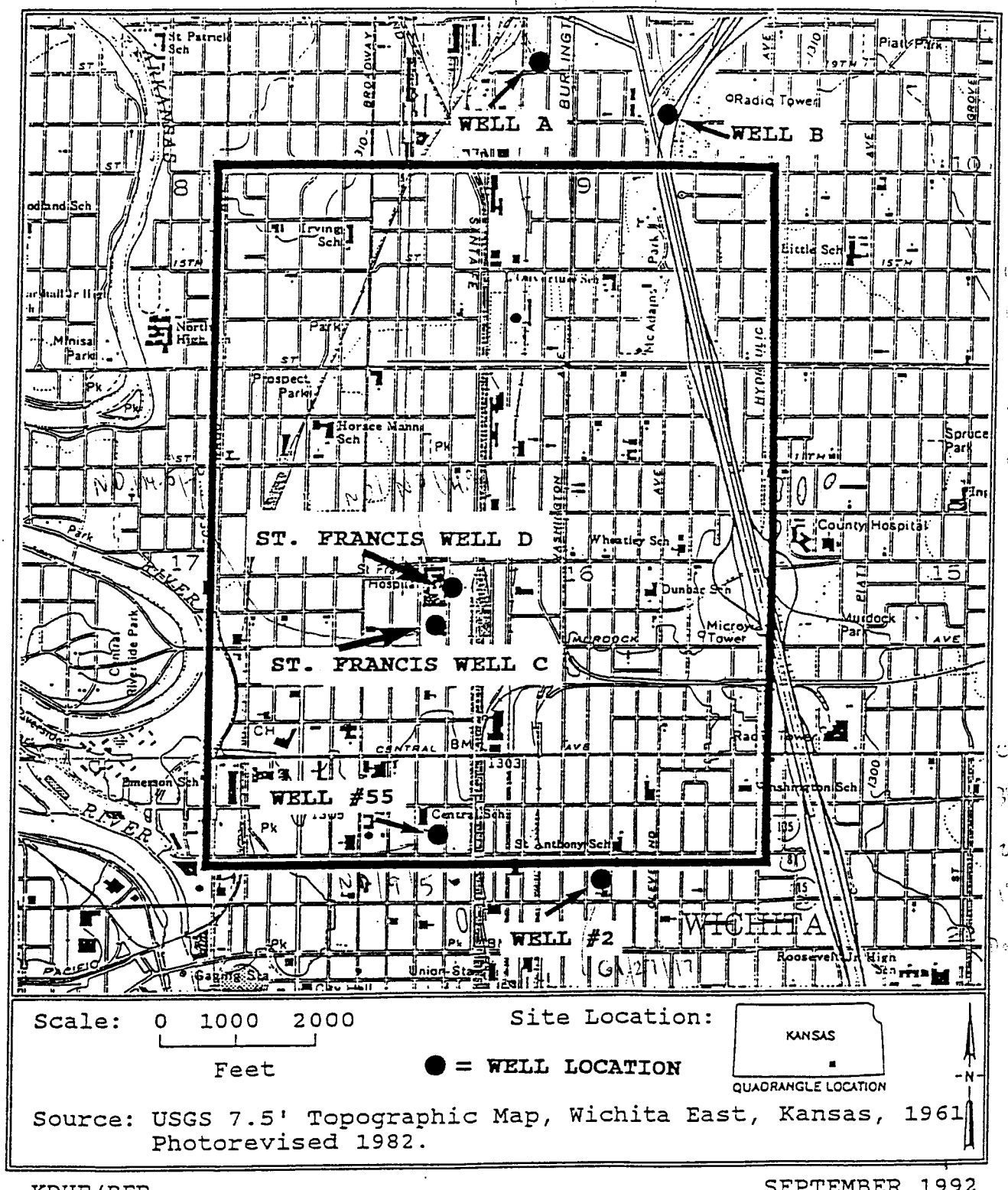
Appendix B
Data from Miscellaneous Facilities within the NIC Site

Appendix B-1
13W - 13th & Washington



KDHE/BER

SEPTEMBER 1992

Figure 5: Ground Water Sample Location Map
13th and Washington PA, February, 1991

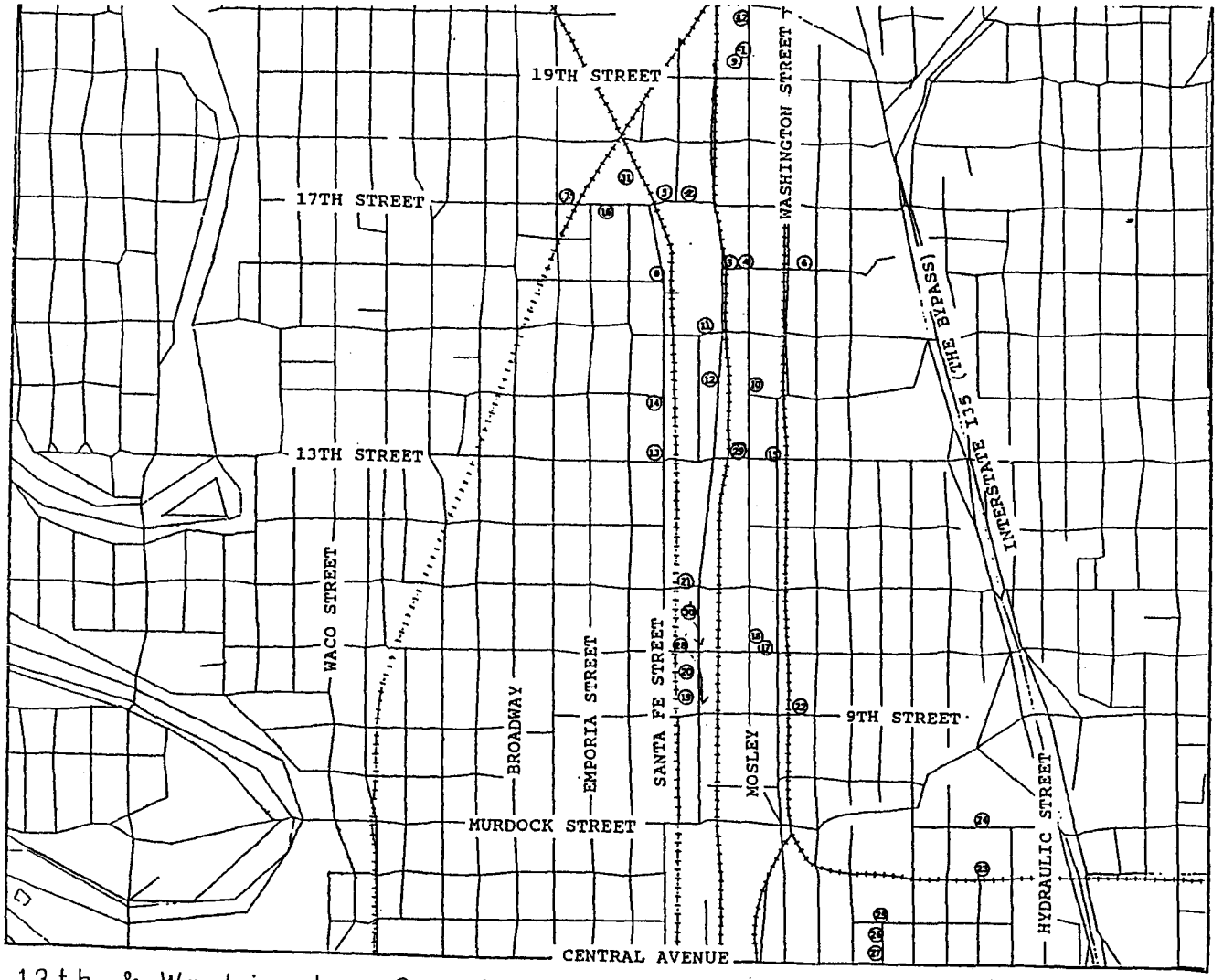


FIGURE 6
GROUND WATER SAMPLING LOCATION MAP
13TH AND WASHINGTON ESI
SEPTEMBER, 1992

①-㉜ = 32 SAMPLING LOCATIONS COLLECTED WITH GEOPROBE

Source: KDHE/BER Field Notes and 13th and Washington Site File

Prepared by the KDHE/BER November, 1992

13th & Washington Sample Location Map, '92

Kansas Department of Health and Environment
GIS Center, Oct 1992

DATA SOURCES:

Political Boundaries - KGS/KCDB
Hydrology Features - CENSUS/TIGER
Road Features - CENSUS/TIGER
Rail Features - KGS/KCDB
PWS Sites - KDHE

County BDY
Hydrology Features - TIGER
Road Features - TIGER
Rail Features

.2 0.4 0.6
Miles

Table 1
13th and Washington Site PA Data
Ground Water Sampling Results
February, 1991

Sample Identification (Well #)	Contaminants µg/l (ppb)								
	TCE	PCE	BENZ	METH	TCA	VC	11DC	12DC	11DCA
Well #2 (Gil+Mos)	20.0	61.0	ND	ND	ND	ND	ND	17.0	ND
Well 55 (Gil+Mos)	9.0	ND	ND	5.0	ND	ND	ND	5.0	ND
MW A (29th+Mead)	620.0	14.0	ND	ND	2.6	ND	ND	81.0	ND
MW B (29th+Mead)	58.0	ND	1.1	2.5	ND	9.5	ND	70.0	ND
Well C(13th+Wash)	14.5	ND	ND	ND	3.7	ND	10.9	20.1	12.7
Well D(13th+Wash)	ND	ND	ND	ND	3.8	ND	6.2	14.9	10.5
MCL	5.0	5.0	5.0	50.0	200.0	2.0	7.0	70.0	5.0

Source: P.A. 13th and Washington, Wichita, Kansas, May,1991
Abbreviations: (Gil+Mos) = Gilbert and Mosley Site
(13th+Wash) = 13th and Washington Site
TCE = Trichloroethylene
PCE = Tetrachloroethylene
METH = Methylene Chloride
11DC = 1,1,-Dichloroethylene
12DC = 1,2,-Dichloroethylene
11DCA = 1,1,-Dichloroethane
TCA = 1,1,1,-Trichloroethane
MCL = Maximum Contaminant Levels
BENZ = Benzene
VC = Vinyl Chloride
ND = Not Detected

Notation: Well 55 Analytical Data included in the Gilbert and Mosley Site; actual location of well may be included in the 13th and Washington Site area.

TABLE 6
13TH AND WASHINGTON SITE
GROUND WATER ANALYTICAL RESULTS
SEPTEMBER 1992

DL: 0.7 0.6 1.1 0.8 0.5 (0.5 0.5 0.7 0.6)

Sample (Probe) Number	0.6	0.5	Contaminants Detected µg/l					
	1DCE	2DCE	TCA	TCE	PCE	VCH	DCA	BTEX
1	1.2	51.6	1.3	83.7	25.0	ND	ND	ND
2	ND	7.6	ND	28.3	ND	ND	ND	ND
3	ND	19.2	4.0	73.7	4.6	ND	2.3	ND
4	3.3	65.7	ND	98.4	4.9	98.1	7.4	5.4
5	ND	3.4	ND	12.1	ND	ND	ND	ND
6	ND	20.0	ND	121.0	ND	ND	ND	ND
7	ND	7.3	ND	23.6	ND	ND	ND	ND
8	ND	2.9	ND	10.0	ND	ND	ND	ND
9	4.5	42.7	4.6	289.0	2.8	ND	12.9	ND
10	1.8	51.8	ND	180.0	23.1	ND	2.9	0.5
11	ND	9.0	ND	17.3	ND	ND	ND	ND
12	ND	9.2	ND	20.2	ND	ND	ND	ND
13	ND	ND	ND	ND	ND	ND	ND	ND
14	ND	1.8	ND	2.4	ND	ND	ND	ND
15	ND	49.1	ND	64.8	ND	ND	ND	ND
16	ND	1.9	10.5	8.6	ND	ND	ND	ND
17	21.3	20.4	246.0	59.1	ND	ND	10.0	ND
18	2.8	8.0	18.3	27.0	ND	ND	1.3	ND
19	2.8	27.0	ND	ND	ND	ND	2.0	1.2*
20	5.4	57.9	ND	ND	ND	ND	19.7	0.8
21	ND	ND	ND	ND	ND	ND	ND	ND
22	ND	ND	ND	ND	ND	ND	2.7	ND*
23	ND	2.3	ND	ND	ND	ND	1.4	ND
24	ND	3.6	ND	ND	ND	ND	ND	ND
25-27	ND	ND	ND	ND	ND	ND	ND	ND
28	5.8	5.6	18.5	18.1	6.6	ND	33.9	0.9*
29	ND	ND	ND	ND	ND	ND	ND	49,010.0
30	ND	0.8	10.9	17.4	ND	ND	6.5	ND*
31	ND	ND	ND	ND	ND	ND	ND	ND
32	ND	14.0	ND	38.5	ND	0.9	ND	ND*

TCE → TCE → TCE → TCE → TCA TCA, TCE → 9th and Maud

VWR Source
Look to north
Look to north
VWR Source
Look for source to north
Look to north
TCA/TCE to North
Look for source
Source? to North

Source: KDHE/Health and Environmental Laboratory, 1992.

Abbreviations:
- 1DCE = 1,1-Dichloroethylene
- 2DCE = trans/cis 1,2-Dichloroethylene
- TCA = 1,1,1-Trichloroethane
- TCE = Trichloroethylene
- PCE = Tetrachloroethylene
- VCH = Vinyl Chloride
- DCA = 1,1-Dichloroethane
- BTEX = Total: Benzene, Toluene, Ethylbenzene, Xylene(s)
- ND = Not Detected
- * = Trace levels of unidentified hydrocarbons present.

13TH & WASHINGTON SITE
GROUND WATER INVESTIGATION
FIELD SCREENING RESULTS
SEPTEMBER 1992

Probe # and Location	Depth (feet)	Contaminants in µg/L TCE	PCE	VOCs
1. 19th & Mosley	21'	134.5	42.8	*
2. 17th & Santa Fe	21'	83.5	7.6	ND
3. 16th & railroad	21'	183.6	11.4	*
4. 16th & Mosley	21'	24.3	11.7	ND
5. 17th & railroad	21'	5.7	ND	ND
6. 16th & Wabash	21'	351.2	1.8	*
7. 17th & Topeka	21'	45.6	0.2	ND
8. 16th & Santa Fe	21'	24.3	0.4	ND
9. CW Feed Building	24'	330.8	5.1	*
10. Mosley & 14th	21'	343.7	56.0	ND
11. 15th & Barwise	21'	44.2	1.1	*
12. Barwise, 15 & 13	21'	38.2	0.6	*
13. 13th & Santa Fe	21'	1.2	ND	ND
14. 14th & Santa Fe	21'	12.3	11.0	ND
15. 13th & Washington	21'	55.1	10.1	ND
16. 17th & St. Francis	21'	18.8	ND	*
17. 10th & Mosley	21'	123.8	0.3	*
18. Mosley & 10th	21'	58.5	0.2	*
19. 9th & Santa Fe	21'	0.6	ND	ND
20. 922 Santa Fe	24'	0.2	ND	ND
21. 11th & railroad	21'	ND	ND	*
22. 9th & Washington	21'	0.8	0.9	ND
23. Penns & Crane Sup.	21'	0.3	ND	ND
24. Penns & Murdock	21'	0.4	ND	ND
25. Elm & Ohio	21'	ND	ND	ND
26. Elm & Ohio (mid)	21'	ND	ND	ND
27. Elm & Central	21'	ND	ND	ND
28. 9th & Mead	21'	34.3	18.0	*
29. 13th & Mosley	21'	0.6	ND	ND
30. 10th & Mead	21'	34.4	ND	*
31. 17th & St. Francis	18'	0.4	ND	ND
32. Mosley & creek	21'	70.3	0.1	ND

Abbreviations: µg/L = micrograms per liter
CCL = Tetrachlormethane
TCE = Trichloroethylene
PCE = Tetrachloroethylene (Perchloroethylene)
* = Other (VOCs) volatile organic compounds detect but not quantified.
ND = Non Detect

Source: KDHE/BER 13th & Washington ESI Site Field Notes, 1992.
Analyses performed by headspace methodology using a gas chromatograph with an Electron Capture & Flame Ionization Detectors.

TABLE 5
13TH AND WASHINGTON SITE
GROUND WATER SAMPLE LOCATIONS
SEPTEMBER 1992

PROBE #	LOCATION	DESCRIPTION
1	19TH & Mosley St.	East of drum storage area/fence
2	17TH & Santa Fe	In front of LS Industries facility
3	16TH & RR Tracks	Southwest of Western Uniform
4	16TH & Mosley St.	South of Western Uniform
5	17TH & RR Tracks	South of Bartels & Shores (abandoned)
6	16TH & Wabash St.	South of Sherwin Williams Company
7	17TH & Topeka St.	South of Purina Mills elevator
8	16TH & Santa Fe	Southwest of Cargill elevator
9	CW Feed Property	Between bldgs, South of Van Waters
10	14TH & Mosley St.	South of Industrial Supply
11	15TH & Barwise St.	South of Cargill elevator & property
12	Barwise St. 13/15	South of HCI Chemical Company
13	13TH & Santa Fe	Carl Bells parking lot
14	14TH & Santa Fe	South of Specialty Industries
15	13TH & Washington	South of Bemis Facility
16	17TH & St. Francis	South of Midwest Thermal (abandoned)
17	Tenth & Mosley St.	South of Kansas Plating
18	Mosley & Tenth St.	Southwest of Kansas Plating
19	912 Santa Fe	Southwest of Cullum Brown Company
20	922 Santa Fe	SW of Harlow Manufacturing Inc.
21	11TH & RR Tracks	South of Cargill Property
22	Ninth & Washington	South of Wichita Sheet Metal
23	Penn. & Crane Sup.	North gate of Crane Supply
24	Penn. & Murdock St.	In front of Buckley Industries
25	Elm & Ohio St.	West of Spurrier Chemical tanks
26	Elm & Ohio St.(mid)	West of Spurrier Chemical
27	Ohio & Central St.	Southwest of Spurrier Chemical
28	Ninth St. & Mead	South of Kreonite Inc. facility
29	13TH & Mosley St.	APCO service station, LUST location
30	Tenth & Mead St.	South of Kreonite Inc. north location
31	17TH & St. Francis	South of Industrial Gas lagoons
32	1900 block Mosley	North of Van Waters & Rogers Inc.

Source: KDHE/BER 13th and Washington ESI Site Field Notes, 1992.

Appendix B-2
29M - 29th & Mead Site

DISTRIBUTIO[illegible] /CE,PCE AND DEGRADATION COMPOUNDS IN SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS

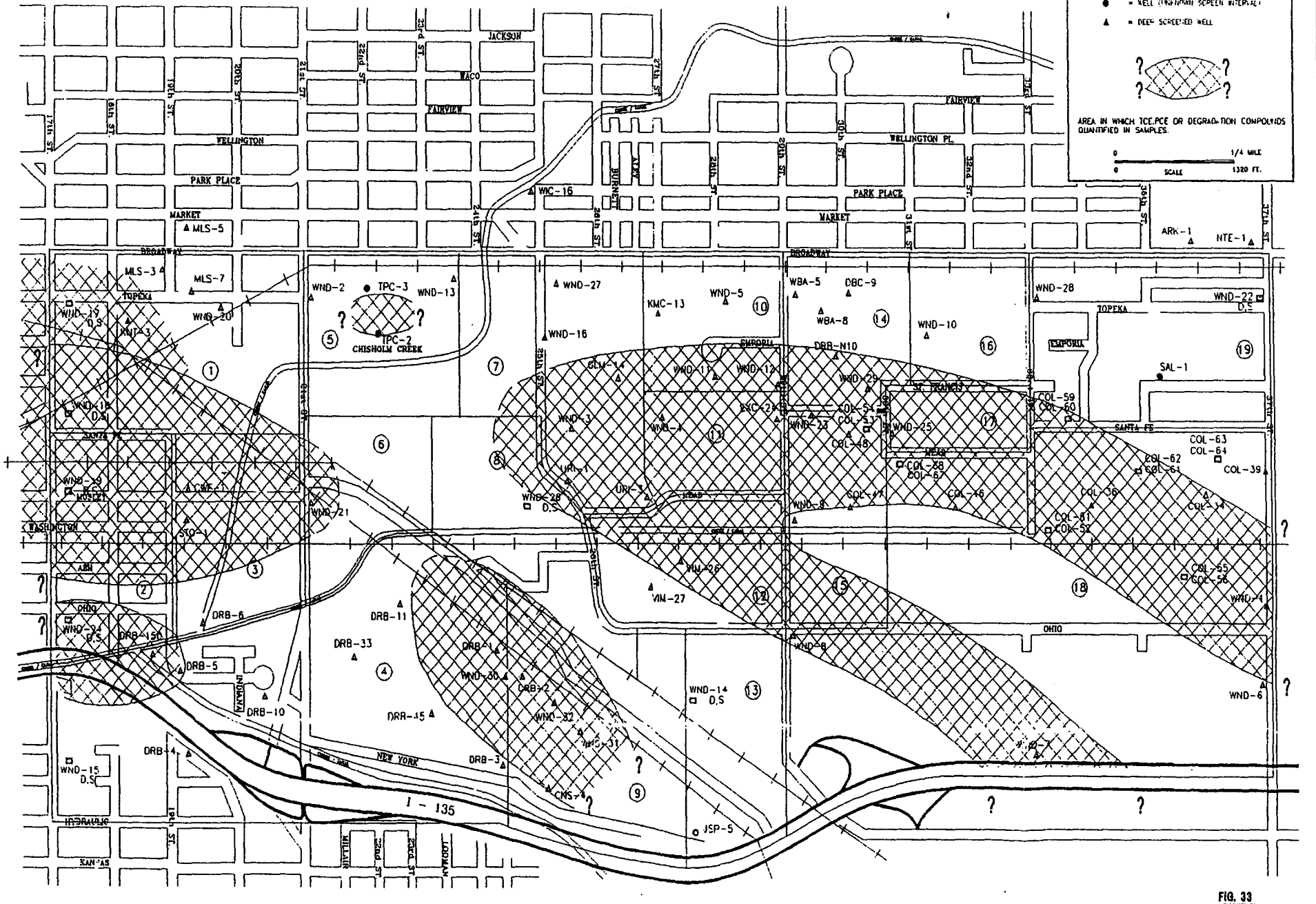
DRAWING REVISI[illegible]

LEGEND

- = CREEK / CANAL
- = SHALLOW SCREENED WELL
- = WELL CLUSTER
- = FULL PENETRATING SCREENED WELL
- = WELL (UNKNOWN SCREEN INTERVAL)
- = DEEP SCREENED WELL

AREA IN WHICH TCE,PCE OR DEGRADATION COMPOUNDS QUANTIFIED IN SAMPLES.

0 — 1/4 MILE
0 — SCALE — 1320 FT.



8/20/91
29th AND MEAD RI/FS

042209670
FILE No. TCEDS

FIG. 33

GROUNDWATER TECHNOLOGY, INC.

DISTRIBUTION OF TCE,PCE AND DEGRADATION COMPOUNDS IN DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS 50CONCENTRATION MAP REFLECT ONLY WELLS SAMPLED CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS

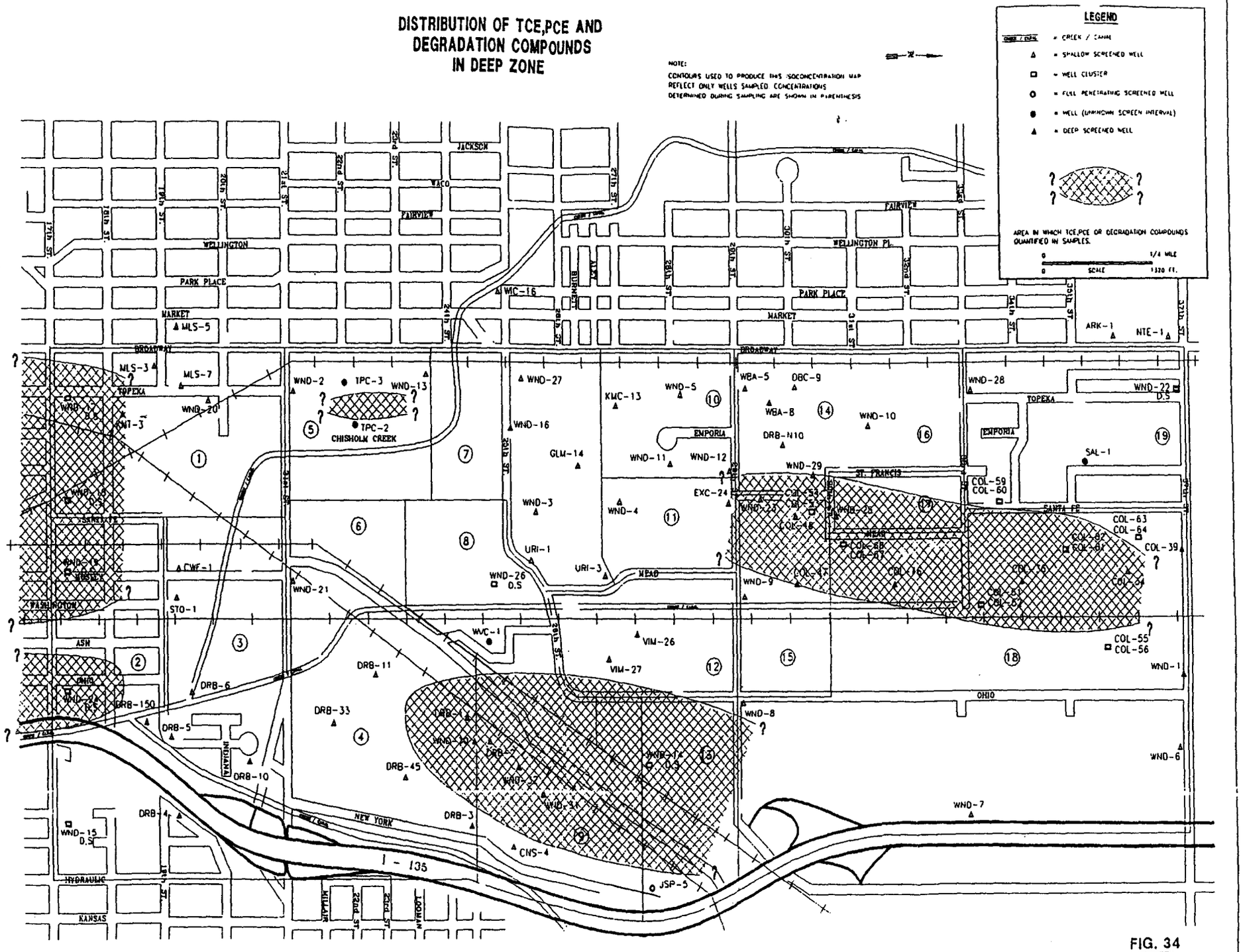


FIG. 34

8/20/91
29th AND MEAD RI/FS

042209670
CAD DWG FILE NO. 1CEDS

GROUNDWATER TECHNOLOGY, INC.

PCE ISOCONCENTRATION ....
SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVISE 92

LEGE

- Δ = SHALLOW SCR EL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

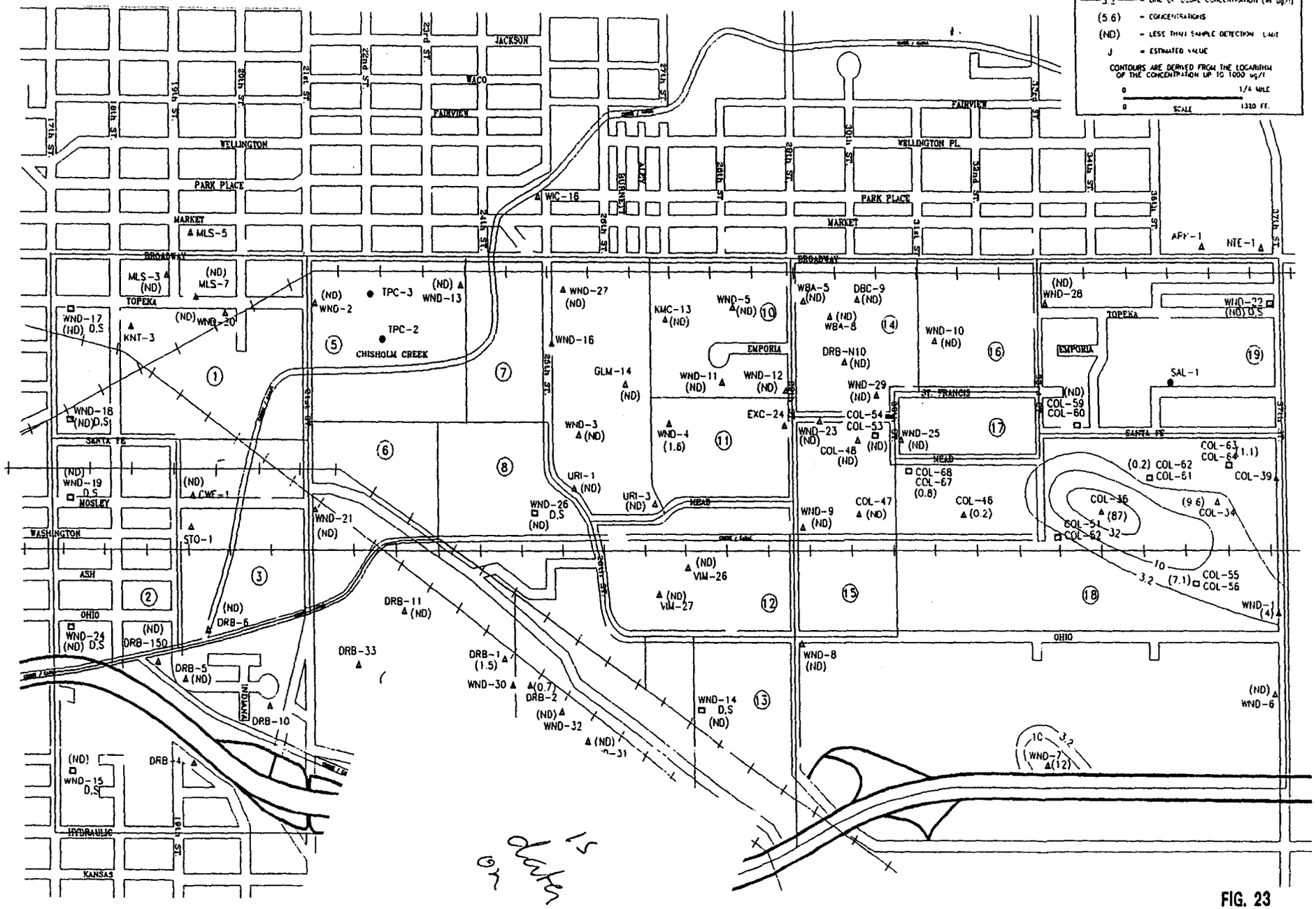


FIG. 23

8/19/91
29th AND MEAD RI/FS
042209630
FILE NO. PCEDS

GROUNDWATER TECHNOLOGY, INC.

PCE
ISOCONCENTRATION MAP
DEEP ZONE

NOTE.
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

N

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (in ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

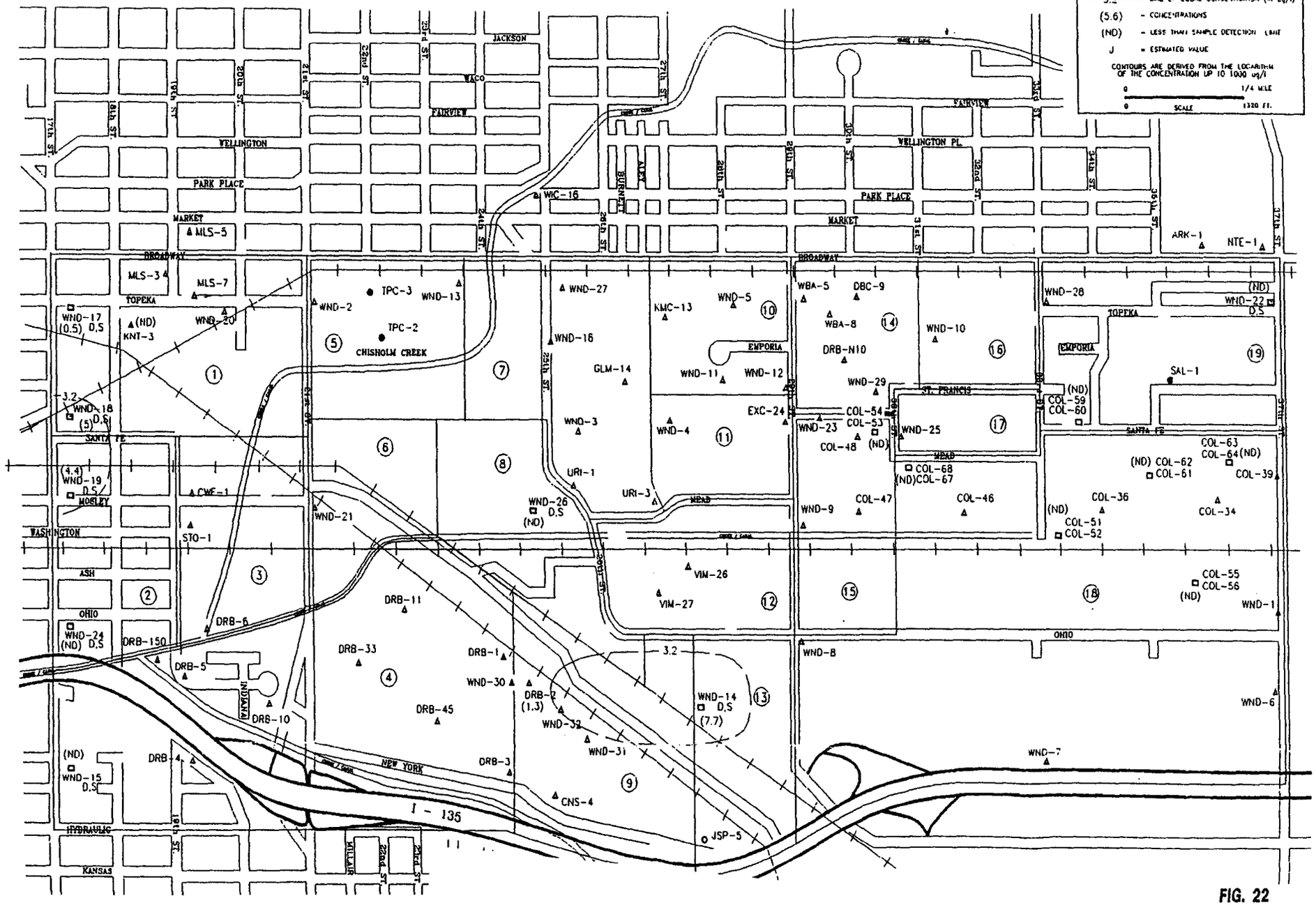


FIG. 22

8/19/91
29th AND MEAD RI/FS

042209670

GROUNDWATER

15 0.

TCE
ISOCONCENTRATION MAP
SHALLOW ZONE

NOTE
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING F 4/92

KEY

- ▲ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 1/4 MILE
0 SCALE 1320 FT.

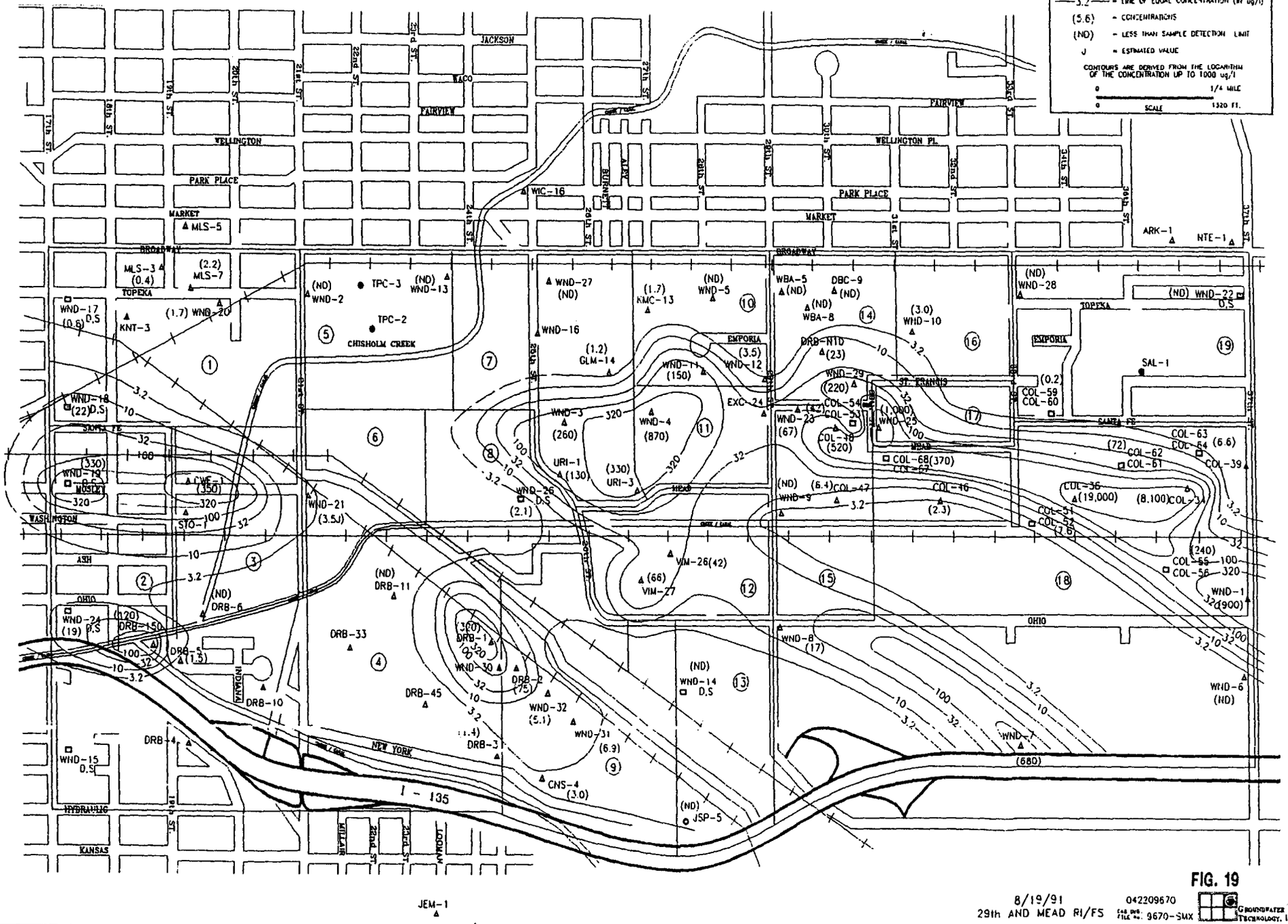


FIG. 19

8/19/91
29th AND MEAD RI/FS

042209670
FILE NO. 9670-SMX

GROUNDWATER TECHNOLOGY, INC.

TCE
ISOCONCENTRATION MAP
DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING # 1/92

LE

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

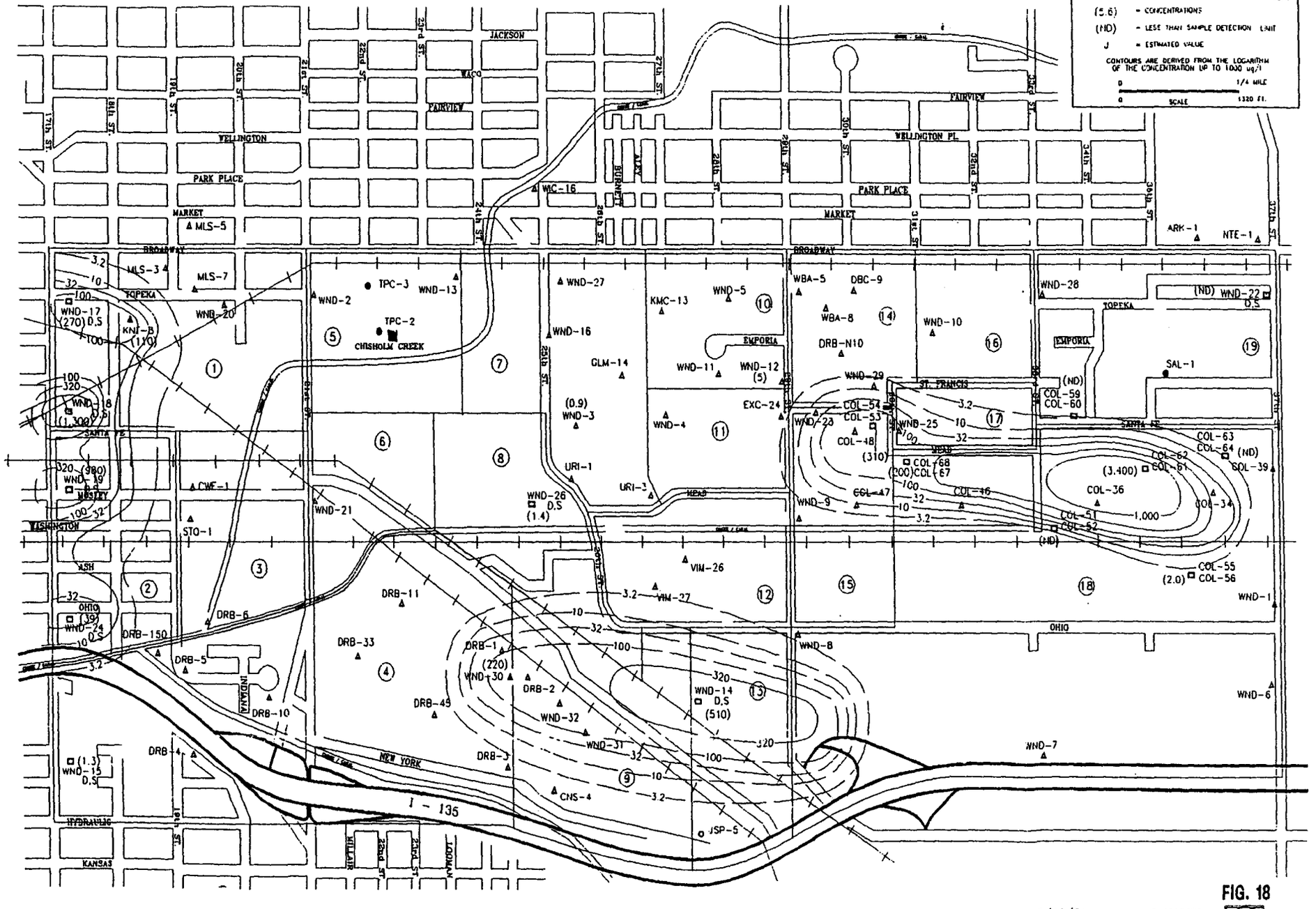


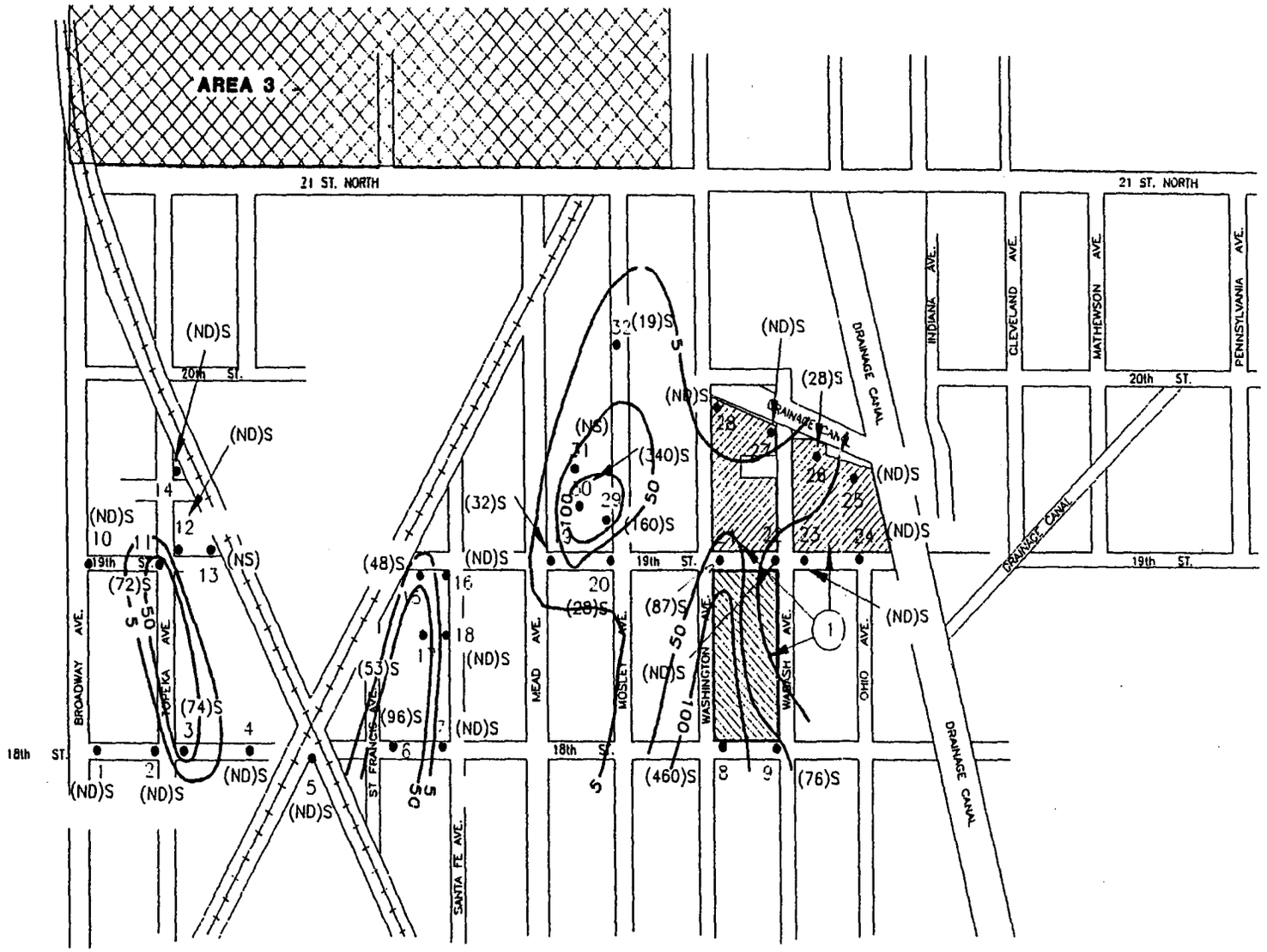
FIG. 18

8/19/91
29th AND MEAD RI/FS

042209670
FILE No. 9670-TCD

GROUNDWATER TECHNOLOGY, INC.

(1) = 1011 AND 1020 EAST 19th STREET NORTH–TRAMCO, INC.



LEGEND

7 • GEOPROBE LOCATIONS

(96)S TCE CONCENTRATION SHALLOW (9/8/92)

(ND)S NOT DETECTED

(NS) NOT SAMPLED

AREA 3 = SUB–AREA OF 29th AND MEAD AS DETERMINED BY KDHE

CONCENTRATIONS IN ppb (ug/L)

N

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GROUNDWATER TECHNOLOGY
443 N. MAIZE ROAD
WICHITA, KS 67212
(316) 722-2266

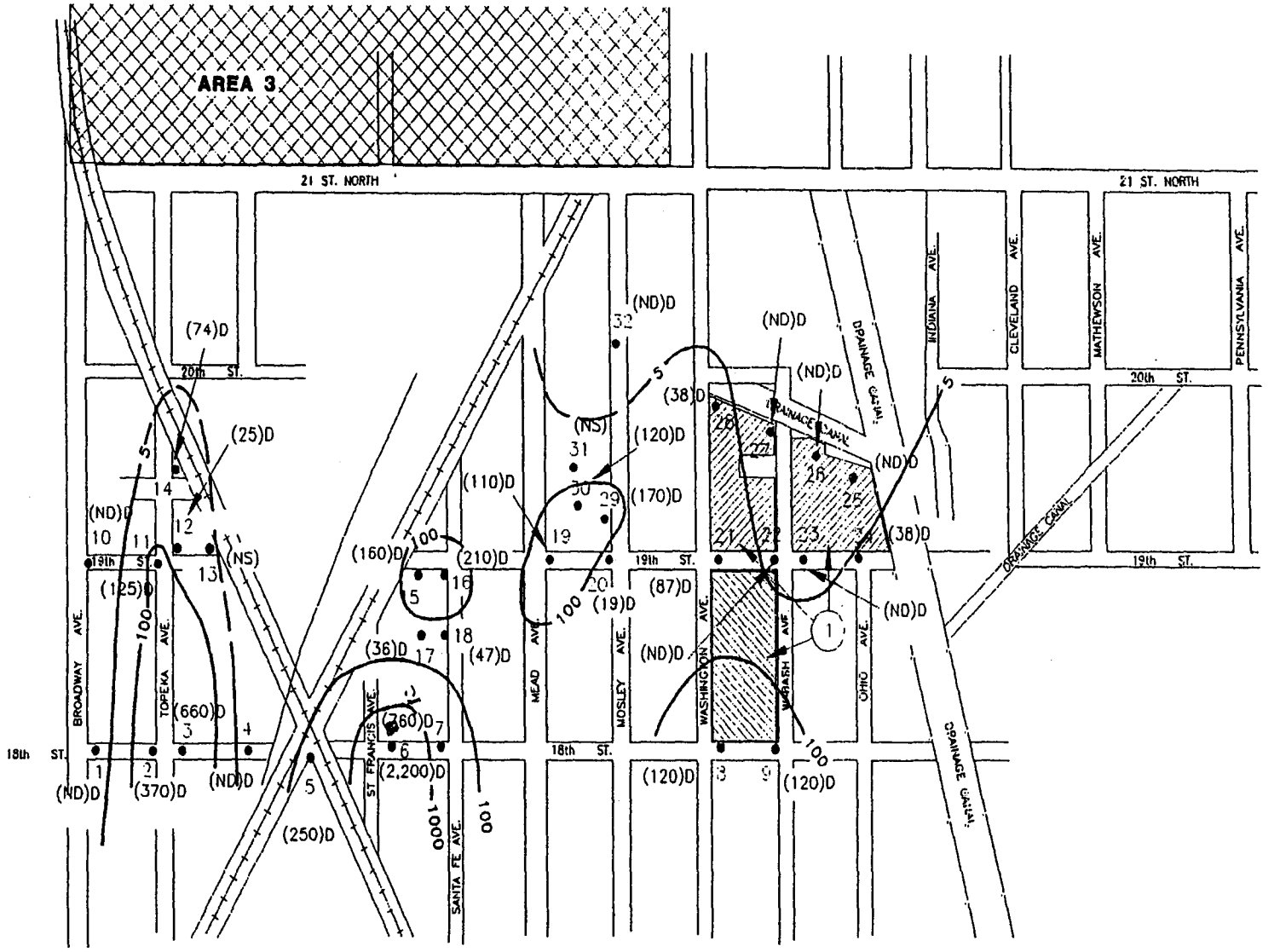
REV. NO.:	DRAWING DATE:	ACAD FILE:
	12/2/92	LITTCES

ROUND 1 GEOPROBE LOCATIONS/ TCE CONCENTRATIONS SHALLOW

CLIENT:	PM:
COLEMAN CO.	DL
LOCATION: WICHITA, KS	PE/RG:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
	RHW	042206375	3

(1) = 1011 AND 1020 EAST 19th STREET NORTH-TRAMCO, INC.



LEGEND

7
• GEOPROBE LOCATIONS

(760)D TCE CONCENTRATION DEEP (9/8/92)

(ND)S NOT DETECTED

(NS) NOT SAMPLED

AREA 3 = SUB-AREA OF 29th AND MEAD AS DETERMINED BY KDHE

CONCENTRATIONS IN ppb (ug/L)

N

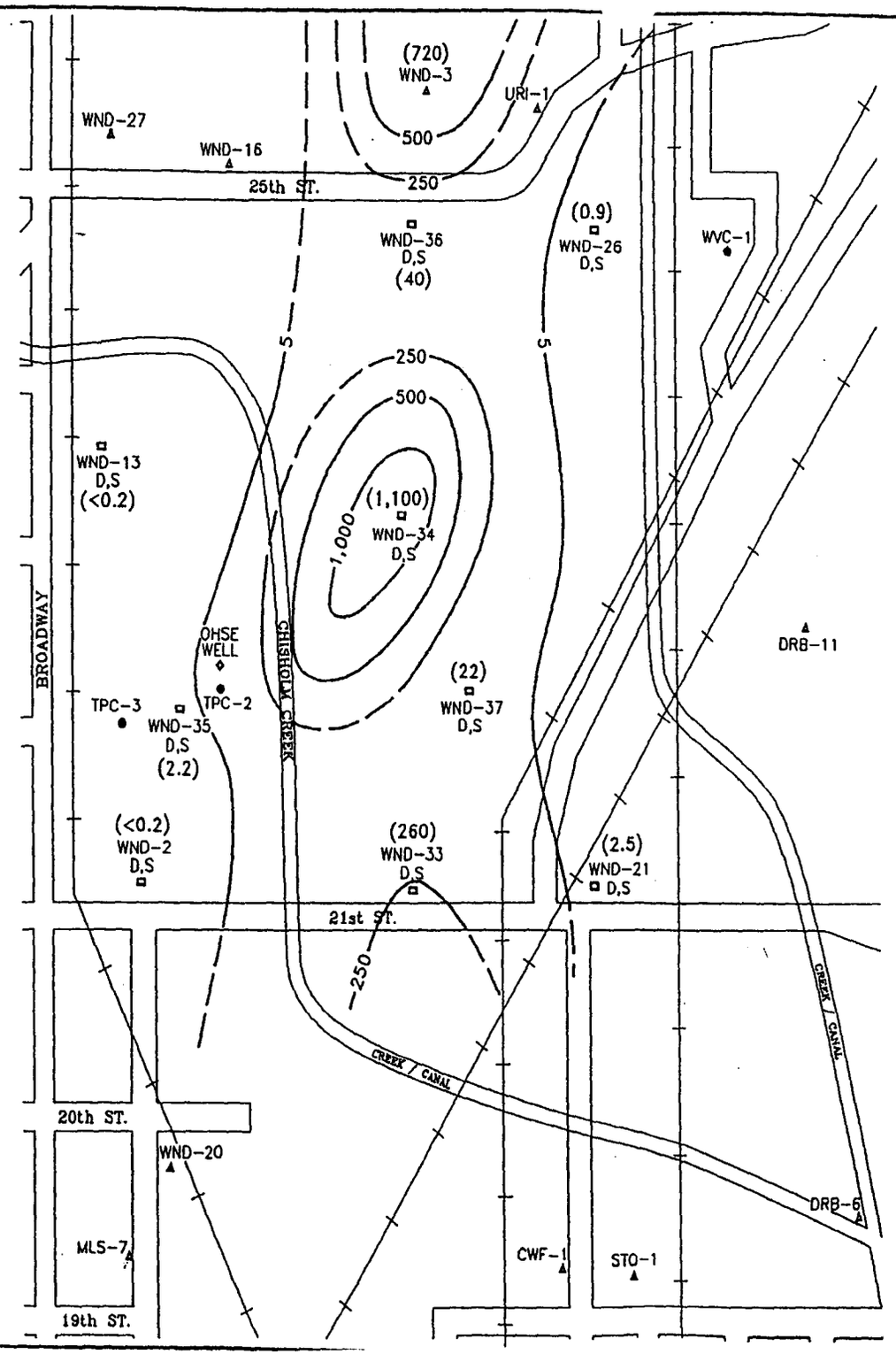
THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF GROUNDWATER TECHNOLOGY, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF GROUNDWATER TECHNOLOGY, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.

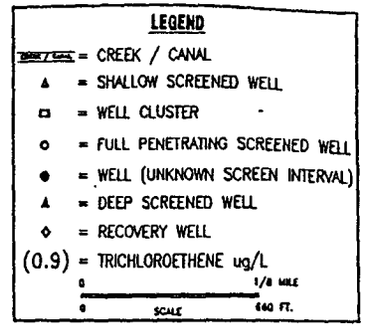
GROUNDWATER TECHNOLOGY
443 N. MAIZE ROAD
WICHITA, KS 67212
(316) 722-2266

REV. NO.:	DRAWING DATE:	ACAD FILE:
	12/2/92	LITTCED

ROUND 1 GEOPROBE LOCATIONS/ TCE CONCENTRATIONS DEEP

CLIENT: COLEMAN CO.			PM: DL
LOCATION: WICHITA, KS			PE/RG:
DESIGNED:	DETAILED: RHW	PROJECT NO.: 042206375	FIGURE: 2





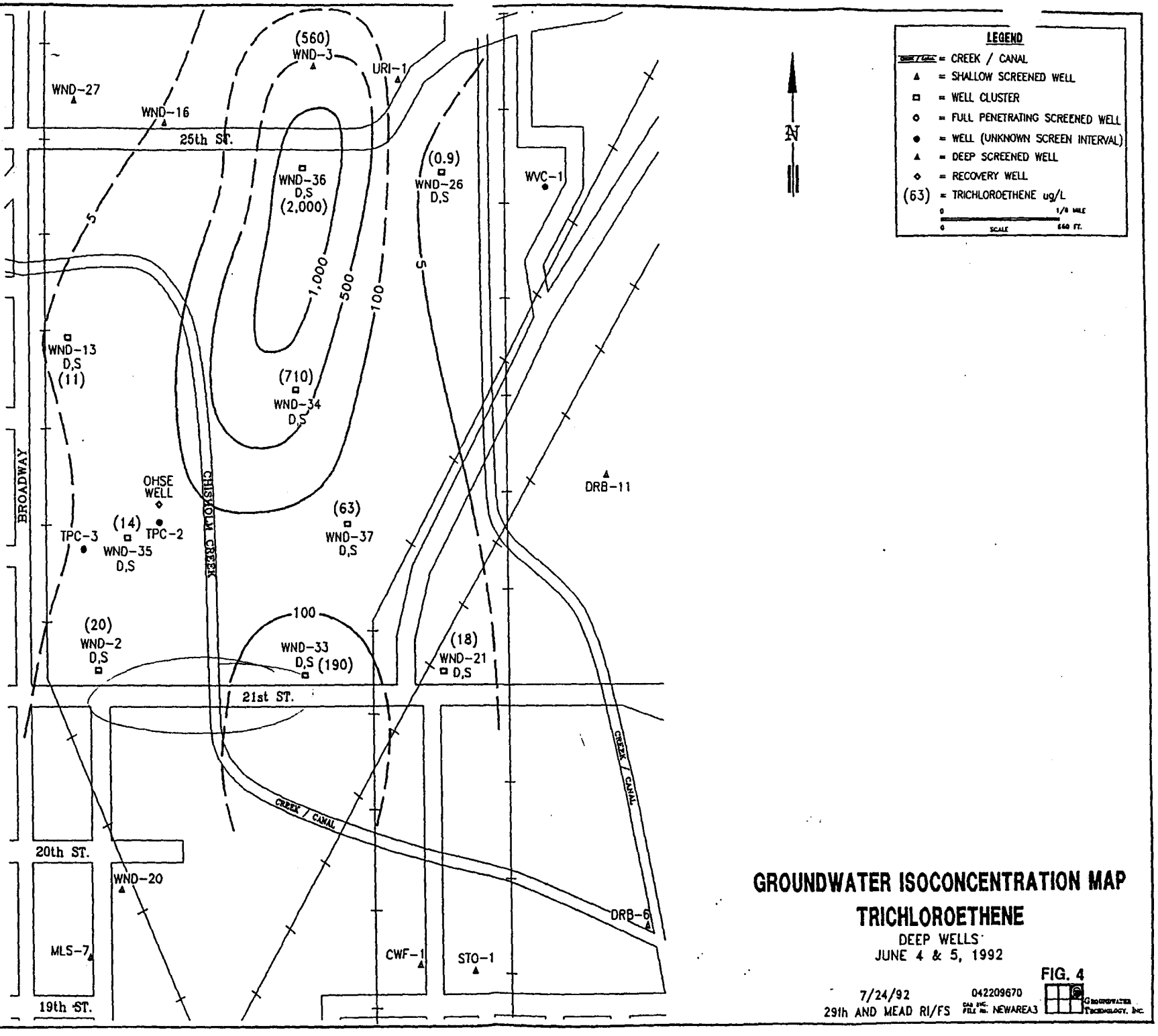
GROUNDWATER ISOCONCENTRATION MAP

TRICHLOROETHENE

SHALLOW WELLS
JUNE 4 & 5, 1992

FIG. 5

7/24/92 042209670
29th AND MEAD RI/FS NEWARFA1



GROUNDWATER ISOCONCENTRATION MAP
TRICHLOROETHENE
DEEP WELLS
JUNE 4 & 5, 1992

FIG. 4

7/24/92
29th AND MEAD RI/FS

042209670
CAD INC. FILE No. NEWAREA3

GROUNDWATER TECHNOLOGY, INC.

TRANS - 1,2-DCE ISOCONCENTRATION MAP SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REF 83

LEGEND

- △ = SHALLOW SCREEN WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 1/4 MILE
0 SCALE 1320 FT.

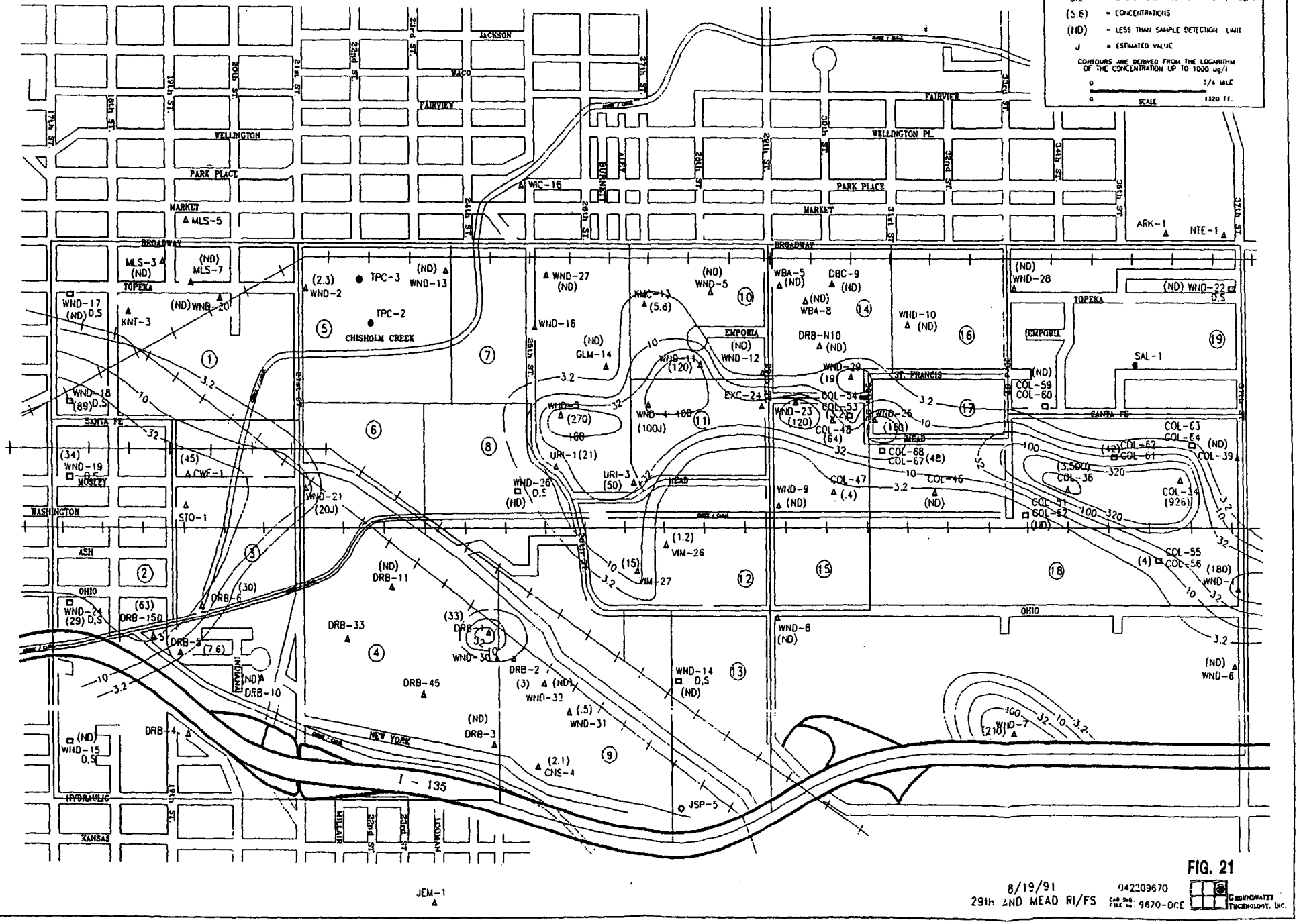


FIG. 21

8/19/91
291h AND MEAD RI/FS

042209670
CAD DWG:
FILE No: 9670-DCE

GROUNDWATER TECHNOLOGY, INC.

T... -1,2,-DCE ISOCONCENTRATION MAP DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING R 1/92

LEL

- ▲ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 1/4 MILE
0 SCALE 1320 FT.

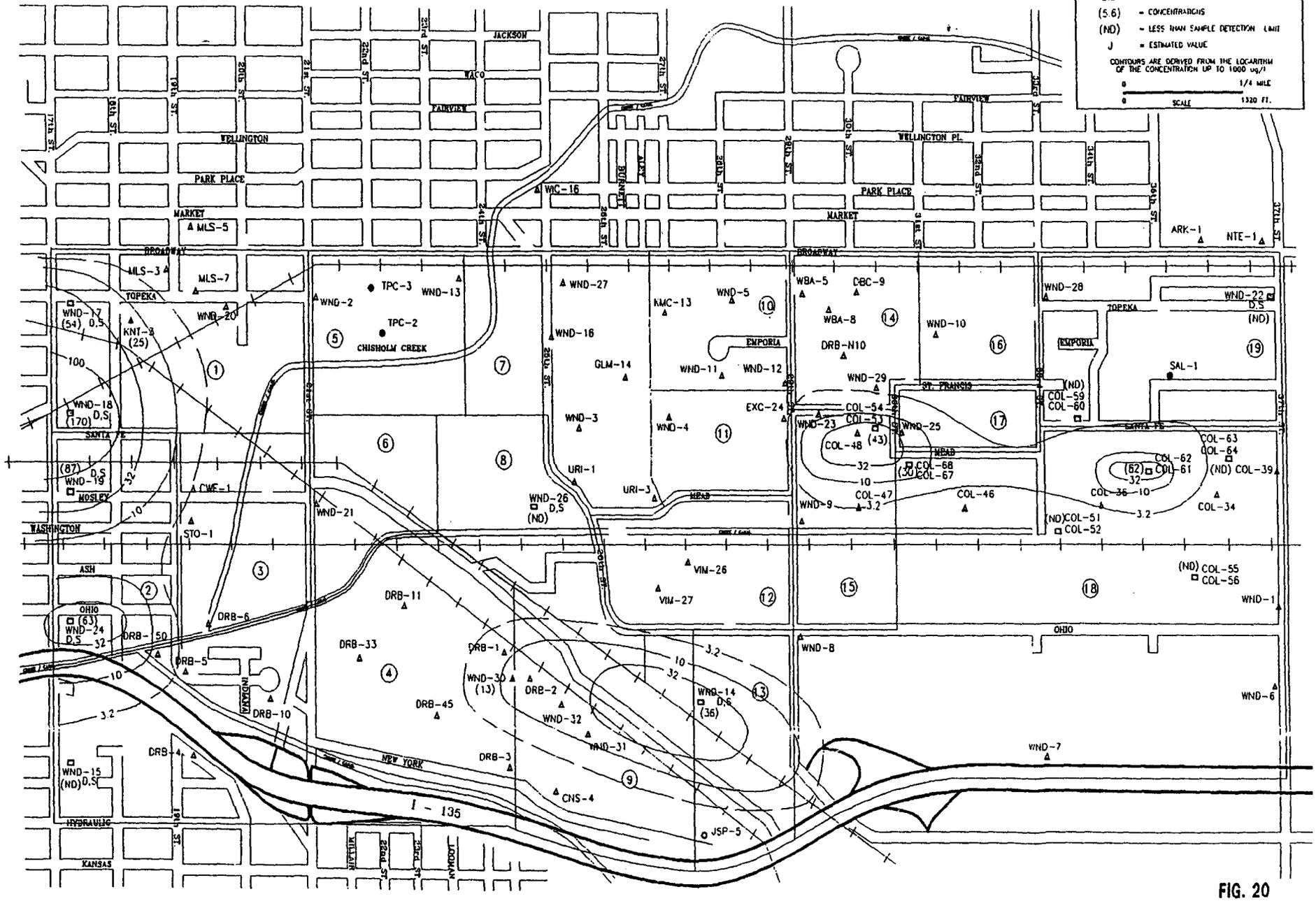
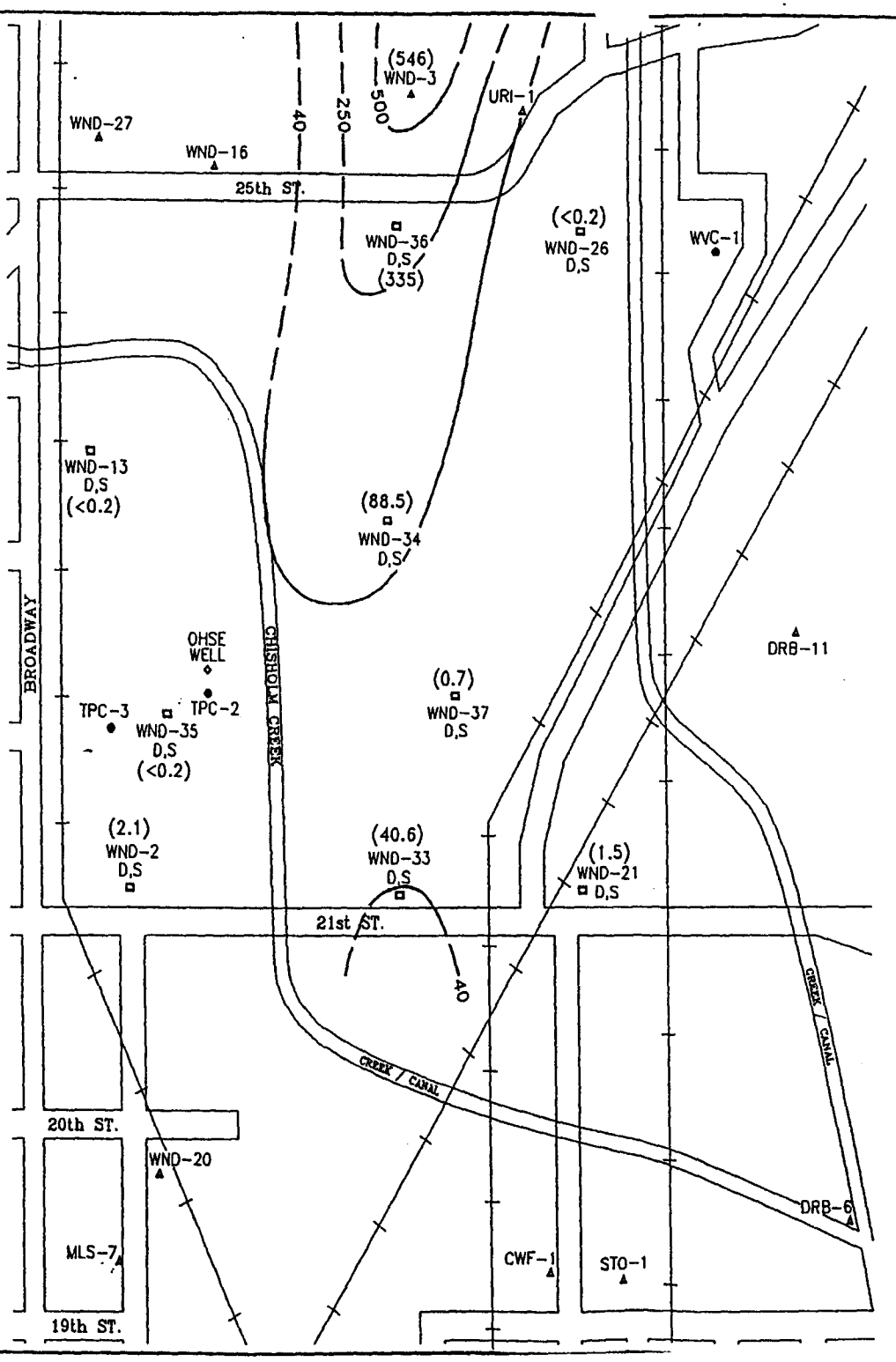


FIG. 20

8/19/91
29th AND MEAD RI/FS
042209670
FILE NO. TRANSDS

GROUNDWATER TECHNOLOGY, INC.



