# CON 12-15 Doc #16499

### PHASE II ENVIRONMENTAL SITE ASSESSMENT

AT

# THE HEARTLAND PRESS FACILITY, 520 2ND AVENUE

#### IN SPENCER, IOWA

Prepared for:

Mr. Tom Manley
Boatman's Bank of Northwest Iowa
P.O. Box 6128
Spencer, Iowa and Heartland Press, Inc.

Seneca Project No 6006300

by Seneca Environmental Services

Jill Reams

Project Manager/Geologist September 20, 1995

#### PHASE II ENVIRONMENTAL SITE ASSESSMENT

#### AT

# HEARTLAND PRESS, 520 2ND AVENUE IN SPENCER, IOWA

#### Introduction:

This report summarizes the data, observations, and conclusions of a Phase II Environmental Site Assessment conducted at the Heartland Press facility, 520 2nd Avenue, in Spencer, Iowa (Figure 1). The Phase II Environmental Site Assessment consisted of drilling four boreholes, allowing the acquisition and laboratory analysis of soil and groundwater samples. This report was prepared for Mr. Tom Manley, Boatman's National Bank of Northwest Iowa and Heartland Press, Inc.

#### Module I. Site History:

As a result of the Phase I Environmental Site Assessment conducted over the period of August 21, 1995 to September 18, 1995, the following environmental hazards were identified:

- Numerous former bulk storage facilities of gasoline and diesel fuel on the subject property.
- A gasoline tanker spill on the property adjacent to the subject property.
- A Leaking Underground Storage Tank (LUST) site #8LTO56 located adjacent to the subject property.

- Presence of a publishing facility, which generates waste inks and waste solvents.
- Historical printing facilities on the subject property which generated waste inks and waste solvents

Due to the above listed environmental conditions a Phase II Environmental Site Assessment drilling and sampling strategy was developed to confirm or deny the presence of detectable groundwater and soil contamination on the subject property.

#### Module II. Drilling and Sampling:

The drilling strategy that was developed included the drilling of four boreholes on the subject property (Figure 2). Borehole (BH-1) was drilled near the northwest portion of the facility beneath an overhead door and loading dock. Borehole (BH-2) was drilled in the center of the grass lot where, from the aerial photos, bulk tanks were located prior to Heartland Press' acquisition of the property. Borehole (BH-3) was drilled southeast of BH2 in an area where a second group of bulk tanks were located. Borehole (BH-4) was drilled near a second set of over head doors and a loading dock.

These boreholes were drilled on August 23, 1995 utilizing a truck-mounted SIMCO 2400 drilling rig equipped with hollow stem augers capable of retrieving a continuous core of relatively undisturbed sediments.

Boreholes BH1 through BH4 were drilled to a depth of ten feet below grade at which time it was determined that the water table had been sufficiently penetrated for the purpose of groundwater sampling.

Field observations did indicate hydrocarbon impact in two of the four horeholes. BH2 and BH4 both had strong petroleum odors in both the groundwater and soil.

Detailed lithologic logs are included in Appendix A. The sediments that were encountered included an upper layer of brown or black clay underlain by various sands and gravel units.

During the drilling of each borehole discrete soil samples were collected from specific intervals for laboratory analysis for total extractable and total petroleum hydrocarbon content utilizing analytical method OA/1 and OA/2. Following the completion of the boring each borehole was converted into a temporary monitoring well.

All of the temporary wells were developed by bailing greater than five casing volumes of water from the well casing. After sufficient time had passed for the wells to fully recover and return to a static water level, groundwater samples then were withdrawn and stored on ice with the chain-of-custody. Groundwater samples were collected from all boreholes and submitted to a laboratory for analysis of volatile organic compounds (EPA Method 8240).

After the samples had been acquired, the temporary monitoring wells were plugged with bentonite and native soils as required by the Iowa Department of Natural Resources (IDNR). A copy of the well abandonment forms are included in Appendix B.

