	mg/kg	11/07/1998	llw	SW 6010B	
Arsenic, ICP	9.6	mg/kg	11/07/1998	llw	SW 6010B	4.0
Barium, ICP	52	mg/kg	11/07/1998	llw	SW 6010B	0.50
Cadmium, ICP	<1.0	mg/kg	11/07/1998	llw	SW 6010B	1.0
Chromium, ICP	13	mg/kg	11/07/1998	llw	SW 6010B	1.0
Lead, ICP	25	mg/kg	11/07/1998	llw	SW 6010B	5.0
Selenium, ICP	<7.5	mg/kg	11/07/1998	llw	SW 6010B	7.5
Silver, ICP	1.3	mg/kg	11/07/1998	llw	SW 6010B	1.0

R.L. Bindert
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480045

NET Job No: 98.13867

Sample ID: BH2 S-Surface-1' Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Mercury,CVAA	0.062	mg/kg	11/05/1998	jcp	EPA 245.5	0.020
ICP Metals Prep (Solid)	Complete	g	11/03/1998	mpc		
ICP Metals-Solid	Complete	mg/kg	11/07/1998	llw	SW 6010B	
Arsenic, ICP	5.4	mg/kg	11/07/1998	llw	SW 6010B	4.0
Barium, ICP	170	mg/kg	11/07/1998	llw	SW 6010B	0.50
Cadmium, ICP	3.2	mg/kg	11/07/1998	llw	SW 6010B	1.0
Chromium, ICP	36	mg/kg	11/07/1998	llw	SW 6010B	1.0
Lead, ICP	190	mg/kg	11/07/1998	llw	SW 6010B	5.0
Selenium, ICP	<7.5	mg/kg	11/07/1998	llw	SW 6010B	7.5
Silver, ICP	<1.0	mg/kg	11/07/1998	llw	SW 6010B	1.0

R.L. Bindert
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480046

NET Job No: 98.13867

Sample ID: BH1 S-6' Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Extraction Prep, soil	complete		11/09/1998	sdv	IOWA-OA2	
EXTRACTABLE HYDROCARBONS-SOIL						
Total Extractable Hydrocarbons	<10	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
Diesel	<10	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
Gasoline	<10	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
Motor Oil	<10	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
VOLATILES - BTEX (NONAQUEOUS)						
Benzene	<0.25	ug/g	11/04/1998	sjg	IA-OA1	0.25
Toluene	<0.5	ug/g	11/04/1998	sjg	IA-OA1	0.5
Ethylbenzene	<0.5	ug/g	11/04/1998	sjg	IA-OA1	0.5
Xylenes, Total	<0.5	ug/g	11/04/1998	sjg	IA-OA1	0.5

R.L. Bindert
Operations Manager

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480047

NET Job No: 98.13867

Sample ID: BH2 S-14' Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Extraction Prep, soil	complete		11/09/1998	sdv	IOWA-OA2	
EXTRACTABLE HYDROCARBONS-SOIL						
Total Extractable Hydrocarbons	11	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
Diesel	<10	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
Gasoline	<10	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
Motor Oil	11	ug/g	11/10/1998	ajp	IA-OA2/S-8015	10
VOLATILES - BTEX (NONAQUEOUS)						
Benzene	<0.25	ug/g	11/04/1998	sjg	IA-OA1	0.25
Toluene	<0.5	ug/g	11/04/1998	sjg	IA-OA1	0.5
Ethylbenzene	<0.5	ug/g	11/04/1998	sjg	IA-OA1	0.5
Xylenes, Total	<0.5	ug/g	11/04/1998	sjg	IA-OA1	0.5

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480048

NET Job No: 98.13867

Sample ID: BH1 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Arsenic, Dissolved (ICP)	<0.080	mg/L	11/02/1998	llw	SW 6010B	0.080
Barium, Dissolved (ICP)	0.042	mg/L	11/02/1998	llw	SW 6010B	0.010
Cadmium, Dissolved (ICP)	<0.020	mg/L	11/02/1998	llw	SW 6010B	0.020
Chromium, Dissolved (ICP)	<0.020	mg/L	11/02/1998	llw	SW 6010B	0.020
Lead, Dissolved (ICP)	<0.10	mg/L	11/02/1998	llw	SW 6010B	0.10
Selenium, Dissolved (ICP)	<0.15	mg/L	11/02/1998	llw	SW 6010B	0.15
Silver, Dissolved (ICP)	<0.020	mg/L	11/02/1998	llw	SW 6010B	0.020
Mercury, diss. Cold Vapor	<0.00020	mg/L	11/05/1998	jcp	EPA 245.1	0.00020
VOLATILE COMPOUNDS - 8260						
Acetone	<20	ug/L	11/02/1998	mmk	SW 8260B	20
Benzene	<0.5	ug/L	11/02/1998	mmk	SW 8260B	0.5
Bromobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Bromochloromethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Bromodichloromethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Bromoform	<2.0	ug/L	11/02/1998	mmk	SW 8260B	2.0
Bromomethane	<4.0	ug/L	11/02/1998	mmk	SW 8260B	4.0
2-Butanone (MEK)	<10	ug/L	11/02/1998	mmk	SW 8260B	10
n-Butylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
sec-Butylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
tert-Butylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Carbon Tetrachloride	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chlorodibromomethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chloroethane	<4.0	ug/L	11/02/1998	mmk	SW 8260B	4.0

