Arden Environmental Engineering, Inc.
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(651) 484-5415, Fax (651) 484-5568

September 21, 1999

Jelil Abdella
Project Manager
Tanks and Emergency Response Section
Minnesota Pollution Control Agency
520 Lafayette Road N
St. Paul, MN 55155-4194

RE: Yocum Oil Company, Jordan MN; Leak #11991

Dear Jelil:

Enclosed is the Remedial Investigation Report for this site. This project was initiated when it was discovered that a fitting failed thereby releasing gasoline at this site. This project has proceeded in two phases. Our initial work was to install a free product recovery system on an emergency basis. In our previous correspondence with you, we have reported the results of our successful free product recovery efforts. In this report, we provide an update on our free product recovery. To date we have recovered over 2600 gallons of free product.

The purpose of this phase of the project was to perfom an investigation of the free product and dissolved plumes, and make a determination for further action. We performed a geoprobe analysis of the site. We have obtained good definition of the dissolved plume, which has migrated approximately 200 feet from the source. We have conducted a well survey, and found that the nearest receptor in the downgradient direction is approximately 1/4 mile away.

Free product disappeared from the site during the summer. The latest round of monitoring on September 3, 1999 indicated that free product has returned to the monitoring wells at the site.

We are recommending continued operation of the free product recovery system. Then, once free product has been removed, two additional rounds of groundwater monitoring to confirm that free product has permanently been removed from this site. If free product thicker than a sheen is not detected in the existing monitoring wells for two successive quarters, we are recommending closure of this site.

If you have any questions, please call me at (651) 484-5415

Sincerely,

John Mills, P.E.
Arden Environmental Engineering, Inc.

Tanks and Emergency Response Section
Minnesota Pollution Control Agency

Remedial Investigation Report Form

Fact Sheet #3.24
January 1997

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This form must be completed for all sites in which a remedial investigation (RI) is conducted--this includes either a *Limited Site Investigation (LSI)* or a *full RI*. Completing this form will provide the MPCA with the minimum amount of information necessary for a *full RI*. Additional information should be included if deemed important for making a site cleanup decision. If the consultant has concluded that a *LSI* is applicable to this site, Section 6 and Section 7 may be deleted from this report.

Refer to Minnesota Pollution Control Agency (MPCA) fact sheet #3.1, "Leaking Underground Storage Tank Investigation and Cleanup Policy" for guidance for the overall objectives of an RI and other MPCA fact sheets regarding investigations.

When a tank has been excavated, refer to fact sheets #3.6, "Excavation of Petroleum Contaminated Soil" and #3.7, "Excavation Report Worksheet for Petroleum Release Sites" for reporting requirements.

If free product is discovered the initial reporting should be done in accordance with fact sheet #3.3 "Free Product: Evaluation and Recovery" and factsheet #3.4, "Free Product Recovery Report Worksheet."

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Leak Number:	LEAK000011991	Date:	September 21, 1999
Responsible Party:	Yocum Oil Company	R.P. phone #:	(651)739-9141
Facility Name:	Jordan Texaco_		
Facility Address:	255 Triangle Lane	City:	Jordan
County:	Scott	Zip Code:	55352
Location of site:	LAT: _44° 40'15"___ LONG: 93° 38' 30"	Circle one:	(UTM)/State

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Section 1: Emergency and High Priority Sites

1. Is an existing drinking water well impacted? YES (NO)
2. Are there existing vapor impacts? YES (NO)
3. Is there an existing surface water impact as indicated by 1) a product sheen on the surface water or 2) a product sheen or volatile organic compounds in the part per million (ppm) range in ground water in a well located close to the surface water. YES (NO)
4. Has the release occurred in the last 30 days? YES (NO)
5. Has free product been detected at the site? (YES) NO
6. Is sand or gravel aquifer impacted which is tapped by water wells within or potentially within 500 feet from the edge of the plume **or** does impacted soil overlie a karsted limestone or fractured bedrock? If yes, explain: YES (NO)

If you answered *YES* to any of questions 1 through 6 above describe below the actions taken to date to reduce or eliminate the risk posed by the release.

A free product recovery system consisting of pumps in two wells was installed at this site and became operational on December 2, 1998. This was done on an emergency response basis, and reported to the MPCA in a previous report: Mills, John "Remedial Investigation Report Form", Arden Environmental Engineering, Inc., 2/26/99. To date the free product recovery system has recovered 2,651 gallons of free product. The system is still in operation.

Section 2: Site and Release Information

2.1 Describe the land use and pertinent geographic features within 1,000 feet of the site.

Site is located at the intersection of Highway 169 and State Highway 252. Groundwater in the area flows to the Northwest, towards the Minnesota River, approximately 1 ½ miles away. From the leak site, groundwater therefore flows directly under Highway 169. Across 169 from the site is an open field, with the nearest structure located approximately ¼ mile away.

To the southeast of the property, in the upgradient direction, are a NAPA parts store with an existing UST leak (11718), a McDonalds, a car repair facility, and a bar/pizza restaurant (without a basement).

To the east of the property (cross-gradient), along Highway 169 is a liquor store, a Dairy Queen and a used car sales business.

To the west of the property (cross-gradient), on the other side of Highway 252, is a (Ford) New Car sales dealership. On the opposite side of the dealership is a wetland.

Soil encountered at the site is primarily glaciated sand covered with 6-10 feet of organic loam (peat) Surface terrain at the site is essentially flat. Approximately ¼ mile to the east is Sand Creek, which flows to the Minnesota River. Approximately 1/8 mile to the west is a wetland.

Table 1.

Provide the following for <u>all</u> tanks that have been at the site:

Tank #	UST or AST	Capacity	Contents	Age	Status*	Condition
1	UST	6000	Super	1995	Currently Used	STIP3
2	UST	6000	MidGrade	1995	Currently Used	STIP3
3	UST	12000	Unleaded	1995	Currently Used	STIP3
4	UST	12000	Unleaded	1995	Currently Used	STIP3

*Indicate: removed (date), abandoned in place (date), or currently used
Notes:

2.2 Describe the status of the other components of the tank system(s), (i.e., piping and dispensers) for those tanks listed above.

All components of the system were installed using new equipment in 1995. All components conform to EPA 1998 standards. Piping is double wall construction with leak detectors. Spill containment is FRP plastic, with spill and leak detection.

2.3 Identify and describe the source or suspected source(s) of the release.

A rubber seal used in the spill containment system, to seal the electrical conduit powering the pumps, was cracked or torn presumably from ground movement. When product began accumulating inside the sump from a leak in the pipe connection, it exited the sump through the torn boot. Product never accumulated enough in the sump to trip the sensor because it exited through the torn boot.

2.4 What was the volume of the release? (if known): _*approximately 4,000*___ gallons

2.5 When did the release occur? (if known): _*Sometime between mid-September and the end of October 1998.*

Section 3: Excavated Soil Information

3.1 Was soil excavated for off-site treatment? Yes (No)

If *YES* then complete the fact sheet #3.7 "Excavation Report Worksheet for Petroleum Release Sites" and include it as an appendix.

Date excavated: _____

Volume removed: _____cubic yards

3.2 Indicate soil treatment type:

____ land treatment
____ thermal treatment
____ composting/biopiling
____ other (_____)
Name and location of treatment facility:
_____
_____

Section 4: Extent and Magnitude of Soil Contamination

4.1 Were soil borings conducted in or immediately adjacent to all likely source areas (e.g., underground storage tank basins, above ground storage tank areas, piping, dispensers, remote fill pipes, known spill areas)? (*YES*) *NO*

4.2 To adequately define the vertical extent of contamination soil borings should be completed at least five feet below the water table or ten feet below the deepest measurable (field screening and visual observation) contamination, whichever is deeper. Were all soil borings completed to the required depth? (*YES*) *NO*

4.3 To adequately evaluate site stratigraphy at least one boring should be completed 20 feet below the water table, unless a confining layer is present. Was this done? *YES* (*NO*)

If you answered *NO* to any of the three previous questions, explain why the borings were not conducted in the required locations or to the required depths (see fact sheet #3.19, "Soil and Ground Water Investigations Performed During Remedial Investigations" regarding exceptions and MPCA approval for depth of drilling):

Initial soil borings were placed to find free product plume and to identify the optimum location of an emergency free product recovery system. These borings were placed 10 feet below the water table with no evidence of site stratigraphy. Geoprobe investigation took borings straight to water without soil samples in order to define the extent of groundwater and free product contamination. So a deep boring has not been performed at this site.

4.4 Indicate the drilling method:

__X_ hollow-stem auger
____ sonic drilling
__X_ push probes
____ other (_____.
Note: contact MPCA staff hydro before use of flight augers)

Borings were completed in two rounds. During the first round, in November 1998, wells were installed to recover free product. These wells were installed using an H.S.A. drill rig and soils were sampled using split spoons. During the placement of the borings, soil classifications were made. This data was previously reported to the MPCA, and is presented below, in table 2.

The second round was performed using push-probes, the purpose of which was to determine the extent of dissolved and free product contamination. During this second round, 12 probes were placed directly to water, and soils were not analyzed.

Table 2.

Complete the following table indicating bag headspace results (in ppm) for soil samples from soil borings.

ASTM soil classification	Depth (ft)	Soil Boring 1	2	3	4	5	6	7	8	9	
SW	0-2	261									
SP-SC	0-2		0	220	0						
SW	2-4	2000+									
SP-SC	2-4		4.8	0	0						
SW	4-6	1000									
OL	4-6		2000+		700						
SP-SC	4-6			20							
SW	6-8	360									
CH	6-9		2000+		2000+						
SP-SC	6-9			28							
SW	8-10	1600									
SP	9-10		2000+ Water		2000+ Water						
OL	9-10			0							
SW	10-12	705									
SP-SM	10-12		2000+		2000+						
OL	10-13			0							
SW	12-14	265 Water			2000+						
SW	13-14			0							
SP-SM	14-16	250									
SW	14-16			0	2000+						
SW	16-18				2000+						

Notes:(type of PID/FID)
Mini-Rae

Note: SB-4 became MW-3. (SB-1 is MW-1, SB-2 is MW-2)

Table 3.

This data is from the November 1998 round of borings, and has been previously reported to the MPCA.

Indicate the laboratory analytical results for soil samples in mg/kg.

Well/Boring, Depth(ft)	Date Analyzed	Benzene	Toluene	Ethylbenzene	Xylene	GRO	DRO
MW-1 2 - 4	11/3/98	<0.43	<1.5	<1.5	<2.9	<3.3	
MW-1 12 - 14	11/3/98	0.089	0.15	<0.14	<0.27	<1.9	
MW-2 4 - 6	11/3/98	0.37	0.44	<0.16	0.32	4.9	
MW-2 8 - 10	11/3/98	190	620	140	650	5,500	
SB-3 12 - 14	11/3/98	<0.055	<0.19	<0.20	<0.37	<2.6	
MW-3 6 - 8	11/3/98	2.3	3.1	0.25	1.3	20	

Notes: (use less than symbols to show detection limits)

Table 4.

Indicate other notable contaminants (either petroleum or non-petroleum derived) detected in soil samples. Indicate contaminant and list in reported units mg/kg.

Well/Boring, Depth (ft)	Date Analyzed						

Notes:

4.5 If any non-petroleum compounds were detected list them below and identify possible sources of these compounds.

4.6 Describe the vertical and horizontal extent and magnitude of soil contamination.

The purpose of this round of investigation was to determine the extent of groundwater contamination, so soil contamination has not been defined. Soil contamination is assumed to be limited to the vicinity of the leak at the tank basin based on the extent of free product contamination.

Section 5: Aquifer Characteristics/Ground Water Contamination Assessment

5.1 Hydraulic conductivity is used to evaluate risk to present or potential ground water receptors. The level of potential risk determines the level of confidence required of the hydraulic conductivity values. Indicate average hydraulic conductivity and methods used for measurement and estimation.

Measurement
Methods of measuring aquifer parameters are *aquifer* and *permeameter* tests. Aquifer tests such as pumping and slug tests are necessary to evaluate parameters of the actual undisturbed aquifer material. Pumping tests evaluate the largest volume of aquifer material, providing the best measurement of *in situ* aquifer parameters. Slug tests provide *in situ* parameters representing a smaller portion of the aquifer. Permeameter tests are laboratory methods used for the evaluation of discrete samples collected from the aquifer. Permeameter tests require an adequate number of representative field samples, and, inherent sampling and analysis technique limitations must be considered when evaluating results.

Estimation
Methods of estimating hydraulic conductivity may involve grain size analysis or correlating a field description with a reference range of values. As with laboratory measurements, estimation methods require an adequate number of representative field samples. Use the most conservative value of a range when using estimates. If there is any question that sediments may be permeable enough to comprise a resource aquifer, confirm by conducting test(s).

Provide hydraulic conductivity values that support the level of investigation based on risk and remediation potential. Be sure to have tests and estimations performed and analyzed by personnel trained and/or experienced in hydrogeologic investigations. Improperly performed or analyzed tests may be returned as incomplete. Attach all supporting information for the determination in the Methodologies appendix:

____$10\text{-}10^{-2}$_____ cm/sec

Indicate the measurement or estimation used:
___Pumping test analysis by _____method(s).
___Slug tests by _____method(s).
___Permeability tests by _____method(s).
___Grain-size distribution approximations by _____ method(s).
___*Reference from__*Freeze and Cherry, 1979, Groundwater, Prentice-Hall, p 29*_.
*provide author(s), year published, title, publisher and page(s).

5.2 Indicate the thickness of the aquifer. If the investigation does not provide enough information to determine the aquifer thickness, assume the aquifer is greater than 20 feet thick:

____ less than 10 feet
____ between 10 and 20 feet
__X__ 20 feet or greater

5.3 Describe in detail the geology underlying the site including confining layers, bedrock formations and the lateral extent of these formations:

The upper portion of the soil is an organic loam (OL) (peat) which extends 6-10 feet deep across the site. The upper portion of the groundwater was in this layer during the investigation.

The loam layer is underlain with a coarse sand layer (SW and some SP) Soil samples indicate that this layer extends at least 10 feet below the top of the water table.

The impacted aquifer or the aquifer that is likely to be impacted at the site is considered a resource aquifer if one of the following situations exist:

The aquifer is a current water supply source.

The water bearing unit has a hydraulic conductivity greater than 1 X 10^{-2} cm/sec and a minimum thickness of 10 feet.

The water bearing unit has a hydraulic conductivity between 1 X 10^{-4} cm/sec and 1 X 10^{-2} cm/sec and a minimum thickness of 20 feet.
The water bearing unit has a hydraulic conductivity less than 1 X 10^{-4} cm/sec and no other viable source of water supply is available. (*Bedrock may be considered a resource aquifer if it is the only water supply available.)*

5.4 Based on the aquifer characteristics and water supply availability, is the aquifer at the site a resource aquifer? (YES) NO

5.5 If other water supplies are available, explain.

This site is located in a commercial section alongside Highway 169 in Jordan. All properties adjacent to the site are commercial uses that use city water. Groundwater is flowing WSW, underneath Hwy 169 from the site. Land directly downgradient of the site is vacant. The nearest downgradient property is a new residential development approximately ¼ mile away. This development is also on city water.

5.6 Are there any other reasons the impacted aquifer should not be considered a resource aquifer?

There are no known impacts. The nearest known potential receptor is the Minnesota river located more than ¼ mile away.

Table 5.

From the November 1998 round as previously reported to the MPCA:
Indicate the water level measured in all of the soil borings.

	Soil Boring									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Water level depth, ft	8.45	8.89	10	9.32						

Notes:

From the geoprobe investigation conducted 5/13/99:

Table 5.

Indicate the water level measured in all of the soil borings.

	Soil Boring (GP)											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Water level depth, ft	5.28	7	17	17	5.38	9	10	17	12	12	12	14

Notes:

Push points GP-1 and GP-5 contained temporary screens. Depth in other points is at the time of probing.

5.7 Is contaminated soil in contact with ground water? (*YES*) *NO*

If *YES* or if ground water contamination appears likely then complete tables 6 and 7 below.

Table 6.

Indicate the laboratory analytical results for water samples collected from the borings, temporary wells or push probes.

