ADDENDUM TO CORRECTIVE ACTION PLAN

ADDITIONAL INFORMATION REQUESTED

Gate City Truck Repair (ARA / Smith's)
6301 Burnt Poplar Road, Greensboro, NC

Groundwater Incident: # 10077
Facility ID: 0-010064

June 22, 1996

Prepared for: **Lindley Property Trust**
Greensboro, North Carolina

Prepared by: **G. VanNess Burbach, PG**
License # 1349

Reviewed by: **Douglas A. Canavello, PG**
License # 1066

6/26/96
Soil was excavated last week. Confirmation sample results & disposal manifests will follow soon under separate cover.

Talk w/ Cope Livingston

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6301 Burnt Poplar Road, Greensboro, NC
Groundwater Incident: # 10077

1.0 INTRODUCTION

In July, 1995, Pyramid Environmental, Inc. submitted a Corrective Action Plan (CAP) for the Gate City Truck Repair (ARA / Smith's) site located at 6301 Burnt Poplar Road in Greensboro, North Carolina (Figures 1 & 2). The CAP proposed remediation of the site by excavation and off-site disposal of petroleum-contaminated soil and natural (passive) remediation of the groundwater (see CAP report dated July 12, 1995). In a letter dated May 7, 1996 from the Winston-Salem Regional Office of the NC-DEHNR-DEM Groundwater Section, additional information was requested before review of the CAP would be completed. The purpose of this report is to supply the requested information.

2.0 ADDITIONAL WORK PERFORMED

2.1 Installation of Monitoring Well MW-8

Monitoring well MW-8 was installed on May 21, 1996 to replace MW-5, which had been destroyed (Figure 2). The well was installed using a truck-mounted hollow-stem Auger to a total depth of 15'. The well was cased with 12' of 2" PVC screen and 3' of 2" PVC riser. A boring log and well construction diagram are included in Appendix I of this report. The well was purged and sampled on May 23, 1996 in accordance with state guidelines, the sampling is discussed in Section 2.3 of this report. MW-8 is directly down-gradient of the contaminant plume (see Section 2.2 and Figure 3), and is sufficient for monitoring possible down-gradient migration of the plume.

2.2 Resurveying of Monitoring Wells

On June 7, 1996, all active monitoring wells on the site, including MW-7 and MW-8, were re-surveyed and water levels were measured in order to determine the current pieziometric gradient for the groundwater. The survey data and calculations are presented in Table 1, and the new pieziometric surface map is shown in Figure 3. These data indicate an average groundwater gradient of less than 1° toward the west.

2.3 *Resampling of Monitoring Wells*

All of the active monitoring wells on the site were resampled on May 23, 1996 and samples were sent to a North Carolina-certified laboratory for analysis by EPA Methods 602, 625, and 3030C. The wells were purged and sampled in accordance with state guidelines using dedicated disposable bailers. The samplers wore disposable latex gloves, and the samples were placed in clean, appropriately prepared sample containers and placed in a cooler maintained at approximately 4° C for transport. The laboratory reports and chains of custody are included in Appendix II of this report. The results of the earlier (1993-1994) sampling of the monitoring wells are shown in Table 2, and the results of the recent resampling of the wells are shown in Table 3. An isoconcentration map for total BTEX based on the recent sampling results is shown in Figure 4, and individual isoconcentration maps for benzene, toluene, ethylbenzene, xylenes, and naphthalene are shown in Figures 5-9.

2.4 *Re-modeling of Contaminant Plume*

The original CAP included modeling of the migration and degradation of the contaminant plume using the program BIOPLUME-II. The original modeling used the total BTEX concentration as the modeled contaminant. In response to the May 7, 1996 letter from the DEM and a phone conversation with Mike Zappia of the Guilford County Health Department, the modeling was re-run using benzene alone as the modeled parameter. The new pieziometric surface map (Figure 3) and the new benzene isoconcentration map (Figure 5) were incorporated into the BIOPLUME-II model. All other parameters of the modeling remained the same as originally run for the CAP (Table 4). The new 20' x 20' model grid is shown in Figure 10 with the base map and benzene isoconcentrations superimposed.

As in the CAP, three levels of modeling were performed. The initial modeling was performed assuming hydraulic conductivity ($K = 9 \times 10^{-8}$ ft/sec) determined from rising-head tests performed on the site. The initial modeling included the effects of convective transport, hydrodynamic dispersion, retardation, and oxygen-limited biodegradation. In the second level of modeling, all the parameters were the same as the first level except that the hydraulic conductivity was increased by two orders of magnitude. In the third level of modeling, all the parameters were the same as the second level except that the effects of oxygen-limited biodegradation were not included. Appendix III of this report includes figures showing the original benzene plume as modeled at Time = 0, and the results of the three levels of modeling at Time = 1 year, 5 years, and 10 years. Appendix IV includes the input and output files for all three levels of BIOPLUME-II modeling (on diskette).

3.0 SPECIFIC POINTS AS REQUESTED BY THE DEM

3.1 Documentation that the conditions at the subject site are conducive to natural remediation processes, and evidence that natural attenuation is occurring at the site.

Observations from soil borings indicate that site soils are dominantly silty clay to clay loam. On June 16, 1994, Triangle Environmental conducted a rising head test on Monitoring Well MW-1. The results indicated a hydraulic conductivity of 2.6×10^{-6} cm/sec. This is a very low hydraulic conductivity, which could significantly inhibit both the migration and the re-aeration of the groundwater. This would slow the rate of aerobic biodegradation, but other natural processes, such as anaerobic biodegradation and adsorption could still produce significant natural attenuation. No direct information regarding soil and groundwater nutrients, dissolved oxygen, or other physical parameters are available.

The Groundwater Section Revised 2L Implementation Guidance Document (dated December 11, 1995) states: "A demonstration of natural attenuation may be based on direct evidence such as monitoring data which shows the plume decreasing in volume and concentration." The highest concentration of BTEX from the earlier (1993-1994) sampling was in well MW-2 at 4636 parts-per-billion (ppb) (Table 2). The results for MW-2 in the recent (1996) sampling was 3304 ppb (Table 3). This represents a decrease of approximately 29% over the earlier results. The next highest concentration from the earlier results was in MW-1, with 937 ppb. The recent results for MW-1B (which replaced MW-1) was only 429.15 ppb, a reduction of over 54%. Furthermore, the results for MW-6, MW-3, and VEW-1, all of which had small amounts of BTEX in the earlier sampling, were BDL for all test parameters in the recent sampling, indicating that the plume is decreasing in both horizontal and vertical extent. The only well with an increase in BTEX was MW-7, which is the up-gradient well. In the earlier results MW-7 was BDL for all parameters. In the recent sampling, small amounts of benzene and xylenes were detected (total BTEX = 10.23 ppb), as well as MTBE at 117 ppb. Also an increase in naphthalene was noted in MW-1B and MW-2. The reason for these increases is unknown.

3.2 It must be demonstrated that the contaminants in question can be remediated to 15 NCAC 2L.0202 standards within an acceptable period of time. . . . The benzene at the site is of particular interest and should be modeled.

The re-modeling using benzene as a parameter has been performed as described in Section 2.4 of this report, and the results are shown graphically in Appendix III. Table 5 shows the maximum concentration of benzene for each model level at 1 year, 5 years, and 10 years. The results of Level 1 modeling show that after 10 years the maximum concentration of the plume has been reduced from the initial concentration of 1810 ppb to 319 ppb, but is still above 2L standards; however, the plume has not migrated at all. Both these effects are due to the extremely low hydraulic conductivity used in Level 1. Level 2,

with a higher hydraulic conductivity, shows the maximum benzene concentration reduced to zero after only 5 years. Level 3, with the higher hydraulic conductivity but without biodegradation, shows the maximum benzene concentration reduced 68.2 ppb after 5 years, and the maximum value has migrated approximately 100' down-gradient. The Level 3 benzene concentration is reduced to zero after 10 years.
These results indicate that, under a variety of assumptions, the contaminant plume is not likely to migrate off site. If the hydraulic conductivity is as low as indicated by the slug tests on site, the plume will not attenuate very rapidly, but it also will not migrate. If the conductivity is high enough for the plume to migrate significantly, it will also attenuate more rapidly so that even without any biodegradation (Level 3) the plume will attenuate to below 2L standards before it can migrate off site.

3.3 Documentation that groundwater in the area has not been identified for future use or development.

Dave Moorefield of the City of Greensboro Water and Sewer Department, in a phone conversation with Pyramid Environmental on June 20, 1996, and in a letter included in Appendix V of this report, confirmed the following information: (1) the subject site is not near any city reservoir or other existing or planned sources of municipal water; (2) the city of Greensboro does not use or plan to develop groundwater from wells in this or any other area; and (3) municipal water lines are available in the area for any future residential or commercial development.

3.4 Monitor wells must include one or more well(s) placed in the zone defined to be no further than 5 years travel time from the leading edge of the plume. . . . A monitoring well to replace MW-5 should be installed. . . . MW-7 should be incorporated into the potentiometric surface map.

The installation of MW-8 to replace MW-5 and the resurveying of all the wells, including MW-7, are described in Sections 2.1 and 2.2 of this report. The analytical results from MW-8 were BDL (Below Detection Level) for all parameters by EPA Methods 602 and 625 (Table 3). MW-8 is directly down-gradient from the contaminant plume according to the new potentiometric surface map (Figure 3). It is approximately 50' down-gradient of the well with the highest contaminant levels (MW-2).

3.5 If roads or highways are located adjacent to the site the DOT or local government must be notified pursuant to 15A NCAC 2L.0114(b).

A letter of notification has been sent to the NC-DOT in accordance with 15A NCAC 2L.0114(b). A copy of this letter is included in Appendix VI of this report.

3.6 A monitoring plan must be provided.

The monitoring plan for the site will include quarterly sampling of all active monitoring wells on the site for the first year, and annual sampling of all the monitoring wells after

that. The samples will be obtained in accordance with state guidelines, and analyzed by a state-certified laboratory by EPA Methods 601/602, 625, and 3030c (lead). A Monitoring Report summarizing the results will be submitted following each sampling event. This monitoring plan will remain in effect for five years, at which time the site's progress will be evaluated and recomendations will be made either to close the site or to continue the monitoring program.

3.7 A schedule including specific time frames for implementation of the CAP must be provided.

The following schedule is anticipated for implementation and operation of this CAP:

ACTION:	Anticipated Date:
Excavation of Contaminated Soil	June, 1996
Report on Results of Soil Excavation	July, 1996
Monitoring Well Sampling & Report	August, 1996
Monitoring Well Sampling & Report	November, 1996
Monitoring Well Sampling & Report	February, 1997
Monitoring Well Sampling & Report	May, 1997
Monitoring Well Sampling & Report	May, 1998
Monitoring Well Sampling & Report	May, 1999
Monitoring Well Sampling & Report	May, 2000
Monitoring Well Sampling & Report	May, 2001
5-Year Evaluation and Recommendations for Either Site Closure or Continued Annual Monitoring.	August, 2001

4.0 CONCLUSIONS

Pyramid Environmental believes that the information presented in this report should be sufficient to satisfy the requests made by the NC-DEHNR-DEM in their letter of May 7, 1996, in order to complete review of the Corrective Action Plan (CAP) for the site. A new, clean, down-gradient well to replace MW-5 has been installed, the wells have been resurveyed for a better definition of the pieziometric surface, and the contaminant plume has been re-modeled using the new information and using benzene as the model parameter. Also, the NC-DOT has been properly notified, and both a monitoring plan and an anticipated timetable are included in this report. The results of these efforts support the conclusions and recommendations of the original CAP, and Pyramid requests that the review of the CAP be completed as soon as possible.

5.0 CLOSURE

This report is prepared for, and made available solely for the use of, the Client, and the contents thereof may not be used or relied upon by any other person without the express written consent and authorization of the consultant. The observations, conclusions, and recommendations documented in this report are based on site conditions and information available at the time of Pyramid's investigation. Pyramid Environmental, Inc. appreciates the opportunity to provide this environmental service.

