

GIS Registry Disclaimer

This case was closed by the DNR prior to August 1, 2002, when DNR began adding approved cleanups with residual soil contamination into the GIS Registry. Certain documents that are currently required by ch. NR 726, Wis. Adm. Code may therefore not be included in this packet as they were unavailable at the time the original case was closed.

The information contained in this document was assembled by DNR from a previously closed case file, and added to the GIS Registry to provide the public with information on closed sites with residual soil and/or groundwater contamination remaining above applicable state standards.

GIS REGISTRY

Cover Sheet

March, 2010
(RR 5367)

Source Property Information

BRRTS #:

ACTIVITY NAME:

PROPERTY ADDRESS:

MUNICIPALITY:

PARCEL ID #:

CLOSURE DATE:

FID #:

DATCP #:

COMM #:

*WTM COORDINATES:

X: Y:

** Coordinates are in
WTM83, NAD83 (1991)*

WTM COORDINATES REPRESENT:

Approximate Center Of Contaminant Source

Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

Contaminated Media:

Groundwater Contamination > ES (236)

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property" form)*

Soil Contamination > *RCL or **SSRCL (232)

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property" form)*

Land Use Controls:

N/A (Not Applicable)

Soil: maintain industrial zoning (220)

*(note: soil contamination concentrations
between non-industrial and industrial levels)*

Structural Impediment (224)

Site Specific Condition (228)

Cover or Barrier (222)

*(note: maintenance plan for
groundwater or direct contact)*

Vapor Mitigation (226)

Maintain Liability Exemption (230)

*(note: local government unit or economic
development corporation was directed to
take a response action)*

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? (234)

Yes No N/A

** Residual Contaminant Level*

***Site Specific Residual Contaminant Level*

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: Completion of this form is mandatory for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: PARCEL ID #:
ACTIVITY NAME: WTM COORDINATES: X: Y:

CLOSURE DOCUMENTS (the Department adds these items to the final GIS packet for posting on the Registry)

- Closure Letter**
- Maintenance Plan** (if activity is closed with a land use limitation or condition (land use control) under s. 292.12, Wis. Stats.)
- Continuing Obligation Cover Letter** (for property owners affected by residual contamination and/or continuing obligations)
- Conditional Closure Letter**
- Certificate of Completion (COC)** (for VPLE sites)

SOURCE LEGAL DOCUMENTS

- Deed:** The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).
Figure #: **Title:**
- Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

MAPS (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 11 x 17 inches unless the map is submitted electronically.

- Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.
Note: Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.
Figure #: **Title:**
- Detailed Site Map:** A map that shows all relevant features (buildings, roads, individual property boundaries, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.
Figure #: 4 **Title: Soil Boring/Monitoring Well Location Map**
- Soil Contamination Contour Map:** For sites closing with residual soil contamination, this map is to show the location of all contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.
Figure #: 1 **Title: Estimated Extent of Residual Impacts**

BRRTS #: 03-41-002426

ACTIVITY NAME: TOTAL PETROLEUM

MAPS (continued)

- Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: 3a Title: Geologic Cross Section A-A

Figure #: Title:

- Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.

Note: This is intended to show the total area of contaminated groundwater.

Figure #: Title:

- Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: Title:

Figure #: Title:

TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))

Tables must be no larger than 11 x 17 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

- Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.
Note: This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: 2 Title: Soil Sample Analysis Results

- Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: Title:

- Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: Title:

IMPROPERLY ABANDONED MONITORING WELLS

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.

Note: If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.

- Not Applicable**

- Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.

Note: If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.

Figure #: Title:

- Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

- Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

- Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 03-41-002426

ACTIVITY NAME: TOTAL PETROLEUM

NOTIFICATIONS

Source Property

Not Applicable

Letter To Current Source Property Owner: If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.

Return Receipt/Signature Confirmation: Written proof of date on which confirmation was received for notifying current source property owner.

Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

Not Applicable

Letter To "Off-Source" Property Owners: Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.

Note: Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.

Number of "Off-Source" Letters:

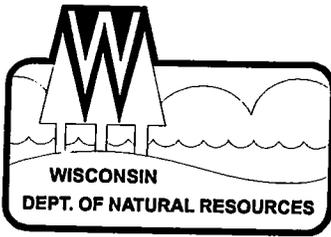
Return Receipt/Signature Confirmation: Written proof of date on which confirmation was received for notifying any off-source property owner.

Deed of "Off-Source" Property: The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies)**. This does not apply to right-of-ways.

Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.

Letter To "Governmental Unit/Right-Of-Way" Owners: Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).

Number of "Governmental Unit/Right-Of-Way Owner" Letters:



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Regional Headquarters
2300 N. Dr. ML King Drive, PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-263-8500
FAX 414-263-8483
TDD 414-263-8713

September 30, 1999

Mr. Dan Senchyshyn
W225 S5755 Guthrie Road
Waukesha, WI 53186

Subject: Final Closure for Cardin, Inc./former Total petroleum, 5235 West Loomis Road,
Greenfield, WI FID: 241104600, BRRTS: 03-41-002426.

Dear Mr. Senchyshyn:

This letter acknowledges the receipt of the deed restriction for the above-named site per Moraine Environmental's submittal dated September 13, 1999. Based on the investigation and remedial documentation provided to the department, it appears that the above-named site is in compliance with the requirements of Chs. NR 700 to 724, Wis. Admin. Code. Therefore, the department considers the case closed and tracked as such, having determined that no further action is necessary at the site at this time. However, the case may be reopened pursuant to S. NR 726.09, Wis. Admin. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment.

The Department appreciates the actions you have taken to investigate and remediate the contamination at this site. If you have any questions or comments, please feel free to contact me at the above address or at (414) 263-8644. Please refer to the FID number at the top of this letter in any future correspondence. Future correspondence should be sent directly to the Remediation and Redevelopment programs assistant Brenda Brown (263-8680) at the above address.

Sincerely,

John J. Hnat
Hydrogeologist
Remediation and Redevelopment

C: Jeff Larkin, Moraine Environmental
WDNR SER Files

Deed Restriction

In Re: 5235 W. Loomis Road, Greenfield, Wisconsin, more particularly described as:

Parcel 2 of C. S. M. No. 3527, being a subdivision of C. S. M. No. 829, located in the Southwest 1/4 of Section 26, Town 6 North, Range 21 East, in the City of Greenfield, Milwaukee County, Wisconsin

STATE OF WISCONSIN)
) ss
COUNTY OF MILWAUKEE)

Recording Area

Name and Return Address
Mr. Dan Senchyshyn
W225 S5755 Guthrie Road
Waukesha, Wisconsin 53186

Parcel Identification Number (PIN)
Greenfield Tax Key
6480008003

WHEREAS, Dan Senchyshyn is the owner of the above-described property.