Well/Boring Number	Date Analyzed	Depth	Benzene	Toluene	Ethylbenzene	Xylene	GRO	DRO
SB-3	11/2/98	12	1.2	4.4	0.94	4.7	40	
GP-1	5/14/99	3-8	40,000	45,000	<5,000	5,000	<500,000	
GP-2	5/14/99	7-12	46	<1.0	<1.0	<1.0	<100	
GP-3	5/14/99	15-19	<1.0	<1.0	<1.0	<1.0	<100	
GP-4	5/14/99	14-18	7,300	13,000	820	7,500	32,000	
GP-5	5/14/99	8-12	65,000	75,000	3,700	26,000	800,000	
GP-6	5/14/99	7-11	44,000	47,000	1,900	15,000	110,000	
GP-7	5/14/99	8-12	4	9	1	9	<100	
GP-8	5/14/99	11-15	2	2	<1.0	<1.0	<100	
GP-9	5/14/99	10-14	23	16	23	140	950	
GP-10	5/14/99	10-14	240 J	37	4	12	350	
GP-11	5/14/99	12-16	8	14	1	11	130	
GP-12	5/14/99	12-16	36	56	7	55	210	

Notes:
J – Estimated Value

Table 7.

Indicate other notable contaminants (either petroleum or non-petroleum derived) detected in water samples collected from the borings, temporary wells or push probes. Indicate contaminant and report in units of ug/l (ppb).

Well/Boring Number	Date Analyzed						

Notes:

5.8 If any non-petroleum compounds were, detected list them below and indicate whether they exceed the Health Risk Limits (HRLs). Also, identify possible sources of these compounds.

5.9 If contaminated soil is not in contact with ground water, what is the distance separating the deepest contamination from the surface of the water table? Was this distance measured during site activities, referenced from geologic information, or estimated based on professional opinion during a site visit? _____ feet

5.10 Describe observations of any evidence of a fluctuating water table and a seasonal high water table (e.g., mottling). Also, from other sources of information describe the range of natural water table fluctuations in the area.

When MW's 1-3 were installed in November 1998, water levels in the wells were 8.5 – 9.5 feet. During this round of drilling, water levels in the push probes with temporary wells were approximately 5.5 feet.

During the latest monitoring round on 6/4/99 water levels in the monitoring wells ranged from 5.89 to 6.81 feet. These levels could be artificially depressed, because free product is actively being pumped from MW-2 and MW-3.

So it appears that from November 1998 to June 1999, a period of seven months, water levels at the site have risen 2 ½ to 3 feet.

5.11 In your judgment, is there a sufficient distance separating the petroleum contaminated soil (or an impacted non-resource aquifer) from the underlying resource aquifer to prevent petroleum contamination of the resource aquifer? Please explain in detail. In your explanation consider the data and information of this section as well as the nature of the petroleum release (i.e., volume, when it occurred, petroleum product). *YES* (*NO*)

Based on MPCA criteria, this contamination is in a resource aquifer, although there are no apparent receptors in this aquifer.

Additional Ground Water Investigation

Complete **Section 6 and Section 7** only if: *1) a resource aquifer has been impacted at or above Minnesota Department of Health HRLs, 2) a resource aquifer has been impacted below the HRLs, but the levels are likely to reach the HRLs, or 3) there is an insufficient distance separating the petroleum contaminated soil (or an impacted non-resource aquifer) from the underlying resource aquifer.* Regardless of whether you are submitting a *LSI* or a *full RI*, all sections following Section 7 must be completed.

Section 6. Extent and Magnitude of Ground Water Contamination

Table 8.

Monitoring well construction.

Well Number	Unique Well Number	Date Installed	Relative Surface Elevation	Riser Height Above Grade	Bottom of Well (Elevation)	Screen Interval (Elev. - Elev.)
MW-1	616538	11/2/98	749.820	-0.70	727.82	727.82-742.82
MW-2	616539	11/2/98	749.440	-0.77	731.44	731.44-746.44
MW-3	616540	11/2/98	749.040	-0.72	731.04	731.04-746.04

Notes: (location and elevation of benchmark)
Benchmark is top of sidewalk at southwest corner of car wash = 750.00'

Table 9.

Water table summary.

Well Number	Date	Depth of Water from Top of Casing	Product Thickness	Depth of Water Below Grade	Relative Groundwater Elevation
MW-1	11/3/98	8.45	0	9.15	740.67
	6/4/99	6.81	0	7.51	742.31
	9/3/99	8.55	0.36	9.25	740.57
MW-2	11/3/98	8.89	1.65	9.66	739.78
	6/4/99	5.89	Sheen	6.66	742.78
	9/3/99	8.00	0.66	8.77	740.67
MW-3	11/3/98	9.38	1.80	10.10	738.94
	6/4/99	6.35	Sheen	7.07	741.97
	9/3/99	8.64	0.94	9.36	739.68

Notes: (ground water above/below screen, etc.)

6.1 Were any deep monitoring wells completed at the site? *YES* (*NO*)

If *YES*, which are deep wells?

Before a deep well is installed contact the MPCA project hydrologist for guidance on its necessity and placement. A deep monitoring well may be necessary if: 1)Contamination exist more than 10 feet below the water table or 2) the impacted aquifer is a resource aquifer or is hydraulically connected to a resource aquifer presently utilized by a water supply well located within 500 feet of the site.

Provide estimates of the following additional aquifer parameters:

Horizontal Gradient (dh/dl):	0.027
Vertical Gradient (dv/dl):	0
Porosity:	0.30
Flow direction:	WSW
Hydraulic Conductivity (K)	$10^{-2} - 10^{-4}$ m/s
Pore velocity	0.3 – 0.003 meters/year

Table 10.

All ground water monitoring data should be collected from a minimum of *two quarterly sampling events*.

Indicate the laboratory analytical results for water samples.

Well #	Date	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	GRO	DRO
MW-1	11/3/98	3,100	3,200	190	1,000	<26	9,200	
	6/4/99	22,000	32,000	6,000	41,000		320,000	
MW-2	11/3/98 1.65 FP							
	6/4/99	28,000	19,000	1,400	10,500		81,000	
MW-3	11/3/98 1.80 FP							
	6/4/99	6,100	16,000	2,100	13,900		61,000	

Notes: (e.g., free product, dry well, units etc.)
ug/l

Table 11.

Indicate other notable contaminants (either petroleum or non-petroleum derived) detected in water samples.

Well Number	Date Analyzed						

Notes: units

6.2 If any non-petroleum compounds were detected list them below and indicate whether they exceed the HRLs. Also, identify possible sources of these compounds.

6.3 Is there a clean or nearly clean (below HRLs) downgradient monitoring well located along the longitudinal axis of the contaminant plume? (approximately 20 degrees plus or minus the axis) *YES* (*NO*)

6.4 Is there a worst case well completed through the source area of the release? (*YES*) *NO*

If you have answered *NO* to any of the above three questions, please explain why a well was not completed in the required location.

Data from the latest investigative round, using geoprobes, provides a reasonable picture of the groundwater contaminant plume. Therefore, in our opinion, a downgradient well is not needed at this site.

6.5 Provide an estimate of the longitudinal length of the dissolved contaminant plume: __220___ feet

6.6 Describe the extent and magnitude of the ground water contamination:

During the initial investigation in 11/98, a maximum free product thickness of 1.80 feet was identified in wells MW-2 and MW-3. Due to the effectiveness of the free product recovery system, free product at these two wells was reduced to a sheen during the 6/4/99 round of groundwater sampling. Data collected on 9/3/99 indicated that when the water levels dropped to levels originally measured at the site, a maximum of 0.94 ft of free product is in the wells.

Geoprobe points GP-1 and GP –5 are located approximately 20 –30 feet downgradient of MW-2. While these points exhibit high dissolved contamination, they do not seem to contain free product. So free product appears to extend from the source (tank 3) to the vicinity of MW-2, a distance of about 60 feet. The length of the free product plume is less than the distance to GP-1, or less than 80 feet long. Based on the geoprobe results and the monitoring well history, it appears thata significant quantity, but not all of the recoverable free product at the site has been removed. The push probes indicate that the free product has not moved downgradient of the monitoring wells.

The free product recovery system has been very effective at removing free product. To date over 2,600 gallons of product have been removed from the site.

The June 1999 groundwater-sampling event at the monitoring wells indicates that groundwater levels have risen approximately three feet since the initial round of sampling in November 1998. The high groundwater level may be a factor in the low levels of free product found at this site in June. During the September 3, 1999 monitoring event, groundwater levels had dropped and free product had returned to the wells.

The dissolved contaminant plume (defined as groundwater with benzene concentration >10 ug/l), extends upgradient of the source to a distance shortly beyond GP-10 (240 ug/l B) which makes it approximately 60 feet upgradient.

The width of the plume is defined by GP-9, GP-7 on the NE side of the plume, and by GP-11, GP-12, SB-3, and GP-8 on the SW side of the plume. These points have benzene contamination near the HRL limit, indicating that they are near the contaminant boundary. Based on their groundwater analytical results, the plume appears to be approximately 100 ft wide.

GP-6, GP-3, GP-4, and GP-2 define the leading edge of the plume. While GP-4 (7,300 B), located directly downgradient of the source contains high benzene concentrations, GP-2 (46 B), and GP-3 (ND B) indicate that they are located near the leading edge of contamination. Based on this analysis, the plume appears to have traveled approximately 160 feet downgradient for a total plume distance of 220 feet.

Section 7: Evaluation of Natural Attenuation

Table 12.

Complete the bio-activity data in the table below. Data should be from two quarterly rounds of sampling. Refer to the fact sheet #3.21, "Assessment of Natural Biodegradation at Petroleum Tank Release Sites," for acceptable methodologies and indicate the chosen method in the Methodologies appendix.

Monitoring Well	**Temp. °C**	**pH**	**Dissolved oxygen (mg/l)**	**Nitrate (mg/l)**	**(Fe II) (mg/l)**	**(H_2S, HS^-) (mg/l)**
MW-1						
MW-2						
MW-3						
MW-4						

Notes:

7.1 Discuss the results of the bio-activity evaluation. Specifically, compare the concentrations of the inorganic parameters inside and outside the plume.

7.2 In your judgment, is natural biodegradation occurring at this site? Please Explain.

(*YES*) *NO*

Yes, the loam soil that the top of the groundwater is in contact with is ideal for biological activity.

Section 8: Well Receptor Information/Assessment

Include in the appendices of this report: 1) A list of addresses within 500 feet from the edge of the plume and confirmation of status of water supply from the city utility billing department; 2) well logs; and 3) map showing ½ mile radius, 500 foot radius, water supply wells, other potential petroleum sources, and addresses for properties within 500 feet.

Table 13.

Complete the following table for all water supply wells located within 500 feet of the edge of the plume and any municipal or industrial wells found within ½ mile.

Unique Well #	Ground Elevation	Total Depth (ft)	Base of Casing (ft)	Static Elevation	Aquifer	Use	Owner	Distance & Direction from site
207131	760	545	360		Mt. Simon	Commercial	Jordan Co-op	1200 ft ESE
207133	755	564	221		Ironton Galesville - Solor Church	Municipal	City of Jordan	800 ft ESE
207134	750	636	252		Ironton Galesville - Solor Church	Municipal	City of Jordan	2500 ft SSE
207135	768	287			St. Lawrence/ Franconia	Industrial	Mpls+St. Louis Railroad	1500 ft WSW
212291	749	250	228		Ironton-Galesville	Commercial	Wolf Ford Motor	300 ft S
462924	750	287	213		Franconia -Ironton Galesville	Municipal	City of Jordan	2200 ft ESE

Notes:

8.1 Is municipal water available in the area? (YES) NO

8.2 Were all property owners within 500 feet of the nearest edge of the (YES) NO

contaminant plume successfully contacted to determine if water wells are present? If No, please explain.

8.3 Discuss the results of the ground water receptor survey and any analytical results from sampling conducted at nearby water wells. Comment on the risks to water supply wells identified within 500 feet from the edge of the plume as well as the risk posed by or to any municipal or industrial wells found within ½ mile. Specifically indicate whether water supply wells identified utilize the impacted aquifer. (Note: an impacted aquifer separated from another aquifer by a clay lens is not considered a separate aquifer.)

The well survey indicates that some wells do exist within the500' and 1/2 mile setback requirements. All of the wells within the setback distance have been drilled to depths of more than 200 feet, placing them in aquifer zones not connected to the contamination at this site. Two wells, 212291 and 207133 are located within the setback distance, but are cross-gradient of the groundwater flow at this site. The nearest well to the site in the downgradient direction is well 207135, located approximately 1/4 mile away.

A search for other potential petroleum sources indicates six other known leaks at five sites in the vicinity of the Yocum Oil site. Two sites with known releases are in the same block as Yocum Oil - Jim's Auto (leak 4697) and Tri-Mart/Triangle Oil Company (leaks 3590 and 11718). Additionally, there are three hazardous waste generators within a block of the Yocum Oil site.

207131 is located significantly upgradient of the groundwater flow direction at the site. In addition to it's depth, it is in a location at low risk of contamination from this site.

207133, 207134, 462924 are municipal wells, which have been drilled into the Ironton-Galesville aquifer. These wells each have approximately with 225 feet of casing. So they are collecting water at a depth significantly deeper than contamination found at the site. These wells are also located upgradient of the groundwater flow at the site, so there is little potential for contamination from this site.

207135 is an industrial well located downgradient of the site. This well is located approximately 1/4 mile from the site. The geoprobe investigation indicates that contamination has migrated only about 200 feet, so the potential or contamination of this well is slight.

212291 is a commercial well located upgradient of the site. This well is the closest water supply well to the site. However this well is cased for 225 feet, and it is placed in the ironton-galesville formation. Since this formation is isolated from the known contamination, there is little risk of contamination to this well.

8.4 Are there any plans for ground water development in the impacted aquifer within 1/2 mile of the site, or one mile down gradient of the site if the aquifer is fractured? Please give the name, title and telephone number of the person that was contacted for this information.

YES (*NO*)

John Breunig, City of Jordan Telephone (612) 492-2535

Section 9: Surface Water Risk Assessment

9.1 Are there any surface waters or wetlands located within ¼ mile of the site? (*YES*) *NO*

If *YES*, indicate its name: Sand Creek, and unnamed wetland

9.2 If surface water is present downgradient of the site, is there a clean down gradient soil boring or monitoring well located between the site and the surface water? (*YES*) ~~*NO*~~ *N/A*

If *NO*, we assume that contamination discharges to surface water. Therefore, complete the following information:

Name of receiving water:	_____
Plume width, (W):	_____ feet
Plume thickness, (H):	_____ feet
Hydraulic conductivity, (K):	_____ gal/day/ft^2
Horizontal gradient, (dh/dl):	_____ (unitless)
Discharge, (Q) = H*W*K*(dh/dl)/1440	_____ gal/min

If *YES*, identify them and indicate the distance to these features and discuss the contamination risk potential.

Section 10: Vapor Risk Assessment/Survey

10.1 Is there a history of vapor impacts in the vicinity of the site ? *YES* (*NO*)

If *YES*, describe:

10.2 Is there any indication that free product or highly contaminated ground water may be traveling offsite within the utility corridors? If YES, have they been investigated with borings or push probes? (*YES*) *NO*

Push probe data indicates that contamination is most likely in contact with buried electrical and buried fiber optic lines. Water and sewer lines are not buried along Highway 169, and are therefore not in contact with, nor are they in the path of, the contaminant plume.

Push probes GP-7 and GP-8, placed along the utility corridor, are clean, indicating that migration along the electrical and telephone corridor is not occurring.

10.3 Discuss the potential for vapor migration/accumulation near the site. In your discussion consider: Soil types, product type, presence and distribution of free product or high concentrations of dissolved product. Also, compare the depth of contamination with the location of underground utility lines, location and depth of storm and sanitary sewers and location of nearby basements.

Groundwater is highly contaminated with gasoline, and there is free product in the most contaminated portion of the plume. However, the plume is not in contact with any occupied structures, and groundwater flow is towards vacant land.

Groundwater is in two soil types, the upper portion of the groundwater is in a peat layer. This would be the most highly contaminated zone of groundwater contamination. The potential for vapor accumulation in the peat layer is low. The peat layer is 6 - 10 feet thick. Beneath the peat layer is a coarse sand layer. While this is below the most highly contaminated zone of groundwater contamination, this is relatively permeable soil, which allows groundwater movement.