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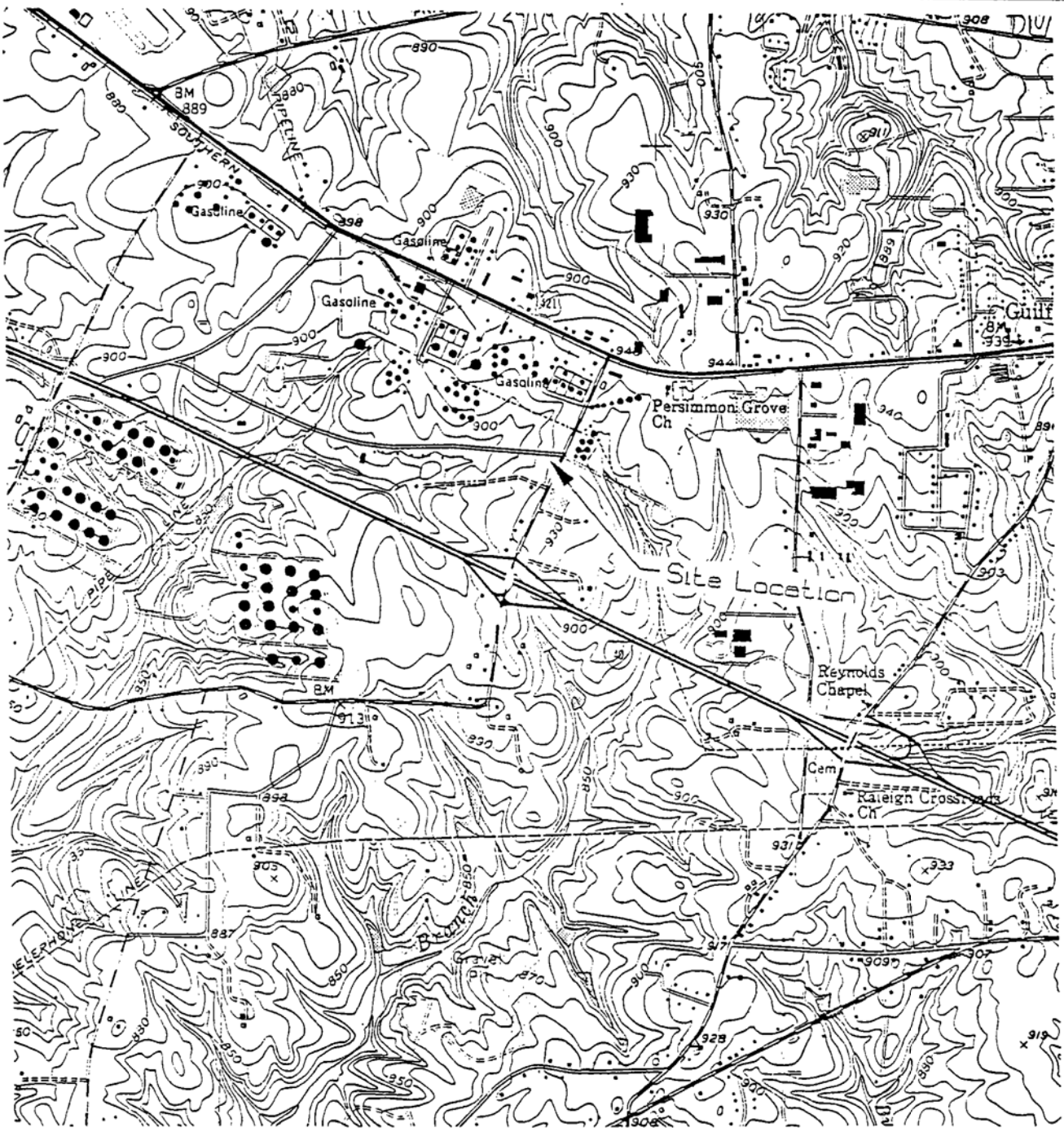
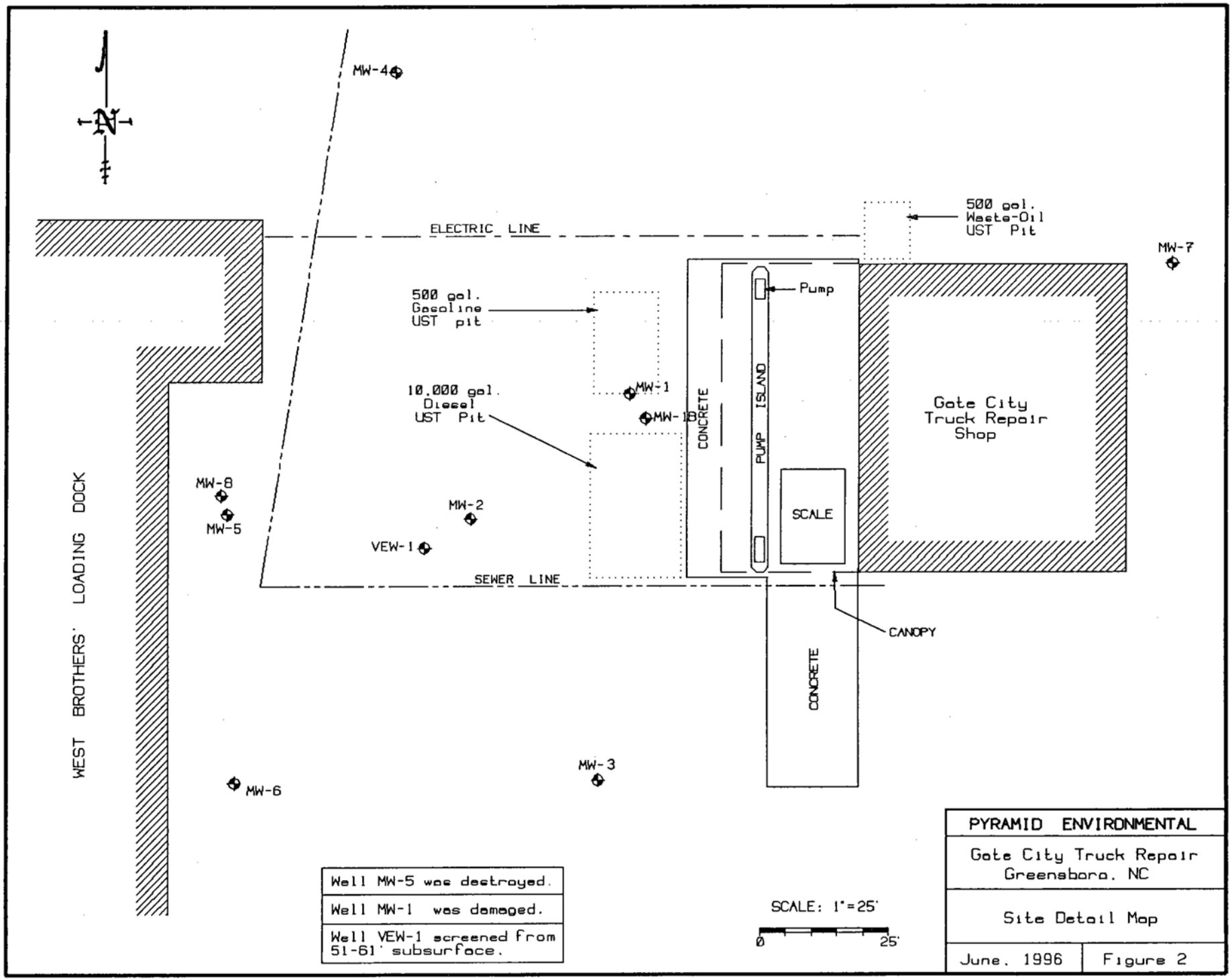
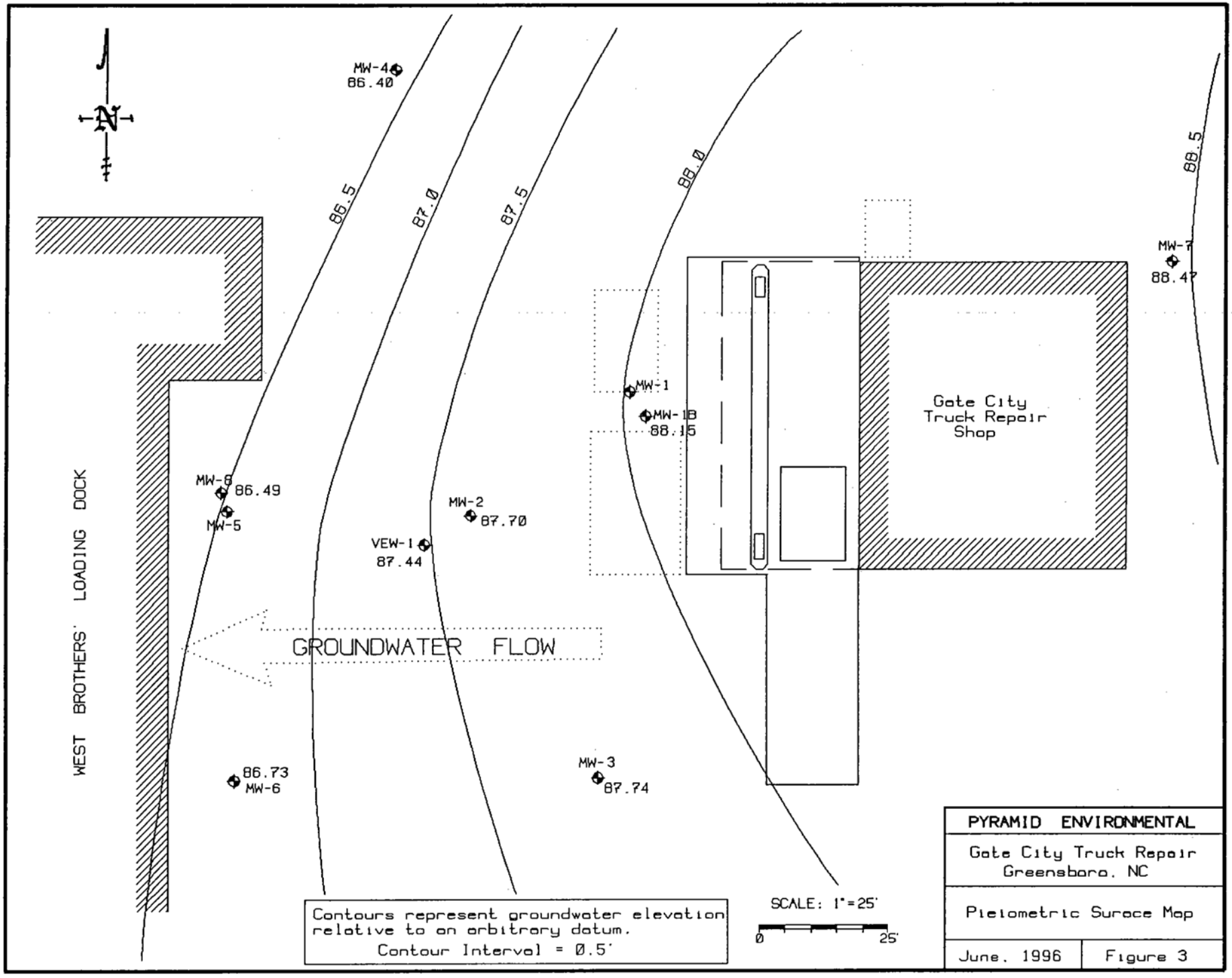
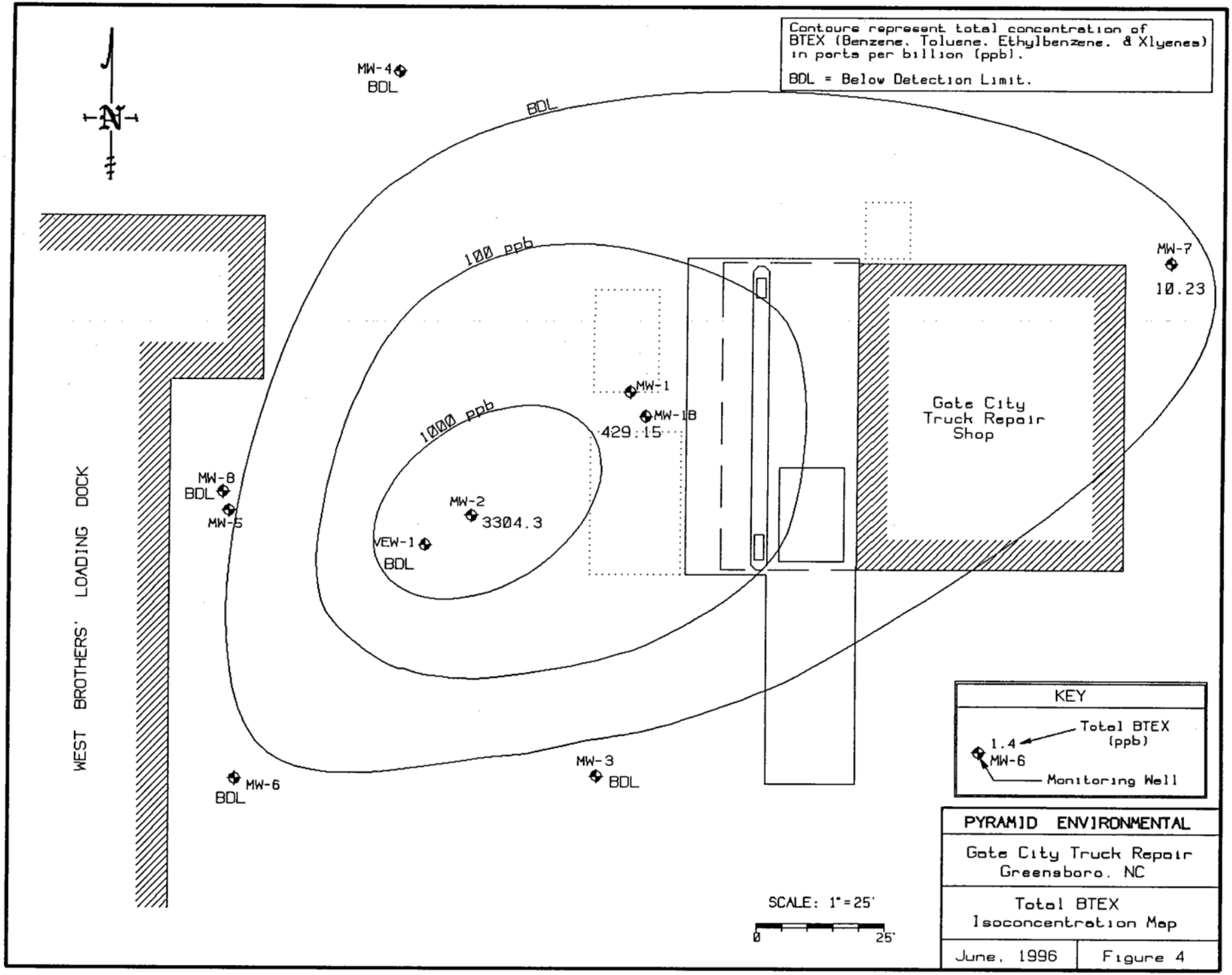


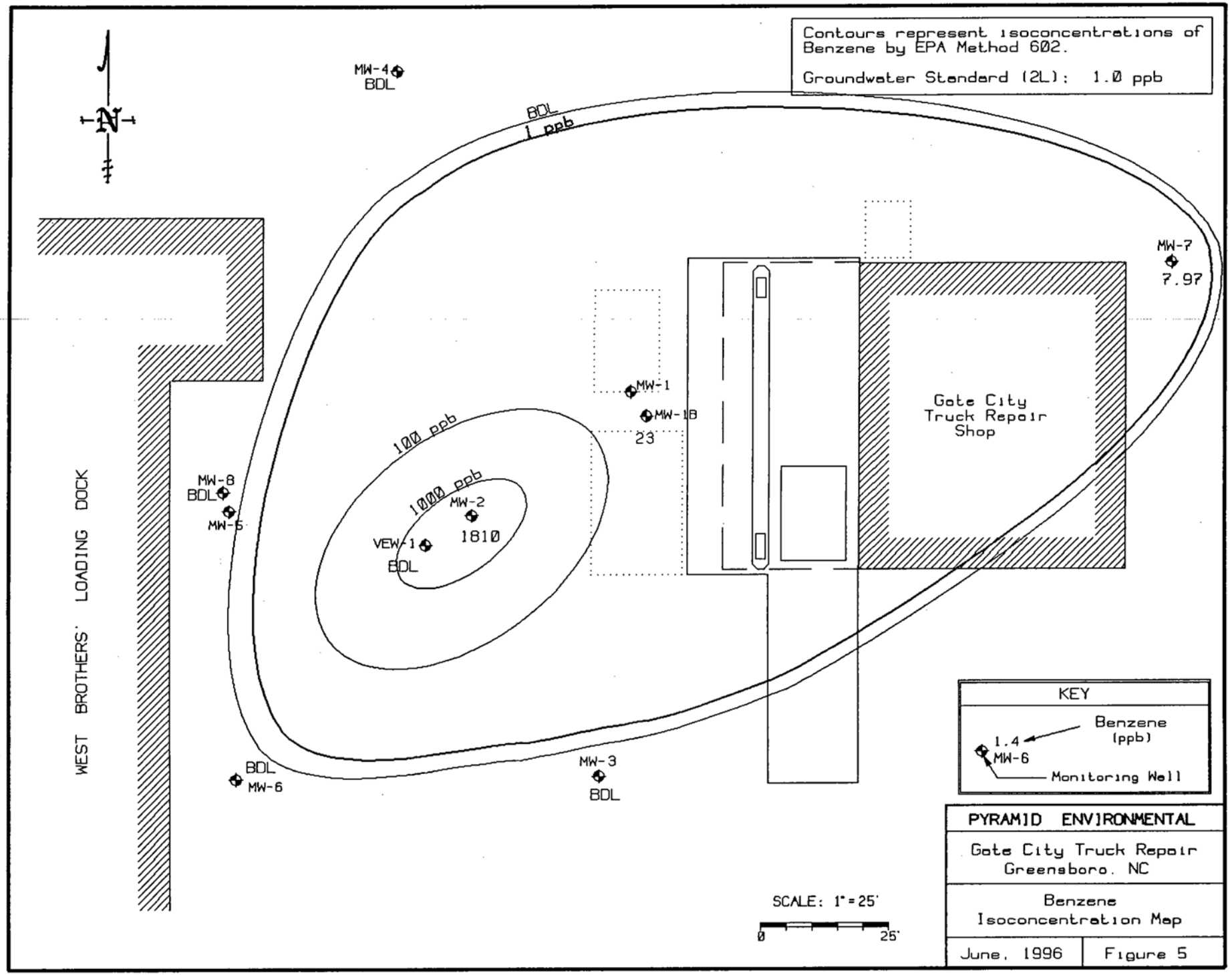
Scale: 1" = 2000'
USGS Topographic Map
Guilford, NC Quadrangle