#### Module III. Results of Sampling:

The laboratory data report and chain of custody are included in Appendix C. Based on the data acquired during this investigation, it is concluded that one soil sample collected from the areas of concern did exhibit contamination at concentrations greater than the Iowa Department of Natural Resources (IDNR) corrective action limits. The IDNR corrective action for total petroleum hydrocarbons (TPH) in soil is 100 ppm, BH4 indicated TPH levels at 170 ppm. One groundwater sample collected, was above IDNR action levels for Trichloroethene. The limit for Trichloroethene is 3 ppb and the groundwater obtained form BH1 was 14.3 ppb Trichloroethene. The findings, with respect to this Phase II audit, are required to be submitted to the Solid and Hazards Waste Department with the State of Iowa. The TPH contamination encountered during this investigation is most likely the associated with the past presence of above ground bulk tank facility, which exited on the property before Heartland's acquisition of the property. Trichloroethene is a common industrial chlorinated solvent.

#### Module IV. Data Review And Recommendations:

Based on the data acquired during this investigation, it is concluded that a soil sample collected from an area of concern did exhibit contamination at concentrations greater than the corrective action limits of the IDNR. One groundwater samples did indicate trichloroethene levels above IDNR action levels of 3 ppb. Seneca Environmental recommends that these results be filed with the IDNR as required by the Iowa environmental regulations. It is the clients



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

#### ANALYTICAL REPORT

Jill Reams
SENECA ENVIRONMENTAL
SERVICES, INC.
4509 N.E. 14th St.
Des Moines, IA 50313

08/31/1995

Sample No.:

311512

NET Job No:

95.08594

Sample ID:

W-BH4

Heartland Press

PROJECT #6006706

Date Taken:

08/23/1995

Date Received: 08/25/1995

|                               | •      |       | Date       |         | Analysis | Reportin |  |
|-------------------------------|--------|-------|------------|---------|----------|----------|--|
|                               | Result | Units | Analyzed   | Analyst | Method   | Limit    |  |
| Methyl isobutyl ketone (MIBK) | <50    | სე/Լ  | 08/30/1995 | dmd     | \$-82408 | 10       |  |
| Methylene chloride            | <50    | ug/L  | 08/30/1995 | dind    | S-8240B  | 10       |  |
| 1,1,2,2-Tetrachloroethane     | <5.0   | ug/L  | 68/30/1995 | dmd     | S-82408  | 1.0      |  |
| Tetrachloroethene             | <5.0   | ug/L  | 08/30/1995 | dmd     | C-8240B  | 1.0      |  |
| Toluene                       | 8.7    | ug/L  | 08/30/1995 | dind    | S-82408  | 1.0      |  |
| 1,1,1-Trichloroethane         | <5.0   | ug/L  | 08/30/1995 | drad    | \$-82408 | 1.0      |  |
| 1,1,2-Trichloroethane         | <5.0   | ug/L  | 08/30/1995 | dmd     | S-8240B  | 1.0      |  |
| Trichloroethene               | <5.0   | ug/L  | 08/30/1995 | dind    | S-82408  | 1.0      |  |
| Trichlorofluoromethane        | <5.0   | ug/L  | 08/30/1995 | dind    | S-82408  | 1.0      |  |
| Vinyt chtoride                | <10    | ug/L  | 08/30/1995 | dmd     | \$-82408 | 2.0      |  |
| Xylenes, Total                | 3,900  | ug/L  | 08/29/1995 | dead    | 5-82408  | 1.0      |  |

R.L. Bindert Operations Manager



Org.



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#### ANALYTICAL REPORT

Jill Reams SENECA ENVIRONMENTAL SERVICES, INC. 4509 N.E. 14th St. Des Moines, IA 50313 08/31/1995

Sample No.: 311512

NET Job No: 95.08594

Sample ID:

W-BH4 Heartland Press

PROJECT #6006306

Date Taken:

08/23/1995

Date Received: 08/25/1995

|                           |                | Date  |                     |         | Analysis | Reporting |  |
|---------------------------|----------------|-------|---------------------|---------|----------|-----------|--|
|                           | Result         | Units | Analyzed            | Analyst | Method   | Limit     |  |
| VOLATILE COMPOUNDS        |                |       |                     |         |          |           |  |
| Acetone                   | <100           | ug/L  | 08/ <b>30/1</b> 995 | clind   | S-8240B  | 20        |  |
| Acrylonitrile             | <250           | ug/L  | 08/30/1995          | dina    | S-8240B  | 50        |  |
| Benzene                   | <5.0           | ug/L  | 08/30/1995          | dind    | S-8240B  | 1.0       |  |
| Bromodichloromethane      | <5.0           | ug/L  | 08/30/1995          | dind    | \$-82408 | 1.0       |  |
| Bromoform                 | <5.0           | ug/L  | 08/30/1995          | dind    | S-82408  | 1.0       |  |
| Bromomethane              | <50            | ug/L  | 08/30/1995          | dnd     | S-82406  | 10        |  |
| Carbon tetrachloride      | <5.0           | ug/L  | 08/30/1995          | dnd     | S-8240B  | 1.0       |  |
| Chiorobenzene             | <5.0           | ug/L  | 08/30/1995          | dend    | S-8240B  | 1.0       |  |
| Chlcroethane              | <50            | ug/L  | 08/30/1995          | dad     | s-82408  | 10        |  |
| Chloroform                | <5.0           | ug/L  | 08/30/1995          | ded     | S-82409  | 1.0       |  |
| Chloromethane             | <50            | ug/L  | 08/30/1995          | dind    | s-82408  | 10 .      |  |
| Dibromochloromethane      | <5.0           | ug/L  | 08/30/1995          | dind    | \$-82408 | 1.0       |  |
| 1,1-Dichloroethane        | <5.0           | ug/L  | 08/30/1995          | dind    | s-82408  | 1.0       |  |
| 1,2-Dichloroethane        | <5.0           | ug/L  | 08/30/1995          | dad     | s-82408  | 1.0       |  |
| 1,1-Dichloroethene        | <5.0           | U7/L  | 08/30/1995          | dind    | S-82408  | 1.0       |  |
| trans-1,2-Dichloroethene  | <5.0           | ug/L  | 08/30/1995          | ded     | S-8240B  | 1.0       |  |
| cis-1,2-Dichloroethene    | <5.0           | ug/L  | 08/30/1995          | dend    | s-82408  | 1.0       |  |
| 1.2-Dichloropropane       | <5.0           | ug/L  | 08/30/1995          | drad    | S-82408  | 1.0       |  |
| cis-1,3-Dichloropropene   | <5.0           | ug/L  | 08/30/1995          | dind    | S-8240B  | 1.0       |  |
| trans-1,3-Dichloropropene | <5.0           | ug/L  | 08/30/1995          | dmd     | S-8240B  | 1.0       |  |
| Ethylbenzene              | 404            | ug/L  | 08/30/1995          | ded     | S-82408  | 1.0       |  |
| 2-Hexanone                | <50            | ug/L  | 08/30/1995          | dnd     | S-8240B  | 10        |  |
| Methyl ethyl ketone (MEK) | <b>&lt;</b> 50 | ug/L  | 08/30/1995          | dmd     | S-82408  | 10        |  |

NOTE: Late eluting non-target hydrocarbons present in this sample.

R.L. Bindert

Operations Manager

SEP 5 1555





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# ANALYTICAL REPORT

Jill Reams SENECA ENVIRONMENTAL SERVICES, INC. 4509 N.E. 14th St. Des Moines, IA 50313

08/31/1995

Sample No.: 311509

NET Job No: 95.08594

Sample ID:

W-BH1

Heartland Press

PROJECT #6006306

Date Taken:

08/23/1995

Date Received: 08/25/1995

|                               |        |       | Date       |         | Analysis | Reporting |  |
|-------------------------------|--------|-------|------------|---------|----------|-----------|--|
|                               | Result | Units | Analyzed   | Analyst | Hethod   | Limit     |  |
| Methyl isobutyl ketone (MIBK) | <10    | ug/L  | 08/28/1995 | dmd     | S-82408  | 10        |  |
| Methylene chloride            | <10    | ug/L  | 08/28/1995 | dmd     | 5-82408  | 10        |  |
| 1.1.2.2-Tetrachloroethane     | <1.0   | ug/L  | 08/28/1995 | dmd     | S-8240J  | 1.0       |  |
| Tetrachloroethene             | <1.0   | ug/L  | 08/28/1995 | dmd     | S-8240B  | 1.0       |  |
| Toluene                       | <1.0   | ug/L  | 08/28/1995 | dmd     | S-8240B  | 1.0       |  |
| 1,1,1-Trichloroethane         | <1.0   | ug/L  | 08/28/1995 | drad    | S-8240B  | 1.0       |  |
| 1.1.2-Trichloroethane         | <1.0   | Ug/L  | 08/28/1995 | dmd     | \$-82408 | 1.0       |  |
| *Trichloroethene              | 14.3   | ug/L  | 08/28/1995 | dind    | S-82408  | 1.0       |  |
| Trichlorofluoromethane        | <1.0   | ug/L  | 08/28/1995 | dind    | s-82408  | 1.0       |  |
| Vinyl chloride                | <2.0   | Ug/L  | 08/28/1995 | dind    | S-8240B  | 2.0       |  |
| Xylenes, Total                | <1.0   | ug/L  | 08/28/1995 | drad    | s-8240B  | 1.0       |  |

R.L. Bindert Operations Manager





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08/31/1995

Sample No.: 311509

NET Job No: 95.08594

Sample ID:

W-BH1

Heartland Press

PROJECT #6006306

Date Taken:

08/23/1995

Date Received: 08/25/1995

|                            |        |       | Date       |         | Analysis | Reporting |  |
|----------------------------|--------|-------|------------|---------|----------|-----------|--|
|                            | Result | Units | Analyzed   | Analyst | Method   | Limit     |  |
| VOLATILE COMPOUNDS         |        |       |            |         |          |           |  |
| Acetone                    | <20    | ug/L  | 08/28/1995 | dnd     | s-8240B  | 20        |  |
| Acrylonitrile              | <50    | ug/L  | 03/28/1995 | drad    | S-8240B  | 50        |  |
| Benzene                    | <1.0   | ug/L  | 08/28/1995 | drad    | S-8240B  | 1.0       |  |
| Bromodichloromethane       | `<1.0  | ug/L  | 08/28/1995 | dind    | s-8240B  | 1.0       |  |
| Bromoform .                | <1.0   | ug/L  | 08/28/1995 | dind    | \$-82408 | 1.0       |  |
| Bromomethane .             | <10    | ug/L  | 08/28/1995 | dind    | S-8240B  | 10        |  |
| Carbon tetrachloride       | <1.0   | ug/L  | 08/28/1995 | dind    | s-82408  | 1.0       |  |
| Chlorobenzene              | <1.0   | ug/L  | 08/28/1995 | dind    | s-82408  | 1.0       |  |
| Chloroethane               | <10    | ug/L  | 08/28/1995 | dad     | \$-82408 | 10        |  |
| Chloroform                 | <1.0   | ug/L  | 08/28/1995 | dnd     | s-82408  | 1.0       |  |
| Chloromethane              | <10    | ug/L  | 08/28/1995 | ded     | s-82408  | 10        |  |
| Dibromochloromethane       | <1.0   | ug/L  | 08/28/1995 | dnd     | 5-82408  | 1.0       |  |
| 1.1-Dichloroethane         | <1.0   | ug/L  | 08/28/1995 | ded     | s-82408  | 1.0       |  |
| 1,2-Dichloroethane         | <1.0   | ug/L  | 08/28/1995 | dend    | s-82408  | 1.0       |  |
| 1,1-Dichloroethene         | <1.0   | ug/L  | 08/28/1995 | ded     | S-82408  | 1.0       |  |
| trans-1,2-Dichloroethene   | <1.0   | ug/L  | 08/28/1995 | dend    | S-82408  | 1.0       |  |
| cis-1,2-Dichloroethene     | <1.0   | ug/L  | 08/28/1995 | ded     | S-82408  | 1.0       |  |
| 1,2-Dichloropropane        | <1.0   | ug/L  | 08/28/1995 | dand    | S-82408  | 1.0       |  |
| cis-1,3-Dichloropropene    | <1.0   | ug/L  | 03/28/1995 | dind    | S-82408  | 1.0       |  |
| trans-1,3-Dichloropropene  | <1.0   | ug/L  | 08/28/1995 | dind    | S-8240B  | 10        |  |
| •                          | <1.0   | ug/L  | 08/28/1995 | ded     | S-82408  | 1.0       |  |
| Ethylbenzene<br>2-Hexanone | <10    | UZ/L  | 08/28/1995 | dnd     | S-8240B  | 10 .      |  |
| Hethyl ethyl ketone (MEK)  | <10    | ug/L  | 08/28/1995 | dind    | S-82408  | 10        |  |

