RC

NORTHWEST
ENVIRONMENTAL SERVICES, INC.
P.O. Box 401 • Alton, Iowa 51003

Site Monitoring Report (SMR)
February 26, 2010

Woodbury Central School District Sites
Shop Building
Climbing Hill, Iowa

LUST No. 7LTV89
UST Registration No. 8811618

IDNR *Site Monitoring Report for Leaking Underground Storage Tank Sites* IDNR

Iowa Department of Natural Resources

SITE IDENTIFICATION

LUST No. 7LTV89 **UST Registration No.** 8811618

Site Name:	Woodbury Central School District
Site Address:	79 Deer Run Trail
City:	Climbing Hill

RESPONSIBLE PARTY IDENTIFICATION

Name: Woodbury Central School District		Phone #:
Street: PO Box AJ		
City: Moville	State: IA	Zip Code: 51039

Type of Monitoring: [ ] Low Risk [X] High Risk: Interim [ ] Exempt Granular Bedrock

Is site reclassification recommended? (Yes) / No If yes, what classification? [X] NAR [ ] low risk [ ] high risk

STATEMENT OF CERTIFICATION

I, Daniel Ruppert, Groundwater Professional Certification No. 1418, am familar with all applicable requirements of Iowa Code § 455B.474 and all rules and procedures adopted thereunder including, but not limited to, Chapter 567-135 and the Department of Natural Resources' Site Monitoring Report guidance. Based on my knowledge of those documents and information I have prepared and reviewed regarding this site, UST Registration No. 8811618, LUST No. 7LTV89, I certify that this document is complete and accurate as provided in 567 IAC 135.9(11)"c" and meets the applicable requirements of the Site Monitoring Report.

Print: Name/Address/Phone # of Certified Groundwater Professional

Daniel Ruppert
Northwest Environmental Services, Inc.
PO Box 401
Alton, IA 51003

Signature: [signature]
Phone #: 712-756-4732
Date: 2-26-10

I certify that I have reviewed this document, appendices and attachments for submittal to the Iowa Department of Natural Resources.

Woodbury Central School District
Print: Name of Responsible Party

[signature]
Signature - Responsible Party

Official IDNR Use Only

Date Received:	4-2-10	Comment Letter Date:	
Reviewer:		Approved:	Y / N

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Site Monitoring Report Checklist

This checklist is for Site Monitoring Reports prepared using Tier 2 software-version 2.51 and later, and applies to the following types of monitoring: **Low risk or High risk: Interim at non-bedrock and exempt granular bedrock sites.** Indicate with "NA" those sections of the report which are not included because they do not apply to site-specific conditions.

REPORT BODY: **Page Number**

[X] Cover sheet ____ 1
[X] SMR checklist page ____ 2
[X] Receptor summary tables ____ 3,4,5
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[X] Receptor status change ____ 7
[X] Site reclassification ____ 7
[X] Groundwater analytical data ____ 8
[X] Soil analytical data ____ 9
[ ] Soil gas analytical data ____ 10
[X] Soil SSTL tables ____ 11
[X] Groundwater / Soil Leaching monitoring plan summary ____ 12
[ ] Soil gas monitoring plan summary ____ 13
[ ] Soil Gas Samples at Tier 2 Soil Sources ____ 15
[ ] Soil Gas Samples at Tier 2 Groundwater Sources ____ 16
[ ] Corrections to Tier 2 Deficiencies Included ____ 17

APPENDICES:

[X] 1. Evaluation of analytical data
[X] 2. Site plan map
[X] 3. Site vicinity map
[ ] 4. Soil summary corrective action map
[X] 5. Soil contamination / soil gas map(s)
[ ] 6. Groundwater summary corrective action map
[X] 7. Groundwater monitoring results map
[X] 8. Groundwater contamination map (from SMR software)
[X] 9. Groundwater flow direction map
[X] 10. Analytical data sheets
[X] 11. Boring Logs / monitoring well construction diagrams
[X] 12. Documentation
[ ] 13. Best management practices (Initial SMR only)

[ ] Computer Disk

SMR, GROUNDWATER SOURCE, RECEPTOR SUMMARY TABLE

	B	T	E	X	D	W
SMR, SOIL GAS AT GW SOURCE, USER				--		--
SOIL GAS AT GW SOURCE, DATA	NS	NS	NS	--	N/A	--

Type	Receptor	Tier 2 Risk	Last Risk	T2(*) or Computed Risk						Corr. Action Taken?	Corrective Action(s) Completed	Current Risk
				Group1				TEH				
				B	T	E	X	D	W			
DWW	DWW-10, Wolf's W			N	N	N	N	NSC	NSC			
NDWW	NDWW-1, LLOYD			N	N	N	N	NSC	NSC	N		N
NDWW	NDWW-2, KAMM			N	N	N	N	NSC	NSC	N		N
PGWS	No-IC	L	L	N	N	N	N	NSC	NSC	N		L
PGWS	IC	L	L	N	N	N	N	NSC	NSC	N		L

N: no action required, L: low risk, H: high risk, N/A: not applicable, NSC: No source concentration, N(SG): Passed soil gas at SMR.
PE: Tier 2 preliminary pathway evaluation result. *: Risk shown is Tier 2 risk classification. Not sufficient data for risk reclassification or risk reclassification criteria for N, L or H have not been met.

Corrective Actions:
1. Plugged drinking water wells
2. Plugged non-drinking water wells
3. Notified IDNR Water Supply Section
4. Notified designated county authority
5. Notified sanitary sewer public authority
6. Notified utility company-plastic water line
7. Relocated plastic water lines
8. Replaced plastic water lines
9. Established institutional controls
10. Conducted soil excavation
11. Cleared with soil gas
12. Zoning
13. For actual PWL, GW > 3 feet

SMR, SOIL LEACHING, RECEPTOR SUMMARY TABLE

	B	T	E	X	D	W
SMR, SOIL GAS AT SOIL SOURCE, USER				--		--
SOIL GAS AT SOIL SOURCE, DATA	NS	NS	NS	--	N/A	--
SUBMERGED SOIL SOURCE	???	???	???	--	N/A	--

Type	Receptor	Tier 2 Risk	Last Risk	T2(*) or Computed Risk						Corr. Action Taken?	Corrective Action(s) Completed	Current Risk
				Group1				TEH				
				B	T	E	X	D	W			
DWW	DWW-10, Wolf's W			N(3)*	N(3)*	N(3)*	N/A*	NSC*	N/A*			
NDWW	NDWW-1, LLOYD			N(PE)*	N(PE)*	N(PE)*	N/A*	NSC*	N/A*	N		N
NDWW	NDWW-2, KAMM			N(PE)*	N(PE)*	N(PE)*	N/A*	NSC*	N/A*	N		N
PGWS	No-IC	H	H	N	N(2)*	N	N/A*	NSC*	N/A*	N		N
PGWS	IC	H	H	N	N*	N	N*	N*	N*	N		N

For actual receptors, only Tier 2 risk shown for chemicals. For potential, reclassification uses groundwater in vicinity of the soil source.
N: No action required, or no receptors present for potential receptors. N(1): Soil source <=Tier 2 Default.
N(2): Modeled GW at Soil Source<=GW TL. N(3): Modeled GW at Receptor<=GW TL. N(4): Chemical not applicable for GW.
N/A: Chemical not applicable for soil. L: low risk. H: high risk. NSC: no source concentration. N(SG): passed soil gas at SMR.
PE: Tier 2 preliminary pathway evaluation result. *: Tier 2 risk classification result.
L or H: For PGWS, monitoring well(s) needed in vicinity of soil source to complete risk classification.

Corrective Actions:

1. Plugged drinking water wells
2. Plugged non-drinking water wells
3. Notified IDNR Water Supply Section
4. Notified designated county authority
5. Notified sanitary sewer public authority
6. Notified utility company-plastic water line
7. Relocated plastic water lines
8. Replaced plastic water lines
9. Established institutional controls
10. Conducted soil excavation
11. Cleared with soil gas
12. Zoning
13. For actual PWL, GW > 3 feet

SMR, SOIL VAPOR, SOIL TO PLASTIC WATER LINE, RECEPTOR SUMMARY TABLE

	B	T	E	D
SMR, SOIL GAS AT SOIL SOURCE, USER				
SOIL GAS AT SOIL SOURCE, DATA	NS	NS	NS	N/A
SUBMERGED SOIL SOURCE	???	???	???	N/A

Type	Receptor	Tier 2 Risk	Last Risk	Tier 2 Risk Group1 B	T	E	TEH D	Corr. Action Taken?	Corrective Action(s) Completed	Current Risk

Tier 2 risk classification shown for chemicals.
N: no action required. L: low risk. H: high risk. N/A: chemical is not applicable. NSC: No source concentration. N(SG): Passed soil gas at SMR.
PE: Tier 2 preliminary evaluation result.

Corrective Actions:
1. Plugged drinking water wells
2. Plugged non-drinking water wells
3. Notified IDNR Water Supply Section
4. Notified designated county authority
5. Notified sanitary sewer public authority
6. Notified utility company-plastic water line
7. Relocated plastic water lines
8. Replaced plastic water lines
9. Established institutional controls
10. Conducted soil excavation
11. Cleared with soil gas
12. Zoning
13. For actual PWL, GW > 3 feet

Potential Receptor Summary **SMR,V-2.51, 7LTV89**

Surveys for new, removed, and replaced receptors must be conducted within the larger area of either 1) the receptor identification plume for the appropriate receptor type; or 2) the receptor-specific distance listed in brackets below.

Receptor questions	Yes/ No	Contact Name/Company Name/ Complete Address	Contact Phone #	Date
New drinking water well(s)? [1,000']	Yes	1) IDNR, Geological Survey Bureau 109 Trowbridge Hall Iowa City, Iowa, 52242-1319	(319) 335-1575	02/05/2010
		2) Chuck Cipperley Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
New non-drinking water well(s)? [1,000']	Yes	1) IDNR, Geological Survey Bureau 109 Trowbridge Hall Iowa City, Iowa, 52242-1319	(319) 335-1575	02/05/2010
		2) Chuck Cipperley Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
Plugged drinking water well(s)? [1,000']	Yes	1) IDNR, Geological Survey Bureau 109 Trowbridge Hall Iowa City, Iowa, 52242-1319	(319) 335-1575	02/05/2010
		2) Chuck Cipperley Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
Plugged non-drinking water well(s)? [1,000']	Yes	1) IDNR, Geological Survey Bureau 109 Trowbridge Hall Iowa City, Iowa, 52242-1319	(319) 335-1575	02/05/2010
		2) Chuck Cipperley Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
New plastic water lines(s)? [200']	No	Ron Brant Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
Replaced or relocated plastic water line(s)? [200']	No	Ron Brant Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
New sanitary sewer(s)? [200']	Yes	Chuck Cipperley Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010
Replaced or relocated sanitary sewer(s)? [200']	No	Chuck Cipperley Siouxland District Health Department 1014 Nebraksa Street Sioux City, Iowa, 51101	(712) 279-6119	02/09/2010

Potential Receptor Summary **SMR,V-2.51, 7LTV89**

Surveys for new, removed, and replaced receptors must be conducted within the larger area of either 1) the receptor identification plume for the appropriate receptor type; or 2) the receptor-specific distance listed in brackets below.

Receptor questions	Yes/ No	Contact Name/Company Name/ Complete Address	Contact Phone #	Date
New building(s) with basements? [200']	Yes	Grant Nelson Northwest Environmental Services P.O. Box 401 Alton, Iowa, 51003	(712) 756-4732	02/09/2010
Building(s) with basement(s) removed? [200']	No	Grant Nelson Northwest Environmental Services P.O. Box 401 Alton, Iowa, 51003	(712) 756-4732	02/09/2010
Zoning changes? [200']	Yes	John Pylelo Woodbury County Planning and Zoning 620 Douglas Street Sioux City, Iowa, 51101	(712) 279-6557	02/05/2010

Receptors: Status change	**SMR,V-2.51, 7LTV89**
List and describe all receptors whose status has changed since the previous receptor evaluation (e.g. Private Well A was plugged/water supply notification form was sent to the proper authorities; new hourses were built; etc.). Numerous receptors have changed over the course of the past five years. Please refer to the Appendix 1 for a detailed description.	

Site Reclassification	**SMR,V-2.51, 7LTV89**
Should the site be reclassified? [ ] No [X] Yes If yes, the site should be reclassified as: [ ] High Risk [ ] Low Risk [X] No Action Required	
If reclassification is recommended, provide the justification for reclassification and provide all necessary documentation in Appendix 12.	
Please refer to the Appendix 1 for a detailed justification.	

