ANNUAL MONITORING REPORT

GARRISON SPORTS
P.O. BOX 85, HIGHWAY 169
GARRISON, MINNESOTA 56450

MPCA SITE ID#: LEAK #10037

Prepared For:

Mr. Kari Hough
Garrison Sports
P.O. Box 85, Highway 169
Garrison, Minnesota 56450

Prepared By:

CERES ENVIRONMENTAL SERVICES
3825 85th Avenue North
Brooklyn Park, MN 55443

June 2000

CERES Environmental

Emergency Management ♻ Environmental Consulting ♻ Demolition and Recycling ♻ Wood Waste Reduction

3825 85th Avenue North
Brooklyn Park, MN 55443
Phone (612) 425-8822
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Mr. Jim MacArthur
Minnesota Pollution Control Agency
1601 Minnesota Drive
Brainerd, Minnesota 56401

June 5, 2000

RE: Annual Monitoring Report
Garrison Sports; MPCA Leak No. 10037
Garrison, Minnesota

Dear Mr. MacArthur :

Ceres Environmental Services (Ceres), on behalf of Garrison Sports, is enclosing the above referenced report for your review and approval. Based on the findings in the report, Ceres respectfully requests that you concur with the recommendations that we have proposed. Thank you for your cooperation.

If you have any questions or require additional information, please contact Mike Lee at (612) 425-4239, ext. 114.

Sincerely,
CERES ENVIRONMENTAL SERVICES

Michael A. Lee
Project Manager/Geologist

Tanks and Emergency Response Section
Minnesota Pollution Control Agency

MPCA

Annual Monitoring Report

Fact Sheet #3.26
April 1996

After the corrective action design (CAD) has been approved, this worksheet should be submitted on an annual schedule. If an active remediation system has been installed, the "Corrective Action Design System Monitoring Worksheet" fact sheet #3.31 should be submitted along with this worksheet. The "Corrective Action Design System Monitoring Worksheet" documents data collection of system emissions and operating parameters, as well as any changes to the system.

Under certain circumstances MPCA staff may request submittal of the monitoring information on a quarterly schedule. This should be conducted according to fact sheet 3.25 "Quarterly Monitoring Report."

Site name and address: Garrison Sports

P.O. Box 85, Highway 169

Garrison, Minnesota 56450

MPCA Leak Number: *LEAK #:* 00010037

Date submitted: 06/05/00

Section I. DISCUSSION

Discuss the results of the monitoring performed since the remedial investigation (RI) report or the last progress report has been submitted. Include any notable trends in the discussion.

Ceres Environmental Services (Ceres) has conducted four sampling events in monitoring wells MW-1, MW-2, and MW-5 since the MPCA Request For Additional Work in May of 1999. All groundwater sampling events were conducted in accordance with MPCA guidance document Fact Sheet # 3.23. During each sampling event, the monitoring wells were purged by removing five well volumes using dedicated sterilized disposable bailers. The ground water samples were placed in sterilized containers preserved with HCL provided by the laboratory, stored in a rigid iced cooler, and tracked under proper chain of custody procedures. The groundwater samples were submitted to Spectrum Laboratories for analysis of BTEX, GRO, and DRO.

In reference to Table 2, the general trend of BTEX, GRO and DRO in the impacted wells is toward decreasing contaminant concentrations. The compounds detected in MW-1 have generally decreased in their contaminant concentrations in the last four sampling events. In MW-2, GRO concentrations increased in the 10/14/99 and 02/03/00 sampling events, and then decreased in the last sampling event. DRO concentrations in MW-2 increased in the 10/14/99 sampling event, and then decreased in the last two sampling events. The only contaminant detected in MW-5 was DRO and it has not been present in the last two sampling events. The laboratory analytical reports for the groundwater samples collected during these sampling events are included in Appendix A.

The depth to water was measured in each of the five site monitoring wells during all four sampling events (refer to Table 1). The water level measurement data from the 02/03/00 sampling event was used to calculate groundwater flow direction. This water level elevation data continues to indicate that the general hydraulic gradient and flow direction is toward the east. The representative groundwater flow direction map for the above mentioned data is illustrated on Figure 3.

In conclusion, groundwater contaminants continue to be detected in MW-1 and MW-2. There were trace DRO detects just exceeding the laboratory detection limits in MW-5. The contaminant plume appears to be moving downgradient as evidenced by the contaminant concentrations increasing and then decreasing in MW-2. However, the overall general decreasing contaminant concentrations indicate that natural attenuation is occurring within the dissolved contaminant plume. Also, the leading edge of the contaminant plume is defined within the monitoring well network as evidenced by contamination no longer being detected in the downgradient well MW-5. Therefore, the dissolved contaminant plume stability appears to be confirmed.

If vapor impacts were reported during the remedial investigation, discuss the results of the vapor monitoring survey completed during this reporting period. Include in your discussion the sampling instrument and sampling method.

There were no vapor impacts reported during the remedial investigation.

NOTE: If vapor concentrations exceed 10 percent of the lower explosive limit, exit the building and contact the local fire department immediately. Then contact the Minnesota Duty Officer (24 hours) at 612/649-5451 (metro and outside Minnesota) or 1-800-422-0798 (Greater Minnesota). TTY users call 612/297-5353 (V/TTY) or 1-800-627-3529 (V/TTY). Vapor mitigation is required.

Section II. RECOMMENDATIONS

The recommendations section should present recommendations for additional corrective action, modifications to corrective action, additional monitoring or site closure. If cleanup goals have been achieved at the site, recommendations for termination of corrective actions may be presented.

Considering the analytical results of the last four sampling events, the dissolved contaminant plume appears to be stable and would have no apparent impact to the public health, welfare, or an environmental resource. Therefore, no additional environmental work is necessary at this site. Taking into account the issues discussed, Ceres respectfully requests that a No Further Action Letter be issued relative to this release site.

Section III. TABLES

Table 1

Water table summary.

Well Number	Date Measured	Depth of Water from Top of Casing (ft)	Product Thickness	Depth of Water Below Grade (ft)	Relative Groundwater Elevation
MW-1	07/01/99	7.10	N/A	7.15	92.90
	10/14/99	8.46	N/A	8.51	91.54
	02/03/00	8.83	N/A	8.88	91.17
	04/28/00	8.36	N/A	8.41	91.64
MW-2	07/01/99	6.61	N/A	6.76	92.67
	10/14/99	7.84	N/A	7.99	91.44
	02/03/00	8.23	N/A	8.38	91.05
	04/28/00	7.77	N/A	7.92	91.51
MW-3	07/01/99	6.28	N/A	6.41	92.68
	10/14/99	7.51	N/A	7.64	91.45
	02/03/00	7.93	N/A	8.06	91.03
	04/28/00	Not Accessible	N/A	N/A	N/A
MW-4	07/01/99	6.62	N/A	6.63	92.74
	10/14/99	7.89	N/A	7.90	91.47
	02/03/00	8.24	N/A	8.25	91.12
	04/28/00	7.81	N/A	7.82	91.55
MW-5	07/01/99	7.61	N/A	5.21	92.12
	10/14/99	8.49	N/A	6.09	91.24
	02/03/00	8.91	N/A	6.51	90.82
	04/28/00	8.48	N/A	6.08	91.25

Notes: MW-3 was not accessible during the last sampling event due to damage from snow plowing.

Table 2.

Indicate the laboratory analytical results for water samples collected from each well. All analytical results collected from each well should be included on this table.

Well #	Date	Benzene	Toluene	Ethylbenzene	Xylenes	GRO	DRO
MW-1	07/01/99	BDL	40	19	98	540	270
	10/14/99	BDL	BDL	BDL	BDL	270	BDL
	02/03/00	BDL	BDL	BDL	BDL	250	BDL
	04/28/00	BDL	2.0	3.0	BDL	200	BDL
MW-2	07/01/99	BDL	BDL	BDL	6	940	280
	10/14/99	BDL	17	BDL	BDL	1900	580
	02/03/00	BDL	10	11	BDL	2400	240
	04/28/00	5.0	3.0	9.0	4.0	1400	98
MW-3	07/01/99	NA	NA	NA	NA	NA	NA
	10/14/99	NA	NA	NA	NA	NA	NA
	02/03/00	NA	NA	NA	NA	NA	NA
	04/28/00	NA	NA	NA	NA	NA	NA
MW-4	07/01/99	NA	NA	NA	NA	NA	NA
	10/14/99	NA	NA	NA	NA	NA	NA
	02/03/00	NA	NA	NA	NA	NA	NA
	04/28/00	NA	NA	NA	NA	NA	NA
MW-5	07/01/99	BDL	BDL	BDL	BDL	BDL	59
	10/14/99	BDL	BDL	BDL	BDL	BDL	45
	02/03/00	BDL	BDL	BDL	BDL	BDL	BDL
	04/28/00	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL = below laboratory method detection limit
NA = not analyzed
All compound concentrations are recorded in ppb = parts per billion

Table 3.

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

There were no other notable contaminants detected in the groundwater samples.

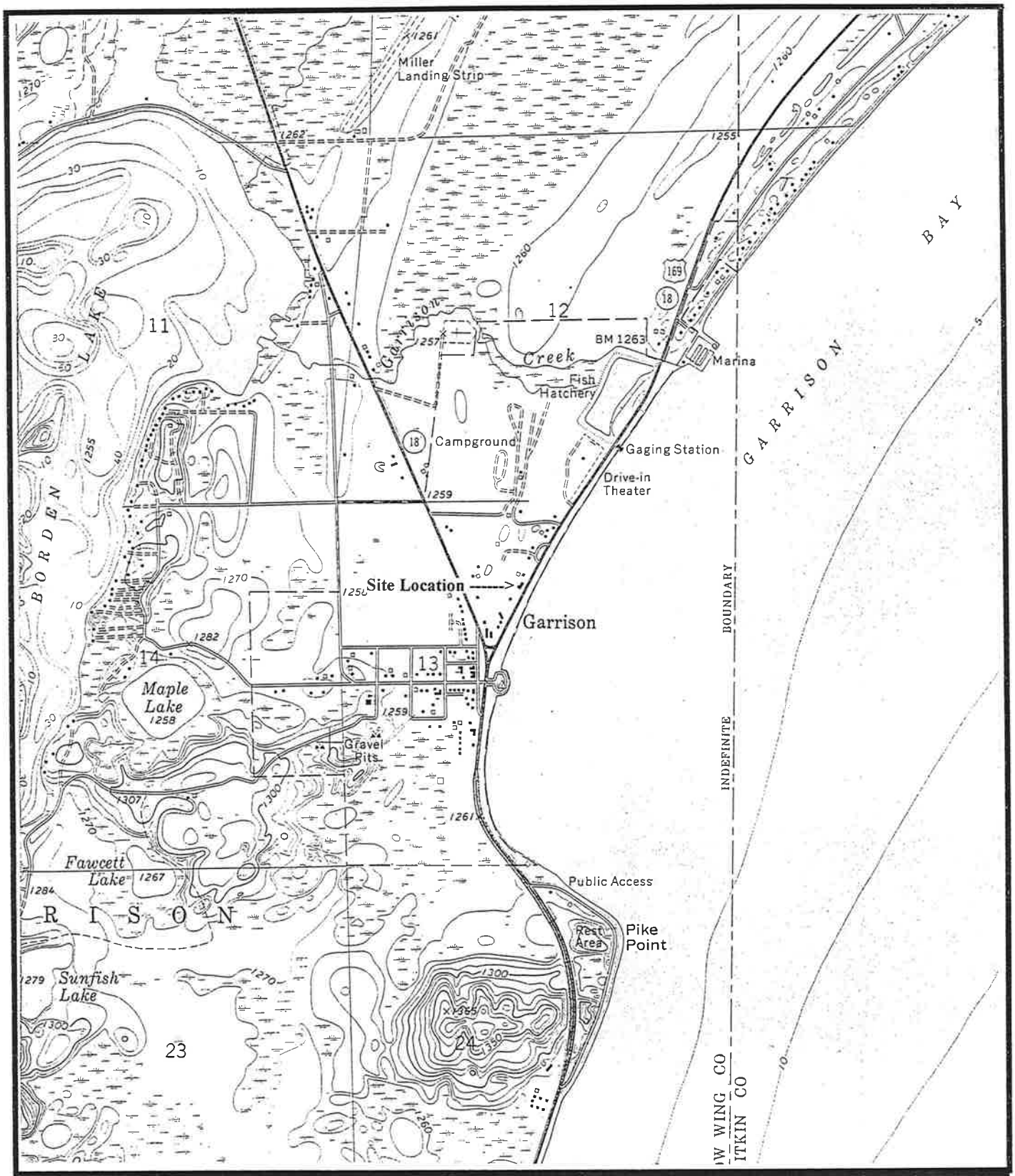
Section IV. FIGURES

Figures - (all maps must include a north arrow, scale and legend) Approximate scales are not acceptable.

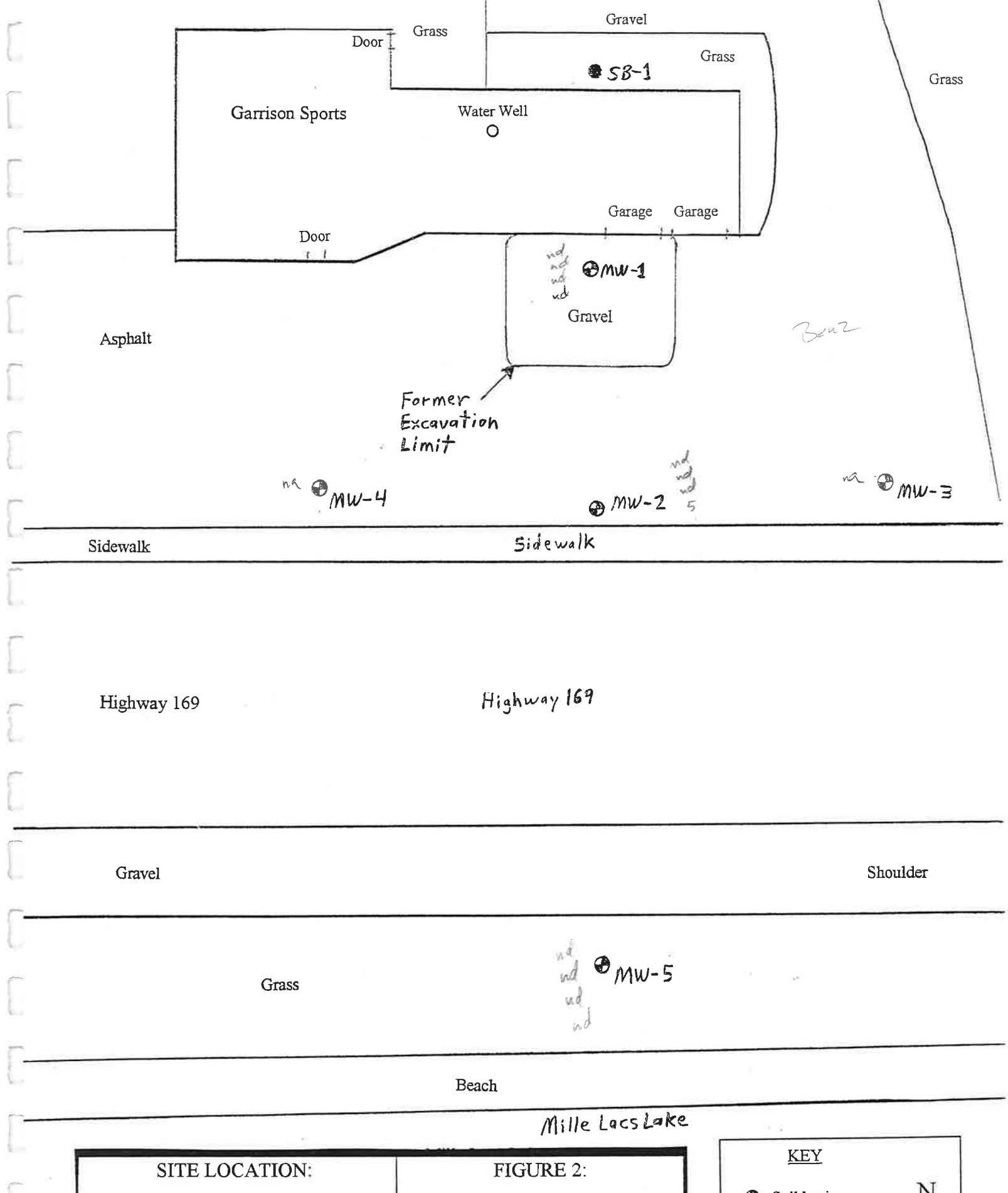
1. **Site location map. Adapt this map from a U.S. Geological Survey 7.5 minute quadrangle and identify the name of the 7.5 minute quadrangle.**
2. **Site map showing the locations of all groundwater and vapor monitoring points.**
3. **Updated ground water contour map, using water level elevations from the most recent round of water level measurements. Show all wells at the site, and differentiate wells constructed in different aquifers. Label ground water contours and elevations at each data point used for contouring.**
4. **Copies of most recent laboratory reports for ground water analyses, including a copy of the Chain of Custody.**
5. **Table of dissolved oxygen sample results (if collected)**

Section V. APPENDICES

The appendices section of the report contains sufficient information to document all activities completed since the last report. All reproduced data must be legible. In general this should include all applicable information required for the Appendices section of a RI report.