LEGEND

- = CREEK / CANAL
- = SHALLOW SCREENED WELL
- = WELL CLUSTER
- = FULL PENETRATING SCREENED WELL
- = WELL (UNKNOWN SCREEN INTERVAL)
- = DEEP SCREENED WELL
- = RECOVERY WELL
- (0.7) = TOTAL 1,2-DICHLOROETHENE ug/L

0 — 1/8 MILE
SCALE
0 — 660 FT.

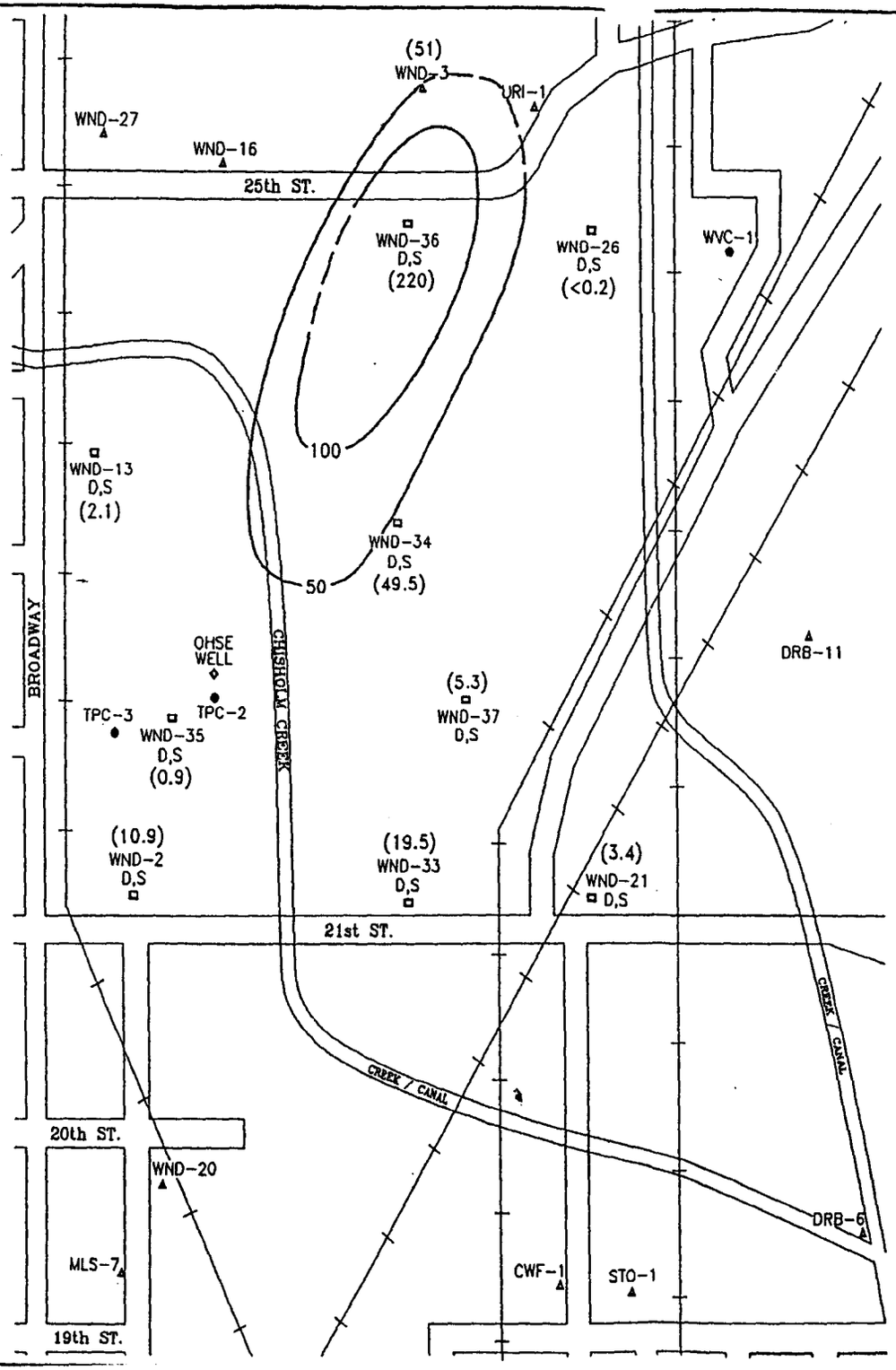
GROUNDWATER ISOCONCENTRATION MAP
TOTAL-1,2-DICHLOROETHENE
SHALLOW WELLS
JUNE 4 & 5, 1992

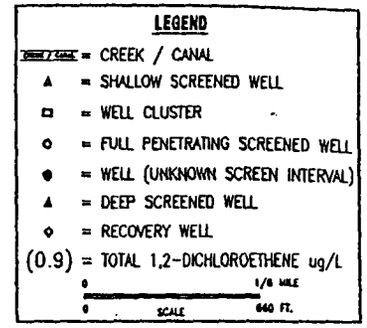
FIG. 8

7/24/92
29th AND MEAD RI/FS

D42209670
FILE No. NEWAREA3

GROUNDWATER TECHNOLOGY, INC.





GROUNDWATER ISOCONCENTRATION MAP
TOTAL-1,2-DICHLOROETHENE
DEEP WELLS
JUNE 4 & 5, 1992

FIG. 7

7/24/92 042209670
29th AND MEAD RI/FS CAB INC. FILE NO. NEWARF43

VINYL CHLORIDE ISOCONCENTRATION MAP SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVIS 92

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 1/4 MILE
0 SCALE 1320 FT.

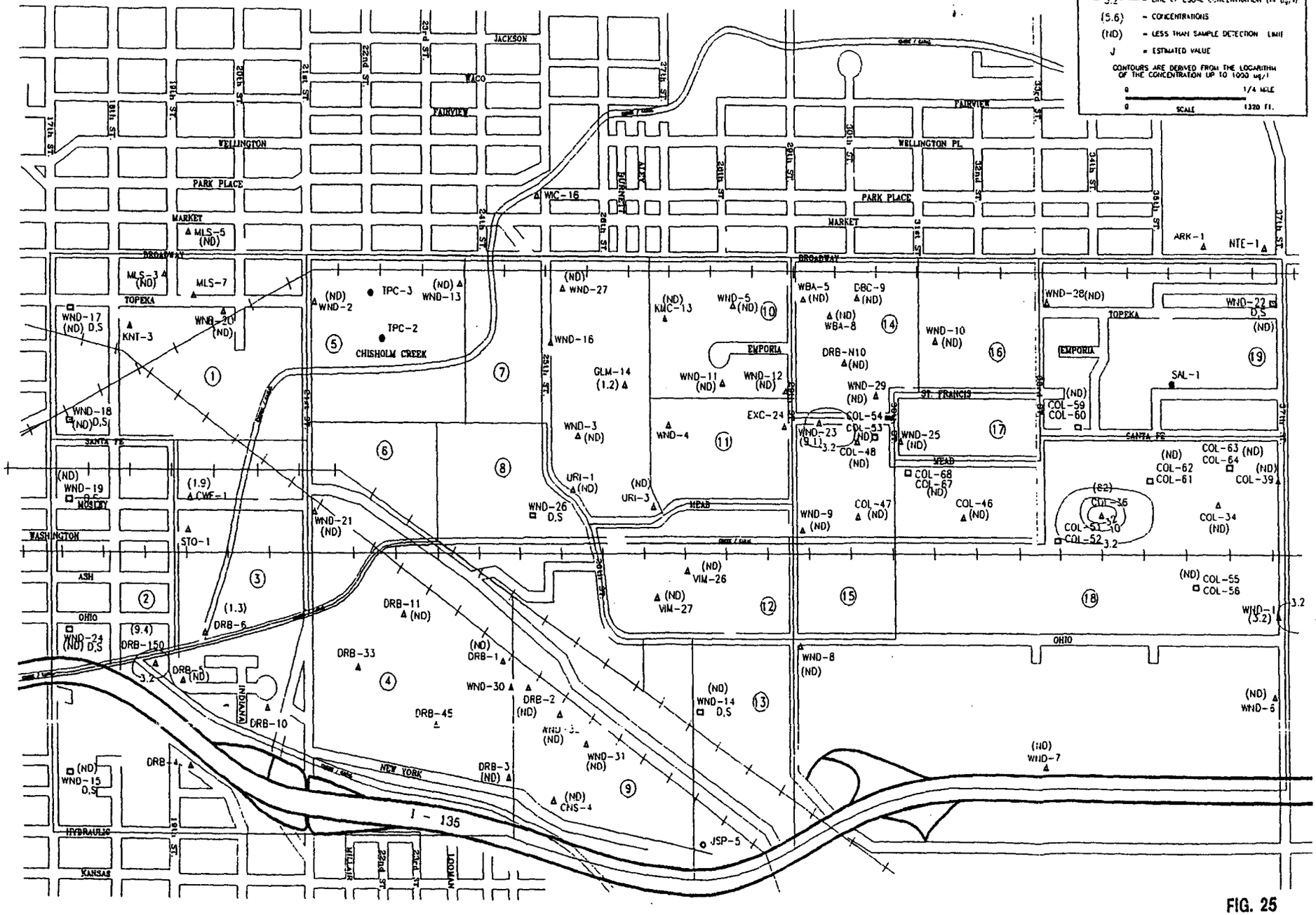


FIG. 25

8/19/91
29th AND MEAD RI/FS

342209670

GROUNDWATER

VINYL CHLORIDE ISOCONCENTRATION MAP DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVISE. .92

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

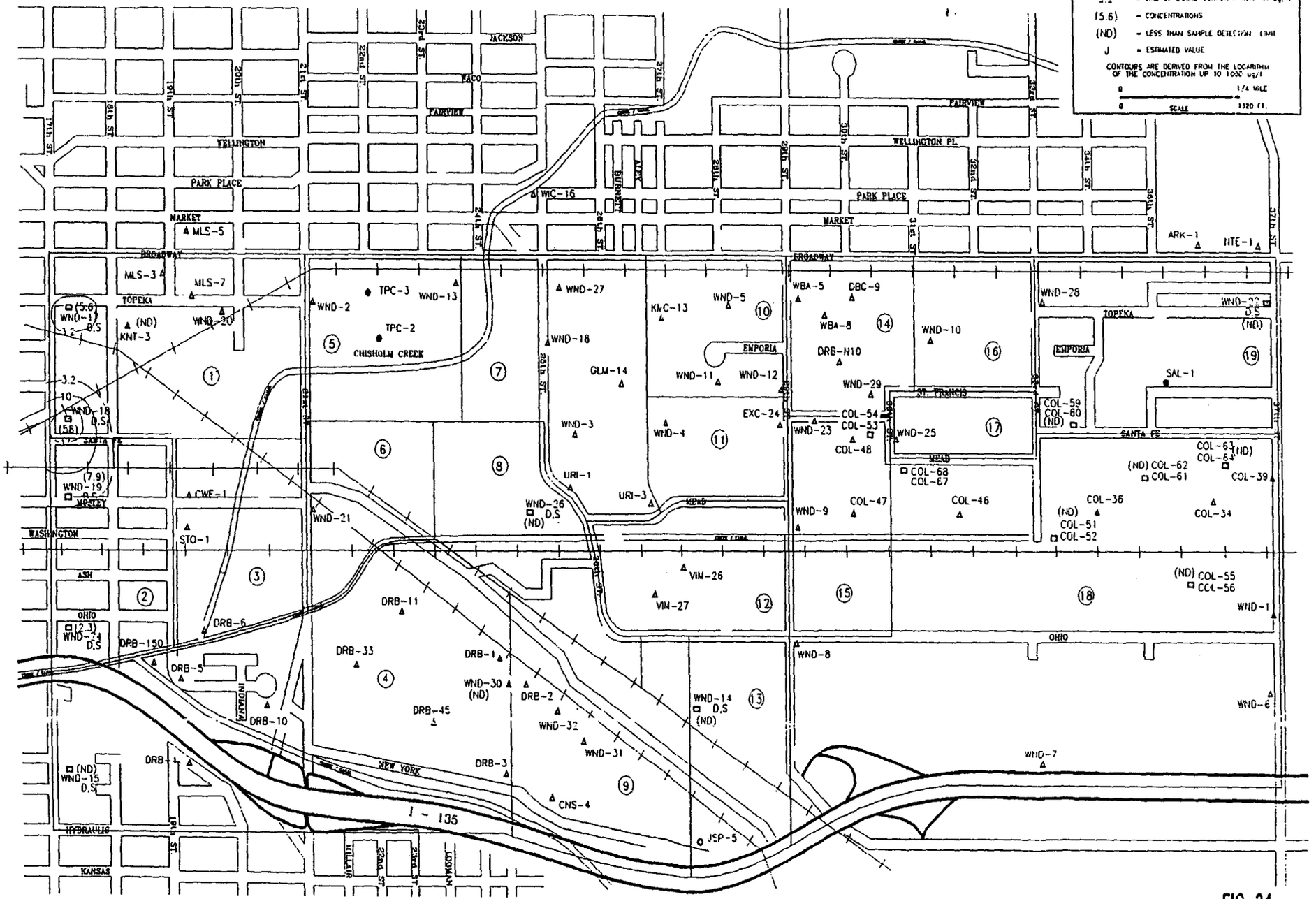


FIG. 24

8/19/91 042209670

DISTRIBUTION OF 1,1,1-TCA AND DEGRADATION COMPOUNDS IN SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REV. 2

LEGEND

- = CREEK / CANAL
- = SHALLOW SCREENED WELL
- = WELL CLUSTER
- = FULL PENETRATING SCREENED WELL
- = WELL (UNKNOWN SCREEN INTERVAL)
- = DEEP SCREENED WELL

AREA IN WHICH 1,1,1-TCA OR DEGRADATION COMPOUNDS QUANTIFIED IN SAMPLES.

0 — 1/4 MILE
0 — SCALE — 1320 FT.

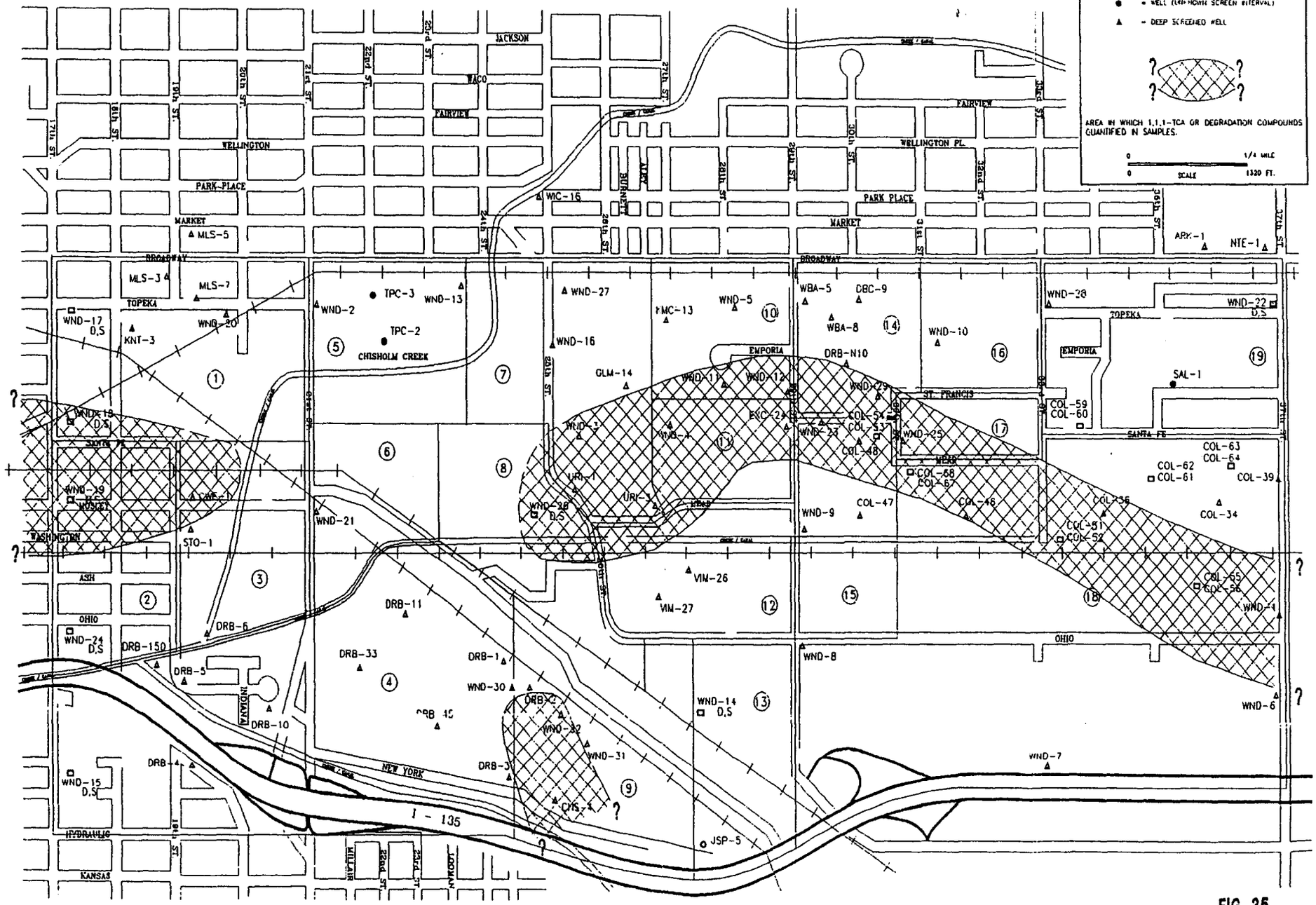


FIG. 35

8/20/91 042209670

JEM-1

DISTRIBU. OF 1,1,1-TCA AND DEGRADATION COMPOUNDS IN DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVISI

LEGEND

- CREEK / CANAL
- SHALLOW SCREENED WELL
- WELL CLUSTER
- FULL PENETRATING SCREENED WELL
- WELL (UNKNOWN SCREEN INTERVAL)
- DEEP SCREENED WELL

AREA IN WHICH 1,1,1-TCA OR DEGRADATION COMPOUNDS QUANTIFIED IN SAMPLES.

0 — 1/4 MILE
0 — SCALE — 1320 FT.

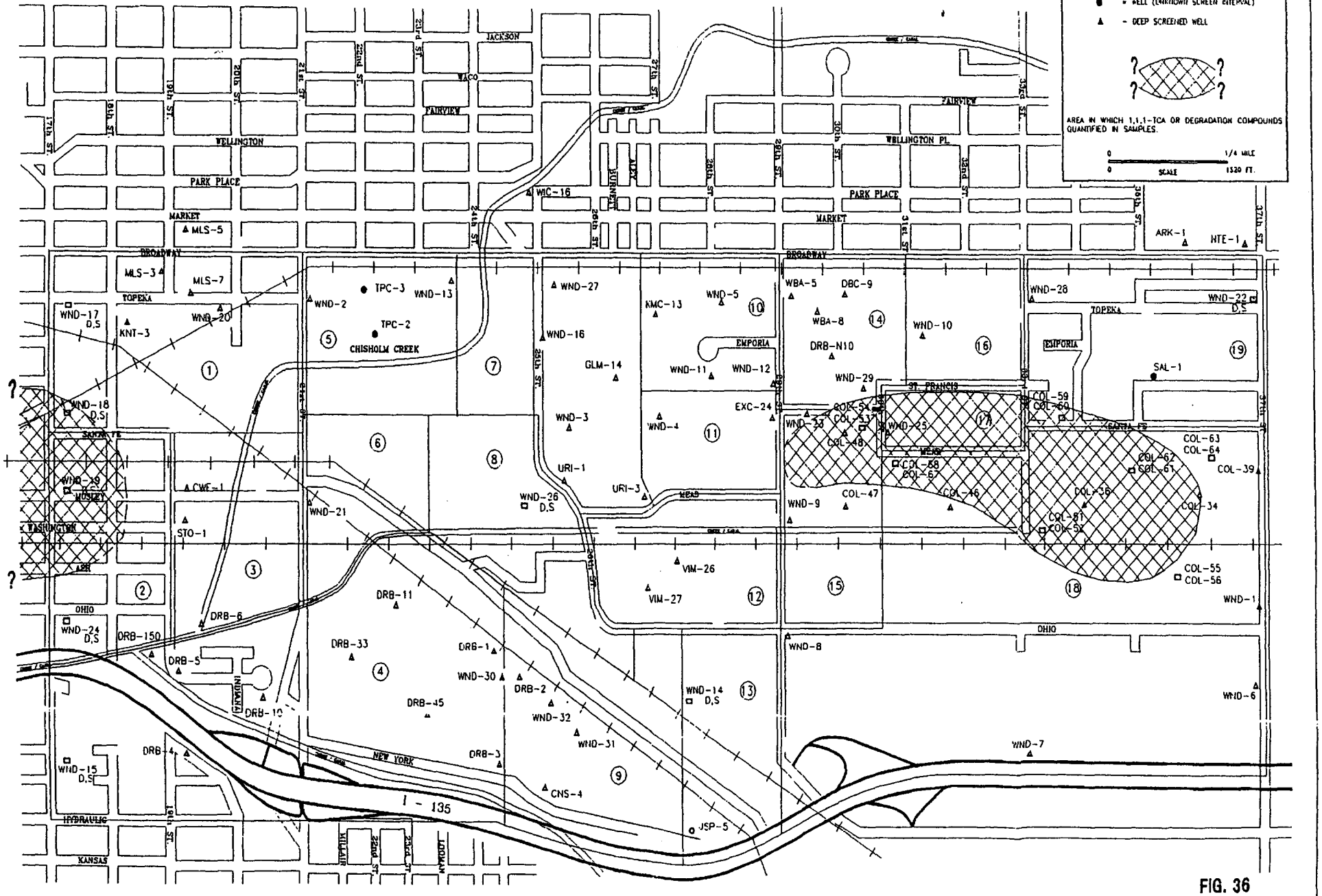


FIG. 36

8/20/91
29th AND MEAD RI/FS

042209670
CAD DWG FILE No. 111TCADS

GROUNDWATER TECHNOLOGY, INC.

1,1,1 - TCA
ISOCONCENTRATION MAP
SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVISE ../92

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

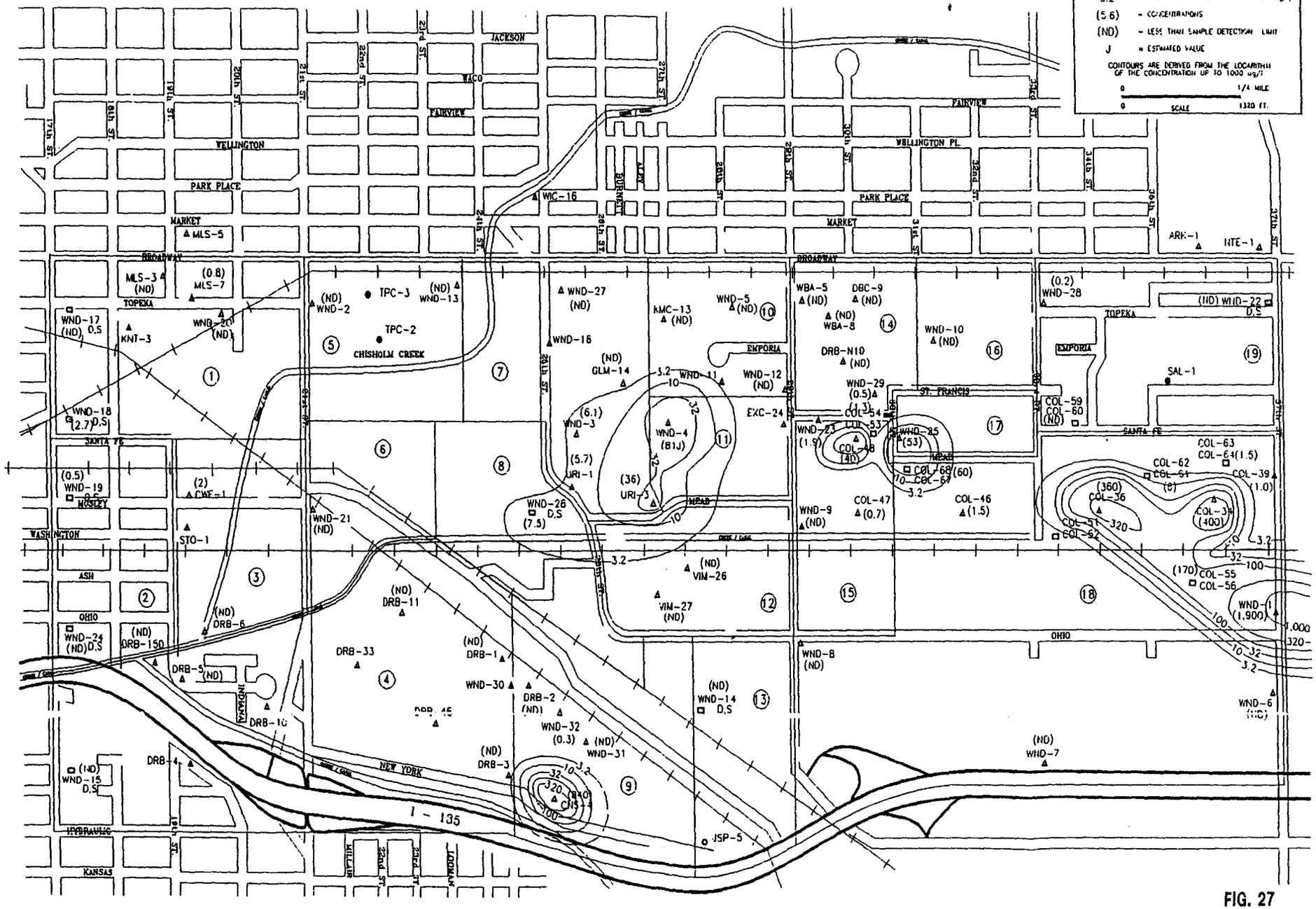


FIG. 27

8/19/91 042209670

1,1,1 - TCA
ISOCONCENTRATION MAP
DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVISED 1/92

LEGEND

- ▲ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

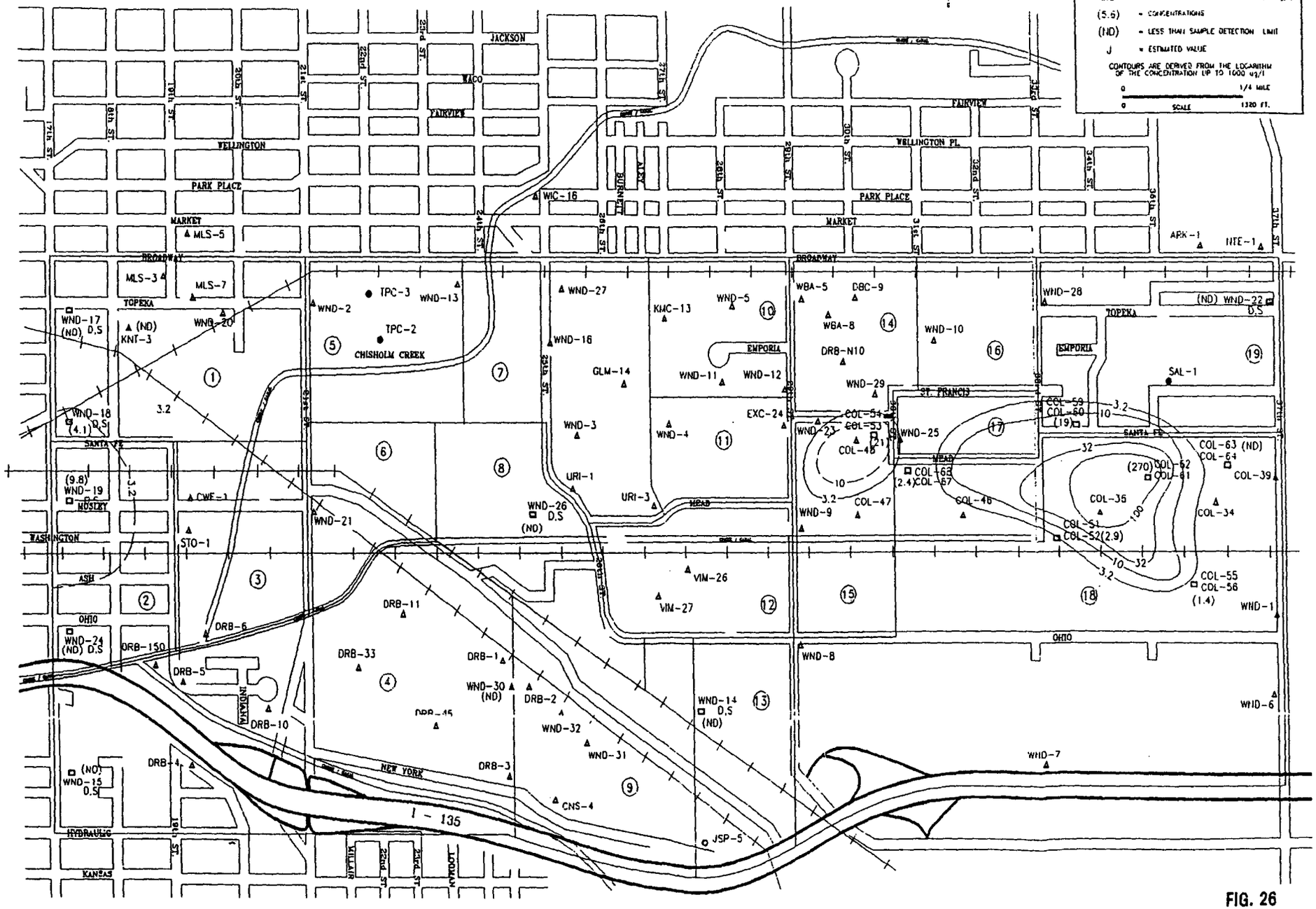
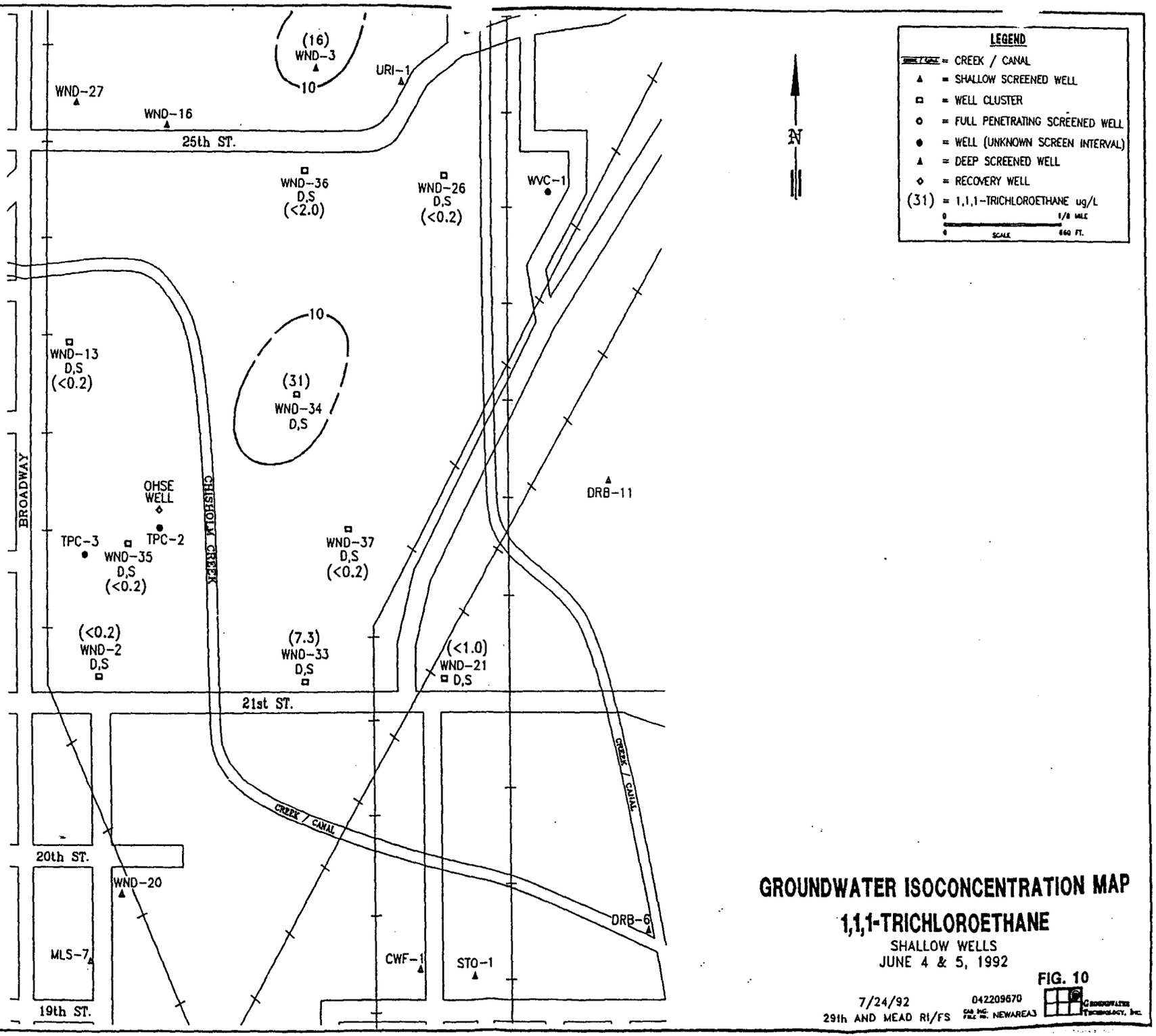


FIG. 26

8/19/91

042209670



GROUNDWATER ISOCONCENTRATION MAP

1,1,1-TRICHLOROETHANE

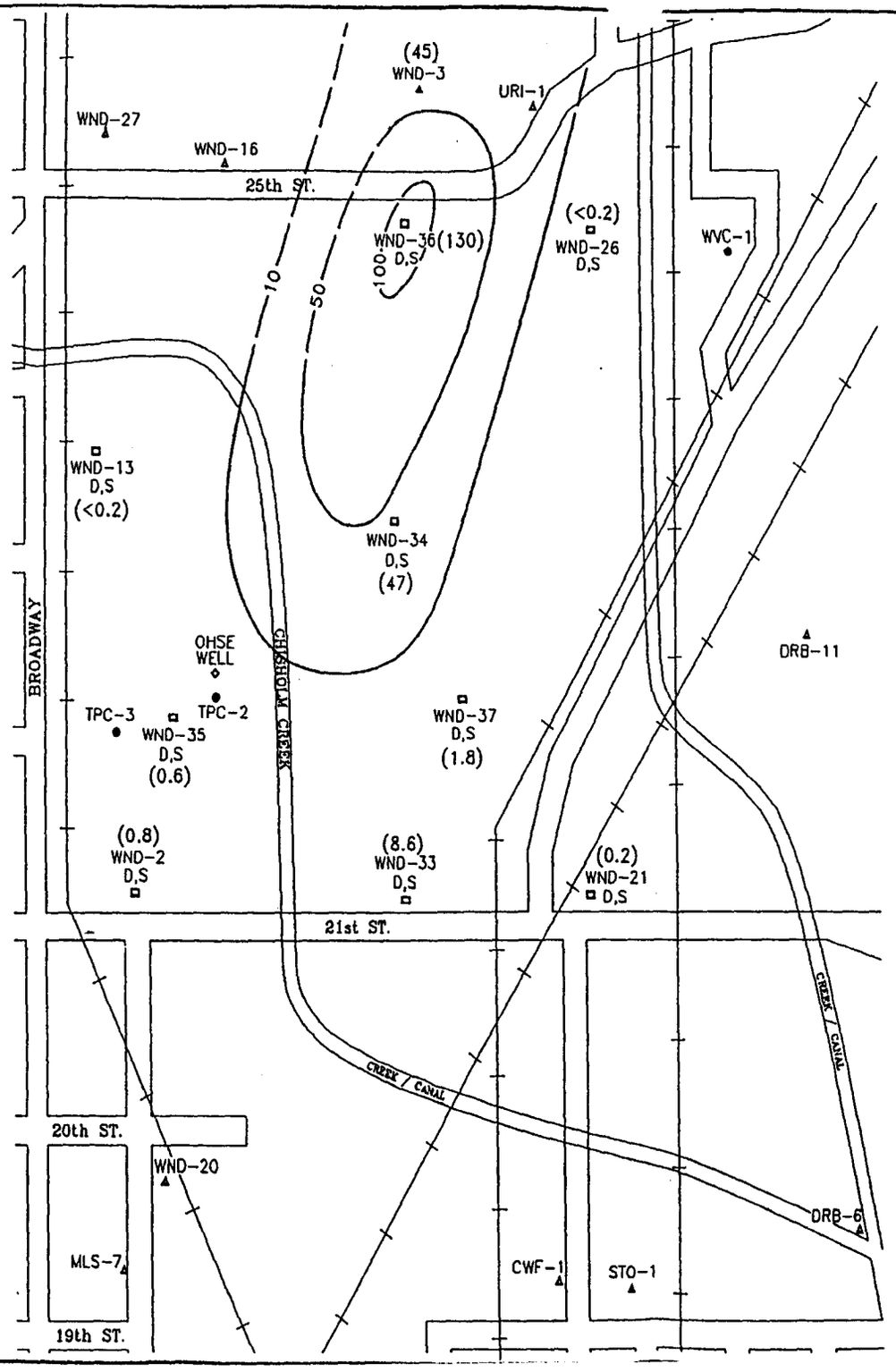
SHALLOW WELLS
JUNE 4 & 5, 1992

FIG. 10

7/24/92
29th AND MEAD RI/FS

042209670
CAD NO.
FILE NO. NEWAREA3

GROUNDWATER TECHNOLOGY, INC.



LEGEND

- CREEK / CANAL = CREEK / CANAL
- ▲ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULL PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- ◇ = RECOVERY WELL
- (1.8) = 1,1,1-TRICHLOROETHANE ug/L

0 — 1/8 MILE
SCALE
0 — 660 FT.

GROUNDWATER ISOCONCENTRATION MAP

1,1,1-TRICHLOROETHANE

DEEP WELLS
JUNE 4 & 5, 1992

FIG. 9

7/24/92
29th AND MEAD RI/FS

042209670
CAD INC. FILE NO. NEWAREA3

GEOSYNTEC TECHNOLOGY, INC.

ISOCONCENTRATION MAP
SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REF: 92

LEG

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ J = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (in ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

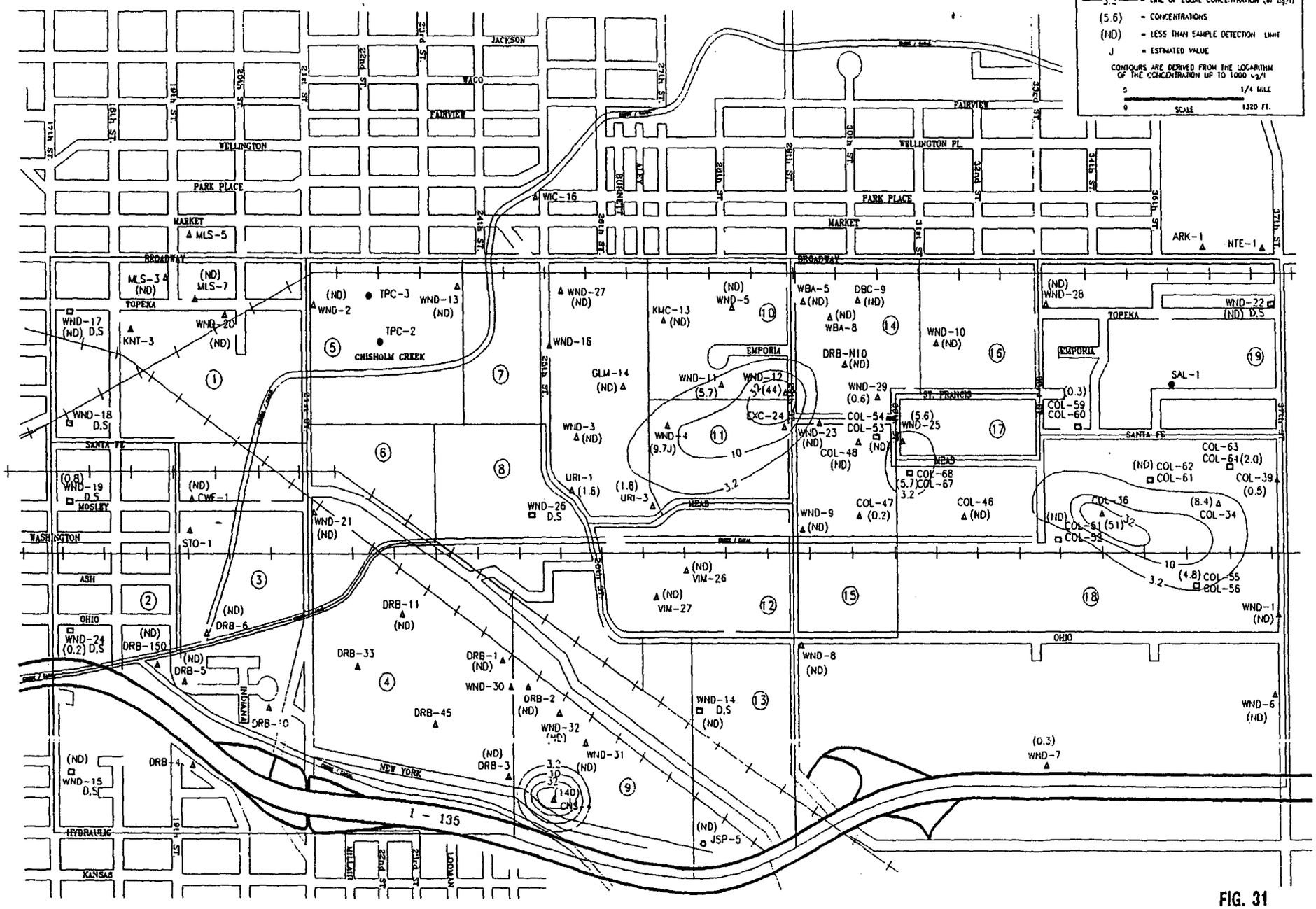


FIG. 31

8/19/91
29th AND MEAD RI/FS
042209670
FILE NO. 11DCADS
GROUNDWATER TECHNOLOGY, INC.

1,1-DCA ISOCONCENTRATION MAP DEEP ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVISION 4 92

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

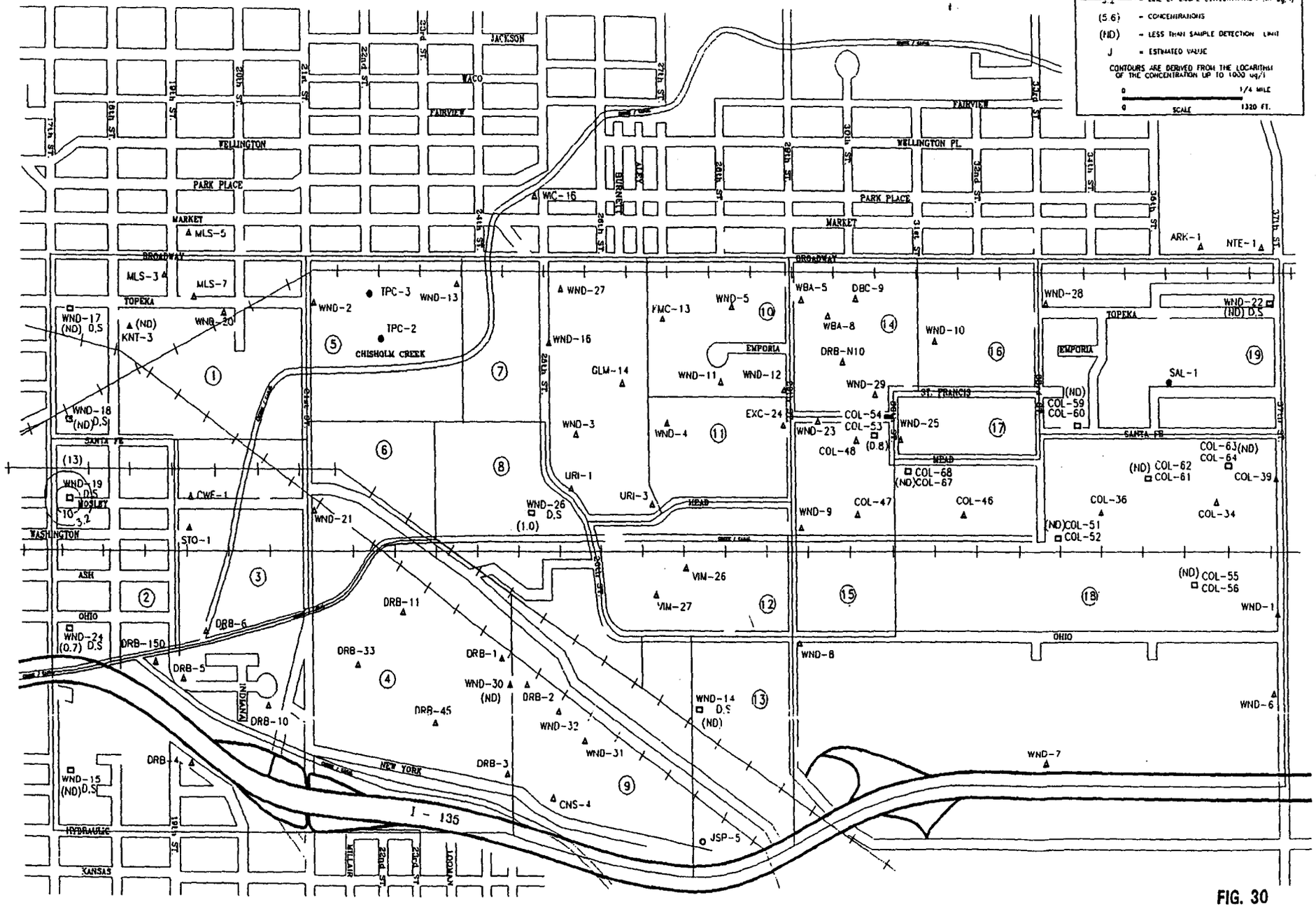


FIG. 30

8/19/91

042209670

JEM-1

CCl4
ISOCONCENTRATION MAP
SHALLOW ZONE

NOTE.
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REVIS

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

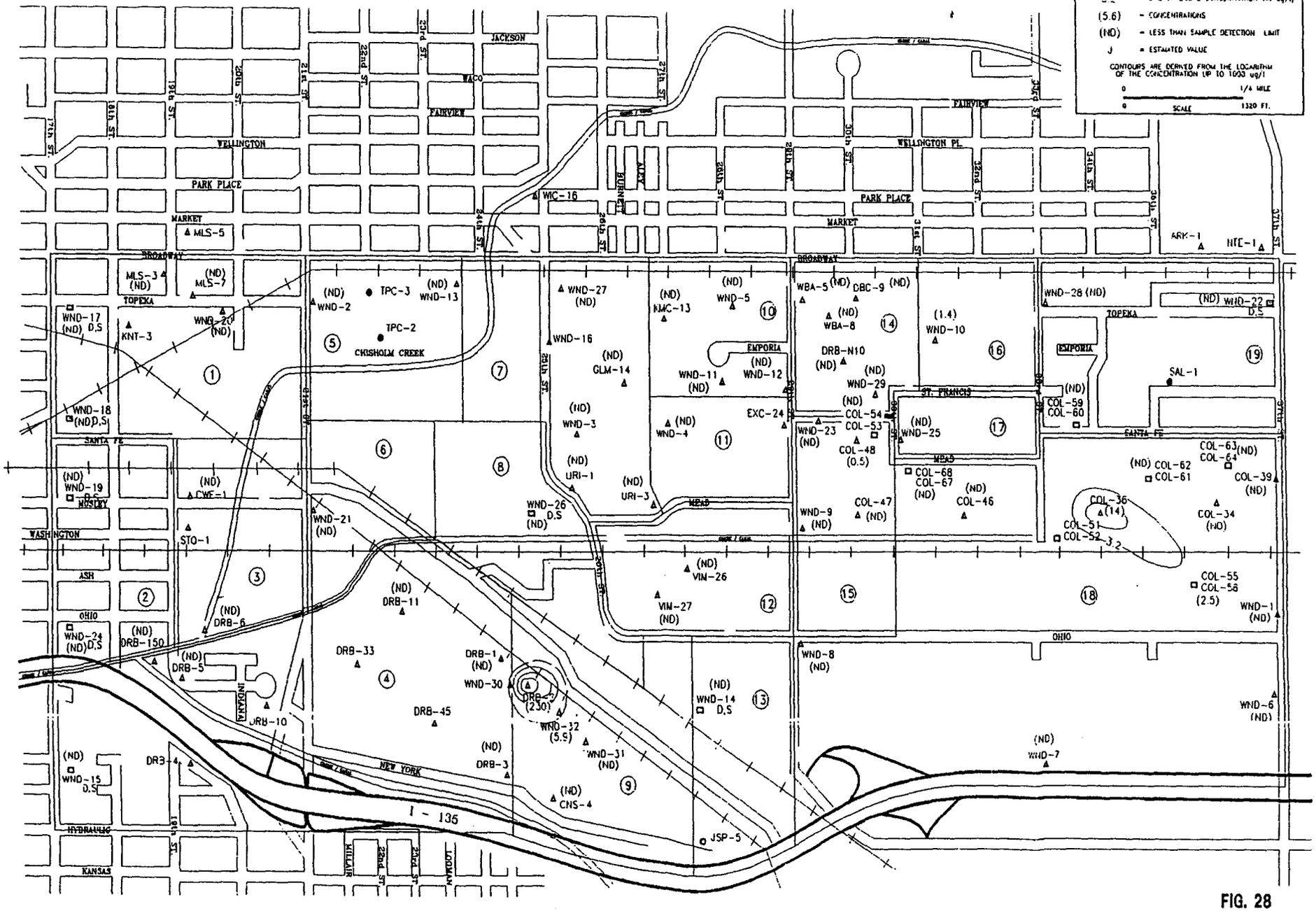


FIG. 28

8/19/91 042209670
29th AND MEAD PI/ES

GROUNDWATER

TOTAL BTEX ISOCONCENTRATION MAP SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESES.

DRAWING REF/S 12

LEGEND

- ▲ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE
- (LPH) = LIQUID-PHASE PETROLEUM HYDROCARBONS

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

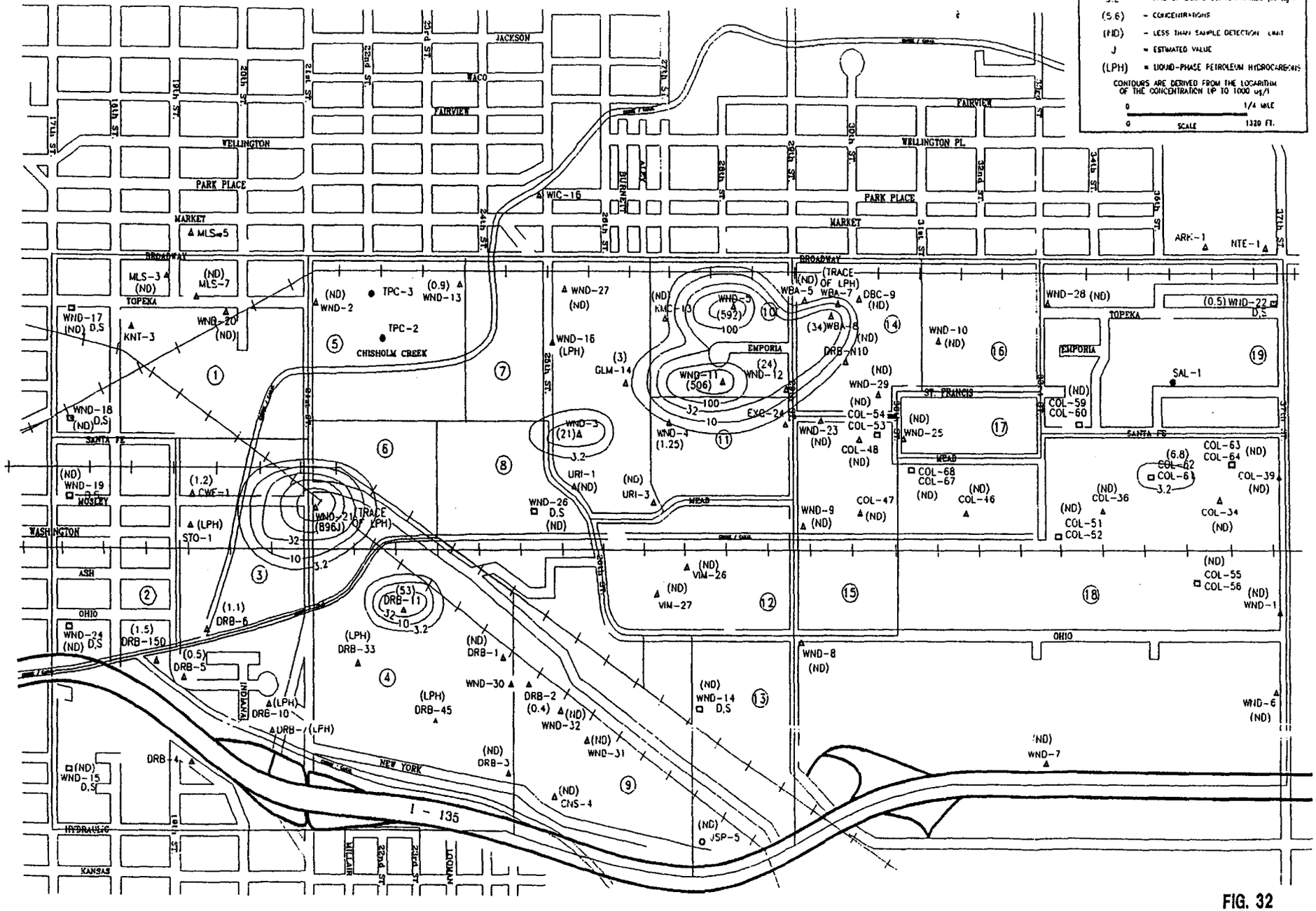


FIG. 32

8/19/91
29th AND MEAD RI/FS
042209670
FILE NO.: 9670-BTX

GROUNDWATER TECHNOLOGY, INC.

1,2 - DCA
ISOCONCENTRATION MAP
SHALLOW ZONE

NOTE:
CONTOURS USED TO PRODUCE THIS ISOCONCENTRATION MAP REFLECT ONLY THOSE WELLS SAMPLED. CONCENTRATIONS DETERMINED DURING SAMPLING ARE SHOWN IN PARENTHESIS.

DRAWING REV. /92

LEGEND

- △ = SHALLOW SCREENED WELL
- □ = WELL CLUSTER
- ○ = FULLY PENETRATING SCREENED WELL
- ● = WELL (UNKNOWN SCREEN INTERVAL)
- ▲ = DEEP SCREENED WELL
- —3.2— = LINE OF EQUAL CONCENTRATION (IN ug/l)
- (5.6) = CONCENTRATIONS
- (ND) = LESS THAN SAMPLE DETECTION LIMIT
- J = ESTIMATED VALUE

CONTOURS ARE DERIVED FROM THE LOGARITHM OF THE CONCENTRATION UP TO 1000 ug/l

0 — 1/4 MILE
0 — SCALE — 1320 FT.

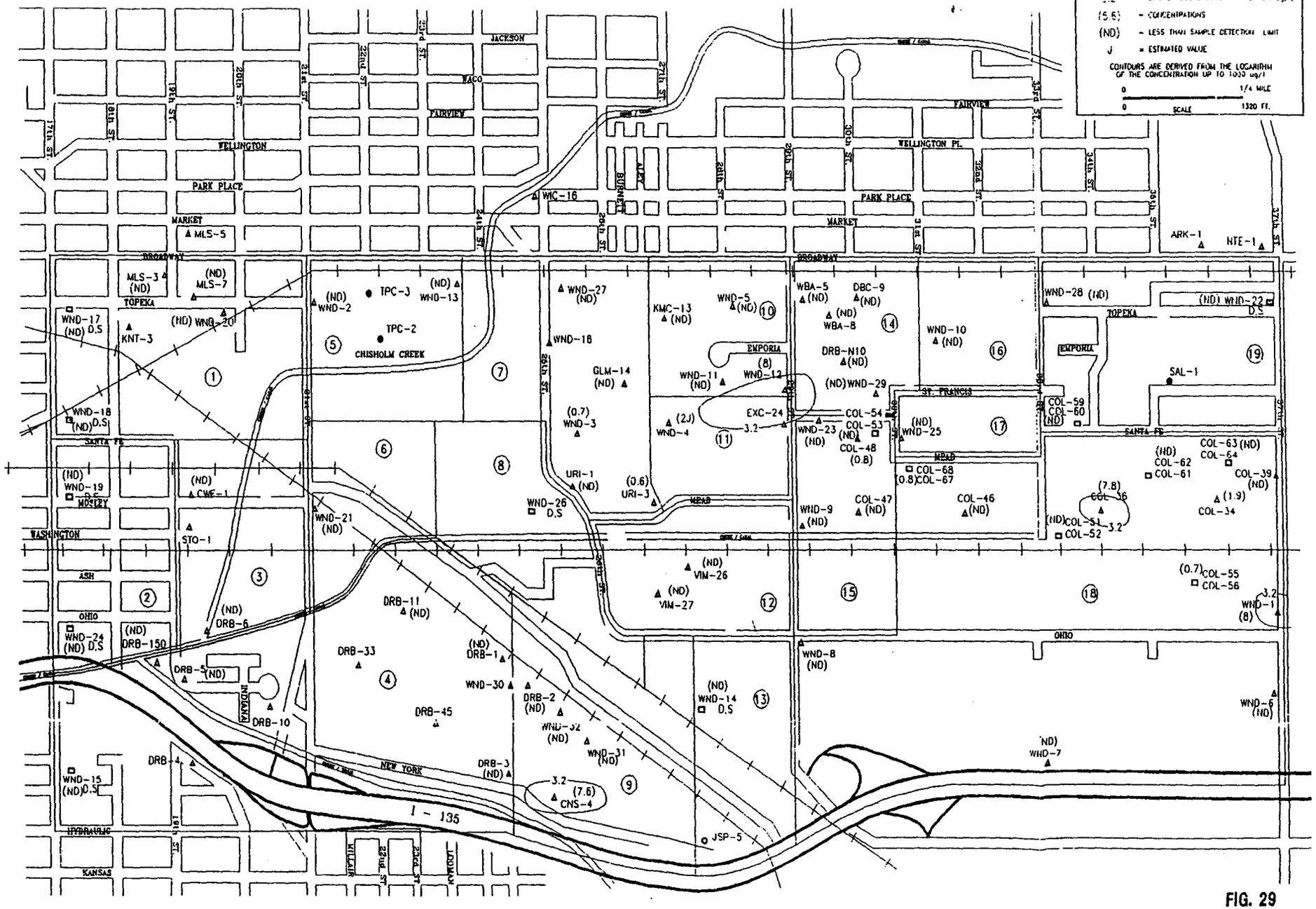
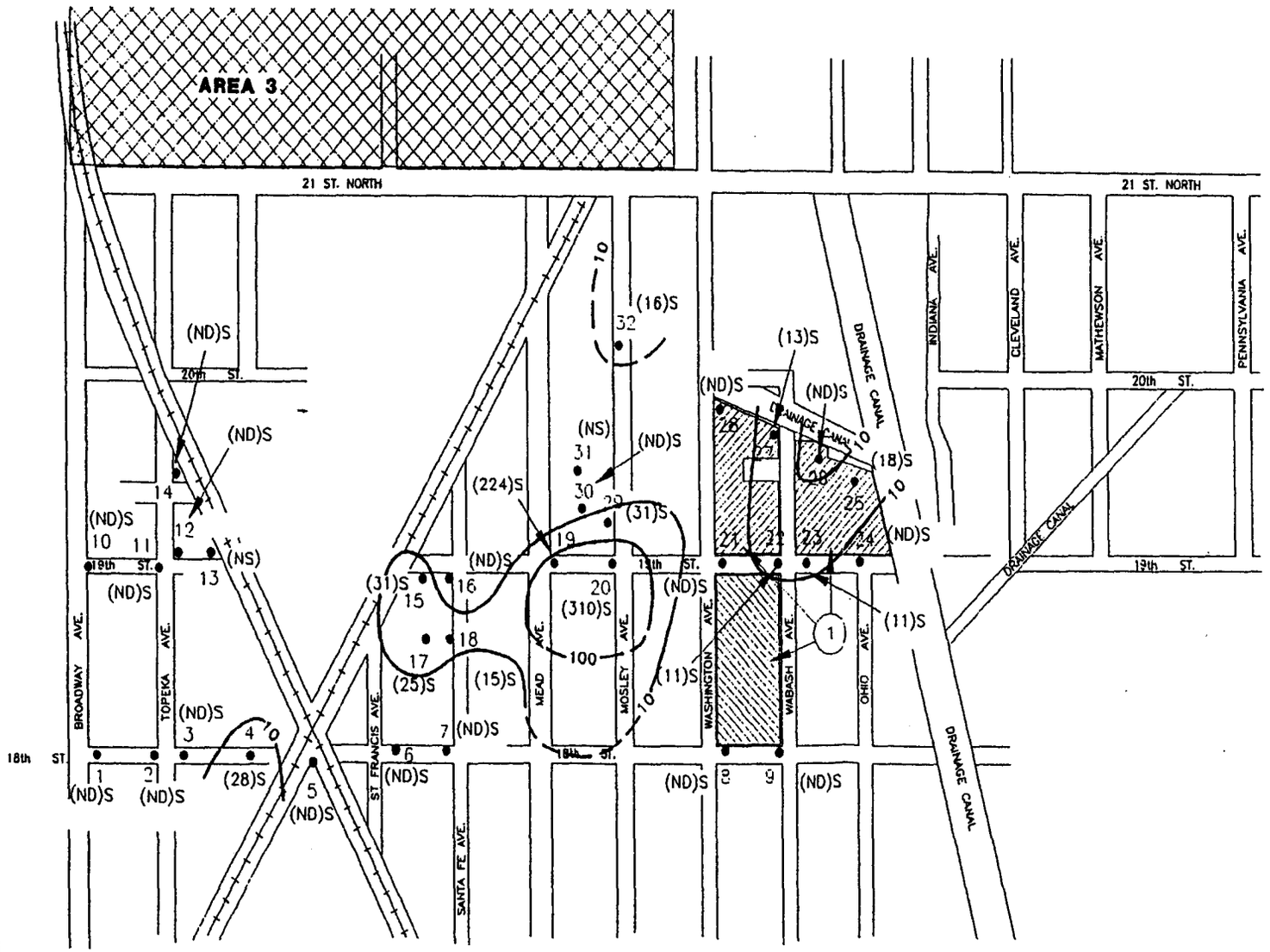


FIG. 29

8/19/91 042209670

GROUNDWATER

(1) = 1011 AND 1020 EAST 19th STREET NORTH-TRAMCO, INC.



LEGEND

7 • GEOPROBE LOCATIONS

(14)D BTEX CONCENTRATION SHALLOW (9/8/92)

(ND)S NOT DETECTED

(NS) NOT SAMPLED

AREA 3 = SUB-AREA OF 29th AND MEAD AS DETERMINED BY KDHE

CONCENTRATIONS IN ppb (ug/L)

N

THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF GROUNDWATER TECHNOLOGY, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF GROUNDWATER TECHNOLOGY, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.

GROUNDWATER TECHNOLOGY
443 N. MAIZE ROAD
WICHITA, KS 67212
(316) 722-2266

REV. NO.:	DRAWING DATE:	ACAD FILE:
	12/2/92	LITBTEXS

ROUND 1
GEOPROBE LOCATIONS/
TOTAL BTEX CONCENTRATIONS
SHALLOW

CLIENT:	PM:
COLEMAN CO.	DL
LOCATION: WICHITA, KS	PE/RG:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
	RHW	042206375	5

(1) = 1011 AND 1020 EAST 19th STREET NORTH-TRAMCO, INC.

