ANNUAL MONITORING REPORT - 1999

PAYNESVILLE MUNICIPAL WATER SUPPLY – MPCA
PAYNESVILLE, MINNESOTA
MPCA SITE ID # LEAK00000131

Terracon Project No. 41987018
February 28, 2000

Prepared for:

MINNESOTA POLLUTION CONTROL AGENCY
1800 College Road
Baxter, Minnesota 56425

Prepared by:

TERRACON
3434 Hoffman Road East
White Bear Lake, Minnesota 55110

Terracon

Tanks and Emergency Response Section
Minnesota Pollution Control Agency

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 " CAD 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 Minnesota Pollution Control Agency (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: *Paynesville Municipal Water Supply – MPCA*
State Highway 23
Paynesville, Minnesota 56362

MPCA Leak Number: *LEAK #:00000131*

Date submitted: *February 28, 2000*

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.

Fluid levels were collected from wells (map unit number in parentheses) DW-1(1), DW-2(2), DW-3(3), DW-4(4), DW-5(45), DW-6(46); Midtown wells MW-10(24), MW-10D(5), MW-14(25), MW-14D(6), MW-16(27), and MW-17(28); Johnson wells MW-4(44) and MW-5(7); City of Paynesville monitoring wells identified as map units 42 and 43; test wells CTW-18(18) and TW-1 and Farmers Union Coop wells MW-7(8) on a monthly basis (Figures 1 and 2). The fluid level data is presented in Table 1. Well construction information is summarized in Table 2. The fluid level data from wells screened between 75 and 90 feet below ground surface was used to prepare

the ground water contour maps depicted in Figures 3A through 3E. The contour maps indicate that the horizontal ground water flow direction is to the southeast. A southeasterly flow direction is consistent with previously collected data. Fluid level data from select monitoring wells screened within the drinking water aquifer and/or located near recovery well DW-5 are depicted on hydrographs in Figures 3F and 3G. The hydrographs illustrate season fluctuations in ground water elevations and in the case of wells CMW-42 (42) and DW-5 (45) (Figure 3G) the results of ground water pumping activities. Anomalous fluid levels from well MW-17 (28) during September 1999 and well MW-5 (7) during December 1999 appear to be the result of field errors. These data were not used in the preparation of the ground water contour maps. Fluid level and well depth measurements from monitoring well MW-4 (44) indicate that screen has failed as the bottom now appears to be approximately 12 ½ feet below the top of the riser pipe.

Ground water samples were collected from monitoring wells DW-3 (3), DW-6 (46), MW-16 (27), MW-17 (28) and storm sewer outfall on a quarterly basis during 1999 for laboratory analysis. The monitoring well sampling was performed by Terracon as part of LEAK00000131 and Pinnacle Engineering as part of the Midtown Auto site. Ground water samples were collected from recovery well DW-5, City Wells CW-3 and CW-4, and the water treatment plant influent and effluent on a monthly bases during 1999 for laboratory analysis. City Well CW-3 and the water treatment plant influent and effluent were sampled to monitoring drinking water quality. City Wells CW-5 and CW-6 were also sampled for laboratory analysis during January, 2000. Recovery well DW-5 and city well CW-4 were monitored to assess their impact on containing the plume and for discharge permit requirements. The laboratory results are summarized in Table 3. Laboratory reports and sampling information forms are included in Appendix D.

Laboratory results for monitoring wells DW-3 (3), MW-16 (27), treatment plant influent, and City Wells CW-5 and CW-6 exhibited non-detectable concentrations of target volatile organic compounds.

Laboratory results from City Well CW-3 (9) detected benzene concentrations during 1999 fluctuating from near the detection level of 0.30 ug/l to 1.6 ug/l. The fluctuations may be seasonal. Laboratory results from City Well CW-4 (10) decreased during 1999 such that benzene concentrations were less than the Minnesota Department of Health's (MDH) Health Risk Limits (HRLs) and approaching the USEPA Maximum Contaminant Levels (MCLs). This decrease is likely in response to ground water pumping activities at recovery well DW-5 and reduction in the pumping rate for City Well CW-4 (Figure 4A).

The treatment plant effluent and storm discharge to the river laboratory analysis results indicated occasional low benzene and toluene concentrations. The concentrations did not exceed the MDH HRLs.

Laboratory results from monitoring wells DW-6 (46) and MW-17 (28) and recovery well DW-5 (45) indicated decreasing concentrations of petroleum constituents during 1999 apparently in response to ground water pumping activities as well DW-5 (Figure 4B).

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

A limited vapor survey was conducted on the following days, March 17, 1999, July 19, 1999 and December 9, 1999. Storm sewer manholes and inlets were screened for the presence of organic vapors using a photoionization detector (PID). This device is calibrated to isobutylene and provides a direct reading in parts per million (ppm).

The March 17, 1999 vapor survey included the storm sewer manhole to which city well #4 is pumped to in the intersection of Railroad Street and Washburne. A vapor survey was also conducted on two storm sewer inlets, west of the Railroad Street and Washburne intersection. The manhole vapor survey recorded a reading of 12 ppm and the storm sewer inlets recorded non-detectable concentrations.

The July 19, 1999 vapor survey recorded a reading of less than 1 ppm at the manhole and 2 ppm during the December 9, 1999 vapor survey. The storm sewer inlets were not checked during these months.

Location #	Date	PID reading (ppm)	Percent of the LEL
Railroad & Washburne	3/17/99	12	
Railroad & Washburne	7/19/99	<1	N/A
Railroad & Washburne	12/9/99	2	

Notes: OVM Model 580B w/ 10.2 eV lamp

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.**

SYSTEM CHANGES

Use this space to describe in detail any changes in system operation or configuration that were made during this reporting period (attach additional pages if needed). Also explain any periods during which the system was not operating.

The ground water extraction system in recovery well DW-5 has been in almost continuous operation since it was started on December 12, 1998, except for a period in early 1999 when the pumping rate was set higher than the well could produce and in late 1999 / early 2000 when the pump began to cycle in response to increased drawdown in the well. This drawdown may be the result of decreased water levels as indicated in Figure 3F and/or the approximately 4½ feet of sand thought to be in the bottom of the well.

City Well CW-4 is currently being pumped at approximately 100 gpm as a plume containment measure. The pumping rate has been stepped down several times since these activities were initiated in 1998. The effluent is discharge to a nearby storm sewer under an NPDES Permit. Ground water laboratory results from CW-4 indicate that the discharge has met the NPDES Permit requirements.

RECOMMENDATIONS

Use this space to detail recommendations for modifying the monitoring schedule, system operation, system configuration or site closure (attach additional pages if needed):

Decreased dissolved phase petroleum concentrations in ground water samples collected from City Well CW-3 indicated that ground water extraction activities utilizing recovery well DW-5 and City Well CW-4 appear to have resulted in containment of the petroleum plume. Benzene concentrations in the effluent from recovery well DW-5 appear to be approaching asymptotic levels. It is unclear whether the decreasing benzene concentrations in City Well CW-4 are the result of the reduce pumping rate or pumping activities at recovery well DW-5. The pending operation of the planned new municipal well(s) may result in further changes in the configuration of the plume. Terracon recommends that plume containment activities utilizing recovery well DW-5 and City Well CW-4 continue during the interim period before and when the new municipal well(s) come on line. The associated ground water monitoring activities should also be continued.

Specifically, Terracon recommends the following activities:

- *Conduct monthly site visits to collect fluid level data from wells DW-1(1), DW-2(2), DW-3(3), DW-4(4), DW-5(45), DW-6(46); Midtown wells MW-10(24), MW-10D(5), MW-14(25), MW-14D(6), MW-16(27), and MW-17(28); Johnson Motors wells MW-5(35) and MW-5(7); City of Paynesville monitoring wells identified as map units 42 and 43; test wells CTW-18(18) and TW-1 and Farmers Union Coop wells MW-7(8).*

- *Continue ground water extraction activities utilizing recovery well DW-5 and City Well CW-4 to contain the petroleum plume. Collect monthly ground water effluent samples from recovery well DW-5. The samples will be analyzed for the presence of BTEX, MTBE, and GRO. Perform routine maintenance on the ground water extraction system on an as needed basis. Consider modifying the ground water pumping rate and schedule for City Well CW-4 to evaluate its impact on containing the petroleum plume.*

- *Collect monthly ground water samples from City Wells CW-3, CW-4, and the water treatment plant influent and effluent. The samples will be analyzed for the presence of volatile organic compounds (VOCs) using Minnesota Department of Health Method 465F and pH. Four samples from city well CW-4 will also be analyzed for total lead consistent with NPDES Permit requirements.*

- *Collect quarterly ground water quality samples for laboratory analysis from monitoring wells DW-3 and DW-6; and Midtown wells MW-16 and MW-17. The samples will be analyzed for BTEX, MTBE, and GRO. A duplicate sample or field blank will be analyzed during each sampling event.*

- *Perform reporting and project management duties necessary for continued operation of the remediation system which includes permitting requirements, utility costs, submission of data to MPCA Staff and the City of Paynesville, and the preparation of an annual monitoring report. The annual report will fulfill the requirements of MPCA Fact Sheets #3.26 and #3.31.*

General Comments

The analysis and opinions expressed in this report are based upon data obtained from the soil borings and laboratory chemical analysis at the indicated locations or from other information discussed in this report. This report does not reflect variations in subsurface stratigraphy, hydrogeology, and contaminant distribution which may occur across the site. Actual subsurface conditions may vary and may not become evident without further assessment.

This report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental engineering practices. No warranties are intended or made. In the event any changes in the nature or location of suspected sources of contamination as outlined in this report are observed, the conclusions and recommendations contained in this report shall not be valid unless these changes are reviewed and the opinions of this report are modified or verified in writing by Terracon.

GROUND WATER PUMP-OUT SYSTEMS

Influent/Effluent concentrations

_X_ Attach a table of cumulative ground water influent and effluent discharge concentrations (in parts per billion).

See attached Table 3.

Operating parameters

Pumping rate: _~10_ gallons per minute
Amount of water table drawdown: _~30_ feet

Contaminant mass removal

Estimated contaminant mass removal rate: _0.001_ gallons/day
Estimated contaminant mass removal to date: _3.17_ gallons

