REMEDIAL INVESTIGATION REPORT
CASH'S STORE
ONAMIA, MINNESOTA

GME PROJECT NO. C-8280-A
AUGUST 14, 2001

GME CONSULTANTS, INC.
CONSULTING ENGINEERS
Lake Shore Drive, P.O. Box 250 / Crosby, MN 56441
(218) 546-6371 / Fax (218) 546-8196

August 14, 2001

Ms. Shelly Cash-Logli
Cash's Store
44465 U.S. Highway 169
Onamia, Minnesota 56359

GME Project No. C-8280-A

RE: Remedial Investigation (RI) Report for the Cash's Store site near Onamia, Minnesota (MPCA Leaksite #13088)

Dear Ms. Cash-Logli:

In accordance with your authorization of our February 18, 2000 and February 13, 2001 proposals, we have completed our services for this phase of the project. The purposes of this report are to evaluate the results of the field and laboratory work, and to recommend subsequent actions. Following is a brief summary of the project; the exploration data and our interpretations are detailed on the enclosed MPCA RI Report Form.

BACKGROUND

The site is located on Highway 169 near Mille Lacs Lake. The surrounding area consists primarily of wetlands and lake cabins.

On March 29, 2000, we monitored the site for potential petroleum product impacts during the removal of two gasoline underground storage tanks (USTs). Petroleum impacted soil was encountered in soil sample B-1 with gasoline range organics (GRO) at 510 parts per million (ppm). The release source appeared to be from overfills. A RI was recommended in accordance with the MPCA guidance document entitled "Excavation of Petroleum Contaminated Soil." You contracted us to conduct the RI.

RI RESULTS

Results from our RI work indicate that the stratigraphy underlying this site generally consists of sand and silt. Groundwater was encountered in all five push probes at depths ranging from 4 to 8 feet below grade.

The organic vapor measurements and chemistry results for soil samples collected from the push probes indicated that petroleum impacted soil was encountered only in probe P-5 from 13 to 14 feet below grade and the P-5 groundwater sample contained slight concentrations of petroleum parameters.

Data collected from the groundwater receptor survey and from the County Well Index database indicate that there are no registered wells within 500 feet of the site. The Mille Lacs Band of Ojibwe municipal wells are located approximately 3/4 mile southeast of the site. The vapor receptor survey indicated that there are no apparent vapor impacts to the site or to adjoining properties at this time.

CONCLUSIONS

Based on the results of this study, there are no apparent extensive soil or groundwater impacts at this site. Therefore, we recommend no further action at this site and are requesting leaksite file closure from the MPCA.

We appreciate this opportunity to be of service to you. If you have any questions, please contact us at 218-546-6371.

Sincerely,

GME CONSULTANTS, INC.

Richard J. Eidem
Environmental Scientist
Project Manager

Mark D. Millsop, P.G.
Principal Hydrogeologist
Env. Division Manager

c: Mr. David Lein

RJE:MDM:jlm
A:8280A.ltr

Leaking Petroleum Storage Tanks

Minnesota Pollution Control Agency

http://www.pca.state.mn.us/programs/lust_p.html

Investigation Report Form
GME Project No. C-8280-A
August 14, 2001

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Complete this form to document remedial investigation (RI) activities, including Limited Site Investigations (LSIs) and full RIs. Do not revise or delete any text or questions from this report form. Include any additional information that is important for making a site cleanup decision. If only a LSI is necessary, you may skip Section 6 and Section 7 of this report form.

Refer to Minnesota Pollution Control Agency (MPCA) fact sheet 3.1 Leaking Underground Storage Tank Program for the overall RI objectives, and to other MPCA fact sheets for details on investigation methods. When a tank has been excavated, refer to fact sheets 3.6 Excavation of Petroleum Contaminated Soil During Tank Removal and 3.7 Excavation Report Worksheet for Petroleum Release Sites for reporting requirements. Document the occurrence of free product using fact sheet 3.3 Free Product: Evaluation and Recover, and fact sheet 3.4 Free Product Recovery Report Worksheet.

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MPCA Site ID: *Leak:13088*

Date: *08-14-01*

Responsible Party: *Ms. Shelly Cash-Logli*

R.P. phone #:

Consultant: *GME Consultants, Inc.*

Consultant phone #: *218-546-6371*

Facility Name: *Cash's Store*

Facility Address: *44465 U.S. Highway 169*

City: *Onamia*

County: *Mille Lacs*

Zip Code: *56359*

Site location (UTM required; refer to http://www.ot.state.mn.us/ot_files/handbook/standard/std17-1.html for spatial data standards): $^{51}14^{950}$N $_{4}41_{420}$E

Other location information
LAT: *46° 11' 14"* **LONG:** *93° 45' 30"*
State Plane coordinates:

Section 1: Emergency and High Priority Sites

1. Is an existing drinking water well impacted or likely to be impacted within a two-year travel time? ___YES _x_NO

2. Are there existing vapor impacts? ___YES _x_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 _x_NO

4. Has the release occurred in the last 30 days? ___YES _x_NO

5. Has free product been detected at the site? If YES, attach fact sheet 3.4 Free Product Recovery Report Worksheet. ___YES _x_NO

6. Is a sand or gravel aquifer impacted which is tapped by water wells within or potentially within 500 feet from the release source or does impacted soil overlie a geologically sensitive area? If YES, explain: ___YES _x_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.

Section 2: Site and Release Information

2.1 Attach Table 1 - Tank Information. Describe the status of the other components of the tank system(s), (i.e., piping and dispensers). *The piping and dispensers were in average condition and were not removed.*

2.2a Describe the land use and pertinent geographic features within 1,000 feet of the site.

The surrounding land is primarily wetlands, with cabins and Mille Lacs Lake nearby (Figure 1).

2.2b List other potential leak sources within 500 feet of the site.

None.

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

The suspected source of the release appears to be overfills.

2.4 What was the volume of the release? (if known): *Unknown*

2.5 When did the release occur? (if known): *Unknown*

Section 3: Excavated Soil Information

3.1 Include the Fact Sheet 3.7 Excavation Report Worksheet in Appendix A

3.2 Was soil excavated for off-site treatment? ___YES _x_NO

Date excavated:

Volume removed: cubic yards

3.3 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, sources including:

dispensers,	_x_YES ___NO	
underground storage tank basins,	_x_YES ___NO	
above ground storage tank areas,	___YES ___NO	NA
piping,	_x_YES ___NO	
remote fill pipes,	___YES ___NO	NA
and known spill areas	_x_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?

_x_YES ___NO

4.3 To adequately evaluate site stratigraphy at least one boring should be completed 20 feet below the water table. If a confining layer is present, drill the boring in an uncontaminated area. Was this done? _x_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):

4.4 Indicate the drilling method:

___hollow-stem auger
___sonic drilling
_x_push probes
___other

Note: MPCA staff hydrologist approval is required before use of flight augers

4.5 Discuss soil borings drilled and provide rationale for their locations. Attach boring logs in Appendix D.

4.6 Attach Table 2 - Results of Soil Headspace Screening, In Appendix C, discuss soil headspace screening method and describe any deviation from recommended and/or required methods and procedures.

4.7 Attach Table 3 - Analytical Results of Soil Samples. Provide analytical results in Appendix B. In Appendix C, discuss soil sampling and analytical methods used and describe any deviation from recommended and/or required methods and procedures.

4.8 Describe the vertical and horizontal extent and magnitude of soil contamination. Provide a plan-view map and two cross-sections that illustrate both soil head space and laboratory analytical results.

Headspace measurements indicate that petroleum impacted soil above MPCA action levels was encountered only in probe P-5 from 13 to 14 feet below grade. Laboratory analyses also indicate impacted soil is in contact with groundwater in probe P-5. Based on these measurements and the measurements from the other probes, it appears that the vertical and lateral extent of the impacted soil is primarily near the former UST excavation.

4.9 Attach Table 4 - Other Contaminants Detected in Soils (Petroleum or Non-petroleum Derived). Discuss the possible sources of these compounds.

Soil samples collected for laboratory analyses were analyzed for BTEX, GRO and MTBE only.

4.10 Is contaminated soil in contact with ground water? _x_YES ___NO

Although laboratory results for a soil sample collected from probe P-5 detected some contaminants, there were no detections in the soil samples above the Soil Reference Values (SRVs) or groundwater samples above the Minnesota Department of Health (MDH) Health Risk Limits (HRLs).

If YES or if ground water contamination appears likely, then complete Section 5.

If NO (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

4.11 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.

Obvious evidence of mottling was not observed in any of the borings. Area information indicates that fluctuations may occur during wet conditions.

4.12 In your judgment, is there a sufficient distance separating the petroleum contaminated soil (or an impacted non- aquifer) from the underlying aquifer to prevent petroleum contamination of the 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). _x_ YES ___ NO

If YES, a ground water contamination assessment is not necessary as part of the LSI.

It appears that there is only a small amount of impacted soil in and near the old tank basin, and there were no detections in the soil samples above the SRVs or in the groundwater samples above the MDH HRLs. Also, the boring logs show silt and clay from approximately 10 feet to at least 35 feet below grade.

If NO, a ground water contamination assessment is necessary. Complete Section 5.

Section 5: Aquifer Characteristics/Ground Water Contamination Assessment

Complete Section 5 if groundwater has been contaminated or may become contaminated. Aquifer determination is made during the LSI. It is based upon the stratigraphy and a hydraulic conductivity measurement calculated from grain size distribution analysis. The site stratigraphy gives the context within which the hydraulic conductivity measurement can be interpreted. Please refer to Fact Sheet 3.19, Soil and Ground Water Investigations Performed During Remedial Investigations for methods and requirements.

5.1 Provide an average hydraulic conductivity value (K) measured:

$K =$ *ft/day*

Indicate the method of measurement (i.e., Hazen, Masch and Denny, Kozeny-Carmen, etc.): *Hazen.*

Provide the results of grain size analyses and other information used for the determination of K-values in Appendix F.

5.2 Calculate a range for aquifer transmissivity (T) using the equation T = Kb, where b is the thickness of the aquifer:

T_{High} = ft²/day
T_{Low} = ft²/day

Determine the aquifer thickness (b) from geologic logs of soil borings, water well logs, and available published information. Attach water well logs in Appendix D. If the transmissivity of a contaminated hydrogeologic unit is greater than 50 ft2/day, it is considered an aquifer (for the purpose of the LUST program), and monitoring wells will be necessary.

5.3 Discuss in detail the site geology and stratigraphy, including a discussion of local and regional hydrogeology, using soil boring data and cross sections, geologic logs of near-by water wells, and available published information.

5.4 Attach Table 5- Water Level Measurements and Depths of Water Samples Collected from Borings. Indicate the method used to measure the water levels in borings, and the depth water samples were collected from borings. Allow water levels in borings to equilibrate to static conditions, and the adjust the effective screened intervals in borings to intercept the static water table prior to water sample collection. Discuss groundwater flow direction.

5.5 Attach Table 6 - Analytical Results of Water Samples Collected from Borings. Summarize the analytical results of groundwater samples collected as part of an LSI. Discuss the extent and magnitude of groundwater contamination. Also provide a discussion on QA/QC, including information on the samples collected and laboratory analyses performed.

5.6 Attach Table 7 - Other Contaminants Detected in Water Samples Collected from Borings (Petroleum or Non-petroleum Derived). Discuss the possible sources of these contaminants and provide a discussion of QA/QC information.

5.7 Laboratory certification number:
Northeast Technical Services MDH Lab ID 027-137-157
EnChem Laboratory, Inc. MDH Lab ID 055-999-334

Additional Ground Water Investigation

Complete **Section 6** only if: 1) an aquifer has been impacted at or above Minnesota Department of Health HRLs, 2) an 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- aquifer) from the underlying aquifer. Complete **Section 7** only if remediation is anticipated. 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

6.1 Discuss drilling and installation of wells, including the rationale for their locations. Attach boring logs in Appendix D.

6.2 Attach Table 8 - Monitoring Well Completion Information.

6.3 Attach Table 9 - Summary of Water Levels Measured in Wells.

6.4 Attach Table 10 - Analytical Results of Water Samples Collected from Wells.

6.5 Attach Table 11 - Other Contaminants Detected in Water Samples Collected from Wells (Petroleum or Non-Petroleum Derived).

6.6 Describe the extent and magnitude of the ground water contamination. Discuss the presence of non-petroleum compounds, if detected, and identify possible sources of these compounds. Also provide a discussion on QA/QC, including information on the samples collected and laboratory analyses performed.

6.7 Is there a clean or nearly clean (below HRLs) down-gradient monitoring well located along the longitudinal axis of the contaminant plume? (approximately 20 degrees plus or minus the axis) ___YES ___NO

6.8 Is there a worst case well completed through the source area(s) of the release? ___YES ___NO

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

6.9 Provide an estimate of the longitudinal length of the dissolved contaminant plume: _____FEET

6.10 Calculate groundwater flow velocity (based on Darcy's Law) using the average K-value, average horizontal hydraulic gradient, and effective porosity. Provide documentation in Appendix F.

Hydraulic Conductivity (K) = *feet/day*
Method: *Hazen*
Porosity (n) = *(Estimate)*
method/reference: *Freeze and Cherry p. 29*
Average horizontal gradient (dh/dl) = *average*
Calculated GW velocity (v) = *ft/day*

6.11 Using the calculated groundwater flow velocity (above), is there a receptor within a five-year travel time? ___YES ___NO

If YES, provide the unique well number and identify the location of the receptor(s).

6.12 Were any deep monitoring wells completed at the site? ___YES ___NO

If YES, list them and indicate their depths:

Contact the MPCA project hydrologist before installing a deep monitoring well. A deep monitoring well may be necessary if: 1) Contamination exists more than 10 feet below the water table or 2) the impacted aquifer is a drinking water aquifer or is hydraulically connected to the aquifer(s) presently utilized by a water supply well located within 500 feet of the release source.

If contamination is present at depth in the aquifer or in deeper aquifers, additional deep wells may be required. Provide the following information if deep wells are installed:

Vertical Gradient (dv/dl)
Inferred GW Flow Direction

Provide the following information for the deep aquifer unit if it appears to be hydrogeologically distinct from the upper unit.

Porosity (n):
Hydraulic Conductivity (K):

Submit this RI report after completing a minimum of two quarterly sampling events. Groundwater monitoring should continue until MPCA response is received.

Section 7: Evaluation of Natural Attenuation

Refer to the fact sheet #3.21 Assessment of Natural Attenuation at Petroleum Release Sites. **Note:** Evaluation of natural attenuation is not required unless requested by MPCA staff.

7.1 Attach Table 12 - Natural Attenuation Parameters. Discuss the results. 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

If active remediation is anticipated, discuss reasons why natural attenuation (including biodegradation) can not adequately remediate the contaminants to acceptable risk levels.

Section 8: Well Receptor Information/Assessment

Include in Appendix E, copies of the water supply well logs obtained from MGS, MDH, drillers, and where applicable, from County well management authorities.

8.1 Attach Table 13 - Properties Located Within 500 Feet of the Release Source. Provide a map identifying the features listed in Table 13.

There are no properties with drinking water wells located within 500 feet, except for the site.

8.2 Were all property owners within 500 feet of the release source successfully contacted to determine if water wells are present? If NO, please explain. _x_ YES ___ NO

8.3 Attach Table 14 - Water Supply Wells Located within 500 Feet of the Release Source and Municipal or Industrial Wells Within ½ Mile.

There are no water supply wells within 500 feet (except the on-site well), or municipal or industrial wells within 1/2 nile.

8.4 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 release source 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 may not be considered a separate aquifer).

There are no water supply wells (except the on-site well) within 500 feet of the edge of the plume. Also, there were no VOC detections in the water sample collected from the on-site well. In addition, our research indicated no municipal or industrial wells within 1/2 mile of the site.

8.5 Is municipal water available in the area? ___ YES _x_ NO

8.6 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? ___ YES _x_ NO

Please give the name, title and telephone number of the person that was contacted for this information (below).

Ryan Rupp, Mille Lacs Band of Ojibwe Env. Department Telephone 320-532-7442

Section 9: Surface Water Risk Assessment

9.1 Are there any surface waters or wetlands located within ¼ mile of the site?
_x_ YES ___ NO

If YES, list them: Mille Lacs Lake

9.2 If surface water is present down-gradient of the site, is there a clean down-gradient monitoring well (temporary or permanent) located between the site and the surface water?
_x_ YES ___ NO
___ NA

Push probe P-2 was placed between the site and Mille Lacs Lake.

9.3 If you answered NO to question 9.2, we assume that contamination discharges to surface water. Therefore, complete the following information:

Name of receiving water:	
Receiving water classification	
ORVW?	___ YES ___ NO
Plume width, (W):	_____ feet
Plume thickness, (H):	_____ feet
Hydraulic conductivity, (K):	_____ gal/day/ft2
Horizontal gradient, (dh/dl):	_____ (unitless)
Discharge, (Q) = H*W*K*(dh/dl)/1440	_____ gal/min

Applicable chronic standard (7050 or 7052)
Applicable max. standard (7050 or 7052)
Applicable FAV (7050 or 7052)
Contaminant concentration in ground water

9.4 If you answered YES to question 9.2, identify the clean down-gradient boring or monitoring well, the distance to the surface water feature, 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 _x_NO

If YES, describe:

10.2 Is there any indication that free product or contaminated ground water may be traveling off-site within the utility corridors? ___YES _x_NO

If YES, utility backfill investigation is required (refer to Fact Sheet 3.19). Discuss the investigation rationale and results.