WHEREAS, approximately two hundred and ten (210) tons of inaccessible petroleum impacted soil remains on the property beneath the current building. In 1995, a total of 11,927 tons of petroleum-contaminated soil were excavated and removed from this site. Benzene as high as 4,100 ug/kg is present residually at the perimeters of the remedial excavation completed in October, 1995. These concentrations exceed the ch.NR 720, Wis. Adm. Code, generic soil cleanup level for benzene of 5.5 ug/kg. Remedial excavation confirmatory soil samples (NW3 and NW1.5A) and investigative soil samples collected from borings B19, B21 and B22 did not contain residual benzene concentrations which exceed the ch.NR 720, Wis. Adm. Code, generic soil cleanup level for benzene of 5.5 ug/kg. Therefore, the extent of soil contamination has been adequately defined and has been determined to be confined on-site.

WHEREAS, it is the desire and intention of the property owner to impose on the property restriction which will make it unnecessary to conduct additional soil remediation activities on the property at the present time;

NOW THEREFORE, the owner hereby declares that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restriction:

- 1) The building that exists on the property, as of the date that this restriction is signed, and the concrete slab on which the building sits shall be repaired and maintained by the property owner, or shall be replaced by a suitable cap or covering, to serve as an impermeable cover over residual petroleum contamination that is located beneath the existing building. If the existing building is demolished or destroyed, the property owner shall take immediate steps to minimize infiltration and shall, as soon as possible, install, maintain and repair a cap or cover to prevent the infiltration of rain water or snow melt in the area that was previously occupied by the building. The design for the cap or cover, and a repair and maintenance plan, shall be approved by the Department of Natural Resources, or its successor agency, prior to the cap or cover's installation. The property owner may propose to utilize the concrete slab on which the existing building sits to satisfy the requirements of this restriction after other portions of the building are removed, but approval of a repair and maintenance plan for the concrete slab must be obtained from the Department of Natural Resources, or its successor agency prior to the building's demolition or as soon as possible after the building's destruction.

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above described property whether by descent, devise, purchase or otherwise. This restriction benefits and is enforceable by the Wisconsin Department of Natural Resources, its successors or assigns. The Department, its successors or assigns may initiate proceedings at law or in equity against any person or persons who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

Any person who is, or becomes, owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that the restriction set forth in this covenant is no longer required. Upon the written receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restriction contained herein can be extinguished. If the

Department determines that the restriction can be extinguished, an affidavit, with a copy of the Department's written determination, may be recorded to give notice that this deed restriction is no longer binding.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restriction, this 29 day of MARCH, 1999

Signature: *Dan Senchyshyn*

Printed Name: Mr. Dan Senchyshyn, Owner

Subscribed and sworn to before me this 29th day of March, 1999

Cathleen Radtke
Notary Public, State of WI

CATHY RADTKE
Notary Public, State of Wis.
My commission expires My Commission Expires January 23, 2000