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480048

NET Job No: 98.13867

Sample ID: BH1 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Chloroform	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chloromethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
2-Chlorotoluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
4-Chlorotoluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dibromo-3-Chloropropane	<10	ug/L	11/02/1998	mmk	SW 8260B	10
1,2-Dibromoethane (EDB)	<10	ug/L	11/02/1998	mmk	SW 8260B	10
Dibromomethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dichlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,3-Dichlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,4-Dichlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Dichlorodifluoromethane	<3.0	ug/L	11/02/1998	mmk	SW 8260B	3.0
1,1-Dichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1-Dichloroethene	<2.0	ug/L	11/02/1998	mmk	SW 8260B	2.0
cis-1,2-Dichloroethene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
trans-1,2-Dichloroethene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,3-Dichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
2,2-Dichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1-Dichloropropene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
cis-1,3-Dichloropropene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
trans-1,3-Dichloropropene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Ethylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Hexachlorobutadiene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480048

NET Job No: 98.13867

Sample ID: BH1 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Isopropylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
p-Isopropyltoluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Methylene Chloride	<10	ug/L	11/02/1998	mmk	SW 8260B	10
MTBE	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Naphthalene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0
n-Propylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Styrene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1,1,2-Tetrachloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1,2,2-Tetrachloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Tetrachloroethene	5.9	ug/L	11/02/1998	mmk	SW 8260B	1.0
Toluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2,3-Trichlorobenzene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0
1,2,4-Trichlorobenzene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0
1,1,1-Trichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1,2-Trichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Trichloroethylene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Trichlorofluoromethane	<4.0	ug/L	11/02/1998	mmk	SW 8260B	4.0
1,2,3-Trichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2,4-Trimethylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,3,5-Trimethylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Vinyl Chloride	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Xylenes, Total	<3.0	ug/L	11/02/1998	mmk	SW 8260B	3.0
Extraction Prep	complete		11/03/1998	jlb	IOWA-OA2	
EXTRACTABLE HYDROCARBONS-WATER						

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Operations Manager

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480048

NET Job No: 98.13867

Sample ID: BH1 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Total Extractable Hydrocarbons	<1,000	ug/L	11/05/1998	mmk	IA-OA2/S-8015	1,000
Diesel	<1,000	ug/L	11/05/1998	mmk	IA-OA2/S-8015	1,000
Gasoline	<1,000	ug/L	11/05/1998	mmk	IA-OA2/S-8015	1,000
Motor Oil	<400	ug/L	11/05/1998	mmk	IA-OA2/S-8015	400

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
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11/11/1998

Sample No.: 480049

NET Job No: 98.13867

Sample ID: BH2 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Arsenic, Dissolved (ICP)	<0.080	mg/L	11/02/1998	llw	SW 6010B	0.080
Barium, Dissolved (ICP)	0.023	mg/L	11/02/1998	llw	SW 6010B	0.010
Cadmium, Dissolved (ICP)	<0.020	mg/L	11/02/1998	llw	SW 6010B	0.020
Chromium, Dissolved (ICP)	<0.020	mg/L	11/02/1998	llw	SW 6010B	0.020
Lead, Dissolved (ICP)	<0.10	mg/L	11/02/1998	llw	SW 6010B	0.10
Selenium, Dissolved (ICP)	<0.15	mg/L	11/02/1998	llw	SW 6010B	0.15
Silver, Dissolved (ICP)	<0.020	mg/L	11/02/1998	llw	SW 6010B	0.020
Mercury, diss. Cold Vapor	<0.00020	mg/L	11/05/1998	jcp	EPA 245.1	0.00020
VOLATILE COMPOUNDS - 8260						
Acetone	<20	ug/L	11/02/1998	mmk	SW 8260B	20
Benzene	<0.5	ug/L	11/02/1998	mmk	SW 8260B	0.5
Bromobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Bromochloromethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Bromodichloromethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Bromoform	<2.0	ug/L	11/02/1998	mmk	SW 8260B	2.0
Bromomethane	<4.0	ug/L	11/02/1998	mmk	SW 8260B	4.0
2-Butanone (MEK)	<10	ug/L	11/02/1998	mmk	SW 8260B	10
n-Butylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
sec-Butylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
tert-Butylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Carbon Tetrachloride	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chlorodibromomethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chloroethane	<4.0	ug/L	11/02/1998	mmk	SW 8260B	4.0

