FEB 8

ADDENDUM TO

COMPREHENSIVE SITE ASSESSMENT

GATE CITY TRUCK REPAIR

6301 BURNT POPLAR ROAD
GREENSBORO, NORTH CAROLINA

Facility ID: 0-010064

June 19, 1995

Prepared for: Lindley Property Trust
Greensboro, North Carolina

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ADDENDUM TO
COMPREHENSIVE SITE ASSESSMENT

Gate City Truck Repair
Greensboro, North Carolina

Facility ID: 0-010064

EXECUTIVE SUMMARY:

On January 25-26, 1993, three underground storage tanks (USTs) were removed from the Gate City Truck Repair property located at 6301 Burnt Poplar Road in Greensboro, Guilford County, North Carolina. The USTs consisted of one 10,000 gallon diesel UST, one 500 gallon gasoline UST and one 500 gallon waste-oil UST. Groundwater was encountered in the excavations for the diesel and gasoline USTs, but not the waste-oil UST.

The UST closure assessment indicated total petroleum hydrocarbon (TPH) concentrations as high as 46 ppm by Method 5030 and 240 ppm by Method 3550 in soil samples from the sides of the diesel and gasoline UST pits, and as high as 190 ppm by Method 9071 beneath the waste-oil UST. The samples from the Gasoline and diesel UST pits are above state action levels of 10 ppm and 40 ppm by EPA Methods 5030 & 3550, respectively, but the soil samples from beneath the waste-oil UST were not above the state action level of 250 ppm by Method 9071[1]. TPH analysis (EPA methods 5030 & 3550) of soil samples from borings around the diesel and gasoline USTs and the pump island constrain lateral extent of the soil contamination. The soil boring investigation has delimited the areal extent of the affected soil above 10 ppm TPH by Method 5030 to be approximately 150-200 ft^2. The areal extent of soil with greater than 40 ppm TPH by Method 3550 is approximately 450-500 ft^2.

Analysis of groundwater samples from seven monitoring wells and eight geoprobe borings by EPA Methods 601, 602, 625, and 3030C indicate concentrations of total BTEX components (benzene, toluene, ethylbenzene, and xylenes) as high as 4636 parts per billion (ppb). Detectable concentrations of MTBE (240 ppb), IPE (300 ppb), 1,2-dibromoethane (7.9 ppb), bromodichloromethane (1.5 ppb), chloroform (38 ppb), bis-2eh-phthalate (43 ppb), Phenol (12 ppb), and lead (16 ppb) were also found in the groundwater. The areal extent of the hydrocarbon plume is approximately 15,000 ft^2. The sample from the vertical-extent well, VEW-1, which was screened from 51 to 61' below the ground surface (43-53' below the water table), contained only 6.4 ppb total BTEX and 0.88 ppb chloroform.

The site and all properties within at least 1500' are supplied with municipal water; however, there is one private water supply well located approximately 1500' north (up-gradient) of the site. There are no public water intakes within 1500' of the site. The nearest surface water is an intermittent creek approximately 1000' east of the site; however, the surface and groundwater gradients for the site are toward a creek approximately 2000' west of the site. The estimated groundwater flow rate is approximately 1.3×10^{-7} cm/sec toward the west-southwest.

Pyramid Environmental recommends development of a Corrective Action Plan (CAP) which will address alternatives for remediation of the hydrocarbons remaining in the soil as well as remediation of the groundwater. The CAP will focus on demonstrating that natural remediation of groundwater is the most appropriate alternative for this site, pursuant to NCAC Title 15, subchapter 2L, section .0106, paragraph l. The CAP will include the necessary information, documentation, and modeling to demonstrate that the subject site meets all the applicable conditions. It is possible that an additional down-gradient well may be required to adequately monitor migration of the plume.

1.0 SITE HISTORY & SOURCE CHARACTERIZATION

1.1 History of Property: Ownership & Use

Gate City Truck Repair, located at 6301 Burnt Poplar Road in the City of Greensboro, in Guilford County, North Carolina (Figure 1), is owned by ARA / Smith's, Inc.. The site has been used as a truck repair garage since the 1970's.

According to the NC-DEHNR Petroleum Underground Storage Tank Program listing (dated 6/26/93) there were three registered USTs on the site, all of which were installed in 1976 and removed on January 26, 1993. The USTs consisted of one 10,000 gallon diesel UST, one 500 gallon gasoline UST and one 500 gallon waste-oil UST. The NC-DEHNR Petroleum Underground Storage Tank Program facility ID for the site is 0-010064, and the ownership of the USTs is listed as ARA / Smith's, Walter L. Hannah, trustee.

1.2 Release Incidents & Prior Investigations

The results of the Underground Storage Tank Closure Assessment were presented in a report by Shield Environmental Associates, Inc. dated March 16, 1993. Soil and groundwater investigations have shown that there are elevated levels of total petroleum hydrocarbons (TPH) in the soil in the vicinity of the excavated USTs and high concentrations of volatile hydrocarbons in the groundwater. The TPH concentration exceeds acceptable limits according to the Department of Environment, Health, and Natural Resources (DEHNR) guidelines[1]. And the hydrocarbon compounds in the groundwater exceed NCAC Title 15 Subsection 2L groundwater standards.

A Comprehensive Site Assessment (CSA) dated March 8, 1994 was submitted by Shield Environmental, Inc.. An Addendum to the CSA, including the results from a new up-gradient well (MW-7) and the results of some aquifer characterization tests, was submitted in a report dated August 29, 1994 by Triangle Environmental, Inc.. The primary results of both the Shield CSA and the Triangle Addendum are summarized in the present addendum.

1.3 Corrective Actions to Date

The USTs, believed to be the source of the released petroleum, have been removed from the property, thus eliminating the possibility of any further release from that source. Approximately 253 tons of excavated soil was initially stockpiled on site, then transported to an approved disposal facility for remediation. Additional testing indicated that TPH concentrations above DEHNR regulatory limits still remained in the soil on the site after excavation. No free product has been observed either during excavation of the USTs or in any of the wells.

2.0 POTENTIAL RECEPTORS & MIGRATION PATHWAYS

Properties adjacent to the site are all zoned commercial or industrial. There are several large tank farms and pipelines for petroleum products in the surrounding area. The property and all surrounding properties for at least 1500' are serviced or have access to the municipal water system; however, there is one private water supply well located approximately 1600' northeast (up-gradient) of the site. This well was sampled by Shield Environmental on November 23, 1994 and analyzed be EPA Methods 601 and 602. The results indicated small concentrations of xylenes (3 ppb), methylene chloride (4 ppb), and 1,4&1,2-dichlorobenzene (1 ppb, each) (see Table 3). These concentrations are very small, and given the position of the well up-gradient from the subject site and the amount of industrial activity in the area (including large petroleum tank farms), it is unlikely that the subject site is the source for these contaminants.

The nearest surface water is an intermittent creek approximately 1000' east of the site; however, the surface and groundwater gradients for the site are toward a creek approximately 2000' west of the site (Figure 1). There are no public water intakes within ½ mile of the site.

There are no basements or other subsurface structures on the site. There are underground utility lines on the site in the vicinity of the hydrocarbon-containing soil, which could provide potential migration pathways for soil vapors.

3.0 SOILS INVESTIGATION

3.1 Site Geology and Soils

The site lies within the Carolina Slate Belt geologic province ([2]Geologic Map of North Carolina, 1985). Bedrock in this area is typically characterized by metamorphosed granitic rocks with a thick layer of saprolite (soft, weathered bedrock). The bedrock may be metacrystic and/or well foliated. Local shearing with abundant small mafic intrusions are common. The soil in the area has been mapped as Enon sandy loam and Mecklenburg sandy clay loam ([3]Soil Survey of Guilford County, 1977).

Observations from soil borings at the site indicate a soil layer consisting primarily of red silty loam with some gray, saprolitic silty loam. A sieve test on site soils performed by Triangle Environmental indicated the predominant grain size to be silt (54%). The interface between weathered bedrock (saprolite) and competent bedrock is probably gradational; however, depth to competent bedrock is estimated at approximately 50' based on drilling results for well VEW-1.

3.2 Soil Sampling

At the time of the UST excavation (performed by Shield Environmental on January 26, 1993), soil samples were taken from beneath the waste-oil UST, and from the sidewalls of the diesel and gasoline UST pits because of groundwater in the excavations. Two composite samples were also taken from the soil stockpile. A total of six soil samples were sent to a state-certified laboratory for analysis.

Shield Environmental also obtained soil samples from the borings for monitoring wells MW-1, MW-2, and MW-3 at 5' on May 21, 1993, and from MW-4, MW-5, and MW-6 at 5' and 10' on September 2, 1993. All samples were screened with an Organic Vapor Analyzer (OVA), and the samples from 5' for MW-4, MW-5, and MW-6 were sent to a state-certified laboratory for analysis.

On May 16, 1995, Pyramid Environmental obtained eight soil samples from soil borings around the former USTs and the pump island (Figure 4). All of the borings were advanced to 5' using a 3¾" truck-mounted auger. Samples were then taken from 5-7' in all borings using a split-spoon sampling device. The samples were placed in clean glass jars sealed with air-tight lids, and placed in a cooler maintained at approximately 4° Celsius for transport to a state-certified laboratory for analysis. All augers and sampling equipment were thoroughly steam-cleaned and decontaminated between uses, and new disposable latex gloves were worn when handling the samples. Boring Logs are included in Appendix I of this report.

3.3 Soil Sample Analysis

The soil samples from beneath the waste-oil UST (C1N & C1S) were analyzed for total petroleum hydrocarbons (TPH) using EPA Method 9071. The results (180 & 190 ppm, respectively) were below the state action level of 250 ppm for TPH by Method 9071.

The soil samples from the gasoline and diesel UST pits (A1S & B1N, respectively) and from the stockpile (Comp-1 & Comp-2) were analyzed for TPH by EPA Methods 5030 and 3550. Soil samples from soil borings B-1, B-2, B-3, B-4, B-6, B-7, B-8, and B-9, as well as the 5' samples from wells MW-4, MW-5, and MW-6 were also analyzed for TPH analysis using EPA Methods 5030 and 3550. The results for several of these samples were above the state action levels of 10 ppm by Method 5030 and/or 40 ppm by Method 3550. The highest levels remaining in the ground are 240 ppm by Method 3550 and 46 ppm by Method 5030. These results are summarized in Table 1 and Figure 3. The complete laboratory reports and chains of custody are included in Appendix II.

4.0 GROUNDWATER INVESTIGATION

4.1 Installation of Monitoring Wells

Monitoring wells MW-1, MW-2, and MW-3 were installed by Shield Environmental on May 21, 1993, and wells MW-4, MW-5, and MW-6 were installed on September 2, 1994. Shield also installed one vertical extent well, VEW-1, screened from 51-61', on September 2, 1993. Monitoring well MW-5 was subsequently removed to repair a sewer line which had been damaged when it was installed. Well MW-1 was damaged as a result of settling in the area of the former UST pits. In June, 1994, Triangle Environmental installed a temporary well, MW-1B, in order to perform aquifer tests. On June 30, 1994, Triangle Environmental installed MW-7 up-gradient from the former UST locations. Figures 4-13 show the locations of these wells.

4.2 Site Hydrology and Pieziometric Surface

On May 9, 1994 wells MW-1, MW-2, MW-3, MW-4, and MW-6 were re-surveyed and water levels measured to define a pieziometric surface. The calculation of relative groundwater elevations is summarized in Table 4. The relative groundwater levels are plotted and contoured to show the interpreted pieziometric surface in Figure 3. These data indicate a pieziometric gradient of approximately 1.0° (dh/dl=0.017) toward the west-southwest. These results are consistent with the results determined by both Shield Environmental, and Triangle Environmental.

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. They calculated the seepage velocity, assuming an effective porosity of 40%, to be 1.3×10^{-7} cm/sec (0.14 ft/yr).

4.3 Groundwater Sampling and Analysis

Monitoring wells MW-1, MW-2, and MW-3 were sampled on June 1, 1993; MW-4, MW-5, MW-6, and VEW-1 were sampled on September 8, 1993 by Shield Environmental. Well MW-7 was sampled on June 30, 1994; wells MW-6, MW-4, were resampled on June 16, 1994; and VEW-1 was resampled on June 21, 1994 by Triangle Environmental. The wells were reportedly sampled in accordance with state guidelines[1], and samples were sent to state-certified laboratories for analysis by some or all of the following EPA Methods: 601; 602; 625; and 239.2 or 3030C (lead). The results are summarized in Table 3.