SMR Groundwater Analytical Data (ug/L), V-2.51, 7LTV89													
Boring / Well #	Date Sampled	Elevations (ASL)				Group 1				Group 2		FP Type	FP Default?
		Ground	TOC	TOS	SWL	B	T	E	X	TEH-D	TEH-WO		
B-1	07/23/1991	1,127.30	N	N	N	700.	1,985.	450.	3,345.	N	N	N	N
MW-2A	05/04/2000	1,127.30	1,126.58	1,099.50	1,095.33	225.	146.	344.	351.	N	N	N	N
MW-2A	03/28/2001	1,127.30	1,126.58	1,099.50	1,095.92	481.	35.	1,850.	454.	N	N	N	N
MW-2A	07/18/2002	1,127.30	1,126.58	1,099.50	1,097.04	185.	26.7	954.	283.	N	N	N	N
MW-2A	10/25/2003	1,127.30	1,126.58	1,099.50	1,096.26	152.	12.5	1,060.	144.	N	N	N	N
MW-2A	07/10/2004	1,127.30	1,126.58	1,099.50	1,097.34	51.5	13.6	398.	164.	N	N	N	N
MW-2A	12/12/2009	1,127.30	1,126.58	1,099.50	1,098.27	12.8	<1.	383.	143.	1,910.	<300.	N	N
MW-4	07/25/1991	1,127.40	1,127.14	1,099.39	1,092.44	104.	6.	<1.	1.	N	N	N	N
MW-4	05/03/2000	1,127.40	1,127.14	1,099.39	1,095.65	1.3	<1.	<1.	<3.	N	N	N	N
MW-4	03/18/2003	N	N	N	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-4	10/25/2003	1,127.40	1,127.14	1,099.39	1,095.99	<5.	<5.	<5.	<15.	N	N	N	N
MW-4	07/10/2004	1,127.40	1,127.14	1,099.39	1,097.16	<1.	<1.	<1.	<3.	N	N	N	N
MW-4	12/12/2009	1,127.40	1,127.14	1,099.39	1,098.02	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-1	07/25/1991	1,127.40	1,127.15	N	N	<1.	<1.	<1.	<1.	N	N	N	N
MW-1	03/18/2003	1,127.40	N	1,099.40	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-1	12/12/2009	1,127.40	1,127.15	N	1,099.10	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-3	07/24/1991	1,126.90	1,126.67	1,100.92	1,094.03	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	07/25/1991	1,126.90	1,126.67	1,100.92	1,092.57	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	07/24/1995	1,126.90	1,126.67	1,100.92	1,098.09	<2.	<2.	<2.	<4.	N	N	N	N
MW-3	11/07/1995	1,126.90	1,126.67	1,100.92	1,096.57	<2.	<2.	<2.	<5.	N	N	N	N
MW-3	12/26/1995	1,126.90	1,126.67	1,100.92	1,096.17	<2.	<2.	<2.	<5.	N	N	N	N
MW-3	03/21/1996	1,126.90	1,126.67	1,100.92	1,095.78	<2.	<2.	<2.	<5.	N	N	N	N
MW-3	07/01/1996	1,126.90	1,126.67	1,100.92	1,096.79	<2.	<2.	<2.	<5.	N	N	N	N
MW-3	09/28/1996	1,126.90	1,126.67	1,100.92	1,098.37	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	03/31/1997	1,126.90	1,126.67	1,100.92	1,097.27	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	07/10/1997	1,126.90	1,126.67	1,100.92	1,097.75	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	10/02/1997	1,126.90	1,126.67	1,100.92	1,096.77	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	01/13/1998	1,126.90	1,126.67	1,100.92	1,096.04	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	05/06/1998	1,126.90	1,126.67	1,100.92	1,096.39	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	08/03/1998	1,126.90	1,126.67	1,100.92	1,098.17	1.	1.	1.	3.	N	N	N	N
MW-3	12/28/1998	1,126.90	1,126.67	1,100.92	1,096.77	<1.	<1.	<1.	<1.	N	N	N	N
MW-3	05/04/2000	1,126.90	1,126.67	1,100.92	1,095.84	<1.	<1.	<1.	<3.	N	N	N	N
MW-3	03/18/2003	N	N	N	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-3	12/12/2009	1,126.90	1,126.67	1,100.92	1,098.29	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-5	07/25/1991	1,127.60	1,127.30	1,099.55	1,093.83	<1.	58.	20.	<1.	N	N	N	N
MW-5	07/24/1995	1,127.60	1,127.30	1,099.55	1,097.90	13.	25.	<2.	10.	N	N	N	N
MW-5	10/09/1995	1,127.60	1,127.30	1,099.55	1,096.78	24.	26.	<2.	<5.	N	N	N	N

SMR Groundwater Analytical Data (ug/L), V-2.51, 7LTV89													
Boring /	Date	Elevations (ASL)				Group 1				Group 2		FP	FP
Well #	Sampled	Ground	TOC	TOS	SWL	B	T	E	X	TEH-D	TEH-WO	Type	Default?
MW-5	12/26/1995	1,127.60	1,127.30	1,099.55	1,096.07	<2.	<2.	<2.	<2.	N	N	N	N
MW-5	03/21/1996	1,127.60	1,127.30	1,099.55	1,096.65	64.	18.	12.	11.	N	N	N	N
MW-5	07/01/1996	1,127.60	1,127.30	1,099.55	1,096.65	39.	19.	20.	18.	N	N	N	N
MW-5	09/28/1996	1,127.60	1,127.30	1,099.55	1,097.99	<1.	<1.	<1.	60.	N	N	N	N
MW-5	03/31/1997	1,127.60	1,127.30	1,099.55	1,098.51	<1.	<1.	8.	7.	N	N	N	N
MW-5	07/10/1997	1,127.60	1,127.30	1,099.55	1,097.56	<1.	<1.	<1.	<1.	N	N	N	N
MW-5	10/02/1997	1,127.60	1,127.30	1,099.55	1,096.68	<1.	<1.	<1.	<1.	N	N	N	N
MW-5	01/13/1998	1,127.60	1,127.30	1,099.55	1,096.00	<1.	<1.	<1.	<1.	N	N	N	N
MW-5	05/06/1998	1,127.60	1,127.30	1,099.55	1,096.38	<1.	<1.	<1.	<1.	N	N	N	N
MW-5	08/03/1998	1,127.60	1,127.30	1,099.55	1,097.93	<1.	<1.	<1.	<1.	N	N	N	N
MW-5	12/28/1998	1,127.60	1,127.30	1,099.55	1,096.68	<1.	1.	4.	3.	N	N	N	N
MW-5	05/03/2000	1,127.60	1,127.30	1,099.55	1,095.73	<1.	<1.	<1.	<3.	N	N	N	N
MW-5	03/18/2003	N	N	N	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-5	10/25/2003	1,127.60	1,127.30	1,099.55	1,096.11	<5.	<5.	<5.	<15.	N	N	N	N
MW-5	07/10/2004	1,127.60	1,127.30	1,099.55	1,097.20	<1.	<1.	<1.	<3.	N	N	N	N
MW-5	12/12/2009	1,127.60	1,127.30	1,099.55	1,098.16	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-9	09/23/1991	1,126.90	1,126.66	1,098.91	1,097.35	<1.	4.	<1.	2.	N	N	N	N
MW-9	03/20/2003	1,126.90	N	1,098.90	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-9	10/25/2003	1,126.90	1,126.66	1,098.91	1,095.93	<1.	<1.	<1.	<3.	N	N	N	N
MW-9	07/10/2004	1,126.90	1,126.66	1,098.91	1,096.98	<1.	<1.	<1.	<3.	N	N	N	N
MW-9	12/12/2009	1,126.90	1,126.66	1,098.91	1,097.93	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW10	09/23/1991	1,127.90	1,127.64	1,097.89	1,092.88	<1.	80.	<10.	660.	N	N	N	N
MW-10R	08/28/2002	1,127.74	1,127.17	1,107.74	1,097.42	<2.	<2.	<2.	<3.	<380.	<380.	N	N
MW-10R	03/20/2003	1,127.74	1,127.17	1,107.74	1,096.33	5.5	<1.	<1.	<3.	<380.	<380.	N	N
MW-10R	01/20/2004	1,127.74	1,127.17	1,107.74	1,096.04	1.8	<1.	<1.	<3.	<380.	<380.	N	N
MW-10R	12/08/2004	1,127.74	1,127.17	1,107.74	1,096.64	<2.	<2.	<2.	<3.	<380.	<380.	N	N
MW-10R	08/10/2005	1,127.74	1,127.17	1,107.74	1,096.99	<1.	<5.	<1.	<3.	<100.	<250.	N	N
MW10	12/12/2009	1,127.90	1,127.64	1,097.89	1,098.86	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-11	09/23/1991	1,125.80	1,125.56	1,097.81	1,092.25	<1.	28.	9.	24.	N	N	N	N
MW-11	03/20/2003	1,125.80	N	1,097.80	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-11	12/12/2009	1,125.80	1,125.56	1,097.81	1,098.21	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-12	09/23/1991	1,127.40	1,127.14	1,097.39	1,093.04	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	07/24/1995	1,127.40	1,127.14	1,097.39	1,098.51	<2.	<2.	<2.	<4.	N	N	N	N
MW-12	10/09/1995	1,127.40	1,127.14	1,097.39	1,097.34	<2.	<2.	<2.	<5.	N	N	N	N
MW-12	12/26/1995	1,127.40	1,127.14	1,097.39	1,096.71	<2.	<2.	<2.	<5.	N	N	N	N
MW-12	03/21/1996	1,127.40	1,127.14	1,097.39	1,096.28	<2.	<2.	<2.	<5.	N	N	N	N
MW-12	07/01/1996	1,127.40	1,127.14	1,097.39	1,097.19	<2.	<2.	<2.	<5.	N	N	N	N

SMR Groundwater Analytical Data (ug/L), V-2.51, 7LTV89													
Boring / Well #	Date Sampled	Elevations (ASL)				Group 1				Group 2		FP Type	FP Default?
		Ground	TOC	TOS	SWL	B	T	E	X	TEH-D	TEH-WO		
MW-12	09/28/1996	1,127.40	1,127.14	1,097.39	1,098.73	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	03/31/1997	1,127.40	1,127.14	1,097.39	1,097.72	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	07/10/1997	1,127.40	1,127.14	1,097.39	1,098.33	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	10/02/1997	1,127.40	1,127.14	1,097.39	1,097.20	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	01/13/1998	1,127.40	1,127.14	1,097.39	1,096.44	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	05/06/1998	1,127.40	1,127.14	1,097.39	1,096.77	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	08/03/1998	1,127.40	1,127.14	1,097.39	1,098.54	1.	2.	1.	3.	N	N	N	N
MW-12	12/28/1998	1,127.40	1,127.14	1,097.39	1,097.16	<1.	<1.	<1.	<1.	N	N	N	N
MW-12	05/03/2000	1,127.40	1,127.14	1,097.39	1,096.19	<1.	<1.	<1.	<3.	N	N	N	N
MW-12	08/28/2002	1,127.40	1,127.42	1,097.40	1,097.99	<2.	<2.	<2.	<3.	<380.	<380.	N	N
MW-12	03/18/2003	1,127.40	1,127.42	1,097.40	1,096.25	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-12	10/25/2003	1,127.40	1,127.14	1,097.39	1,096.48	<1.	<1.	<1.	<3.	N	N	N	N
MW-12	01/20/2004	1,127.40	1,127.42	1,097.40	1,095.81	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-12	07/10/2004	1,127.40	1,127.14	1,097.39	1,097.60	<1.	<1.	<1.	<3.	N	N	N	N
MW-12	12/08/2004	1,127.40	1,127.42	1,097.40	1,096.40	<2.	<2.	<2.	<3.	<380.	<380.	N	N
MW-12	12/12/2009	1,127.40	1,127.14	1,097.39	1,098.55	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-13	09/23/1991	1,127.40	1,127.09	1,097.36	1,092.28	<1.	<1.	<1.	<1.	N	N	N	N
MW-13	05/03/2000	1,127.40	1,127.09	1,097.36	1,095.41	<1.	<1.	<1.	<3.	N	N	N	N
MW-13	03/18/2003	N	N	N	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-13	12/12/2009	1,127.40	1,127.09	1,097.36	1,097.84	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-14	01/02/1992	1,128.30	1,128.03	1,098.28	1,092.85	3.	51.	<2.	5.	N	N	N	N
MW-14	03/20/2003	1,128.30	N	1,098.30	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-14	12/12/2009	1,128.30	1,128.03	1,098.28	1,098.90	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-16	12/18/1991	1,127.70	1,127.48	1,063.73	1,092.28	5.	21.	<2.	2.	N	N	N	N
MW-16	01/02/1992	1,127.70	1,127.48	1,063.73	1,092.28	8.	4.	<2.	2.	N	N	N	N
MW-16	05/03/2000	1,127.70	1,127.48	1,063.73	1,095.88	<1.	<1.	<1.	<3.	N	N	N	N
MW-16	12/12/2009	1,127.70	1,127.48	1,063.73	1,098.36	<1.	<1.	<1.	<3.	<300.	313.	N	N
MW-21	01/18/1993	1,127.40	N	1,101.35	1,094.50	755.	845.	1,242.	4,052.	N	N	N	N
MW-21A	05/04/2000	1,127.40	1,126.66	1,099.60	1,095.80	1.1	<1.	9.2	<3.	N	N	N	N
MW-21A	03/28/2001	1,127.40	1,126.66	1,099.60	1,095.89	1.2	<1.	2.	<3.	N	N	N	N
MW-21A	07/18/2002	1,127.40	1,126.66	1,099.60	1,097.04	<1.	<1.	<1.	<3.	N	N	N	N
MW-21	03/18/2003	1,127.40	N	1,101.40	N	189.	23.4	896.	330.	4,010.	<380.	N	N
MW-21A	12/12/2009	1,127.40	1,126.66	1,099.60	1,098.49	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-22	01/18/1993	1,127.30	N	1,099.26	1,094.51	2,576.	4,007.	5,588.	5,954.	N	N	N	N
MW-22A	05/04/2000	1,127.40	1,126.90	1,099.60	1,095.76	<1.	<1.	<1.	<3.	N	N	N	N
MW-22A	03/28/2001	1,127.40	1,126.90	1,099.60	1,095.92	<1.	<1.	<1.	<3.	N	N	N	N
MW-22A	07/18/2002	1,127.40	1,126.90	1,099.60	1,097.06	<1.	<1.	<1.	<3.	N	N	N	N