CERES ENVIRONMENTAL	SITE LOCATION: LEAK #10037 GARRISON SPORTS P.O. BOX 85, HIGHWAY 169 GARRISON, MN	FIGURE 1: SITE LOCATION MAP GARRISON QUAD MINNESOTA 7.5 MINUTE SERIES



SITE LOCATION:	FIGURE 2:
LEAK #10037 GARRISON SPORTS P.O. BOX 85, HIGHWAY 169 GARRISON, MN	SITE DIAGRAM

KEY

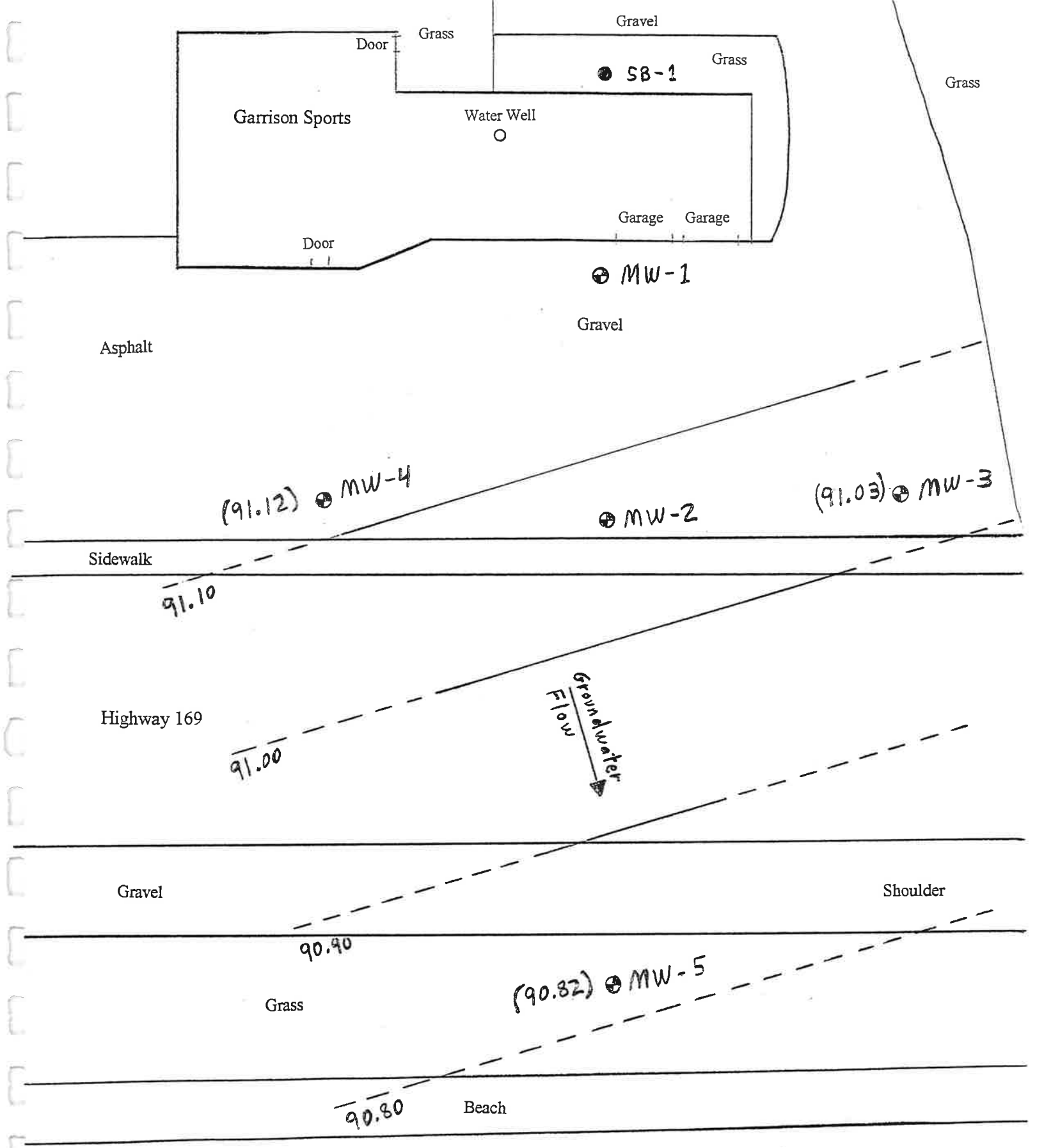
Soil boring

Monitoring

N

0 10 20

Scale: 1" = 20'



SITE LOCATION:	FIGURE 3:
LEAK #10037 GARRISON SPORTS P.O. BOX 85, HIGHWAY 169 GARRISON, MN	GROUNDWATER CONTOUR MAP FEBRUARY 3, 2000

KEY

Soil boring

Monitoring

N

0 10 20

Scale: 1" = 20'

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LABORATORY ANALYSIS REPORT

DATE:	*July 19, 1999*	***PAGE:***	*4 Of 4*
CLIENT:	*Ceres Environmental Services* *3825 85th Ave. N* *Brooklyn Park, MN 55443*	***PROJECT NO.:***	*070199-200371*
		COLLECTION DATE:	*7/01/99*
		COLLECTED BY:	*Client*
		RECEIVED DATE:	*7/01/99*
		PROJECT DESCRP.:	*Garrison Sports*
CONTACT:	*Micheal Lee*		

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

Report Submitted By,

Lon Jones
Organics-Supervisor

TLH:wmc
cc200-1

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	3825 85th Ave. N	***COLLECTION DATE:***	*7/01/99*
	Brooklyn Park, MN 55443	***COLLECTED BY:***	*Client*
		RECEIVED DATE:	*7/01/99*
		PROJECT DESCRP.:	*Garrison Sports*
CONTACT:	*Micheal Lee*		

		Sample No.:		***L23990-1***
		Sample ID.:		***MW-1***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO				
Date Analyzed: 7/14/99				
Benzene	*ug/L*	*3*	*10*	*ND*
Toluene	*ug/L*	*3*	*10*	*40*
Ethylbenzene	*ug/L*	*3*	*10*	*19*
*m,p-Xylene**	*ug/L*	*6*	*10*	*67*
o-Xylene	*ug/L*	*2*	*10*	*31*
Gasoline Range Organics	*ug/L*	*20*	*100*	*540*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*(s)148%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 7/08/99				
Date Analyzed: 7/13/99				
Diesel Range Organics	*ug/L*	*30*	*100*	*(o)270*

(s)High surrogate recovery due to matrix interference.
(o)Significant peaks detected before DRO window.
** means Coeluting Compounds*
***ND** means Not Detected or below reported MDL*
***MDL** means Method Detection Limit*
***PQL** means Practical Quantification Limit*
***ug/L** means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)*

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LABORATORY ANALYSIS REPORT

DATE: July 19, 1999 **PAGE:** 2 Of 4

CLIENT: Ceres Environmental Services
3825 85th Ave. N
Brooklyn Park, MN 55443

CONTACT: Micheal Lee

PROJECT NO.: 070199-200371
COLLECTION DATE: 7/01/99
COLLECTED BY: Client
RECEIVED DATE: 7/01/99
PROJECT DESCRP.: Garrison Sports

		Sample No.:		L23990-2
		Sample ID.:		MW-2
ANALYSIS	UNITS	MDL	POL	RESULT
EPA 8020/WIS DNR GRO				
Date Analyzed: 7/14/99				
Benzene	ug/L	3	10	ND
Toluene	ug/L	3	10	ND
Ethylbenzene	ug/L	3	10	ND
m,p-Xylene*	ug/L	6	10	ND
o-Xylene	ug/L	2	10	[r]6
Gasoline Range Organics	ug/L	20	100	940

Surrogate Recovery	Detector	% Recovery
1-Chloro-4-Fluorobenzene	PID	120%

ANALYSIS	UNITS	MDL	POL	RESULT
WIS DNR DRO				
Date Extracted: 7/08/99				
Date Analyzed: 7/13/99				
Diesel Range Organics	ug/L	30	100	[o]280

[r]Result is above MDL, but below PQL.
[o]Significant peaks detected before DRO window.
* means Coeluting Compounds
ND means Not Detected or below reported MDL
MDL means Method Detection Limit
PQL means Practical Quantification Limit
ug/L means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)

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LABORATORY ANALYSIS REPORT

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CLIENT:	*Ceres Environmental Services* *3825 85th Ave. N* *Brooklyn Park, MN 55443*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:*** ***PROJECT DESCRP.:***	*070199-200371* *7/01/99* *Client* *7/01/99* *Garrison Sports*
CONTACT:	*Micheal Lee*		

		Sample No.:		***L23990-3***
		Sample ID.:		***MW-5***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO				
Date Analyzed: 7/14/99				
Benzene	*ug/L*	*3*	*10*	*ND*
Toluene	*ug/L*	*3*	*10*	*ND*
Ethylbenzene	*ug/L*	*3*	*10*	*ND*
*m,p-Xylene**	*ug/L*	*6*	*10*	*ND*
o-Xylene	*ug/L*	*2*	*10*	*ND*
Gasoline Range Organics	*ug/L*	*20*	*100*	*ND*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*105%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 7/08/99				
Date Analyzed: 7/13/99				
Diesel Range Organics	*ug/L*	*30*	*100*	*(r)59*

(r)Result is above MDL, but below PQL.
** means Coeluting Compounds*
***ND** means Not Detected or below reported MDL*
***MDL** means Method Detection Limit*
***PQL** means Practical Quantification Limit*
***ug/L** means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)*

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New Brighton, MN 55112
(612) 633-0101 FAX (612) 633-1402

CHAIN OF CUSTODY RECORD

Record Number _____

Client Ceres Environmental
Address 3825 85th Ave N.
Brooklyn Park, MN
Phone # (612) 425-8822
Fax # _____
Project # Garrison Sports
Hwy 169, Garrison, MN

Client # _____
Client Contact Mike Lee
Spectrum Contact _____
Spectrum Project # _____
Client P.O.# _____
DUE DATE Normal

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

Spectrum Number	COLLECTION DATE	COLLECTION TIME	SAMPLE I.D. / DESCRIPTION	Number of Containers	MATRIX: WATER	MATRIX: SOIL	MATRIX: OTHER	ANALYSIS REQUIRED: HCl	ANALYSIS REQUIRED: BTEX	ANALYSIS REQUIRED: GRO	ANALYSIS REQUIRED: DRO	COMMENTS
23990-1	7-1-99	—	MW-1	5	X			✓	✓	✓		sl. impacted
-2	↓	—	MW-2	5	X			✓	✓	✓		
-3	↓	—	MW-5	5	X			✓	✓	✓		

Sampled By:	Date	Time	Relinquished By:	Date:	Time:	Received By (lab):	Date:	Time:	Cooler Temp:
Michael A. Lee / Ceres	7-1-99		Michael A. Lee / Ceres	7-1-99	3:50pm		7/1/99	3:[illegible]0	ice
Received By:	**Date**	**Time**	**Relinquished By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**pH:**

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CLIENT:	*Ceres Environmental* *3825 85th Ave. North* *Brooklyn Park, MN 55443*	***PROJECT NO.:***	*101499-200371*
		COLLECTION DATE:	*10/14/99*
		COLLECTED BY:	*Client*
		RECEIVED DATE:	*10/14/99*
		PROJECT DESCRP.:	*Garrison Sports*
CONTACT:	*Micheal Lee*		

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

Report Submitted By,

Lon Jones
Organics Supervisor

TLH:wmc
ce307-1

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CONTACT:	*Micheal Lee*		

		Sample No.:		***27704-1***
		Sample ID.:		***MW-1***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO[d]				
Date Analyzed: 10/22/99				
Benzene	*ug/L*	*6*	*20*	*ND*
Toluene	*ug/L*	*6*	*20*	*ND*
Ethylbenzene	*ug/L*	*6*	*20*	*ND*
*m,p-Xylene**	*ug/L*	*12*	*20*	*ND*
o-Xylene	*ug/L*	*4*	*20*	*ND*
Gasoline Range Organics	*ug/L*	*40*	*200*	*270*

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

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 10/19/99				
Date Analyzed: 10/19/99				
Diesel Range Organics[L]	*ug/L*	*30*	*100*	*ND*

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

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CONTACT:	*Micheal Lee*		

		Sample No.:		***27704-2***
		Sample ID.:		***MW-2***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO[d]				
Date Analyzed: 10/22/99				
Benzene	*ug/L*	*6*	*20*	*ND*
Toluene	*ug/L*	*6*	*20*	*[r]17*
Ethylbenzene	*ug/L*	*6*	*20*	*ND*
*m,p-Xylene**	*ug/L*	*12*	*20*	*ND*
o-Xylene	*ug/L*	*4*	*20*	*ND*
Gasoline Range Organics	*ug/L*	*40*	*200*	*1900*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*[s]151%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 10/19/99				
Date Analyzed: 10/19/99				
Diesel Range Organics[L]	*ug/L*	*30*	*100*	*580*

[d]A dilution was necessary due to levels present; therefore, detection limits were raised.
[r]Result is above MDL, but below PQL.
[s]High surrogate recovery due to matrix interference.
[L]LCS/LCSD recovery was low for DRO.
** means Coeluting Compounds*
***ND** means Not Detected or below reported MDL*
***MDL** means Method Detection Limit*
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CONTACT:	*Micheal Lee*		

		Sample No.:		***27704-3***
		Sample ID.:		***MW-5***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO				
Date Analyzed: 10/22,28/99				
Benzene	*ug/L*	*3*	*10*	*ND*
Toluene	*ug/L*	*3*	*10*	*ND*
Ethylbenzene	*ug/L*	*3*	*10*	*ND*
*m,p-Xylene**	*ug/L*	*6*	*10*	*ND*
o-Xylene	*ug/L*	*2*	*10*	*ND*
Gasoline Range Organics	*ug/L*	*20*	*100*	*ND*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*95.8%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 10/19/99				
Date Analyzed: 10/19/99				
Diesel Range Organics[L]	*ug/L*	*30*	*100*	[r]*45*

