Brownfields Program

File Room Document Transmittal Sheet

Your Name:	Shirley Liggins
Project ID:	0905605096
Facility Name:	Goldtex
Document Group:	Environmental Assessment (EA)
Document Type:	Vapor Intrusion Assessment (VIA)
Description:	vapor intrusion assessment for Seegars Fence Co (BDA Souts, LLC) by Mid-Atlantic
Date of Doc:	12/2/2011
Author of Doc:	Robert D. Hill

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ASSOCIATES, INC.
Engineering & Environmental Solutions
409 Rogers View Court / Raleigh / North Carolina / 27610
800-486-7568 / 919-250-9918 / 919-250-9950 Facsimile
www.maaonline.com

Goldtex

DEC 2011

December 2, 2011

Mr. Tony Duque
Hydrogeologist
NCDENR
401 Oberlin Road, Suite 150
Raleigh, NC 27606

Subject: **RESPONSE TO BROWNFIELDS AGREEMENT**
VAPOR INTRUSION ASSESSMENT
SEEGARS FENCE COMPANY (DBA SCOUTS LLC)
GOLDSBORO, WAYNE COUNTY
MID-ATLANTIC PROJECT NO. 000R-2308.00

Dear Mr. Duque:

As you are aware, Scouts LLC (Scouts), is in the process of obtaining a Brownfields Agreement (BFA) for the former Goldtex, Inc. site (a textile dying/finishing mill) located at 401 Patetown Road in Goldsboro, North Carolina. Following Scout's submittal of a BFA application to your office – the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Waste Management's Brownfield's Program – you expressed a concern regarding vapor intrusion into the building based on historical groundwater monitoring by Goldtex. The prior testing indicated the presence of chlorinated solvent contamination beneath exterior storage tank locations to the northeast of the building and/or the former solids settling and water holding ponds (which are now removed). This letter is in response to your request for an assessment of exposure pathways related to vapor intrusion.

Comparison of Groundwater Concentrations to IHSB Industrial/Commercial Screening Levels

We compared the results of the historical groundwater monitoring sampling reports from S&ME (March 1993 to September 2005) to the August 2011 version of the North Carolina Department of Environment and Natural Resources (NCDENR) – Inactive Hazardous Sites Branch (IHSB) industrial/commercial groundwater screening level (ICGWSL) table for vapor intrusion[1]. A summary of the pertinent tables from the S&ME monitoring reports are included in Attachment 1 and the ICGWSL table is included in

[1] In accordance with IHSB guidance, the comparison was made using the industrial/commercial screening level table since this property is not significantly occupied or frequented by children.

Attachment 2. Pertinent drawings from the various assessment reports are included in Attachment 3. Following are the findings of our review:

Sample results from two groundwater monitoring well locations (MW-3S and MW-6S) exhibited analyte concentrations that were above the ICGWSLs for two analytes – vinyl chloride and 1,1-dichloroethene, respectively. These are noted in the table below.

Table 1. Summary of S&ME historical groundwater monitoring results for subject wells MW-3S and MW-6S.

	Sample ID:	MW-3S			MW-6S		
	Sampling Date:	Mar-93	Sep-99	Sep-05	Mar-93	Apr-93	Aug-00
Method:	IHSB Ind/Comm GW Screening Level	8240	601, 602	624	8240	601, 602	8260
Constituent	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]
Tetrachloroethene	29	1.3	5.5	ND	21	18	16
Trichloroethene	150	8	54	140	20	19	5
cis-1,2-Dichloroethene	NA	28	67	190	4.4	ND	5.9
trans-1,2-Dichloroethene	140	ND	ND	ND	ND	ND	ND
Vinyl Chloride	25	78	110	67	ND	ND	ND
1,1,1-Trichloroethane	6,300	11	29	9	5.4	ND	2.3
1,1-Dichloroethene	160	12	21	14	430	380	33
1,1-Dichloroethane	330	140	170	76	81	68	12
Chloroethane	NA	68	ND	ND	ND	ND	ND
Chloroform	35	ND	ND	ND	ND	ND	ND
Acetone	20,000,000	17	---	---	ND	---	ND
Benzene	70	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	30	---	2.1	---	---	---	ND
Toluene	16,000	26	---	ND	ND	ND	ND
2-Chlorotoluene	NA	81	ND	---	---	---	ND
Methylene Chloride	2,000	---	ND	ND	ND	ND	ND
Trichlorofluoromethane	160	---	---	---	---	ND	ND
2-methyl-benzenesulfonamide	NA	---	---	---	---	---	---
4-methyl-benzenesulfonamide	NA	---	---	---	---	---	---
EPA Method 625		---	---	---	---	---	---

Key:
NS = No Standard
ND = Not Detected
--- = Not Analyzed

- The results for three sampling dates for MW-3S were each above the ICGWSL for vinyl chloride. The most recent result (vinyl chloride from the September 2005 sampling) was 67 ug/L, which is 2.7 times the ICGWSL of 25 ug/L;
- The results from MW-6S showed two exceedances of the ICGWSL during the 1990s, but the concentration had decreased by more than ten fold for 1,1-dichloroethene by the last sampling date (33 ug/L on August 2000, compared to ICGWSL of 160 ug/L for 1,1-dichloroethene); and
- The two subject wells are located approximately 122 feet and 27 feet from the building, respectively (see Figure 1 below).

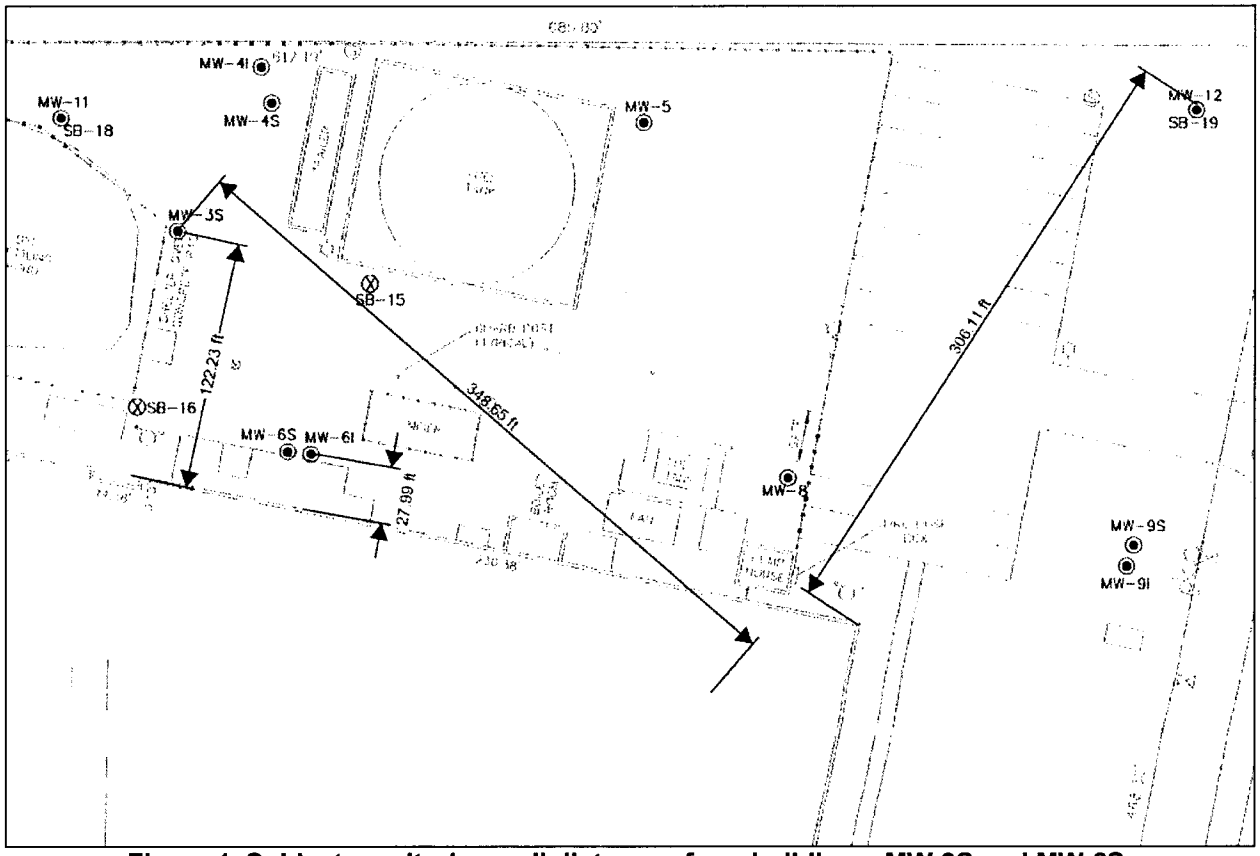

Figure 1. Subject monitoring well distances from building – MW-3S and MW-6S. (Source: Kimley-Horn & Associates Phase II Investigation report, Figure 2, dated September 14, 1999. See Attachment 3 for the entire drawing from the report.)