SMR Groundwater Analytical Data (ug/L), V-2.51, 7LTV89													
Boring /	Date	Elevations (ASL)				Group 1				Group 2		FP	FP
Well #	Sampled	Ground	TOC	TOS	SWL	B	T	E	X	TEH-D	TEH-WO	Type	Default?
MW-22	03/18/2003	N	N	N	N	<1.	<1.	<1.	<3.	<380.	<380.	N	N
MW-23	01/18/1993	1,129.40	N	1,101.42	1,093.86	85.	63.	<2.	5.	N	N	N	N
MW-23	05/03/2000	1,129.40	N	1,101.42	N	<5.	<5.	<5.	<15.	N	N	N	N
MW-23	03/18/2003	N	N	N	N	1.4	<1.	<1.	<3.	387.	<380.	N	N
MW-23	12/12/2009	1,127.80	1,127.68	1,101.42	1,098.17	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-24	01/18/1993	1,130.20	N	1,102.21	1,093.76	13.	24.	<2.	3.	N	N	N	N
MW-24	10/25/2003	1,130.20	N	1,102.21	N	<5.	<5.	<5.	<15.	N	N	N	N
MW-24	07/10/2004	1,130.20	N	1,102.21	N	1.7	<1.	<1.	<3.	N	N	N	N
MW-25	01/18/1993	1,129.30	N	1,101.25	1,093.26	<2.	23.	<2.	<2.	N	N	N	N
MW-25	12/12/2009	1,127.00	1,126.89	1,101.25	1,097.26	<1.	<1.	<1.	<3.	<300.	<300.	N	N
MW-26	10/26/1993	1,130.70	1,130.53	1,102.70	1,097.03	<2.	<2.	<2.	<2.	N	N	N	N
MW-26	07/24/1995	1,130.70	1,130.53	1,102.70	1,097.68	<2.	<2.	<2.	<4.	N	N	N	N
MW-26	10/09/1995	1,130.70	1,130.53	1,102.70	1,098.01	<2.	<2.	<2.	<5.	N	N	N	N
MW-26	12/26/1995	1,130.70	1,130.53	1,102.70	1,097.36	<2.	<2.	<2.	<5.	N	N	N	N
MW-26	03/21/1996	1,130.70	1,130.53	1,102.70	1,097.03	<2.	<2.	<2.	<5.	N	N	N	N
MW-26	07/01/1996	1,130.70	1,130.53	1,102.70	1,098.19	<2.	<2.	<2.	<5.	N	N	N	N
MW-26	09/28/1996	1,130.70	1,130.53	1,102.70	1,099.33	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	03/31/1997	1,130.70	1,130.53	1,102.70	1,098.51	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	07/10/1997	1,130.70	1,130.53	1,102.70	1,099.42	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	10/02/1997	1,130.70	1,130.53	1,102.70	1,098.01	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	01/13/1998	1,130.70	1,130.53	1,102.70	1,097.23	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	05/06/1998	1,130.70	1,130.53	1,102.70	1,097.69	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	08/03/1998	1,130.70	1,130.53	1,102.70	1,099.26	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	12/28/1998	1,130.70	1,130.53	1,102.70	1,097.96	<1.	<1.	<1.	<1.	N	N	N	N
MW-26	05/03/2000	1,130.70	1,130.53	1,102.70	1,095.30	<1.	<1.	<1.	<3.	N	N	N	N
MW-26	12/12/2009	1,130.70	1,130.53	1,102.70	1,099.36	<1.	<1.	<1.	<3.	<300.	338.	N	N

SMR Soil Analytical Data (mg/kg), V-2.51, 7LTV89											
Boring / Well #	Date Sampled	Elevations (ASL)			Group 1				Group 2		
		Ground	Sample	SWL	B	T	E	X	TEH-D	TEH-WO	TPH
B-15	12/11/1991	1,127.30	1107.3	1,092.66	22.	394.	202.	1,354.	N	N	12,820
B-15	12/11/1991	1,127.30	1097.3	1,092.66	0.3	1.2	1.	5.5	N	N	104.60
B-15	12/11/1991	1,127.30	1107.3	1,092.66	1.2	4.4	3.2	15.9	N	N	222.70
MW-2A	05/04/2000	1,127.30	1,107.3	1,095.33	0.006	0.028	0.068	0.637	N	N	N
MW-2A	05/04/2000	1,127.30	1,099.3	1,095.33	1.1	44.7	35.6	256.	N	N	N
MW-2A	05/04/2000	1,127.30	1095.3	1,095.33	0.187	<0.005	0.626	0.325	N	N	N
SB-1	02/11/2010	1,127.30	1,099.3	1,097.90	<0.248	7.36	20.8	257.	1,570.	38.9	N
SB-1	02/11/2010	1,127.30	1,098.3	1,097.90	<0.021	1.53	9.01	137.	219.	12.9	N
#8	08/10/1995	1,127.30	1,117.3	N	<1.	<1.	<1.	<1.	N	N	39
#4	08/10/1995	1,127.30	1,102.3	N	<1.	<1.	<1.	<1.	N	N	77
#8 (prf)	02/11/2010	1,127.30	1,117.3	N	0.23	<1.	<1.	<1.	N	N	39
#4 (prf)	02/11/2010	1,127.30	1,102.3	N	0.23	<1.	<1.	<1.	N	N	77
#7	08/10/1995	1,127.30	1,097.3	N	<1.	<1.	<1.	<1.	N	N	<10
#7 (prf)	02/11/2010	1,127.30	1,097.3	N	0.23	<1.	<1.	<1.	N	N	<10
#9	08/10/1995	1,127.30	1,102.3	N	<1.	<1.	<1.	<1.	N	N	<10
#9 (prf)	02/11/2010	1,127.30	1,102.3	N	0.23	<1.	<1.	<1.	N	N	<10
#10	08/10/1995	1,127.30	1,102.3	N	<1.	<1.	<1.	<1.	N	N	<10
#10 (prf)	02/11/2010	1,127.30	1,102.3	N	0.23	<1.	<1.	<1.	N	N	<10
#11	08/10/1995	1,127.30	1,107.3	N	<1.	<1.	<1.	<1.	N	N	<10
#11 (prf)	02/11/2010	1,127.30	1,107.3	N	0.23	<1.	<1.	<1.	N	N	<10
#12	08/10/1995	1,127.30	1,107.3	N	<1.	<1.	<1.	<1.	N	N	<10
#12 (prf)	02/11/2010	1,127.30	1,107.3	N	0.23	<1.	<1.	<1.	N	N	<10

MTBE Sampling Results

LUST #	Site Name	Site City	Monitoring Event	Sample ID	Sample Date (mm/dd/yyyy)	Ground Surface Elevation (feet ASL)	Soil Sample Elevation (feet ASL)	Static Water Level (feet ASL)	**MTBE Soil** (mg/kg)	**MTBE Groundwater** (ug/L)	Comments
7LTV89	Bus Barn	Climbing Hill	SMR	MW-1	12/12/2009	1127.40		1099.10		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-2A	12/12/2009	1127.30		1098.27		1.76	
7LTV89	Bus Barn	Climbing Hill	SMR	SB-1@28'	2/11/2010	1127.30	1099.30	1097.90		<0.0337	
7LTV89	Bus Barn	Climbing Hill	SMR	SB-1@29'	2/11/2010	1127.30	1099.30	1097.90		<0.00285	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-3	12/12/2009	1126.90		1098.29		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-4	12/12/2009	1127.40		1098.02		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-5	12/12/2009	1127.60		1098.16		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-9	12/12/2009	1126.90		1097.93		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-10	12/12/2009	1127.90		1098.86		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-11	12/12/2009	1125.80		1098.21		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-12	12/12/2009	1127.40		1098.55		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-13	12/12/2009	1127.40		1097.84		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-14	12/12/2009	1128.30		1098.90		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-16	12/12/2009	1127.70		1098.36		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-21A	12/12/2009	1127.40		1098.49		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-23	12/12/2009	1127.80		1098.17		53.10	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-25	12/12/2009	1127.00		1097.26		<1.00	
7LTV89	Bus Barn	Climbing Hill	SMR	MW-26	12/12/2009	1130.70		1099.36		<1.00	

Type	Receptor	Soil Leaching SSTLs (mg/kg)			
		Benzene	Toluene	Ethylbenzene	TEH-Diesel
DWW	DWW-10, Wolf's Well (Hanco	N(3)	N(3)	N(3)	NSC
NDWW	NDWW-1, LLOYD WELL	N(PE)	N(PE)	N(PE)	NSC
NDWW	NDWW-2, KAMM WELL	N(PE)	N(PE)	N(PE)	NSC
PGWS	No-IC	0.64	N(2)	18	NSC
PGWS	IC	0.67	N	19	N

SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY and NFA GW/SL MONITORING RESULTS

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor Type	Receptor Label	Receptor Description	Chem. Risk	Recept. Curr. Risk	Min. Freq.
GW/SL MONITORING PLAN											
NFA GW/SL MONITORING RESULTS											
B-1 MW-2A	13										
		1,789	Yes	Yes	S/	DWW	DWW-10	Wolf's Well (Hanc	N		
		1,046	Yes	Yes	S/	NDWW	NDWW-1	LLOYD WELL	N	N	
		95,521	Yes	Yes	S/	NDWW	NDWW-2	KAMM WELL	N	N	
		290	Yes	Yes	S	PGWS	No-IC		N	L	
		304	Yes	Yes	S	PGWS	IC		N	L	
		290	Yes	Yes	SL	PGWS	No-IC		N	N	
		304	Yes	Yes	SL	PGWS	IC		N	N	
MW-4	<1										
		290	Yes	Yes	T-ML/T-ML	PGWS	No-IC		N	L	
		290	Yes	Yes	TG/TG	PGWS	No-IC		N	L	
		225	Yes	Yes	T-ML/T-ML	PGWS	IC		N	L	

SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY and NFA GW/SL MONITORING RESULTS

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor Type	Receptor Label	Receptor Description	Chem. Risk	Recept. Curr. Risk	Min. Freq.
GW/SL MONITORING PLAN											
NFA GW/SL MONITORING RESULTS											
MW10 MW-	<1										
		588,284	Yes	Yes	S/	DWW	DWW-10	Wolf's Well (Hanc	N		
		471,547	Yes	Yes	S/	NDWW	NDWW-1	LLOYD WELL	N	N	
		760,817	Yes	Yes	S/	NDWW	NDWW-2	KAMM WELL	N	N	
		7,300	Yes	Yes	S	PGWS	No-IC		N	L	
		15,099	Yes	Yes	S	PGWS	IC		N	L	

SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY and NFA GW/SL MONITORING RESULTS

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor Type	Receptor Label	Receptor Description	Chem. Risk	Recept. Curr. Risk	Min. Freq.
GW/SL MONITORING PLAN											
NFA GW/SL MONITORING RESULTS											
B-1 MW-2A	383										
		83,706	Yes	Yes	S/	DWW	DWW-10	Wolfs Well (Hanc	N		
		10,794	Yes	Yes	S/	NDWW	NDWW-1	LLOYD WELL	N	N	
		416,727	Yes	Yes	S/	NDWW	NDWW-2	KAMM WELL	N	N	
		3,700	Yes	Yes	S	PGWS	No-IC		N	L	
		3,747	Yes	Yes	S	PGWS	IC		N	L	
		3,700	Yes	Yes	SL	PGWS	No-IC		N	N	
		3,747	Yes	Yes	SL	PGWS	IC		N	N	

SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY and NFA GW/SL MONITORING RESULTS

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor Type	Receptor Label	Receptor Description	Chem. Risk	Recept. Curr. Risk	Min. Freq.
GW/SL MONITORING PLAN											
NFA GW/SL MONITORING RESULTS											
MW10 MW-	<3										
		3,499,822	Yes	Yes	S/	DWW	DWW-10	Wolf's Well (Hanc	N		
		3,480,392	Yes	Yes	S/	NDWW	NDWW-1	LLOYD WELL	N	N	
		5,381,261	Yes	Yes	S/	NDWW	NDWW-2	KAMM WELL	N	N	
		73,000	Yes	Yes	S	PGWS	No-IC		N	L	
		139,893	Yes	Yes	S	PGWS	IC		N	L	

APPENDIX 1

EVALUATION OF ANALYTICAL DATA

APPENDIX 1

EVALUATION OF ANALYTICAL DATA

Annual monitoring for the School District site was performed in conjunction with the Former Service Station on December 12, 2009. A Site Monitoring Report (SMR) for both sites was prepared on December 26, 2009. The combined SMR provided mapping of the current groundwater concentrations. The 2009 results indicate that groundwater concentrations have declined substantially at the School District site and are below SSTLs for this site.

For this reclassification SMR, a soil boring was advanced at MW-2A on February 11, 2010. Soil samples were collected at a depth of 28 feet, the depth of the previous maximum soil concentration, and at a depth 29 feet, the depth of the current maximum field screening vapor level. Both samples of the samples were analyzed for BTEX by the OA-1 method and TEH by the OA-2 Method. The maximum benzene concentration declined from 1.1 ppm in 2000 to <0.248 ppm.