SOIL VENTING SYSTEMS

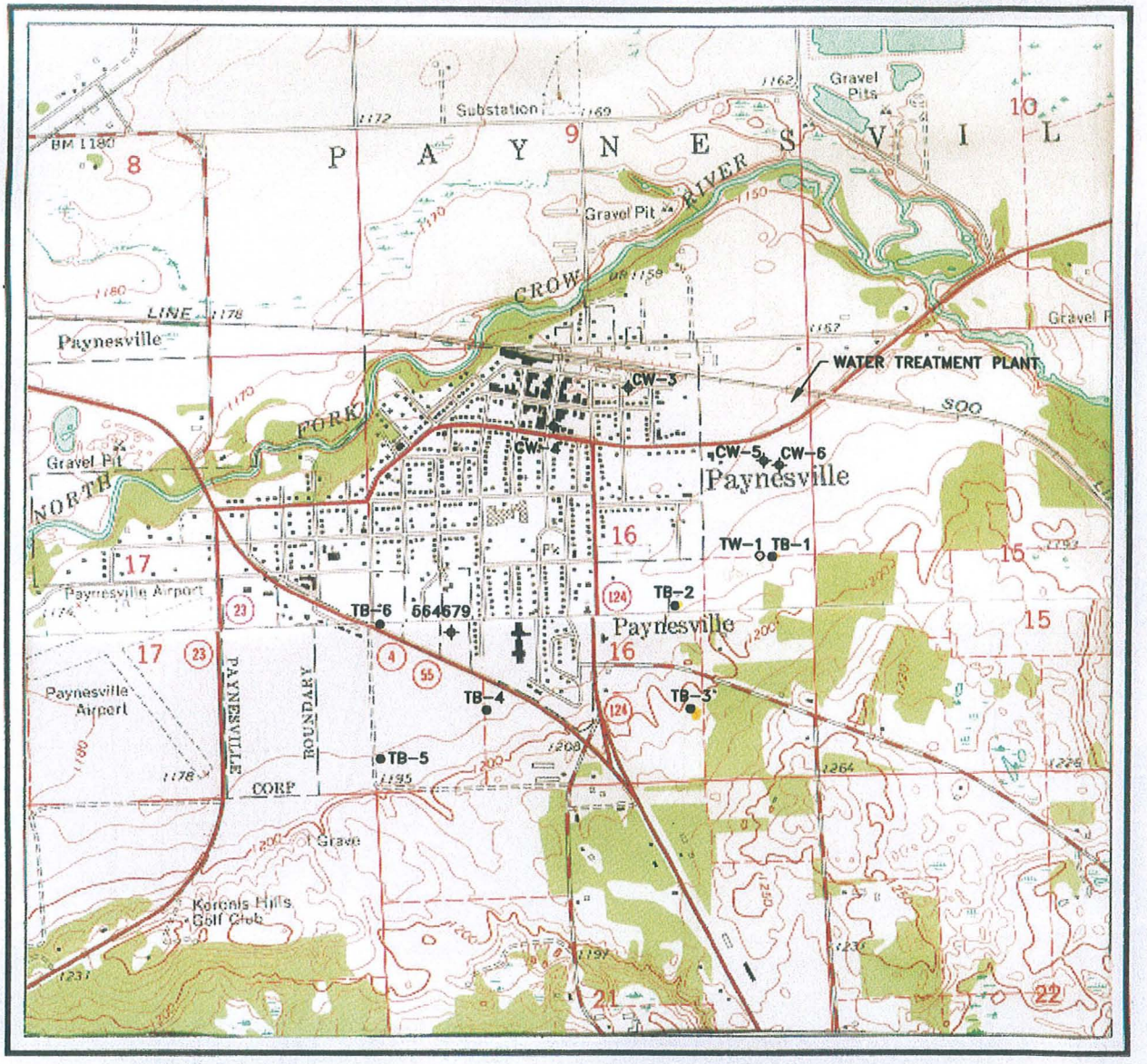
N/A

Emission concentrations

___ Attach a table containing field screening results for each vapor extraction point.

___ Attach a table of soil vent system emissions concentrations. The table should include all analytical samples taken since system startup. The samples should be collected from a sampling port located before the blower. Samples should be analyzed for benzene, ethyl benzene, toluene and xylene using EPA Method 18.

UNITED STATES – DEPARTMENT OF THE INTERIOR – GEOLOGICAL SURVEY



SCALE 1:24 000

KILOMETERS 1 .5 0 1 2

METERS 1000 0 1000 2000

MILES 1 .5 0 1

FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000

N

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DOTTED LINES REPRESENT 5-FOOT CONTOURS

LEGEND:

TB-2 ●	TEST BORING
TW-1 ○	TEST WELL
CW-1 ⌖	CITY WELL
564679 ⌖	POTABLE WELL

PAYNESVILLE QUADRANGLE
MINNESOTA–STERNS COUNTY
7.5 MINUTE SERIES (TOPOGRAPHIC)

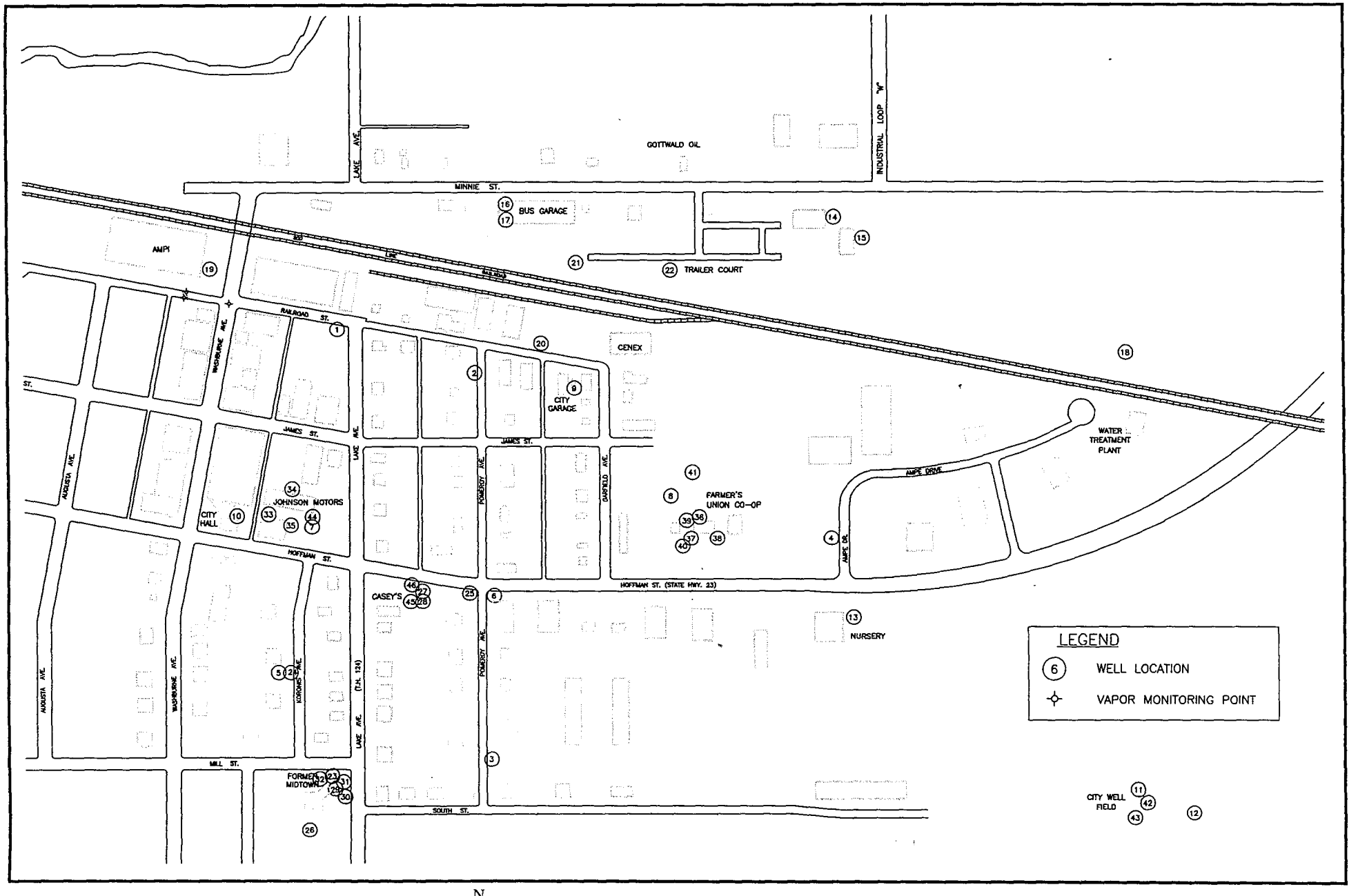
Terracon
3535 HOFFMAN ROAD EAST
WHITE BEAR LAKE, MN 55110
(612) 770-1500 FAX (612) 770-1657

PAYNESVILLE PUBLIC WATER SUPPLY
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

DRAWN BY: J&K
CHECKED BY: SAJ
FILE: 0185.DWG
SCALE: AS SHOWN
DATE: 3/17/89

SITE MAP

FIGURE 1



Terracon

3535 HOFFMAN ROAD EAST
WHITE BEAR LAKE, MN 55110
(651) 770-1500 FAX (651) 770-1657

0 400
Approximate Scale (Feet)

N

MPCA – PAYNESVILLE
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

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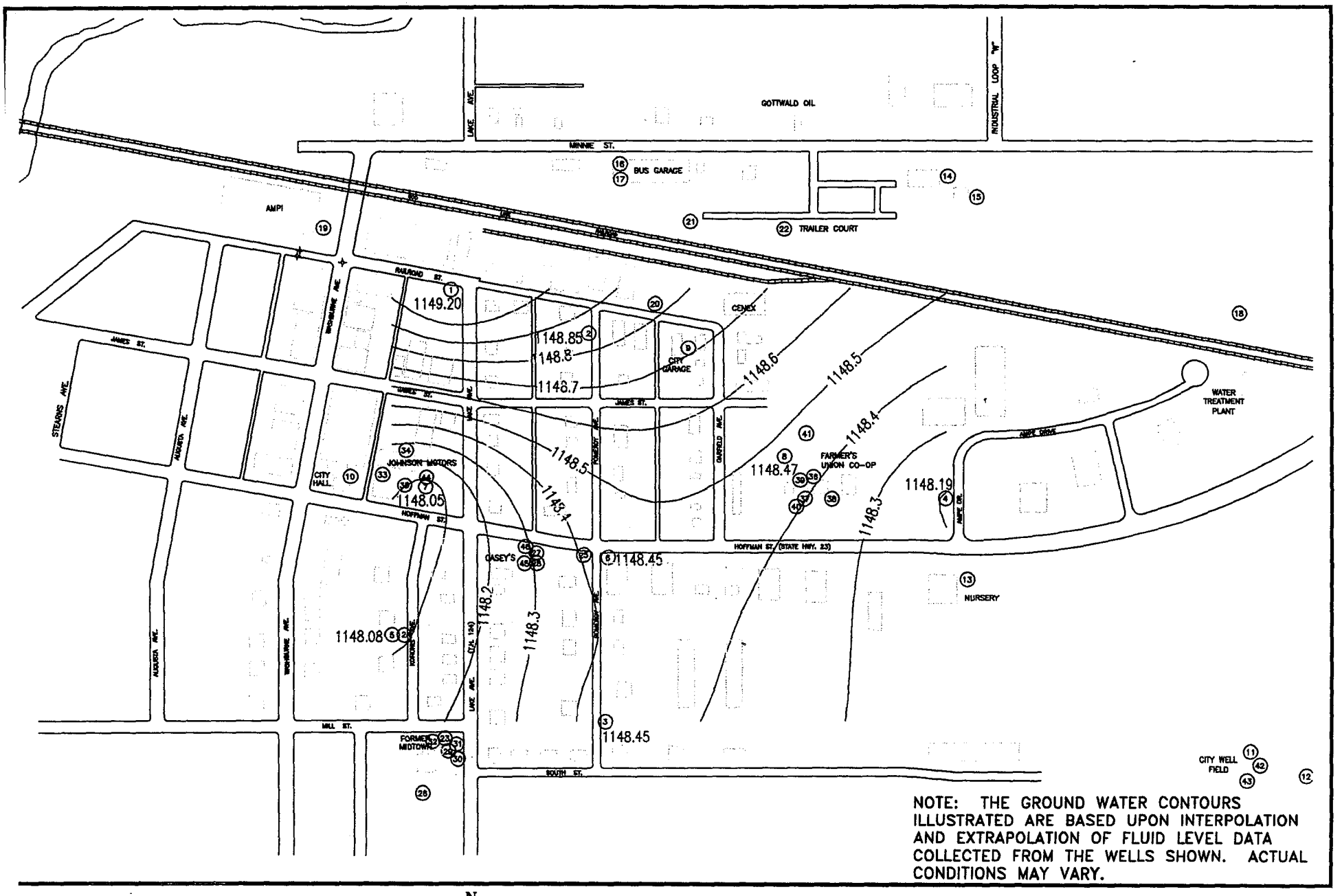
CHECKED BY:	PJW
FILE:	018SM.DWG
SCALE:	AS SHOWN
DATE:	2/3/00

SITE MAP

FIGURE 2



NOTE: THE GROUND WATER CONTOURS ILLUSTRATED ARE BASED UPON INTERPOLATION AND EXTRAPOLATION OF FLUID LEVEL DATA COLLECTED FROM THE WELLS SHOWN. ACTUAL CONDITIONS MAY VARY.