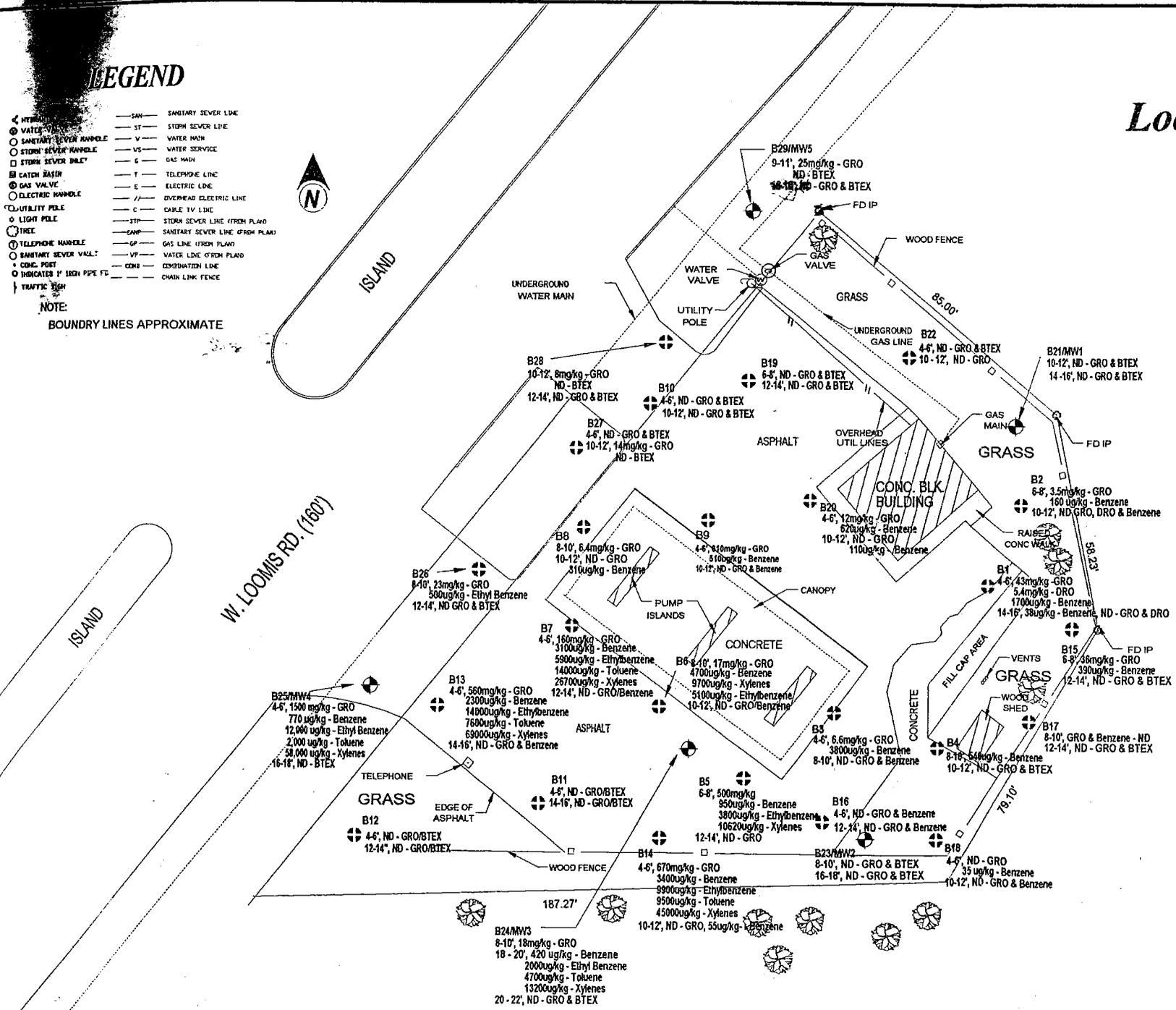


Soil Boring/Monitoring Well Location Map - Soil Quality Results

Figure 4 CARDAN OIL

- ### LEGEND
- ◊ INTERIOR
 - WATER
 - SANITARY SEWER HANNOLE
 - STORM SEWER HANNOLE
 - STORM SEWER DILET
 - CATCH BASIN
 - GAS VALVE
 - ELECTRIC HANNOLE
 - UTILITY POLE
 - LIGHT POLE
 - TREE
 - TELEPHONE HANNOLE
 - SANITARY SEWER VALLT
 - CONC. PORT
 - INDICATES 1" IRON PIPE FT
 - ↑ TRAFFIC SIGN
 - SAN — SANITARY SEWER LINE
 - ST — STORM SEWER LINE
 - W — WATER MAIN
 - VS — WATER SERVICE
 - G — GAS MAIN
 - T — TELEPHONE LINE
 - E — ELECTRIC LINE
 - // — OVERHEAD ELECTRIC LINE
 - C — CABLE TV LINE
 - STP — STORM SEWER LINE (FROM PLAND)
 - CAMP — SANITARY SEWER LINE (FROM PLAND)
 - GP — GAS LINE (FROM PLAND)
 - WP — WATER LINE (FROM PLAND)
 - CONB — COMBINATION LINE
 - — CHAIN LINK FENCE

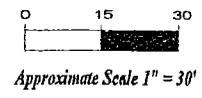
NOTE:
BOUNDRY LINES APPROXIMATE



Legend

- GRO - Gasoline Range Organics
- DRO - Diesel Range Organic
- BTEX - Benzene, Toluene, Ethylbenzene, Xylenes
- ND - No Detection

- - Tree
- ⊕ - Soil Boring Location
- ⊙ - Groundwater Monitoring Well Location



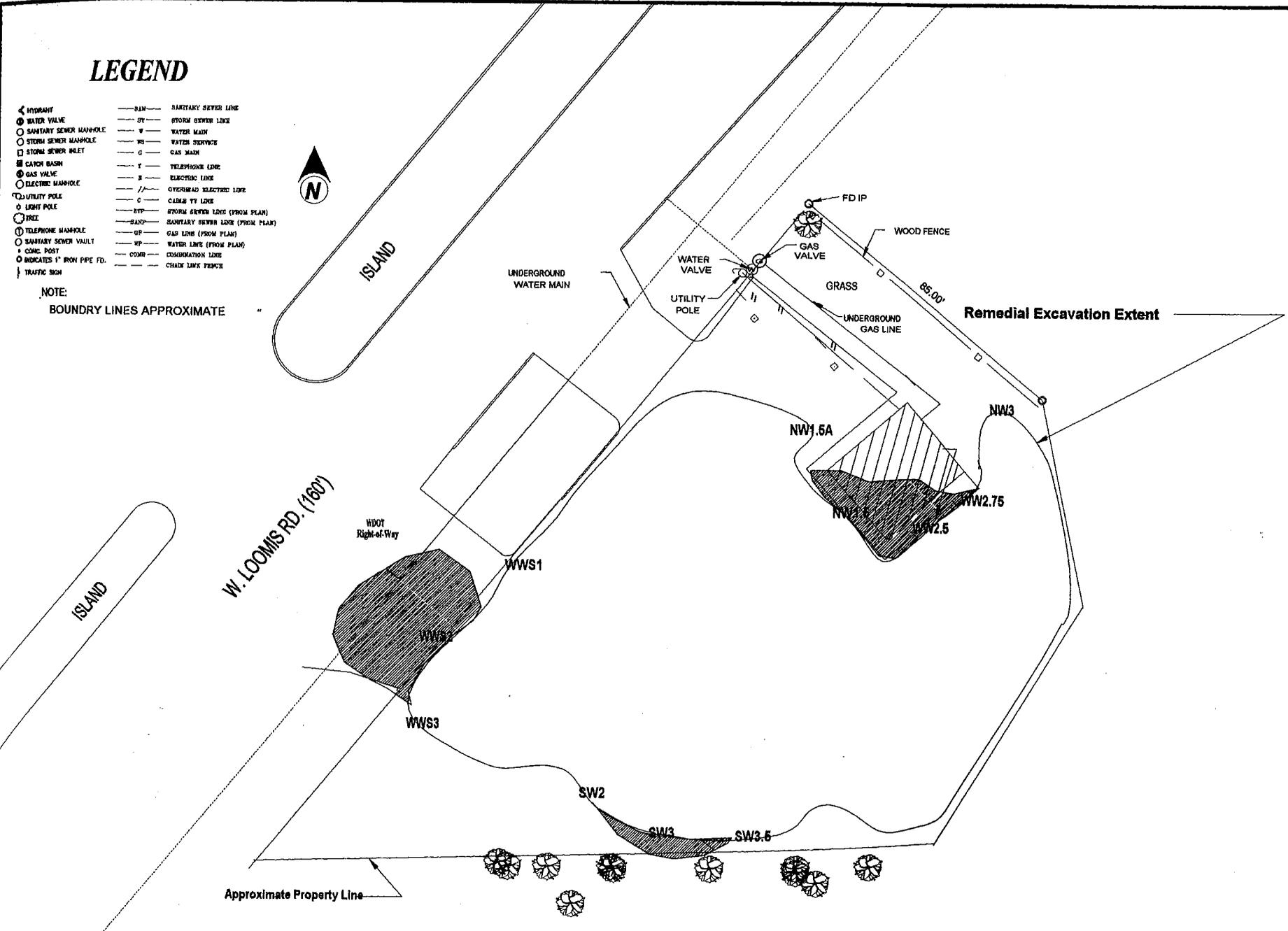
* Original site survey and map produced by LIS
map depicted has been modified by MEI for report.
* Scale - 1" = 30' on 11x17 paper. Original
Enhanced by 25%.