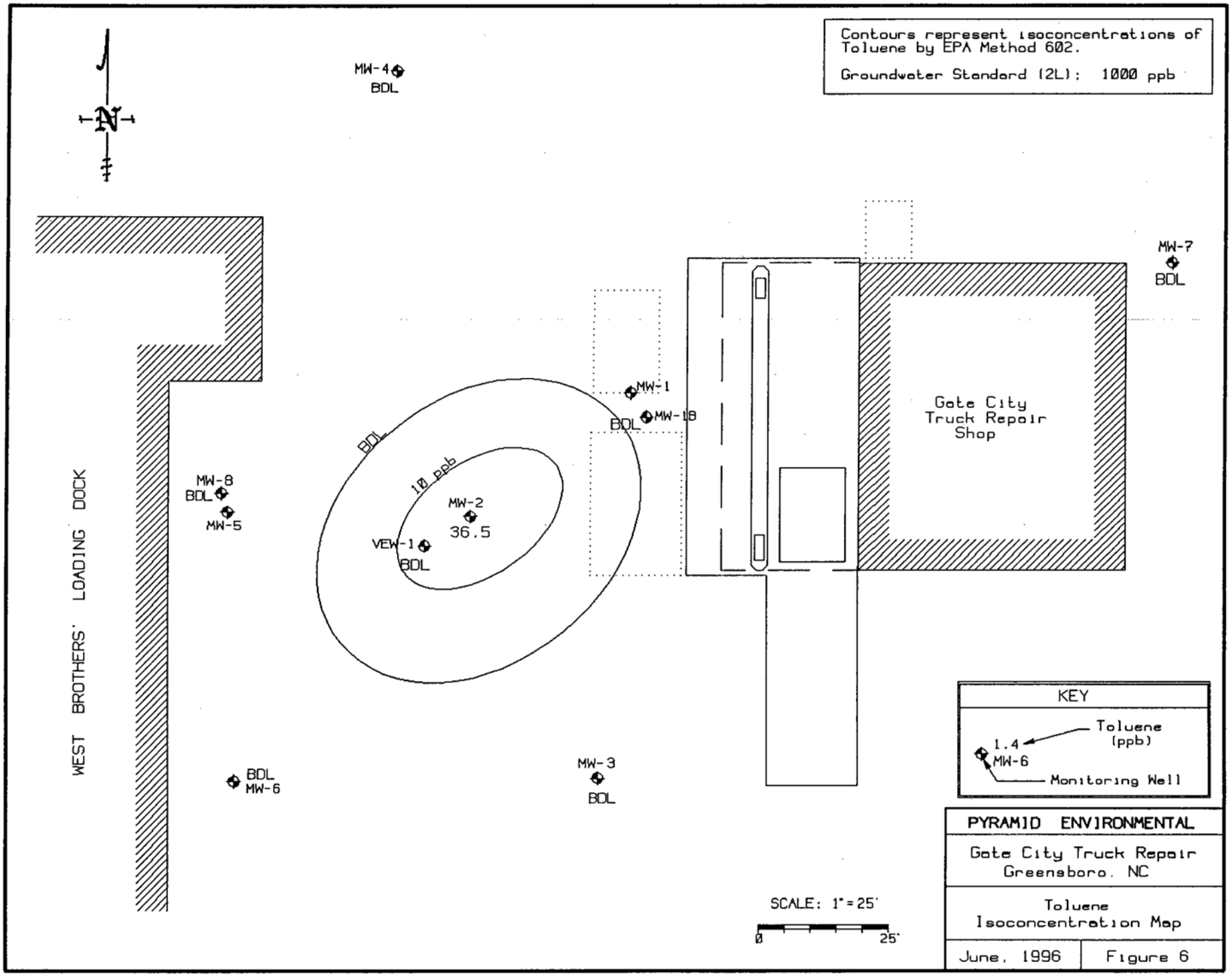
PYRAMID ENVIRONMENTAL	
Gate City Truck Repair Greensboro, NC	
Site Location Map	
May 1995	Figure 1

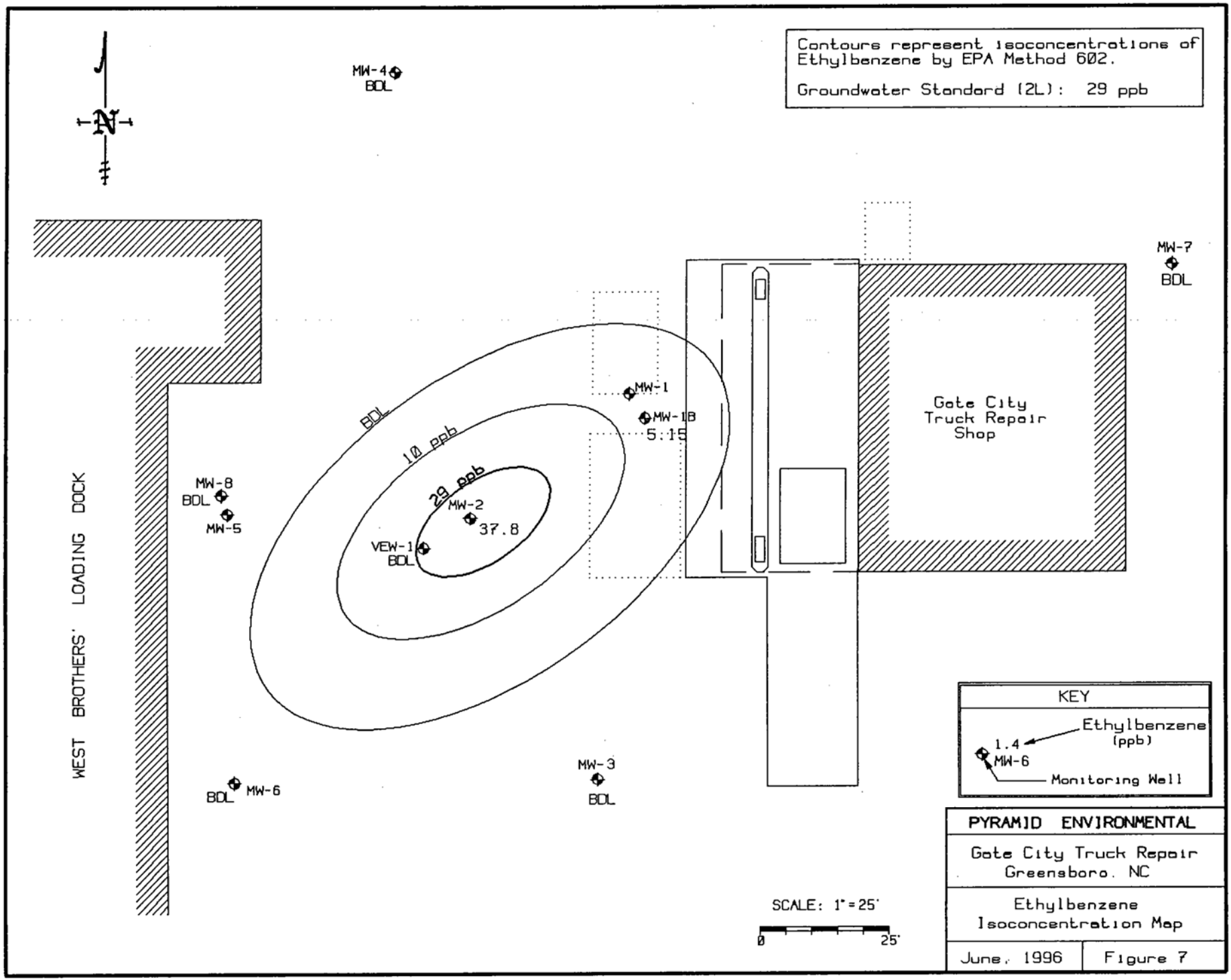

MW-4
ELECTRIC LINE
500 gal.
Waste-Oil
UST Pit
MW-7
500 gal.
Gasoline
UST pit
Pump
10,000 gal.
Diesel
UST Pit
MW-1
MW-1B
CONCRETE
PUMP ISLAND
Gate City
Truck Repair
Shop
SCALE
MW-8
MW-5
MW-2
VEW-1
SEWER LINE
CANOPY
CONCRETE
WEST BROTHERS' LOADING DOCK
MW-3
MW-6
Well MW-5 was destroyed.
Well MW-1 was damaged.
Well VEW-1 screened from 51-61' subsurface.
SCALE: 1"=25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Site Detail Map
June, 1996
Figure 2

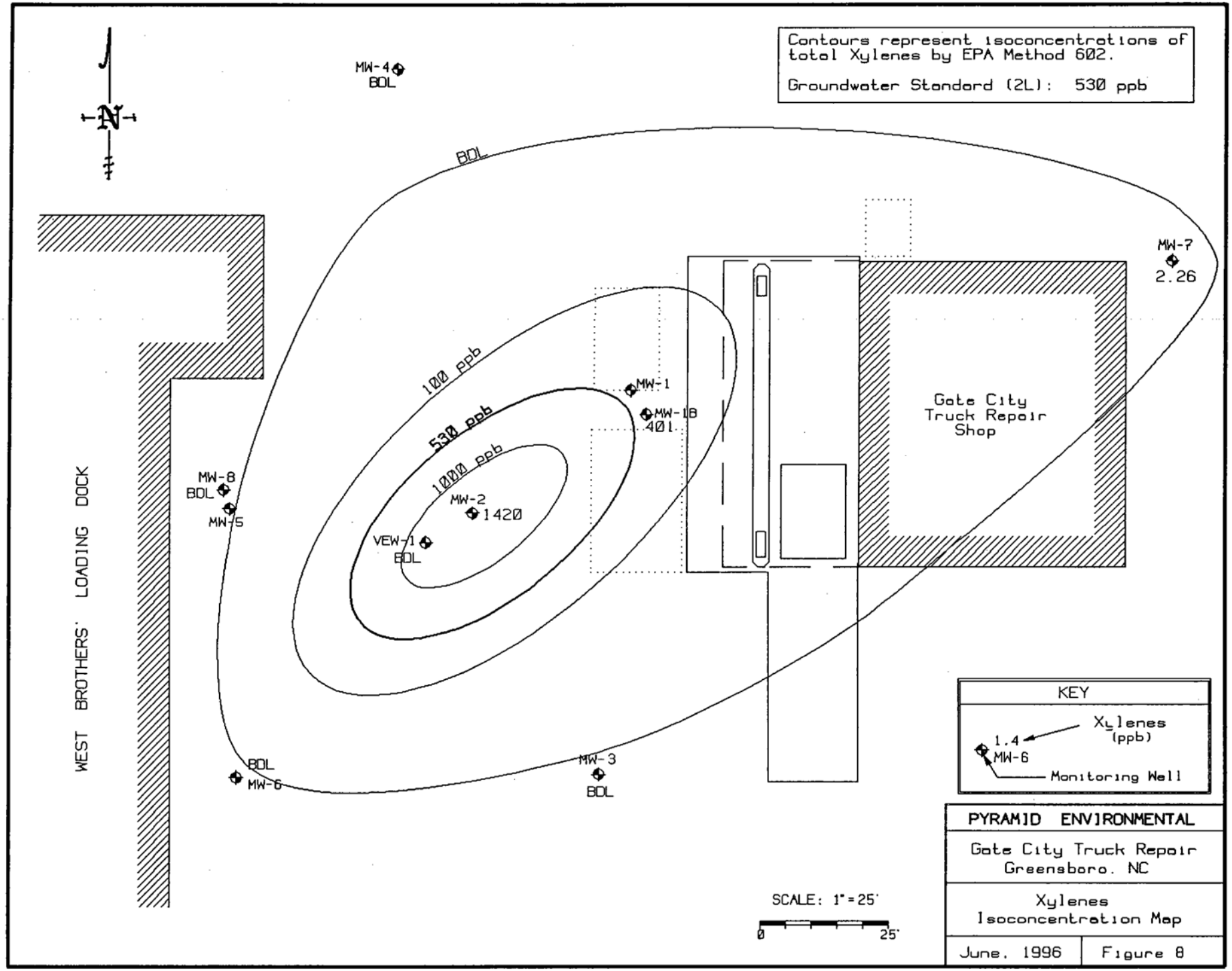

N
MW-4
86.40
86.5
87.0
87.5
88.0
88.5
MW-7
88.47
MW-1
MW-1B
88.15
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
MW-6
86.49
MW-5
MW-2
87.70
VEW-1
87.44
GROUNDWATER FLOW
86.73
MW-6
MW-3
87.74
Contours represent groundwater elevation relative to an arbitrary datum.
Contour Interval = 0.5'
SCALE: 1"=25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Pietometric Surface Map
June, 1996
Figure 3

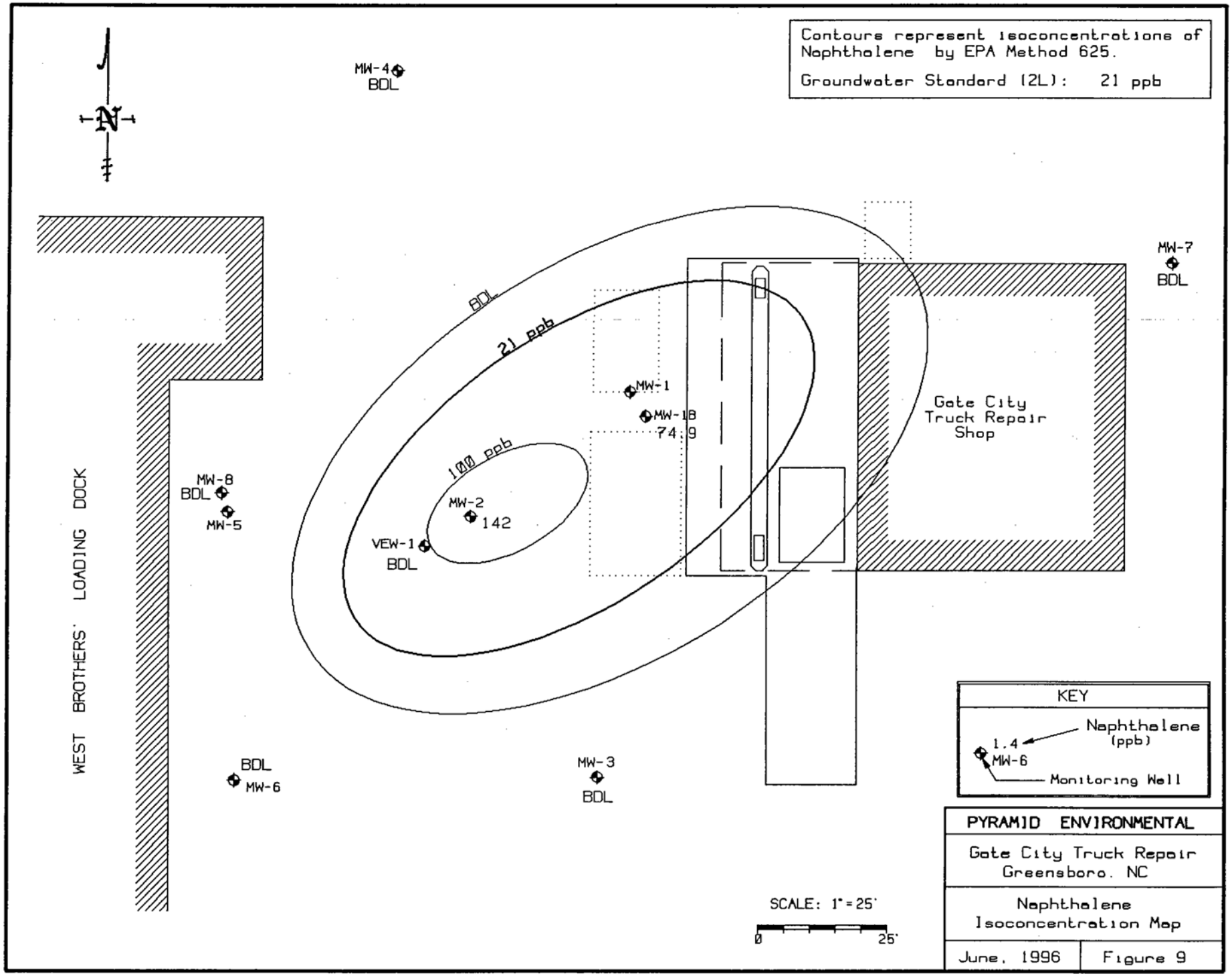

Contours represent total concentration of BTEX (Benzene, Toluene, Ethylbenzene, & Xlyenes) in parts per billion (ppb).
BDL = Below Detection Limit.
MW-4
BDL
BDL
100 ppb
1000 ppb
MW-7
10.23
MW-1
MW-1B
429.15
Gate City
Truck Repair
Shop
MW-8
BDL
MW-5
MW-2
3304.3
VEW-1
BDL
WEST BROTHERS' LOADING DOCK
MW-6
BDL
MW-3
BDL
KEY
Total BTEX
(ppb)
1.4
MW-6
Monitoring Well
SCALE: 1"=25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Total BTEX
Isoconcentration Map
June, 1996
Figure 4


Contours represent isoconcentrations of Benzene by EPA Method 602.
Groundwater Standard (2L): 1.0 ppb
N
MW-4
BDL
BDL
1 ppb
MW-7
7.97
MW-1
MW-1B
23
100 ppb
1000 ppb
MW-2
1810
VEW-1
BDL
MW-8
BDL
MW-5
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
BDL
MW-6
MW-3
BDL
KEY
Benzene
(ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Benzene
Isoconcentration Map
June, 1996
Figure 5