Review of Soil Sampling Results

- Analytical results of soil sampling of the sludge disposal area associated with the former lagoon and settling pond area closures during 2010 by Contractors and Engineers Environmental Testing Laboratory (CEETL) showed no detectable contaminants when analyzed by Method 8260B and Method 8270C, with the exception of bis(2-ethylhexyl)phthalate, or DEHP, at 15.6 ug/L (ppb).
- The DEHP concentration was reported to be below the IHSB protective soil remediation goal (PSRG) of 35 mg/kg and the EPA regional screening level (RSL) for industrial soil of 120 mg/kg, while noting that phthalates are commonly used in the manufacture of medical supplies and the source in the sample could have been from the gloves used during sampling. Additionally, they indicated having seen trace amounts of phthalates appear in analyses from gloves in the past.

The IHSB guidance states that vapor intrusion must be evaluated when concentrations of listed contaminants exceed the screening level within 100 feet of a building. Based on the most recent monitoring well data for these two wells:

- Only MW-3S exhibited a recent contaminant concentration above an ICGWSL.
- None of the other wells exhibited a detectable concentration of vinyl chloride, except MW-12, which had a result of 7 ug/L during the September 2005 sampling event.
- MW-12 is located at the east corner of the property, more than 500 feet from MW-3S and greater than 300 feet from the subject building.
- There are two wells nearer to the building from MW-3S (e.g., MW-6S and MW-6I) and vinyl chloride was not detected in either of these wells.
- Soil boring SB-16 is directly between MW-3S and the building and no vinyl chloride was detected in that sample from 2010.
- Groundwater flow is to the east, which would prove to be a hydraulic barrier to vapor intrusion from MW-3S (see Figure 4-1, Water Table Contour Map in Attachment 3).
- Based on the absence of vinyl chloride in wells and soil borings adjacent to MW-3S, it is believed that groundwater contamination at the ICGWSL concentration does not occur within 100 feet of the building.
- The exposure pathway distance to occupied spaces/offices within the building would have to exceed a distance of approximately 350 feet from MW-3S.

Conclusion

Based on recent and historical soil and groundwater monitoring at the site, only one contaminant, vinyl chloride, was identified as a potential concern regarding vapor intrusion into the building. Since the building at the subject property lies beyond the 100-foot distance at the screening level concentration, it is our opinion that there is minimal risk of an exposure pathway into the building and that a vapor intrusion study is not required. This conclusion is further substantiated based on groundwater flow, which is eastward (away from the building) with respect to MW-3S (e.g., the well that exhibited the only contaminant concentration above the ICGWSL).

Closing

We hope that the information in this submittal addresses your questions regarding vapor intrusion at the property in a satisfactory manner. If you should have any questions, please contact us at (919) 250-9918.

Sincerely,
MID-ATLANTIC ASSOCIATES, INC.

Jeffrey Tyburski, P.G.
Senior Geologist

Robert D. Hill, P.E.
Principal Engineer

Attachments

cc: S. Sullivan – Williams Mullen
W. Seegars – Scouts LLC

ATTACHMENT 1

SUMMARY OF TABLES FROM HISTORIC MONITORING REPORTS

Groundwater Monitoring Results
Former Goldtex Plant
Summary of S&ME Project Reports

	Sample ID:	MW-3S			MW-5			
	Sampling Date:	Mar-93	Sep-99	Sep-05	Mar-93	Sep-99	Aug-00	Sep
Method:	IHSB Ind/Comm GW Screening Level	8240	601, 602	624	8240	601, 602	625 + TICs	6
Constituent	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug
Tetrachloroethene	29	1.3	5.5	ND	3.6	12	---	
Trichloroethene	150	8	54	140	1.7	37	---	
cis-1.2-Dichloroethene	NA	28	67	190	2.9	20	---	
trans-1,2-Dichloroethene	140	ND	ND	ND	ND	4.8	---	N
Vinyl Chloride	25	78	110	67	ND	ND	---	N
1,1,1-Trichloroethane	6,300	11	29	9	4	16	---	
1,1-Dichloroethene	160	12	21	14	3.6	21	---	
1,1-Dichloroethane	330	140	170	76	6.3	69	---	
Chloroethane	NA	68	ND	ND	ND	56	---	N
Chloroform	35	ND	ND	ND	ND	ND	---	N
Acetone	20,000,000	17	---	---	ND	---	---	-
Benzene	70	ND	ND	ND	ND	ND	---	N
1,2,4-Trichlorobenzene	30	---	2.1	---	---	---	---	-
Toluene	16,000	26	---	ND	ND	ND	---	N
2-Chlorotoluene	NA	81	ND	---	---	---	---	-
Methylene Chloride	2,000	---	ND	ND	2.3	ND	---	N
Trichlorofluoromethane	160	---	---	---	---	ND	---	N
2-methyl-benzenesulfonamide	NA	---	---	---	---	---	36.59	-
4-methyl-benzenesulfonamide	NA	---	---	---	---	---	54.17	-
EPA Method 625		---	---	---	---	---	---	-

Key:
NS = No Standard
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--- = Not Analyzed

Groundwater Monitoring Results
Former Goldtex Plant
Summary of S&ME Project Reports

	Sample ID:	MW-6S			MW-6I			MV
	Sampling Date:	Mar-93	Apr-93	Aug-00	Apr-93	Aug-00	Sep-05	Ma
Method:	IHSB Ind/Comm GW Screening Level	8240	601, 602	8260	601, 602	8260	624	82
Constituent	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug
Tetrachloroethene	29	21	18	16	ND	ND	ND	N
Trichloroethene	150	20	19	5	ND	ND	ND	N
cis-1.2-Dichloroethene	NA	4.4	ND	5.9	ND	ND	ND	N
trans-1,2-Dichloroethene	140	ND	ND	ND	ND	ND	ND	N
Vinyl Chloride	25	ND	ND	ND	ND	ND	ND	N
1,1,1-Trichloroethane	6,300	5.4	ND	2.3	ND	ND	ND	1
1,1-Dichloroethene	160	430	380	33	ND	ND	2	1
1,1-Dichloroethane	330	81	68	12	ND	ND	1	N
Chloroethane	NA	ND	ND	ND	ND	ND	ND	N
Chloroform	35	ND	ND	ND	ND	ND	ND	N
Acetone	20,000,000	ND	---	ND	---	ND	---	N
Benzene	70	ND	ND	ND	ND	ND	ND	N
1,2,4-Trichlorobenzene	30	---	---	ND	---	ND	---	-
Toluene	16,000	ND	ND	ND	ND	ND	ND	N
2-Chlorotoluene	NA	---	---	ND	---	ND	---	-
Methylene Chloride	2,000	ND	ND	ND	ND	ND	ND	2
Trichlorofluoromethane	160	---	ND	ND	ND	ND	ND	-
2-methyl-benzenesulfonamide	NA	---	---	---	---	---	---	-
4-methyl-benzenesulfonamide	NA	---	---	---	---	---	---	-
EPA Method 625		---	---	---	---	---	---	-