10.3 Discuss the potential for vapor migration/accumulation near the site. Your discussion should consider: Soil types, product type, presence and distribution of free product or high concentrations of dissolved product. Also, using cross-sections to illustrate the relationship, 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 and sumps.

There is no apparent significant potential for vapor migration/accumulation, because petroleum parameters only were detected near the UST. Also, there apparently are no utilities or basements in contact with the petroleum contaminated soil.

10.4 Conduct a vapor survey if the vapor risk assessment indicated a risk of vapor impacts to buildings or utilities. Ask occupants of nearby buildings if they have smelled petroleum odors. See fact sheet 3.20 Potential Receptor Surveys and Risk Evaluation Procedures at Petroleum Release Sites. Describe and interpret the results of the vapor survey. Identify the vapor monitoring location on an attached site map.

There are no apparent vapor impacts to the site or to adjoining properties at this time.

10.5 Attach Table 15 - Results of Vapor Monitoring.

Section 11: Discussion

11.1 Discuss the risks associated with the remaining soil contamination:

Most of the petroleum impacts appear to be located near the former UST basin. Based on the magnitude and extent of the remaining soil impacts as defined by this study and the UST excavation work, it does not appear that the petroleum impacts have significantly migrated to date. (Note that if future construction activities should happen to encounter these impacts, proper safety, handling and disposal procedures should be followed, and the MPCA should be notified.)

11.2 Discuss the risks associated with the impacted ground water:

Based on the information to date, it appears that the groundwater has not been significantly impacted due to this petroleum release. The slight groundwater impacts have not migrated beyond the former UST excavation toward the likely downgradient direction (east) or toward the on-site well. No VOCs were detected in the samples collected from the on-site well. (Note that if future construction activities should happen to encounter these impacts, proper safety, handling and disposal procedures should be followed and the MPCA should be notified.)

11.3 Discuss other concerns not mentioned above: *None.*

Section 12: Conclusions and Recommendations

12.1 Recommendation for site:

_x_site closure
___additional vapor monitoring
___additional ground water monitoring
___active remediation

12.2 Base the recommendation above on fact sheet #3.1 Leaking Underground Storage Tank Program. Describe below how you applied the policy to support your recommendation. If closure is recommended, please summarize significant site investigative events and describe how site specific risk issues have been adequately addressed or minimized to acceptable low risk levels.

In summary, our limited site investigation has not revealed extensive soil impacts and no petroleum parameter detections above the HRLs were detected in the groundwater samples at this site. It is our opinion that the impacts reported during the gasoline UST removal, and this study likely are limited to a small area near the former UST basin. Therefore, we recommend no further action at this time and recommend leaksite file closure.

12.3 If additional monitoring is recommended, indicate the proposed monitoring schedule and frequency. Conduct quarterly monitoring until the MPCA responds to this report.

12.4 If active remediation is proposed, then recommend a conceptual approach by listing the remedial technologies or combination of technologies that are likely feasible. MPCA staff will review this RI report at a higher than normal priority to determine if active remediation is required. We will respond with either a request for proposal for additional monitoring or a Corrective Action Design report.

Section 13: Figures

Attach the following figures in order of discussion in the text:

Site location map using a U.S. Geological Survey 7.5 minute quadrangle map.

One or more site map showing:
* Structures
* Locations and depths of on-site buried utilities
* 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
* Location of end points for all geologic cross sections.

Distinguish sequential elements of investigations by dates, symbols, etc. in the key.

Ground water gradient contour maps (for sites with monitoring wells) for each gauging event.

Well receptor survey map showing 1/2 mile radius, 500 foot radius, water supply wells, other potential sources of contamination, using a U.S. Geological Survey 7.5 minute quadrangle.

Vapor survey map showing utilities and buildings with basements and monitoring locations (if a survey was required).

Provide at least two (2) geologic cross sections, including utilities.

Section 14: Tables

Table 1
Tank Information

Tank #	UST or AST	Capacity (Gallons)	Contents	Year Installed	Status*	Condition
1	UST	2,000	Unleaded Gasoline	Unknown	Removed 10-29-99	Surficial corrosion and rust
2	UST	10,000	Unleaded Gasoline	Unknown	Removed 10-29-99	Light surficial rust

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

Notes:

Table 2
Results of Soil Headspace Screening

Depth (Ft)	Soil Boring				
	1	2	3	4	5
0 - 1	1.6	0.4	0.3	1.0	1.4
3 - 4	0.4	0.4	0.4	0.6	3.0
7 - 8	2.2	0.4	0.4	1.0	1.0
11 - 12	0.5	0.8	0.6	0.6	1.2
13 - 14					44
14 - 16			0.0	0.8	
15 - 16	0.5	0.6			2.2
18 - 20	0.8	0.0	0.8		0.2
20 - 22				0.2	
25 - 27				0.4	
33 - 35				0.4	

PID measurements in parts per million
HNU Model PI-101 with 10.2 eV lamp used

Table 3
Analytical Results of Soil Samples

Well/Boring, Depth (Ft)	Date Sampled	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Lab Type
P-1 (7-8)	03-29-00	<0.025	<0.025	<0.025	<0.025	<2.9	<3.7	Fixed
P-2 (11-12)	03-29-00	<0.025	<0.025	<0.025	<0.025	<2.9	<3.5	Fixed
P-3 (18-20)	03-29-00	<0.025	<0.025	<0.025	<0.025	<2.9	<3.6	Fixed
P-4 (7-8)	03-29-00	<0.025	<0.025	<0.025	<0.025	<3.0	<4.0	Fixed
P-5 (13-14)	03-29-00	<0.025	<0.025	<0.025	0.12	51	81	Fixed
P-6 (18-20)	03-29-00	<0.025	<0.025	<0.025	<0.025	<2.9	<4.0	Fixed

Note: mg/kg = milligrams per kilogram or parts per million

Table 4 (Not Detected)
Other Contaminants Detected in Soils (Petroleum or Non-petroleum Derived)

Boring # Depth (Ft)	Date Sampled							Lab Type

Report results in mg/kg. Indicate other contaminants (either petroleum or non-petroleum derived) detected in soil collected from borings.

Notes: *Soil sampled for BTEX, GRO and DRO only.*

Table 5
Water Level Measurements and Depths of Water Samples Collected from Borings

	Push Probe #				
	1	2	3	4	5
Static Water Level Depth (Ft)	6	7	4	5	8
Sampled Depth (Ft)	12	16	12	8	10

Describe in Appendix C, the methods and procedures used to measure water levels in borings.

Table 6
Analytical Results of Water Samples Collected From Borings

Push Probe/ Boring #	Date Sampled	Sampled Depth	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	GRO	DRO	Lab Type
P-1	03-29-00	12'	<1.0	<1.0	<1.0	<2.0	<1.0	<50	<100	Fixed
P-2	03-29-00	16'	<1.0	<1.0	<1.0	<2.0	<1.0	<50	<100	Fixed
P-3	03-29-00	12'	<1.0	<1.0	<1.0	<2.0	<1.0	<50	<100	Fixed
P-4	03-29-00	8'	<1.0	<1.0	<1.0	<2.0	<1.0	<50	<100	Fixed
P-5	03-29-00	10'	1.9	1.2	1.9	10.5	<1.0	1500	26000	Fixed
Trip Blank			<1.0	<1.0	<1.0	<2.0	<1.0	<50	<100	Fixed
Field Blank										
Lab Blank										
HRL			10	1000	700	10000				

Notes: Depths in feet. ug/L = parts per billion

Table 7
Other Contaminant Detected in Water Samples Collected From Borings (Petroleum or Non-petroleum Derived)

Parameter Detected	Date Sampled	Push Probe/Boring Number Parts per billion (ppb)	
		P-5	
n-Butylbenzene	03-29-00	17	
s-Butylbenzene	03-29-00	5.0	
1,2,4-Trimethylbenzene	03-29-00	110	
1,3,5-Trimethylbenzene	03-29-00	38	

Notes: ppb = parts per billion

Table 8
Monitoring Well Construction

Well #	Unique Well #	Date Installed	Surface Elevation	Top of Riser Elevation	Bottom of Well Elevation	Screen Interval (Elev.-Elev.)

Table 9
Water Level Measurements in Wells

Well #	Date Sampled	Depth of Water From Top of Riser	Product Thickness	Depth of Water Below Grade	Relative Groundwater Elevation	Water Level Above Screen (Y/N)

Table 10
Analytical Results of Water Samples Collected From Wells

Well #	Date Sampled	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MTBE (ppb)	GRO (ppb)	DRO (ppb)	Lab Type
Trip Blank									
Lab Blank HRL (ug/L)									

Table 11
Other Contaminants Detected in Water Samples Collected From Wells (Petroleum or Non-petroleum Derived)

Well Number	Sample Date						

Results in parts per million (ppm) ND = Not Detected

Table 12
Natural Attenuation Parameters

Monitoring Well	Sample Date	Temp. °C	pH	DO (mg/L)	Nitrate (mg/L)	(Fe II) (mg/L)	(H_2S, HS) (mg/L)

Table 13
Properties Located Within 500 Feet of the Release Source

# (From Map)	Property Address	Water Well (Y or N)	How Determined*	Well Use**	Public Water Supply (Y or N)	Confirmed By City (Y or N)	Basement or Sumps (Y or N)	Possible Petroleum Sources (Y or N)	Comments (including property use)

*E.g., visual observations, personal contact, telephone, returned postcard, assumed (i.e., no postcard returned)
**E.g., domestic, industrial, municipal, livestock, lawn/gardening, irrigation

Table 14
Water Supply Wells Located Within 500 Feet of the Release Source and Municipal or Industrial Wells Within 1/2 Mile

Unique Well #	Ground Elevation	Total Depth (ft)	Base of Casing (ft)	Static Elevation	Aquifer	Use	Owner	Distance & Direction From Source
NA	NA	NA	NA	NA	NA	Domestic	Cash-Logli	60' S.W.

Notes:

Table 15
Results of Vapor Monitoring

Location #	Date	PID Reading (ppm)	Percent of the LEL
1	03-29-00	0.4	-
2	03-29-00	0.2	-
3	03-29-00	0.5	-

Section 15: Appendices

Attach the following appendices.

_x_Appendix A Excavation Report Worksheet for Petroleum Release Sites.

_x_Appendix B Laboratory Analytical Reports for Soil and Ground Water. Include laboratory QA/QC data and laboratory certification number.

_x_Appendix C Methodologies and Procedures, Including Field Screening of Soil, Other Field Analyses, Soil Boring, Soil Sampling, Well Installation, and Water Sampling.

_x_Appendix D Geologic Logs of Soil Borings, Including Construction Diagrams of Temporary and Permanent Wells, and Copies of the Minnesota Department of Health Well Record.

_x_Appendix E Copies of Water Supply Well Logs With Legible Unique Numbers.

___Appendix Grain Size Analysis, Hydraulic Conductivity Measurements, and Other Calculations.

_x_Appendix F GME General Qualifications.

Section 16: Consultant Information

Richard J. Eidem, Environmental Scientist
Preparer Name and Title **Date**

Richard J. Eidem 8/14/01
Preparer Signature

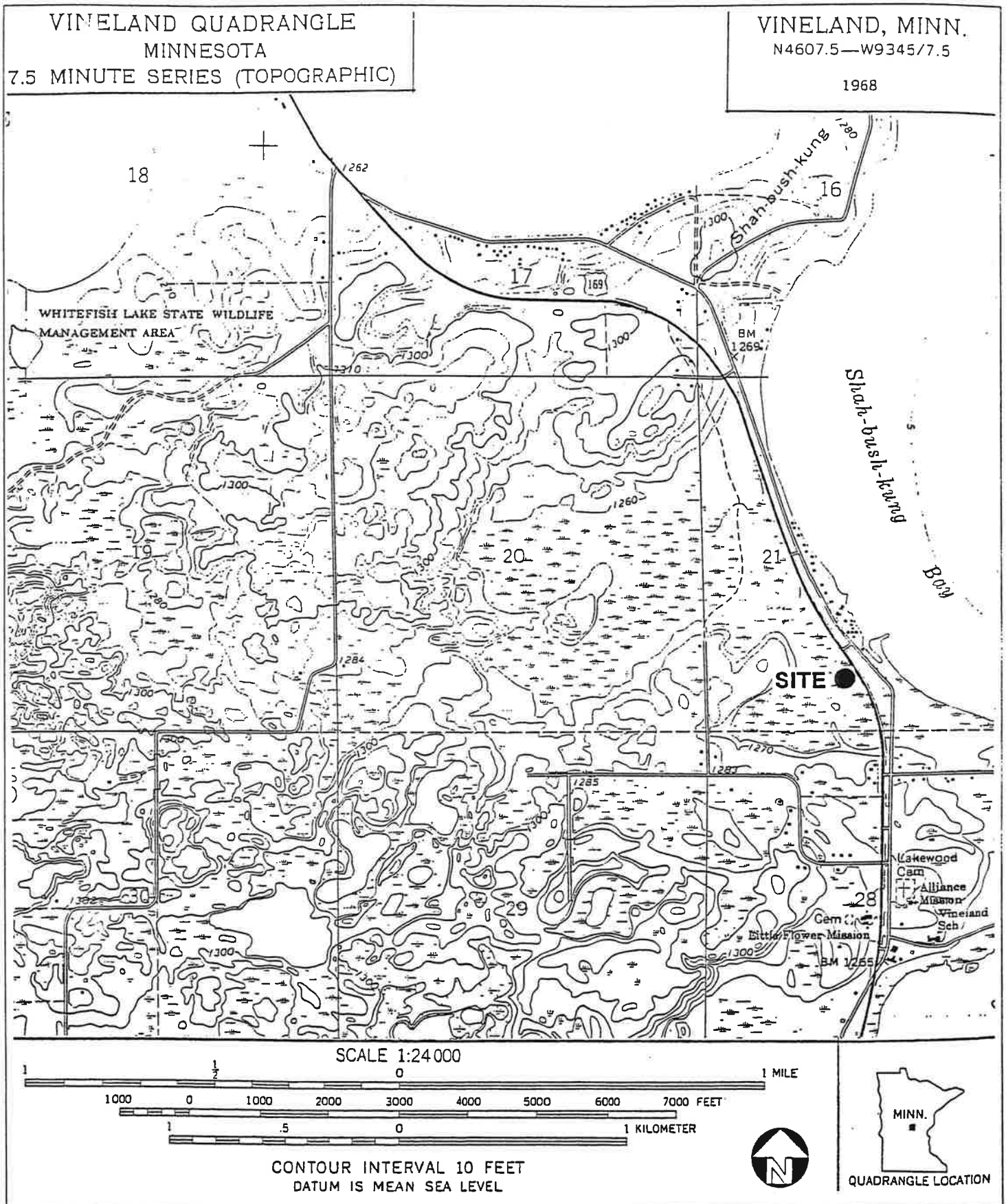
Mark D. Millsop, Principal Hydrogeologist
Reviewer Name and Title **Date**

Mark D. Millsop 8/14/01
Reviewer Signature

Company and mailing address:

GME Consultants, Inc.
P.O. Box 250, Lakeshore Drive
Crosby, Minnesota 56441
218-546-6371
218-546-8196 (Fax)
gmecrosb@emily.net (email)

FIGURES



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Crosby, Minnesota 56441
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FIGURE 1: REGIONAL LOCATION MAP