Terracon
3535 HOFFMAN ROAD EAST
WHITE BEAR LAKE, MN 55110
(612) 770-1500 FAX (612) 770-1657

0 400
Approximate Scale (Feet)

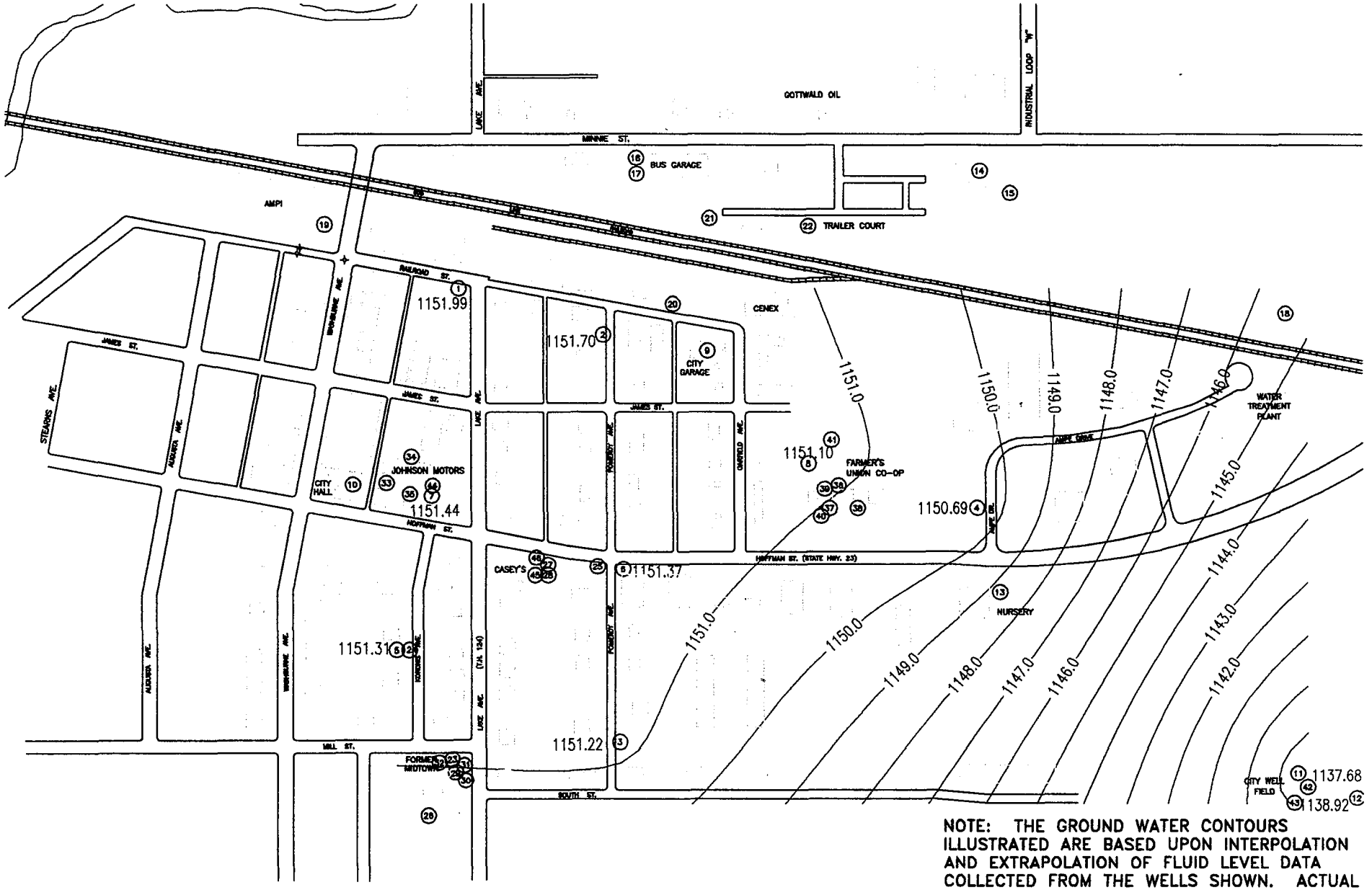
N

MPCA – PAYNESVILLE
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

DRAWN BY:	JLK
CHECKED BY:	PJW
FILE:	0180W-99.DWG
SCALE:	AS SHOWN
DATE:	2/3/00

GROUND WATER ELEVATIONS
MEASURED 2/18/99

FIGURE 3A



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Terracon
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0 400
Approximate Scale (Feet)

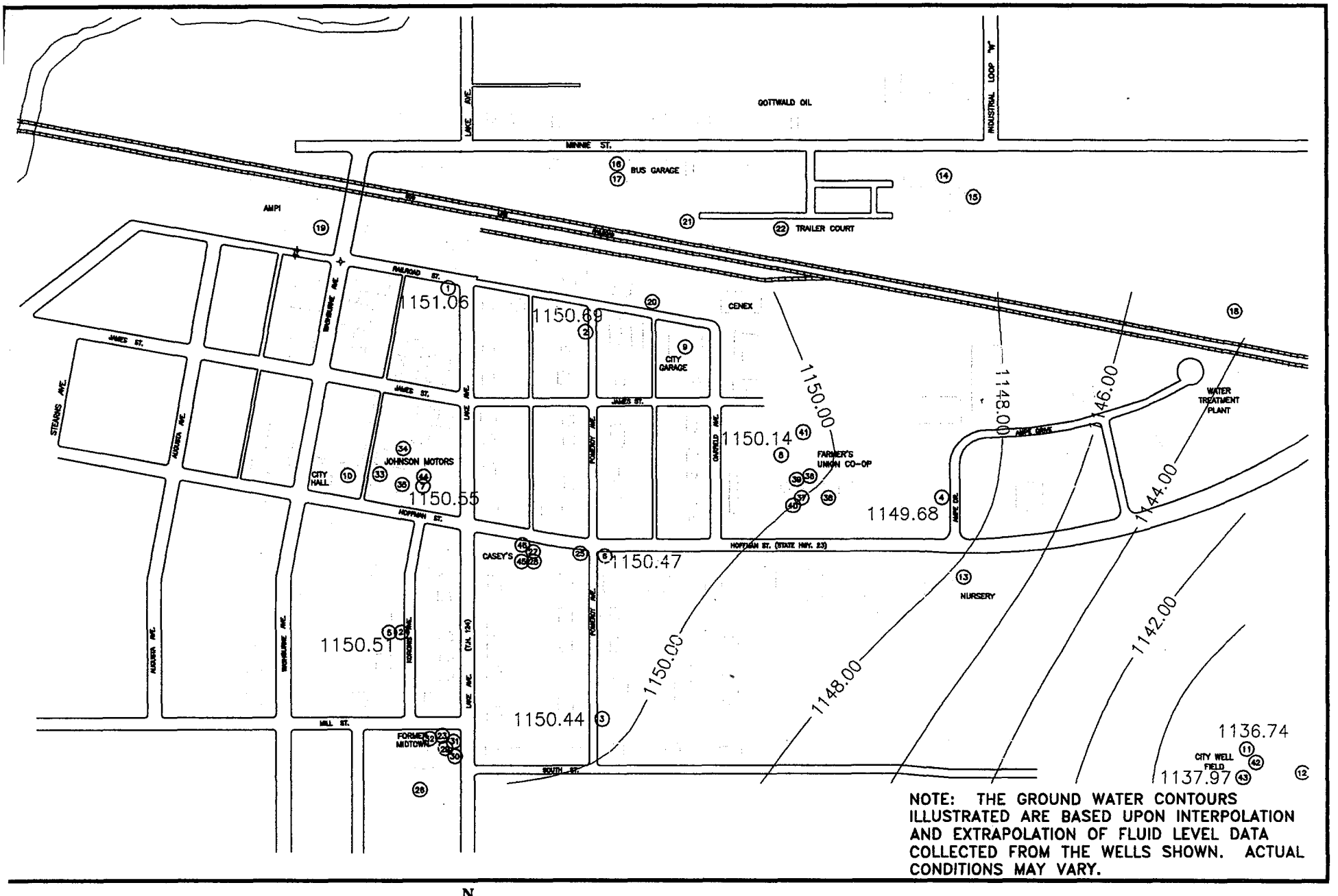
N

MPCA – PAYNESVILLE
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

DRAWN BY:	JLK
CHECKED BY:	PJW
FILE:	018GW-99.DWG
SCALE:	AS SHOWN
DATE:	2/3/00

GROUND WATER ELEVATIONS
MEASURED 5/21/99

FIGURE 3B



NOTE: THE GROUND WATER CONTOURS ILLUSTRATED ARE BASED UPON INTERPOLATION AND EXTRAPOLATION OF FLUID LEVEL DATA COLLECTED FROM THE WELLS SHOWN. ACTUAL CONDITIONS MAY VARY.

Terracon
3535 HOFFMAN ROAD EAST
WHITE BEAR LAKE, MN 55110
(612) 770-1500 FAX (612) 770-1657

0 400
Approximate Scale (Feet)

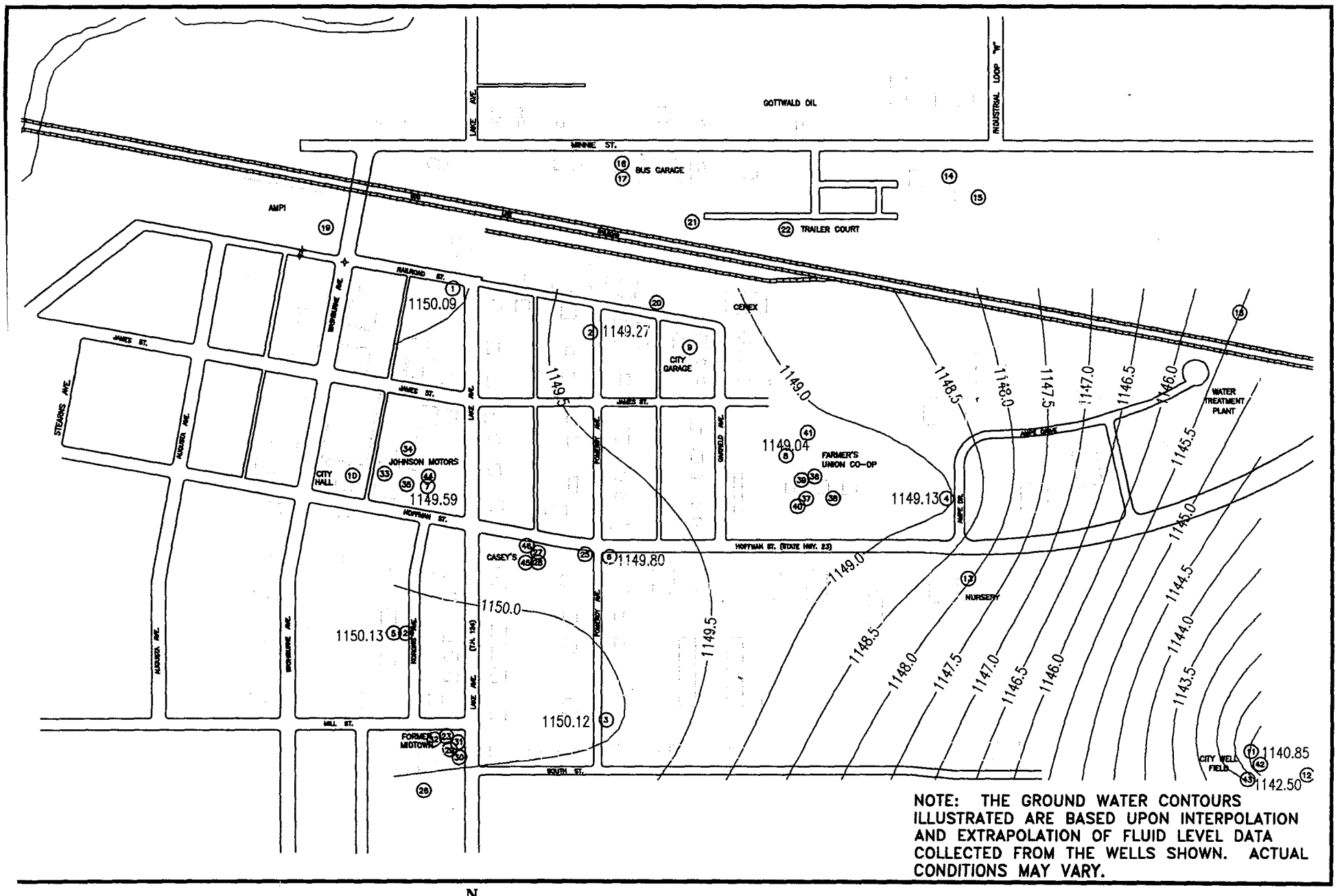
N

MPCA – PAYNESVILLE
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

DRAWN BY:	JLK
CHECKED BY:	PJW
FILE:	01BGW-99.DWG
SCALE:	AS SHOWN
DATE:	2/3/00

GROUND WATER ELEVATIONS
MEASURED 7/19/99

FIGURE 3C



NOTE: THE GROUND WATER CONTOURS ILLUSTRATED ARE BASED UPON INTERPOLATION AND EXTRAPOLATION OF FLUID LEVEL DATA COLLECTED FROM THE WELLS SHOWN. ACTUAL CONDITIONS MAY VARY.

