## GIS REGISTRY INFORMATION

**SITE NAME:** Heartland Coop Greenwood

**BRRTS #:** 02-10-540850 **FID #** 610069460

**DATCP # (**if appropriate**):** 99405101101

**CLOSURE DATE:** 18-Apr-05

**STREET ADDRESS:** 427 S. Main St.

**CITY:** Greenwood

**SOURCE PROPERTY LOCATIONAL COORDINATES**
(meters in WTM91 projection)**:** **X=** 472551 **Y=** 476594

**CONTAMINATED MEDIA:** Groundwater [X] Soil [ ] Both [ ]

**OFF-SOURCE GW CONTAMINATION >ES:** [ ] **Yes** [X] **No**

**IF YES, STREET ADDRESS 1:**

**Locational COORDINATES** (meters in WTM91 projection)**:** **X=** **Y=**

**OFF-SOURCE SOIL CONTAMINATION >Generic or Site-Specific RCL (SSRCL):** [ ] **Yes** [ ] **No**

**IF YES, STREET ADDRESS 1:**

**Locational COORDINATES** (meters in WTM91 projection)**:** **X=** **Y=**

**CONTAMINATION IN RIGHT OF WAY:** [ ] **Yes** [X] **No**

**DOCUMENTS NEEDED:**

| | |
|---|---|
| **Closure Letter, and any conditional closure letter issued** | X |
| **Copy of most recent deed, including legal description, for all affected properties** (missing deed for property, have it for exception) | X |
| **Certified survey map or relevant portion of the recorded plat map (*if referenced in the legal description*) for all affected properties** | X |
| **County Parcel ID number, *if used for county*, for all affected properties** | |
| **Location Map** which outlines all properties within contaminated site boundaries on USGS topographic map or plat map in sufficient detail to permit the parcels to be located easily (8.5x14" if paper copy). If groundwater standards are exceeded, the map must also include the location of all municipal and potable wells within 1200' of the site. | X |
| **Detailed Site Map(s) for all affected properties,** showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells and potable wells. (8.5x14", if paper copy) This map shall also show the location of all contaminated public streets, highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding ch. NR 140 ESs and soil contamination exceeding ch. NR 720 generic or SSRCLs. | X |
| **Tables of Latest Groundwater Analytical Results (no shading or cross-hatching)** | X |
| **Tables of Latest Soil Analytical Results (no shading or cross-hatching)** | X |
| **Isoconcentration map(s), *if required for site investigation (SI) (*** 8.5x14" if paper copy***).*** The isoconcentration map should have flow direction and extent of groundwater contamination defined. **If not available, include the latest extent of contaminant plume map.** | X |
| **GW: Table of water level elevations, with sampling dates, and free product noted if present** | X |
| **GW: Latest groundwater flow direction/monitoring well location map (should be 2 maps if maximum variation in flow direction is greater than 20 degrees)** | X |
| **SOIL: Latest horizontal extent of contamination exceeding generic or SSRCLs, with one contour** | X |
| **Geologic cross-sections, *if required for SI.*** (8.5x14' if paper copy**)** | X |
| **RP certified statement that legal descriptions are complete and accurate** | X |
| **Copies of off-source notification letters (if applicable)** | NA |
| **Letter informing ROW owner of residual contamination (if applicable)** (public, highway or railroad ROW) | NA |
| **Copy of (soil or land use) deed restriction(s) or deed notice *if any required as a condition of closure*** | NA |

**State of Wisconsin**
Jim Doyle, Governor

**Department of Agriculture, Trade and Consumer Protection**
Rod Nilsestuen, Secretary

April 18, 2005

Dennis Schultz
Heartland Cooperative Services
152 S. Front St.
P.O. Box 260
Dorchester, WI 54425

SUBJECT: No Further Action Approval
Greenwood Branch of Heartland Co-op
DATCP Case # 99405101101
DNR BRRTS# 02-10-540850

Dear Mr. Schultz,

We appreciate your completing the last step of the cleanup work for the Coop's Greenwood branch located at 427 S. Main St. in the NE ¼ of the SE ¼ of Section 3, T26N, R2W. I've reviewed the GIS Registry Packet recently provided for the site by your consultant, Ayres and Associates. I've also received documentation that the monitoring wells used for the case were abandoned last month and I've confirmed that the DNR received the $250 registry maintenance fee. As a result, you've satisfied the conditions required by my February 4, 2005 closure approval letter and we consider your cleanup case closed.

You will not be required to do any further work regarding this case. However, in the future, if information is made available to the department suggesting that additional corrective action is needed, the department will require that the appropriate actions are taken.

I'm sending a copy of your GIS Registry Packet and a copy of this letter to Ann Hake, at DNR's Eau Claire office. She'll enter the appropriate site information into the internet–accessible registry and case database.

I would like to thank you for your efforts to remediate this site. If you have any questions, please call me at (608) 224 - 4517.

Sincerely,

Alan J. MacKenzie
Hydrogeologist, Containment and Remediation Section

cc: Dave Hyer - DATCP
Dennis Johnson - Ayres
Ann Hake – DNR, Eau Claire, w/attachment

**State of Wisconsin**
Jim Doyle, Governor

**Department of Agriculture, Trade and Consumer Protection**
Rod Nilsestuen, Secretary

RECEIVED
FEB 07 2005
DNR-WCR

February 4, 2005

Dennis Schultz
Heartland Cooperative Services
152 S. Front St.
P.O. Box 260
Dorchester, WI 54425

SUBJECT: Conditional Case Closure Approval
Greenwood Branch of Heartland Co-op
DATCP Case # 99405101101

Dear Mr. Schultz,

I have some good news for you. On February 2 our case closeout committee reviewed the information provided by your consultant, Ayres Associates, for your Greenwood branch located at 427 S. Main St. in the NE ¼ of the SE ¼ of Section 3, T26N, R2W. The committee decided that the site will meet the necessary closure criteria when you complete the last step, which is to list the property on the Department of Natural Resource's database of sites with residual ground water contamination.

Properties where ground water contaminants exceed the NR140, Wis. Admin Code, enforcement standards need to be listed on the DNR's Geographic Information System (GIS) Registry of Closed Remediation Sites. In your case, I believe the facility property alone needs to be listed. Water quality at the monitoring wells you installed on adjacent downgradient properties is acceptable.

Requirements for listing properties on the DNR GIS registry are contained in NR 726, Wis. Admin. Code. The DNR also provides a generic checklist showing the necessary items to include. The checklist can be found on the Internet at:
http://dnr.wi.gov/org/aw/rr/archives/pubs/RR688.pdf

Please abandon all of the monitoring wells used for this case and send me the documentation. If some of the wells are in use by nearby LUST cases, please make the appropriate contacts before proceeding with abandonment or if necessary, transferring responsibility for any wells.

Please have Ayers send two copies of the GIS closure package to me. After checking for completeness, I will forward one copy to Ann Hake of DNR's Remediation and Redevelopment Bureau in Eau Claire. You'll need to send a check for the appropriate fee to Ms. Hake at P.O. Box 4001, Eau Claire, WI 54702-4001. Her phone number is 715-839-2784. Reference the case with the newly assigned BRRTS number: **02-10-540850.**

After I confirm that the closure package is complete, I will issue a No Further Action Letter, which I'll include as part of the closure package forwarded to Ms. Hake.

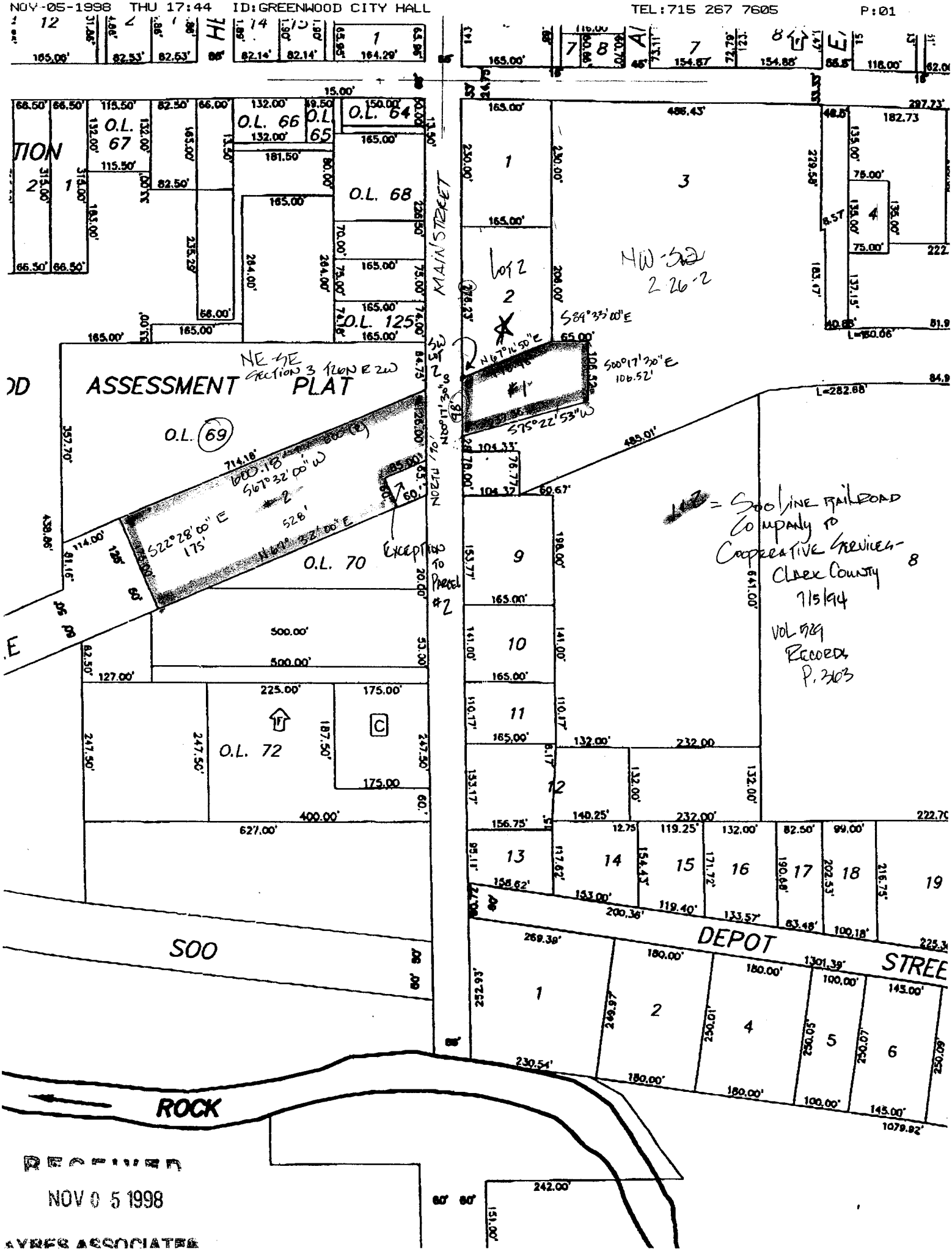
I expect that Ayers will need an additional cost approval to pull together the closure package.