[r]*Result is above MDL, but below PQL.*
[L]*LCS/LCSD recovery was low for DRO.*
* *means Coeluting Compounds*
ND *means Not Detected or below reported MDL*
MDL *means Method Detection Limit*
PQL *means Practical Quantification Limit*
ug/L *means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)*

SPECTRUM LABS INC

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

CHAIN OF CUSTODY RECORD

Record Number _____

Client Ceres Environmental
Address 3825 85th Ave N.
Brooklyn Park, MN
Phone # (612) 425-8822
Fax # _____
Project # Garrison Sports
Hwy 169, Garrison, MN

Client # _____
Client Contact Mike Lee
Spectrum Contact _____
Spectrum Project # _____
Client P.O.# _____
DUE DATE Normal

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

Spectrum Number	COLLECTION DATE	COLLECTION TIME	SAMPLE I.D. / DESCRIPTION	Number of Containers	MATRIX: WATER	MATRIX: SOIL	MATRIX: OTHER	ANALYSIS REQUIRED: HCl	ANALYSIS REQUIRED: BTEX	ANALYSIS REQUIRED: GRO	ANALYSIS REQUIRED: DRO	COMMENTS
27704-1	10-14-99	—	MW-1	4	X				✓	✓	✓	
-2	↓	—	MW-2	4	X				✓	✓	✓	
-3	↓	—	MW-5	4	X				✓	✓	✓	

Sampled By:	Date	Time	Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:	Cooler Temp:
Michael A. Lee / Ceres	10-14-99	12:30pm	Michael A. Lee / Ceres	10-14-99	3:30pm	Patrick Lynch			On ice
Received By:	**Date**	**Time**	**Relinquished By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**pH:**
Kathy A. Pethan	10-14-99	3:30							

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LABORATORY ANALYSIS REPORT

DATE:	*February 10, 2000*	***PAGE:***	*4 Of 4*
CLIENT:	*Ceres Environmental* *3825 85th Ave. North* *Brooklyn Park, MN 55443*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:*** ***PROJECT DESCRP.:***	*020300-200371* *2/03/00* *Client* *2/03/00* *Garrison Sports*
CONTACT:	*Micheal Lee*		

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

Report Submitted By,

Lon Jones
Organics Supervisor

TLH:wmc
ce041-1

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LABORATORY ANALYSIS REPORT

DATE: February 10, 2000

PAGE: 1 Of 4

CLIENT: Ceres Environmental
3825 85th Ave. North
Brooklyn Park, MN 55443

CONTACT: Micheal Lee

PROJECT NO.: 020300-200371
COLLECTION DATE: 2/03/00
COLLECTED BY: Client
RECEIVED DATE: 2/03/00
PROJECT DESCRP.: Garrison Sports

		Sample No.:		30749-1
		Sample ID.:		MW-1
ANALYSIS	**UNITS**	**MDL**	**POL**	**RESULT**
EPA 8020/WIS DNR GRO[d]				
Date Analyzed: 2/08/00				
Benzene	ug/L	6	20	ND
Toluene	ug/L	6	20	ND
Ethylbenzene	ug/L	6	20	ND
m,p-Xylene*	ug/L	12	20	ND
o-Xylene	ug/L	4	20	ND
Gasoline Range Organics	ug/L	40	200	250

Surrogate Recovery	**Detector**	**% Recovery**
1-Chloro-4-Fluorobenzene	PID	112%

ANALYSIS	**UNITS**	**MDL**	**POL**	**RESULT**
WIS DNR DRO				
Date Extracted: 2/08/00				
Date Analyzed: 2/09/00				
Diesel Range Organics[L]	ug/L	30	100	ND

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

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LABORATORY ANALYSIS REPORT

DATE:	*February 10, 2000*	***PAGE:***	*2 Of 4*
CLIENT:	*Ceres Environmental* *3825 85th Ave. North* *Brooklyn Park, MN 55443*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:*** ***PROJECT DESCRP.:***	*020300-200371* *2/03/00* *Client* *2/03/00* *Garrison Sports*
CONTACT:	*Micheal Lee*		

		Sample No.:		***30749-2***
		Sample ID.:		***MW-2***
ANALYSIS	***UNITS***	***MDL***	***POL***	***RESULT***
EPA 8020/WIS DNR GRO[d]				
Date Analyzed: 2/08/00				
Benzene	*ug/L*	*6*	*20*	*ND*
Toluene	*ug/L*	*6*	*20*	*[r]10*
Ethylbenzene	*ug/L*	*6*	*20*	*[r]11*
*m,p-Xylene**	*ug/L*	*12*	*20*	*ND*
o-Xylene	*ug/L*	*4*	*20*	*ND*
Gasoline Range Organics	*ug/L*	*40*	*200*	*2400*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*[s]123%*

ANALYSIS	***UNITS***	***MDL***	***POL***	***RESULT***
WIS DNR DRO				
Date Extracted: 2/08/00				
Date Analyzed: 2/09/00				
Diesel Range Organics[L]	*ug/L*	*30*	*100*	*240*

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

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LABORATORY ANALYSIS REPORT

DATE:	*February 10, 2000*	***PAGE:***	*3 Of 4*
CLIENT:	*Ceres Environmental* *3825 85th Ave. North* *Brooklyn Park, MN 55443*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:*** ***PROJECT DESCRP.:***	*020300-200371* *2/03/00* *Client* *2/03/00* *Garrison Sports*
CONTACT:	*Micheal Lee*		

		Sample No.:		***30749-3***
		Sample ID.:		***MW-5***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO				
Date Analyzed: 2/08/00				
Benzene	*ug/L*	*3*	*10*	*ND*
Toluene	*ug/L*	*3*	*10*	*ND*
Ethylbenzene	*ug/L*	*3*	*10*	*ND*
*m,p-Xylene**	*ug/L*	*6*	*10*	*ND*
o-Xylene	*ug/L*	*2*	*10*	*ND*
Gasoline Range Organics	*ug/L*	*20*	*100*	*ND*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*103%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 2/08/00				
Date Analyzed: 2/09/00				
Diesel Range Organics[(L)]	*ug/L*	*30*	*100*	*ND*

[(L)]LCS/LCSD recovery was low for DRO.
** means Coeluting Compounds*
***ND** means Not Detected or below reported MDL*
***MDL** means Method Detection Limit*
***PQL** means Practical Quantification Limit*
***ug/L** means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)*

SPECTRUM LABS INC

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New Brighton, MN 55112
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CHAIN OF CUSTODY RECORD

Record Number _____

Client Ceres Environmental
Address 3825 85th Ave N.
Brooklyn Park, MN
Phone # (612) 425-8822
Fax # (612) 425-5636
Project # Garrison Sports
Hwy 169, Garrison, MN

Client # _____
Client Contact Mike Lee
Spectrum Contact _____
Spectrum Project # _____
Client P.O.# _____
DUE DATE Normal

HCl

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

Spectrum Number	COLLECTION DATE	COLLECTION TIME	SAMPLE I.D. / DESCRIPTION	Number of Containers	MATRIX: WATER	MATRIX: SOIL	MATRIX: OTHER	ANALYSIS REQUIRED: BTEX	GRO	DRO	COMMENTS
30749-1	2-3-00		MW-1	4	X			✓	✓	✓	
-2	↓		MW-2	4	X			✓	✓	✓	
-3	↓		MW-5	4	X			✓	✓	✓	
		TZ	2/7								

Sampled By:	Date	Time	Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:	Cooler Temp:
Michael A. Lee / Ceres	2-3-00	4:30pm	Michael A. Lee / Ceres	2-3-00	4:30pm	Patrick Lynch	2/3	4:30pm	on ONICE.
Received By:	**Date**	**Time**	**Relinquished By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**pH:**

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LABORATORY ANALYSIS REPORT

DATE:	May 18, 2000	**PAGE:**	4 Of 4
CLIENT:	Ceres Environmental 3825 85th Ave. North Brooklyn Park, MN 55443	**PROJECT NO.:** **COLLECTION DATE:** **COLLECTED BY:** **RECEIVED DATE:**	042800-200371 4/28/00 Client 4/28/00
CONTACT:	Mike Lee	**PROJECT DESCP:**	Garrison Sports

				Sample No.:	**33316-4**
				Sample ID.:	**Trip Blank**
ANALYSIS	**UNITS**	**MDL**	**PQL**	**RESULT**
EPA 8020/WIS DNR GRO				
Date Analyzed: 5/09/00				
Benzene	ug/L	1.0	10	ND
Toluene	ug/L	1.0	10	ND
Ethylbenzene	ug/L	1.0	10	ND
m,p-Xylene*	ug/L	2.4	10	ND
o-Xylene	ug/L	1.1	10	ND
Gasoline Range Organics	ug/L	23	100	ND

Surrogate Recovery	**Detector**	**% Recovery**
1-Chloro-4-Fluorobenzene	PID	98.4%

* means Coeluting Compounds
ND means Not Detected or below reported MDL
MDL means Method Detection Limit
PQL means Practical Quantification Limit
ug/L means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)

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

Report Submitted By,

Gerard Herro
Laboratory Manager

GJH:wmc
ce33316

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LABORATORY ANALYSIS REPORT

DATE: May 18, 2000

PAGE: 1 Of 4

CLIENT: Ceres Environmental
3825 85th Ave. North
Brooklyn Park, MN 55443

CONTACT: Mike Lee

PROJECT NO.: 042800-200371
COLLECTION DATE: 4/28/00
COLLECTED BY: Client
RECEIVED DATE: 4/28/00
PROJECT DESCP: Garrison Sports

		Sample No.:		33316-1
		Sample ID.:		MW-1
ANALYSIS	**UNITS**	**MDL**	**PQL**	**RESULT**
EPA 8020/WIS DNR GRO				
Date Analyzed: 5/09/00				
Benzene	ug/L	1.0	10	ND
Toluene	ug/L	1.0	10	(r)2.0
Ethylbenzene	ug/L	1.0	10	(r)3.0
m,p-Xylene*	ug/L	2.4	10	ND
o-Xylene	ug/L	1.1	10	ND
Gasoline Range Organics	ug/L	23	100	200

Surrogate Recovery	**Detector**	**% Recovery**
1-Chloro-4-Fluorobenzene	PID	116%

ANALYSIS	**UNITS**	**MDL**	**PQL**	**RESULT**
WIS DNR DRO				
Date Extracted: 5/02/00				
Date Analyzed: 5/03/00				
Diesel Range Organics(L)	ug/L	30	100	ND

(r)Result is above MDL, but below PQL.
(L)LCS/LCSD recovery was low for DRO.
* means Coeluting Compounds
ND means Not Detected or below reported MDL
MDL means Method Detection Limit
PQL means Practical Quantification Limit
ug/L means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)

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LABORATORY ANALYSIS REPORT

DATE:	*May 18, 2000*	***PAGE:***	*2 Of 4*
CLIENT:	*Ceres Environmental* *3825 85th Ave. North* *Brooklyn Park, MN 55443*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:***	*042800-200371* *4/28/00* *Client* *4/28/00*
CONTACT:	*Mike Lee*	***PROJECT DESCP:***	*Garrison Sports*

		Sample No.:		***33316-2***
		Sample ID.:		***MW-2***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO[d]				
Date Analyzed: 5/09,10/00				
Benzene	*ug/L*	*2.0*	*20*	*[r]5.0*
Toluene	*ug/L*	*2.0*	*20*	*[r]3.0*
Ethylbenzene	*ug/L*	*2.0*	*20*	*[r]9.0*
*m,p-Xylene**	*ug/L*	*4.8*	*20*	*ND*
o-Xylene	*ug/L*	*2.2*	*20*	*[r]4.0*
Gasoline Range Organics	*ug/L*	*46*	*200*	*1400*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*115%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 5/02/00				
Date Analyzed: 5/03/00				
Diesel Range Organics[L]	*ug/L*	*30*	*100*	*[r]98*

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

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LABORATORY ANALYSIS REPORT

DATE:	*May 18, 2000*	***PAGE:***	*3 Of 4*
CLIENT:	*Ceres Environmental* *3825 85th Ave. North* *Brooklyn Park, MN 55443*	***PROJECT NO.:*** ***COLLECTION DATE:*** ***COLLECTED BY:*** ***RECEIVED DATE:***	*042800-200371* *4/28/00* *Client* *4/28/00*
CONTACT:	*Mike Lee*	***PROJECT DESCP:***	*Garrison Sports*

		Sample No.:		***33316-3***
		Sample ID.:		***MW-5***
ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
EPA 8020/WIS DNR GRO				
Date Analyzed: 5/09/00				
Benzene	*ug/L*	*1.0*	*10*	*ND*
Toluene	*ug/L*	*1.0*	*10*	*ND*
Ethylbenzene	*ug/L*	*1.0*	*10*	*ND*
*m,p-Xylene**	*ug/L*	*2.4*	*10*	*ND*
o-Xylene	*ug/L*	*1.1*	*10*	*ND*
Gasoline Range Organics	*ug/L*	*23*	*100*	*ND*

Surrogate Recovery	***Detector***	***% Recovery***
1-Chloro-4-Fluorobenzene	*PID*	*89.0%*

ANALYSIS	***UNITS***	***MDL***	***PQL***	***RESULT***
WIS DNR DRO				
Date Extracted: 5/02/00				
Date Analyzed: 5/03/00				
Diesel Range Organics[L]	*ug/L*	*30*	*100*	*ND*

[L] *LCS/LCSD recovery was low for DRO.*
** means Coeluting Compounds*
***ND** means Not Detected or below reported MDL*
***MDL** means Method Detection Limit*
***PQL** means Practical Quantification Limit*
***ug/L** means Micrograms Per Liter which is equivalent to Parts Per Billion (ppb)*

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

CHAIN OF CUSTODY RECORD

Record Number _____

Client Ceres Environmental
Address 3825 85TH Ave North
Brooklyn Park, MN
Phone # (612) 425-8822
Fax # _____
Project # Garrison Sports
Hwy 169, Garrison, MN

Client # _____
Client Contact Mike Lee
Spectrum Contact _____
Spectrum Project # _____
Client P.O.# _____
DUE DATE Normal

HCl

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

Spectrum Number	COLLECTION DATE	COLLECTION TIME	SAMPLE I.D. / DESCRIPTION	Number of Containers	MATRIX: WATER	MATRIX: SOIL	MATRIX: OTHER	ANALYSIS REQUIRED: BTEX	GRO	DRO	COMMENTS
33316-1	4-28-00		MW-1	4	X			✓	✓	✓	
-2			MW-2	4	X			✓	✓	✓	
-3			MW-5	4	X			✓	✓	✓	
-4			TRIP								
					7	2		×			on ice

Sampled By:	Date	Time	Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:	Cooler Temp:
Michael A. Lee / Ceres	4-28-00		Michael A. Lee / Ceres	4-28-00	3:35pm		4/28	1530	
Received By:	**Date**	**Time**	**Relinquished By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**pH:**

REMEDIAL INVESTIGATION / CORRECTIVE ACTION DESIGN REPORT

GARRISON SPORTS
P.O. BOX 85, HIGHWAY 169
GARRISON, MINNESOTA 56450

MPCA SITE ID#: LEAK #10037

Prepared For:

Mr. Kari Hough
Garrison Sports
P.O. Box 85, Highway 169
Garrison, Minnesota 56450

Prepared By:

CERES ENVIRONMENTAL SERVICES
3825 85th Avenue North
Brooklyn Park, MN 55443

April 1999

Table 3.