DRAWING SITE LOCATION		
<h1>Cardan Oil</h1>		
5235 West Loomis Rd. Greenfield, Wisconsin		
DRAWING SCALE	DATE OF DRAWING	FIGURE NUMBER
1" = 30'	8-09-95	4

LEGEND

- ◀ HIGHWAY
- ⊙ WATER VALVE
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER INLET
- ⊠ CATCH BASIN
- ⊙ GAS VALVE
- ⊙ ELECTRIC MANHOLE
- ⊙ UTILITY POLE
- LIGHT POLE
- ⊙ TREE
- ⊙ TELEPHONE MANHOLE
- ⊙ SANITARY SEWER VAULT
- ⊙ CONC. POST
- ⊙ INDICATES 1" IRON PIPE FD.
- ↑ TRAFFIC SIGN
- SAN — SANITARY SEWER LINE
- ST — STORM SEWER LINE
- W — WATER MAIN
- WI — WATER SERVICE
- G — GAS MAIN
- T — TELEPHONE LINE
- E — ELECTRIC LINE
- // — OVERHEAD ELECTRIC LINE
- C — CABLE TV LINE
- STP — STORM SEWER LINE (FROM PLAN)
- SAMP — SANITARY SEWER LINE (FROM PLAN)
- GP — GAS LINE (FROM PLAN)
- WP — WATER LINE (FROM PLAN)
- COMB — COMBINATION LINE
- — CHAIN LINK FENCE

NOTE:
BOUNDARY LINES APPROXIMATE



Estimated Extent Of Residual Impacts

Legend

Estimated Extent of Residual Soil Impact



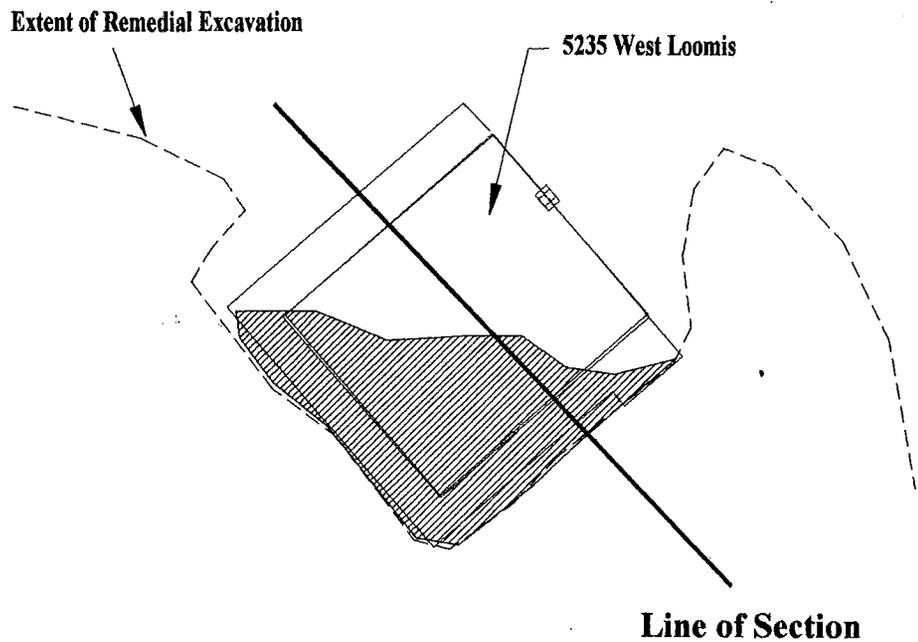
Approximate Scale 1" = 30'

* Original site survey and map produced by LIS
map depicted has been modified by MEI for report.

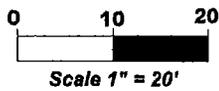
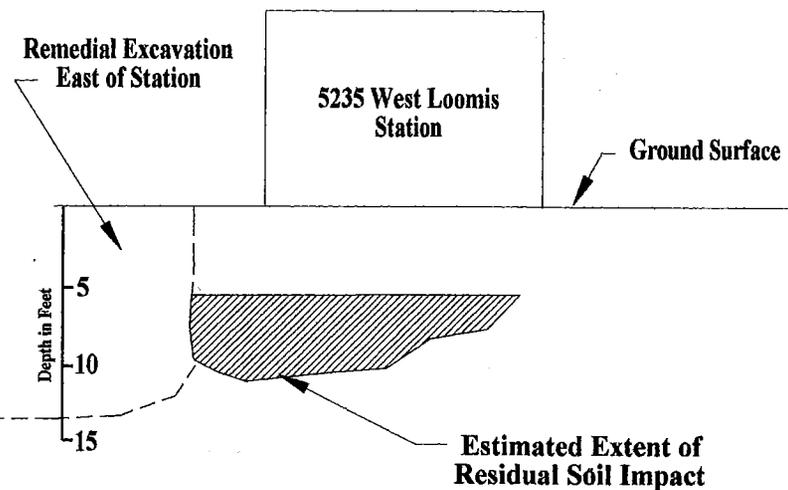
* Scale - 1" = 30' on 11x17 paper. Original
Enhanced by 25%.

DRAWING SITE LOCATION		
Cardan Oil		
5235 West Loomis Rd. Greenfield, Wisconsin		
DRAWING SCALE	DATE OF DRAWING	FIGURE NUMBER
1" = 30'	6-19-98	1

Plan View



Cross Sectional View



Drawing Title		
Extent of Soil Impacts		
Project Name		
Cardan, Inc. 5235 West Loomis Road Greenfield, Wisconsin		
Project Number	Drawing Company	
1006	Moraine Environmental, Inc.	
Scale	Date	Page
1" = 20'	6-17-98	Figure 2

Plan View



Extent of Remedial Excavation

WDOT
Right-of-Way

WWS1

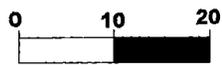
WWS2

Remedial Excavation

SW2

SW3

SW3.5



Scale 1" = 20'