I would like to thank you for your efforts to cleanup this site. If you have any questions, please call me at (608) 224 - 4517.

Sincerely,

Alan J. Mackenzie
Hydrogeologist, Containment and Remediation Section

cc: Dave Hyer - DATCP
Dennis Johnson– Ayers
Ann Hake– DNR




RECEIVED
NOV 0 5 1998
AYRES ASSOCIATES

| NUMBER 485983 | INDEXED TO: Register of Deeds, Clark Co., WI | RETURN TO: |
|---|---|---|
| Vol. 617 | Pt NE SE 3-26-2W | |
| Page 80 | | Paid $ ____ Cash ☐ Chg. $ ____ Total $ 10.00 Check ☑ |

485983

Document Number

STATE BAR OF WISCONSIN FORM 1 - 1998

617 PAGE 080

# WARRANTY DEED

This Deed, made between WALT BACKUS, as individual property, Grantor, and HEARTLAND COOPERATIVE, INC., a Wisconsin Cooperative, Grantee.

Grantor, for a valuable consideration, conveys to Grantee the following described real estate in Clark County, State of Wisconsin (The "Property"):

RECORDED ON 1/20/00 AT 3:00 P.M. IN VOL. 617 OF RECORDS PAGE 80 CLARK COUNTY WI BY, Lois Hazelbin, Lynette Phillips, Deputy

Recording Area Pd $10.00 CL#14860

Name and Return Address

Sautebin Law Office
Greenwood, Wisconsin 54437

SCHUSTER-CAMPMAN ABSTRACT & TITLE CO INC

TRANSFER $ 1.20 FEE

231.9546.000
Parcel Identification Number (PIN)
This is not homestead property.

A part of the NE 1/4 of the SE 1/4 of Section 3-26-2 West, City of Greenwood, Clark County, Wisconsin, described as follows: Beginning at the Northeast corner of Assessment Lot 70 of Greenwood Assessment Plat, thence South 67 degrees 32'00" West, on the North line thereof, 60.00 feet, thence North 22 degrees 28'00" West, 60.00 feet, thence North 67 degrees 32'00" East approximately 85 feet to the West line of Main Street, thence South approximately 65 feet to the point of beginning. Subject to the reservations contained in Volume 529 Records, page 212, Document Number 448841.

Together with all appurtenant rights, title and interests.

Grantor warrants that the title to the Property is good, indefeasible in fee simple and free and clear of encumbrances except easements and restrictions of record

Dated this 23rd day of December, 1999.

Walt Backus
* Walt Backus

**AUTHENTICATION**

Signature(s) Walt Backus

authenticated this 23rd day of December, 1999

* Bruce L. Sautebin
TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, _____
authorized by § 706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY
Bruce L. Sautebin, Attorney
Greenwood, Wisconsin 54437
(Signatures may be authenticated or acknowledged. Both are not necessary.)

**ACKNOWLEDGMENT**

STATE OF WISCONSIN )
) ss.
County )

Personally came before me this day of , the above named to me known to be the person(s) who executed the foregoing instrument and acknowledge the same.

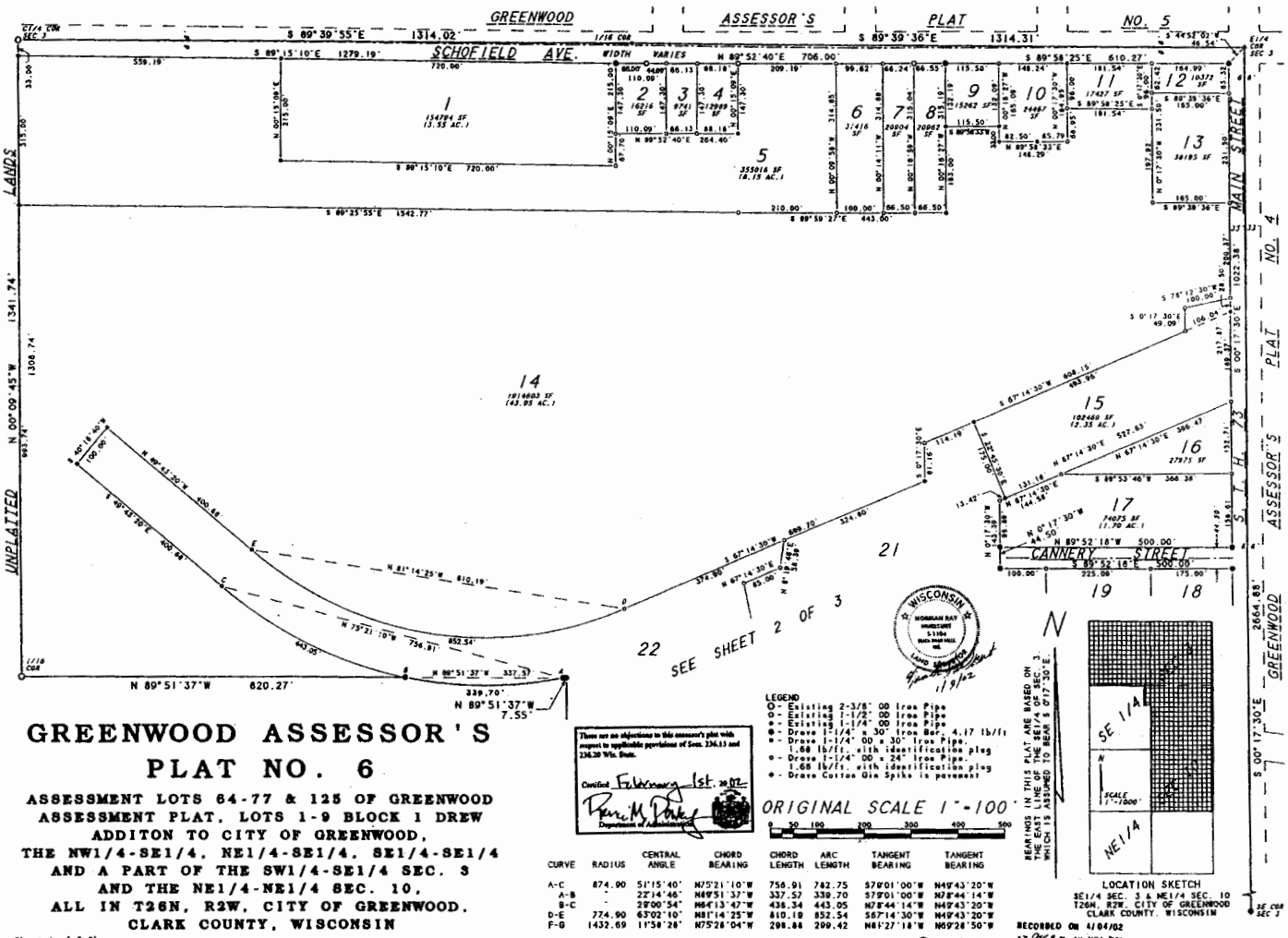
_____
* _____
Notary Public, State of Wisconsin
My Commission is permanent. (If not, state expiration date: _____, ____.)

*Names of persons signing in any capacity should be typed or printed below their signatures

WARRANTY DEED

STATE BAR OF WISCONSIN FORM No. 1 - 1998

INFORMATION PROFESSIONALS COMPANY FOND DU LAC, WI




# GREENWOOD ASSESSOR'S PLAT NO. 6

**ASSESSMENT LOTS 64-77 & 125 OF GREENWOOD ASSESSMENT PLAT, LOTS 1-9 BLOCK 1 DREW ADDITON TO CITY OF GREENWOOD, THE NW1/4-SE1/4, NE1/4-SE1/4, SE1/4-SE1/4 AND A PART OF THE SW1/4-SE1/4 SEC. 3 AND THE NE1/4-NE1/4 SEC. 10, ALL IN T26N, R2W, CITY OF GREENWOOD, CLARK COUNTY, WISCONSIN**

Sheet 1 of 3 Sheets

There are no objections to this assessor's plat with respect to applicable provisions of Sect. 236.15 and 236.20 Wis. Stats.

Certified February 1st, 2002

Department of Administration

LEGEND
- O - Existing 2-3/8" OD Iron Pipe
- o - Existing 1-1/2" OD Iron Pipe
- ● - Existing 1-1/4" OD Iron Pipe
- ● - Drove 1-1/4" x 30" Iron Bar, 4.17 lb/ft
- ● - Drove 1-1/4" OD x 30" Iron Pipe, 1.68 lb/ft, with identification plug
- ● - Drove 1-1/4" OD x 24" Iron Pipe, 1.68 lb/ft, with identification plug
- ● - Drove Cotton Gin Spike in pavement

ORIGINAL SCALE 1"=100'