On August 16, 1993, Shield Environmental advanced eight geoprobe borings to obtain groundwater samples at the locations indicated in Figure 5. Groundwater samples from each of the borings were analyzed on site by gas chromatography (GC) for BTEX compounds (benzene, toluene, ethylbenzene, & xylenes). The results of the analyses are summarized in Table 4.

4.4 Characterization of Contaminant Plume

The chemical constituents found by the groundwater analyses are consistent with the suspected releases of gasoline and diesel-fuel on the site. The primary constituents are the BTEX compounds (benzene, toluene, ethylbenzene, and xylenes). The highest concentration of BTEX was in well MW-2 at 4636 parts-per-billion (ppb). Detectable concentrations of MTBE (240 ppb), IPE (300 ppb), 1,2-dibromoethane (7.9 ppb), bromodichloromethane (1.5 ppb), chloroform (38 ppb), bis-2eh-phthalate (43 ppb), Phenol (12 ppb), and lead (16 ppb) were also found in the groundwater. It should be noted that a sewer line was damaged in the installation of MW-5, which could account for the high concentration of chloroform (38 ppb) in that well. ?

Figure 5 shows isoconcentration contours for total BTEX concentrations in the groundwater of the site. The areal extent of the hydrocarbon plume is approximately 16,000 ft^2. Isoconcentration maps of the individual primary contaminants are shown in Figures 6-13. The sample from the vertical-extent well, VEW-1, which was screened from 51 to 61' below the ground surface (43-53' below the water table), contained only 6.4 ppb total BTEX, indicating that the vertical extent of the plume is on the order of 60'.

The transport and fate of the identified organic contaminants include the processes of volatilization, absorption and bacterial degradation. All the identified organic compounds except chloroform and bromodichloromethane are lighter than water and should be concentrated near the surface of the aquifer. Chloroform and bromodichloromethane are heavier than water and should be concentrated lower in the aquifer. Benzene has been determined to have a relatively high mobility and low absorption potential, and therefore would be expected to move into the groundwater most easily of all the detected

compounds. All of the identified organic contaminants are biologically degradable, and some biodegradation can be expected both within the unsaturated and saturated zones of migration.

5.0 CONCLUSIONS / RECOMMENDATIONS

5.1 Summary and Conclusions

On January 25-26, 1993, three underground storage tanks (USTs) were removed from the Gate City Truck Repair property located at 6301 Burnt Poplar Road in Greensboro, Guilford County, North Carolina. The USTs consisted of one 10,000 gallon diesel UST, one 500 gallon gasoline UST and one 500 gallon waste-oil UST. Groundwater was encountered in the excavations for the diesel and gasoline USTs, but not the waste-oil UST.

The UST closure assessment indicated total petroleum hydrocarbon (TPH) concentrations as high as 46 ppm by Method 5030 and 240 ppm by Method 3550 in soil samples from the sides of the diesel and gasoline UST pits, and as high as 190 ppm by Method 9071 beneath the waste-oil UST. The samples from the Gasoline and diesel UST pits are above state action levels of 10 ppm and 40 ppm by EPA Methods 5030 & 3550, respectively, but the soil samples from beneath the waste-oil UST were not above the state action level of 250 ppm by Method 9071[1]. TPH analysis (EPA methods 5030 & 3550) of soil samples from borings around the diesel and gasoline USTs and the pump island constrain lateral extent of the soil contamination. The soil boring investigation has delimited the areal extent of the affected soil above 10 ppm TPH by Method 5030 to be approximately 150-200 ft^2. The areal extent of soil with greater than 40 ppm TPH by Method 3550 is approximately 450-500 ft^2.

Analysis of groundwater samples from seven monitoring wells and eight geoprobe borings by EPA Methods 601, 602, 625, and 3030C indicate concentrations of total BTEX components (benzene, toluene, ethylbenzene, and xylenes) as high as 4636 parts per billion (ppb). Detectable concentrations of MTBE (240 ppb), IPE (300 ppb), 1,2-dibromoethane (7.9 ppb), bromodichloromethane (1.5 ppb), chloroform (38 ppb), bis-2eh-phthalate (43 ppb), Phenol (12 ppb), and lead (16 ppb) were also found in the groundwater. The areal extent of the hydrocarbon plume is approximately 15,000 ft^2. The sample from the vertical-extent well, VEW-1, which was screened from 51 to 61' below the ground surface (43-53' below the water table), contained only 6.4 ppb total BTEX and 0.88 ppb chloroform.

The site and all properties within at least 1500' are supplied with municipal water; however, there is one private water supply well located approximately 1500' north (up-gradient) of the site. There are no public water intakes within 1500' of the site. The nearest surface water is an intermittent creek approximately 1000' east of the site; however, the surface and groundwater gradients for the site are toward a creek

approximately 2000' west of the site. The estimated groundwater flow rate is approximately 1.3×10^{-7} cm/sec toward the west-southwest.

5.2 Recommendations for Corrective Action

State guidelines[1] require development of a Corrective Action Plan (CAP) for the site, which will give detailed technical plans for remediation of the contaminated soil and groundwater. The primary options available for remediation of the site include the following. The advantages, disadvantages, relative costs, and other factors relating to these options are summarized in Table 5.

- OPTION A: Installation of a combination soil vapor extraction (SVE) and pump-and-treat system. The pump-and-treat system will draw down the water table and recover groundwater for on-site treatment by diffused aeration and a series of carbon filters. The SVE system will remove the volatile hydrocarbons from the soil and will stimulate in-situ biodegradation of the remaining petroleum hydrocarbons.

- OPTION B: Installation of a closed-loop bio-reactor system designed to pump ground water from the surface aquifer, remove the contaminants through biological remediation, and apply the treated water to the areas of contaminated soil to flush more contaminants into the recovery wells for further treatment.

- OPTION C: Installation of a combination SVE and Air-Sparging system which will aerate both the saturated and unsaturated zones to remove volatile hydrocarbons and to stimulate in-situ biodegradation of the remaining petroleum hydrocarbons.

- OPTION D: Excavation of contaminated soil and natural (passive) remediation of the groundwater of the site. Under this option, the natural processes of biological degradation and attenuation are considered adequate to control and/or remediate the site. After initial soil excavation and installation of any necessary monitoring wells, no action is taken other than monitoring of the groundwater plume. NCAC Title 15, subchapter 2L, section .0106, paragraph l provides the option of natural remediation when the following conditions are met.

  1. All sources of contamination have been removed;

  2. The product has the capacity to degrade under site conditions;

  3. The time and direction of plume migration can be predicted with reasonable certainty;

  4. Plume migration will not result in violation of groundwater standards at any existing or foreseeable receptors;

5. The plume will not migrate onto any property which is not served by the municipal water system;

6. The plume will not intercept any surface waters;

7. The groundwater monitoring system will be sufficient to track the degradation and attenuation of the plume and to detect contaminants prior to their reaching any existing or foreseeable receptor at least one year's travel time up-gradient of the receptor and no greater than five years travel time down-gradient from the contaminant site;

8. All necessary access agreements pursuant to (7) above have been or can be obtained;

9. Public notice of the request has been provided in accordance with regulations; and

10. The proposed corrective action plan will be consistent with all other applicable laws.

Pyramid Environmental recommends development of a Corrective Action Plan (CAP) which will address alternatives for remediation of the hydrocarbons remaining in the soil as well as remediation of the groundwater. The CAP will focus on demonstrating that natural remediation of groundwater is the most appropriate alternative for this site, pursuant to the NCAC Title 15:2L conditions discussed above. The CAP will include the necessary information, documentation, and modeling to demonstrate that the subject site meets all the applicable conditions. It is possible that an additional down-gradient well may be required to adequately monitor migration of the plume.

6.0 REFERENCES

[1] **Groundwater Section Guidelines for the Investigation and Remediation of Soils and Groundwater**. NC Dept. of Environment, Health, and Natural Resources, Div. of Environmental Management, Groundwater Section. March, 1993.

[2] **Geologic Map of North Carolina**; by P. Albert Carpenter, III. NC Dept. of Natural Resources & Community Development, Geological Survey Section. 1982.

[3] **Soil Survey of Guilford County, North Carolina**. United States Dept. of Agriculture, Soil Conservation Service. 1977.