R.L. Bindert
Operations Manager

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998
Sample No.: 480049
NET Job No: 98.13867

Sample ID: BH2 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Chloroform	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Chloromethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
2-Chlorotoluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
4-Chlorotoluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dibromo-3-Chloropropane	<10	ug/L	11/02/1998	mmk	SW 8260B	10
1,2-Dibromoethane (EDB)	<10	ug/L	11/02/1998	mmk	SW 8260B	10
Dibromomethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dichlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,3-Dichlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,4-Dichlorobenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Dichlorodifluoromethane	<3.0	ug/L	11/02/1998	mmk	SW 8260B	3.0
1,1-Dichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1-Dichloroethene	<2.0	ug/L	11/02/1998	mmk	SW 8260B	2.0
cis-1,2-Dichloroethene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
trans-1,2-Dichloroethene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2-Dichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,3-Dichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
2,2-Dichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1-Dichloropropene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
cis-1,3-Dichloropropene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
trans-1,3-Dichloropropene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Ethylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Hexachlorobutadiene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0

R.L. Bindert
Operations Manager

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480049

NET Job No: 98.13867

Sample ID: BH2 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Isopropylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
p-Isopropyltoluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Methylene Chloride	<10	ug/L	11/02/1998	mmk	SW 8260B	10
MTBE	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Naphthalene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0
n-Propylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Styrene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1,1,2-Tetrachloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1,2,2-Tetrachloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Tetrachloroethene	1.1	ug/L	11/02/1998	mmk	SW 8260B	1.0
Toluene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2,3-Trichlorobenzene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0
1,2,4-Trichlorobenzene	<5.0	ug/L	11/02/1998	mmk	SW 8260B	5.0
1,1,1-Trichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,1,2-Trichloroethane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Trichloroethylene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Trichlorofluoromethane	<4.0	ug/L	11/02/1998	mmk	SW 8260B	4.0
1,2,3-Trichloropropane	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,2,4-Trimethylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
1,3,5-Trimethylbenzene	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Vinyl Chloride	<1.0	ug/L	11/02/1998	mmk	SW 8260B	1.0
Xylenes, Total	<3.0	ug/L	11/02/1998	mmk	SW 8260B	3.0
Extraction Prep	complete		11/03/1998	jlb	IOWA-OA2	
EXTRACTABLE HYDROCARBONS-WATER						

R.L. Bindert
Operations Manager

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ANALYTICAL REPORT

Amy Linder
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

11/11/1998

Sample No.: 480049

NET Job No: 98.13867

Sample ID: BH2 Project #6110906
1312-1324 WALNUT, DES MOINES

Date Taken: 10/29/1998 Date Received: 10/31/1998

	Result	Units	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
Total Extractable Hydrocarbons	<1,000	ug/L	11/05/1998	mmk	IA-OA2/S-8015	1,000
Diesel	<1,000	ug/L	11/05/1998	mmk	IA-OA2/S-8015	1,000
Gasoline	<1,000	ug/L	11/05/1998	mmk	IA-OA2/S-8015	1,000
Motor Oil	<400	ug/L	11/05/1998	mmk	IA-OA2/S-8015	400

R.L. Bindert
Operations Manager

NET National Environmental Testing, Inc.
NET [illegible] Ced [illegible] ls Di [illegible]
704 Enterprise Drive
Cedar Falls, IA
F [illegible] 319 [illegible] - 24 [illegible] or 1 [illegible] - 750 [illegible] 1
Fax: 319 - 277 - 2425

Company: Seneca Environmental Services
Send Report To: Amy Linder
Address: PO Box ~~28~~ 33160
City/State/Zip Code: Des Moines, IA 50313
Telephone Number: (515) 261-7720 Fax: (515) 262-2469
Sampled By: (Print Name) Amy Linder
(Signature) Amy Linder