LEGEND

7 ● GEOPROBE LOCATIONS

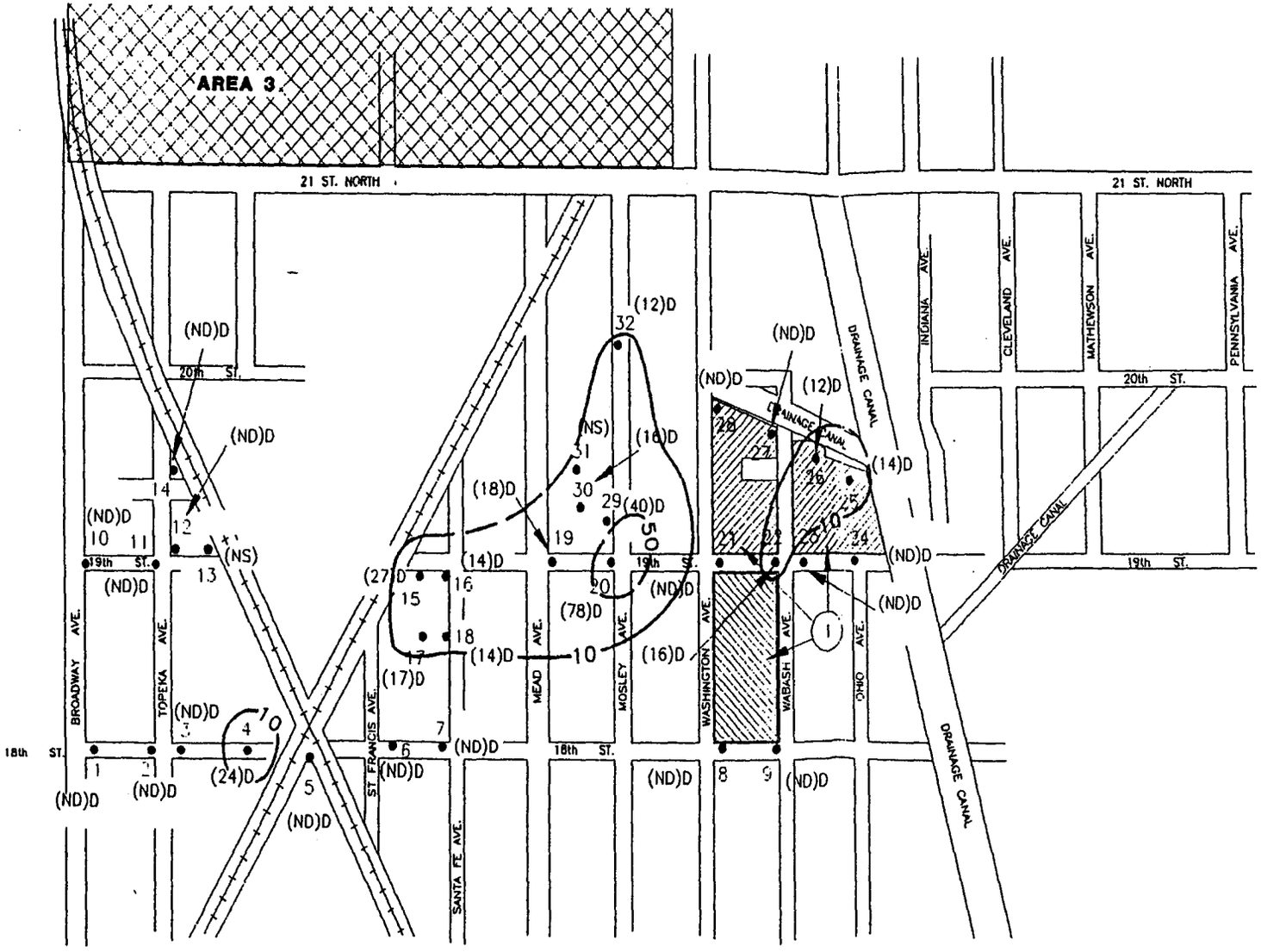
(14)D BTEX CONCENTRATION SHALLOW (9/8/92)

(ND)S NOT DETECTED

(NS) NOT SAMPLED

AREA 3 = SUB-AREA OF 29th AND MEAD AS DETERMINED BY KDHE

CONCENTRATIONS IN ppb (ug/L)



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GROUNDWATER TECHNOLOGY
443 N. MAIZE ROAD
WICHITA, KS 67212
(316) 722-2266

REV. NO.:	DRAWING DATE:	ACAD FILE:
	12/2/92	LITBTEXD

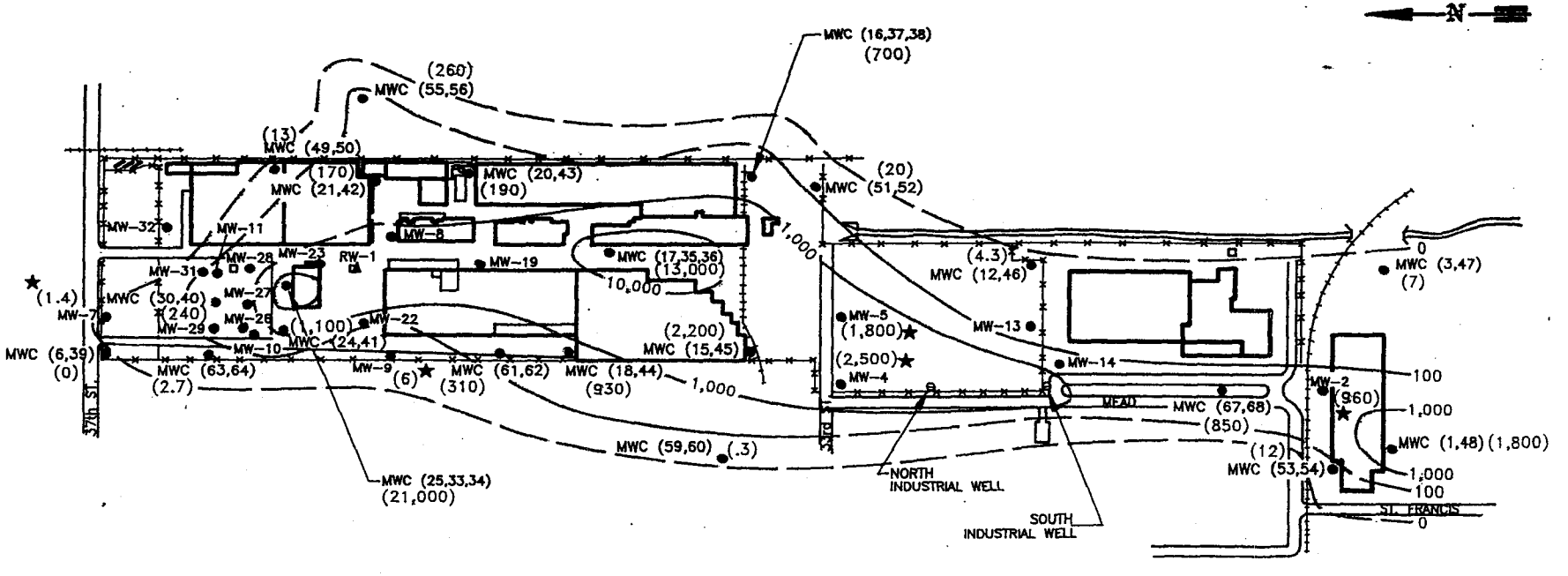
ROUND 1
GEOPROBE LOCATIONS/
TOTAL BTEX CONCENTRATIONS
DEEP

CLIENT:	PM:
COLEMAN CO.	DL
LOCATION: WICHITA, KS	PE/RG:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
	RHW	042206375	4

Appendix B-3
CN - Coleman North

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(20) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

400 0 400 800

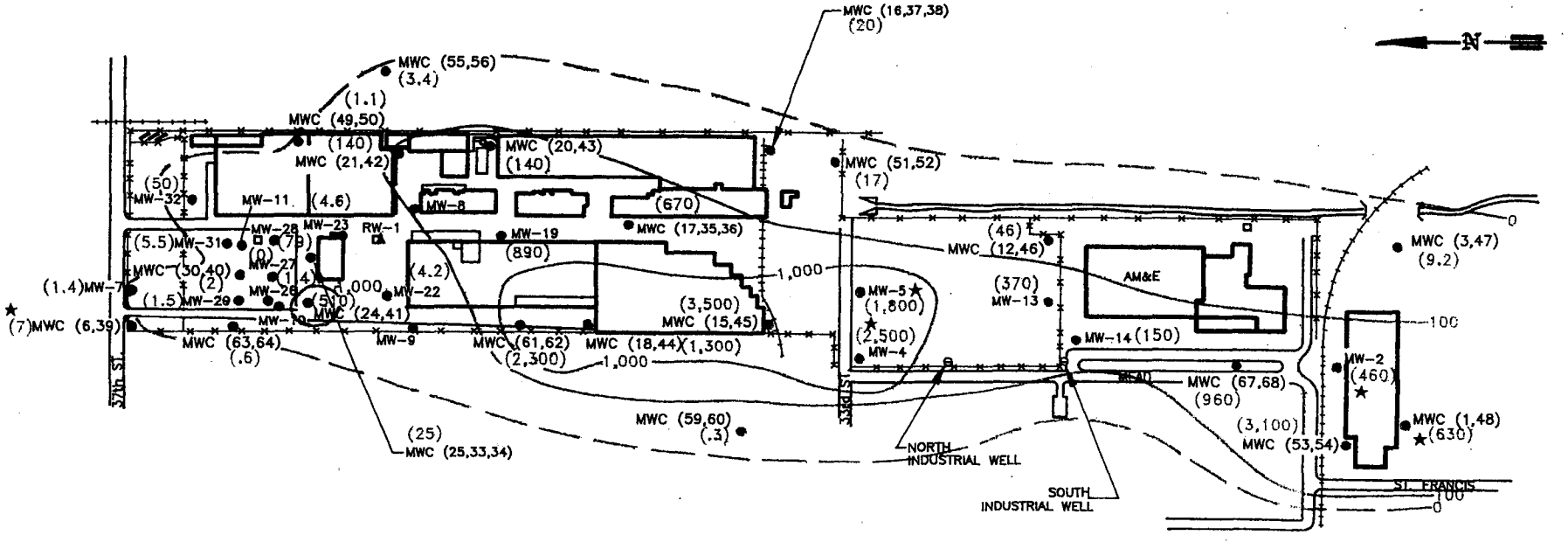
SCALE FEET

FIG. 11

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS 67212

PROJECT No: 042209733	DATE 5/4/90
DETAILED RHW	TITLE: SHALLOW TCE ISOCONCENTRATION MAP MAY 1990
CLIENT: COLEMAN CO.	LOCATION: WICHITA, KS.
CAD FILE No. 9430-SM	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(20) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

400 0 400 800

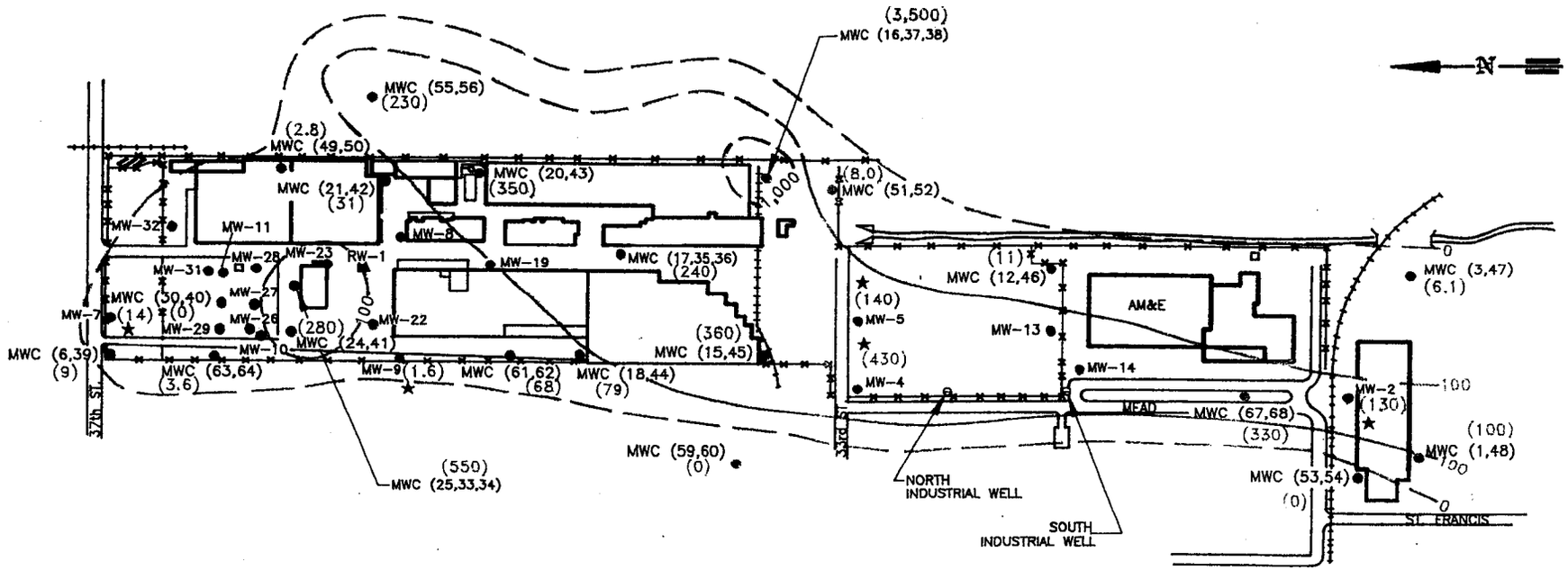
SCALE FEET

FIG. 12

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS. 67212

PROJECT No: 042209733	DATE 5/4/90
DETAILED RHW	TITLE: DEEP TCE ISOCONCENTRATION MAP MAY 1990
CLIENT: COLEMAN CO.	LOCATION: WICHITA, KS.
DWG No. / FILE No. 9430-SM	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(8.0) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

400 0 400 800

SCALE FEET

FIG. 13

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS. 67212

PROJECT No: 042209733
DATE 5/4/90

DETAILED RHW

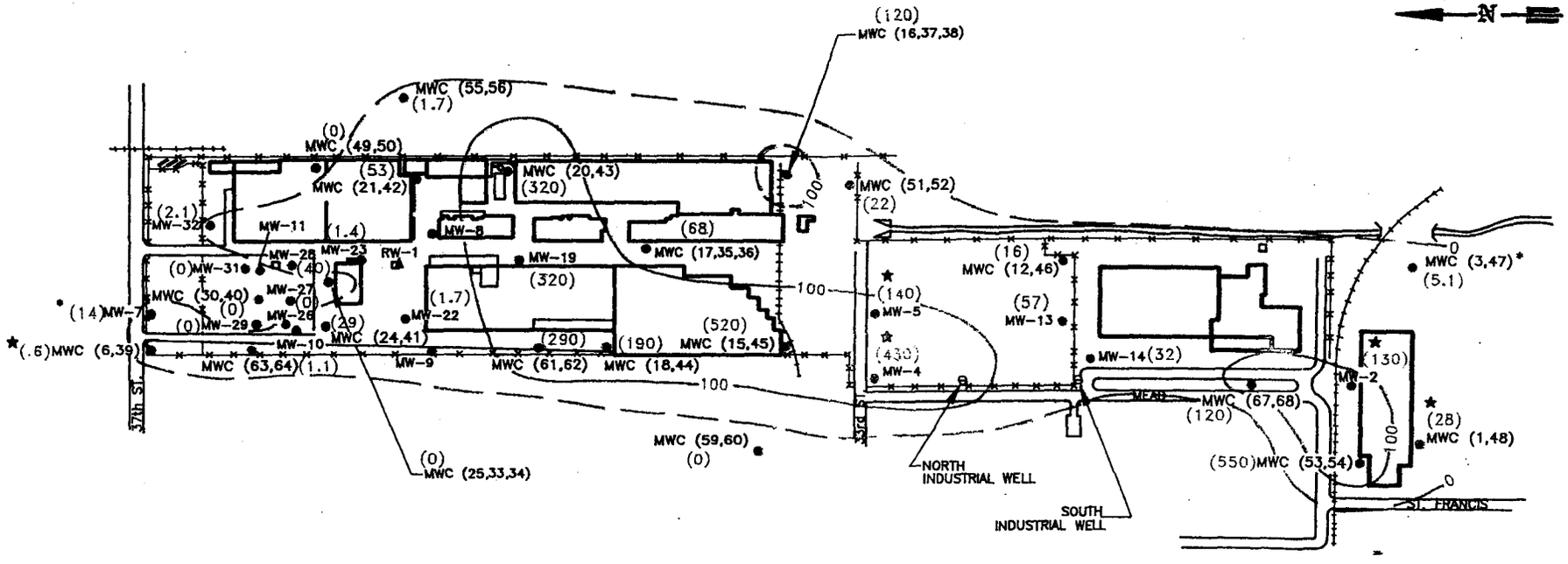
TITLE:
SHALLOW TCA ISOCONCENTRATION MAP
MAY 1990

CLIENT: COLEMAN CO.

LOCATION: WICHITA, KS.

CAD DWG. FILE No. 9430-SM

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(57) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

○ = FULLY PENETRATING WELL

400 0 400 800

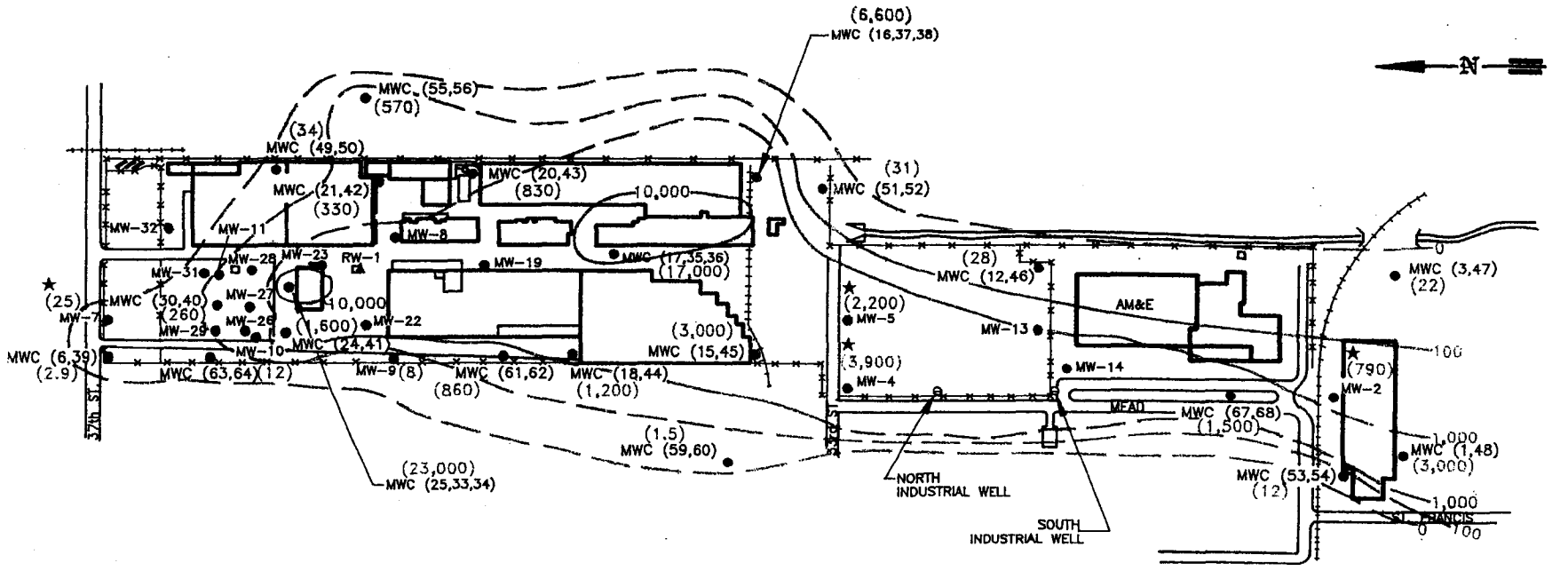
SCALE FEET

FIG. 14

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS 67212

PROJECT No: 042209733	DATE 5/4/90
DETAILED RHW	TITLE: DEEP TCA CONCENTRATION MAP MAY 1990
CLIENT: COLEMAN CO.	LOCATION: WICHITA, KS.
DWG. No. / FILE No. 9430-SM	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(31) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

400 0 400 800

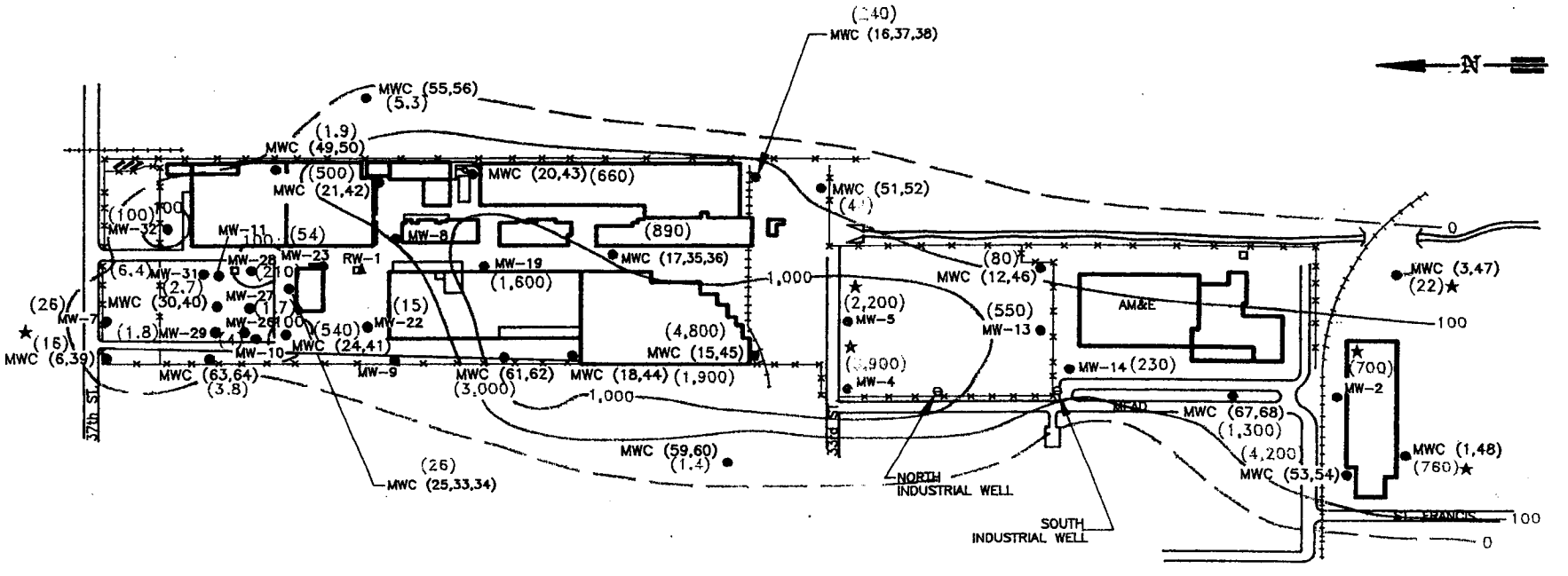
SCALE FEET

FIG. 15

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS. 67212

PROJECT No: 042209733	DATE 5/4/90
DETAILED RHW	TITLE: SHALLOW TVOC ISOCONCENTRATION MAP MAY 1990
CLIENT: COLEMAN CO.	LOCATION: WICHITA, KS.
CAD DWG. FILE No. 9430-SM	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(44) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

400 0 400 800

SCALE FEET

FIG. 16

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS. 67212

PROJECT No: 042209733	DATE 5/4/90
DETAILED RHW	TITLE: DEEP TVOC CONCENTRATION MAP MAY 1990
CLIENT: COLEMAN CO.	LOCATION: WICHITA, KS.
CAD DWG. FILE No.: 9430-SM	

TABLE 1
GROUNDWATER ELEVATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
WICHITA, KANSAS

PERIOD: From 05/15/2001 thru 05/15/2001 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	DELTA WATER ELEV (feet)	WATER ELEV. (feet)
MW-02F	5/15/2001	1316.57	00:00	13.11	NA	1303.46
MW-03F	5/15/2001	1316.72	00:00	12.95	NA	1303.77
MW-04F	5/15/2001	1318.41	00:00	13.57	NA	1304.84
MW-05F	5/15/2001	1318.19	00:00	13.29	NA	1304.90
MW-06	5/15/2001	1322.98	00:00	14.91	NA	1308.07
MW-07	5/15/2001	1323.17	00:00	15.11	NA	1308.06
MW-08	5/15/2001	1322.12	00:00	16.43	NA	1305.69
MW-09	5/15/2001	1319.49	00:00	13.52	NA	1305.97
MW-11	5/15/2001	1321.11	00:00	14.34	NA	1306.77
MW-13	5/15/2001	1317.45	00:00	O	NA	NA
MW-14	5/15/2001	1318.70	00:00	14.68	NA	1304.02
MW-15	5/15/2001	1320.34	00:00	15.10	NA	1305.24
MW-16	5/15/2001	1321.27	00:00	15.88	NA	1305.39
MW-17	5/15/2001	1321.09	00:00	15.50	NA	1305.59
MW-18	5/15/2001	1320.30	00:00	14.62	NA	1305.68
MW-19	5/15/2001	1321.06	00:00	15.39	NA	1305.67
MW-20	5/15/2001	1321.34	00:00	15.30	NA	1306.04
MW-21	5/15/2001	1320.11	00:00	14.02	NA	1306.09
MW-23	5/15/2001	1320.66	00:00	15.01	NA	1305.65
MW-25	5/15/2001	1321.83	00:00	15.65	NA	1306.18
MW-27	5/15/2001	1321.55	00:00	14.90	NA	1306.65
MW-28	5/15/2001	1320.34	00:00	13.76	NA	1306.58
MW-30	5/15/2001	1322.95	00:00	16.15	NA	1306.80
MW-31	5/15/2001	1321.86	00:00	14.98	NA	1306.88
MW-32	5/15/2001	1322.90	00:00	15.65	NA	1307.25
MW-33	5/15/2001	1321.66	00:00	15.22	NA	1306.44

NA=Not Applicable

TABLE 1
GROUNDWATER ELEVATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
WICHITA, KANSAS

PERIOD: From 05/15/2001 thru 05/15/2001 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	DELTA WATER ELEV (feet)	WATER ELEV. (feet)
MW-34	5/15/2001	1321.63	00:00	15.20	NA	1306.43
MW-35	5/15/2001	1320.89	00:00	15.26	NA	1305.63
MW-36	5/15/2001	1321.05	00:00	15.42	NA	1305.63
MW-37	5/15/2001	1320.82	00:00	15.44	NA	1305.38
MW-38	5/15/2001	1320.93	00:00	15.58	NA	1305.35
MW-39	5/15/2001	1322.83	00:00	14.77	NA	1308.06
MW-40	5/15/2001	1322.96	00:00	16.52	NA	1306.44
MW-42	5/15/2001	1320.06	00:00	13.71	NA	1306.35
MW-43	5/15/2001	1321.19	00:00	15.14	NA	1306.05
MW-44	5/15/2001	1318.70	00:00	13.09	NA	1305.61
MW-45	5/15/2001	1320.54	00:00	15.46	NA	1305.08
MW-46	5/15/2001	1317.70	00:00	13.59	NA	1304.11
MW-47	5/15/2001	1316.13	00:00	12.50	NA	1303.63
MW-49	5/15/2001	1320.61	00:00	14.89	NA	1305.72
MW-50	5/15/2001	1320.58	00:00	14.85	NA	1305.73
MW-51	5/15/2001	1319.27	00:00	14.17	NA	1305.10
MW-52	5/15/2001	1319.06	00:00	14.05	NA	1305.01
MW-53	5/15/2001	1316.26	00:00	12.64	NA	1303.62
MW-54	5/15/2001	1316.16	00:00	12.53	NA	1303.63
MW-55	5/15/2001	1320.59	00:00	14.10	NA	1306.49
MW-56	5/15/2001	1321.28	00:00	14.68	NA	1306.60
MW-59	5/15/2001	1319.87	00:00	14.56	NA	1305.31
MW-60	5/15/2001	1319.34	00:00	14.01	NA	1305.33
MW-61	5/15/2001	1320.20	00:00	14.35	NA	1305.85
MW-62	5/15/2001	1319.80	00:00	13.94	NA	1305.86

NA=Not Applicable

TABLE 1
GROUNDWATER ELEVATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
WICHITA, KANSAS

PERIOD: From 05/15/2001 thru 05/15/2001 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	DELTA WATER ELEV (feet)	WATER ELEV. (feet)
MW-63	5/15/2001	1320.36	00:00	13.21	NA	1307.15
MW-64	5/15/2001	1320.35	00:00	13.09	NA	1307.26
MW-67	5/15/2001	1317.34	00:00	13.51	NA	1303.83
MW-68	5/15/2001	1317.30	00:00	13.49	NA	1303.81
MW-69D	5/15/2001	1314.14	00:00	10.58	NA	1303.56
MW-69S	5/15/2001	1314.21	00:00	10.63	NA	1303.58
MW-70D	5/15/2001	1320.97	00:00	15.60	NA	1305.37
MW-70S	5/15/2001	1320.85	00:00	15.51	NA	1305.34
MW-71D	5/15/2001	1316.66	00:00	13.12	NA	1303.54
MW-71S	5/15/2001	1316.50	00:00	12.96	NA	1303.54
VEW-05D	5/15/2001	1320.04	00:00	14.24	NA	1305.80
VEW-11D	5/15/2001	1320.28	00:00	13.75	NA	1306.53
VEW-13D	5/15/2001	1320.00	00:00	13.50	NA	1306.50
VEW-14D	5/15/2001	1320.29	00:00	14.03	NA	1306.26
VEW-18D	5/15/2001	1320.05	00:00	14.20	NA	1305.85
VEW-21D	5/15/2001	1320.16	00:00	14.41	NA	1305.75
VEW-22D	5/15/2001	1319.93	00:00	14.53	NA	1305.40
WND-10	5/15/2001	1317.95	00:00	13.83	NA	1304.12
WND-25D	5/15/2001	1318.12	00:00	14.49	NA	1303.63
WND-25S	5/15/2001	1318.09	00:00	14.48	NA	1303.61
WND-28S	5/15/2001	1320.37	00:00	14.83	NA	1305.54
WND-29D	5/15/2001	1319.30	00:00	15.83	NA	1303.47
WND-29S	5/15/2001	1319.01	00:00	15.42	NA	1303.59

NA=Not Applicable

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	1,1,1-trichloro ethane (ug/l)	1,1,2,2-Tetra chloroethane (ug/l)	1,1,2-Trichloro ethane (ug/l)	1,1-Dichloro ethane (ug/l)	1,1-Dichloro ethylene (ug/l)	1,2-Dichloro ethane (ug/l)	1,2-Dichloro propane (ug/l)
MW-03F	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-12	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-15	05/15/2001	1.9	<0.5	<0.5	2	2.3	<0.5	<0.5
MW-16	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	05/16/2001	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
MW-20	05/16/2001	13	<0.5	<0.5	0.96	5.6	<0.5	<0.5
MW-21	05/16/2001	<2.5	<2.5	<2.5	<2.5	10	<2.5	<2.5
MW-25	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-30	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-34	05/16/2001	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-36	05/16/2001	<50	<50	<50	<50	<50	<50	<50
MW-38	05/15/2001	13	<0.5	<0.5	0.7	9	<0.5	<0.5
MW-40	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-42	05/16/2001	4	<0.5	<0.5	1.4	2.6	<0.5	<0.5
MW-43	05/16/2001	2.3	<0.5	<0.5	<0.5	1.2	<0.5	<0.5
MW-45	05/15/2001	0.86	<0.5	<0.5	0.68	0.57	<0.5	<0.5
MW-46	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-47	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-49	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-50	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	1,1,1-trichloro ethane (ug/l)	1,1,2,2-Tetra chloroethane (ug/l)	1,1,2-Trichloro ethane (ug/l)	1,1-Dichloro ethane (ug/l)	1,1-Dichloro ethylene (ug/l)	1,2-Dichloro ethane (ug/l)	1,2-Dichloro propane (ug/l)
MW-51	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-52	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-53	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-54	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-59	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-60	05/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-61	05/16/2001	2.7	<1	<1	5.4	<1	<1	<1
MW-62	05/16/2001	<2.5	<2.5	<2.5	<2.5	5.7	<2.5	<2.5
MW-67	05/15/2001	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5
MW-68	05/15/2001	<0.5	<0.5	<0.5	<0.5	0.64	<0.5	<0.5
MW-69D	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-69S	05/15/2001	<0.5	<0.5	<0.5	<0.5	0.74	<0.5	<0.5
MW-70D	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-70S	05/15/2001	<25	<25	<25	<25	<25	<25	<25
MW-71D	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-71S	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N.IND	05/16/2001	<2.5	<2.5	<2.5	3	2.6	<2.5	<2.5
RW-1	01/24/2001	18.9	<0.5	<0.5	0.8	4.5	<0.5	<0.5
RW-1	02/22/2001	11	<0.5	<0.5	<0.2	2.3	<0.5	<0.5
RW-1	03/13/2001	23.1	<0.5	<0.5	1.0	5.2	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	1,1,1-trichloro ethane (ug/l)	1,1,2,2-Tetra chloroethane (ug/l)	1,1,2-Trichloro ethane (ug/l)	1,1-Dichloro ethane (ug/l)	1,1-Dichloro ethylene (ug/l)	1,2-Dichloro ethane (ug/l)	1,2-Dichloro propane (ug/l)
RW-1	04/18/2001	18.2	<0.5	<0.5	0.9	5.0	<0.5	<0.5
RW-1	05/08/2001	16.3	<0.5	<0.5	1.0	4.7	<0.5	<0.5
RW-1	05/16/2001	16	<1	<1	<1	3.6	<1	<1
RW-1	06/05/2001	22	<0.5	<0.5	1.2	5.4	<0.5	<0.5
S.IND	05/16/2001	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
VEW-05D	05/16/2001	<250	<250	<250	<250	<250	<250	<250
VEW-11D	05/16/2001	37	<2.5	<2.5	110	67	2.8	<2.5
VEW-13D	05/16/2001	0.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VEW-14D	05/16/2001	25	<1	<1	20	55	<1	<1
VEW-18D	05/16/2001	<5	<5	<5	<5	<5	<5	<5
VEW-21D	05/16/2001	110	<13	<13	<13	16	<13	<13
VEW-22D	05/16/2001	<130	<130	<130	<130	<130	<130	<130
WND-29D	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WND-29S	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	Benzene (ug/l)	Bromodichloro methane (ug/l)	Bromoform (ug/l)	Carbon tetrachloride (ug/l)	Chlorobenzene (ug/l)	Chloroethane (ug/l)	Chloroform (ug/l)
MW-03F	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-12	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-15	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-16	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	05/16/2001	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
MW-20	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	0.86
MW-21	05/16/2001	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
MW-25	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-30	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-34	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-36	05/16/2001	---	<50	<50	<50	<50	<50	<50
MW-38	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-40	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-42	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	0.56
MW-43	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-45	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-46	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-47	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-49	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-50	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	Benzene (ug/l)	Bromodichloro methane (ug/l)	Bromoform (ug/l)	Carbon tetrachloride (ug/l)	Chlorobenzene (ug/l)	Chloroethane (ug/l)	Chloroform (ug/l)
MW-51	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-52	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-53	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	0.9
MW-54	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-59	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-60	05/16/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-61	05/16/2001	30	<1	<1	<1	<1	<1	<1
MW-62	05/16/2001	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
MW-67	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-68	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-69D	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
MW-69S	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
MW-70D	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-70S	05/15/2001	---	<25	<25	<25	<25	<25	<25
MW-71D	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-71S	05/15/2001	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N.IND	05/16/2001	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
RW-1	01/24/2001	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5
RW-1	02/22/2001	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5
RW-1	03/13/2001	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	Benzene (ug/l)	Bromodichloro methane (ug/l)	Bromoform (ug/l)	Carbon tetrachloride (ug/l)	Chlorobenzene (ug/l)	Chloroethane (ug/l)	Chloroform (ug/l)
RW-1	04/18/2001	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5
RW-1	05/08/2001	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5
RW-1	05/16/2001	<0.5	<1	<1	<1	<1	<1	<1
RW-1	06/05/2001	<0.5	<0.5	<0.5	<0.5	<0.5	---	<0.5
S.IND	05/16/2001	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
VEW-05D	05/16/2001	---	<250	<250	<250	<250	<250	<250
VEW-11D	05/16/2001	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
VEW-13D	05/16/2001	---	12	0.67	<0.5	<0.5	<0.5	14
VEW-14D	05/16/2001	---	<1	<1	<1	<1	<1	<1
VEW-18D	05/16/2001	---	<5	<5	<5	<5	<5	<5
VEW-21D	05/16/2001	---	<13	<13	<13	<13	<13	<13
VEW-22D	05/16/2001	---	<130	<130	<130	<130	<130	<130
WND-29D	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WND-29S	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	cis-1,2-Dichloro ethylene (ug/l)	cis-1,3-Dichloropropene (ug/l)	Dibromochloro methane (ug/l)	Dichloro difluoromethane (ug/l)	Ethene, (2-chloroethoxy)- (ug/l)	Ethene, 1,2-dichloro-, (E)- (ug/l)	Ethylbenzene (ug/l)
MW-03F	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-12	05/15/2001	1.3	<0.5	<0.5	<1	<5	<0.5	---
MW-15	05/15/2001	4.3	<0.5	<0.5	<1	<5	<0.5	---
MW-16	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-17	05/16/2001	62	<2.5	<2.5	<2.5	<25	<2.5	---
MW-20	05/16/2001	6.2	<0.5	<0.5	<1	<5	<0.5	---
MW-21	05/16/2001	11	<2.5	<2.5	<2.5	<25	<2.5	---
MW-25	05/16/2001	0.69	<0.5	<0.5	<1	<5	<0.5	---
MW-30	05/16/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-34	05/16/2001	1.9	<0.5	<0.5	<1	<5	<0.5	---
MW-36	05/16/2001	550	<50	<50	<50	<500	<50	---
MW-38	05/15/2001	8.8	<0.5	<0.5	<1	<5	<0.5	---
MW-40	05/16/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-42	05/16/2001	30	<0.5	<0.5	<1	<5	<0.5	---
MW-43	05/16/2001	1.7	<0.5	<0.5	<1	<5	<0.5	---
MW-45	05/15/2001	1.8	<0.5	<0.5	<1	<5	<0.5	---
MW-46	05/15/2001	0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-47	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-49	05/16/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-50	05/16/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	cis-1,2-Dichloro ethylene (ug/l)	cis-1,3-Dichloropropene (ug/l)	Dibromochloro methane (ug/l)	Dichloro difluoromethane (ug/l)	Ethene, (2-chloroethoxy)- (ug/l)	Ethene, 1,2-dichloro-, (E)- (ug/l)	Ethylbenzene (ug/l)
MW-51	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-52	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-53	05/15/2001	2.9	<0.5	<0.5	<1	<5	<0.5	---
MW-54	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-59	05/16/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-60	05/16/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-61	05/16/2001	60	<1	<1	<1	<10	<1	7.9
MW-62	05/16/2001	3.3	<2.5	<2.5	<2.5	<25	<2.5	<1
MW-67	05/15/2001	5	<0.5	<0.5	<1	<5	<0.5	---
MW-68	05/15/2001	4.6	<0.5	<0.5	<1	<5	<0.5	---
MW-69D	05/15/2001	0.52	<0.5	<0.5	<1	<5	<0.5	<0.5
MW-69S	05/15/2001	2.1	<0.5	<0.5	<1	<5	<0.5	<0.5
MW-70D	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	---
MW-70S	05/15/2001	97	<25	<25	<25	<250	<25	---
MW-71D	05/15/2001	0.72	<0.5	<0.5	<1	<5	<0.5	---
MW-71S	05/15/2001	52	<0.5	<0.5	<1	<5	<0.5	---
N.IND	05/16/2001	24	<2.5	<2.5	<2.5	<25	<2.5	---
RW-1	01/24/2001	3.5	<0.5	<0.5	---	---	<0.5	<0.5
RW-1	02/22/2001	<0.5	<0.5	<0.5	---	---	<0.5	<0.5
RW-1	03/13/2001	3.4	<0.5	<0.5	---	---	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	cis-1,2-Dichloro ethylene (ug/l)	cis-1,3-Dichloropropene (ug/l)	Dibromochloro methane (ug/l)	Dichloro difluoromethane (ug/l)	Ethene, (2-chloroethoxy)- (ug/l)	Ethene, 1,2-dichloro-, (E)- (ug/l)	Ethylbenzene (ug/l)
RW-1	04/18/2001	3.2	<0.5	<0.5	---	---	<0.5	<0.5
RW-1	05/08/2001	3.2	<0.5	<0.5	---	---	<0.5	<0.5
RW-1	05/16/2001	3.7	<1	<1	<1	<10	<1	<0.5
RW-1	06/05/2001	4.1	<0.5	<0.5	---	---	<0.5	<0.5
S.IND	05/16/2001	44	<2.5	<2.5	<2.5	<25	<2.5	---
VEW-05D	05/16/2001	2300	<250	<250	<250	<2500	<250	---
VEW-11D	05/16/2001	210	<2.5	<2.5	<2.5	<25	<2.5	---
VEW-13D	05/16/2001	2.7	<0.5	6.9	<1	<5	<0.5	---
VEW-14D	05/16/2001	61	<1	<1	<1	<10	<1	---
VEW-18D	05/16/2001	33	<5	<5	<5	<50	<5	---
VEW-21D	05/16/2001	19	<13	<13	<13	<130	<13	---
VEW-22D	05/16/2001	1800	<130	<130	<130	<1300	<130	---
WND-29D	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	<0.5
WND-29S	05/15/2001	<0.5	<0.5	<0.5	<1	<5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	m/p-xylene (ug/l)	m-Dichloro benzene (ug/l)	Methyl bromide (ug/l)	Methyl chloride (ug/l)	Methylene chloride (ug/l)	o-Dichloro benzene (ug/l)	o-Xylene (ug/l)
MW-03F	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-12	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-15	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-16	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-17	05/16/2001	---	<2.5	<2.5	<10	<10	<2.5	---
MW-20	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-21	05/16/2001	---	<2.5	<2.5	<10	<10	<2.5	---
MW-25	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-30	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-34	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-36	05/16/2001	---	<50	<50	<200	<200	<50	---
MW-38	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-40	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-42	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-43	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-45	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-46	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-47	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-49	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-50	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	m/p-xylene (ug/l)	m-Dichloro benzene (ug/l)	Methyl bromide (ug/l)	Methyl chloride (ug/l)	Methylene chloride (ug/l)	o-Dichloro benzene (ug/l)	o-Xylene (ug/l)
MW-51	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-52	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-53	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-54	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-59	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-60	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-61	05/16/2001	4.4	<1	<1	<4	<4	<1	3.5
MW-62	05/16/2001	<1	<2.5	<2.5	<10	<10	<2.5	<1
MW-67	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-68	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-69D	05/15/2001	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5
MW-69S	05/15/2001	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5
MW-70D	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-70S	05/15/2001	---	<25	<25	<100	<100	<25	---
MW-71D	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
MW-71S	05/15/2001	---	<0.5	<0.5	<2	<2	<0.5	---
N.IND	05/16/2001	---	<2.5	<2.5	<10	<10	<2.5	---
RW-1	01/24/2001	<0.5	<0.5	---	---	<0.5	<0.5	<0.5
RW-1	02/22/2001	<0.5	<0.5	---	---	<0.5	<0.5	<0.5
RW-1	03/13/2001	<0.5	<0.5	---	---	<0.5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	m/p-xylene (ug/l)	m-Dichloro benzene (ug/l)	Methyl bromide (ug/l)	Methyl chloride (ug/l)	Methylene chloride (ug/l)	o-Dichloro benzene (ug/l)	o-Xylene (ug/l)
RW-1	04/18/2001	<0.5	<0.5	---	---	<0.5	<0.5	<0.5
RW-1	05/08/2001	<0.5	<0.5	---	---	<0.5	<0.5	<0.5
RW-1	05/16/2001	<0.5	<1	<1	<4	<4	<1	<0.5
RW-1	06/05/2001	<0.5	<0.5	---	---	<0.5	<0.5	<0.5
S.IND	05/16/2001	---	<2.5	<2.5	<10	<10	<2.5	---
VEW-05D	05/16/2001	---	<250	<250	<1000	<1000	<250	---
VEW-11D	05/16/2001	---	<2.5	<2.5	<10	<10	<2.5	---
VEW-13D	05/16/2001	---	<0.5	<0.5	<2	<2	<0.5	---
VEW-14D	05/16/2001	---	<1	<1	<4	<4	<1	---
VEW-18D	05/16/2001	---	<5	<5	<20	<20	<5	---
VEW-21D	05/16/2001	---	<13	<13	<50	<50	<13	---
VEW-22D	05/16/2001	---	<130	<130	<500	<500	<130	---
WND-29D	05/15/2001	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5
WND-29S	05/15/2001	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	p-Dichloro benzene (ug/l)	Tetrachloro ethylene (ug/l)	Toluene (ug/l)	Trans-1,3-Dichloropropene (ug/l)	Trichloro ethylene (ug/l)	Trichloro fluoromethane (ug/l)	Vinyl chloride (ug/l)
MW-03F	05/15/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW-12	05/15/2001	<0.5	<0.5	---	<0.5	21	<0.5	<0.5
MW-15	05/15/2001	<0.5	<0.5	---	<0.5	38	<0.5	2.5
MW-16	05/15/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW-17	05/16/2001	<2.5	<2.5	---	<2.5	260	<2.5	<2.5
MW-20	05/16/2001	<0.5	0.63	---	<0.5	33	<0.5	<0.5
MW-21	05/16/2001	<2.5	<2.5	---	<2.5	130	<2.5	<2.5
MW-25	05/16/2001	<0.5	1.4	---	<0.5	97	<0.5	<0.5
MW-30	05/16/2001	<0.5	3.6	---	<0.5	0.89	<0.5	<0.5
MW-34	05/16/2001	<0.5	1.4	---	<0.5	61	<0.5	<0.5
MW-36	05/16/2001	<50	<50	---	<50	3300	<50	<50
MW-38	05/15/2001	<0.5	<0.5	---	<0.5	33	<0.5	<0.5
MW-40	05/16/2001	<0.5	10	---	<0.5	2.7	<0.5	<0.5
MW-42	05/16/2001	<0.5	<0.5	---	<0.5	42	<0.5	<0.5
MW-43	05/16/2001	<0.5	<0.5	---	<0.5	12	<0.5	<0.5
MW-45	05/15/2001	<0.5	5.9	---	<0.5	60	<0.5	<0.5
MW-46	05/15/2001	<0.5	<0.5	---	<0.5	9.2	<0.5	<0.5
MW-47	05/15/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW-49	05/16/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW-50	05/16/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5

---=Not analyzed

TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	p-Dichloro benzene (ug/l)	Tetrachloro ethylene (ug/l)	Toluene (ug/l)	Trans-1,3-Dichloropropene (ug/l)	Trichloro ethylene (ug/l)	Trichloro fluoromethane (ug/l)	Vinyl chloride (ug/l)
MW-51	05/15/2001	<0.5	<0.5	---	<0.5	0.77	<0.5	<0.5
MW-52	05/15/2001	<0.5	<0.5	---	<0.5	7.9	<0.5	<0.5
MW-53	05/15/2001	<0.5	<0.5	---	<0.5	17	<0.5	<0.5
MW-54	05/15/2001	<0.5	<0.5	---	<0.5	1.6	<0.5	<0.5
MW-59	05/16/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW-60	05/16/2001	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW-61	05/16/2001	<1	<1	10	<1	38	<1	37
MW-62	05/16/2001	<2.5	<2.5	<1	<2.5	170	<2.5	<2.5
MW-67	05/15/2001	<0.5	<0.5	---	<0.5	95	<0.5	<0.5
MW-68	05/15/2001	<0.5	<0.5	---	<0.5	27	<0.5	<0.5
MW-69D	05/15/2001	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5
MW-69S	05/15/2001	<0.5	<0.5	<0.5	<0.5	38	<0.5	<0.5
MW-70D	05/15/2001	<0.5	<0.5	---	<0.5	1.7	<0.5	<0.5
MW-70S	05/15/2001	<25	<25	---	<25	1300	<25	<25
MW-71D	05/15/2001	<0.5	<0.5	---	<0.5	3.3	<0.5	<0.5
MW-71S	05/15/2001	<0.5	<0.5	---	<0.5	17	<0.5	1.3
N.IND	05/16/2001	<2.5	<2.5	---	<2.5	150	<2.5	3
RW-1	01/24/2001	<0.5	0.8	<0.5	<0.5	77.7	<0.5	<0.5
RW-1	02/22/2001	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	<0.5
RW-1	03/13/2001	<0.5	0.9	<0.5	<0.5	74	<0.5	<0.5

---=Not analyzed

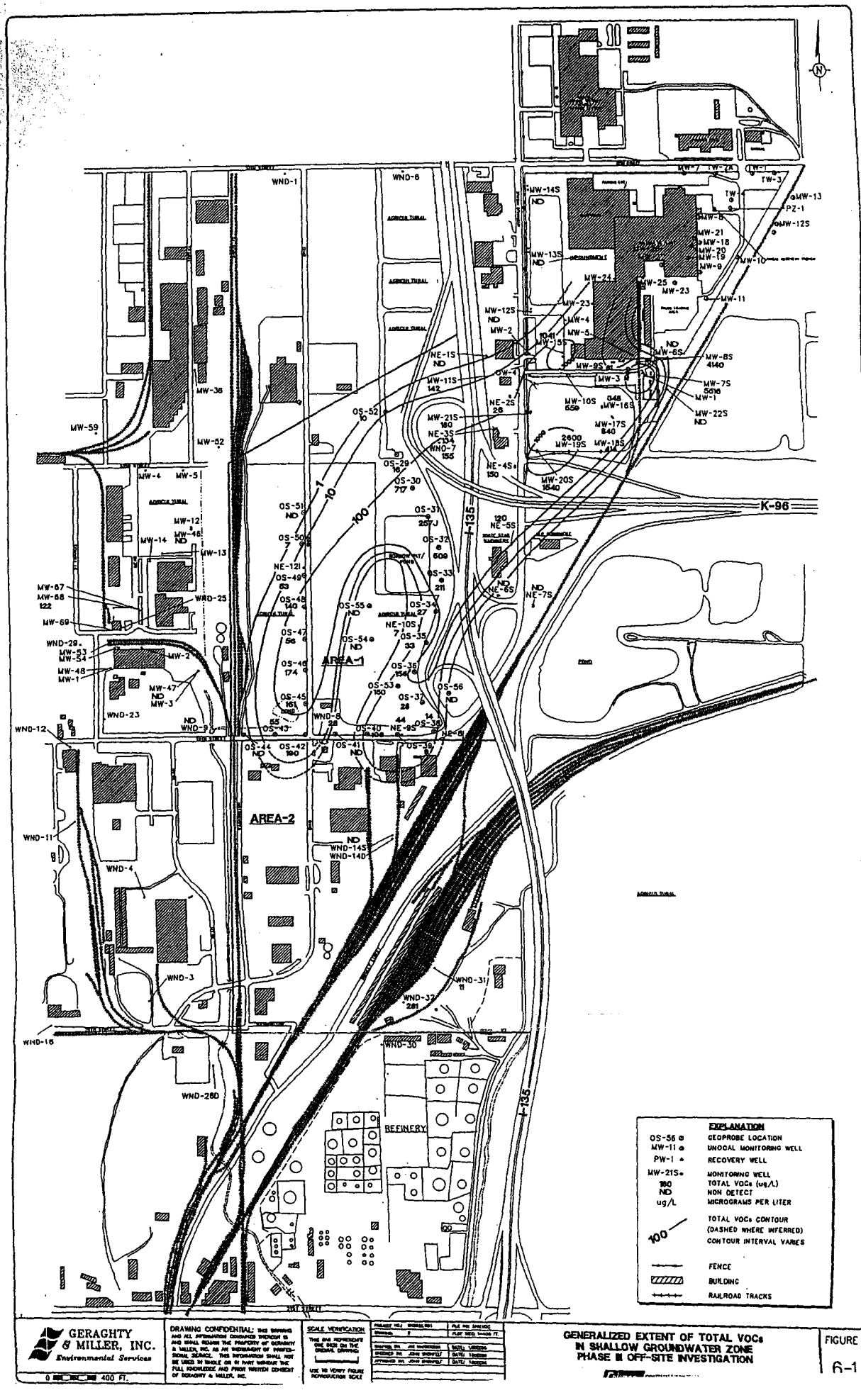
TABLE 2
CONCENTRATION DATA
SPRING 2001
COLEMAN OPERABLE UNIT
Wichita, Kansas

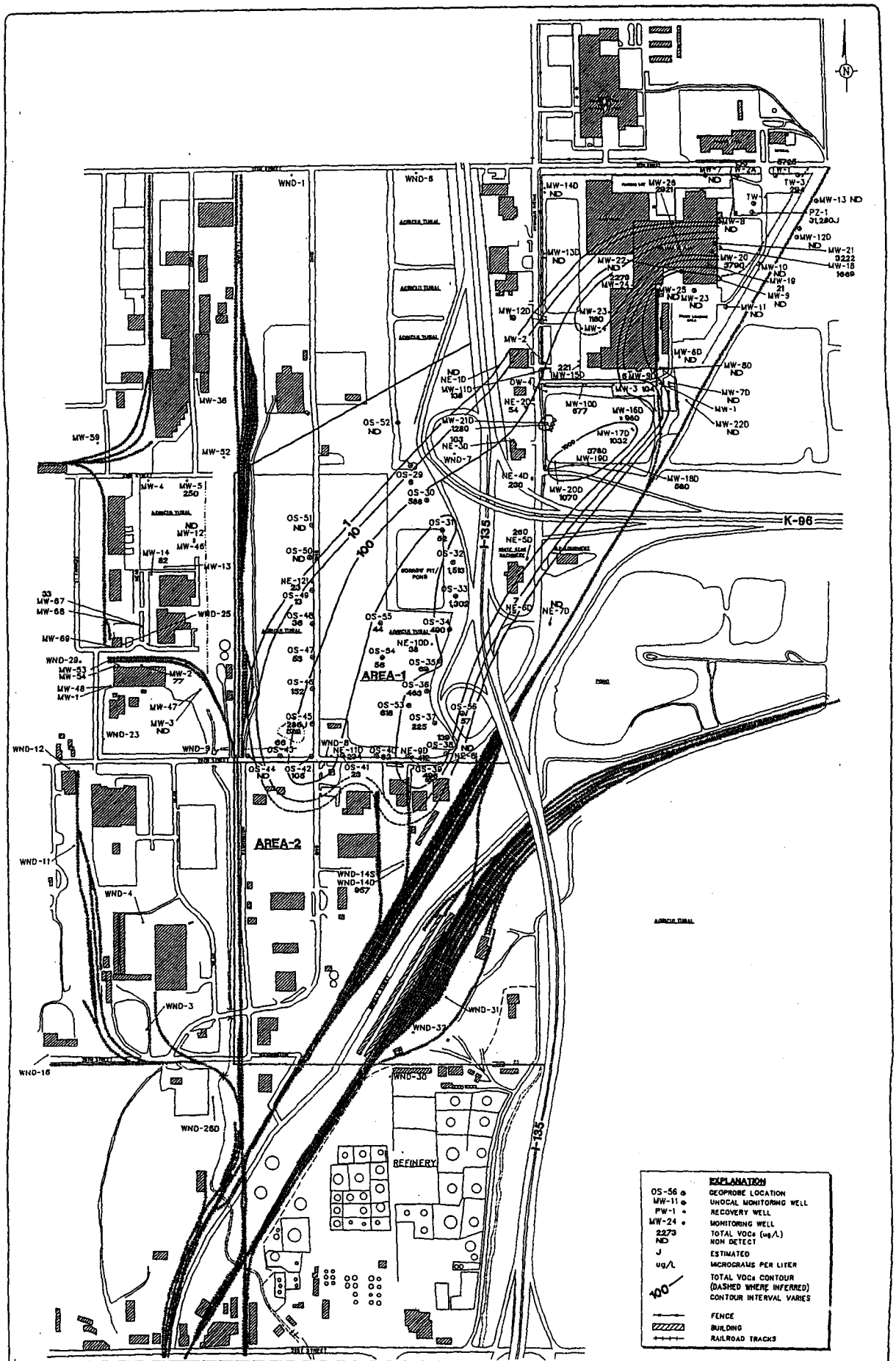
PERIOD: From 01/24/2001 thru 06/25/2001 - Inclusive
SAMPLE TYPE: Water

SITE	DATE	p-Dichloro benzene (ug/l)	Tetrachloro ethylene (ug/l)	Toluene (ug/l)	Trans-1,3-Dichloropropene (ug/l)	Trichloro ethylene (ug/l)	Trichloro fluoromethane (ug/l)	Vinyl chloride (ug/l)
RW-1	04/18/2001	<0.5	0.9	<0.5	<0.5	75.3	<0.5	<0.5
RW-1	05/08/2001	<0.5	0.8	<0.5	<0.5	81	<0.5	<0.5
RW-1	05/16/2001	<1	<1	<0.5	<1	70	<1	<1
RW-1	06/05/2001	<0.5	<0.5	<0.5	<0.5	108	<0.5	<0.5
S.IND	05/16/2001	<2.5	<2.5	---	<2.5	150	<2.5	<2.5
VEW-05D	05/16/2001	<250	<250	---	<250	15000	<250	<250
VEW-11D	05/16/2001	<2.5	<2.5	---	<2.5	95	<2.5	3.4
VEW-13D	05/16/2001	<0.5	<0.5	---	<0.5	6.1	<0.5	<0.5
VEW-14D	05/16/2001	<1	<1	---	<1	120	<1	<1
VEW-18D	05/16/2001	<5	<5	---	<5	480	<5	<5
VEW-21D	05/16/2001	<13	<13	---	<13	1100	<13	<13
VEW-22D	05/16/2001	<130	<130	---	<130	8500	<130	<130
WND-29D	05/15/2001	<0.5	<0.5	<0.5	<0.5	6.2	<0.5	<0.5
WND-29S	05/15/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

---=Not analyzed

Appendix B-4
CNE - Coleman Northeast


N
K-96
I-135
AREA-1
AREA-2
REFINERY
POND
AGRICULTURAL
EXPLANATION
OS-56 GEOPROBE LOCATION
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-21S MONITORING WELL
180 TOTAL VOCs (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
100 TOTAL VOCs CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES
FENCE
BUILDING
RAILROAD TRACKS
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
USE TO VERIFY FIGURE REPRODUCTION SCALE
GENERALIZED EXTENT OF TOTAL VOCs
IN SHALLOW GROUNDWATER ZONE
PHASE III OFF-SITE INVESTIGATION
FIGURE
6-1



GERAGHTY & MILLER, INC.
Environmental Services

0 400 FT.

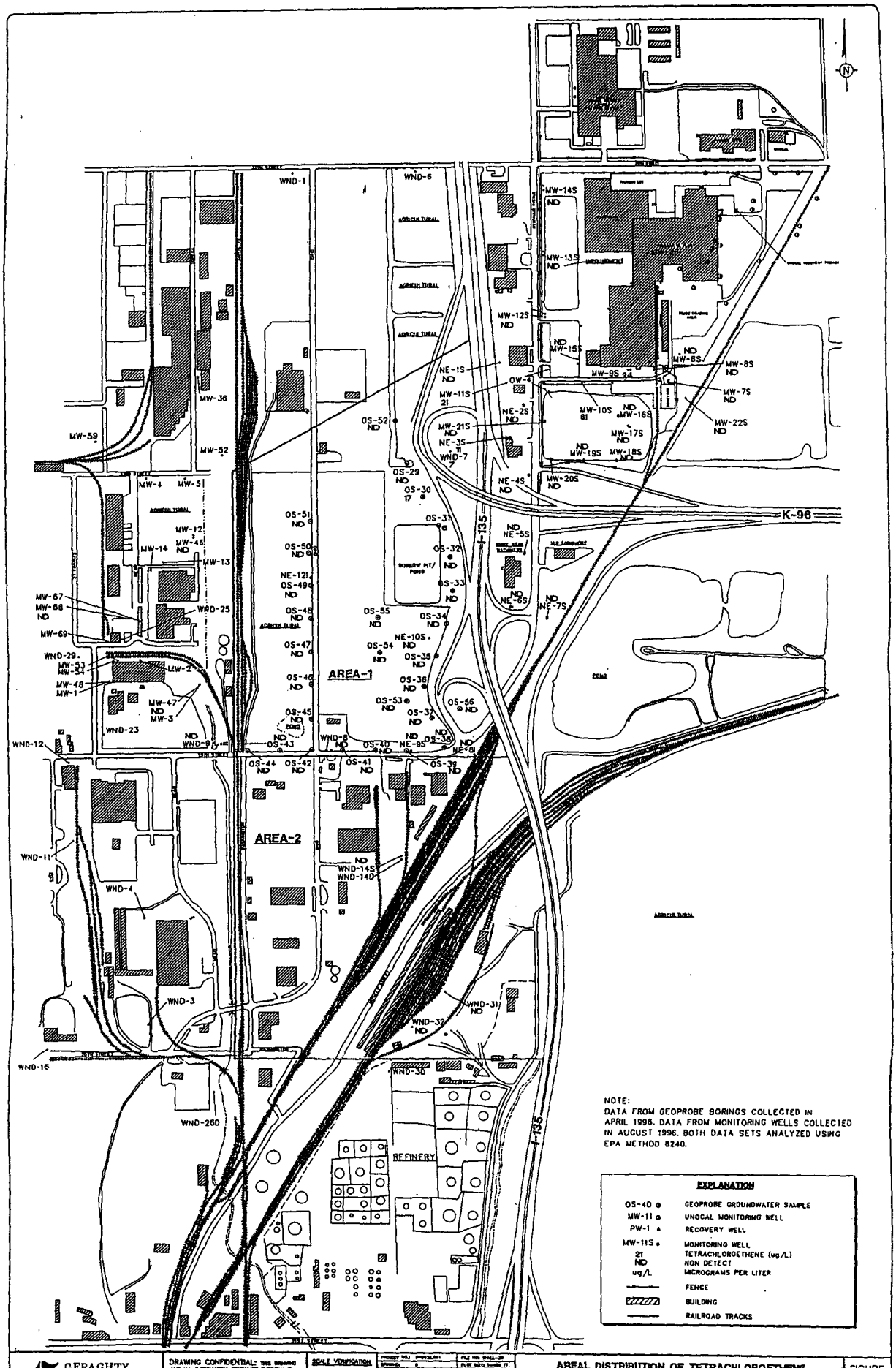
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.

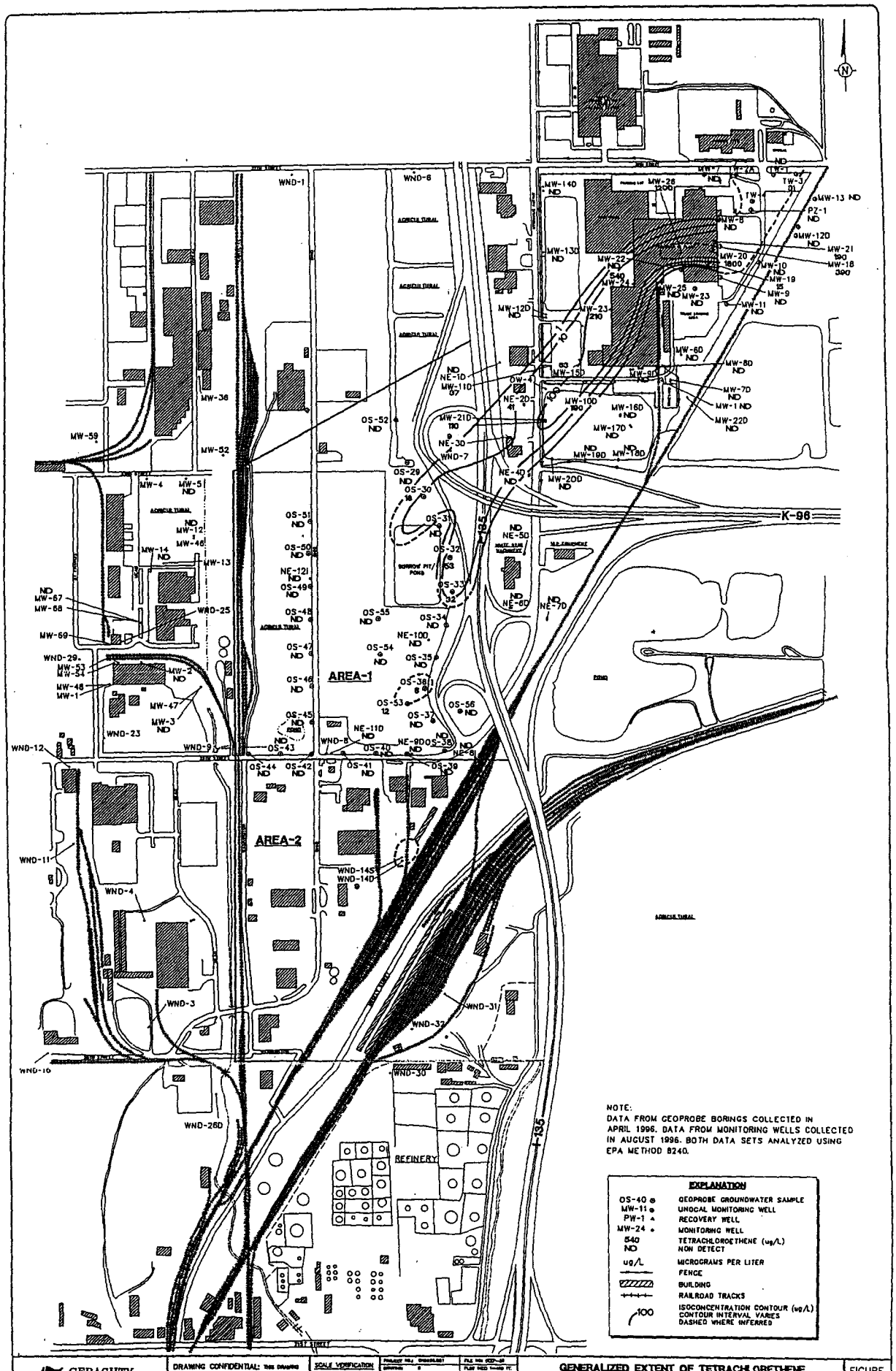
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY FUTURE REPRODUCTION SCALE

PROJECT NO.:	FILE NO:
DRAWING:	PLOT SCALE:
DRAWN BY:	DATE:
CHECKED BY:	DATE:
APPROVED BY:	DATE:

GENERALIZED EXTENT OF TOTAL VOCs IN DEEP GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION

FIGURE 6-2


N
K-96
I-135
AREA-1
AREA-2
REFINERY
WND-1
WND-6
MW-14S
ND
MW-13S
ND
MW-12S
ND
ND
MW-15S
ND
MW-6S
MW-8S
ND
MW-9S 24
MW-7S
ND
MW-22S
ND
MW-10S
61
ND
MW-16S
MW-17S
ND
ND
MW-19S
MW-18S
MW-20S
ND
NE-4S
ND
NE-1S
ND
MW-11S
21
OW-4
NE-2S
ND
MW-21S
ND
NE-3S
11
WND-7
7
OS-52
ND
OS-29
ND
OS-30
17
OS-31
6
OS-32
ND
OS-33
ND
ND
NE-5S
ND
NE-6S
ND
NE-7S
OS-51
ND
OS-50
ND
NE-12S
OS-49
ND
OS-48
ND
OS-47
ND
OS-46
ND
OS-45
ND
OS-43
ND
OS-55
ND
OS-34
ND
NE-10S
ND
OS-54
ND
OS-35
ND
OS-36
ND
OS-53
ND
OS-37
ND
OS-56
ND
ND
OS-38
ND
ND
NE-8S
ND
NE-9S
ND
OS-40
ND
OS-41
ND
OS-42
ND
OS-44
ND
OS-39
ND
ND
WND-14S
WND-14D
WND-31
ND
WND-32
ND
WND-30
WND-26D
WND-16
WND-3
WND-4
WND-11
WND-12
WND-23
WND-29
WND-25
WND-9
ND
MW-67
MW-68
ND
MW-69
MW-53
MW-54
MW-2
MW-48
MW-1
MW-47
ND
MW-3
MW-4
MW-5
MW-12
MW-46
ND
MW-14
MW-13
MW-36
MW-59
MW-52
BORROW PIT/
POND
FENCE
AGRICULTURAL
WHITE STAR
MAGNETICS
NUS EQUIPMENT
IMPOUNDMENT
PARKING LOT
PRODUCTION
BUILDING
PRODUCT
STORAGE
TANKS
PUMP
RAILROAD
TRACKS
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 ⊕ GEOPROBE GROUNDWATER SAMPLE
MW-11 ⊕ UNOCAL MONITORING WELL
PW-1 ▲ RECOVERY WELL
MW-11S • MONITORING WELL
21 TETRACHLOROETHENE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY PRIOR REPRODUCTION SCALE
AREAL DISTRIBUTION OF TETRACHLOROETHENE IN SHALLOW GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION
Coleman COLEMAN NORTHEAST PLANE
FIGURE
6-3



GERAGHTY & MILLER, INC.
Environmental Services

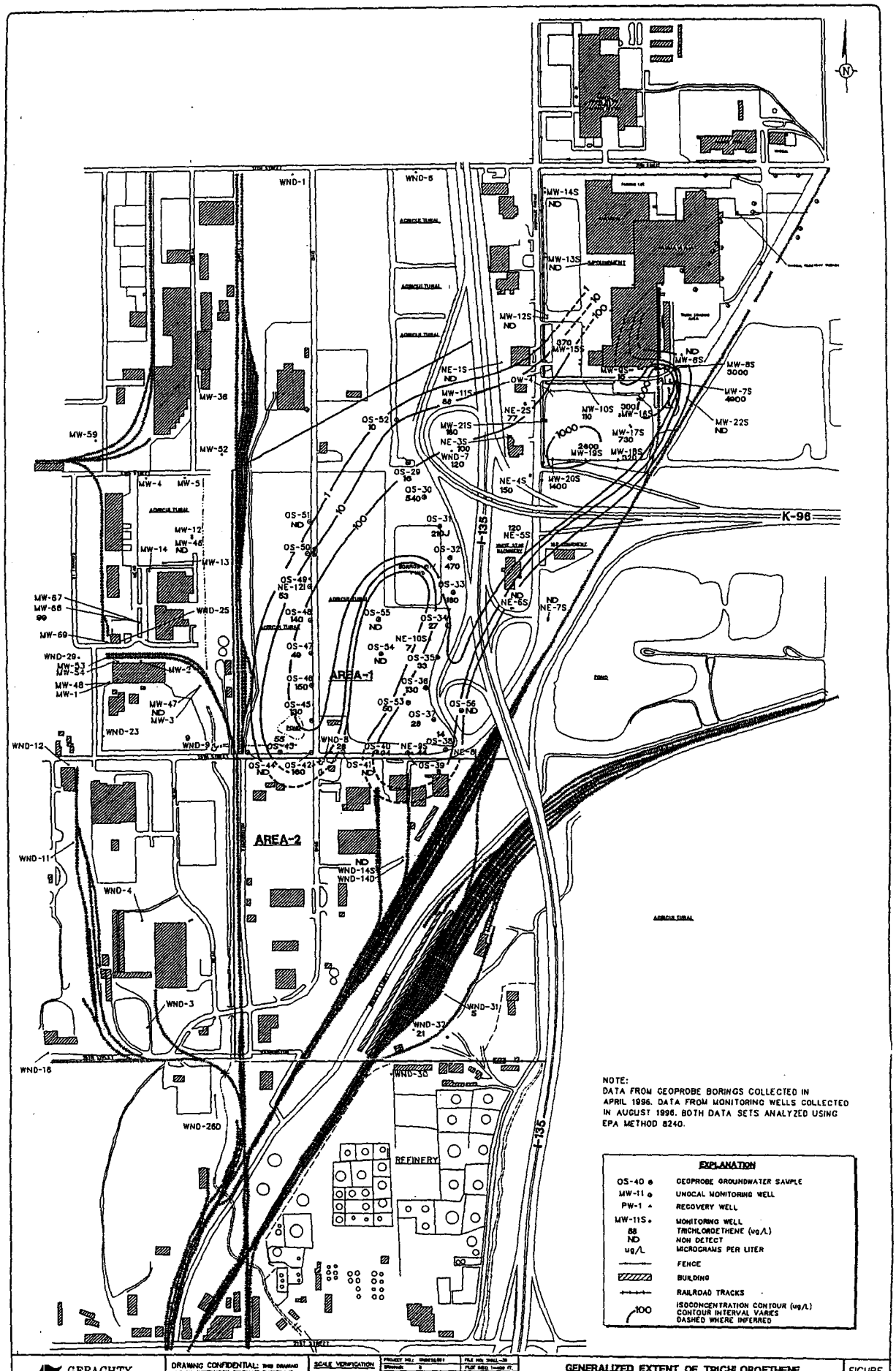
0 400 FT.

DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.

SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY FIGURE REPRODUCTION SCALE

GENERALIZED EXTENT OF TETRACHLORETHENE IN DEEP GROUNDWATER ZONE
PHASE III OFF-SITE INVESTIGATION

FIGURE 6-4



NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.

EXPLANATION

OS-40 ●	GEOPROBE GROUNDWATER SAMPLE
MW-11 ●	UNOCAL MONITORING WELL
PW-1 ▲	RECOVERY WELL
MW-11S ●	MONITORING WELL
88	TRICHLOROETHENE (ug/L)
ND	NON DETECT
ug/L	MICROGRAMS PER LITER
——	FENCE
▨	BUILDING
—+—+—	RAILROAD TRACKS
100	ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES DASHED WHERE INFERRED

GERAGHTY & MILLER, INC.
Environmental Services

0 400 FT.

DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.

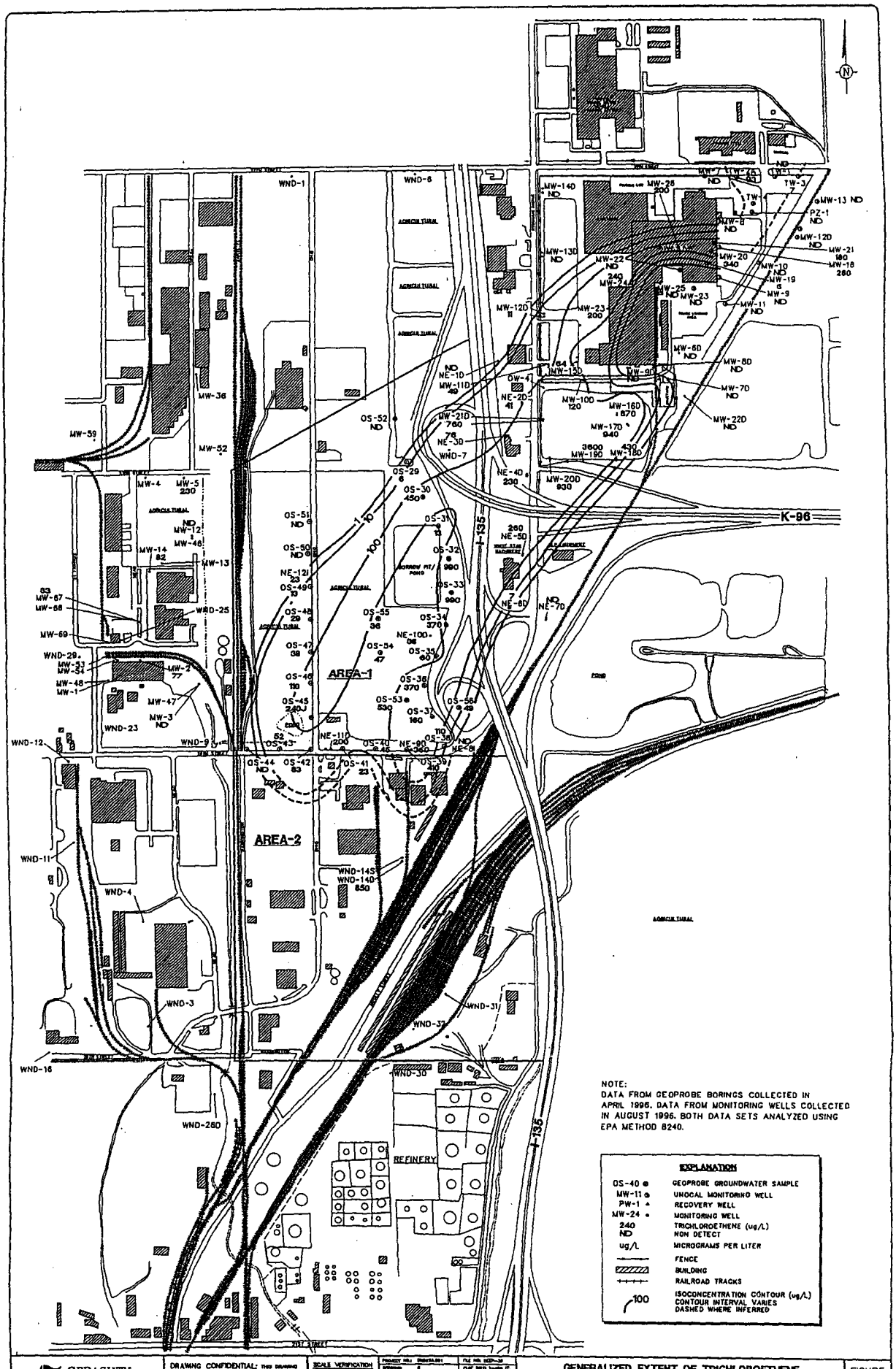
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY FIGURE REPRODUCTION SCALE

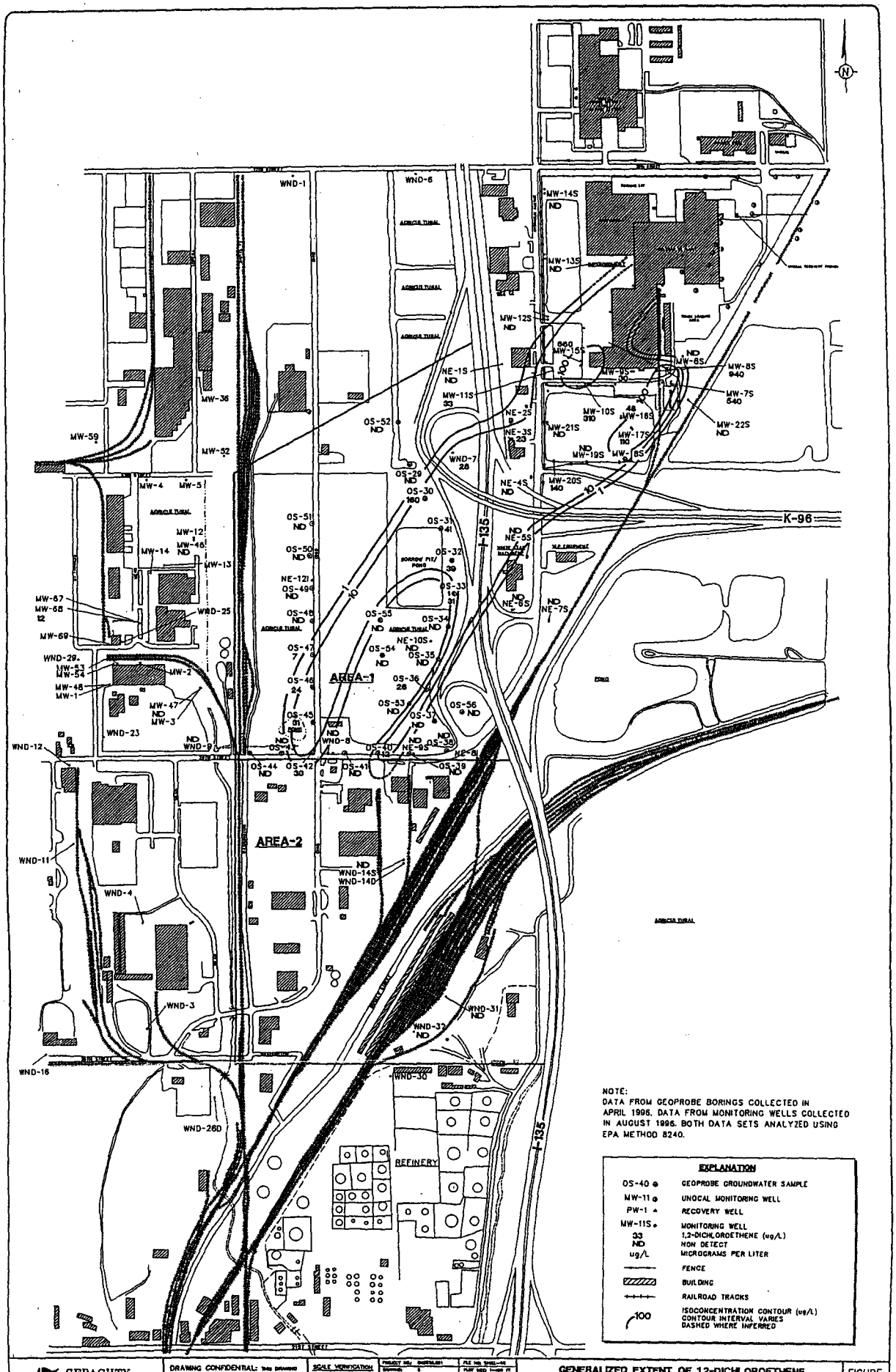
PROJECT NO.: [illegible] | FILE NO.: [illegible]
DRAWN: [illegible] | PLOT SCALE: 1=400 FT.
DRAWN BY: JAY HANCOCK | DATE: [illegible]
CHECKED BY: [illegible] | DATE: [illegible]
APPROVED BY: JOHN [illegible] | DATE: [illegible]

GENERALIZED EXTENT OF TRICHLOROETHENE IN SHALLOW GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION

Coleman COLORADO NORTHEAST PLANE

FIGURE 6-5


AREA-1
AREA-2
K-96
I-135
REFINERY
BORROW PIT/ POND
AGRICULTURAL
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 GEOPROBE GROUNDWATER SAMPLE
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-24 MONITORING WELL
240 TRICHLOROETHENE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
100 ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES DASHED WHERE INFERRED
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
GENERALIZED EXTENT OF TRICHLOROETHENE IN DEEP GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION
FIGURE 6-6



NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.