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A

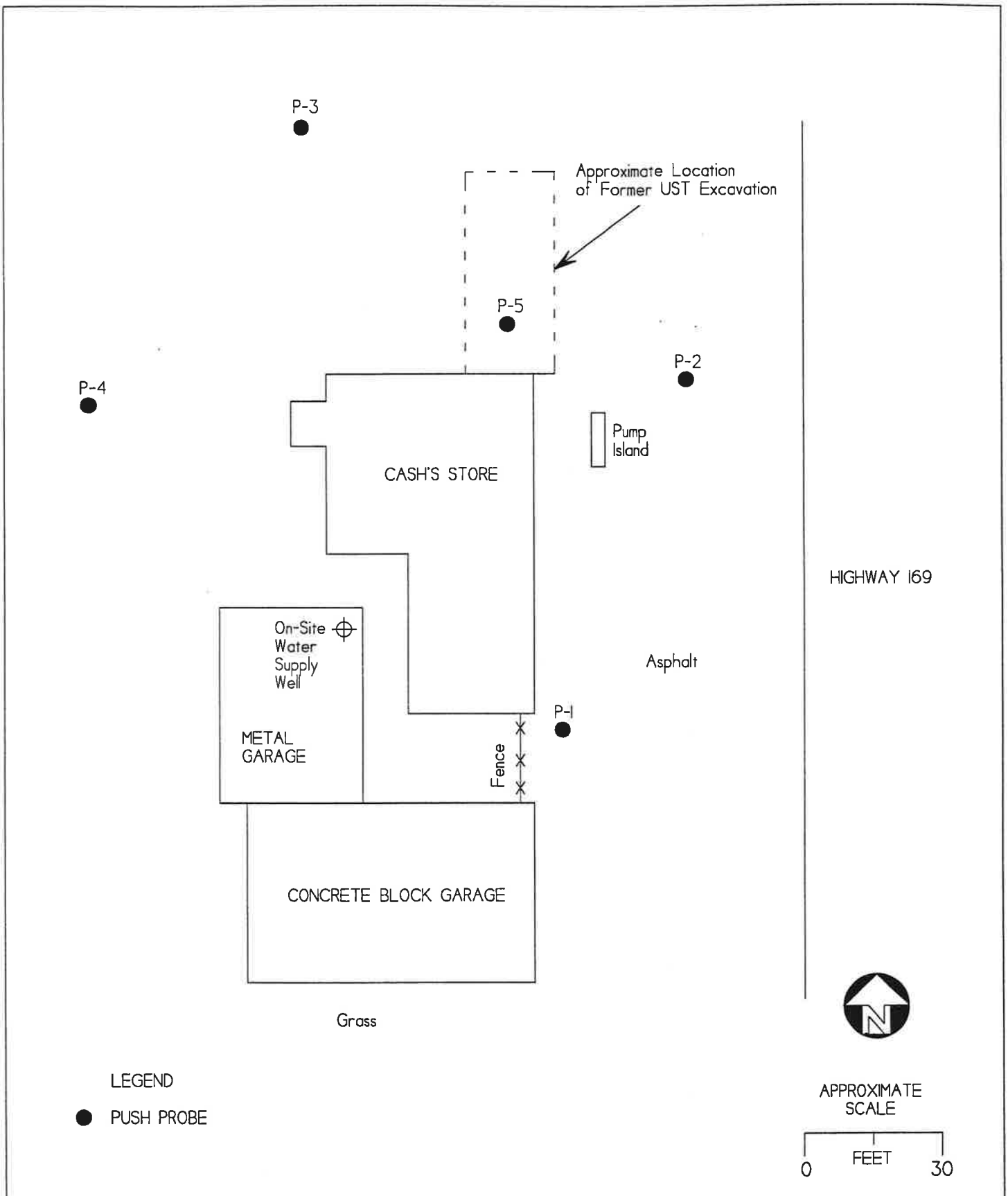

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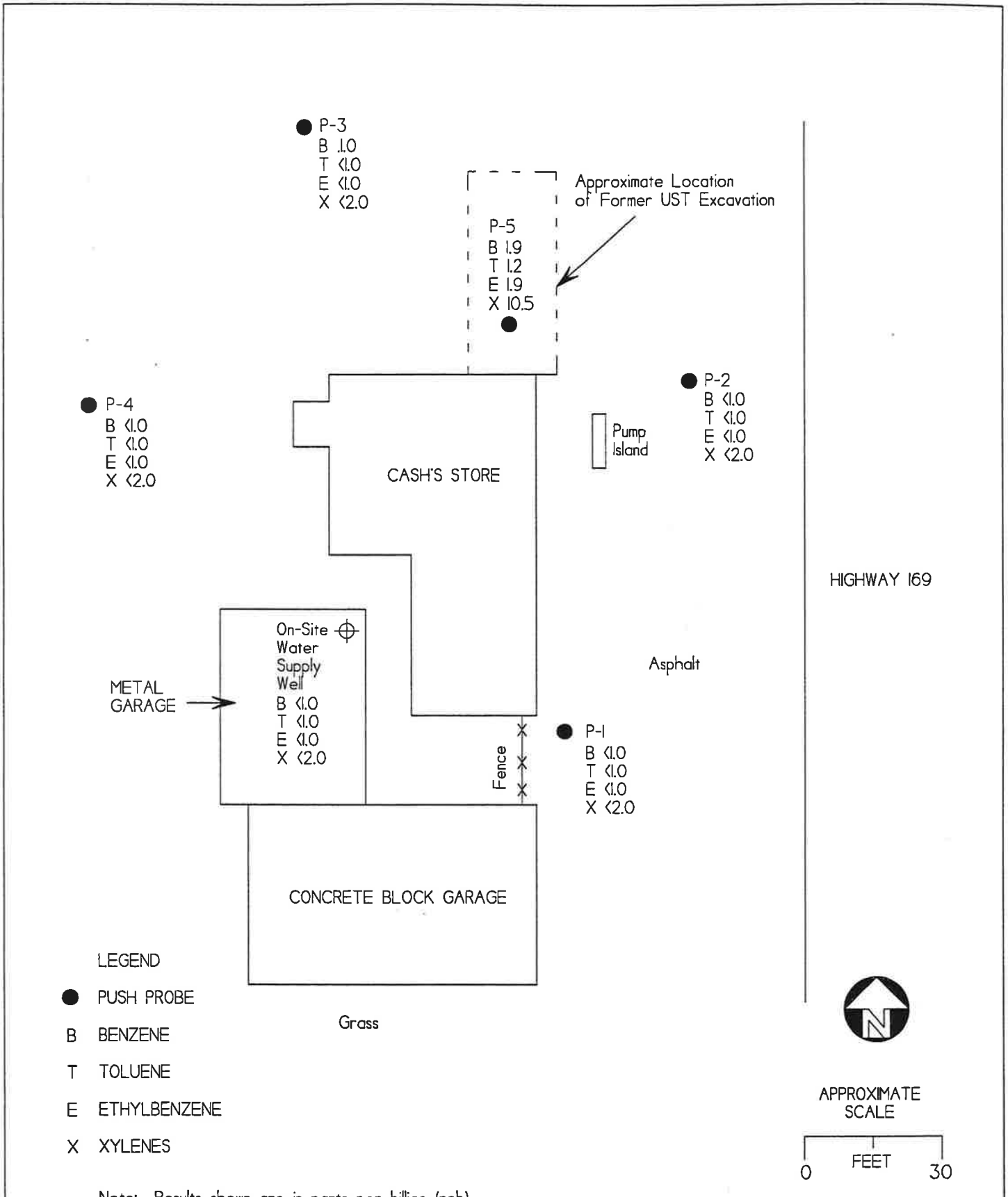
FIGURE 2: APPROXIMATE SITE DIAGRAM

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A



Note: Results shown are in parts per billion (ppb).

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FIGURE 3: GROUNDWATER CHEMISTRY RESULTS

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A

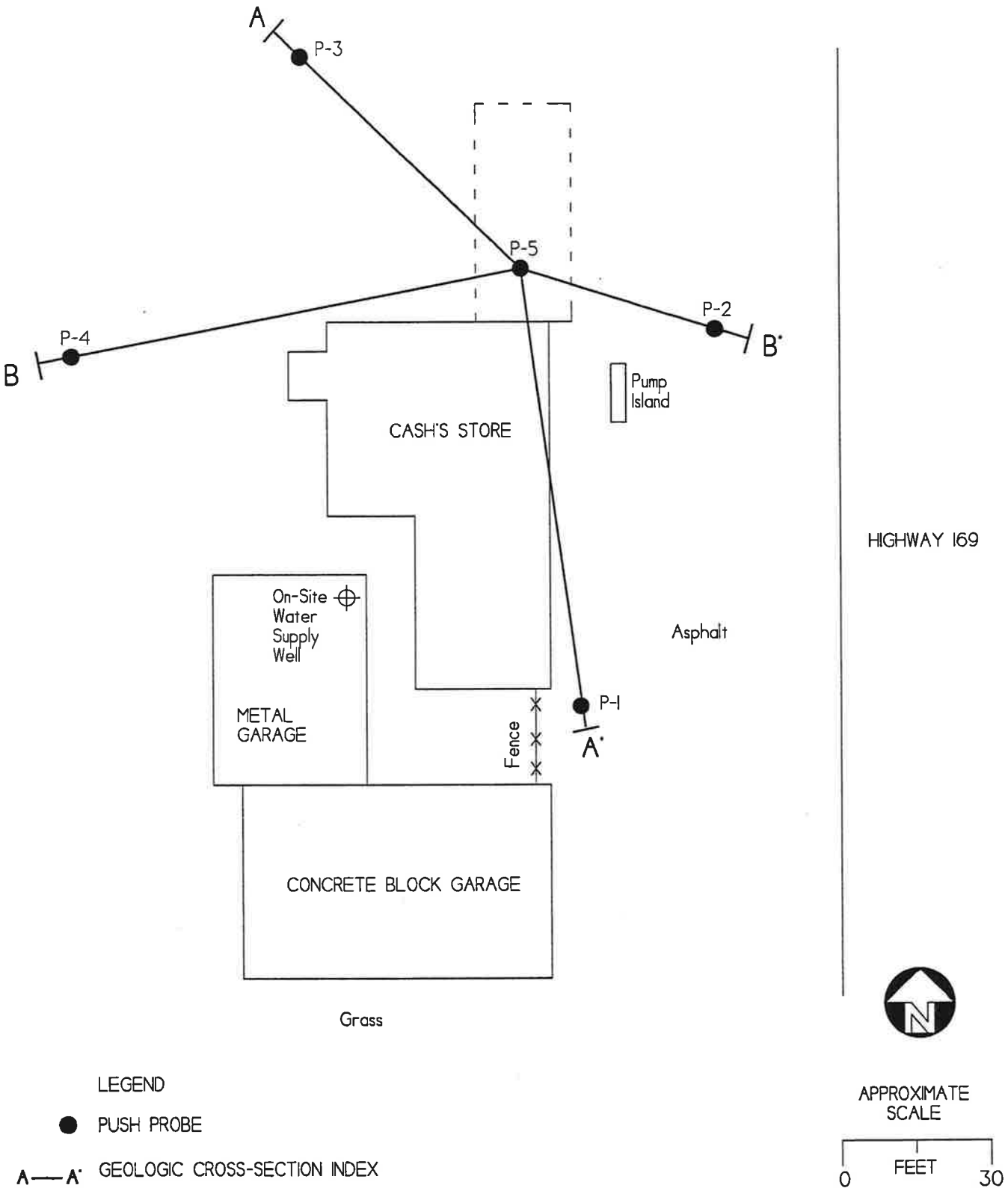

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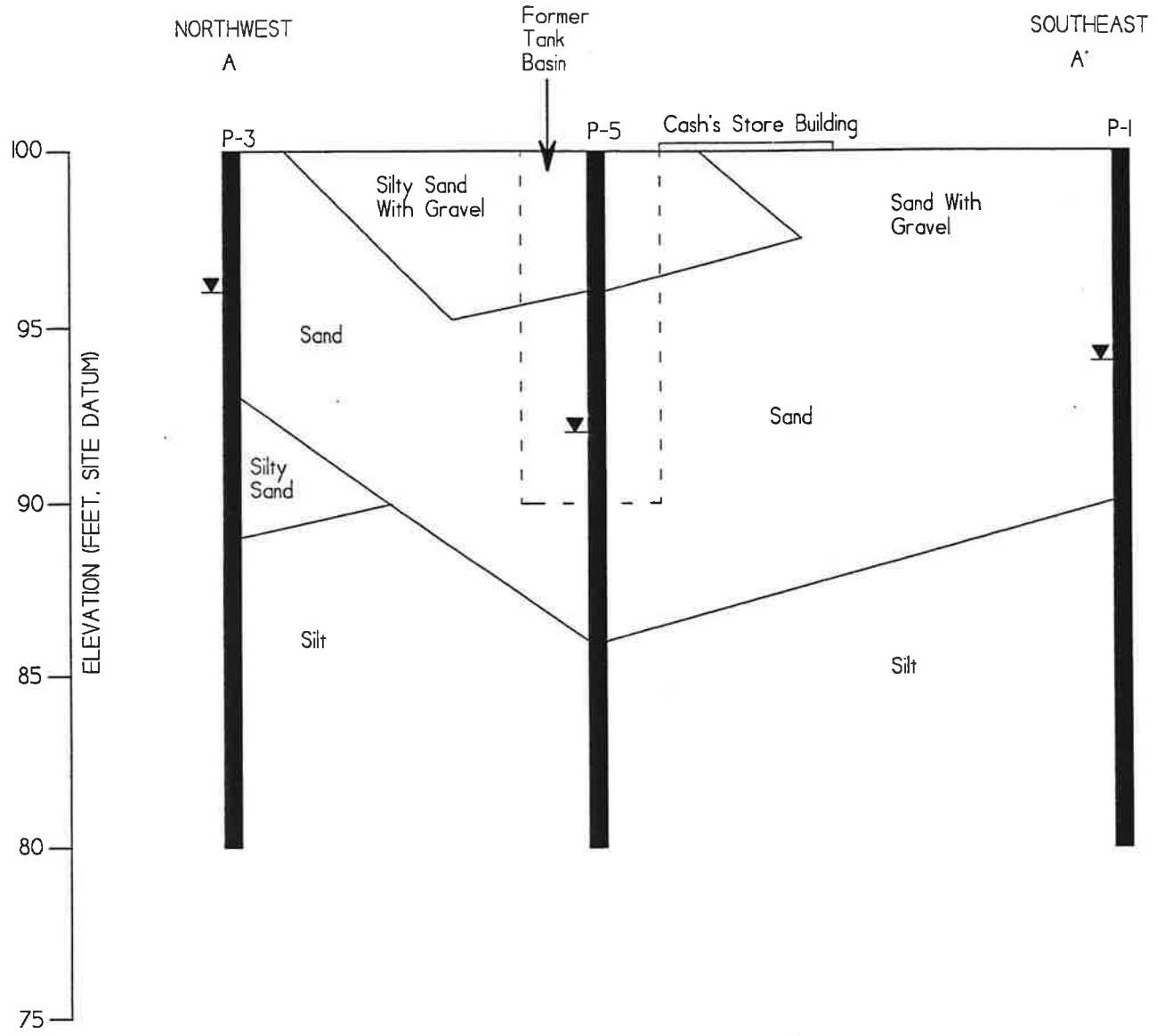
FIGURE 4: GEOLOGIC CROSS-SECTION INDEX

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A



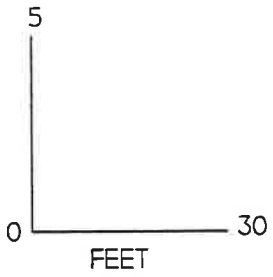
LEGEND

- Approximate Stratigraphic Boundary
- Approximate Groundwater Elevation During Drilling
- Neat Cement Grout

NOTES: 1. Elevations referenced to

2. Stratigraphic boundaries are estimated only: boundaries may differ.

3. Topography is estimated.



VERTICAL EXAGGERATION: 6X

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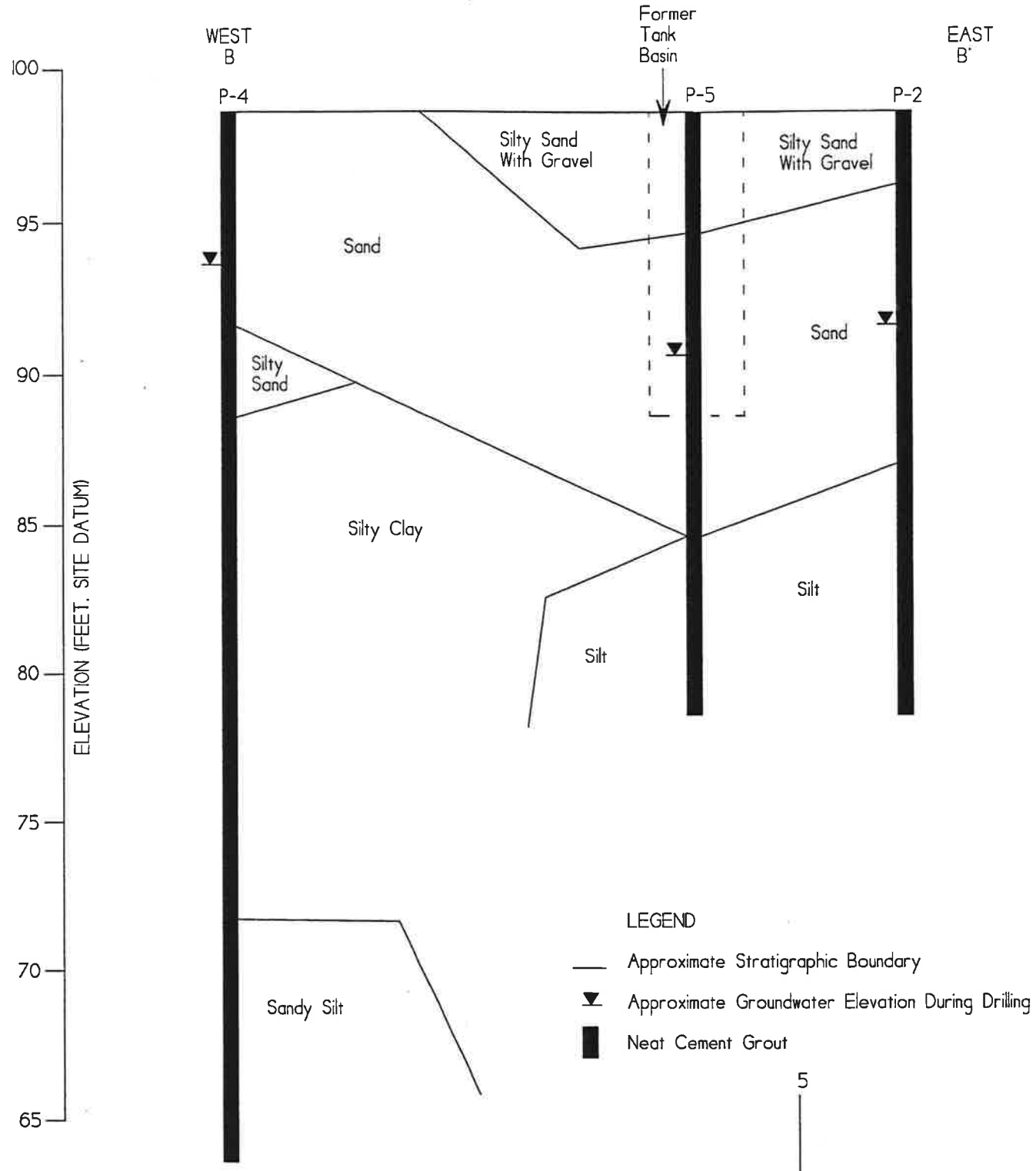
FIGURE 5: GEOLOGIC CROSS-SECTION A-A'