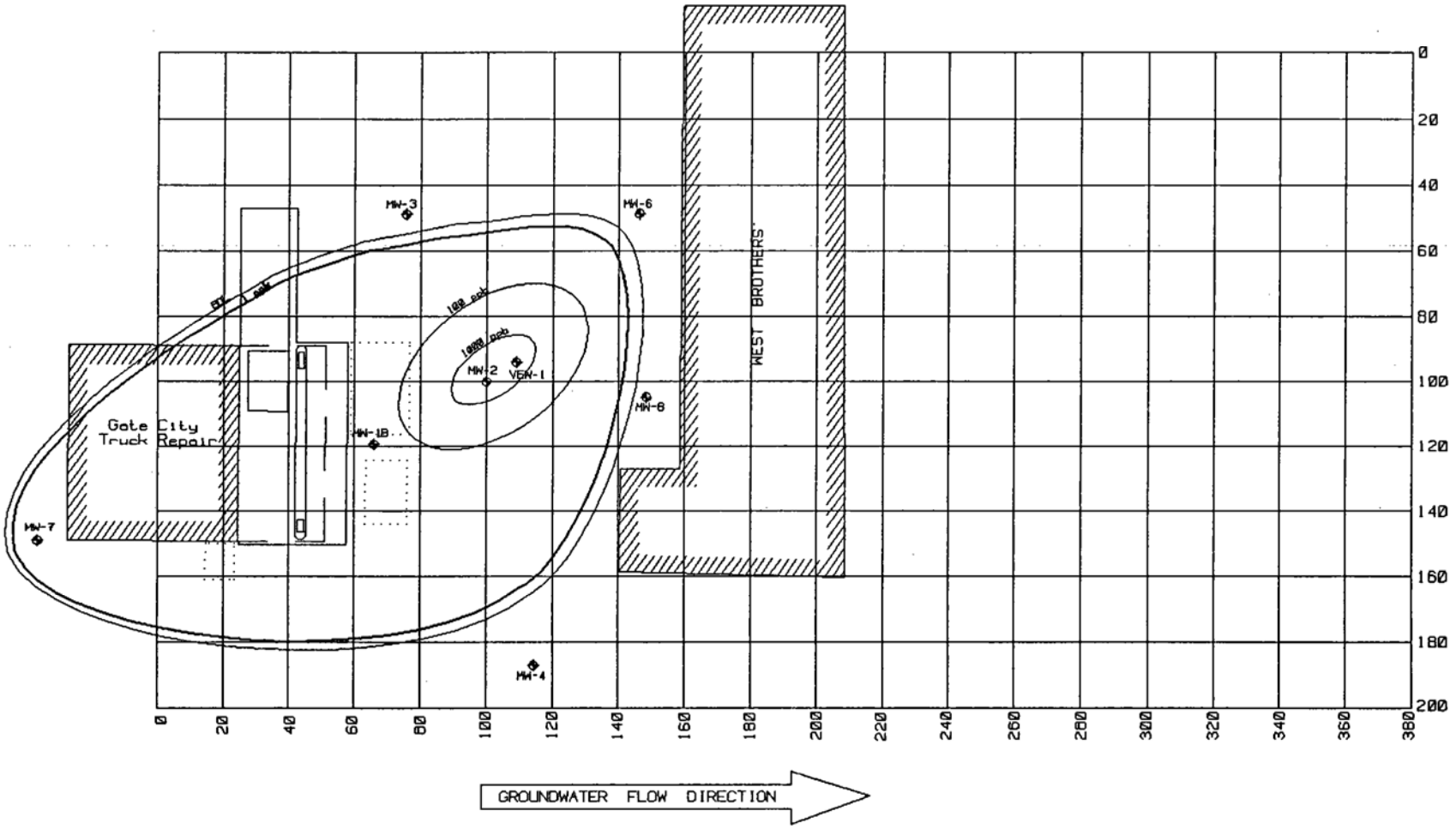

Contours represent isoconcentrations of Toluene by EPA Method 602.
Groundwater Standard (2L): 1000 ppb
MW-4
BDL
MW-7
BDL
MW-1
BDL
MW-18
BDL
Gate City Truck Repair Shop
BDL
10 ppb
MW-2
36.5
VEW-1
BDL
MW-8
BDL
MW-5
WEST BROTHERS' LOADING DOCK
BDL
MW-6
MW-3
BDL
KEY
Toluene (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1"=25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Toluene
Isoconcentration Map
June, 1996
Figure 6


Contours represent isoconcentrations of Ethylbenzene by EPA Method 602.
Groundwater Standard (2L): 29 ppb
MW-4
BDL
MW-7
BDL
MW-1
MW-1B
5.15
BDL
10 ppb
29 ppb
MW-2
37.8
VEW-1
BDL
MW-8
BDL
MW-5
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
MW-3
BDL
BDL
MW-6
KEY
Ethylbenzene
(ppb)
1.4
MW-6
Monitoring Well
SCALE: 1"=25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Ethylbenzene
Isoconcentration Map
June, 1996
Figure 7


Contours represent isoconcentrations of total Xylenes by EPA Method 602.
Groundwater Standard (2L): 530 ppb
MW-4
BDL
BDL
100 ppb
530 ppb
1000 ppb
MW-1
MW-18
401
MW-2
1420
VEW-1
BDL
MW-8
BDL
MW-5
MW-7
2.26
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
BDL
MW-6
MW-3
BDL
KEY
Xylenes (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Xylenes
Isoconcentration Map
June, 1996
Figure 8


Contours represent isoconcentrations of Naphthalene by EPA Method 625.
Groundwater Standard (2L): 21 ppb
MW-4
BDL
MW-7
BDL
BDL
21 ppb
100 ppb
MW-1
MW-18
74.9
MW-2
142
VEW-1
BDL
MW-8
BDL
MW-5
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
BDL
MW-6
MW-3
BDL
KEY
Naphthalene (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Naphthalene
Isoconcentration Map
June, 1996
Figure 9

20' X 20' Grid for BIOPLUME II Modeling (Figures 8, 9, & 10).



SCALE
0 50'

Contours represent current plume as defined by Benzene concentration in parts per billion (ppb).

PYRAMID ENVIRONMENTAL	
Gate City Truck Repair Greensboro, NC	
BIOPLUME II Model Grid	
June 1996	Figure 10

TABLE 1: Groundwater Elevation Calculations (6/7/96).

	TOC Surveyed (1)	TOC Height (2)	TOC Elevation w.r.t. Datu	Water Level from TOC	Water Table w.r.t. Datum
MW-1	---	---	---	---	---
MW-1B	5.60		94.40	6.25	88.15
MW-2	5.26		94.74	7.04	87.70
MW-3	5.55	5.65	94.45	6.71	87.74
MW-4	5.50		94.50	8.10	86.40
MW-5	---	---	---	---	---
MW-6	5.16	5.26	94.84	8.11	86.73
MW-7	5.53		94.47	6.00	88.47
MW-8	5.47		94.53	8.04	86.49
VEW-1	5.08		94.92	7.48	87.44

TOC = top of casing.
Datum is arbitrarily set at instrument level = 100'.
MW-6 Height (1) calculated from Height (2) releative to MW-3.
MW-5 & MW-1 were destroyed or damaged.

TABLE 2: Results of Groundwater Analyses (Methods 601, 602, 625 & Lead).

Parameter	MW-1 6/1/93	MW-2 6/1/93	MW-3 6/1/93	MW-4 9/8/93	MW-4 6/16/94	MW-5 9/8/93	MW-6 9/8/93	MW-6 6/16/94	MW-7 6/30/94	VEW-1 9/8/93	VEW-1 6/21/94	WSW 11/23/93
Method 602 Results												
Benzene	**250**	**2200**	**1**	BDL	---	BDL	BDL	---	BDL	**4.5**	BDL	BDL
Toluene	**47**	**36**	BDL	BDL	---	BDL	BDL	---	BDL	BDL	BDL	BDL
Ethylbenzene	BDL	**900**	BDL	BDL	---	BDL	BDL	---	BDL	BDL	BDL	BDL
Xylenes (total)	**640**	**1500**	BDL	BDL	---	BDL	**1.4**	---	BDL	**1.9**	BDL	**3**
"BTEX"	**937**	**4636**	**1**	BDL	---	BDL	**1.4**	---	BDL	**6.4**	BDL	**3**
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	---	BDL	BDL	---	BDL	BDL	BDL	**1**
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	---	BDL	BDL	---	BDL	BDL	BDL	**1**
MTBE	**50**	**240**	BDL	BDL	---	BDL	BDL	---	BDL	BDL	---	BDL
IPE	**74**	**300**	BDL	---	---	---	---	---	BDL	---	---	BDL
All Other 602 Parameters	BDL	BDL	BDL	BDL	---	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Method 601 Results												
1,2 Dichloroethane	**3.4**	**7.9**	BDL	BDL	---	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromo-dichloro Methane	BDL	BDL	BDL	BDL	---	**1.5**	BDL	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	BDL	BDL	BDL	BDL	---	BDL	BDL	BDL	BDL	BDL	BDL	**4**
Chloroform	BDL	BDL	BDL	BDL	---	**38**	**.6**	BDL	BDL	.88	BDL	BDL
All Other 601 Parameters	BDL	BDL	BDL	BDL	---	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Method 625 Results												
Phenol	BDL	**12**	BDL	BDL	---	BDL	BDL	BDL	BDL	BDL	---	BDL
Bis-(2-eh)-Phthalate	BDL	BDL	BDL	BDL	---	BDL	**43**	BDL	BDL	BDL	---	BDL
All Other 625 Parameters	BDL	BDL	BDL	BDL	---	BDL	BDL	BDL	BDL	BDL	---	BDL
Method 3030C Results												
Lead	---	---	---	**.016**	**.004**	**.012**	BDL	---	---	BDL	---	---

MTBE = Methyl-tertiary-butyl-ether.
IPE - Isopropyl Ether

BTEX = Sum of benzene, toluene, ethylbenzene, and xylenes.
All Results in ppb = parts per billion (µg/l).
BDL = Below Detection Limit.

TABLE 3: Results of Groundwater Analyses (Methods 602, 625 & Lead).

Parameter	MW-1B 5/23/96	MW-2 5/23/96	MW-3 5/23/96	MW-4 5/23/96	MW-6 5/23/96	MW-7 5/23/96	MW-8 5/23/96	VEW-1 5/23/96
Method 602								
Benzene	**23**	**1810**	BDL	BDL	BDL	**7.97**	BDL	BDL
Toluene	BDL	**36.5**	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	**5.15**	**37.8**	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (total)	**401**	**1420**	BDL	BDL	BDL	**2.26**	BDL	BDL
"BTEX"	**429.15**	**3304.3**	BDL	BDL	BDL	**10.23**	BDL	BDL
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MTBE	BDL	BDL	BDL	BDL	BDL	**117**	BDL	**29.7**
IPE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
EDB	BDL	**275**	BDL	BDL	BDL	BDL	BDL	BDL
All Other 602 Parameters	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Method 625								
Phenol	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	**74.9**	**142**	BDL	BDL	BDL	BDL	BDL	BDL
Bis-(2-eh)-Phthalate	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
All Other 625 Target Parameters	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Number of TICs	3	10	0	0	0	0	0	0
Method 3030C								
Lead	32	37	41	BDL	33	20	16	16

MTBE - Methyl-tertiary-butyl-ether.
IPE - Isopropyl Ether
EDB - Ethylene Dibromide

BTEX = Sum of benzene, toluene, ethylbenzene, and xylenes.
All results in ppb = parts per billion (µg/l).
BDL = Below Detection Limit.

TABLE 4: Parameters for Plume Migration Models.

PARAMETER	LEVEL 1	LEVEL 2	LEVEL 3
Simulation Time	10 years	10 years	10 years
Number of steps	10	10	10
Grid Size	11 x 20	11 x 20	11 x 20
Cell Size	20' x 20'	20' x 20'	20' x 20'
Hydraulic Gradient (dh/dl)	.015	.015	.015
Hydraulic Conductivity (K)	**9×10^{-8} ft/sec**	**9×10^{-6} ft/sec**	**9×10^{-6} ft/sec**
Aquifer Thickness (D)	53'	53'	53'
Transmisivity (T= KD)	**5×10^{-6} ft^2/sec**	**5×10^{-4} ft^2/sec**	**5×10^{-4} ft^2/sec**
Effective Porosity (n_{ed})	.30	.30	.30
Initial Concentration of O_2	.5 ppm	.5 ppm	.5 ppm
Coefficient of Reaeration	0	0	0
Coefficient of Anaerobic Decay	0	0	0
Stoichiometric Ratio (Hydrocarbons/Oxygen)	3	3	3
Dispersivity Ratio (Transverse/Longitudinal)	.1	.1	.1
Ratio of T_{yy} to T_{xx}	1	1	1
Biodegradation Flag	**ON**	**ON**	**OFF**

TABLE 5: Maximum Benzene Concentrations from Models.

	Initial Plume T = 0	T = 1 year	T = 5 years	T = 10 years
Level 1	MB = 1810 ppb (100, 100)	MB = 1019.5 ppb (100, 100)	MB = 630.9 ppb (100, 100)	MB = 319.0 ppb (100, 100)
Level 2	MB = 1810 ppb (100, 100)	MB = 403.3 ppb (100, 120)	MB = 0 ppb	MB = 0 ppb
Level 3	MB = 1810 ppb (100, 100)	MB = 469.0 ppb (100, 120)	MB = 68.2 ppb (100, 200)	MB = 0 ppb

MB = Maximum benzene concentration for whole grid at time = T.
(X, Y) = Grid location of MB.

PYRAMID ENVIRONMENTAL, INC.
2706 PINEDALE ROAD
GREENSBORO, NC 27408

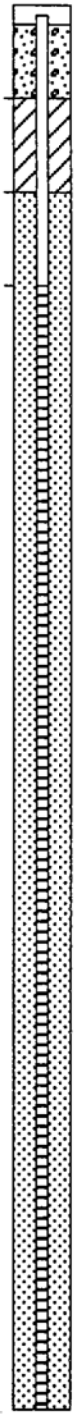
LOG OF BORING MW-8

Gatecity Truck Repair
5301 Burnt Poplar Road
Greensboro, NC

DRILLER	: Hardin, Co.	DATE	: 21-May-96
DRILLING METHOD	: Hollow-Stem Auger	BORING DIAMETER	: 6"
SAMPLING METHOD	: none	PYRAMID STAFF	: JWWM
	:		:

Depth In Feet	Surf. Elev. 0	GRAPHIC	USCS	DESCRIPTION
0	0		CL	CLAY, red, dry, no odor
5	-5		CL	CLAY, brown, dry, slight gasoline odor
10	-10		CL	CLAY, brown, wet, slight gasoline odor
15				

MW-8
ELEV:



Well Construction Information

WELL CONSTRUCTION

Date Completed	: 21-May-96
Material	: PVC
Diameter	: 2"
Pack	: #2 sand
Seal	: Bentonite
Fill	: Grout

NOTES

Type II Groundwater Monitoring Well

8-21-1998 a:\par-1998\par8-05\gatecity\mw8log.pa5

HYDROLOGIC, INC.

June 18, 1996

REPORTING:

Pyramid Environmental
2706 Pinedale Road
Greensboro, NC 27408

INVOICING:

Pyramid Environmental
2706 Pinedale Road
Greensboro, NC 27408

PROJECT NUMBER: FL968496

DATE COMPLETED: June 5, 1996
DATE RECEIVED: May 25, 1996

PROJECT DESCRIPTION: REVISED

Gate City Truck--8 water samples analyzed for 602/625/TICS.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jamie Fore. We appreciate your business and look forward to serving you again soon.

Respectfully,

Walter Hogg

Walter Hogg
QA/QC Officer

Post-it® Fax Note 7671	Date 6-24	# of pages ▶ 9
To April	From Lisa	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

HYDROLOGIC, INC.

COMPANY NAME:	Pyramid Environmental
COMPANY PROJECT NUMBER:	Gate City Truck
HYDROLOGIC PROJECT NUMBER:	FL968496
HYDROLOGIC LAB I.D.#:	399
HYDROLOGIC SAMPLE NUMBER:	968496
SAMPLE IDENTIFICATION:	VEW-1
DATE SAMPLED:	5/23/96
DATE EXTRACTED:	N/A
DATE/TIME ANALYZED:	5/29/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	71-43-2	1.0	BDL
Chlorobenzene	108-90-7	1.0	BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Toluene	108-88-3	1.0	BDL
Xylene (Total)	1330-20-7	1.0	BDL
MTBE		**5.0**	**29.7**
EDB		1.0	BDL
IPE		5.0	BDL
Surrogate Recovery:			
BFB			102%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

HYDROLOGIC, INC.