Terracon
3535 HOFFMAN ROAD EAST
WHITE BEAR LAKE, MN 55110
(612) 770-1500 FAX (612) 770-1657

0 400
Approximate Scale (Feet)

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MPCA – PAYNESVILLE
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

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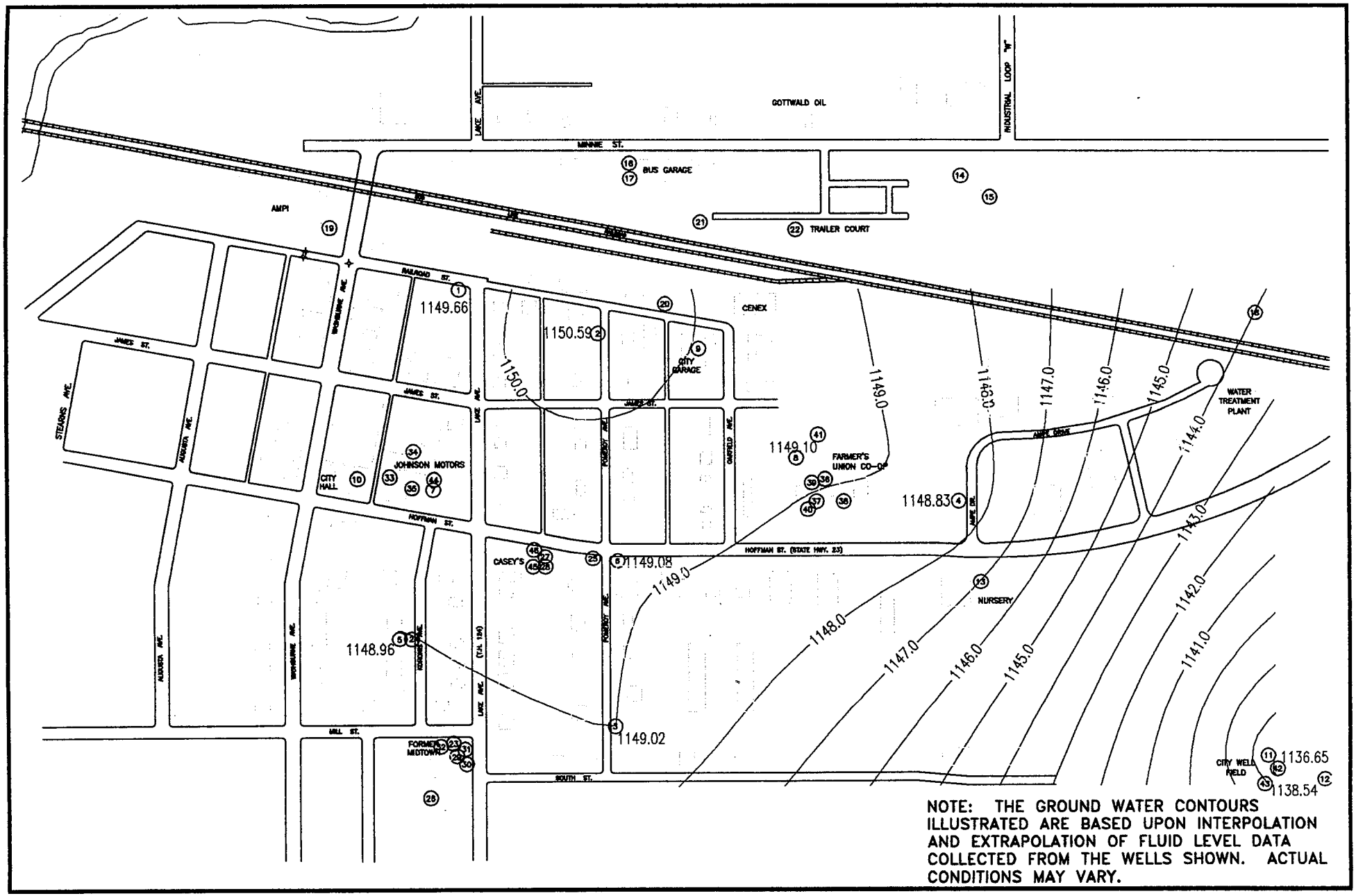
CHECKED BY:	PJW
FILE:	018GW-99.DWG
SCALE:	AS SHOWN
DATE:	2/3/00

GROUND WATER ELEVATIONS
MEASURED 8/23/99

FIGURE 3D



NOTE: THE GROUND WATER CONTOURS ILLUSTRATED ARE BASED UPON INTERPOLATION AND EXTRAPOLATION OF FLUID LEVEL DATA COLLECTED FROM THE WELLS SHOWN. ACTUAL CONDITIONS MAY VARY.

Terracon
3535 HOFFMAN ROAD EAST
WHITE BEAR LAKE, MN 55110
(612) 770-1500 FAX (612) 770-1657

0 400
Approximate Scale (Feet)

N

MPCA – PAYNESVILLE
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

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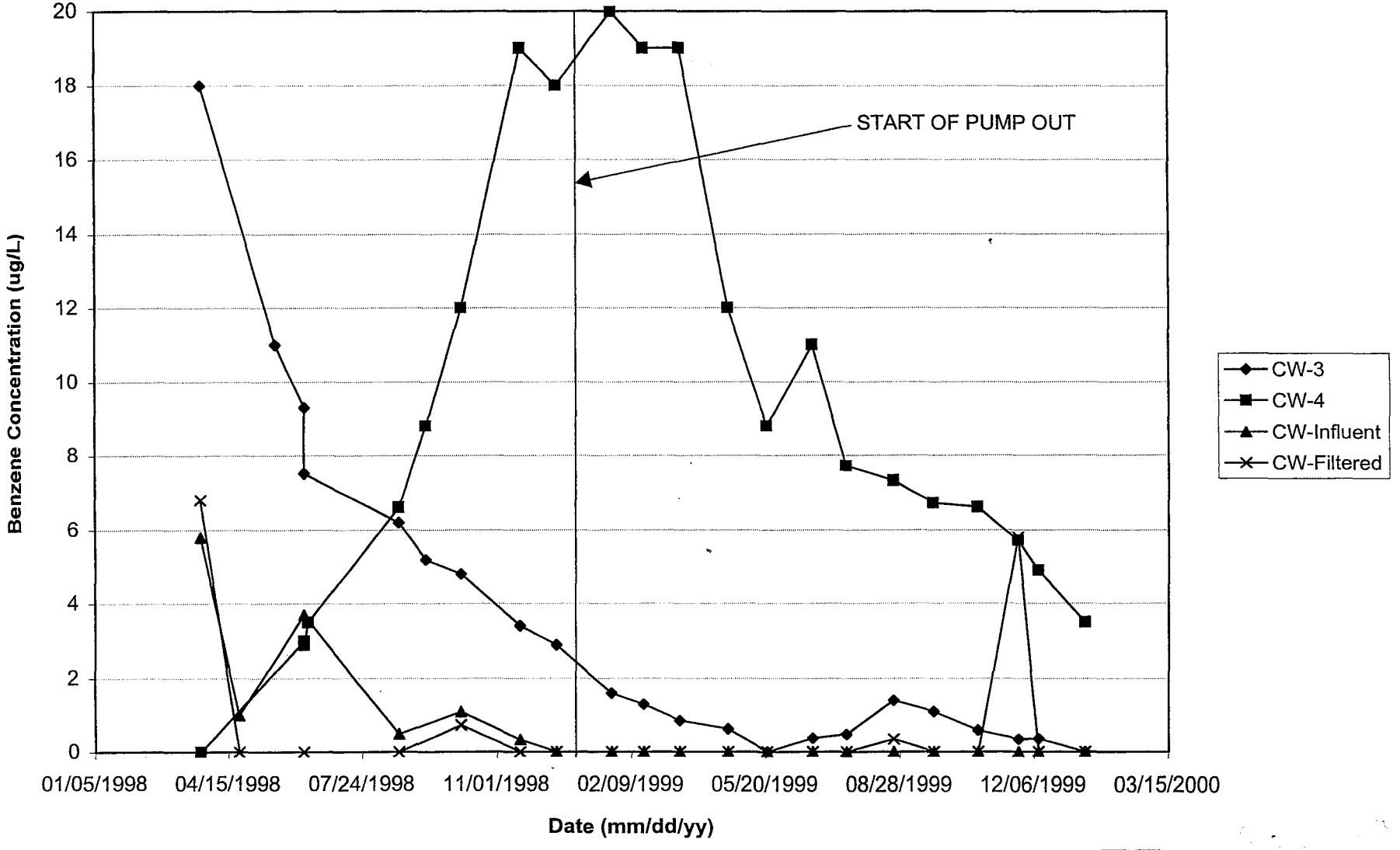
CHECKED BY:	PJW
FILE:	0180W-99.DWG
SCALE:	AS SHOWN
DATE:	2/3/00

GROUND WATER ELEVATIONS
MEASURED 11/24/99

FIGURE 3E

FIGURE 4A - BENZENE CONCENTRATIONS vs. TIME
CITY WELLS AND TREATMENT PLANT
PAYNESVILLE MUNICIPAL WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

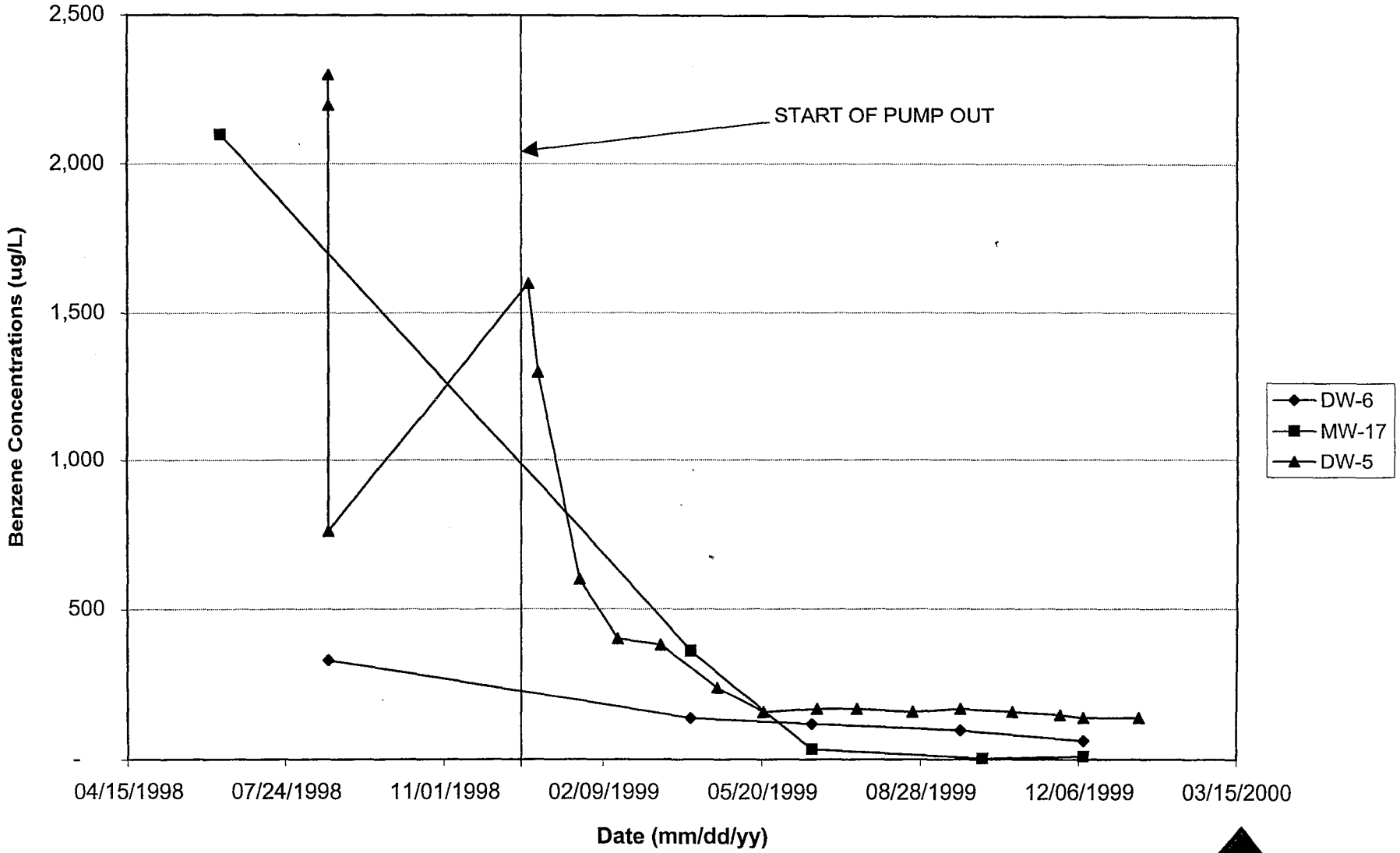


Terracon

Form 102—6-85

City Conc vs. Time

FIGURE 4B - BENZENE CONCENTRATIONS vs. TIME
MONITORING AND RECOVERY WELLS
PAYNESVILLE MUNICIPAL WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018