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A



NOTES: 1. Elevations referenced to

2. Stratigraphic boundaries are estimated only: boundaries may differ.

3. Topography is estimated.

VERTICAL EXAGGERATION: 6X

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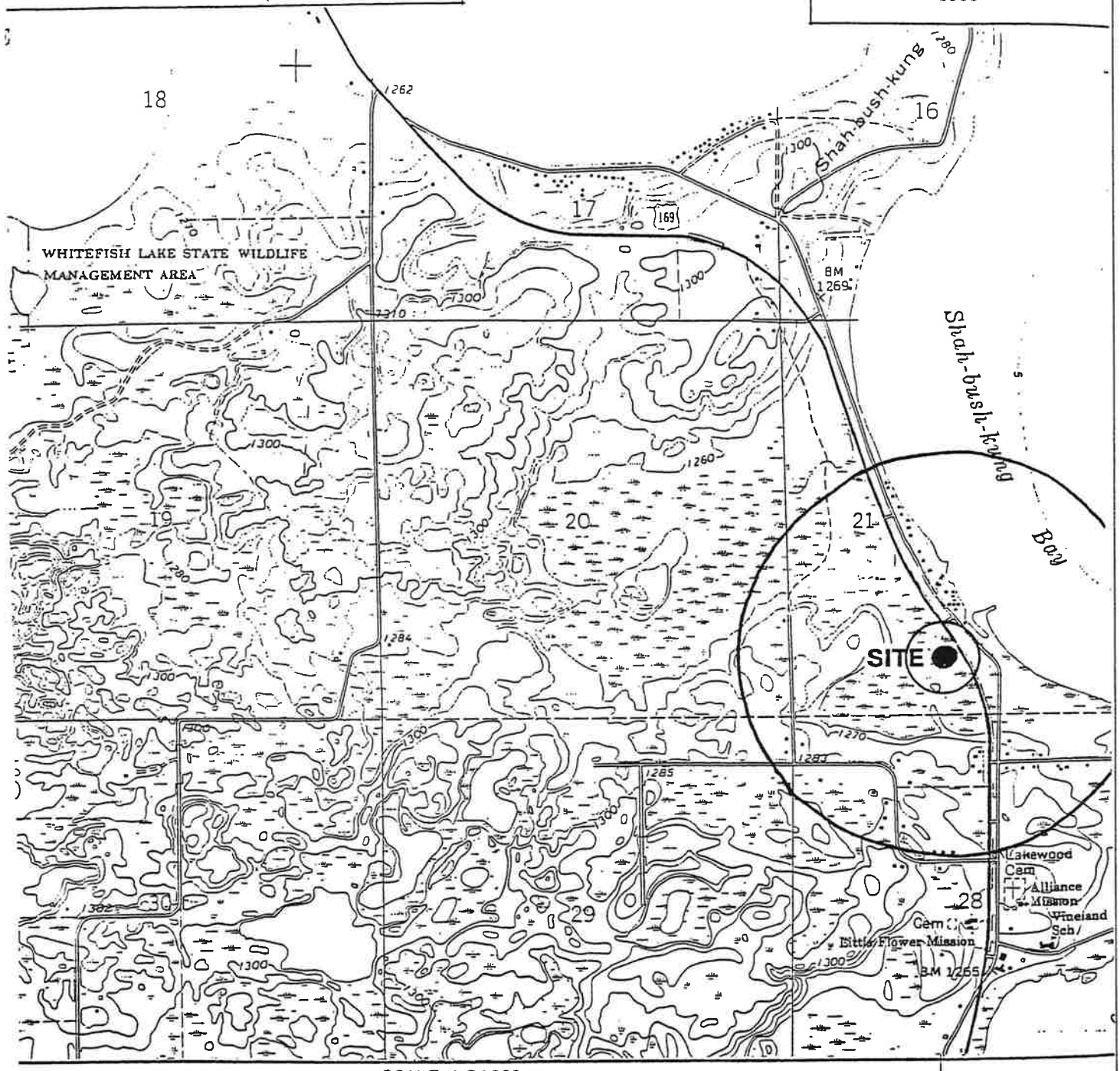
FIGURE 6: GEOLOGIC CROSS-SECTION B-B'

CASH'S STORE
ONAMIA. MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A

VINELAND QUADRANGLE
MINNESOTA
7.5 MINUTE SERIES (TOPOGRAPHIC)

VINELAND, MINN.
N4607.5—W9345/7.5
1968



SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

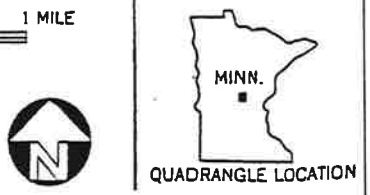


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FIGURE 7: NEARBY WELL LOCATIONS

CASH'S STORE
ONAMIA. MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A

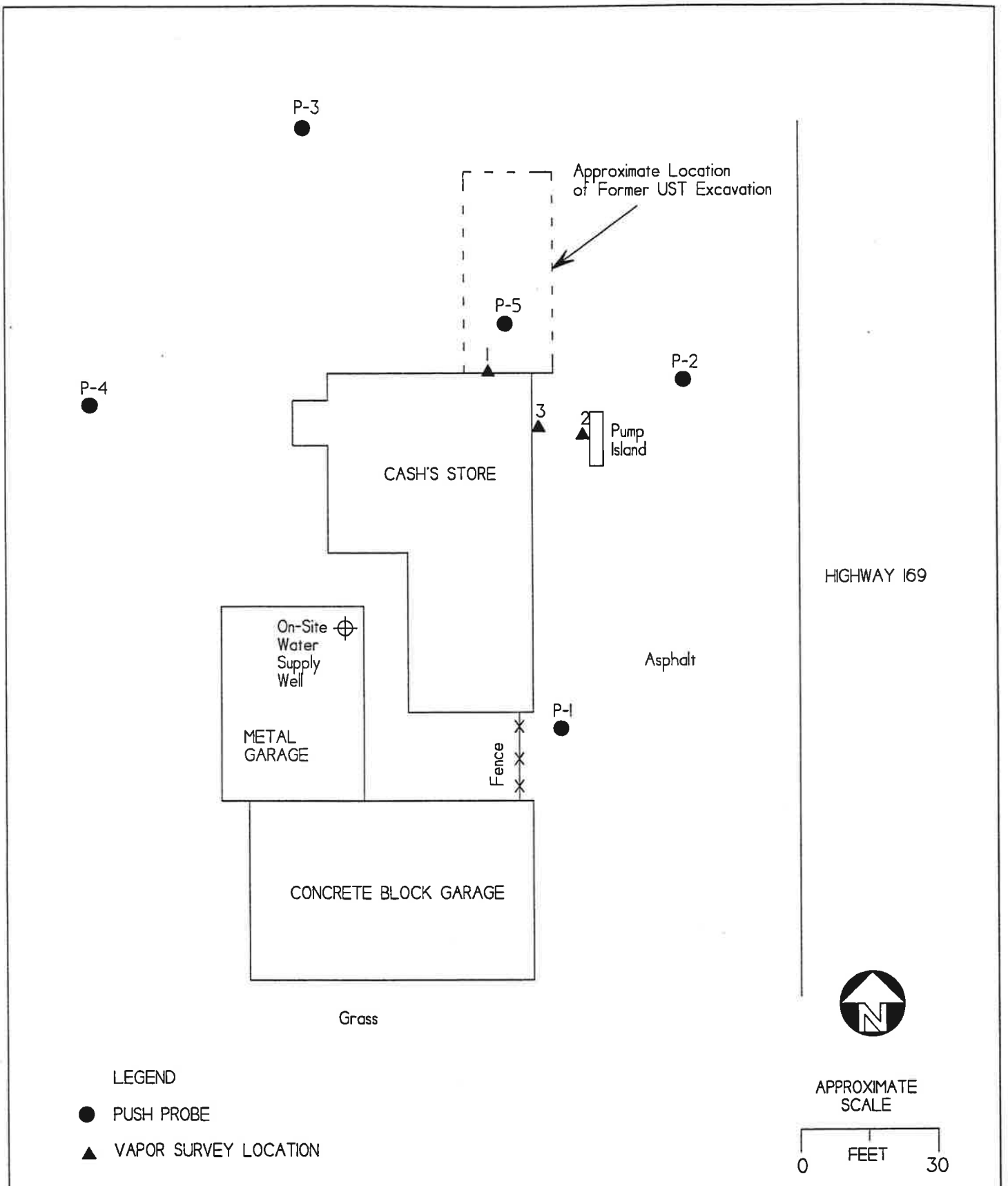

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FIGURE 8: VAPOR SURVEY LOCATION

CASH'S STORE
ONAMIA. MINNESOTA

JLM	RJE	7-01	GME Project No. C-8280-A

APPENDIX A

EXCAVATION REPORT WORKSHEET

UNDERGROUND STORAGE TANK
EXCAVATION REPORT
CASH'S STORE
ONAMIA, MINNESOTA

GME PROJECT NO. C-8280
FEBRUARY 21, 2000

February 21, 2000

Ms. Shelly Cash-Logi
Cash's Store
44465 U.S. Highway 169
Onamia, Minnesota 56359

GME Project No. C-8280

RE: Underground Storage Tank (UST) Excavation Report for the Cash's Store site near Onamia, Minnesota (MPCA Leaksite #13088)

Dear Ms. Cash-Logi:

In accordance with your authorization, we have completed our services for this UST Closure project. The purposes of this report are to evaluate the results of the field and laboratory work, and to recommend subsequent actions.

Based on the field and laboratory results and the MPCA guidance document entitled "Excavation of Petroleum Contaminated Soil", it is our opinion that a Remedial Investigation will be required at the above referenced site.

We appreciate this opportunity to be of service to you. If you have any questions, please contact us.

Sincerely,

GME CONSULTANTS, INC.

Eric J. Wallin
Hydrogeologist
Project Manager

Mark D. Millsop
Principal Hydrogeologist
Environmental Division Manager

EJW:MDM:jlm

EXCAVATION REPORT WORKSHEET
FOR PETROLEUM RELEASE SITES
CASH'S STORE
ONAMIA, MINNESOTA
FEBRUARY 21, 2000
GME PROJECT NO. C-8280

TABLE OF CONTENTS

EXCAVATION REPORT WORKSHEET FOR PETROLEUM RELEASE SITES

Fact Sheet #3.7
GME Project No. C-8280
February 21, 2000

Complete the information below and submit to the Minnesota Pollution Control Agency (MPCA) Tanks and Emergency Response Section to document excavation and treatment of petroleum contaminated soil. Conduct excavations in accordance with "Excavation of Petroleum Contaminated Soil" (fact sheet #3.6). Please attach any available preliminary site investigation reports to this excavation report.

Attach additional pages if necessary. Please type or print clearly.

The excavation reporting deadline is 10 months from the date of receipt of the standard letter. A shorter deadline may be established by MPCA staff for high priority sites.

PART I: BACKGROUND

A. Site: *Cash's Store*

Street: *44465 U.S. Highway 169*
City, Zip: *Onamia, 56359*
County: *Mille Lacs*

MPCA Site ID#: LEAK*13088*

B. Tank Owner/Operator:
Ms. Shelly Cash-Logi

Mailing Address:
Street/Box: *44465 U.S. Hwy. 169*
City, Zip: *Onamia, 56359*
Telephone:

C. Excavating Contractor:
Action Environmental Services

Contact: *Mr. Larry Weber*
Telephone: *651-222-7527*
Tank Contractor Certification Number: *615*

D. Consultant: *GME Consultants, Inc.*

Contact: *Eric J. Wallin*
Street/Box: *P.O. Box 250, Lakeshore Drive*
City, Zip: *Crosby, 56441*
Telephone: *218-546-6371*

E. Others on-site during site work (e.g., fire marshal, local officials, MPCA staff, etc.):

Note: If person other than tank owner and/or operator is conducting the cleanup, provide name, address, and relationship to site on a separate attached sheet.

PART II: DATES

A. Date release reported to MPCA: *October 29, 1999*

B. Dates site work performed (tanks removed, soil excavation, soil borings, etc.):

Work Performed	Date
Monitored the removal of 2 underground storage tanks	*October 29, 1999*

PART III: SITE AND RELEASE INFORMATION

A. Describe the land use and pertinent geographic features within 1000 feet of the site. (i.e. residential property, industrial, wetlands, etc.)

The surrounding land use is primarily wetlands with lake cabins and Mille Lacs Lake to the east (Figure 1).

Table 1.

B. Provide the following information for all tanks at the site at the time of the release:

Tank #	UST or AST	Capacity (Gallons)	Contents (Product Type)	Age	Status*	Condition of Tank
1	*UST*	*2,000*	*Unleaded Gasoline*	*Unknown*	*Removed 10-29-99*	*Surficial corrosion and rust*
2	*UST*	*10,000*	*Unleaded Gasoline*	*Unknown*	*Removed 10-29-99*	*Light surface rust*

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

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

The piping and dispensers were in average condition and not removed at this time.

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

The suspected source of the release appears to be overfills.

E. What was the volume of the release? (if known): *Unknown* gallons

F. When did the release occur? (if known): *Unknown*

G. Describe source of on-site drinking water.

On-site private water supply well to the south of the store.

PART IV: EXCAVATION INFORMATION

A. Dimensions of excavation: *The dimensions of the excavation were approximately 10 to 15 feet in width by 40 feet in length with a maximum depth of approximately 9 feet below grade (Figure 2).*

B. Original tank backfill material (sand, gravel, etc.): *Sand.*

C. Native soil type (clay, sand, etc.): *Sand.*

D. Quantity of contaminated soil removed for treatment (cubic yards): *Not applicable.*

[Note: If more than 150 cubic yards removed, please attach copy of written approval from MPCA.]

E. Were new tanks installed at the site? *NO* If yes, how much soil was excavated to accommodate the installation of the new tanks?

F. Was ground water encountered or was there evidence of a seasonally high ground water table? *YES* At what depth? *At approximately 7 feet.*

G. If ground water was not encountered during the excavation, what is the expected depth of ground water?

H. If a soil boring was required (see fact sheet #3.6 "Excavation of Petroleum Contaminated Soil," Part VI Additional Investigation) describe the soil screening and analytical results. Attach the boring logs and laboratory results to this report. *Soil borings have not been completed by GME.*

I. If no soil boring was required, explain. *It is our opinion that additional investigation will be required to adequately define the vertical and horizontal extents of the petroleum impacts at the site.*

J. If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? *YES* Describe this evidence of contamination, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc.

Yes - analytical results from the water sample indicated benzene at 22 ppb and GRO at 1000 ppb.

[NOTE: If free product was observed, contact MPCA staff immediately as outlined in fact sheet #3.3 "Free Product: Evaluation and Recovery"].