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: Gate City Truck

HYDROLOGIC PROJECT NUMBER: FL968496
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 968497
SAMPLE IDENTIFICATION: MW-1B
DATE SAMPLED: 5/23/96
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 5/31/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	**71-43-2**	**5.0**	**23.0**
Chlorobenzene	108-90-7	5.0	BDL
1,2-Dichlorobenzene	95-50-1	5.0	BDL
1,3-Dichlorobenzene	541-73-1	5.0	BDL
1,4-Dichlorobenzene	106-46-7	5.0	BDL
Ethylbenzene	**100-41-4**	**5.0**	**5.15**
Toluene	108-88-3	5.0	BDL
Xylene (Total)	**1330-20-7**	**5.0**	**401**
MTBE		25.0	BDL
EDB		5.0	BDL
IPE		25.0	BDL

Surrogate Recovery:
BFB 101%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

HYDROLOGIC, INC.

COMPANY NAME:	Pyramid Environmental
COMPANY PROJECT NUMBER:	Gate City Truck
HYDROLOGIC PROJECT NUMBER:	FL968496
HYDROLOGIC LAB I.D.#:	399
HYDROLOGIC SAMPLE NUMBER:	968498
SAMPLE IDENTIFICATION:	MW-2
DATE SAMPLED:	5/23/96
DATE EXTRACTED:	N/A
DATE/TIME ANALYZED:	5/30/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	**71-43-2**	**25.0**	**1810**
Chlorobenzene	108-90-7	25.0	BDL
1,2-Dichlorobenzene	95-50-1	25.0	BDL
1,3-Dichlorobenzene	541-73-1	25.0	BDL
1,4-Dichlorobenzene	106-46-7	25.0	BDL
Ethylbenzene	**100-41-4**	**25.0**	**37.8**
Toluene	**108-88-3**	**25.0**	**36.5**
Xylene (Total)	**1330-20-7**	**25.0**	**1420**
MTBE		125	BDL
EDB		25.0	BDL
IPE		**125**	**275**
Surrogate Recovery:			
BFB			105%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

HYDROLOGIC, INC.

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: Gate City Truck

HYDROLOGIC PROJECT NUMBER: FL968496
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 968499
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 5/23/96
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 5/29/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	71-43-2	1.0	BDL
Chlorobenzene	108-90-7	1.0	BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Toluene	108-88-3	1.0	BDL
Xylene (Total)	1330-20-7	1.0	BDL
MTBE		5.0	BDL
EDB		1.0	BDL
IPE		5.0	BDL
Surrogate Recovery:			
BFB			97%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-729-2251

HYDROLOGIC, INC.

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: Gate City Truck

HYDROLOGIC PROJECT NUMBER: FL968496
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 968500
SAMPLE IDENTIFICATION: MW-4
DATE SAMPLED: 5/23/96
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 5/29/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	71-43-2	1.0	BDL
Chlorobenzene	108-90-7	1.0	BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Toluene	108-88-3	1.0	BDL
Xylene (Total)	1330-20-7	1.0	BDL
MTBE		5.0	BDL
EDB		1.0	BDL
IPE		5.0	BDL
Surrogate Recovery:			
BFB			102%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

HYDROLOGIC, INC.

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: Gate City Truck

HYDROLOGIC PROJECT NUMBER: FL968496
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 968501
SAMPLE IDENTIFICATION: MW-6
DATE SAMPLED: 5/23/96
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 5/29/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	71-43-2	1.0	BDL
Chlorobenzene	108-90-7	1.0	BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Toluene	108-88-3	1.0	BDL
Xylene (Total)	1330-20-7	1.0	BDL
MTBE		5.0	BDL
EDB		1.0	BDL
IPE		5.0	BDL
Surrogate Recovery:			
BFB			101%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

HYDROLOGIC, INC.

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: Gate City Truck

HYDROLOGIC PROJECT NUMBER: FL968496
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 968502
SAMPLE IDENTIFICATION: MW-7
DATE SAMPLED: 5/23/96
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 5/29/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	**71-43-2**	**1.0**	**7.97**
Chlorobenzene	108-90-7	1.0	BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Toluene	108-88-3	1.0	BDL
Xylene (Total)	**1330-20-7**	**1.0**	**2.26**
MTBE		**5.0**	**117**
EDB		1.0	BDL
IPE		5.0	BDL
Surrogate Recovery:			
BFB			102%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

HYDROLOGIC, INC.

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: Gate City Truck

HYDROLOGIC PROJECT NUMBER: FL968496
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 968503
SAMPLE IDENTIFICATION: MW-8
DATE SAMPLED: 5/23/96
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 5/29/96

METHOD 602

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Benzene	71-43-2	1.0	BDL
Chlorobenzene	108-90-7	1.0	BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Toluene	108-88-3	1.0	BDL
Xylene (Total)	1330-20-7	1.0	BDL
MTBE		5.0	BDL
EDB		1.0	BDL
IPE		5.0	BDL
Surrogate Recovery:			
BFB			100%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-1051 FAX: 502-875-8016 / TOLL FREE 800-728-2251

HYDROLOGIC, INC.

Chain of Custody Record

☒ 122 Lyman Street, Asheville, NC 28801, (704)254-5169, FAX (704) 252-9711
☐ 410 New Salem Highway #106, Murfreesboro, TN 37129, (615) 848-0810, FAX (615) 848-0805
☐ 1491 Twilight Trail, Frankfort, KY 40601, (502) 223-0251, FAX (502) 695-8016
☐ 2003 North Pine Street, Lumberton, NC 28358, (910) 738-6190, FAX (910) 671-8837
☐ 263 Branchview Drive SE, Concord, NC 28025, (704) 786-3322, FAX (704) 786-2999
☐ 2500 Gateway Centre, Morrisville, NC 27560, (919) 380-9699, FAX (919) 380-9717
☐ 4875 Riverside Drive, Macon, GA 31210, (912) 757-0811, FAX (912) 757-0149
☐ 2082 Trade Ctr Way #103, Naples, FL 33942, (813) 597-6059, FAX (813) 597-7056

E1968496

Client: Pyramid Environmental	Project No: Gate City Trucks
Report Address: 2706 Pinedale Rd, Greensboro, NC 27408	Invoice Address:
Attn: Van	Attn:
Phone No.:	Sampled By:
Fax No.:	P.O. No:

TURNAROUND TIME

☐ 24 Hours ☐ 48 Hours Date Needed: _____

☒ 5 Days ☐ 10 Days ☐ Other _____

REQUESTED PARAMETERS

602

625+10 PICS

LAB CODE I.D.

A = Asheville, NC
C = Concord, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Naples, FL
S = Subcontracted
T = Murfreesboro, TN

Sample ID	Date	Time	Comp/ Grab	Matrix	Preserv.	Containers	602	625+10 PICS	REMARKS
VEW-1	5/23/96	11:15	G	H_2O	HCl	2-40 ml	✓		
"	"	"	"	"	—	1-L		✓	
MW-1B		2:15			HCl	2-40 ml	✓		
"		"			—	1-L		✓	
MW-2		11:40			HCl	3-40 ml	✓		
"		"			—	1-L		✓	
MW-3		1:05			HCl	2-40 ml	✓		
"		"			—	1-L		✓	
MW-4		2:55			HCl	2-40 ml	✓		
"		"			—	1-L		✓	

Lab Use Only Custody Seal: ☐ Yes ☐ No ☐ N/A — Init Lab Temp. — Rec. Lab Temp

COMMENTS:

Relinquished By:	Date 5-24-96	Time 1500	Received By:	Date 5-28-96	Time 1115
Relinquished By:	Date	Time	Received By:	Date	Time
Relinquished By:	Date	Time	Received By:	Date	Time
Relinquished By:	Date	Time	Received By:	Date	Time

State Samples Collected:

Lab Use Only:

HYDROLOGIC, INC.

Chain of Custody Record

☒ 122 Lyman Street, Asheville, NC 28801, (704)254-5169, FAX (704) 252-9711
☐ 410 New Salem Highway #106, Murfreesboro, TN 37129, (615) 848-6810, FAX (615) 848-6805
☒ 1491 Twilight Trail, Frankfort, KY 40601, (502) 223-0251, FAX (502) 875-8016
☐ 2003 North Pine Street, Lumberton, NC 28358, (910) 738-6190, FAX (910) 671-8837
☐ 263 Branchview Drive SE, Concord, NC 28025, (704) 786-3322, FAX (704) 786-2999
☐ 2500 Gateway Centre, Morrisville, NC 27560, (919) 380-9699, FAX (919) 380-9717
☐ 4875 Riverside Drive, Macon, GA 31210, (912) 757-0811, FAX (912) 757-0149
☐ 2082 Trade Ctr Way #103, Naples, FL 33942, (813) 597-6059, FAX (813) 597-7056

Client: Pyramid Environmental | Project No: Coate City Truck

Report Address: | Invoice Address:

Attn: Van | Attn:

Phone No.: | Sampled By:

Fax No.: | P.O. No:

TURNAROUND TIME

☐ 24 Hours ☐ 48 Hours Date Needed: _____

☒ 5 Days ☐ 10 Days ☐ Other _____

REQUESTED PARAMETERS

602

625 + TICS

LAB CODE I.D.

A = Asheville, NC
C = Concord, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Naples, FL
S = Subcontracted
T = Murfreesboro, TN

Sample ID	Date	Time	Comp/ Grab	Matrix	Preserv.	Containers	602	625+TICS	REMARKS
MW-6	5/23/96	1235	G	H_2O	HCl	2-40ml	✓		
"	"	"	"	"	—	2-L		✓	
MW-7	"	320	"	"	HCl	2-40ml	✓		
"	"	"	"	"	—	1-L		✓	
MW-8	"	1205	"	"	HCl	2-40ml	✓		
"	"	"	"	"	—	1-L		✓	

Lab Use Only | Custody Seal: ☐ Yes ☐ No ☐ N/A | Init Lab Temp. | Rec. Lab Temp: <4-0

COMMENTS:

Relinquished By:	Date	Time	Received By:	Date	Time	State Samples Collected:
[signature]	5-24-96	1500	[signature]	5-28-96	1130	
Relinquished By:	Date	Time	Received By:	Date	Time	Lab Use Only:
Relinquished By:	Date	Time	Received By:	Date	Time	
Relinquished By:	Date	Time	Received By:	Date	Time	

Billed

SENT

MAY

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85920 SAMPLE ID- GATE CITY MW1B SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.032	mg/l	0.010

LABORATORY DIRECTOR

Post-it® Fax Note 7671	Date 6/18	# of pages ▶ 10
To Van Burbach	From Dinah	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

P.O. BOX 18029 ASHEVILLE NC 28814-0029
704-254-5169 FAX: 704-252-9711 / TOLL FREE : 800-344-5759

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85921 SAMPLE ID- GATE CITY MW 2 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.037	mg/l	0.010

LABORATORY DIRECTOR

P.O. BOX 18029 ASHEVILLE NC 28814-0029
704-254-5169 FAX: 704-252-9711 / TOLL FREE : 800-344-5759

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85922 SAMPLE ID- GATE CITY MW 3 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.041	mg/l	0.010

LABORATORY DIRECTOR

P.O. BOX 18029 ASHEVILLE NC 28814-0029
704-254-5169 FAX: 704-252-9711 / TOLL FREE : 800-344-5759

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85923 SAMPLE ID- GATE CITY MW 4 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	< 0.010	mg/l	0.010

LABORATORY DIRECTOR

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85924 SAMPLE ID- GATE CITY MW 6 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.033	mg/l	0.010

LABORATORY DIRECTOR

P.O. BOX 18029 ASHEVILLE NC 28814-0029
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HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85925 SAMPLE ID- GATE CITY MW 7 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.020	mg/l	0.010

LABORATORY DIRECTOR

P.O. BOX 18029 ASHEVILLE NC 28814-0029
704-254-5169 FAX: 704-252-9711 / TOLL FREE : 800-344-5759

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85926 SAMPLE ID- GATE CITY MW 8 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.016	mg/l	0.010

LABORATORY DIRECTOR _____

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85927 SAMPLE ID- STAGECOACH MW 7 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.021	mg/l	0.010

LABORATORY DIRECTOR

HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

PYRAMID ENVIROMENTAL
2706 PINEDALE ROAD
GREENSBORO, NC 27408-
Attn: DOUG CANAVELLO

PROJECT NAME: PYRAMID
REPORT DATE: 05/29/96

SAMPLE NUMBER- 85928 SAMPLE ID- GATECITY VEW 1 SAMPLE MATRIX- WW
DATE SAMPLED- 05/23/96
DATE RECEIVED- 05/25/96 SAMPLER- NOT SPECIFIED RECEIVED BY- BDL
TIME RECEIVED- 1141 DELIVERED BY- FED EX

Page 1 of 1

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
LEAD, TOTAL	6010	05/25/96	BDJ	05/28/96	BDL	0.016	mg/l	0.010

LABORATORY DIRECTOR _____

P.O. BOX 18029 ASHEVILLE NC 28814-0029
704-254-5169 FAX: 704-252-9711 / TOLL FREE : 800-344-5759

Chain of Custody Record

[redacted]

☒ 4122 Lyman Street, Asheville, NC 28801, (704)254-5169, FAX (704) 252-9711
☐ 410 New Salem Highway #106, Murfreesboro, TN 37129, (615) 848-6810, FAX (615) 848-6805
☐ 1491 Twilight Trail, Frankfort, KY 40601, (502) 223-0251, FAX (502) 875-8016
☐ 2003 North Pine Street, Lumberton, NC 28358, (910) 738-6190, FAX (910) 671-8837
☐ 263 Branchview Drive SE, Concord, NC 28025, (704) 786-3322, FAX (704) 786-2999
☐ 2500 Gateway Centre, Morrisville, NC 27560, (919) 380-9699, FAX (919) 380-9717
☐ 4875 Riverside Drive, Macon, GA 31210, (912) 757-0811, FAX (912) 757-0149
☐ 2082 Trade Center Way #110, Naples, FL 33942, (813) 597-6059, FAX (813) 597-7056

Client: Pyramid Environmental | Project No: Gate City Truck

Report Address: 2706 Pinedale Rd | Invoice Address:

Greensboro, NC 27408

Attn: Van | Attn:

Phone No.: | Sampled By:

Fax No.: | P.O. No:

TURNAROUND TIME

☐ 24 Hours ☐ 48 Hours Date Needed:

☒ 5 Days ☐ 10 Days ☐ Other

REQUESTED PARAMETERS

8021B (Lead)

LAB CODE I.D.