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

SOIL LABORATORY RESULTS
Concentrations (ppm)

Well/Boring, Depth (ft)	Date Analyzed	MtBE	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	DRO	GRO
MW-1 (8-10)	7/17/97	BDL	5.9	44	24	88	300	1,200
MW-1 (38-40)	7/17/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-2 (8-10)	7/17/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-3 (8-10)	7/17/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-4 (8-10)	7/17/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-5 (8-10)	7/17/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SB-1 (8-10)	7/17/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: Please refer to Appendix B for laboratory results.
GRO = gasoline range organics
BDL = below laboratory detection limit
ppm = parts per million
DRO = diesel range organics
MtBE = Methyl tert-Butyl Ether

Table 4.

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

There are no other notable contaminants that were detected in the soil samples.

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

There were no non-petroleum related compounds detected.

4.6 Describe the vertical and horizontal extent and magnitude of soil contamination.
The horizontal extent of soil contamination has been defined by perimeter soil borings SB-1, MW-3, MW-4, and MW-5. Soil boring MW-1 was advanced in the worst case area (release area). The vertical extent of soil contamination was established in boring MW-1 where the boring was completed 20 feet below the water table and 10 feet below deepest measurable contamination. Also, a dense silt (confining layer) was encountered at approximately 34 feet in boring MW-1. DRO concentrations of 300 ppm and GRO concentrations of 1,200 ppm were detected between (8-10 feet) in the former tank basin area. Therefore, the horizontal and vertical extent of the soil contamination has been established relative to this release site.

Section 5: Aquifer Characteristics/Ground Water Contamination Assessment

5.1 Indicate the hydraulic conductivity and the method used to determine it. Attach all supporting information for the determination in the Methodologies appendix:
The estimated hydraulic conductivity and porosity were based on tables referenced in Freeze and Cherry, 1979, and Groundwater and Wells, 1986. Please refer to Appendix C.

____0.001____ **cm/sec**

__X_ **estimate from reference**
____ **slug test**
____ **permeability test**
____ **Hazen approximation from grain-size distribution**

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

____ **less than 10 feet**
____ **between 10 and 20 feet**
__X_ **20 feet or greater**

5.3 Describe in detail the geology underlying the site including confining layers, bedrock formations and the lateral extent of these formations:
The stratigraphy underlying the site consists of a medium then fine sand to a depth of approximately 34 feet where a dense silt (confining layer) was encountered. The boring termination depth is at 40 feet. The water table was encountered at a depth of approximately 7-9 feet below ground surface. The lateral extent of the above described deposits is throughout the site boring and monitoring well network. There were no bedrock formations encountered during the subsurface investigation.

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

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

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

5.5 If other water supplies are available, explain.
The water supply wells in the area are completed into a sand/rock development at depths of approximately 75-120 feet.

5.6 Are there any other reasons the impacted aquifer should not be considered a resource aquifer?
According to the MPCA conditions described above, this aquifer meets the conditions to be considered a potential resource aquifer. However, this aquifer is not currently being used and may never be used as a resource aquifer.

Table 5.

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

	SB-1	MW-1	MW-2	MW-3	MW-4	MW-5
Water level depth, ft	9	8	7	7	7	7

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

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

Table 6.

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

Well/Boring Number	Date Sampled	MtBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO	GRO

Note: There were no water samples collected from the borings, temporary wells, or push probes.

Table 7.

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

GROUNDWATER LABORATORY RESULTS
OTHER DETECTED COMPOUNDS FROM BORINGS
Concentrations (ppb)

Boring Number	n-Butyl-benzene	sec-Butyl-benzene	Ethyl Benzene	Isopropyl Benzene	Methyl Ethyl Ketone	Napth-alene	n-Propyl-benzene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene

Note: Not Applicable

5.8 If any non-petroleum compounds were detected list them below and indicate whether they exceed the HRLs. Also, identify possible sources of these compounds.
Not Applicable

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

5.10 Describe observations of any evidence of a fluctuating water table and a seasonal high water table (e.g., mottling). Also, from other sources of information describe the range of natural water table fluctuations in the area.
There was no evidence of a fluctuating water table or a seasonally high water table mark. No other sources of information were found to describe a range of natural water table fluctuations in the area.

5.11 In your judgment, is there a sufficient distance separating the petroleum contaminated soil (or an impacted non-resource aquifer) from the underlying resource aquifer to prevent petroleum contamination of the resource aquifer? Please explain in detail. In your explanation consider the data and information of this section as well as the nature of the petroleum release (i.e., volume, when it occurred, petroleum product).

YES NO

The subject aquifer is a potential resource aquifer, which is not being used at this time and may never be used as such. The vertical and lateral extent of this release has been defined and the petroleum release is localized to the release source area. The source of the release is from the former UST area (tank basin where three gasoline USTs and one dispenser was located). This release appears to be a small volume of product that has only marginally impacted the groundwater and is confined within the monitoring well network. (Note: A majority of the petroleum-impacted soil was removed during the tank removal procedures.)

Additional Ground Water Investigation

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

Section 6. Extent and Magnitude of Groundwater Contamination

Table 8.

Monitoring well construction.

Well Number	Unique Well Number	Date Installed	Relative Surface Elevation	Riser Height Above Grade	Bottom of Well (Elevation)	Screen Interval (Elev. - Elev.)
MW-1	599534	7/17/97	100.05	(0.05)	85.05	85.05-95.05
MW-2	599535	7/15/97	99.43	(0.15)	85.43	85.43-95.43
MW-3	599536	7/16/97	99.09	(0.13)	85.09	85.09-95.09
MW-4	599537	7/16/97	99.37	(0.01)	85.37	85.37-95.37
MW-5	599540	7/16/97	97.33	2.40	84.33	84.33-94.33

Notes: Top of casing reference based on assumed 100 foot elevation taken from the top of the two inch casing in monitoring well MW-1. Please refer to Appendix E for well construction diagrams.

Table 9.

Water table summary.

MONITORING WELL GROUNDWATER ELEVATIONS

Monitoring Well Number	Date Measured	Depth of Water from Top of Casing (ft)	Product Thickness	Depth of Water Below Grade (ft)	Relative Groundwater Elevation
MW-1	08-28-97	7.73	None	7.78	92.27
	11-20-97	8.66	None	8.71	91.34
	11-19-98	8.90	None	8.95	91.10
MW-2	08-28-97	7.13	None	7.28	92.15
	11-20-97	8.03	None	8.18	91.25
	11-19-98	8.31	None	8.46	90.97
MW-3	08-28-97	6.84	None	6.97	92.12
	11-20-97	7.70	None	7.83	91.26
	11-19-98	7.98	None	8.11	90.98

MONITORING WELL GROUNDWATER ELEVATIONS (continued)

Monitoring Well Number	Date Measured	Depth of Water from Top of Casing (ft)	Product Thickness	Depth of Water Below Grade (ft)	Relative Groundwater Elevation
MW-4	08-28-97	7.14	None	7.15	92.22
	11-20-97	8.08	None	8.09	91.28
	11-19-98	8.36	None	8.37	91.00
MW-5	08-28-97	7.87	None	5.47	91.86
	11-20-97	8.72	None	6.32	91.01
	11-19-98	9.08	None	6.68	90.65

Note: Top of casing reference based on assumed 100 foot elevation taken from the north side of the top of the two inch casing in monitoring well MW-1.

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

If *YES*, which are deep wells?

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

Provide estimates of the following additional aquifer parameters:
Please refer to Appendix C for groundwater velocity calculations.

Horizontal Gradient (dh/dl): 0.30 ft / 91.0 ft = 0.0033

Vertical Gradient (dv/dl): No gradient established

Porosity: 35%

Flow direction: East

Hydraulic Conductivity (K) 0.001 **cm/sec**

Pore velocity: 2.97 **meters/year**

Table 10.

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

Indicate the laboratory analytical results for water samples.

Well/Boring Number	Date Sampled	MtBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO
MW-1	08/28/97	BDL	280	540	89	590	7,700	1,300
	11/20/97	BDL	BDL	26	11	33.8	3,800	670
	11/19/98	BDL	BDL	3.7	BDL	1.8	440	190
MW-2	08/28/97	BDL	BDL	2.9	BDL	5.7	2,700	820
	11/20/97	BDL	BDL	5.7	6.1	13.4	3,300	440
	11/19/98	BDL	BDL	3.0	3.4	8.7	1,700	440
MW-3	08/28/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/20/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-4	08/28/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/20/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-5	08/28/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/20/97	0.96	BDL	BDL	BDL	0.58	BDL	BDL
	11/19/98	BDL	BDL	0.5	BDL	BDL	BDL	BDL

Note: The laboratory report results are included in Appendix B.

µg/l = ppb = parts per billion
BDL = below laboratory detection limit
DRO = diesel range organics
GRO = gasoline range organics
MtBE = methyl tert-butyl ether

Table 11.

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

Well #	Date Samples	n-Butyl-ben-zene	sec-Butyl-ben-zene	Iso-propyl-Ben-zene	Methyl Ethyl Ketone	Napth-alene	n-Propyl-ben-zene	1,2,4-Tri-methyl-Ben-zene	Ace-tone	Methyl Iso-butyl Ketone	p-Iso-propyl-toluene	1,3,5-Tri-methyl-Ben-zene
MW-1	08/28/97	140	8.5	22	BDL	28	62	380	BDL	BDL	BDL	170
	11/20/97	150	BDL	BDL	BDL	BDL	31	56	BDL	BDL	BDL	83
	11/19/98	17	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-2	08/28/97	77	11	24	180	16	14	16	140	21	4.6	BDL
	11/20/97	110	8.4	22	140	13	24	BDL	BDL	BDL	BDL	BDL
	11/19/98	54	5.6	15	110	BDL	16	BDL	BDL	BDL	BDL	BDL

Table 11.
(continued)

Well #	Date Samples	n-Butyl-benzene	sec-Butyl-benzene	Iso-propyl-Benzene	Methyl Ethyl Ketone	Napth-alene	n-Propyl-benzene	1,2,4-Tri-methyl-Benzene	Ace-tone	Methyl Iso-butyl Ketone	p-Iso-propyl-toluene	1,3,5-Tri-methyl-Benzene
MW-3	8/28/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/20/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-4	8/28/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/20/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-5	8/28/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/20/97	BDL	0.81	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: The laboratory report results are included in Appendix B.
µg/l = ppb = parts per billion

6.2 If any non-petroleum compounds were detected list them below and indicate whether they exceed the HRLs. Also, identify possible sources of these compounds.
Acetone was detected in the groundwater sample collected from monitoring well MW-2 in the initial sampling event. Subsequent sampling events from MW-2 did not detect acetone. The acetone detected in the initial sampling event did not exceed the Minnesota Department of Health (MDH) HRLs. (Note: The acetone detect may have been misidentified during analysis procedures because of similar retention times in the analytical system to other petroleum compounds.)

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

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

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

6.5 Provide an estimate of the longitudinal length of the dissolved contaminant plume: < 150 feet

6.6 Describe the extent and magnitude of the ground water contamination:
The groundwater contamination is confined (defined) within the monitoring well network. The petroleum release appears to be a small volume of product that has only impacted the groundwater near the source area (former tank basin where three gasoline USTs and one dispenser was located). (Note: A majority of the petroleum-impacted soil was removed during the tank removal procedures.)

Section 7: Evaluation of natural attenuation

Table 12.

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

Monitoring Well	Temp. °C	pH	Dissolved oxygen (mg/l)	Nitrate (mg/l)	(Fe II) (mg/l)	(H_2S, HS^-) (mg/l)
MW-1	15.6	11.6	0.6	NA	NA	NA
MW-2	16.7	6.6	1.0	NA	NA	NA
MW-3	16.1	6.4	3.0	NA	NA	NA
MW-4	16.7	7.2	3.0	NA	NA	NA
MW-5	18.9	6.6	3.0	NA	NA	NA

Notes: NA = not available.

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

The low dissolved oxygen concentrations within the dissolved contaminant plume and the higher oxygen concentrations outside of the contaminant plume indicate that bioactivity is occurring.

7.2 In your judgment, is natural biodegradation occurring at this site? Please explain. YES NO

Because the dissolved contaminant plume is moving slowly downgradient and the soil type within the aquifer is medium to fine sand, natural biodegradation activities are likely occurring. Also, the difference in contaminant concentrations between monitoring well MW-2 (just downgradient from release) and MW-5 (farthest downgradient nearly clean) indicate natural biodegradational activities are occurring.

Section 11: Discussion

11.1 Discuss the risks associated with the remaining soil contamination?

The soil boring investigation indicated that the soil contamination is localized to the release source area. Also, a majority of the petroleum-impacted soil was removed during the tank removal procedures. The potential for petroleum vapors to migrate from this site is minimal. Therefore the risks associated with the remaining contaminated soil is minimal.

11.2 Discuss the risks associated with the impacted ground water?

The dissolved contaminant plume is defined within the monitoring well network and natural biodegradation is likely occurring at this site. The onsite water supply well (Garrison Sports) is upgradient from the petroleum release, and this well was sampled and no petroleum related compounds were detected. There are no water supply wells located downgradient from the release site. Also, there is a nearly clean downgradient monitoring well located between the release area and Mille Lacs Lake indicating that it is not likely that any petroleum contaminants are reaching this surficial water body. Therefore, the risks associated with the impacted groundwater are minimal.

11.3 Discuss other concerns not mentioned above:

There are no other concerns relative to this release site. Considering the above mentioned risk determinations, the potential for this petroleum release site to impact receptors is minimal. Therefore, this release does not appear to constitute a threat to the public health and welfare, or to an environmental resource.