7.0 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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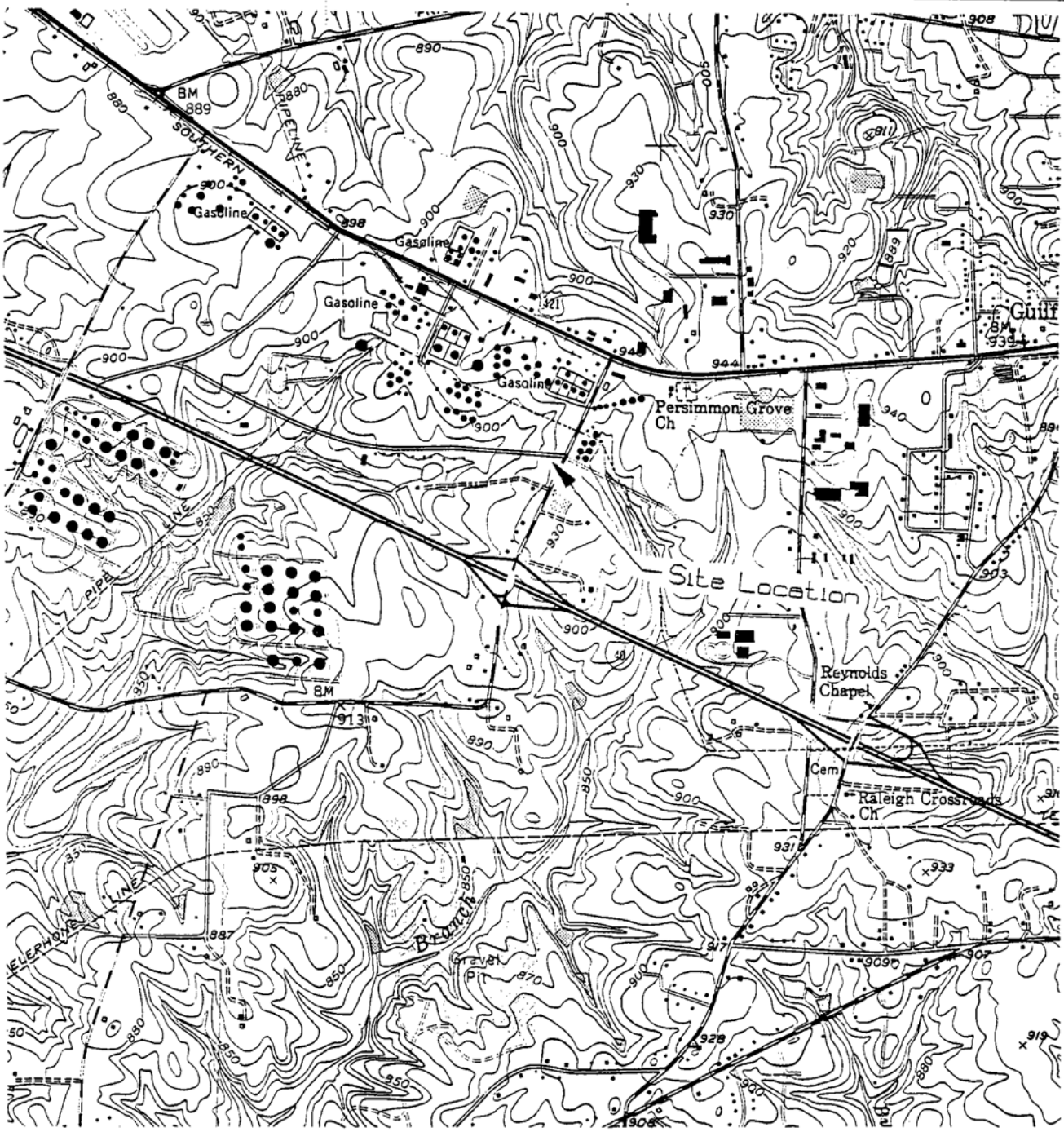
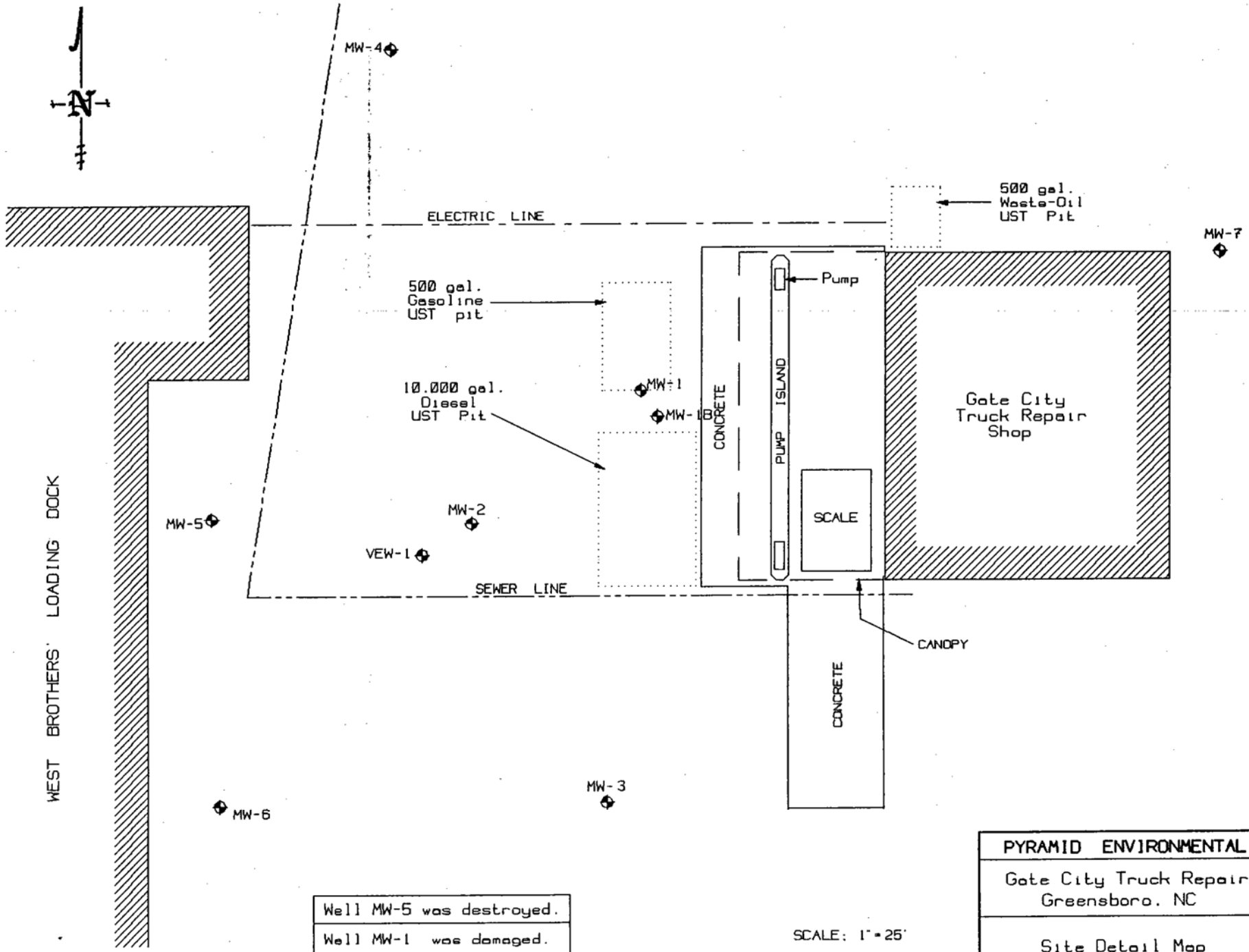
FIGURES



North

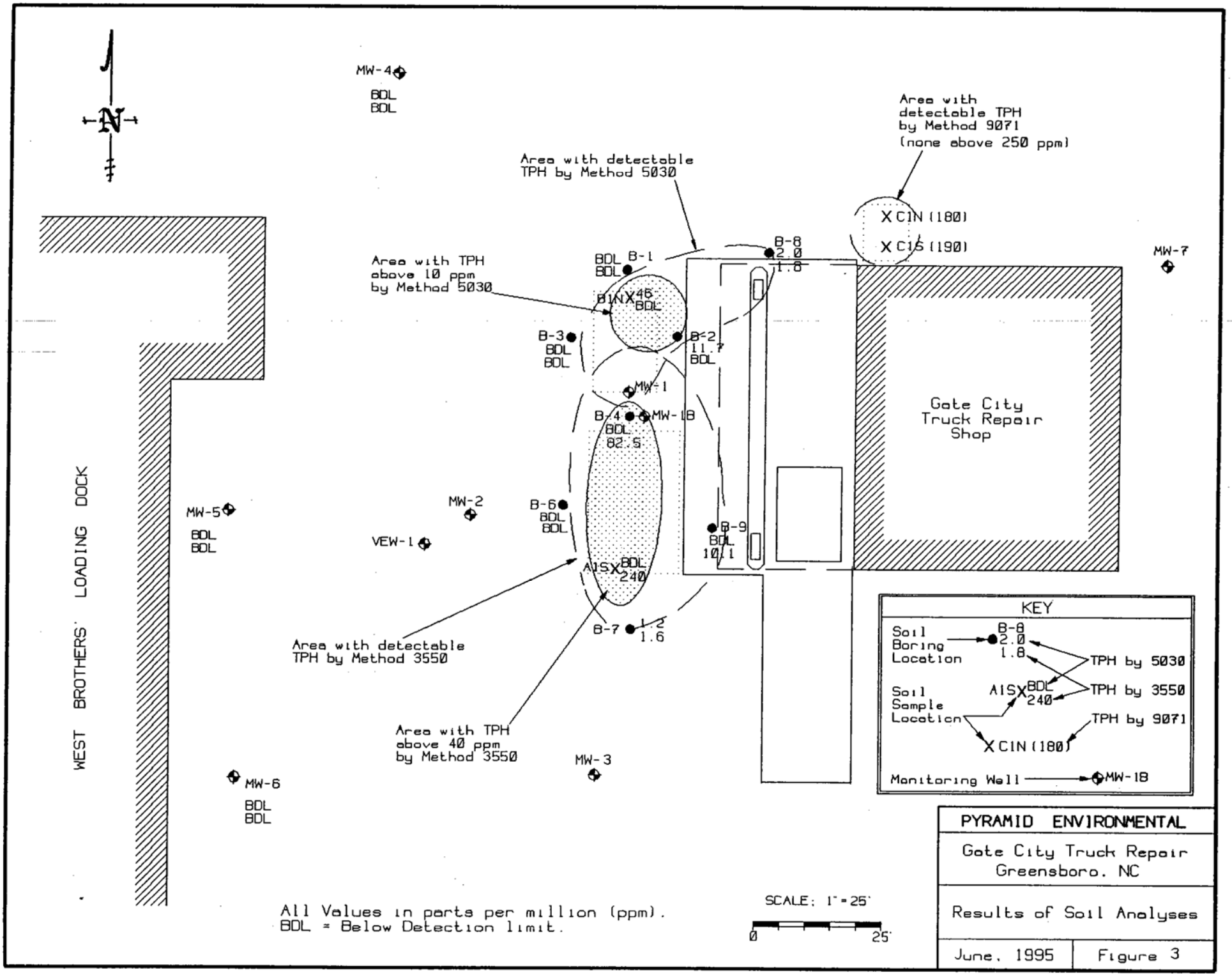
Scale: 1" = 2000'
USGS Topographic Map
Guilford, NC Quadrangle

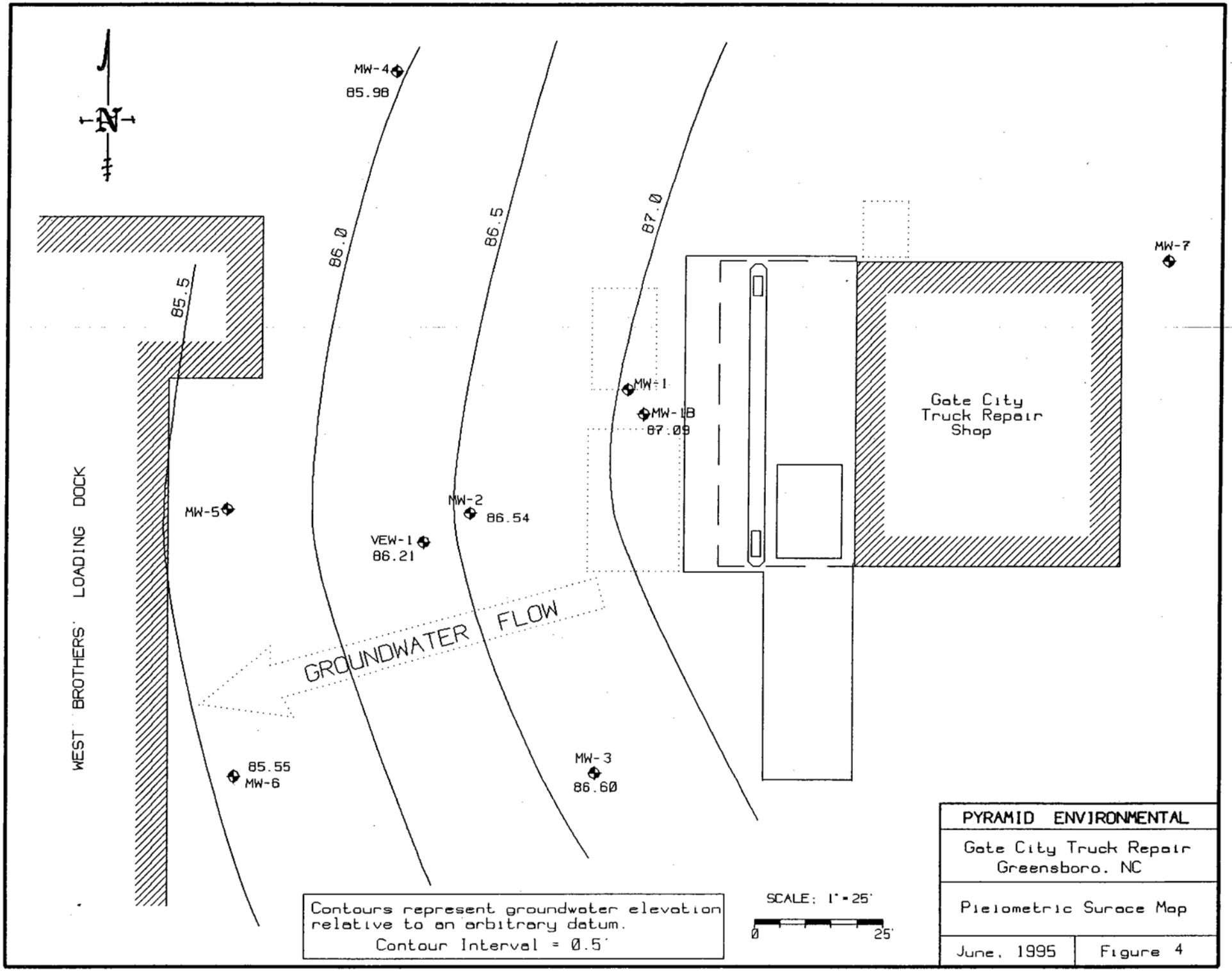
PYRAMID ENVIRONMENTAL	
Gate City Truck Repair Greensboro, NC	
Site Location Map	
May 1995	Figure 1