0 50 100 200 300 400 500

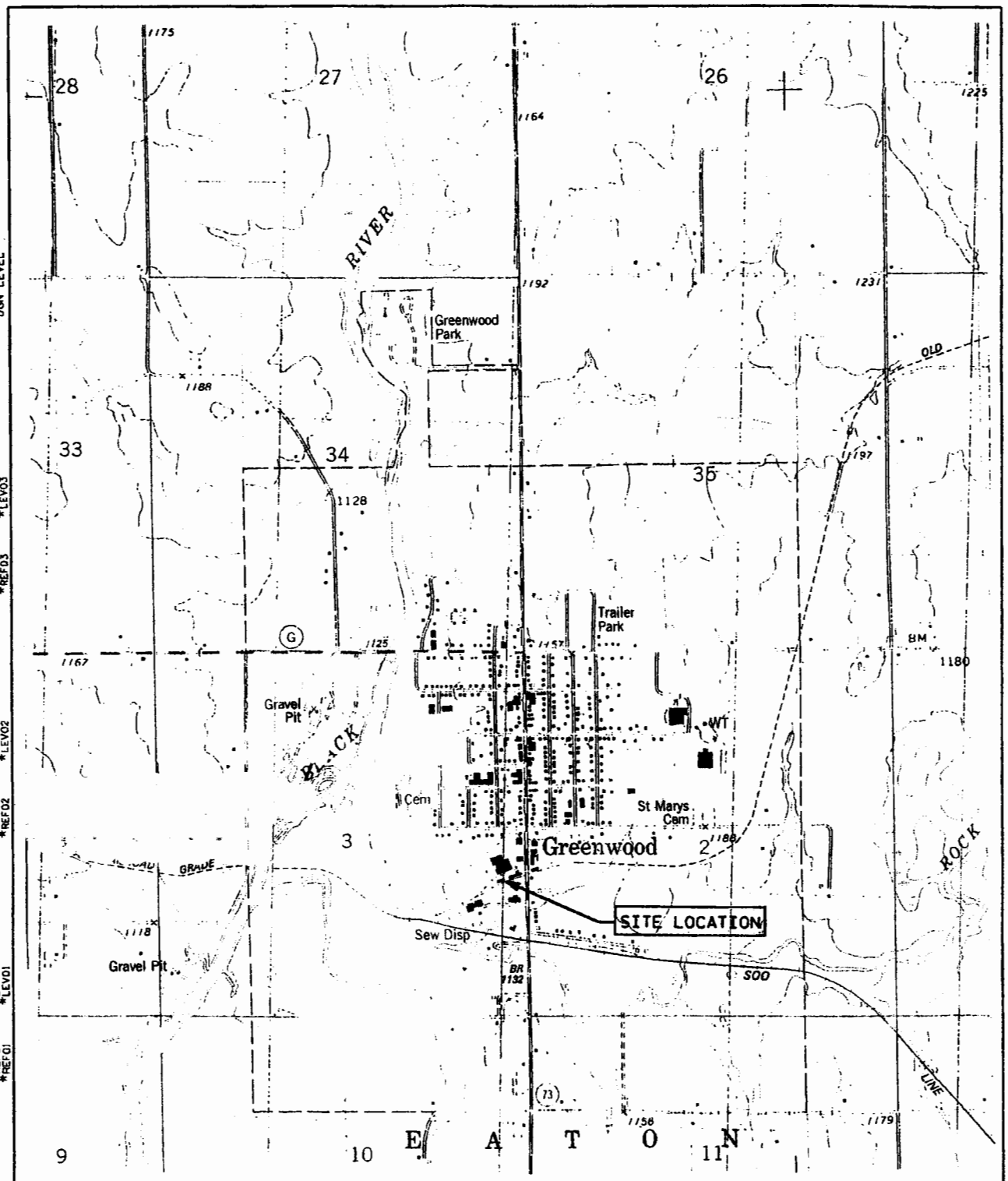
| CURVE | RADIUS | CENTRAL ANGLE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | TANGENT BEARING | TANGENT BEARING |
|---|---|---|---|---|---|---|---|
| A-C | 874.90 | 51°15'40" | N75°21'10"W | 756.91 | 782.75 | S78°01'00"W | N49°43'20"W |
| A-B | - | 22°14'46" | N49°51'37"W | 337.52 | 339.70 | S78°01'00"W | N28°44'14"W |
| B-C | - | 29°00'54" | N64°13'47"W | 436.34 | 443.05 | N28°44'14"W | N49°43'20"W |
| D-E | 774.90 | 63°02'10" | N81°14'25"W | 810.19 | 852.54 | S67°14'30"W | N49°43'20"W |
| F-G | 1432.69 | 11°58'28" | N75°28'04"W | 298.88 | 299.42 | N85°27'18"W | N69°28'50"W |

BEARINGS IN THIS PLAT ARE BASED ON THE EAST LINE OF SEC. 3, WHICH IS ASSUMED TO BEAR S 0°17'30"E.

LOCATION SKETCH
SE1/4 SEC. 3 & NE1/4 SEC. 10
T26N, R2W, CITY OF GREENWOOD
CLARK COUNTY, WISCONSIN

Doc.# 504469

RECORDED ON 4/04/02
AT 9:54 A.M. IN VOL. 862
OF RECORDS PAGE 342
CLARK COUNTY WI BY
Michael Fischer, Reg. Deed of Deeds




MAP SOURCE: GREENWOOD (1982)

SCALE 1:24000

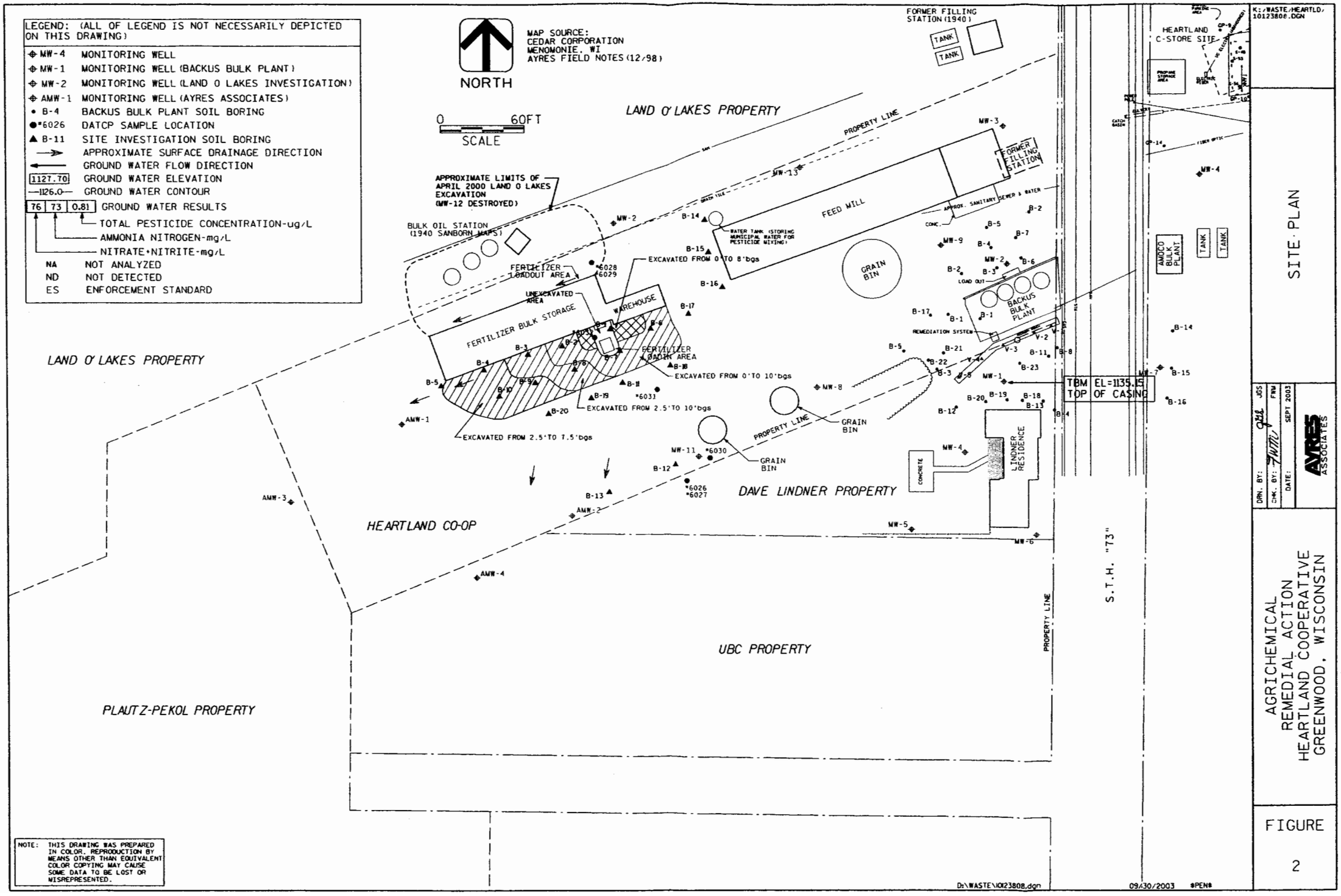
1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

NORTH

| | | | |
|---|---|---|---|
| AGRICHEMICAL SITE INVESTIGATION HEARTLAND COOPERATIVE GREENWOOD, WISCONSIN | DRN. BY: JCS<br>CHK. BY: FWM<br>DATE: JAN 2001<br>AYRES ASSOCIATES | LOCATION MAP | FIGURE 1 |

K:/WASTE/HEARTLD/101238LW.DGN


LEGEND: (ALL OF LEGEND IS NOT NECESSARILY DEPICTED ON THIS DRAWING)
MW-4 MONITORING WELL
MW-1 MONITORING WELL (BACKUS BULK PLANT)
MW-2 MONITORING WELL (LAND O LAKES INVESTIGATION)
AMW-1 MONITORING WELL (AYRES ASSOCIATES)
B-4 BACKUS BULK PLANT SOIL BORING
*6026 DATCP SAMPLE LOCATION
B-11 SITE INVESTIGATION SOIL BORING
APPROXIMATE SURFACE DRAINAGE DIRECTION
GROUND WATER FLOW DIRECTION
1127.70 GROUND WATER ELEVATION
1126.0 GROUND WATER CONTOUR
76 73 0.81 GROUND WATER RESULTS
TOTAL PESTICIDE CONCENTRATION-ug/L
AMMONIA NITROGEN-mg/L
NITRATE+NITRITE-mg/L
NA NOT ANALYZED
ND NOT DETECTED
ES ENFORCEMENT STANDARD
NORTH
MAP SOURCE:
CEDAR CORPORATION
MENOMONIE, WI
AYRES FIELD NOTES (12/98)
0 60FT
SCALE
LAND O' LAKES PROPERTY
PROPERTY LINE
APPROXIMATE LIMITS OF APRIL 2000 LAND O LAKES EXCAVATION (MW-12 DESTROYED)
BULK OIL STATION (1940 SANBORN MAPS)
FERTILIZER LOADOUT AREA
UNEXCAVATED AREA
FERTILIZER BULK STORAGE
WAREHOUSE
FERTILIZER UNLOADING AREA
EXCAVATED FROM 0 TO 8'bgs
EXCAVATED FROM 0'TO 10'bgs
EXCAVATED FROM 2.5'TO 10'bgs
EXCAVATED FROM 2.5'TO 7.5'bgs
WATER TANK (STORING MUNICIPAL WATER FOR PESTICIDE MIXING)
FEED MILL
GRAIN BIN
FORMER FILLING STATION (1940)
TANK
FORMER FILLING STATION
APPROX. SANITARY SEWER & WATER
CONC.
LOAD OUT
BACKUS BULK PLANT
REMEDIATION SYSTEM
TBM EL=1135.15 TOP OF CASING
LINDNER RESIDENCE
CONCRETE
DAVE LINDNER PROPERTY
HEARTLAND CO-OP
UBC PROPERTY
PLAUTZ-PEKOL PROPERTY
S.T.H. "73"
HEARTLAND C-STORE SITE
PROPANE STORAGE AREA
ELECTRIC SERVICE
AMOCO BULK PLANT
TANK
FIBER OPTIC
CATCH BASIN
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-11
MW-13
AMW-1
AMW-2
AMW-3
AMW-4
*6028
*6029
*6031
*6030
*6026
*6027
NOTE: THIS DRAWING WAS PREPARED IN COLOR. REPRODUCTION BY MEANS OTHER THAN EQUIVALENT COLOR COPYING MAY CAUSE SOME DATA TO BE LOST OR MISREPRESENTED.
D:\WASTE\10123808.dgn
09/30/2003
$PEN$
K:/WASTE/HEARTLD/10123808.DGN
SITE PLAN
DRN. BY: JOS
CHK. BY: FRW
DATE: SEPT 2003
AYRES ASSOCIATES
AGRICHEMICAL
REMEDIAL ACTION
HEARTLAND COOPERATIVE
GREENWOOD, WISCONSIN
FIGURE
2