Because soil samples collected from the excavation in 1995 had a detection limit of 1 ppm, the percent reduction factor was applied to the benzene concentrations of these excavation samples. The reduced concentrations are indicated by "(prf)" following the sample label in the SMR software. Application of the percent reduction factor, results in a maximum benzene soil concentration of <0.248 ppm.

Several changes have been made regarding receptors and zoning. Because of well plugging or conversion to nondrinking water wells nine of the ten previous drinking water wells were removed as drinking water receptors and three nondrinking water wells receptors were added to the Tier 2 software. The Wolfs well DWW-10, now used by Charles Hancock, is the only remaining drinking water well. This well is located west of the map coverage area and entirely outside of the receptor ID plumes.

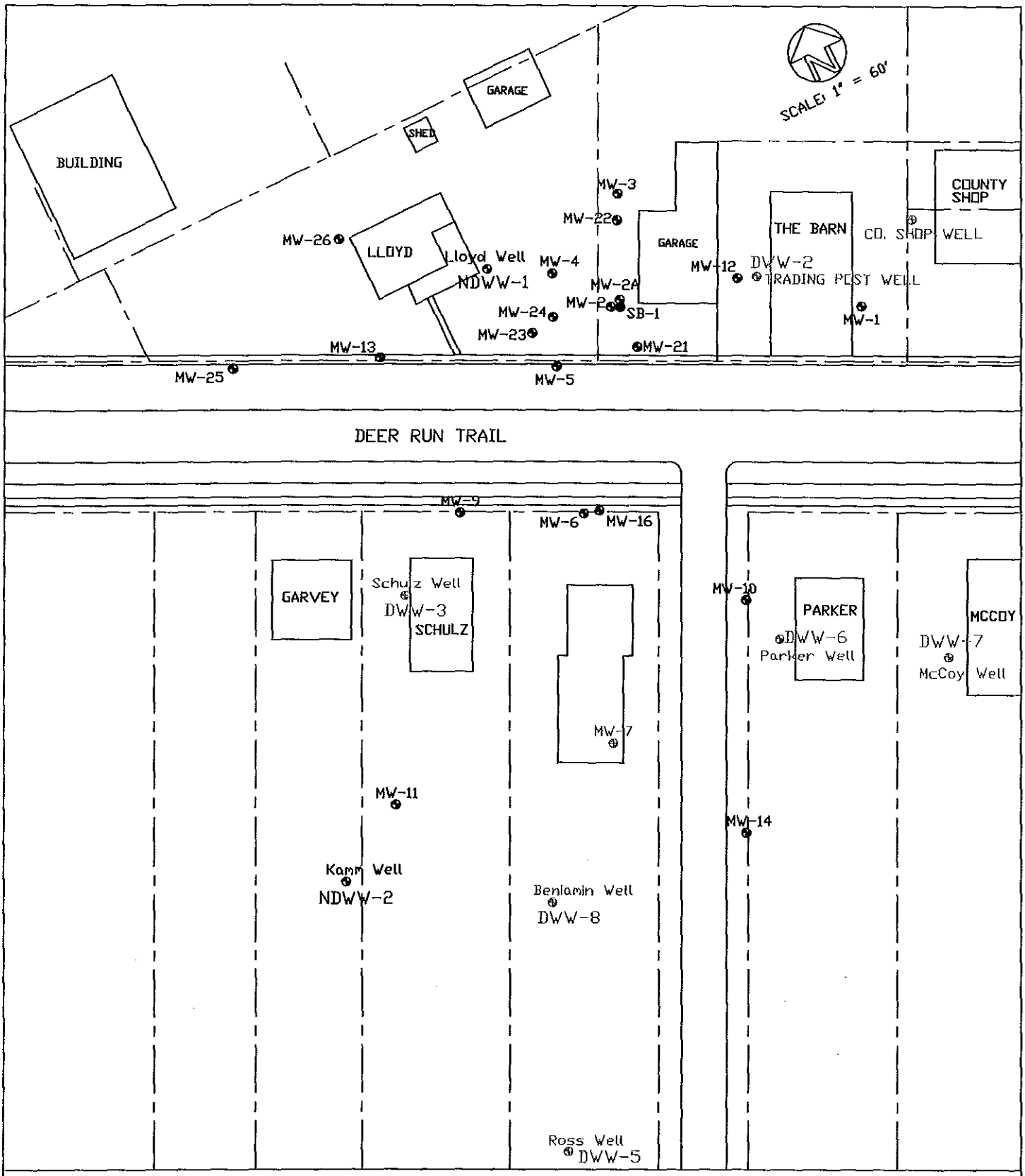
A new septic system has been installed at the property across the street from the site. Zoning in the area has been changed to general commercial, suburban residential, or agriculture preserve. Because the vapor pathways

are not complete at this site, no changes were required for the report or software.

A sample from MW-21A was collected by others on March 18, 2003 and indicated as MW-21. The 2003 analytical results for this sample do not fit the recent history of this location. These results may be associated with a different well and the results should be questioned and possibly ignored. Although not "steady or declining", the 2003 results remain below the SSTLs and because this well is not in the Tier 2 monitoring plan, it's "steady or declining" status is not indicated in monitoring plan summary table.

APPENDIX 2

SITE PLAN MAP

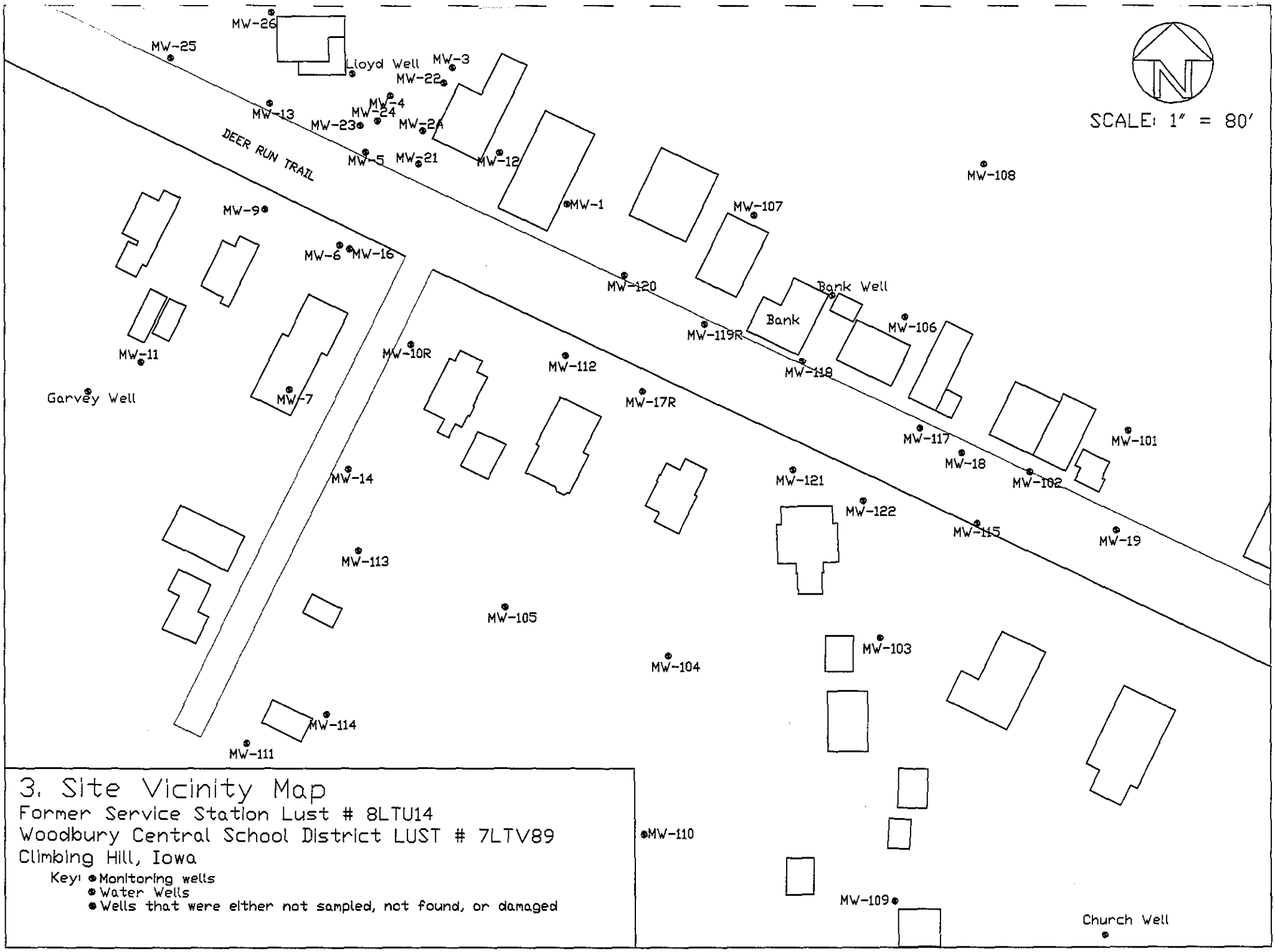


2. Site Plan Map
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key:
Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

APPENDIX 3

SITE VICINITY MAP



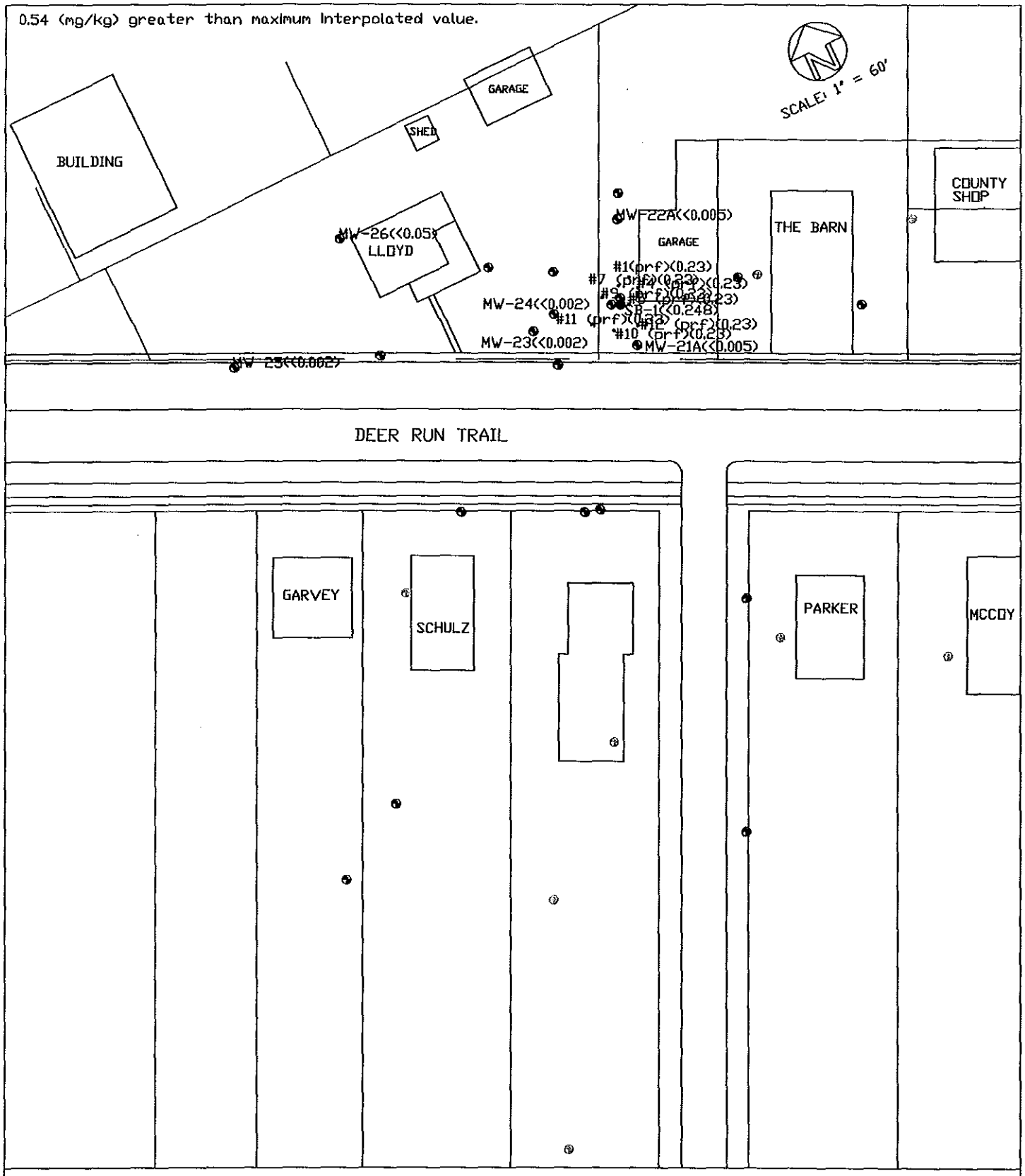
3. Site Vicinity Map

Former Service Station Lust # 8LTU14
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: ● Monitoring wells
● Water Wells
● Wells that were either not sampled, not found, or damaged