R.L. Bindert

Operations Manager



warehouse, recycling area, lunch room and paper shredding area. The inspection commenced in the office area. No recognized environmental conditions were noted within the office area of the facility. Next the inspection proceeded into the main warehouse and storage area. No recognized environmental conditions were noted in the warehouse areas. The production area was inspected next. No recognized environmental conditions were noted. Waste oils are generated from this building and Heartland Press recycles their waste oils. Concrete floors are present in each building area on the subject property and all were clean and free of stains.

#### 3.1 Interviews:

#### Mr. Marv Johnson:

Mr. Marv Johnson, operations manager of Heartland Press, Inc., was interviewed on August 22, 1995 with regard to the site. Mr. Johnson provided responses to a hazardous and toxic materials questionnaire which is included in the Appendix. The facility obtains its water and sewer services from the City of Spencer. The building is heated by natural gas forced air furnaces and radiant heaters. Mr. Johnson was unaware of any spills or additional environmental hazards associated with the subject property.

#### Mr. Kirby Schmidt:

Mr. Kirby Schmidt, City of Spencer Planning and Zoning
Administrator, was interviewed with regard to the subject property on
August 22, 1995. Mr. Schmidt has been with the Zoning Department for
three years and has been a lifetime resident of Spencer. Mr. Schmidt was
aware that four bulk petroleum facilities existed on the subject property at
one time or another. Mr. Schmidt had also done some construction in the
past, at the subject property, in the area of the northeast overhead doors and
stated that green soils with strong petroleum odors were encountered. Mr.
Schmidt was also aware of a gasoline tanker spill at Cleber's gasoline station,
directly across the street to the northwest of the subject property. See spill
file review in the appendix.

#### Module IV. Data Review and Recommendations:

We have performed a Phase I Environmental Site Assessment of the Heartland Press facility located in Spencer, Iowa in conformance with the scope and limitations of the ASTM Practice E 1527. Any exceptions to, or deletions from, this practice are described in the introduction of this report.

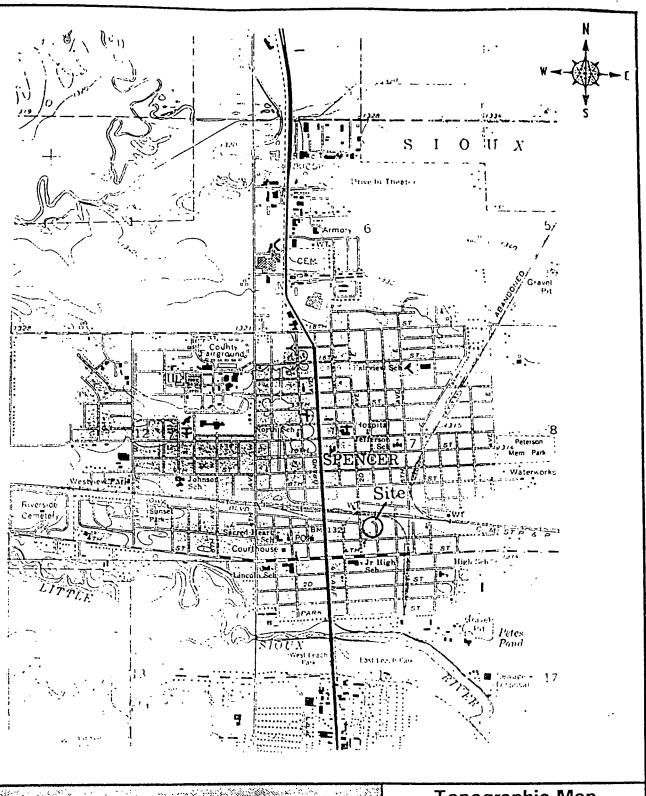
This assessment has revealed no environmental conditions except the following;