The peat layer has poor bearing support, so in the construction of all structures on the property, the peat layer has been excavated and replaced with granular fill. The car wash facility has some potential for vapor accumulation since it is near the plume, and the peat layer was removed from the vicinity of the building when it was constructed. However, the car wash is designed to deal with gasoline vapors, as a normal part of its operation, to remove car exhaust. Since engineering controls are already in place in the car wash, there is nearly no potential for hazardous vapor accumulation in the car wash. No other structures on the site, nor downgradient of the site appear to be in the path of the groundwater plume. Sewer and water utilities to the site come from Triangle Lane so they are not in contact with the plume, nor are they in the direction of groundwater flow.

The plume is in the vicinity of buried electrical conduit and a buried fiber optic telephone line that are in the ditch adjacent to Highway 169. Based on the depth to groundwater, these lines are likely in contact

with the contaminated groundwater. The risk of vapor migration due to contact with these lines is not significant.

If the vapor risk assessment indicated a risk of vapor impacts to buildings or utilities, complete the following table with vapor monitoring data collected. Location numbers should be mapped on an accompanying figure of the surveyed area.

Table 14.

Location #	Date	PID reading (ppm)	Percent of the LEL

Notes:

10.4 Describe and interpret the results of the vapor survey.

Section 11: Discussion

11.1 Discuss the risks associated with the remaining soil contamination?

Soil contamination appears to be limited to a small area in the vicinity of the tank basin. It does not appear to be in contact with structures. There is little risk of vapor migration issues due to the contaminated soil.

11.2 Discuss the risks associated with the impacted ground water?

Contaminated groundwater at the site is in contact with only one structure – a car wash. The risks to this structure are low, due to engineering controls normally associated with car washes. No other structures are affected. No other structures appear to be at risk of being contaminated by the groundwater.

Contaminated groundwater is flowing underneath Highway 169 towards vacant land.

Several water wells are within the mandated setback distance. Based on well records these wells appear to be in aquifers separated from the contaminated groundwater zone, so there is negligible risk to potential receptors.

The free product recovery efforts have been highly successful at removing free product from the site. Over 2,600 gallons of free product have been recovered. The most recent round of sampling confirms that free product thickness is down at the site. However, free product continues to exist in the monitoring wells at the site. The geoprobe investigation confirms that free product has not moved off-site.

11.3 Discuss other concerns not mentioned above:

Section 12: Conclusions and Recommendations

Recommendation for site:

___ site closure
____ additional vapor monitoring
__X_ additional ground water monitoring
__X__ active cleanup

The recommendation above should be based on fact sheet #3.1, "Leaking Underground Storage Tank Investigation and Cleanup Policy." Describe below how you applied the policy to support your recommendation.

We recommend that:

- *The free product collection system continue to operate until free product has been removed from the wells at the site. Defined as no free product thicker than 0.1 feet for two successive quarters Once the free product collection system has been shut down, we will conduct 2 additional rounds of monitoring at existing wells in order to determine whether free product returns to the site when the free product collection system ceases operations.*
- *If free product returns to the site, we would restart the system to recover the product.*
- *The condition for closure would be that if free product, thicker than 0.1 feet has not returned to the wells after the 2 additional rounds of monitoring, site closure be granted.*
- *Since we are requesting closure based solely on the absence of free product, we request that analytical samples not be collected at this site on a quarterly basis.*

If additional monitoring is recommended, indicate the proposed monitoring schedule and frequency:

We are recommending operation of the free product collection system for at least two additional quarters. Once free product has been removed from the site, we are recommending two additional quarterly monitoring events

If active cleanup is proposed, then MPCA staff will review this RI report at a higher than normal priority to determine if active cleanup is required. We will respond with either a request for proposal for additional monitoring or a Corrective Action Design report. Please indicate below what cleanup technology you are considering at this time.

We are recommending continued operation of the existing QED brand, controllerless pneumatic free product collection pumps. These are "active" style free product collection pumps. These pumps separate gas from the water in the monitoring well, pumping pure product to the free product collection tank.

When the tank is full the gasoline is manifested and hauled away using a licensed vacuum truck hauler.

Section 13: Required Figures

Indicate attached figures:

_X_	*Figure 1, 1a:*	Site location map (*approximate scale is not acceptable) and* a large scale site map show all potential receptors within 300 feet of the site. The large scale site map should show those properties with basements and wells.
_X_	*Figure 2, 2a, 2b, etc.:*	One or more site map showing: structures; all past and present petroleum storage tanks, piping, and dispensers; extent of soil excavation; boring and well locations (including any drinking water wells on site); horizontal extent of soil contamination; horizontal extent of ground water contamination; and location of end points for all geologic cross sections.
_X_	*Figure 3, 3a:*	Ground water gradient contour maps (for sites with monitoring wells).
_X_	*Figure 4*	Well receptor survey map showing 1/2 mile radius, 500 foot radius, water supply wells, other potential sources of contamination.
____	*Figure 5:*	Vapor survey map showing utilities and buildings with basements and monitoring locations (if a survey was required).
____	*Figure 6:*	Geologic cross sections.

Section 14: Appendices

Indicate attached appendices.

___	*Appendix A*	Excavation Report Worksheet for Petroleum Release Sites.
_X_	*Appendix B*	Laboratory Analytical Reports for Soil and Ground Water.
_X_	*Appendix C*	Methodologies and Procedures, Including Field Screening of Soil, Other Field Analyses, Soil Boring, Soil Sampling, Well Installation, and Water Sampling.
___	*Appendix D*	Geologic Logs for Each Well or Boring, Including Well As-Builts on Log.
___	*Appendix E*	Well Construction Diagrams and Copies of the Minnesota Department of Health Well Record.
_X_	*Appendix F*	Copies of Water Supply Well Logs With Legible Unique Numbers.
___	*Appendix G*	A List of Addresses Within 500 Feet From the Edge of the Plume and Confirmation of Status of Water Supply From the City Utility Billing department.

Section 15: Consultant (or other) Information

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leaksite. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in reduction of reimbursement awards. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leaksite that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (1994) or Minn. Rules 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

Name and Title:	Signature:	Date signed:
John Mills, P.E., Vice President	John Mills	9 / 21 / 99
		/ /
		/ /
		/ /

Company and mailing address: *Arden Environmental Engineering, Inc.*
3550 Lexington Avenue North, Suite 102
Shoreview, MN 55126

Phone: *(651) 484-5415*
Fax: *(651) 484-5568*

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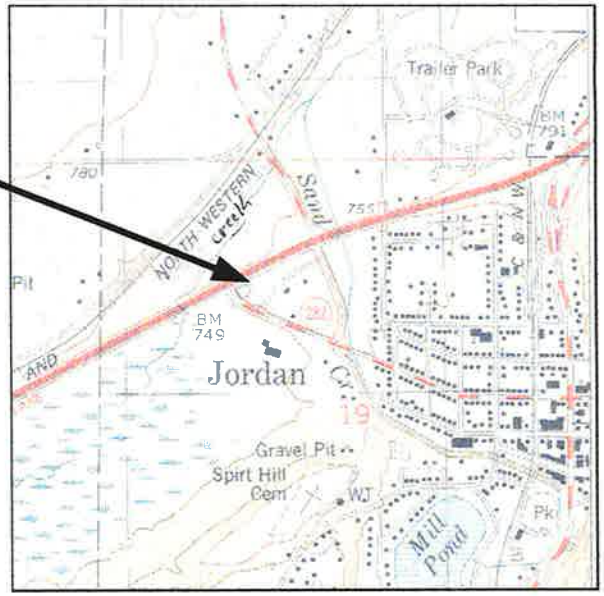
Figures

Location Of Site



JORDAN WEST, MINN.
NW/4 NEW PRAGUE 15' QUADRANGLE
N4437.5–W9337.5/7.5

1981

DMA 7273 II NW SERIES V872

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Site Location Map
Yocum Oil Company, Jordan MN

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(651) 484-5415, Fax 484-5569 e-mail: arden@ardenengineers.com
visit our website at: http://www.ardenengineers.com

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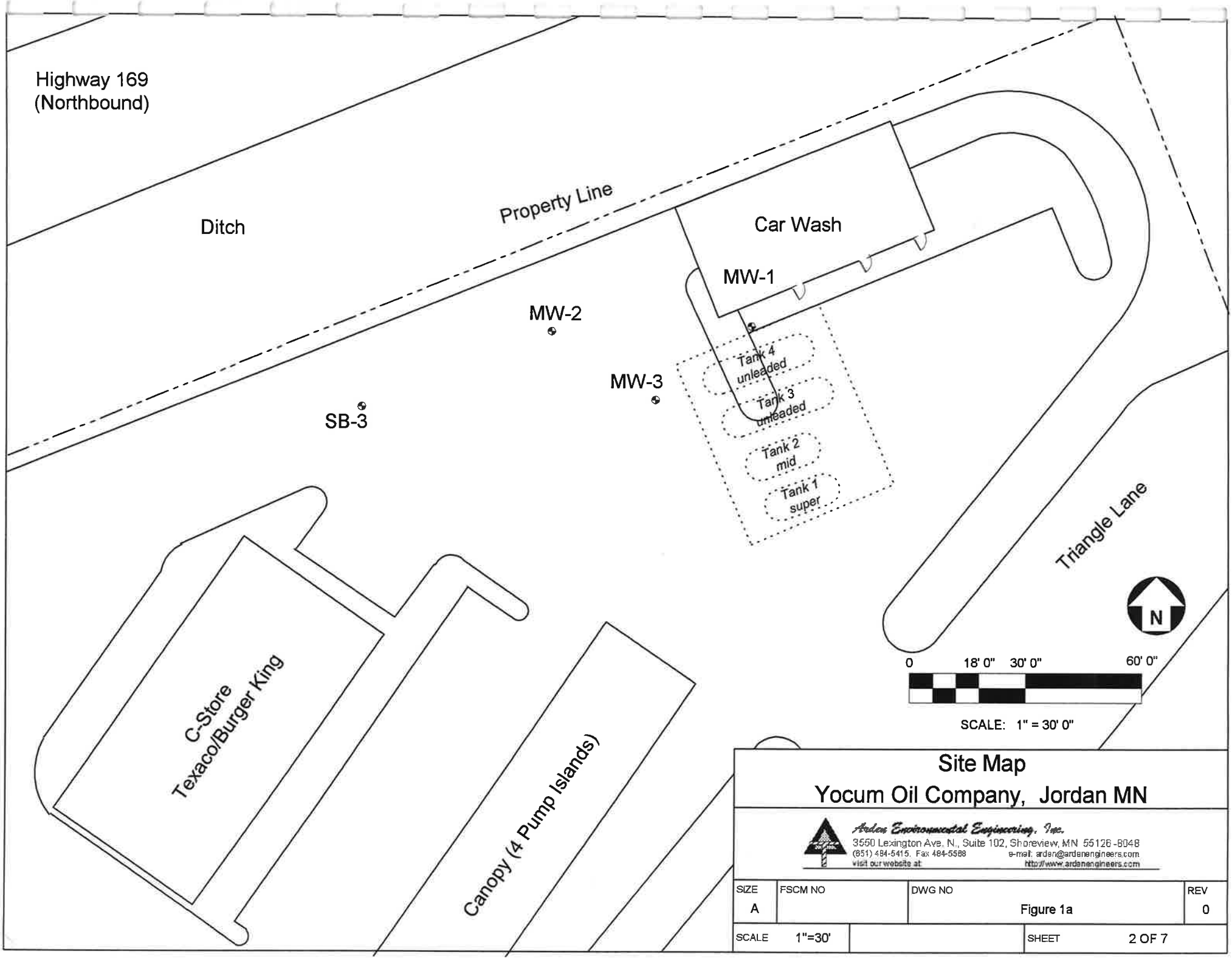
SCALE		SHEET	1 OF 7



Site Map

Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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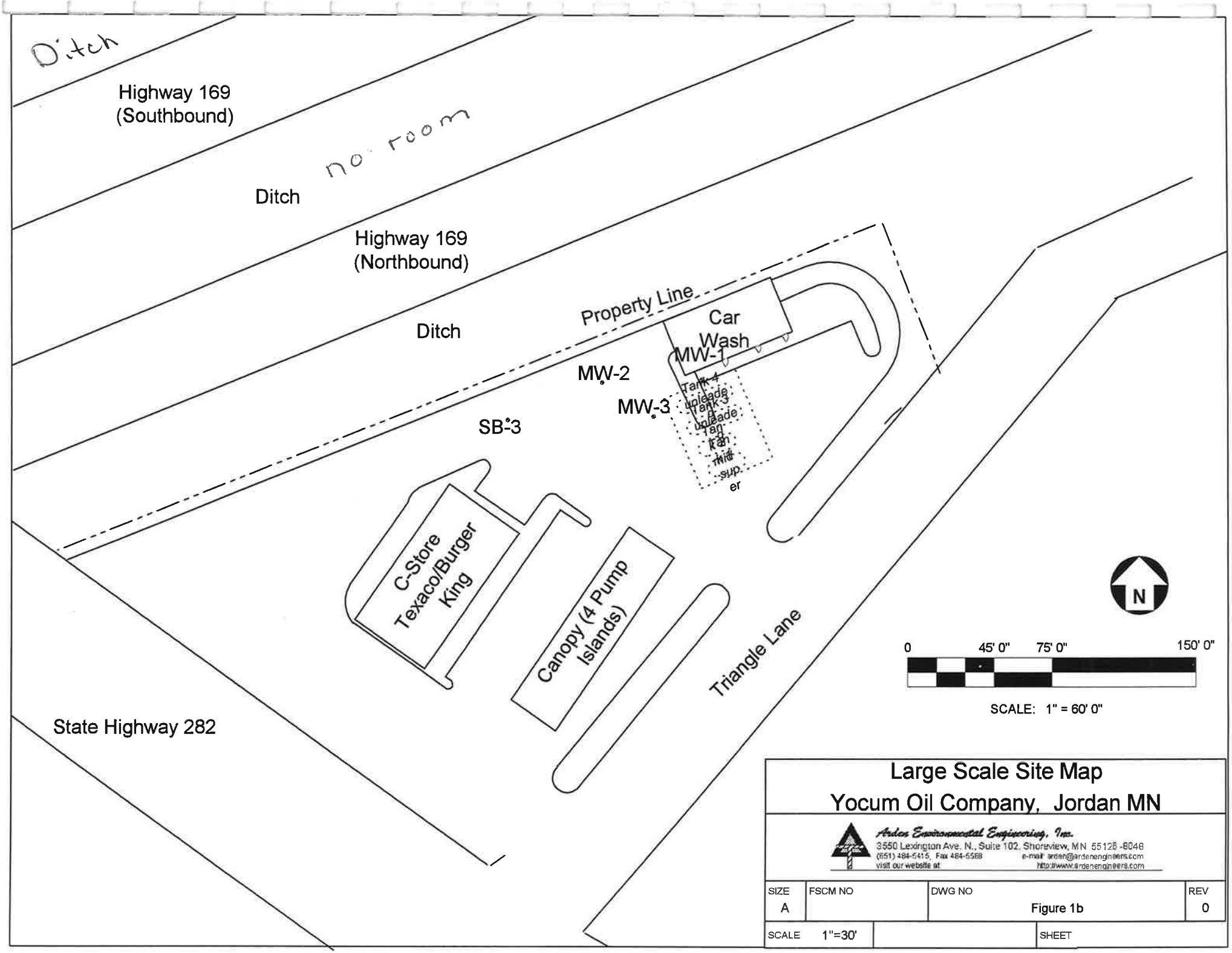