# TABLE 2
# GROUND WATER ANALYTICAL RESULTS
# HEARTLAND COOPERATIVE--GREENWOOD FERTILIZER FACILITY

| Well Name | Date Sampled | Nitrate+ Nitrite Nitrogen (mg/L) | Ammonia Nitrogen (mg/L) | Total Nitrogen (mg/L) | EPTC (ug/L) | Butylate (ug/L) | Tri-fluralin (ug/L) | Chlor-pyrifos (ug/L) | Atrazine (ug/L) | Desethyl Atrazine (ug/L) | Desiso-Propyl Atrazine (ug/L) | Pro-meton (ug/L) | Pro-pazine (ug/L) | Sima-zine (ug/L) | Aceto-chlor (ug/L) | Dimeth-enamid (ug/L) | Alachlor (ug/L) | Metri-buzin (ug/L) | Metola-chlor (ug/L) | Pendi-methalin (ug/L) | Cyana-zine (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMW-1 | 1/30/02 | **64** | 11 | 75 | <0.51 | <0.51 | NA | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.5 | <0.51 | <0.51 | 0.83 | <0.51 | <0.20 |
| Duplicate =AMW-1 | | **60** | 11 | 71 | <0.51 | <0.51 | NA | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.5 | <0.51 | <0.51 | 0.84 | <0.51 | <0.20 |
| | 3/19/02 | **85** | 16 | 101 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | 0.69 | <0.52 | <0.21 |
| | 10/23/02 | **93** | 250 | 343 | <0.53 | <0.53 | NA | <0.53 | ***0.64*** | ***<0.53*** | ***<0.53*** | <0.53 | <0.53 | <0.53 | <0.53 | <0.5 | <0.53 | <0.53 | 0.86 | <0.53 | <0.21 |
| | 1/27/03 | **76** | 73 | 149 | <0.53 | <0.53 | NA | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.5 | <0.53 | <0.53 | 0.81 | <0.53 | <0.21 |
| | 8/20/03 | **70** | 84 | 154 | <0.054 | <0.039 | <0.030 | <0.041 | ***0.53*** | ***<0.014*** | ***<0.038*** | 0.20 | <0.032 | <0.020 | <0.026 | <0.012 | ***0.42*** | <0.021 | 0.90 | 0.21 | <0.048 |
| | 11/7/03 | **70** | 45 | 115 | <0.058 | <0.041 | <0.031 | <0.043 | ***0.37*** | ***<0.015*** | ***<0.040*** | 0.14 | <0.034 | <0.021 | <0.027 | <0.013 | ***0.37*** | <0.022 | 0.83 | <0.010 | <0.051 |
| | 5/27/04 | **91** | 100 | 191 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.32*** | ***<0.054*** | ***<0.043*** | 0.42 | <0.051 | 0.14 | <0.087 | <0.055 | <0.053 | <0.032 | 0.98 | <0.056 | <0.034 |
| | 11/23/04 | **60** | 78 | 138 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.38*** | ***<0.054*** | ***<0.043*** | 0.34 | <0.051 | 0.27 | <0.087 | <0.055 | <0.053 | <0.032 | 0.86 | <0.056 | <0.034 |
| AMW-2 | 1/30/02 | 0.54 | <0.02 | 0.54 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | <0.52 | <0.52 | <0.21 |
| | 3/19/02 | <1.0 | 0.28 | 0.28 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | 0.99 | <0.52 | <0.21 |
| Duplicate =AMW-2 | | ***2.4*** | <0.02 | 2.4 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | 0.85 | <0.52 | <0.21 |
| | 10/23/02 | **13** | <0.02 | 13 | <0.54 | <0.54 | NA | <0.54 | <0.54 | <0.54 | <0.54 | <0.54 | <0.54 | <0.54 | <0.54 | <0.5 | <0.54 | <0.54 | <0.54 | <0.54 | <0.22 |
| Duplicate =AMW-2 | | **12** | 0.04 | 12.04 | <0.57 | <0.57 | NA | <0.57 | <0.57 | <0.57 | <0.57 | <0.57 | <0.57 | <0.57 | <0.57 | <0.6 | <0.57 | <0.57 | <0.57 | <0.57 | <0.23 |
| | 1/27/03 | 1.5 | <0.02 | 1.5 | <0.56 | <0.56 | NA | <0.56 | <0.56 | <0.56 | <0.56 | <0.56 | <0.56 | <0.56 | <0.56 | <0.6 | <0.56 | <0.56 | <0.56 | <0.56 | <0.22 |
| Duplicate =AMW-2 | | ***2.0*** | <0.02 | 2.0 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | <0.52 | <0.52 | <0.21 |
| | 8/20/03 | 1.8 | <1.0 | 1.8 | <0.053 | <0.038 | <0.029 | <0.040 | 0.11 | 0.050 | <0.037 | <0.032 | <0.032 | <0.020 | <0.025 | <0.012 | 0.094 | <0.021 | 0.45 | <0.0093 | <0.047 |
| | 11/7/03 | 1.3 | <1.0 | 1.3 | <0.054 | <0.039 | <0.030 | <0.041 | <0.033 | <0.014 | <0.038 | <0.032 | <0.032 | <0.020 | <0.026 | <0.012 | 0.042J | <0.021 | 0.39 | <0.0095 | <0.048 |
| Duplicate =AMW-2 | | 1.3 | <1.0 | 1.3 | <0.054 | <0.039 | <0.029 | <0.041 | <0.033 | <0.014 | <0.038 | <0.032 | <0.032 | <0.020 | <0.025 | <0.012 | <0.028 | <0.021 | 0.39 | <0.0094 | <0.047 |
| | 5/27/04 | ***4.5*** | 0.4 | 4.9 | <0.029 | <0.031 | <0.036 | <0.039 | <0.037 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | 0.41 | <0.056 | <0.034 |
| | 11/23/04 | ***8.1*** | 0.19 | 8.29 | <0.029 | <0.031 | <0.036 | <0.039 | 0.047 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | <0.087 | <.0.055 | 0.15 | <0.032 | 0.24 | <0.056 | <0.034 |
| Duplicate =AMW-2 | | 7.7 | 0.19 | 7.89 | <0.029 | <0.031 | <0.036 | <0.039 | 0.057 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | 0.29 | <0.056 | <0.034 |
| AMW-3 | 8/20/03 | ***9.4*** | <1.0 | 9.4 | <0.054 | <0.039 | <0.029 | <0.041 | <0.033 | <0.014 | <0.038 | <0.032 | <0.032 | <0.020 | <0.025 | <0.012 | <0.028 | <0.021 | <0.019 | <0.0094 | <0.047 |
| Duplicate =AMW-3 | | ***9.4*** | <1.0 | 9.4 | <0.057 | <0.041 | <0.031 | <0.043 | <0.035 | <0.015 | <0.040 | <0.034 | <0.034 | <0.021 | <0.027 | <0.013 | <0.030 | <0.022 | <0.020 | <0.010 | <0.050 |
| | 11/7/03 | **11** | <1.0 | 11 | <0.055 | <0.040 | <0.030 | <0.042 | <0.034 | <0.015 | <0.039 | <0.033 | <0.033 | <0.020 | <0.026 | <0.013 | <0.029 | <0.021 | <0.019 | <0.0097 | <0.049 |
| | 5/27/04 | 0.46 | <0.025 | 0.46 | <0.029 | <0.031 | <0.036 | <0.039 | <0.037 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| Duplicate =AMW-3 | | 0.48 | 0.12 | 0.60 | <0.029 | <0.031 | <0.036 | <0.039 | <0.037 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| | 11/23/04 | <0.050 | <0.025 | <0.075 | <0.029 | <0.031 | <0.036 | <0.039 | <0.037 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| AMW-4 | 8/20/03 | ***2.1*** | <1.0 | 2.1 | <0.054 | <0.039 | <0.029 | <0.041 | ***0.66*** | ***0.13*** | ***<0.038*** | <0.032 | <0.032 | <0.020 | <0.025 | <0.012 | ***0.22*** | <0.021 | 0.36 | 0.17 | <0.047 |
| | 11/7/03 | ***1.1*** | <1.0 | 1.1 | <0.055 | <0.039 | <0.030 | <0.040 | ***0.53*** | ***<0.14*** | ***<0.038*** | <0.033 | <0.033 | <0.020 | <0.029 | <0.013 | <0.029 | <0.021 | 0.048 | <0.0096 | <0.048 |
| | 5/27/04 | 0.15 | <0.025 | 0.15 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.42*** | ***0.30*** | ***<0.043*** | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| | 11/23/04 | <0.050 | <0.025 | <0.075 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.32*** | ***0.32*** | ***<0.043*** | 0.16 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| NR 140 ES | | 10 | NS | NS | 250 | 67 | 7.5 | NS | 3 (a) | | | 250 | NS | 4 | NS | NS | 2 | 250 | 15 | NS | 1 |
| NR 140 PAL | | 2 | NS | NS | 50 | 6.7 | 0.75 | NS | 0.3 (a) | | | 50 | NS | 0.4 | NS | NS | 0.2 | 50 | 1.5 | NS | 0.1 |