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Groundwater Monitoring Results
Former Goldtex Plant
Summary of S&ME Project Reports

	Sample ID:	MW-8			MW-9S	
	Sampling Date:	Apr-93	Sep-99	Sep-05	Apr-93	Sep-99
Method:	IHSB Ind/Comm GW Screening Level	601, 602	601, 602	625	601, 602	601, 602
Constituent	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]
Tetrachloroethene	29	ND	9.2	---	ND	ND
Trichloroethene	150	ND	3.2	---	ND	ND
cis-1.2-Dichloroethene	NA	ND	38	---	ND	ND
trans-1,2-Dichloroethene	140	ND	ND	---	ND	ND
Vinyl Chloride	25	ND	ND	---	ND	ND
1,1,1-Trichloroethane	6,300	23	ND	---	ND	1.7
1,1-Dichloroethene	160	130	ND	---	ND	6
1,1-Dichloroethane	330	ND	ND	---	ND	ND
Chloroethane	NA	ND	ND	---	ND	ND
Chloroform	35	ND	ND	---	2.5	ND
Acetone	20,000,000	---	---	---	---	---
Benzene	70	ND	ND	---	ND	ND
1,2,4-Trichlorobenzene	30	---	---	---	---	---
Toluene	16,000	ND	ND	---	ND	ND
2-Chlorotoluene	NA	---	---	---	---	---
Methylene Chloride	2,000	ND	ND	---	ND	ND
Trichlorofluoromethane	160	ND	ND	---	ND	ND
2-methyl-benzenesulfonamide	NA	---	---	---	---	---
4-methyl-benzenesulfonamide	NA	---	---	---	---	---
EPA Method 625		---	---	ND	---	---

Key:
NS = No Standard
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--- = Not Analyzed

Groundwater Monitoring Results
Former Goldtex Plant
Summary of S&ME Project Reports

	Sample ID:	MW-9I			MW-10		MW-11	
	Sampling Date:	Apr-93	Aug-00	Sep-05	Sep-99	Sep-05	Sep-99	Sep
Method:	IHSB Ind/Comm GW Screening Level	601, 602	8260	624	601, 602	624	601, 602	601,
Constituent	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug/L]	[ug
Tetrachloroethene	29	ND	ND	ND	ND	ND	ND	1
Trichloroethene	150	ND	ND	ND	ND	ND	1.4	1
cis-1.2-Dichloroethene	NA	ND	ND	ND	ND	ND	ND	1
trans-1,2-Dichloroethene	140	ND	ND	ND	ND	ND	ND	N
Vinyl Chloride	25	ND	ND	ND	ND	ND	ND	N
1,1,1-Trichloroethane	6,300	ND	ND	ND	ND	ND	2.2	3
1,1-Dichloroethene	160	ND	ND	2	ND	ND	2.6	3
1,1-Dichloroethane	330	ND	ND	ND	ND	ND	11	4
Chloroethane	NA	ND	ND	ND	ND	ND	ND	7
Chloroform	35	1.1	ND	ND	ND	ND	ND	N
Acetone	20,000,000	---	ND	---	---	---	---	-
Benzene	70	ND	ND	ND	ND	ND	1	N
1,2,4-Trichlorobenzene	30	---	ND	---	---	---	---	-
Toluene	16,000	ND	ND	ND	ND	ND	ND	N
2-Chlorotoluene	NA	---	ND	---	---	---	---	-
Methylene Chloride	2,000	ND	ND	ND	ND	ND	ND	N
Trichlorofluoromethane	160	ND	ND	ND	ND	ND	ND	N
2-methyl-benzenesulfonamide	NA	---	---	---	---	---	---	-
4-methyl-benzenesulfonamide	NA	---	---	---	---	---	---	-
EPA Method 625		---	---	---	---	---	---	-

Key:
NS = No Standard
ND = Not Detected
--- = Not Analyzed

Groundwater Monitoring Results
Former Goldtex Plant
Summary of S&ME Project Reports

	Sample ID:	MW-13	MW-14	MW-15
	Sampling Date:	Sep-05	Sep-05	Sep-05
Method:	IHSB Ind/Comm GW Screening Level	624	624	624
Constituent	[ug/L]	[ug/L]	[ug/L]	[ug/L]
Tetrachloroethene	29	ND	ND	ND
Trichloroethene	150	ND	ND	ND
cis-1.2-Dichloroethene	NA	ND	ND	ND
trans-1,2-Dichloroethene	140	ND	ND	ND
Vinyl Chloride	25	ND	ND	ND
1,1,1-Trichloroethane	6,300	ND	ND	ND
1,1-Dichloroethene	160	ND	ND	ND
1,1-Dichloroethane	330	ND	ND	ND
Chloroethane	NA	ND	ND	ND
Chloroform	35	1	ND	ND
Acetone	20,000,000	---	---	---
Benzene	70	ND	ND	ND
1,2,4-Trichlorobenzene	30	---	---	---
Toluene	16,000	ND	ND	ND
2-Chlorotoluene	NA	---	---	---
Methylene Chloride	2,000	ND	ND	ND
Trichlorofluoromethane	160	ND	ND	ND
2-methyl-benzenesulfonamide	NA	---	---	---
4-methyl-benzenesulfonamide	NA	---	---	---
EPA Method 625		---	---	---

Key:
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ND = Not Detected
--- = Not Analyzed

ATTACHMENT 2

NCDENR - INACTIVE HAZARDOUS SITES BRANCH (IHSB) INDUSTRIAL/COMMERCIAL GROUNDWATER SCREENING LEVEL (ICGWSL) TABLE FOR VAPOR INTRUSION (AUGUST 2011 VERSION)

IHSB INDUSTRIAL/ COMMERCIAL VAPOR INTRUSION SCREENING TABLE [2,3].

(DO NOT USE FOR PROPERTIES OCCUPIED/FREQUENTED BY CHILDREN)