Large Scale Site Map
Yocum Oil Company, Jordan MN

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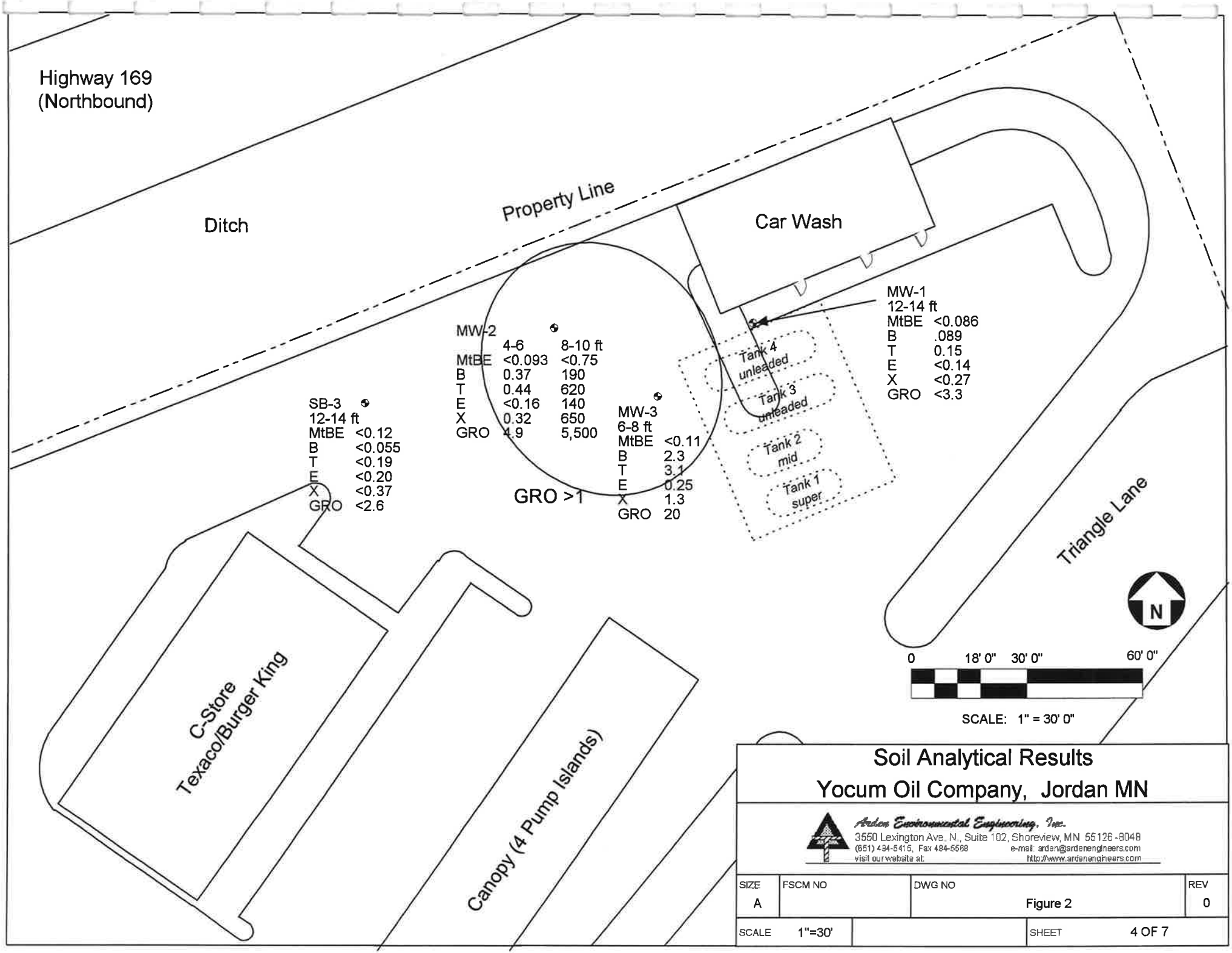

Soil Analytical Results
Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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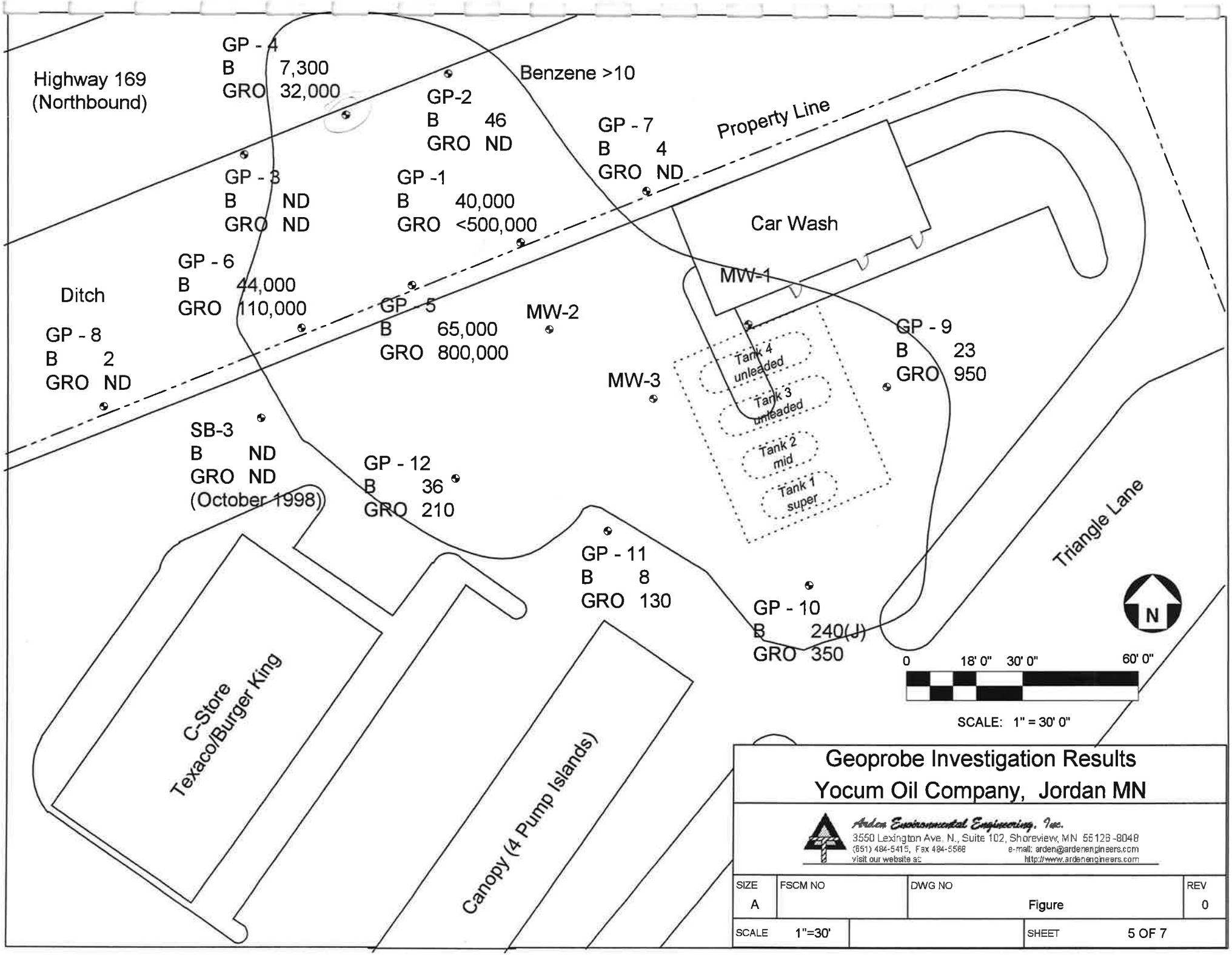

Geoprobe Investigation Results
Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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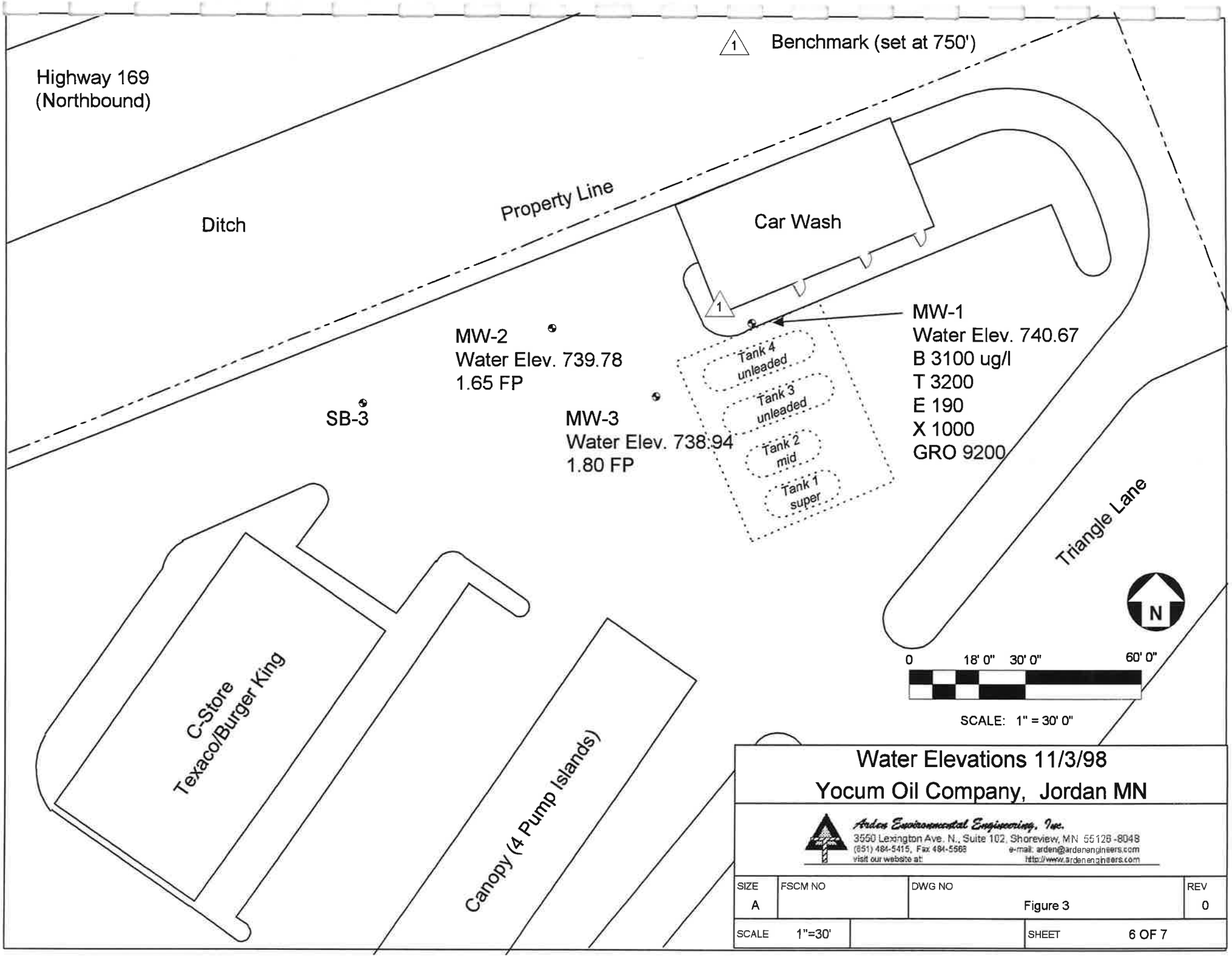

Water Elevations 11/3/98
Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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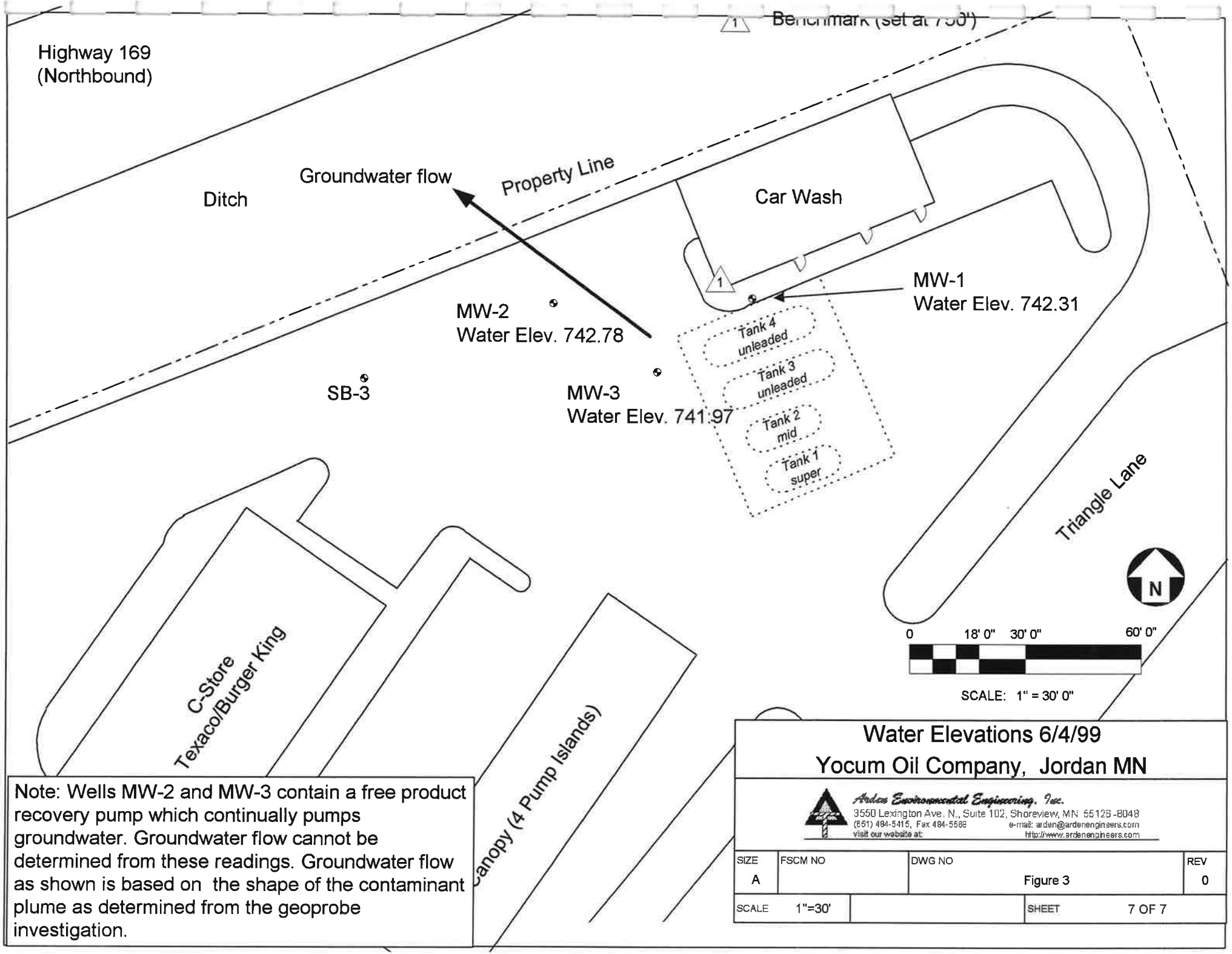

Note: Wells MW-2 and MW-3 contain a free product recovery pump which continually pumps groundwater. Groundwater flow cannot be determined from these readings. Groundwater flow as shown is based on the shape of the contaminant plume as determined from the geoprobe investigation.