**Abbreviations and Acronyms**
ES = Enforcement Standard
PAL = Preventive Action Limit
NR = Not reported on laboratory report
NA = Not analyzed

mg/L = Milligrams per liter; equivalent to parts per million
ug/L = Micrograms per liter; equivalent to parts per billion
(a) = ES and PAL for atrazine includes the total concentration of atrazine, desethyl atrazine, and desisopropyl atrazine
**80** = Concentrations meet or exceed NR 140 ES
***2.4*** = Concentrations meet or exceed NR 140 PAL

# TABLE 2 (Cont.)
# GROUND WATER ANALYTICAL RESULTS
# HEARTLAND COOPERATIVE--GREENWOOD FERTILIZER FACILITY

| Well Name | Date Sampled | Nitrate+ Nitrite Nitrogen (mg/L) | Ammonia Nitrogen (mg/L) | Total Nitrogen (mg/L) | EPTC (ug/L) | Butylate (ug/L) | Tri-fluralin (ug/L) | Chlor-pyrifos (ug/L) | Atrazine (ug/L) | Desethyl Atrazine (ug/L) | Desiso-Propyl Atrazine (ug/L) | Pro-meton (ug/L) | Pro-pazine (ug/L) | Sima-zine (ug/L) | Aceto-chlor (ug/L) | Dimeth-enamid (ug/L) | Alachlor (ug/L) | Metri-buzin (ug/L) | Metola-chlor (ug/L) | Pendi-methalin (ug/L) | Cyana-zine (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 10/11/00 | <0.1 | 0.5 | 0.5 | <0.1 | <0.1 | NA | <0.1 | <0.1 | NR | NR | <0.1 | <0.1 | <0.1 | <0.2 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 1/30/02 | 0.10 | 0.46 | 0.56 | <0.53 | <0.53 | NA | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.53 | <0.5 | <0.53 | <0.53 | <0.53 | <0.53 | <0.21 |
| | 3/19/02 | ***2.5*** | <0.02 | 2.5 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | <0.52 | <0.52 | <0.21 |
| | 10/23/02 | <0.02 | 0.92 | 0.92 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 1/27/03 | <1.0 | 0.65 | 0.65 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 8/20/03 | <1.0 | <1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 10/03 | Well abandoned in October 2003. | | | | | | | | | | | | | | | | | | | |
| MW-3 | 10/11/00 | **60** | 75 | 135 | <0.1 | <0.1 | NA | <0.1 | <0.1 | NR | NR | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.90 | <0.1 | <0.1 |
| | 11/5/01 | Well was removed from excavation area with the backhoe. Well was abandoned. | | | | | | | | | | | | | | | | | | | |
| MW-8 | 10/11/00 | 0.4 | <0.1 | 0.4 | <0.1 | <0.1 | NA | <0.1 | ***0.51*** | NR | NR | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 1/30/02 | <0.02 | <0.02 | <0.02 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | <0.52 | <0.52 | <0.21 |
| | 3/19/02 | 0.19 | <0.02 | 0.19 | <0.51 | <0.51 | NA | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.51 | <0.5 | <0.51 | <0.51 | <0.51 | <0.51 | <0.20 |
| | 10/23/02 | ***2.0*** | <0.10 | 2.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 1/27/03 | 0.03 | <0.02 | 0.03 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 8/20/03 | <1.0 | <1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 11/7/03 | <1.0 | <1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 5/27/04 | ***3.8*** | 0.073 | 3.873 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.70*** | ***0.21*** | ***<0.043*** | 0.27 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| | 11/23/04 | ***2.3*** | <0.025 | 2.3 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.66*** | ***0.25*** | ***<0.043*** | <0.048 | <0.051 | <0.067 | <0.087 | <0.055 | <0.053 | <0.032 | <0.21 | <0.056 | <0.034 |
| MW-11 | 10/11/00 | ***2.3*** | <0.1 | 2.3 | <0.1 | <0.1 | NA | <0.1 | <0.1 | NR | NR | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | 0.12 | <0.1 | <0.1 |
| Duplicate =MW-11 | | ***2.5*** | <0.1 | 2.5 | <0.1 | <0.1 | NA | <0.1 | <0.1 | NR | NR | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | 0.14 | <0.1 | <0.1 |
| | 1/29/02 | **14** | <0.02 | 14 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | <0.52 | <0.52 | <0.21 |
| | 3/19/02 | **15** | <0.02 | 15 | <0.52 | <0.52 | NA | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.52 | <0.5 | <0.52 | <0.52 | <0.52 | <0.52 | <0.21 |
| | 10/23/02 | **14** | 0.33 | 14.33 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 1/27/03 | ***6.5*** | 0.11 | 6.61 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 8/20/03 | **18** | <1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 11/7/03 | **18** | <1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 5/27/04 | **25** | 0.93 | 25.93 | <0.029 | <0.031 | <0.036 | <0.039 | 0.14 | <0.054 | <0.043 | <0.048 | <0.051 | <0.067 | 0.57 | <0.055 | <0.053 | <0.032 | 0.32 | <0.056 | <0.034 |
| | 12/8/04 | **18** | 0.42 | 18.42 | <0.029 | <0.031 | <0.036 | <0.039 | ***0.19*** | ***0.19*** | ***<0.043*** | <0.048 | <0.051 | <0.067 | 0.84 | <0.055 | <0.053 | <0.032 | 0.56 | <0.056 | <0.034 |
| B-5 | 10/31/00 | **80** | 5.1 | 85.1 | <0.1 | <0.1 | NA | <0.1 | ***1.7*** | ***<0.1*** | ***<0.1*** | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | **2.3** | <0.1 | ***1.8*** | <0.1 | <0.1 |
| B-7 | 10/31/00 | **29** | 53 | 82 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-13 | 10/31/00 | 0.5 | <0.1 | 0.5 | <0.1 | <0.1 | NA | <0.1 | 0.29 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.69 | <0.1 | <0.1 |
| NR 140 ES | | 10 | NS | NS | 250 | 67 | 7.5 | NS | 3 (a) | | | 250 | NS | 4 | NS | NS | 2 | 250 | 15 | NS | 1 |
| NR 140 PAL | | 2 | NS | NS | 50 | 6.7 | 0.75 | NS | 0.3 (a) | | | 50 | NS | 0.4 | NS | NS | 0.2 | 50 | 1.5 | NS | 0.1 |

**Abbreviations and Acronyms**

ES = Enforcement Standard
PAL = Preventive Action Limit
NR = Not reported on laboratory report
NA = Not analyzed

mg/L = Milligrams per liter; equivalent to parts per million
ug/L = Micrograms per liter; equivalent to parts per billion
(a) = ES and PAL for atrazine includes the total concentration of atrazine, desethyl atrazine, and desisopropyl atrazine
**80** = Concentrations meet or exceed NR 140 ES
***2.4*** = Concentrations meet or exceed NR 140 PAL

# Table 1
## Heartland Cooperative - Greenwood Fertilizer Facility
## Soil Analytical Results

| Soil Probe | Sample Number | Depth (feet) | Nitrate + Nitrite mg/Kg | Ammonia Nitrogen mg/Kg | Total Nitrogen mg/Kg | EPTC (mg/kg) | Trifluralin (mg/kg) | Atrazine (mg/kg) | Des-ethyl-Atrazine (mg/kg) | Des-isopropyl-Atrazine (mg/kg) | Alachlor (mg/kg) | Metribuzin (mg/kg) | Metol-achlor (mg/kg) | Penda-methalin (mg/kg) | Cyanazine (mg/kg) | Butylate (mg/kg) | Prometon (mg/kg) | Propazine (mg/kg) | Simazine (mg/kg) | Acetochlor (mg/kg) | Dimeth-enamid (mg/kg) | Chlor-pyrifos (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-1 | 1 | 0-1 | 130 | 25 | 155 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 570 | 570 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | 65 | 65 | | | | | | | | | | | | | | | | | |
| B-2 | 1 | 0-1 | 150 | 56 | 206 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <40 | 740 | 740 | | | | | | | | | | | | | | | | | |
| B-2 #5 4'-5' confirmation | | | 21 | 710 | 731 | | | | | | | | | | | | | | | | | |
| | 7 | 8-10 | <20 | 250 | 250 | | | | | | | | | | | | | | | | | |
| B-3 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <80 | 1000 | 1000 | | | | | | | | | | | | | | | | | |
| | 7 | 8-10 | <20 | 550 | 550 | | | | | | | | | | | | | | | | | |
| B-4 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 260 | 260 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | 68 | 68 | | | | | | | | | | | | | | | | | |
| B-5 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 110 | 110 | | | | | | | | | | | | | | | | | |
| | 7 | 8-10 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-6 | 1 | 0-1 | 150 | <20 | 150 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 230 | 230 | | | | | | | | | | | | | | | | | |
| B-6 #5 4'-5' confirmation | | | 21 | 180 | 201 | | | | | | | | | | | | | | | | | |
| | 7 | 8-10 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-7 | 1 | 0-1 | 110 | <20 | 110 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <80 | 1200 | 1200 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | 520 | 520 | | | | | | | | | | | | | | | | | |
| B-8 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 490 | 490 | | | | | | | | | | | | | | | | | |
| | 7 | 8-10 | <20 | 170 | 170 | | | | | | | | | | | | | | | | | |
| B-9 | 1 | 0-1 | 73 | <20 | 73 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 620 | 620 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | 46 | 46 | | | | | | | | | | | | | | | | | |
| B-10 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 130 | 130 | | | | | | | | | | | | | | | | | |
| B-10 #5 4'-5' confirmation | | | <10 | 120 | 120 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | 27 | 27 | | | | | | | | | | | | | | | | | |