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Form 102—6-85

MW nc. vs. Time

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

	Well	Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
1	DW-1	03/16/98	18.97	1,170.73	90	1,151.76
1	DW-1	03/25/98	19.37	1,170.73	90	1,151.36
1	DW-1	04/22/98	17.29	1,170.73	90	1,153.44
1	DW-1	05/20/98	18.04	1,170.73	90	1,152.69
1	DW-1	05/21/98	19.30	1,170.73	90	1,151.43
1	DW-1	06/13/98	18.61	1,170.73	90	1,152.12
1	DW-1	08/20/98	19.91	1,170.73	90	1,150.82
1	DW-1	01/25/99	21.08	1,170.73	90	1,149.65
1	DW-1	02/18/99	21.53	1,170.73	90	1,149.20
1	DW-1	03/17/99	21.30	1,170.73	90	1,149.43
1	DW-1	03/18/99	21.28	1,170.73	90	1,149.45
1	DW-1	04/22/99	19.41	1,170.73	90	1,151.32
1	DW-1	04/28/99	19.83	1,170.73	90	1,150.90
1	DW-1	05/21/99	18.74	1,170.73	90	1,151.99
1	DW-1	07/19/99	19.67	1,170.73	90	1,151.06
1	DW-1	08/23/99	20.64	1,170.73	90	1,150.09
1	DW-1	09/22/99	19.44	1,170.73	90	1,151.29
1	DW-1	10/25/99	21.78	1,170.73	90	1,148.95
1	DW-1	11/24/99	21.07	1,170.73	90	1,149.66
1	DW-1	12/09/99	20.98	1,170.73	90	1,149.75
1	DW-1	01/13/00	20.95	1,170.73	90	1,149.78
2	DW-2	03/16/98	17.68	1,170.44	85	1,152.76
2	DW-2	03/25/98	20.12	1,170.44	85	1,150.32
2	DW-2	04/22/98	17.30	1,170.44	85	1,153.14
2	DW-2	05/20/98	18.09	1,170.44	85	1,152.35
2	DW-2	05/21/98	18.88	1,170.44	85	1,151.56
2	DW-2	06/13/98	18.64	1,170.44	85	1,151.80
2	DW-2	08/20/98	19.25	1,170.44	85	1,151.19
2	DW-2*	12/23/98	20.33	1,170.44	85	1,150.11
2	DW-2	12/23/98	20.31	1,170.44	85	1,150.13
2	DW-2	12/30/98	21.03	1,170.44	85	1,149.41
2	DW-2	01/25/99	20.94	1,170.44	85	1,149.50
2	DW-2	02/18/99	21.59	1,170.44	85	1,148.85
2	DW-2	03/17/99	20.92	1,170.44	85	1,149.52
2	DW-2	03/18/99	21.29	1,170.44	85	1,149.15
2	DW-2	04/22/99	19.27	1,170.44	85	1,151.17
2	DW-2	04/28/99	19.93	1,170.44	85	1,150.51
2	DW-2	05/21/99	18.74	1,170.44	85	1,151.70
2	DW-2	07/19/99	19.75	1,170.44	85	1,150.69

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
2	DW-2	08/23/99	21.17	1,170.44	85	1,149.27
2	DW-2	09/22/99	19.58	1,170.44	85	1,150.86
2	DW-2	10/25/99	20.47	1,170.44	85	1,149.97
2	DW-2	11/24/99	19.85	1,170.44	85	1,150.59
2	DW-2	12/09/99	20.73	1,170.44	85	1,149.71
2	DW-2	01/13/00	20.87	1,170.44	85	1,149.57
3	DW-3	03/16/98	24.08	1,176.29	90	1,152.21
3	DW-3	03/25/98	24.44	1,176.29	90	1,151.85
3	DW-3	04/22/98	23.23	1,176.29	90	1,153.06
3	DW-3	05/20/98	24.00	1,176.29	90	1,152.29
3	DW-3	05/21/98	25.25	1,176.29	90	1,151.04
3	DW-3	06/13/98	24.46	1,176.29	90	1,151.83
3	DW-3	08/20/98	24.48	1,176.29	90	1,151.81
3	DW-3	09/08/98	26.38	1,176.29	90	1,149.91
3	DW-3*	12/23/98	26.79	1,176.29	90	1,149.50
3	DW-3	12/23/98	26.74	1,176.29	90	1,149.55
3	DW-3	12/30/98	26.68	1,176.29	90	1,149.61
3	DW-3	01/25/99	27.24	1,176.29	90	1,149.05
3	DW-3	02/18/99	27.84	1,176.29	90	1,148.45
3	DW-3	03/17/99	27.30	1,176.29	90	1,148.99
3	DW-3	04/22/99	26.06	1,176.29	90	1,150.23
3	DW-3	04/28/99	26.42	1,176.29	90	1,149.87
3	DW-3	05/21/99	25.07	1,176.29	90	1,151.22
3	DW-3	07/19/99	25.85	1,176.29	90	1,150.44
3	DW-3	08/23/99	26.17	1,176.29	90	1,150.12
3	DW-3	09/22/99	25.50	1,176.29	90	1,150.79
3	DW-3	10/25/99	26.67	1,176.29	90	1,149.62
3	DW-3	11/24/99	27.27	1,176.29	90	1,149.02
3	DW-3	12/09/99	27.12	1,176.29	90	1,149.17
3	DW-3	01/13/00	27.57	1,176.29	90	1,148.72
4	DW-4	03/16/98	19.17	1,171.74	90	1,152.57
4	DW-4	03/25/98	20.08	1,171.74	90	1,151.66
4	DW-4	04/22/98	18.95	1,171.74	90	1,152.79
4	DW-4	05/20/98	19.78	1,171.74	90	1,151.96
4	DW-4	05/21/98	20.77	1,171.74	90	1,150.97
4	DW-4	06/13/98	19.77	1,171.74	90	1,151.97
4	DW-4	08/20/98	20.78	1,171.74	90	1,150.96
4	DW-4	09/08/98	21.80	1,171.74	90	1,149.94

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

	Well	Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
4	DW-4	01/25/99	22.62	1,171.74	90	1,149.12
4	DW-4	02/18/99	23.55	1,171.74	90	1,148.19
4	DW-4	03/17/99	23.15	1,171.74	90	1,148.59
4	DW-4	04/22/99	21.34	1,171.74	90	1,150.40
4	DW-4	04/28/99	22.33	1,171.74	90	1,149.41
4	DW-4	05/21/99	21.05	1,171.74	90	1,150.69
4	DW-4	07/19/99	22.06	1,171.74	90	1,149.68
4	DW-4	08/23/99	22.61	1,171.74	90	1,149.13
4	DW-4	09/22/99	21.38	1,171.74	90	1,150.36
4	DW-4	10/25/99	21.93	1,171.74	90	1,149.81
4	DW-4	11/24/99	22.91	1,171.74	90	1,148.83
4	DW-4	12/09/99	22.85	1,171.74	90	1,148.89
4	DW-4	01/13/00	23.04	1,171.74	90	1,148.70
5	MW-10D	04/22/98	18.67	1,172.25	90	1,153.58
5	MW-10D	05/20/98	19.55	1,172.25	90	1,152.70
5	MW-10D	05/21/98	21.78	1,172.25	90	1,150.47
5	MW-10D	06/13/98	20.82	1,172.25	90	1,151.43
5	MW-10D	08/20/98	21.94	1,172.25	90	1,150.31
5	MW-10D	09/08/98	23.10	1,172.25	90	1,149.15
5	MW-10D*	12/23/98	23.22	1,172.25	90	1,149.03
5	MW-10D	12/23/98	23.20	1,172.25	90	1,149.05
5	MW-10D	12/30/98	23.13	1,172.25	90	1,149.12
5	MW-10D	01/25/99	23.55	1,172.25	90	1,148.70
5	MW-10D	02/18/99	24.17	1,172.25	90	1,148.08
5	MW-10D	03/17/99	23.78	1,172.25	90	1,148.47
5	MW-10D	03/18/99	23.51	1,172.25	90	1,148.74
5	MW-10D	04/22/99	21.88	1,172.25	90	1,150.37
5	MW-10D	04/28/99	22.18	1,172.25	90	1,150.07
5	MW-10D	05/21/99	20.94	1,172.25	90	1,151.31
5	MW-10D	07/19/99	21.74	1,172.25	90	1,150.51
5	MW-10D	08/23/99	22.12	1,172.25	90	1,150.13
5	MW-10D	09/22/99	21.24	1,172.25	90	1,151.01
5	MW-10D	10/25/99	22.68	1,172.25	90	1,149.57
5	MW-10D	11/24/99	23.29	1,172.25	90	1,148.96
5	MW-10D	12/09/99	23.12	1,172.25	90	1,149.13
5	MW-10D	01/13/00	23.41	1,172.25	90	1,148.84

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

	Well	Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
6	MW-14D	04/22/98	21.89	1,175.48	90	1,153.59
6	MW-14D	05/20/98	23.00	1,175.48	90	1,152.48
6	MW-14D	05/21/98	24.35	1,175.48	90	1,151.13
6	MW-14D	06/13/98	23.99	1,175.48	90	1,151.49
6	MW-14D	08/20/98	24.54	1,175.48	90	1,150.94
6	MW-14D	09/08/98	26.02	1,175.48	90	1,149.46
6	MW-14D*	12/23/98	25.85	1,175.48	90	1,149.63
6	MW-14D	12/23/98	25.85	1,175.48	90	1,149.63
6	MW-14D	12/30/98	26.03	1,175.48	90	1,149.45
6	MW-14D	01/25/99	26.48	1,175.48	90	1,149.00
6	MW-14D	02/18/99	27.03	1,175.48	90	1,148.45
6	MW-14D	03/17/99	26.46	1,175.48	90	1,149.02
6	MW-14D	04/22/99	25.12	1,175.48	90	1,150.36
6	MW-14D	04/28/99	25.13	1,175.48	90	1,150.35
6	MW-14D	05/21/99	24.11	1,175.48	90	1,151.37
6	MW-14D	06/24/99	24.10	1,175.48	90	1,151.38
6	MW-14D	07/19/99	25.01	1,175.48	90	1,150.47
6	MW-14D	08/23/99	25.68	1,175.48	90	1,149.80
6	MW-14D	09/22/99	24.70	1,175.48	90	1,150.78
6	MW-14D	10/25/99	25.32	1,175.48	90	1,150.16
6	MW-14D	11/24/99	26.40	1,175.48	90	1,149.08
6	MW-14D	12/09/99	26.28	1,175.48	90	1,149.20
6	MW-14D	01/13/00	26.58	1,175.48	90	1,148.90
7	MW-5	04/22/98	16.80	1,170.41	89	1,153.61
7	MW-5	05/20/98	17.70	1,170.41	89	1,152.71
7	MW-5	05/21/98	20.55	1,170.41	89	1,149.86
7	MW-5	06/13/98	18.79	1,170.41	89	1,151.62
7	MW-5	08/20/98	20.56	1,170.41	89	1,149.85
7	MW-5*	12/23/98	21.49	1,170.41	89	1,148.92
7	MW-5	12/23/98	21.50	1,170.41	89	1,148.91
7	MW-5	12/30/98	21.43	1,170.41	89	1,148.98
7	MW-5	01/25/99	21.77	1,170.41	89	1,148.64
7	MW-5	02/18/99	22.36	1,170.41	89	1,148.05
7	MW-5	03/17/99	22.06	1,170.41	89	1,148.35
7	MW-5	03/18/99	21.68	1,170.41	89	1,148.73
7	MW-5	04/22/99	19.79	1,170.41	89	1,150.62
7	MW-5	05/21/99	18.97	1,170.41	89	1,151.44
7	MW-5	07/19/99	19.86	1,170.41	89	1,150.55
7	MW-5	08/23/99	20.82	1,170.41	89	1,149.59