August 2011

Contaminant	CAS No.	Acceptable Groundwater Concentration (Cgw) ug/l Carcinogenic Target Risk (TR) = 1E-05 Noncancer Hazard Quotient (HQ) = 0.2	Acceptable Soil Gas Concentration (Csg) ug/m3 Carcinogenic Target Risk (TR) = 1E-05 Noncancer Hazard Quotient (HQ) = 0.2	Cgw & Csg Basis	Acceptable Indoor Air Concentration (Cia) ug/m3 Carcinogenic Target Risk (TR) = 1E-06 Noncancer Hazard Quotient (HQ) = 0.2	Cia Basis
Acetaldehyde	75-07-0	2.9E+03	7.80E+01	N[1]	5.60E+00	C[1]
Acetone	67-64-1	2.0E+07	2.80E+05	N	2.80E+04	N
Acetonitrile	75-05-8	3.7E+04	5.20E+02	N	5.20E+01	N
Acrolein	107-02-8	3.5E+00	1.76E-01	N	1.76E-02	N
Acrylonitrile	107-13-1	3.1E+02	1.76E+01	N[1]	1.80E-01	C[1]
Aldrin	309-00-2	1.4E+01	2.50E-01	C	2.50E-03	C
Ammonia	7664-41-7	1.3E+05	8.80E+02	N	8.80E+01	N
Benzene	71-43-2	7.0E+01	1.60E+02	C[1]	1.60E+00	C[1]
Benzyl Chloride	100-44-7	5.2E+01	8.80E+00	N[1]	2.50E-01	C[1]
Bis(2-chloroethyl)ether	111-44-4	5.3E+02	3.70E+00	C	3.70E-02	C
Bis(chloromethyl)ether	542-88-1	1.1E-02	2.00E-02	C	2.00E-04	C
Bromodichloromethane	75-27-4	3.8E+01	3.30E+01	C	3.30E-01	C
Bromoform	75-25-2	5.0E+03	1.10E+03	C	1.10E+01	C
Butadiene, 1,3-	106-99-0	5.9E-01	1.76E+01	N[1]	4.10E-01	C[1]
Carbon Disulfide	75-15-0	1.1E+03	6.20E+03	N	6.20E+02	N
Carbon Tetrachloride	56-23-5	7.5E+00	8.20E+01	C[1]	8.20E-01	C[1]
Chlordane	12789-03-6	3.1E+02	6.20E+00	N[1]	1.20E-01	C[1]
Chloro-1,3-butadiene, 2-	126-99-8	2.7E+00	6.20E+01	N	6.20E+00	N
Chlorobenzene	108-90-7	3.4E+02	4.40E+02	N	4.40E+01	N
Chlorodifluoromethane	75-45-6	2.6E+04	4.40E+05	N	4.40E+04	N
Chloroform	67-66-3	3.5E+01	5.30E+01	C[1]	5.30E-01	C[1]
Chloromethane	74-87-3	2.2E+02	7.80E+02	N	7.80E+01	N
Cumene	98-82-8	7.7E+02	3.60E+03	N	3.60E+02	N
Cyanide, Hydrogen	74-90-8	4.8E+02	2.60E+01	N	2.60E+00	N
DDE, p,p'-	72-55-9	7.6E+02	1.30E+01	C	1.30E-01	C
Dibromo-3-chloropropane, 1,2-	96-12-8	3.3E+00	2.00E-01	C[1]	2.00E-03	C[1]
Dibromochloromethane	124-48-1	1.4E+02	4.50E+01	C	4.50E-01	C
Dibromoethane, 1,2-	106-93-4	7.4E+00	2.00E+00	C[1]	2.00E-02	C[1]
Dichlorobenzene, 1,2-	95-50-1	2.3E+03	1.76E+03	N	1.76E+02	N
Dichlorobenzene, 1,4-	106-46-7	1.1E+02	1.10E+02	C[1]	1.10E+00	C[1]
Dichlorodifluoromethane	**75-71-8**	**6.3E+00**	**8.80E+02**	**N**	**8.80E+01**	**N**
Dichloroethane, 1,1-	75-34-3	3.3E+02	7.70E+02	C	7.70E+00	C
Dichloroethane, 1,2-	**107-06-2**	**9.8E+01**	**4.70E+01**	**C[1]**	**4.70E-01**	**C[1]**
Dichloroethylene, 1,1-	75-35-4	1.6E+02	1.76E+03	N	1.76E+02	N
Dichloroethylene, 1,2-trans-	156-60-5	1.4E+02	5.20E+02	N	5.20E+01	N
Dichloropropane, 1,2-	78-87-5	3.0E+01	3.60E+01	N[1]	1.20E+00	C[1]
Dichloropropene, 1,3-	542-75-6	1.2E+02	1.76E+02	N[1]	3.10E+00	C[1]

1. HAS BOTH CARCINOGENIC AND NON-CARCINOGENIC PROPERTIES.
2. VERIFY THIS IS THE MOST CURRENT TABLE VERSION BEFORE USE. REVISED VALUES IN BOLD.
3. BASED ON JUNE 2011 USEPA REGIONAL SCREENING LEVELS FOR AIR.

NA - NOT AVAILABLE

IHSB INDUSTRIAL/ COMMERCIAL VAPOR INTRUSION SCREENING TABLE [2,3].

(DO NOT USE FOR PROPERTIES OCCUPIED/FREQUENTED BY CHILDREN)

Contaminant	CAS No.	Acceptable Groundwater Concentration (Cgw) ug/l Carcinogenic Target Risk (TR) = 1E-05 Noncancer Hazard Quotient (HQ) = 0.2	Acceptable Soil Gas Concentration (Csg) ug/m3 Carcinogenic Target Risk (TR) = 1E-05 Noncancer Hazard Quotient (HQ) = 0.2	Cgw & Csg Basis	Acceptable Indoor Air Concentration (Cia) ug/m3 Carcinogenic Target Risk (TR) = 1E-06 Noncancer Hazard Quotient (HQ) = 0.2	Cia Basis
Dieldrin	60-57-1	6.6E+01	2.70E-01	C	2.70E-03	C
Epichlorohydrin	106-89-8	7.3E+02	8.80E+00	N[1]	8.80E-01	N[1]
Ethylbenzene	100-41-4	1.5E+02	4.90E+02	C[1]	4.90E+00	C[1]
Ethylene Oxide	75-21-8	2.3E+02	1.40E+01	C[1]	1.40E-01	C[1]
Heptachlor	76-44-8	7.8E+00	9.40E-01	C	9.40E-03	C
Hexachlorobenzene	118-74-1	3.9E+00	2.70E+00	C	2.70E-02	C
Hexachlorobutadiene	87-68-3	1.3E+01	5.60E+01	C	5.60E-01	C
Hexachlorocyclohexane, Alpha-	319-84-6	3.2E+02	6.80E-01	C	6.80E-03	C
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	1.9E+03	4.00E+00	C	4.00E-02	C
Hexachlorocyclopentadiene	77-47-4	1.6E-01	1.76E+00	N	1.76E-01	N
Hexachloroethane	67-72-1	1.9E+02	3.10E+02	C	3.10E+00	C
Hexane, N-	110-54-3	8.4E+00	6.20E+03	N	6.20E+02	N
~Mercury (elemental)	7439-97-6	5.5E-01	2.60E+00	N	2.60E-01	N
Methyl Ethyl Ketone (2-Butanone)	78-93-3	1.9E+06	4.40E+04	N	4.40E+03	N
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	4.6E+05	2.60E+04	N	2.60E+03	N
Methyl Methacrylate	80-62-6	4.8E+04	6.20E+03	N	6.20E+02	N
Methyl tert-Butyl Ether (MTBE)	1634-04-4	2.0E+04	4.70E+03	C[1]	4.70E+01	C[1]
Methylene Chloride	75-09-2	2.0E+03	2.60E+03	C[1]	2.60E+01	C[1]
Nitrobenzene	98-95-3	3.2E+03	3.10E+01	C[1]	3.10E-01	C[1]
Nitropropane, 2-	79-46-9	9.2E+00	4.50E-01	C[1]	4.50E-03	C[1]
Nitroso-di-N-butylamine, N-	924-16-3	1.4E+02	7.70E-01	C	7.70E-03	C
~Benzo[b]fluoranthene	205-99-2	4.1E+04	1.10E+01	C	1.10E-01	C
~Chrysene	218-01-9	5.2E+04	1.10E+02	C	1.10E+00	C
~Naphthalene	91-20-3	1.4E+02	2.60E+01	N[1]	3.60E-01	C[1]
Styrene	100-42-5	8.0E+03	8.80E+03	N	8.80E+02	N
Tetrachloroethane, 1,1,1,2-	630-20-6	1.7E+02	1.70E+02	C	1.70E+00	C
Tetrachloroethane, 1,1,2,2-	79-34-5	1.4E+02	2.10E+01	C	2.10E-01	C
Tetrachloroethylene	127-18-4	2.9E+01	2.10E+02	C[1]	2.10E+00	C[1]
Toluene	108-88-3	1.6E+04	4.40E+04	N	4.40E+03	N
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	1.2E+03	2.60E+05	N	2.60E+04	N
Trichlorobenzene, 1,2,4-	120-82-1	3.0E+01	1.76E+01	N	1.76E+00	N
Trichloroethane, 1,1,1-	71-55-6	6.3E+03	4.40E+04	N	4.40E+03	N
Trichloroethane, 1,1,2-	79-00-5	2.3E+02	7.70E+01	C	7.70E-01	C
Trichloroethylene	79-01-6	1.5E+02	6.10E+02	C	6.10E+00	C

1. HAS BOTH CARCINOGENIC AND NON-CARCINOGENIC PROPERTIES.
2. VERIFY THIS IS THE MOST CURRENT TABLE VERSION BEFORE USE. REVISED VALUES IN BOLD.
3. BASED ON JUNE 2011 USEPA REGIONAL SCREENING LEVELS FOR AIR.