NOTE: Only samples from B-14, B-15, and B-16 were analyzed for pesticides

[ ] = Exceeds 100 mg/kg total nitrogen concentration for soil

mg/kg = Milligrams per kilogram, equivalent to parts per million

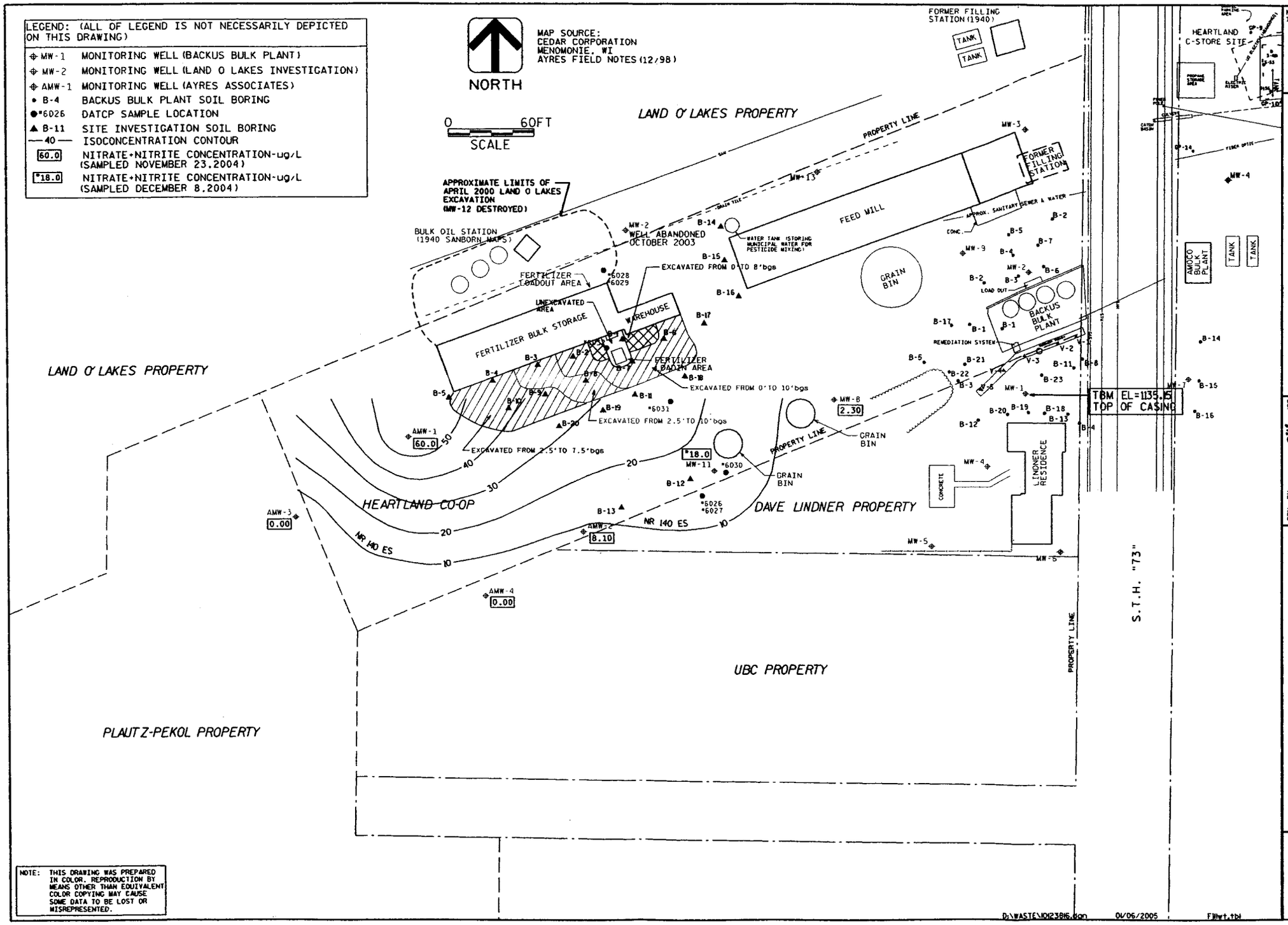
# Table 1 (Cont.)
## Heartland Cooperative - Greenwood Fertilizer Facility
## Soil Analytical Results

| Soil Probe | Sample Number | Depth (feet) | Nitrate + Nitrite mg/Kg | Ammonia Nitrogen mg/Kg | Total Nitrogen mg/Kg | EPTC (mg/kg) | Trifluralin (mg/kg) | Atrazine (mg/kg) | Des-ethyl-Atrazine (mg/kg) | Des-isopropyl-Atrazine (mg/kg) | Alachlor (mg/kg) | Metribuzin (mg/kg) | Metol-achlor (mg/kg) | Penda-methalin (mg/kg) | Cyanazine (mg/kg) | Butylate (mg/kg) | Prometon (mg/kg) | Propazine (mg/kg) | Simazine (mg/kg) | Acetochlor (mg/kg) | Dimeth-enamid (mg/kg) | Chlor-pyrifos (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-11 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 29 | 29 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-12 | 1 | 0-1 | 29 | 46 | 75 | | | | | | | | | | | | | | | | | |
| B-12 #1 0'-1' confirmation | | | 56 | 30 | 86 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-13 | 1 | 0-1 | 45 | <20 | 45 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-14 | 1 | 0-1 | <20 | <20 | <20 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 5 | 4-5 | <20 | 79 | 79 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 7 | 8-10 | <20 | 25 | 25 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| B-15 | 1 | 0-1 | <20 | <20 | <20 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.50 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| B-15 #1 0'-1' confirmation | | | 12 | <10 | 12 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.37 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 5 | 4-5 | <20 | 44 | 44 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 7 | 8-10 | <20 | 61 | 61 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| B-16 | 1 | 0-1 | 23 | <20 | 23 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 5 | 4-5 | <20 | <20 | <20 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | 7 | 8-10 | <20 | <20 | <20 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| B-17 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 40 | 40 | | | | | | | | | | | | | | | | | |
| | 7 | 8-10 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-18 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-19 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 38 | 38 | | | | | | | | | | | | | | | | | |
| B-19 #5 4'-5' confirmation | | | <10 | 11 | 11 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| B-20 | 1 | 0-1 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |
| | 5 | 4-5 | <20 | 86 | 86 | | | | | | | | | | | | | | | | | |
| | 8 | 10-12 | <20 | <20 | <20 | | | | | | | | | | | | | | | | | |

NOTE: Only samples from B-14, B-15, and B-16 were analyzed for pesticides

[ ] = Exceeds 100 mg/kg total nitrogen concentration for soil

mg/kg = Milligrams per kilogram, equivalent to parts per million




K:/WASTE/HEARTLD/10123B16.DGN

NITRATE+NITRITE ISOCONCENTRATION CONTOURS NOVEMBER 23/DECEMBER 8, 2004

DRN. BY: JGS
CHK. BY: GJS
DATE: JAN 2005

AYRES ASSOCIATES

AGRICHEMICAL REMEDIAL ACTION HEARTLAND COOPERATIVE GREENWOOD, WISCONSIN

FIGURE 2

**TABLE 1**
**MONITORING WELL INFORMATION**
**HEARTLAND COOPERATIVE--GREENWOOD FERTILIZER FACILITY**

| Well Number | AMW-1 | AMW-2 | AMW-3 | AMW-4 | MW-2 | MW-8 | MW-11 |
|---|---|---|---|---|---|---|---|
| Wisconsin Unique Well I.D. No. | PB 440 | PE 125 | PA 168 | PA 169 | NA | NA | NA |
| Top of Casing Elevation | 1135.35 | 1133.00 | 1138.56 | 1135.40 | 1136.69 | 1135.52 | 1133.84 |
| Ground Surface Elevation | 1135.70 | 1133.42 | 1136.20 | 1133.00 | 1136.81 | 1135.78 | 1134.31 |
| Top of Screen Elevation | 1128.72 | 1127.30 | 1128.20 | 1126.00 | 1132.57 | 1125.14 | 1125.44 |
| Bottom of Screen Screen | 1118.72 | 1117.30 | 1118.20 | 1116.00 | 1122.57 | 1115.14 | 1115.44 |
| Depth to ground water 1/29/2002 ** | NM | NM | NI | NI | NM | NM | 8.87 |
| Depth to ground water 1/30/2002 ** | 10.59 | 8.27 | NI | NI | 8.43 | 10.31 | NM |
| Depth to ground water 3/19/2002 ** | 9.13 | 6.80 | NI | NI | 6.54 | 8.76 | 7.43 |
| Depth to ground water 10/23/2002 ** | 8.88 | 6.79 | NI | NI | 5.40 | 8.56 | 7.12 |
| Depth to ground water 1/27/2003 ** | 10.90 | 8.58 | NI | NI | 8.99 | 10.77 | 9.28 |
| Depth to ground water 8/20/2003 ** | 10.96 | 8.66 | 14.21 | 11.21 | 6.60 | 10.78 | 9.35 |
| Depth to ground water 11/7/03 ** | 11.15 | 8.84 | 14.4 | 11.37 | * | 10.95 | 9.49 |
| Ground water elevation 1/30/2002 | 1124.76 | 1124.73 | NI | NI | 1128.26 | 1125.21 | 1124.97 |
| Ground water elevation 3/19/2002 | 1126.22 | 1126.20 | NI | NI | 1130.15 | 1126.76 | 1126.41 |
| Ground water elevation 10/23/2002 | 1126.47 | 1126.21 | NI | NI | 1131.49 | 1126.96 | 1126.72 |
| Ground water elevation 1/27/2003 | 1124.45 | 1124.42 | NI | NI | 1127.70 | 1124.75 | 1124.56 |
| Ground water elevation 8/20/2003 | 1124.39 | 1124.34 | 1124.35 | 1124.19 | 1130.09 | 1124.74 | 1124.49 |
| Ground water elevation 11/7/2003 | 1124.20 | 1124.16 | 1124.16 | 1124.03 | * | 1124.57 | 1124.35 |
| Ground water elevation 5/27/2004 | 1127.22 | 1127.22 | 1127.42 | 1127.12 | * | 1127.67 | 1127.24 |
| Ground water elevation 11/23/04 | 1126.10 | 1125.97 | 1125.66 | 1125.93 | * | 1126.50 | NM |