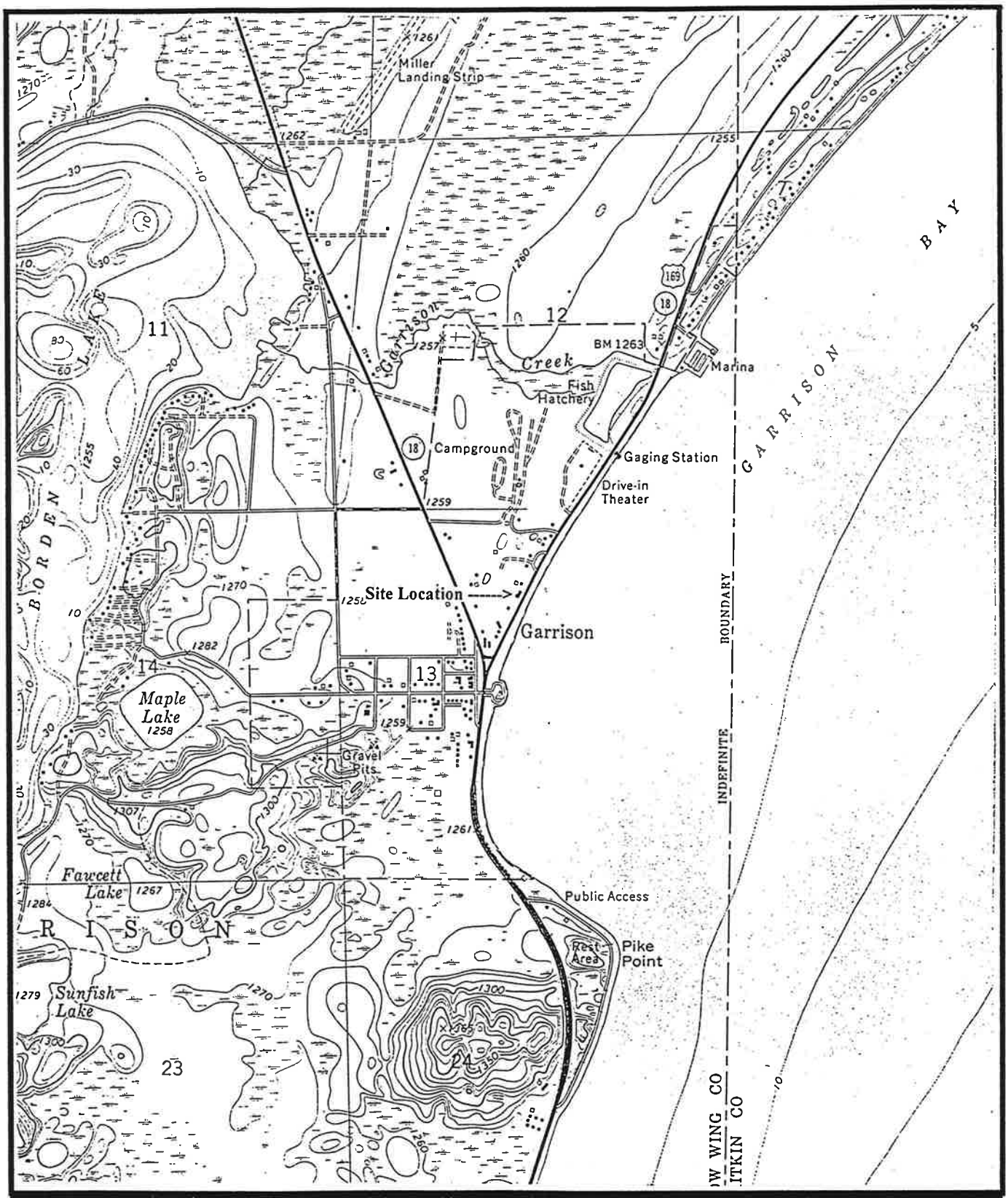
Section 12: Conclusions and Recommendations

Recommendation for site:

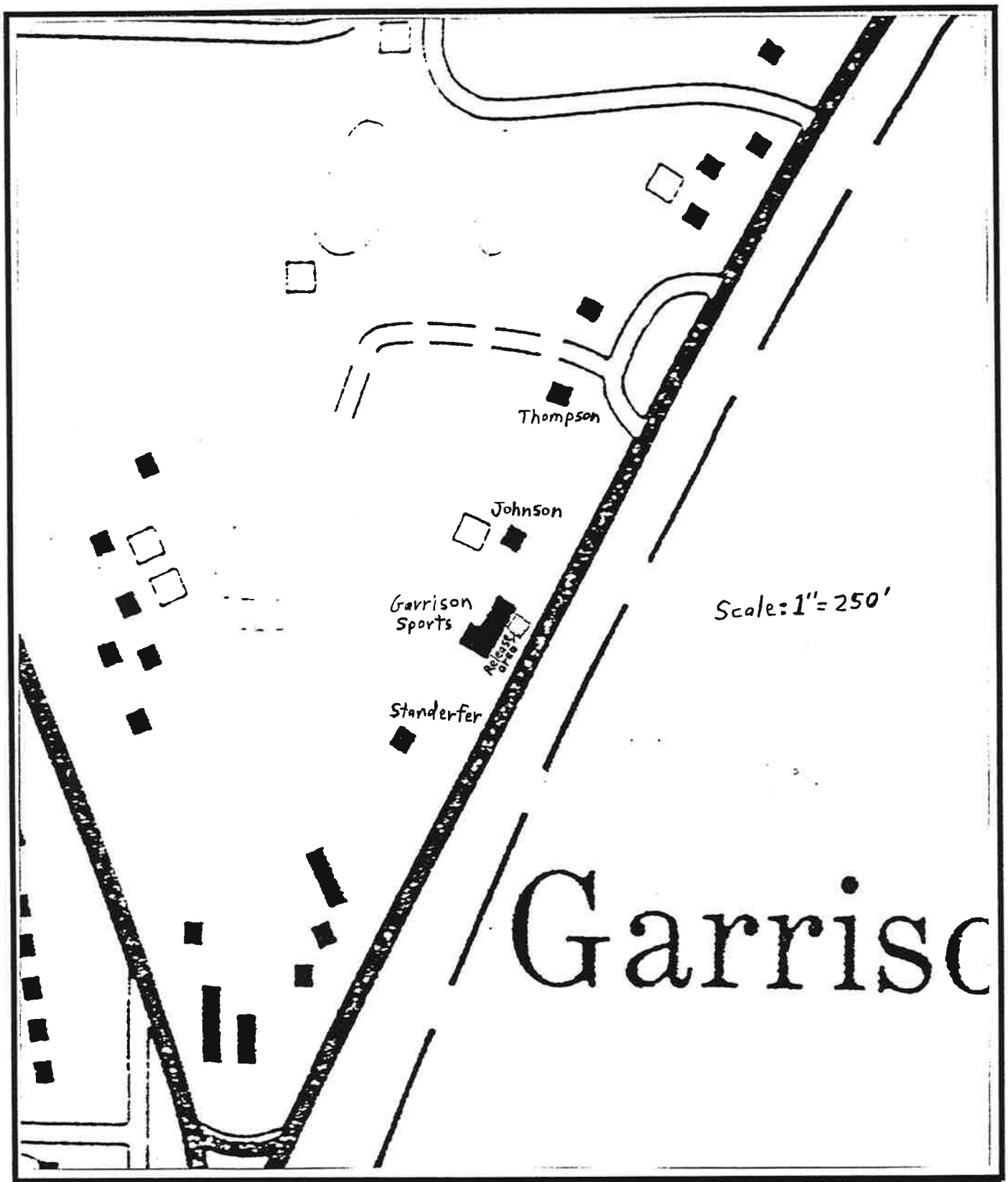
___ site closure
____ additional vapor monitoring
__X_ additional ground water monitoring
____ active cleanup

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

On page five of fact sheet #3.1, the MPCA indicates that it is not possible to establish plume stability with only two groundwater sampling events. Also stated, is that at least six rounds of quarterly monitoring data will be necessary to evaluate plume stability on a site by site basis. Therefore, Ceres Environmental Services, on behalf of Garrison Sports, recommends groundwater sampling of the site monitoring wells on a quarterly basis for a period of one year. After this one year period of groundwater monitoring, an annual report will be submitted to the MPCA as described in fact sheet #3.26. (Note: Due to the minimal risk associated with this release site, the MPCA may want to consider closure of this site.)



CERES ENVIRONMENTAL	SITE LOCATION: LEAK #10037 GARRISON SPORTS P.O. BOX 85, HIGHWAY 169 GARRISON, MN	FIGURE 1: SITE LOCATION MAP GARRISON QUAD MINNESOTA 7.5 MINUTE SERIES



CERES ENVIRONMENTAL	SITE LOCATION: LEAK #10037 GARRISON SPORTS P.O. BOX 85, HIGHWAY 169 GARRISON, MN	FIGURE 6: WALKING SURVEY PROPERTY/ WATER SUPPLY WELL LOCATION MAP

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 dispenser of the tank system were in fair to poor condition.

D. Identify and describe the source or suspected source(s) of the release.
The source of release is suspected to have been from leaking dispenser lines and connections, and from leaking piping and/or connections.

E. What was the volume of the release? (if known): Not Known

F. When did the release occur? (if known): Not Known

G. Describe source of on-site drinking water.
The onsite drinking water source is Garrison Sports residential water supply well.

PART IV: EXCAVATION INFORMATION

A. Dimensions of excavation: 20' x 30' x 8'

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

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

D. Quantity of contaminated soil removed for treatment (cubic yards):
[Note: If more than 150 cubic yards removed, please attach copy of written approval from MPCA.] 150 cubic yards of contaminated soil were removed for treatment.

E. Were new tanks installed at the site? (No) **If yes, how much soil was excavated to accommodate the installation of the new tanks?** Not Applicable

F. Was ground water encountered or was there evidence of a seasonally high ground water table? (Yes) **At what depth?** Groundwater was encountered at a depth of approximately (7-8 ft) below ground surface and there was no evidence of a seasonally high ground water table.

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

C. 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.
Please refer to the following table.

Table 3. Soil Sample Analytical results from bottom samples.

Sample Code	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO
D-1/Dispenser	BDL	BDL	BDL	BDL	BDL	NA
D-2/Dispenser	BDL	BDL	BDL	BDL	BDL	NA
D-3/Dispenser	BDL	BDL	BDL	BDL	BDL	18
B-4 UST#4 (9 ft)	BDL	BDL	BDL	BDL	NA	BDL
B-1 (7 ft)	0.31	1.7	0.30	6.4	73	23
B-2 (7 ft)	BDL	BDL	BDL	BDL	BDL	BDL
B-3 (7 ft)	BDL	BDL	BDL	BDL	BDL	NA
B-4 (7 ft)	BDL	BDL	BDL	BDL	BDL	NA

Note: Copies of laboratory reports and chain of custody forms are included in Appendix A.
All results are recorded in parts per million (ppm).
DRO = diesel range organics
NA = not analyzed

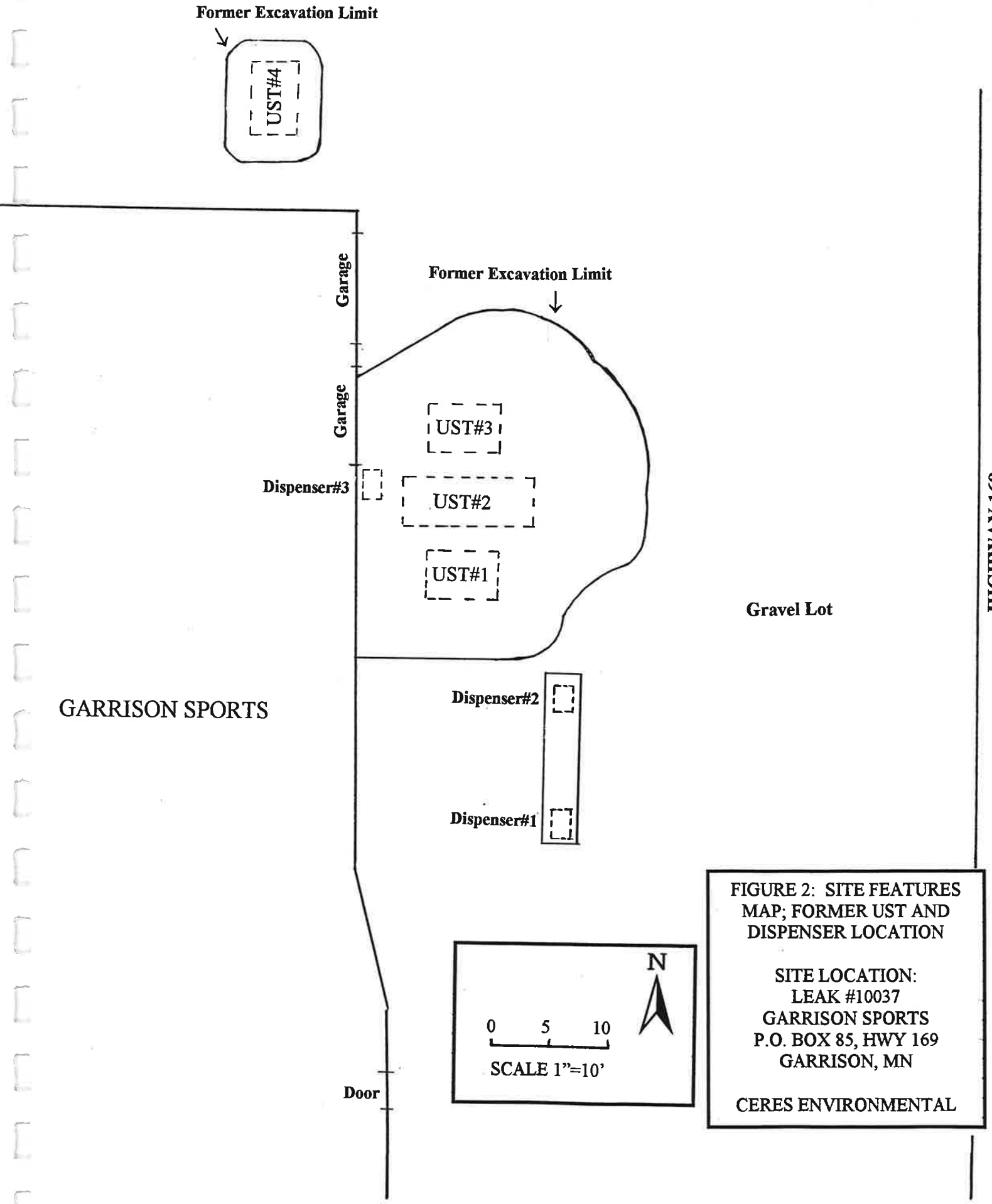


FIGURE 2: SITE FEATURES MAP; FORMER UST AND DISPENSER LOCATION

SITE LOCATION:
LEAK #10037
GARRISON SPORTS
P.O. BOX 85, HWY 169
GARRISON, MN

CERES ENVIRONMENTAL

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY REPORT

Client: CERES Contracting
3825 85th Ave. North
Brooklyn Park, MN

Project: Garrison Sports
Garrison, MN

Date Sampled: 07/15/97 - 07/16/97
Date Received: 07/17/97
Date Analyzed: 07/17/97 - 07/22/97
Physical State: Soil

Report Date: 07/23/97
Lab P.N.: 1010-83
Client P.N.: NA

Quality Assurance / Quality Control Summary

Parameter (Method)	QC Type	Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
MtBE (EPA 8020)	M	93	76 - 125	0.44	0 - 20
Benzene (EPA 8020)	M	95	87 - 116	1.5	0 - 20
Toluene (EPA 8020)	M	98	87 - 115	0.84	0 - 20
Ethylbenzene (EPA 8020)	M	96	84 - 120	1.1	0 - 20
m,p-Xylenes (EPA 8020)	M	106	90 - 120	0.56	0 - 20
o-Xylenes (EPA 8020)	M	100	92 - 115	0.87	0 - 20
DRO (Wis. DNR)	M	90	70 - 120	6.8	0 - 20

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area of known standards using a Hewlett Packard ChemStation Data System. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY RESULTS

Client: CERES Contracting
3825 85th Ave. North
Brooklyn Park, MN

Project: Garrison Sports
Garrison, MN

Date Sampled: 07/15/97 - 07/16/97
Date Analyzed: 07/17/97 - 07/22/97
Physical State: Soil

Report Date: 07/23/97
Lab P.N.: 1010-83
Client P.N.: NA

Sample I.D.	MtBE mg/kg EPA 8020	Benzene mg/kg EPA 8020	Toluene mg/kg EPA 8020	Ethyl-benzene mg/kg EPA 8020	Total, Xylenes mg/kg EPA 8020	GRO mg/kg Wis. DNR	DRO mg/kg Wis. DNR	% Moisture
MW-1 (8-10')	< 0.27	5.9	44	24	88	1,200	300	15
MW-1 (38-40')	< 0.13	< 0.059	< 0.21	< 0.21	< 0.39	< 3.3	< 0.90	17
MW-2 (8-10')	< 0.13	< 0.061	< 0.21	< 0.22	< 0.41	< 3.3	< 0.90	12
MW-3 (8-10')	< 0.13	< 0.060	< 0.21	< 0.21	< 0.40	< 3.3	< 0.90	16
MW-4 (8-10')	< 0.13	< 0.061	< 0.21	< 0.22	< 0.41	< 3.3	< 0.90	17
MW-5 (8-10')	< 0.13	< 0.061	< 0.21	< 0.22	< 0.40	< 3.3	< 0.90	16
SB-1 (8-10')	< 0.13	< 0.061	< 0.21	< 0.22	< 0.41	< 3.3	< 0.90	21
PQL, mg/kg	0.0015	0.00070	0.0025	0.0025	0.0047	3.3	0.90	
MDL, mg/kg	0.00030	0.00014	0.00049	0.00050	0.00093	0.65	0.23	

MDL; Method Detection Limit for undiluted samples.