Water Elevations 6/4/99
Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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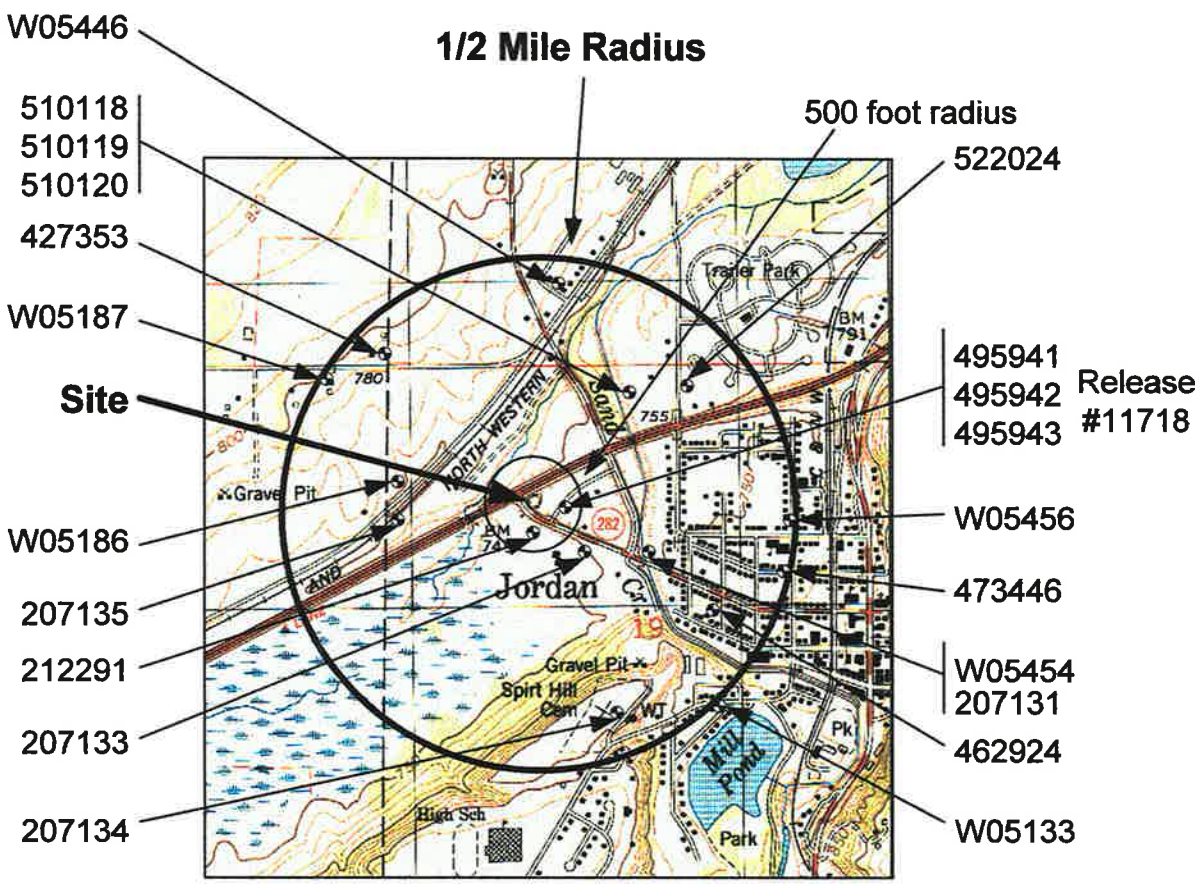

Well No.	Use
W05133	Domestic
W05186	Domestic
W05187	Domestic
W05446	Domestic
W05454	Domestic
W05456	Domestic
207131	Commercial
207133	Municipal
207134	Municipal
207135	Industrial
212291	Commercial
427353	Domestic
462924	Municipal
473446	Monitor
495941	Monitor
495942	Monitor
495943	Monitor
510118	Monitor
510119	Monitor
510120	Monitor
522024	Monitor

Well Survey
Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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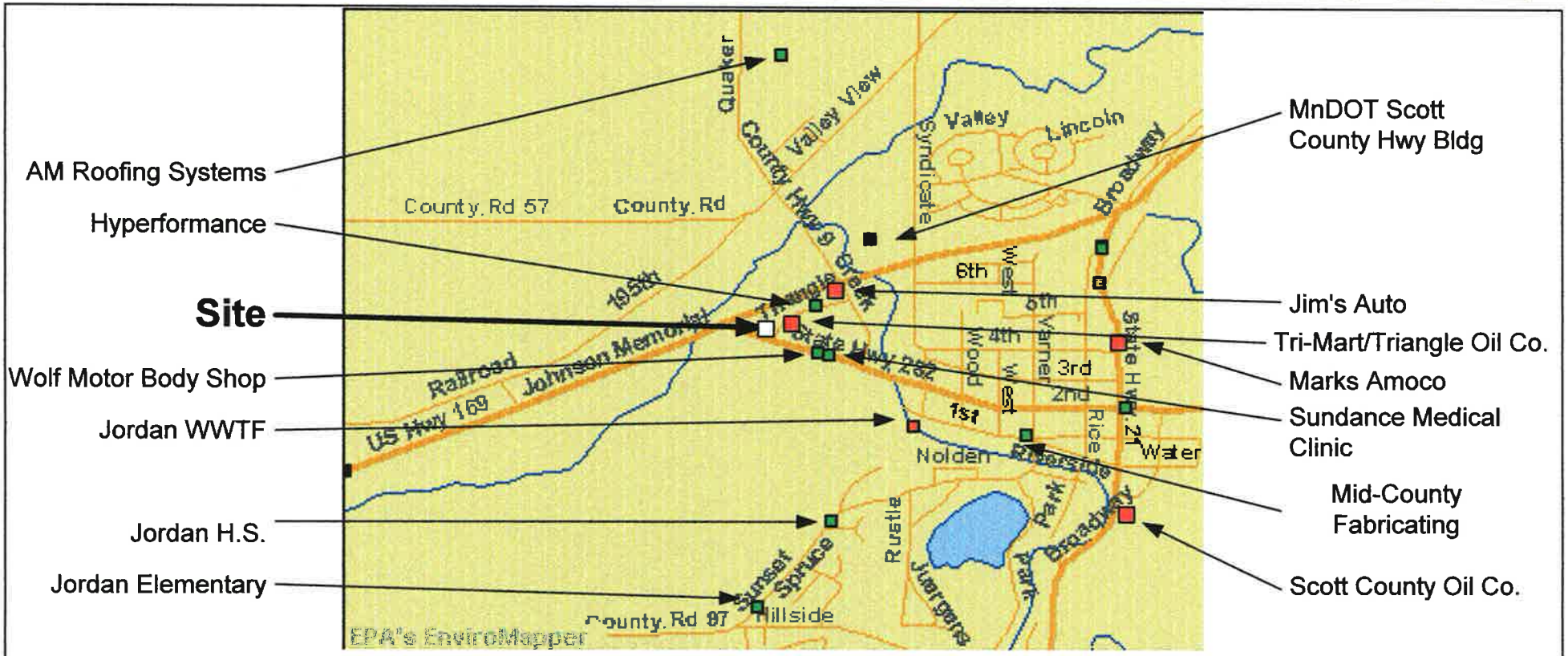

Site Name	Known Release?	Haz Waste Permit	LUST Release #
AM Roofing Systems	No	MND982637456	
Hyperformance	No	MND985685726	
Jim's Auto	Yes		4697 (closed 9/98)
Jordan Elementary	No	MND985763663	
Jordan High School	No	MND053393005	
Jordan WWTF	No	MN0001608330	
Marks Amoco	Yes		2249 (closed 3/95)
Mid-County Fabricating	No	MND019751668	
MnDOT Scott County	Yes	MND985750413	1338 (closed 3/95)
Scott County Oil Co.	Yes		4523 (closed 9/93)
Sundance Clinic	No	MND985688464	
Triangle Oil Company	Yes		11718 (active)
Tri-Mart	Yes		3590 (closed 1/95)
Wolf Motor Body Shop	No	MND022834071	

EPA Permitted Hazardous Waste Facilities and Known UST Release Sites

Source:
EPA Info: Envirofacts: www.epa.gov
MPCA Info:blue.state.mn.us

Nearby Potential Release Sites
Yocum Oil Company, Jordan MN

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SIZE	FSCM NO	DWG NO	REV
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SCALE	1"=30'	SHEET	10 OF 10

Appendix B

Laboratory Analytical Reports for Soil and Ground Water

SPECTRUM LABS INC

301 West County Road E2
New Brighton, MN 55112
(612) 633-0101 FAX (612) 633-1402

CHAIN OF CUSTODY RECORD

Client ARDEN ENVIRONMENTAL
Address
Phone #
Fax #
Project # YOCUM 6:1 - Jordan

Client #
Client Contact
Spectrum Contact
Spectrum Project #
Client P.O.#
DUE DATE

Record Number

Preserved Container Type
A None
B HNO_3
C H_2SO_4
D NaOH
E Organics
F Bacteria
G Other

Spectrum Number	COLLECTION DATE	COLLECTION TIME	SAMPLE I.D. / DESCRIPTION	Number of Containers	MATRIX: WATER	MATRIX: SOIL	MATRIX: OTHER	ANALYSIS REQUIRED: BTEX-GRO	COMMENTS
230981	6/4/99	10:00	MW-3	3	X				
-2		10:30	MW-2	3					
-3		11:00	MW-1	3					
-4									

Sampled By:	Date	Time	Relinquished By:	Date:	Time:	Received By/Lab:	Date:	Time:	Cooler Temp:
Jeff Smith	6/4/99	15:40	Jeff Smith	6/4/99	15:40	Patrick Lynch	6/4	3:35	
Received By:	Date	Time	Relinquished By:	Date:	Time:	Received By:	Date:	Time:	pH:

SPECTRUM LABS INC
301 West County Road E2 • St. Paul, MN 55112-6859
651.633.0101 • FAX 651.633.1402
www.spectrum-labs.com

LABORATORY ANALYSIS REPORT

DATE: June 22, 1999 **PAGE:** 1 Of 3

CLIENT: Arden Environmental
3550 Lexington Ave. N
Suite 210
Shoreview, MN 55125

CONTACT: John Mills

PROJECT NO.: 060499-201780
COLLECTION DATE: 6/04/99
COLLECTED BY: Client
RECEIVED DATE: 6/04/99
PROJECT DESCP: Yocum Oil-Jordan

		Sample No.:		**L23098-1**
		Sample ID.:		**MW-3**
ANALYSIS	**UNITS**	**MDL**	**PQL**	**RESULT**
EPA 8020/WIS DNR GRO[d]				
Date Analyzed: 6/17/99				
Benzene	ug/L	300	1000	6100
Toluene	ug/L	300	1000	16,000
Ethylbenzene	ug/L	300	1000	2100
m,p-Xylene*	ug/L	600	1000	9900
o-Xylene	ug/L	200	1000	4000
Gasoline Range Organics	ug/L	2000	10,000	61,000

Surrogate Recovery	**Detector**	**% Recovery**
1-Chloro-4-Fluorobenzene	PID	111%

[d] A dilution was necessary due to levels present; therefore, detection limits were raised.
* means Coeluting Compounds
ND means Not Detected or below reported MDL
MDL means Method Detection Limit
PQL means Practical Quantification Limit
ug/L means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)

SPECTRUM LABS INC
301 West County Road E2 • St. Paul, MN 55112-6859
651.633.0101 • FAX 651.633.1402
www.spectrum-labs.com

LABORATORY ANALYSIS REPORT

DATE:	*June 22, 1999*	***PAGE:***	*2 Of 3*
CLIENT:	*Arden Environmental* *3550 Lexington Ave. N* *Suite 210* *Shoreview, MN 55125*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:*** ***PROJECT DESCP:***	*060499-201780* *6/04/99* *Client* *6/04/99* *Yocum Oil-Jordan*
CONTACT:	*John Mills*		

		Sample No.:		***L23098-2***
		Sample ID.:		***MW-2***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO[(d)]				
Date Analyzed: 6/17/99				
Benzene	*ug/L*	*300*	*1000*	*28,000*
Toluene	*ug/L*	*300*	*1000*	*19,000*
Ethylbenzene	*ug/L*	*300*	*1000*	*1400*
*m,p-Xylene**	*ug/L*	*600*	*1000*	*7500*
o-Xylene	*ug/L*	*200*	*1000*	*3000*
Gasoline Range Organics	*ug/L*	*2000*	*10,000*	*81,000*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*108%*

[(d)]A dilution was necessary due to levels present; therefore, detection limits were raised.
** means Coeluting Compounds*
***ND** means Not Detected or below reported MDL*
***MDL** means Method Detection Limit*
***PQL** means Practical Quantification Limit*
***ug/L** means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)*

SPECTRUM LABS INC
301 West County Road E2 • St. Paul, MN 55112-6859
651.633.0101 • FAX 651.633.1402
www.spectrum-labs.com

LABORATORY ANALYSIS REPORT

DATE: June 22, 1999

PAGE: 3 Of 3

CLIENT: Arden Environmental
3550 Lexington Ave. N
Suite 210
Shoreview, MN 55125

CONTACT: John Mills

PROJECT NO.: 060499-201780
COLLECTION DATE: 6/04/99
COLLECTED BY: Client
RECEIVED DATE: 6/04/99
PROJECT DESCP: Yocum Oil-Jordan

		Sample No.:		L23098-3
		Sample ID.:		MW-1
ANALYSIS	UNITS	MDL	PQL	RESULT
EPA 8020/WIS DNR GRO[(d)]				
Date Analyzed: 6/17/99				
Benzene	ug/L	600	2000	22,000
Toluene	ug/L	600	2000	32,000
Ethylbenzene	ug/L	600	2000	6000
m,p-Xylene*	ug/L	1200	2000	27,000
o-Xylene	ug/L	400	2000	14,000
Gasoline Range Organics	ug/L	4000	20,000	320,000

Surrogate Recovery	Detector	% Recovery
1-Chloro-4-Fluorobenzene	PID	104%

[(d)]A dilution was necessary due to levels present; therefore, detection limits were raised.
* means Coeluting Compounds
ND means Not Detected or below reported MDL
MDL means Method Detection Limit
PQL means Practical Quantification Limit
ug/L means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)

This report has been reviewed by me for technical accuracy and completeness. The analyses were performed using EPA or other approved methodologies and the results were reported on an "as received" basis unless otherwise noted. The results reported relate only to the items tested. Please contact me if you have any questions or comments regarding this report. Spectrum Labs, Inc. appreciates the opportunity to provide this analytical service for you.

Report Submitted By,

Lon Jones
Organics Supervisor

TLH:wmc
ae173-1

Appendix C

Soil Boring Results, Methods, and Procedures

SUBSURFACE ASSESSMENT RESULTS

YOCUM OIL
US HIGHWAY 169 & STATE HIGHWAY 282
JORDAN, MINNESOTA
MATRIX PROJECT NO. 99109

Prepared by:

MATRIX Technologies, Corp.
8631 Jefferson Highway
Osseo, MN 55369
(612) 424-4803
fax: (612) 424-9452

May 14, 1999

SUBSURFACE ASSESSMENT RESULTS

YOCUM OIL
US HIGHWAY 169 & STATE HIGHWAY 282
JORDAN, MINNESOTA
MATRIX PROJECT NO. 99109

1.0 INTRODUCTION

MATRIX Technologies, Corp. (MATRIX) was authorized by Mr. John Mills of Arden Environmental Engineering to perform a subsurface assessment at the Yocum Oil site located in Jordan, Minnesota. The goal of the assessment was to collect ground water samples for on-site laboratory analysis of petroleum hydrocarbons. Field work was completed on May 13, 1999.

2.0 SCOPE OF WORK

The scope of services provided by MATRIX included the following:

- Contacted the state one call system and arranged for all public utilities in the investigation area to be located (Ticket No. 152055).
- Collected twelve (12) ground water samples from depths ranging from eight (8) to nineteen (19) feet bgs for on-site laboratory analysis (Appendix A).
- Analyzed twelve (12) ground water samples for petroleum hydrocarbons (Table 1).
- Abandoned all probe locations with a neat cement grout mixture according to Minnesota Department of Health guidelines - Sealing Report No. 148507 (Appendix B).

3.0 ON-SITE CHEMICAL ANALYSIS

Samples were analyzed on-site and quantified for petroleum hydrocarbons in accordance with US EPA Method 8020 modified and WDNR modified GRO Method and US E.P.A. Method 8015 for TPH as Fuel Oil. Samples were concentrated with an OI-Analytical Model 4560 purge and trap sample concentrator. The purge and trap sample concentrator is directly connected to a Hewlett Packard 5890 Series II gas chromatograph. The samples were analyzed by PID and FID detectors in series. The results of the chemical analysis are summarized in Table 1.

The following quality assurance/quality control measures were conducted to ensure the validity of the analytical results:

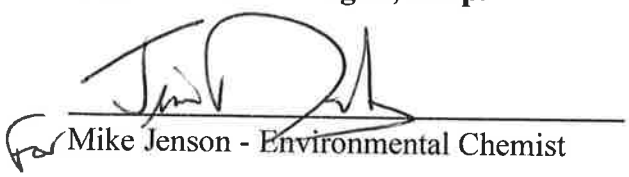
- A five point calibration curve for the method target compounds was established.
- A prepared standard was run to verify the calibration curve.
- A reagent water blank was run to assure the entire analytical system was free of interferences prior to sample analysis.
- A surrogate standard (4-bromofluorobenzene) was run with each sample to monitor retention time accuracy and concentration efficiency.
- A matrix spike and matrix spike duplicate were run to confirm precision and accuracy of the analytical system and to identify possible matrix effects.