**NOTES**

* MW-2 abandoned October 2003

** Depth to ground water measured from the top of well casing

AMW-1 = Ayres Associates Monitoring Well #1

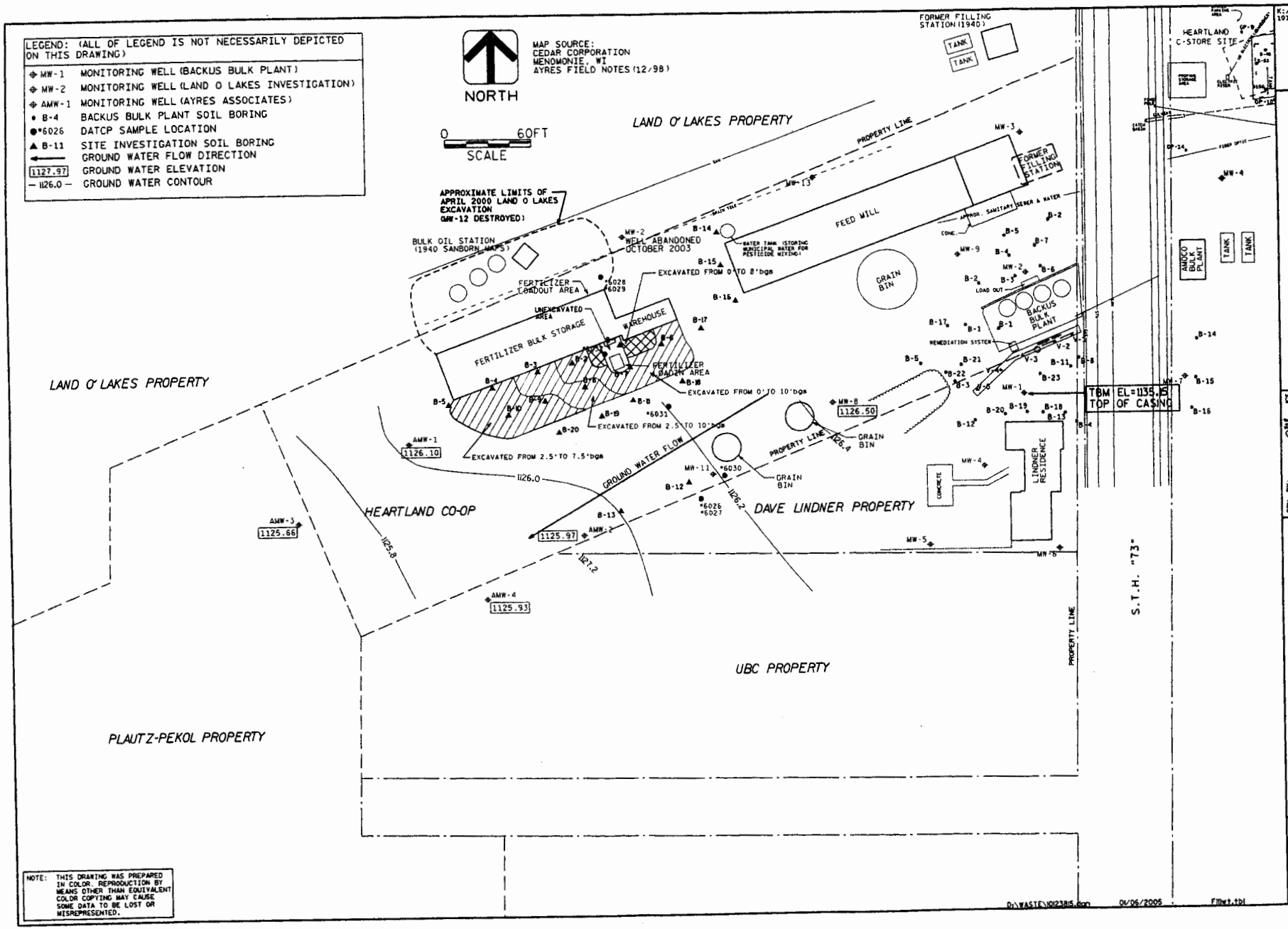
MW-2 = Land O'Lakes Well #2

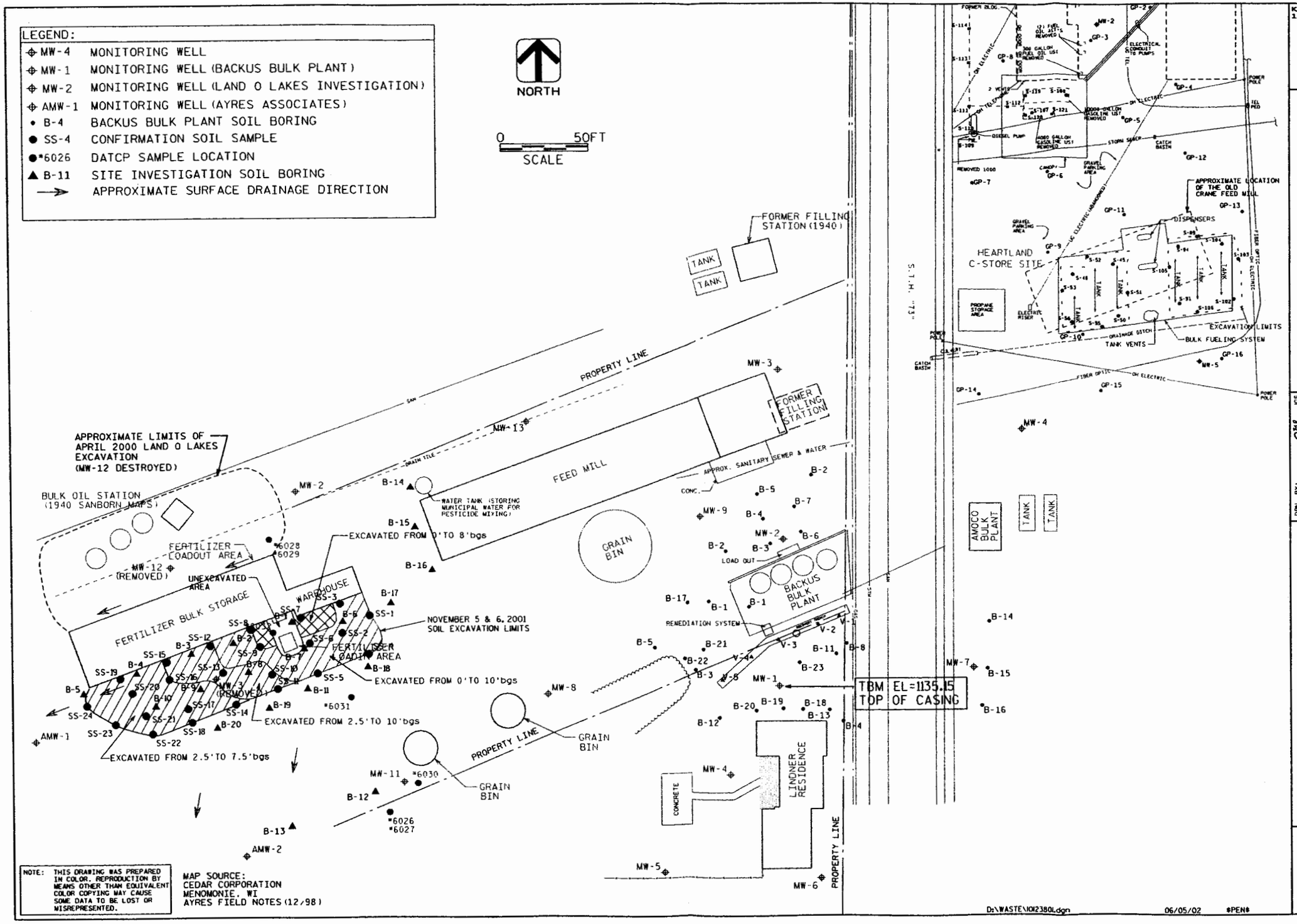
NA = None assigned

NM = Not measured

NI = Not installed

Benchmark was the top of casing of the Heartland Backus well MW-1; Elevation = 1135.15.


LEGEND: (ALL OF LEGEND IS NOT NECESSARILY DEPICTED ON THIS DRAWING)
MW-1 MONITORING WELL (BACKUS BULK PLANT)
MW-2 MONITORING WELL (LAND O LAKES INVESTIGATION)
AMW-1 MONITORING WELL (AYRES ASSOCIATES)
B-4 BACKUS BULK PLANT SOIL BORING
*6026 DATCP SAMPLE LOCATION
B-11 SITE INVESTIGATION SOIL BORING
GROUND WATER FLOW DIRECTION
1127.97 GROUND WATER ELEVATION
1126.0 GROUND WATER CONTOUR
NORTH
MAP SOURCE: CEDAR CORPORATION MENOMONIE, WI AYRES FIELD NOTES (12/98)
0 60FT
SCALE
LAND O' LAKES PROPERTY
PROPERTY LINE
FORMER FILLING STATION (1940)
TANK
HEARTLAND C-STORE SITE
APPROXIMATE LIMITS OF APRIL 2000 LAND O LAKES EXCAVATION (MW-12 DESTROYED)
BULK OIL STATION (1940 SANBORN MAPS)
WELL ABANDONED OCTOBER 2003
FEED MILL
FORMER FILLING STATION
GRAIN BIN
FERTILIZER LOADOUT AREA
UNEXCAVATED AREA
FERTILIZER BULK STORAGE
WAREHOUSE
FERTILIZER LOADIN AREA
EXCAVATED FROM 0' TO 8' bgs
EXCAVATED FROM 0' TO 10' bgs
EXCAVATED FROM 2.5' TO 10' bgs
EXCAVATED FROM 2.5' TO 7.5' bgs
GROUND WATER FLOW
BACKUS BULK PLANT
REMEDIATION SYSTEM
LOAD OUT
AMOCO BULK PLANT
TBM EL=1135.15 TOP OF CASING
LINDNER RESIDENCE
CONCRETE
HEARTLAND CO-OP
DAVE LINDNER PROPERTY
UBC PROPERTY
PLAUTZ-PEKOL PROPERTY
S.T.H. "73"
1126.10
1125.66
1125.97
1125.93
1126.50
1126.0
1125.8
1126.2
1127.2
1126.4
NOTE: THIS DRAWING WAS PREPARED IN COLOR. REPRODUCTION BY MEANS OTHER THAN EQUIVALENT COLOR COPYING MAY CAUSE SOME DATA TO BE LOST OR MISREPRESENTED.
D:\WASTE\10123815.dgn 01/06/2005 Fillwt.tbl
K:/WASTE/HEARTLD/10123815.DGN
GROUND WATER CONTOURS NOVEMBER 23, 2004
AYRES ASSOCIATES
DRN. BY: JGS
CHK. BY: GJS
DATE: JAN 2005
AGRICHEMICAL REMEDIAL ACTION HEARTLAND COOPERATIVE GREENWOOD, WISCONSIN
FIGURE 1