A = Asheville, NC
C = Concord, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Naples, FL
S = Subcontracted
T = Murfreesboro, TN

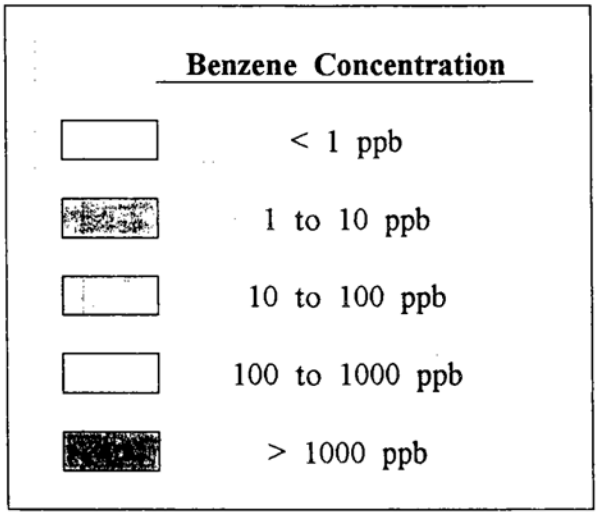
Sample ID	Date	Time	Comp/ Grab	Matrix	Preserv.	Containers		REMARKS
VEW-1	5/23/96	11:15	G	H2O	HNO3	1-250 mL	✓	
MW-1B		2:15					✓	
MW-2		11:40					✓	
MW-3		1:05					✓	
MW-4		2:55					✓	
MW-6		12:35					✓	
MW-7		3:20					✓	
MW-8		12:05					✓	

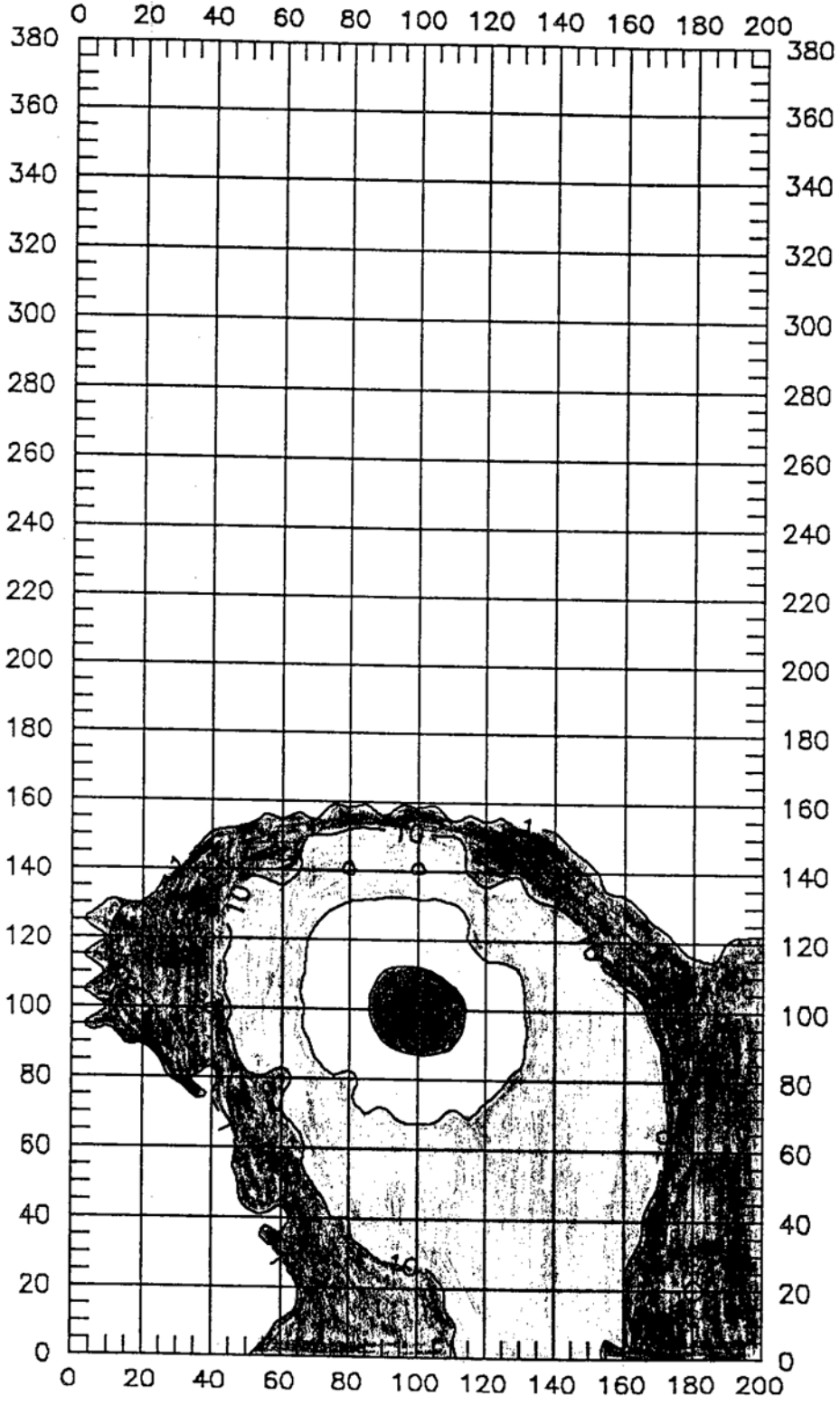
Lab Use Only | Custody Seal: ☐ Yes ☐ No ☐ N/A | Init Lab Temp. | Rec. Lab Temp

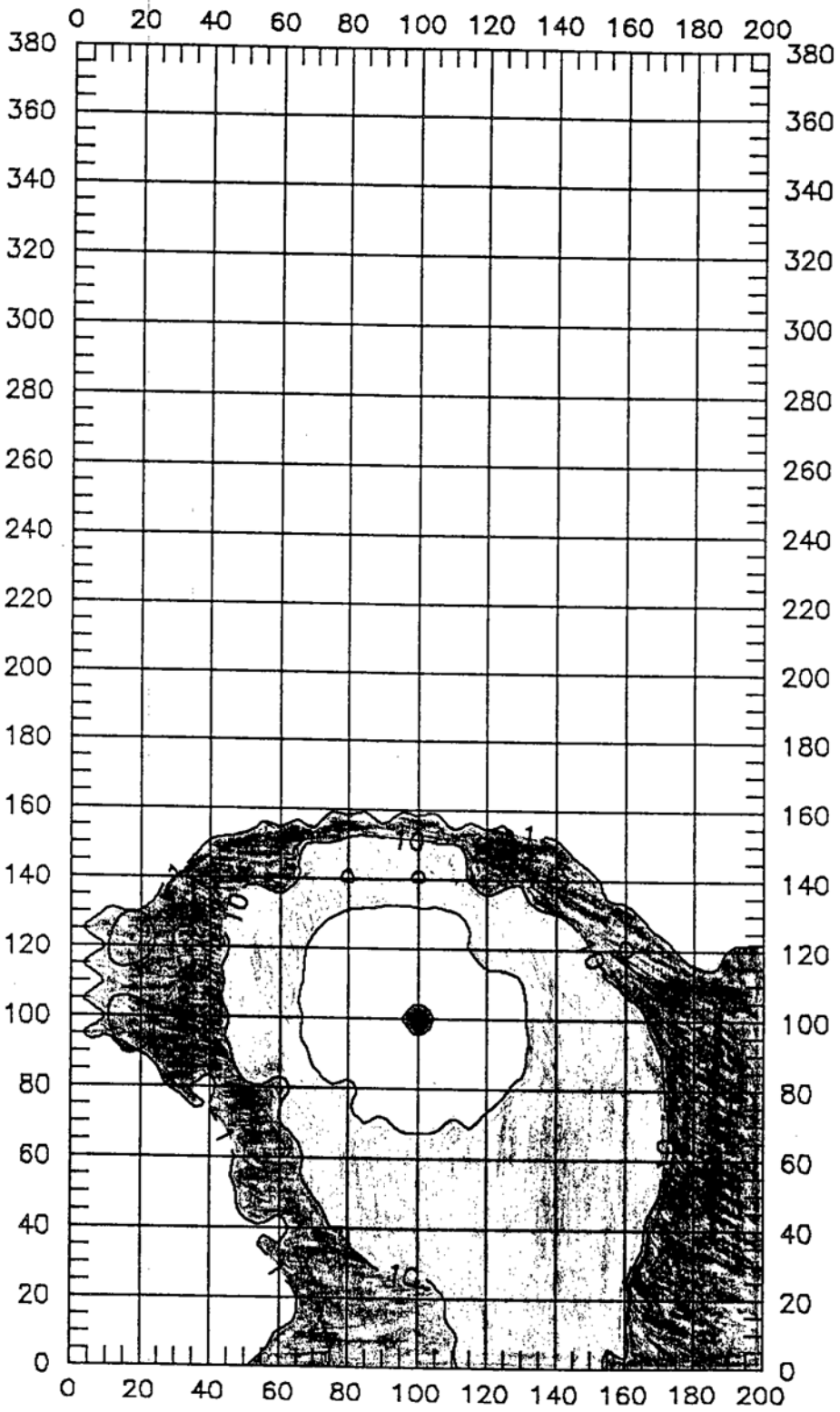
COMMENTS:

	Date	Time		Date	Time	
Relinquished By:	5/24/96	1800	Received By:	5/25/96		State Samples Collected:
Relinquished By:	Date	Time	Received By:	Date	Time	Lab Use Only:
Relinquished By:	Date	Time	Received By:	Date	Time	
Relinquished	Date	Time	Received By:	Date	Time	

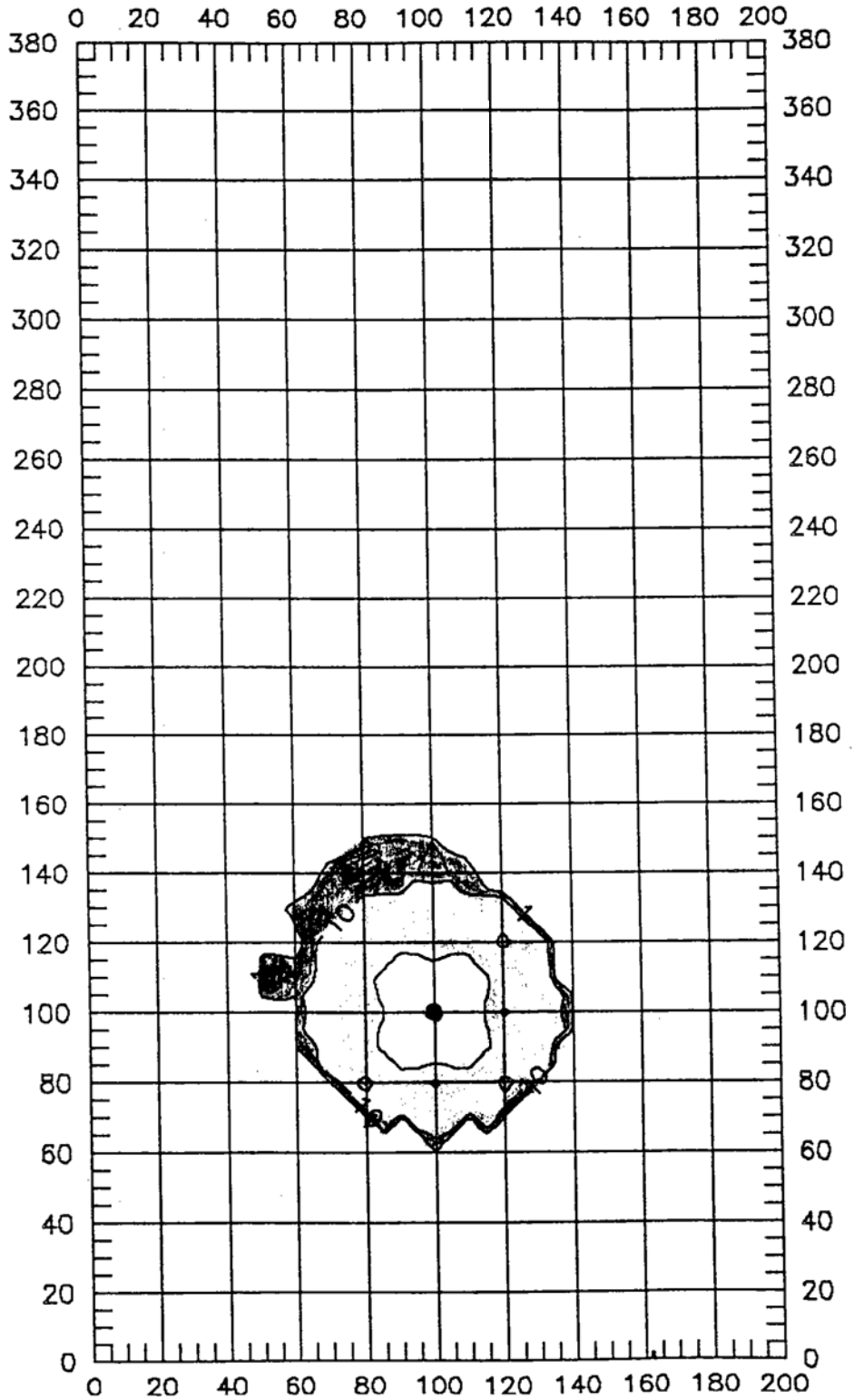
KEY


Benzene Concentration
< 1 ppb
1 to 10 ppb
10 to 100 ppb
100 to 1000 ppb
> 1000 ppb

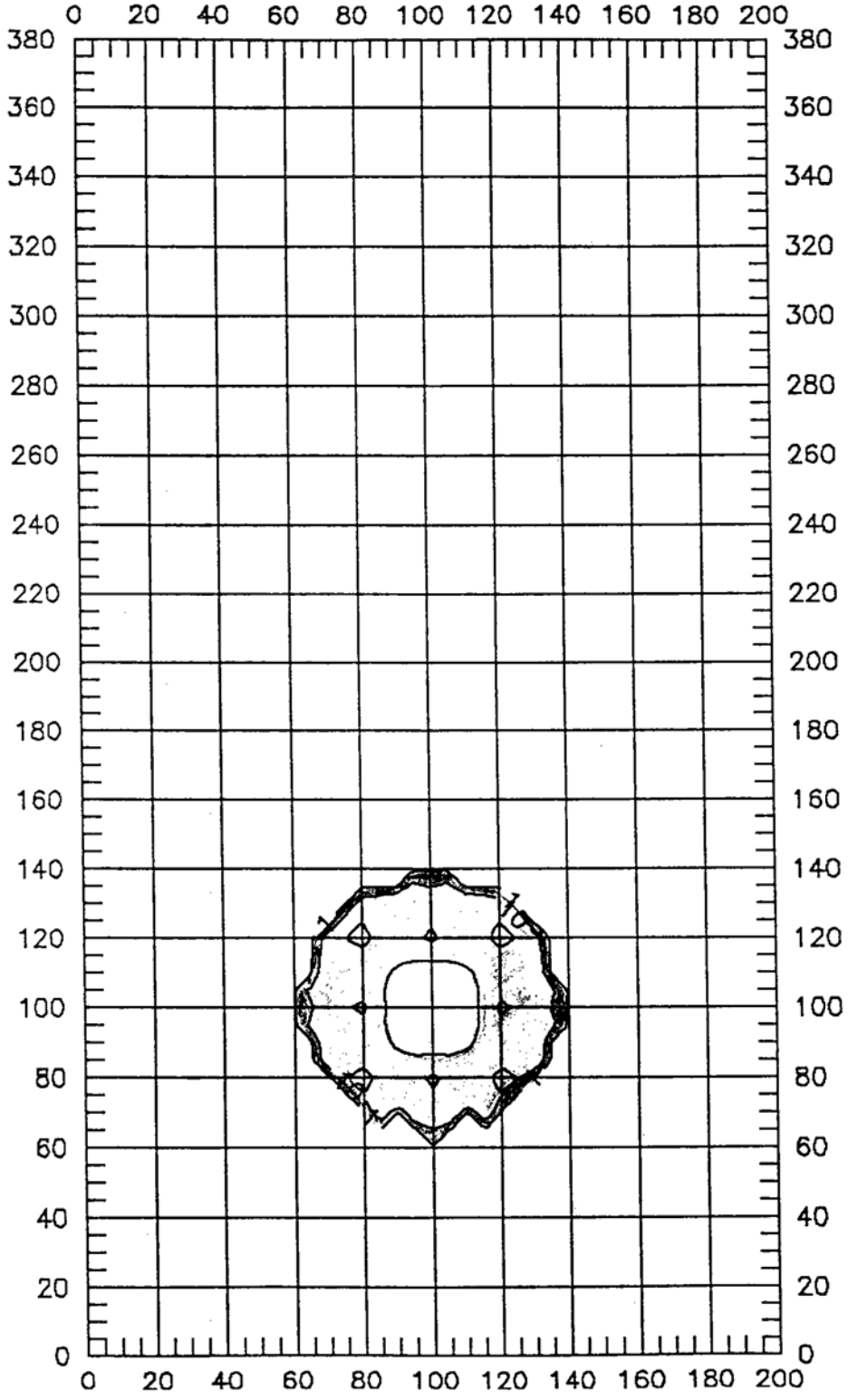

0 20 40 60 80 100 120 140 160 180 200
380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0
Benzene Isoconcentrations – Time = 0