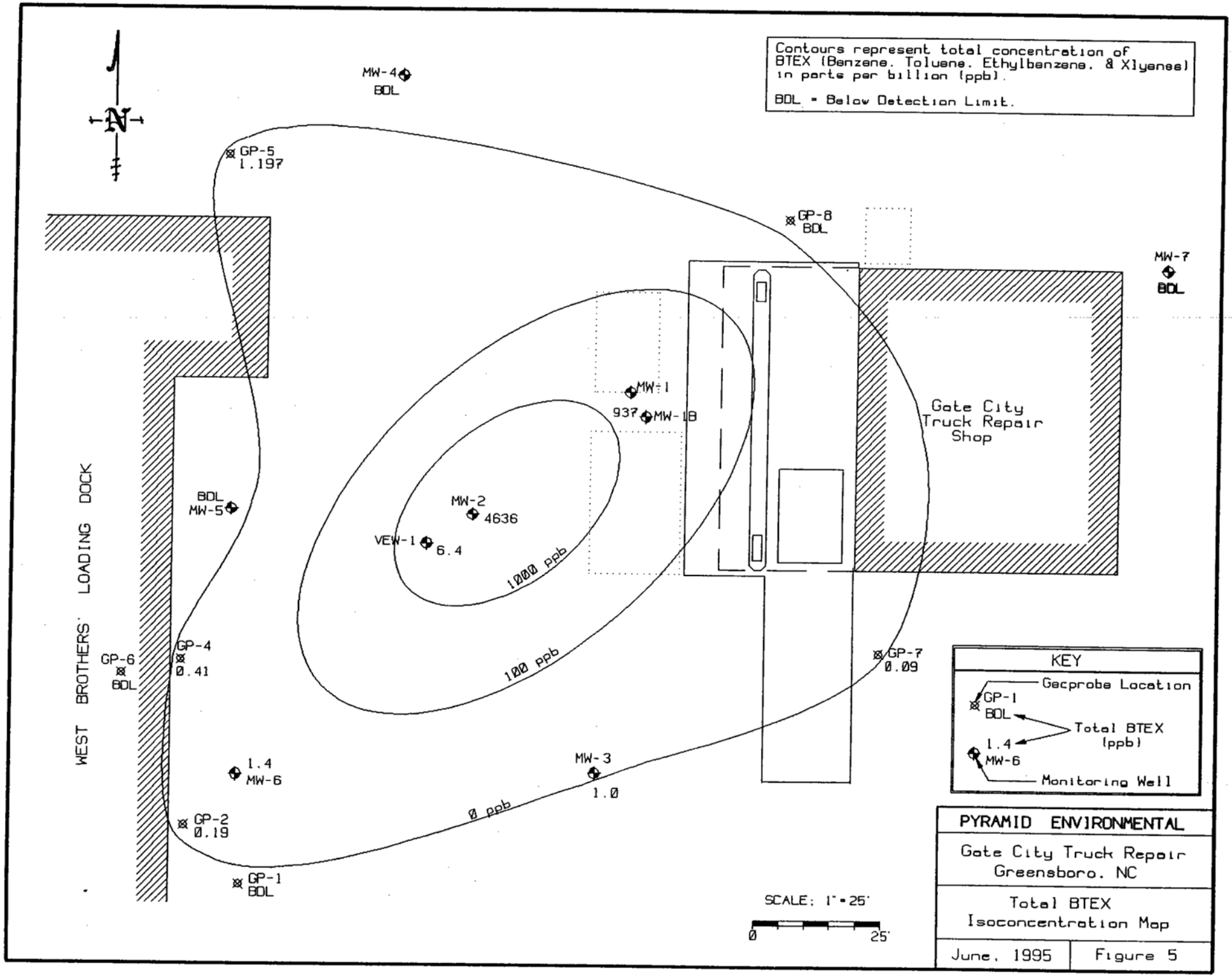


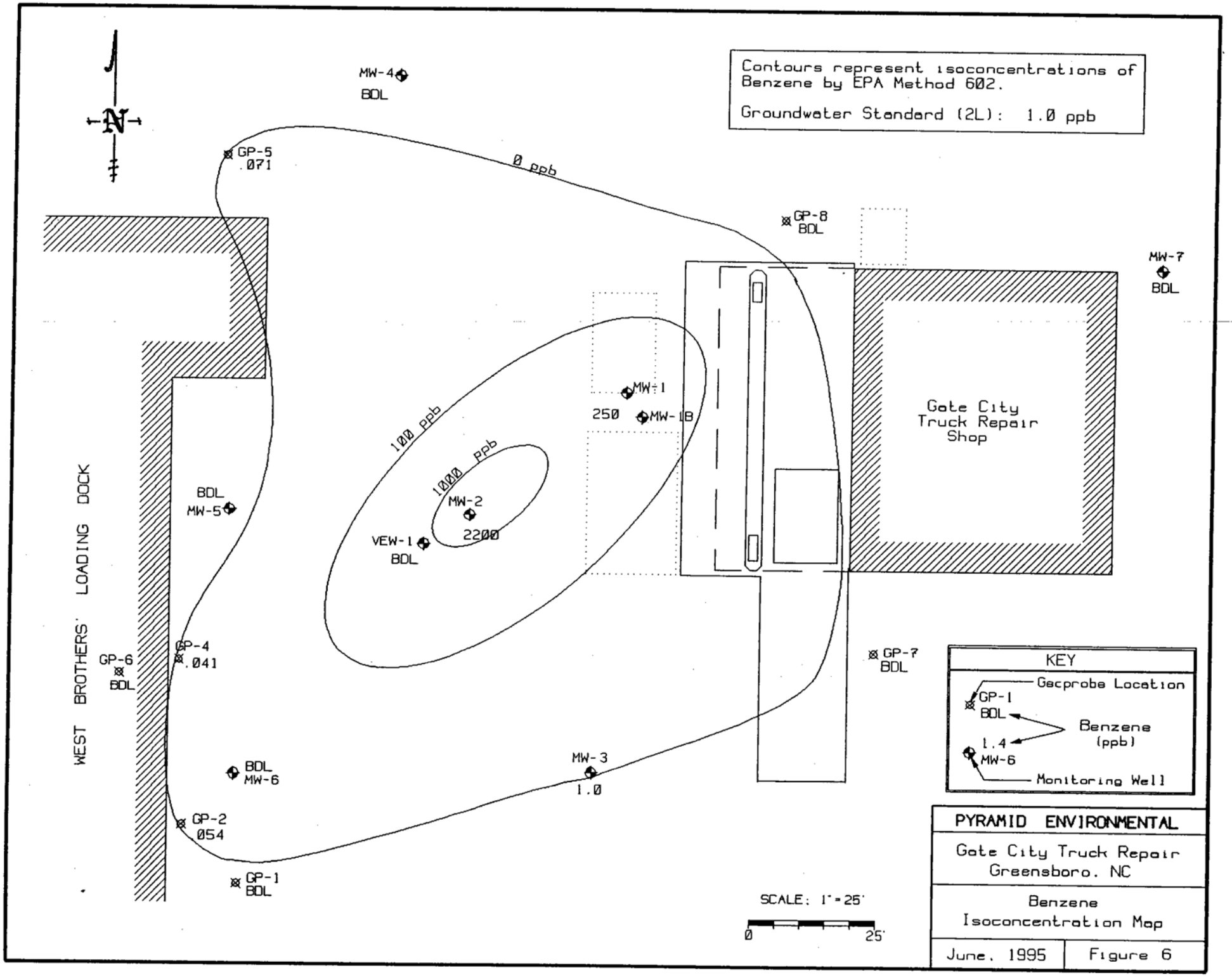
Well MW-5 was destroyed.
Well MW-1 was damaged.
Well VEW-1 screened from 51-61' subsurface.

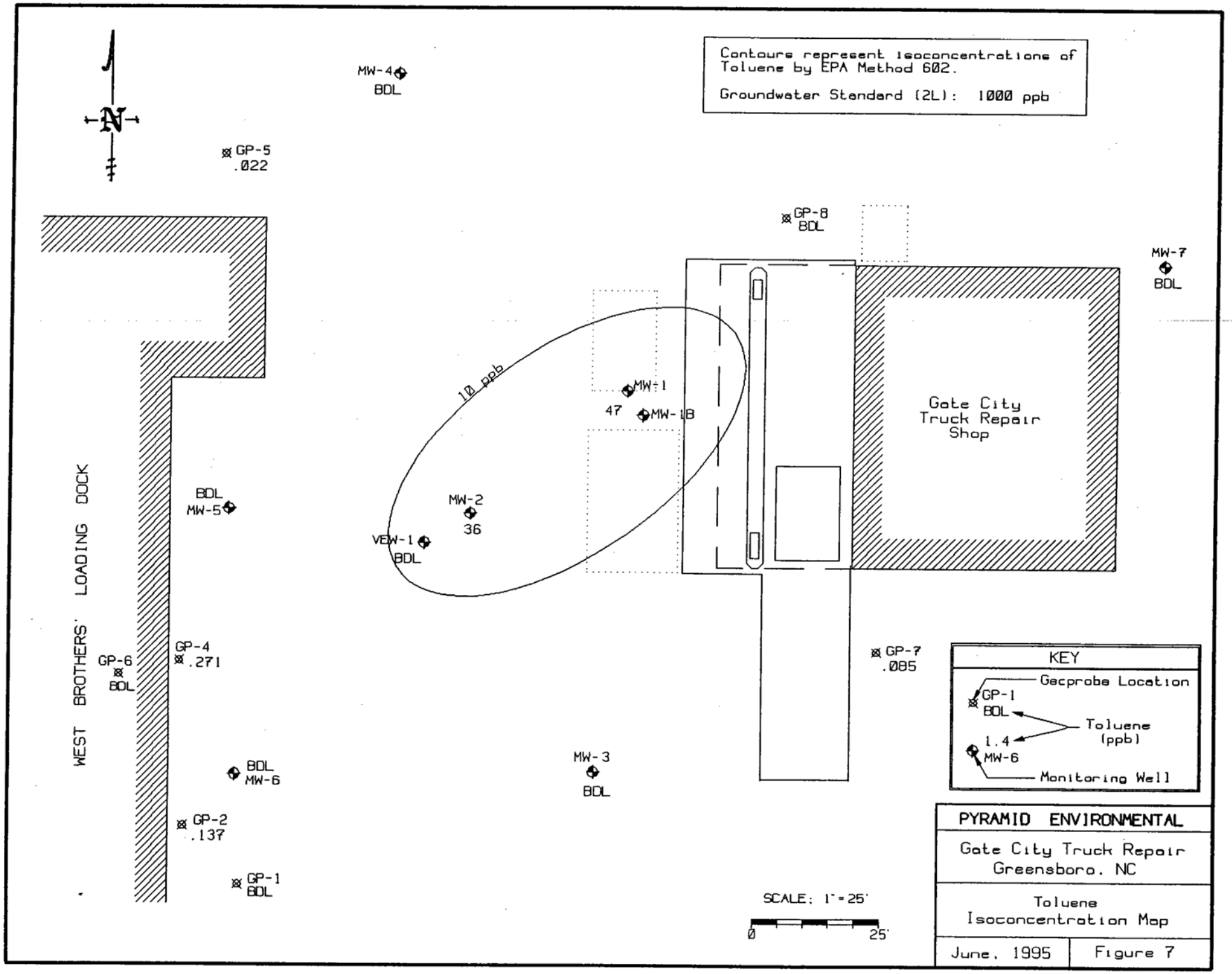
PYRAMID ENVIRONMENTAL	
Gate City Truck Repair Greensboro, NC	
Site Detail Map	
June, 1995	Figure 2