K:/WASTE/HEARTLD/101238O1.DGN

EXCAVATION LIMITS/ SOIL SAMPLE LOCATIONS

DRN. BY: JGS
CHK. BY: FRM
DATE: JUNE 2002

AYRES ASSOCIATES

AGRICHEMICAL
REMEDIAL ACTION
HEARTLAND COOPERATIVE
GREENWOOD, WISCONSIN

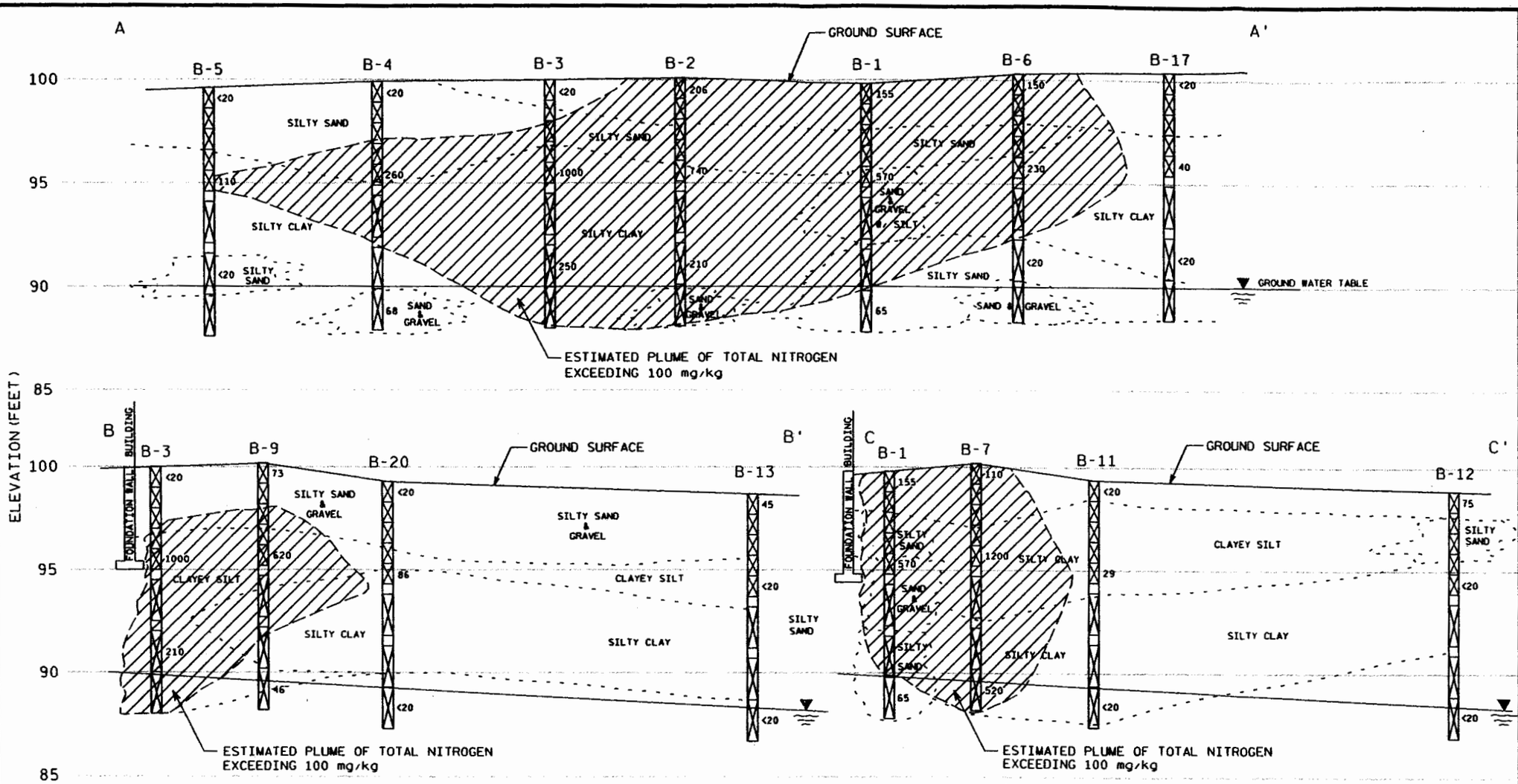
FIGURE 2

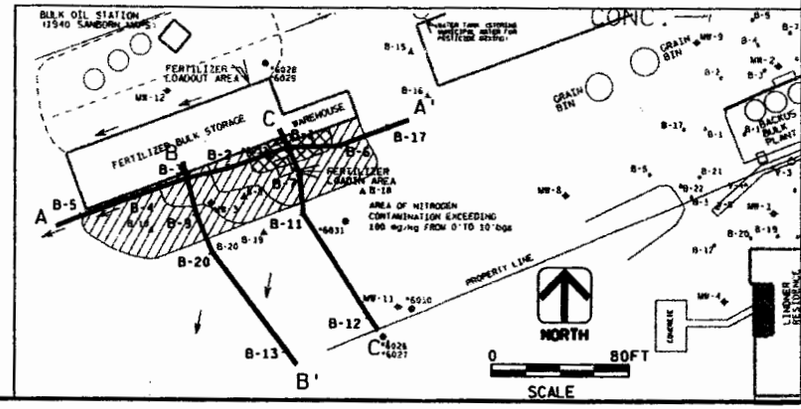
# TABLE 1
# SOIL ANALYTICAL RESULTS
# NOVEMBER 2001 REMEDIAL ACTION
# HEARTLAND COOPERATIVE
# GREENWOOD, WISCONSIN
# DATCP CASE NO. 99405101101

| Sample Number | Date | Location | Depth (feet) | Ammonia Nitrogen (mg/Kg) | Nitrate + Nitrite (mg/Kg) | Total Nitrogen (mg/Kg) |
|---|---|---|---|---|---|---|
| S-1 | 11 / 5 / 01 | East Sidewall | 5 | 3.6 | <1.6 | 3.6 |
| S-2 | 11 / 5 / 01 | East Bottom | 10 | <1.6 | <1.6 | <1.6 |
| S-3 | 11 / 5 / 01 | Northeast Sidewall | 5 | <1.6 | <1.6 | <1.6 |
| S-4 | 11 / 5 / 01 | Southeast Sidewall | 5 | 12 | <1.6 | 12 |
| S-5 | 11 / 5 / 01 | Mid Southeast Sidewall | 5 | 9.8 | 2.7 | 12.5 |
| S-6 | 11 / 5 / 01 | Mid East Bottom | 10 | 5.4 | 7.7 | 13.3 |
| S-7 | 11 / 5 / 01 | Mid Northeast Sidewall | 5 | 85 | 7.9 | 92.9 |
| S-8 | 11 / 5 / 01 | North Sidewall Middle | 5 | 63 | 2.6 | 65.6 |
| S-9 | 11 / 5 / 01 | North Bottom Middle | 10 | 10 | 2.5 | 12.5 |
| S-10 | 11 / 5 / 01 | South Bottom Middle | 10 | 17 | 6.0 | 23.0 |
| S-11 | 11 / 5 / 01 | South Sidewall Middle | 5 | 43 | 12 | 55.0 |
| S-12 | 11 / 5 / 01 | North Sidewall Middle | 5 | 48 | <1.6 | 48.0 |
| S-13 | 11 / 5 / 01 | Bottom Center of Excavation | 10 | 67 | 2.9 | 69.9 |
| S-14 | 11 / 5 / 01 | South Sidewall Middle | 5 | 18 | <1.6 | 18.0 |
| S-15 | 11 / 6 / 01 | Mid North Sidewall | 5 | 60 | <1.6 | 60.0 |
| S-16 | 11 / 6 / 01 | North Bottom Mid West Side | 10 | 22 | 3.1 | 25.1 |
| S-17 | 11 / 6 / 01 | South Bottom Mid West Side | 8 | 36 | 3.4 | 39.4 |
| S-18 | 11 / 6 / 01 | South Sidewall Mid West Side | 4 | 14 | 11 | 25 |
| S-19 | 11 / 6 / 01 | North Sidewall Mid West Side | 5 | <1.6 | <1.6 | <1.6 |
| S-20 | 11 / 6 / 01 | North Bottom West Side | 7.5 | 2.7 | <1.6 | 2.7 |
| S-21 | 11 / 6 / 01 | South Bottom West Side | 7.5 | <1.6 | 4.7 | 4.7 |
| S-22 | 11 / 6 / 01 | Southwest Sidewall | 5 | 3.2 | <1.6 | 3.2 |
| S-23 | 11 / 6 / 01 | West Sidewall | 5 | <1.6 | 6.1 | 6.1 |
| S-24 | 11 / 6 / 01 | Northwest sidewall | 5 | 14 | <1.6 | 14 |

## Soil Sample Results From Monitoring Wells

| | | | | | | |
|---|---|---|---|---|---|---|
| AMW-1 #1 | 12/20/01 | West of Excavation | 2.5 - 4.5 | 120 | 3.6 | 123.6 |
| AMW-1 #4 | 12/20/01 | West of Excavation | 10 - 12 | 5.5 | 10 | 15.5 |
| AMW-2 #1 | 12/20/01 | South of Excavation | 2.5 - 4.5 | 9.5 | 9.6 | 19.1 |
| AMW-2 #4 | 12/20/01 | South of Excavation | 10 - 12 | <1.6 | <1.6 | <1.6 |




| LEGEND: |
|---|
| 210 TOTAL NITROGEN mg/kg |

NOTE: THIS DRAWING WAS PREPARED IN COLOR. REPRODUCTION BY MEANS OTHER THAN EQUIVALENT COLOR COPYING MAY CAUSE SOME DATA TO BE LOST OR MISREPRESENTED.

SCALE:
1"=20' HORIZ.
1"=5' VERT.

K:/WASTE/HEARTLD/101238F3.DGN

CROSS SECTION A-A'
CROSS SECTION B-B'
CROSS SECTION C-C'

DRW. BY: AEB
CHK. BY: FRW
DATE: MARCH 2001

AYRES ASSOCIATES

ESTIMATED LATERAL EXTENT OF THE TOTAL NITROGEN CONTAMINATED SOIL PLUME AREA

FIGURE 3

P.O. Box 260
Dorchester, WI 54425
1-800-521-2021

Statement

The legal description and deed sent to Ayres Associates, describing the contaminated property at 427 S. Main Street, Greenwood, Wisconsin is complete and accurate.

Dennis Schultz
P.O. Box 260
Dorchester, WI 54425

Date