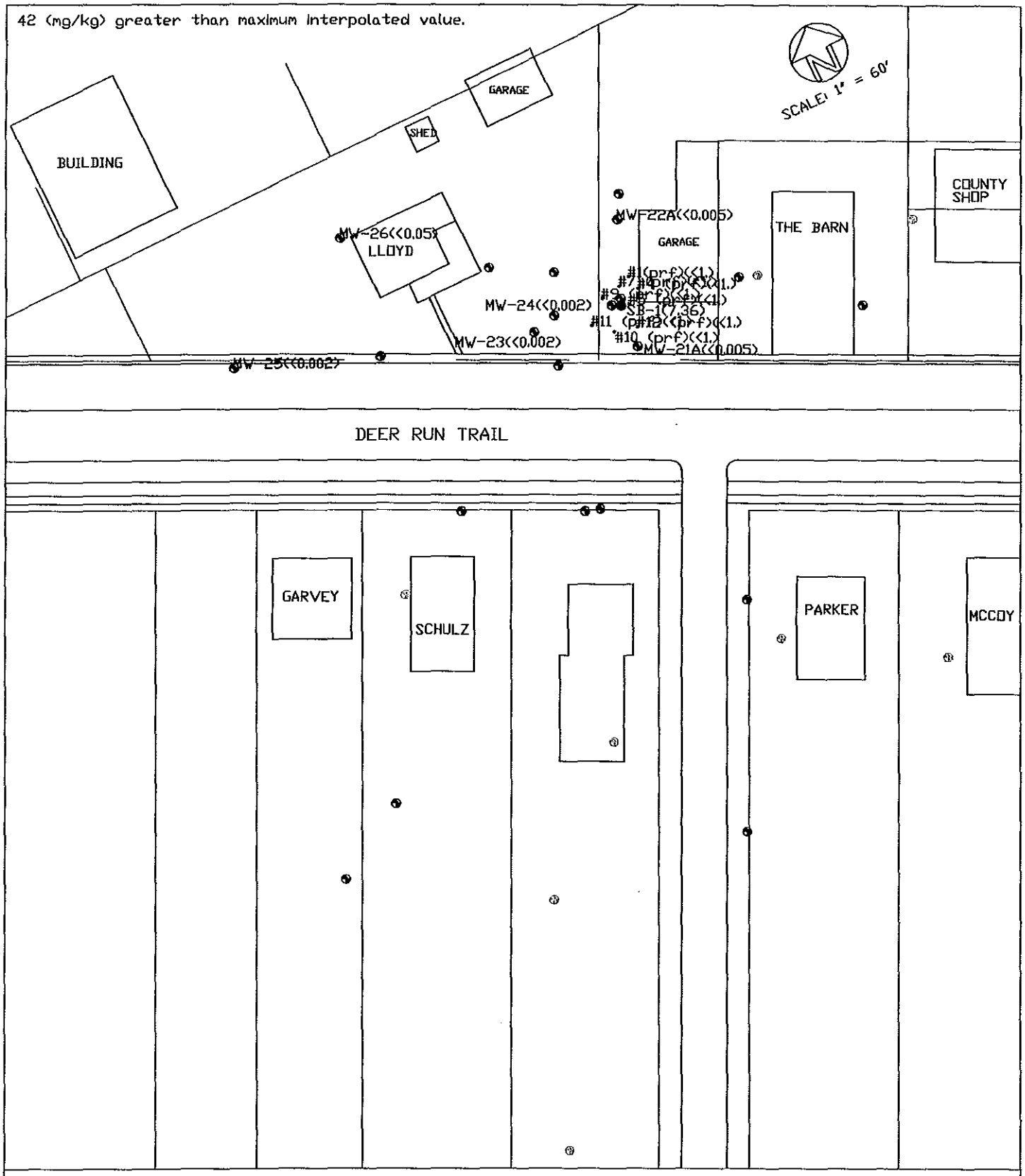
APPENDIX 5

SOIL CONTAMINATION MAPS



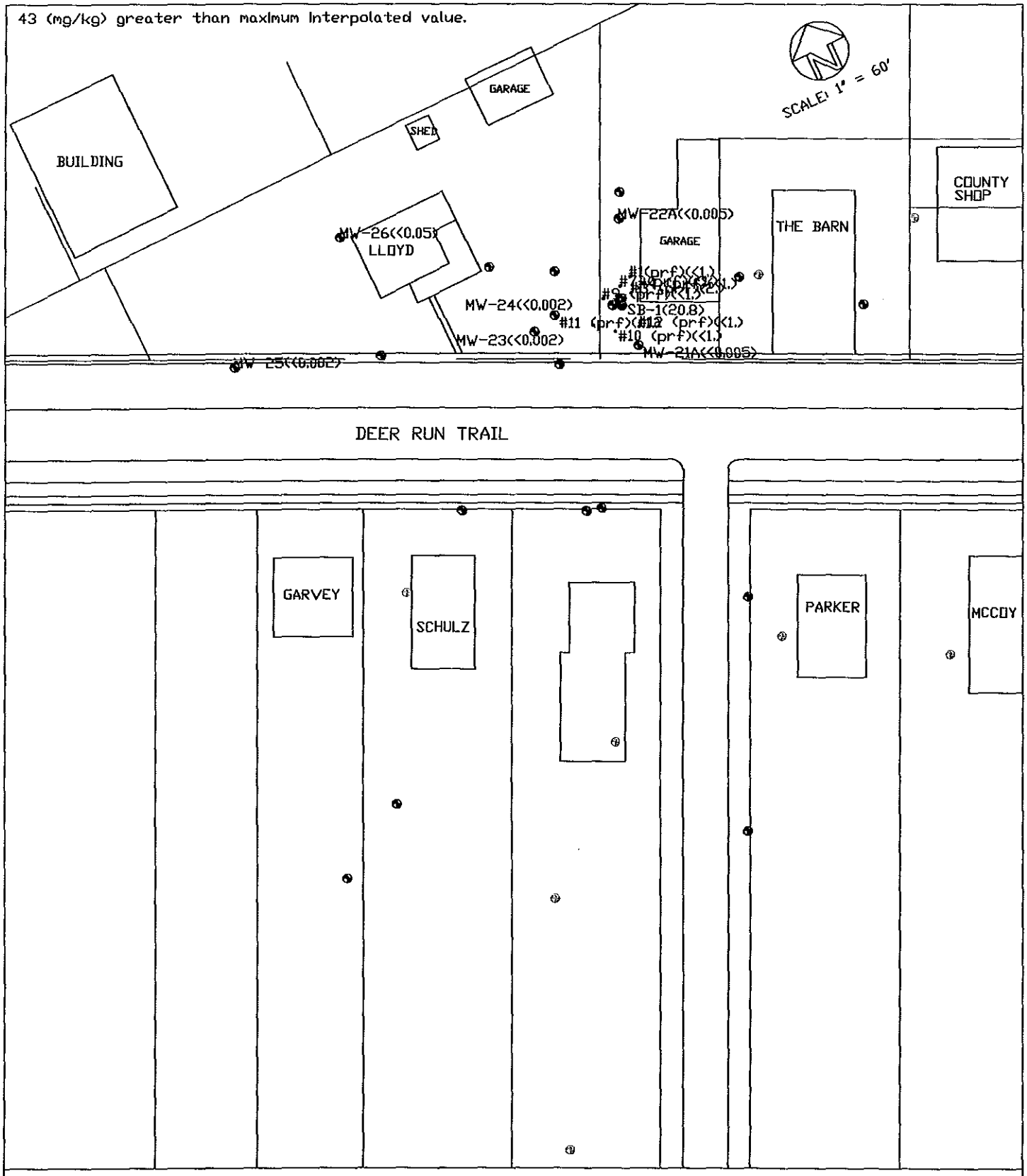
5a. Soil Contamination Map: 2/11/2010, Benzene (mg/kg) Woodbury Central School District LUST # 7LTV89 Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black



5b. Soil Contamination Map:
2/11/2010, Toluene (mg/kg)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

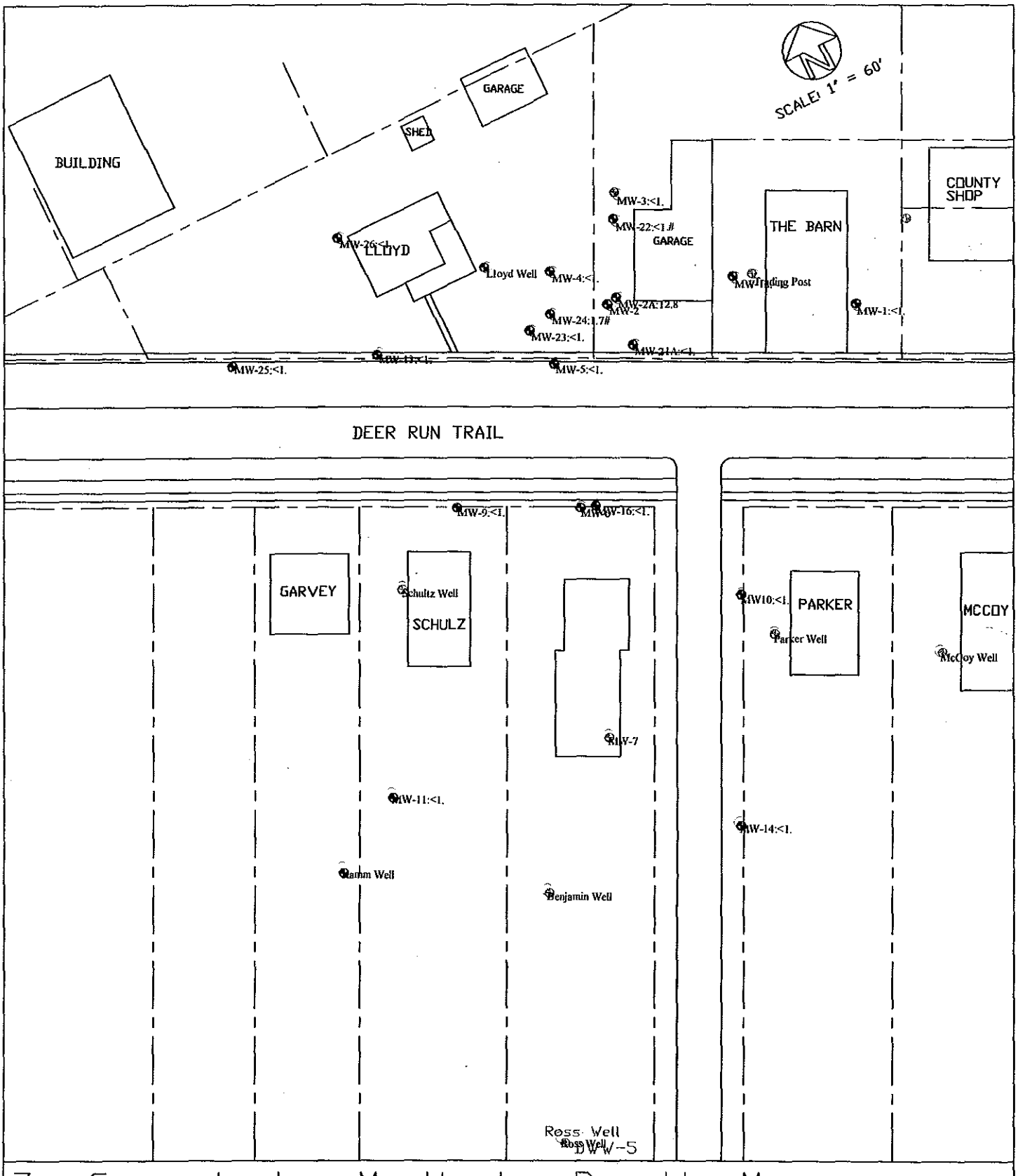


5c. Soil Contamination Map: 2/11/2010, Ethylbenzene (mg/kg) Woodbury Central School District LUST # 7LTV89 Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