NA - NOT AVAILABLE

IHSB INDUSTRIAL/ COMMERCIAL VAPOR INTRUSION SCREENING TABLE [2,3].

(DO NOT USE FOR PROPERTIES OCCUPIED/FREQUENTED BY CHILDREN)

August 2011

Contaminant	CAS No.	Acceptable Groundwater Concentration (Cgw) ug/l Carcinogenic Target Risk (TR) + 1E-05 Noncancer Hazard Quotient (HQ) = 0.2	Acceptable Soil Gas Concentration (Csg) ug/m3 Carcinogenic Target Risk (TR) = 1E-05 Noncancer Hazard Quotient (HQ) = 0.2	Cgw & Csg Basis	Acceptable Indoor Air Concentration (Cia) ug/m3 Carcinogenic Target Risk (TR) = 1E-06 Noncancer Hazard Quotient (HQ) = 0.2	Cia Basis
Trichlorofluoromethane	75-69-4	1.6E+02	6.20E+03	N	6.20E+02	N
Trimethylbenzene, 1,2,4-	95-63-6	2.5E+01	6.20E+01	N	6.20E+00	N
Vinyl Acetate	108-05-4	8.4E+03	1.76E+03	N	1.76E+02	N
Vinyl Chloride	75-01-4	2.5E+01	2.80E+02	C[1]	2.80E+00	C[1]
Xylene, Mixture	1330-20-7	4.2E+02	8.80E+02	N	8.80E+01	N
Xylene, P-	106-42-3	**3.1E+02**	**8.80E+02**	N	**8.80E+01**	N
Xylene, m-	108-38-3	**3.0E+02**	**8.80E+02**	N	**8.80E+01**	N
Xylene, o-	95-47-6	**4.2E+02**	**8.80E+02**	N	**8.80E+01**	N

1. HAS BOTH CARCINOGENIC AND NON-CARCINOGENIC PROPERTIES.
2. VERIFY THIS IS THE MOST CURRENT TABLE VERSION BEFORE USE. REVISED VALUES IN BOLD.
3. BASED ON JUNE 2011 USEPA REGIONAL SCREENING LEVELS FOR AIR.

NA - NOT AVAILABLE

ATTACHMENT 3

DRAWINGS

REV. No.	REVISION	DATE:	DRAWN BY:	CHECKED BY:

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PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT:
BEST DISTRIBUTING COMPANY
GOLDSBORO, NC

TITLE:
LOCATION OF GROUNDWATER MONITORING WELLS AND SOIL BORINGS

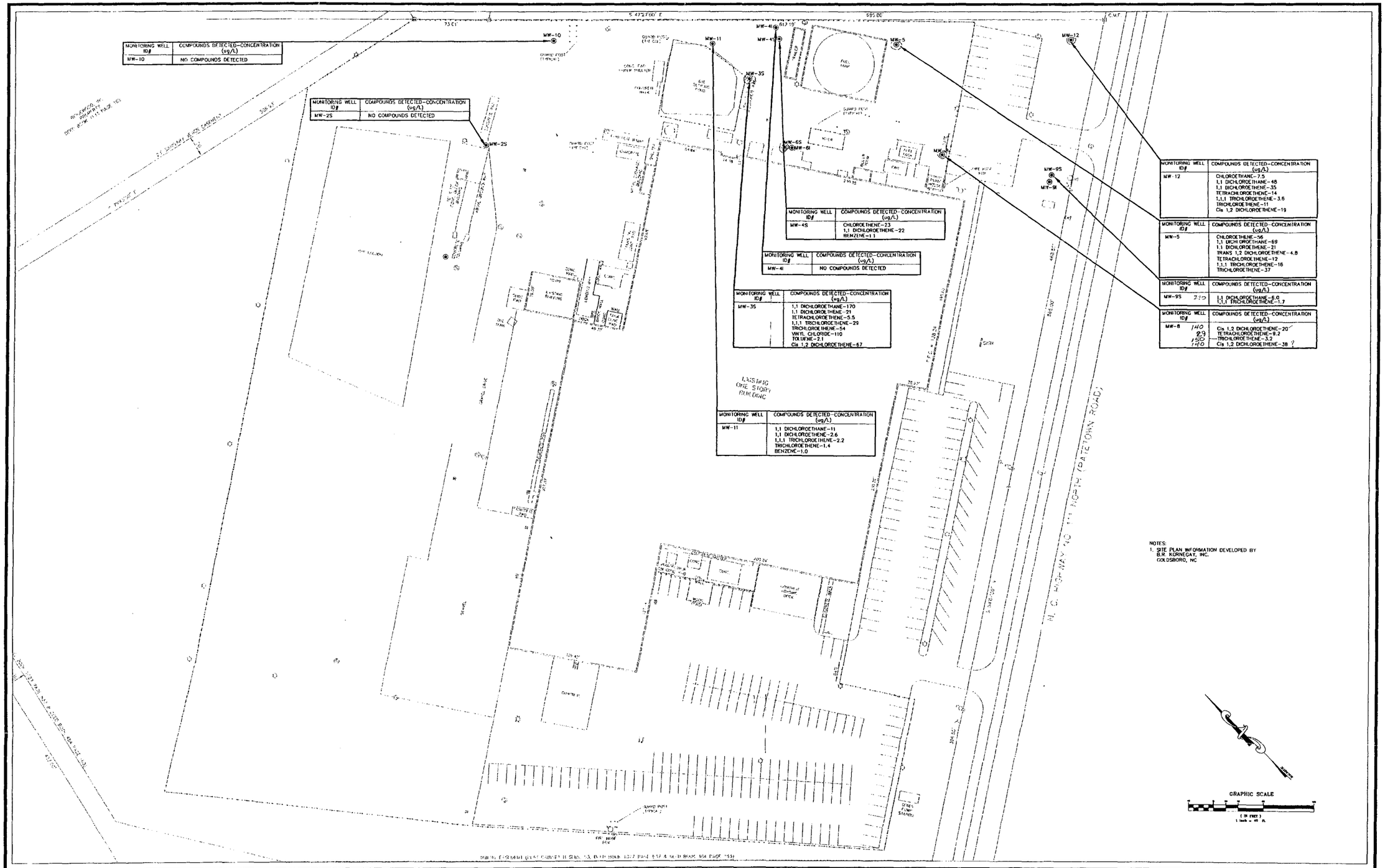
SEAL:

DATE: 9/14/99
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 40'
DRAWN BY: SPB
DESIGNED BY: RMM
CHECKED BY: RMM

PROJECT:
PHASE II INVESTIGATION FOR GOLDTEX PROPERTY
GOLDSBORO, NC

ATTACHED REFERENCE FILES:
JOB NUMBER: 011861.00

FIGURE 2



MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-10	NO COMPOUNDS DETECTED

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-2S	NO COMPOUNDS DETECTED

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-4S	CHLOROETHENE-23 1,1 DICHLOROETHENE-22 BENZENE-1.1

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-4I	NO COMPOUNDS DETECTED

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-3S	1,1 DICHLOROETHANE-170 1,1 DICHLOROETHENE-21 TETRACHLOROETHENE-5.5 1,1,1 TRICHLOROETHENE-29 TRICHLOROETHENE-54 VINYL CHLORIDE-110 TOLUENE-2.1 Cis 1,2 DICHLOROETHENE-67