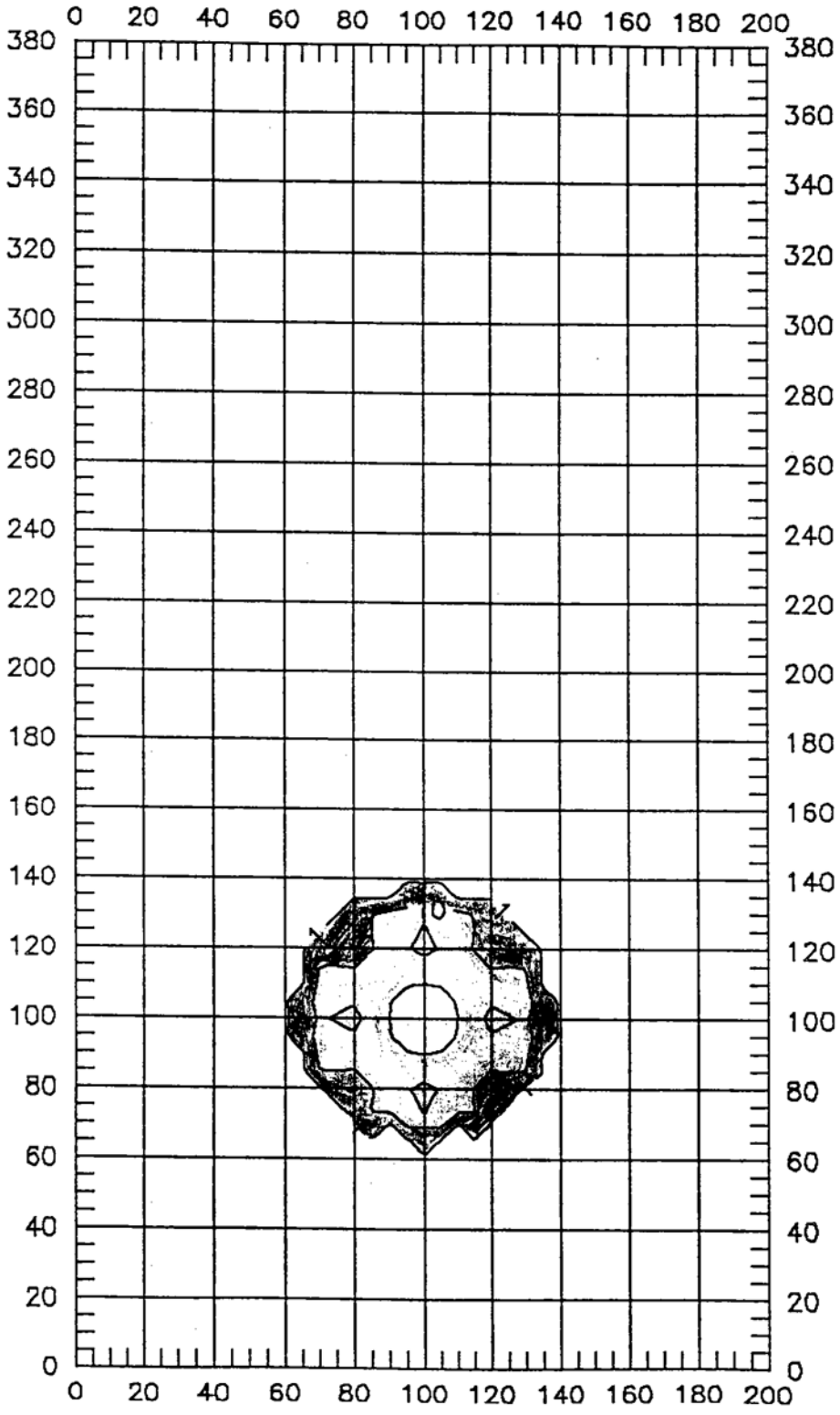
Benzene Isoconcentrations — Time = 0



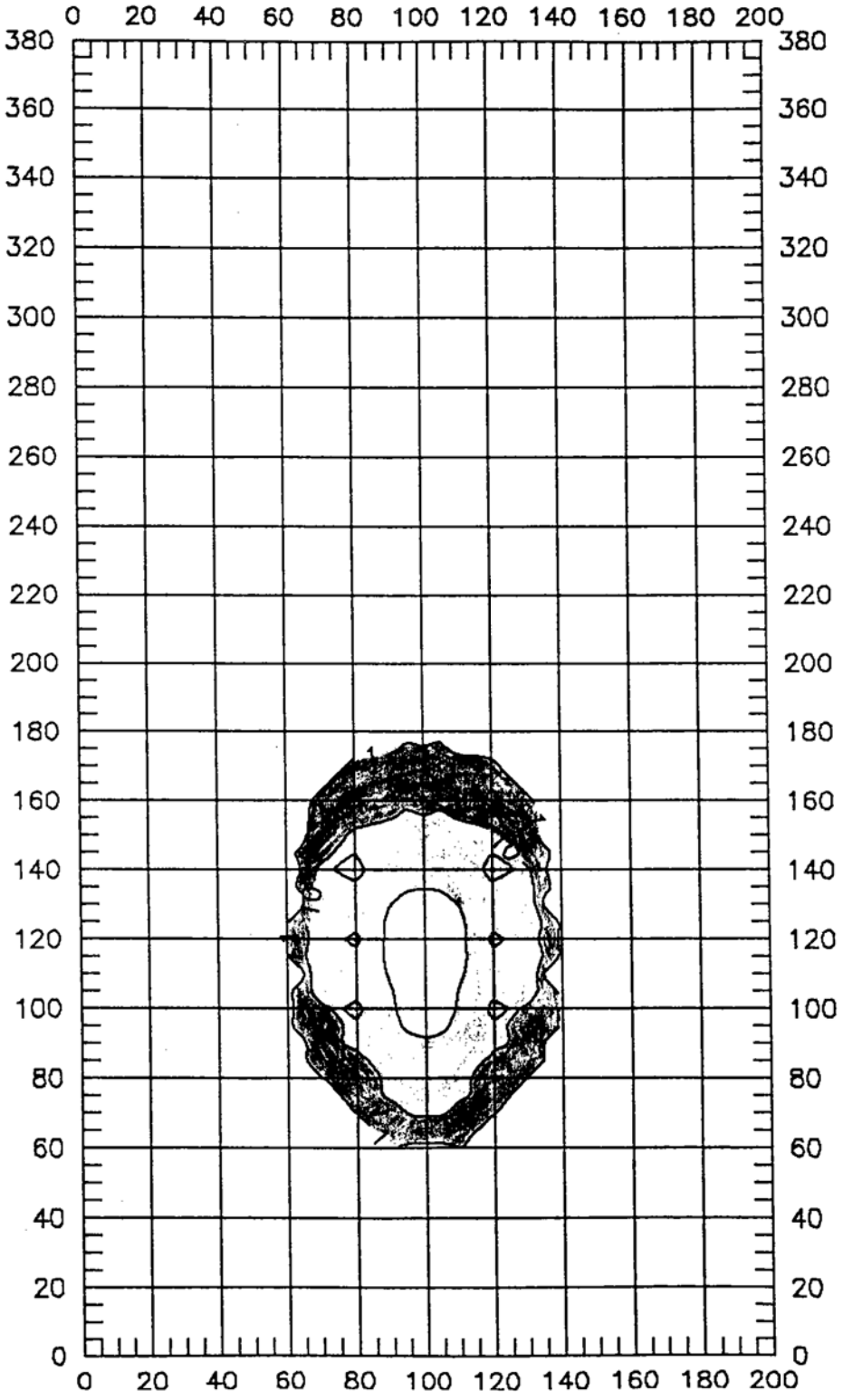
Level 1: Time = 1 yr.



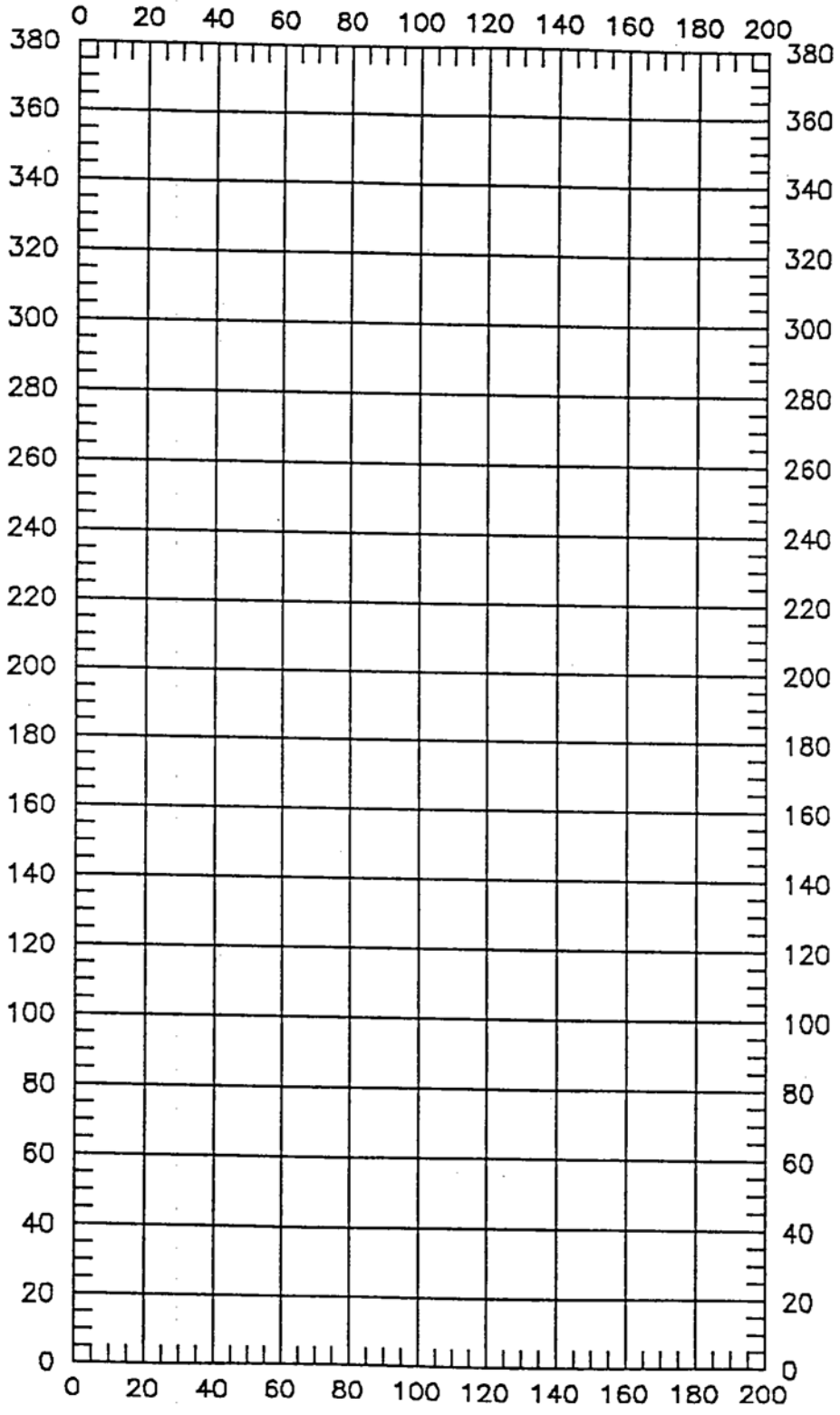
Level 1: Time = 5 yrs.



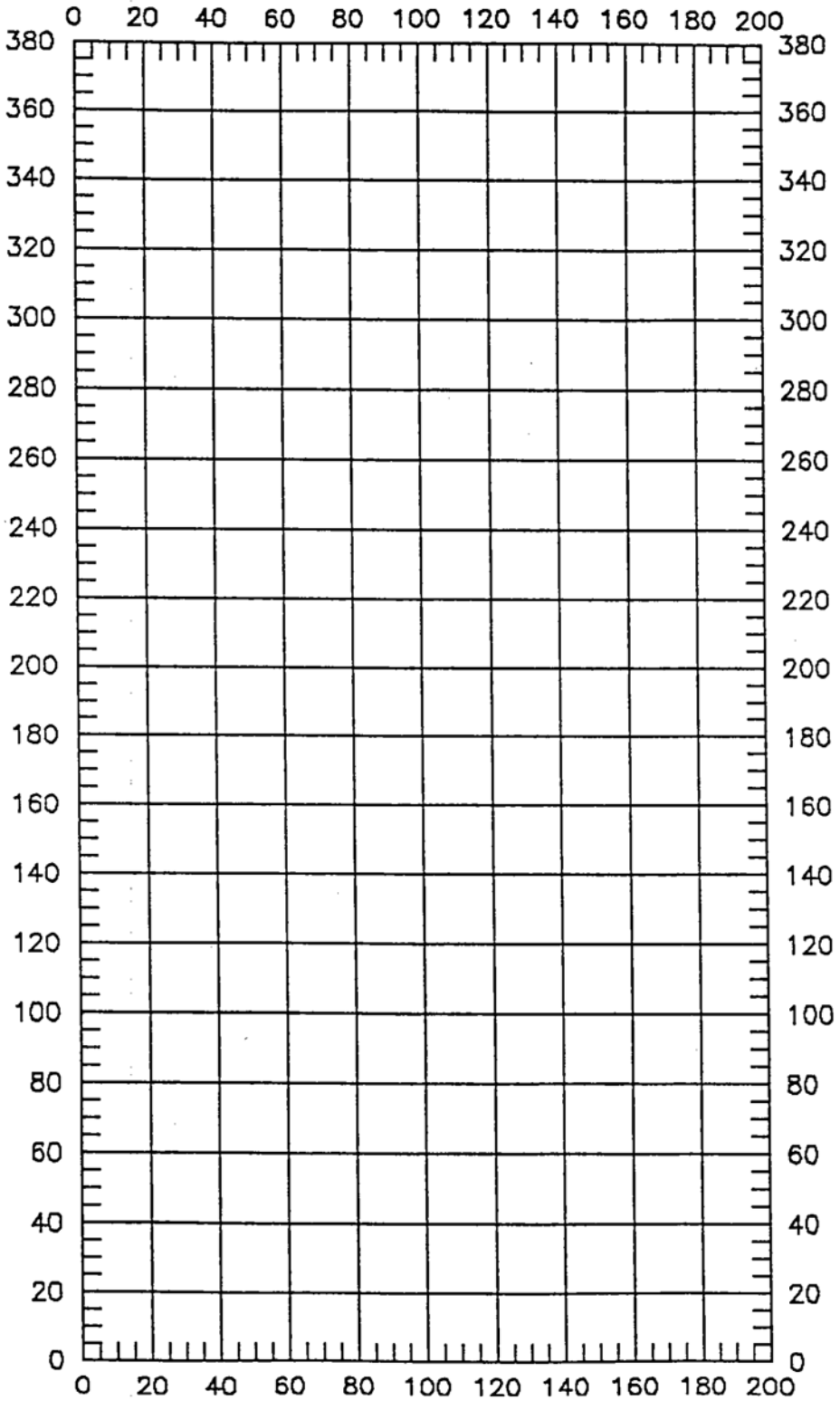
Level 1: Time = 10 yrs.