K. Was bedrock encountered in the excavation? *NO* At what depth?

L. Were other unique conditions associated with this site? *NO* If so, explain.

PART V: SAMPLING INFORMATION

A. Briefly describe the field screening methods used to distinguish contaminated from uncontaminated soil: *The soils from and within the excavation were observed for the presence of unusual discolorations and petroleum odors. Headspace analyses of soil samples collected from the base and sidewalls of the excavation were conducted with a HNU Model PI-101 fitted with a 10.2 eV lamp. The HNU is a photoionization detector (PID) that detects certain organic vapors in the parts per million (ppm) range.*

B. List all soil vapor headspace analysis results. Indicate all sampling locations using sample codes (with sampling depths in parentheses), e.g. R-1 (2 feet), R-2 (10 feet), etc. "R" stands for "removed." Samples collected at different depths at the same location should be labeled R-1A (2 feet), R-1B (4 feet), R-1C (6 feet), etc. If the sample was collected from the sidewall or bottom after excavation was complete, label it S-1 (for sidewall) or B-1 (for "bottom"). Be sure the sample codes correspond with the site map required in part VI, below. *(See Figure 3)*

Sample Code (Depth)	Soil Type	Reading (ppm)	Sample Code (Depth)	Soil Type	Reading (ppm)
S-1 (4')	*Sand*	*0.2*	*S-2 (4')*	*Sand*	*1.0*
S-3 (4')	*Sand*	*0.8*	*S-4 (4')*	*Sand*	*1.6*
S-5 (5')	*Sand*	*0.2*	*S-6 (5')*	*Sand*	*0.2*
S-7 (5')	*Sand*	*0.3*	*S-8 (5')*	*Sand*	*0.1*
B-1 (9')	*Sand*	*190*	*B-2 (9')*	*Sand*	*13*
B-3 (9')	*Sand*	*2.0*			

C. Briefly describe the soil analytical sampling and handling procedures used:

One soil sample was collected from under each end of the 10,000 gallon gasoline UST and one soil sample was collected from under the center of the 2,000 gallon gasoline UST. The sample containers were labeled, placed in a cooler with ice, and transported to EnChem, Inc. under established preservation and chain-of-custody procedures. The samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX), and gasoline range organics (GRO). Copies of the laboratory reports and sample chain-of-custody forms are included in the Appendix.

D. List below all soil sample analytical results from bottom and sidewall samples (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), etc. Be sure the sample codes correspond to the site map required in part VI. Do not include analyses from the stockpiled soils. *(See Figure 3)*

Sample Code (Depth)	GRO (ppm)	Benzene (ppm)	Ethyl-benzene (ppm)	Toluene (ppm)	Xylenes (ppm)
B-1 (9')	*510*	*<0.2*	*<0.2*	*<0.2*	*<0.2*
B-2 (9')	*11*	*<0.025*	*0.054*	*0.11*	*0.31*
B-3 (9')	*3.6*	*<0.025*	*<0.025*	*<0.025*	*<0.025*

ppm = parts per million
GRO = gasoline range organics

NOTE: ATTACH COPIES OF LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS.

PART VI: FIGURES

Attach the following figures to this report:

1. Site location map.
2. Site map(s) drawn to scale illustrating the following:

   a. Location (or former location) of all present and former tanks, lines, and dispensers;
   b. Location of other structures (buildings, canopies, etc.);
   c. Adjacent city, township, or county roadways;
   d. Final extent and depth of excavation;
   e. Location of soil screening samples (e.g. R-1), soil analytical samples (e.g., S-1 or B-1), (e.g. SB-1). Also, attach all boring logs.
   f. North arrow, bar scale and map legend.
   g. Provide location of any on-site water wells. If on-site water wells exist please provide well logs and/or construction diagrams.

PART VII: SUMMARY

Briefly summarize evidence indicating whether additional investigation is necessary at the site, as discussed in parts VI and VII of "Excavation of Petroleum Contaminated Soil" (fact sheet #3.6). If no further action is recommended, the MPCA staff will review this report following notification of soil treatment.

On October 29, 1999, we monitored the removal of two gasoline USTs at the Cash's Store site near Onamia, Minnesota, and we notified the MPCA of the petroleum release encountered in the on-site soils. The release source appears to be overfills. Results of soil and groundwater sample analyses indicate that petroleum impacts remain above MPCA action levels as defined on page 7 of the MPCA guidance document entitled "Excavation of Petroleum Contaminated Soil" (see Appendix).

Based on MPCA guidance documents and the results of the excavation monitoring, it is our opinion that a remedial investigation (RI) will be required. We recommend at least the following activities:

1. *A potential receptor survey to determine if any nearby wells, utilities, or structure have been or may be affected; and,*

2. *Five push probes to define the vertical and horizontal extents of the petroleum impacts.*

This report has been completed in general accordance with the MPCA guidance document entitled "Petroleum Tank Release Reports." We recommend that a copy of this report be submitted to the MPCA as part of an RI report.

PART VIII: SOIL TREATMENT INFORMATION

A. Soil treatment method used (thermal, land application, composting, other). If you choose "other" specify treatment method: *Not applicable.*

B. Location of treatment site/facility: *Not applicable.*

C. Date MPCA approved soil treatment (if thermal treatment was used after May 1, 1991, indicate date that the MPCA permitted thermal treatment facility agreed to accept soil): *Not applicable.*

D. Identify the location of stockpiled contaminated soil: *Not applicable.*

PART IX: CONSULTANT PREPARING THIS REPORT

Name and Title: Signature: Date signed:

Eric J. Wallin, Hydrogeologist

Mark D. Millsop, Principal Hydrogeologist

Company and mailing address: *GME Consultants, Inc.*
P.O. Box 250, Lakeshore Drive
Crosby, Minnesota 56441

Phone: *218-546-6371*

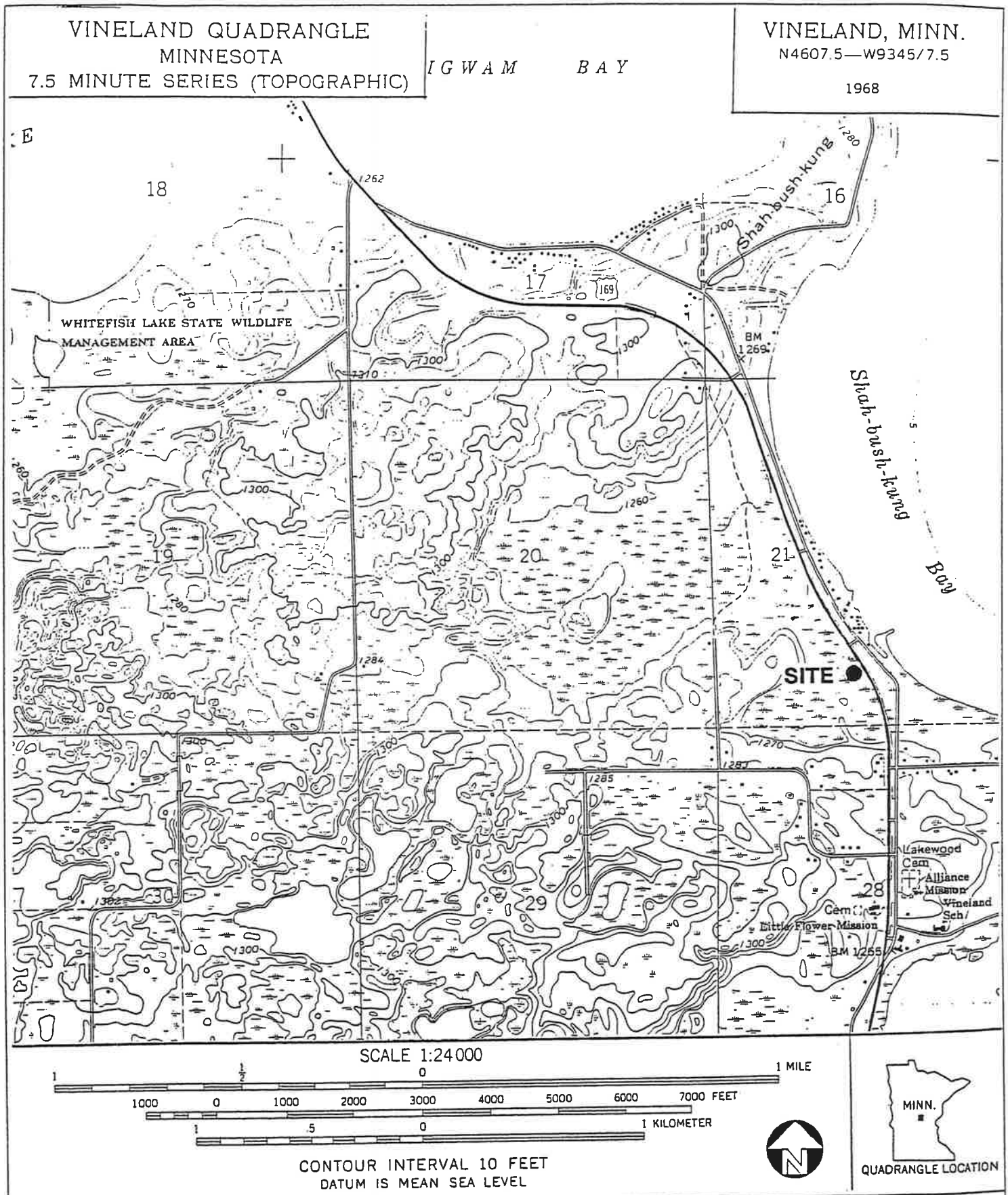
Fax: *218-546-8196*

If additional investigation is not required at the site, please mail this form and all necessary attachments to:

(Project Manager)
Minnesota Pollution Control Agency
Hazardous Waste Division
Tanks and Emergency Response Section
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

If additional investigation is required at the site, include this form as an appendix to the "Remedial Investigation Report Form." **Excavation reports indicating a limited site investigation (LSI) is necessary will not be reviewed by MPCA staff until the LSI has been completed.**

FIGURES



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Crosby, Minnesota 56441
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FIGURE 1: REGIONAL LOCATION MAP

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	11-99	GME Project No. C-8280

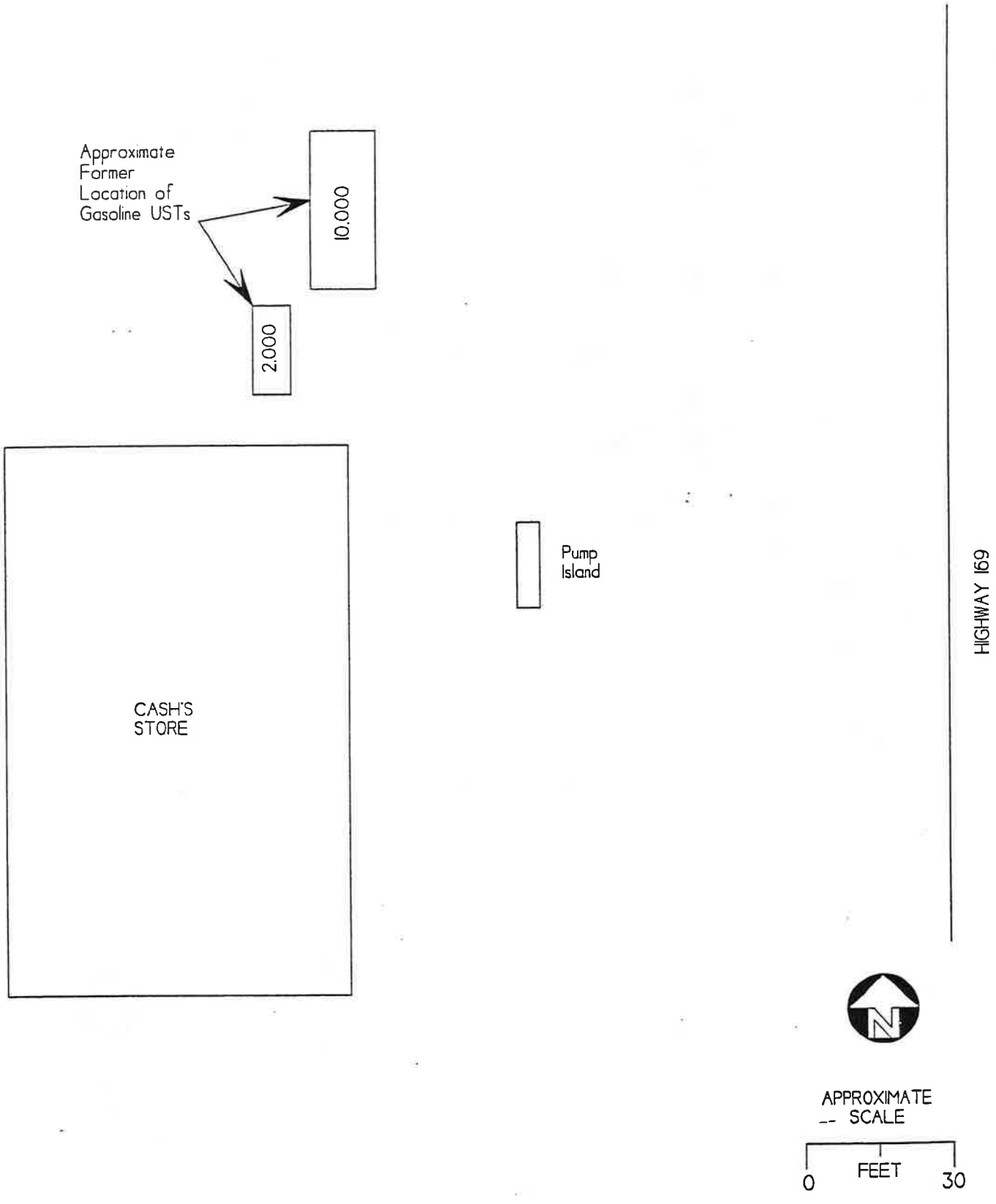

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FIGURE 2: APPROXIMATE SITE DIAGRAM

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	11-99	GME Project No. C-8280

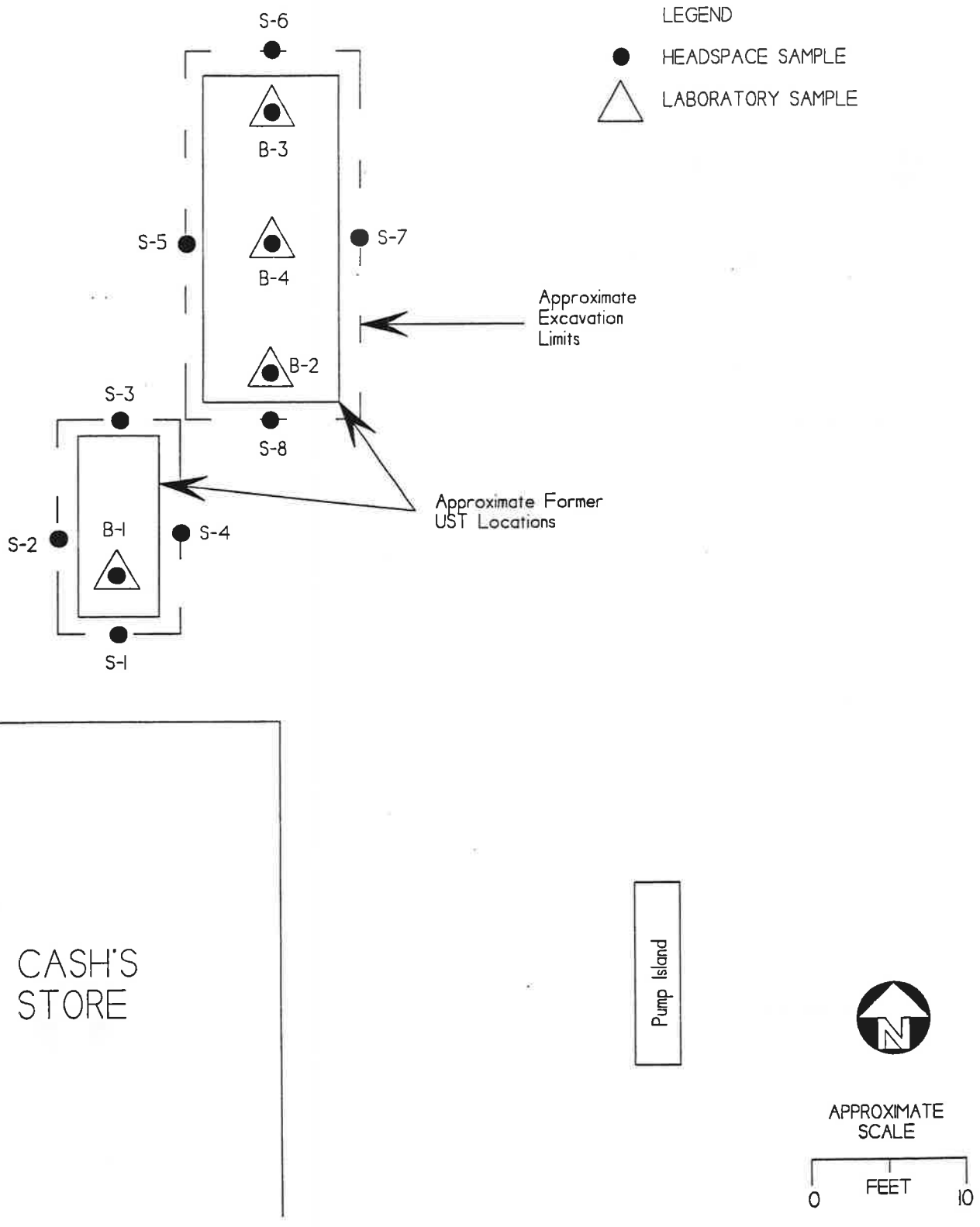

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FIGURE 3: SAMPLE LOCATION DIAGRAM

CASH'S STORE
ONAMIA, MINNESOTA

JLM	RJE	11-99	GME Project No. C-8280

ENCHEM LABORATORY RESULTS

EN CHEM INC.
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE

Project Number : C-8280

Client: GME CONSULTANTS

MDH LAB ID : 055-999-334

Sample No.	Field ID	Collection Date	Sample No.	Field ID	Collection Date
896710-001	B-1	10/29/99			
896710-002	B-2	10/29/99			
896710-003	B-3	10/29/99			
896710-004	B-4	10/29/99			
896710-005	FIELD BLANK	10/29/99			

Please visit our Internet homepage at: www.encheminc.com

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

J. Duracean
Approval Signature

11/10/99
Date

En Chem Inc.

Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Lab#:	TestGroupID:	Comment:
896710-001 B-1	BTEX-S-ME	The PVOC surrogate recovery was above limits due to co-elution with non-target compounds.
	BTEX-S-ME	Elevated detection limit due to late eluting hydrocarbons.
896710-004 B-4	GRO-W	Early and late peaks were present outside of window.

En Chem Inc.

920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE

Project Number : C-8280

Field ID : B-1

Lab Sample Number : 896710-001

MDH LAB ID : 055-999-334

Client : GME CONSULTANTS

Report Date : 11/9/99

Collection Date : 10/29/99

Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	82.4		%		11/4/99	SM2540G	SM2540G

Organic Results

BTEX - METHANOL PRESERVED SOIL Prep Method: 5030B/5035 Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	173	---	%Recov		11/6/99	MOD 8021B
Benzene	< 200	200	ug/kg		11/6/99	MOD 8021B
Ethylbenzene	< 200	200	ug/kg		11/6/99	MOD 8021B
Toluene	< 200	200	ug/kg		11/6/99	MOD 8021B
Xylenes, -m, -p	< 200	200	ug/kg		11/6/99	MOD 8021B
Xylene, -o	< 200	200	ug/kg		11/6/99	MOD 8021B

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: Wi MOD GRO Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	510	24	mg/kg		11/6/99	Wi MOD GRO
Blank Spike	96	---	%Recov		11/6/99	Wi MOD GRO
Blank Spike Duplicate	99	---	%Recov		11/6/99	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg		11/6/99	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280
Field ID : B-2
Lab Sample Number : 896710-002
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS
Report Date : 11/10/99
Collection Date : 10/29/99
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	78.2		%		11/4/99	SM2540G	SM2540G

Organic Results

BTEX - METHANOL PRESERVED SOIL Prep Method: 5030B/5035 Prep Date: 11/4/99 Analyst: MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	106	---	%Recov		11/8/99	MOD 8021B
Benzene	< 25	25	ug/kg		11/8/99	MOD 8021B
Ethylbenzene	54	32	ug/kg		11/8/99	MOD 8021B
Toluene	110	32	ug/kg		11/8/99	MOD 8021B
Xylenes, -m, -p	190	32	ug/kg		11/8/99	MOD 8021B
Xylene, -o	120	32	ug/kg		11/8/99	MOD 8021B

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: Wi MOD GRO Prep Date: 11/4/99 Analyst: MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	11	3.2	mg/kg		11/8/99	Wi MOD GRO
Blank Spike	96	---	%Recov		11/8/99	Wi MOD GRO
Blank Spike Duplicate	99	---	%Recov		11/8/99	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg		11/8/99	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280
Field ID : B-3
Lab Sample Number : 896710-003
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS
Report Date : 11/9/99
Collection Date : 10/29/99
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	76.9		%		11/4/99	SM2540G	SM2540G

Organic Results

BTEX - METHANOL PRESERVED SOIL Prep Method: 5030B/5035 Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	103	---	%Recov		11/6/99	MOD 8021B
Benzene	< 25	25	ug/kg		11/6/99	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		11/6/99	MOD 8021B
Toluene	< 25	25	ug/kg		11/6/99	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/kg		11/6/99	MOD 8021B
Xylene, -o	< 25	25	ug/kg		11/6/99	MOD 8021B

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: Wi MOD GRO Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	3.6	3.3	mg/kg		11/6/99	Wi MOD GRO
Blank Spike	96	---	%Recov		11/6/99	Wi MOD GRO
Blank Spike Duplicate	99	---	%Recov		11/6/99	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg		11/6/99	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280
Field ID : B-4
Lab Sample Number : 896710-004
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS
Report Date : 11/8/99
Collection Date : 10/29/99
Matrix Type : WATER

Organic Results

BTEX - WATER Prep Method: SW846 5030B Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	112	—	%Recov		11/4/99	MOD 8021B
Benzene	22	1.0	ug/l		11/4/99	MOD 8021B
Ethylbenzene	21	1.0	ug/l		11/4/99	MOD 8021B
Toluene	84	1.0	ug/l		11/4/99	MOD 8021B
Xylenes, -m, -p	130	2.0	ug/l		11/4/99	MOD 8021B
Xylene, -o	100	1.0	ug/l		11/4/99	MOD 8021B

Organic Results

GASOLINE RANGE ORGANICS - WATER Prep Method: Wi MOD GRO Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	1000	50	ug/l		11/4/99	Wi MOD GRO
Blank Spike	97	—	%Recov		11/4/99	Wi MOD GRO
Blank Spike Duplicate	92	—	%Recov		11/4/99	Wi MOD GRO
Blank	< 50	50	ug/l		11/4/99	Wi MOD GRO

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Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280
Field ID : FIELD BLANK
Lab Sample Number : 896710-005
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS
Report Date : 11/9/99
Collection Date : 10/29/99
Matrix Type : METHANOL

Organic Results

BTEX - METHANOL Prep Method: SW846 5030B Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	103	---	%Recov		11/6/99	MOD 8021B
Benzene	< 25	25	ug/l		11/6/99	MOD 8021B
Ethylbenzene	< 25	25	ug/l		11/6/99	MOD 8021B
Toluene	< 25	25	ug/l		11/6/99	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/l		11/6/99	MOD 8021B
Xylene, -o	< 25	25	ug/l		11/6/99	MOD 8021B

Organic Results

GASOLINE RANGE ORGANICS - METHANOL Prep Method: Wi MOD GRO Prep Date: 11/4/99 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2500	2500	ug/L		11/6/99	Wi MOD GRO
Blank Spike	96	---	%Recov		11/6/99	Wi MOD GRO
Blank Spike Duplicate	99	---	%Recov		11/6/99	Wi MOD GRO
Blank	< 50	50	ug/L		11/6/99	Wi MOD GRO

EN CHEM INC.
1241 St., Green Bay, WI 54302
920-469-2436 • 1-800-736-2436
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608-232-3300 • 1-888-536-2436
FAX: 608-233-0502
1423 Street, Superior, WI 54880
715-392-5844 • 1-800-837-8238
FAX 715-392-5843

CHAIN OF CUSTODY

44052

Page 1 of 1

Company: [illegible]

Branch or Location: Crosby

Project Contact: Eric Wallin

Telephone: 218-546-6371

Project Number: C-8280

Project Name: Cashs Store

Project State: MN

Sampled By (Print): Rick Eidem

Regulatory Program *(circle)*: UST RCRA CLP SDWA NPDES/WPDES CAA NR____ Other ____

P.O. # ____ Quote # ____

Mail Report To: Eric Wallin

Company: LaPE Consulting

Address: P.O. Box 25
Crosby MN 56441

Invoice To: ____

Company: Same

Address: ____

Mail Invoice To: ____

FIELD ID	SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	FILTERED? (YES/NO)	FILTERED? (YES/NO)								FIELD SCREEN	MATRIX	SHADED AREA FOR LABORATORY USE ONLY: GOOD COND.	TOTAL BOTTLES	COMMENTS	LABORATORY NUMBER
				PRESERVATION (CODE)*	PRESERVATION (CODE)*													
				ANALYSES REQUESTED	ANALYSES REQUESTED													
	B-1	11/01/99	3:30	✓	✓								190	Soil	✓	1		001
	B-2	11/01/99	3:30	✓	✓								—	Soil	✓	1		002
	B-3	11/01/99	3:45	✓	✓								—	Soil	✓	1		003
	B-4	11/01/99	4:00	✓									—	H2O	✓	3	VOA	004
	Field Blank	11/01/99		✓									—	H2O	✓	1		005

*Preservation Code
A=None B=HCL C=H2SO4
D=HN03 E=EnCore F=Methanol**
G=NaOH O=Other (Indicate)

**If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	11/01/99	UPS	
UPS	11/2/99 1015	[signature]	11/2/99 1015
[signature]	11/3/99		
Relinquished By:	Date/Time:	Received By:	Date/Time:
		[signature]	1530

En Chem Project No.: 89610

Sample Receipt Temp.: ROI 4°C

Sample Receipt pH (Wet/Metals): N/A

Custody Seal: N

MPCA GUIDANCE DOCUMENT

GME GENERAL QUALIFICATIONS

GME GENERAL QUALIFICATIONS

The environmental assessment and recommendations submitted in this report are based on data that we obtained during this study. The scope of this report is limited to the specific project and location described herein. We cannot account for any environmental variations that may occur on portions of the site that were not observed or explored. Conclusions concerning off-site characteristics or future degradation of soil, groundwater or surface water are estimated.

Samples were collected and analyzed under the conditions stated in this report. Analytical data have been reviewed and an interpretation made in the text of this report. We assume that all subcontract laboratory work has been completed correctly. Also, it must be noted that seasonal and annual fluctuations in hydrogeologic characteristics likely will occur.

Our description of this project represents our understanding of significant aspects relative to soil and groundwater conditions. Conclusions in this report represent our engineering judgment. This report has been prepared in accordance with the local standard of practice for our profession, using the normally available sources of information. No warranty, express or implied, is presented in this report with respect to the environmental conditions at this site.

APPENDIX B

LABORATORY REPORTS

EN CHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
FAX: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE

Project Number : C-8280-A

Client: GME CONSULTANTS INC

MDH LAB ID : 055-999-334

Sample No.	Field ID	Collection Date	Sample No.	Field ID	Collection Date
801374-001	P-1 @ 7'-8'	3/29/00			
801374-002	P-2 @ 11'-12'	3/29/00			
801374-003	P-3 @ 18'-20'	3/29/00			
801374-004	P-4 @ 7'-8'	3/29/00			
801374-005	P-5 @ 13'-14'	3/29/00			
801374-006	P-5 @ 18'-20'	3/29/00			
801374-007	P-1 @ 12'	3/29/00			
801374-008	P-2 @ 16'	3/29/00			
801374-009	P-3 @ 12'	3/29/00			
801374-010	P-4 @ 8'	3/29/00			
801374-011	P-5 @ 10'	3/29/00			
801374-012	ON-SITE WELL	3/29/00			
801374-013	METHANOL BLANK	3/29/00			
801374-014	TRIP BLANK	3/29/00			

Please visit our Internet homepage at: www.encheminc.com

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

Date

En Chem Inc.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Lab#:	TestGroupID:	Comment:
801374-005 P-5 @ 13'-14'	BT&MT-S-ME	The BT&MT surrogate recovery was above limits due to co-elution with non-target compounds.
	GRO-S-ME	Late peaks were present outside of window.
	DRO-S	Front peaks present along with mainly diesel peaks.
801374-009 P-3 @ 12'	DRO-W	Hump was present late in chromatogram.
801374-011 P-5 @ 10'	GRO-W	Late peaks were present outside of window.

En Chem Inc.

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Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-1 @ 7'-8'
Lab Sample Number : 801374-001
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	86.1		%		4/4/00	SM2540G	SM2540G

Organic Results

BTEX + MTBE - SOIL/METHANOL **Prep Method:** 5030B/5035 **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	110	—	%Recov		4/8/00	MOD 8021B
Benzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/kg		4/8/00	MOD 8021B
Toluene	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylene, -o	< 25	25	ug/kg		4/8/00	MOD 8021B

Organic Results

Preservation Date: 3/31/00

DIESEL RANGE ORGANICS - SOIL **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 3.7	3.7	mg/kg		4/3/00	Wi MOD DRO
Blank spike	87	—	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	83	—	%Recov		4/3/00	Wi MOD DRO
Blank	< 5.0	5.0	mg/kg		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9	2.9	mg/kg		4/8/00	Wi MOD GRO
Blank Spike	103	—	%Recov		4/8/00	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-1 @ 7'-8'
Lab Sample Number : 801374-001
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Blank Spike Duplicate	103	---	%Recov	4/8/00	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg	4/8/00	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-2 @ 11'-12'
Lab Sample Number : 801374-002
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	87.2		%		4/4/00	SM2540G	SM2540G

Organic Results

BTEX + MTBE - SOIL/METHANOL **Prep Method:** 5030B/5035 **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	108	---	%Recov		4/8/00	MOD 8021B
Benzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/kg		4/8/00	MOD 8021B
Toluene	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylene, -o	< 25	25	ug/kg		4/8/00	MOD 8021B

Organic Results

Preservation Date: 3/31/00

DIESEL RANGE ORGANICS - SOIL **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 3.5	3.5	mg/kg		4/3/00	Wi MOD DRO
Blank spike	87	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	83	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 5.0	5.0	mg/kg		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9	2.9	mg/kg		4/8/00	Wi MOD GRO
Blank Spike	103	---	%Recov		4/8/00	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.

1795 Industrial Drive
Green Bay, WI 54302
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800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-2 @ 11'-12'
Lab Sample Number : 801374-002
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Blank Spike Duplicate	103	---	%Recov	4/8/00	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg	4/8/00	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.

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Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-3 @ 18'-20'
Lab Sample Number : 801374-003
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	86.0		%		4/4/00	SM2540G	SM2540G

Organic Results

BTEX + MTBE - SOIL/METHANOL **Prep Method:** 5030B/5035 **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	107	---	%Recov		4/8/00	MOD 8021B
Benzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/kg		4/8/00	MOD 8021B
Toluene	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylene, -o	< 25	25	ug/kg		4/8/00	MOD 8021B

Organic Results

Preservation Date: 3/31/00

DIESEL RANGE ORGANICS - SOIL **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 3.6	3.6	mg/kg		4/3/00	Wi MOD DRO
Blank spike	87	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	83	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 5.0	5.0	mg/kg		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9	2.9	mg/kg		4/8/00	Wi MOD GRO
Blank Spike	103	---	%Recov		4/8/00	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

En Chem Inc.