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-11	1,1 DICHLOROETHANE-11 1,1 DICHLOROETHENE-2.6 1,1,1 TRICHLOROETHENE-2.2 TRICHLOROETHENE-1.4 BENZENE-1.0

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-12	CHLOROETHANE-7.5 1,1 DICHLOROETHANE-48 1,1 DICHLOROETHENE-35 TETRACHLOROETHENE-14 1,1,1 TRICHLOROETHENE-3.6 TRICHLOROETHENE-11 Cis 1,2 DICHLOROETHENE-19

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-5	CHLOROETHENE-56 1,1 DICHLOROETHANE-69 1,1 DICHLOROETHENE-21 TRANS 1,2 DICHLOROETHENE-4.8 TETRACHLOROETHENE-12 1,1,1 TRICHLOROETHENE-16 TRICHLOROETHENE-37

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-9S 220	1,1 DICHLOROETHANE-6.0 1,1,1 TRICHLOROETHENE-1.7

MONITORING WELL ID#	COMPOUNDS DETECTED-CONCENTRATION (ug/L)
MW-8 140 29 150 140	Cis 1,2 DICHLOROETHENE-20 TETRACHLOROETHENE-9.2 TRICHLOROETHENE-3.2 Cis 1,2 DICHLOROETHENE-38 ?

NOTES:
1. SITE PLAN INFORMATION DEVELOPED BY B.R. KORNEGAY, INC. GOLDSBORO, NC

REV. No.	REVISIONS	DATE:	DRAWN BY:	CHECKED BY:

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Kimley-Horn and Associates, Inc.
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068
PHONE: (919) 677-2000 FAX: (919) 677-2050

CLIENT: BEST DISTRIBUTING COMPANY GOLDSBORO, NC

TITLE: GROUNDWATER MONITORING WELL SAMPLING RESULTS

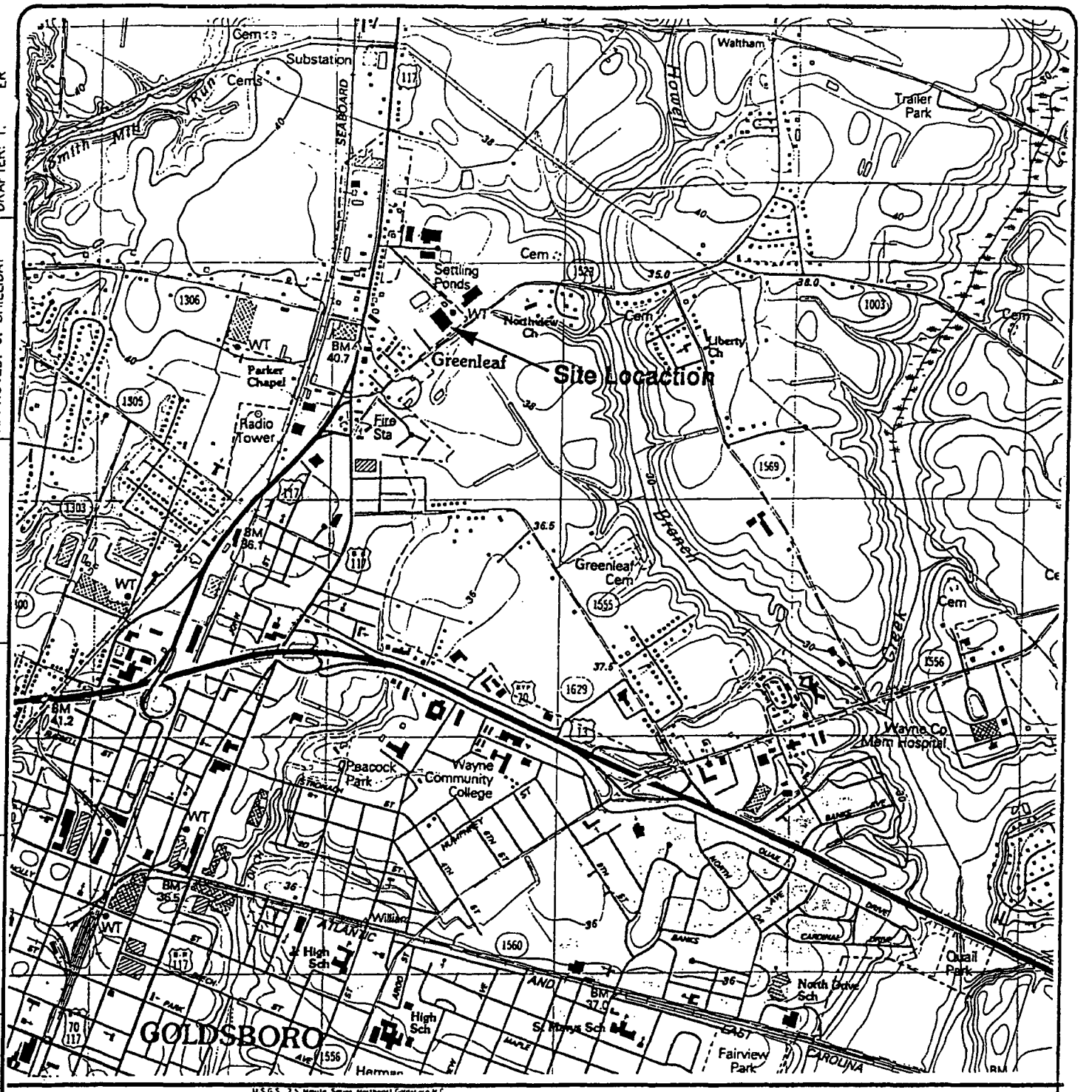
SEAL:

DATE: 9/14/99
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 40'
DRAWN BY: SFB
DESIGNED BY: RMM
CHECKED BY: RMM

PROJECT: PHASE II INVESTIGATION FOR GOLDTEX PROPERTY GOLDSBORO, NC

ATTACHED REFERENCE FILES:
JOB NUMBER: 011861100

FIGURE 4



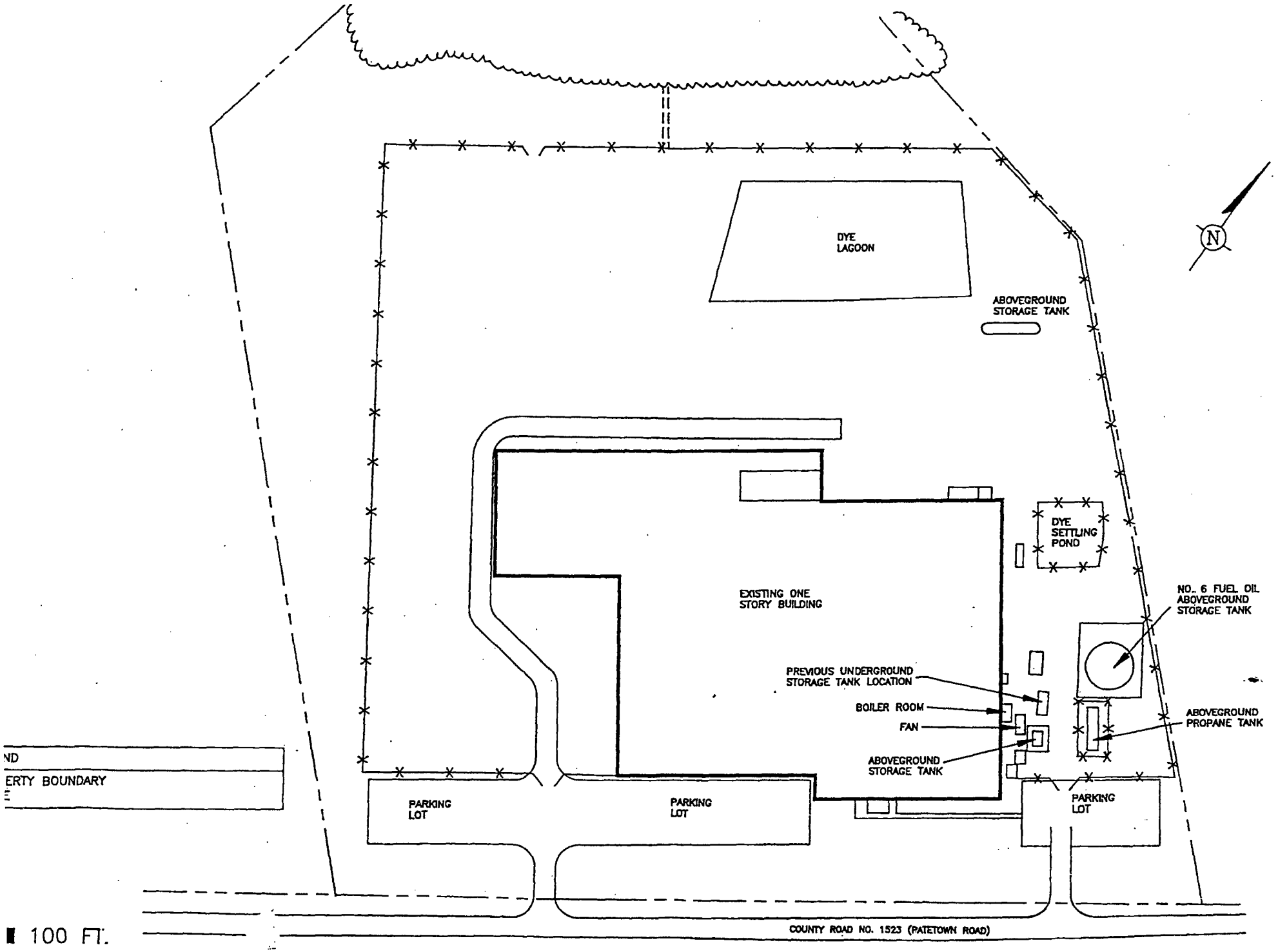
GERAGHTY & MILLER, INC.
Environmental Services

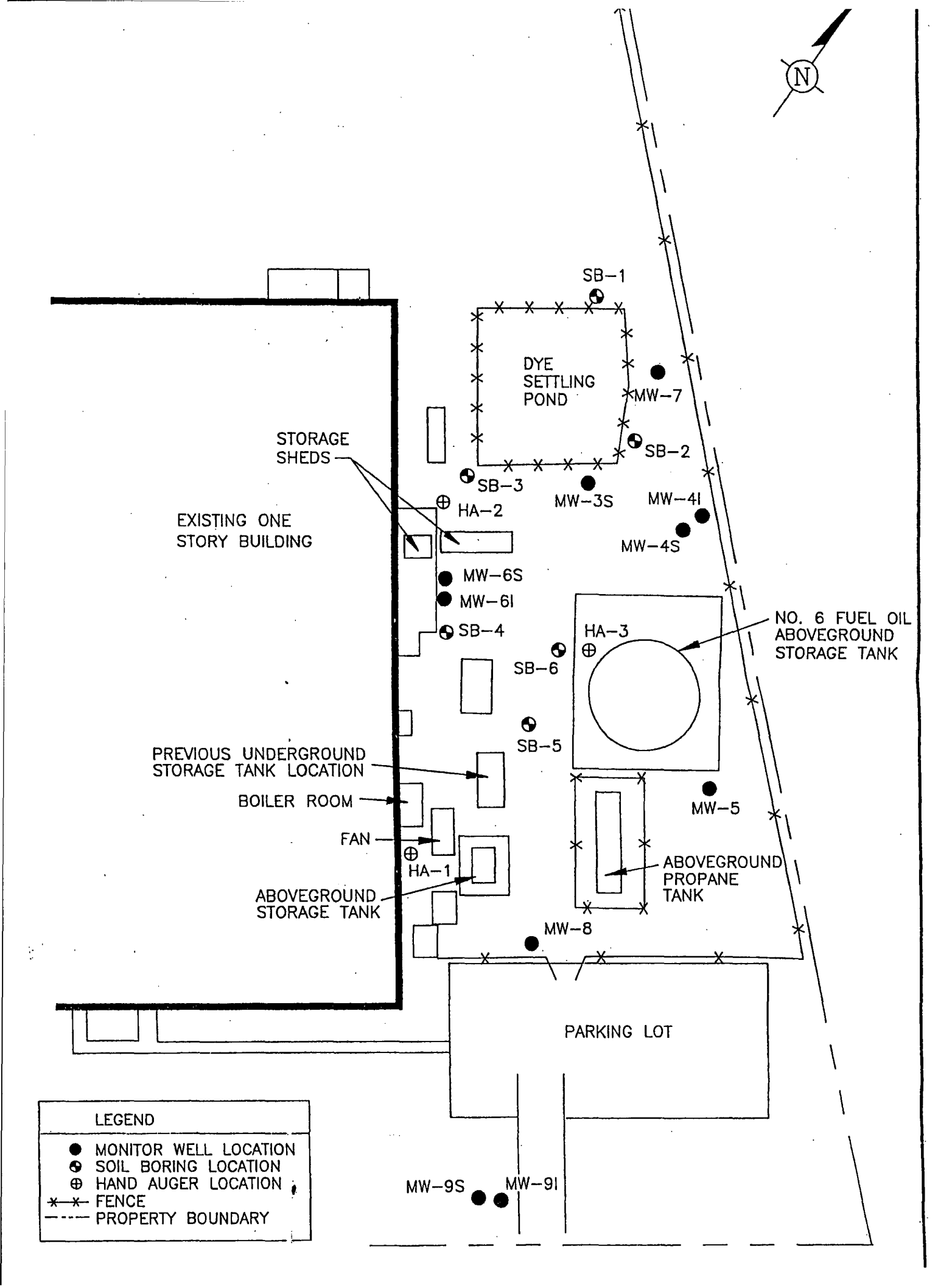
SITE LOCATION MAP

GOLDTEX,INC.
GOLDSBORO,NORTH CAROLINA

FIGURE
1-1

DRAFTER: T. ER | APPROVED: J. SHILLIDAY | CHECKED: J. SHILLIDAY | DRAWING: NC18001A.DWG | FILE NO.: NC180.01 | PRJCT NO.: NC180.01 | DWG DA 2 MAR 93


DYE LAGOON
ABOVEGROUND STORAGE TANK
N
DYE SETTLING POND
EXISTING ONE STORY BUILDING
NO. 6 FUEL OIL ABOVEGROUND STORAGE TANK
PREVIOUS UNDERGROUND STORAGE TANK LOCATION
BOILER ROOM
FAN
ABOVEGROUND STORAGE TANK
ABOVEGROUND PROPANE TANK
PARKING LOT
PARKING LOT
PARKING LOT
ND
ERTY BOUNDARY
E
100 FT.
COUNTY ROAD NO. 1523 (PATETOWN ROAD)


N
SB-1
DYE
SETTLING
POND
MW-7
SB-2
STORAGE
SHEDS
SB-3
MW-3S
MW-4I
HA-2
EXISTING ONE
STORY BUILDING
MW-4S
MW-6S
MW-6I
SB-4
HA-3
NO. 6 FUEL OIL
ABOVEGROUND
STORAGE TANK
SB-6
SB-5
PREVIOUS UNDERGROUND
STORAGE TANK LOCATION
BOILER ROOM
MW-5
FAN
HA-1
ABOVEGROUND
PROPANE
TANK
ABOVEGROUND
STORAGE TANK
MW-8
PARKING LOT
LEGEND
MONITOR WELL LOCATION
SOIL BORING LOCATION
HAND AUGER LOCATION
FENCE
PROPERTY BOUNDARY
MW-9S
MW-9I