PQL; Practical Quantitation Limit for undiluted samples.

GRO; Gasoline Range Organics

DRO; Diesel Range Organics

MtBE; Methyl tert-Butyl Ether

All results are in mg/kg which is equal to parts-per-million (ppm) and are based on a "dry weight" basis.

The Laboratory Results are only a part of the Laboratory Report.

Horizon Laboratories, Inc.

CHAIN-OF-CUSTODY RECORD

4463 White Bear Parkway, Suite #105 St, Paul, MN. 55110 Tel. 612 / 653-3471 Fax 612 / 653-3475

Ceres Environmental
Client Name

3825 85TH Ave North
Client Address (Street No., Suite #)

Brooklyn Park, MN
Client Address (City, State, Zip)

Normal Turnaround ☒ If Other, Specify _____

[MW-1 (8-10')] is impacted
Client Comments:

Client Comments:

Michael A. Lee / Ceres
Sample Collector's Signature

Garrison Sports
Project Name

Garrison, MN
Project Address

Client Project Number

Mike Lee / Ceres
Send Report to:

Page 1 of 1

Laboratory Receiving Notes:

HLI Project No. 1010-83

Check if "received on ice" ☑

Temperature of Shipping Container: °C

Lab Comments:

Invoice No.

Code A-None, B-HNO_3, C-H_2SO_4, D-MeOH, E-HCl, F-____

Item No.	Field Sample ID	Matrix	Date Sampled	Time Sampled	Analysis Requested: GRO/BTEX (Filtered (Y/N) N, Preserved (Code) A)	Analysis Requested: MTBE (Filtered (Y/N) N, Preserved (Code) A)	Analysis Requested: DRO (Filtered (Y/N) N, Preserved (Code) A)	No. of Items	Container Type	Sample Condition	Horizon No.
1	MW-1 (8-10')	S	7-15-97	—	✓	✓	✓	3			30462
2	MW-1 (38-40')	S	"	—	✓	✓	✓	3			30463
3	MW-2 (8-10')	S	"	—	✓	✓	✓	3			30464
4	MW-3 (8-10')	S	7-16-97	—	✓	✓	✓	3			30465
5	MW-4 (8-10')	S	"	—	✓	✓	✓	3			30466
6	MW-5 (8-10')	S	"	—	✓	✓	✓	3			30467
7	SB-1 (8-10')	S	"	—	✓	✓	✓	3			30468
8											
9											
10											

RELINQUISHED BY / COMPANY	DATE	TIME	RECEIVED BY / COMPANY	DATE	TIME
Michael A. Lee / Ceres	7-17-97	7:50AM	[illegible] / Horizon Labs	7/18/97	7 50

Copies: White - Client (completion), Yellow - File (completion), Pink - Client (initial)

Rvs 3 (8/96)

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY REPORT

Client:	CERES Environmental	Date Sampled:	08/28/97
	3825 85th Ave. North	Date Received:	08/29/97
	Brooklyn Center, MN	Date Analyzed:	08/29/97 - 09/05/97
		Physical State:	Aqueous
Project:	Garrison Sports	Report Date:	09/10/97
	P.O. Box 85, Hwy 169	Lab P.N.:	1010-83.2
	Garrison, MN	Client P.N.:	NA

Quality Assurance / Quality Control Summary

Parameter: (Method)	QC Type	Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
MtBE (MDH 465E)	M	93	73 - 125	0.53	0 - 25
Benzene (MDH 465E)	M	93	83 - 116	2.0	0 - 8.5
Toluene (MDH 465E)	M	93	82 - 117	2.9	0 - 13
Ethylbenzene (MDH 465E)	M	93	81 - 116	3.2	0 - 10
m,p-Xylenes (MDH 465E)	M	92	76 - 118	3.7	0 - 12
o-Xylene (MDH 465E)	M	94	83 - 115	2.5	0 - 9.0
cis-1,2-Dichloroethene (MDH 465E)	M	90	88 - 113	0.77	0 - 11
Tetrachloroethene (MDH 465E)	M	95	79 - 121	4.2	0 - 12
GRO (Wis. DNR)	M	115	80 - 120	3.3	0 - 20
DRO (Wis. DNR)	M	115	80 - 120	7.2	0 - 20

M = Matrix Spike / Matrix Spike Duplicate L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area to those of known standards using a Hewlett Packard ChemStation data system. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody Record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Center, MN

Date Sampled: 08/28/97
Date Analyzed: 09/02/97 - 09/03/97
Physical State: Aqueous

Project: Garrison Sports
P.O. Box 85, Hwy 169
Garrison, MN

Report Date: 09/10/97
Lab P.N.: 1010-83.2
Client P.N.: NA

VOC Results: Page 1 of 4

Parameter	MW-1 µg/l MDH 465E	MW-2 µg/l MDH 465E	MW-3 µg/l MDH 465E	MW-4 µg/l MDH 465E	MW-5 µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
Acetone	< 160	**140**	< 16	< 16	< 16	16	3.1
Allyl Chloride	< 14	< 1.4	< 1.4	< 1.4	< 1.4	1.4	0.28
Benzene	**280**	< 0.28	< 0.28	< 0.28	< 0.28	0.28	0.056
Bromobenzene	< 2.6	< 0.26	< 0.26	< 0.26	< 0.26	0.26	0.052
Bromochloromethane	< 6.5	< 0.65	< 0.65	< 0.65	< 0.65	0.65	0.13
Bromodichloromethane	< 3.1	< 0.31	< 0.31	< 0.31	< 0.31	0.31	0.061
Bromoform	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
Bromomethane	< 30	< 3.0	< 3.0	< 3.0	< 3.0	3.0	0.60
n-Butylbenzene	**140**	**77**	< 1.3	< 1.3	< 1.3	1.3	0.26
sec-Butylbenzene	**8.5**	**11**	< 0.70	< 0.70	< 0.70	0.70	0.14
tert-Butylbenzene	< 8.0	< 0.80	< 0.80	< 0.80	< 0.80	0.80	0.16
Carbon Tetrachloride	< 4.3	< 0.43	< 0.43	< 0.43	< 0.43	0.43	0.085
Chlorobenzene	< 3.6	< 0.36	< 0.36	< 0.36	< 0.36	0.36	0.071
Chloroethane	< 34	< 3.4	< 3.4	< 3.4	< 3.4	3.4	0.68
Chloroform	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	0.50	0.10
Chloromethane	< 45	< 4.5	< 4.5	< 4.5	< 4.5	4.5	0.89
2-Chlorotoluene	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
4-Chlorotoluene	< 6.5	< 0.65	< 0.65	< 0.65	< 0.65	0.65	0.13
Dibromochloromethane	< 5.5	< 0.55	< 0.55	< 0.55	< 0.55	0.55	0.11
1,2-Dibromo-3-Chloropropane	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
1,2-Dibromoethane	< 1.6	< 0.16	< 0.16	< 0.16	< 0.16	0.16	0.031
Dibromomethane	< 2.8	< 0.28	< 0.28	< 0.28	< 0.28	0.28	0.055
1,2-Dichlorobenzene	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
1,3-Dichlorobenzene	< 6.0	< 0.60	< 0.60	< 0.60	< 0.60	0.60	0.12
1,4-Dichlorobenzene	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	0.50	0.10
Dichlorodifluoromethane	< 32	< 3.2	< 3.2	< 3.2	< 3.2	3.2	0.63
1,1-Dichloroethane	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
1,2-Dichloroethane	< 3.1	< 0.31	< 0.31	< 0.31	< 0.31	0.31	0.061
1,1-Dichloroethene	< 8.5	< 0.85	< 0.85	< 0.85	< 0.85	0.85	0.17
cis-1,2-Dichloroethene	< 8.0	< 0.80	< 0.80	< 0.80	< 0.80	0.80	0.16
trans-1,2-Dichloroethene	< 7.5	< 0.75	< 0.75	< 0.75	< 0.75	0.75	0.15
Dichlorofluoromethane	< 20	< 2.0	< 2.0	< 2.0	< 2.0	2.0	0.39
1,2-Dichloropropane	< 2.7	< 0.27	< 0.27	< 0.27	< 0.27	0.27	0.053
1,3-Dichloropropane	< 2.7	< 0.27	< 0.27	< 0.27	< 0.27	0.27	0.053

PQL; Practical Quantitation Limit for undiluted samples.
MDL; Method Detection Limit for undiluted samples.
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Center, MN

Date Sampled: 08/28/97
Date Analyzed: 09/02/97 - 09/03/97
Physical State: Aqueous

Project: Garrison Sports
P.O. Box 85, Hwy 169
Garrison, MN

Report Date: 09/10/97
Lab P.N.: 1010-83.2
Client P.N.: NA

VOC Results: Page 2 of 4

Parameter	MW-1 µg/l MDH 465E	MW-2 µg/l MDH 465E	MW-3 µg/l MDH 465E	MW-4 µg/l MDH 465E	MW-5 µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
*2,2-Dichloropropane	< 19	< 1.9	< 1.9	< 1.9	< 1.9	1.9	0.38
1,1-Dichloropropene	< 6.0	< 0.60	< 0.60	< 0.60	< 0.60	0.60	0.12
cis-1,3-Dichloropropene	< 5.5	< 0.55	< 0.55	< 0.55	< 0.55	0.55	0.11
trans-1,3-Dichloropropene	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
Ethyl Benzene	**89**	< 0.37	< 0.37	< 0.37	< 0.37	0.37	0.073
Ethyl Ether	< 9.0	< 0.90	< 0.90	< 0.90	< 0.90	0.90	0.18
Hexachlorobutadiene	< 24	< 2.4	< 2.4	< 2.4	< 2.4	2.4	0.47
Isopropyl Benzene	**22**	**24**	< 0.95	< 0.95	< 0.95	0.95	0.19
p-Isopropyltoluene	< 7.0	**4.6**	< 0.70	< 0.70	< 0.70	0.70	0.14
Methyl Ethyl Ketone	< 280	**180**	< 2.0	< 2.0	< 2.0	2.0	0.40
Methyl Isobutyl Ketone	< 6.5	**21**	< 0.65	< 0.65	< 0.65	0.65	0.13
Methyl tert-Butyl Ether	< 9.1	< 0.91	< 0.91	< 0.91	< 0.91	0.91	0.18
Methylene Chloride	< 82	< 8.2	< 8.2	< 8.2	< 8.2	8.2	0.90
Naphthalene	**28**	**16**	< 1.2	< 1.2	< 1.2	1.2	0.24
*n-Propylbenzene	**62**	**14**	< 1.1	< 1.1	< 1.1	1.1	0.21
o-Xylene	**180**	< 0.33	< 0.33	< 0.33	< 0.33	0.33	0.065
Styrene	< 4.1	< 0.41	< 0.41	< 0.41	< 0.41	0.41	0.082
1,1,1,2-Tetrachloroethane	< 4.7	< 0.47	< 0.47	< 0.47	< 0.47	0.47	0.094
1,1,2,2-Tetrachloroethane	< 2.1	< 0.21	< 0.21	< 0.21	< 0.21	0.21	0.041
Tetrachloroethene	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	0.50	0.099
Tetrahydrofuran	< 26	< 2.6	< 2.6	< 2.6	< 2.6	2.6	0.51
Toluene	**540**	**2.9**	< 0.42	< 0.42	< 0.42	0.42	0.084
1,2,3-Trichlorobenzene	< 16	< 1.6	< 1.6	< 1.6	< 1.6	1.6	0.32
1,2,4-Trichlorobenzene	< 24	< 2.4	< 2.4	< 2.4	< 2.4	2.4	0.47
1,1,1-Trichloroethane	< 6.5	< 0.65	< 0.65	< 0.65	< 0.65	0.65	0.13
1,1,2-Trichloroethane	< 2.3	< 0.23	< 0.23	< 0.23	< 0.23	0.23	0.046
Trichloroethene	< 7.0	< 0.70	< 0.70	< 0.70	< 0.70	0.70	0.14
Trichlorofluoromethane	< 11	< 1.1	< 1.1	< 1.1	< 1.1	1.1	0.22
1,2,3-Trichloropropane	< 1.6	< 0.16	< 0.16	< 0.16	< 0.16	0.16	0.031
1,1,2-Trichlorotrifluoroethane	< 20	< 2.0	< 2.0	< 2.0	< 2.0	2.0	0.39
1,2,4-Trimethylbenzene	**380**	**16**	< 0.80	< 0.80	< 0.80	0.80	0.16
*1,3,5-Trimethylbenzene	**170**	< 1.3	< 1.3	< 1.3	< 1.3	1.3	0.25
Vinyl Chloride	< 24	< 2.4	< 2.4	< 2.4	< 2.4	2.4	0.47
m,p-Xylenes	**410**	**5.7**	< 0.65	< 0.65	< 0.65	0.65	0.13

*; coeluting compounds
PQL; Practical Quantitation Limit for undiluted samples.
MDL; Method Detection Limit for undiluted samples.
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Center, MN

Date Sampled: 08/28/97
Date Analyzed: 09/03/97
Physical State: Aqueous

Project: Garrison Sports
P.O. Box 85, Hwy 169
Garrison, MN

Report Date: 09/10/97
Lab P.N.: 1010-83.2
Client P.N.: NA

VOC Results: Page 3 of 4

Parameter	Water Supply Well µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
Acetone	< 16	16	3.1
Allyl Chloride	< 1.4	1.4	0.28
Benzene	< 0.28	0.28	0.056
Bromobenzene	< 0.26	0.26	0.052
Bromochloromethane	< 0.65	0.65	0.13
Bromodichloromethane	< 0.31	0.31	0.061
Bromoform	< 0.70	0.70	0.14
Bromomethane	< 3.0	3.0	0.60
n-Butylbenzene	< 1.3	1.3	0.26
sec-Butylbenzene	< 0.70	0.70	0.14
tert-Butylbenzene	< 0.80	0.80	0.16
Carbon Tetrachloride	< 0.43	0.43	0.085
Chlorobenzene	< 0.36	0.36	0.071
Chloroethane	< 3.4	3.4	0.68
Chloroform	< 0.50	0.50	0.10
Chloromethane	< 4.5	4.5	0.89
2-Chlorotoluene	< 0.70	0.70	0.14
4-Chlorotoluene	< 0.65	0.65	0.13
Dibromochloromethane	< 0.55	0.55	0.11
1,2-Dibromo-3-Chloropropane	< 0.70	0.70	0.14
1,2-Dibromoethane	< 0.16	0.16	0.031
Dibromomethane	< 0.28	0.28	0.055
1,2-Dichlorobenzene	< 0.70	0.70	0.14
1,3-Dichlorobenzene	< 0.60	0.60	0.12
1,4-Dichlorobenzene	< 0.50	0.50	0.10
Dichlorodifluoromethane	< 3.2	3.2	0.63
1,1-Dichloroethane	< 0.70	0.70	0.14
1,2-Dichloroethane	< 0.31	0.31	0.061
1,1-Dichloroethene	< 0.85	0.85	0.17
cis-1,2-Dichloroethene	< 0.80	0.80	0.16
trans-1,2-Dichloroethene	< 0.75	0.75	0.15
Dichlorofluoromethane	< 2.0	2.0	0.39
1,2-Dichloropropane	< 0.27	0.27	0.053
1,3-Dichloropropane	< 0.27	0.27	0.053

PQL; Practical Quantitation Limit
MDL; Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

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Laboratories, Inc.