Line of Section

Cross Sectional View

- Not To Scale

Estimated Extent of
Residual Soil Impact

Ground Surface

WDOT
Right-of-Way

Depth in Feet
5
10
15

Remedial Excavation

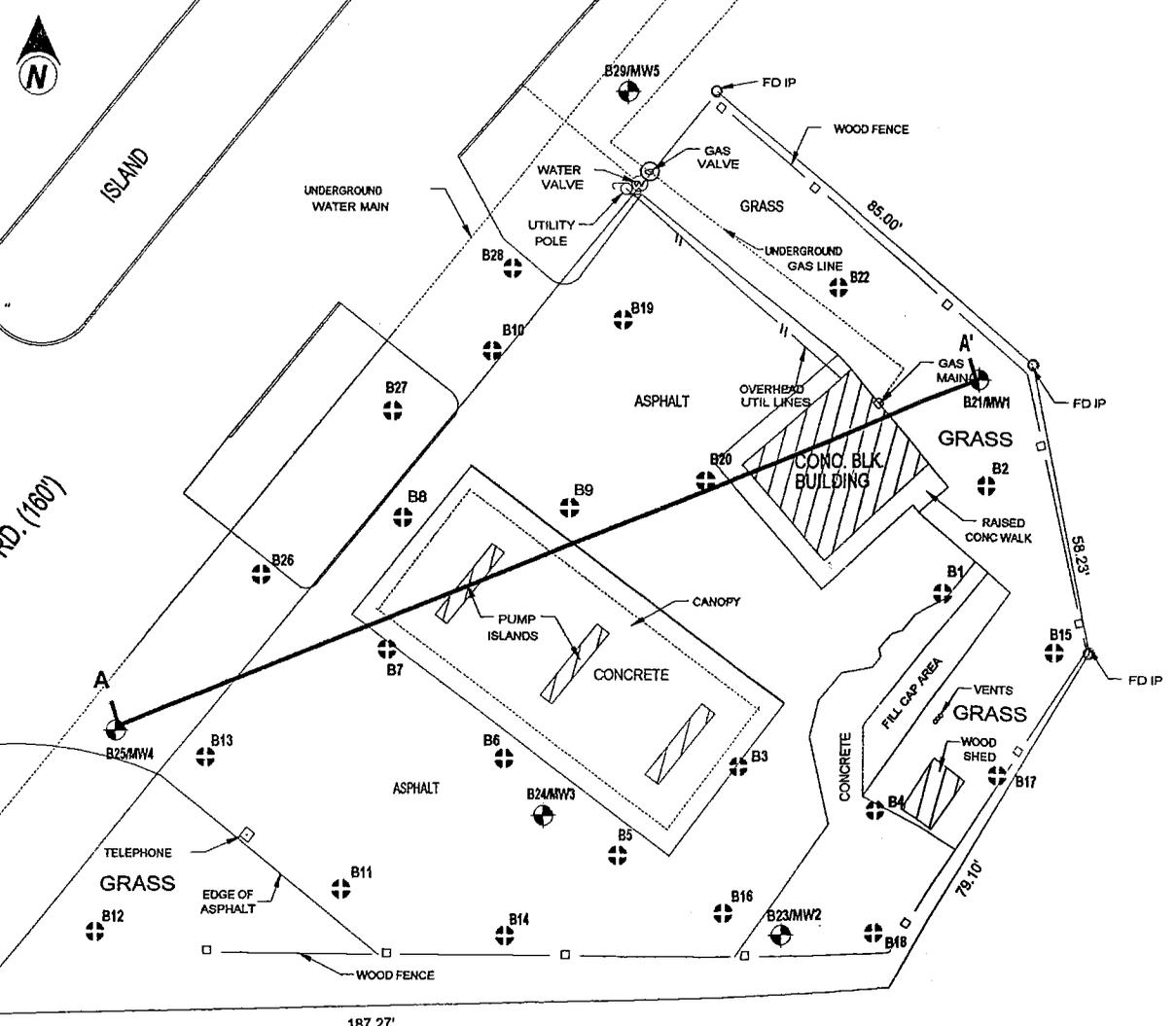
Extent of Remedial Excavation

Drawing Title		
Extent of Soil Impacts		
Project Name		
Cardan, Inc. 5235 West Loomis Road Greenfield, Wisconsin		
Project Number	Drawing Company	
1006	Moraine Environmental, Inc.	
Scale	Date	Figure
1" = 20'	6-18-98	Figure 3

LEGEND

- SAN — SANITARY SEWER LINE
- ST — STORM SEWER LINE
- V — WATER MAIN
- VS — WATER SERVICE
- G — GAS MAIN
- T — TELEPHONE LINE
- E — ELECTRIC LINE
- / — OVERHEAD ELECTRIC LINE
- C — CABLE TV LINE
- STP — STORM SEWER LINE (FROM PLAN)
- SAMP — SANITARY SEWER LINE (FROM PLAN)
- GP — GAS LINE (FROM PLAN)
- WP — WATER LINE (FROM PLAN)
- COMB — COMBINATION LINE
- CHAIN LINK FENCE
- TRAFFIC SIGN
- HYDRANT
- ⊕ WATER VALVE
- ⊕ SANITARY SEWER MANHOLE
- ⊕ STORM SEWER MANHOLE
- ⊕ STORM SEWER INLET
- ⊕ CATCH BASIN
- ⊕ GAS VALVE
- ⊕ ELECTRIC MANHOLE
- ⊕ UTILITY POLE
- ⊕ LIGHT POLE
- ⊕ TREE
- ⊕ TELEPHONE MANHOLE
- ⊕ SANITARY SEWER VALVE
- ⊕ CONC. POST
- ⊕ INDICATES 1" IRON PIPE FD

NOTE:
BOUNDARY LINES APPROXIMATE



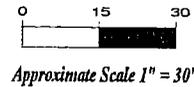
Geologic Cross Section Location Map

Figure 3

CARDAN OIL

Legend

- ⊕ Soil Boring Location
- ⊕ Groundwater Monitoring Well Location



* Original site survey and map produced by LIS
map depicted has been modified by MEI for report.