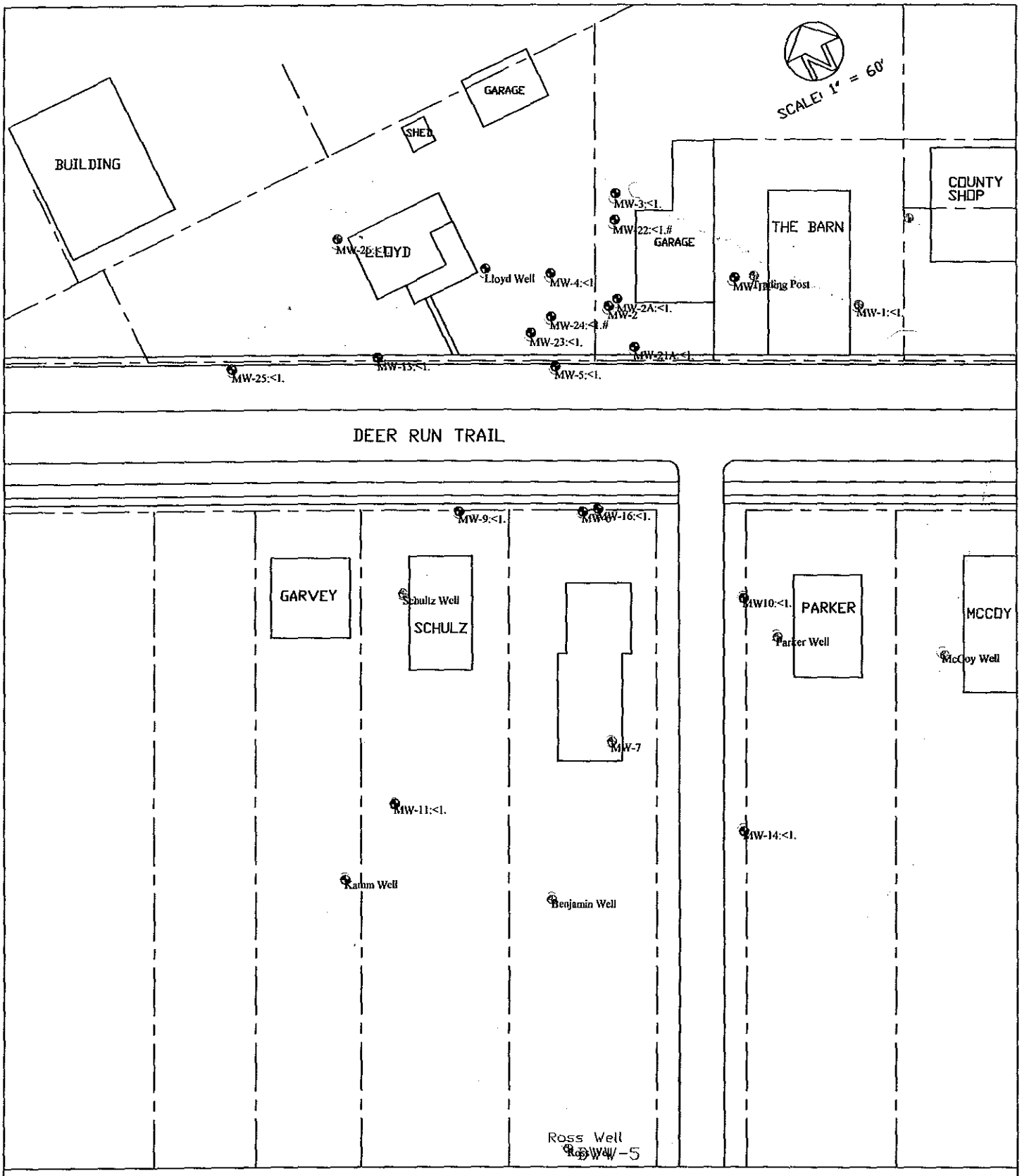
APPENDIX 7

GROUNDWATER MONITORING RESULTS MAPS



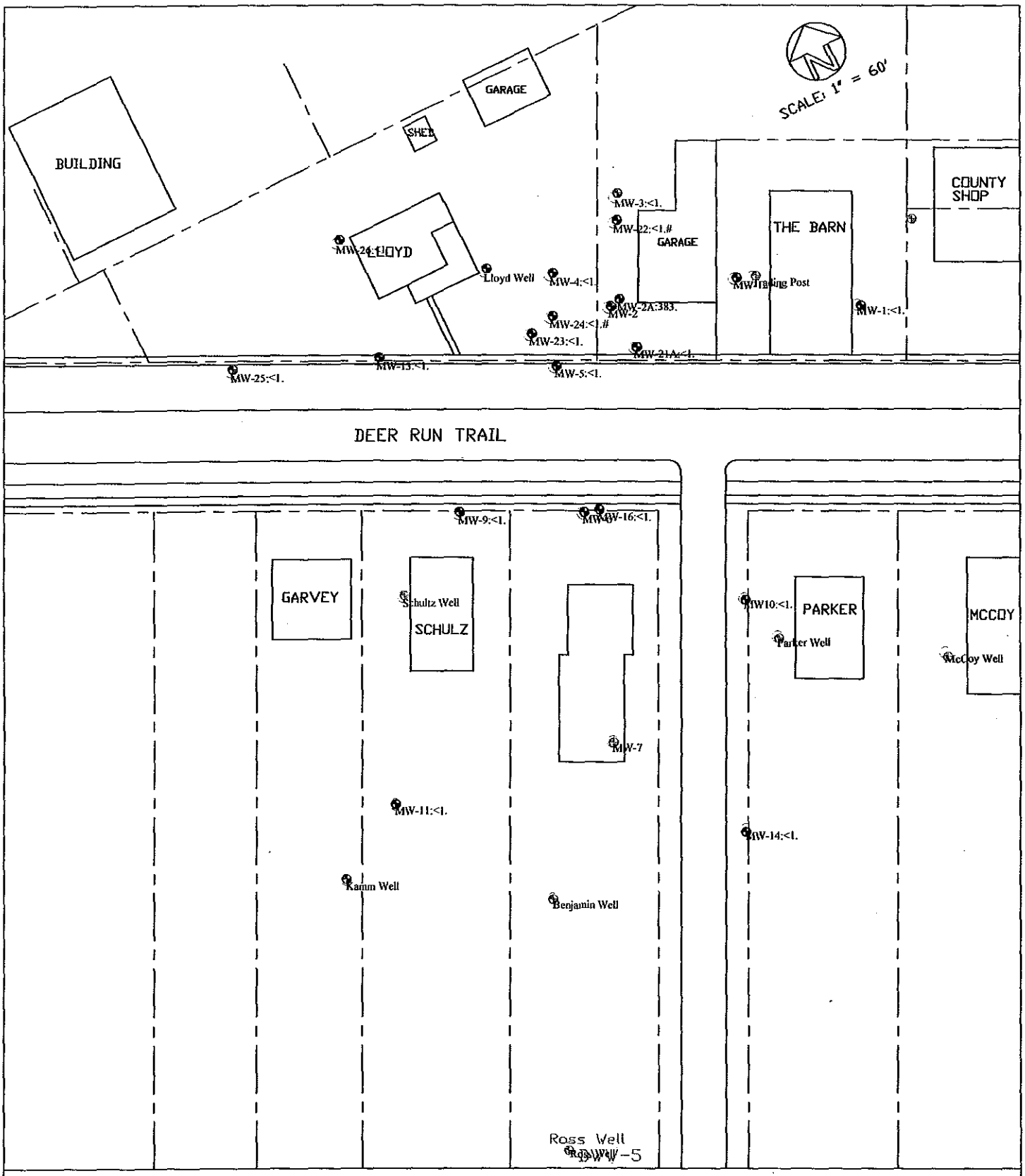
7a. Groundwater Monitoring Results Map:
12/12/2009, Benzene (ug/L)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black



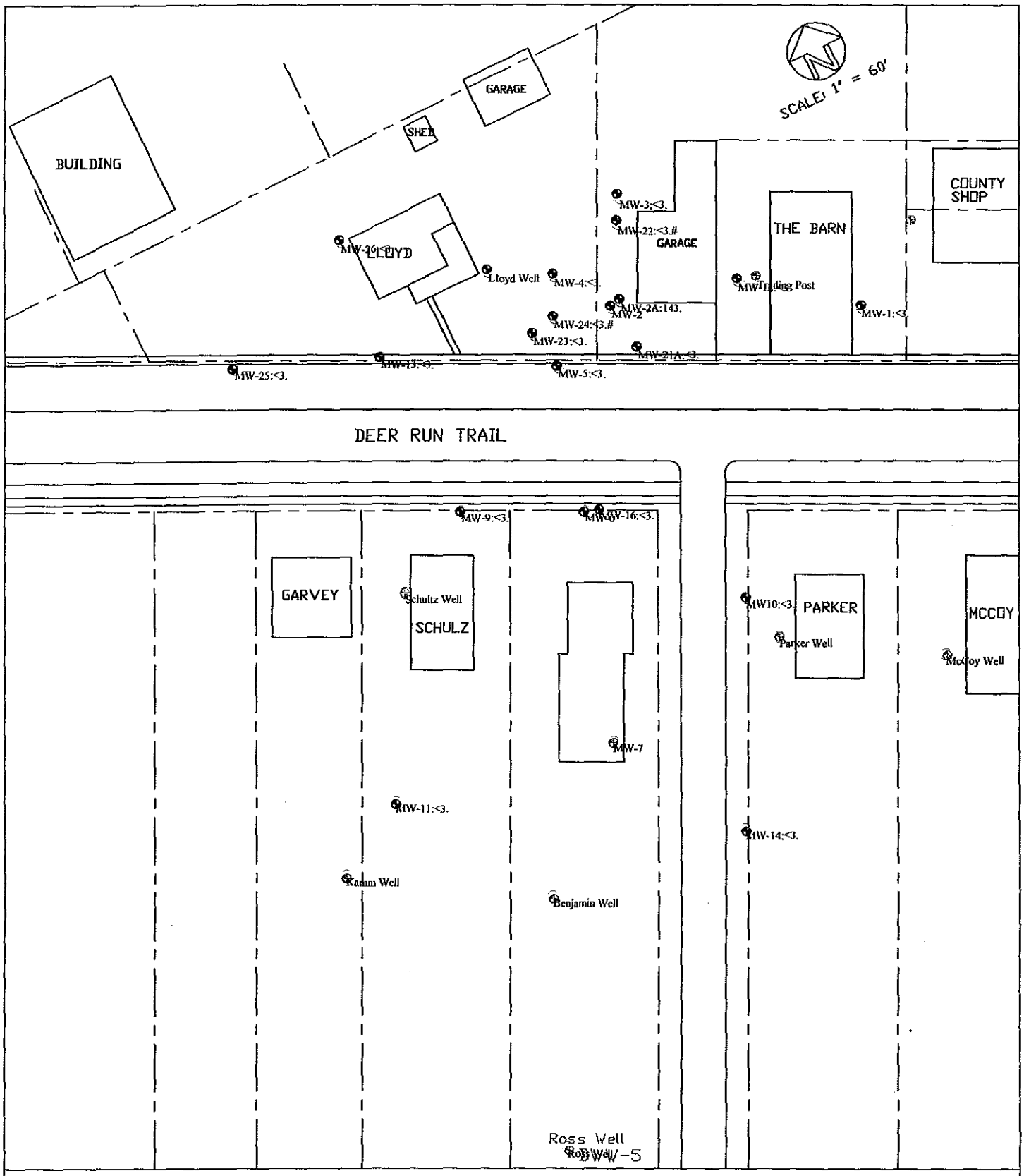
7b. Groundwater Monitoring Results Map:
12/12/2009, Toluene (ug/L)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black



7c. Groundwater Monitoring Results Map:
12/12/2009, Ethylbenzene (ug/L)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

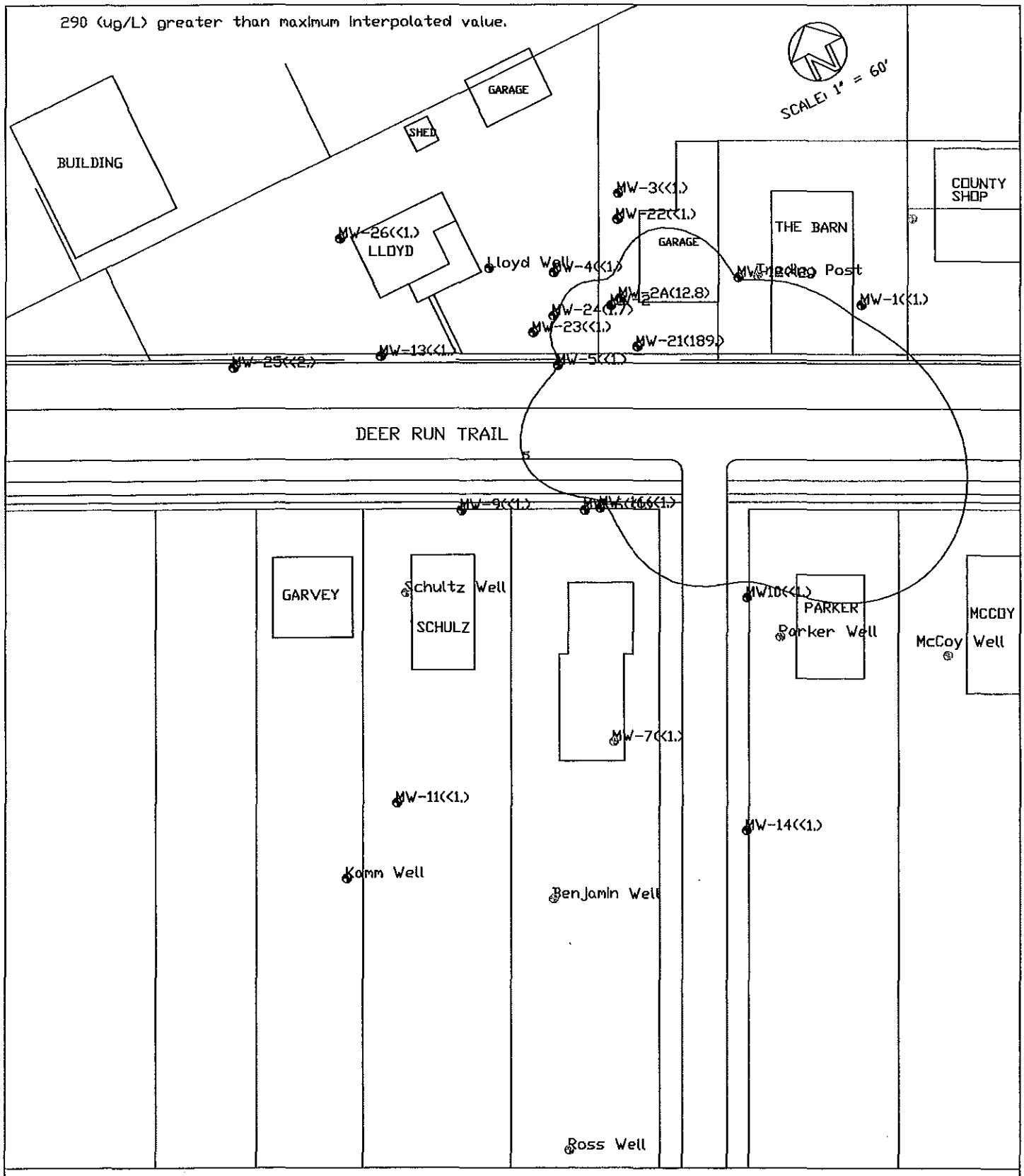


7d. Groundwater Monitoring Results Map: 12/12/2009, Xylenes (ug/L)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