- Numerous former bulk storage facilities of gasoline and diesel fuel on the subject property.
- A gasoline tanker spill on the property adjacent to the subject property.
- A Leaking Underground Storage Tank (LUST) site #8LTO56 located adjacent to the subject property.
- Presence of a publishing facility, which generates waste inks and waste solvents.
- Historical printing facilities on the subject property which generated waste inks and waste solvents

Based on the above listed environmental hazards, Seneca recommends that a Phase II Environmental Site Assessment be conducted on the subject property. The recommended Phase II Environmental Site Assessment should include drilling of boreholes in the areas of concern for the acquisition and analysis of soil and groundwater samples.

The qualifications of the environmental professionals participating in this Phase I Environmental Site Assessment are included in the Appendix. The information contained in this report is based on visual observations performed at the time of the site visit, interviews with available persons familiar with the area, and data made available through examination of public and private records which are assumed to be representative of the property. 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.



Seneca Environmental Services

Date: September 18, 1995 | 1 inch = 2,000 Feet

Topographic Map Spencer Iowa

# City Directory Data For Heartland Press

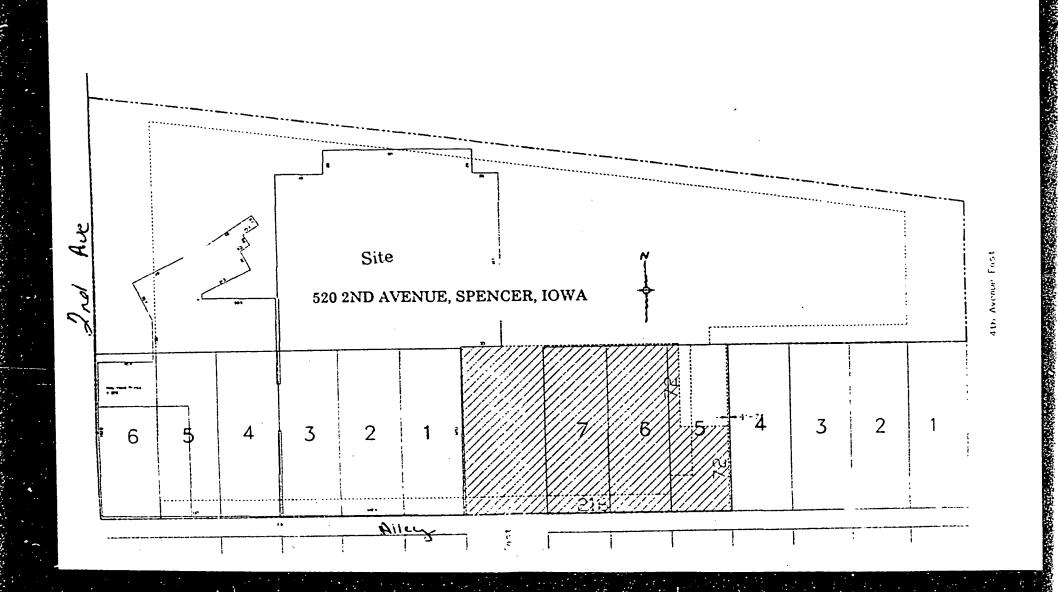
| Year | Street/Add.               | Occupant  |
|------|---------------------------|---|
| 1992 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Not listed                      |
| 1986 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1985 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1983 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1982 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1981 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1980 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1979 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| 1978 | 2nd Ave. E.<br>520<br>524 | Heartland Press Inc.<br>Western Tank Line and Wyatt Oil |
| ·    |                           |   |