4.0 GENERAL COMMENTS

The analysis and opinions expressed in this report are based upon data obtained from the samples collected at the indicated locations and from other information discussed in this report. This report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted practices. No warranties, expressed or implied are intended or made.

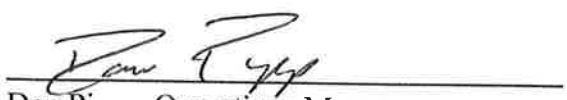
This report was prepared by:

MATRIX Technologies, Corp.



for Mike Jenson - Environmental Chemist

5/14/99
Date



Dan Pipp - Operations Manager

5/14/99
Date

TABLES

LABORATORY RESULTS

Client:	Arden Environmental Engineering	Date Analyzed:	5/13/99
Project Name:	Yocum Oil	Matrix Project #:	99109
Project Location:	Jordan, MN	Client Project #:	

QUALITY ASSURANCE/ QUALITY CONTROL DATA

ANALYTE	MATRIX SPIKE % RECOVERY	MATRIX SPIKE DUPLICATE % RECOVERY	RELATIVE PERCENT DIFFERENCE
Benzene	84	94	11.2
Toluene	110	95	14.6
Ethyl Benzene	91	84	8.0
Xylenes	99	98	1.0
TPH as GRO	89	84	5.8

LABORATORY RESULTS

Client: Arden Environmental Engineering

Project Name: Yocum Oil

Project Location: Jordan, MN

Date(s) Analyzed: 5/14/99

MATRIX Project #: 99109

Client Project #:

ANALYTE	PQL ug/L[1]	GP-1 3'-8'	GP-2 7'-12'	GP-3 15'-19'	GP-4 14'-18'	GP-5 8'-12'	GP-6 7'-11'	GP-7 8'-12'	GP-8 11'-15'	GP-9 10'-14'	GP-10 10'-14'
Benzene[3]	<1.0[2]	**40,000.**	**46.**	<1.0	**7,300.**	**65,000.**	**44,000.**	**4.**	**2.**	**23.**	**240.J**
Toluene	<1.0	**45,000.**	<1.0	<1.0	**13,000.**	**75,000.**	**47,000.**	**9.**	**2.**	**16.**	**37.**
Ethyl Benzene	<1.0	<5,000.	<1.0	<1.0	**820.**	**3,700.**	**1,900.**	**1.**	<1.0	**23.**	**4.**
Xylenes	<1.0	**5,000.**	<1.0	<1.0	**7,500.**	**26,000.**	**15,000.**	**9.**	<1.0	**140.**	**12.**
TPH as GRO[4]	<100.0	<500,000.	<100.0	<100.0	**32,000.**	**800,000.**	**110,000.**	<100.0	<100.0	**950.**	**350.**
1,4-Bromoflourobenzene[5]	% rec	100%	95%	112%	101%	96%	75%	107%	100%	103%	100%

1 -Water sample results reported in micrograms per liter (ug/L).
2 -<1.0 represents less than the method practical quantitation limit.
3 -Analyte results quantified in accordance with US EPA Method 8020 modified
4 -TPH as GRO results quantified in accordance with the WDNR Modified GRO Method.
5 -Surrogate standard added to confirm retention time and concentration accuracy.
6 -* - Not quantifiable due to sample interference.
J Estimated Value
B Compound found in blank

LABORATORY RESULTS

Client:	Arden Environmental Engineering	Date(s) Analyzed:	5/14/99
Project Name:	Yocum Oil	MATRIX Project #:	99109
Project Location:	Jordan, MN	Client Project #:	

ANALYTE	PQL ug/L[1]	GP-11 12'-16'	GP-12 12'-16'
Benzene[3]	<1.0[2]	**8.**	**36.**
Toluene	<1.0	**14.**	**56.**
Ethyl Benzene	<1.0	**1.**	**7.**
Xylenes	<1.0	**11.**	**55.**
TPH as GRO[4]	<100.0	**130.**	**210.**
1,4-Bromoflourobenzene[5]	% rec	100%	101%

1 -Water sample results reported in micrograms per liter (ug/L).
2 -<1.0 represents less than the method practical quantitation limit.
3 -Analyte results quantified in accordance with US EPA Method 8020 modified
4 -TPH as GRO results quantified in accordance with the WDNR Modified GRO Method.
5 -Surrogate standard added to confirm retention time and concentration accuracy.
6 -* - Not quantifiable due to sample interference.
J Estimated Value
B Compound found in blank

APPENDIX A

STANDARD OPERATING PROCEDURES

SCREENED POINT 15 GROUND WATER SAMPLER

MATRIX STANDARD OPERATING PROCEDURE

TECHNICAL BULLETIN NO. 96.002

PREPARED: JANUARY 08, 1996

REVISED: DECEMBER 30, 1998

1.0 OBJECTIVE

The objective of this procedure is to drive a sealed stainless steel or PVC screen to depth, deploy the screen, obtain a representative water sample from the screen interval, and grout the probe hole during abandonment. The Screen Point 15 Ground Water Sampler enables the operator to conduct grouting that meets American Society for Testing and Materials (ASTM) Method D 5299 requirements for decommissioning wells and borings for environmental activities (ASTM 1993).

2.0 BACKGROUND

2.1 Definitions

- **Geoprobe®**: A vehicle-mounted hydraulically-powered soil probing machine that utilizes static force and percussion to advance small diameter sampling tools into the subsurface for collecting soil core, soil gas, or ground water samples.

- **Screened Point 15 Ground Water Sampler:** The assembled Screen Point 15 Sampler is 1.5-inch O.D. X 52-inch overall length. This sampler features a 41-inch stainless steel or PVC screen. The device is also useful for measurement of piezometric levels.

- **Casing Puller:** An assembly which makes it possible to retract the sampler string with extension rods protruding from the top of the probe rods.

- **Rod Grip Pull System:** An attachment mounted on the Geoprobe Hammer which enables the operator to retract the sampler string with the extension rods protruding from the top of the probe rods. The rod grip pull system utilizes hammer support brackets which greatly enhance probe unit durability. This system is preferred over the casing puller system.

2.2 Discussion

In this procedure, the assembled Screen Point 15 Sampler threads onto the leading end of a Geoprobe probe rod and is driven into the subsurface using a Geoprobe machine. Additional probe rods are connected in succession to advance the sampler to depth. While the Screen Point Sampler is being driven to the desired sampling depth, it is kept sealed by O-ring connections placed at critical locations on the assembly. This eliminates the threat of subsurface fluids entering the screen before deployment and ensures sample integrity.

Once at the desired sampling interval, extension rods are sent downhole until the leading rod contacts the bottom of the sampler screen. The tool string is then retracted approximately 44 inches while the screen is held in place with the extension rods. As the tool string is retracted, the expendable point is released from the sampler sheath. An O-ring on the screen head maintains the seal at the top of the screen. As a result, any liquid entering the sampler during screen deployment must first pass through the screen. The tool string and sheath may be retracted the full length of the screen or as little as a few inches if a small sampling interval is desired.

Ground water samples are recovered by using polyethylene tubing and a vacuum pump or a check valve with check ball to recover water collected in the sampler screen. The standard slot size of the screen of this sampler is between 0.004-inches and 0.010-inches and 41 inches in length. This sampler will allow the user to collect representative samples in a short time period due to its large surface area.

A removable plug, located in the bottom of the ground water screen, allows the operator to grout as the sampler is extracted. This ensures proper abandonment of the probe hole.

3.0 REQUIRED EQUIPMENT

Equipment required to successfully recover water samples using the Screen Point 15 Groundwater Sampler is listed below (See Attached Figure).

3.1 Screen Point Sampler Parts

O-ring Service Kit	1
Sampler Sheath	1
Drive Head	1
Stainless Steel/PVC Screen	1
Screen Push Adapter	1
Grout Plug Push Adapter	1
Grout Plugs, Teflon®/PVC	25
Expendable Drive Points	25

3.2 Geoprobe Tools

Probe Rod (48", 36", 24", or 12")	Variable
Drive Cap	1
Pull Cap	1
Split Pull Cap (Optional)	1
Extension Rod	Variable
Extension Rod Coupler	Variable
Extension Rod Handle	1
Extension Rod Jig	1

3.3 Optional

Tubing Bottom Check Valve	2
Check Balls for Check Valve	25
Polyethylene Tubing, 1/4-inch I.D.	Variable

4.0 OPERATION

4.1 Basic Operation

The Screen Point 15 Ground Water Sampler uses a stainless steel or PVC screen which is encased in an alloy steel sampler sheath. An expendable drive point is placed in the lower end of the sheath while a drive head is attached to the top. O-rings on the drive head and expendable point provide a water-tight sheath.

Once the sampling depth is reached, extension rods equipped with a screen push adapter are inserted down the inside of the probe rods. The probe rods attached to the sampler sheath are retracted, with the extension rods in place, approximately 44 inches to allow the sampler screen to be pushed out into the formation. At this point the sampler is ready to collect a ground water sample. When sampling is complete, a removable plug in the bottom of the screen allows for grouting below the sampler as the tool string is retrieved.

4.2 Decontamination and Preparation of Parts

In order to assemble the water sampler properly and to take representative water samples, all parts need to be cleaned thoroughly using deionized water and Alconox®. All soil adhering to the parts should be removed by brushing or pressure washing. Finally, all parts should be rinsed with clean, contaminant-free water and allowed to dry before they are assembled.

Check all O-rings in the sampler assembly for damage and/or wear. All worn O-rings should be replaced. It is more efficient and cost effective to change O-rings rather than collecting a non-representative sample or invalid data.

4.3 Assembly

a. Install an O-ring on an expendable drive point. Firmly seat the expendable point in the necked end of the sampler sheath.

b. Place a grout plug (PVC or Teflon®) in the lower end of either a wound-wire stainless steel or PVC screen. When using a stainless steel screen, install an O-ring in the groove on the upper end of the screen. Slide the screen inside of the sampler sheath with the grout plug towards the bottom. Ensure that the expendable point was not dislodged by the placement of the screen.

c. Install a bottom O-ring on a drive head. Thread the drive head onto the sampler sheath. Attach a drive cap to the drive head.

d. Sampler assembly is complete.

4.4 Probing

a. Drive the Screen Point 15 Ground Water sampler to depth. Use probe rods as needed. Approximately 12 inches of the last probe must extend above the ground surface to allow attachment of the puller assembly.

b. Remove the drive cap and retract the probe derrick away from the tool string.

4.5 Screen Deployment

Once the Screen Point 15 Ground Water Sampler has been driven to the base of the desired sampling interval, the probe rods are retracted a distance of 44 inches and the screen is pushed out into the formation. The following procedures are employed to deploy the screen:

a. Thread the screen push adapter on an extension rod. Lower the extension rod inside the probe rods. Add extension rods, as needed, until the adapter contacts the bottom of the screen.

b. Position the probe assembly into the pulling position.

Note: In this section, "Puller" will refer to either the Rod Grip Puller or the Casing Puller. The operator can choose which system they want to use.

c. Ensure that at least 48 inches of extension rod protrudes from the probe rod. Thread an extension rod handle on the top extension.

d. Retract probe rods and sampler sheath while physically holding the screen in place with the extension rods. Raise the hammer and puller approximately 44 inches. At this point, the screen head will contact the necked portion of the sampler sheath and the extension rods will rise with the probe rods. The screen is now deployed.

g. Lower the hammer assembly and remove the puller assembly. Remove the top extension rod and handle, pull cap, casing pull plate, and top probe rod. Finally, extract all extension rods.

h. Ground water samples can now be collected.

4.6 Sampling, General Considerations

Ground water samples are obtaining using a tubing system that is inserted within the deployed screen and samples are pumped to the surface using either a vacuum pump or peristaltic pump. Another method of sampling the groundwater is by use of a check valve and check ball inside the polyethylene tubing. The check valve is attached to one end of the tubing and inserted down the casing until it is immersed in groundwater. Water is pumped through the tubing and to the ground surface by oscillating the tubing up and down. The ball will seat in the check valve and trap the sample in the tubing. Collect the sample by withdrawing and draining the tubing.

4.7 Abandonment Grouting

The Screen Point 15 Sampler can meet ASTM D 5299 requirements for abandoning environmental wells or borings when grouting is conducted properly. A removable grout plug makes it possible to deploy tubing through the bottom of the screen. Grout is then pumped into the open hole as the sampler is withdrawn. The following procedure is can be used as proper abandonment of a probe hole.

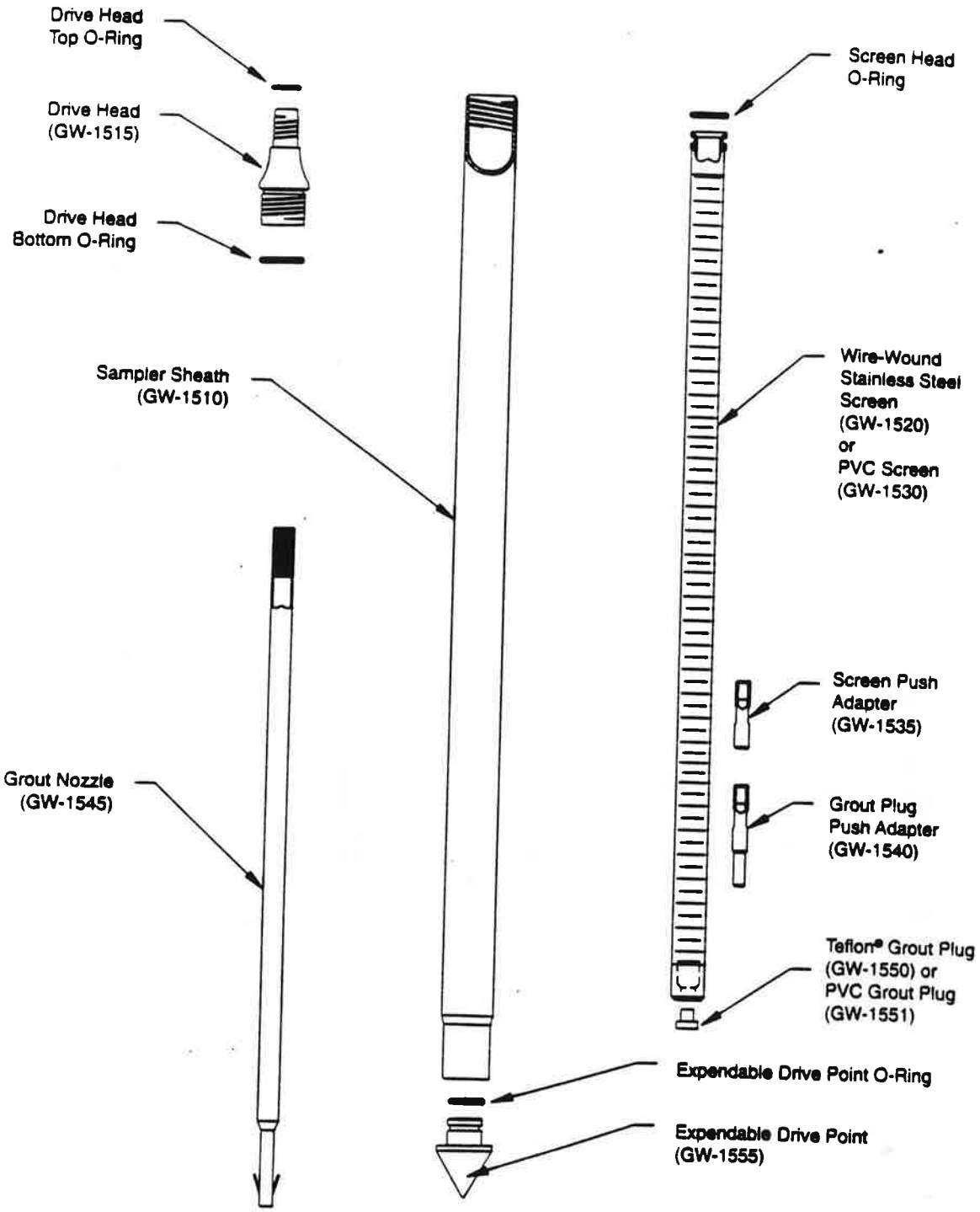
a. Use the puller on the tool string and place a split pull cap on the top probe rod. Raise the tool string approximately 4 to 6 inches to allow for removal of grout plug. Remove the pull cap.

b. Thread the grout plug adapter onto an extension rod. Insert the adapter and extension rod inside the probe rod string. Add extension rods until the grout plug adapter contacts the bottom of the screen. Apply pressure to the extension rods to release the grout plug. When the grout plug is pushed from the screen, remove all extension rods.

c. Connect a grout nozzle to polyethylene tubing and insert into the probe rods and down through the bottom of the screen. Once the grout nozzle is set through the bottom of the screen, pull gently on the tubing to ensure that it is locked in place.