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800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-3 @ 18'-20'
Lab Sample Number : 801374-003
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Blank Spike Duplicate	103	---	%Recov	4/8/00	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg	4/8/00	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-4 @ 7'-8'
Lab Sample Number : 801374-004
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	84.4		%		4/4/00	SM2540G	SM2540G

Organic Results

BTEX + MTBE - SOIL/METHANOL **Prep Method:** 5030B/5035 **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	107	---	%Recov		4/8/00	MOD 8021B
Benzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/kg		4/8/00	MOD 8021B
Toluene	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylene, -o	< 25	25	ug/kg		4/8/00	MOD 8021B

Organic Results

Preservation Date: 3/31/00

DIESEL RANGE ORGANICS - SOIL **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.0	4.0	mg/kg		4/3/00	Wi MOD DRO
Blank spike	87	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	83	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 5.0	5.0	mg/kg		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 3.0	3.0	mg/kg		4/8/00	Wi MOD GRO
Blank Spike	103	---	%Recov		4/8/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-4 @ 7'-8'
Lab Sample Number : 801374-004
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Blank Spike Duplicate	103	---	%Recov	4/8/00	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg	4/8/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 13'-14'
Lab Sample Number : 801374-005
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	85.6		%		4/4/00	SM2540G	SM2540G

Organic Results

BTEX + MTBE - SOIL/METHANOL Prep Method: 5030B/5035 Prep Date: 4/3/00 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	133	---	%Recov		4/10/00	MOD 8021B
Benzene	< 25	25	ug/kg		4/10/00	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		4/10/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/kg		4/10/00	MOD 8021B
Toluene	< 25	25	ug/kg		4/10/00	MOD 8021B
Xylenes, -m, -p	120	29	ug/kg		4/10/00	MOD 8021B
Xylene, -o	< 25	25	ug/kg		4/10/00	MOD 8021B

Organic Results

Preservation Date: 3/31/00

DIESEL RANGE ORGANICS - SOIL Prep Method: Wi MOD DRO Prep Date: 4/3/00 Analyst: DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	81	3.6	mg/kg		4/3/00	Wi MOD DRO
Blank spike	87	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	83	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 5.0	5.0	mg/kg		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: Wi MOD GRO Prep Date: 4/3/00 Analyst: PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	51	2.9	mg/kg		4/10/00	Wi MOD GRO
Blank Spike	103	---	%Recov		4/10/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 13'-14'
Lab Sample Number : 801374-005
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Blank Spike Duplicate	103	---	%Recov	4/10/00	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg	4/10/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 18'-20'
Lab Sample Number : 801374-006
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Inorganic Results

Test	Result	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Solids, percent	87.5		%		4/4/00	SM2540G	SM2540G

Organic Results

BTEX + MTBE - SOIL/METHANOL **Prep Method:** 5030B/5035 **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	108	---	%Recov		4/8/00	MOD 8021B
Benzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Ethylbenzene	< 25	25	ug/kg		4/8/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/kg		4/8/00	MOD 8021B
Toluene	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/kg		4/8/00	MOD 8021B
Xylene, -o	< 25	25	ug/kg		4/8/00	MOD 8021B

Organic Results

Preservation Date: 3/31/00

DIESEL RANGE ORGANICS - SOIL **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.0	4.0	mg/kg		4/3/00	Wi MOD DRO
Blank spike	87	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	83	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 5.0	5.0	mg/kg		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9	2.9	mg/kg		4/8/00	Wi MOD GRO
Blank Spike	103	---	%Recov		4/8/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 18'-20'
Lab Sample Number : 801374-006
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : SOIL

Blank Spike Duplicate	103	---	%Recov	4/8/00	Wi MOD GRO
Blank	< 2.5	2.5	mg/kg	4/8/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-1 @ 12'
Lab Sample Number : 801374-007
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

DIESEL RANGE ORGANICS - WATER **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 100	100	ug/l		4/3/00	Wi MOD DRO
Blank spike	84	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	85	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	< 50	50	ug/l		4/3/00	Wi MOD GRO
Blank Spike	100	---	%Recov		4/3/00	Wi MOD GRO
Blank Spike Duplicate	95	---	%Recov		4/3/00	Wi MOD GRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD GRO

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** RJN

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-1 @ 12'
Lab Sample Number : 801374-007
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

s-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-1 @ 12'
Lab Sample Number : 801374-007
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Isopropylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
p-Isopropyltoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Naphthalene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Propylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Toluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	86	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	86	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	90	---	%Recov	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-2 @ 16'
Lab Sample Number : 801374-008
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

DIESEL RANGE ORGANICS - WATER **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 100	100	ug/l		4/3/00	Wi MOD DRO
Blank spike	84	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	85	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	< 50	50	ug/l		4/3/00	Wi MOD GRO
Blank Spike	100	---	%Recov		4/3/00	Wi MOD GRO
Blank Spike Duplicate	95	---	%Recov		4/3/00	Wi MOD GRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD GRO

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** HW

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-2 @ 16'
Lab Sample Number : 801374-008
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

s-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-2 @ 16'
Lab Sample Number : 801374-008
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Isopropylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
p-Isopropyltoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8250B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
Naphthalene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
n-Propylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
Toluene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8250B
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	81	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	84	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	88	---	%Recov	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-3 @ 12'
Lab Sample Number : 801374-009
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

DIESEL RANGE ORGANICS - WATER **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	140	100	ug/l		4/3/00	Wi MOD DRO
Blank spike	84	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	85	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	< 50	50	ug/l		4/3/00	Wi MOD GRO
Blank Spike	100	---	%Recov		4/3/00	Wi MOD GRO
Blank Spike Duplicate	95	---	%Recov		4/3/00	Wi MOD GRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD GRO

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** HW

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-3 @ 12'
Lab Sample Number : 801374-009
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

s-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-3 @ 12'
Lab Sample Number : 801374-009
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Isopropylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
p-Isopropyltoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Naphthalene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Propylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Toluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	80	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	83	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	88	---	%Recov	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-4 @ 8'
Lab Sample Number : 801374-010
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

DIESEL RANGE ORGANICS - WATER **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 100	100	ug/l		4/3/00	Wi MOD DRO
Blank spike	84	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	85	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	< 50	50	ug/l		4/3/00	Wi MOD GRO
Blank Spike	100	---	%Recov		4/3/00	Wi MOD GRO
Blank Spike Duplicate	95	---	%Recov		4/3/00	Wi MOD GRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD GRO

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** HW

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-4 @ 8'
Lab Sample Number : 801374-010
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

s-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-4 @ 8'
Lab Sample Number : 801374-010
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Isopropylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
p-Isopropyltoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Naphthalene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Propylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Toluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	78	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	84	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	89	---	%Recov	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 10'
Lab Sample Number : 801374-011
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

DIESEL RANGE ORGANICS - WATER **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	26000	1000	ug/l		4/3/00	Wi MOD DRO
Blank spike	84	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	85	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	1500	100	ug/l		4/4/00	Wi MOD GRO
Blank Spike	100	---	%Recov		4/4/00	Wi MOD GRO
Blank Spike Duplicate	95	---	%Recov		4/4/00	Wi MOD GRO
Blank	< 50	50	ug/l		4/4/00	Wi MOD GRO

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** HW

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	1.9	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 10'
Lab Sample Number : 801374-011
MDH LAB ID : 055-999-334
Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

s-Butylbenzene	5.0	1.0	ug/L	4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Butylbenzene	17	1.0	ug/L	4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	1.9	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : P-5 @ 10'
Lab Sample Number : 801374-011
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Isopropylbenzene	2.5	1.0	ug/L	4/3/00	SW846 8260B
p-Isopropyltoluene	6.2	1.0	ug/L	4/3/00	SW846 8260B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Naphthalene	2.5	1.0	ug/L	4/3/00	SW846 8260B
n-Propylbenzene	7.4	1.0	ug/L	4/3/00	SW846 8260B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Toluene	1.2	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trimethylbenzene	110	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	38	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	7.1	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	3.4	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	79	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	81	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	87	---	%Recov	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : ON-SITE WELL
Lab Sample Number : 801374-012
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

DIESEL RANGE ORGANICS - WATER **Prep Method:** Wi MOD DRO **Prep Date:** 4/3/00 **Analyst:** DJB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 100	100	ug/l		4/3/00	Wi MOD DRO
Blank spike	84	---	%Recov		4/3/00	Wi MOD DRO
Blank spike duplicate	85	---	%Recov		4/3/00	Wi MOD DRO
Blank	< 50	50	ug/l		4/3/00	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** MSB

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	< 50	50	ug/l		4/4/00	Wi MOD GRO
Blank Spike	100	---	%Recov		4/4/00	Wi MOD GRO
Blank Spike Duplicate	95	---	%Recov		4/4/00	Wi MOD GRO
Blank	< 50	50	ug/l		4/4/00	Wi MOD GRO

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** HW

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : ON-SITE WELL
Lab Sample Number : 801374-012
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

s-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Butylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : ON-SITE WELL
Lab Sample Number : 801374-012
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/5/00
Collection Date : 3/29/00
Matrix Type : WATER

Isopropylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
p-Isopropyltoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Naphthalene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Propylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Toluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	77	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	82	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	88	---	%Recov	4/3/00	SW846 8260B

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : METHANOL BLANK
Lab Sample Number : 801374-013
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : METHANOL

Organic Results

BTEX + MTBE - METHANOL **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	108	---	%Recov		4/8/00	MOD 8021B
Benzene	< 25	25	ug/l		4/8/00	MOD 8021B
Ethylbenzene	< 25	25	ug/l		4/8/00	MOD 8021B
Methyl-tert-butyl-ether	< 25	25	ug/l		4/8/00	MOD 8021B
Toluene	< 25	25	ug/l		4/8/00	MOD 8021B
Xylenes, -m, -p	< 25	25	ug/l		4/8/00	MOD 8021B
Xylene, -o	< 25	25	ug/l		4/8/00	MOD 8021B

Organic Results

GASOLINE RANGE ORGANICS - METHANOL **Prep Method:** Wi MOD GRO **Prep Date:** 4/3/00 **Analyst:** PMS

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2500	2500	ug/L		4/8/00	Wi MOD GRO
Blank Spike	103	---	%Recov		4/8/00	Wi MOD GRO
Blank Spike Duplicate	103	---	%Recov		4/8/00	Wi MOD GRO
Blank	< 50	50	ug/L		4/8/00	Wi MOD GRO

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- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : TRIP BLANK
Lab Sample Number : 801374-014
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : WATER

Organic Results

MDH 465 VOLATILES - WATER **Prep Method:** SW846 5030B **Prep Date:** 4/3/00 **Analyst:** RJN

Analyte	Result	EQL	Units	Code	Analysis Date	Analysis Method
Acetone	< 10	10	ug/L		4/3/00	SW846 8260B
Allyl Chloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Benzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromochloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromodichloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromoform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Bromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Butanone	< 5.0	5.0	ug/L		4/3/00	SW846 8260B
s-Butylbenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
t-Butylbenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
n-Butylbenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Carbon tetrachloride	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Chloroform	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Chlorobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Chlorodibromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Chloroethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Chloromethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
2-Chlorotoluene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
4-Chlorotoluene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,2-Dibromo-3-chloropropane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,2-Dibromoethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
Dibromomethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,3-Dichlorobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,4-Dichlorobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,2-Dichloroethane	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,2-Dichlorobenzene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B
1,1-Dichloroethene	< 1.0	1.0	ug/L		4/3/00	SW846 8260B

En Chem Inc.

Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : TRIP BLANK
Lab Sample Number : 801374-014
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : WATER

cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorodifluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Dichlorofluoromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,3-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
2,2-Dichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Ethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Diethyl ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Fluorotrichloromethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Hexachlorobutadiene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Isopropylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
p-Isopropyltoluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Methylene chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Methyl-2-pentanone	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
Methyl-tert-butyl-ether	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Naphthalene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
n-Propylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Styrene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrachloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Toluene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Trichloroethene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B

En Chem Inc.

Green Bay, WI 54302
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Fax: 920-469-8827

- Analytical Report -

Project Name : CASH'S STORE
Project Number : C-8280-A
Field ID : TRIP BLANK
Lab Sample Number : 801374-014
MDH LAB ID : 055-999-334

Client : GME CONSULTANTS INC
Report Date : 4/11/00
Collection Date : 3/29/00
Matrix Type : WATER

1,2,3-Trichloropropane	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Tetrahydrofuran	< 5.0	5.0	ug/L	4/3/00	SW846 8260B
1,3,5-Trimethylbenzene	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Vinyl chloride	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylenes, -m, -p	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
Xylene, -o	< 1.0	1.0	ug/L	4/3/00	SW846 8260B
4-Bromofluorobenzene	86	---	%Recov	4/3/00	SW846 8260B
Dibromofluoromethane	88	---	%Recov	4/3/00	SW846 8260B
Toluene-d8	92	---	%Recov	4/3/00	SW846 8260B

EN CHEM INC.

☑ 1241 Bellevue St., Suite 9
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920-469-2436 • 1-800-736-2436
FAX 920-469-8827

☐ 525 Science Drive
Madison, WI 53711
608-232-3300 • 1-888-536-2436
FAX: 608-233-0502

☐ 1423 N. 8th Street, Suite 122
Superior, WI 54880
715-392-5844 • 1-800-837-8238
FAX 715-392-5843

CHAIN OF CUSTODY

24955

Page 1 of 1

Company Name: GME CONSULTANTS
Branch or Location: CROSBY, MN
Project Contact: CONRAD KRAGNESS
Telephone: 218-546-6371
Project Number: C-8780-A
Project Name: CASH'S STORE
Project Location: ONAMIA, MN
Sampled By (Print): CONRAD KRAGNESS

P.O. # _____ Quote # _____

Mail Report To: CONRAD KRAGNESS
Company: GME CONSULTANTS
Address: P.O. Box 250
CROSBY MN. 56441

Invoice To: CONRAD KRAGNESS
Company: GME CONSULTANTS
Address: P.O. Box 250
CROSBY, MN. 56441

Mail Invoice To: SAME

Regulatory Program *(circle)*: (UST) RCRA CLP SDWA
NPDES/WPDES CAA NR____
Other _____

NR720 Confirmation Analysis Required? *(circle)*: Y N
(En Chem will not confirm unless otherwise instructed.)

FIELD ID	SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	GRO/BTEX/MTBE	DRO	DRO WI	VOCs (465)	GRO	DRO	FIELD SCREEN	MATRIX	GOOD COND.	TOTAL BOTTLES	COMMENTS	LABORATORY NUMBER
	P-1 @ 7'-8'	3/29	9:30	✓	✓	✓				2.2	Soil	X	1		-001
	P-2 @ 11'-12'	3/29	10:20	✓	✓	✓				0.8	Soil				-002
	P-3 @ 18'-20'	3/29	1:45	✓	✓	✓				0.8	Soil				-003
	P-4 @ 7'-8'	3/29	2:15	✓	✓	✓				1.0	Soil				-004
	P-5 @ ~~12'-13'~~ 13'-14'	3/29	3:40	✓	✓	✓				44	Soil				-005
	P-5 @ 18'-20'	3/29	3:50	✓	✓	✓				0.2	Soil				-006
	P-1 @ 12'	3/29	9:40				✓	✓	✓		H_2O		1-40 2-VOA	M	-007
	P-2 @ 16'	3/29	10:45				✓	✓	✓		H_2O				-008
	P-3 @ 12'	3/29	11:50				✓	✓	✓		H_2O				-009
	P-4 @ 8'	3/29	1:45				✓	✓	✓		H_2O				-010
	P-5 @ 10'	3/29	3:30				✓	✓	✓		H_2O				-011
	ON-SITE WELL	3/29	4:15				✓	✓	✓		H_2O				-012
	METHANOL BLANK	3/29		✓									1-2	M	-013
	TRIP BLANK						✓				H_2O	✓	2-VOA		-014

FILTERED? (YES/NO): NO NO NO NO NO NO
PRESERVATION (CODE)*: F A A B B B

SHADED AREA FOR LABORATORY USE ONLY

*Preservation Code
A=None B=HCL C=H2SO4
D=HN03 E=EnCore F=Methanol**
G=NaOH O=Other (Indicate)

**If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By:	Date/Time:	Received By:	Date/Time:	En Chem Project No.
M. C. Kragness	3/30/00 @ 11:50AM			801374
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt Temp.
				3.1 °C
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH (Wet/Metals)
Relinquished By:	Date/Time:	Received By (En Chem):	Date/Time:	

APPENDIX C

METHODOLOGIES AND PROCEDURES

SITE INVESTIGATION PROCEDURES

A. Field

1. Geoprobe Survey

On March 29, 2000, Thein Well Company (Thein) drilled five environmental push probes with a Geoprobe. The push probe locations (Figure 2) were selected by our Senior Environmental Scientist, based on the findings of the previous UST removal phase of this project. Underground utilities were cleared prior to drilling. The probes and sampling devices were cleaned prior to mobilization to the site and between boring locations as needed. The borings were advanced using 1-inch probes. Soils were sampled at selected intervals with a 2-inch diameter by 4-foot long sampler.

Our Senior Environmental Scientist conducted headspace analyses on representative portions of the recovered soil samples using an HNU Model PI-101 (HNU) fitted with a 10.2 eV lamp. The HNU is a photoionization detection (PID) that measures certain organic vapors in parts per million (ppm). Polyethylene bag headspace analyses were conducted in general accordance with MPCA guidance documents.

Upon completion, the probe holes were located on a site map and were sealed with a neat cement grout. The GME Soil Boring Logs in the Appendix summarize soil classifications and observed groundwater levels.

APPENDIX D

SOIL BORING LOGS

LOG OF BORING P-1

PROJECT: Remedial Investigation
SITE: Cash's Store
CLIENT: Ms. Shelly Cash-Logi
ARCHITECT-ENGINEER:

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL	SPECIAL TEST RESULTS HNU READINGS (ppm)	N-VALUE (BLOWS/FT.)
				SURFACE ELEVATION		
	1SS			Brown fine to medium SAND WITH GRAVEL, trace silt - moist - (SP-GP)	1.6	
	2SS				0.4	
5		▼				
	3SS				2.2	
10			10.0			
	4SS			Brown SILT, trace gravel - wet - (ML)	0.5	
15	5SS				0.5	
	6SS				0.8	
20			20.0			
				End of boring at 20 feet		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}
1 2 3 4 5
WATER CONTENT %
STANDARD PENETRATION (BLOWS/FOOT)
10 20 30 40 50

HNU headspace measurements in parts per million (ppm)
Soil sample collected from 7-8 feet was submitted to laboratory for analysis
Water sample collected at 12 feet was submitted to laboratory for analysis
Borehole backfilled with neat cement grout

WATER LEVEL OBSERVATIONS
W.L. ▼ 6' While Probing
W.L.
W.L.