EXPLANATION

OS-40 ●	GEOPROBE GROUNDWATER SAMPLE
MW-11 ●	UNOCAL MONITORING WELL
PW-1 ▲	RECOVERY WELL
MW-11S ●	MONITORING WELL
33	1,2-DICHLOROETHENE (ug/L)
ND	NON DETECT
ug/L	MICROGRAMS PER LITER
	FENCE
	BUILDING
	RAILROAD TRACKS
100	ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES DASHED WHERE INFERRED

GERAGHTY & MILLER, INC.
Environmental Services

0 200 400 FT.

DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.

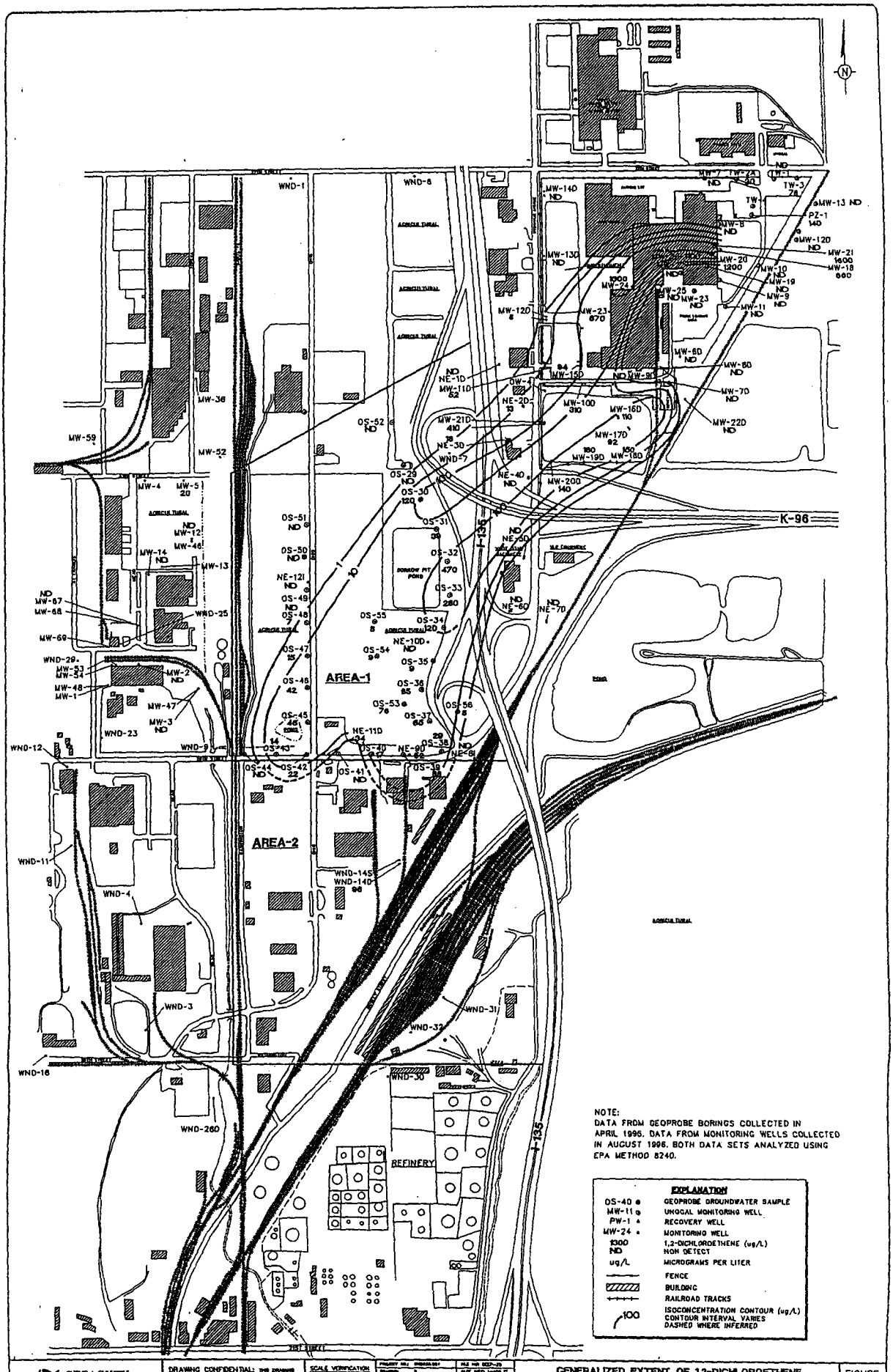
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY FIGURE REPRODUCTION SCALE

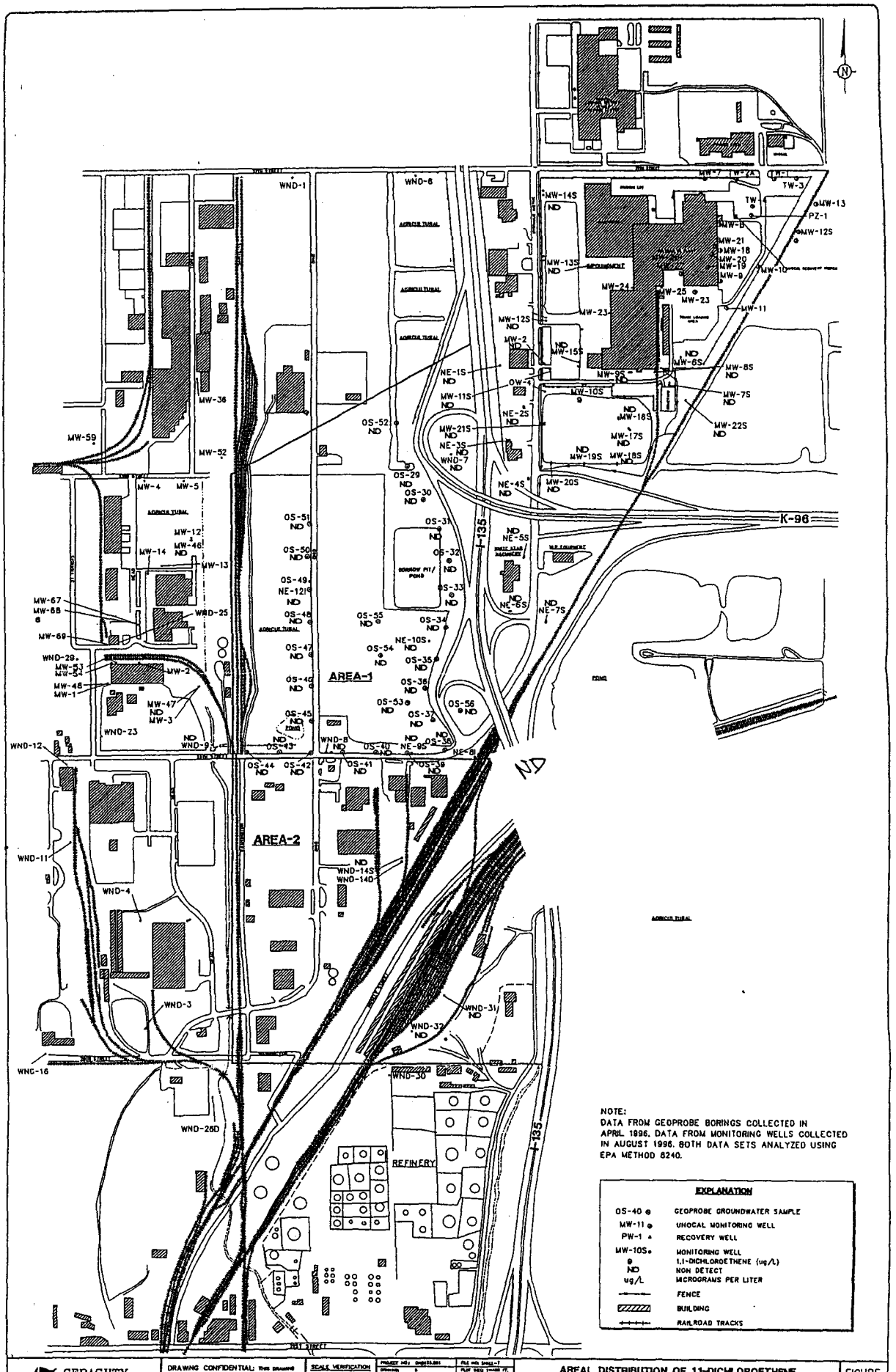
PROJECT NO.	DRAWING NO.	FILE NO. SHEET-46
DRAWING	5	PLOT SCD 1=400 FT
DRAFTED BY	GREG GRAVES	DATE: 3/30/00
CHECKED BY	D. MASLEY	DATE: 3/30/00
APPROVED BY	JOHN MARCHLY	DATE: 3/30/00

GENERALIZED EXTENT OF 1,2-DICHLOROETHENE IN SHALLOW GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION

FIGURE 6-7

COLDWAY NEWTON LIVE ON 1997


AREA-1
AREA-2
K-96
I-135
REFINERY
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 GEOPROBE GROUNDWATER SAMPLE
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-24 MONITORING WELL
1000 1,2-DICHLOROETHENE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
100 ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES DASHED WHERE INFERRED
GERAGHTY & MILLER, INC.
Environmental Services
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY FIGURE REPRODUCTION SCALE
0 400 FT.
GENERALIZED EXTENT OF 1,2-DICHLOROETHENE IN DEEP GROUNDWATER ZONE
PHASE III OFF-SITE INVESTIGATION
FIGURE
6-8



GERAGHTY & MILLER, INC.
Environmental Services

0 400 FT.

DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.

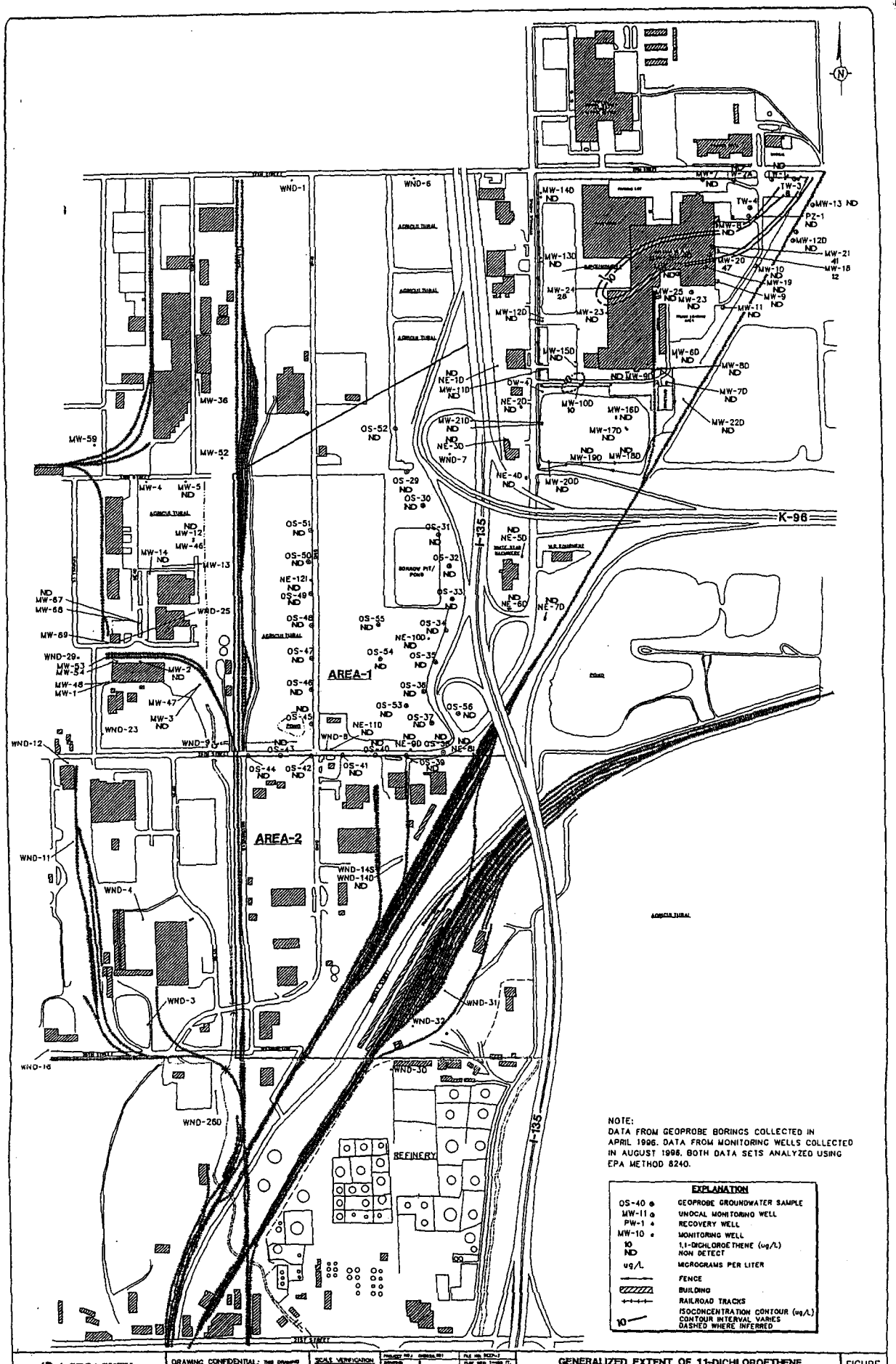
SCALE VERIFICATION

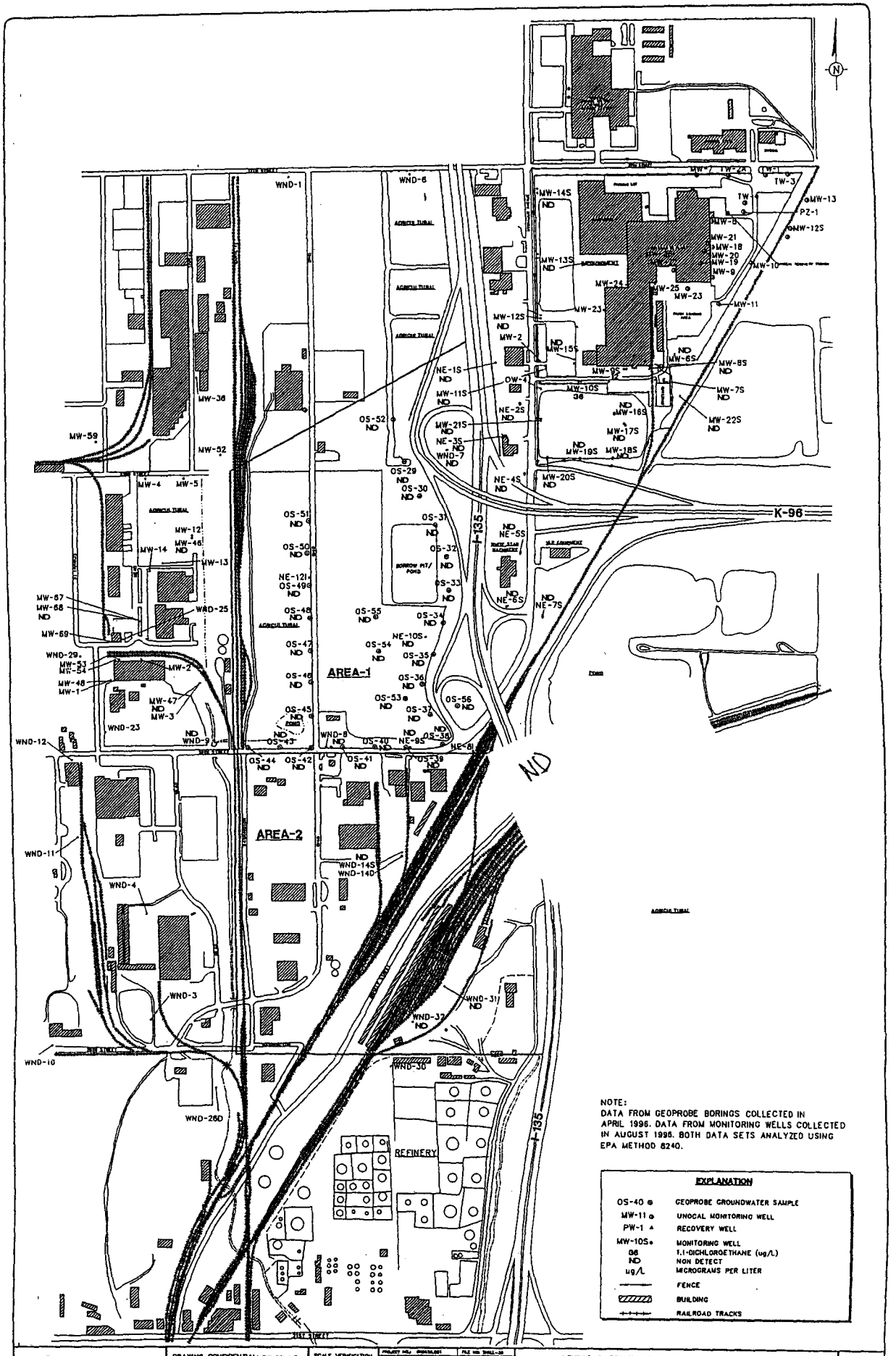
PROJECT NO.: 0H0033.001 | FILE NO: 0H0033-7
DRAWING: 3 | PLOT SIZE: 11"x8.5"
DRAFTED BY: JAN HARRISON | DATE: 12/09/97
CHECKED BY: JOHN SHOWALTER | DATE: 12/09/97
APPROVED BY: JOHN SHOWALTER | DATE: 12/09/97

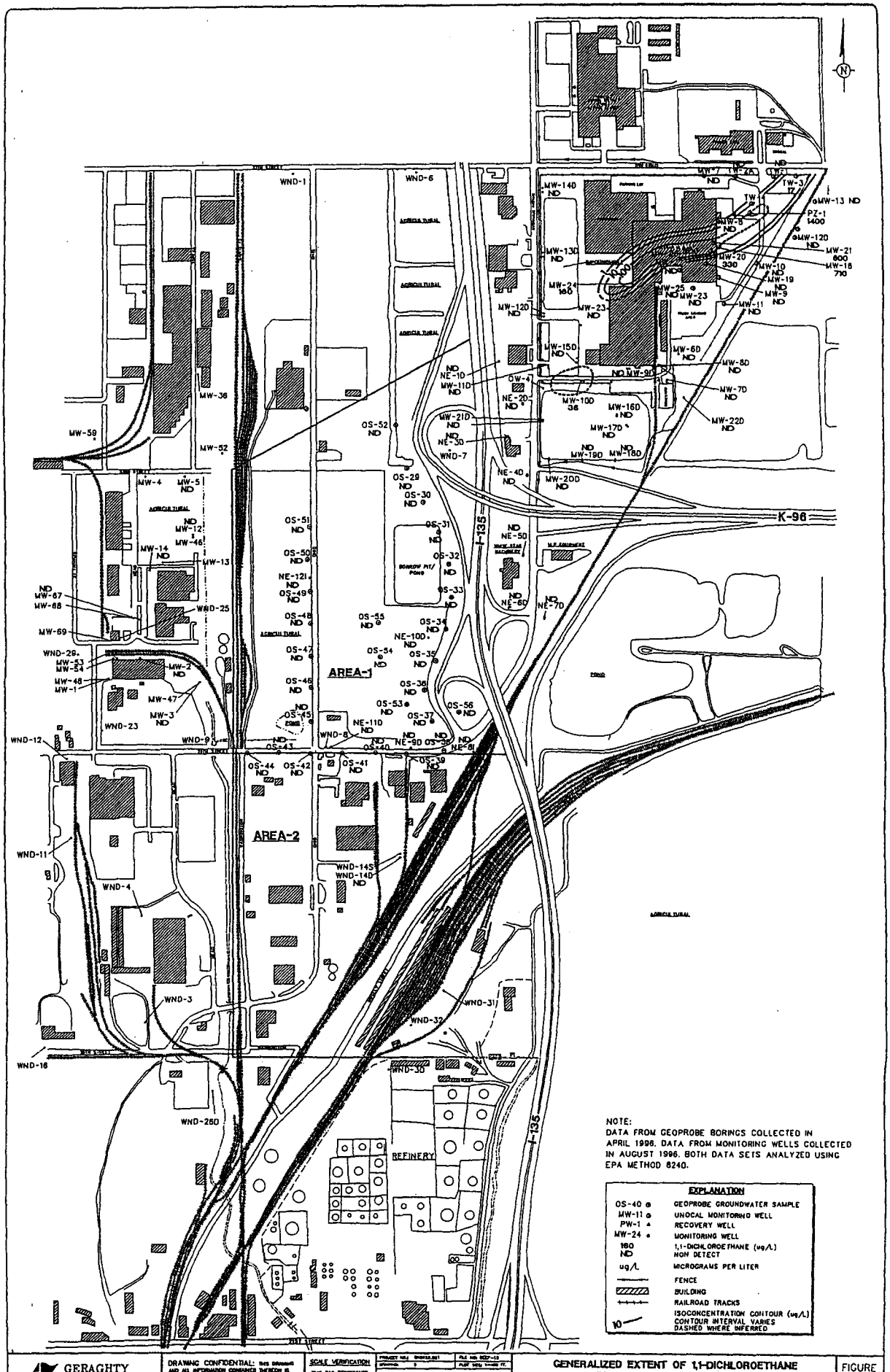
AREAL DISTRIBUTION OF 1,1-DICHLOROETHENE IN SHALLOW GROUNDWATER ZONE
PHASE III OFF-SITE INVESTIGATION

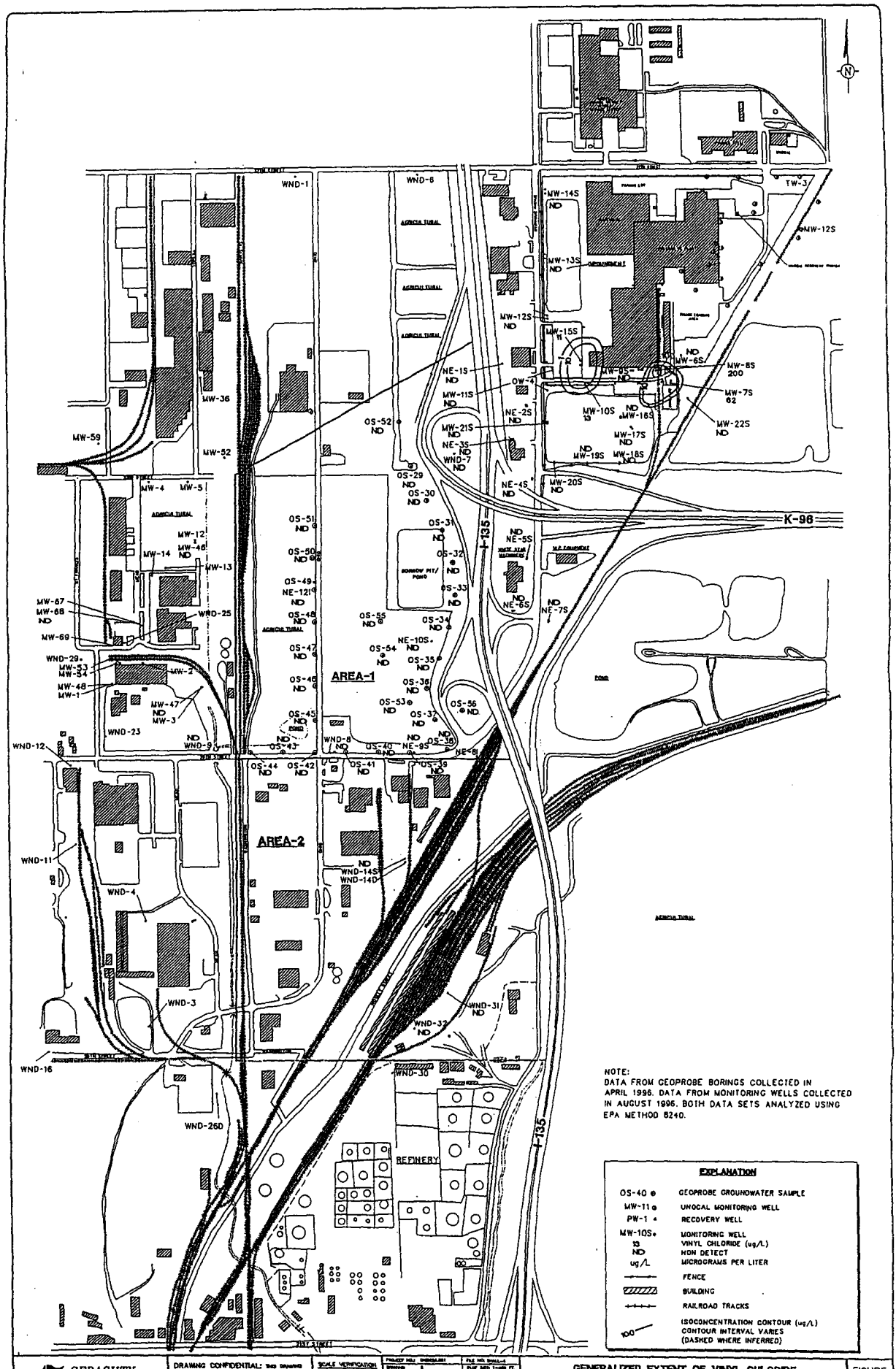
Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

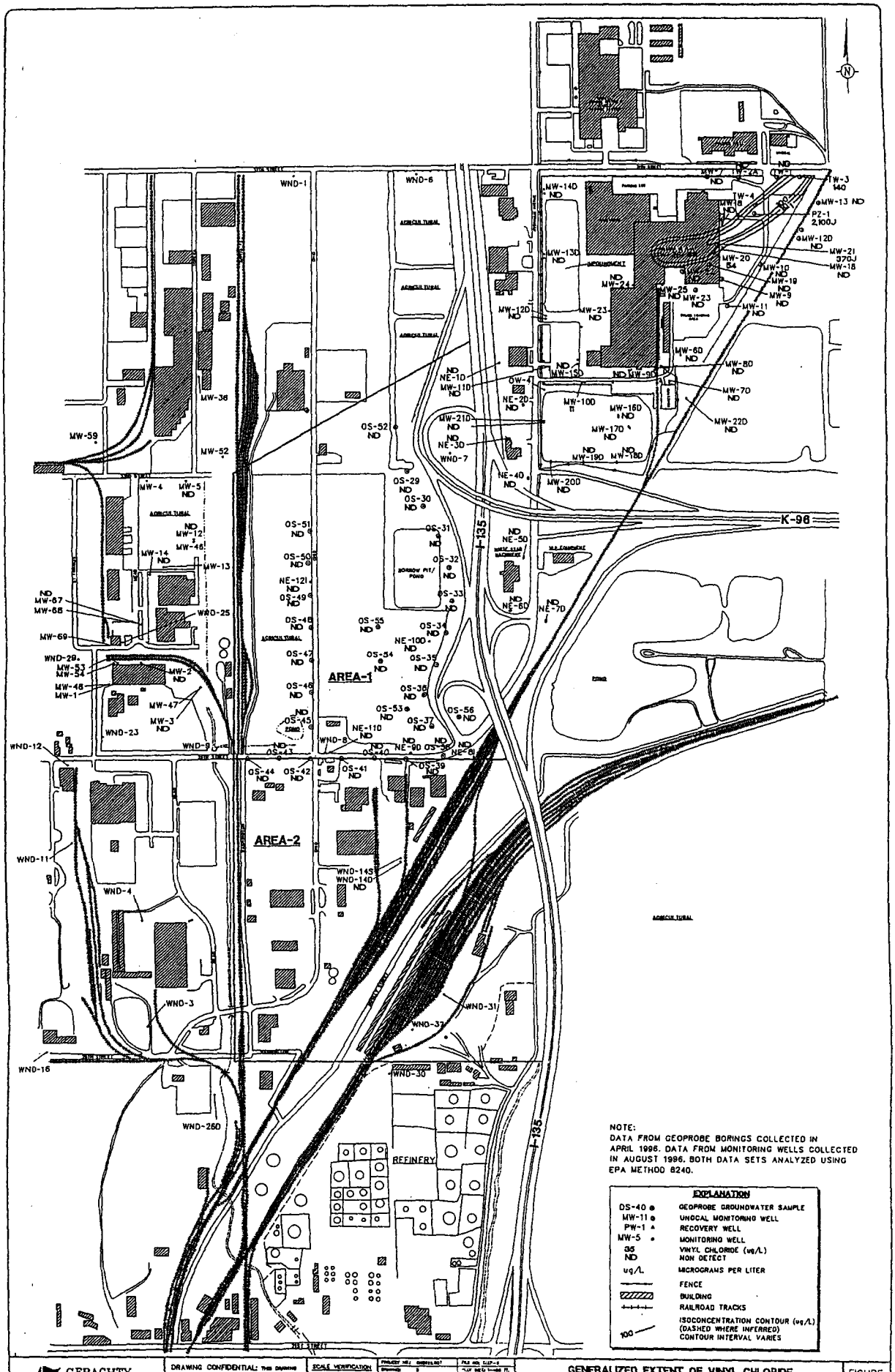
FIGURE 6-9

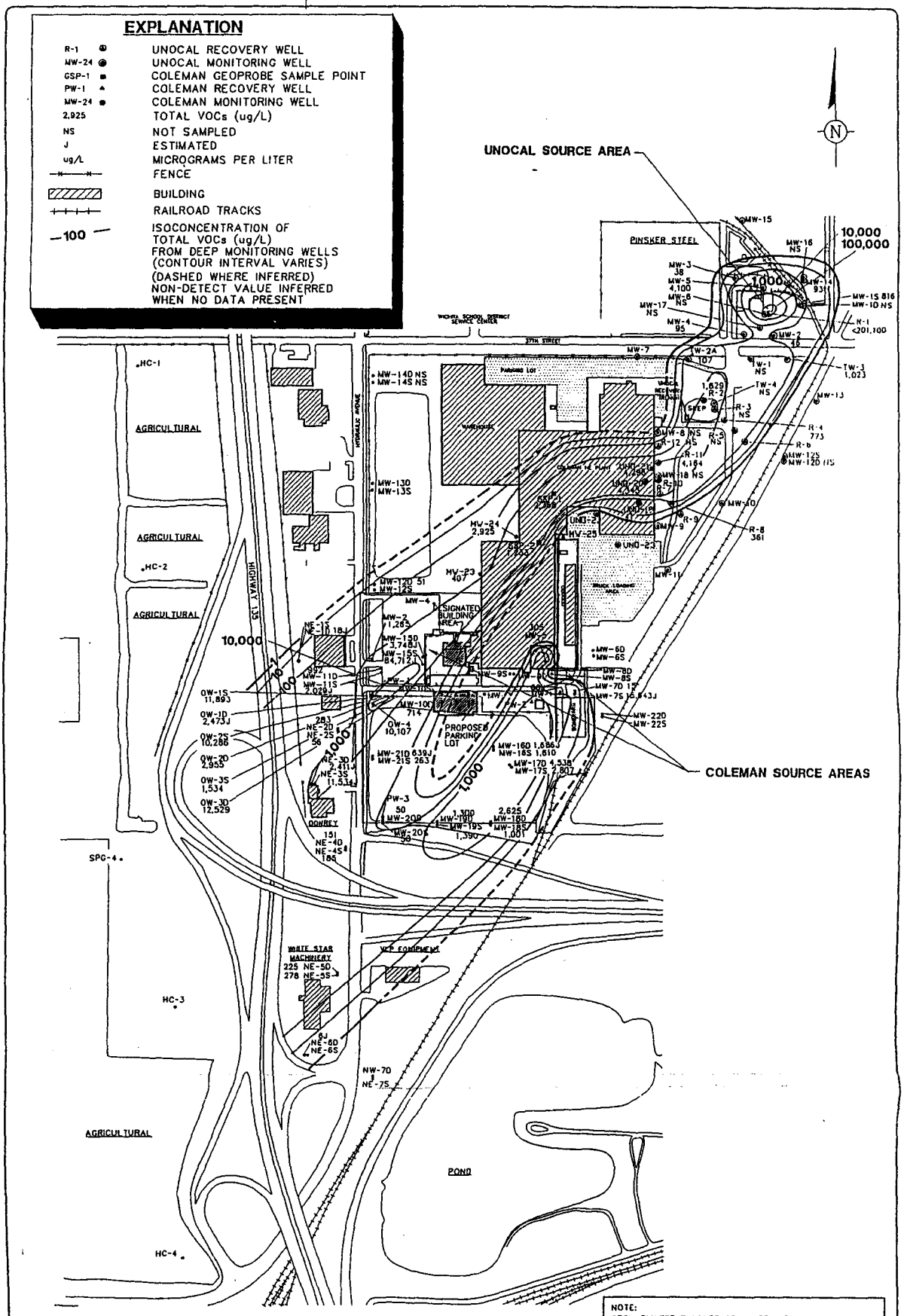

N
AREA-1
AREA-2
I-135
K-96
REFINERY
POND
AGRICULTURAL
WND-1
WND-6
WND-7
WND-8
WND-9
WND-11
WND-12
WND-16
WND-23
WND-25
WND-26D
WND-29
WND-3
WND-4
WND-14S
WND-14D
WND-30
WND-31
WND-32
MW-36
MW-59
MW-52
MW-4
MW-5
MW-12
MW-46
MW-14
MW-13
MW-67
MW-68
MW-69
MW-2
MW-48
MW-1
MW-47
MW-3
MW-14D
MW-13D
MW-24
MW-12D
MW-15D
MW-21D
MW-11D
MW-10D
MW-16D
MW-17D
MW-19D
MW-18D
MW-20D
MW-6D
MW-8D
MW-7D
MW-22D
MW-9D
MW-7
MW-7A
TW-4
TW-3
PZ-1
MW-13
MW-12D
MW-21
MW-18
MW-20
MW-10
MW-19
MW-9
MW-11
MW-25
MW-23
MW-24
MW-1D
NE-1D
NE-11D
NE-20
NE-3D
NE-40
NE-50
NE-60
NE-7D
NE-121
NE-100
NE-110
NE-90
NE-80
OW-4
OS-52
OS-29
OS-30
OS-31
OS-32
OS-33
OS-34
OS-35
OS-36
OS-37
OS-38
OS-39
OS-40
OS-41
OS-42
OS-43
OS-44
OS-45
OS-46
OS-47
OS-48
OS-49
OS-50
OS-51
OS-53
OS-54
OS-55
OS-56
ND
10
47
41
12
26
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1998. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 GEOPROBE GROUNDWATER SAMPLE
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-10 MONITORING WELL
10 1,1-DICHLOROETHENE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
10 ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES DASHED WHERE INFERRED
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY FIGURE REPRODUCTION SCALE
GENERALIZED EXTENT OF 1,1-DICHLOROETHENE IN DEEP GROUNDWATER ZONE PHASE II: OFF-SITE INVESTIGATION
Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS
FIGURE 6-10


N
K-96
I-135
AREA-1
AREA-2
REFINERY
ND
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 GEOPROBE GROUNDWATER SAMPLE
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-10S MONITORING WELL
86 1,1-DICHLOROETHANE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL:
SCALE VERIFICATION
AREAL DISTRIBUTION OF 1,1-DICHLOROETHANE IN SHALLOW GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION
Coleman
COLEMAN NORTHEAST PLANT WICHITA, KANSAS
FIGURE
6-11


AREA-1
AREA-2
K-96
I-135
REFINERY
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1998. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 GEOPROBE GROUNDWATER SAMPLE
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-24 MONITORING WELL
160 1,1-DICHLOROETHANE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES DASHED WHERE INFERRED
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL:
SCALE VERIFICATION
GENERALIZED EXTENT OF 1,1-DICHLOROETHANE IN DEEP GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION
Coleman
COLEMAN NORTHEAST PLANT WICHITA, KANSAS
FIGURE
6-12


N
WND-1
WND-6
TW-3
MW-14S
ND
MW-12S
MW-13S
ND
MW-12S
ND
MW-15S
11
ND
MW-6S
MW-8S
200
MW-7S
62
MW-22S
ND
MW-10S
13
ND
MW-16S
MW-17S
ND
ND
MW-19S
MW-18S
ND
MW-20S
ND
NE-1S
ND
MW-11S
ND
OW-4
NE-2S
ND
MW-21S
ND
NE-3S
ND
WND-7
ND
OS-52
ND
OS-29
ND
OS-30
ND
NE-4S
ND
MW-36
MW-59
MW-52
MW-4
MW-5
MW-12
MW-46
ND
MW-14
MW-13
MW-67
MW-68
ND
WND-25
MW-69
WND-29
MW-53
MW-54
MW-2
MW-48
MW-1
MW-47
ND
MW-3
WND-23
ND
WND-9
WND-12
OS-51
ND
OS-50
ND
OS-49
NE-12
ND
OS-48
ND
OS-47
ND
OS-46
ND
OS-45
ND
OS-43
ND
OS-31
ND
OS-32
ND
OS-33
ND
OS-55
ND
OS-34
ND
NE-10S
ND
OS-54
ND
OS-35
ND
OS-36
ND
OS-53
ND
OS-37
ND
OS-56
ND
WND-8
ND
OS-40
ND
NE-9S
ND
OS-38
ND
NE-8
OS-44
ND
OS-42
ND
OS-41
ND
OS-39
ND
AREA-1
AREA-2
I-135
K-96
ND
NE-5S
ND
NE-6S
ND
NE-7S
POND
ND
WND-14S
WND-14D
WND-11
WND-4
WND-3
WND-31
ND
WND-32
ND
WND-16
WND-30
WND-26D
REFINERY
I-135
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
OS-40 ⊕ GEOPROBE GROUNDWATER SAMPLE
MW-11 ⊙ UNOCAL MONITORING WELL
PW-1 ◂ RECOVERY WELL
MW-10S ⊙ MONITORING WELL
13 VINYL CHLORIDE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
100 ISOCONCENTRATION CONTOUR (ug/L) CONTOUR INTERVAL VARIES (DASHED WHERE INFERRED)
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY FINAL REPRODUCTION SCALE
GENERALIZED EXTENT OF VINYL CHLORIDE IN SHALLOW GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION
Coleman COLEMAN NORTHEAST PLANT
FIGURE
6-13


AREA-1
AREA-2
K-96
I-135
REFINERY
NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.
EXPLANATION
DS-40 GEOPROBE GROUNDWATER SAMPLE
MW-11 UNOCAL MONITORING WELL
PW-1 RECOVERY WELL
MW-5 MONITORING WELL
35 VINYL CHLORIDE (ug/L)
ND NON DETECT
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
100 ISOCONCENTRATION CONTOUR (ug/L) (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES
GERAGHTY & MILLER, INC.
Environmental Services
0 400 FT.
DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY PROPER REPRODUCTION SCALE
GENERALIZED EXTENT OF VINYL CHLORIDE IN DEEP GROUNDWATER ZONE
PHASE III OFF-SITE INVESTIGATION
FIGURE
6-14



GERAGHTY & MILLER, INC.
Environmental Services

0 250 ft.

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SCALE VERIFICATION
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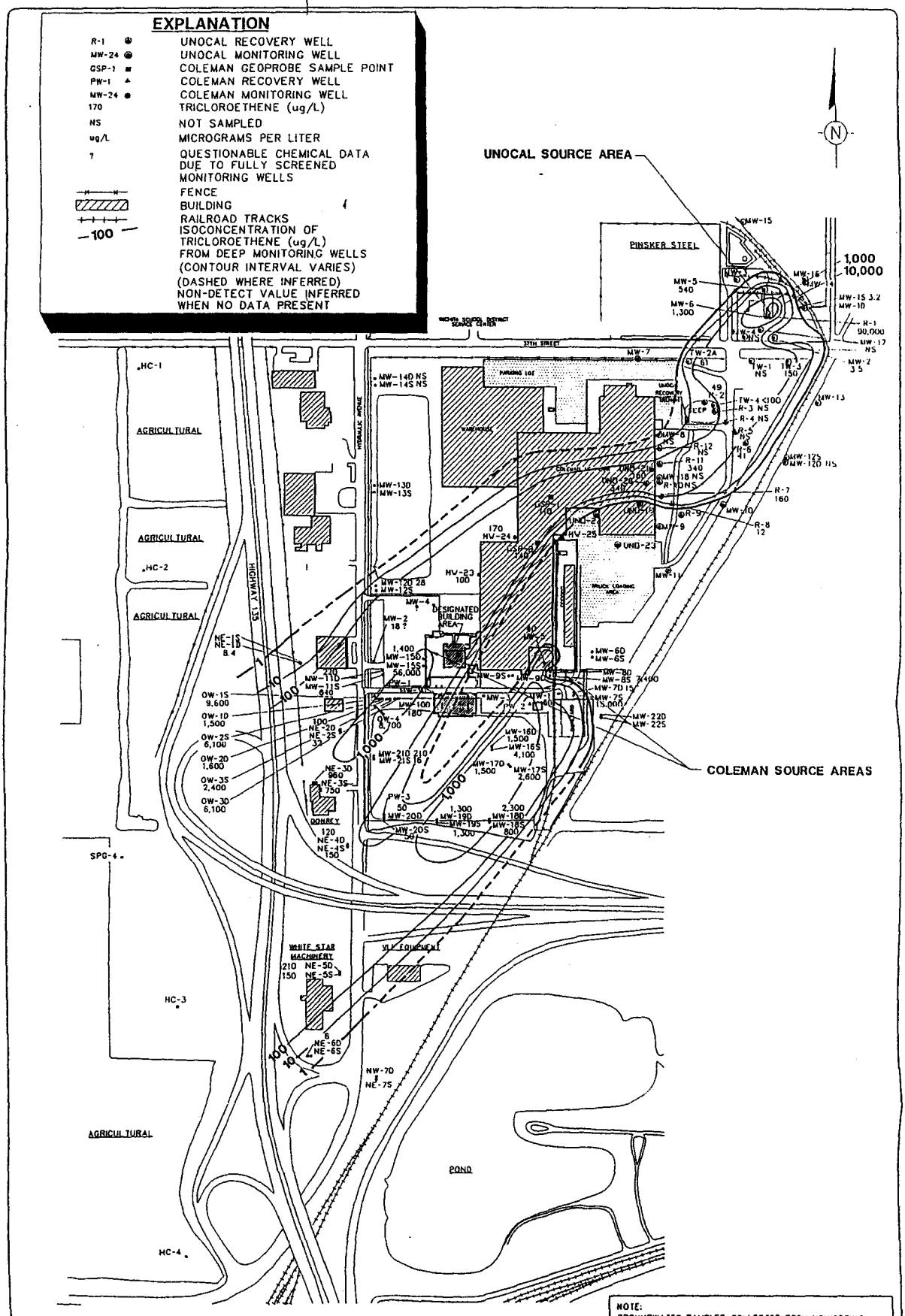
USE TO VERIFY FIGURE REPRODUCTION SCALE

PROJECT NO.: 0995TI.001	FILE NO. 9V0034
DRAWING:	DATE: JULY 1995
DRAFTED BY: JM MANSTEIN	DATE: 10/95
CHECKED BY: DAVID WINGLEY	DATE: 10/95
APPROVED BY: JOHN SHERTLE	DATE: 10/95

APPROXIMATE EXTENT OF TOTAL VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER WITH ISOCONCENTRATION CONTOURS COLEMAN/UNOCAL INVESTIGATION, 1995

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

FIGURE 4-7



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Environmental Services

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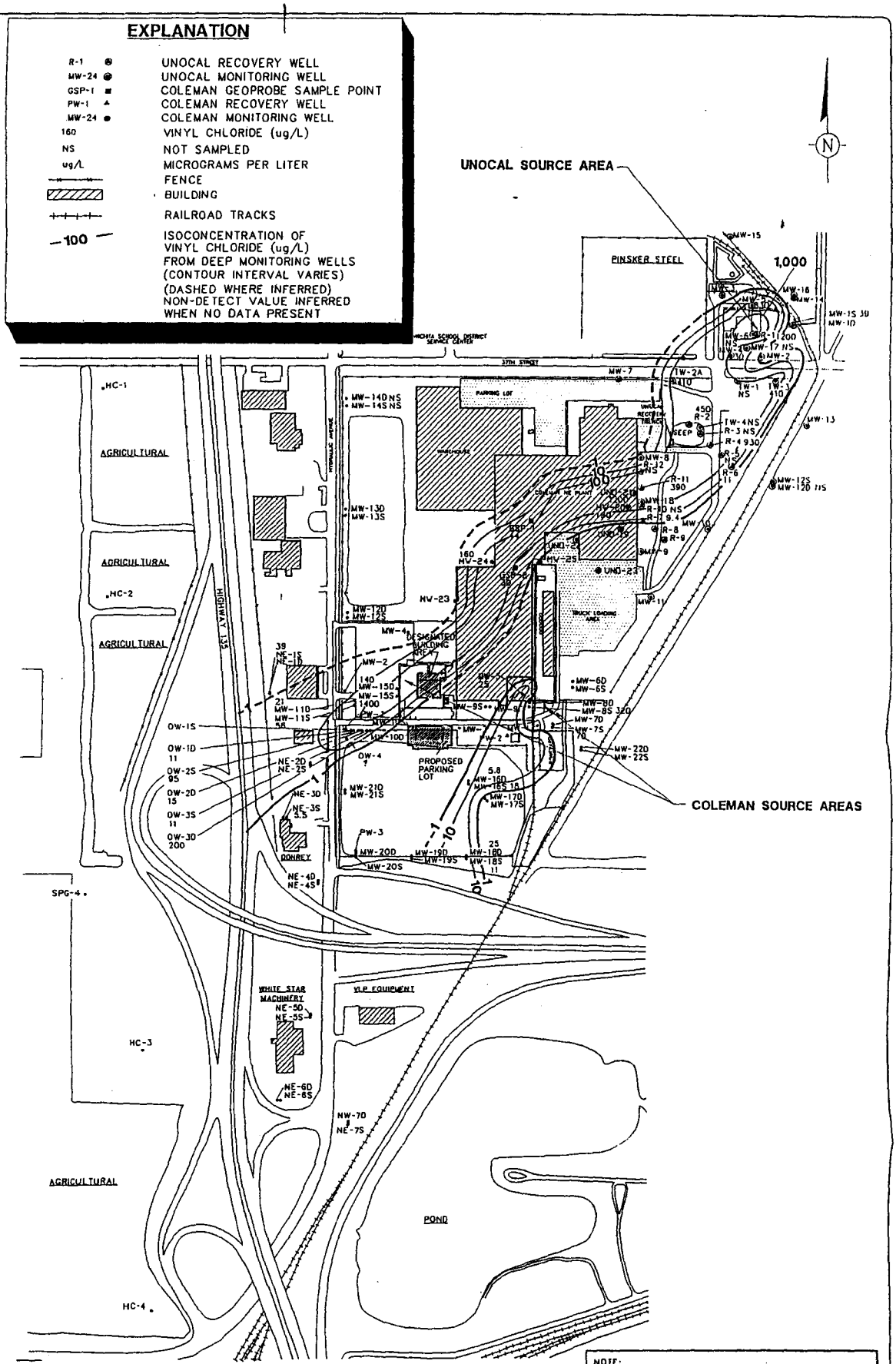
SCALE VERIFICATION

APPROXIMATE EXTENT OF TRICHLOROETHENE IN GROUNDWATER WITH ISOCONCENTRATION CONTOURS COLEMAN/UNOCAL INVESTIGATION, 1995

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

FIGURE 4-8



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SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING
USE TO VERIFY FUTURE REPRODUCTION SCALE

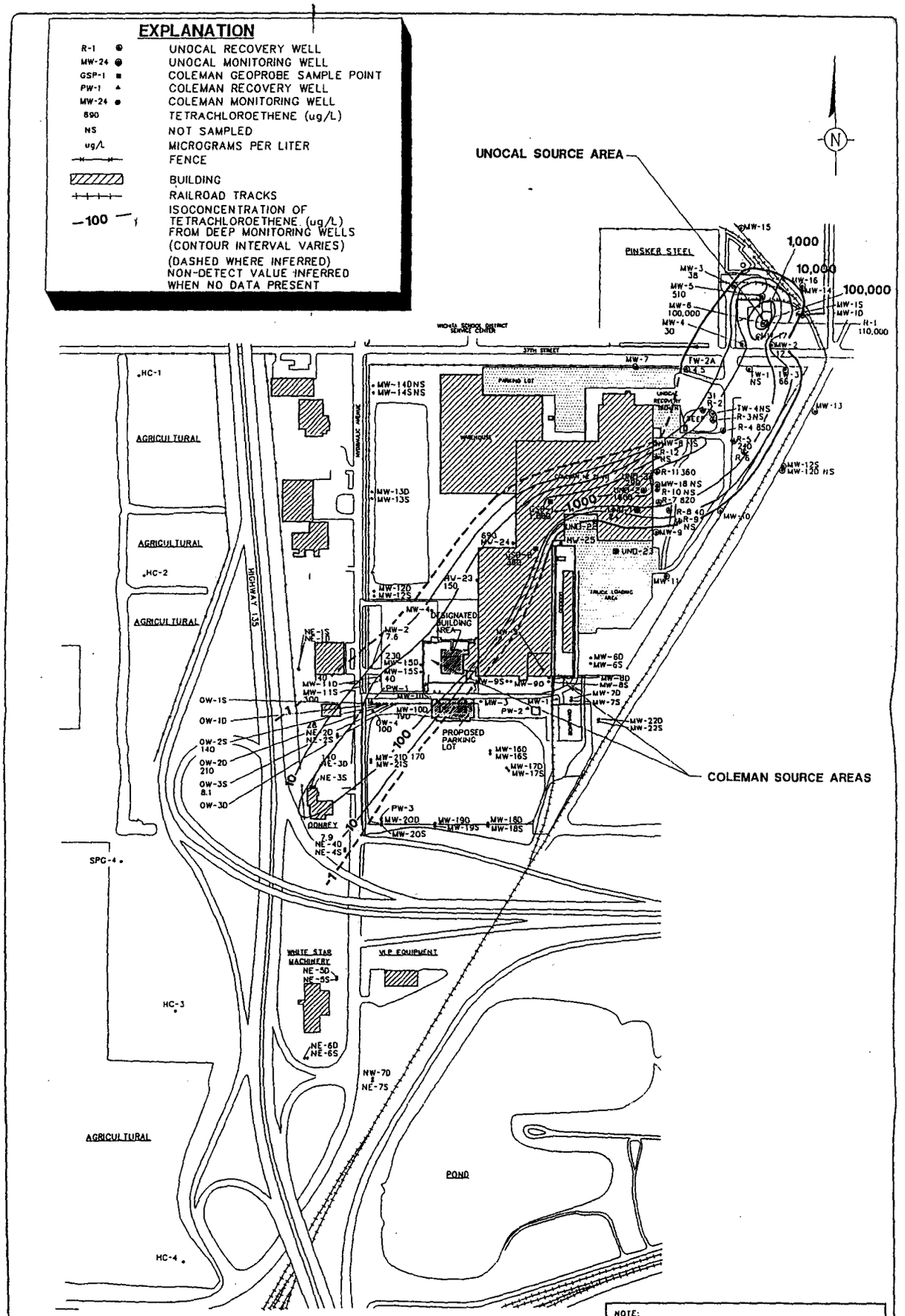
PROJECT NO.: 0000211-001
DRAWING
FILE NO.: 1W0BLA
PLOT SCALE: 1=200
DRAWN BY: EDWY CARPER DATE: 1/02/96
CHECKED BY: DAVID HINDLEY DATE: 1/02/96
APPROVED BY: JOHN BARNHART DATE: 1/02/96

APPROXIMATE EXTENT OF VINYL CHLORIDE IN GROUNDWATER WITH ISOCONCENTRATION CONTOURS COLEMAN/UNOCAL INVESTIGATION, 1995

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

FIGURE 4-9

0 250 ft.


EXPLANATION
R-1 UNOCAL RECOVERY WELL
MW-24 UNOCAL MONITORING WELL
GSP-1 COLEMAN GEOPROBE SAMPLE POINT
PW-1 COLEMAN RECOVERY WELL
MW-24 COLEMAN MONITORING WELL
890 TETRACHLOROETHENE (ug/L)
NS NOT SAMPLED
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
100 ISOCONCENTRATION OF TETRACHLOROETHENE (ug/L) FROM DEEP MONITORING WELLS (CONTOUR INTERVAL VARIES)
(DASHED WHERE INFERRED)
NON-DETECT VALUE INFERRED WHEN NO DATA PRESENT
UNOCAL SOURCE AREA
COLEMAN SOURCE AREAS
PINSKER STEEL
1,000
10,000
100,000
37TH STREET
HIGHWAY 135
AGRICULTURAL
DESIGNATED BUILDING AREA
PROPOSED PARKING LOT
DONREY
WHITE STAR MACHINERY
VLP EQUIPMENT
POND
NOTE:
GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS ON THE FOLLOWING DATES:
UNOCAL MONITORING WELLS — MARCH 1995
COLEMAN MONITORING WELLS — MAY 1995
UNOCAL\COLEMAN MONITORING WELLS — JULY 1995
GERAGHTY & MILLER, INC.
Environmental Services
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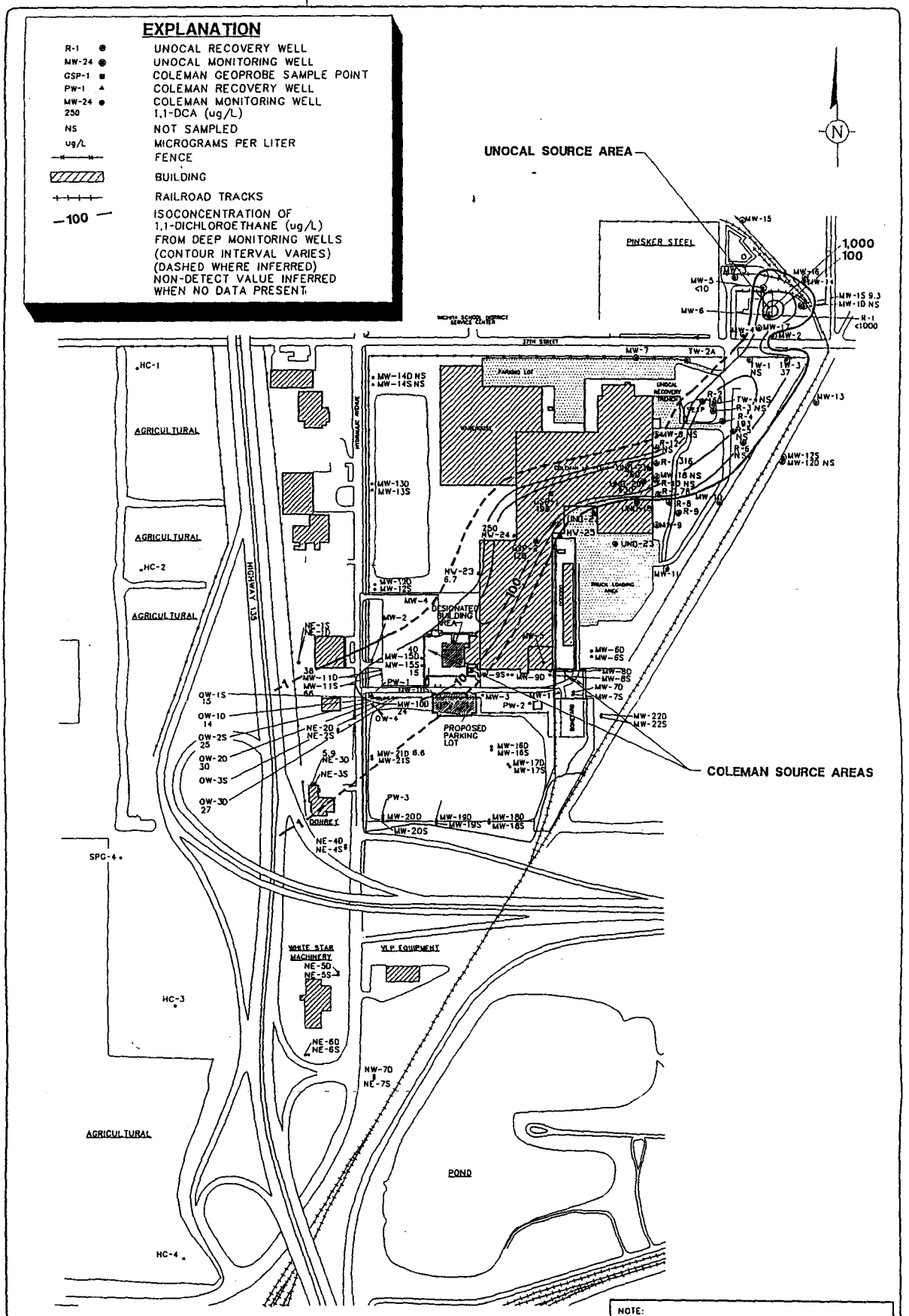
SCALE VERIFICATION
APPROXIMATE EXTENT OF TETRACHLOROETHENE IN GROUNDWATER WITH ISOCONCENTRATION CONTOURS COLEMAN/UNOCAL INVESTIGATION, 1995
FIGURE 4-10


EXPLANATION
R-1 UNOCAL RECOVERY WELL
MW-24 UNOCAL MONITORING WELL
GSP-1 COLEMAN GEOPROBE SAMPLE POINT
PW-1 COLEMAN RECOVERY WELL
MW-24 COLEMAN MONITORING WELL
250 1,1-DCA (ug/L)
NS NOT SAMPLED
ug/L MICROGRAMS PER LITER
FENCE
BUILDING
RAILROAD TRACKS
100 ISOCONCENTRATION OF 1,1-DICHLOROETHANE (ug/L) FROM DEEP MONITORING WELLS (CONTOUR INTERVAL VARIES) (DASHED WHERE INFERRED) NON-DETECT VALUE INFERRED WHEN NO DATA PRESENT
N
UNOCAL SOURCE AREA
PINSKER STEEL
1,000
100
WICHITA SCHOOL DISTRICT SERVICE CENTER
37TH STREET
HYDRAULIC AVENUE
HIGHWAY 55
AGRICULTURAL
WAREHOUSE
PARKING LOT
UNOCAL RECOVERY PROPERTY
TRUCK LOADING AREA
DESIGNATED BUILDING AREA
PROPOSED PARKING LOT
DONREY
WHITE STAR MACHINERY
VLP EQUIPMENT
POND
COLEMAN SOURCE AREAS
HC-1
HC-2
HC-3
HC-4
SPG-4
MW-15
MW-5 <10
MW-6
MW-15 9.3
MW-1D NS
R-1 <1000
MW-13
MW-12S
MW-12D NS
MW-140 NS
MW-14S NS
MW-130
MW-13S
MW-120
MW-12S
MW-24
MW-23 6.7
MW-4
MW-2
MW-1
TW-2A
MW-11
MW-10
MW-9
MW-8
MW-7
MW-6D
MW-6S
MW-8D
MW-8S
MW-7D
MW-7S
MW-3
PW-1
PW-2
PW-3
MW-9S
MW-9D
MW-10D
MW-10S
MW-15D
MW-15S
MW-11D
MW-11S
OW-1S 13
OW-1D 14
OW-2S 25
OW-2D 30
OW-3S
OW-3D 27
NE-1S
NE-1D
NE-2D
NE-2S
NE-3D
NE-3S
NE-4D
NE-4S
MW-21D 6.6
MW-21S
MW-16D
MW-16S
MW-17D
MW-17S
MW-20D
MW-20S
MW-19D
MW-19S
MW-18D
MW-18S
MW-22D
MW-22S
NE-5D
NE-5S
NE-6D
NE-6S
NW-7D
NE-7S
250
700
NOTE:
GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS ON THE FOLLOWING DATES:
UNOCAL MONITORING WELLS — MARCH 1995
COLEMAN MONITORING WELLS — MAY 1995
UNOCAL\COLEMAN MONITORING WELLS — JULY 1995
GERAGHTY & MILLER, INC.
Environmental Services
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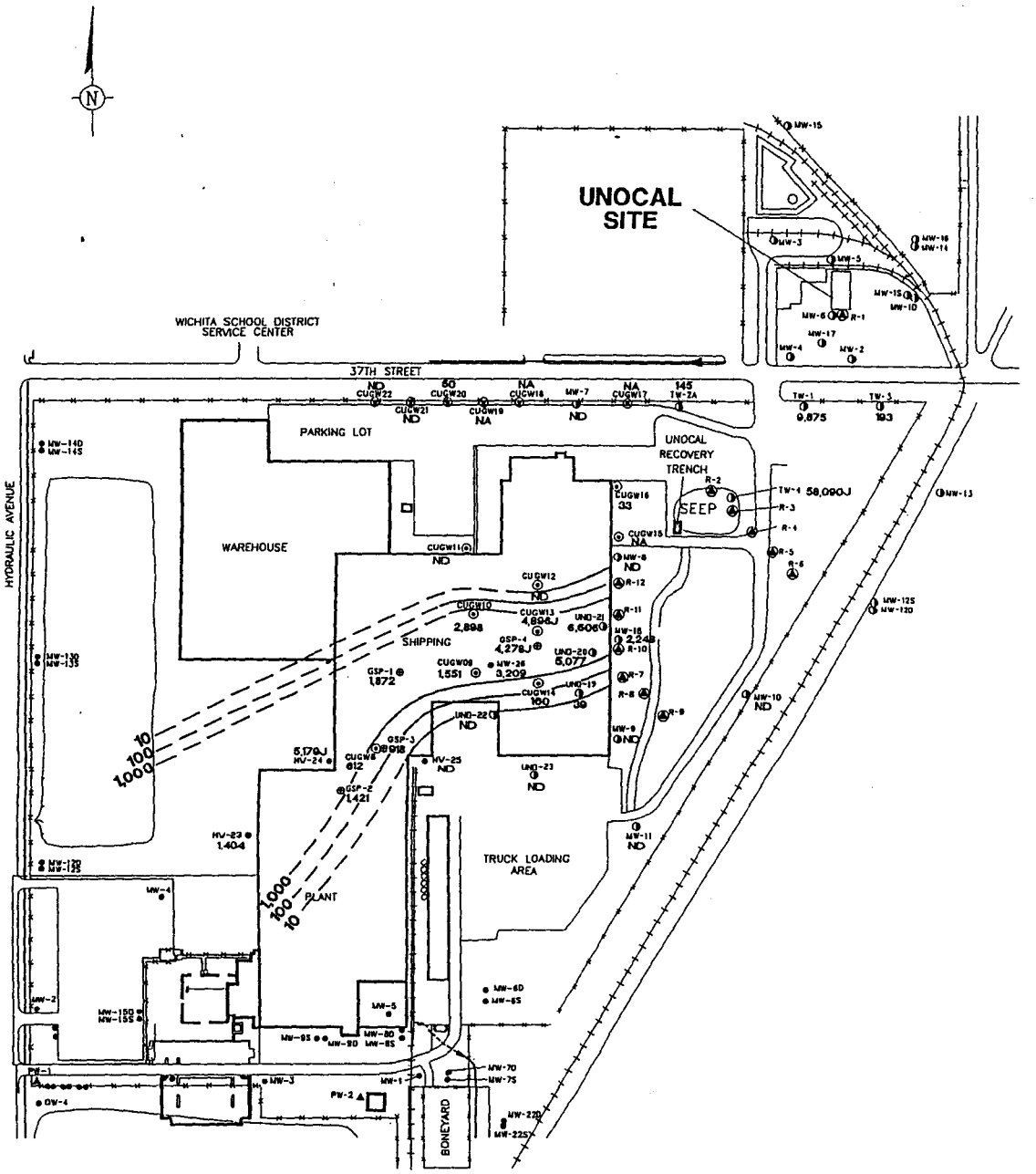
SCALE VERIFICATION
USE TO VERIFY FIGURE REPRODUCTION SCALE
APPROXIMATE EXTENT OF 1,1-DICHLOROETHANE IN GROUNDWATER WITH ISOCONCENTRATION CONTOURS
COLEMAN/UNOCAL INVESTIGATION, 1995
Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS
FIGURE
4-11



EXPLANATION

MW-11 ●	UNOCAL MONITORING WELL
R-10 (A)	UNOCAL RECOVERY WELL
CUGW08 (⊙)	GEOPROBE GROUNDWATER SAMPLE
GSP-2 ⊕	GEOPROBE GROUNDWATER SAMPLING POINT
PW-1 ▲	COLEMAN RECOVERY WELL
MV-24 ● 5,179J	COLEMAN MONITORING WELL; TOTAL VOLATILE ORGANIC COMPOUNDS IN MICROGRAMS PER LITER (FEBRUARY 1998)
NA	NOT ANALYZED
ND	NOT DETECTED
J	ESTIMATED
100 —	ISOCONCENTRATION OF TOTAL VOCs (ug/L) (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES

NOTES:

1.) ANALYTICAL DATA FROM MONITORING WELLS AND GEOPROBE SAMPLE POINTS ARE CONSIDERED MORE REPRESENATIVE THAN DATA FROM GEOPROBE BORINGS.

2.) A GRAB SAMPLE WAS COLLECTED FROM GEOPROBE SAMPLE POINT GSP-4 DUE TO LOW WATER YIELDING CONDITIONS IN SAMPLE POINT.

GERAGHTY & MILLER, INC.
Environmental Services

0 150 FT.

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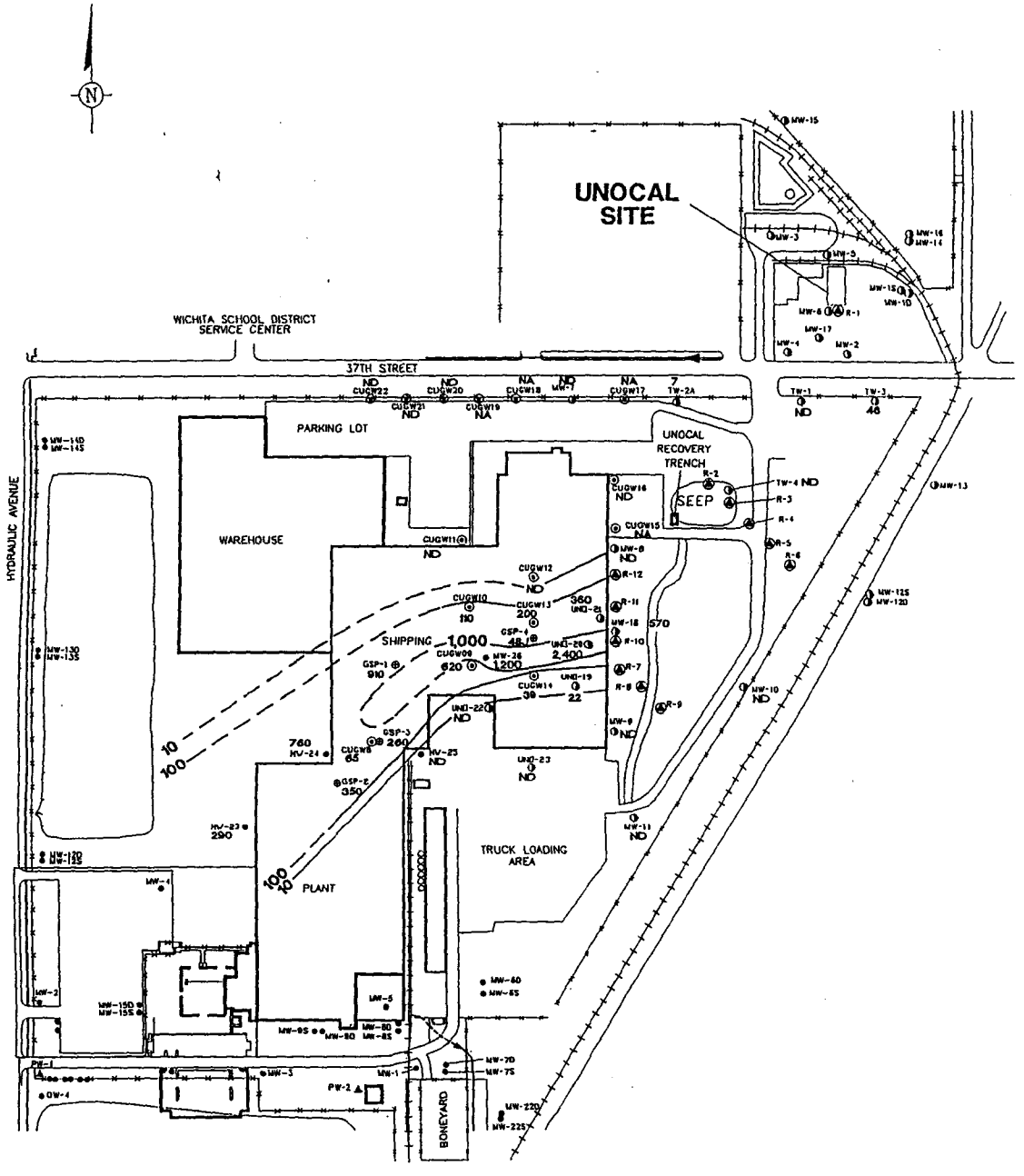
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY FIGURE REPRODUCTION SCALE

PROJECT NO.: [illegible]	FILE NO.: [illegible]
DRAWING:	PLOT DATE: [illegible]
DRAWN BY: [illegible]	DATE: [illegible]
CHECKED BY: [illegible]	DATE: [illegible]
APPROVED BY: [illegible]	DATE: [illegible]

APPROXIMATE EXTENT OF TOTAL VOCs DETECTED IN GROUNDWATER SAMPLES WITH ISOCONCENTRATION CONTOURS
COLEMAN/UNOCAL INVESTIGATION AREA

Coleman
COLEMAN NORTHEAST PLANT
WICHITA, KANSAS

FIGURE 4-5



EXPLANATION

MW-15 ●	UNOCAL MONITORING WELL
R-10 (A)	UNOCAL RECOVERY WELL
CUGW08 (●)	GEOPROBE GROUNDWATER SAMPLE
GSP-2 ⊕	GEOPROBE GROUNDWATER SAMPLING POINT
PW-1 ▲	COLEMAN RECOVERY WELL
HV-26 ●	COLEMAN MONITORING WELL
1,200	TETRACHLOROETHENE CONCENTRATION IN MICROGRAMS PER LITER (FEBRUARY 1996)
NA	NOT ANALYZED
ND	NOT DETECTED
J	ESTIMATED
100	ISOCONCENTRATION OF TETRACLOROETHENE (ug/L) (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES

NOTES:

1.) ANALYTICAL DATA FROM MONITORING WELLS AND GEOPROBE SAMPLE POINTS ARE CONSIDERED MORE REPRESENATIVE THAN DATA FROM GEOPROBE BORINGS.