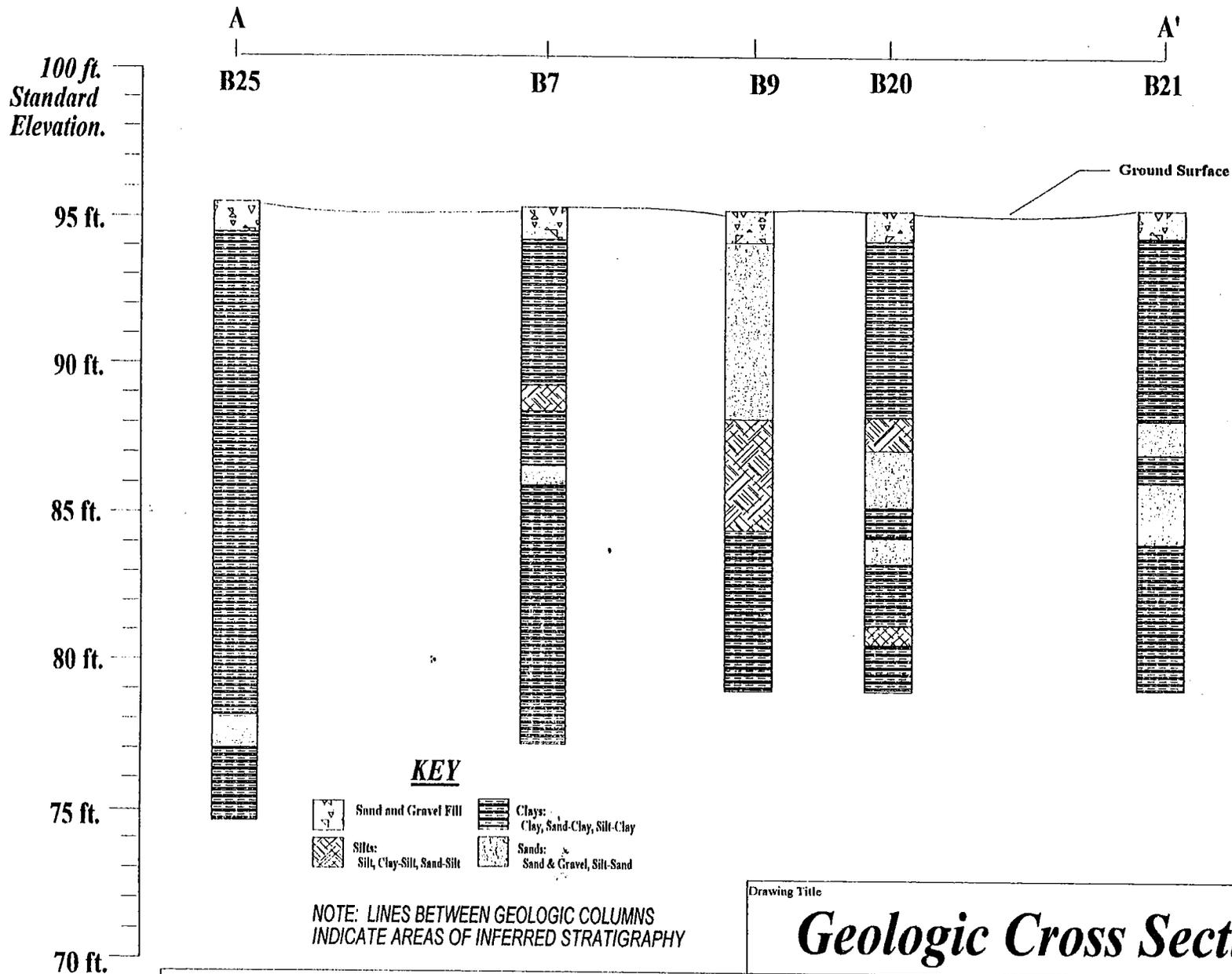
* Scale - 1" = 30' on 11x17 paper. Original
Enhanced by 25%.

DRAWING SITE LOCATION

Cardan Oil

5235 West Loomis Rd. Greenfield, Wisconsin

DRAWING SCALE	DATE OF DRAWING	FIGURE NUMBER
1" = 30'	12-8-95	3



**Datum is Standard Ground Surface Elevation.*

Cardan Oil #0704
 5235 West Loomis Rd., Greenfield, Wisconsin
 Part of the Southwest 1/4 of Section 26,
 Township 6 North, Range 21 East, In the City of
 Greenfield, Milwaukee County, Wisconsin

Drawing Title		
Geologic Cross Section A - A'		
Drawing Company		
Moraine Environmental, Inc.		
Date	Scale	Figure
12-7-95	Scale: Vertical Scale: 1" = 5' Horizontal scale: 1" = 20'	Figure 3a

**TABLE 2
CARDAN, INC.
SOIL SAMPLE ANALYSIS RESULTS**

Boring Number	Depth (feet bgs)	PID	GRO mg/kg	DRO mg/kg	Benzene	Ethyl Benzene	Methyl-Tert Butyl Ether	Toluene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene	Xylenes	Lead mg/kg	1,2-DCA
B1	4-6	698	43	5.4	1700	1500	55	130	1600	600	1810	20	ND
B1	14-16	19.4	ND	ND	38	43	ND	ND	120	ND	100	6.8	ND
B2	6-8	21	3.5	NA	160	86	ND	ND	ND	ND	ND	9.8	ND
B2	10-12	1.2	ND	ND	ND	ND	130	ND	ND	ND	ND	6.6	ND
B3	4-6	8.9	6.6	NA	3800	170	160	40	42	ND	937	9.6	ND
B3	8-10	9	ND	NA	ND	ND	1200	ND	ND	ND	ND	9.1	ND
B4	8-10	98	NA	NA	540	76	47	ND	170	ND	46	14	ND
B4	10-12	1	ND	NA	ND	ND	89	ND	ND	ND	ND	6.9	ND
B5	6-8	528	500	NA	950	3800	ND	170	7900	2300	10620	16	ND
B5	12-14	0.6	ND	NA	ND	ND	ND	ND	ND	ND	ND	8.7	ND
B6	8-10	298	17	NA	4700	5100	500	1400	6800	980	9700	8.8	ND
B6	10-12	10	ND	NA	ND	ND	790	ND	ND	ND	ND	7.3	ND
B7	4-6	344	160	NA	3100	5900	ND	14,000	9700	2700	26700	9.1	ND
B7	12-14	2	ND	NA	ND	ND	ND	ND	ND	ND	ND	5.9	ND
B8	8-10	60	6.4	NA	720	1900	67	51	120	120	138	9.8	ND
B8	10-12	0.3	ND	NA	310	140	ND	52	ND	ND	85	8.5	ND
B9	10-12	3	ND	NA	ND	ND	440	ND	ND	ND	ND	6.7	ND
B9	4-6	213	610	NA	510	520	ND	ND	22000	4300	3000	12	ND
B10	4-6	10.7	ND	NA	ND	ND	ND	ND	ND	ND	ND	8.4	ND
B10	10-12	6.8	ND	NA	ND	ND	ND	ND	ND	ND	ND	8.7	ND
B11	4-6	3.2	ND	NA	ND	ND	ND	ND	ND	ND	ND	20	ND
B11	14-16	29	ND	NA	ND	ND	ND	ND	ND	ND	ND	11	ND
B12	4-6	4.2	ND	NA	ND	ND	ND	ND	ND	ND	ND	14	ND
B12	12-14	3.2	ND	NA	ND	ND	ND	ND	ND	ND	ND	10	ND
B13	4-6	483	560	NA	2300	14,000	ND	7600	39000	12000	69000	11	ND
B13	14-16	8.3	ND	NA	ND	ND	ND	ND	ND	ND	ND	10	ND
B14	4-6	480	670	NA	3400	9900	ND	9500	30000	ND	45000	14	ND
B14	10-12	18.6	ND	NA	55	ND	ND	38	ND	ND	43	10	ND
B15	6-8	24	36	NA	390	170	240	ND	1100	ND	180	30	ND
B15	12-14	16	ND	NA	ND	ND	430	ND	ND	ND	ND	12	ND
B16	4-6	4.8	ND	NA	ND	ND	ND	NA	ND	ND	ND	11	ND
B16	12-14	3.8	ND	NA	ND	ND	ND	ND	ND	ND	ND	12	ND
B17	8-10	8.5	ND	NA	ND	ND	ND	ND	ND	ND	ND	12	ND