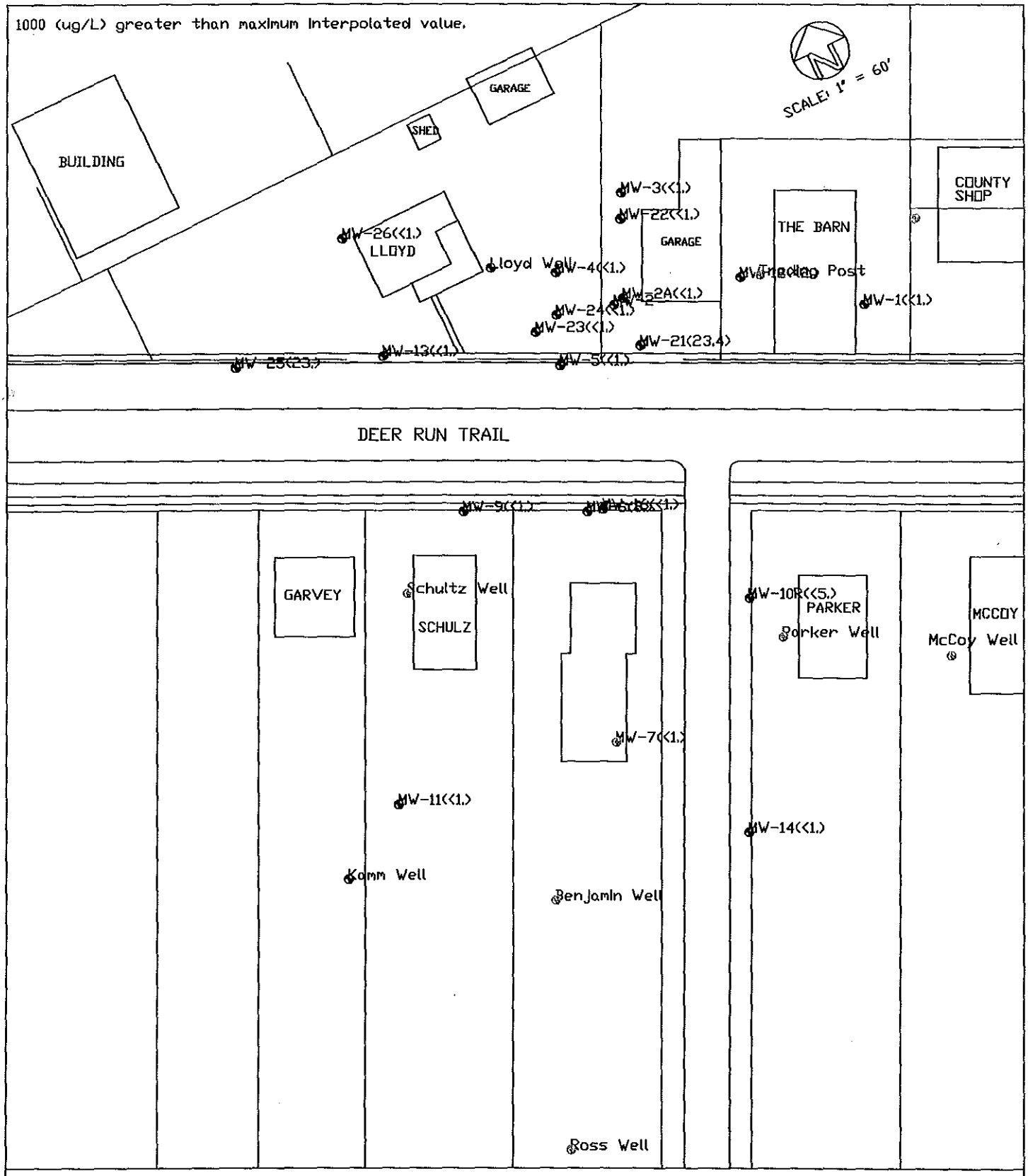
APPENDIX 8

GROUNDWATER CONTAMINATION MAPS



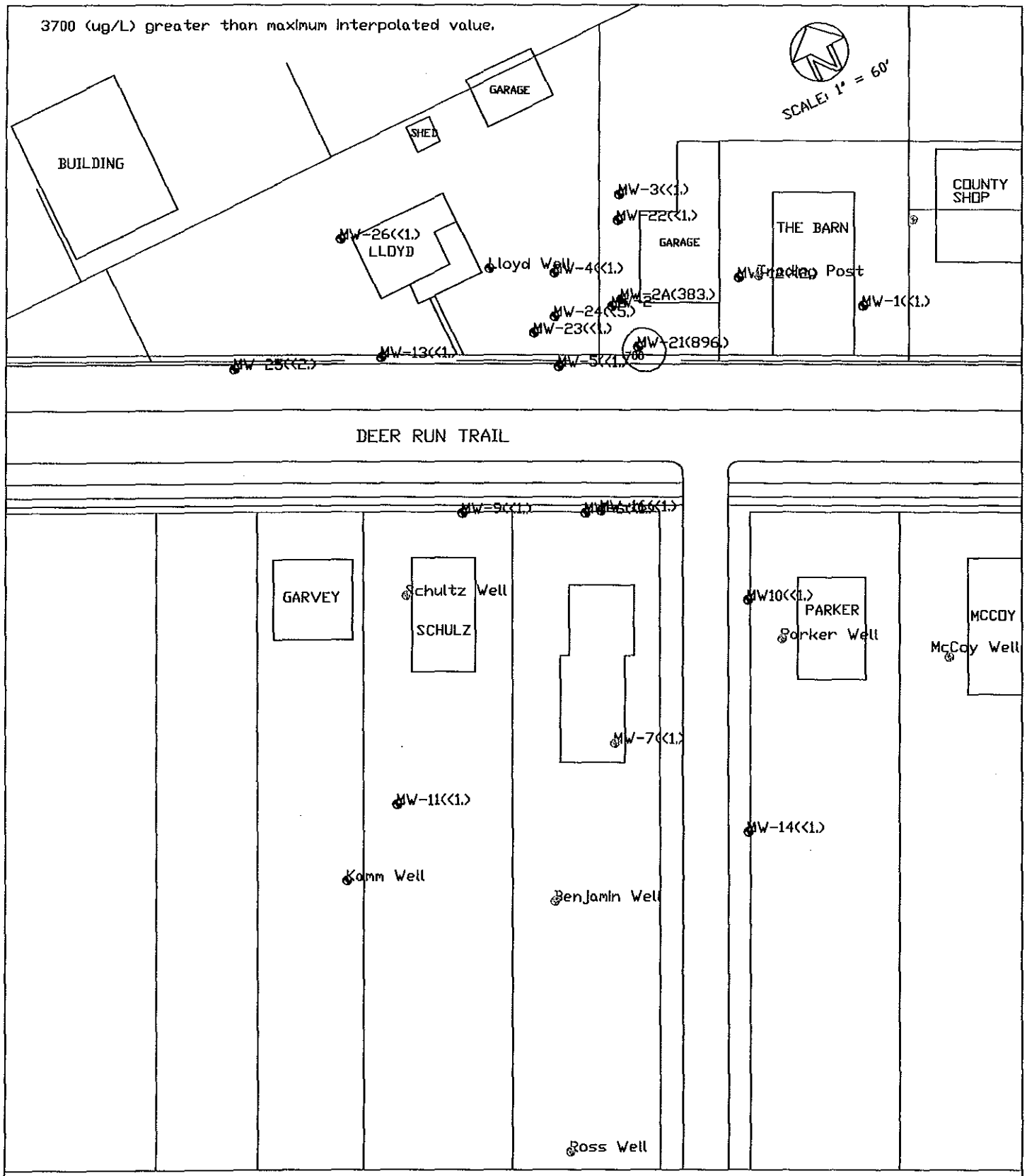
8a. Groundwater Contamination Map: 12/12/2009, Benzene (ug/L)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black



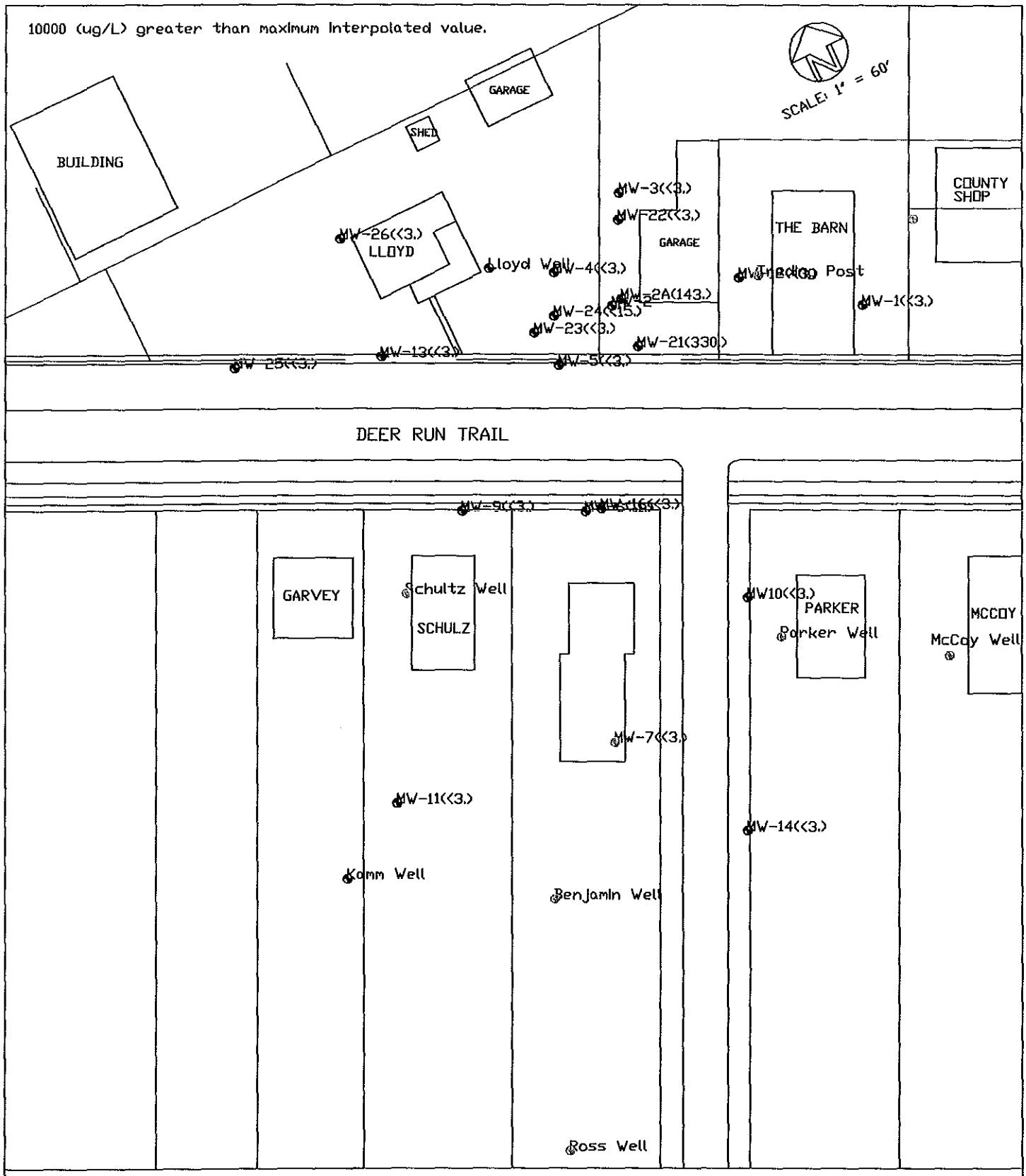
8b. Groundwater Contamination Map: 12/12/2009, Toluene (ug/L) Woodbury Central School District LUST # 7LTV89 Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black



8c. Groundwater Contamination Map: 12/12/2009, Ethylbenzene (ug/L) Woodbury Central School District LUST # 7LTV89 Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