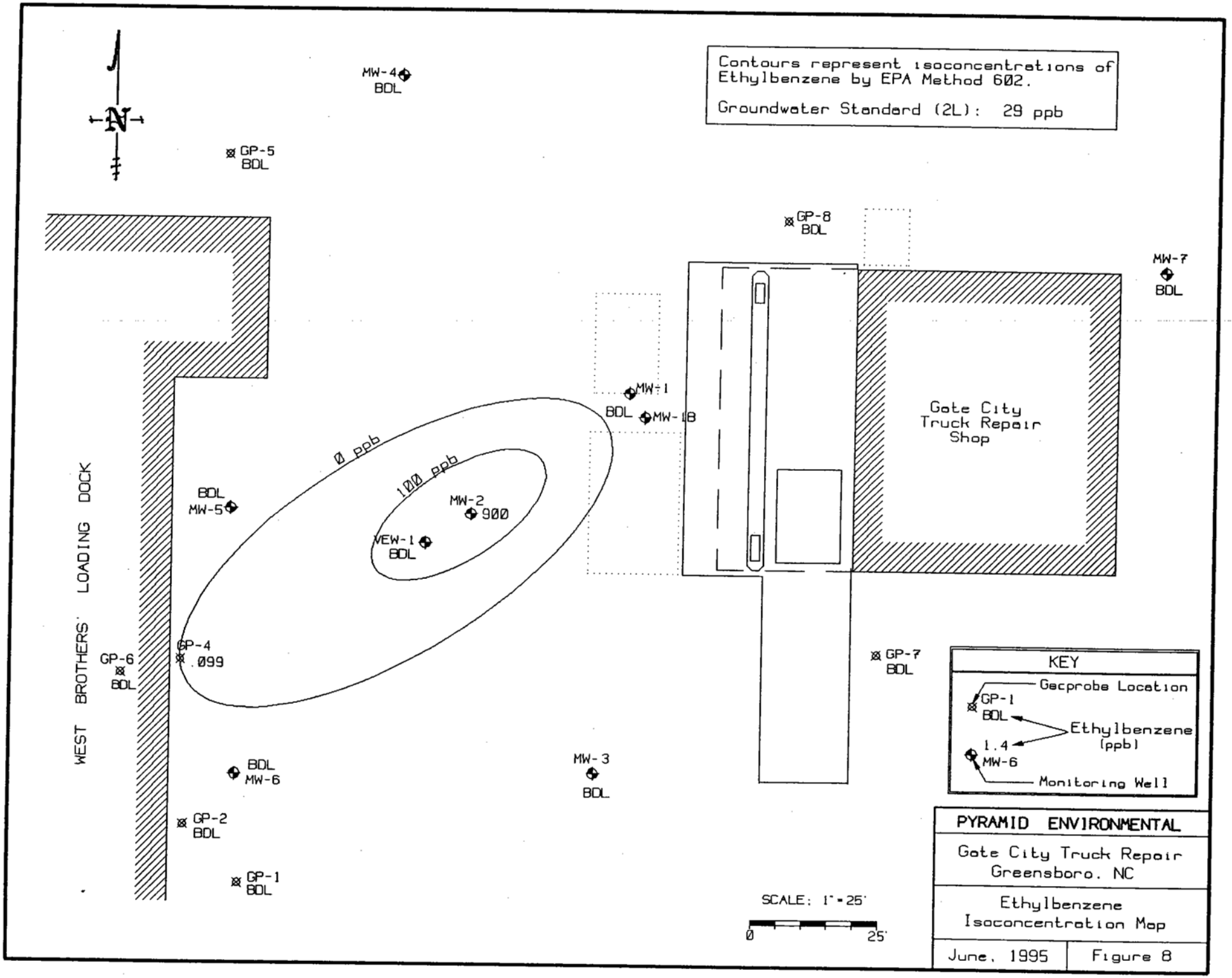

N
MW-4
BDL
BDL
Area with detectable TPH by Method 9071 (none above 250 ppm)
Area with detectable TPH by Method 5030
X C1N (180)
X C1S (190)
B-8
2.0
1.8
MW-7
Area with TPH above 10 ppm by Method 5030
BDL B-1
BDL
B1NX46
BDL
B-3
BDL
BDL
B-2
11.7
BDL
MW-1
B-4
MW-1B
BDL
82.5
Gate City Truck Repair Shop
WEST BROTHERS' LOADING DOCK
MW-5
BDL
BDL
MW-2
B-6
BDL
BDL
VEW-1
B-9
BDL
10.1
A1SX BDL
240
B-7
1.2
1.6
Area with detectable TPH by Method 3550
Area with TPH above 40 ppm by Method 3550
MW-3
MW-6
BDL
BDL
KEY
Soil Boring Location
B-8
2.0
1.8
TPH by 5030
Soil Sample Location
A1SX BDL
240
TPH by 3550
TPH by 9071
X C1N (180)
Monitoring Well
MW-1B
All Values in parts per million (ppm).
BDL = Below Detection limit.
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Results of Soil Analyses
June, 1995
Figure 3

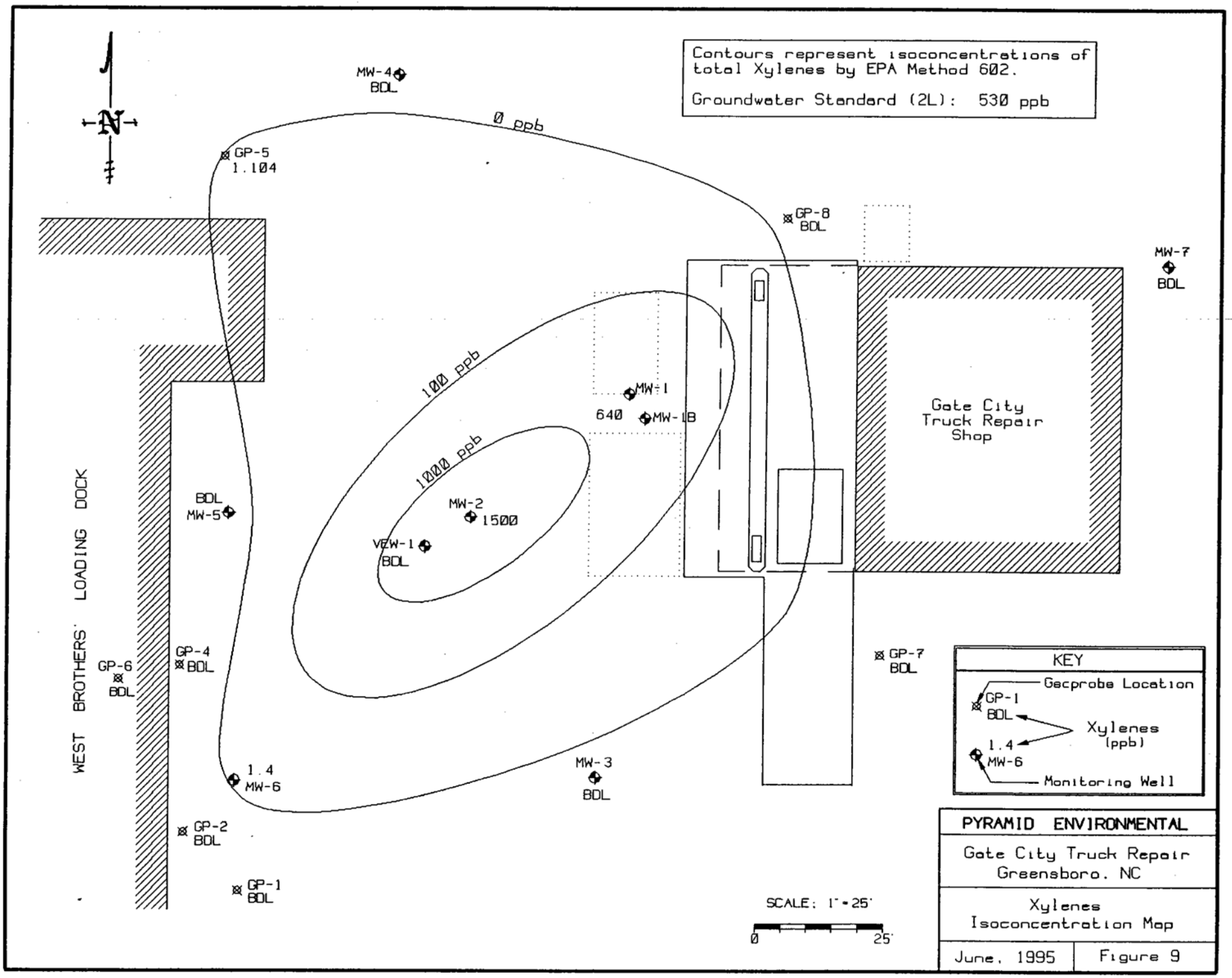

N
MW-4
85.98
86.0
86.5
87.0
85.5
MW-7
MW-1
MW-1B
87.09
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
MW-5
MW-2
86.54
VEW-1
86.21
GROUNDWATER FLOW
85.55
MW-6
MW-3
86.60
Contours represent groundwater elevation relative to an arbitrary datum.
Contour Interval = 0.5'
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Pielometric Surace Map
June, 1995
Figure 4

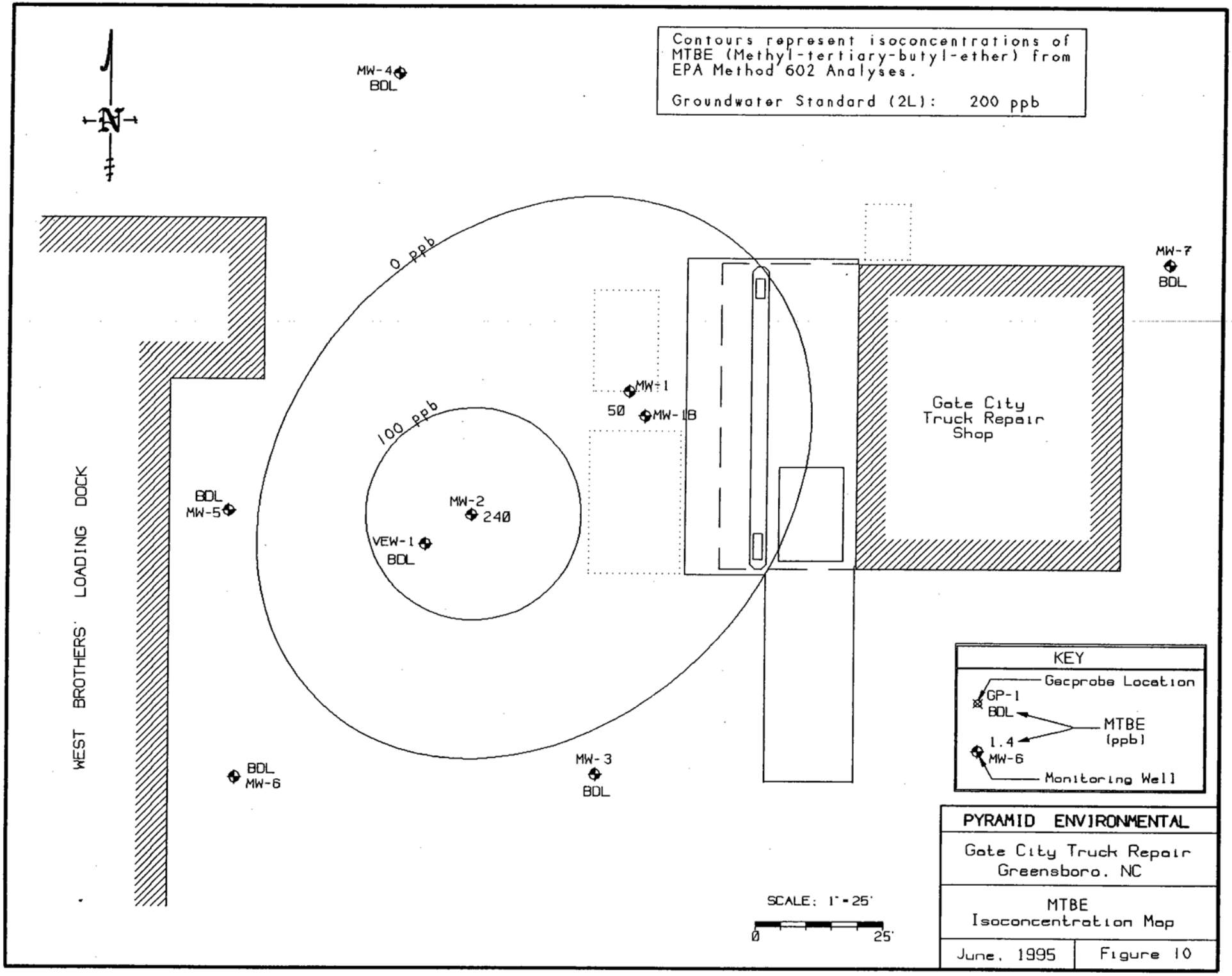

Contours represent total concentration of BTEX (Benzene, Toluene, Ethylbenzene, & Xylenes) in parts per billion (ppb).
BDL = Below Detection Limit.
N
MW-4
BDL
GP-5
1.197
GP-8
BDL
MW-7
BDL
MW-1
937
MW-1B
Gate City Truck Repair Shop
MW-2
4636
VEW-1
6.4
1000 ppb
100 ppb
0 ppb
BDL
MW-5
WEST BROTHERS' LOADING DOCK
GP-6
BDL
GP-4
0.41
GP-7
0.09
1.4
MW-6
MW-3
1.0
GP-2
0.19
GP-1
BDL
SCALE: 1" = 25'
0
25'
KEY
Geoprobe Location
GP-1
BDL
Total BTEX (ppb)
1.4
MW-6
Monitoring Well
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Total BTEX
Isoconcentration Map
June, 1995
Figure 5