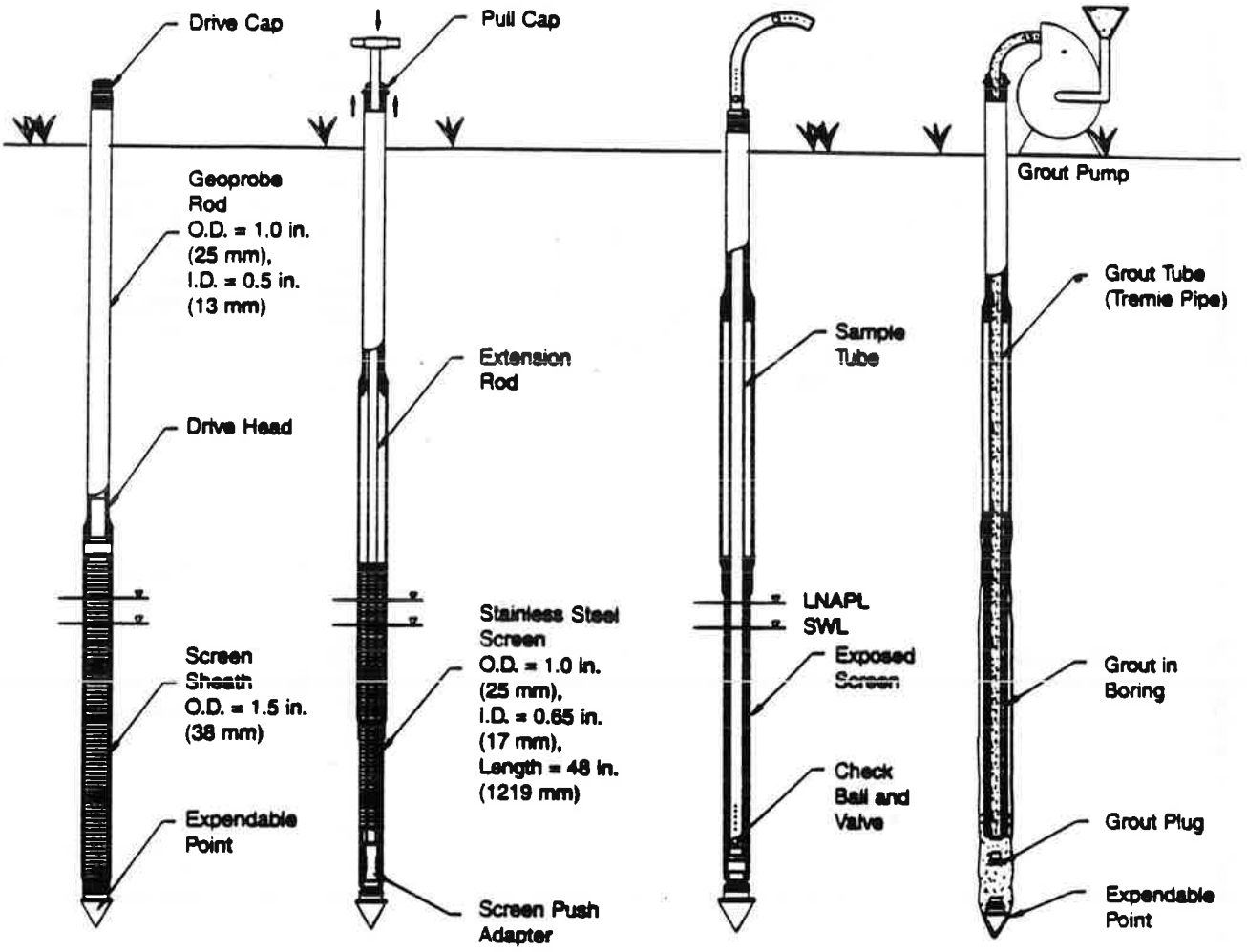
d. Attach a split cap to the top probe rod. Position the polyethylene tubing in the pull cap slot taking care not to pinch or bind the tubing. Operate the grout pump while pulling the probe rod string. Remove the split pull cap and unscrew the probe rod. Slide the rod over the tubing and place it on the ground near the end of the tubing making sure not to bend or kink the tubing. Repeat this Step until the sampler is retrieved.

e. Promptly clean all probe rods and sampler part before the grout sets up and clogs the equipment.



Screen Point 15 Ground Water Sampler Parts

The Screen Point 15 Ground Water Sampler utilizes a stainless steel or PVC screen which is encased in an alloy steel sampler sheath. An expendable drive point is placed in the lower end of the sheath while a drive head is attached to the top. O-rings on the drive head and expendable point provide a watertight sheath. Once the desired sampling interval is reached, extension rods equipped with a screen push adapter are inserted down the inside diameter of the probe string. The tool string is then retracted approximately 44 inches while the screen is held in place with the extension rods. At this point the system is ready for ground water sampling. When sampling is complete, a removable plug in the bottom of the screen allows for grouting below the sampler as the tool string is retrieved.



The assembled Screen Point 15 Groundwater Sampler is driven to the desired sampling depth using standard Geoprobe rods.

Extension rods are used to hold the screen in position as the Casing Puller Assembly is used to retract the rods 4 feet (1.2 m).

The tubing check valve can be used to sample and measure NAPLs within the screen interval as well as sample ground-water. The screen sheath forms a mechanical annular seal above the screen interval.

Abandonment grouting can be conducted to meet ASTM requirements. A high-pressure grout pump is used to pump grout into the borehole as the screen and rods are extracted using the Casing Puller Assembly.

Screen Point Ground Water Sampler Basic Operation

APPENDIX B

SEALING REPORT

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING SEALING RECORD

Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No.
Minnesota Unique No. or W-series No.
(Leave blank if not known)

H 148507

WELL OR BORING LOCATION

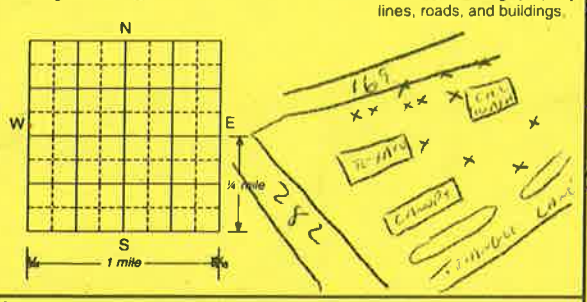
County Name: Scott

Township Name	Township No.	Range No.	Section No.	Fraction (sm. → lg.)
SAND CREEK	114N	23W	19	NE ¼ SW ¼ NW ¼

Numerical Street Address or Fire Number and City of Well or Boring Location: US Hwy 169 + State Hwy 282 JORDAN

Show exact location of well or boring in section grid with "X".

Sketch map of well or boring location, showing property lines, roads, and buildings.



Date Sealed: 5/13/99

Date Well or Boring Constructed: 5/13/99

Depth Before Sealing: 12-19 ft.

Original Depth: 12-19 ft.

AQUIFER(S)
☒ Single Aquifer ☐ Multiaquifer

WELL/BORING
☐ Water Supply Well ☒ Monit. Well TENNIS
☐ Env. Bore Hole ☐ Other

STATIC WATER LEVEL
☒ Measured ☐ Estimated
10-17 ft. ☒ below ☐ above land surface

CASING TYPE(S)
☒ Steel ☐ Plastic ☐ Tile ☐ Other

CASING

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
NA in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown

SCREEN/OPEN HOLE
Screen from NA to ____ ft. Open Hole from ____ to ____ ft.

OBSTRUCTIONS
☐ Rods/Drop Pipe ☐ Check Valve(s) ☐ Debris ☐ Fill ☐ No Obstruction
Type of Obstructions (Describe): NA
Obstructions removed? ☐ Yes ☐ No Describe

PUMP
Type: NA
☐ Removed ☐ Not Present ☐ Other

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:
☐ No Annular Space Exits
☐ Annular space grouted with tremie pipe
☐ Casing Perforation/Removal
NA in. from ____ to ____ ft. ☐ Perforated ☐ Removed
____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed
Type of perforator
☐ Other

GROUTING MATERIAL(S)
Grouting Material: BENTONITE from 0 to 12-19 ft. 20 CHIPS 55 GAL yards ____ bags
____ from ____ to ____ ft. ____ yards ____ bags
____ from ____ to ____ ft. ____ yards ____ bags
____ from ____ to ____ ft. ____ yards ____ bags

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
If not known, indicate estimated formation log from nearby well or boring.				
SAND W/ GRAVEL	BRN	MED	0	19

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

OTHER WELLS AND BORINGS
Other unsealed and unused well or boring on property? ☐ Yes ☒ No How many?

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

MATRIX TECHNOLOGIES — Contractor Business Name
M0175 — License or Registration No.

Guy Paquette — Authorized Representative Signature
5/14/99 — Date

GUY PAQUETTE — Name of Person Sealing Well or Boring

IMPORTANT-FILE WITH PROPERTY PAPERS-WELL OWNER COPY

H 148507

PROPERTY OWNER'S NAME
YOUNG OIL

Property owner's mailing address if different than well location address indicated above.
C/O ACUTE ENVIRONMENTAL
3550 LEXINGTON AVE N SUITE 102
SHOREVIEW, MN 55126

WELL OWNER'S NAME
SAA

Well owner's mailing address if different than property owner's address indicated above.
SAA

HE-01434-03

2/97 R

Appendix F

Copies of Water Supply Well Logs

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

W05187 70 114-24-24ABDB 1.0 198704 1 198704 QUATMA

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **W05187/70** ENTERED: 1988/02/11
NAME : QUATMAN HARRY UPDATED: 1991/08/18

COUNTY : SCOTT USE : DRILLED: / /
T/R/SEC. : 114/24/24ABDB DEPTH : FT. DEPTH D: FT.
ELEVATION: FT.( ) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
LOC.METH.: LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 6305 190TH ST. W , JORDAN , MN 55352
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1987/04/07	<1.0	<1	MVTL			

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

W05446 70 114-23-18 0.1 198307 1 198307 SCHMIT

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **W05446/70** ENTERED: 1988/02/11
NAME : SCHMITT CHRIS UPDATED: 1991/08/18

COUNTY : SCOTT USE : DRILLED: / /
T/R/SEC. : 114/23/18 DEPTH : FT. DEPTH D: FT.
ELEVATION: FT.( ) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 200 HOOPER ST. , JORDAN , MN 55352
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1983/07/19	<0.1	<1	ERG			

Well Logs

County Well Index for wells within ½ mile of Yocum Oil – Jordan MN.

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **W05133/70** ENTERED: 1988/02/11
NAME : HOFFMAN VIRGIL UPDATED: 1991/08/18

COUNTY : SCOTT USE : DRILLED: / /
T/R/SEC. : 114/23/19 DEPTH : FT. DEPTH D: FT.
ELEVATION: FT.( ) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 112 SUNSET DR. , JORDAN , MN 55352
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1987/05/22	<1.0	<1	MVTL			
1987/03/18	<1.0	<1	MVTL			

UN.NO.	CO	T-R-S	QUAD	ELEV	USE	DPTH	AQU	D2BR	FBRK	LUNT	NO3	DATE	BACT	DATE	SWEL	DATE	WL	WC	NAME
W05186	70	114-24-24ADAA									1.0	198704	1	198704					THISSE

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **W05186/70** ENTERED: 1988/02/11
NAME : THISSEN JERRY UPDATED: 1991/08/18

COUNTY : SCOTT USE : DRILLED: / /
T/R/SEC. : 114/24/24ADAA DEPTH : FT. DEPTH D: FT.
ELEVATION: FT.( ) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
LOC.METH.: LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 19300 VALLEY VIEW DR. , JORDAN , MN 55352
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1987/04/28	<1.0	<1	MVTL			

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MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : W05454/70 ENTERED: 1988/02/11
NAME : BEISE GARY UPDATED: 1991/08/18

COUNTY : SCOTT USE : DRILLED: / /
T/R/SEC. : 114/23/19 DEPTH : FT. DEPTH D: FT.
ELEVATION: FT.( ) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 340 CREEK LA. , JORDAN , MN 55352
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

COMMENTS: PH 8.23 9-13-84

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **W05456/70** ENTERED: 1988/02/11
NAME : BOECKMAN LOREN UPDATED: 1991/08/18

COUNTY : SCOTT USE : DRILLED: / /
T/R/SEC. : 114/23/19 DEPTH : FT. DEPTH D: FT.
ELEVATION: FT.( ) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 416 VARNER ST. N , JORDAN , MN 55352
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1984/01/06	<0.04	<1.0	ERG			

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MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **207131/70** ENTERED: 1988/02/11
NAME : JORDAN CO-OP UPDATED: 1996/02/08

COUNTY : SCOTT USE : COMMERCIAL DRILLED: 1954/05/00
T/R/SEC. : 114/23/19ADBDDB DEPTH : 545 FT. DEPTH D: 545 FT.
ELEVATION: 760 FT.(TOPO) CASED : 360 FT. GROUT :
DIAM. : 10 IN. DRL/DS : 62012 :KEYS WELL CO.
LOC.METH.: LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#:

DPTH BDRK: 27 FT. BEDROCK: ST.LAWRENCE
OPEN HOLE: MT.SIMON
AQUIFER : MT.SIMON

ADDRESS : , JORDAN , MN
QUAD(7.5): JORDAN WEST CONTACT:
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1954/05/00				10	750	62012

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MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **207133/70** ENTERED: 1989/08/09
NAME : JORDAN 3 UPDATED: 1996/02/05

COUNTY : SCOTT USE : MUNICIPAL DRILLED: 1950/06/00
T/R/SEC. : 114/23/19AACCDB DEPTH : 564 FT. DEPTH D: 564 FT.
ELEVATION: 755 FT.(TOPO) CASED : 221 FT. GROUT :
DIAM. : 16 IN. DRL/DS : 62012 :KEYS WELL CO.
LOC.METH.: INFO.OWNER LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#: 80-6175

DPTH BDRK: 40 FT. BEDROCK: ST.LAWRENCE
OPEN HOLE: IRONTON-GALESVILLE-SOLOR CHURCH FORMATION
AQUIFER : MULTIPLE

QUAD(7.5): JORDAN WEST CONTACT:
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.: CUTTINGS

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1950/06/00				6	749	62012

COMMENTS: M.G.S. NO. 73

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MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **207134/70** ENTERED: 1989/05/05
NAME : JORDAN 2 UPDATED: 1996/02/05

COUNTY : SCOTT USE : MUNICIPAL DRILLED: 1948/11/30
T/R/SEC. : 114/23/19ABCADC DEPTH : 636 FT. DEPTH D: 636 FT.
ELEVATION: 750 FT.(TOPO) CASED : 252 FT. GROUT :
DIAM. : 10 IN. DRL/DS :
LOC.METH.: INFO.OWNER LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#: 80-6175

DPTH BDRK: 32 FT. BEDROCK: IRONTON-GALESVILLE
OPEN HOLE: IRONTON-GALESVILLE-SOLOR CHURCH FORMATION
AQUIFER : MULTIPLE

QUAD(7.5): JORDAN WEST CONTACT:
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.: GEOPHYSICAL LOG
IGWIS : SWUDS : OBWELL: YES

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1949/00/00				20	730	USGS

COMMENTS: GAMMA AND T.V. LOGGED ON 1-11-88. ORIGINALLY DRILLED TO 252

*

UN.NO.	CO	T-R-S	QUAD	ELEV	USE	DPTH	AQU	D2BR	FBRK	LUNT	NO3	DATE	BACT	DATE	SWEL	DATE	WL	WC	NAME
207135	70	114-23-19ADAC	90B	768	IN	287		112	CSLF	CIGL							Y		MPLS +