TABLE 2, Continued
CARDAN, INC.
SOIL SAMPLE ANALYSIS RESULTS

Boring Number	Depth (feet bgs)	PID	GRO mg/kg	DRO mg/kg	Benzene	Ethyl Benzene	Methyl-Tert Butyl Ether	Toluene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene	Xylenes	Lead mg/kg	1,2-DCA
B17	12-14	3.2	ND	NA	ND	ND	560	ND	ND	ND	ND	11	ND
B18	4-6	3.8	ND	NA	35	ND	110	ND	ND	ND	ND	30	ND
B18	10-12	4.2	ND	NA	ND	ND	190	ND	ND	ND	ND	11	ND
B19	6-8	2.1	ND	NA	ND	ND	ND	ND	ND	ND	ND	10	ND
B19	12-14	2.1	ND	NA	ND	ND	ND	ND	ND	ND	ND	10	ND
B20	4-6	279	12	NA	620	850	ND	ND	1700	ND	1100	12	ND
B20	10-12	7.5	ND	NA	110	ND	250	ND	ND	ND	ND	11	ND
B21	10-12	3.2	ND	NA	ND	ND	ND	ND	ND	ND	ND	4.8	ND
B21	14-16	1.9	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
B22	4-6	1.9	ND	NA	ND	ND	ND	ND	ND	ND	ND	8.5	ND
B22	10-12	0.2	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
B23	8-10	4.5	ND	NA	ND	ND	ND	ND	ND	ND	ND	13	ND
B23	16-18	0.4	ND	NA	ND	ND	ND	ND	ND	ND	ND	10	ND
B24	8-10	1507	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
B24	18-20	24.7	84	NA	420	2000	ND	4700	9800	3100	13200	7.3	ND
B24	20-22	4.7	ND	NA	ND	ND	ND	ND	ND	ND	ND	5.7	ND
B25	4-6	792	1500	NA	770	12000	ND	2000	48000	14000	58000	12	ND
B25	16-18	2.1	ND	NA	ND	ND	ND	ND	ND	ND	ND	4.5	ND
B26	8-10	305	23	NA	ND	500	ND	ND	95	260	ND	7.8	ND
B26	12-14	0.4	ND	NA	ND	ND	ND	ND	ND	ND	ND	7.4	ND
B27	4-6	0.6	ND	NA	ND	ND	ND	ND	ND	ND	ND	8.7	ND
B27	10-12	6.4	14	NA	ND	ND	ND	ND	ND	ND	ND	7.8	ND
B28	10-12	--	8.0	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
B28	12-14	--	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
B29	9-11	--	25	NA	ND	ND	ND	ND	ND	ND	ND	7.1	ND
B29	16-18	--	ND	NA	ND	ND	ND	ND	ND	ND	ND	4.4	ND
NR 720 Standards		--	250	250	5.5	2900	NSE	1500	NSE	NSE	4100	50	4.9

KEY:

BDE = Below Detection Limit
mg/kg = milligrams/kilogram (equivalent to parts per million - ppm)
ug/kg = micrograms/kilogram (equivalent to parts per billion - ppb)
NA = Not Analyzed
ND = No Detection
NSE = No Standard Established
00.00 = Indicates Exceedence of Generic NR 720 Cleanup Standard
PID Values = Instrument Units as Isobutylene
All values in ug/kg unless noted otherwise

Kapur & Associates, Inc.

Consulting Engineers

September 17, 1992

SUBJECT: Area of Soil Contamination
Loomis Road - STH 36
(Lovers Lane - So. 51st Street)
STH 36
Milwaukee County

This report describes in chronological order what happened when an area of gasoline contaminated soil was discovered while laying 27" reinforced concrete storm sewer pipe that was part of the Loomis Road project.

On May 22, 1992, at 9:30 a.m., Cornelius Contractors of Jackson, WI, was laying sections of 27" storm sewer through the south driveway of the Total Gas Station, 5235 W. Loomis Road. They were laying the pipe parallel to Loomis Road and excavated into an area of gasoline contaminated soil. The limits of this area were between STA 293+29 and STA 293+70, about 75 feet right of the centerline. The contractor laid enough pipe to get out of the limits of the driveway and backfilled it so the driveway could remain open. The inspector, Mikhail Gelmanovich, informed me about the strong gasoline smell and I shut down the operation at 10:30 a.m.. John Schaefer, the Wisconsin Department of Transportation Construction Supervisor for the Loomis Road Project, was notified of the problem. John called John Lewis of the Wisconsin Department of Transportation Environmental Analysis Division in Madison, WI. It was decided that soil borings should be taken from the contaminated area on Monday, May 25, to find out the extent of the contamination. Cornelius Contractors stockpiled the excavated material on site and covered it with plastic sheeting as per John Lewis's instructions. The owner of the Total Gas Station is Dan Senchyshyn. His address is W225 S. 5755 Guthrie Road, Waukesha, WI, 53186 and the phone number is 547-3230.

On Monday, May 25, John Lewis, Bob Spanbauer from Foth & VanDyke of Milwaukee and two men from Wisconsin Test Drilling of Schofield met me at the Total Gas Station to make some borings of the soil. Four samples were made with a Shelby split spoon at STA 293+70, 65 feet right of centerline, STA 293+40, 75 feet right, 293+35, 59 feet right, and at STA 293+17, 75 feet right. The first and fourth samples had low contamination, the second sample had a high level of contamination and the third sample had no contamination.