Your PO #: 127284
Invoice To:
NET Quote #:
Project Name: 1312-1324 Walnut Des Moines
Project Number: ~~to1306~~ 61109006
Project Manager: Amy Linder

Sample ID	Date Sampled	Time Sampled	# of containers shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO3 (Red & White Label)	HCl (Blue & White Label)	NaOH (Orange Label)	H2SO4 Plastic (Yellow Label)	H2SO4 Glass (Yellow Label)	None (Black & White Label)	Other (Specify)	Matrix: Groundwater	Wastewater	Drinking Water	Soil	Other Specify:	Analyze For: RCRA Metals	OA1 - BETX	OA2	OA1 TPH (Gasoline)	Dissolved RCRA Metals	CHROMATOGRAMS REQUIRED**	8260A	HNO3 introduced to RCRA Metals w/ H2O after samples collected	5 Day TAT (SEE NOTE)	Standard TAT	Fax Results	Send QC with report
BH1 S-Surface-1'	10/29/98	AM	1	X			X						X					X		X									X	
BH1 S-6'																					X	X								
BH2 S-Surface-1'																				X										
BH2 S-14'																					X	X								
BH1						X		X					X		X									X						
BH1													X									X								
BH2		PM				X		X					X											X						
BH2		AM											X									X								
BH1			3						X																	X				
BH2									X																	X				

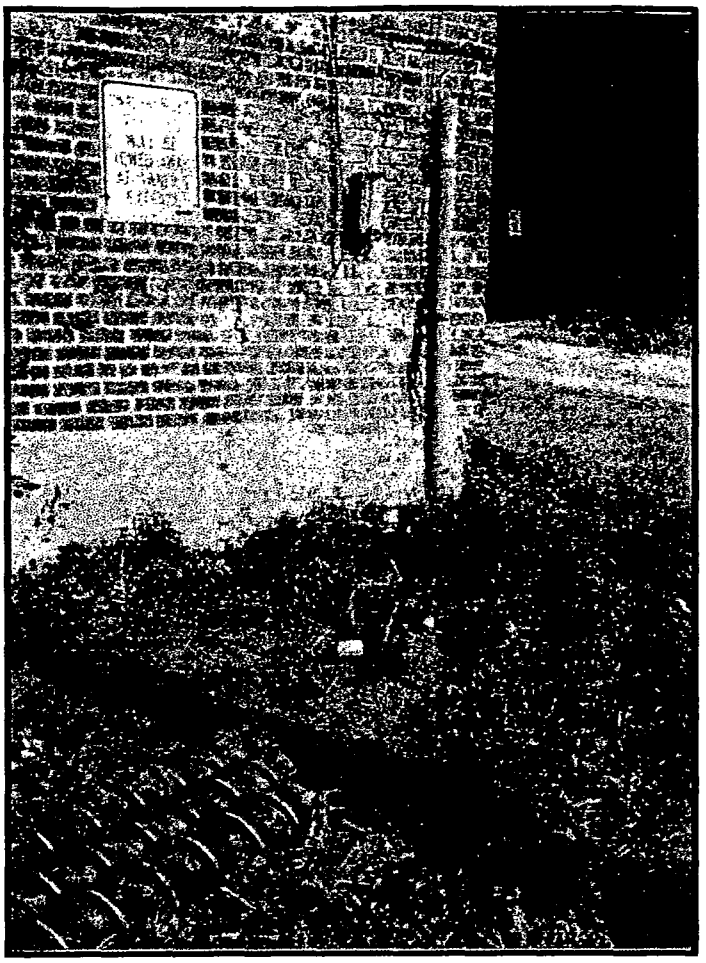
NOTE: All turn around times are calculated from the time of receipt at NET.
NOTICE: **Pre-Arrangements must be made *AT LEAST 48 Hours in ADVANCE* to receive results with these turn around time commitments; Additional Charges may be assessed.**
NOTE: There may be a charge assessed for NET disposing of sample remainders.

NOTES:

**THERE IS A $4.00 CHARGE FOR EACH CHROMATOGRAM

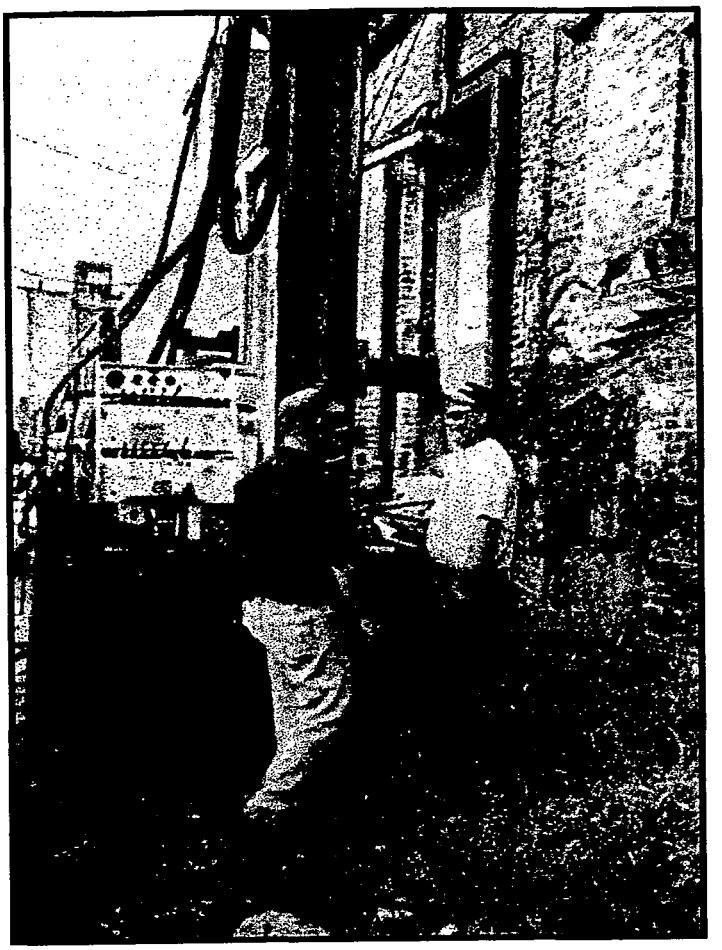
Relinquished by:	Date	Time	Received by:	Date	Time	Relinquished by:	Date	Time
Amy A. Linder	10/29/98	PM	[signature]	10/30	3:00 PM			
Received for NET by:	Date	Time	COC Seals Present and Intact? Yes No	Shipped Via:				
Shawn Hayes	10/31/98	800	Temperature Upon Receipt					

APPENDIX E
SITE PHOTOGRAPHS

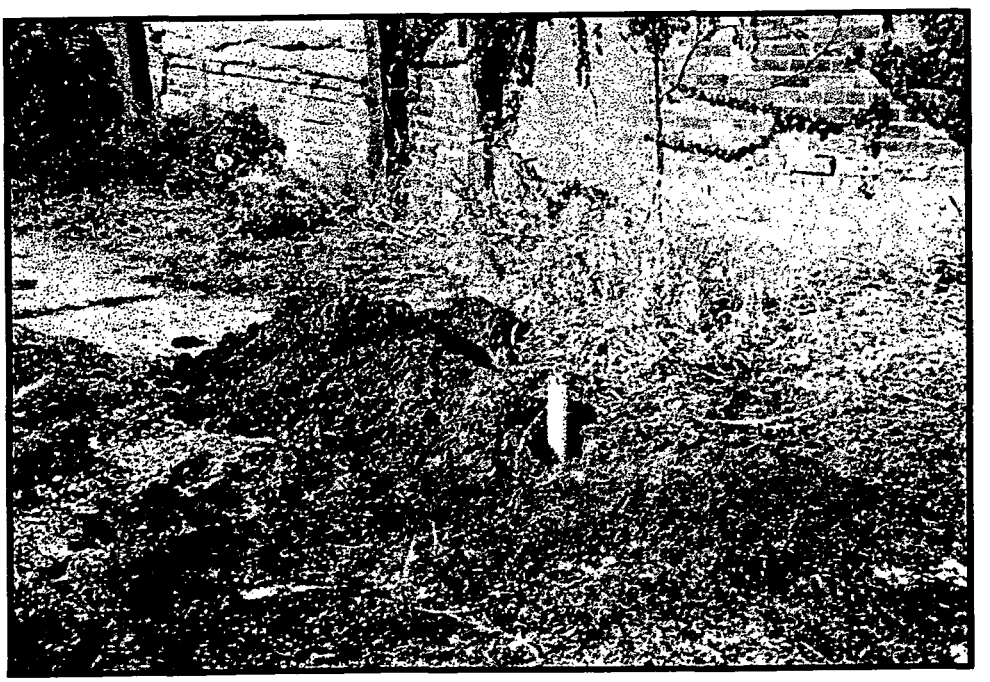


BH 1 located along SE corner of building.

BH 1



Drilling BH 2



BH 2 along SW corner of building.

Plugged BH 1

Plugged BH 2

Seneca Environmental Services
Des Moines • Bettendorf

Amy A. Linder
Environmental Scientist

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