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LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Center, MN

Date Sampled: 08/28/97
Date Analyzed: 09/03/97
Physical State: Aqueous

Project: Garrison Sports
P.O. Box 85, Hwy 169
Garrison, MN

Report Date: 09/10/97
Lab P.N.: 1010-83.2
Client P.N.: NA

VOC Results: Page 4 of 4

Parameter	Water Supply Well µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
*2,2-Dichloropropane	< 1.9	1.9	0.38
1,1-Dichloropropene	< 0.60	0.60	0.12
cis-1,3-Dichloropropene	< 0.55	0.55	0.11
trans-1,3-Dichloropropene	< 0.70	0.70	0.14
Ethyl Benzene	< 0.37	0.37	0.073
Ethyl Ether	< 0.90	0.90	0.18
Hexachlorobutadiene	< 2.4	2.4	0.47
Isopropyl Benzene	< 0.95	0.95	0.19
p-Isopropyltoluene	< 0.70	0.70	0.14
Methyl Ethyl Ketone	< 2.0	2.0	0.40
Methyl Isobutyl Ketone	< 0.65	0.65	0.13
Methyl tert-Butyl Ether	< 0.91	0.91	0.18
Methylene Chloride	< 4.5	4.5	0.90
Naphthalene	< 1.2	1.2	0.24
*n-Propylbenzene	< 1.1	1.1	0.21
o-Xylene	< 0.33	0.33	0.065
Styrene	< 0.41	0.41	0.082
1,1,1,2-Tetrachloroethane	< 0.47	0.47	0.094
1,1,2,2-Tetrachloroethane	< 0.21	0.21	0.041
Tetrachloroethene	< 0.50	0.50	0.099
Tetrahydrofuran	< 2.6	2.6	0.51
Toluene	< 0.42	0.42	0.084
1,2,3-Trichlorobenzene	< 1.6	1.6	0.32
1,2,4-Trichlorobenzene	< 2.4	2.4	0.47
1,1,1-Trichloroethane	< 0.65	0.65	0.13
1,1,2-Trichloroethane	< 0.23	0.23	0.046
Trichloroethene	< 0.70	0.70	0.14
Trichlorofluoromethane	< 1.1	1.1	0.22
1,2,3-Trichloropropane	< 0.16	0.16	0.031
1,1,2-Trichlorotrifluoroethane	< 2.0	2.0	0.39
1,2,4-Trimethylbenzene	< 0.80	0.80	0.16
*1,3,5-Trimethylbenzene	< 1.3	1.3	0.25
Vinyl Chloride	< 2.4	2.4	0.47
m,p-Xylenes	< 0.65	0.65	0.13

*; coeluting compounds
PQL; Practical Quantitation Limit
MDL; Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 *St. Paul, MN. 55110* *Tel. (612) 653-3471* *Fax (612) 653-3475*

LABORATORY RESULTS

Client: CERES Environmental
3825 85th Avenue North
Brooklyn Park, MN

Project: Garrison Sports
P.O. Box 85, Hwy 169
Garrison, MN

Date Sampled: 08/28/97
Date Analyzed: 08/29/97 - 09/05/97
Physical State: Aqueous

Report Date: 09/10/97
Lab P.N.: 1010-83.2
Client P.N.: NA

Sample I.D.	GRO µg/l Wis. DNR	DRO µg/l Wis. DNR	Dissolved Lead µg/l EPA 200.8
MW-1	7,700	1,300	<3.0
MW-2	2,700	820	8.2
MW-3	< 40	<280	<3.0
MW-4	< 40	<280	<3.0
MW-5	< 40	<280	<3.0
Water Supply Well	< 40	<280	<3.0
PQL, µg/l	40	280	3.0
MDL, µg/l	4.3	13	0.60

PQL; Practical Quantitation Limit for undiluted samples.
MDL; Method Detection Limit for undiluted samples.
GRO; Gasoline Range Organics
DRO; Diesel Range Organics
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon Laboratories, Inc.

CHAIN-OF-CUSTODY RECORD

4463 White Bear Parkway, Suite #105 St, Paul, MN. 55110 Tel. 612 / 653-3471 Fax 612 / 653-3475

Ceres Environmental
Client Name
3825 85TH Avenue North
Client Address (Street No., Suite #)
Brooklyn Park, MN
Client Address (City, State, Zip)

Normal Turnaround ☒ If Other, Specify _____

* Field filtered G.W. samples for lead analysis
Client Comments:

Client Comments:

Michael A. Lee / Ceres
Sample Collector's Signature

Garrison Sports
Project Name
P.O. Box 85, Hwy 169, Garrison, MN
Project Address

Client Project Number
Mike Lee / Ceres
Send Report to:

Page 1 of 1

Laboratory Receiving Notes:

HLI Project No. 1010-83.2
Check if "received on ice" ☑
Temperature of Shipping Container: °C
Lab Comments:
Invoice No.

Code A-None, B-HNO_3, C-H_2SO_4, D-MeOH, E-HCl, F-____

Item No.	Field Sample ID	Matrix	Date Sampled	Time Sampled	VOCs/MDH 465E	GRO	DRO	Dissolved lead	Dissolved lead			No. of Items	Container Type	Sample Condition	Horizon No.
	Analysis Requested														
	Filtered (Y/N)				N	N	N	Y	N						
	Preserved (Code)				E	E	E	B	B						
1	MW-1	G.W.	8-28-97	—	✓	✓	✓	✓				5	3-40ml 1-1liter 1-250ml	Good	31402
2	MW-2	↓	↓	—	✓	✓	✓	✓				5	↓	↓	31403
3	MW-3			—	✓	✓	✓	✓				5			31404
4	MW-4			—	✓	✓	✓	✓				5			31405
5	MW-5			—	✓	✓	✓	✓				5			31406
6	Water supply well	water	↓	—	✓	✓	✓		✓			5	↓	↓	31407
7															
8															
9															
10															

RELINQUISHED BY / COMPANY	DATE	TIME	RECEIVED BY / COMPANY	DATE	TIME
Michael A. Lee / Ceres	8-29-97	7:40 pm	[illegible] / Horizon Labs	8/29	742

Copies: White - Client (completion), Yellow - File (completion), Pink - Client (initial)

Rvs 3 (8/96)

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY REPORT

Client:	CERES Environmental 3825 85th Ave. North Brooklyn Park, MN	Date Sampled: Date Received: Date Analyzed: Physical State:	11/20/97 11/20/97 11/24/97 - 12/02/97 Aqueous
Project:	Garrison Sports P.O. Box 85 Hwy 169 Garrison, MN	Report Date: Lab P.N.: Client P.N.:	12/03/97 1010-83.3 NA

Quality Assurance / Quality Control Summary

Parameter: (Method)	QC Type	Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
MtBE (MDH 465E)	M	89	80 - 116	0.83	0 - 24
Benzene (MDH 465E)	M	94	76 - 117	0.77	0 - 12
Toluene (MDH 465E)	M	95	77 - 118	0.44	0 - 13
Ethylbenzene (MDH 465E)	M	94	77 - 119	1.1	0 - 12
m,p-Xylenes (MDH 465E)	M	92	78 - 116	1.2	0 - 12
o-Xylene (MDH 465E)	M	94	80 - 114	0.40	0 - 11
Dibromomethane (MDH 465E)	M	87	81 - 138	0.75	0 - 19
Tetrachloroethene (MDH 465E)	M	93	72 - 121	0.22	0 - 16
GRO (Wis. DNR)	M	115	80 - 120	1.4	0 - 20
DRO (Wis. DNR)	M	101	80 - 120	1.2	0 - 20

M = Matrix Spike / Matrix Spike Duplicate L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area to those of known standards using a Hewlett Packard ChemStation data system. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody Record. The Laboratory Report is the sole property of the client to whom it is addressed.
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

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LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Park, MN

Date Sampled: 11/20/97
Date Analyzed: 11/25/97
Physical State: Aqueous

Project: Garrison Sports
P.O. Box 85 Hwy 169
Garrison, MN

Report Date: 12/03/97
Lab P.N.: 1010-83.3
Client P.N.: NA

VOC Results: Page 1 of 2

Parameter	MW-1 µg/l MDH 465E	MW-2 µg/l MDH 465E	MW-3 µg/l MDH 465E	MW-4 µg/l MDH 465E	MW-5 µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
Acetone	< 160	< 160	< 16	< 16	< 16	16	3.1
Allyl Chloride	< 14	< 14	< 1.4	< 1.4	< 1.4	1.4	0.28
Benzene	< 2.8	< 2.8	< 0.28	< 0.28	< 0.28	0.28	0.056
Bromobenzene	< 2.6	< 2.6	< 0.26	< 0.26	< 0.26	0.26	0.052
Bromochloromethane	< 6.5	< 6.5	< 0.65	< 0.65	< 0.65	0.65	0.13
Bromodichloromethane	< 3.1	< 3.1	< 0.31	< 0.31	< 0.31	0.31	0.061
Bromoform	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
Bromomethane	< 30	< 30	< 3.0	< 3.0	< 3.0	3.0	0.60
n-Butylbenzene	150	110	< 1.3	< 1.3	< 1.3	1.3	0.26
sec-Butylbenzene	< 7.0	8.4	< 0.70	< 0.70	0.81	0.70	0.14
tert-Butylbenzene	< 8.0	< 8.0	< 0.80	< 0.80	< 0.80	0.80	0.16
Carbon Tetrachloride	< 4.3	< 4.3	< 0.43	< 0.43	< 0.43	0.43	0.085
Chlorobenzene	< 3.6	< 3.6	< 0.36	< 0.36	< 0.36	0.36	0.071
Chloroethane	< 34	< 34	< 3.4	< 3.4	< 3.4	3.4	0.68
Chloroform	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	0.50	0.10
Chloromethane	< 45	< 45	< 4.5	< 4.5	< 4.5	4.5	0.89
2-Chlorotoluene	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
4-Chlorotoluene	< 6.5	< 6.5	< 0.65	< 0.65	< 0.65	0.65	0.13
Dibromochloromethane	< 5.5	< 5.5	< 0.55	< 0.55	< 0.55	0.55	0.11
1,2-Dibromo-3-Chloropropane	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
1,2-Dibromoethane	< 1.6	< 1.6	< 0.16	< 0.16	< 0.16	0.16	0.031
Dibromomethane	< 2.8	< 2.8	< 0.28	< 0.28	< 0.28	0.28	0.055
1,2-Dichlorobenzene	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
1,3-Dichlorobenzene	< 6.0	< 6.0	< 0.60	< 0.60	< 0.60	0.60	0.12
1,4-Dichlorobenzene	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	0.50	0.10
Dichlorodifluoromethane	< 32	< 32	< 3.2	< 3.2	< 3.2	3.2	0.63
1,1-Dichloroethane	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
1,2-Dichloroethane	< 3.1	< 3.1	< 0.31	< 0.31	< 0.31	0.31	0.061
1,1-Dichloroethene	< 8.5	< 8.5	< 0.85	< 0.85	< 0.85	0.85	0.17
cis-1,2-Dichloroethene	< 8.0	< 8.0	< 0.80	< 0.80	< 0.80	0.80	0.16
trans-1,2-Dichloroethene	< 7.5	< 7.5	< 0.75	< 0.75	< 0.75	0.75	0.15
Dichlorofluoromethane	< 20	< 20	< 2.0	< 2.0	< 2.0	2.0	0.39
1,2-Dichloropropane	< 2.7	< 2.7	< 0.27	< 0.27	< 0.27	0.27	0.053
1,3-Dichloropropane	< 2.7	< 2.7	< 0.27	< 0.27	< 0.27	0.27	0.053

PQL; Practical Quantitation Limit for undiluted samples.
MDL; Method Detection Limit for undiluted samples.
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Park, MN

Date Sampled: 11/20/97
Date Analyzed: 11/25/97
Physical State: Aqueous

Project: Garrison Sports
P.O. Box 85 Hwy 169
Garrison, MN

Report Date: 12/03/97
Lab P.N.: 1010-83.3
Client P.N.: NA

VOC Results: Page 2 of 2

Parameter	MW-1 µg/l MDH 465E	MW-2 µg/l MDH 465E	MW-3 µg/l MDH 465E	MW-4 µg/l MDH 465E	MW-5 µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
*2,2-Dichloropropane	< 19	< 19	< 1.9	< 1.9	< 1.9	1.9	0.38
1,1-Dichloropropene	< 6.0	< 6.0	< 0.60	< 0.60	< 0.60	0.60	0.12
cis-1,3-Dichloropropene	< 5.5	< 5.5	< 0.55	< 0.55	< 0.55	0.55	0.11
trans-1,3-Dichloropropene	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
Ethyl Benzene	11	6.1	< 0.37	< 0.37	< 0.37	0.37	0.073
Ethyl Ether	< 9.0	< 9.0	< 0.90	< 0.90	< 0.90	0.90	0.18
Hexachlorobutadiene	< 24	< 24	< 2.4	< 2.4	< 2.4	2.4	0.47
Isopropyl Benzene	< 9.5	22	< 0.95	< 0.95	< 0.95	0.95	0.19
p-Isopropyltoluene	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
Methyl Ethyl Ketone	< 20	140	< 2.0	< 2.0	< 2.0	2.0	0.40
Methyl Isobutyl Ketone	< 6.5	< 6.5	< 0.65	< 0.65	< 0.65	0.65	0.13
Methyl tert-Butyl Ether	< 9.0	< 9.0	< 0.90	< 0.90	0.96	0.90	0.18
Methylene Chloride	< 45	< 45	< 4.5	< 4.5	< 4.5	4.5	0.90
Naphthalene	< 12	13	< 1.2	< 1.2	< 1.2	1.2	0.24
*n-Propylbenzene	31	24	< 1.1	< 1.1	< 1.1	1.1	0.21
o-Xylene	6.8	3.6	< 0.33	< 0.33	0.58	0.33	0.065
Styrene	< 4.1	< 4.1	< 0.41	< 0.41	< 0.41	0.41	0.082
1,1,1,2-Tetrachloroethane	< 4.7	< 4.7	< 0.47	< 0.47	< 0.47	0.47	0.094
1,1,2,2-Tetrachloroethane	< 2.1	< 2.1	< 0.21	< 0.21	< 0.21	0.21	0.041
Tetrachloroethene	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	0.50	0.099
Tetrahydrofuran	< 26	< 26	< 2.6	< 2.6	< 2.6	2.6	0.51
Toluene	26	5.7	< 0.42	< 0.42	< 0.42	0.42	0.084
1,2,3-Trichlorobenzene	< 16	< 16	< 1.6	< 1.6	< 1.6	1.6	0.32
1,2,4-Trichlorobenzene	< 24	< 24	< 2.4	< 2.4	< 2.4	2.4	0.47
1,1,1-Trichloroethane	< 6.5	< 6.5	< 0.65	< 0.65	< 0.65	0.65	0.13
1,1,2-Trichloroethane	< 2.3	< 2.3	< 0.23	< 0.23	< 0.23	0.23	0.046
Trichloroethene	< 7.0	< 7.0	< 0.70	< 0.70	< 0.70	0.70	0.14
Trichlorofluoromethane	< 11	< 11	< 1.1	< 1.1	< 1.1	1.1	0.22
1,2,3-Trichloropropane	< 1.6	< 1.6	< 0.16	< 0.16	< 0.16	0.16	0.031
1,1,2-Trichlorotrifluoroethane	< 20	< 20	< 2.0	< 2.0	< 2.0	2.0	0.39
1,2,4-Trimethylbenzene	56	< 8.0	< 0.80	< 0.80	< 0.80	0.80	0.16
*1,3,5-Trimethylbenzene	83	< 13	< 1.3	< 1.3	< 1.3	1.3	0.25
Vinyl Chloride	< 24	< 24	< 2.4	< 2.4	< 2.4	2.4	0.47
m,p-Xylenes	27	9.8	< 0.65	< 0.65	< 0.65	0.65	0.13

*; coeluting compounds

PQL; Practical Quantitation Limit for undiluted samples.