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
7	MW-5	09/22/99	19.26	1,170.41	89	1,151.15
7	MW-5	10/25/99	19.93	1,170.41	89	1,150.48
7	MW-5	11/24/99	29.44	1,170.41	89	1,140.97
7	MW-5	12/09/99	21.16	1,170.41	89	1,149.25
7	MW-5	01/13/00	21.45	1,170.41	89	1,148.96
8	MW-7	04/22/98	19.38	1,172.20	80	1,152.82
8	MW-7	05/20/98	19.64	1,172.20	80	1,152.56
8	MW-7	05/21/98	20.85	1,172.20	80	1,151.35
8	MW-7	06/13/98	20.74	1,172.20	80	1,151.46
8	MW-7	08/20/98	21.20	1,172.20	80	1,151.00
8	MW-7	09/08/98	22.47	1,172.20	80	1,149.73
8	MW-7*	12/23/98	22.20	1,172.20	80	1,150.00
8	MW-7	12/23/98	22.26	1,172.20	80	1,149.94
8	MW-7	12/30/98	22.81	1,172.20	80	1,149.39
8	MW-7	01/25/99	22.92	1,172.20	80	1,149.28
8	MW-7	02/18/99	23.73	1,172.20	80	1,148.47
8	MW-7	03/17/99	23.37	1,172.20	80	1,148.83
8	MW-7	04/22/99	10.03	1,172.20	80	1,162.17
8	MW-7	04/28/99	21.76	1,172.20	80	1,150.44
8	MW-7	05/21/99	21.10	1,172.20	80	1,151.10
8	MW-7	07/19/99	22.06	1,172.20	80	1,150.14
8	MW-7	08/23/99	23.16	1,172.20	80	1,149.04
8	MW-7	09/22/99	22.69	1,172.20	80	1,149.51
8	MW-7	10/25/99	22.25	1,172.20	80	1,149.95
8	MW-7	11/24/99	23.10	1,172.20	80	1,149.10
8	MW-7	12/09/99	22.99	1,172.20	80	1,149.21
8	MW-7	01/13/00	23.23	1,172.20	80	1,148.97
10	CW-4	03/16/98	21.60	1,173.38	110	1,151.78
10	CW-4	03/25/98	21.30	1,173.38	110	1,152.08
10	CW-4	04/22/98	20.32	1,173.38	110	1,153.06
10	CW-4	05/20/98	20.83	1,173.38	110	1,152.55
10	CW-4	06/13/98	23.65	1,173.38	110	1,149.73
10	CW-4	05/21/98	23.85	1,173.38	110	1,149.53
11	CW-5	04/22/98	39.03	1,168.49	90	1,129.46
11	CW-5	05/21/98	40.25	1,168.49	90	1,128.24

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
12	CW-6	04/22/98	42.25	1,171.55	97	1,129.30
12	CW-6	05/21/98	42.74	1,171.55	97	1,128.81
17	Bus Garage	04/22/98	15.67	1,169.05	50	1,153.38
17	Bus Garage	05/21/98	16.87	1,169.05	50	1,152.18
17	Bus Garage	08/20/98	17.58	1,169.05	50	1,151.47
18	CMW	04/22/98	21.18	1,171.42	120	1,150.24
18	CMW	05/21/98	21.56	1,171.42	120	1,149.86
18	CMW	08/20/98	23.24	1,171.42	120	1,148.18
18	CMW	04/28/99	23.53	1,171.42	120	1,147.89
18	CMW	08/20/98	23.24	1,171.42	120	1,148.18
18	CMW	05/21/99	22.61	1,171.42	120	1,148.81
18	CMW	07/19/99	23.64	1,171.42	120	1,147.78
18	CMW	11/24/99	24.27	1,171.42	120	1,147.15
18	CMW	12/09/99	24.32	1,171.42	120	1,147.10
18	CMW	01/13/00	24.34	1,171.42	120	1,147.08
20	MW-1	04/22/98	16.94	1,170.87	43	1,153.93
20	MW-1	05/21/98	17.76	1,170.87	43	1,153.11
20	MW-1	08/20/98	19.19	1,170.87	43	1,151.68
21	MW-2	04/22/98	17.71	1,171.20	38	1,153.49
21	MW-2	05/21/98	17.83	1,171.20	38	1,153.37
21	MW-2	08/20/98	19.29	1,171.20	38	1,151.91
23	MW-1	04/22/98	16.79	1,173.74	27	1,156.95
23	MW-1	08/20/98	18.38	1,173.74	27	1,155.36
24	MW-10	04/22/98	15.01	1,171.69	27	1,156.68
24	MW-10	05/20/98	15.05	1,171.69	27	1,156.64
24	MW-10	05/21/98	15.22	1,171.69	27	1,156.47
24	MW-10	06/13/98	15.44	1,171.69	27	1,156.25
24	MW-10	08/20/98	16.20	1,171.69	27	1,155.49
24	MW-10*	12/23/98	17.82	1,171.69	27	1,153.87
24	MW-10	12/23/98	17.83	1,171.69	27	1,153.86
24	MW-10	12/30/98	17.96	1,171.69	27	1,153.73
24	MW-10	01/25/99	18.41	1,171.69	27	1,153.28
24	MW-10	02/18/99	18.73	1,171.69	27	1,152.96
24	MW-10	03/17/99	19.09	1,171.69	27	1,152.60

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

	Well	Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
24	MW-10	03/18/99	19.09	1,171.69	27	1,152.60
24	MW-10	04/22/99	18.23	1,171.69	27	1,153.46
24	MW-10	04/28/99	18.00	1,171.69	27	1,153.69
24	MW-10	05/21/99	17.11	1,171.69	27	1,154.58
24	MW-10	07/19/99	16.52	1,171.69	27	1,155.17
24	MW-10	08/23/99	17.98	1,171.69	27	1,153.71
24	MW-10	09/22/99	17.52	1,171.69	27	1,154.17
24	MW-10	10/25/99	18.70	1,171.69	27	1,152.99
24	MW-10	11/24/99	18.60	1,171.69	27	1,153.09
24	MW-10	12/09/99	18.80	1,171.69	27	1,152.89
24	MW-10	01/13/00	19.22	1,171.69	27	1,152.47
25	MW-14	04/22/98	17.92	1,173.20	29	1,155.28
25	MW-14	05/20/98	18.26	1,173.20	29	1,154.94
25	MW-14	05/21/98	18.61	1,173.20	29	1,154.59
25	MW-14	06/13/98	18.90	1,173.20	29	1,154.30
25	MW-14	08/20/98	19.80	1,173.20	29	1,153.40
25	MW-14*	12/23/98	21.30	1,173.20	29	1,151.90
25	MW-14	12/23/98	21.24	1,173.20	29	1,151.96
25	MW-14	12/30/98	21.31	1,173.20	29	1,151.89
25	MW-14	01/25/99	21.80	1,173.20	29	1,151.40
25	MW-14	02/18/99	22.13	1,173.20	29	1,151.07
25	MW-14	03/17/99	22.45	1,173.20	29	1,150.75
25	MW-14	03/18/99	22.47	1,173.20	29	1,150.73
25	MW-14	04/22/99	21.25	1,173.20	29	1,151.95
25	MW-14	04/28/99	21.12	1,173.20	29	1,152.08
25	MW-14	05/21/99	20.17	1,173.20	29	1,153.03
25	MW-14	06/24/99	19.48	1,173.20	29	1,153.72
25	MW-14	07/19/99	19.86	1,173.20	29	1,153.34
25	MW-14	08/23/99	20.74	1,173.20	29	1,152.46
25	MW-14	09/22/99	20.78	1,173.20	29	1,152.42
25	MW-14	10/25/99	21.32	1,173.20	29	1,151.88
25	MW-14	11/24/99	21.80	1,173.20	29	1,151.40
25	MW-14	12/09/99	21.98	1,173.20	29	1,151.22
25	MW-14	01/13/00	22.35	1,173.20	29	1,150.85
26	MW-15	04/22/98	17.67	1,175.09	25	1,157.42
26	MW-15	05/21/98	17.76	1,175.09	25	1,157.33
26	MW-15	06/13/98	18.01	1,175.09	25	1,157.08
26	MW-15	08/20/98	18.60	1,175.09	25	1,156.49

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
27	MW-16	04/22/98	15.67	1,171.10	26	1,155.43
27	MW-16	05/20/98	15.85	1,171.10	26	1,155.25
27	MW-16	05/21/98	16.18	1,171.10	26	1,154.92
27	MW-16	06/13/98	16.48	1,171.10	26	1,154.62
27	MW-16	08/20/98	17.35	1,171.10	26	1,153.75
27	MW-16*	12/23/98	18.86	1,171.10	26	1,152.24
27	MW-16	12/23/98	18.82	1,171.10	26	1,152.28
27	MW-16	12/30/98	18.91	1,171.10	26	1,152.19
27	MW-16	01/25/99	19.38	1,171.10	26	1,151.72
27	MW-16	02/18/99	19.74	1,171.10	26	1,151.36
27	MW-16	03/17/99	20.09	1,171.10	26	1,151.01
27	MW-16	03/18/99	20.11	1,171.10	26	1,150.99
27	MW-16	04/22/99	18.90	1,171.10	26	1,152.20
27	MW-16	04/28/99	18.75	1,171.10	26	1,152.35
27	MW-16	05/21/99	17.81	1,171.10	26	1,153.29
27	MW-16	06/24/99	17.09	1,171.10	26	1,154.01
27	MW-16	07/19/99	17.45	1,171.10	26	1,153.65
27	MW-16	08/23/99	18.27	1,171.10	26	1,152.83
27	MW-16	09/22/99	18.35	1,171.10	26	1,152.75
27	MW-16	10/25/99	18.89	1,171.10	26	1,152.21
27	MW-16	11/24/99	19.46	1,171.10	26	1,151.64
27	MW-16	12/09/99	19.55	1,171.10	26	1,151.55
27	MW-16	01/13/00	19.96	1,171.10	26	1,151.14
28	MW-17	04/22/98	18.10	1,171.53	62	1,153.43
28	MW-17	05/20/98	19.03	1,171.53	62	1,152.50
28	MW-17	05/21/98	20.66	1,171.53	62	1,150.87
28	MW-17	06/13/98	19.98	1,171.53	62	1,151.55
28	MW-17	08/20/98	21.02	1,171.53	62	1,150.51
28	MW-17	09/08/98	22.28	1,171.53	62	1,149.25
28	MW-17*	12/23/98	22.11	1,171.53	62	1,149.42
28	MW-17	12/23/98	22.17	1,171.53	62	1,149.36
28	MW-17	12/30/98	22.50	1,171.53	62	1,149.03
28	MW-17	01/25/99	22.80	1,171.53	62	1,148.73
28	MW-17	02/18/99	23.28	1,171.53	62	1,148.25
28	MW-17	03/17/99	22.92	1,171.53	62	1,148.61
28	MW-17	03/18/99	22.87	1,171.53	62	1,148.66
28	MW-17	04/22/99	20.40	1,171.53	62	1,151.13
28	MW-17	04/28/99	21.43	1,171.53	62	1,150.10

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
28	MW-17	05/21/99	20.34	1,171.53	62	1,151.19
28	MW-17	06/24/99	20.30	1,171.53	62	1,151.23
28	MW-17	07/19/99	21.08	1,171.53	62	1,150.45
28	MW-17	08/23/99	21.71	1,171.53	62	1,149.82
28	MW-17	09/22/99	18.17	1,171.53	62	1,153.36
28	MW-17	10/25/99	22.13	1,171.53	62	1,149.40
28	MW-17	11/24/99	22.52	1,171.53	62	1,149.01
28	MW-17	12/09/99	22.22	1,171.53	62	1,149.31
28	MW-17	01/13/00	22.68	1,171.53	62	1,148.85
33	MW-1	04/22/98	13.66	1,169.35		1,155.69
33	MW-1	05/20/98	13.30	1,169.35		1,156.05
33	MW-1	05/21/98	13.44	1,169.35		1,155.91
33	MW-1	08/20/98	14.43	1,169.35		1,154.92
34	MW-2	04/22/98	14.02	1,169.75		1,155.73
34	MW-2	05/20/98	13.83	1,169.75		1,155.92
34	MW-2	05/21/98	13.94	1,169.75		1,155.81
35	MW-3	04/22/98	13.74	1,169.60		1,155.86
35	MW-3	05/20/98	13.61	1,169.60		1,155.99
35	MW-3	05/21/98	13.76	1,169.60		1,155.84
40	MW-5	05/20/98	19.10	1,173.40		1,154.30
40	MW-5	05/21/98	18.76	1,173.40		1,154.64
40	MW-5	08/20/98	20.43	1,173.40		1,152.97
41	MW-6	05/21/98	9.97	1,170.81		1,160.84
42	CMW	04/22/98	29.54	1,168.67	95	1,139.13
42	CMW	05/21/98	30.62	1,168.67	95	1,138.05
42	CMW	08/20/98	21.82	1,168.67	95	1,146.85
42	CMW	03/17/99	32.12	1,168.67	95	1,136.55
42	CMW	04/22/99	23.18	1,168.67	95	1,145.49
42	CMW	04/28/99	23.90	1,168.67	95	1,144.77
42	CMW	05/21/99	30.99	1,168.67	95	1,137.68
42	CMW	07/19/99	31.93	1,168.67	95	1,136.74
42	CMW	08/23/99	27.82	1,168.67	95	1,140.85
42	CMW	09/22/99	26.28	1,168.67	95	1,142.39
42	CMW	10/25/99	24.51	1,168.67	95	1,144.16