2.) A GRAB SAMPLE WAS COLLECTED FROM GEOPROBE SAMPLE POINT GSP-4 DUE TO LOW WATER YIELDING CONDITIONS IN SAMPLE POINT.

GERAGHTY & MILLER, INC.
Environmental Services

0 SCALE 150 FT.

DRAWING CONFIDENTIAL: THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS AND SHALL REMAIN THE PROPERTY OF GERAGHTY & MILLER, INC. AS AN INSTRUMENT OF PROFESSIONAL SERVICE. THIS INFORMATION SHALL NOT BE USED IN WHOLE OR IN PART WITHOUT THE FULL KNOWLEDGE AND PRIOR WRITTEN CONSENT OF GERAGHTY & MILLER, INC.

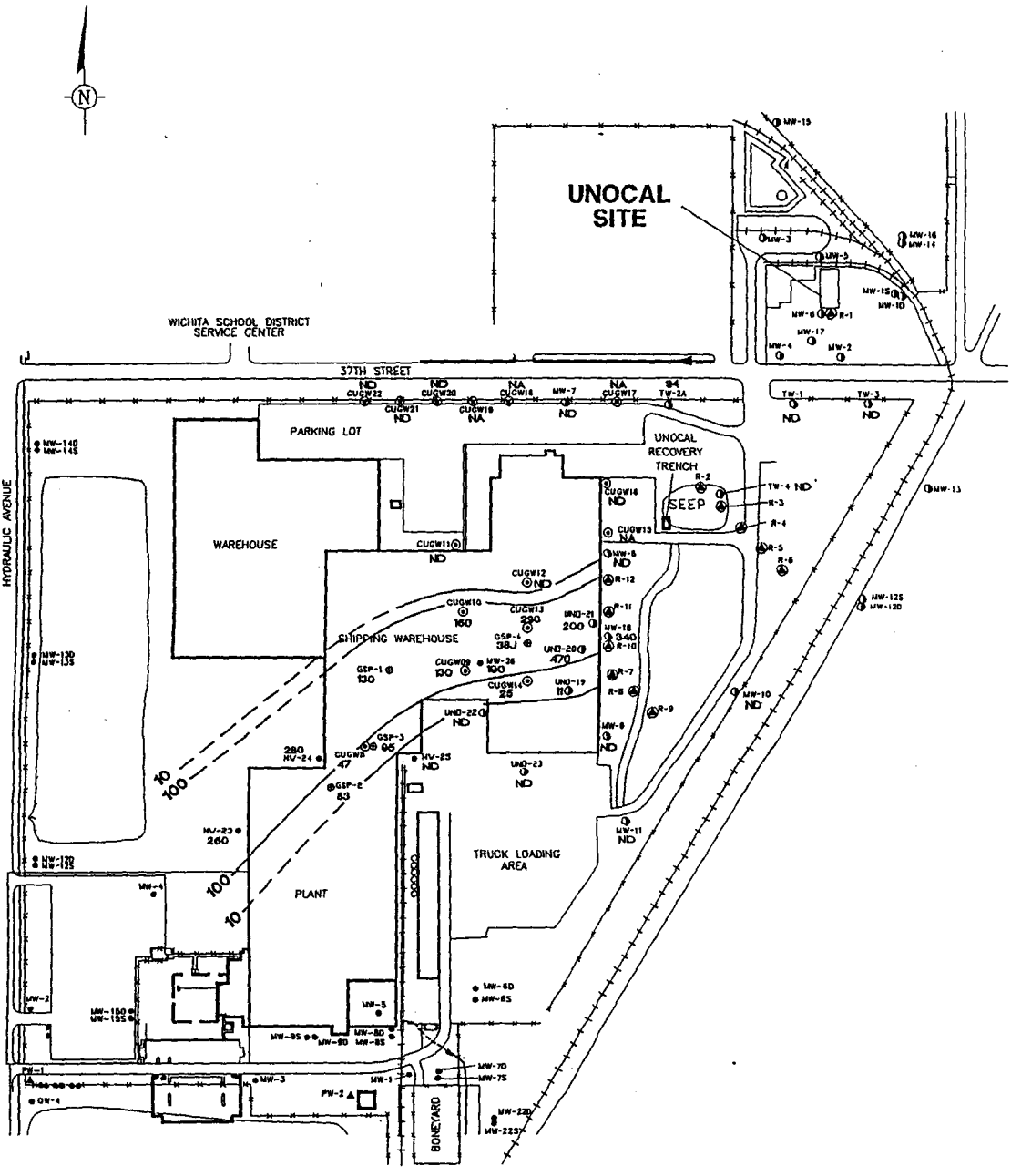
SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY FIGURE REPRODUCTION SCALE

PROJECT NO.: 0960-71.001	FILE NO. TETRA05
DRAWING	PLOT SCL: 1=150
DRAFTED BY: JM PARKERSON	DATE: 1/09/97
CHECKED BY: S. MARLEY	DATE: 1/09/97
APPROVED BY: JAMES SHAFFER	DATE: 1/09/97

APPROXIMATE EXTENT OF TETRACHLOROETHENE DETECTED IN GROUNDWATER SAMPLES WITH ISOCONCENTRATION CONTOURS
COLEMAN/UNOCAL INVESTIGATION AREA

Coleman
COLEMAN NORTHEAST PLANT
WICHITA, KANSAS

FIGURE
4-6



EXPLANATION

MW-11 ●	UNOCAL MONITORING WELL
R-10 (A)	UNOCAL RECOVERY WELL
CUGW08 (G)	GEOPROBE GROUNDWATER SAMPLE
GSP-2 ●	GEOPROBE GROUNDWATER SAMPLING POINT
PW-1 ▲	COLEMAN RECOVERY WELL
MV-26 ● 190	COLEMAN MONITORING WELL TRICHLOROETHENE CONCENTRATION IN MICROGRAMS PER LITER (FEBRUARY 1996)
NA	NOT ANALYZED
ND	NOT DETECTED
J	ESTIMATED
100	ISOCONCENTRATION OF TRICHLOROETHENE (ug/L) (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES

NOTES:

1.) ANALYTICAL DATA FROM MONITORING WELLS AND GEOPROBE SAMPLE POINTS ARE CONSIDERED MORE REPRESENATIVE THAN DATA FROM GEOPROBE BORINGS.

2.) A GRAB SAMPLE WAS COLLECTED FROM GEOPROBE SAMPLE POINT GSP-4 DUE TO LOW WATER YIELDING CONDITIONS IN SAMPLE POINT.

GERAGHTY & MILLER, INC.
Environmental Services

0 150 FT.

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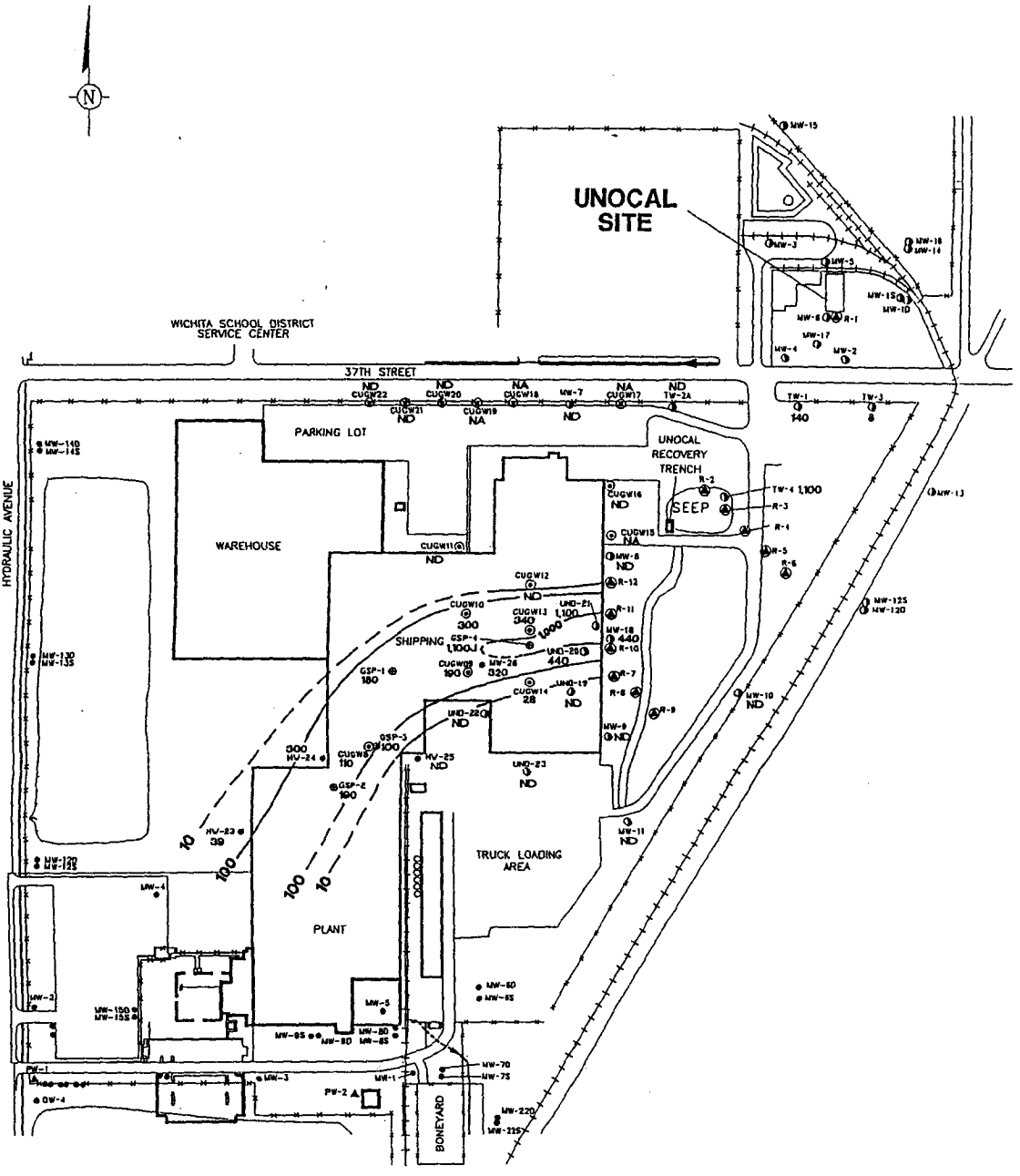
DESIGNED BY: D. WHELLY	DATE: 10/96
APPROVED BY: JOHN SHAFFAT	DATE: 10/96

APPROXIMATE EXTENT OF TRICHLOROETHENE DETECTED IN GROUNDWATER SAMPLES WITH ISOCONCENTRATION CONTOURS
COLEMAN/UNOCAL INVESTIGATION AREA

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

FIGURE 4-7



EXPLANATION

MW-11	UNOCAL MONITORING WELL
R-10	UNOCAL RECOVERY WELL
CUGW08	GEOPROBE GROUNDWATER SAMPLE
GSP-2	GEOPROBE GROUNDWATER SAMPLING POINT
PW-1	COLEMAN RECOVERY WELL
HV-24	COLEMAN MONITORING WELL
300	1,1-DICHLOROETHANE CONCENTRATION IN MICROGRAMS PER LITER (FEBRUARY 1996)
NA	NOT ANALYZED
ND	NOT DETECTED
J	ESTIMATED
100	ISOCONCENTRATION OF 1,1-DICHLOROETHANE (ug/L) (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES

NOTES:

1.) ANALYTICAL DATA FROM MONITORING WELLS AND GEOPROBE SAMPLE POINTS ARE CONSIDERED MORE REPRESENATIVE THAN DATA FROM GEOPROBE BORINGS.

2.) A GRAB SAMPLE WAS COLLECTED FROM GEOPROBE SAMPLE POINT GSP-4 DUE TO LOW WATER YIELDING CONDITIONS IN SAMPLE POINT.

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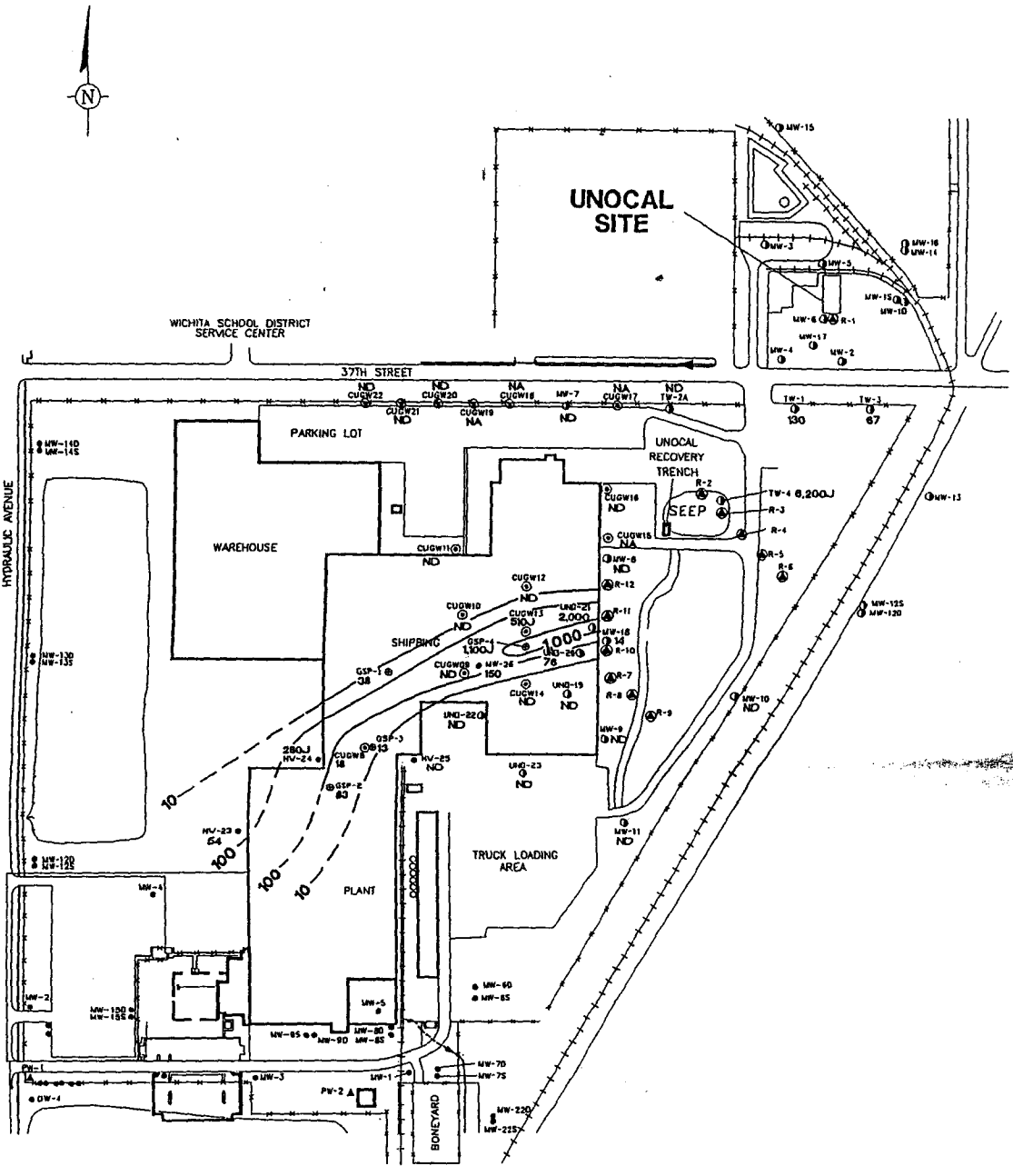
APPROVED BY: JOHN WINTERS | DATE: 10/96

APPROXIMATE EXTENT OF 1,1-DICHLOROETHANE DETECTED IN GROUNDWATER SAMPLES WITH ISOCONCENTRATION CONTOURS COLEMAN/UNOCAL INVESTIGATION AREA

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

FIGURE 4-8



EXPLANATION

MW-11	UNOCAL MONITORING WELL
R-10	UNOCAL RECOVERY WELL
CUGW08	GEOPROBE GROUNDWATER SAMPLE
GSP-2	GEOPROBE GROUNDWATER SAMPLING POINT
PW-1	COLEMAN RECOVERY WELL
MW-24	COLEMAN MONITORING WELL
280J	VINYL CHLORIDE CONCENTRATION IN MICROGRAMS PER LITER (FEBRUARY 1996)
NA	NOT ANALYZED
ND	NOT DETECTED
J	ESTIMATED
100	ISOCONCENTRATION OF VINYL CHLORIDE (ug/L) (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES

NOTES:

1.) ANALYTICAL DATA FROM MONITORING WELLS AND GEOPROBE SAMPLE POINTS ARE CONSIDERED MORE REPRESENATIVE THAN DATA FROM GEOPROBE BORINGS.

2.) A GRAB SAMPLE WAS COLLECTED FROM GEOPROBE SAMPLE POINT GSP-4 DUE TO LOW WATER YIELDING CONDITIONS IN SAMPLE POINT.

GERAGHTY & MILLER, INC.
Environmental Services

0 150 FT.

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PROJECT NO.: M0021.001 | FILE NO. MW0L-1
DRAWN BY: JM MARTIN | DATE: 10/97
DESIGNED BY: R. HINSLEY | DATE: 10/97
APPROVED BY: JOHN SHERRILL | DATE: 10/97

APPROXIMATE EXTENT OF VINYL CHLORIDE DETECTED IN GROUNDWATER SAMPLES WITH ISOCONCENTRATION CONTOURS COLEMAN/UNOCAL INVESTIGATION AREA

Coleman
COLEMAN NORTHEAST PLANT
WICHITA, KANSAS

FIGURE 4-9

ARCADIS GERAGHTY&MILLER

Table 3. Summary of Groundwater Level Measurements, Coleman Northeast Plant Quarterly Monitoring Report - June 2001.

Well Identification	Measuring Point Elevation (ft AMSL)	Date Measured	Depth to Water (ft)	Water Table Elevation (ft AMSL)
PW-1	1,324.33	6/3/01	18.35	1,305.98
PW-2	1,327.41	6/3/01	24.79	1,302.62
PW-3	1,322.34	6/3/01	16.45	1,305.89
MW-1	1,325.70	6/3/01	17.63	1,308.07
MW-2	1,322.80	6/3/01	15.17	1,307.63
MW-3	1,321.77	6/3/01	NM	NM
MW-4	1,326.06	6/3/01	NM	NM
MW-5	1,331.50	6/3/01	22.96	1,308.54
MW-6S	1,324.32	6/3/01	15.77	1,308.55
MW-6D	1,324.43	6/3/01	15.94	1,308.49
MW-7S	1,322.92	6/3/01	14.78	1,308.14
MW-7D	1,323.15	6/3/01	14.93	1,308.22
MW-8S	1,327.33	6/3/01	19.33	1,308.00
MW-8D	1,327.35	6/3/01	19.16	1,308.19
MW-9S	1,329.17	6/3/01	20.94	1,308.23
MW-9D	1,329.26	6/3/01	21.08	1,308.18
MW-10S	1,323.03	6/3/01	15.26	1,307.77
MW-10D	1,322.98	6/3/01	15.23	1,307.75
MW-11S	1,322.23	6/3/01	14.45	1,307.78
MW-11D	1,322.29	6/3/01	14.64	1,307.65
MW-12S	1,323.12	6/3/01	14.51	1,308.61

Footnotes found on last page.

ARCADIS GERAGHTY & MILLER

Table 3. Summary of Groundwater Level Measurements, Coleman Northeast Plant Quarterly Monitoring Report - June 2001.

Well Identification	Measuring Point Elevation (ft AMSL)	Date Measured	Depth to Water (ft)	Water Table Elevation (ft AMSL)
MW-12D	1,323.27	6/3/01	14.74	1,308.53
MW-13S	1,326.64	6/3/01	15.02	1,311.62
MW-13D	1,324.75	6/3/01	15.10	1,309.65
MW-14S	1,325.44	6/3/01	13.41	1,312.03
MW-14D	1,325.35	6/3/01	14.61	1,310.74
MW-15S	1,322.52	6/3/01	14.29	1,308.23
MW-15D	1,322.78	6/3/01	14.68	1,308.10
MW-16S	1,323.41	6/3/01	15.80	1,307.61
MW-16D	1,323.28	6/3/01	15.69	1,307.59
MW-17S	1,324.20	6/3/01	16.66	1,307.54
MW-17D	1,323.97	6/3/01	16.47	1,307.50
MW-18S	1,324.21	6/3/01	16.93	1,307.28
MW-18D	1,324.24	6/3/01	17.16	1,307.08
MW-19S	1,323.79	6/3/01	16.89	1,306.90
MW-19D	1,323.70	6/3/01	16.93	1,306.77
MW-20S	1,323.71	6/3/01	17.39	1,306.32
MW-20D	1,323.63	6/3/01	17.34	1,306.29
MW-21S	1,323.66	6/3/01	16.74	1,306.92
MW-21D	1,323.68	6/3/01	16.79	1,306.89
MW-22S	1,323.15	6/3/01	14.83	1,308.32
MW-22D	1,323.22	6/3/01	14.94	1,308.28
MW-23	1,331.01	6/3/01	21.16	1,309.85

Footnotes found on last page.

ARCADIS GERAGHTY&MILLER

Table 3. Summary of Groundwater Level Measurements, Coleman Northeast Plant Quarterly Monitoring Report - June 2001.

Well Identification	Measuring Point Elevation (ft AMSL)	Date Measured	Depth to Water (ft)	Water Table Elevation (ft AMSL)
MW-24	1,331.10	6/3/01	19.71	1,311.39
MW-25	1,327.62	6/3/01	15.88	1,311.74
MW-26	NA	6/3/01	14.91	1,312.71
OW-1S	1,321.40	6/3/01	14.84	1,306.56
OW-1D	1,321.53	6/3/01	14.89	1,306.64
OW-2S	1,321.24	6/3/01	14.06	1,307.18
OW-2D	1,320.78	6/3/01	13.82	1,306.96
OW-3S	1,321.05	6/3/01	13.65	1,307.40
OW-3D	1,320.90	6/3/01	13.68	1,307.22
OW-4	1,321.27	6/3/01	14.37	1,306.90
NE-1S	1,323.47	6/3/01	15.60	1,307.87
NE-1D	1,323.27	6/3/01	15.46	1,307.81
NE-2S	1,321.54	6/3/01	14.34	1,307.20
NE-2D	1,321.41	6/3/01	14.23	1,307.18
NE-3S	1,321.40	6/3/01	14.64	1,306.76
NE-3D	1,321.37	6/3/01	13.59	1,307.78
NE-4S	1,320.35	6/3/01	13.91	1,306.44
NE-4D	1,320.55	6/3/01	14.09	1,306.46
NE-5S	1,319.05	6/3/01	13.30	1,305.75
NE-5D	1,319.06	6/3/01	13.49	1,305.57
NE-6S	1,318.66	6/3/01	13.23	1,305.43

Footnotes found on last page.

ARCADIS GERAGHTY & MILLER

Table 3. Summary of Groundwater Level Measurements, Coleman Northeast Plant Quarterly Monitoring Report - June 2001.

Well Identification	Measuring Point Elevation (ft AMSL)	Date Measured	Depth to Water (ft)	Water Table Elevation (ft AMSL)
NE-6D	1,318.76	6/3/01	13.55	1,305.21
NE-7S	1,320.05	6/3/01	14.64	1,305.41
NE-7D	1,320.14	6/3/01	14.71	1,305.43
NE-8I	1,319.72	6/3/01	15.85	1,304.29
NE-9D	1,316.61	6/3/01	13.11	1,307.03
NE-9S	1,316.79	6/3/01	13.24	1,306.90
NE-10D	1,318.57	6/3/01	14.38	1,305.76
NE-10S	1,318.43	6/3/01	14.21	1,305.93
NE-11D	1,314.99	6/3/01	11.66	1,308.48
NE-12I	1,318.17	6/3/01	13.84	1,306.30

ft Feet.
AMSL Above Mean Sea Level.
NM Not Measured
NA Not Available

G:\APROJECT\COLEMAN\OK120501\[WLSUM.XLS]June 2001 Data

Appendix B-5
CTC - Continental Tank Car

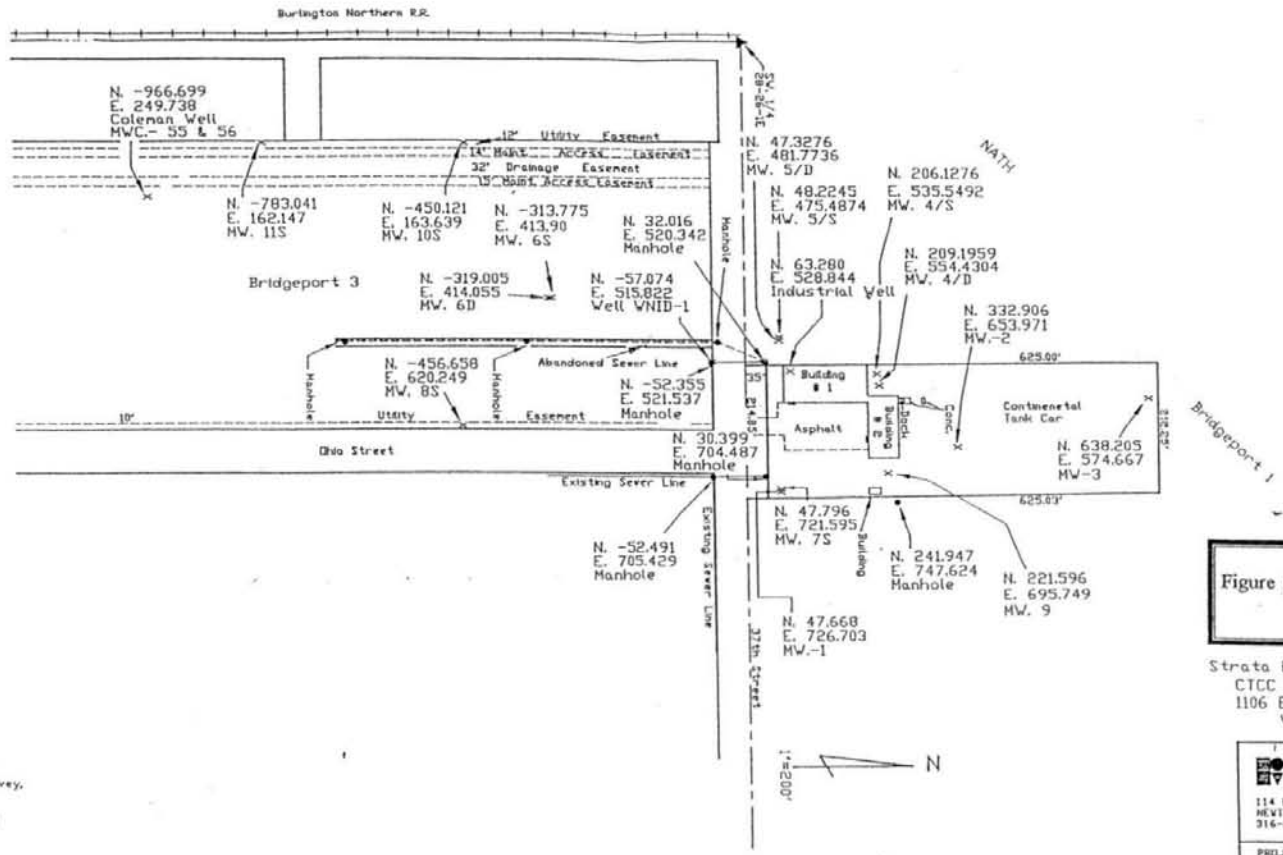


Figure 1. CTCC Site Groundwater Monitoring Well Network

Strata Environmental Services, Inc.
CTCC Monitor Well Locations
1106 E. 37th Street North
Wichita, Kansas.

MACON COMPANY
RATHBONE SURVEYING
114 E. FOURTH
NEWTON, KANSAS 67114
316-283-7000

PROJECT NO. 990006 2/14/94

DOUG RATHBONE
REGISTERED
KANSAS
LAND SURVEYOR

I hereby certify this foregoing Survey, completed on 2-14-94, was made under my supervision and is correct to the best of my knowledge

Doug Rathbone L.S. 1117

Table 1. Groundwater Contaminant Concentrations[1] by Monitoring Well at CTCC Site, June 21-22, 2001							
	Groundwater Chemical Contaminants						
Monitoring Well Number	Toluene	1,1,1-Trichloroethane	Trichloroethene	Cis1,2-Dichlorethene	1,1-Dichloroethene	1,1-Dichloroethane	Tetrachloroethene
MW-1[2]	nd	nd	nd	nd	nd	nd	nd
MW-2[2]	nd	nd	nd	nd	nd	nd	nd
MW-3[2]	nd	nd	nd	nd	nd	nd	nd
MW-4S[2]	nd	nd	nd	nd	nd	nd	nd
MW-4D[2]	nd	nd	nd	nd	nd	nd	nd
MW-5S	NA	NA	NA	NA	NA	NA	NA
MW-5D	NA	NA	NA	NA	NA	NA	NA
MW-6S	nd	520	140	38	20	nd	20
MW-6D	nd	4J	nd	nd	nd	nd	nd
MW-6D QC	nd	2J	nd	nd	nd	nd	nd
MW-6D QA	nd	nd	nd	nd	nd	nd	nd
MW-7S	nd	nd	nd	nd	nd	nd	nd
MW-8S	nd	nd	nd	nd	nd	nd	nd
MW-9S	nd	nd	nd	nd	nd	nd	nd
MW-9S QC	nd	nd	nd	nd	nd	nd	nd
MW-9S QA	nd	nd	13	nd	nd	5	nd
MW-10S	nd	nd	nd	nd	nd	nd	nd
MW-11S	nd	nd	13	nd	nd	nd	nd
MW-11S QC	nd	7	14	nd	nd	nd	nd
MW-11S QA	nd	9	19	nd	nd	nd	nd
Industrial Well	nd	1	32	6	0.9 J	nd	nd
Trip Blank	nd	nd	nd	nd	nd	nd	nd
WNID-1[5]	nd	nd	550	300	nd	nd	nd

[1] denotes concentrations in ug/l or parts per billion
[2] denotes upgradient wells
[3] S denotes shallow well ~ 25-34 feet in depth
[4] D denotes deep well ~ 40-48 feet in depth
[5] denotes wells that are not CTCC wells
nd denotes concentration less than detection limit (5 ug/l)

J denotes estimated concentration
E denotes estimated concentration above the linear range
QC denotes a quality control duplicate of a sample
QA denotes a quality assurance duplicate of a sample
NA denotes monitoring wells unable to be sampled in 2001

Table 2. Comparison of CTCC Groundwater Contaminant Concentrations[1] by Monitoring Well; 1994,1998, and 2001.

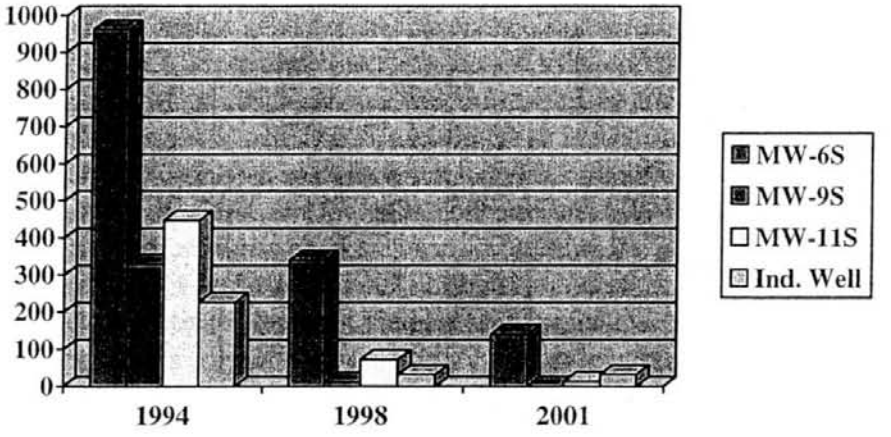
	Groundwater Chemical Contaminants																				
	Toluene			1,1,1-Trichloroethane			Trichloroethene			Cis 1,2-Dichloroethene			1,1-Dichloroethene			1,1-Dichloroethane			Tetrachloroethene		
Well Number	1994	1998	2001	1994	1998	2001	1994	1998	2001	1994	1998	2001	1994	1998	2001	1994	1998	2001	1994	1998	2001
MW-1[2]	nd	0.6 J	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-2[2]	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-3[2]	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-4S[2]	nd	nd	nd	2	0.9 J	nd	25.4	13	nd	nd	0.7 J	nd	0.6 J	nd	nd	nd	nd	nd	nd	nd	nd
MW-4D[4]	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-5S	nd	nd	NA	1.5	2	NA	19.7	31	NA	nd	10	NA	1 J	2	NA	nd	nd	NA	nd	nd	NA
MW-5D	nd	nd	NA	0.6 J	nd	NA	2.3	nd	NA	nd	nd	NA	nd	nd	NA	nd	nd	NA	nd	nd	NA
MW-6S	nd	nd	nd	815	96	520	962	340	140	nd	120	38	247	40	20	nd	11	20	nd	nd	20
MW-6D	nd	nd	nd	21.4	4	nd	26.9	3	nd	nd	0.6 J	nd	7.2	nd	nd	nd	nd	nd	nd	nd	nd
MW-7S	nd	nd	nd	nd	nd	nd	2.3	0.8 J	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-8S	nd	nd	nd	0.7 J	2	nd	1.8	8	nd	nd	3	nd	nd	0.9 J	nd	nd	nd	nd	nd	nd	nd
MW-9S	nd	nd	nd	nd	nd	nd	329	12	nd	nd	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-10S	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MW-11S	nd	nd	nd	728	87	nd	447	72	13	nd	12	nd	149	10	nd	nd	nd	nd	nd	6	nd
Industrial Well	nd	nd	nd	14	1	nd	226	32	32	nd	6	6	7.9 J	0.9 J	0.9 J	nd	nd	nd	nd	nd	nd
Trip Blank	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
WNID-1[5]	NA	nd	nd	1900[6]	14	nd	1100[6]	190	550	180[6]	79 E	300	NA	16	nd	NA	12	nd	NA	1	nd

[1] denotes concentrations in ug/l or parts per billion
[2] denotes upgradient wells
[3] S denotes shallow well ~ 25-34 feet in depth
[4] D denotes deep well ~ 40-48 feet in depth
[5] denotes wells that are not CTCC wells
[6] denotes 1991 sample concentrations (information provided by Rick Bean, KDHE)
green denotes a decrease in concentration between 1998 and 2001

J denotes estimated concentration
E denotes estimated concentration above the linear range
QC denotes a quality control duplicate of a sample
QA denotes a quality assurance duplicate of a sample
NA denotes monitoring wells unable to be sampled in 2001
nd denotes concentration less than detection limit (5 ug/l)
red denotes an increase in concentration between 1998 and 2001

examples of decrease in concentration are shown in trichloroethene from 329 to 12 to non-detect (<5 ug/l) at MW-9S, from 962 to 340 to 140 ug/1 at MW-6S, and from 447 to 72 to 13 ug/l at MW-11S between 1994, 1998, and 2001, respectively. Similar decreases in concentration were observed for 1,1,1-trichloroethane and 1,1-dichloroethene. Graphic analysis of the primary contaminants is shown in Appendix C.

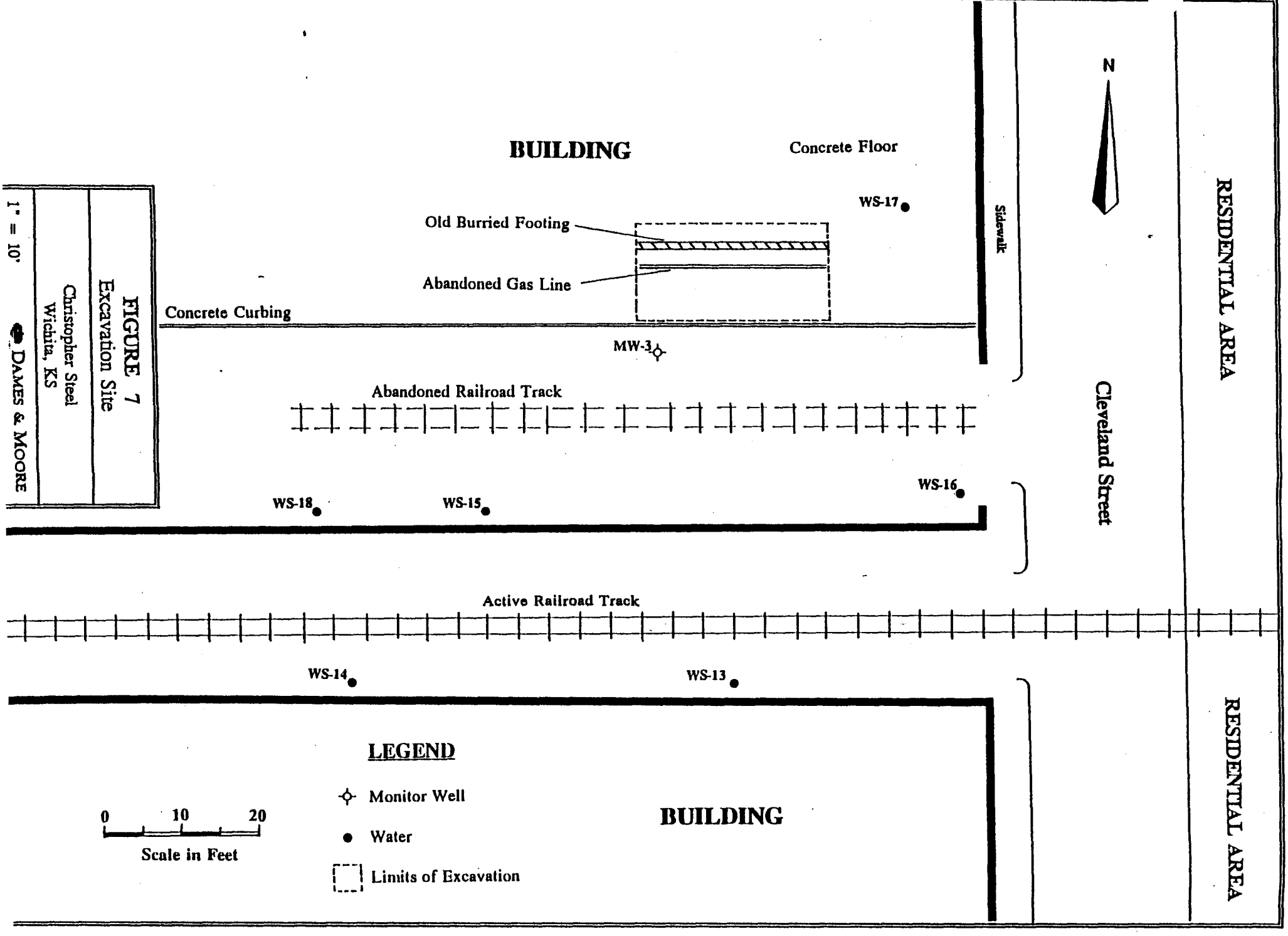
Figure 2. Changes in Concentration of TCE (ug/l) at Selected Wells from 1994, 1998, and 2001

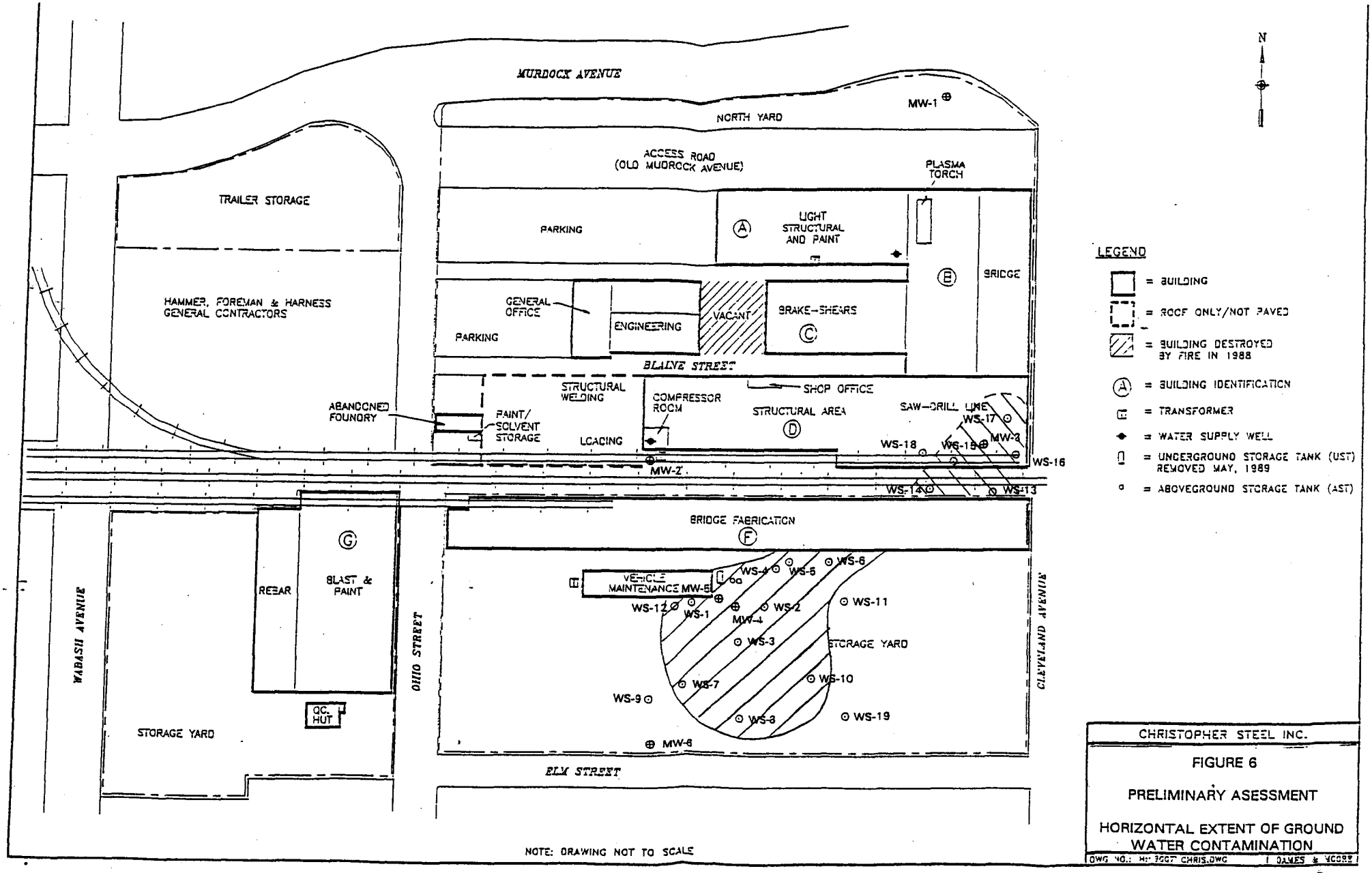


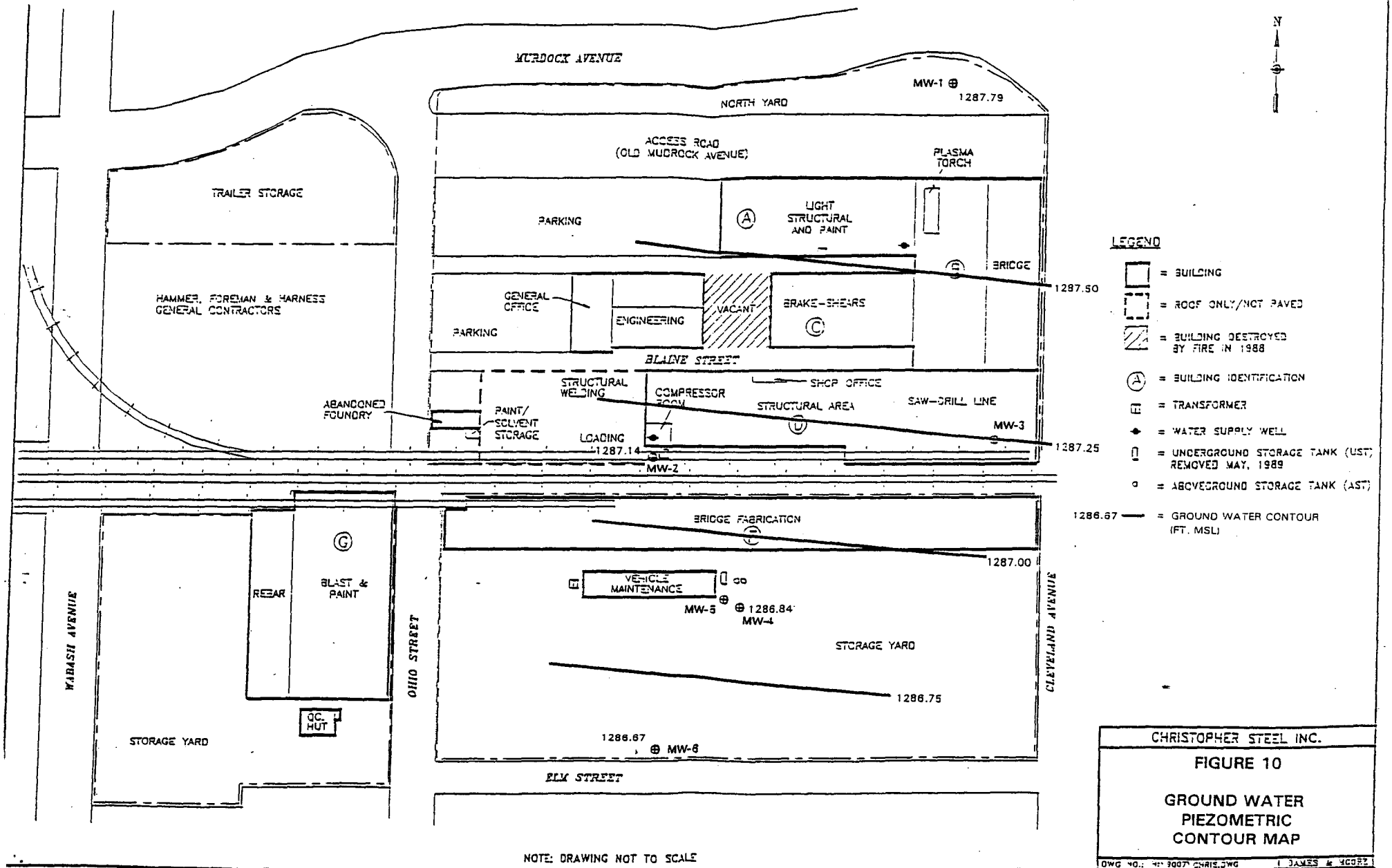
Quality Control, Quality Assurance, and Data Validation Results. Data quality objectives were met through field quality control activities such as labeling, documenting, handling and transport of samples, and ensuring completeness, split samples for quality control and quality assurance analysis, and representativeness of the samples collected. Laboratory quality control was ensured through the use of method blanks, matrix spikes, spike duplicates, the reporting of percent recovery and relative percent difference in comparison to accepted ranges or limits (Appendix A).

Quality control (QC) samples, quality assurance (QA) samples were collected as split samples during the sampling event. Split samples for QC and QA analysis were collected from MW-6D, MW-9S, and MW-11S. In addition to the split samples, a trip blank was provided to ensure handling and transport did not affect the sample results. The QC samples were used within the laboratory as a matrix spike and spike duplicate sample to ensure the analytical method was operating within accepted ranges. The QA samples were submitted to an independent laboratory as a duplicate to determine contaminant concentration for comparison to the sample. Results of the QA duplicate samples and trip blank are shown in Table 1 and Appendices A and B. The QA duplicate samples confirmed the results of the contract laboratory and show acceptable comparability between the sample and the duplicate. Results of the QC matrix spike and spike duplicates (Appendix A) show all spike recoveries within acceptable ranges. Laboratory control samples (spike and spike duplicates) were also observed within acceptable recovery ranges and relative percent difference amounts for all groundwater contaminants detected.

Appendix B-6
CSI - Christopher Steel


BUILDING
Concrete Floor
WS-17
Old Burried Footing
Abandoned Gas Line
Concrete Curbing
MW-3
Abandoned Railroad Track
WS-18
WS-15
WS-16
Active Railroad Track
WS-14
WS-13
Sidewalk
N
Cleveland Street
RESIDENTIAL AREA
RESIDENTIAL AREA
BUILDING
LEGEND
Monitor Well
Water
Limits of Excavation
0
10
20
Scale in Feet
FIGURE 7
Excavation Site
Christopher Steel
Wichita, KS
1" = 10'
DAMES & MOORE


MURDOCK AVENUE
NORTH YARD
MW-1
ACCESS ROAD
(OLD MURDOCK AVENUE)
PLASMA TORCH
TRAILER STORAGE
PARKING
LIGHT STRUCTURAL AND PAINT
BRIDGE
HAMMER, FOREMAN & HARNESS GENERAL CONTRACTORS
GENERAL OFFICE
ENGINEERING
VACANT
BRAKE-SHEARS
PARKING
BLAINE STREET
STRUCTURAL WELDING
COMPRESSOR ROOM
SHOP OFFICE
STRUCTURAL AREA
SAW-DRILL LINE
ABANDONED FOUNDRY
PAINT/ SOLVENT STORAGE
LOADING
WS-17
MW-3
WS-18
WS-15
WS-16
MW-2
WS-14
WS-13
BRIDGE FABRICATION
REBAR
BLAST & PAINT
VEHICLE MAINTENANCE
MW-5
WS-4
WS-5
WS-6
WS-12
WS-1
WS-2
WS-11
MW-4
WS-3
STORAGE YARD
WS-7
WS-10
WS-9
WS-8
WS-19
MW-6
QC HUT
STORAGE YARD
WABASH AVENUE
OHIO STREET
CLEVELAND AVENUE
ELM STREET
N
LEGEND
= BUILDING
= ROOF ONLY/NOT PAVED
= BUILDING DESTROYED BY FIRE IN 1988
= BUILDING IDENTIFICATION
= TRANSFORMER
= WATER SUPPLY WELL
= UNDERGROUND STORAGE TANK (UST) REMOVED MAY, 1989
= ABOVEGROUND STORAGE TANK (AST)
NOTE: DRAWING NOT TO SCALE
CHRISTOPHER STEEL INC.
FIGURE 6
PRELIMINARY ASESSMENT
HORIZONTAL EXTENT OF GROUND WATER CONTAMINATION
DWG NO.: HI 3007 CHRIS.DWG
DAMES & MOORE



CHRISTOPHER STEEL INC.

FIGURE 10

GROUND WATER PIEZOMETRIC CONTOUR MAP

TABLE 1

SUMMARY OF OFF-SITE ANALYTICAL RESULTS
PHASE 1 SOIL BORING SAMPLES

ANALYTE	BENZENE	ETHYLBENZENE	TOLUENE	XYLENES	TPH
MDL	0.250 mg/kg	0.250 mg/kg	0.250 mg/kg	0.750 mg/kg	5 mg/kg
KDHE ACTION LEVEL	1.4 mg/kg	-	-	-	100 mg/kg
MW-1 (4'-9')	ND	ND	ND	ND	ND
MW-1 (9'-14')	ND	ND	ND	ND	ND
MW-2 (0'-4')	ND	ND	ND	ND	ND
MW-2 (4'-9')	ND	ND	ND	ND	8
MW-3 (3'-4')	ND	ND	ND	ND	ND
MW-3 (4'-9')	ND	ND	ND	ND	ND
MW-4 (4'-9')	ND	ND	ND	ND	ND
MW-4 (9'-14')	ND	ND	ND	ND	ND

ND: Not detected at or above the MDL
Note: Analyzed November 9 to 12, 1992

TABLE 2

SUMMARY OF OFF-SITE ANALYTICAL RESULTS
PHASE 1 GROUND WATER SAMPLES

ANALYTE	BENZENE	ETHYLBENZENE	TOLUENE	XYLENES	TCE	TTCE	1,2-DCA
MDL	5 μg/l	5 μg/l	5 μg/l	5 μg/l	5 μg/l	5 μg/l	5 μg/l
KDHE ACTION LEVEL	5	680	2,000	440	5	5	5
MW-1	ND	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	6	ND
MW-3	ND	ND	ND	ND	18	ND	ND
MW-4	1,400	ND(50)	ND(50)	310	ND(50)	ND(50)	ND
MW-5	97	170	440	670	ND(25)	ND(25)	ND
MW-6	ND	ND	ND	ND	ND	ND	ND
COMPRESSOR WELL	ND	ND	ND	ND	ND	ND	ND

ND: Not detected at or above the MDL
TCE: Trichloroethylene
TTCE: Tetrachloroethylene
( ): Elevated MDL
Note: Analyzed November 12 and 13, 1992

TABLE 3

SUMMARY OF OFF-SITE ANALYTICAL RESULTS
PHASE 1 SURFACE SOIL SAMPLES

ANALYTE	MDL	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8
BARIUM	0.50 mg/kg	23.0	96.0	11,600	22.2	-	-	-	-
CADMIUM	0.05 mg/kg	0.25	0.45	36.7	ND	-	-	-	-
CHROMIUM	0.50 mg/kg	17.0	30.1	1,200	865	-	-	-	-
LEAD	2.5 mg/kg	38.0	270	6,380	44.5	-	-	-	-
SILVER	1.5 mg/kg	ND	ND	ND	1.95	-	-	-	-
ARSENIC	0.30 mg/kg	0.313	3.84	1.68	40.3	-	-	-	-
BENZENE	250 μg/kg	-	-	-	-	-	ND	ND	-
ETHYLBENZENE	250 μg/kg	-	-	-	-	-	ND	ND	-
TOLUENE	250 μg/kg	-	-	-	-	-	ND	ND	-
XYLENE	750 μg/kg	-	-	-	-	-	ND	ND	-
TPH	5 mg/kg	-	-	-	-	ND	-	-	ND

ND: Not detected at or above the MDL
- : Not analyzed for this compound
Note: Analyzed November 11 and 20, 1992

TABLE 4

SUMMARY OF OFF-SITE ANALYTICAL RESULTS
PHASE 2 MW-3 GROUND WATER SAMPLE

ANALYTE	MINERAL SPIRITS	GASOLINE	DIESEL FUEL	FUEL OIL	MOTOR OIL	BNAs
MDL	0.4 mg/L	0.4 mg/L	0.4 mg/L	0.4 mg/L	0.4 mg/L	10-50 μg/L
MW-3	12	ND	ND	ND	ND	ND

ND: Not detected at or above the MDL
Note: Analyzed December 22, 1992

TABLE 5

MONITORING WELL AND GROUND WATER ELEVATIONS

WELL I.D.	TOP OF CASING (feet)	GROUND LEVEL (feet)	DEPTH TO GROUND WATER (feet)	GROUND WATER ELEVATION (feet)
MW-1	1303.40	1300.58	15.61	1287.79
MW-2	1300.94	1301.34	13.80	1287.14
MW-3	1299.93	1300.36	12.68	1287.25
MW-4	1303.32	1300.34	16.48	1286.84
MW-5	1302.99	1300.10	-	-
MW-6	1300.45	1299.65	13.78	1286.67

Note: The elevation reference mark used for determining these elevations was a City of Wichita brass rod in concrete post, 23 feet south and 37 feet east of the centerline of Washington and 9th Street; elevation 112.90 (City Datum), 1300.30 (M.S.L.).

TABLE 6

SUMMARY OF OFF-SITE ANALYTICAL RESULTS
PHASE 4 SOIL BORING SAMPLES

ANALYTE	MDL	SB93-2 (2.5'-5')	SB93-8 (0'-2.5')	SB93-15 (10'-12')
MINERAL SPIRITS	10 mg/kg	ND	NR	-
GASOLINE	10 mg/kg	ND	NR	-
JET FUEL	10 mg/kg	ND	NR	-
KEROSENE	10 mg/kg	ND	NR	-
DIESEL FUEL	10 mg/kg	ND	ND	-
FUEL OIL	10 mg/kg	ND	ND	-
MOTOR OIL	10 mg/kg	ND	ND	-
TPH	10 mg/kg	ND	200	-
VOCs[1]	1,200/620 μg/kg	-	ND	-
ARSENIC[2]	0.25 mg/L	-	-	ND
CHROMIUM[2]	0.25mg/L	-	-	ND
LEAD[2]	0.25 mg/L	-	-	ND

ND: Not detected at or above the MDL
NR: Not reported
- : Not analyzed for this analyte
1 : Sample analyzed at medium level due to the presence of high levels of hydrocarbons
2 : TCLP analysis
Note: Analyzed November 19 to December 13, 1993

TABLE 7
SUMMARY OF OFF-SITE ANALYTICAL RESULTS
PHASE 4 WELL POINT GROUND WATER SAMPLES

ANALYTE	LEAD	BENZENE	TCE	TTCE	1,2-DCA
MDL	0.005 mg/L	5 μg/L	5 μg/L	5 μg/L	5 μg/L
KDHE ACTION LEVEL	0.050	5	5	5	5
HP-1 (13.4)	0.254	ND	ND	ND	ND
HP-2 (11)	0.274	ND	ND	ND	ND
HP-3 (22.5)	0.677	ND	ND	ND	ND
HP-4 (14.5)	0.344	ND	ND	ND	ND
HP-5 (22.5)	0.193	ND	ND	ND	ND
HP-6 (22.5)	0.160	ND	ND	ND	ND
HP-7 (22.5)	0.232	ND	ND	ND	ND
HP-8 (22.5)	0.346	ND	ND	ND	ND
HP-9 (22.5)	0.114	ND	ND	ND	ND
HP-10 (22.5)	0.106	6	ND	ND	ND
HP-11 (22.5)	0.138	ND	ND	ND	ND
HP-12 (22.5)	0.403	ND	ND	ND	ND

ND: Not detected at or above the MDL
TCE: Trichloroethylene
TTCE: Tetrachloroethylene
( ): Sample Depth in feet
Note: Each well point sample was collected from a depth of 20 feet.
Samples analyzed November 24 and 30, 1993

TABLE 8

SUMMARY OF OFF-SITE TCLP ANALYTICAL RESULTS
PHASE 4 SOIL SAMPLES

ANALYTE	MDL	RCRA REGULATORY LEVEL	N. Found. Comp.	PSSA Composite	Bldg. G. Surface
ARSENIC	0.25 mg/L	5	ND	ND	ND
CHROMIUM	0.25 mg/L	5	ND	0.642	ND
LEAD	0.25 mg/L	5	3.56	ND	ND

ND: Not detected at or above the MDL
Note: Analyzed December 8 to 13, 1993

Appendix B-7
DRB - Coastal Derby Refinery

GROUNDWATER CONSULTANTS

2227 W Lindsey, Suite 1402 • Norman, OK 73069 • (405) 360-3884 • fax (405) 579-3884

fax

To: Mr. Frank Winslow

Fax #: (316) 634-2835

From: Charles B. Burris

Date: March 30, 2001

Subject: Wichita Facility well elevations

Pages: 5 including cover page

NOTES:

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WELLID	TOC	TOS	BOS	SPECGRAV
# 1	1,311.63	1,297.63	1,281.63	0.77
# 2	1,309.67	1,298.67	1,288.67	0.76
# 2A	1,309.13	0.00	0.00	0.77
# 3	1,311.38	1,299.55	1,289.55	0.83
# 4	1,313.54	0.00	0.00	0.77
# 5A	0.00	0.00	0.00	
# 6	1,317.06	1,306.56	1,294.56	0.77
# 7	1,315.17	1,304.17	1,292.17	0.91
# 8	1,313.86	1,303.86	1,292.86	0.77
# 9	1,314.60	1,301.60	1,291.60	0.77
# 10	0.00	0.00	0.00	
# 11	1,314.48	1,300.48	1,290.48	0.77
# 12	0.00	0.00	0.00	
# 13	1,312.28	1,301.28	1,291.28	0.78
# 14	0.00	0.00	0.00	
# 15	1,311.09	1,303.09	1,283.09	0.76
# 16	1,311.96	1,303.96	1,283.96	0.75
# 17	1,313.16	1,308.41	1,288.91	
# 18	1,313.29	1,305.29	1,285.29	
# 19	1,310.39	1,298.85	1,280.85	0.84
# 20	1,308.42	1,300.42	1,285.42	0.75
# 21	1,311.00	1,303.00	1,288.00	
# 22	1,311.08	1,303.08	1,288.08	0.76
# 23	1,310.53	1,297.53	1,287.53	0.73
# 24	1,312.72	1,299.72	1,289.72	
# 25	1,312.84	1,299.84	1,289.84	
# 26	0.00	0.00	0.00	
# 27	1,308.52	1,299.52	1,269.52	0.78
# 28	1,311.43	1,302.43	1,287.43	
# 29	1,310.52	1,302.52	1,287.52	0.77
# 30	0.00	0.00	0.00	
# 31	0.00	0.00	0.00	
# 32	1,309.85	1,303.39	1,273.39	0.77
# 33	1,311.01	1,306.01	1,289.01	0.77
# 34	1,312.40	1,295.50	1,289.50	0.77
# 35	1,312.65	1,299.00	1,293.00	
# 36	1,311.39	1,297.39	1,291.39	0.77
# 36A	1,311.30	1,304.30	1,285.30	0.78
# 37	1,313.73	1,296.50	1,290.50	
# 38	1,314.44	1,301.00	1,291.00	
# 39	0.00	0.00	0.00	
# 40	1,312.26	1,301.26	1,292.26	0.77
# 41	0.00	0.00	0.00	
# 42	1,310.78	1,299.78	1,290.78	0.77
# 42A	1,311.30	1,301.30	1,291.30	0.77
# 43	1,312.13	1,299.40	1,290.40	0.77
# 44	1,312.53	1,300.53	1,290.53	0.77
# 45	1,313.70	1,302.70	1,293.70	0.77
# 46	1,314.40	1,299.40	1,290.40	0.77
#A	1,309.40	1,301.40	1,284.40	0.77
#B	1,309.44	1,301.44	1,284.44	0.77
#C	1,308.63	1,300.13	1,283.63	0.77
#D	1,308.25	1,300.25	1,283.25	0.77
#E	1,308.79	1,300.79	1,283.79	0.77
#F	0.00	0.00	0.00	
#G	0.00	0.00	0.00	
#H	0.00	0.00	0.00	
#I	1,309.32	1,301.32	1,284.32	0.79
#J	1,308.94	1,300.44	1,283.94	0.79
#K	0.00	0.00	0.00	
#L	0.00	0.00	0.00	
#M	0.00	0.00	0.00	
19STBD	1,311.89	0.00	0.00	
21STBD	1,310.22	0.00	0.00	
I- 1	1,311.55	1,293.60	1,273.60	
I- 2	1,312.01	1,293.80	1,273.80	
I- 3	1,312.35	1,292.00	1,277.00	
I- 4	1,312.19	1,292.90	1,272.90	

Friday, March 30, 2001 WFELEV

WELLID	TOC	TOS	BOS	SPECGRAV
I- 5	1,312.60	1,295.90	1,273.90	
I- 6	1,312.82	1,294.10	1,274.10	
I- 7	1,312.44	1,294.70	1,274.70	
I- 8	1,314.00	1,296.10	1,276.10	
I-11	1,313.11	1,292.90	1,277.90	
I-12	1,312.99	1,293.40	1,278.40	
I-13	1,313.25	1,293.30	1,278.30	
I-14	1,314.39	1,293.60	1,278.60	
I-15	1,314.65	1,295.80	1,275.80	
I-16	1,315.16	1,293.00	1,278.00	
I-17	1,313.78	1,295.60	1,277.60	
I-18	1,312.85	1,295.20	1,275.20	
I-19	1,314.10	1,297.40	1,277.40	
I-20	1,314.56	1,297.80	1,277.80	
I-21	1,311.45	1,292.80	1,272.80	
I-22	1,311.53	1,293.40	1,275.40	
I-23	1,311.89	1,291.90	1,276.90	
I-24	1,312.96	1,293.80	1,273.80	
I-25	1,312.86	1,293.80	1,273.80	
I-26	1,312.71	1,293.00	1,273.00	
I-27	1,313.38	1,293.50	1,273.50	
I-28	1,315.03	1,295.10	1,275.10	
I-29	1,313.37	1,293.10	1,276.10	
I-30	1,313.16	1,294.10	1,277.10	
I-31	1,313.67	1,292.50	1,277.50	
I-32	1,313.20	1,292.20	1,277.20	
I-33	1,314.72	1,296.72	1,279.72	
I-34	1,314.65	1,293.60	1,278.60	
I-35	1,314.73	1,293.00	1,278.00	
I-36	1,315.66	1,294.40	1,277.40	
I-37	1,312.52	1,294.20	1,275.20	
I-38	1,312.97	1,295.20	1,275.20	
I-39	1,313.80	1,296.10	1,276.10	
I-40	1,314.96	1,297.20	1,275.20	
MW- 1	1,313.67	1,302.00	1,294.00	0.77
MW- 2	1,313.49	1,301.49	1,292.49	0.77
MW- 3	1,314.92	1,303.92	1,294.92	0.77
MW- 4	1,310.66	1,297.66	1,288.66	0.77
MW- 5	1,311.41	1,298.41	1,289.41	0.77
MW- 6	1,307.49	1,297.49	1,288.49	0.77
MW- 7	1,311.30	1,291.40	1,281.40	0.77
MW- 8	1,312.49	1,294.49	1,284.49	0.77
MW- 9	1,310.87	1,300.50	1,280.50	0.77
MW- 10	1,307.92	1,301.92	1,281.92	0.77
MW- 11	1,307.34	1,302.34	1,282.34	0.77
MW- 12	1,309.02	0.00	0.00	
MW- 13	1,310.61	0.00	0.00	0.77
MW- 20	1,311.93	1,305.93	1,285.93	0.77
MW- 30	1,312.96	1,306.96	1,286.96	0.77
MW- 40	1,315.98	1,301.48	1,281.48	0.77
MW- 50	1,312.23	1,303.73	1,283.73	0.77
MW- 60	1,312.33	1,305.33	1,285.33	0.77
MW- 70	1,313.06	1,301.56	1,280.56	0.77
MW- 80	1,310.38	1,303.88	1,283.88	0.77
MW- 90	1,309.51	1,305.51	1,284.51	0.77
MW-100	1,309.64	1,302.64	1,282.64	0.77
MW-110	1,311.06	1,300.56	1,280.56	0.77
MW-120	1,311.38	1,300.88	1,280.88	0.77
MW-130	1,308.66	1,301.66	1,281.66	0.77
MW-140	1,312.13	1,301.63	1,281.63	0.77
MW-150	1,311.65	1,301.15	1,281.15	0.77
MW-160	1,312.06	1,304.06	1,284.06	0.77
MW-170	1,314.92	0.00	0.00	0.76
MW-180	1,312.00	0.00	0.00	
MW-190	1,311.37	1,297.37	1,282.37	0.77
MW-200	1,309.55	1,294.55	1,279.55	0.77
MW-210	1,309.04	1,295.04	1,280.04	0.77
MW-220	1,311.92	1,297.92	1,282.92	0.77

WELLID	TOC	TOS	BOS	SPECGRAV
MW-230	1,313.01	1,300.52	1,285.52	0.77
MW-240	1,310.99	1,296.99	1,281.99	0.77
MW-250	1,313.80	1,305.90	1,290.90	0.77
MW-260	1,312.46	1,295.46	1,285.46	0.77
MW-270	1,317.90	1,299.82	1,284.82	0.77
MW-280	1,315.88	1,297.46	1,287.46	0.77
MW-290	1,310.90	1,295.90	1,280.90	0.77
MW-300	1,311.46	1,296.96	1,281.96	0.77
MW-310	1,312.44	1,297.94	1,282.94	0.77
MW-320	1,311.51	1,297.01	1,282.01	0.83
MW-330	1,313.81	1,299.31	1,284.31	0.77
MW-340	1,312.40	1,296.40	1,286.40	0.77
MW-350	1,305.90	1,290.90	1,275.90	
MW-360	1,309.64	1,294.64	1,279.64	
MW-370	1,311.18	1,297.18	1,282.18	
MW-380	1,311.98	1,302.98	1,282.98	
MW-390	1,311.27	1,303.27	1,283.27	
MW-400	1,308.12	1,298.12	1,278.12	
MW-410	1,314.79	1,297.79	1,277.79	
MW-420	1,314.46	1,306.46	1,286.46	
MW-430	1,312.38	1,303.38	1,283.38	
MW-440	1,312.48	1,304.48	1,284.48	
MW-450	1,316.95	1,307.95	1,287.95	
MW-460	1,312.22	1,304.22	1,284.22	
MW-470	0.00	0.00	0.00	
MW-480	1,313.15	1,293.40	1,278.40	
MW-490	1,313.17	1,300.17	1,285.17	
MW-500	1,313.82	1,299.82	1,284.82	
MW-510	1,312.87	1,297.87	1,282.87	
RGBD	1,311.53	0.00	0.00	
RW- 1	1,316.84	1,301.84	1,292.84	0.77
RW- 2	1,312.98	1,298.98	1,288.98	0.77
RW- 3	1,314.90	0.00	0.00	0.77
RW- 4	1,311.22	1,298.22	1,288.22	0.77
RW- 5	1,309.58	1,301.58	1,292.08	0.77
RW- 6	1,309.06	1,298.06	1,287.06	0.77
RW- 7	1,308.87	1,302.37	1,292.37	0.77
RW- 8	1,307.15	1,300.65	1,290.65	0.77
RW- 9	1,308.00	1,301.50	1,292.50	0.77
RW- 10	1,307.90	1,301.40	1,292.40	0.77
RW- 11	1,311.93	1,301.93	1,291.93	0.77
RW- 12	1,308.18	1,297.68	1,288.68	0.77
RW- 12A	0.00	0.00	0.00	
RW- 13	1,308.16	1,298.16	1,289.16	0.77
RW- 14	1,309.74	1,298.24	1,288.24	0.77
RW- 14A	0.00	0.00	0.00	
RW- 15	1,308.96	1,298.96	1,288.46	0.77
RW- 16	1,312.15	0.00	0.00	0.75
RW- 17	1,312.18	0.00	0.00	0.77
RW- 18	1,312.51	1,295.51	1,285.51	
RW- 19	1,313.20	1,296.20	1,286.20	
RW- 20	1,314.71	1,298.71	1,288.71	
RW- 21	1,309.67	1,292.67	1,280.67	
RW- 22	1,309.35	1,293.35	1,280.35	
RW- 23	1,312.36	1,296.36	1,283.36	
RW- 23R	0.00	0.00	0.00	
RW- 24	1,314.72	1,293.72	1,287.72	
RW- 24R	1,313.29	1,292.29	1,286.29	
RW- 25	1,312.17	1,296.17	1,283.17	
RW- 26	1,313.74	1,292.74	1,284.74	
RW- 27	1,311.36	1,295.36	1,283.36	
RW- 27R	1,312.06	1,296.06	1,284.06	
RW- 28	1,313.86	1,296.86	1,284.86	
RW- 29	1,312.63	1,295.63	1,278.63	
RW- 29R	1,312.49	1,295.49	1,278.49	
RW- 30	1,308.91	1,291.91	1,279.91	
RW- 31	1,309.26	1,292.26	1,277.26	
RW- 32	1,313.91	1,295.91	1,275.91	

WELLID	TOC	TOS	BOS	SPECGRAV
RW- 34	1,311.36	1,294.36	1,282.36	
RW- 35	1,311.87	1,293.87	1,279.87	
RW- 36	1,312.21	1,294.21	1,280.21	
RW- 37	1,311.38	1,294.38	1,279.38	
RW- 38	1,311.65	1,295.65	1,281.65	
RW- 39	0.00	0.00	0.00	
RW- 40	1,312.04	0.00	0.00	
RW- 41	1,312.92	1,296.92	1,283.92	
T- 1	1,307.46	0.00	0.00	0.77
T- 2	0.00	0.00	0.00	0.77
T- 3	1,307.33	0.00	0.00	0.77
T- 4	1,307.74	0.00	0.00	0.77
T- 5	1,307.04	0.00	0.00	0.77
T- 6	1,308.04	0.00	0.00	0.77
T- 7	1,308.52	0.00	0.00	0.77
T- 8	1,308.73	0.00	0.00	0.77

GROUNDWATER CONSULTANTS

2227 W Lindsey, Suite 1402 • Norman, OK 73069 • (405) 360-3884 • fax (405) 579-3884

fax

To: Mr. Frank Winslow

Fax #: (316) 634-2835

From: Charles B. Burris

Date: March 29, 2001

Subject: Wichita Facility Gauging Data for March 2001

Pages: 3 including cover page

NOTES:

CONFIDENTIALITY NOTICE: This message is intended only for the use of the individual or entity designated above, is confidential and may contain information that is legally privileged or exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution, copying or use of or reliance upon the information contained in and transmitted with this facsimile transmission by or to anyone other than the recipient designated above by the sender is, not authorized and strictly prohibited. If you have received this communication in error please immediately notify the sender by telephone and return it to the sender by U.S. Mail, or destroy it if authorization is granted by the sender. Thank you.