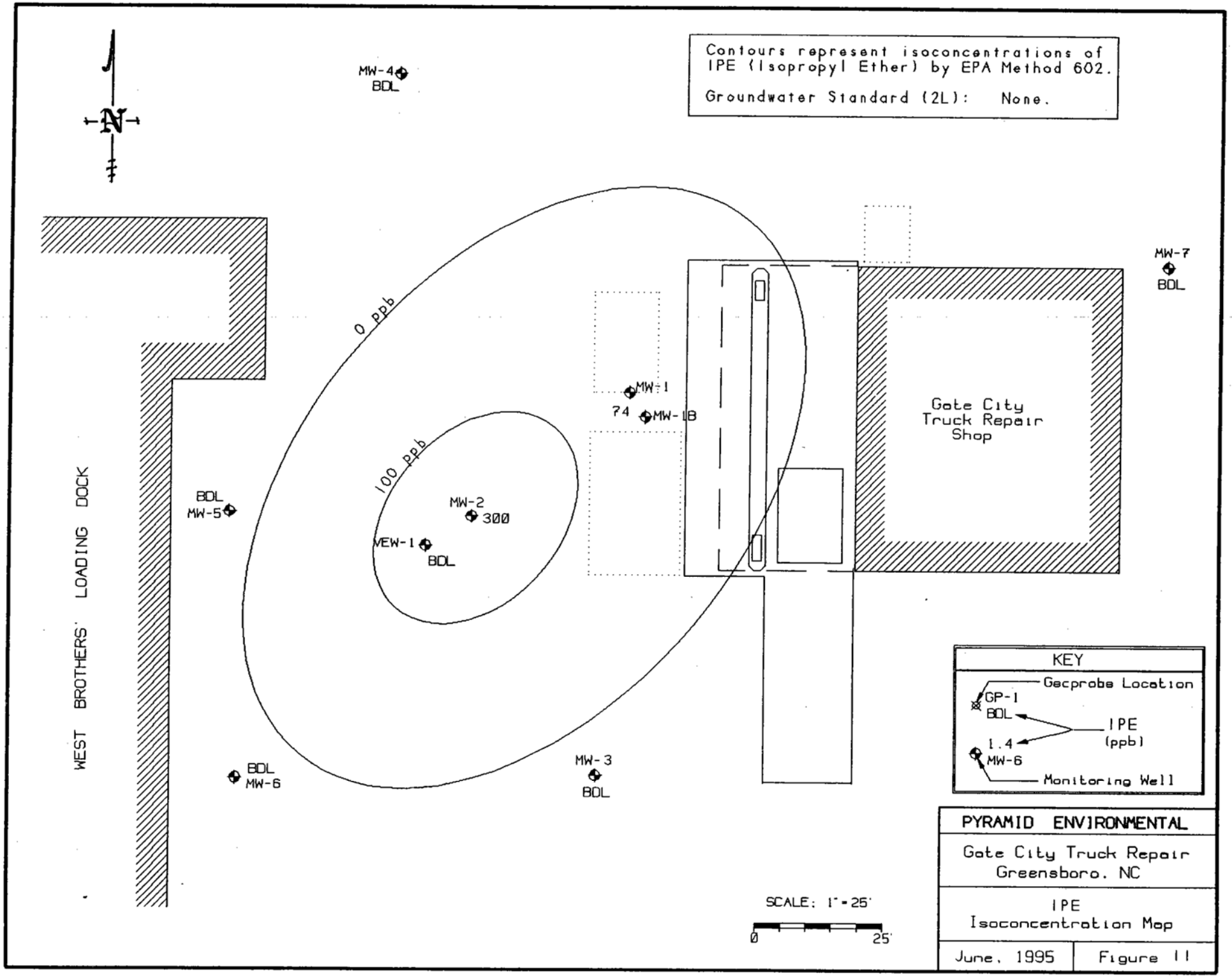

Contours represent isoconcentrations of Benzene by EPA Method 602.
Groundwater Standard (2L): 1.0 ppb
N
MW-4
BDL
GP-5
.071
0 ppb
GP-8
BDL
MW-7
BDL
MW-1
250
MW-1B
100 ppb
1000 ppb
MW-2
2200
VEW-1
BDL
Gate City
Truck Repair
Shop
BDL
MW-5
WEST BROTHERS' LOADING DOCK
GP-4
.041
GP-6
BDL
GP-7
BDL
MW-3
1.0
BDL
MW-6
GP-2
054
GP-1
BDL
SCALE: 1" = 25'
0
25'
KEY
Geoprobe Location
GP-1
BDL
Benzene
(ppb)
1.4
MW-6
Monitoring Well
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Benzene
Isoconcentration Map
June, 1995
Figure 6

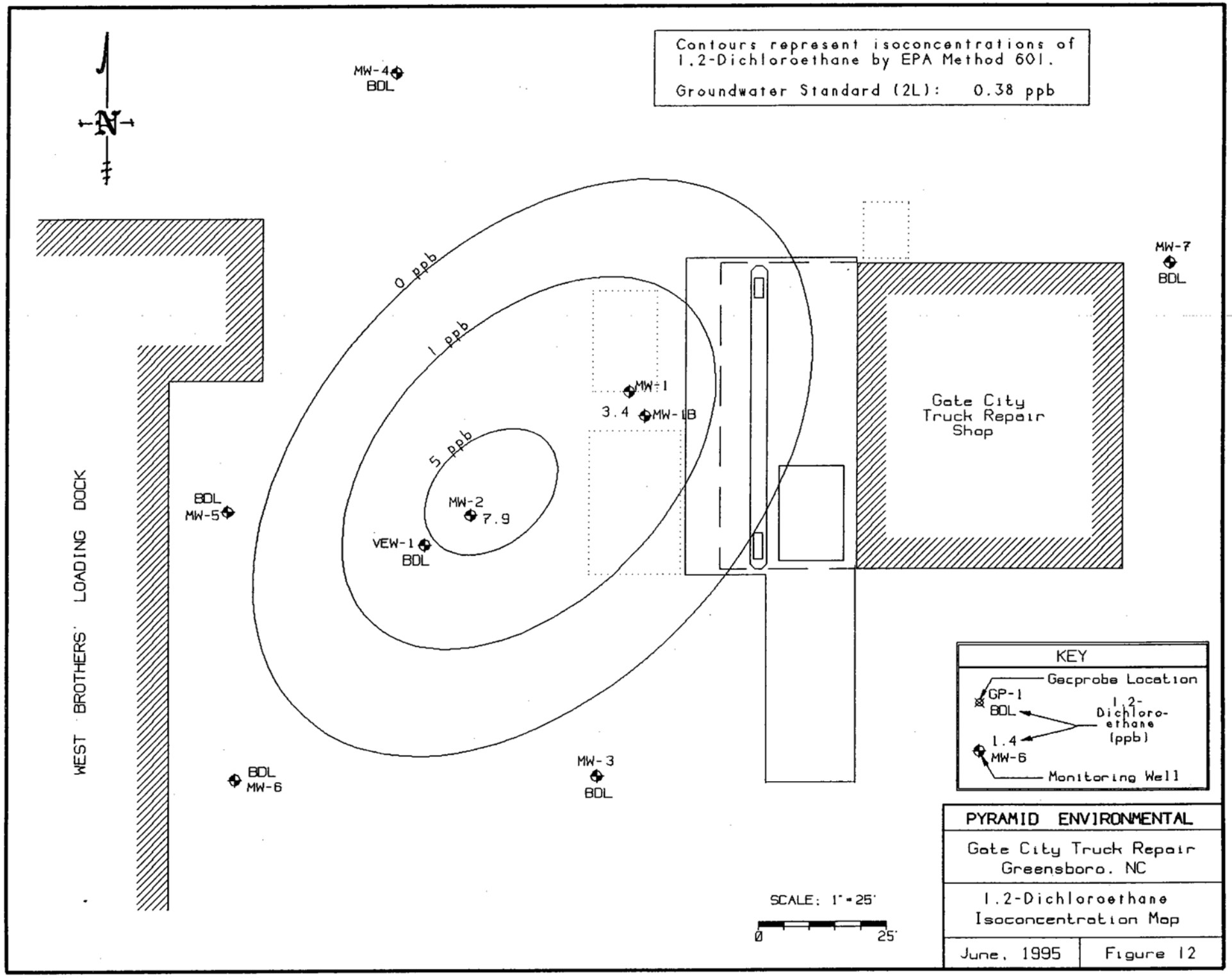

Contours represent isoconcentrations of Toluene by EPA Method 602.
Groundwater Standard (2L): 1000 ppb
N
MW-4
BDL
GP-5
.022
GP-8
BDL
MW-7
BDL
10 ppb
MW-1
47
MW-18
Gate City
Truck Repair
Shop
WEST BROTHERS' LOADING DOCK
BDL
MW-5
MW-2
36
VEW-1
BDL
GP-6
BDL
GP-4
.271
GP-7
.085
MW-3
BDL
BDL
MW-6
GP-2
.137
GP-1
BDL
KEY
Geoprobe Location
GP-1
BDL
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, 1995
Figure 7