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
42	CMW	11/24/99	32.02	1,168.67	95	1,136.65
42	CMW	12/09/99	25.80	1,168.67	95	1,142.87
42	CMW	01/13/00	24.30	1,168.67	95	1,144.37
43	CMW	04/22/98	27.37	1,167.91	95	1,140.54
43	CMW	05/21/98	28.55	1,167.91	95	1,139.36
43	CMW	08/20/98	20.82	1,167.91	95	1,147.09
43	CMW	03/17/99	30.14	1,167.91	95	1,137.77
43	CMW	04/22/99	22.35	1,167.91	95	1,145.56
43	CMW	04/28/99	23.06	1,167.91	95	1,144.85
43	CMW	05/21/99	28.99	1,167.91	95	1,138.92
43	CMW	07/19/99	29.94	1,167.91	95	1,137.97
43	CMW	08/23/99	25.41	1,167.91	95	1,142.50
43	CMW	09/22/99	23.87	1,167.91	95	1,144.04
43	CMW	10/25/99	23.75	1,167.91	95	1,144.16
43	CMW	11/24/99	29.37	1,167.91	95	1,138.54
43	CMW	12/09/99	24.88	1,167.91	95	1,143.03
43	CMW	01/13/00	23.51	1,167.91	95	1,144.40
44	MW-4	04/22/98	14.82	1,170.58	19	1,155.76
44	MW-4	05/20/98	14.72	1,170.58	19	1,155.86
44	MW-4	05/21/98	14.89	1,170.58	19	1,155.69
44	MW-4*	12/23/98	17.86	1,170.58	19	1,152.72
44	MW-4	12/23/98	17.67	1,170.58	19	1,152.91
44	MW-4	12/30/98	17.79	1,170.58	19	1,152.79
44	MW-4	01/25/99	18.28	1,170.58	19	1,152.30
44	MW-4	02/18/99	18.60	1,170.58	19	1,151.98
44	MW-4	03/17/99	DRY	1,170.58	19	-
44	MW-4	03/18/99	DRY	1,170.58	19	-
44	MW-4	04/22/99	18.13	1,170.58	19	1,152.45
44	MW-4	05/21/99	17.09	1,170.58	19	1,153.49
44	MW-4	07/19/99	16.24	1,170.58	19	1,154.34
44	MW-4	08/23/99	17.06	1,170.58	19	1,153.52
44	MW-4	10/25/99	17.63	1,170.58	19	1,152.95
44	MW-4	11/24/99	18.29	1,170.58	19	1,152.29
44	MW-4	12/09/99	18.52	1,170.58	19	1,152.06

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

	Well	Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
45	DW-5	08/20/98	22.27	1,172.76	67	1,150.49
45	DW-5*	12/23/98	23.43	1,172.76	67	1,149.33
45	DW-5	12/23/98	48.46	1,172.76	67	1,124.30
45	DW-5	12/30/98	50.75	1,172.76	67	1,122.01
45	DW-5	01/25/99	52.81	1,172.76	67	1,119.95
45	DW-5	02/18/99	54.60	1,172.76	67	1,118.16
45	DW-5	03/17/99	57.87	1,172.76	67	1,114.89
45	DW-5	03/18/99	54.81	1,172.76	67	1,117.95
45	DW-5	04/22/99	55.44	1,172.76	67	1,117.32
45	DW-5	05/21/99	53.80	1,172.76	67	1,118.96
45	DW-5	06/24/99	56.02	1,172.76	67	1,116.74
45	DW-5	07/19/99	55.91	1,172.76	67	1,116.85
45	DW-5	08/23/99	57.98	1,172.76	67	1,114.78
45	DW-5	09/22/99	51.20	1,172.76	67	1,121.56
45	DW-5	10/25/99	52.62	1,172.76	67	1,120.14
45	DW-5	11/24/99	54.42	1,172.76	67	1,118.34
45	DW-5	12/09/99	55.05	1,172.76	67	1,117.71
46	DW-6	08/20/98	21.28	1,172.32	45	1,151.04
46	DW-6*	12/23/98	22.34	1,172.32	45	1,149.98
46	DW-6	12/23/98	22.48	1,172.32	45	1,149.84
46	DW-6	12/30/98	22.58	1,172.32	45	1,149.74
46	DW-6	01/25/99	22.88	1,172.32	45	1,149.44
46	DW-6	02/18/99	23.15	1,172.32	45	1,149.17
46	DW-6	03/17/99	23.32	1,172.32	45	1,149.00
46	DW-6	03/18/99	23.20	1,172.32	45	1,149.12
46	DW-6	04/22/99	21.73	1,172.32	45	1,150.59
46	DW-6	04/28/99	21.85	1,172.32	45	1,150.47
46	DW-6	05/21/99	20.78	1,172.32	45	1,151.54
46	DW-6	06/24/99	20.57	1,172.32	45	1,151.75
46	DW-6	07/19/99	21.26	1,172.32	45	1,151.06
46	DW-6	08/23/99	23.41	1,172.32	45	1,148.91
46	DW-6	09/22/99	21.98	1,172.32	45	1,150.34
46	DW-6	10/25/99	22.86	1,172.32	45	1,149.46
46	DW-6	11/24/99	22.80	1,172.32	45	1,149.52
46	DW-6	12/09/99	22.68	1,172.32	45	1,149.64
46	DW-6	01/13/00	22.95	1,172.32	45	1,149.37

TABLE 1

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ELEVATION DATA

Well		Date	Depth to Water	Reference Elevation	Well Depth	Water Table Elevation
47	TW-1	07/19/99	40.77			
47	TW-1	08/23/99	38.02			
47	TW-1	10/25/99	39.22			
47	TW-1	11/24/99	39.56			
47	TW-1	12/09/99	40.50			

Elevations are measured in feet.

Note: Riser pipe elevations are referenced to the top nut of the fire hydrant at the intersection of Hoffman and Augusta with an elevation of 1,173.14 feet AMSL per information provide by SEH.

*- static water level prior to pump-out start-up.

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TABLE 2

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

WELLS ATTRIBUTES

Map ID #	Well Name	Installed	Unique Well #	Type of Well	Screen Length (feet)	Reference Elevation (feet)	Well Depth (feet)	Depth to GW (feet)	Lock	Comments
1	DW-1	1998	608369	Monitoring Well	5	1,170.73	90	20	#2121	-
2	DW-2	1998	608370	Monitoring Well	5	1,170.44	85	20	#2121	-
3	DW-3	1998	608371	Monitoring Well	5	1,176.29	90	24	#2121	-
4	DW-4	1998	608372	Monitoring Well	5	1,171.74	90	22	#2121	-
5	MW-10D - Midtown Station	1998	-	Monitoring Well	10	1,172.25	90	22	Am. #24685	-
6	MW-14D - Midtown Station	1998	-	Monitoring Well	10	1,175.48	90	24	Am. #24685	-
7	MW-5 - Johnson Motor	1998	610507	Monitoring Well	5	1,170.41	89	20	-	-
8	MW-7 - Farmer's Union Co-Op	1998	601012	Monitoring Well	10	1,172.20	80	22	#2179	-
9	CW-3	1979	198647	City Mun. Well #3	26		93	-	-	-
10	CW-4	1989	456066	City Mun. Well #4	40	1,173.38	110	-	city lock	ref. = top of metal rim
11	CW-5	1993	537550	City Mun. Well #5	25	1,168.49	90	40	city lock	ref. = top of metal rim
12	CW-6	1993	537549	City Mun. Well #6	22	1,171.55	97	42	city lock	ref. = top of metal rim
13	Nursery Well	-	-	Potable Well	-	-	130	-	-	-
14	Private Well	-	-	Potable Well	-	-	-	-	-	-
15	Private Well	-	-	Potable Well	-	-	-	-	-	-
16	Bus Garage Well (north)	-	-	Former Potable Well	-	-	-	17	-	-
17	Bus Garage Well (south)	-	-	Former Potable Well	-	1,169.05	50	17	none	located in garage
18	City Monitoring Well	-	-	Monitoring Well	-	1,171.42	120	22	none	surrounded by electric fence
19	AMPI Well	-	-	Potable Well	-	-	-	-	-	-
20	MW-1 - Agronomy Center	1998	-	Monitoring Well	-	1,170.87	43	18	#2121	-
21	MW-2 - Agronomy Center	1998	-	Monitoring Well	-	1,171.20	38	18	#2121	-
22	MW-3 - Agronomy Center	1998	-	Monitoring Well	-	1,170.69	31	-	-	trailer park
23	MW-1 - Midtown Station	1991	467014	Monitoring Well	10	1,173.74	27	18	#2126	2" monitoring well
24	MW-10 - Midtown Station	1991	467015	Monitoring Well	10	1,171.69	27	16	#2126	2" monitoring well
25	MW-14 - Midtown Station	1991	467016	Monitoring Well	10	1,173.20	29	20	#2126	2" monitoring well
26	MW-15 - Midtown Station	1991	467017	Monitoring Well	10	1,175.09	25	-	#2126	2" monitoring well
27	MW-16 - Midtown Station	1993	521003	Monitoring Well	10	1,171.10	26	18	#2126	2" monitoring well
28	MW-17 - Midtown Station	1993	521001	Monitoring Well	5	1,171.53	62	22	#2126	2" monitoring well
29	MW-18 - Midtown Station	1993	535697	Monitoring Well	10	1,172.21	30	-	#2126	2" monitoring well
30	MW-19 - Midtown Station	1993	535698	Monitoring Well	10	1,172.27	30	-	#2126	2" monitoring well
31	MW-20 - Midtown Station	1994	535707	Monitoring Well	10	1,173.51	24	-	#2126	2" monitoring well
32	RW-1 - Midtown Station	-	-	Monitoring Well	30	1,172.42	43	-	#2126	recovery well
33	MW-1 - Johnson Motor	1996	-	Monitoring Well	10	1,169.35	-	14	-	-
34	MW-2 - Johnson Motor	1996	-	Monitoring Well	10	1,169.75	-	14	-	-
35	MW-3 - Johnson Motor	1996	-	Monitoring Well	10	1,169.60	-	14	-	-
36	MW-1 - Farmer's Union Co-Op	1993	521483	Monitoring Well	10	1,173.50	25	-	#2179	-
37	MW-2 - Farmer's Union Co-Op	1993	517433	Monitoring Well	15	1,171.58	25	-	#2179	-
38	MW-3 - Farmer's Union Co-Op	1993	521484	Monitoring Well	15	1,171.85	30	-	#2179	-
39	MW-4 - Farmer's Union Co-Op	1995	-	Monitoring Well	-	1,170.86	-	-	#2179	-
40	MW-5 - Farmer's Union Co-Op	1996	-	Monitoring Well	-	1,173.40	-	20	#2179	-
41	MW-6 - Farmer's Union Co-Op	1996	-	Monitoring Well	-	1,170.81	-	10	#2179	-
42	City Monitoring Well	1993	-	Monitoring Well	-	1,168.67	95	25	none	-
43	City Monitoring Well	1993	-	Monitoring Well	-	1,167.91	95	25	none	ref.=top of pipe thread, 8" from top
44	MW-4 - Johnson Motor	1998	-	Monitoring Well	-	1,170.58	-	18	-	-
45	DW-5	1998	614598	Recovery Well	10	1,172.76	67	22	#2121	recovery well
46	DW-6	1998	614599	Monitoring Well	5	1,172.32	45	22	#2121	-
47	TW-1	1999	625384	Test Well	20		102	40	Bolt	-