# City Directory Data For Heartland Press

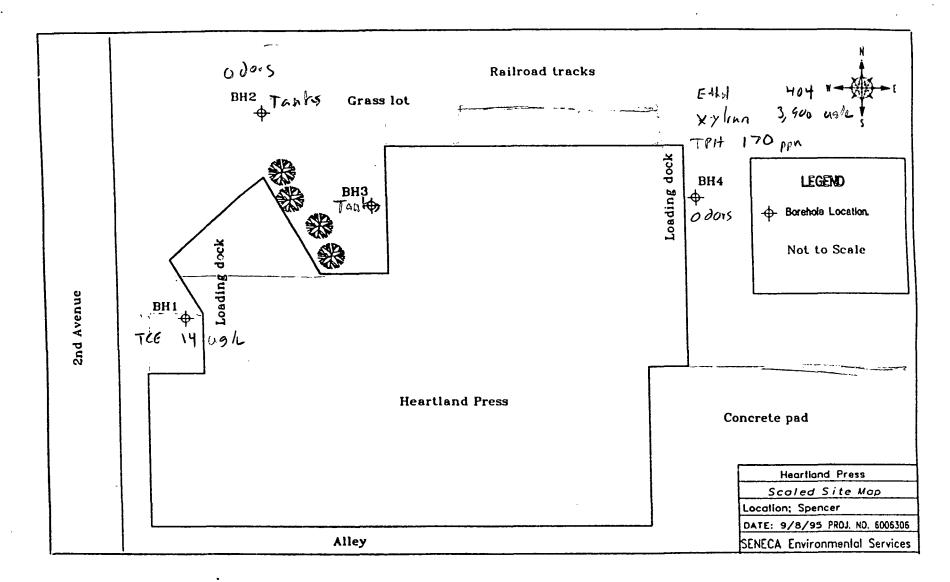
| Year | Street/Add.                      | Occupant Occupant   |
|------|----------------------------------|---|
| 1977 | 2nd Ave. E.<br>520<br>524        | Heartland Press Inc. and Webb Bound Printing, Inc. Moser Oil Co., Wyatt Oil and Wyatt Transportation  |
| 1976 | 2nd Ave. E.<br>520<br>524        | Heartland Press Inc. and Webb Bound Printing, Inc.<br>Moser Oil Co., Wyatt Oil and Wyatt Transportation   |
| 1974 | 2nd Ave. E.<br>520<br>524        | Spencer Printing & Lithographing Co.<br>Wyatt Oil, Wyatt Transporation, and Moser Oil   |
| 1972 | 2nd Ave. E.<br>520<br>524        | Spencer Printing & Lithographing Co.<br>Wyatt Oil, Wyatt Transporation, and Moser Oil   |
| 1971 | 2nd Ave. E.<br>520<br>524        | Spencer Printing & Lithographing Co. Wyatt Oil, Wyatt Transporation, and Moser Oil  |
| 1968 | 2nd Ave. E.<br>520<br>524        | Spencer Printing & Lithographing Co. Wyatt Oil, Wyatt Transporation, and Moser Oil  |
| 1967 | 2nd Ave. E.<br>520<br>522<br>524 | Jackson Printing Co. and Spencer Printing & Lithographing Not listed Not listed   |
| 1966 | 2nd Ave. E.<br>520<br>522<br>524 | Jackson Printing Co. and Spencer Printing & Lithographing Miller Transfer & Storage Spencer Propane Service, Wyatt Transport Co., and Moser Oil Co. |
| 1964 | 2nd Ave. E.<br>520<br>522        | Spencer Printing & Lithographing<br>Miller Transfer & Storage   |
|      |                                  |   |

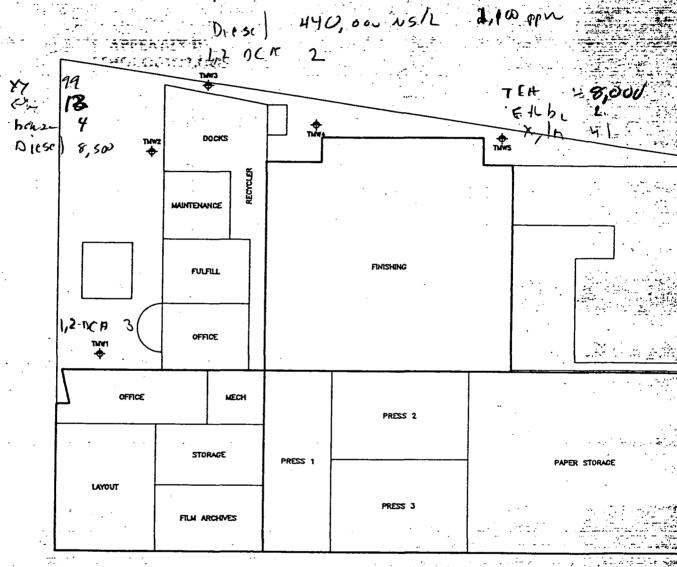
#### City Directory Data For Heartland Press