John Lewis made the suggestion that the contaminated soil be excavated by an OSHA certified contractor. The boundaries of the excavation would be from the right-of-way line that borders the southeast section of the contaminated area to the 8-inch sanitary sewer main that borders the northwest section (see Fig. 1). The new 27" storm sewer and backfill that was laid on Friday, May 22, will have to be removed by Cornelius Contractors so the contaminated soil can be removed. Foth & Van Dyke will have someone on site to monitor the limits of contamination. The newly excavated trench will be lined with 1 mm plastic to prevent further movement of the gasoline. John Schaefer was notified of the plan.

On Tuesday, May 26, Conelius Contractors removed 80 feet of the 27" storm sewer from the area of contamination. Access to the Total Gas Station was maintained at the north driveway while the south driveway was closed due to the excavation.

On Wednesday, May 27, removal of the gasoline contaminated soil took place. Petroleum Equipment of Milwaukee, an OSHA certified contractor, was brought in by Foth & Van Dyke to remove the soil. Two men used a backhoe and a front end loader to remove the soil. Rick Vaskamp, an environmental engineer from Foth & Van Dyke, was on site to take samples and readings on the contaminated soil and to define the limits of the excavation. During the excavation a very strong gasoline smell was present. The contaminated soil had a dark grey color. Approximately 245 cubic yards of contaminated soil was removed (see Fig. 2). The excavated material was stockpiled on site onto 1 mm thick sheeting and the stockpiles were also covered with the sheeting. The soil was excavated to a depth of 10 feet, which was the extent of the contamination. The newly excavated trench was lined with the 1 mm plastic and backfilled with a heavy clay content bank run to the grade needed to relay the storm sewer. The clay will help prevent the migration of the gasoline. The driveway was kept closed overnight.

On Thursday, May 28, Petroleum Equipment finished backfilling the trench. Cornelius Contractors relaid the 27" storm sewer, backfilled the trench, put down some 3/4 inch gravel and opened the driveway.

On Friday, May 29, Shar Tabiste of the Wisconsin Department of Transportation Environmental Analysis Division called to inform me that the stockpiles will have to stay in place for about 2 weeks until they can be removed and disposed.

After numerous delays, the contaminated soil was removed from the site by Petroleum Equipment on Wednesday, July 22, 1992.

Submitted by,
Kapur & Associates, Inc.



Steve Kuhl
Project Engineer

Subject

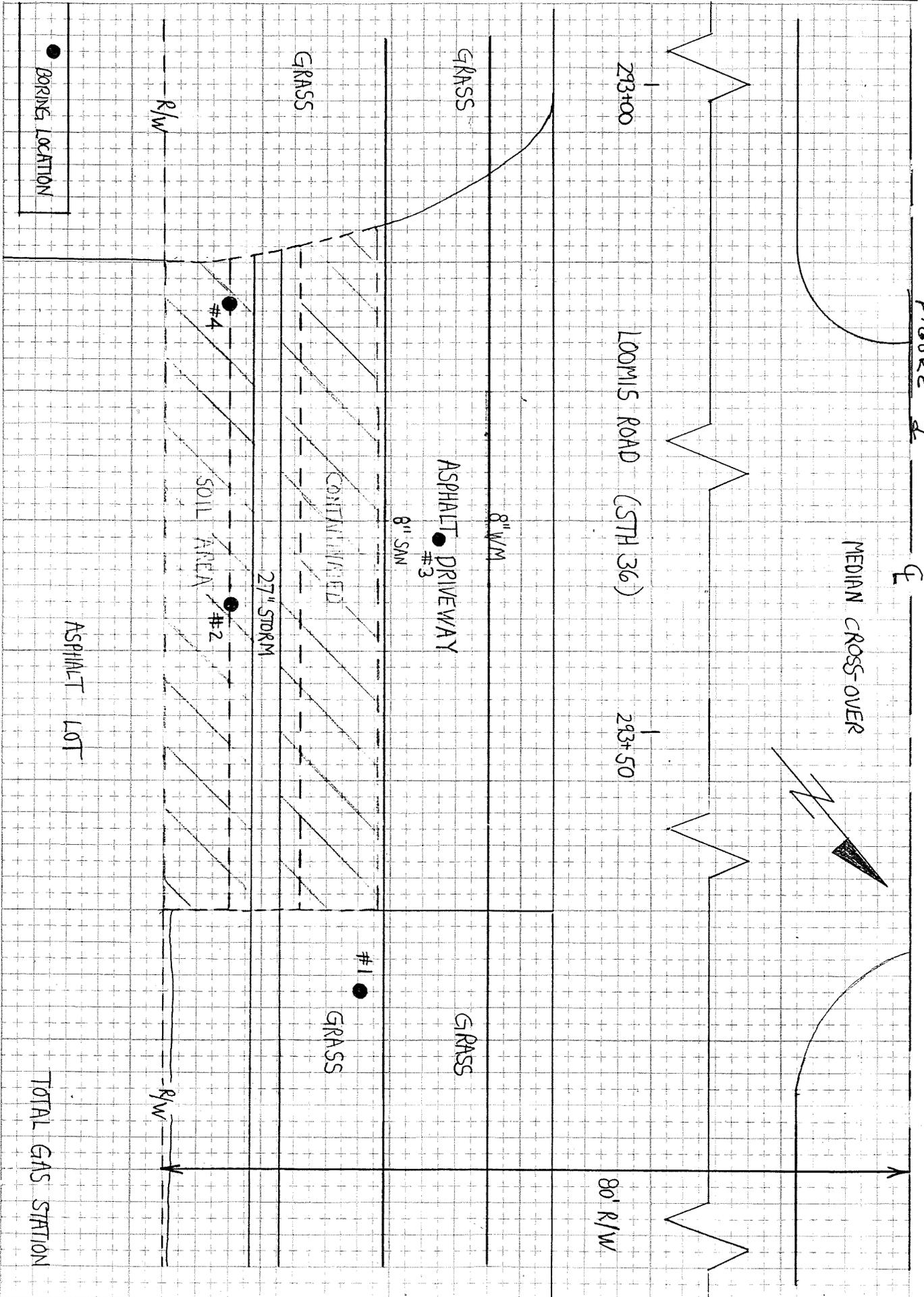


Figure 1