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **207135/70** ENTERED: 1988/02/11
NAME : MPLS + ST LOUIS RAILWAY UPDATED: 1996/02/08

COUNTY : SCOTT USE : INDUSTRIAL DRILLED: / /
T/R/SEC. : 114/23/19ADACCB DEPTH : 287 FT. DEPTH D: 287 FT.
ELEVATION: 768 FT.(TOPO) CASED : FT. GROUT :
DIAM. : IN. DRL/DS :
LOC.METH.: LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#:

DPTH BDRK: 112 FT. BEDROCK: ST.LAWRENCE-FRANCONIA
OPEN HOLE:

QUAD(7.5): JORDAN WEST CONTACT:
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.:

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

212291 70 114-23-19BDCB 90B 749 CO 250 CIGL 55 CSTL CIGL Y WOLF F

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **212291/70** ENTERED: 1989/02/23
NAME : WOLF FORD MOTOR UPDATED: 1996/02/08

COUNTY : SCOTT USE : COMMERCIAL DRILLED: 1973/00/00
T/R/SEC. : 114/23/19BDCBBA DEPTH : 250 FT. DEPTH D: 250 FT.
ELEVATION: 749 FT.(TOPO) CASED : 228 FT. GROUT :
DIAM. : 4 IN. DRL/DS : 40174 :HARTMANN WELL CO.
LOC.METH.: LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#:

DPTH BDRK: 55 FT. BEDROCK: ST.LAWRENCE
OPEN HOLE: IRONTON-GALESVILLE
AQUIFER : IRONTON-GALESVILLE

ADDRESS : 600 2ND ST. W , JORDAN , MN 55352
QUAD(7.5): JORDAN WEST CONTACT:
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.:

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

427353 70 114-24-13DDDD 90B 790 DO 160 CSLF 112 CSLF CFRN 718 198403 Y YAHNKE

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **427353/70** ENTERED: 1991/03/28
NAME : YAHNKE, NANCY UPDATED: 1994/08/30

COUNTY : SCOTT USE : DOMESTIC DRILLED: 1984/03/22
T/R/SEC. : 114/24/13DDDDCB DEPTH : 160 FT. DEPTH D: 160 FT.
ELEVATION: 790 FT.(TOPO) CASED : 117 FT. GROUT : YES
DIAM. : 4 IN. DRL/DS : 70350 :BOHN WELL CO.
LOC.METH.: ADD.VERIF. LOC.BY : MGS COORDS.:
ABANDONED: / / UNUSED?: YES SEALED?: NOT
STATUS : ACTIVE WHPA : DNR PA#:

DPTH BDRK: 112 FT. BEDROCK: ST.LAWRENCE-FRANCONIA
OPEN HOLE: ST.LAWRENCE-FRANCONIA
AQUIFER : ST.LAWRENCE-FRANCONIA

ADDRESS : 6050 190TH ST. W , JORDAN , MN
QUAD(7.5): JORDAN WEST CONTACT:
POTENTIAL POLLUTION SOURCE: 50 FT. DIR.: W TYPE: SEPTIC/DFL
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1984/03/22				72	718	70350

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **462924/70** ENTERED: 1993/03/06
NAME : JORDAN 5 UPDATED: 1996/02/14

COUNTY : SCOTT USE : MUNICIPAL DRILLED: 1991/01/15
T/R/SEC. : 114/23/19ACAAAC DEPTH : 287 FT. DEPTH D: 287 FT.
ELEVATION: 750 FT.(TOPO) CASED : 213 FT. GROUT : YES
DIAM. : 12 IN. DRL/DS : 71015 :RENNER E.H. WELL
LOC.METH.: INFO.OWNER LOC.BY : MGS COORDS.:
STATUS : ACTIVE WHPA : DNR PA#: 80-6175

DPTH BDRK: 37 FT. BEDROCK: ST.LAWRENCE
OPEN HOLE: FRANCONIA-IRONTON-GALESVILLE
AQUIFER : FRANCONIA-IRONTON-GALESVILLE

ADDRESS : 107 4TH ST. , JORDAN , MN 55352
QUAD(7.5): JORDAN WEST CONTACT:
POTENTIAL POLLUTION SOURCE: 100 FT. DIR.: NW TYPE: SEPTIC/DFL
CWI/WL: YES CWI/WC: NO CORE/CTTNGS/GP.: CUTTINGS

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1991/01/11				14	736	71015

COMMENTS: M.G.S.NO.2715.

UN.NO.	CO	T-R-S	QUAD	ELEV	USE	DPTH	AQU	D2BR	FBRK	LUNT	NO3	DATE	BACT	DATE	SWEL	DATE	WL	WC	NAME
473446	70	114-23-19ADC	90B		MW	14							D	7	199202				RHODES

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **473446/70** ENTERED: 1992/10/16
NAME : RHODES, NICK UPDATED: 1993/05/28

COUNTY : SCOTT USE : MONITOR DRILLED: 1992/01/18
T/R/SEC. : 114/23/19ADC DEPTH : 14 FT. DEPTH D: 14 FT.
ELEVATION: FT.( ) CASED : 3 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : M0117 :MATEFFY ENGINEERING
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 215 3RD ST. E , JORDAN , MN
QUAD(7.5): JORDAN WEST CONTACT:
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1992/02/18			7	M0117		

COMMENTS: WELL PERMITTED UNDER TOM DONOFRIO, BUT DRILLED UNDER LES MATEFFY

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

495941 70 114-23-19BD 90B MW 15 D 9 199110 MW-1

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **495941/70** ENTERED: 1992/10/16
NAME : MW-1 UPDATED: 1995/04/04

COUNTY : SCOTT USE : MONITOR DRILLED: 1991/10/17
T/R/SEC. : 114/23/19BD DEPTH : 15 FT. DEPTH D: 15 FT.
ELEVATION: FT.( ) CASED : 5 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : 34050 :THEIN WELL CO.
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

CNTCT.ADD: 240 TRIANGLE LA. , JORDAN , MN 55352
QUAD(7.5): JORDAN WEST CONTACT: ANDERSON, JERRY
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1991/10/17			9		34050	

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

495942 70 114-23-19BD 90B MW 16 D 10 199110 MW-2

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **495942/70** ENTERED: 1992/10/16
NAME : MW-2 UPDATED: 1995/04/04

COUNTY : SCOTT USE : MONITOR DRILLED: 1991/10/17
T/R/SEC. : 114/23/19BD DEPTH : 16 FT. DEPTH D: 16 FT.
ELEVATION: FT.( ) CASED : 6 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : 34050 :THEIN WELL CO.
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

CNTCT.ADD: 240 TRIANGLE LA. , JORDAN , MN 55352
QUAD(7.5): JORDAN WEST CONTACT: ANDERSON, JERRY
CWI/WL: NO CWI/WC: NO CORE/CTTN

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

495943 70 114-23-19BD 90B MW 15 D 9 199110 MW-3

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **495943/70** ENTERED: 1992/10/16
NAME : MW-3 UPDATED: 1995/04/04

COUNTY : SCOTT USE : MONITOR DRILLED: 1991/10/17
T/R/SEC. : 114/23/19BD DEPTH : 15 FT. DEPTH D: 15 FT.
ELEVATION: FT.( ) CASED : 5 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : 34050 :THEIN WELL CO.
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

CNTCT.ADD: 240 TRIANGLE LA. , JORDAN , MN 55352
QUAD(7.5): JORDAN WEST CONTACT: ANDERSON, JERRY
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1991/10/17		9	34050			

UN.NO. CO T-R-S QUAD ELEV USE DPTH AQU D2BR FBRK LUNT NO3 DATE BACT DATE SWEL DATE WL WC NAME

510118 70 114-23-19ABB 90B MW 15 D 8 199008 MN DEP

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **510118/70** ENTERED: 1992/10/16
NAME : MN DEPT. OF TRANSPORT. UPDATED: 1993/05/28

COUNTY : SCOTT USE : MONITOR DRILLED: 1990/08/15
T/R/SEC. : 114/23/19ABB DEPTH : 15 FT. DEPTH D: 15 FT.
ELEVATION: FT.( ) CASED : 8 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : M0077 :BRAUN ENV LAB
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 705 SYNDICATE ST. , JORDAN , MN 55352
CNTCT.ADD: 2055 LILAC DR. N , GOLDEN VALLEY , MN 55422
QUAD(7.5): JORDAN WEST CONTACT:
POTENTIAL POLLUTION SOURCE: 25 FT. DIR.: N TYPE: OTHER
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1990/08/10		8	M0077			

COMMENTS: MW 1

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510119 70 114-23-19ABB 90B MW 15 D 8 199008 MN DEP

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MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **510119/70** ENTERED: 1992/10/16
NAME : MN DEPT. OF TRANSP. UPDATED: 1993/05/28

COUNTY : SCOTT USE : MONITOR DRILLED: 1990/08/16
T/R/SEC. : 114/23/19ABB DEPTH : 15 FT. DEPTH D: 15 FT.
ELEVATION: FT.( ) CASED : 8 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : M0077 :BRAUN ENV LAB
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 705 SYNDICATE ST. , JORDAN , MN 55352
CNTCT.ADD: 2055 LILAC N , GOLDEN VALLEY , MN 55422
QUAD(7.5): JORDAN WEST CONTACT:
POTENTIAL POLLUTION SOURCE: 32 FT. DIR.: E TYPE: VOL.ORGAN.
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1990/08/20				8		M0077

COMMENTS: MW 2

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MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **510120/70** ENTERED: 1992/10/16
NAME : MN DEPT. OF TRANSPORT UPDATED: 1993/05/28

COUNTY : SCOTT USE : MONITOR DRILLED: 1990/08/16
T/R/SEC. : 114/23/19ABB DEPTH : 15 FT. DEPTH D: 15 FT.
ELEVATION: FT.( ) CASED : 8 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : M0077 :BRAUN ENV LAB
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 705 SYNDICATE ST. , JORDAN , MN 55352
CNTCT.ADD: 2055 LILAC DR. , GOLDEN VALLEY , MN 55422
QUAD(7.5): JORDAN WEST CONTACT:
POTENTIAL POLLUTION SOURCE: 28 FT. DIR.: S TYPE: VOL.ORGAN.
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1990/08/20				8		M0077

COMMENTS: MW 3

MINNESOTA COUNTY WELL INDEX.

UN.NO./CO. : **522024/70** ENTERED: 1995/03/31
NAME : MW-4 UPDATED: 1995/03/31

COUNTY : SCOTT USE : MONITOR DRILLED: 1992/12/09
T/R/SEC. : 114/23/19 DEPTH : 14 FT. DEPTH D: 15 FT.
ELEVATION: FT.( ) CASED : 4 FT. GROUT : YES
DIAM. : 2 IN. DRL/DS : M0109 :BRAUN INTERTEC ENV.
ABANDONED: / / UNUSED?: NO SEALED?:
STATUS : ACTIVE WHPA : DNR PA#:

ADDRESS : 705 SYNDICATE ST. , JORDAN , MN
CNTCT.ADD: 395 JOHNIRELAND BL. , ST. PAUL , MN 55155
QUAD(7.5): CONTACT: MN DEPT OF TRANS.
POTENTIAL POLLUTION SOURCE: 35 FT. DIR.: SE TYPE: VOL.ORGAN.
CWI/WL: NO CWI/WC: NO CORE/CTTNGS/GP.:

DATE	NITRATE	BACTERIA	SOURCE	SWL	ELEV	SOURCE
1992/12/15			6.8			M0109

EPA United States Environmental Protection Agency

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ENVIROFACTS Query Results

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Map Facilities

Please note that a maximum of 100 facilities will be mapped!

ZIP CODE: **55352**

LIST OF EPA-REGULATED FACILITIES IN ENVIROFACTS

To see a report on a facility click on the underlined Facility Name. Click on the underlined EPA FACILITY ID value to view EPA Facility information for the facility.

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FACILITY NAME/ADDRESS	EPA FACILITY ID	Permitted Discharges to Water?	Toxic Releases Reported?	Hazardous Waste Handler?	Active or Archived Superfund Report?	Air Releases Reported?	B R
ALLOY HARDFACING AND ENG 20425 JOHNSON MEMORIAL DRIVE JORDAN, MN 55352	MND980794150	NO	NO	YES	NO	NO	
AM ROOFING SYSTEMS 910 QUAKER AVE JORDAN, MN 55352	MND982637456	NO	NO	YES	NO	NO	
BODYWORK AND PAINT CO 3311 W 166TH ST JORDAN, MN 55352	MND047428909	NO	NO	YES	NO	NO	
CEMSTONE PRODUCTS 3350 W 166TH ST JORDAN, MN 55352	000007571444	NO	NO	NO	NO	YES	

DEM CON LANDFILL INC 3601 130TH ST W JORDAN, MN 55352	MND985678614	NO	NO	YES	NO	NO
ENGEL DIVERSIFIED IND INC 1060 QUAKER AVE JORDAN, MN 55352	MN0002126944	NO	NO	YES	NO	NO
FIRST AVE CLEANERS 17360 VERGUS AVE JORDAN, MN 55352	MN0002126910	NO	NO	YES	NO	NO
HYPERFORMANCE 230 TRIANGLE LN JORDAN, MN 55352	MND985685726	NO	NO	YES	NO	NO
JORDAN ELEM SCHOOL 815 SUNSET DR JORDAN, MN 55352	MND985763663	NO	NO	YES	NO	NO
JORDAN HS 500 SUNSET DR JORDAN, MN 55352	MND053393005	NO	NO	YES	NO	NO
JORDAN WWTF SEC 18, T114N, R23W JORDAN, MN 55352	MN0001608330	YES	NO	NO	NO	NO
MID COUNTY FABRICATING INC 112 1ST ST W JORDAN, MN 55352	MND019751668	NO	NO	YES	NO	NO
MINNESOTA VALLEY ELEC COOP 612 N BROADWAY JORDAN, MN 55352	MN0001344985	NO	NO	YES	NO	NO
MPCA SCOTT CO HWY BLDG 606 COUNTRY TRAIL E JORDAN, MN 55352	MND985750413	NO	NO	YES	NO	NO
QUALITY TRUCK RPR LLC 3441A BLUF DR JORDAN, MN 55352	MN0002363422	NO	NO	YES	NO	NO

ST JOHN THE BAPTIST CHURCH SCHOOL 313 E SECOND ST E JORDAN, MN 55352	MN0002126928	NO	NO	YES	NO	NO
SUNDANCE MEDICAL CLINIC LTD 560 SECOND ST W JORDAN, MN 55352	MND985688464	NO	NO	YES	NO	NO
U S TRANSFORMER INC 1000 SYNDICATE ST JORDAN, MN 55352	MND064771900	NO	NO	YES	NO	NO
UNIMIN-MN FRAC SAND HIGHWAY 169 JORDAN, MN 55352	MND985691146	NO	NO	NO	NO	YES
WOLF MOTOR BODY SHOP 600 W 2ND ST JORDAN, MN 55352	MND022834071	NO	NO	YES	NO	NO
WOLF MOTOR BODY SHOP 614 N BROADWAY JORDAN, MN 55352	MND980904676	NO	NO	YES	NO	NO

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Total Number of Facilities Displayed: 21

Minnesota Pollution Control Agency

Leaking Underground Storage Tank (LUST) Information

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LUST Home

The following sites resemble the search information that you entered. To find out more information on the sites click on the leak ID number

Leak ID# - Site Name:

- 1338 - MNDOT TRUCK STATION DIST #5 , JORDAN
- 2249 - MARKS AMOCO , JORDAN
- 3590 - TRI-MART, JORDAN
- 4508 - UTILITY AND HIGHWAY RECONSTRUCTION, JORDAN
- 4509 - UTILITY AND HIGHWAY RECONSTRUCTION, JORDAN
- 4523 - SCOTT COUNTY OIL CO , JORDAN
- 4697 - JIM'S AUTO, JORDAN
- 6228 - MINNESOTA VALLEY ELECTRIC COOP, JORDAN
- 11718 - TRIANGLE OIL CO , JORDAN
- 11991 - JORDAN TEXACO , JORDAN

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TTY: 651-282-5332, TTY 24-hour emergency number: 651-297-5353 or 800-627-3529