COASTAL REFINING & MARKETING, INC - WICHITA FACILITY - MONTHLY GAUGING

FREE PHASE WELLS

GAUGING DATE: 3-25-01 GAUGED BY: RET

# 19	13.75	13.85	MW-340	15.35	16.35	MW-170	16.15	16.40
# 32.	13.45	14.00	MW-260	20.70	22.05	#A	—	17.00
# 1	14.50	14.55	MW-270	20.05	22.55	#B	—	13.90
RW- 7	12.50	13.50	# 46	15.00	15.40	#C	12.90	14.72
# 21	14.90	16.10	MW-330	14.43	17.55	#D	12.00	14.35
# 2	13.50	14.90	# 45			RW- 15	12.50	12.70
# 2A	13.20	14.10	MW-160	14.70	17.21	#I	—	10.72
RW- 6	12.90	14.60	# 42	14.35	16.40	#M	—	14.72
# 17	16.40	18.52	# 42A	14.60	18.65	#J	—	12.00
RW- 5	13.95	16.00	# 40	16.70	18.75	# 28	15.85	16.15
MW-320	13.12	15.82	# 36	14.85	16.40	RW- 14	14.97	17.00
RW- 4	17.11	17.84	# 36A	14.25	15.25	RW- 8	—	12.40
# 4	15.20	17.10	MW-300	13.15	13.35	T- 3	12.45	12.50
MW- 50	15.30	19.40	# 34	11.42	11.45	T- 4	—	12.70
RW- 24	19.55	20.42	MW-290	Abandoned		T- 1	12.15	12.25
RW- 2	—	17.30	MW-410	15.4	16.35	RW- 12	12.82	14.20
# 6	21.95	22.55	MW-420	13.9	17.25	#L	Broke	—
# 33	Broke	—	# 18	12.9	16.55	MW- 90	12.25	15.60
MW-180	14.50	18.20	# 24	Broke	—	MW- 11	11.90	12.75
# 25	15.55	17.10	# 23	12.40	15.80	MW- 10	Broke	—
# 44	14.43	19.72	# 13	15.00	15.40	MW-470	—	15.00
# 43	13.85	16.35	# 15	—	14.30	MW- 7	16.35	17.65
MW- 20	14.19	14.20	# 16	15.20	17.31	MW- 80	15.75	16.02
RW- 27	14.45	14.55	MW- 60	15.35	17.90	MW-310	Broke	—
RW- 29	16.95	17.10	MW-490	—	16.30	MW-500	—	17.16
MW-510	14.97	17.81	MW-140	16.9	17.01	RW- 23	17.60	19.40
RW- 26	15.85	19.80	RW- 28	15.55	16.00	RW- 31	—	14.50
RW- 36	—	15.15	RW- 38	—	15.25	RW- 40	18.90	20.40
RW- 41	18.7	20.00						

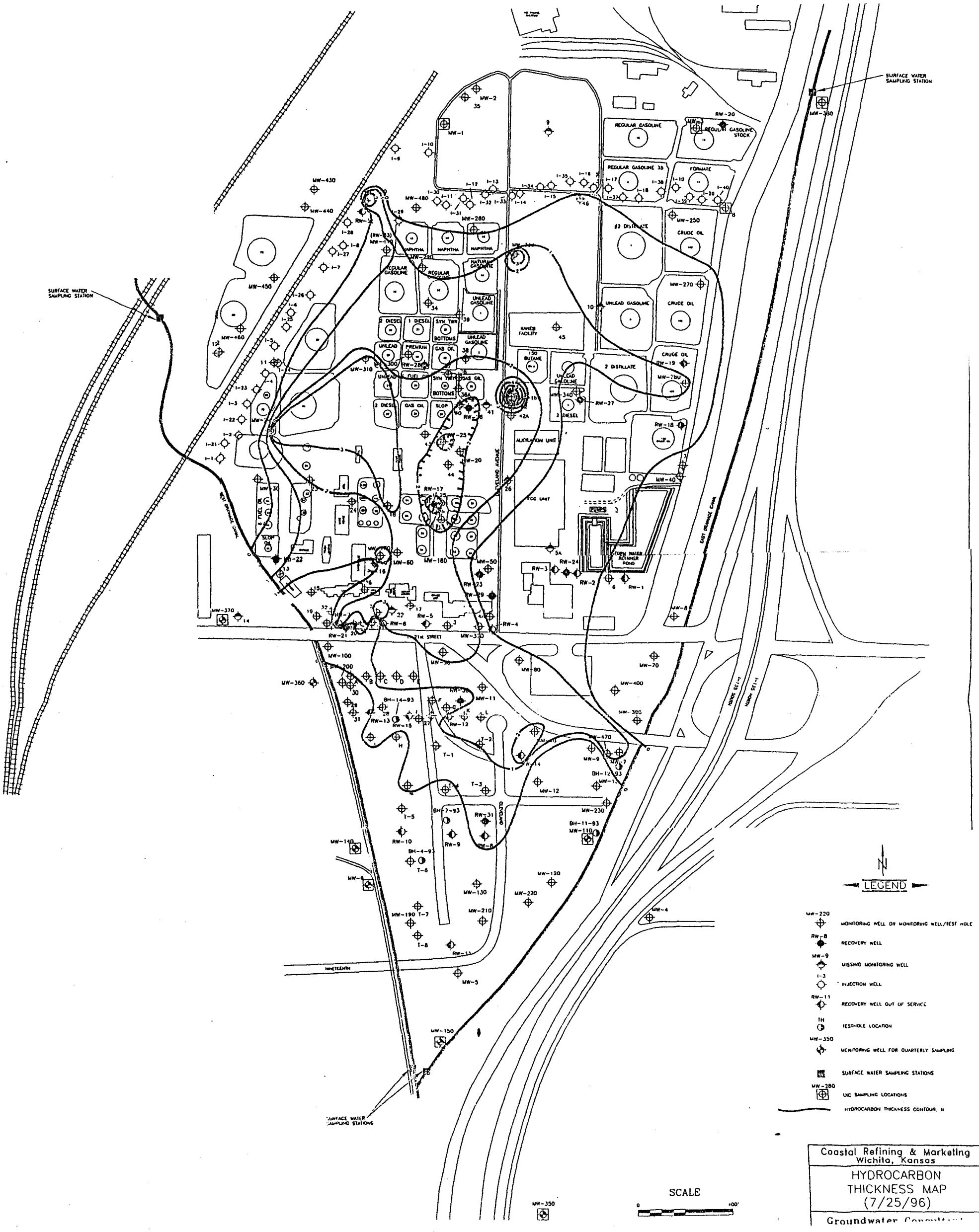
COASTAL REFINING & MARKETING, INC - WICHITA FACILITY - MONTHLY GAUGING

NON-FREE PHASE WELLS

GAUGING DATE: 3-27-01 **GAUGED BY:** RET

RW- 1	21.53	MW-370	14.04	MW-120	17.58	T-6	13.03
MW- 40	19.40	MW-430	12.55	MW-110	16.93	RW- 10	12.98
# 8	19.63	MW-440	12.45	MW-230	19.00	T-5	11.90
MW-250	16.00	MW-450	17.80	MW- 9	Broke	#H	10.20
RW- 20	17.90	MW-460	13.60	MW- 13	16.30	RW- 13	12.55
MW- 3	15.60	MW-350	13.38	MW- 12	14.40	# 31	13.68
MW- 2	15.00	MW- 4	16.30	RW- 9	12.23	# 29	13.20
# 35	13.12	MW-380	14.80	MW-130	14.40	# 30	12.68
MW- 1	12.93	MW- 8	17.90	MW-210	14.98	MW-200	13.90
RW- 32	13.95	MW- 70	18.09	RW- 11	17.86	#E	10.50
MW-480	18.32	MW-400	13.15	19STBD	19.70	MW-100	13.68
MW-260	13.40	MW-390	16.74	MW- 6	12.94	21STBD	16.98
# 11	14.62	MW-150	17.82	T- 8	14.43	MW-360	13.70
MW- 30	13.94	MW- 5	17.35	MW-190	17.01		
RGBD	15.88	MW-220	18.17	T-7	14.05		

REV 01/25/00 ew



Coastal Refining & Marketing
Wichita, Kansas

HYDROCARBON THICKNESS MAP (7/25/96)

Groundwater Consultants

Coastal
The Energy People

Z 403 905 790

August 23, 1999

Mr. Andy Horn:
Project Geologist
Camp Dresser & McKee, Inc.
1331 17th Street, Suite 1200
Denver, Colorado 80202-1562

Re: North Industrial Corridor - Chronology of Significant Events, Coastal Facility

Dear Mr. Horn:

In response to your request of July 7, 1999, we have prepared the attached "Chronology of Significant Events" for Coastal's Wichita Facility. The following information is included:

* Dates and manner of discovery of product releases,
* Dates of installation of remedial systems and summaries of system components involved, and
* Dates when any remedial systems were removed from service and summaries of system components involved.

The Wichita Facility has a consent agreement with the Kansas Department of Health & Environment (KDH&E) and is in active remediation. Quarterly reports are prepared for the remediation progress and are on file with KDH&E.

Sincerely,

R. W. Harrington
Senior Environmental Engineer

xc: J. R. Copeland
O. E. Meyer
C. B. Burris

Coastal Refining & Marketing, Inc.
A SUBSIDIARY OF THE COASTAL CORPORATION
KANSAS REFINING DIVISION • 1100 21ST ST • WICHITA KS 67214-1442 • 316/262-5703

Chronology of Significant Events
Coastal Refinery
Wichita, Kansas

Derby Refining Company was notified October 20, 1980 by the KDHE that hydrocarbon had been found in the groundwater south of the refinery. KDHE requested Derby Refining Company to delineate the extent of contamination at the refinery and to determine potential sources of contamination. In November, 1980, Derby Refining Company installed 14 monitoring wells for the detection and recovery of hydrocarbon contamination. An approximate total of 67 additional monitoring/recovery wells were subsequently installed. Monitoring well numbers MW-1 through MW-11 were specifically designated as groundwater monitoring wells. The remaining wells were primarily utilized for recovery purposes and for the detection of hydrocarbon.

A trench was constructed in March, 1985, south of 21st Street in Wichita, Kansas to intercept and recover hydrocarbon. Two recovery wells were installed in the trench. The recovery from the trench was discontinued in 1989 when two additional recovery wells were installed.

Fifteen recovery wells were constructed in 1988 and placed in service in 1989, but were shut down after two weeks of use.

Derby Refining Company and its successors continuously operated a hydrocarbon recovery system from January 1981 to September 1990.

Recovery wells RW-16 and RW-17 were constructed in April of 1993 and placed in service shortly thereafter.

RW-18 and RW-19 were constructed and placed in service May 24, 1994.

RW-21 was placed in service February 25, 1995.

Thirty-nine of 40 injection wells (I-1 through I-40) were constructed.

RW-32 is an injection well converted into a recovery well. Use of this well for product recovery was discontinued in October 1996. This well is now used as a monitoring well.

On August 8, 1996 RW-22 was started. Recovery wells RW-24, RW-27, and RW-29 were also started in August.

During September and October 1996, the remaining recovery wells were brought online.

Recovery well RW-20 was connected to the City of Wichita sanitary sewer and was started on February 20, 1997.

Monitoring well MW-410 was converted into a single pump recovery well, RW-33. RW-33 was placed into service on May 24, 1996 and removed from service six months later.

RW-24 was removed from service on September 30, 1997 after attempts to recondition the well failed.

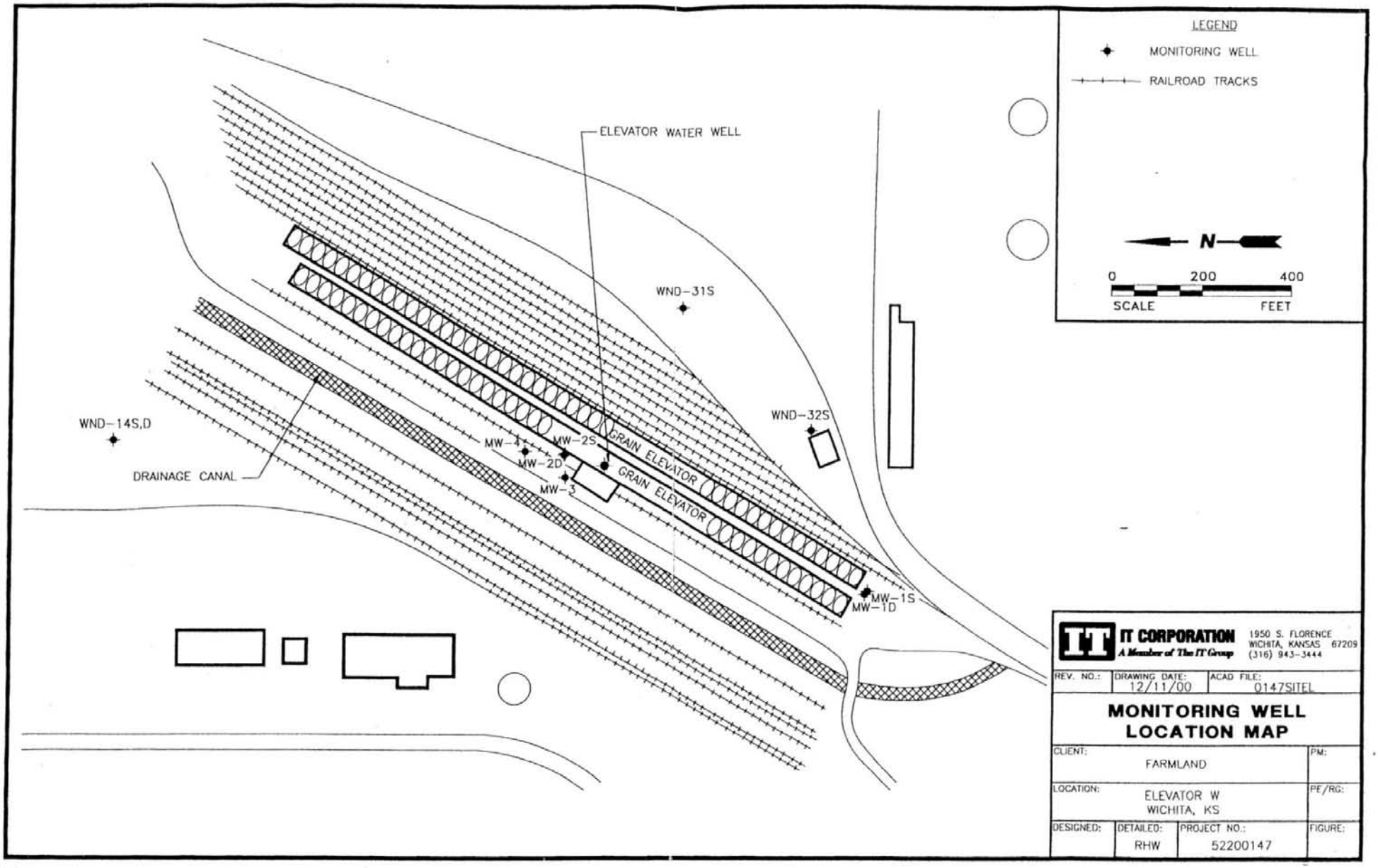
RW-27 was removed from service on June 28, 1998 because of poor well yield.

Monitoring well MW-160 was temporarily converted to a single pump recovery well. It was placed in service on February 15, 1998 and removed from service on June 17, 1998.

Recovery wells RW-34 through RW-41 have been constructed but are not yet in service.

A comprehensive description of the current remediation system can be found in the report Revised Remediation System Design for the Wichita Facility, dated May 14, 1994 and subsequent annual reports prepared by Groundwater Consultants, Norman, Oklahoma.

Appendix B-8
FLE - Farmland Elevator


LEGEND
MONITORING WELL
RAILROAD TRACKS
N
0
200
400
SCALE
FEET
ELEVATOR WATER WELL
WND-31S
WND-32S
WND-14S,D
DRAINAGE CANAL
MW-4
MW-2S
MW-2D
MW-3
GRAIN ELEVATOR
GRAIN ELEVATOR
MW-1S
MW-1D
IT CORPORATION
A Member of The IT Group
1950 S. FLORENCE
WICHITA, KANSAS 67209
(316) 943-3444
REV. NO.:
DRAWING DATE: 12/11/00
ACAD FILE: 0147SITEL
MONITORING WELL LOCATION MAP
CLIENT: FARMLAND
PM:
LOCATION: ELEVATOR W WICHITA, KS
PE/RG:
DESIGNED:
DETAILED: RHW
PROJECT NO.: 52200147
FIGURE:

Groundwater Elevation Data
Farmland Elevator W Area

Well ID	Date	TOC	DTW	ELEVATION
MW-01S	02/07/2000	1317.50	17.30	1300.20
MW-01S	05/07/2001	1317.50	17.46	1300.04
MW-01D	02/07/2000	1317.63	17.41	1300.22
MW-01D	05/07/2001	1317.63	17.58	1300.05
MW-02S	02/07/2000	1317.57	16.49	1301.08
MW-02S	05/07/2001	1317.57	16.64	1300.93
MW-02D	02/07/2000	1317.58	16.54	1301.04
MW-02D	05/07/2001	1317.58	16.68	1300.90
MW-03	02/07/2000	1318.06	16.99	1301.07
MW-03	05/07/2001	1318.06	17.15	1300.91
MW-04	02/07/2000	1317.85	16.70	1301.15
MW-04	05/07/2001	1317.85	16.85	1301.00
WND-31S	02/07/2000	1317.26	16.57	1300.69
WND-31S	05/07/2001	1317.26	16.72	1300.54
WND-32S	02/07/2000	1317.68	17.41	1300.27
WND-32S	05/07/2001	1317.68	17.56	1300.12
WND-14S	02/07/2000	1317.23	15.02	1302.21
WND-14S	05/07/2001	1317.23	15.06	1302.17
WND-14D	02/07/2000	1317.15	14.84	1302.31
WND-14D	05/07/2001	1317.15	14.96	1302.19

TOC=Top of Casing
DTW=Depth to Water

n:\nid_work\farmland\elevw\site0200.wk4

Appendix B-9
HCI - HCI/Advance Chemical

WORK PLAN FOR THE ADVANCE CHEMICAL, INC. SITE

1.0 INTRODUCTION

Advance Chemical, Inc. (Advance) has a facility located at 1520 North Barwise in Wichita, Kansas (see Figure 1). The site is used as a chemical storage and distribution center. The site is located within the Northern Industrial Corridor (NIC), an area known to have soil and ground water contaminated with chlorinated solvents. Because the Advance site has stored chlorinated solvents on site, the City of Wichita, which is leading the environmental investigation, has assumed that Advance may bear responsibility for part of the contamination. Previous investigations on site and off site have shown the ground water to be contaminated with chlorinated organic compounds. To determine the source of the contamination, Advance proposes to test the ground water under the site and downgradient of the site for chlorinated organic compounds.

The objectives of the investigation are to:

1. determine the concentrations of contamination under the site at the water table (approximately 20 feet below grade) and at the bottom of the unconfined aquifer (approximately 38 feet below grade); and

2. determine the concentrations of contamination at the same levels downgradient of the site.

To achieve these objectives, geoprobes will be drilled at the site and downgradient from the site to define the soil stratigraphy and collect water sample for analysis. This work plan has been prepared to describe the work that will be undertaken and to document the procedures which will be followed in conducting the work.

2.0 SITE DESCRIPTION

The site is located in an industrial area within the NIC in Wichita, Kansas. The site is used as a chemical storage and distribution facility (see Figure 2 for a site plan). Structures at the site include an office, warehouse, loading dock, and a warm room for storing chemicals which require temperatures above 50^0 F. The warehouse and warm room have cement floors and are constructed to contain spills. The north yard, which is unpaved, is used to receive and ship packaged chemicals from the warehouse and to store returned empty drums. The facility accepts only empty return drums from customers. No waste disposal or drum recycling is conducted on site. The south yard, which is paved, has above ground tanks for storing acids, caustic, and bleach. These chemicals are received in tank trucks and stored in the tanks on the south side of the facility. Chlorinated solvents are received in drums and by tank truck. The tank trucks containing chlorinated solvents are parked in the center of the south yard and the contents of the tanks are transferred to drums in the drumming area. The drums are stored in the southern portion of the site as the drumming proceeds, and then either shipped to customers or transferred to the warehouse for storage.

There are no manufacturing or chemical synthesis operations on site. The site does not generate hazardous wastes. There have been no known releases of reportable quantities of

chlorinated solvents at the site.

3.0 PREVIOUS INVESTIGATIONS

Camp Dresser McKee (CDM) has conducted a study of the groundwater contamination in the area of the Advance site. Geoprobe samples of ground water were collected at upgradient and downgradient sites. The concentrations of the chlorinated organic compounds in the samples are shown in Figure 3. The results show that tetrachloroethene (PCE) is found only in very low concentrations, the maximum concentration found being 5.4 parts per billion (ppb). Trichloroethene (TCE) is found in concentrations up to 830 ppb upgradient from Advance. TCE decreases in downgradient samples relative to the directly upgradient samples. Isomers of dichloroethene (DCE) and vinyl chloride (VC), which are degradation products of PCE and TCE also show a trend of decreasing concentrations downgradient.

Advance conducted a geoprobe study in 2000. The results of the study show that chlorinated compounds are found in the soil beneath the site (see Figure 4 and Table 1). The maximum concentrations are found at two feet below grade in sample GPAD-5-2 where the total concentration of chlorinated compounds is 3,962 ppb. However, the concentrations of the chemicals at this location decrease to 17 ppb at 10 feet below grade. The concentration of total chlorinated compounds in GPAD-4 decreases from 716 ppb at two feet below grade to 80 ppb at 10 feet below grade, the maximum contamination found at depth in the soil at the site.

Ground water is found approximately 19 feet below grade. Groundwater tested as part of the same investigation showed that the PCE is found at elevated levels beneath the site (see Figure 5 and Table 2). The groundwater sample collected GPAD-6 had PCE at a concentration of 1,200 ppb. The concentrations of the other chlorinated compounds were generally consistent with the decrease noted from upgradient to downgradient in the CDM samples. The exception to this is at GPAD-6 where concentrations of TCE and DCE appear to be elevated with respect to the surrounding area. This increase may be due to degradation of PCE rather than a release. Split groundwater samples collected and analyzed by Wichita-Sedgewick County Department of Environmental Health (WSC) personnel reportedly contained concentrations of chlorinated compounds consistent with the results of the
Advance study.

4.0 PROPOSED INVESTIGATION

The previous groundwater testing on site was limited to the shallow part of the upper aquifer. To test for the presence and distribution of chlorinated solvents in the ground water at depth under the site, two geoprobes will be advanced to approximately 39 feet below grade. The geoprobes will be located near GPAD-2 and GPAD-6 to test the upgradient and downgradient sides of the site (see Figure 6). In addition, two geoprobes will be advanced at offsite locations between the Advance site and the nearest CDM downgradient geoprobe locations.

Continuous soil cores will be collected from the geoprobes. The Standard Operating Procedures (SOP) for geoprobe soil sampling is given in SOP-009, which is attached to this work plan. The cores will be logged by a geologist. Observations on the color, grain size, layering,

fracturing, odor, and visible presence of chemicals will be made. Organic vapor meter (OVM) readings will be taken along the length of the cores as they are removed from the hole. The OVM will be calibrated and operated as described in SOP-020, which is attached to this work plan. The ambient air background for the OVM will be established by taking readings on the upwind and downwind boundaries of the site at the start of the day and after any significant wind shifts.

Soil from discrete zones will be tested using a field headspace technique. If head space analysis, visual observations, or odors indicate the presence of contamination, soil samples will be collected for analysis for volatile organic compounds using EPA Method 8260. Soil samples selected for analysis laboratory-supplied, precleaned glass jars with teflon lids.

Each geoprobe will be completed to the lower confining layer, which is at a depth of approximately 39 feet. A groundwater sample will be collected at 20 feet below grade and at the confining layer. The SOP for collecting groundwater samples is given in SOP-010, which is attached to this work plan. The sample will be submitted for analysis for volatile organic compounds using EPA Method 8260.

5.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

To ensure the validity of the data collected, quality assurance/quality control procedures will be followed throughout the project. All of the SOPs referenced above, along with SOP-028, Data Review Procedures, which is attached to this work plan, will be followed carefully. The locations of the geoprobes will be carefully noted in the field. All field notes and pictures will be placed in the permanent file for future reference, if necessary.

Quality control samples will include a trip blank supplied by the analytical laboratory, a field blank, an equipment blank, a duplicate soil sample, and a duplicate groundwater sample. The quality control samples will be recorded on a chain of custody record with all of the field samples collected. The chain of custody will be maintained through delivery to the analytical laboratory. All samples will be stored in a clean ice chest and maintained at a temperature of 4° C.

Any deviations from the work plan or the SOPs and any anomalous conditions observed in the field will be documented in writing. The data will be reviewed in accordance with SOP-028. Any discrepancies in the data will be referred to the laboratory for review, and a written description of the discrepancy and the results of the review will be placed in the permanent file.

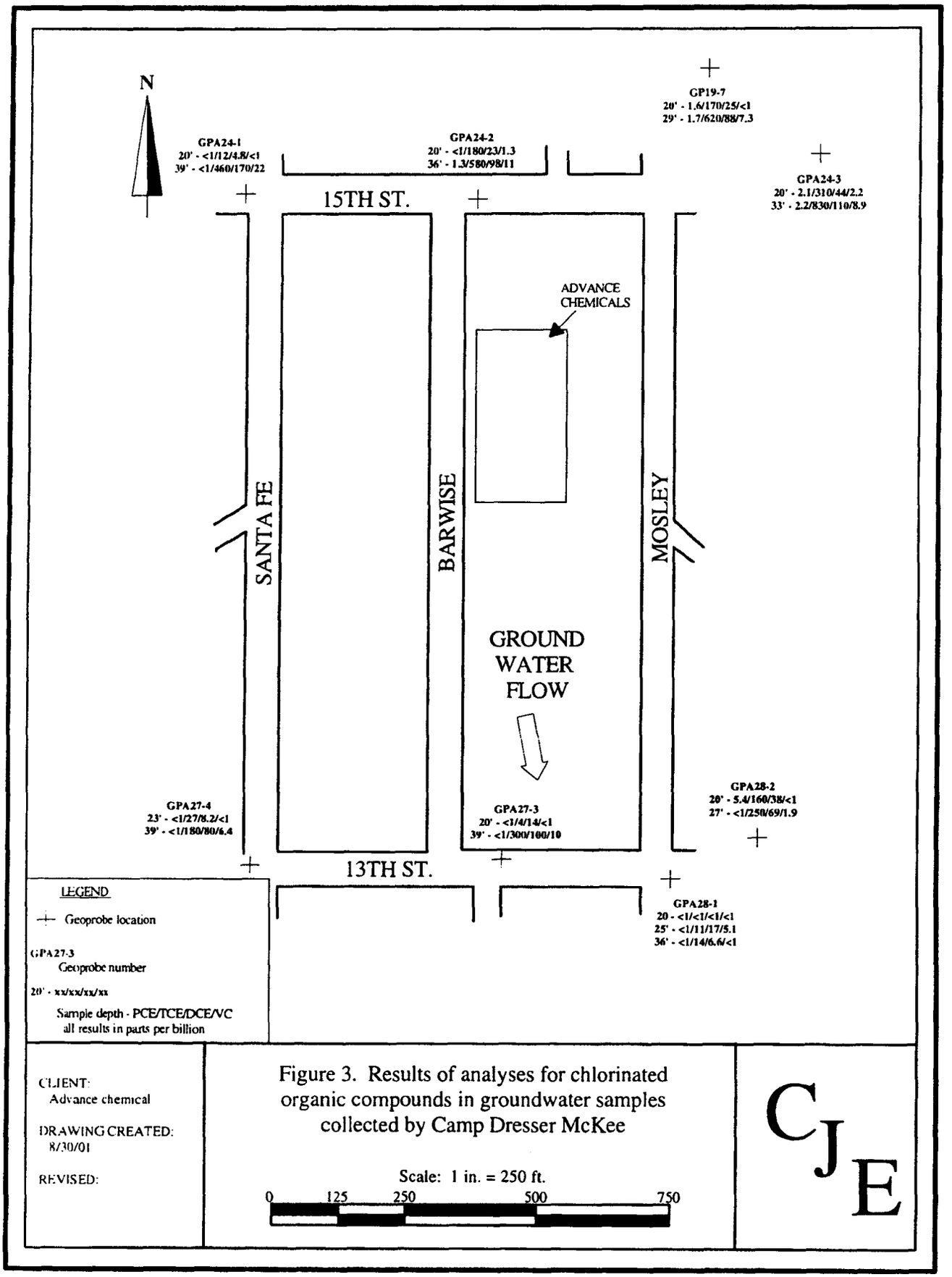
6.0 REPORT

Following completion of the field work and the Quality Control/Quality assurance review of the data, the data will be submitted to the Wichita-Sedgewick County Department of Health (WSC). The need to prepare a written report will be determined at that time.

7.0 SCHEDULE

The field work will be scheduled for approximately two weeks after this work plan has been approved by WSC and KDEH. Data review and analysis will be completed approximately 30 days

after the field work has been completed.



CLIENT:
Advance chemical

DRAWING CREATED:
8/30/01

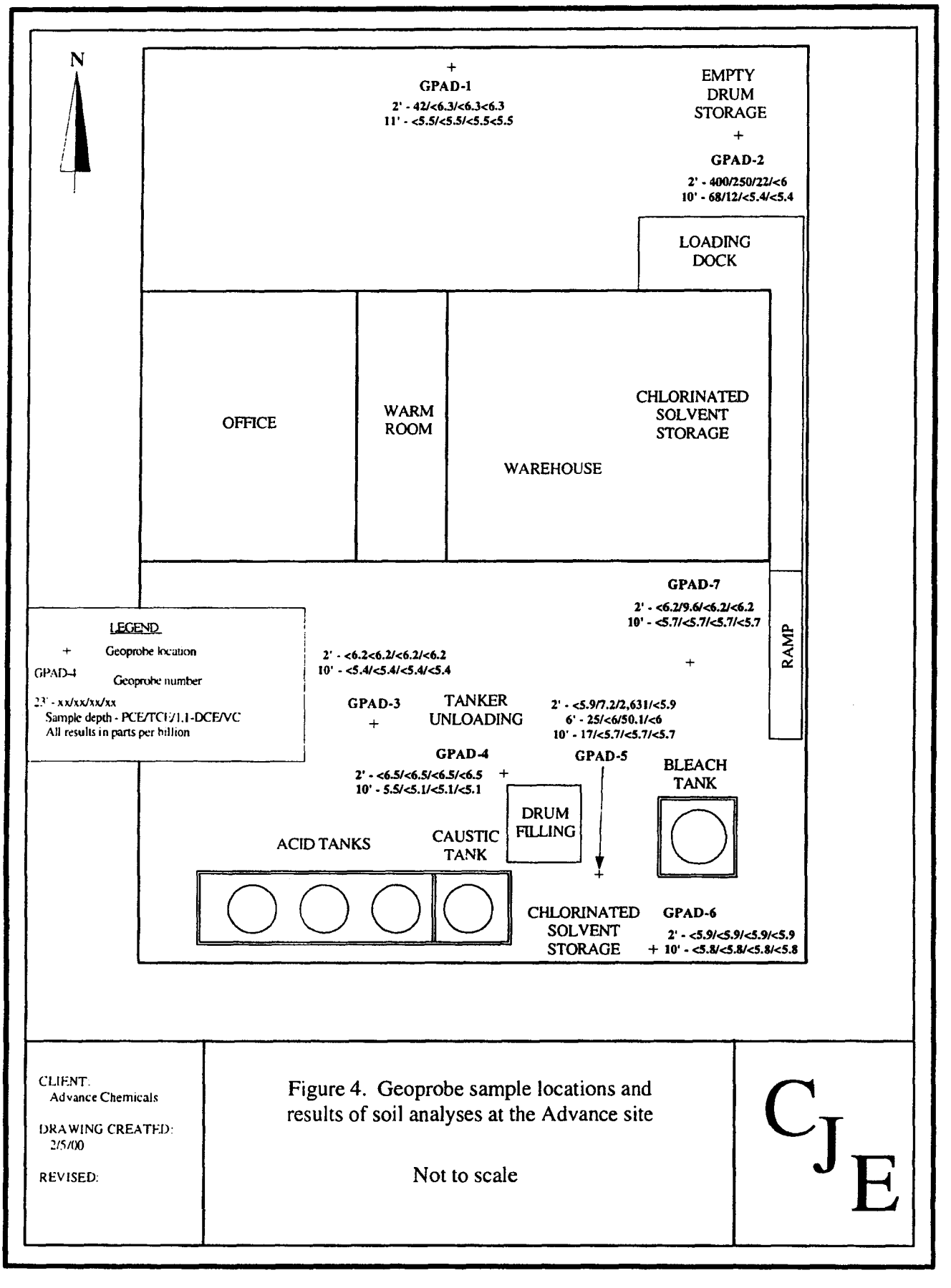
REVISED:

Figure 3. Results of analyses for chlorinated organic compounds in groundwater samples collected by Camp Dresser McKee

Scale: 1 in. = 250 ft.

0 125 250 500 750

CJE



CLIENT:
Advance Chemicals

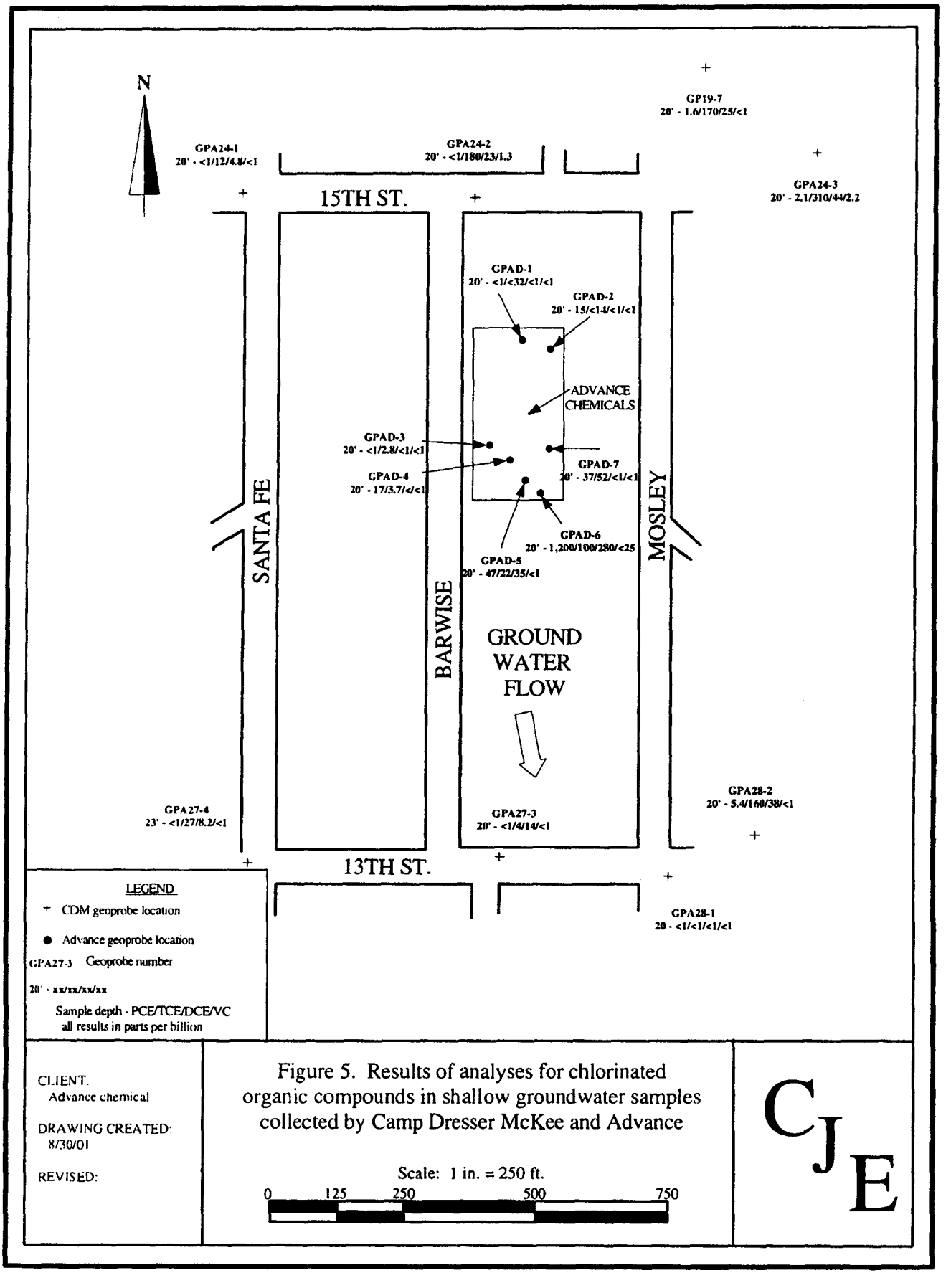
DRAWING CREATED:
2/5/00

REVISED:

Figure 4. Geoprobe sample locations and results of soil analyses at the Advance site

Not to scale

CJE



CLIENT:
Advance chemical

DRAWING CREATED:
8/30/01

REVISED:

Figure 5. Results of analyses for chlorinated organic compounds in shallow groundwater samples collected by Camp Dresser McKee and Advance

Scale: 1 in. = 250 ft.

0 125 250 500 750

CJE

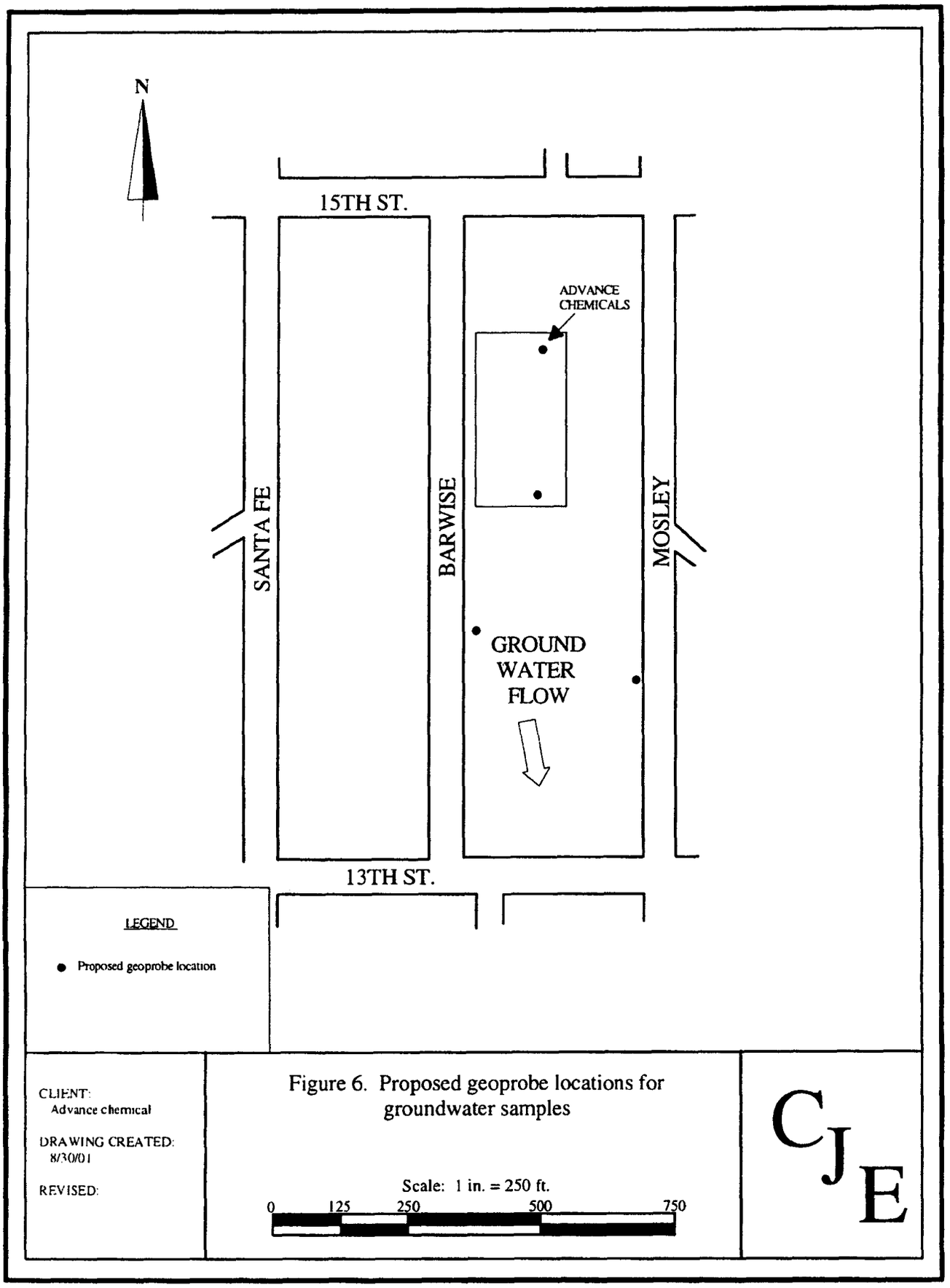


Figure 6. Proposed geoprobe locations for groundwater samples

TABLE 1
Soil Analytical Results EPA Method 8260
HCI Advance, Wichita, Kansas
February 2000

Sample ID / Chemical	[redacted]	GP1-2	GP1-11	GP2-2	GP2-10	GP3-2	GP3-10	GP4-2	GP4-10	GP5-2	GP5-6	GP5-10	GP6-2	GP6-10	GP7-2	GP7-10	Dup#1 GP5-2
Vinyl chloride	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	<5.9	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
1,1-Dichloroethene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**31**	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
trans-1,2-Dichloroethene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	<5.9	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
1,1-Dichloroethane	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**1100**	**8.1**	<5.7	<5.9	<5.8	<6.2	<5.7	**21**
1,2-Dichloroethane	ug/Kg	<6.3	<5.5	**22**	<5.4	<6.2	<5.4	<6.5	<5.1	**14**	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
Benzene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	<5.9	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
Trichloroethene	ug/Kg	<6.3	<5.5	**250**	**12**	<6.2	<5.4	<6.5	<5.1	**7.2**	<6.0	<5.7	<5.9	<5.8	**9.6**	<5.7	<5.8
Toluene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**15**	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
Tetrachloroethene	ug/Kg	**42**	<5.5	**400**	**68**	<6.2	<5.4	<6.5	**5.5**	<5.9	**25**	**17**	<5.9	<5.8	<6.2	<5.7	<5.8
1,1,1-Trichloroethane	ug/Kg	<6.3	<5.5	**37**	<5.4	<6.2	<5.4	<6.5	<5.1	**170**	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
Chlorobenzene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	<5.9	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
Ethylbenzene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**230**	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	**23**
m&p Xylene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**610**	**17**	<5.7	<5.9	<5.8	<6.2	<5.7	**88**
o-Xylene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**260**	**8.4**	<5.7	<5.9	<5.8	<6.2	<5.7	**40**
cis-1,2-Dichloroethene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	**1500**	**42**	<5.7	<5.9	<5.8	<6.2	<5.7	**29**
1,2-Dichlorobenzene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	<5.9	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
1,4-Dichlorobenzene	ug/Kg	<6.3	<5.5	<6.0	<5.4	<6.2	<5.4	<6.5	<5.1	<5.9	<6.0	<5.7	<5.9	<5.8	<6.2	<5.7	<5.8
Methylene chloride	ug/Kg	<6.3	<5.5	**7.3**	<5.4	<6.2	<5.4	**7.7**	<5.1	**15**	<6.0	<5.7	<5.9	<5.8	**6.5**	<5.7	**5.9**

ug/Kg: micrograms per kilogram, equal to parts per billion

TABLE 2
Groundwater Analytical Results EPA Method 8260
HCI Advance, Wichita, Kansas
February 2000

Chemical		GP1	GP2	GP3	GP4	GP5	GP6	GP7	Dup GP5
Vinyl chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0
1,1-Dichloroethene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	**1.8**
trans-1,2-Dichloroethene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	**1**
1,1-Dichloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	**14**	**90**	<1.0	**15**
1,2-Dichloroethane	ug/L	<1.0	**1.2**	<1.0	<1.0	<5	<25	<1.0	<1.0
Benzene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0
Trichloroethene	ug/L	**32**	**14**	**2.8**	**3.7**	**22**	**100**	**52**	**23**
Toluene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0
Tetrachloroethene	ug/L	<1.0	**15**	<1.0	**17**	**47**	**1200**	**37**	**42**
Chlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0
Ethylbenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0
m&p Xylene	ug/L	<1.3	<1.3	<1.3	<1.3	<6.5	<32	<1.3	<1.3
o-Xylene	ug/L	<1.1	<1.1	<1.1	<1.1	<5.5	<25	<1.1	<1.1
cis-1,2-Dichloroethene	ug/L	<1.0	<1.0	<1.0	<1.0	**21**	**190**	<1.0	**23**
1,1,1-Trichloroethane	ug/L	<1.0	**9.3**	<1.0	<1.0	**6.3**	<25	**7.1**	**7.4**
Chloroform	ug/L	<1.0	**1.2**	<1.0	<1.0	<5	<25	**1.5**	<1.0
1,2-Dichlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0
1,4-Dichlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<5	<25	<1.0	<1.0

ug/L: micrograms per liter, equal to parts per billion

Appendix B-10
JRF – Johns' Refinery

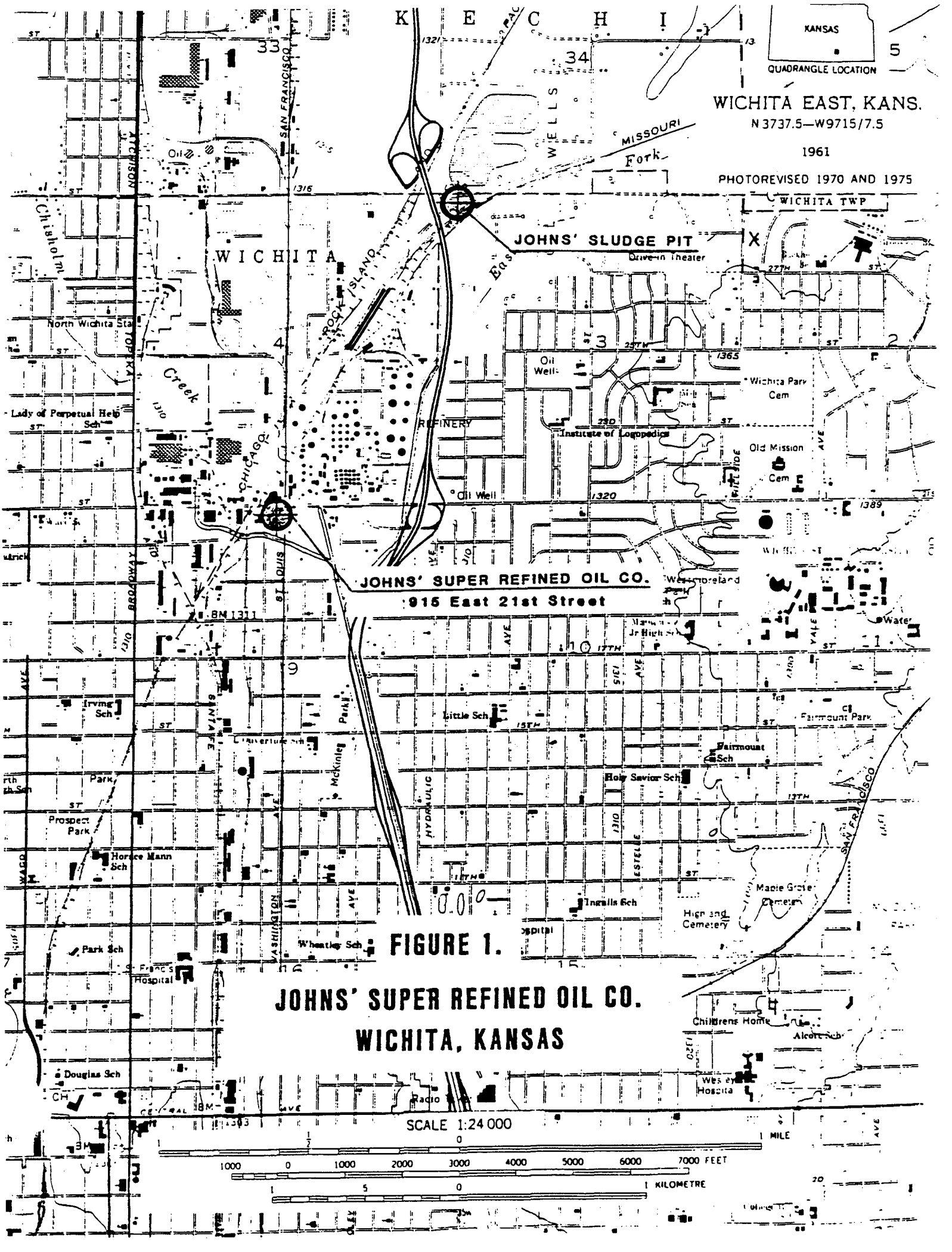
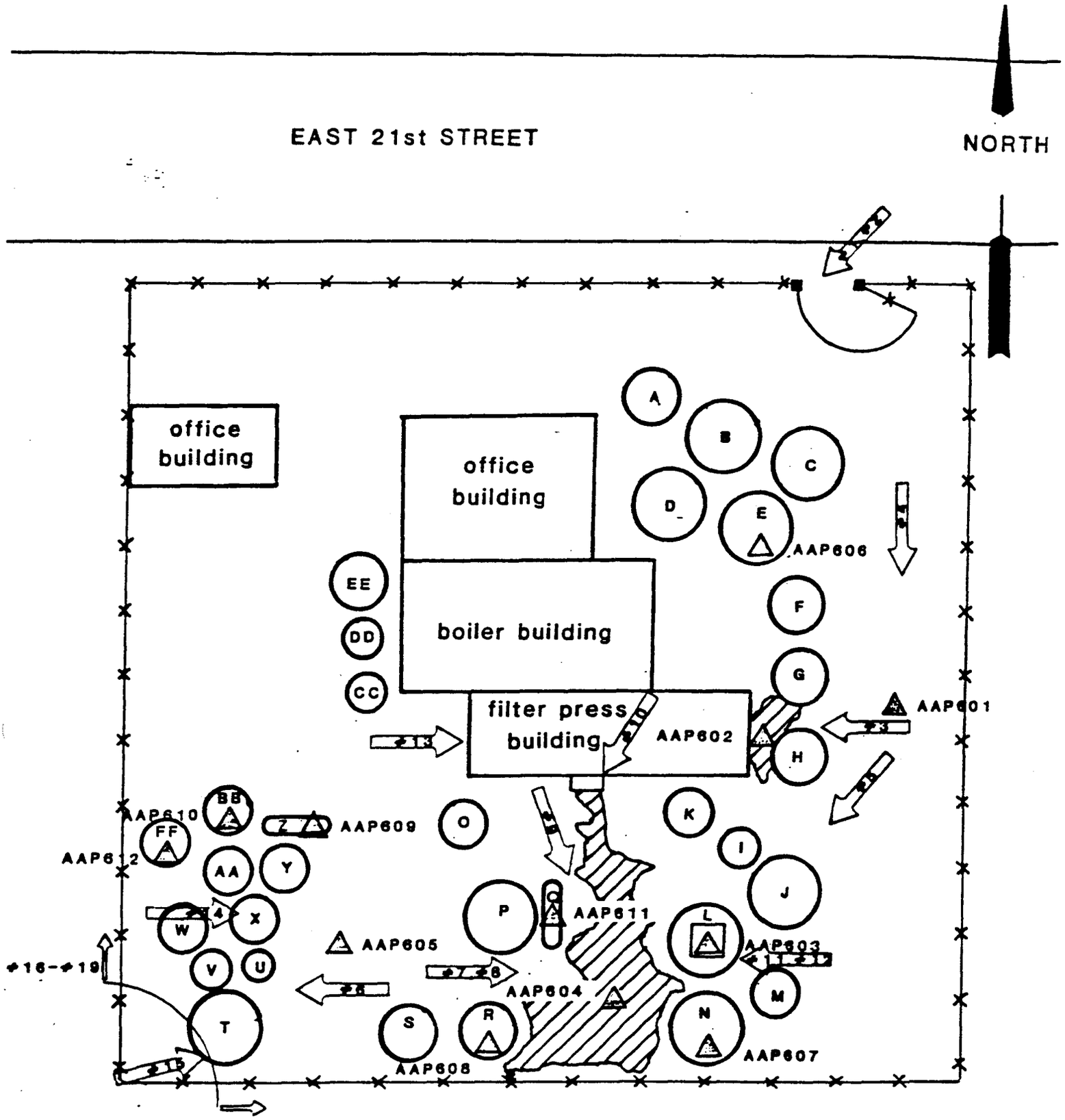


FIGURE 1.

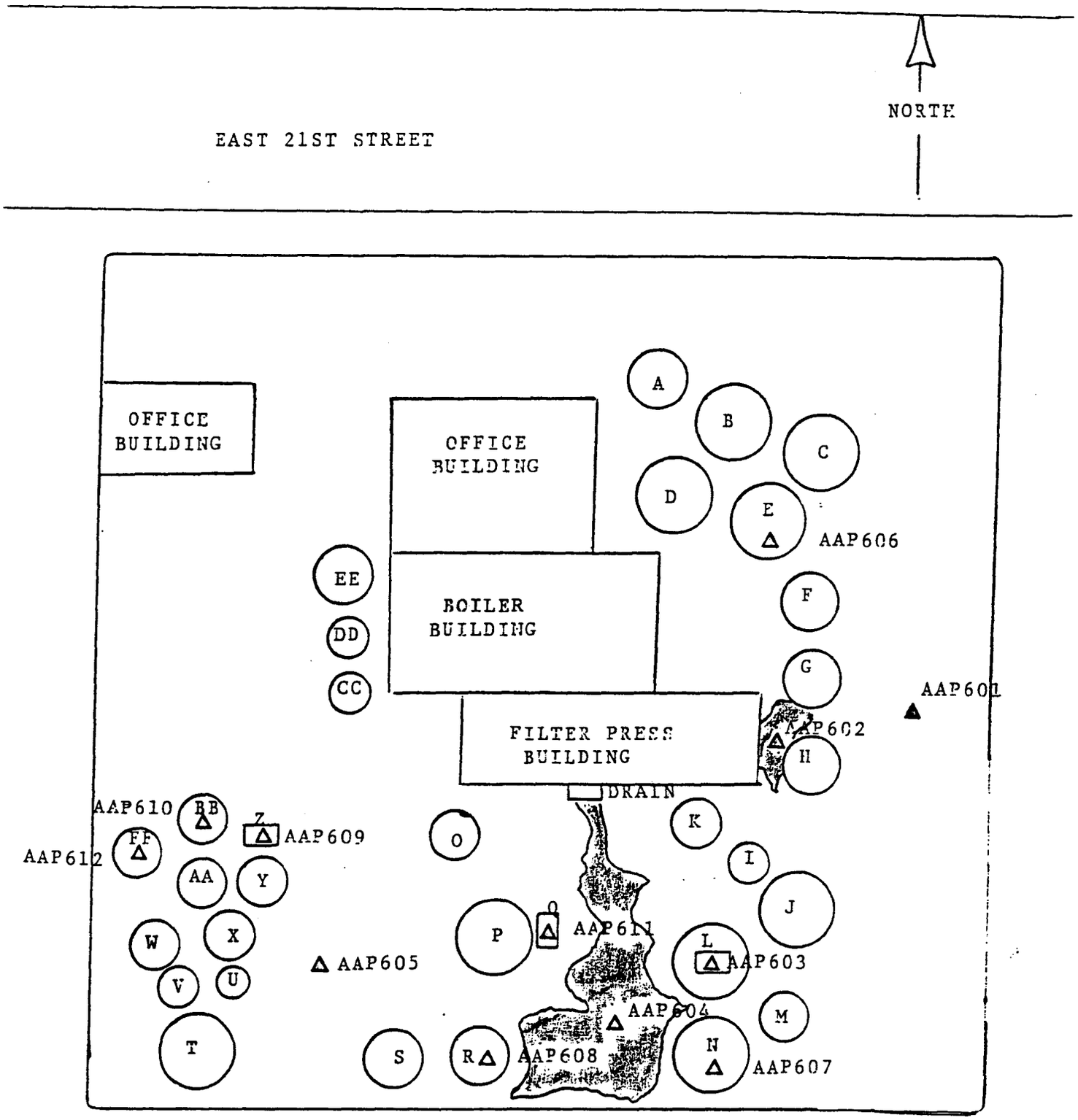
JOHNS' SUPER REFINED OIL CO.
WICHITA, KANSAS



-Sample Locations

Site Photos

FIGURE 2. SITE SKETCH
JOHNS' REFINERY SITE
915 EAST 21st STREET
WICHITA, KANSAS



△ - SAMPLE LOCATIONS

FIGURE 2. SITE SKETCH
JOHNS' REFINERY
915 EAST 21st STREET
WICHITA, KANSAS

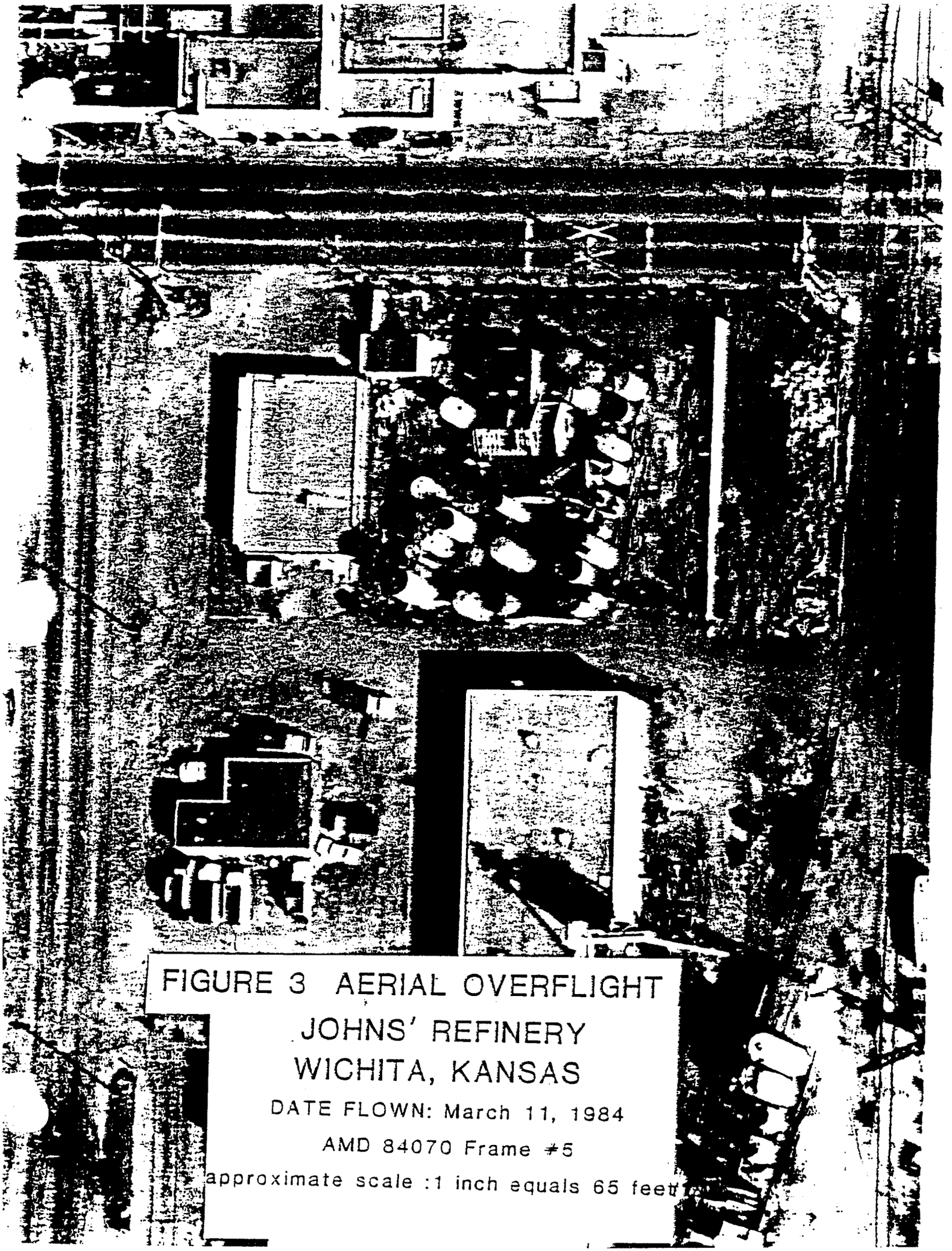


FIGURE 3 AERIAL OVERFLIGHT

JOHNS' REFINERY

WICHITA, KANSAS

DATE FLOWN: March 11, 1984

AMD 84070 Frame #5

approximate scale :1 inch equals 65 feet

TABLE I

SUMMARY OF INVENTORY OF JOHNS' REFINERY TANKS

Tank	Estimated Height Ft	Estimated Diameter Ft	Type	Top	Ground Level OVA	Contents	Interior Explosimeter
A	18	15	Vertical	Cone	Background	13" Black Oil	Negative
B	20	15	Vertical	Cone	Background	Inaccessible	Negative
C	18	15	Vertical	Cone	Background	4" Amber Liquid	Negative
D	18	15	Vertical	Cone	Background	1" Amber Liquid	Negative
E*	6	20	Vertical	Open	Background	8" Black/Brown Liquid	Negative
F	18	10	Vertical	Stack	1 ppm	Inaccessible	Negative
G	18	10	Vertical	Stack	1 ppm	Empty	Negative
H	15	10	Elevated Hopper	Stack	Background	Inaccessible	Negative
I	12	8	Elevated Hopper	Stack	Background	Empty	Negative
J	18	15	Vertical	Cone	Background	Inaccessible	Negative
K	8	8	Elevated Hopper	Stack	Background	Empty	Negative
L	10	15	Elevated Hopper	Cone	Background	Inaccessible	Negative
M	15	8	Elevated Hopper	Cone	Background	2" Liquid	Negative
N*	15	12	Elevated Hopper	Cone	Background	8" Black/Brown Liquid	Negative
O	20	10	Elevated Hopper	Cone	Background	Empty	Negative
P	18	15	Elevated Hopper	Cone	Background	Inaccessible	Negative
Q*	6(L)	4	Horizontal	Open	Background	7" Black Oil	Negative
R*	15	12	Vertical	Cone	Background	1'2" Liquid over 1'10" Black Sludge	Negative
S	15	12	Vertical	Cone	Background	Inacessible	Negative
T	30	15	Elevated Hopper	Open	Background	Empty	Negative
U	10	8	Elevated Hopper	Cone	Background	Inaccessible	Negative
V	15	3	Elevated Hopper	Cone	Background	2" White Powder	Negative
W	10	8	Elevated Hopper	Cone	Background	2" White Powder	Negative
X	15	15	Elevated Hopper	Cone	Background	Empty	Negative
Y	15	12	Elevated Hopper	Open	Background	6" Black Sludge	Negative
Z*	10(L)	4	Horizontal	Cone	Background	5" Liquid over 6" Black Sludge	Negative
AA	16	12	Vertical	Cone	Background	5" Liquid	Negative
BB*	15	12	Vertical	Cone	Background	9'5" Amber Liquid	Negative
CC	8	4	Elevated Hopper	Open	Background	1'3" Black Liquid	Negative
DD	12	8	Elevated Hopper	Open	Background	4'2" Black Liquid	Negative
EE	20	15	Vertical	Cone	Background	Inaccessible	Negative
FF*	12	15	Vertical	Cone	Background	3'7" Clear Liquid Caustic	Negative

* Tank Sampled

TABLE II

SUMMARY OF JOHNS' REFINERY SAMPLES

Sample #	Description	Requested Analysis
AAP601	Yard dirt (uncontaminted) located east of tanks F & G.	Metals, priority pollutant (acids, B/N, pest & volatiles), and tetraethyl lead.
AAP602	Contaminated soil from stained area between tanks G & H.	Metals, priority pollutant (acids, B/N, pest & volatiles), and tetraethyl lead.
AAP603	Sludge from hopper car under tank L.	Metals, priority pollutant (acids, B/N, pest & volatiles, and tetraethyl lead.
AAP604	Oil spill located west of tank L.	Metals, priority pollutant (acids, B/N, pest & volatiles, and tetraethyl lead.
AAP605	Yard dirt east of tanks U, V and X.	Metals, priority pollutant (acids, B/N, pest & volatiles, and tetraethyl lead.
AAP606	Contents of tank E, liquid over oil sludge.	Metals, E.P. toxicity priority pollutant (acids, B/N, pesticides and volatile) and tetraethyl lead.
AAP607	Contents of tank N, brown/black liquid.	Metals, E.P. toxicity priority pollutant (acids, B/N, pesticides and volatile) and tetraethyl lead.
AAP608	Contents of tank R, brown/black liquid.	Metals, E.P. toxicity priority pollutant (acids, B/N, pesticides and volatile) and tetraethyl lead.
AAP609	Content of tank Z, black oily liquid.	Metals, E.P. toxicity priority pollutant (acids, B/N, pesticides and volatile) and tetraethyl lead.
AAP610	Contents of tank BB, amber liquid	Metals, E.P. toxicity priority pollutant (acids, B/N, pesticides and volatile) and tetraethyl lead.
AAP611	Contents of tank Y, black oil liquid.	Metals, E.P. toxicity priority pollutant (acids, B/N, pesticides and volatile) and tetraethyl lead.
AAP612	Contents of tank FF, clear liquid.	Metals, E.P. toxicity priority pollutant, (acids, B/N, pesticides and volatile) tetraethyl lead and PH.

TABLE III

SUMMARY OF ORGANIC ANALYSIS OF SOILS AND TANKS AT JOHNS' OIL REFINERY

Parameter	AAP601 Soil by Tanks F/G	AAP602 Soil by Tanks G/H	AAP603 Hopper Sludge	AAP604 Pooled Oil On Ground	AAP605 Soil by Tanks U/V/Z	AAP606 Tank E Contents	AAP607 Tank N Contents	AAP608 Tank R Contents	AAP609 Tank Z Contents	AAP610 Tank BB Contents	AAP611 Tank Q Contents	AAP612 Tank FF Contents
				(All Concentrations in ppm#)								
Napthalene						820					140.0	
PCB 1242		60.0	180.0	151.0			742.0	236.0	107.3		252.0	
PCB 1260	0.64	35.0	168.0	54.0				139.0		122.0	69.0	
Benzene				25.0		20.0						

* Samples were analyzed as hazardous waste oil samples. Detection limits were in the PPM range.

TABLE IV

SUMMARY OF INORGANIC ANALYSIS OF SOILS AND TANKS AT JOHNS' OIL REFINERY

Parameter	AAP601 Soil by Tanks	AAP602 Soil by Tanks	AAP603 Hopper Sludge	AAP604 Pooled Oil On Ground	AAP605 Soil By Tanks U/V/Z	AAP606 Tank E Contents		Recommendations For Non-Hazardous Soil Conditions		Observed Concentration Ranges For U.S. Soils[3]
						Aqueous Phase	Oil Phase	1	2	
Silver MG/KG	<0.10	<0.10	<0.10	<0.10	<0.10	<50	<0.10	100	NR	
Aluminum MG/KG	4510.0	2790.0	1240.0	211.0	3030.0	977	8.3	NR	NR	0.2% - >10%
Arsenic MG/KG	<10.00	<10.00	<10.00	<10.00	<10.00	<500	<10.00	500	328	<0.2 - 170
Barium MG/KG	[illegible]0	74.0	48.1	186.0	279.0	4890	52.8	450	NR	30 - 5000
Beryllium MG/KG	<0.10	<0.10	<0.10	<0.10	<0.10	<20	<0.10	50	NR	<1 - 7
Cadmium MG/KG	5.2	2.3	3.7	2.5	2.0	<20	.3	20	2.5	<1 - 11
Cobalt MG/KG	2.9	2.9	1.1	.2	1.4	<50	<0.10	500	NR	<2 - 70
Chromium MG/KG	25.6	24.6	26.8	5.2	7.0	108	6.4	1000	164	1 - 1500
Copper MG/KG	112.0	41.4	51.7	24.6	39.9	118	9.0	250	816	<1 - 700
Iron MG/KG	22800.0	16500.0	28600.0	1190.0	11100.0	43500.0	169.0	NR	NR	.01% - 13%
Manganese MG/KG	186.0	92.2	242.0	15.7	47.9	444	6.4	1000	NR	<2 - >20000
Molybdenum MG/KG	7.3	3.7	5.4	1.6	3.8	<50	.2	NR	50	<3 - 170
Nickel MG/KG	12.6	12.4	3.6	2.3	4.8	<200	2.3	100	328	<3 - 700
Lead MG/KG	3180.0	103.0	325.0	2390.0	2050.0	4850	103.0	1000	1632	<7 - 700
Antimony MG/KG	<10	<10	<10	<10	<10	<500	<1.00	250	NR	<150 - 500
Selenium MG/KG	<10.00	<10.00	<10.00	<10.00	<10.00	<500	<10.00	10	4	<0.1 - 4.3
Titanium MG/KG	86.6	156.0	226.0	6.2	64.4	<500	3.4	NR	NR	700 - 12000
Thallium MG/KG	<20.0	<20.0	<20.0	<20.0	<20.0	<3000	<2.0	250	NR	NI
Vanadium MG/KG	12.4	8.8	5.5	.8	7.8	<50	<0.10	500	NR	<5 - 500
Zinc MG/KG	483.0	248.0	127.0	168.0	103.0	840	20.1	500	1632	<5 - 2000
Calcium MG/KG	45700.0	18900.0	14300.0	1700.0	4630.0	43	1500.0	NR	NR	<0.01% - 40%
Magnesium MG/KG	3090.0	3060.0	546.0	74.7	798.0	<20	<40.00	NR	NR	.005% - >10%
Sodium MG/KG	588.0	333.0	520.0	112.0	199.0	26	145.0	NR	NR	<0.01% - 10%
Potassium MG/KG	1300.0	1120.0	598.0	<40.00	459.0	<20	<40.00	NR	NR	.01% - 6.3%

1. "Hazardous Waste Land Treatment" (SW-874): Recommendations based on phytotoxic soil conditions of moderately tolerant vegetation.
2. OHMTADS "Recommendations based on plant uptake and bioaccumulation factors.
3. Background geochemistry of some rocks, soils, plants and vegetables in the contiguous United States, Geological Survey Paper #574-F.