MDL; Method Detection Limit for undiluted samples.

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Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 St. Paul, MN. 55110 Tel. (612) 653-3471 Fax (612) 653-3475

LABORATORY RESULTS

Client: CERES Contracting
3825 85th Avenue North
Brooklyn Park, MN

Project: Garrison Sports
PO Box 85 Hwy 169
Garrison, MN

Date Sampled: 11/20/97
Date Analyzed: 11/24/97 - 12/02/97
Physical State: Aqueous

Report Date: 12/03/97
Lab P.N.: 1010-83.3
Client P.N.: NA

Sample I.D.	GRO µg/l Wis. DNR	DRO µg/l Wis. DNR
MW-1	3,800	670
MW-2	3,300	440
MW-3	< 40	<65
MW-4	< 40	<65
MW-5	< 40	<65
PQL, µg/l	40	65
MDL, µg/l	4.3	13

PQL; Practical Quantitation Limit for undiluted samples.

MDL; Method Detection Limit for undiluted samples.

GRO; Gasoline Range Organics

DRO; Diesel Range Organics

All results are in µg/l which is equal to parts-per-billion (ppb).

The Laboratory Results are only a part of the Laboratory Report.

Horizon Laboratories, Inc.

CHAIN-OF-CUSTODY RECORD

4463 White Bear Parkway, Suite #105 St, Paul, MN. 55110 Tel. 612 / 653-3471 Fax 612 / 653-3475

Ceres Environmental
Client Name

3825 85th Avenue North
Client Address (Street No., Suite #)

Brooklyn Park, MN
Client Address (City, State, Zip)

Normal Turnaround [X] If Other, Specify _____

(mw-1 & mw-2 impacted)
Client Comments:

Client Comments:

Michael A. Lee / Ceres
Sample Collector's Signature

Garrison Sports
Project Name

P.O. Box 85, Hwy 169, Garrison, MN
Project Address

Client Project Number

Mike Lee
Send Report to:

Page 1 of 1

Code A-None
B-HNO_3
C-H_2SO_4
D-MeOH
E-HCl
F-____

Laboratory Receiving Notes:
HLI Project No. 1010-83.3
Check if "received on ice" [X]
Temperature of Shipping Container: °C
Lab Comments:
Invoice No.

Item No.	Field Sample ID	Matrix	Date Sampled	Time Sampled	Filtered (Y/N)							No. of Items	Container Type	Sample Condition	Horizon No.
					VOCs / MDH 465E	GRO	DRO								
					Preserved (Code)										
					N	N	N								
					E	E	E								
1	MW-1	G.W.	11-20-97	—	✓	✓	✓					4			32878
2	MW-2	↓	↓	—	✓	✓	✓					4			32879
3	MW-3			—	✓	✓	✓					4			32880
4	MW-4			—	✓	✓	✓					4			32881
5	MW-5			—	✓	✓	✓					4			32882
6															
7															
8															
9															
10															

RELINQUISHED BY / COMPANY	DATE	TIME	RECEIVED BY / COMPANY	DATE	TIME
Michael A. Lee / Ceres	11-20-97	4:40pm	[signature] / HORIZON	11-20-97	4:40

Copies: White - Client (completion), Yellow - File (completion), Pink - Client (initial)

Rvs 3 (8/96)

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 *St. Paul, MN. 55110* *Tel. (612) 653-3471* *Fax (612) 653-3475*

LABORATORY REPORT

Client:	CERES Environmental 3825 85th Ave. North Brooklyn Park, MN	Date Sampled: Date Received: Date Analyzed: Physical State:	11/19/98 11/20/98 11/23/98 - 11/26/98 Aqueous
Project:	Garrison Sports Hwy 169 Garrison, MN	Report Date: Lab P.N.: Client P.N.:	12/09/98 1010-83.4 NA

Quality Assurance / Quality Control Summary

Parameter: (Method)	QC Type	Percent Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
MtBE (MDH 465E)	M	87	64 - 132	0.83	0 - 16
Benzene (MDH 465E)	M	98	79 - 123	1.6	0 - 8.8
Toluene (MDH 465E)	M	98	79 - 122	2.6	0 - 8.7
Ethylbenzene (MDH 465E)	M	98	78 - 123	2.8	0 - 9.7
m,p-Xylenes (MDH 465E)	M	97	79 - 122	3.4	0 - 12
o-Xylene (MDH 465E)	M	97	78 - 123	3.1	0 - 9.6
Dibromomethane (MDH 465E)	M	84	66 - 112	0.86	0 - 19
Tetrachloroethene (MDH 465E)	M	98	79 - 125	2.8	0 - 7.5
GRO (Wis. DNR)	M	90	80 - 120	1.3	0 - 20
DRO (Wis. DNR)	M	92	80 - 120	4.8	0 - 20

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area to those of known standards using a Hewlett Packard ChemStation data system. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody Record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

4463 White Bear Parkway, Suite #105 *St. Paul, MN. 55110* *Tel. (612) 653-3471* *Fax (612) 653-3475*

LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Park, MN

Date Sampled: 11/19/98
Date Analyzed: 11/23/98 - 11/24/98
Physical State: Aqueous

Project: Garrison Sports
Hwy 169
Garrison, MN

Report Date: 12/09/98
Lab P.N.: 1010-83.4
Client P.N.: NA

VOC Results: Page 1 of 2

Parameter	MW-1 µg/l MDH 465E	MW-2 µg/l MDH 465E	MW-3 µg/l MDH 465E	MW-4 µg/l MDH 465E	MW-5 µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
Acetone	< 78	< 78	< 16	< 16	< 16	16	3.1
Allyl Chloride	< 7.0	< 7.0	< 1.4	< 1.4	< 1.4	1.4	0.28
Benzene	< 1.4	< 1.4	< 0.28	< 0.28	< 0.28	0.28	0.056
Bromobenzene	< 1.3	< 1.3	< 0.26	< 0.26	< 0.26	0.26	0.052
Bromochloromethane	< 3.3	< 3.3	< 0.65	< 0.65	< 0.65	0.65	0.13
Bromodichloromethane	< 1.5	< 1.5	< 0.31	< 0.31	< 0.31	0.31	0.061
Bromoform	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
Bromomethane	< 15	< 15	< 3.0	< 3.0	< 3.0	3.0	0.60
n-Butylbenzene	17	54	< 1.3	< 1.3	< 1.3	1.3	0.26
sec-Butylbenzene	< 3.5	5.6	< 0.70	< 0.70	< 0.70	0.70	0.14
tert-Butylbenzene	< 4.0	< 4.0	< 0.80	< 0.80	< 0.80	0.80	0.16
Carbon Tetrachloride	< 2.1	< 2.1	< 0.43	< 0.43	< 0.43	0.43	0.085
Chlorobenzene	< 1.8	< 1.8	< 0.36	< 0.36	< 0.36	0.36	0.071
Chloroethane	< 17	< 17	< 3.4	< 3.4	< 3.4	3.4	0.68
Chloroform	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50	0.50	0.10
Chloromethane	< 22	< 22	< 4.5	< 4.5	< 4.5	4.5	0.89
2-Chlorotoluene	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
4-Chlorotoluene	< 3.3	< 3.3	< 0.65	< 0.65	< 0.65	0.65	0.13
Dibromochloromethane	< 2.8	< 2.8	< 0.55	< 0.55	< 0.55	0.55	0.11
1,2-Dibromo-3-Chloropropane	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
1,2-Dibromoethane	< 0.78	< 0.78	< 0.16	< 0.16	< 0.16	0.16	0.031
Dibromomethane	< 1.4	< 1.4	< 0.28	< 0.28	< 0.28	0.28	0.055
1,2-Dichlorobenzene	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
1,3-Dichlorobenzene	< 3.0	< 3.0	< 0.60	< 0.60	< 0.60	0.60	0.12
1,4-Dichlorobenzene	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50	0.50	0.10
Dichlorodifluoromethane	< 16	< 16	< 3.2	< 3.2	< 3.2	3.2	0.63
1,1-Dichloroethane	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
1,2-Dichloroethane	< 1.5	< 1.5	< 0.31	< 0.31	< 0.31	0.31	0.061
1,1-Dichloroethene	< 4.3	< 4.3	< 0.85	< 0.85	< 0.85	0.85	0.17
cis-1,2-Dichloroethene	< 4.0	< 4.0	< 0.80	< 0.80	< 0.80	0.80	0.16
trans-1,2-Dichloroethene	< 3.8	< 3.8	< 0.75	< 0.75	< 0.75	0.75	0.15
Dichlorofluoromethane	< 9.8	< 9.8	< 2.0	< 2.0	< 2.0	2.0	0.39
1,2-Dichloropropane	< 1.3	< 1.3	< 0.27	< 0.27	< 0.27	0.27	0.053
1,3-Dichloropropane	< 1.3	< 1.3	< 0.27	< 0.27	< 0.27	0.27	0.053

PQL; Practical Quantitation Limit for undiluted samples.
MDL; Method Detection Limit for undiluted samples.
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

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Laboratories, Inc.

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LABORATORY RESULTS

Client: CERES Environmental
3825 85th Ave. North
Brooklyn Park, MN

Date Sampled: 11/19/98
Date Analyzed: 11/23/98 - 11/24/98
Physical State: Aqueous

Project: Garrison Sports
Hwy 169
Garrison, MN

Report Date: 12/09/98
Lab P.N.: 1010-83.4
Client P.N.: NA

VOC Results: Page 2 of 2

Parameter	MW-1 µg/l MDH 465E	MW-2 µg/l MDH 465E	MW-3 µg/l MDH 465E	MW-4 µg/l MDH 465E	MW-5 µg/l MDH 465E	PQL µg/l MDH 465E	MDL µg/l MDH 465E
*2,2-Dichloropropane	< 9.5	< 9.5	< 1.9	< 1.9	< 1.9	1.9	0.38
1,1-Dichloropropene	< 3.0	< 3.0	< 0.60	< 0.60	< 0.60	0.60	0.12
cis-1,3-Dichloropropene	< 2.8	< 2.8	< 0.55	< 0.55	< 0.55	0.55	0.11
trans-1,3-Dichloropropene	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
Ethyl Benzene	< 1.8	**3.4**	< 0.37	< 0.37	< 0.37	0.37	0.073
Ethyl Ether	< 4.5	< 4.5	< 0.90	< 0.90	< 0.90	0.90	0.18
Hexachlorobutadiene	< 12	< 12	< 2.4	< 2.4	< 2.4	2.4	0.47
Isopropyl Benzene	< 4.8	**15**	< 0.95	< 0.95	< 0.95	0.95	0.19
p-Isopropyltoluene	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
Methyl Ethyl Ketone	< 10	**110**	< 2.0	< 2.0	< 2.0	2.0	0.40
Methyl Isobutyl Ketone	< 3.3	**< 3**	< 0.65	< 0.65	< 0.65	0.65	0.13
Methyl tert-Butyl Ether	< 4.5	< 4.5	< 0.90	< 0.90	< 0.90	0.90	0.18
Methylene Chloride	< 23	< 23	< 4.5	< 4.5	< 4.5	4.5	0.90
Naphthalene	< 6.0	< 6.0	< 1.2	< 1.2	< 1.2	1.2	0.24
*n-Propylbenzene	< 5.3	**16**	< 1.1	< 1.1	< 1.1	1.1	0.21
o-Xylene	**1.8**	**1.8**	< 0.33	< 0.33	< 0.33	0.33	0.065
Styrene	< 2.1	< 2.1	< 0.41	< 0.41	< 0.41	0.41	0.082
1,1,1,2-Tetrachloroethane	< 2.4	< 2.4	< 0.47	< 0.47	< 0.47	0.47	0.094
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	< 0.21	< 0.21	< 0.21	0.21	0.041
Tetrachloroethene	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50	0.50	0.099
Tetrahydrofuran	< 13	< 13	< 2.6	< 2.6	< 2.6	2.6	0.51
Toluene	**3.7**	**3.0**	< 0.42	< 0.42	**0.50**	0.42	0.084
1,2,3-Trichlorobenzene	< 8.0	< 8.0	< 1.6	< 1.6	< 1.6	1.6	0.32
1,2,4-Trichlorobenzene	< 12	< 12	< 2.4	< 2.4	< 2.4	2.4	0.47
1,1,1-Trichloroethane	< 3.3	< 3.3	< 0.65	< 0.65	< 0.65	0.65	0.13
1,1,2-Trichloroethane	< 1.2	< 1.2	< 0.23	< 0.23	< 0.23	0.23	0.046
Trichloroethene	< 3.5	< 3.5	< 0.70	< 0.70	< 0.70	0.70	0.14
Trichlorofluoromethane	< 5.5	< 5.5	< 1.1	< 1.1	< 1.1	1.1	0.22
1,2,3-Trichloropropane	< 0.78	< 0.78	< 0.16	< 0.16	< 0.16	0.16	0.031
1,1,2-Trichlorotrifluoroethane	< 9.8	< 9.8	< 2.0	< 2.0	< 2.0	2.0	0.39
1,2,4-Trimethylbenzene	< 4.0	< 4.0	< 0.80	< 0.80	< 0.80	0.80	0.16
*1,3,5-Trimethylbenzene	< 6.3	< 6.3	< 1.3	< 1.3	< 1.3	1.3	0.25
Vinyl Chloride	< 12	< 12	< 2.4	< 2.4	< 2.4	2.4	0.47
m,p-Xylenes	< 3.3	**6.9**	< 0.65	< 0.65	< 0.65	0.65	0.13

*; coeluting compounds
PQL; Practical Quantitation Limit for undiluted samples.
MDL; Method Detection Limit for undiluted samples.
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
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LABORATORY RESULTS

Client:	CERES Contracting	Date Sampled:	11/19/98
	3825 85th Avenue North	Date Analyzed:	11/25/98 - 11/26/98
	Brooklyn Park, MN	Physical State:	Aqueous
Project:	Garrison Sports	Report Date:	12/09/98
	Hwy 169	Lab P.N.:	1010-83.4
	Garrison, MN	Client P.N.:	NA

	GRO	DRO
	µg/l	µg/l
Sample I.D.	Wis. DNR	Wis. DNR
MW-1	440	190
MW-2	1,700	440
MW-3	< 22	<65
MW-4	< 22	<65
MW-5	< 22	<65
PQL, µg/l	22	65
MDL, µg/l	4.3	13

PQL; Practical Quantitation Limit

MDL; Method Detection Limit

GRO; Gasoline Range Organics

DRO; Diesel Range Organics

All results are in µg/l which is equal to parts-per-billion (ppb).

The Laboratory Results are only a part of the Laboratory Report.