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TABLE 3

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ANALYTCAL RESULTS - WELLS

ID#	Sample		Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	GRO (µg/L)	DRO (µg/L)
	MONITORING WELLS											
1	DW-1	*G	03/05/1998	<1	<1	<1	<3	<5	<5	<1	-	-
1	DW-1		03/25/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
1	DW-1	*G	06/13/1998	<1	<1	<1	<3	-	<5	<1	-	-
1	DW-1		06/13/1998	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
2	DW-2	G	03/06/1998	<1	<1	<1	<3	<5	<5	**20**	-	-
2	DW-2		03/25/1998	<0.30	<0.30	<0.50	<0.80	<1.0	<0.40	<0.50	-	-
2	DW-2	G	06/13/1998	<1	<1	<1	<3	-	<5	<1	-	-
2	DW-2		06/13/1998	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
3	DW-3	G	03/16/1998	<1	<1	<1	<3	<5	<5	<1	-	-
3	DW-3		03/25/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
3	DW-3	G	06/13/1998	<1	<1	<1	<3	-	<5	<1	-	-
3	DW-3		06/13/1998	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
3	DW-3		09/22/1999	<1.0	<1.0	<1.0	<1.0	<5.0	-	-	<100	-
3	DW-3		12/09/1999	<1.0	<1.0	<1.0	<1.0	<5.0	-	-	<100	-
4	DW-4	G	03/16/1998	<1	<1	<1	<3	<5	<5	<1	-	-
4	DW-4		03/25/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
4	DW-4	G	06/13/1998	<1	<1	<1	<3	-	<5	<1	-	-
4	DW-4		06/13/1998	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
46	DW-6	G	08/20/1998	**330**	<100	<100	<300	-	<500	<100	-	-
46	DW-6		04/05/1999	**140**	**3.9**	**29**	**17.4**	-	-	-	**720**	**150**
46	DW-6		06/21/1999	**120**	**2.1**	**25**	**14**	-	-	-	**660**	**100**
46	DW-6		09/22/1999	**99**	**1.4**	**16**	**9.3**	**10**	-	-	**400**	-
46	DW-6		12/09/1999	**64**	**5.3**	**20**	**29**	**20**	-	-	**570**	-
21	BEI-MW-2		03/25/1998	<0.30	**0.61**	<0.50	<1.2	<1.0	<0.40	<0.50	-	**170**
27	MW-16		04/05/1999	<1.0	<1.0	<1.0	<3.0	-	-	-	<50	<100
27	MW-16		06/21/1999	<1.0	<1.0	<1.0	<3.0	-	-	-	<50	<100
27	MW-16		10/06/1999	<1.0	<1.0	<1.0	<3.0	-	-	-	<50	<100
27	MW-16		12/09/1999	<1.0	<1.0	<1.0	<1.0	<5.0	-	-	<100	-
28	MW-17	G	06/13/1998	**2,100**	<100	<100	<300	-	<500	**140**	-	-
28	MW-17		04/05/1999	**360**	<2.0	<2.0	<6.0	-	-	-	**540**	<100
28	MW-17		06/21/1999	**35**	<1.0	<1.0	<3.0	-	-	-	<50	<100
28	MW-17		10/06/1999	**2.8**	<1.0	<1.0	<3.0	-	-	-	<50	<100
28	MW-17		12/09/1999	**9.2**	**1.7**	**1.2**	**5.8**	<5.0	-	-	<100	-
	POTABLE WELLS											
9	CW-3		03/25/1998	**18**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		05/20/1998	**11**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3	G	06/10/1998	**9.3**	<1	<1	<3	-	<5	<1	-	-
9	CW-3		06/10/1998	**7.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
9	CW-3		08/20/1998	**6.2**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-

TABLE 3

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ANALYTCAL RESULTS - WELLS

ID#	Sample		Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	GRO (µg/L)	DRO (µg/L)
9	CW-3		09/09/1998	**5.2**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		10/05/1998	**4.8**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		11/18/1998	**3.4**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		12/15/1998	**2.9**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		01/25/1999	**1.6**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		02/18/1999	**1.3**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		03/17/1999	**0.86**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		04/22/1999	**0.63**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		05/21/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
9	CW-3		06/24/1999	**0.37**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		07/19/1999	**0.48**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		08/23/1999	**1.4**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		09/22/1999	**1.1**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		10/25/1999	**0.59**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		11/24/1999	**0.35**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		12/09/1999	**0.36**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
9	CW-3		01/13/2000	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	-	-
10	CW-4		12/19/1990	**2.2**	<0.2	<0.2	**0.4**	<0.2	<0.5	**0.3**	-	-
10	CW-4		10/23/1997	**16**	<0.30	<0.50	<1.2	<1.0	<0.40	**1.5**	-	-
10	CW-4		03/25/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4	G	06/10/1998	**3.0**	<1	<1	<3	-	<5	**2.2**	-	-
10	CW-4		06/10/1998	**2.9**	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	-	-
10	CW-4	G	06/13/1998	**3.5**	<1	<1	<3	-	<5	**2.7**	-	-
10	CW-4		08/20/1998	**6.6**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
10	CW-4		09/09/1998	**8.8**	<0.3	<0.5	<1.2	<1.0	<0.4	**0.78**	-	-
10	CW-4		10/05/1998	**12**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
10	CW-4		11/18/1998	**19**	<0.3	<0.5	<1.2	<1.0	<0.4	**0.6**	-	-
10	CW-4		12/15/1998	**18**	**0.4**	<0.5	<1.2	<1.0	<0.4	**0.8**	-	-
10	CW-4		01/25/1999	**20**	**0.38**	**0.51**	<1.2	<1.0	<0.4	**1.1**	-	-
10	CW-4		02/18/1999	**19**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
10	CW-4		03/17/1999	**19**	<0.3	**0.55**	<1.2	<1.0	<0.4	**0.88**	-	-
10	CW-4		04/22/1999	**12**	<0.3	<0.50	<1.2	<1.0	<0.4	**0.51**	-	-
10	CW-4		05/21/1999	**8.8**	<0.3	<0.50	<1.2	<1.0	<0.4	**0.62**	-	-
10	CW-4		06/24/1999	**11**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4		07/19/1999	**7.7**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4		08/23/1999	**7.3**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4		09/22/1999	**6.7**	<0.30	<0.50	<1.2	<1.0	<0.40	**0.59**	-	-
10	CW-4		10/25/1999	**6.6**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4		11/24/1999	**5.7**	<0.30	<0.50	<1.2	<1.0	<0.40	**0.5**	-	-
10	CW-4		12/09/1999	**4.9**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4		01/13/2000	**3.5**	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	-	-
11	CW-5		01/13/2000	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	-	-
12	CW-6		01/13/2000	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	-	-

TABLE 3

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ANALYTCAL RESULTS - WELLS

ID#	Sample	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	GRO (µg/L)	DRO (µg/L)
	CW-Influent	03/25/1998	**5.8**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent G	04/23/1998	**1.0**	<1	<1	<3	<5	<5	<1	-	-
	CW-Influent	06/10/1998	**3.7**	**1.0**	**4.7**	**1.3**	<1.0	<1.0	<1.0	-	-
	CW-Influent	08/20/1998	**0.5**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	10/05/1998	**1.1**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	11/18/1998	**0.34**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	12/15/1998	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	01/25/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	02/18/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	03/17/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	04/22/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	05/21/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	06/24/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Influent	07/19/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent	08/23/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent	09/22/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent	10/25/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent	11/24/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent	12/09/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Influent	01/13/2000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
	CW-Filtered	03/25/1998	**6.8**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered G	04/23/1998	<1	<1	<1	<3	<5	<5	<1	-	-
	CW-Filtered	06/10/1998	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	08/20/1998	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	10/05/1998	**0.73**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	11/18/1998	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	12/15/1998	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	01/25/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	02/18/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	03/17/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	04/22/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	05/21/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	06/24/1999	<0.3	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	CW-Filtered	07/19/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered	08/23/1999	**0.35**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered	09/22/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered	10/25/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered	11/24/1999	**5.80**	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered	12/09/1999	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	CW-Filtered	01/13/2000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
	Storm Dis.	03/17/1999	<0.3	**0.86**	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	Storm Dis.	04/22/1999	**3.0**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	<100	<100
	Storm Dis.	09/22/1999	**1.8**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
	Storm Dis.	12/09/1999	**1.1**	<0.3	<0.5	<1.2	<1.0	<0.4	<0.5	-	-
13	Nusery Well G	02/26/1998	<1	<1	<1	<3	<5	<5	<1	-	-

TABLE 3

PAYNESVILLE PUBLIC WATER SUPPLY - MPCA
PAYNESVILLE, MINNESOTA
TERRACON PROJECT NO. 41987018

GROUND WATER ANALYTCAL RESULTS - WELLS

ID#	Sample	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	GRO (µg/L)	DRO (µg/L)
13	Nusery Well	02/26/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
19	AMPI Well	03/25/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
17	Bus Gar. (south)	03/25/1998	<0.30	**0.35**	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
	GW PUMPING TEST										
10	CW-4-1	05/20/1998	<1.0	<1.0	<1.0	<1.0	<5.0	NA	NA	<100	-
10	CW-4-2	05/20/1998	<1.0	<1.0	<1.0	<1.0	<5.0	NA	NA	<100	-
10	CW-4-3	05/20/1998	<0.30	<0.30	<0.50	<1.2	<1.0	<0.40	<0.50	-	-
10	CW-4-4	05/20/1998	<1.0	<1.0	<1.0	<1.0	**49**	NA	NA	<100	-
10	CW-4-5	05/21/1998	<1.0	<1.0	<1.0	<1.0	<5.0	NA	NA	<100	-
10	CW-4-6	05/21/1998	**0.41**	<0.30	<0.50	<1.2	<1.0	<0.40	**0.46**	-	-
45	DW-5 G	08/20/1998	**2,200**	**140**	<100	<300	-	<500	**100**	-	-
45	DW-5 - 2 hrs G	08/20/1998	**2,300**	**120**	<100	<300	-	<500	**110**	-	-
45	DW-5 - 2 hrs G*	08/20/1998	**760**	**120**	**73**	**65**	**1.7**	<0.40	**41**	**2700**	-
45	DW-5	12/24/1998	**1,600**	**81**	**64**	**41**	<5.0	-	-	**2,800**	-
45	DW-5	12/30/1998	**1,300**	**47**	**51**	**41**	**44**	-	-	**1,700**	-
45	DW-5	01/25/1999	**600**	**28**	**41**	**41**	**5.4**	-	-	**1,100**	-
45	DW-5	02/18/1999	**400**	**13**	**25**	<5.0	<25	-	-	**550**	-
45	DW-5	03/17/1999	**380**	**13**	**22**	**17**	<5.0	-	-	**610**	-
45	DW-5	04/22/1999	**240**	<1.0	**13**	**18**	<5.0	-	-	**590**	-
45	DW-5 *	05/21/1999	**160**	**8.7**	**14**	**13**	<1.0	-	**5.8**	-	-
45	DW-5	06/24/1999	**170**	**6.2**	**9.9**	**8.9**	<5.0	-	-	**280**	-
45	DW-5	07/19/1999	**170**	**5.7**	**11**	**11**	<5.0	-	-	**300**	-
45	DW-5	08/23/1999	**160**	**6.2**	**12**	**8.9**	**5.3**	-	-	**280**	-
45	DW-5	09/22/1999	**170**	**5.7**	**11**	**8.6**	<5.0	-	-	**280**	-
45	DW-5	10/25/1999	**160**	**5.6**	**12**	**10**	<5.0	-	-	**260**	-
45	DW-5	11/24/1999	**150**	**5.8**	**11**	**10**	**5.2**	-	-	**250**	-
45	DW-5	12/09/1999	**140**	**5.7**	**12**	**9.7**	<5.0	-	-	**230**	-
45	DW-5	01/13/2000	**140**	**10**	**12**	**15**	<130	-	-	**290**	-
	HRL	-	10	1,000	700	10,000	NE	300	4	NE	NE
	MCL	-	5	1,000	700	10,000	NE	NE	5	NE	NE
	NPDES	-	114	253	-	166	-	-	190	500	-

Concentrations are in micrograms per liter (µg/L) which is equivalent to parts per billion.

1,2-DCA = 1,2-Dichloroethane

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

G = Samples analyzed using GC in Geoprobe Sampling Vehicle.

* = Other petroleum related volatile organic compounds detected.

HRL = Health Risk Limit (MDH, 1996)

MCL = Maximum contaminant levels (EPA, 1996)

< = Less than the practical quantification limits.

NA = not analyzed

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