TABLE V

SUMMARY OF INORGANIC ANALYSIS OF SOILS AND TANKS AT JOHNS' OIL REFINERY

Parameter	AAP607 Tank N Contents	AAP608 Tank R Contents	AAP609 Tank Z Contents	AAP610 Tank BB Contents	AAP611 Tank Q Contents	AAP612 Tank FF Contents	Recommendations For Non-Hazardous Soil Conditions		Observed Concentration Ranges For U.S. Soils[3]
							1	2	
Silver MG/KG	<0.10	<0.10	<0.10	<0.10	<0.10	<50	100	NR	
Aluminum MG/KG	<0.40	5.5	212.0	2.9	55.9	5600	NR	NR	0.2% - >10%
Arsenic MG/KG	<10.00	<10.00	<10.00	<10.00	<10.00	<500	500	328	<0.2 - 170
Barium MG/KG	.3	9.2	1.2	2.9	1.5	90	450	NR	30 - 5000
Beryllium MG/KG	<0.10	<0.10	<0.10	<0.10	<0.10	<20	50	NR	<1 - 7
Cadmium MG/KG	<0.10	.9	2.5	.3	.5	<20	20	2.5	<1 - 11
Cobalt MG/KG	.2	<0.10	.4	<0.10	.2	<50	500	NR	<2 - 70
Chromium MG/KG	.2	8.5	12.7	1.5	6.5	<50	1000	164	1 - 1500
Copper MG/KG	.4	25.4	64.3	1.9	20.1	70	250	816	<1 - 700
Iron MG/KG	66.8	50.7	1450.0	127.0	381.0	7310	NR	NR	.01% - 13%
Manganese MG/KG	<0.10	25.1	16.2	8.0	8.5	75	1000	NR	<2 - >20000
Molybdenum MG/KG	<0.10	.5	2.5	<0.10	1.1	71	NR	50	<3 - 170
Nickel MG/KG	<0.20	2.1	3.8	.4	1.8	<200	100	328	<3 - 700
Lead MG/KG	5.6	69.9	115.0	113.0	113.0	<500	1000	1632	<7 - 700
Antimony MG/KG	<1.00	<1.00	<1.00	<1.00	<1.00	<500	250	NR	<150 - 500
Selenium MG/KG	<10.00	<10.00	<10.00	<10.00	<10.00	<500	10	4	<0.1 - 4.3
Titanium MG/KG	4.5	5.1	37.8	12.8	12.7	<500	NR	NR	700 - 12000
Thallium MG/KG	<2.0	<2.0	<2.0	<2.0	<2.0	<3000	250	NR	NI
Vanadium MG/KG	<0.10	<0.10	.7	<0.10	.3	<50	500	NR	<5 - 500
Zinc MG/KG	<0.40	686.0	566.0	6.0	116.0	547	500	1632	<5 - 2000
Calcium MG/KG	<40.0	1640.0	2460.0	339.0	926.0	<20	NR	NR	<0.01% - 40%
Magnesium MG/KG	<40.0	99.5	98.5	<40.0	<40.0	<20	NR	NR	.005% - >10%
Sodium MG/KG	<40.0	1040.0	3150.0	679.0	97.5	243000	NR	NR	<0.01% - 10%
Potassium MG/KG	<40.0	<40.0	<40.0	<40.00	<40.0	344	NR	NR	.01% - 6.3%

1. "Hazardous Waste Land Treatment" (SW-874): Recommendations based on phytotoxic soil conditions of moderately tolerant vegetation.
2. OHMTADS "Recommendations based on plant uptake and bioaccumulation factors.
3. Background geochemistry of some rocks, soils, plants and vegetables in the contiguous United States, Geologic Survey Paper #574-F.

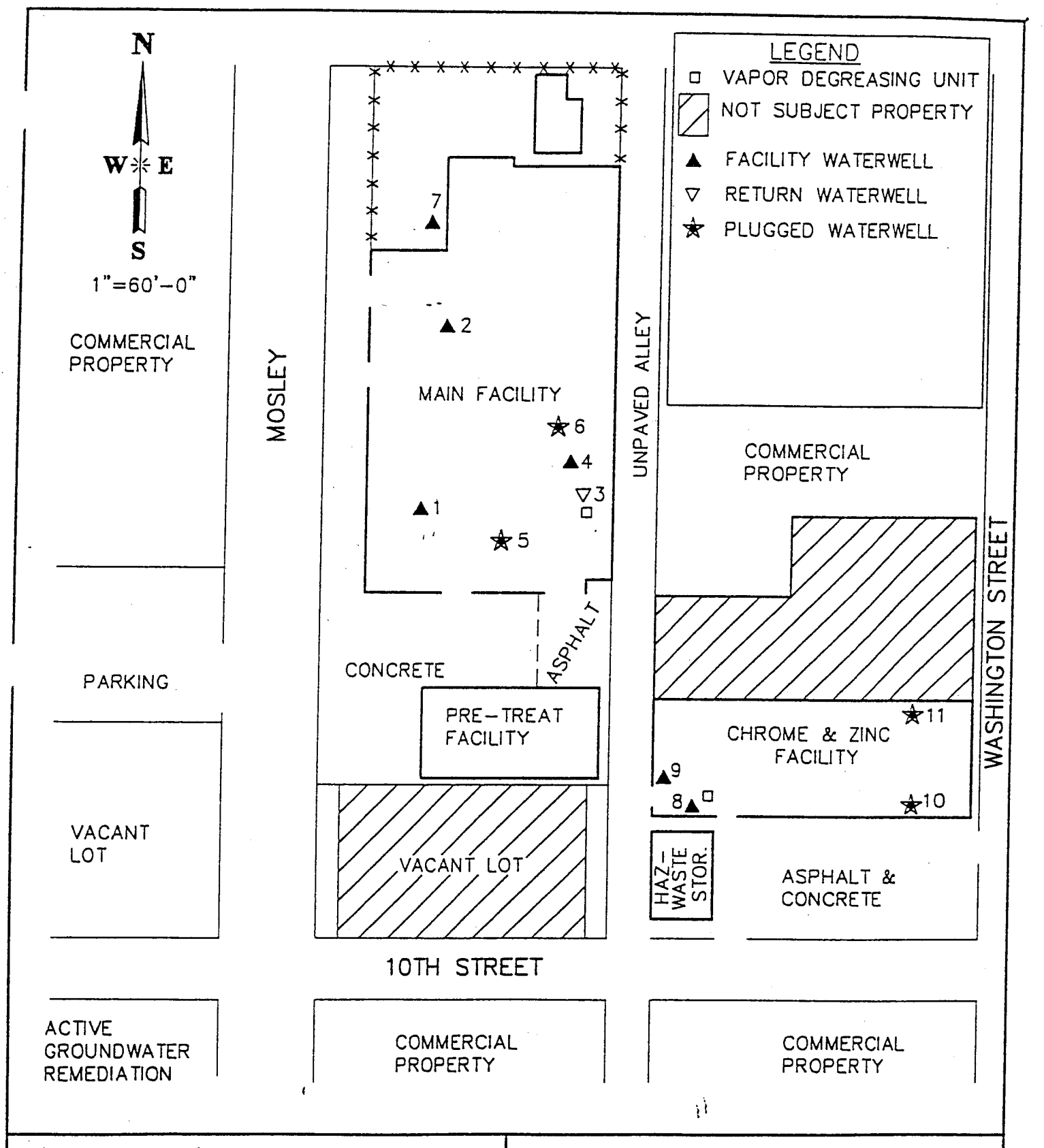
TABLE VI

SUMMARY OF E.P. TOXICITY ANALYSIS OF SOILS AT JOHNS' OIL REFINERY

Parameter	AAP601 Soil by Tanks F/G	AAP602 Soil by Tanks G/H	AAP605 Soil by Tanks U/V/Z	E.P. Toxicity Standards
Silver UG/l	<5	<5		5000
Aluminum UG/l	<50	98	58	NR
Arsenic UG/l	<50	<50	<50	5000
Barium UG/l	1170	683	433	100,000
Beryllium UG/l	<2	<2	<2	NR
Cadium UG/l	24	<2	8	1000
Cobalt UG/l	13	6	9	NR
Chromium UG/l	<5	<5	<5	5000
Copper UG/l	38	<10	20	NR
Iron UG/l	65	822	<50	NR
Manganese UG/l	1270	457	350	NR
Molybdenum UG/l	8	<5	<5	NR
Nickel UG/l	23	<20	<5	NR
Lead UG/l	841	<50	<50	5000
Antimony UG/l	<50	<50	<50	NR
Selenium UG/l	<500	<50	<50	1000
Titanium UG/l	<500	<50	<50	NR
Thallium UG/l	<300	<300	<300	NR
Vanadium UG/l	<10	<10	<10	NR
Zinc UG/l	1360	1000	505	NR
Calcium MG/l	1300	212	121	NR
Magnesium MG/l	10	5	4	NR
Sodium MG/l	14	9	7	NR
Potassium MG/l	8	8	7	NR

NR: No E.P. toxicity standard

Appendix B-11
KPI - Kansas Plating Inc.

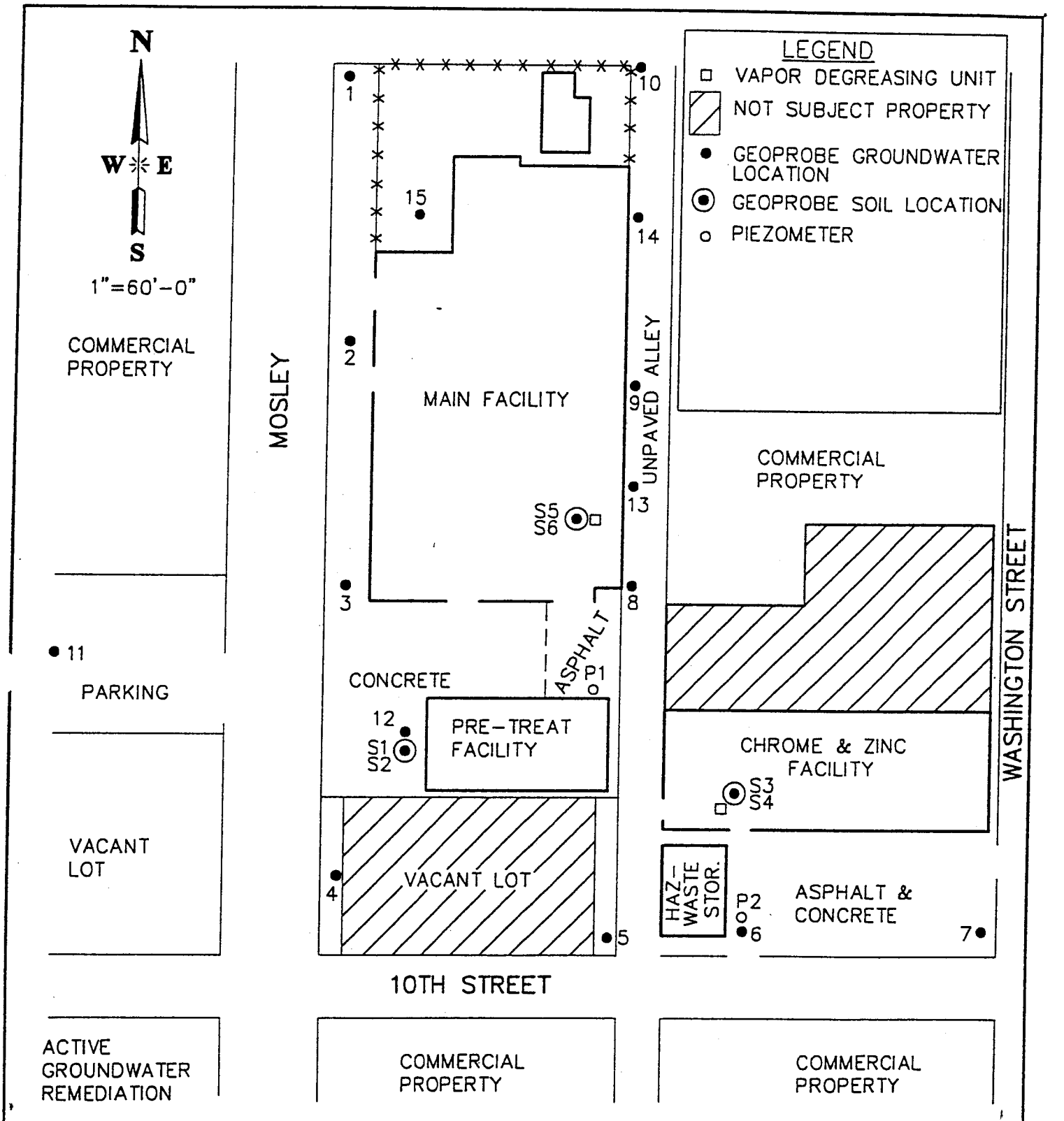


TERRATECH
ENVIRONMENTAL SERVICE, INC.
212 South Hydraulic, Suite #400, Wichita, KS. 67211
Office (316) 262-0735 Fax (316) 262-6860

FACILITY WATERWELL MAP
KS PLATING
1110 N. MOSLEY
WICHITA, KANSAS

FIGURE-6.

\ADCADD\CIVIL\P\KSPLATE\KSPLATE2 Wed Aug 21 11:39:05 1996



TERRATECH
ENVIRONMENTAL SERVICE, INC.
212 South Hydraulic, Suite #400, Wichita, KS. 67211
Office (316) 262-0735 Fax (316) 262-6860

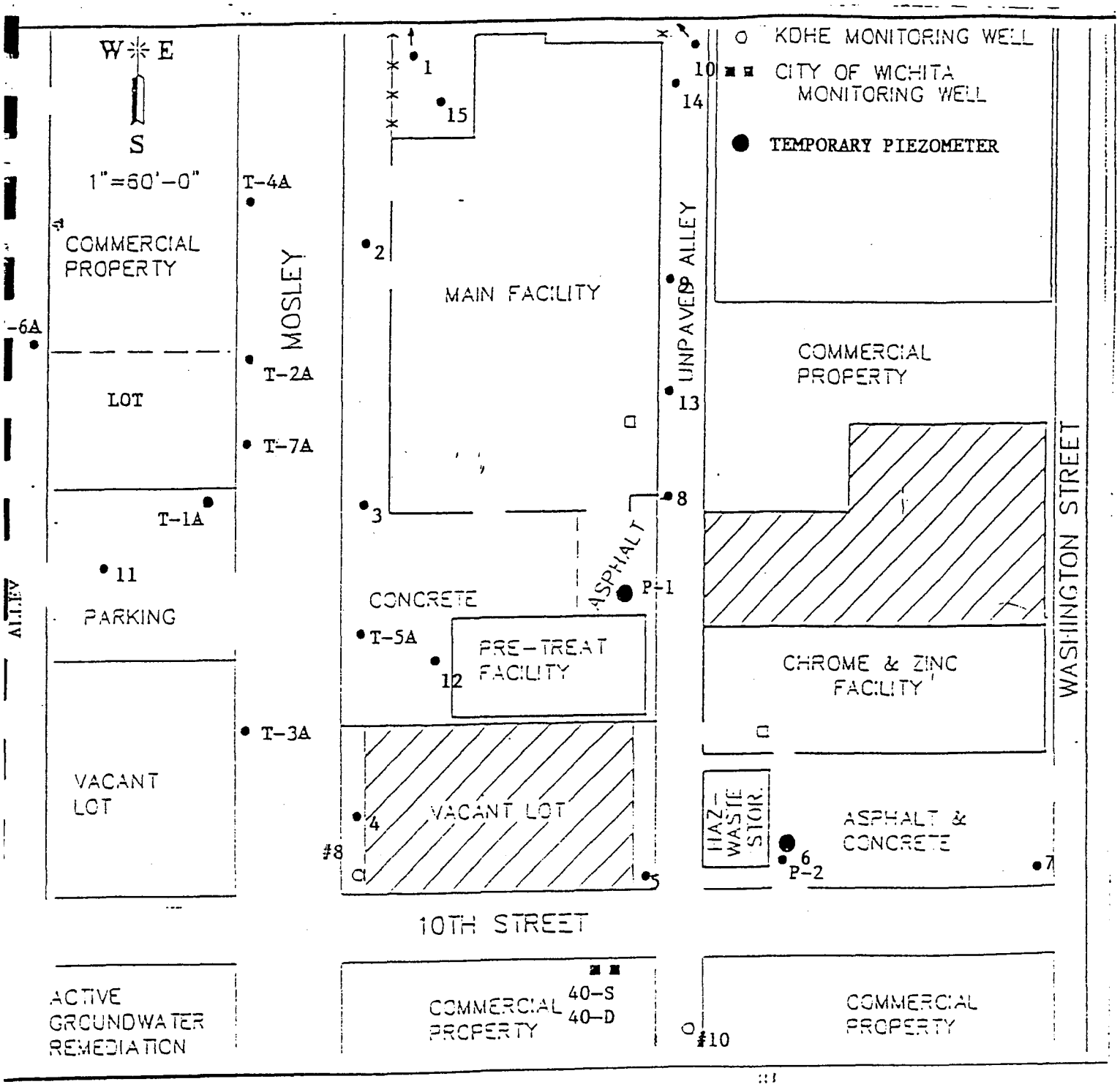
PROBE-SOIL & WATER LOCATIONS
PIEZOMETER LOCATIONS
KS PLATING, 1110 N. MOSLEY
WICHITA, KANSAS

FIGURE-9.

C:\ADCADD\CIVIL\P\KSPLATE\KSPLATE2 Wed Aug 21 11:36:59 1996

TerraTech Environmental Service, Inc.

1760 South Baenr ~ Wichita, KS 67209
Phone 316-941-4444 ~ Fax 316-941-9311 ~ Email TTES KS@aol.com
Mailing Address: PO Box 427 ~ Wichita, KS 67201-0427



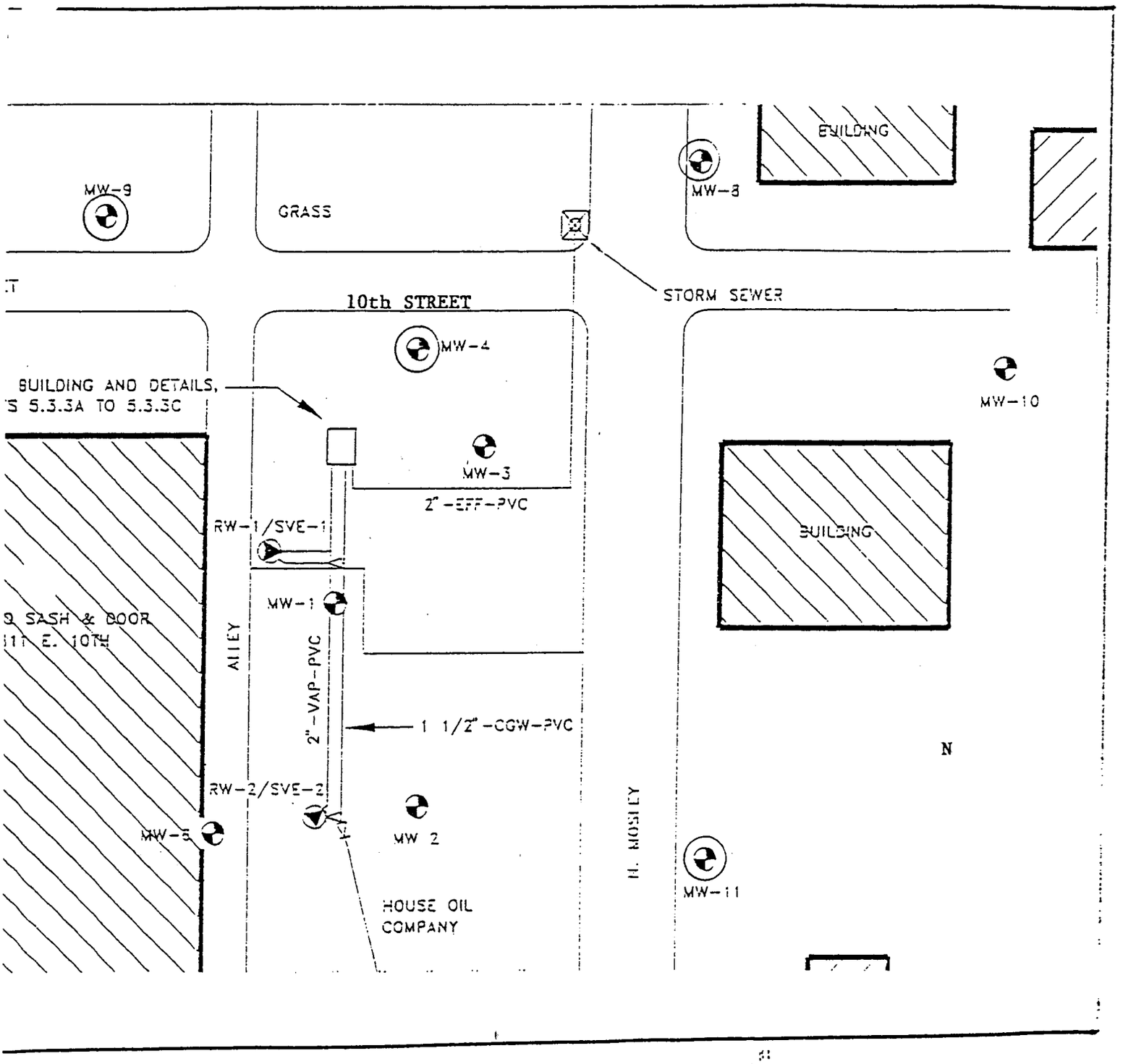
Site: KANSAS PLATING, INC.
Location: COMBINED GEOPROBE SAMPLING POINTS- 9/1996, 9/1997

Scale: 1"=app. 60.0'
Key • #-1996 SAMPLING LOCATION
• T-# -1997 SAMPLING LOCATION

FIGURE-1.

TerraTech Environmental Service, Inc.

1760 South Baenr - Wichita, KS 67209
Phone 316-941-4444 - Fax 316-941-9311 - Email TTES KS@aol.com
Mailing Address: PO Box 427 - Wichita, KS 67201-0427



Site: HOUSE OIL # 02087525
Location: WICHITA, KS

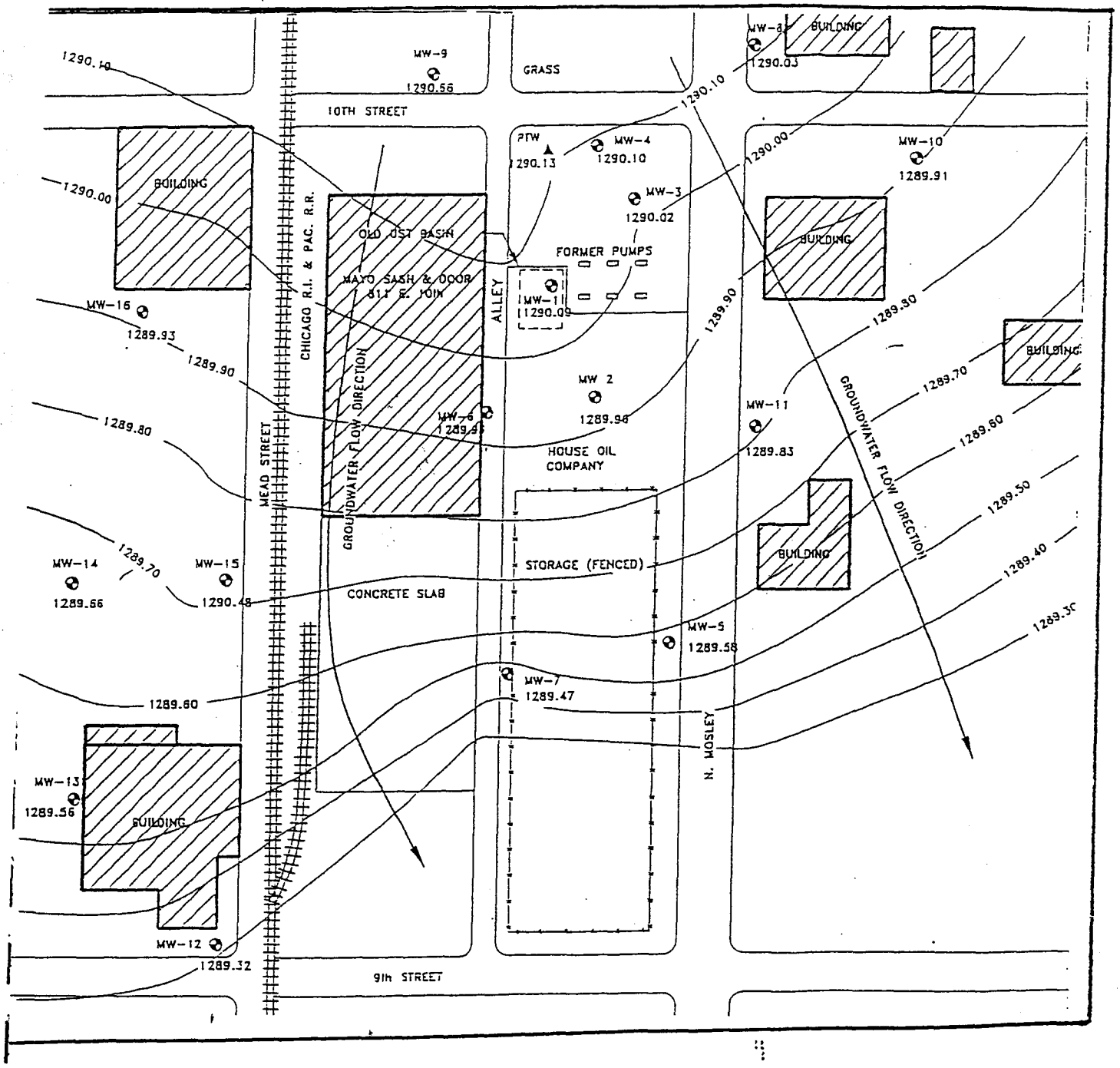
Scale: REPRODUCED

Key SAMPLED MONITORING WELL

FIGURE-2.

TerraTech Environmental Service, Inc.

1760 South Baehr ~ Wichita, KS 67209
Phone 316-941-4444 ~ Fax 316-941-9311 ~ Email TTES KS@aol.com
Mailing Address: PO Box 427 ~ Wichita, KS 67201-0427

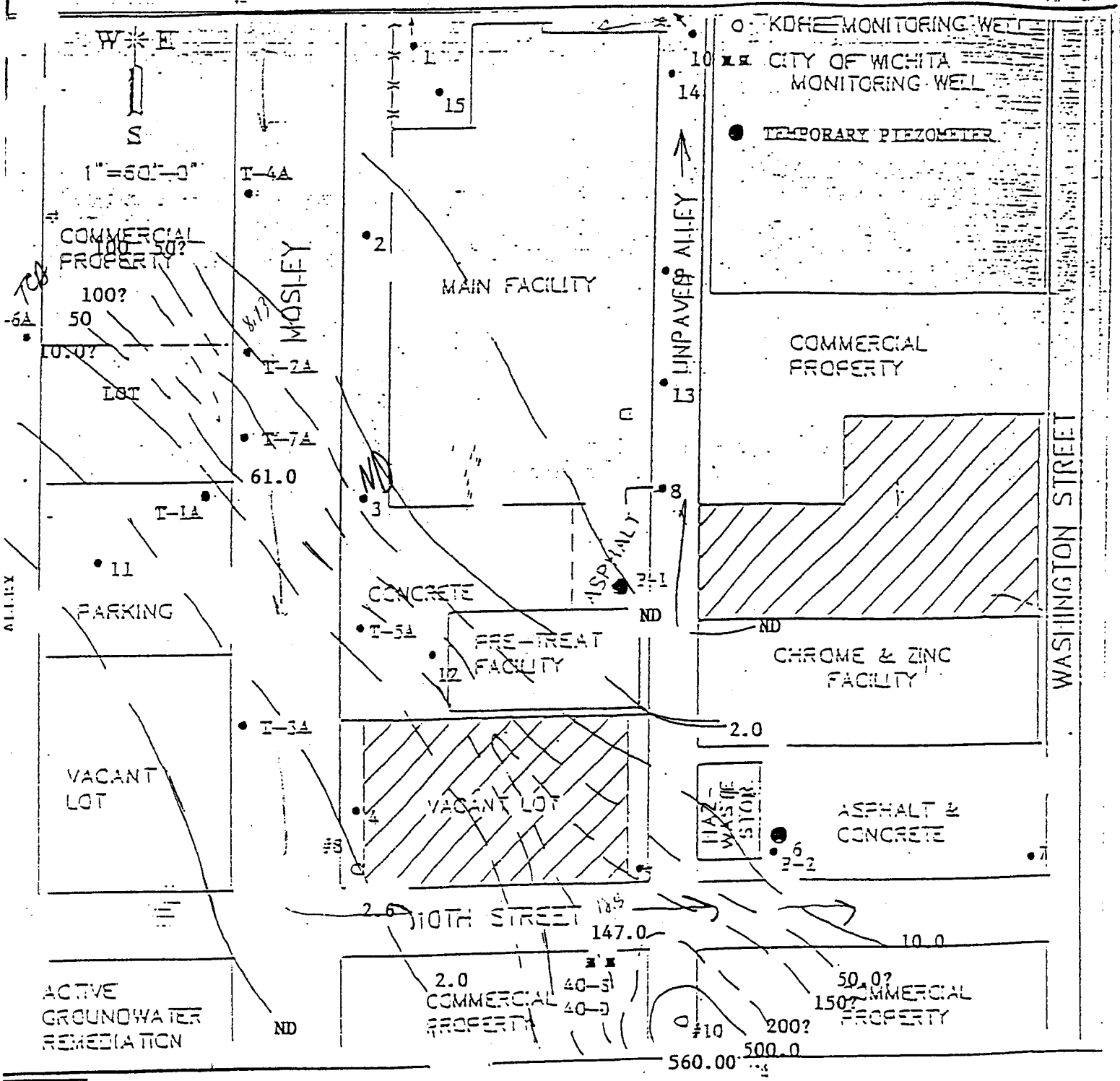


Site: GROUNDWATER GRADIENT MAP
Location: HOUSE OIL / KANSAS PLATING, INC.

Scale: REPRODUCED
Key

FIGURE-3.

TerraTech Environmental Service, Inc.
1760 South Baehr – Wichita, KS 67209
Phone 316-941-4444 – Fax 316-941-5311 – Email TTES KS@aol.com
Mailing Address: PO Box 427 – Wichita, KS 67201-0427

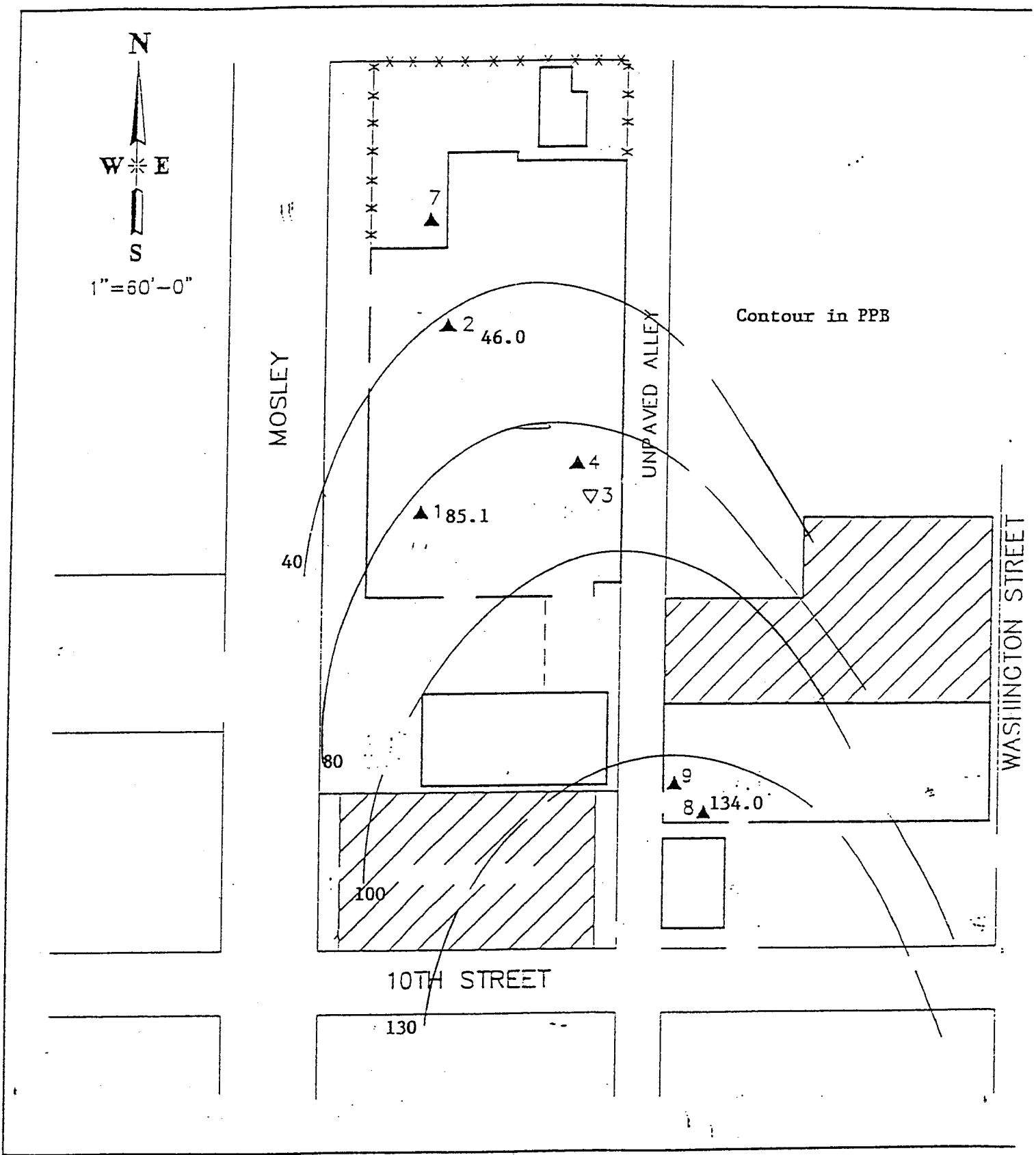


Site: KANSAS PLATING, INC.
Location:

1,1,1-TCA ISOCOCENTRATION MAP
(UG/L)

Scale:
Key

FIGURE-4.



TERRATECH

ENVIRONMENTAL SERVICE, INC.

212 South Hydraulic, Suite #400, Wichita, KS. 67211

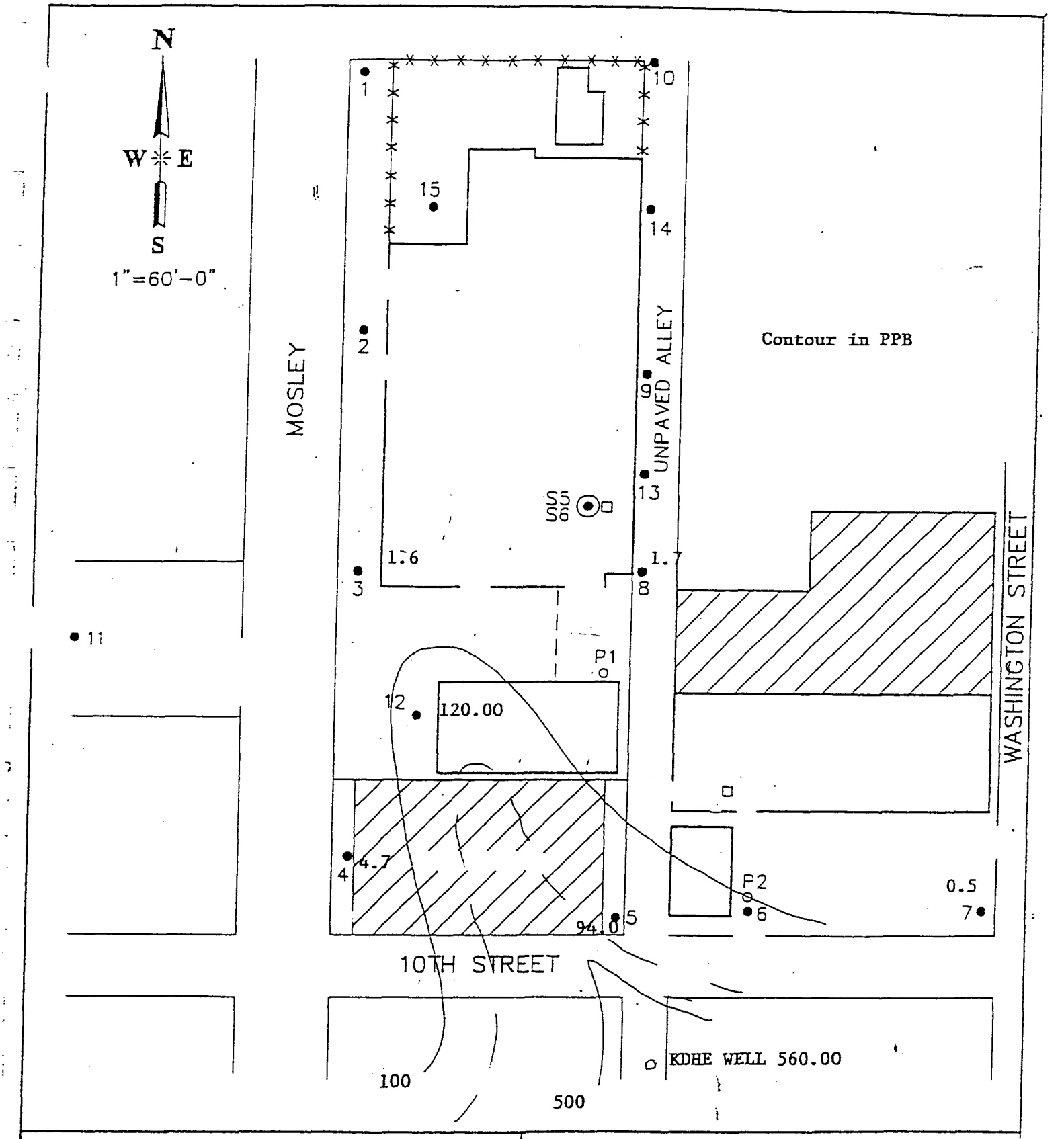
Office (316) 262-0735 Fax (316) 262-6860

ISOCONCENTRATION MAP 1.1.1-TCA

ESTIMATED CONTOUR- WATERWELL SAMPLING

12/ 1993

C:\ARCADD\CIVIL\P\KSPLATE\KSPLATE2 Wed Aug 21 11:55:57 1996

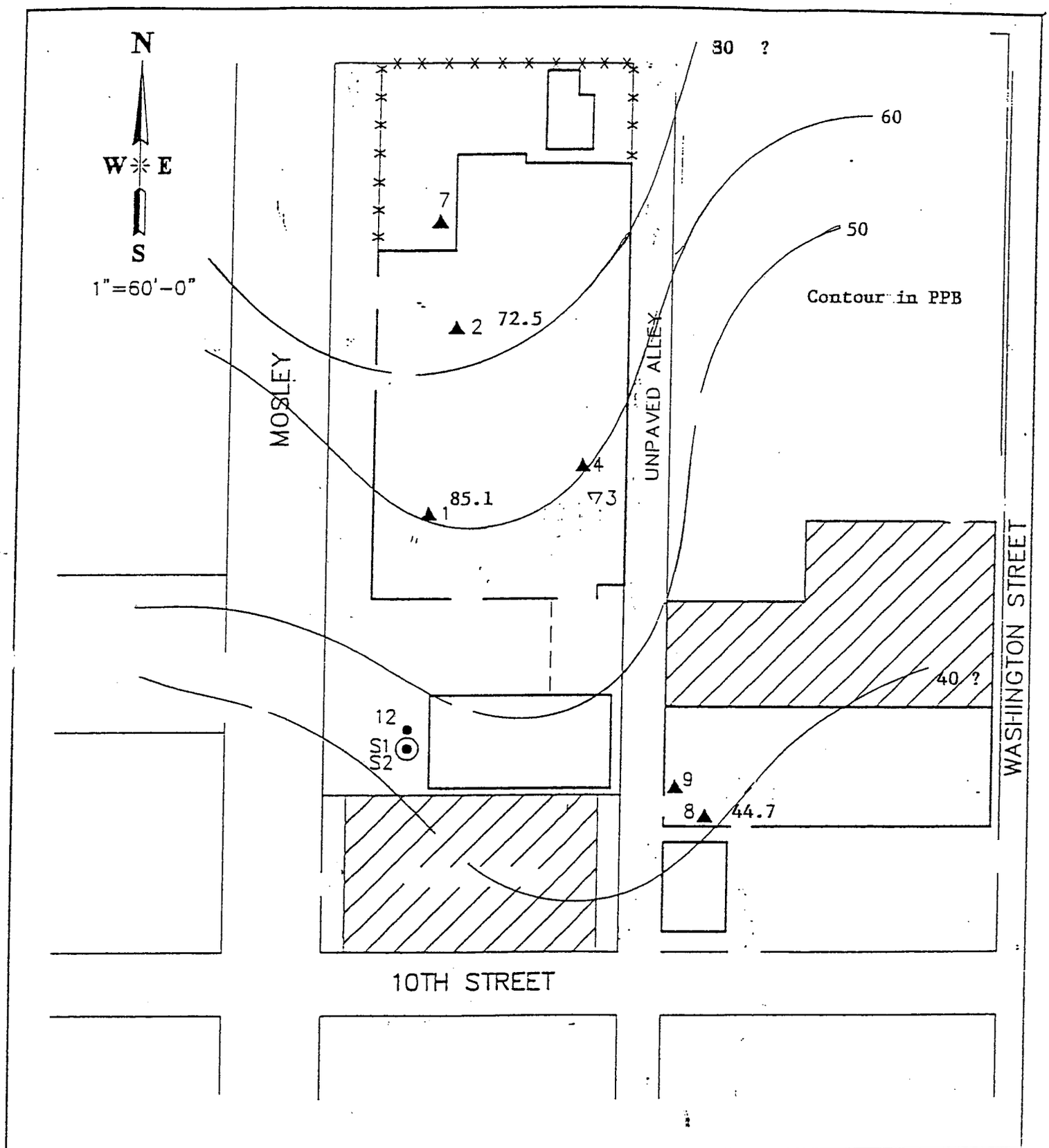


TERRATECH
ENVIRONMENTAL SERVICE, INC.
212 South Hydraulic, Suite #400, Wichita, KS. 67211
Office (316) 262-0735 Fax (316) 262-6860

ISOCONCENTRATION MAP
1.1.1-TCA

PHASE-II INVESTIGATION 1996

SHALLOW GROUNDWATER- LABORATORY

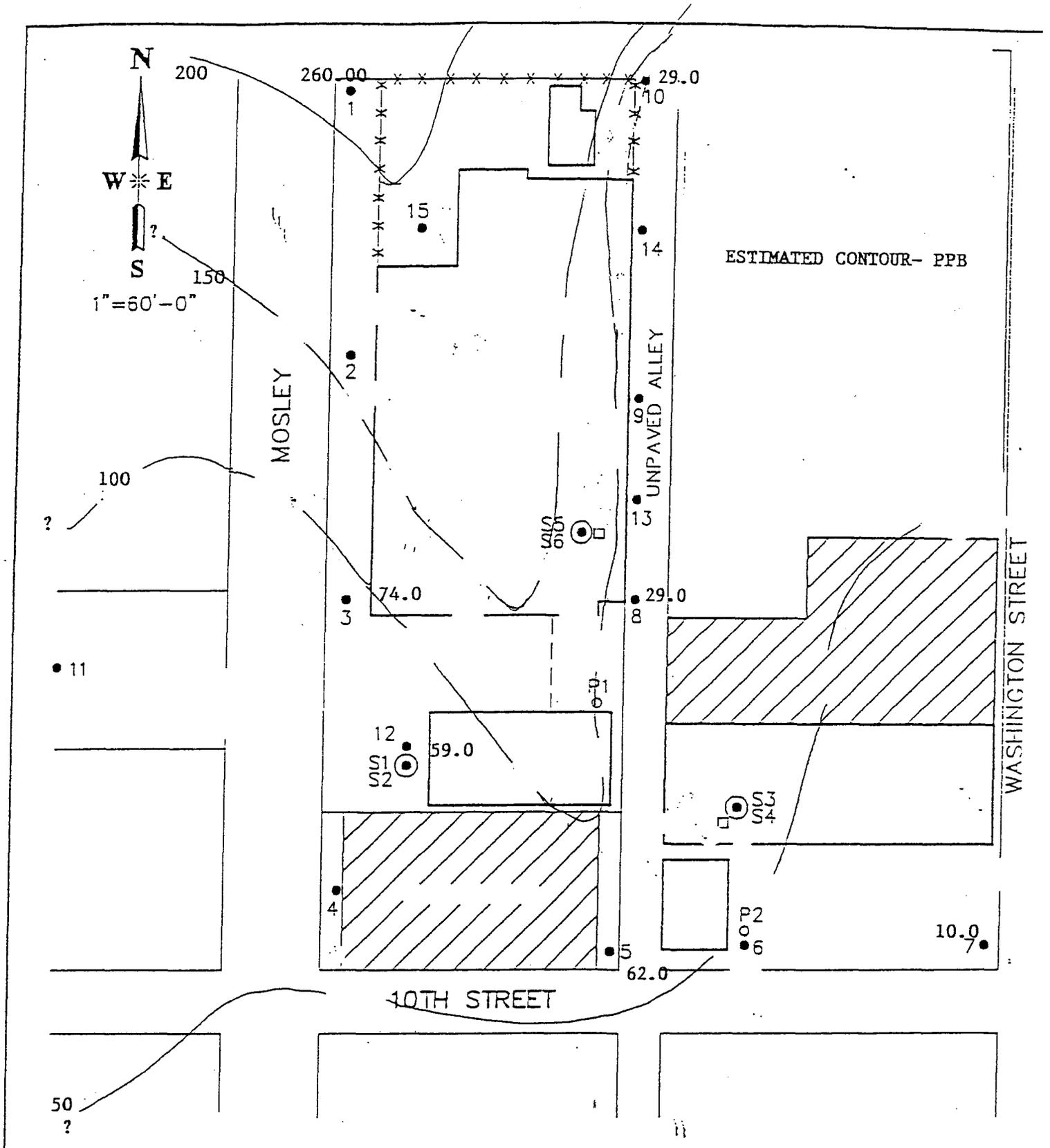


TERRATECH
ENVIRONMENTAL SERVICE, INC.
212 South Hydraulic, Suite #400, Wichita, KS. 67211
Office (316) 262-0735 Fax (316) 262-6860

ISOCONCENTRATION MAP
TCE

FACILITY WATERWELLS DECEMBER 1993
ESTIMATED CONTOUR- 12/ 1993

C:\ARCADD\CIVIL\B\KSPLATE\KSPLATE2 Wed Aug 21 11:57:37 1996



TERRATECH

ENVIRONMENTAL SERVICE, INC.

212 South Hydraulic, Suite #400, Wichita, KS. 67211

Office (316) 262-0735 Fax (316) 262-6860

ISOCONCENTRATION MAP TCE

PHASE-II INVESTIGATION 1996

LOWER GROUNDWATER- LABORATORY RESULTS

KANSAS PLATING INC.
LABORATORY WELL COMPARISONS

Date	Lab	Well Location	Well No.	TCA	TCE
11-15-89	KDHE	Mosley -anod dept.	2	8.5	1.1
11-18-93	M&D	Washington St. - Zinc dept.	8	87.1	53.3
12-7-93	M&D	Mosley -anod dept. Mosley - near lab Washington St. - Zinc dept.	2 1 8	46.0 85.1 134.0	72.5 62.3 44.7
3-31-94	M&D	Mosley - anod dept Washington St. - Zinc dept.	2 8	ND 97.2	95.7 59.7
7-15-94	Priority	Mosley - anod dept. Washington St. - Zinc dept.	2 8	ND 54.0	74.0 46.0
11-17-94	National	Mosley - anod dept. Washington St. - Zinc dept.	2 8	ND 88.0	111.0 65.0
11-17-95	Priority	Mosley - anod dept. Washington St. - Zinc dept.	2 8	ND 5.0	84.0 66.0
11-30-95	Priority	Mosley - masking dept.	7	ND	132.0
1-18-96	Priority	Mosley - masking dept. Mosley - anod dept. Mosley - near lab Washington St. - Zinc dept.	7 2 1 8	ND ND 3.0 16.5	114.0 92.0 90.0 60.5

FIGUE-8.

Note: These are Kansas Plating, Inc. Wells only.

	Field Results (ppb)			Laboratory Results (ppb)				
TH-ID	(cis) 1,2-DCE	TCE	PCE	Lab ID #	(cis) 1,2-DCE	1,1,1 TCA	TCE	PCE
T-1-S	5.0	≥53	1.8	960322001	23		65	1.1
T-1-D	8.2	>65	8.3	960322002	58		260	6.0
T-2-S	3.5	≥61.2	4.8					
T-2-D	6.5	≥73	11.3					
T-3-S	1.8	≥40	1.1	960322005	20	1.6	35	0.9
T-3-D	4.0	≥55.8	12.6	960322006	41	ND	74	5.7
T-4-S	2.6	≥40.8	1.2	960322007	22	4.7	37	1.1
T-4-D	4.0	≥56.2	12.4	960322008	37	ND	63	5.3
T-5-S	2.5	≥119	1.5	960325009	6.3	94	18	ND
T-5-D	2.6	≥54.6	2.9	960325010	24	6.2	62	1.3
T-6-S	1.6	≥55	1.0					
T-6-D	3.5	≥48.4	<1.0					
T-7-S	3.0	≥44.1	ND	960325013	32	0.5	25	ND
T-7-D	1.7	11.8	ND	960325014	23	ND	10	ND
T-8-S	<1.0	5.6	ND	960325015	3.1	1.7	7.2	ND
T-8-D	1.7	39.8	<1.0	960325016	10	ND	29	0.5
T-9-S	ND	3	ND					
T-9-D	<1.0	40	<1.0					
T-10-S	ND	1.5	<1.0	960325019	ND	ND	ND	ND
T-10-D				960325020	6.2	ND	29	0.8
T-11-S	ND	7	1.5					
T-11-D	<1.0	25	4.0					
T-12-S	ND	≥173	ND	960416A03	16.0	120.0	31	0.8
T-12-D	ND	≥35.0	1.8	960416A04	35.0	1.2	59	1.6
T-13-S	ND	2.6	ND					
T-13-D	<1.0	≥19.1	<1.0					
T-14-S	ND	4.5	ND					
T-14-D	ND	32	<1.0	960416A05	9.9	ND	33	0.6
T-15-S	<1.0	6.5	<1.0					
T-15-D	2.4	≥138	3.7					

FIGURE-10. page 17

FIGURE-11.

Laboratory Analysis

Sample ID Number	Depth	8021-VOC*	RCRA Metals	
			Cadmium**	Chromium#
S-1	1'-3'		ND	19.9
S-2	8'-10'	ND		
S-3	1'-3'		1.1	4.0
S-4	8'-10'	ND		
S-5	1'-3'		0.7	<1.0
S-6	8'-10'	ND		

* PPB
** Average Cadmium in soil = 0.06 ppm
# Average Chromium in soil = 100 ppm

TABLE-1: Field and Laboratory 1,1,1-TCA Concentrations

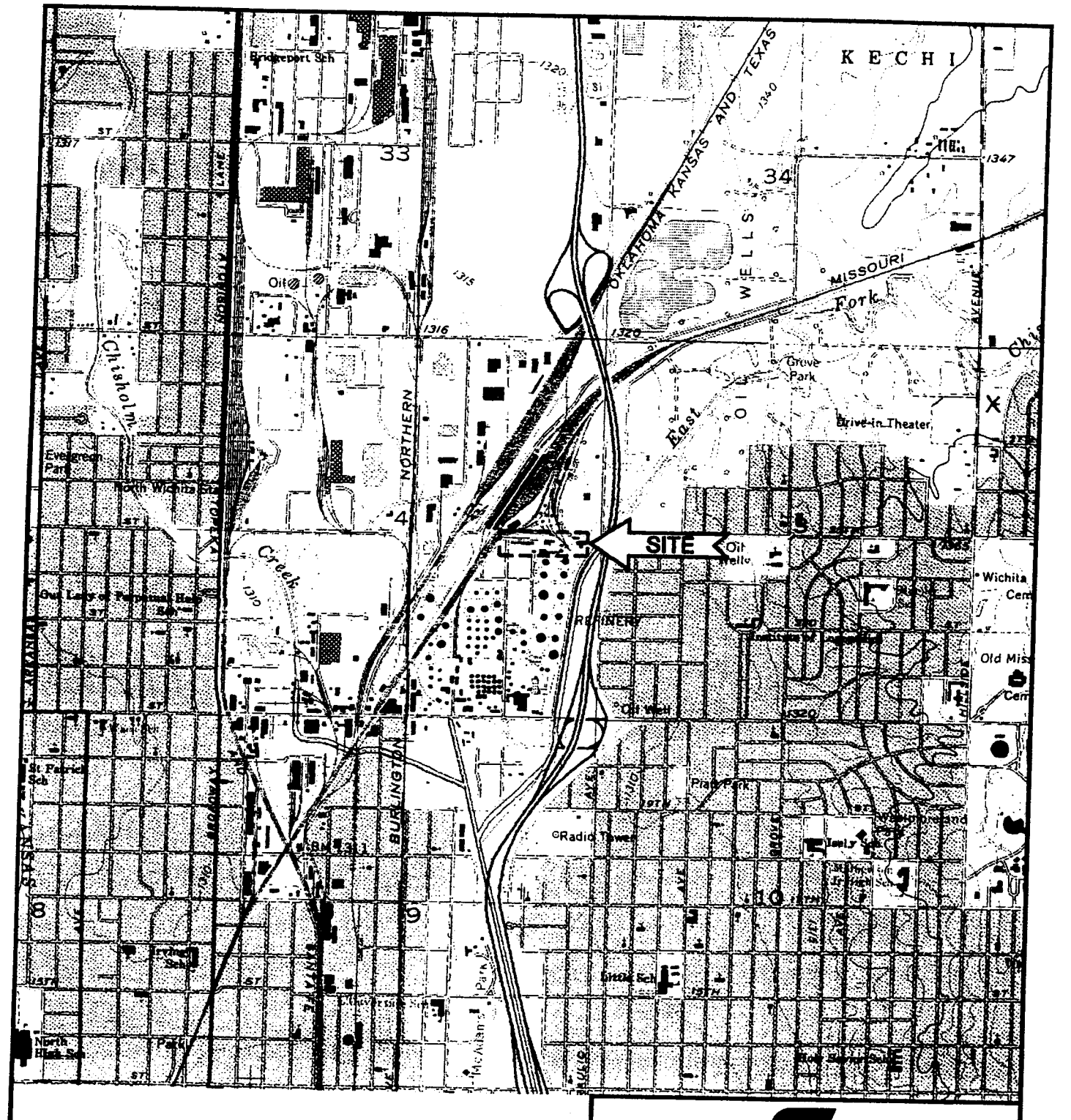
Table-1:Field and Laboratory 1,1,1-TCA Concentrations

Location	Field 1,1,1-TCA	Laboratory 1,1,1-TCA
KPI Piezometer P-1	NA	ND
KPI Piezometer P-2	>0.68	NA
T-1A 16'-18' bgs	>9.8	NA
T-2A 16'-18' bgs	>8.73	NA
T-3A 16'-18' bgs	>2.9	NA
T-4A 16'-18' bgs	ND	NA
T-5A 16'-18' bgs	>0.77	NA
T-6A 16'-18' bgs	>1.3	NA
T-7A 16'-18' bgs	>22.0	**61**
Monitoring Wells (LUST Site ID # 02087525)		
MW-4	>0.3	ND
MW-8	>1.1	**2.6**
MW-9	>0.04	ND
MW-11	>0.26	ND
City of Wichita MW-40-S	>12.8	**147**
City of Wichita MW-40-D	>0.5	NA

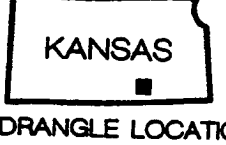
II-2. Total Metal Analytical Findings

Two (2) shallow groundwater samples were obtained to under-go analytical testing for Total Metals.(EPA Methods 6010, 7060, 7470, 7740). The samples were taken from wells at MW-40S and P-2, downgradient of Kansas Plating Inc. Review of the analytical findings indicates concentrations within naturally occurring levels. The laboratory analytical data is located in Appendix C.

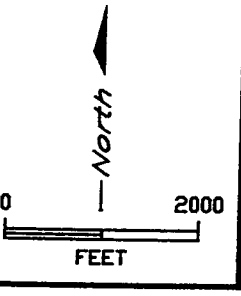
Appendix B-12
SK - Safety Kleen/Former Hydrocarbon Recyclers, Inc.



MAP ADAPTED FROM U.S.G.S 7.5' SERIES
QUADRANGLE WICHITA EAST, KANSAS



QUADRANGLE LOCATION



963231-LOCMAP

safety-kleen consulting

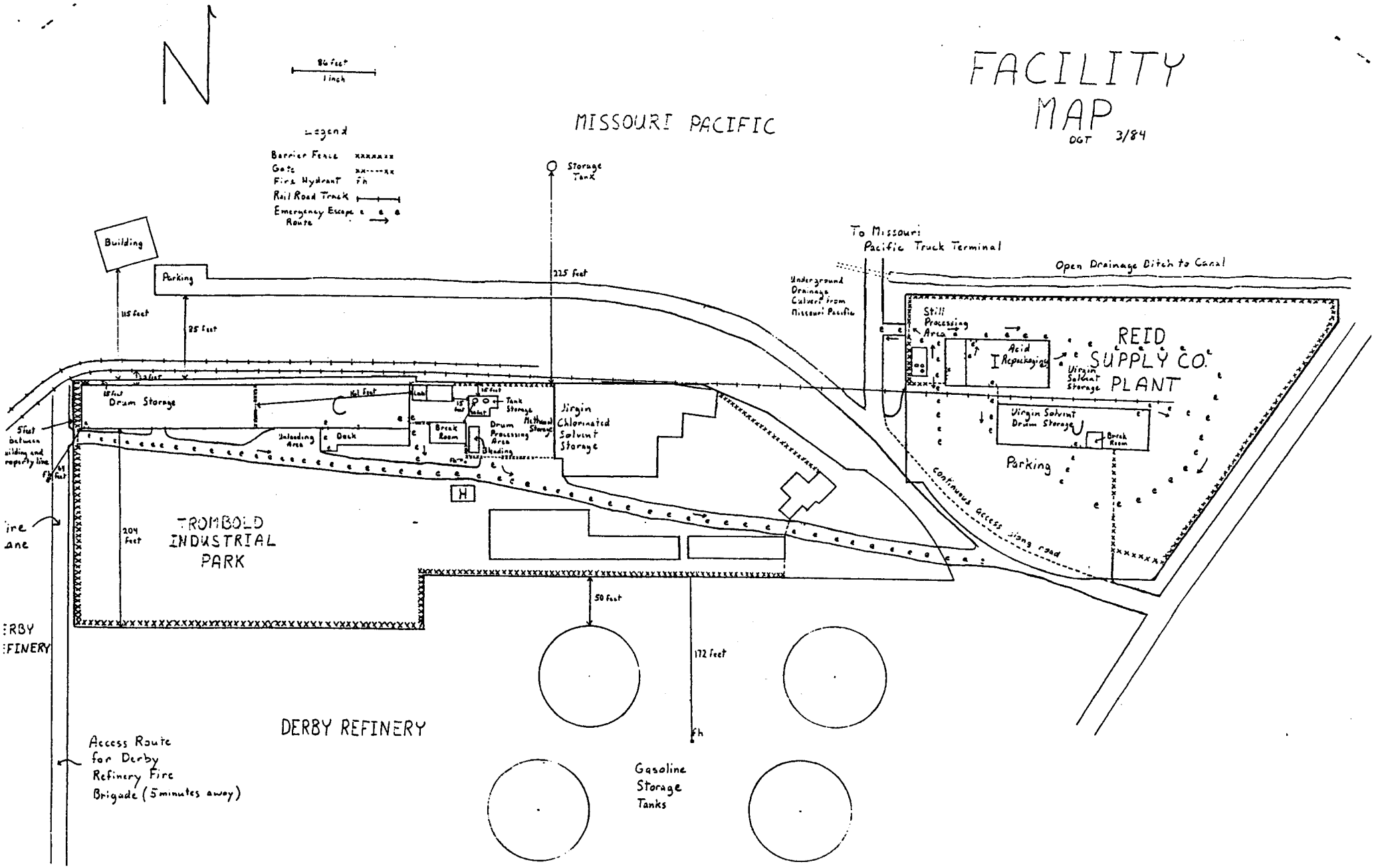
WICHITA, KANSAS

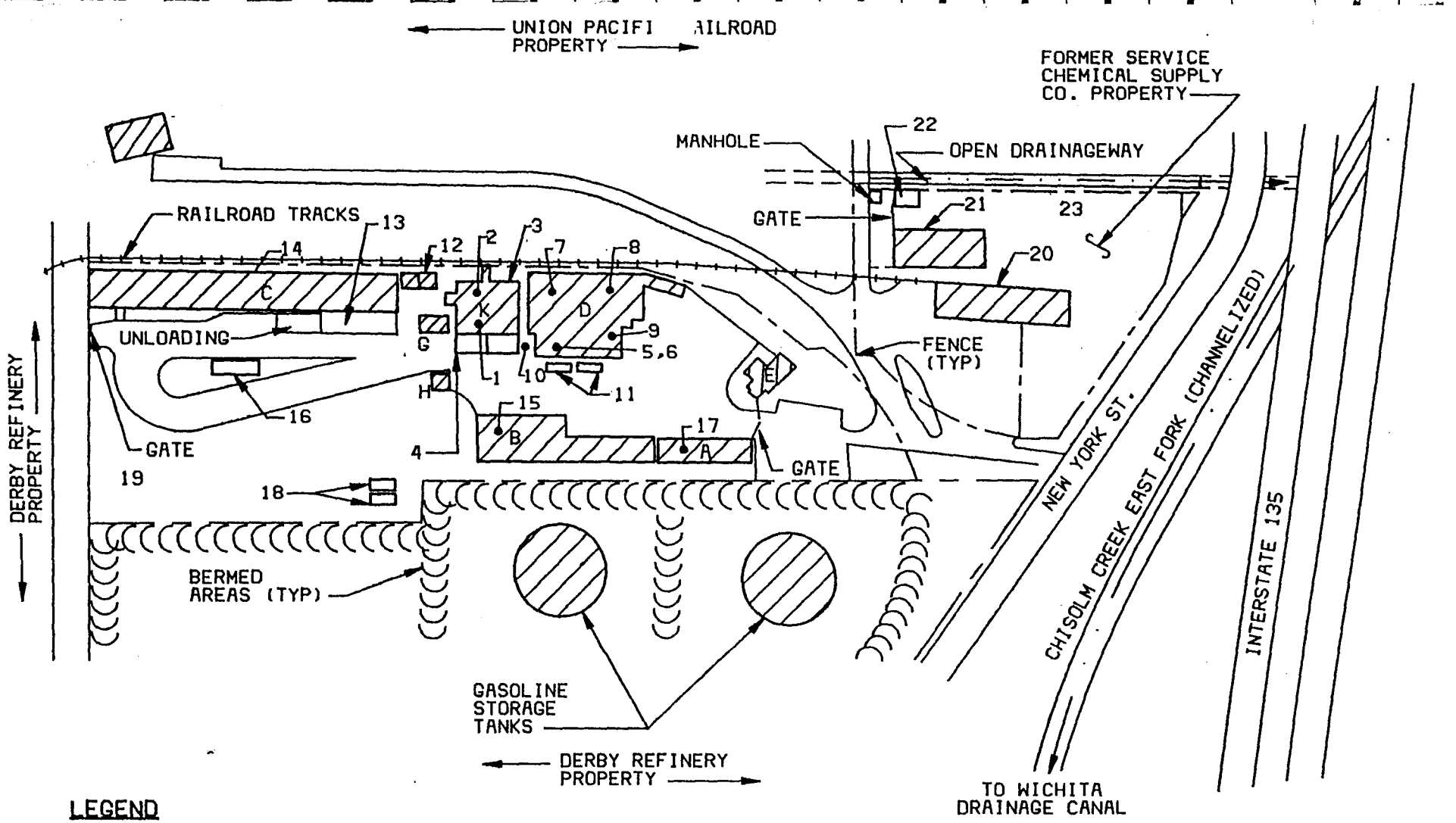
FIGURE 1
SITE LOCATION MAP

SCALE	DATE
1" = 2000'	6-11-01

FACILITY MAP

DGT 3/84





LEGEND

1. PROCESS AREA STORAGE TANKS
2. WASTE BLENDING AND DRUM PROCESSING
3. FORMER DRUM PROCESSING AREA
4. PROCESS AREA TRUCK BAY
5. SPARGING AREA
6. HOT ROOM
7. ELEVATED TANK STORAGE AREA
8. NONREGULATED WASTE STORAGE AREA
9. SOLIDS DRYER AREA
10. DRUM CRUSHER
11. CRUSHED DRUM ROLL-OFF BOXES
12. WARM ROOM
13. DOCK AREA
14. DRUM STORAGE WAREHOUSE (BUILDING C)
15. CORROSIVE WASTE STORAGE AREA
16. DRY SOLIDS GONDOLA
17. LABORATORY SAMPLE STORAGE AREA
18. VEHICLE FUELING TANKS
19. OPEN AREA ALONG SOUTHWEST CORNER
20. BUILDING J
21. BUILDING I
22. CONCRETE VAULT
23. OPEN AREA NORTH OT BUILDING I

SOURCE: FACILITY MAP FOR HYDROCARBON RECYCLERS INC. PREPARED BY REISS & GOODNESS ENGINEERS.

N

NO SCALE

FIGURE 2-2
SITE PLAN AND FACILITY LAYOUT
HRI FACILITY
RCRA FACILITY ASSESSMENT

CAD DWG NO:C0000522
DATE:9-24-90 KIN
PLOT SCALE:1=1

UNION PACIFIC RAILROAD

BUILDING C
FORMER WARMING ROOM
LOADING RAMP
DRUM DOCK
GATE
AREA SOUTH OF BUILDING C
FORMER DRY SOLIDS GONDOLA
FIRE LANE
HRI-03
OPEN AREA ALONG SOUTHWESTERN CORNER OF SITE
SK-4S
FORMER ABOVE GROUND FUEL TANKS
PROCESSING AREA
ELEVATED TANK STORAGE AREA
REGULATED WASTE STORAGE AREA
BUILDING D
FORMER SOLIDS DRYER
HOT ROOMS
CYCLONE
PROCESSING AREA TRUCK BAY
SPARGING AREA
BUILDING H
SK-5S
SK-5D
FORMER BURIED PAINT CAN PIT
CORROSIVE WASTE STORAGE
BUILDING B
GATE
SK-3D
SK-3S
FIRE LANE
SK-2D
SK-2S
LABORATORY SAMPLE STORAGE
BUILDING A
GATE
PARKING
PARKING
BUILDING E
PARKING
PARKING
COASTAL REFINERY (FORMER DERBY REFINERY)
25th STREET
FORMER OLD STILL AREA
CONCRETE VAULT
AREA NORTH OF BUILDING I
GATE
BUILDING I
AREA EAST OF BUILDING I
BUILDING K
SK-6S
GATE
BUILDING J
RAMP
LOADING DOCK
GATE
SK-1S
SK-1D
NEW YORK ST.

North
0 100
FEET

LEGEND

: SWMU Locations

: AOC Locations

MONITORING WELL LOCATIONS

NOTE: SURVEYED TO STATE PLANE COORDINATE SYSTEM
CONTOURS BASED ON SHALLOW GROUNDWATER MEASUREMENTS

BY	DATE
DRAWN CJJ	6-11-01
CHECKED	
APPROVED	
APPROVED	
APPROVED	

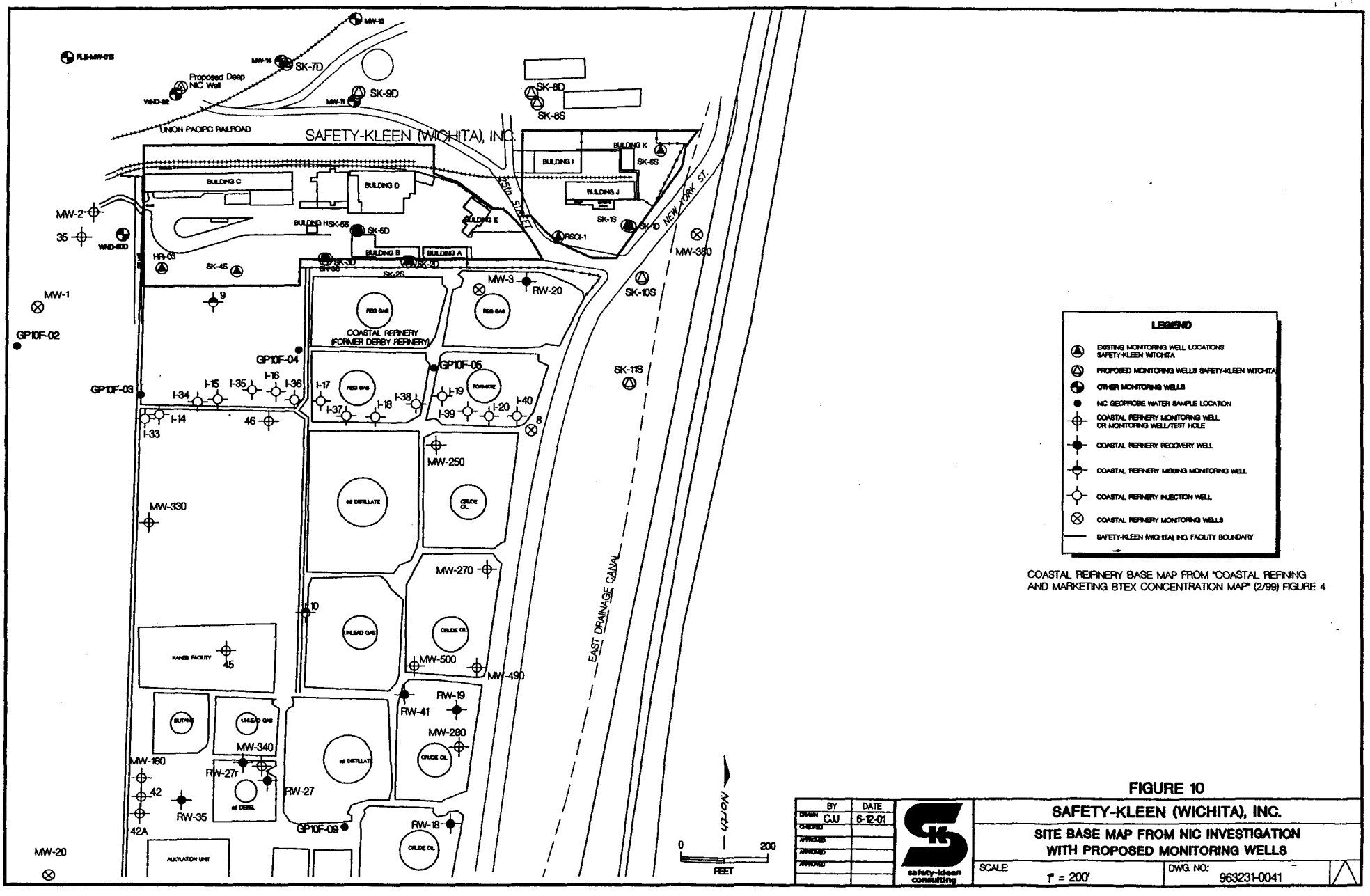
safety-kleen consulting

SAFETY-KLEEN - (WICHITA) FACILITY

FIGURE 2
SITE MAP

SCALE: 1" = 100'

DWG. NO: 963231-0042



COASTAL REFINERY BASE MAP FROM "COASTAL REFINING AND MARKETING BTEX CONCENTRATION MAP" (2/99) FIGURE 4

	BY	DATE
DRAWN	CJJ	6-12-01
CHECKED		
APPROVED		
APPROVED		
APPROVED		

safety-kleen consulting

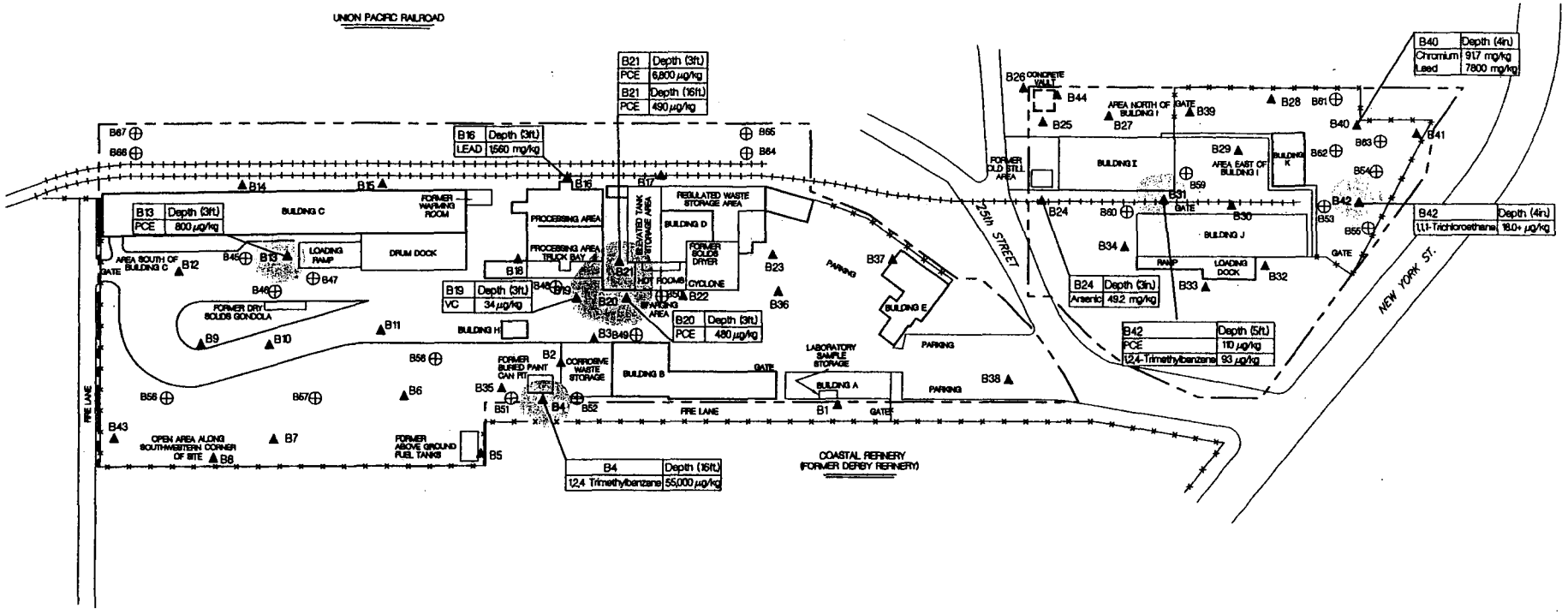
FIGURE 10

SAFETY-KLEEN (WICHITA), INC.