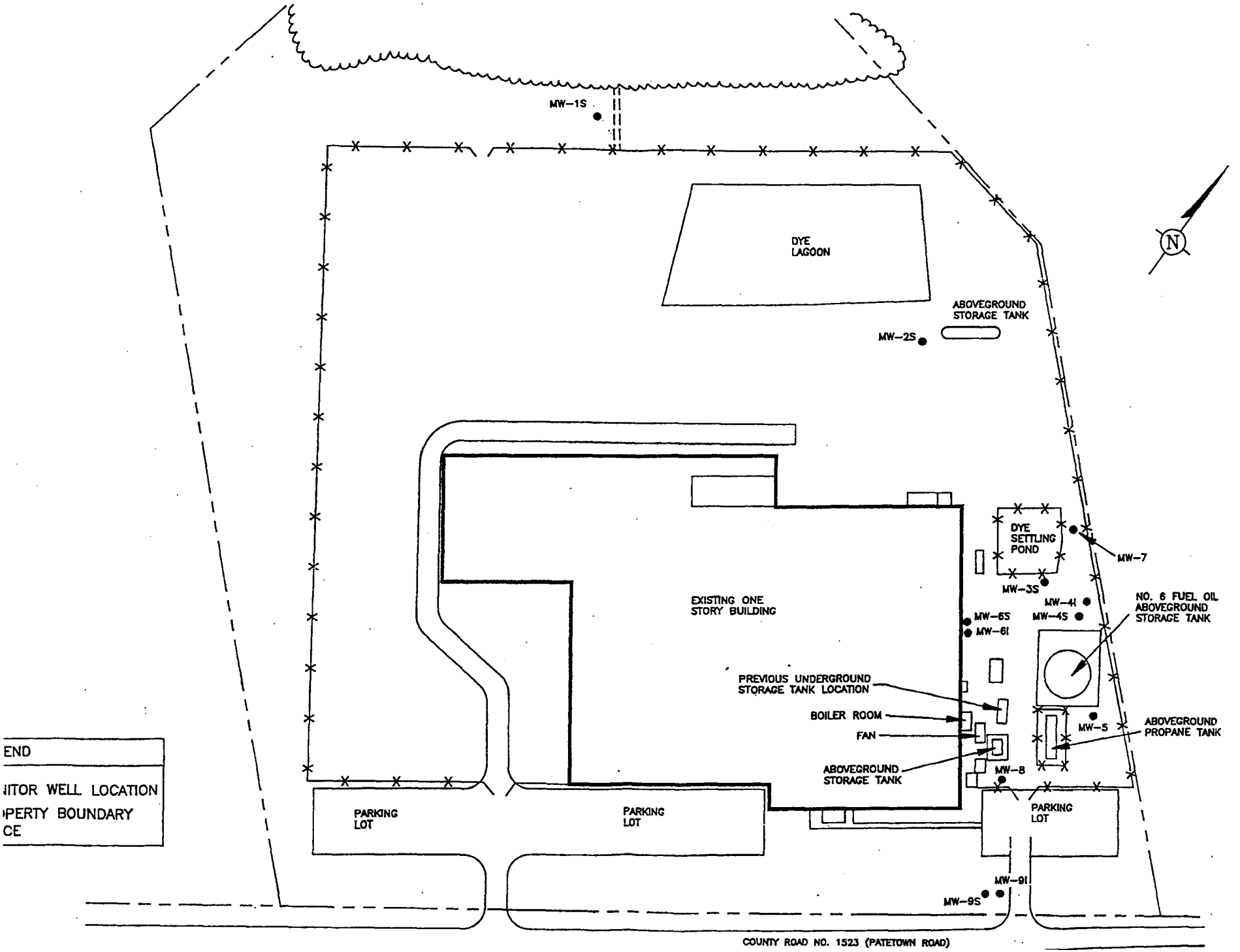


FIGURE 3-2

MONITOR WELL LOCATION MAP

GERAGHTY & MILLER, INC.
Environmental Services

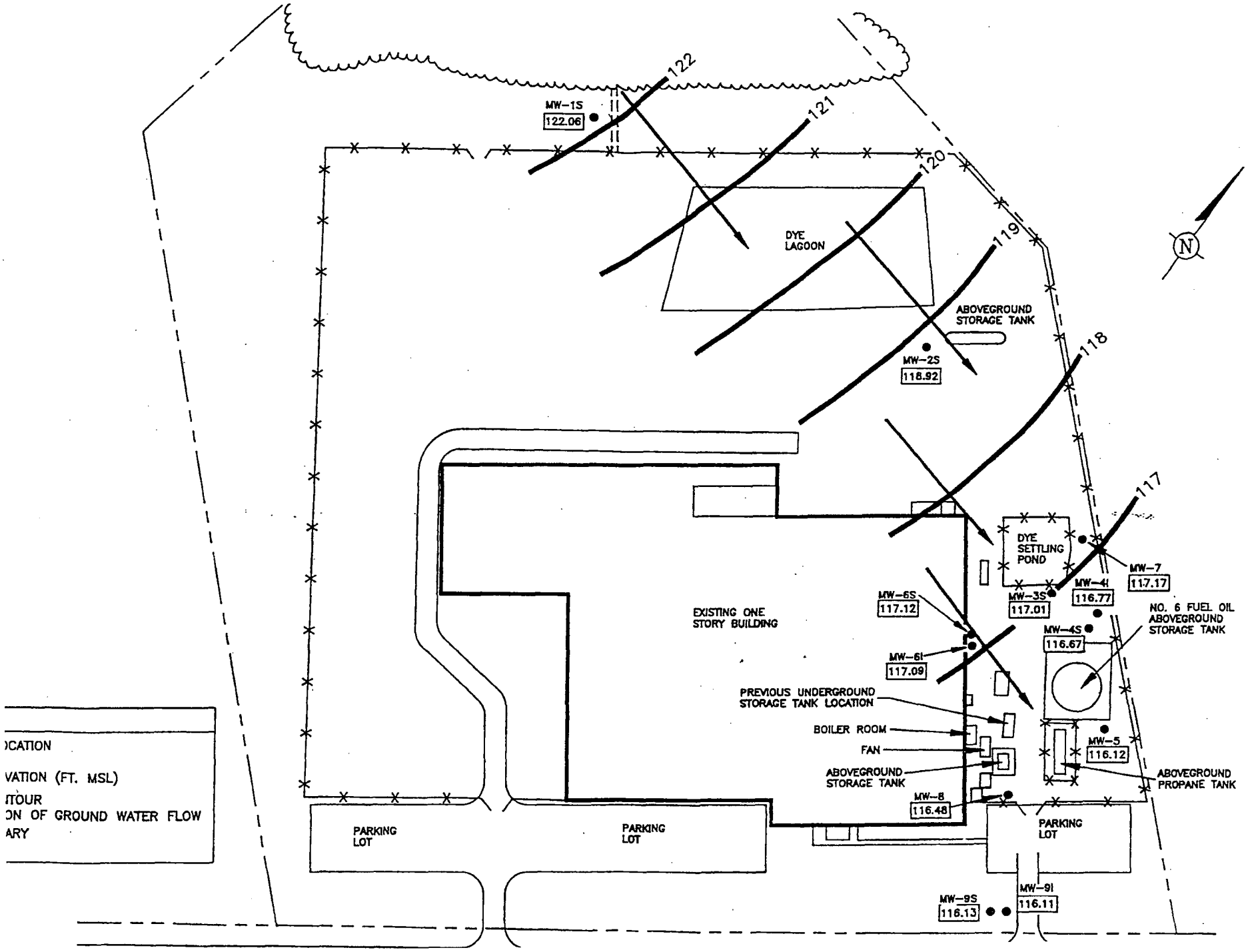


FIGURE 4-1

WATER TABLE CONTOUR MAP

APRIL 20, 1993

GERAGHTY & MILLER, INC.
Environmental Services