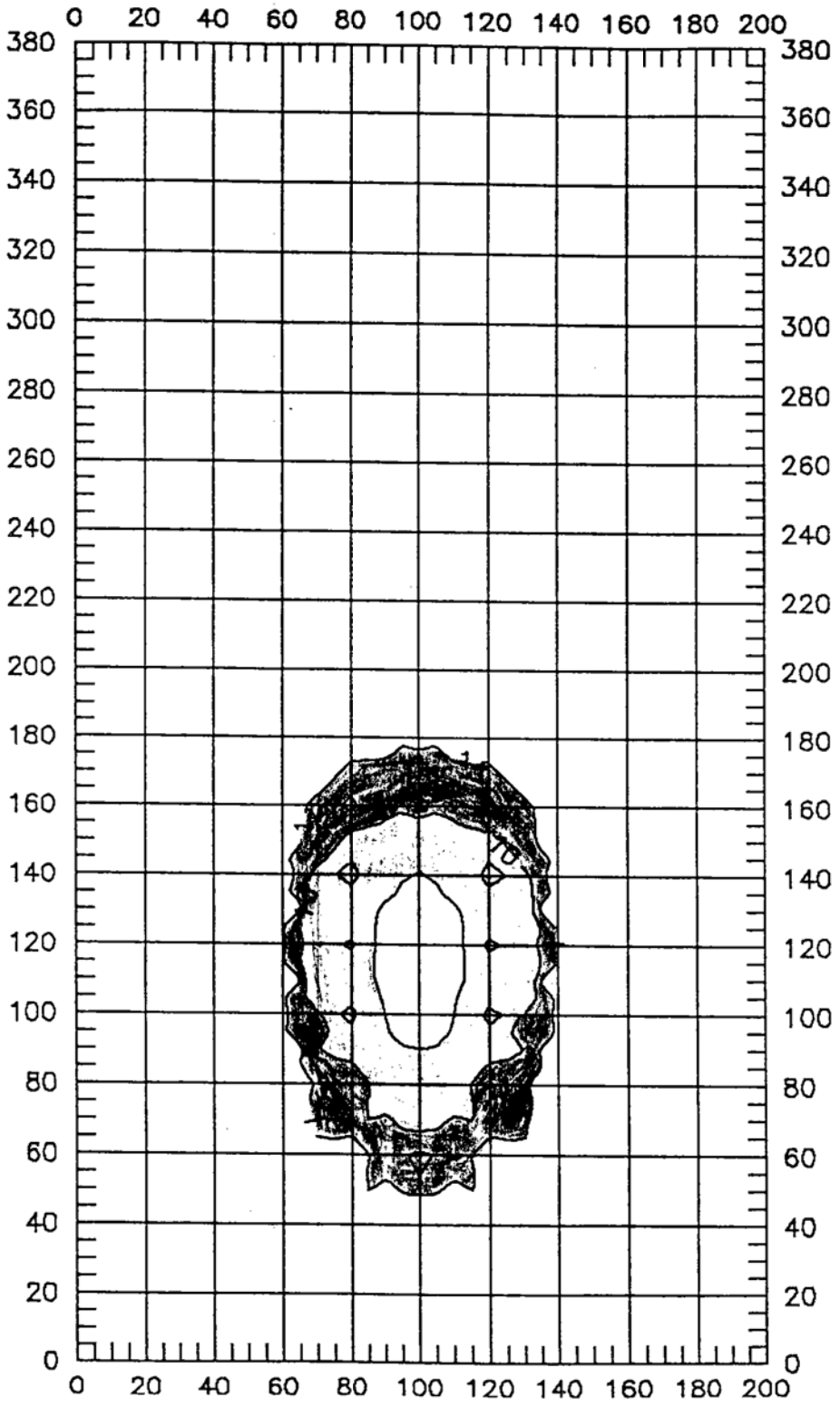
Level 2: Time = 1 yr.



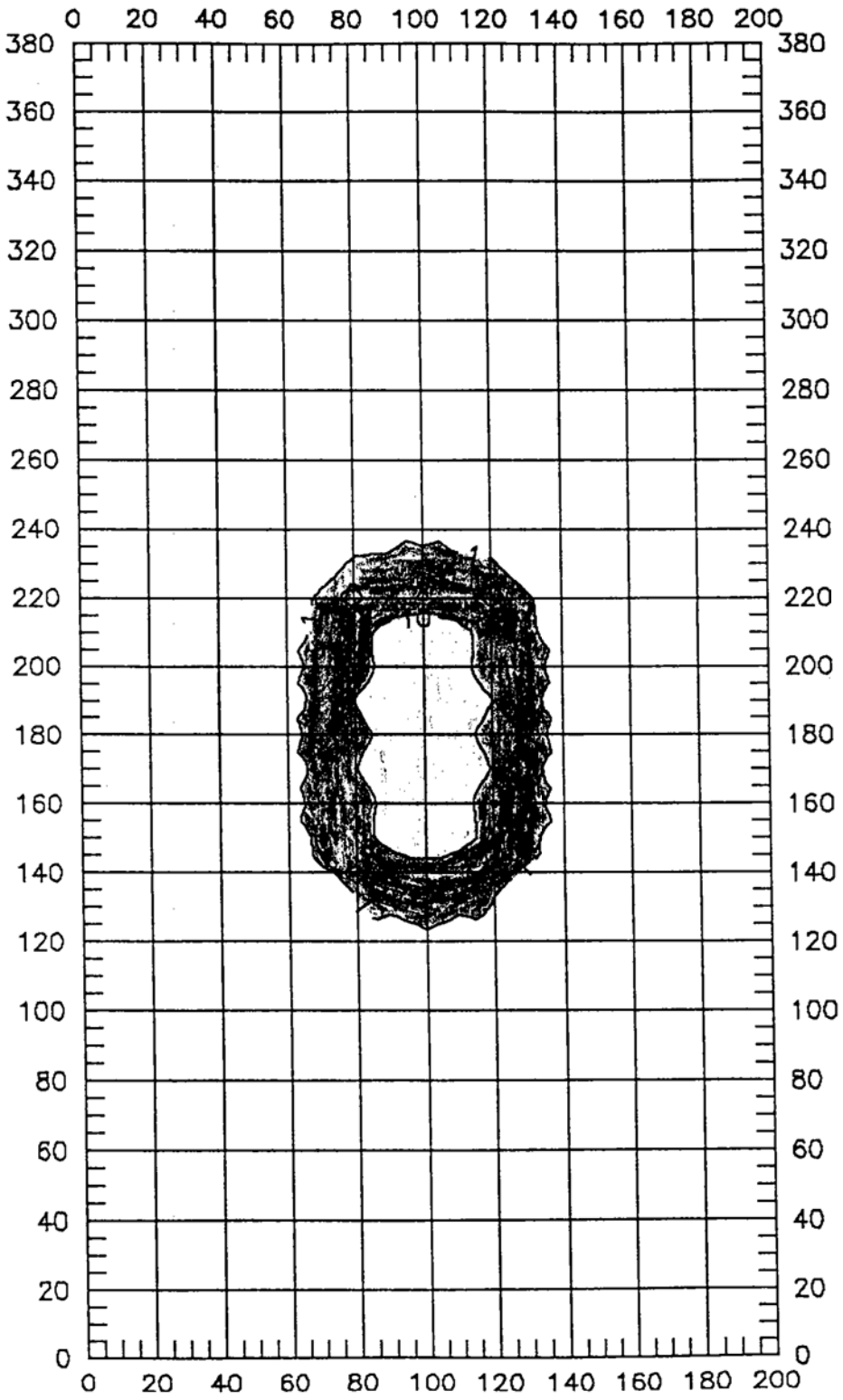
Level 2: Time = 5 yrs.



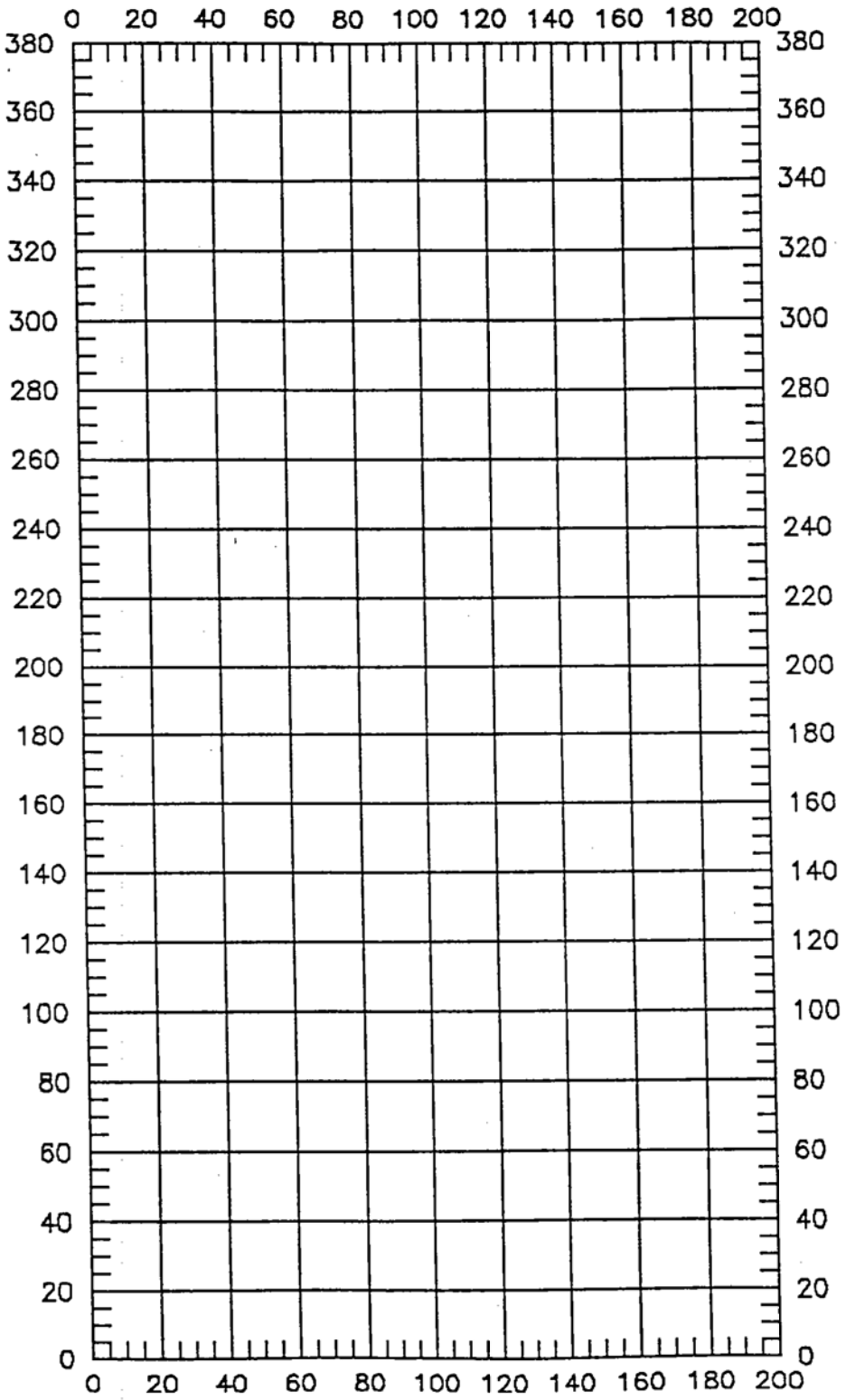
Level 2: Time = 10 yrs.



Level 3: Time = 1 yr.



Level 3: Time = 5 yrs.



Level 3: Time = 10 yrs.

Appendix IV: Bioplume-II Files on diskette.

GATE2-L1.INP	Level 1 Model Input File
GATE2-L1.OP1	Level 1 Model Output File
G2-BENZ.DAT	Level 1 Output Data: Benzene Plume at T=00 years (Initial Benzene Plume for all Levels)
G2-L1-1.DAT	Level 1 Output Data: Benzene Plume at T=01 years
G2-L1-5.DAT	Level 1 Output Data: Benzene Plume at T=05 years
G2-L1-10.DAT	Level 1 Output Data: Benzene Plume at T=10 years
GATE2-L2.INP	Level 2 Model Input File
GATE2-L2.OP1	Level 2 Model Output File
G2-L2-1.DAT	Level 2 Output Data: Benzene Plume at T=01 years
G2-L2-5.DAT	Level 2 Output Data: Benzene Plume at T=05 years
G2-L2-10.DAT	Level 2 Output Data: Benzene Plume at T=10 years
GATE2-L3.INP	Level 3 Model Input File
GATE2-L3.OP1	Level 3 Model Output File
G2-L3-1.DAT	Level 3 Output Data: Benzene Plume at T=01 years
G2-L3-5.DAT	Level 3 Output Data: Benzene Plume at T=05 years
G2-L3-10.DAT	Level 3 Output Data: Benzene Plume at T=10 years

CITY OF GREENSBORO
NORTH CAROLINA

P.O. BOX 3136
GREENSBORO, NC 27402-3136

June 21, 1996

Mr. Van Burbach
Pyramid Environmental Company
2706 Pinedale Road
Greensboro, NC 27408

Dear Sir:

I would like to confirm our conversation pertaining to the property in the area of Burnt Poplar Road and Chimney Rock Road. The City of Greensboro does not have a water source we draw from in this area.

City water is available for service in this area, but I cannot confirm how many structures are still served by wells. If you need further information, please call me at 910-373-2055.

Sincerely,

Dave Moorefield

Dave Moorefield
Utilities Services Administrator

05/12483-2030

Post-it® Fax Note 7671	Date 6/25/96	# of pages ▶ 1
To VAN BURBACK	From D. MOOREFIELD	
Co./Dept.	Co.	
Phone #	Phone # 373-2055	
Fax # 282-9032	Fax #	

Pyramid Environmental, Inc.

June 21, 1996

CERTIFIED MAIL: # P 536 077 195
RETURN RECEIPT REQUESTED

Mr. Lane Hall, District Engineer
NC-DOT
P.O. Box 14996
Greensboro, NC 27415-4996

SUBJECT: NOTICE CONCERNING THE REQUEST FOR A CORRECTIVE ACTION PLAN BASED ON NATURAL PROCESSES OF DEGRADATION AND ATTENUATION OF CONTAMINANTS.

GATE CITY TRUCK REPAIR PROPERTY
6301 BURNT POPLAR RD.
GREENSBORO, NC
DEM INCIDENT # 10064, GUILFORD COUNTY, NC

Dear Mr. Hall:

This letter is to inform you that the North Carolina Division of Environmental Management (DEM) is being requested to approve a an environmental cleanup in your area. In accordance with North Carolina General Statutes, a set of Groundwater Classifications and Standards has been put in place for the protection of all groundwaters across the state. State guidelines require that the NC-DOT be informed of the proposed activities since the property is adjacent to public roads for which NC-DOT maintains the right-of-way.

Pursuant to the notification requirements of Title 15A NCAC 2L.0114(b), Pyramid Environmental, Inc., on behalf of Lindley Property Trust, is providing notice of the request for a Corrective Action Plan (CAP) under Title 15A NCAC 2L.0106 (l). The property is located at 6301 Burnt Poplar Road, at the intersection of Chimney Rock Road. Some of the constituents found in the groundwater at the above location are typical of gasoline and/or diesel fuel, and have been detected at this site in concentrations that exceed the Groundwater Quality Standards outlined in 15A NCAC 2L.0202.

Pyramid Environmental believes that if the proposed CAP is approved by the DEM, implementation will result in:

1. No active groundwater treatment will be implimented on this site in favor of natural remediation in accordance with 15A NCAC 2L.0106 (l).
2. The most recent groundwater analyses indicate that the maximum concentrations of the primary contaminants: benzene, toluene, ethylbenzene, and xylenes (BTEX) is approximately 4636 parts per billion (ppb), and that the contamination is constrained to a small plume of 16,000 square feet.

2706 Pinedale Road • Greensboro, NC 27408 • 910 282-9030 • Fax 910 282-9032

3. Since the properties in the area are supplied with municipal water and there are no water supply wells, public water intakes, or any other known or foreseeable receptors within 1500' downgradient of the plume, the contaminants identified in the groundwater pose no threat to public health or safety, or to property or property values in the area.
4. Calculations of groundwater velocity based on the observed hydrologic gradient and analysis of soil characteristics at the site has indicated that the plume will migrate at a rate of less than 1 foot per year, at which rate it will take the plume over 500 years to migrate off the subject property.
5. The processes of volatilization, adsorbtion, and biological degradation can be expected to remediate the affected groundwater with time.
6. The monitoring wells already in place on the site are sufficient to monitor migration and degradation of the plume. The wells will be sampled and analyzed quarterly to insure that the plume does not spread beyond the property boundaries. If the monitoring indicates movement of the plume, additional monitoring wells can be installed further down-gradient on the subject property.
7. The contaminant plume is not expected to have any significant adverse impact on any adjoining properties.

Any written comments concerning this request should be submitted within 30 days of June 30, 1995 to the DEM Groundwater Section regional office in Winston-Salem, NC. The Winston-Salem regional office has the proposed CAP and detailed site information on record for public perusal. You may make copies of any of this information at a charge of 10 cents per page. Please send written comments and/or requests to examine the proposed CAP to the following address below.

NC DEM - Groundwater Section
585 Waughtown St.
Winston-Salem, NC 27107
(910) 771-4600

Winston-Salem regional office staff may be contacted during normal weekday business hours to answer questions pertaining to this request. Notification of this request for corrective action is also being made to Dr. Harold Gable, Director of the Guilford County Health Department, Mayor Carolyn Allen of Greensboro, and to the owners of all properties adjacent to the site.

Respectfully,

G. VanNess Burbach, PG
Pyramid Environmental, Inc.

CC: NC-DEM Groundwater Section,
Lindley Property Trust