|      |                           | For Heartland Press   |   |
|------|---------------------------|---|---|
| Year | Street/Add.               | Occupant  |   |
| 1963 | 2nd Ave. E.<br>520<br>522 | Spencer Printing & Lithographing<br>Miller Transfer & Storage | · |
| 1961 | 2nd Ave. E.<br>520<br>522 | Residence<br>Miller Transfer & Storage                        | • |
| 1959 | 2nd Ave. E.<br>520        | Residence   |   |
| 1956 | 2nd Ave. E.<br>520        | Not Available   | · |
| 1952 | 2nd Ave. E.<br>520        | Residential   |   |
| 1942 | 2nd Ave. E.<br>520        | Residential   |   |
| 1941 | 2nd Ave. E.<br>520        | Residential   |   |
| 1940 | 2nd Ave. E.<br>520        | No listing  |   |
| 1939 | 2nd Ave. E.<br>520        | No listing  |   |
| 1921 | 2nd Ave. E.<br>520        | No listing  |   |
|      |                           |   |   |
|      |                           |   |   |



10 food Buriess





ALEY

EAST WILWAUKEE ABANDONED SUILDINGS ABANDONED RAILROAD TRACKS STORUGE SHEDS SOIL BORING LOCATIONS -- PROPERTY LINE RESCIENTIAL PROPERTY CHAIN UNK FENCE POWER LINE - RAILROAD TRACKS A----A' REDLOGIC CPOSS SECTION LOCATION UNDERGROUND STORAGE TANKS (REMOVED): \$1 350 CALLON REGULAR CASOLINE #2 350 GALLON REGULAR GASOLINE NOTE: TANK \$2 PREVIOUSLY CONTAINED DESEL AND FUEL OIL FIGURE 5
GEOLOGIC CROSS SECTION LOCATION MAP
SOO LINE RAILROAD
SPENCER, 10WA PROJECT NO. PROPERTY OF ANDREW BY 10-90-3121 AWY/LS TALL 30312-31 Constitution

#### TABLE 5

Analytical Results - Soil Borings Spencer Soo Line Railroad Spencer, Iowa Iowa LUST No. 8LTG72 Delta No. 10-90-312

| Parameter (OA 1)                                       | <u>Units</u> | MDL | <u>SB-1</u> | <u>SB-2</u> | <u>SB-3</u> | <u>SR-4</u> | <u>SR-5</u> |
|--|--------------|-----|-------------|-------------|-------------|-------------|-------------|
| Gasoline in soil (OA-1) Total Hydrocarbons as gasoline | mg/kg        | 10  | ND          | ND          | ND          | ND          | ND          |
| Diesel or Fuel Oil in Soil                             |              |     |             |             |             |             |             |
| (OA-2) Total Hydrocarbons as Fuel Oil #1               | mg/kg        | 5   | ND          | ND          | ND          | ND          | ND          |
| Total Hydrocarbons as Fuel Oil #2                      | mg/kg        | 5   | ND          | ND          | ND          | ND          | 5           |
| Total Hydrocarbons as<br>Waste Oil                     | mg/kg        | 5   | ND          | ND          | ND          | ND          | ND          |

All samples collected between eight and nine feet below the surface.

Method Detection Limit MDL =

Not detected at or above the MDL ND =

IDNR's Method OA-1: Method for Determination of Volatile Petroleum Hydrocarbons (Gasoline), Revision January 10, 1990. IDNR's Method OA-2: Extractable Petroleum Products (and Related Low Volatility Organic Compounds), Revision January 10, OA-1

OA-2 1990.

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