GME CONSULTANTS, INC.
Geotechnical Materials Environmental
P.O. Box 250
Crosby, Minnesota 56441
(281) 546-6371

BORING STARTED	3/29/00		
BORING COMPLETED	3/29/00		
RIG	Geoprobe	DRILLER	Thein
DRAWN	RJE	APPROVED	MDM
JOB #	C-8280	SHEET	1 of 1

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

LOG OF BORING P-2

PROJECT Remedial Investigation	SITE Cash's Store
CLIENT Ms. Shelly Cash-Logi	ARCHITECT-ENGINEER

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL SURFACE ELEVATION ▼	SPECIAL TEST RESULTS HNU READINGS (ppm)	N-VALUE (BLOWS/FT.)
	1SS		2.0	Brown SILTY SAND WITH GRAVEL - (SM)	0.4	
	2SS			Brown fine to medium SAND, trace silt and gravel - moist to wet at 7' - (SP)	0.4	
5		▼				
	3SS				0.4	
10			11.0			
	4SS			Brown SILT, trace gravel - wet - (ML)	0.8	
15						
	5SS				0.6	
	6SS				0.0	
20			20.0			
				End of boring at 20 feet HNU headspace measurements in parts per million (ppm) Soil sample collected from 11-12 feet was submitted to laboratory for analysis Water sample collected at 16 feet was submitted to laboratory for analysis Borehole backfilled with neat cement grout		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}
1 2 3 4 5
WATER CONTENT %
STANDARD PENETRATION (BLOWS/FOOT)
10 20 30 40 50

WATER LEVEL OBSERVATIONS	
W.L.	▼ 7' While Probing
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical Materials Environmental
P.O. Box 250
Crosby, Minnesota 56441
(281) 546-6371

BORING STARTED	3/29/00		
BORING COMPLETED	3/29/00		
RIG	Geoprobe	DRILLER	Thein
DRAWN	RJE	APPROVED	MDM
JOB #	C-8280	SHEET	1 of 1

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

LOG OF BORING P-3

PROJECT Remedial Investigation	SITE Cash's Store
CLIENT Ms. Shelly Cash-Logi	ARCHITECT-ENGINEER

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL	SPECIAL TEST RESULTS HNU READINGS (ppm)	N-VALUE (BLOWS/FT.)
				SURFACE ELEVATION		
	1SS			Brown fine to medium SAND - moist - (SP)	0.3	
			3.0			
	2SS	▼		Brown fine to medium SAND, trace silt - wet at 4 feet - (SP)	0.4	
5			7.0			
	3SS			Grayish brown SILTY SAND - wet - (SM)	0.4	
10			11.0			
	4SS			Brown SILT, trace gravel - wet - (ML)	0.6	
15	5SS				0.0	
	6SS				0.8	
20			20.0			
				End of boring at 20 feet		
				HNU headspace measurements in parts per million (ppm)		
				Soil sample collected from 18-20 feet was submitted to laboratory for analysis		
				Water sample collected at 12 feet was submitted to laboratory for analysis		
				Borehole backfilled with neat cement grout		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}
1 2 3 4 5

WATER CONTENT %

STANDARD PENETRATION (BLOWS/FOOT)
10 20 30 40 50

WATER LEVEL OBSERVATIONS	
W.L.	▼ 4' While Probing
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical Materials Environmental
P.O. Box 250
Crosby, Minnesota 56441
(281) 546-6371

BORING STARTED	3/29/00		
BORING COMPLETED	3/29/00		
RIG	Geoprobe	DRILLER	Thein
DRAWN	RJE	APPROVED	MDM
JOB #	C-8280	SHEET	1 of 1

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

LOG OF BORING P-4

PROJECT Remedial Investigation	SITE Cash's Store
CLIENT Ms. Shelly Cash-Logi	ARCHITECT-ENGINEER

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL SURFACE ELEVATION ▼	SPECIAL TEST RESULTS HNU READINGS (ppm)	N-VALUE (BLOWS/FT.)
	1SS			Brown fine to medium SAND - moist to wet at 5 feet - (SP)	1.0	
	2SS				0.6	
5		▼				
			7.0			
	3SS			Gray SILTY SAND - wet - (SM)	1.0	
10			10.0			
				Brown SILTY CLAY, trace gravel - wet - (CL)		
	4SS				0.6	
15	5SS				0.8	
20						
	6SS				0.2	
25						
	7SS				0.4	
			27.0			
				Gray SANDY SILT - wet - (SM)		
30						

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2} ○
1 2 3 4 5

WATER CONTENT % ●

STANDARD PENETRATION (BLOWS/FOOT) ⊗
10 20 30 40 50

WATER LEVEL OBSERVATIONS	
W.L.	▼ 5' While Probing
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical Materials Environmental
P.O. Box 250
Crosby, Minnesota 56441
(281) 546-6371

BORING STARTED			3/29/00
BORING COMPLETED			3/29/00
RIG	Geoprobe	DRILLER	Thein
DRAWN	RJE	APPROVED	MDM
JOB #	C-8280	SHEET	1 of 2

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

LOG OF BORING P-4

PROJECT: Remedial Investigation
SITE: Cash's Store
CLIENT: Ms. Shelly Cash-Logi
ARCHITECT-ENGINEER:

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL	SPECIAL TEST RESULTS HNU READINGS (ppm)	N-VALUE (BLOWS/FT.)
				(continued)		
35	8SS		35.0		0.4	
				End of boring at 35 feet HNU headspace measurements in parts per million (ppm) Soil sample collected from 7-8 feet was submitted to laboratory for analysis Water sample collecte at 8 feet was submitted to laboratory for analysis Borehole backfilled with neat cement grout		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}
1 2 3 4 5
WATER CONTENT %
STANDARD PENETRATION (BLOWS/FOOT)
10 20 30 40 50

WATER LEVEL OBSERVATIONS	
W.L.	▼ 5' While Probing
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical Materials Environmental
P.O. Box 250
Crosby, Minnesota 56441
(281) 546-6371

BORING STARTED			3/29/00
BORING COMPLETED			3/29/00
RIG	Geoprobe	DRILLER	Thein
DRAWN	RJE	APPROVED	MDM
JOB #	C-8280	SHEET	2 of 2

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

LOG OF BORING P-5

PROJECT Remedial Investigation	SITE Cash's Store
CLIENT Ms. Shelly Cash-Logi	ARCHITECT-ENGINEER

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL	SPECIAL TEST RESULTS HNU READINGS (ppm)	N-VALUE (BLOWS/FT.)
				SURFACE ELEVATION		
	1SS			Brown SILTY SAND WITH GRAVEL - moist - (SM)	1.4	
	2SS		4.0		3.0	
5				Brown fine to medium SAND - moist to wet at 8 feet - (SP)		
	3SS	▼			1.0	
10						
	4SS				1.2	
	5SS		14.0		44	
15				Brown SILT, trace gravel - wet - (ML)		
	6SS				2.2	
	7SS		20.0		0.2	
20				End of boring at 20 feet		
				HNU headspace measurements in parts per million (ppm)		
				Soil sample collected from 13-14 feet was submitted to laboratory for analysis		
				Water sample collected at 10 feet was submitted for laboratory analysis		
				Borehole backfilled with neat cement grout		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}
1 2 3 4 5

WATER CONTENT %

STANDARD PENETRATION (BLOWS/FOOT)
10 20 30 40 50

WATER LEVEL OBSERVATIONS	
W.L.	▼ 8' While Probing
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical Materials Environmental
P.O. Box 250
Crosby, Minnesota 56441
(281) 546-6371

BORING STARTED			3/29/00
BORING COMPLETED			3/29/00
RIG	Teo	DRILLER	Thein
DRAWN	RJE	APPROVED	MDM
JOB #	C-8280	SHEET	1 of 1

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING SEALING RECORD

Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No. H 166051

Minnesota Unique Well No. or W-series No. NONE

(Leave blank if not known)

WELL OR BORING LOCATION

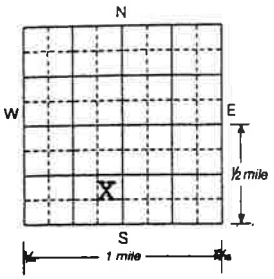
County Name: MILLE LACS

Township Name	Township No	Range No	Section No	Fraction (sm → lg)
	43N	27W	21	NE SE SW

Numerical Street Address or Fire Number and City of Well or Boring Location: 44465 US HWY 169, ONAMIA, MN

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



PROPERTY OWNER'S NAME: CASH'S STORE/SHELLY CASH-LOGI

Property owner's mailing address if different than well location address indicated above.

44465 US HIGHWAY 169
ONAMIA, MN 56359

WELL OWNER'S NAME: SAME AS ABOVE

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

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
If not known, indicate estimated formation log from nearby well or boring.				
SAND	BRN	MED	0	8
SAND SILTY	CLAY BRN	MED	8	12
SILTY CLAY	BRN	MED	12	25
SILTY CLAY	GRAY	MED	25	35

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

GP#1-20'
GP#2-20'
GP#3-20'
GP#4-35'
GP#5-20'

gme

IMPORTANT-FILE WITH PROPERTY PAPERS-WELL OWNER COPY H 166051

Date Sealed: 3-29-2000

Date Well or Boring Constructed: 3-29-2000

Depth Before Sealing: 35 ft

Original Depth: 35 ft

AQUIFER(S)

☒ Single Aquifer ☐ Multiaquifer

WELL/BORING

☐ Water Supply Well ☒ Monit. Well

☐ Env. Bore Hole ☒ Other TEMP WELL 8 ft ☒ below ☐ above land surface

STATIC WATER LEVEL

☐ Measured ☒ Estimated

CASING TYPE(S)

☐ Steel ☐ Plastic ☐ Tile ☐ Other

CASING(S)

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
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 ____ to ____ ft. Open Hole from 0 to 35 ft.

OBSTRUCTIONS

☐ Rods/Drop Pipe ☐ Check Valve(s) ☐ Debris ☐ Fill ☒ No Obstruction

Type of Obstructions (Describe)

Obstructions removed? ☐ Yes ☐ No Describe

PUMP

Type

☐ Removed ☒ Not Present ☐ Other

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:

☒ No Annular Space Exists

☐ Annular space grouted with tremie pipe

☐ Casing Perforation/Removal

in. from to ft. ☐ Perforated ☐ Removed

in. from to ft. ☐ Perforated ☐ Removed

Type of perforator

☐ Other

GROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)

Grouting Material	NEAT CEMENT	from 0 to 35 ft.	yards	1	bags
		from to ft.	yards		bags
		from to ft.	yards		bags
		from to ft.	yards		bags

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.

THEIN WELL CO — 34625

Contractor Business Name — *License or Registration No.*

Authorized Representative Signature — 4-11-2000 *Date*

ALVIN WIEBER — 4-11-2000

Name of Person Sealing Well or Boring

APPENDIX E

COUNTY WELL INDEX SURVEY

Unique No. 00125644

County Name Mille Lacs

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Update Date 1994/08/22

Entry Date 1988/04/13

Township Name	Township	Range	Dir	Section	Subsection
	43	27	W	21	CADBCD

Well Depth 88 ft. | Depth Completed 88 ft. | Date Well Completed 1976/04/30

Well Name M&M PRINTING

Drilling Method Non-specified Rotary

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No

From ft. to ft.

Contact's Name
1355 11TH ST
MINNEAPOLIS

Use Domestic

Casing Drive Shoe? ☐ Yes ☑ N

Hole Diameter

Casing Diameter 4 in. to 84 ft. Weight(lbs/ft)

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
SAND	BROW	SOFT	0	7
CLAY	GRAY	MEDIUM	7	34
SANDY CLAY	GRAY	SOFT	34	84
SAND	GRAY	SOFT	84	88

Screen Y

Open Hole From ft. to ft.

Make JOHNSON Type L

Diameter	Slot	Length	Set	Fitting
0	12	4	84 ft. to 88 ft.	

Static Water Level 0 ft. from Land surface Date 1976/04/30

PUMPING LEVEL (below land surface)

ft. after hrs. pumping g.p.m.

Well Head Completion

Pitless adapter mfr Model

Casing Protection ☐ 12 in. above grade

☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☑ Yes ☐ No

Material	From	To (ft.)	Amount(yds/bags)
G	8	18	0

Nearest Known Source of Contamination

ft. direction type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed N

Mfr name

Model HP 0 Volts

Drop Pipe Length ft. Capacity g.p.m

Type

Any not in use and not sealed well(s) on property? ☐ Yes ☐ No

Was a variance granted from the MDH for this Well? ☐ Yes ☐ No

REMARKS, ELEVATION, SOURCE OF DATA, etc.

WESTMERE BLK A LOT 9.

USGS Quad: Vineland Elevation: 1263

Aquifer: QBAA Alt Id:

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 48038

License Business Name North Star Drilling

Name of Driller

Report Copy

HE-01205-06 (Rev. 9/96)

Unique No. 623261

County Name Mille Lacs

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Update Date

Entry Date 1999/07/06

Township Name	Township	Range	Dir	Section	Subsection
	43	27	W	21	

Well Depth 71 ft. | Depth Completed 71 ft. | Date Well Completed 1999/03/27

Well Name RAUNIO, TOM

Drilling Method Non-specified Rotary

Well Owner's Name RAUNIO, TOM
44558 VIRGO RD
ONAMIA MN

Contact's Name RAUNIO, TOM
512 9 N ST
BRAINERD MN 56401-

Drilling Fluid: Bentonite

Well Hydrofractured? ☐ Yes ☑ No
From ft. to ft.

Use: Domestic

Casing: Drive Shoe? ☐ Yes ☑ N
4 in. to 67 ft.

Hole Diameter: in. to 71 ft.

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
SAND	GRY		0	24
CLAY	GRY		24	30
SAND	GRY		30	35
CLAY, ROCKS	GRY		35	

Screen Y

Open Hole From ft. to ft.

Make JOHNSON Type L

Diameter	Slot	Length	Set	Fitting
2	12	4	67 ft. to 71 ft.	

Static Water Level 1 ft. from Date 1999/03/27

PUMPING LEVEL (below land surface)
35 ft. after 1 hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter mfr BAKER Model BULLDOG
Casing Protection ☐ 12 in. above grade
☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☑ Yes ☐ No

Material	From	To (ft.)	Amount(yds/bags)
B	0	30	

Nearest Known Source of Contamination
50 ft. direction type SDF
Well disinfected upon completion? ☑ Yes ☐ No

Pump ☐ Not Installed Date Installed
Mfr name STA RITE
Model 10SP4C02J HP 0.5 Volts 230
Drop Pipe Length 30 ft. Capacity 12 g.p.m
Type S

Any not in use and not sealed well(s) on property? ☐ Yes ☑ No

Was a variance granted from the MDH for this Well? ☐ Yes ☑ No

USGS Quad: Elevation:
Aquifer: Alt Id:

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 49588
License Business Name North Star Drilling
Name of Driller WITUCKI, J.

Report Copy

HE-01205-06 (Rev. 9/96)

Unique No. 00131728

County Name Mille Lacs

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Update Date 1994/08/22

Entry Date 1988/04/13

Township Name	Township	Range	Dir	Section	Subsection
	43	27	W	21	CADCAA

Well Depth 90 ft. | Depth Completed 90 ft. | Date Well Completed 1977/05/24

Well Name MONSON, KATHRYN

Drilling Method Non-specified Rotary

Contact's Name
706 9TH S ST
MINNEAPOLIS MN 55404

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From ft. to ft.

Use Domestic

Casing Drive Shoe? ☐ Yes ☑ N

Hole Diameter

Casing Diameter Weight(lbs/ft)
4 in. to 86 ft.

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
SAND	GRAY	SOFT	0	11
SANDY CLAY	GRAY	SOFT	11	31
CLAY & ROCKS	GRAY	MEDIUM	31	86
SAND	GRAY	SOFT	86	90

Screen N | Open Hole From ft. to ft.

Make JOHNSON Type L

Diameter	Slot	Length	Set	Fitting
0	12	4	86 ft. to 90 ft.	

Static Water Level 6 ft. from Land surface Date 1977/05/24

PUMPING LEVEL (below land surface)
32 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter mfr Model
Casing Protection ☐ 12 in. above grade
☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☐ Yes ☑ No

Nearest Known Source of Contamination
50 ft. direction NW type SDF
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed N
Mfr name
Model HP 0 Volts
Drop Pipe Length ft. Capacity g.p.m
Type

Any not in use and not sealed well(s) on property? ☐ Yes ☐ No

Was a variance granted from the MDH for this Well? ☐ Yes ☐ No

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 48038
License Business Name North Star Drilling
Name of Driller

REMARKS, ELEVATION, SOURCE OF DATA, etc.

WESTMERE BLK A LOT 3.

USGS Quad: Vineland Elevation: 1263
Aquifer: QBAA Alt Id:

Report Copy

HE-01205-06 (Rev. 9/96)

APPENDIX F

GME GENERAL QUALIFICATIONS

GME GENERAL QUALIFICATIONS

The conclusions and recommendations submitted in this report are based on data produced during this study and previous studies at the site. The scope of this report is limited to this specific project and location described herein. This report does not account for any variations that may occur between or outside of the exploration locations. Furthermore, we did not explore outside of the study area boundaries.

Groundwater level measurements and groundwater samples were collected and analyzed under the conditions stated in this report. These data have been reviewed and an interpretation made in the text of this report. However, it must be noted that seasonal fluctuations in hydrogeologic characteristics likely will occur.

Our description of this project represents our understanding of significant aspects relative to groundwater conditions. Conclusions in this report represent our professional judgment. No warranty, express or implied, is made.