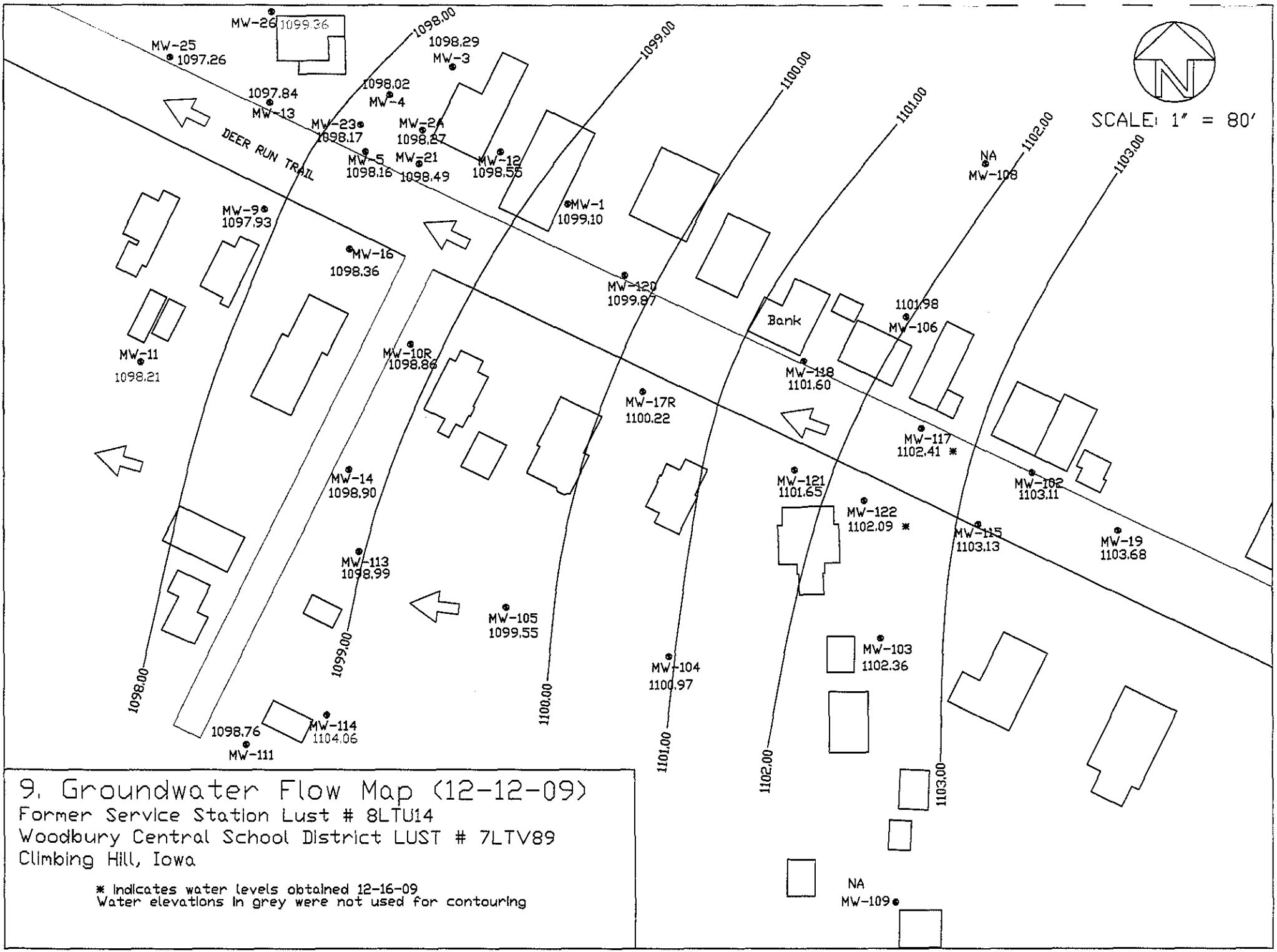


8d. Groundwater Contamination Map:
12/12/2009, Xylenes (ug/L)
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

Key: Monitoring Wells are shown in red
Plugged wells are shown in grey
Non-drinking Water wells are shown in blue
Damaged, or missing wells are shown in black

APPENDIX 9

GROUNDWATER FLOW DIRECTION MAP



9. Groundwater Flow Map (12-12-09)

Former Service Station Lust # 8LTU14
Woodbury Central School District LUST # 7LTV89
Climbing Hill, Iowa

* Indicates water levels obtained 12-16-09
Water elevations in grey were not used for contouring

APPENDIX 12

DOCUMENTATION

Well Search

Well Search Report

Search Method: LUST/UST

For: Northwest Environmental Services, Inc.
P.O. Box 401
Alton, IA 51003

Subject: LUST ID: 7LTV89
Site Name: Woodbury Central Schools
Address: 79 HWY D54 W Climbing Hill IA, 510150000
XY UTM Coordinates: 246258/4692436
Search Radius(ft.): 1000

Date: 2/5/2010

Prepared By: Northwest Environmental Services, Inc.

Included in search	No. of wells	Database
X	2	IGS well database General well database maintained by IGS, location accuracy varies 3,730 to 25 ft., last updated 8/2005.
X	1	Public wells Municipal and nonmunicipal public well databases maintained by IGS, location varies 3,730 to 25 ft., under development.
X	2	SDWIS public wells Public well database developed from the Safe Drinking Water Information System database maintained by IDNR, estimated locational accuracy varies from 15m. to 3300m. Created from 5/2005 data.
X	11	Private well tracking system IDNR database management system for Grants-to-counties-covered wells. Locational accuracy unknown, assumed to be +/- 17 m., Last update 7/2005.
X	0	Wells registered for testing Wells tested under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Permitted private wells Wells permitted under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Registered abandoned wells Wells abandoned under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Water use facilities Wells used by facilities permitted to withdraw >25,000 gallons per day, locational accuracy is +/- 20m to 1150 m. Created from 7/2005 data.
X	0	Municipal wells and intakes Locational accuracy 220 m., last updated 8/96.
X	0	Ag drainage wells Locational accuracy 100 m., last updated 4/98.

Well Search Detail

Subject: LUST ID: 7ltv89
XY UTM Coordinates: 246258/4692436
Search Radius (ft.): 1000

IGS Well Database

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
20172	35761	T. 87N., R. 45W., Sec. 16, SE, SE, SE	Calc. +/- 140 m.	171 (m)	82	11/30/1993	Benjamin, Pat	Well type: Private
20159	58755	T. 87N., R. 45W., Sec. 16, SE, SE, SW, SW, SW	GPS	197 (m)	65		The Barn (climbing Hill)	Well type: Public access

Public Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
20164	58755	T. 87N., R. 45W., Sec. 16, SE, SE, SW, SW, SW	GPS	197 (m)	65		The Barn (climbing Hill)	Local name: The Barn (climbing Hill) #1; Status: Active

SDWIS public wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
20228	2412138	T87N, R45W, Sec. 21, NE, NE, NE	+/- 15 m.	106 (m)	unknown		First Trust And Savings, Climbing Hill	Well # 1 ( ); PWSID: 9715869; Status: active
20152	2577673	T87N, R45W, Sec. 16, SE, SE, SW	+/- 15 m.	195 (m)	82		The Barn (climbing Hill)	PWSID: 9715201; Status: inactive

Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
20167	2095449	T. 87 N., R. 45W., Sec. 16, SW, SW, SE, SW, NE	nom. +/- 25m.	121 (m)	122	11/07/2003		Status: Retired; Well use: Household, Livestock
20155	2092688	T. 87 N., R. 45W., Sec. 16, SW, SW, SE, SW, NW	nom. +/- 25m.	162 (m)	78	07/26/2003		Status: Active; Well use: Household
20221	2120756	T. 87 N., R. 45W., Sec. 21, NE, NE, NE, NE, SE	nom. +/- 25m.	127 (m)	1	01/01/1846	Benjamin, Pat	Status: Active; Well use: Household
20236	2124943	T. 87 N., R. 45W., Sec. 21, NE, NE, NE, SW, NE	nom. +/- 25m.	141 (m)	93	06/23/1987	Boraowski, Russell	Status: Active; Well use: Household
20179	2135100	T. 87 N., R. 45W., Sec. 16, SW, SE, SW, SE, NE	nom. +/- 25m.	294 (m)	90	05/01/1992	Goodrich, David	Status: Active; Well use: Household

20173	2106776	T. 87 N., R. 45W., Sec. 16, SW, SW, SW, SE, NE	nom. +/- 25m.	171 (m)	72	06/10/1974	Little, Garrett	Status: Plugged; Well use: Household
20222	2095450	T. 87 N., R. 45W., Sec. 16, SW, SW, SW, NW, SW	nom. +/- 25m.	122 (m)	135	04/01/2004	Rogers, Patrick	Status: Retired; Well use: Household
20233	2098533	T. 87 N., R. 45W., Sec. 21, NE, NE, NE, NE, SW	nom. +/- 25m.	151 (m)	120	01/01/1985	Schleis, Charles	Status: Active; Well use: Household
20178	2107458	T. 87 N., R. 45W., Sec. 21, NE, NE, NW, NE, SE	nom. +/- 25m.	101 (m)	100	03/01/2004	Schulz, Kay	Status: Active; Well use: Household
20138	2124938	T. 87 N., R. 45W., Sec. 16, SW, SW, SE, NW, SE	nom. +/- 25m.	233 (m)	80	08/15/1982	Steinhauer, Phyllis	Status: Active; Well use: Household
20251	2094355	T. 87 N., R. 45W., Sec. 22,	nom. +/- 25m.	235 (m)	200	01/01/1980	West, Doug	Status: Active; Well use: Household

Wells Registered For Testing

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

No records found from this data source

Permitted Private Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

No records found from this data source

Abandoned Wells (plugged)

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

No records found from this data source

Water Use Facilities

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

No records found from this data source

Municipal Wells And Intakes

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

No records found from this data source

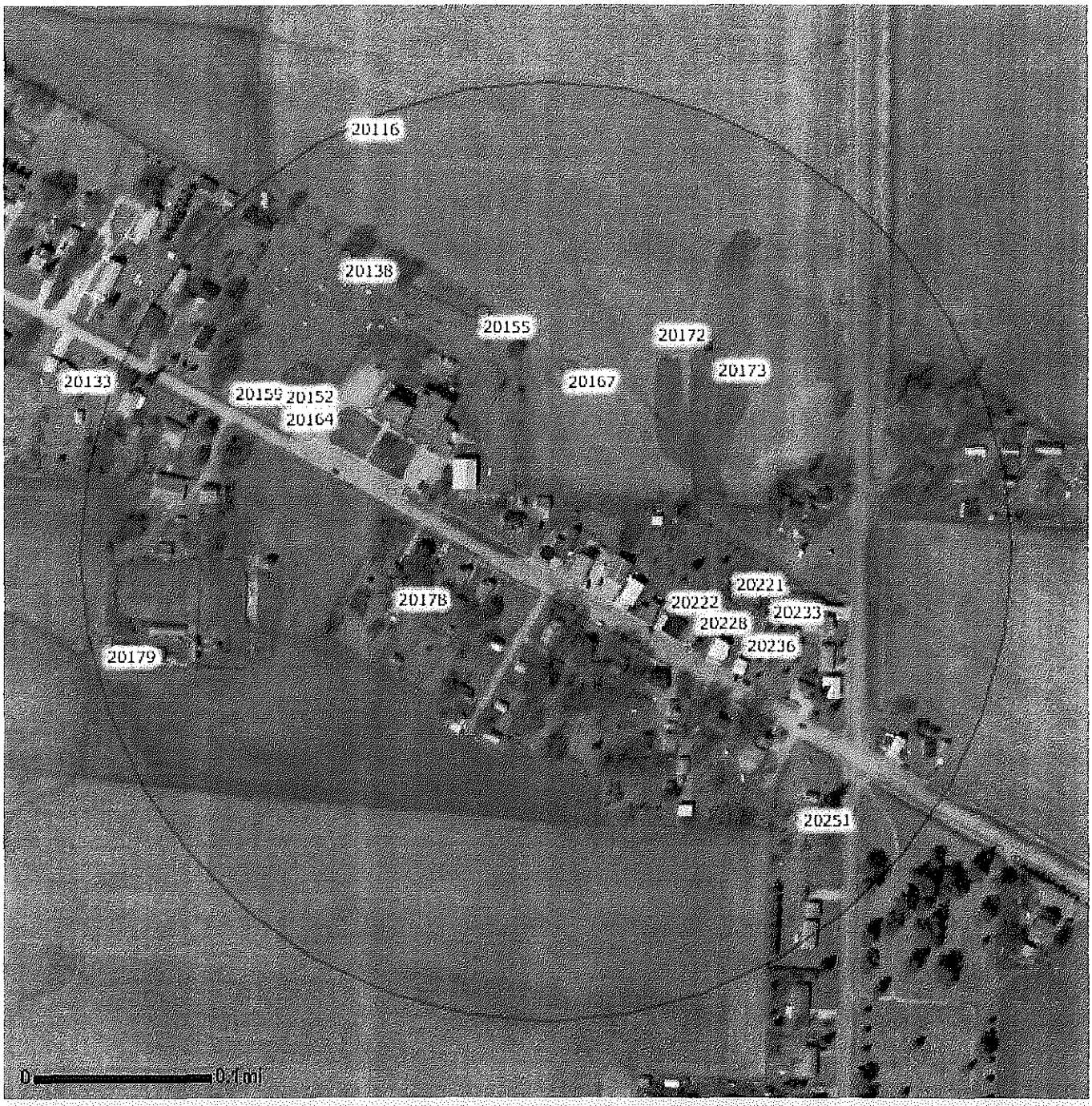
Ag Drainage Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

No records found from this data source

Well Search Buffered Map

Subject: LUST ID: 7ltv89
XY UTM Coordinates: 246258/4692436
Search Radius (ft.): 1000



Map Notes:

- ○ UST
- * LUST
- Please refer to the Accuracy column in Well Search Detail.
- Since multiple points can be at the same spot (as those located to the center of a quarter section), points were randomly dispersed within 10 meters around that spot so all points can be seen.
- Aerial photos were flown in 2002.

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