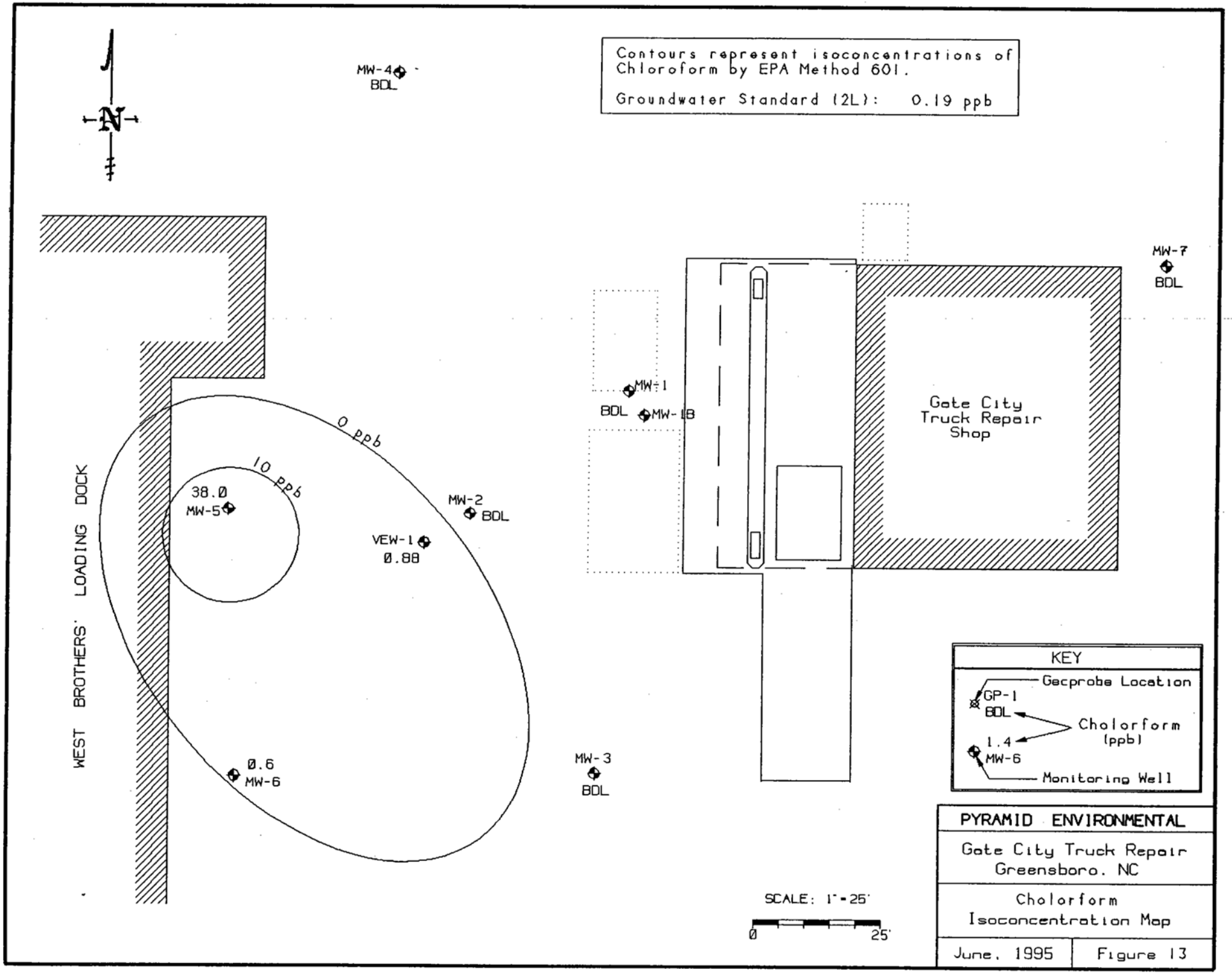

Contours represent isoconcentrations of Ethylbenzene by EPA Method 602.
Groundwater Standard (2L): 29 ppb
N
MW-4
BDL
GP-5
BDL
GP-8
BDL
MW-7
BDL
MW-1
BDL
MW-1B
Gate City Truck Repair Shop
0 ppb
100 ppb
MW-2
900
VEW-1
BDL
BDL
MW-5
WEST BROTHERS' LOADING DOCK
GP-6
BDL
GP-4
.099
GP-7
BDL
BDL
MW-6
MW-3
BDL
GP-2
BDL
GP-1
BDL
SCALE: 1" = 25'
0
25'
KEY
Geoprobe Location
GP-1
BDL
Ethylbenzene (ppb)
1.4
MW-6
Monitoring Well
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Ethylbenzene
Isoconcentration Map
June, 1995
Figure 8


Contours represent isoconcentrations of total Xylenes by EPA Method 602.
Groundwater Standard (2L): 530 ppb
N
MW-4
BDL
0 ppb
GP-5
1.104
GP-8
BDL
MW-7
BDL
100 ppb
MW-1
640
MW-1B
1000 ppb
MW-2
1500
VEW-1
BDL
Gate City
Truck Repair
Shop
BDL
MW-5
WEST BROTHERS' LOADING DOCK
GP-6
BDL
GP-4
BDL
GP-7
BDL
1.4
MW-6
MW-3
BDL
GP-2
BDL
GP-1
BDL
KEY
Geoprobe Location
GP-1
BDL
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, 1995
Figure 9


Contours represent isoconcentrations of MTBE (Methyl-tertiary-butyl-ether) from EPA Method 602 Analyses.
Groundwater Standard (2L): 200 ppb
N
MW-4
BDL
0 ppb
100 ppb
MW-1
50
MW-1B
MW-2
240
VEW-1
BDL
BDL
MW-5
BDL
MW-6
MW-3
BDL
MW-7
BDL
Gate City Truck Repair Shop
WEST BROTHERS' LOADING DOCK
KEY
Geoprobe Location
GP-1
BDL
MTBE (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
MTBE
Isoconcentration Map
June, 1995
Figure 10


Contours represent isoconcentrations of IPE (Isopropyl Ether) by EPA Method 602.
Groundwater Standard (2L): None.
N
MW-4
BDL
MW-7
BDL
0 ppb
100 ppb
MW-1
74
MW-1B
Gate City Truck Repair Shop
BDL
MW-5
MW-2
300
VEW-1
BDL
WEST BROTHERS' LOADING DOCK
BDL
MW-6
MW-3
BDL
KEY
Geoprobe Location
GP-1
BDL
IPE (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
IPE
Isoconcentration Map
June, 1995
Figure 11


Contours represent isoconcentrations of 1,2-Dichloroethane by EPA Method 601.
Groundwater Standard (2L): 0.38 ppb
N
MW-4
BDL
MW-7
BDL
0 ppb
1 ppb
5 ppb
MW-1
3.4
MW-1B
MW-2
7.9
VEW-1
BDL
BDL
MW-5
BDL
MW-6
MW-3
BDL
Gate City Truck Repair Shop
WEST BROTHERS' LOADING DOCK
KEY
Geoprobe Location
GP-1
BDL
1,2-Dichloroethane (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
1,2-Dichloroethane
Isoconcentration Map
June, 1995
Figure 12


Contours represent isoconcentrations of Chloroform by EPA Method 601.
Groundwater Standard (2L): 0.19 ppb
N
MW-4
BDL
MW-7
BDL
MW-1
BDL
MW-1B
Gate City Truck Repair Shop
0 ppb
10 ppb
38.0
MW-5
MW-2
BDL
VEW-1
0.88
WEST BROTHERS' LOADING DOCK
0.6
MW-6
MW-3
BDL
KEY
Geoprobe Location
GP-1
BDL
Cholorform (ppb)
1.4
MW-6
Monitoring Well
SCALE: 1" = 25'
0
25'
PYRAMID ENVIRONMENTAL
Gate City Truck Repair
Greensboro, NC
Cholorform
Isoconcentration Map
June, 1995
Figure 13

TABLES

TABLE 1: Results of Soil Sample Analyses.

Sample ID	Date Sampled	Location	Depth (ft)	OVA*	TPH* (5030)	TPH* (3550)	TPH* (9071)
A1S	1/27/93	Diesel UST Pit	7'	---	BDL	**240**	---
B1N	1/27/93	Gas. UST Pit	7'	---	**46**	BDL	---
C1N	1/27/93	W. Oil UST Pit	7'	---	---	---	**180**
C1S	1/27/93	W. Oil UST Pit	7'	---	---	---	**190**
Comp-1	1/27/93	Stockpile	---	---	**2400**	**690**	---
Comp-2	1/27/93	Stockpile	---	---	**41**	BDL	---
CS-1 #	6/8/93	Stockpile	---	---	---	---	---
MW-1-5	5/21/93	MW-1	5'	2.0	---	---	---
MW-2-5	5/21/93	MW-2	5'	4.5	---	---	---
MW-3-5	5/21/93	MW-3	5'	< 1	---	---	---
MW-4-5	9/2/93	MW-4	5'	< 1	BDL	BDL	---
MW-4-10	9/2/93	MW-4	10'	< 1	---	---	---
MW-5-5	9/2/93	MW-5	5'	< 4	BDL	BDL	---
MW-5-10	9/2/93	MW-5	10'	< 1	---	---	---
MW-6-5	9/2/93	MW-6	5'	1.5	BDL	BDL	---
MW-6-10	9/2/93	MW-6	10'	< 1	---	---	---
B-1	5/16/95	B-1	5-7'	---	BDL	BDL	---
B-2	5/16/95	B-2	5-7'	---	**11.7**	BDL	---
B-3	5/16/95	B-3	5-7'	---	BDL	BDL	---
B-4	5/16/95	B-4	5-7'	---	BDL	**82.5**	---
B-6	5/16/95	B-6	5-7'	---	BDL	BDL	---
B-7	5/16/95	B-7	5-7'	---	**1.2**	**1.6**	---
B-8	5/16/95	B-8	5-7'	---	**2.0**	**1.7**	---
B-9	5/16/95	B-9	5-7'	---	BDL	**10.1**	---

TPH = Total Petroleum Hydrocarbons. OVA = Organic Vapor Analyzer (Field Test).

* Results in parts per million (ppm). BDL = Below Detection Limit.

Sample CS-1 was analyzed by Methods 8080, 8270, 8240, & TCLP Metals. See lab. report for results.

TABLE 2: Groundwater Elevation Calculations (5/9/95).

WELL	TOC Surveyed Height	TOC Elevation w.r.t. Datum	Water Level from TOC	Water Table w.r.t. Datum
MW-1	5.595	94.405	7.32	87.085
MW-2	5.26	94.74	8.2	86.54
MW-3	5.545	94.455	7.86	86.595
MW-4	5.5	94.5	8.52	85.98
MW-5	-----	-----	-----	-----
MW-6	5.14	94.86	9.31	85.55
MW-7	-----	-----	-----	-----
VEW-1	5.085	94.915	8.71	86.205

TOC = top of casing.
Datum is arbitrarily set at instrument level = 100'.

TABLE 4: Geoprobe Sample Analytical Results.

Geoprobe Boring	Date Sampled	Site Screening GC Results				
		Benzene	Toluene	Ethylbenzene	Xylenes	"BTEX"
GP-1	8/16/93	BDL	BDL	BDL	BDL	BDL
GP-2	8/16/93	**.054**	**.137**	BDL	BDL	**1.424**
GP-3	8/16/93	**1.72**	**1.34**	BDL	BDL	**3.06**
GP-4	8/16/93	**.041**	**.271**	**.099**	BDL	**0.411**
GP-5	8/16/93	**.071**	**.022**	BDL	**1.104**	**1.197**
GP-6	8/16/93	BDL	BDL	BDL	BDL	BDL
GP-7	8/16/93	BDL	**.085**	BDL	BDL	**.085**
GP-8	8/16/93	BDL	BDL	BDL	BDL	BDL

BTEX = Sum of all above parameters. GC = Gas Chromatography.
Values in parts per billion (ppb). BDL = Below Detection Limit.

TABLE 3: 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.
ppb = parts per billion (µg/l).
BDL = Below Detection Limit.

TABLE 5: Evaluation of Remedial Alternatives.

OPTION:	A	B	C	D
Soil Remediation Method	Soil Vapor Extraction	Soil Flushing	Soil Vapor Extraction	Excavation
Groundwater Remediation Method	Pump & Treat	Closed Loop Bio-reactor	Air Sparging	Natural (Passive)
Feasibility for Site	Yes	Yes	Yes	Yes
Time to Final Clean-up	3-5 years	1-2 years	2-3 years	3-5 years
Advantages	Retards plume migration. Remediates both soil & groundwater. Exposes soil in vadose zone. Established technology.	Contaminants remediated insitu. Remediates both soil & groundwater. No effluent.	Contaminants remediated insitu. Remediates both soil & groundwater. No effluent. Established technology.	Cost Effective. Low impact on property operations. Immediate soil remediation & natural groundwater remediation.
Disadvantages	Large volume of groundwater effluent. Air emissions.	Difficult to control plume & distibution of nutrients.	Difficult to control plume & ensure even air-flow. Air emissions.	No plume control. Longer duration.
Initial Capital Outlay	Moderate to High	High	Moderate	Moderate
Yearly Overhead Expenses	Moderate to High	Moderate	Moderate	Low
Permits Required	Water Discharge Permit	None	Injection Well Permits	None

APPENDIX I

Boring Logs

PYRAMID ENVIRONMENTAL BORING LOG

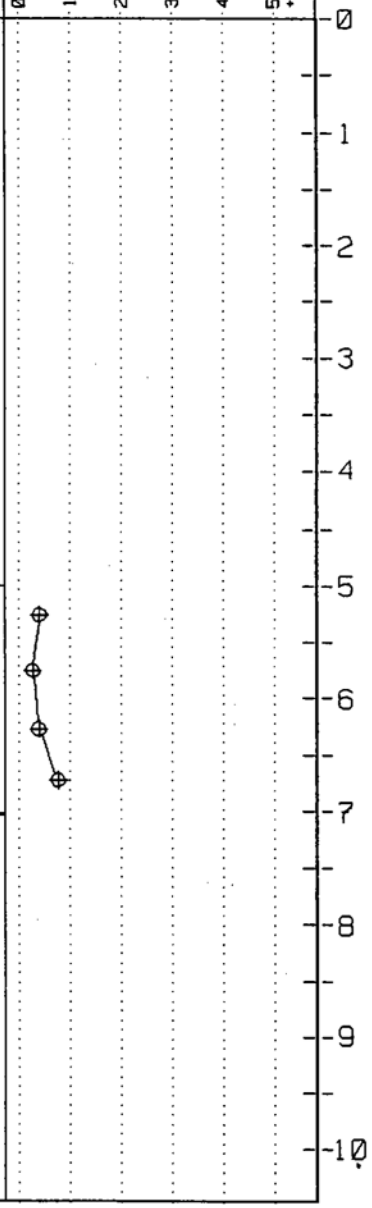
PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burbach
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-1
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-1	15"	Red Silty Clay	silty clay		no	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES
0 10 20 30 40 50+



DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

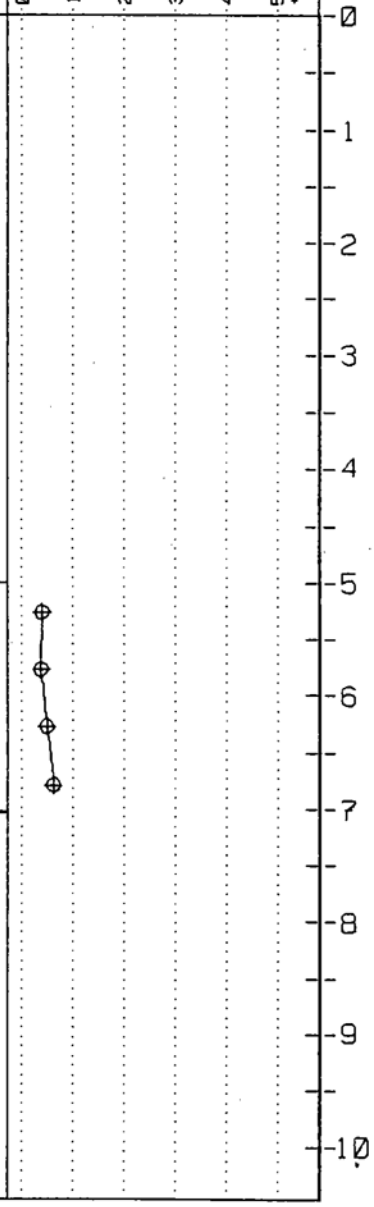
PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burbach
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-2
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-2	18"	Red Silty Clay	silty clay		slight	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES
0 10 20 30 40 50+



DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

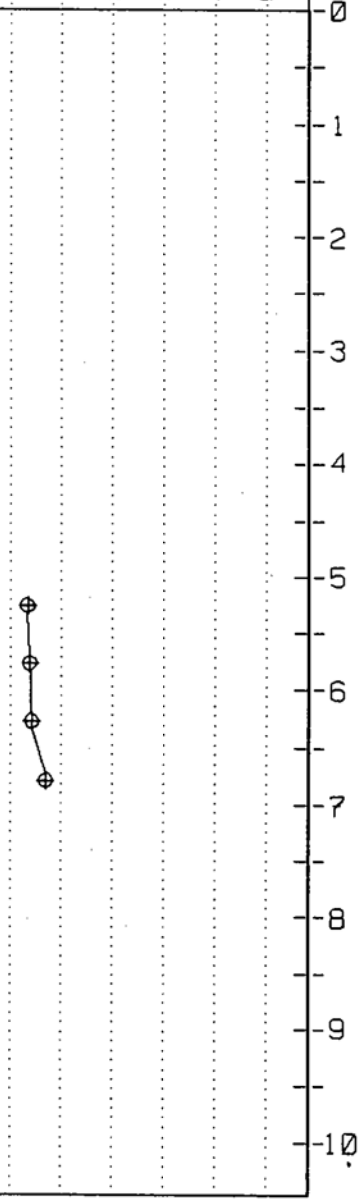
PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burkach
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-3
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-3	20"	Red Silty Clay	silty clay		slight	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES
0 10 20 30 40 50+



DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burbach
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-4
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-4	20"	Red Silty Clay	silty clay		slight	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES
0 10 20 30 40 50+

DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

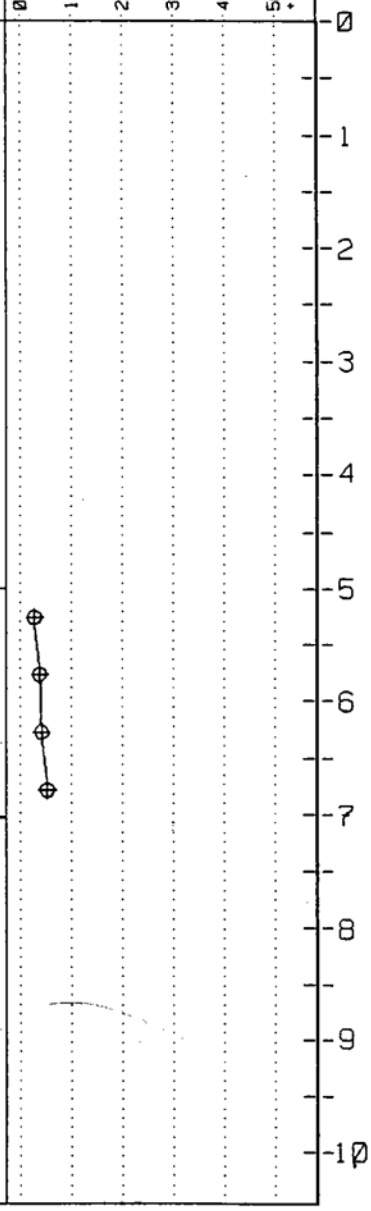
PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burkock
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-6
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-6	20"	Red to grey silty clay Saprolitic	silty clay		no	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES



DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burkeck
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-7
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-7	20"	Redish tan silty clay	silty clay		no	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES
0 10 20 30 40 50+

DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

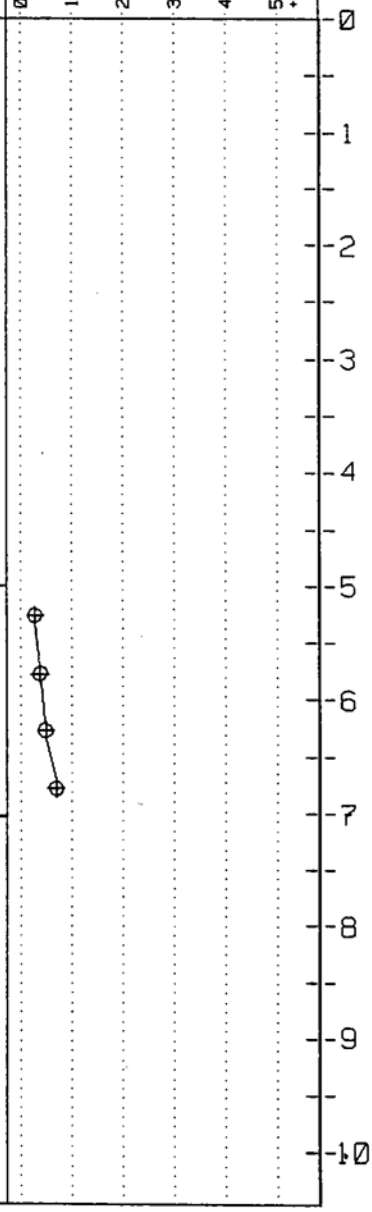
PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burbach
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-8
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT
B-8	15"	Redish tan silty clay	silty clay		strong	moist
		T. D.				

STANDARD PENETRATION
BLOWS PER 6 INCHES
0 10 20 30 40 50+



DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

PYRAMID ENVIRONMENTAL BORING LOG

PROJECT: Gate City Truck Repair
GEOLOGIST: Van Burkeen
DRILLER: Hardin
DRILLING METHOD: 3.5" steel auger (Truck-mounted)
SAMPLING METHOD: 1.5" split-spoon (2' long)

BORING I.D.: B-9
DATE: 5/16/95

PAGE 1 OF 1

SAMPLE ID	RECOVERY (in)	DESCRIPTION OF SAMPLES / CUTTINGS	USCS CLASS.	OVM SCREEN (ppm)	ODORS / STAINS	WATER CONTENT	STANDARD PENETRATION BLOWS PER 6 INCHES (0, 10, 20, 30, 40, 50+)
B-9	22"	Redish tan silty clay	silty clay		no	moist	
		T. D.					

DEPTH TO GROUNDWATER: _____
TOTAL DEPTH OF BORING: 7'

DEPTH TO BEDROCK: _____
AUGER REFUSAL? (Y/N) N

APPENDIX II

Laboratory Report
and
Chain of Custody

H Y D R O L O G I C , I N C .

May 26, 1995

REPORTING:

Pyramid Environmental
2706 Pinedale Road
Greensboro, NC 27408

INVOICING:

Pyramid Environmental
2706 Pinedale Road
Greensboro, NC 27408

PROJECT NUMBER: FL958799

DATE COMPLETED: May 26, 1995
DATE RECEIVED: May 19, 1995

PROJECT DESCRIPTION:

Gate City Truck--8 soil samples analyzed for 3550/5030.

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,

Benjamin Carl Esterle
Laboratory Director

1491 Twilight Trail ☐ Frankfort, KY 40601 ☐ 502/223-0251 ☐ FAX 502/875-8016 ☐ Toll Free 1-800/728-2251

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958799
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-1
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.5	BDL
Gasoline		2.0	BDL

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 1-800/728-2251

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958800
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-2
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.6	BDL
Gasoline		3.1	11.7

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958801
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-3
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.5	BDL
Gasoline		2.0	BDL

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 1-800/728-2251

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958802
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-4
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.7	82.5
Gasoline		2.0	BDL

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 1-800/728-2251

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958803
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-6
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.6	BDL
Gasoline		2.0	BDL

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 1-800/728-2251

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958804
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-7
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.6	BDL
Gasoline		2.0	BDL

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 1-800/728-2251

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958805
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-8
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.7	BDL
Gasoline		2.0	BDL

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: GASOLINE: 75% WEATHERED GAS PRESENT AT A CONCENTRATION OF 320 MG/KG

1491 Twilight Trail ☐ Frankfort, KY 40601 ☐ 502/223-0251 ☐ FAX 502/875-8016 ☐ Toll Free 1-800/728-2251

H Y D R O L O G I C , I N C .

COMPANY NAME: Pyramid Environmental
COMPANY PROJECT NUMBER: GATE CITY TRUCK

HYDROLOGIC PROJECT NUMBER: FL958799
HYDROLOGIC SAMPLE NUMBER: 958806
HYDROLOGIC LAB I.D. #: 399
SAMPLE IDENTIFICATION: B-9
DATE SAMPLED: 5/16/95
DATE EXTRACTED: 5/23/95
DATE/TIME ANALYZED: 5/26/95 5/23/95

METHOD TPH 3550/5030

ANALYSIS	CAS NO.	SDL (mg/kg)	RESULT (mg/kg)
Diesel		1.6	10.1
Gasoline		2.0	BDL

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 1-800/728-2251

H Y D R O L O G I C , I N C .

F1958799

COMPANY NAME PYRAMID ENVIRONMENTAL CONTACT NAME VAN TELEPHONE NO. (910) 282-9038

Samplers: Print Name VAN BURBACH Signature

Project No: Gate City Truck

SAMPLE ID	SAMPLE LOCATION	Composite	Grab	Date	Time	Sample Type: Water	Liquid	Oil	Solid	No. of Containers	ANALYSIS: 5030	3550								REMARKS
B-1			✓	5/16/95	9:05am				✓	1	✓	✓								
B-2			✓	"	9:15				✓	1	✓	✓								
B-3			✓	"	9:30				✓	1	✓	✓								
B-4			✓	"	9:50				✓	1	✓	✓								
B-6			✓	"	10:10				✓	1	✓	✓								
B-7			✓	"	10:35				✓	1	✓	✓								
B-8			✓	"	10:50				✓	1	✓	✓								
B-9			✓	"	11:30				✓	1	✓	✓								

COMMENTS:

Relinquished by: (Signature)			Received by: (Signature)	Date	Time
Relinquished by: (Signature)			Received by: (Signature)	Date	Time
Dispatched by: (Signature) Van Burbach	Date 5/18/95	Time 5:00pm	Received for Laboratory by: D. Ramsey	Date 5/19/95	Time 11:00
Method of Shipment: FED. EXP.				Date	Time

1491 Twilight Trail ☐ Frankfort, Kentucky 40601 ☐ 502/223-0251 ☐ FAX 502/875-8016 ☐ Toll Free 1-800/728-2251