SITE BASE MAP FROM NIC INVESTIGATION WITH PROPOSED MONITORING WELLS

SCALE: 1" = 200'

DWG. NO: 963231-0041



LEGEND

- : SWMU Locations
- : AOC Locations
- POTENTIAL CHLORINATED HYDROCARBON SOURCE AREA
- PCE TETRACHLOROETHENE
- VC VINYL CHLORIDE
- B-1 ▲ SOIL BORING LOCATION (FALL 1999)
- B57 ⊕ PROPOSED SOIL BORING LOCATION

NOTES: CONCENTRATIONS PRESENTED HERE EXCEED EITHER THE KDHE SOIL TO GROUNDWATER VALUES AND/OR REGION IX NON-RESIDENTIAL PRG's.

SURVEYED TO STATE PLANE COORDINATE SYSTEM

North

0 100 FEET

BY	DATE
DRAWN WRB	6-11-01
CHECKED	
APPROVED	
APPROVED	
APPROVED	

safety-kleen consulting

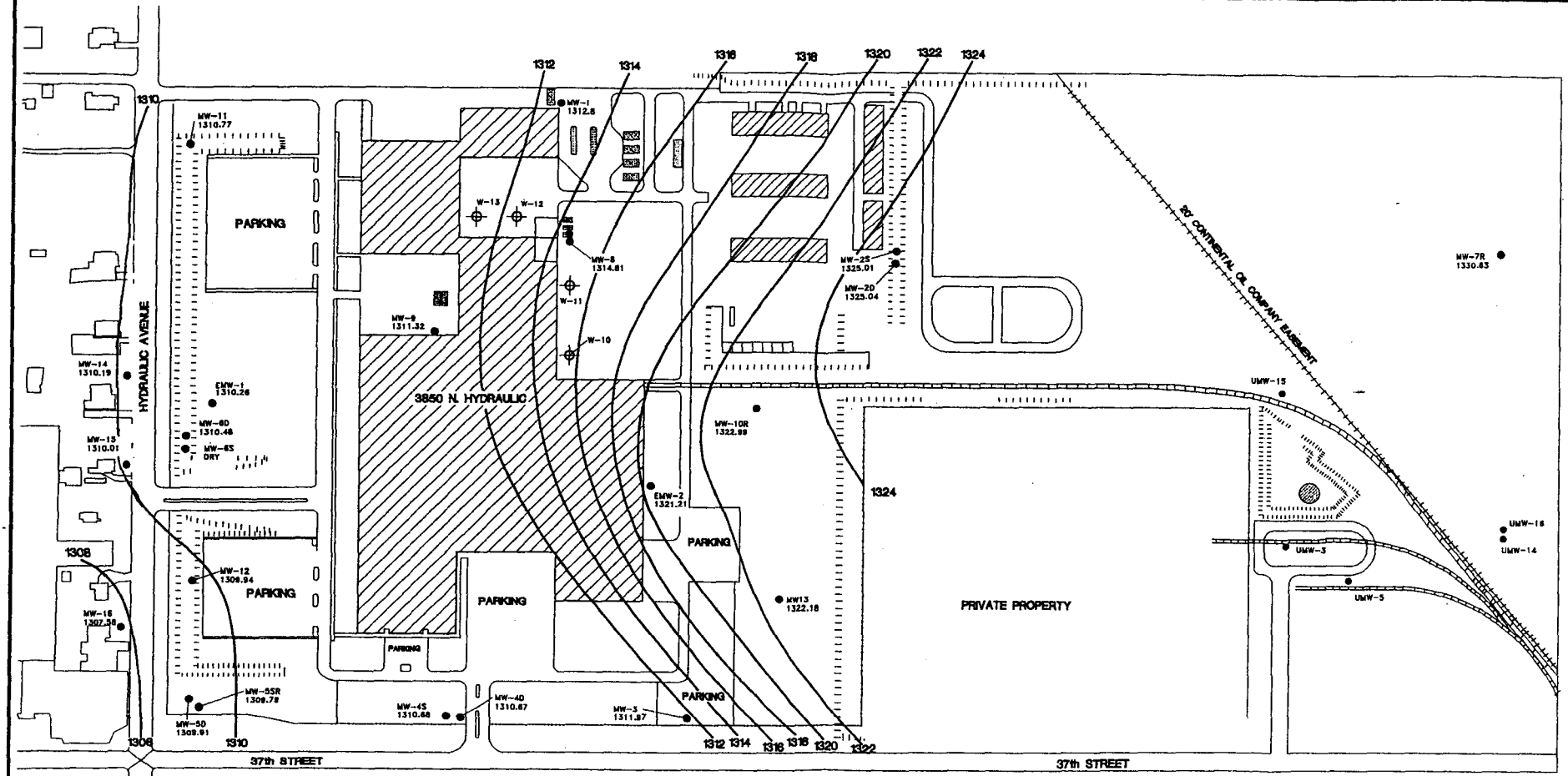
SAFETY-KLEEN - (WICHITA) FACILITY

FIGURE 3

SOIL EXCEEDANCES AND PROPOSED BORING LOCATIONS

SCALE: 1" = 100'

DWG. NO: 963231-0038



LEGEND

WELL LOCATION AND POTENTIOMETRIC ELEVATION (FT. MSL)

● MW-9 1311.32

JANUARY 1999 GEOPROBE LOCATION

⊕ W-10

NOTE:

1. WATER LEVELS MEASURED FEBRUARY 7, 1999.

SCALE IN FEET

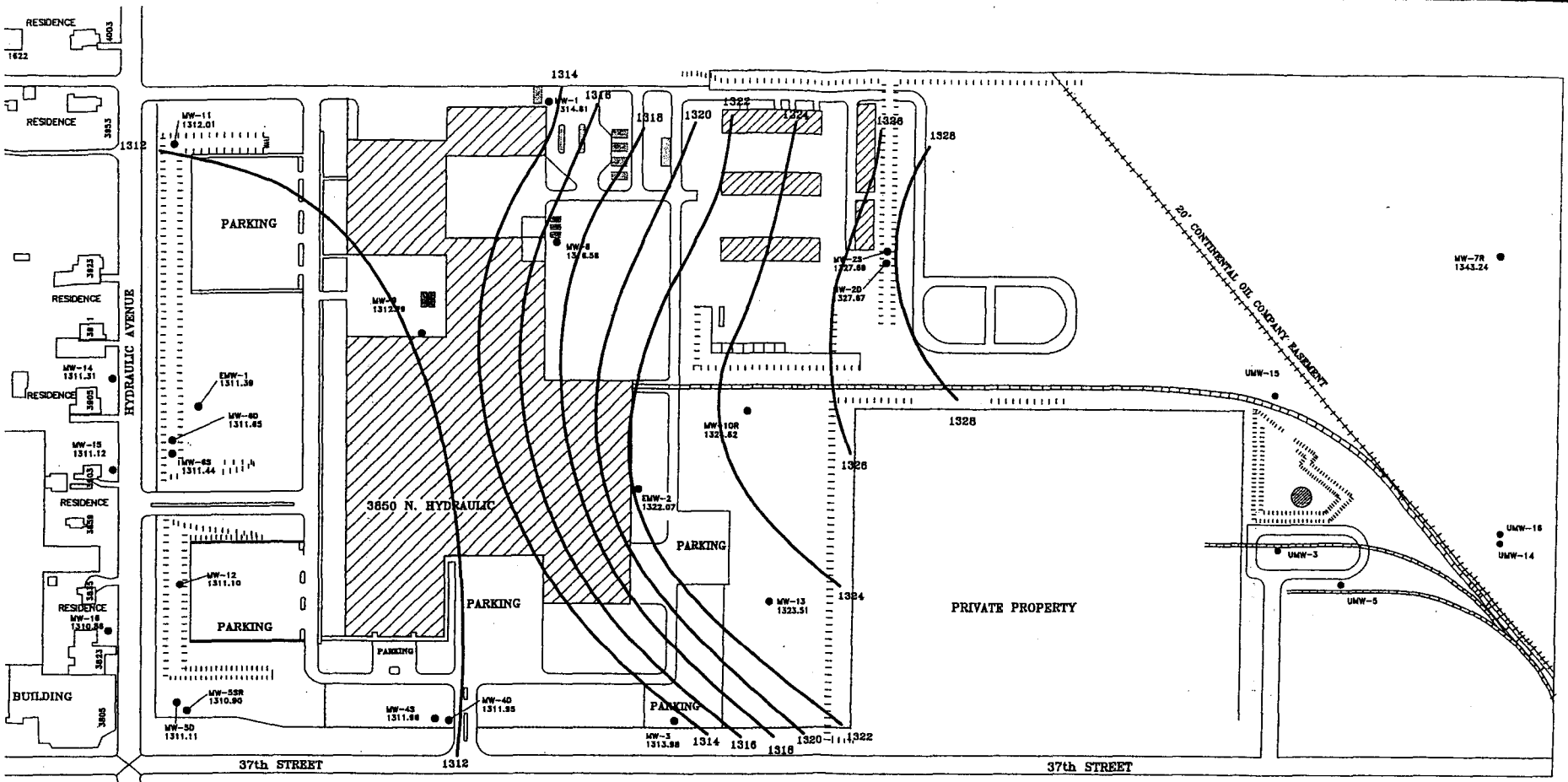
200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE
POTENTIOMETRIC SURFACE MAP
FEBRUARY 1999

DRAWN JTL	DATE MARCH 1999	JOB NO. 973-2209	
CHECKED MRS	SCALE AS SHOWN	DWG. NO. 2209-025	
REVIEWED FMB	FILE NO.	FIGURE NO. 3	



LEGEND

● MW-3 1313.98 WELL LOCATION AND POTENTIOMETRIC ELEVATION (FT. MSL)

NOTE:

1. WATER LEVELS MEASURED JUNE 21, 1999.
2. UNOCAL DATA COLLECTED MARCH 1999.

SCALE IN FEET

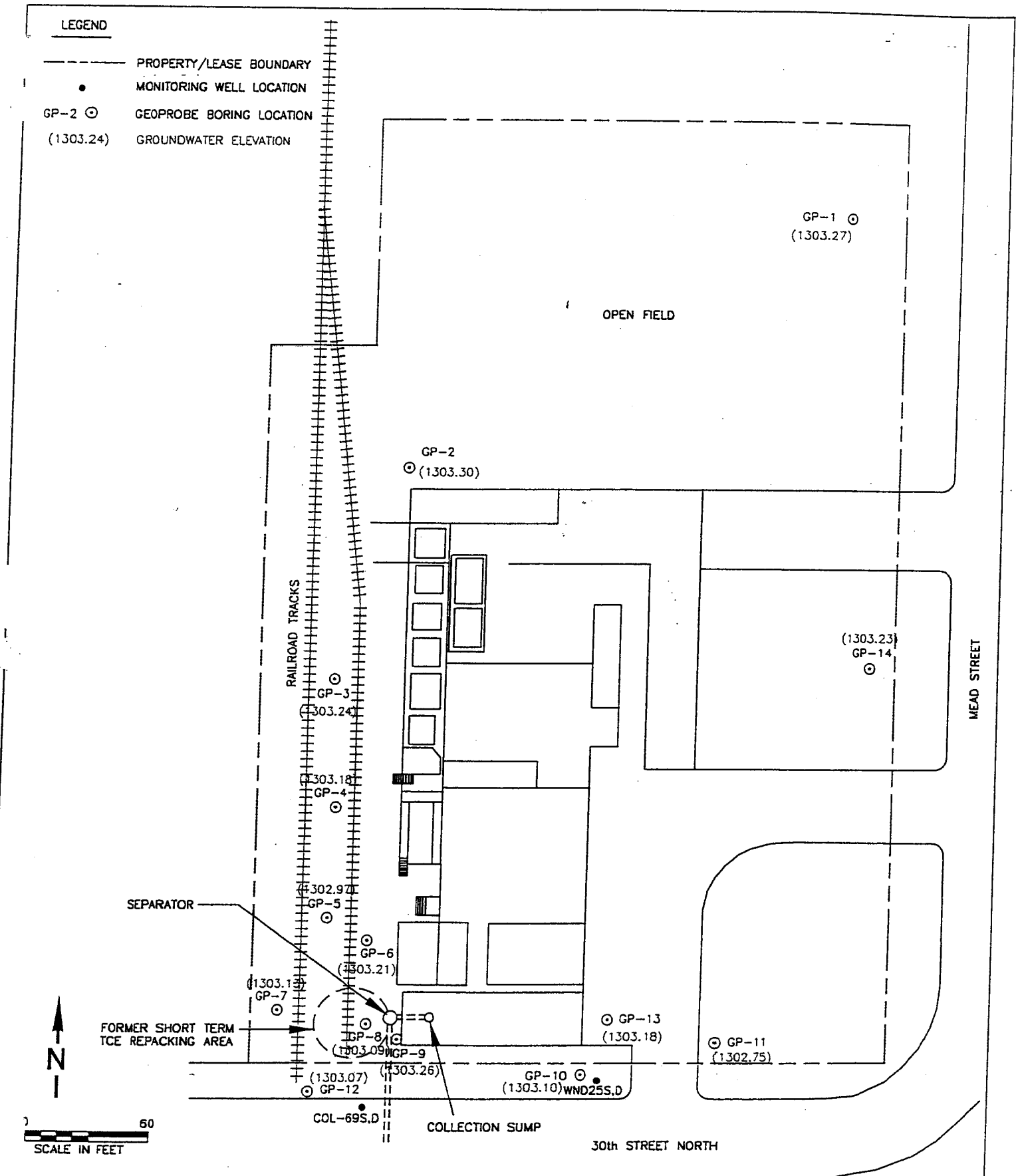
200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE
POTENTIOMETRIC SURFACE MAP
SEPTEMBER 1999

DRAWN ML	DATE NOVEMBER 1999	JOB NO. 973-2209	
CHECKED MRS	SCALE AS SHOWN	DWG. NO. 2209-039	
REVIEWED FMB	FILE NO.	FIGURE NO. 2	

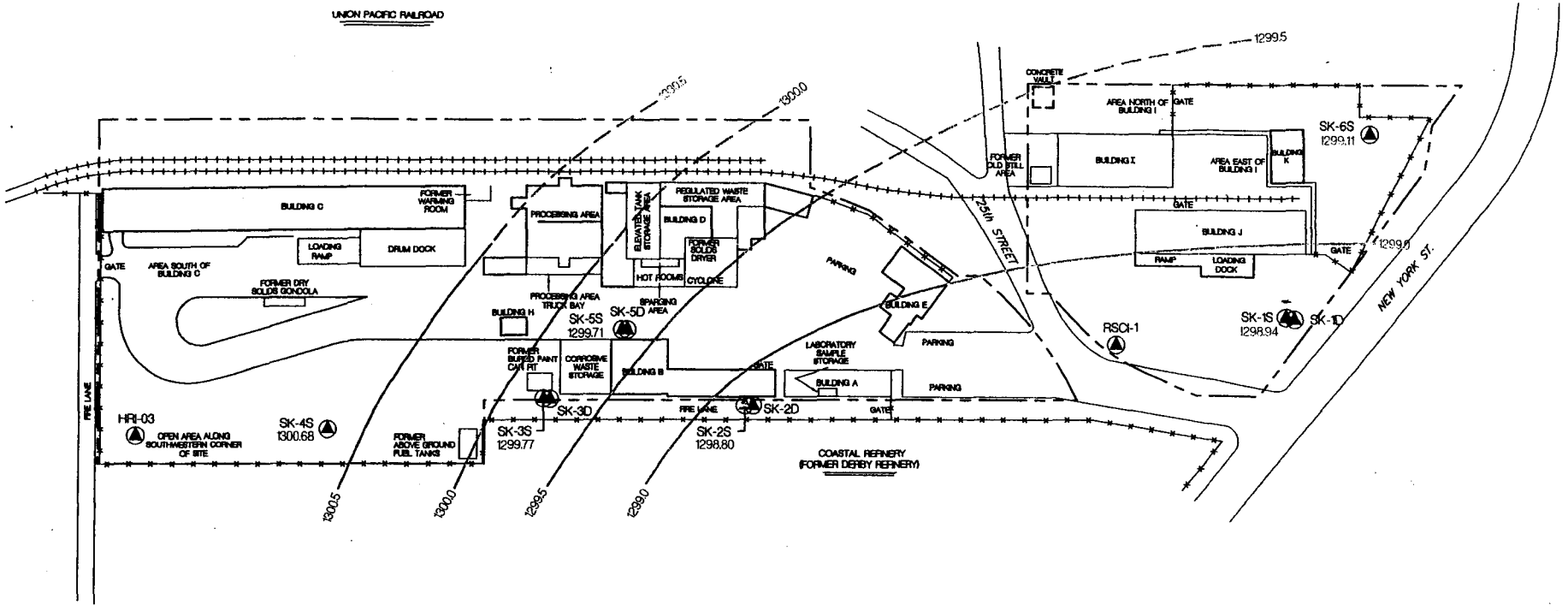


SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS

GROUNDWATER ELEVATION DATA MAP
(SEPTEMBER 2000)

FIGURE
6



LEGEND

- : SWMU Locations
- : AOC Locations
- MONITORING WELL LOCATIONS
- 1300.68 SHALLOW GROUNDWATER ELEVATION (FT. MSL)
- GROUNDWATER ELEVATION CONTOUR

NOTE: SURVEYED TO STATE PLANE COORDINATE SYSTEM
CONTOURS BASED ON SHALLOW GROUNDWATER MEASUREMENTS

North

0 100
FEET

FIGURE 5

BY	DATE
DRAWN CJJ	6-12-01
CHECKED	
APPROVED	
APPROVED	
APPROVED	

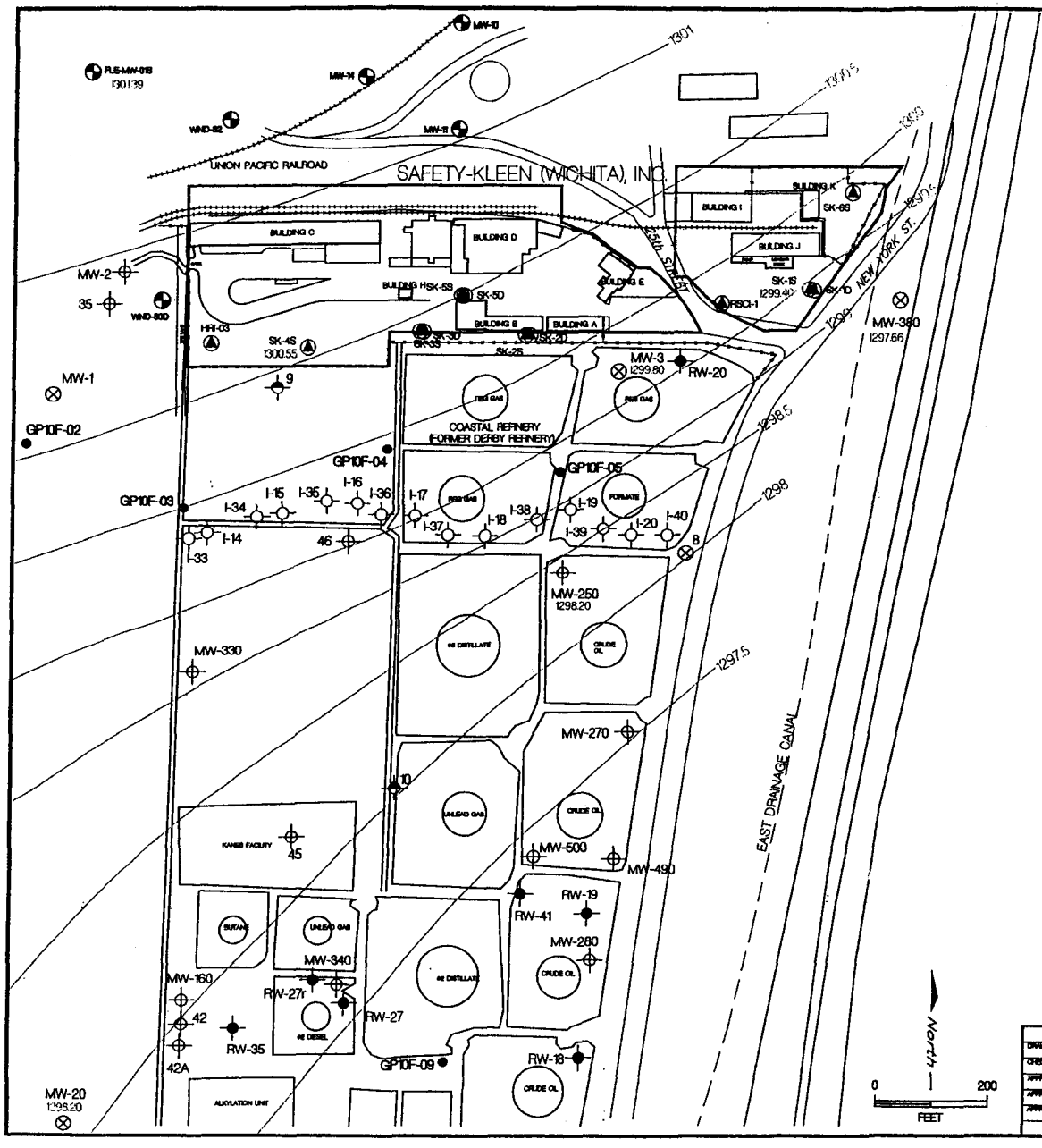
safety-kleen consulting

SAFETY-KLEEN - (WICHITA) FACILITY

CONTOURED GROUNDWATER ELEVATION MAP FOR THE SHALLOW ZONE - OCTOBER 25, 2000

SCALE: 1" = 100'

DWG. NO: 963231-0026



LEGEND

- EXISTING MONITORING WELL LOCATIONS SAFETY-KLEEN WICHITA
- OTHER MONITORING WELLS
- NIC GEORROBE WATER SAMPLE LOCATION
- COASTAL REFINERY MONITORING WELL OR MONITORING WELL/TEST HOLE
- COASTAL REFINERY RECOVERY WELL
- COASTAL REFINERY MISSING MONITORING WELL
- COASTAL REFINERY INJECTION WELL
- COASTAL REFINERY MONITORING WELLS
- SAFETY-KLEEN (WICHITA) INC. FACILITY BOUNDARY
- REGIONAL GROUNDWATER ELEVATION CONTOUR

POTENTIOMETRIC SURFACE AND POSTED WATER LEVEL ELEVATIONS FROM CAMP DRESSER & McKEE (CD&M) FIGURE 1, NORTH INDUSTRIAL CORRIDOR (NIC), SITE POTENTIOMETRIC SURFACE MAP, MARCH 2001

COASTAL REFINERY BASE MAP FROM "COASTAL REFINING AND MARKETING BTEX CONCENTRATION MAP" (2/99) FIGURE 4

	BY	DATE
DRAWN	CJJ	6-12-01
CHECKED		
APPROVED		
APPROVED		
APPROVED		

safety-kleen consulting

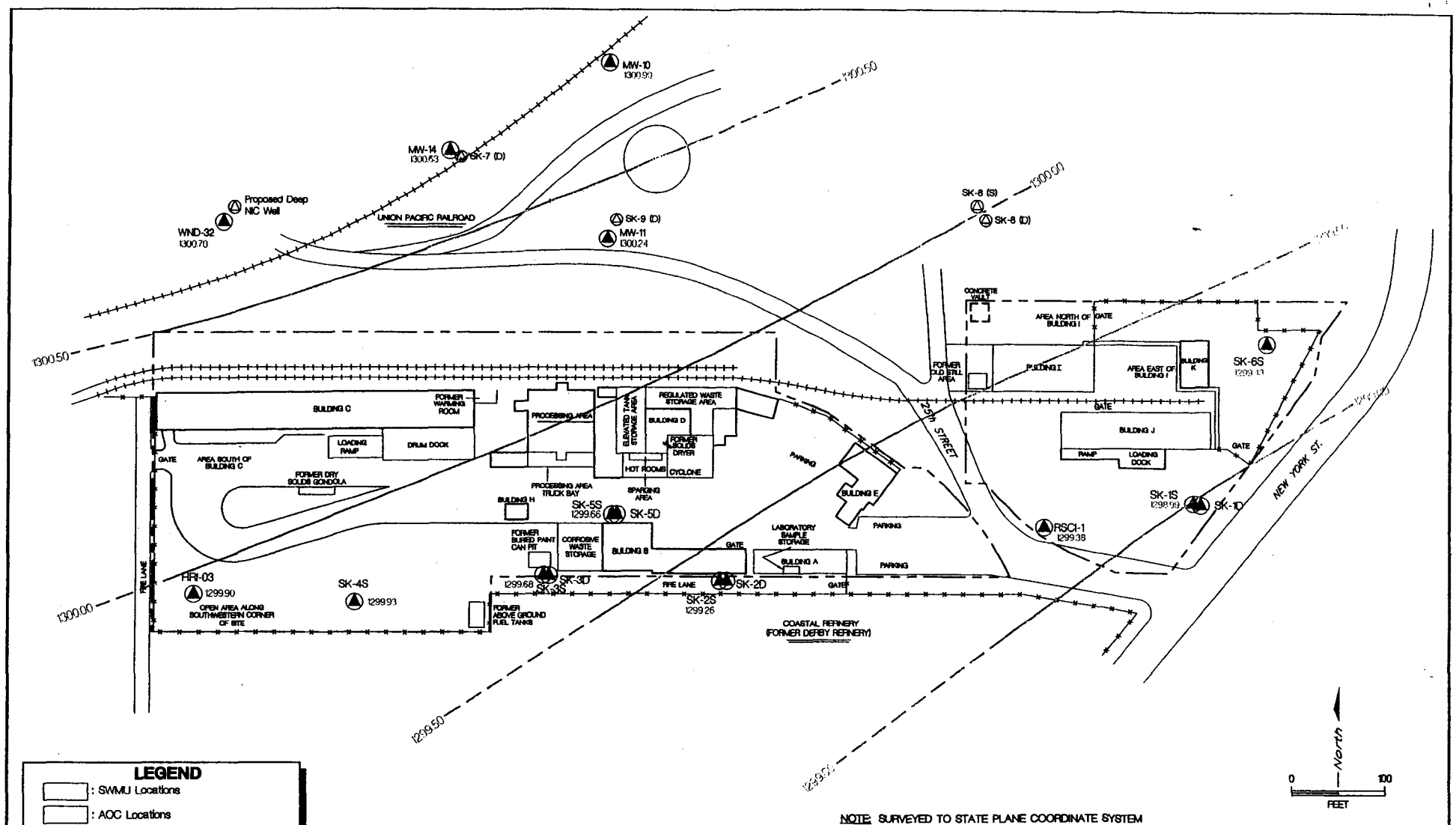
FIGURE 7

SAFETY-KLEEN (WICHITA), INC.

POTENTIOMETRIC SURFACE MAP FROM NIC INVESTIGATION (MARCH 2001)

SCALE: 1" = 200'

DWG. NO: 963231-0039



LEGEND

- : SWMU Locations
- : AOC Locations
- EXISTING MONITORING WELL LOCATIONS
- PROPOSED MONITORING WELLS
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- 1300.70 GROUNDWATER ELEVATION (FT/MSL)

NOTE: SURVEYED TO STATE PLANE COORDINATE SYSTEM

FIGURE 6

	BY	DATE
DRAWN	CJJ	6-11-01
CHECKED		
APPROVED		
APPROVED		
APPROVED		

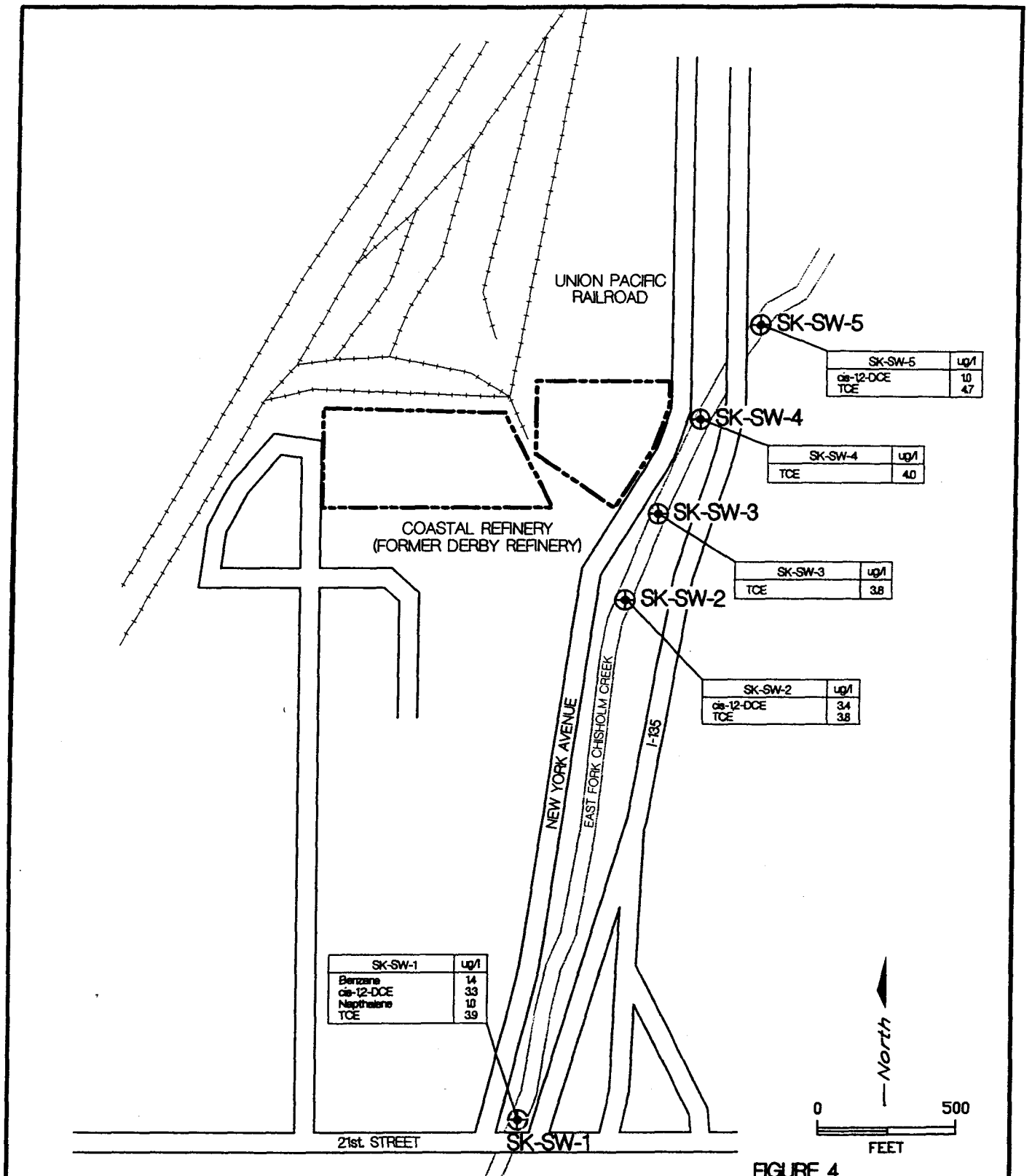
safety-kleen consulting

SAFETY-KLEEN - (WICHITA) FACILITY

CONTOURED GROUNDWATER ELEVATION MAP FOR THE SHALLOW ZONE - APRIL 25, 2001

SCALE: 1" = 100'

DWG. NO: 963231-0036



SK-SW-5	ug/l
cis-12-DCE	1.0
TCE	4.7

SK-SW-4	ug/l
TCE	4.0

SK-SW-3	ug/l
TCE	3.8

SK-SW-2	ug/l
cis-12-DCE	3.4
TCE	3.8

SK-SW-1	ug/l
Benzene	14
cis-12-DCE	33
Napthalene	1.0
TCE	3.9

FIGURE 4

LEGEND

APPROXIMATE SAFETY-KLEEN FACILITY LOCATION

PROPOSED SURFACE WATER SAMPLE LOCATION

safety-kleen consulting

SAFETY-KLEEN (WICHITA) FACILITY

SURFACE WATER SAMPLE LOCATIONS WITH VOC CONCENTRATIONS (4/25/01)

WICHITA, KANSAS

SCALE: 1" = 500'

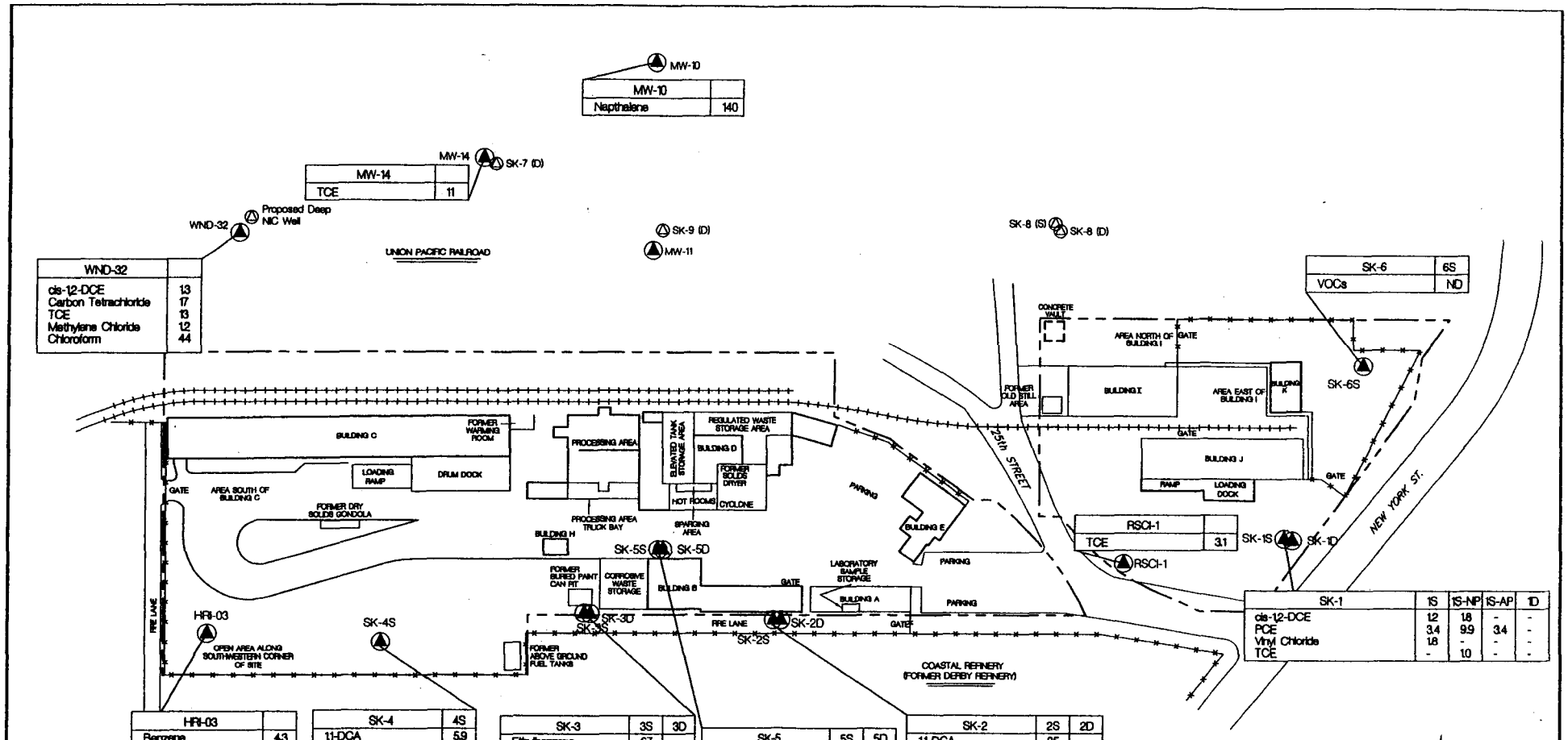
DATE: 6-11-01

963231-0034

Table 1
Fluid Levels
RCRA Facility Investigation
Safety-Kleen (Wichita) Facility

Well ID	Date of Installation	Survey Coordinates Northing	Survey Coordinates Easting	TOC Elevation	Rim Elevation (ft-msl)	Casing Diameter (inches)	Screened Interval (ft below TOC)	Oct-00 DTW (ft)	Oct-00 GW Elevation (ft-msl)	Apr-01 DTW (ft)	Apr-01 GW Elevation (ft-msl)
SK-1D	10/23/00	1701433.03	1654158.09	1315.61	1315.87	2.00	33.5-38.5	15.65	1299.96	16.09	1299.52
SK-1S	10/23/00	1701435.13	1654150.42	1315.43	1315.66	2.00	11.5-26.58	16.49	1298.94	16.44	1298.99
SK-2D	10/23/00	1701352.84	1653651.39	1313.47	1313.75	2.00	32.75-37.75	14.62	1298.85	14.16	1299.31
SK-2S	10/24/00	1701352.32	1653643.20	1313.51	1313.81	2.00	10.75-25.75	14.71	1298.80	14.25	1299.26
SK-3D	10/24/00	1701358.20	1653459.78	1313.37	1313.67	2.00	32.7-39.7	13.25	1300.12	13.85	1299.52
SK-3S	10/23/00	1701358.64	1653453.58	1313.33	1313.67	2.00	9.5-24.5	13.56	1299.77	13.65	1299.68
SK-4S	10/23/00	1701330.43	1653252.27	1312.80	1313.03	2.00	6.75-21.75	12.12	1300.68	12.87	1299.93
SK-5D	10/24/00	1701423.85	1653532.62	1313.65	1313.96	2.00	32.25-37.25	14.21	1299.44	13.98	1299.67
SK-5S	10/24/00	1701423.92	1653527.32	1313.49	1314.03	2.00	8.5-23.5	13.78	1299.71	13.83	1299.66
SK-6S	10/23/00	1701608.68	1654227.91	1316.98	1317.25	2.00	11.75-26.75	17.87	1299.11	17.55	1299.43
RSCI-1	NA	1701409.55	1653990.47	1315.49	1315.87	4.00	NA	NM	NM	16.11	1299.38
HRI-03	NA	1701323.78	1653072.28	1312.46	1312.53	2.00	NA	NM	NM	12.56	1299.90
WND-32	7/31/91	1701737.09	1653110.92	1318.20	1318.75	4.00	14.00-24.00	NM	NM	17.50	1300.70
MW-10	5/19/94	1701907.56	1653522.30	1318.11	1318.64	2.00	13.50-23.50	NM	NM	17.21	1300.90
MW-11	5/19/94	1701719.78	1653520.73	1316.57	1316.89	2.00	14.00-24.00	NM	NM	16.33	1300.24
MW-14	10/5/94	1701812.20	1653352.03	1317.74	1317.90	2.00	14.60-24.60	NM	NM	17.11	1300.63

DTW = Depth to Water
NA - Not Available
NM - Not Measured
ft-msl = elevation in feet above mean sea level
TOC = Top of Casing
Survey in State Plane Coordinate System



MW-10	
Napthalene	140

MW-14	
TCE	11

WND-32	
cis-1,2-DCE	13
Carbon Tetrachloride	17
TCE	13
Methylene Chloride	12
Chloroform	44

SK-6	6S
VOCs	ND

RSCI-1	
TCE	3.1

SK-1	1S	1S-NP	1S-AP	1D
cis-1,2-DCE	1.2	1.8	-	-
PCE	3.4	9.9	3.4	-
Vinyl Chloride	1.8	-	-	-
TCE	-	1.0	-	-

HRI-03	
Benzene	4.3
cis-1,2-DCE	13
Carbon Tetrachloride	7
TCE	95
PCE	11
Chloroform	2.6

SK-4	4S
1,1-DCA	5.9
cis-1,2-DCE	17
1,1,1-TCA	2.4
TCE	18
PCE	110
1,1-DCE	5.9

SK-3	3S	3D
Ethylbenzene	67	-
cis-1,2-DCE	-	12
n-Propylbenzene	20	-
TCE	46	90
PCE	11	-
Toluene	200	-
1,2,4-Trimethylbenzene	130	-
1,3,5-Trimethylbenzene	35	-
m-Xylene & p-Xylene	230	-
o-Xylene	88	-

SK-5	5S	5D
1,1-DCA	2.4	-
cis-1,2-DCE	37	25
1,1,1-TCA	5.9	-
TCE	22	180
PCE	46	-
1,1-DCE	1.2	-

SK-2	2S	2D
1,1-DCA	35	-
cis-1,2-DCE	730	42
1,1,1-TCA	150	-
TCE	390	270
PCE	600	-
1,3-Dichlorobenzene	23	-
Napthalene	29	-
1,2,3-Trichlorobenzene	26	-
1,2,4-Trichlorobenzene	22	-

LEGEND

- : SWMU Locations
- : AOC Locations
- EXISTING MONITORING WELL LOCATIONS
- PROPOSED MONITORING WELLS

NOTES: Sample 1S-NP is a discrete interval sample collected before purging the well at 18.5 feet below ground surface (bgs).

Sample 1S-AP is a discrete sample collected after purging the well at 18.5 feet below ground surface (bgs).

NOTE: SURVEYED TO STATE PLANE COORDINATE SYSTEM

FIGURE 8

	BY	DATE
DRAWN	C.U	6-07-01
CHECKED		
APPROVED		
APPROVED		
APPROVED		

safety-kleen consulting

SAFETY-KLEEN - (WICHITA) FACILITY

GROUNDWATER VOC CONCENTRATIONS (ug/l)

APRIL 25, 2001

SCALE: 1" = 100'

DWG. NO: 963231-0035

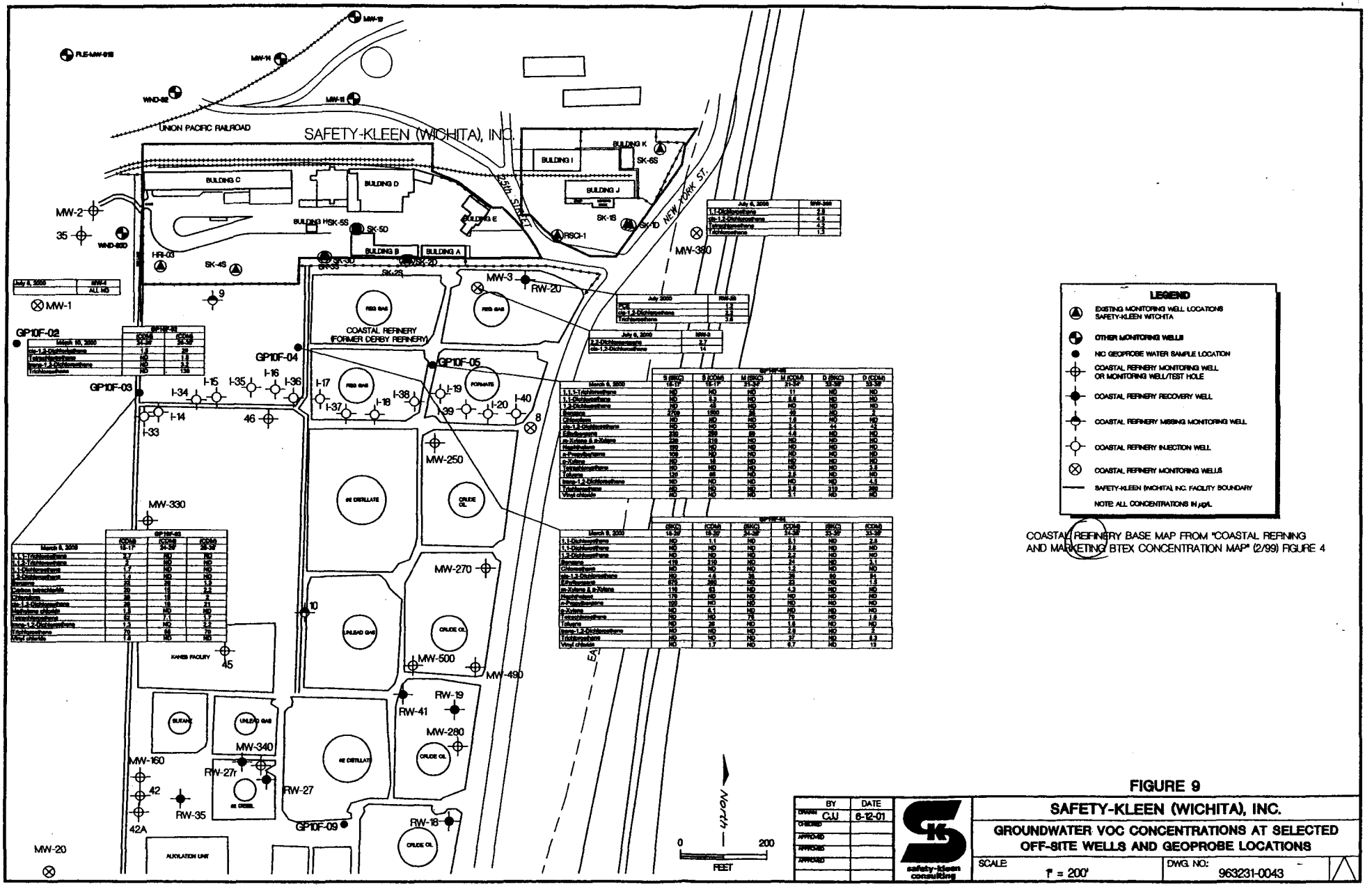

SAFETY-KLEEN (WICHITA), INC.
UNION PACIFIC RAILROAD
BUILDING C
BUILDING D
BUILDING E
BUILDING H
BUILDING I
BUILDING J
BUILDING K
BUILDING B
BUILDING A
SK-5S
SK-5D
SK-4S
SK-6S
SK-1S
SK-1D
RSCI-1
HR-03
MW-1
MW-2
MW-3
MW-330
MW-380
MW-250
MW-270
MW-500
MW-490
MW-280
MW-340
MW-160
MW-20
RW-20
RW-19
RW-41
RW-18
RW-27
RW-27r
RW-35
GP10F-02
GP10F-03
GP10F-04
GP10F-05
GP10F-09
COASTAL REFINERY (FORMER DERBY REFINERY)
RES GAS
FORMATE
HE DISTILLATE
CRUDE OIL
UNLEAD GAS
BUTANE
HE DIESEL
KANEB FACILITY
AUXILIATION UNIT
25th STREET
NEW YORK ST.
EAST
North
0
200
FEET
LEGEND
EXISTING MONITORING WELL LOCATIONS SAFETY-KLEEN WITCHITA
OTHER MONITORING WELLS
NIC GEOPROBE WATER SAMPLE LOCATION
COASTAL REFINERY MONITORING WELL OR MONITORING WELL/TEST HOLE
COASTAL REFINERY RECOVERY WELL
COASTAL REFINERY MISSING MONITORING WELL
COASTAL REFINERY INJECTION WELL
COASTAL REFINERY MONITORING WELLS
SAFETY-KLEEN (WICHITA) INC. FACILITY BOUNDARY
NOTE: ALL CONCENTRATIONS IN µg/L
COASTAL REFINERY BASE MAP FROM "COASTAL REFINING AND MARKETING BTEX CONCENTRATION MAP" (2/99) FIGURE 4
FIGURE 9
SAFETY-KLEEN (WICHITA), INC.
GROUNDWATER VOC CONCENTRATIONS AT SELECTED OFF-SITE WELLS AND GEOPROBE LOCATIONS
BY
DATE
DRAWN C.J.J
6-12-01
CHECKED
APPROVED
APPROVED
APPROVED
safety-kleen consulting
SCALE 1" = 200'
DWG. NO: 963231-0043

Table 2
Soil Analytical Results
November 1999
Safety-Kleen (Wichita) Facility

				B-1		B-2	B-3		B-4			B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12
				4"	16'	4"	3'	16'	4"	16'[1]	16' Dup[1]	4"	4"	4"	4"	4"	4"	4"	3'
Parameters		Practical Quantitation Limit	Test Method																
Percent Moisture	%	0.5	D 2216-90	22.1	3.5	18.7	21	18.2	15.5	8.4	7.2	20.1	17.6	20.6	24	16.5	18.2	29.6	20.9
Corrosivity	No Units	1	9040B	7.2	--	6.8	6.8	--	6.8	7.6	7.6	6.6	5.9	6.2	6.3	6.5	6.4	6.1	6.8
RCRA Metals																			
Arsenic	mg/kg	30	6010B	--	NA	--	--	NA	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	20	6010B	221	NA	198	207	NA	171	--	--	180	155	158	238	192	223	189	234
Cadmium	mg/kg	0.5	6010B	--	NA	--	--	NA	0.63	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	1	6010B	25.7	NA	19.8	20.2	NA	24.9	2.3	2.4	21.2	21.7	22.8	24.9	22.4	19.6	20.7	25.1
Lead	mg/kg	10	6010B	17.1	NA	15.7	12.3	NA	101	--	--	15.1	13.9	10	31	25.1	13.7	66.9	12.8
Mercury	mg/kg	0.1	7471A	--	NA	--	--	NA	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	1	6010B	--	NA	--	--	NA	--	--	--	--	--	--	1	--	--	--	--
Organic Constituents																			
VOCs																			
1,1,1-Trichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	55,000**	14,000	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	15,000	3,600	--	--	--	--	--	--	--	--
Chlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichlorethene	ug/kg	2.5	8260B	--	--	--	--	--	43	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	ug/kg	25	8260B	--	--	--	--	--	--	3,100	800	--	--	--	--	--	--	--	--
Isopropylbenzene	ug/kg	1000	8260B	--	--	--	--	--	--	1,000	--	--	--	--	--	--	--	--	--
Methylene chloride	ug/kg	5	8260B	--	--	--	--	5.4	5	--	--	--	--	--	--	--	--	--	--
m-Xylene & p-Xylene	ug/kg	5	8260B	--	--	--	--	--	--	16,000	3,900	--	--	--	--	--	--	--	--
n-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	4600@	1200@	--	--	--	--	--	--	--	--
n-Propylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	5,900	1,400	--	--	--	--	--	--	--	--
o-Xylene	ug/kg	2.5	8260B	--	--	--	--	--	--	6,600	1,500	--	--	--	--	--	--	--	--
p-Isopropyltoluene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	ug/kg	5	8260B	--	--	6.2	--	8.1	--	--	--	--	12	--	51	11	31	72	--
Toluene	ug/kg	25	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	ug/kg	2.5	8260B	--	--	--	--	--	4.4	--	--	--	--	--	--	--	--	--	--
Trichloroethene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	ug/kg	10	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	5	8260B	--	NA	NA	NA	NA	NA	12,000	4,800	--	--	--	--	--	--	--	--
SVOCs																			
bis(2-Ethylhexyl) phthalate	ug/kg	330	8270C	--	NA	NA	NA	NA	NA	NA	NA	--	1,100	--	--	--	--	--	NA
Dimethyl phthalate	ug/kg	3300	8270C	--	NA	NA	NA	NA	NA	NA	NA	--	--	--	--	--	--	--	NA
Pesticides																			
4,4'-DDE	ug/kg	17	8081A	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
Diesel																			
Diesel Range Organics	ug/kg	1700	8015B	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Elevated detection limits due to dilution of sa -- Not detected

* - Laboratory Data Qualifier B = Analyte also NA = Not Analyzed

** - Laboratory Data Qualifier = Sample was diluted due to elevated concentration levels

@ = Biased high due to a coeluting isomer.

N/A = None Available

Table 2
Soil Analytical Results
November 1999
Safety-Kleen (Wichita) Facility

				B-13		B-14	B-15	B-16	B-17	B-18		B-19		B-20			B-21		B-22		
				3'[†]	12'	4"	3'	3'	3'[†]	3'	3' Dup	3'[†]	13'	3'	3' Dup[†]	16'	3'[†]	12'[†]	3'	3' Dup	16'
Parameters		Practical Quantitation Limit	Test Method																		
Percent Moisture	%	0.5	D 2216-90	18.8	13.5	14.3	18.9	24	21	18.9	15.9	8.4	20.4	20.4	21.2	19	9.5	17.6	19.8	21.1	21.9
Corrosivity	No Units	1	9040B	5.5	--	6.3	6.1	6.2	6.1	5.8	6.6	7.6	--	6.6	6.4	--	7.7	--	7.4	7.1	--
RCRA Metals																					
Arsenic	mg/kg	30	6010B	--	NA	--	--	--	--	--	--	--	NA	--	--	--	--	NA	--	--	NA
Barium	mg/kg	20	6010B	181	NA	143	115	166	95	181	166	219	NA	148	152	NA	154	NA	184	157	NA
Cadmium	mg/kg	0.5	6010B	--	NA	--	--	--	--	--	--	--	NA	--	--	NA	--	NA	--	--	NA
Chromium	mg/kg	1	6010B	19	NA	23.3	20.4	20.1	20.3	21	18.8	20.8	NA	18.7	18.9	NA	15.1	NA	21.8	20.1	NA
Lead	mg/kg	10	6010B	15.5	NA	11.6	11.5	1,560	146	12.1	10.5	68.4	NA	13.6	10.7	NA	12.9	NA	10.2	26.2	NA
Mercury	mg/kg	0.1	7471A	--	NA	--	--	--	--	--	--	--	NA	--	--	NA	--	NA	--	--	NA
Silver	mg/kg	1	6010B	--	NA	--	--	--	2.4	--	--	--	NA	--	--	NA	--	NA	--	--	NA
Organic Constituents																					
VOCs																					
1,1,1-Trichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	67	--	--	31	--	--	--	--	--	--
1,2,4-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	ug/kg	2.5	8260B	--	--	--	--	--	--	--	--	--	--	10	120	--	--	28	26	18	21
Ethylbenzene	ug/kg	25	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	ug/kg	1000	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	ug/kg	5	8260B	28*	--	5*	--	--	--	--	5.2*	--	5.1*	--	--	--	--	26*	5.5	--	--
m-Xylene & p-Xylene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	ug/kg	2.5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Isopropyltoluene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	ug/kg	5	8260B	800	35	--	--	--	--	--	--	--	24	24	480	12	6,800	490	95	48	40
Toluene	ug/kg	25	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	ug/kg	2.5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	ug/kg	5	8260B	--	--	--	--	52	--	--	--	--	--	5.7	120	--	--	85	72	44	19
Vinyl Chloride	ug/kg	10	8260B	--	--	--	--	--	--	--	--	34	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																					
bis(2-Ethylhexyl) phthalate	ug/kg	330	8270C	NA	NA	NA	NA	NA	--	--	1000	9400	NA	--	--	NA	24,000	NA	NA	NA	NA
Dimethyl phthalate	ug/kg	3300	8270C	NA	NA	NA	NA	NA	--	--	--	8400	NA	--	--	NA	--	NA	NA	NA	NA
Pesticides																					
4,4'-DDE	ug/kg	17	8081A	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA	NA	NA	NA	NA	NA
Diesel																					
Diesel Range Organics	ug/kg	1700	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA	NA	NA	NA	NA	NA

Notes:
[†] Elevated detection limits due to dilution of sa
* - Laboratory Data Qualifier B = Analyte also
** - Laboratory Data Qualifier = Sample was d
@ = Biased high due to a coeluting isomer
N/A = None Available

Table 2
Soil Analytical Results
November 1999
Safety-Kleen (Wichita) Facility

				B-23			B-24		B-25		B-26	B-27		B-28	B-29		B-30		B-31
				3'	8'	8' Dup	0-3"[1]	6'	11'	15'	10'	3'	15'	4"	4"	13'	4"	16'	5'
Parameters		Practical Quantitation Limit	Test Method																
Percent Moisture	%	0.5	D 2216-90	21.9	17	22.3	10.8	14.5	19.1	12.6	18.5	18.3	7.2	26.7	5.6	10.4	5.5	16	18.6
Corrosivity	No Units	1	9040B	6.7	--	--	7.4	7.7	7.3	--	7.6	6.4	--	7.1	8.5	--	7.4	--	7.3
RCRA Metals																			
Arsenic	mg/kg	30	6010B	--	NA	NA	49.2	--	--	NA	--	--	NA	--	--	NA	--	--	--
Barium	mg/kg	20	6010B	202	NA	NA	44.1	150	63.9	NA	103	314	NA	232	134	NA	110	NA	305
Cadmium	mg/kg	0.5	6010B	--	NA	NA	46.8	--	--	NA	--	--	NA	--	--	NA	37.3	NA	--
Chromium	mg/kg	1	6010B	21.3	NA	NA	33.7	15	8.1	NA	11.7	22.8	NA	25.9	14.5	NA	39.7	NA	17.4
Lead	mg/kg	10	6010B	46.6	NA	NA	392	--	--	NA	--	12.6	NA	13.8	10.1	NA	319	NA	20.9
Mercury	mg/kg	0.1	7471A	--	NA	NA	0.27	--	--	NA	--	--	NA	--	0.77	NA	0.11	NA	--
Silver	mg/kg	1	6010B	--	NA	NA	--	--	--	NA	--	1.4	NA	--	--	NA	--	NA	1.1
Organic Constituents																			
VOCs																			
1,1,1-Trichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	93
1,2-Dichlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21
1,3,5-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35
Chlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichlorethene	ug/kg	2.5	8260B	78	--	7.3	--	--	--	--	--	--	--	--	--	--	11	18	--
Ethylbenzene	ug/kg	25	8260B	--	--	--	440	--	--	6.5	--	--	--	--	--	--	--	--	8.5
Isopropylbenzene	ug/kg	1000	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--
m-Xylene & p-Xylene	ug/kg	5	8260B	--	--	--	700	23	--	32	--	--	14	--	--	--	--	--	50
n-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25@
n-Propylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7
o-Xylene	ug/kg	2.5	8260B	--	--	--	560	7.3	--	12	--	--	8.3	--	--	--	--	--	24
p-Isopropyltoluene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.6
sec-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
Tetrachloroethene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	35	7.6	--	--	--	38	27	110
Toluene	ug/kg	25	8260B	--	--	--	56	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	ug/kg	2.5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28	--
Vinyl Chloride	ug/kg	10	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	37
SVOCs																			
bis(2-Ethylhexyl) phthalate	ug/kg	330	8270C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/kg	3300	8270C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides																			
4,4'-DDE	ug/kg	17	8081A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	NA	NA
Diesel																			
Diesel Range Organics	ug/kg	1700	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Elevated detection limits due to dilution of sa

* - Laboratory Data Qualifier B = Analyte also

** - Laboratory Data Qualifier = Sample was d

@ = Biased high due to a coeluting isomer

N/A = None Available

Table 2
Soil Analytical Results
November 1999
Safety-Kleen (Wichita) Facility

				B-32	B-33		B-34	B-35		B-36	B-37	B-38	B-39	B-40		B-41	B-42	B-43	B-44	
				0-3"	0-3'	15'	0-3'	6'[1]	13'	3'	3'	3'	4"	4"[1]	16'	4"	4"	4"	11'	15'
Parameters		Practical Quantitation Limit	Test Method																	
Percent Moisture	%	0.5	D 2216-90	22.3	20.7	8.4	22.8	13.2	20.3	24.2	21.7	23.2	11.1	14.6	7.8	13.9	18.4	23.4	11.9	3.4
Corrosivity	No Units	1	9040B	7	6.8	--	6.7	7.1	--	7.4	6.5	7.8	7.8	7.2	--	6.9	7.4	6.4	6.9	--
RCRA Metals																				
Arsenic	mg/kg	30	6010B	--	--	NA	--	--	NA	--	--	--	--	--	NA	--	--	--	--	NA
Barium	mg/kg	20	6010B	189	319	NA	191	67.9	NA	163	172	98.4	86.5	344	NA	369	185	202	38.4	NA
Cadmium	mg/kg	0.5	6010B	--	--	NA	--	--	NA	--	--	--	0.69	3.3	NA	1.6	--	--	--	NA
Chromium	mg/kg	1	6010B	21.1	21.4	NA	21.6	11.8	NA	18.7	22.8	10.3	17	91.7	NA	60.4	19.7	24.5	12	NA
Lead	mg/kg	10	6010B	15	20.3	NA	12.2	296	NA	--	15.6	25.8	19.8	7800	NA	320	16.6	15	--	NA
Mercury	mg/kg	0.1	7471A	--	--	NA	--	--	NA	--	--	--	--	0.23	NA	0.16	--	--	0.4	NA
Silver	mg/kg	1	6010B	1	1.1	NA	--	--	NA	--	--	--	--	3	NA	1.4	--	1	--	NA
Organic Constituents																				
VOCs																				
1,1,1-Trichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--
1,1-Dichloroethane	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	5.9	--	--	--
1,2-Dichlorobenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	25	--	--	--
Chlorobenzene	ug/kg	5	8260B	--	--	--	--	1,200**	5.6	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichlorethene	ug/kg	2.5	8260B	4.6	3	--	3	--	--	3	12	--	8.4	--	--	--	--	--	--	--
Ethylbenzene	ug/kg	25	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	8.7	--	--	--
Isopropylbenzene	ug/kg	1000	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	5.7*	--	--	--	--	--	--
m-Xylene & p-Xylene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--
n-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	ug/kg	2.5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	80	--	--	--
p-Isopropyltoluene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	ug/kg	5	8260B	16	110	--	9.4	--	--	--	--	--	--	9.7	9.2	25	13	--	--	--
Toluene	ug/kg	25	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	7.6	--	--	--
trans-1,2-Dichloroethene	ug/kg	2.5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	ug/kg	5	8260B	6.6	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	ug/kg	10	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/kg	5	8260B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs																				
bis(2-Ethylhexyl) phthalate	ug/kg	330	8270C	--	NA	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA	NA
Dimethyl phthalate	ug/kg	3300	8270C	--	NA	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	NA	NA
Pesticides																				
4,4'-DDE	ug/kg	17	8081A	--	--	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel																				
Diesel Range Organics	ug/kg	1700	8015B	--	NA	NA	NA	NA	NA	2100	--	--	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Elevated detection limits due to dilution of sa

* - Laboratory Data Qualifier B = Analyte also

** - Laboratory Data Qualifier = Sample was d

@ = Biased high due to a coeluting isomer.

N/A = None Available

Table 3
Proposed Soil Sampling Depths and Analyses
RCRA Facility Investigation
Safety-Kleen (Wichita) Facility

Boring ID	Location Description or Associated Potential Source Area	Proposed Sampling Depths			Proposed Soil Sample Analyses	
		Ground Surface (0-6 inches)	3 to 5 feet Default	Just Above Water Table	VOCs	Inorganics
B-45	Building C Loading Ramp		X	X	X	
B-46	Building C Loading Ramp		X	X	X	
B-47	Building C Loading Ramp		X	X	X	
B-48	South of Processing Area		X	X	X	
B-49	South of Processing Area		X	X	X	
B-50	South of Processing Area		X	X	X	
B-51	Former Paint Can Burial Pit		X	X	X	
B-52	Former Paint Can Burial Pit		X	X	X	
B-53	East of Buildings J and K		X	X	X	
B-54	East of Buildings J and K		X	X	X	
B-55	East of Buildings J and K		X	X	X	
B-56	Southwest Backfilled Area		X	X	X	
B-57	Southwest Backfilled Area		X	X	X	
B-58	Southwest Backfilled Area		X	X	X	
B-59	Spur Between Bldgs. I & J		X	X	X	
B-60	Spur Between Bldgs. I & J	X	X	X	X	X
B-61	Far Northeast Corner of Facility	X	X	X		X
B-62	Far Northeast Corner of Facility	X	X	X		X
B-63	Far Northeast Corner of Facility	X	X	X		X
B-64	Rail Spur Along North Property Boundary	X	X	X		X
B-65	Rail Spur Along North Property Boundary	X	X	X		X
B-66	Rail Spur Along North Property Boundary	X	X	X		X
B-67	Rail Spur Along North Property Boundary	X	X	X		X

Table 4
Groundwater Analytical Results for Detected Volatile Organic Compounds
October 2000
Safety-Kleen (Wichita) Facility

Parameter Name	Units	Practical Quantitation Limit	SK-1S	SK-1D	SK-2S	SK-2D	SK-2D (DUP)	SK-3S	SK-3D	SK-4S	SK-5S	SK-5D	SK-6S
Dilution Factor			1	1	1	10	10	1	2	10	4	3.3	1
Volatile Organic Compounds													
1,1,1-Trichloroethane	ug/L	< 1.0	-	-	6.3	-	-	1.7	7.0	15.0	-	-	-
1,1-Dichloroethane	ug/L	< 1.0	-	-	2.3	-	-	-	-	-	-	-	1.7
1,1-Dichloroethene	ug/L	< 1.0	-	-	1.2	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	120.0	270.0	-
1,3,5-Trimethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	42.0	86.0	-
Bromodichloromethane	ug/L	< 1.0	-	-	-	-	-	-	2.2	-	-	-	-
Carbon tetrachloride	ug/L	< 1.0	-	-	-	-	-	-	-	-	6.3	-	-
Chlorodibromomethane	ug/L	< 1.0	-	-	-	-	-	-	2.7	-	-	-	-
Chloroform	ug/L	< 1.0	-	-	-	-	-	-	2.5	-	20.0	-	-
cis-1,2-Dichloroethene	ug/L	< 1.0	-	2.2	38.0	58.0	53.0	13.0	18.0	23.0	8.2	10.0	-
Ethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	33.0	33.0	-
Isopropylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	9.2	-
m-Xylene & p-Xylene	ug/L	< 2.0	-	-	-	-	-	-	-	-	120.0	90.0	-
Naphthalene	ug/L	< 1.0	-	-	-	-	-	-	-	-	15.0	26.0	-
n-Butylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	14.0	-
n-Propylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	12.0	40.0	-
o-Xylene	ug/L	< 1.0	-	-	-	-	-	-	-	-	41.0	23.0	-
p-Isopropyltoluene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	6.4	-
Tetrachloroethene	ug/L	< 1.0	1.4	3.2	31.0	20.0	13.0	17.0	66.0	160.0	6.0	-	-
Toluene	ug/L	< 1.0	-	-	-	-	-	-	-	-	54.0	9.9	-
Trichloroethene	ug/L	< 1.0	-	-	19.0	240.0	290.0	7.4	42.0	33.0	63.0	74.0	-

Notes:
NA = Not available
"-" = Results were below reporting limits
Analysis by USEPA SW-846 Method 8260B

Table 5
Groundwater Analytical Results for Detected Volatile Organic Compounds
April 2001
Safety-Kleen (Wichita) Facility

Parameter Name	Units	Practical Quantitation Limit	SK-1S	SK-1S NP	SK-1S AP	SK-1D	SK-2S	SK-2D	SK-3S	SK-3D	SK-3Z (DUP - 3D)	SK-4S	SK-4Z (DUP - 4S)
Sample Date			Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01
Dilution Factor			1			1							
Volatile Organic Compounds													
1,1,1-Trichloroethane	ug/L	< 1.0	-	-	-	-	150.0	-	-	-	-	24.0	24.0
1,1-Dichloroethane	ug/L	< 1.0	-	-	-	-	35.0	-	-	-	-	5.9	-
1,1-Dichloroethene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	5.9	5.6
1,2,3-Trichlorobenzene	ug/L	< 1.0	-	-	-	-	26.0	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	< 1.0	-	-	-	-	22.0	-	-	-	-	-	-
1,2,4-Trimethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	130.0	-	-	-	-
1,3,5-Trimethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	35.0	-	-	-	-
1,3-Dichlorobenzene	ug/L	< 1.0	-	-	-	-	23.0	-	-	-	-	-	-
Benzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	< 1.0	1.2	1.8	-	-	730.0	42.0	-	12.0	13.0	17.0	-
Ethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	67.0	-	-	-	-
Methylene chloride	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-
m-Xylene & p-Xylene	ug/L	< 2.0	-	-	-	-	-	-	230.0	-	-	-	-
Naphthalene	ug/L	< 1.0	-	-	-	-	29.0	-	-	-	-	-	-
n-Propylbenzene	ug/L	< 1.0	-	-	-	-	-	-	20.0	-	-	-	-
o-Xylene	ug/L	< 1.0	-	-	-	-	-	-	88.0	-	-	-	-
Tetrachloroethene	ug/L	< 1.0	3.4	9.9	3.4		600.0	-	11.0	-	2.0	110.0	98.0
Toluene	ug/L	< 1.0	-	-	-	-	-	-	200.0	-	-	-	-
Trichloroethene	ug/L	< 1.0	-	1.0	-	-	390.0	270.0	46.0	90.0	94.0	18.0	17.0
Vinyl chloride	ug/L	< 1.0	1.8	-	-	-	-	-	-	-	-	-	-

Notes:
NA = Not available
"-" = Results were below reporting limits
Analysis by USEPA SW-846 Method 8260B

Table 5
Groundwater Analytical Results for Detected Volatile Organic Compounds
April 2001
Safety-Kleen (Wichita) Facility

Parameter Name	Units	Practical Quantitation Limit	SK-5S	SK-5D	SK-6S	SK-SW-1	SK-SW-2	SK-SW-3	SK-SW-5	RSCI-1	HRI-03	UPMW-10	UPMW-11	UPMW-14	WND-32
Sample Date			Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01	Apr-01
Dilution Factor					1										
Volatile Organic Compounds															
1,1,1-Trichloroethane	ug/L	< 1.0	5.9	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	< 1.0	2.4	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	< 1.0	1.2	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	< 1.0	-	-	-	1.4	-	-	-	-	4.3	-	-	-	-
Carbon tetrachloride	ug/L	< 1.0	-	-	-	-	-	-	-	-	7.0	-	-	-	17.0
Chloroform	ug/L	< 1.0	-	-	-	-	-	-	-	-	2.6	-	-	-	44.0
cis-1,2-Dichloroethene	ug/L	< 1.0	37.0	25.0	-	3.3	3.4	-	1.0	-	13.0	-	-	-	1.3
Ethylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	1.2
m-Xylene & p-Xylene	ug/L	< 2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/L	< 1.0	-	-	-	1.0	-	-	-	-	-	140.0	-	-	-
n-Propylbenzene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	ug/L	< 1.0	46.0	-	-	-	-	-	-	-	11.0	-	-	-	-
Toluene	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	< 1.0	22.0	180.0	-	3.9	3.8	3.8	4.7	3.1	95.0	-	-	11.0	13.0
Vinyl chloride	ug/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
NA = Not available
"-" = Results were below reporting limits
Analysis by USEPA SW-846 Method 8260B

Table 6
Groundwater Analytical Results for Detected Inorganic Parameters
October 2000
Safety-Kleen (Wichita) Facility

Parameter Name	Units	Method	SK-1S	SK-1D	SK-2S	SK-2D	SK-2D (DUP)	SK-3S	SK-3D	SK-4S	SK-5S	SK-5D	SK-6S
Inorganics													
Alkalinity, Bicarbonate	mg/L	310.1	252.0	238.0	445.0	325.0	NR	353.0	75.0	360.0	274.0	178.0	396.0
Alkalinity, Carbonate	mg/L	310.1	-	-	-	-	-	-	27.9	-	-	-	-
Alkalinity, Total	mg/L	310.1	252.0	238.0	445.0	325.0	NR	353.0	103.0	360.0	274.0	178.0	396.0
Calcium (Dissolved)	mg/L	6010B	116.0	108.0	135.0	141.0	h	128.0	65.5	128.0	102.0	70.1	110.0
Chloride	mg/L	325.2	58.8	84.5	122.0	65.8	NR	98.0	111.0	48.4	50.5	78.7	117.0
Iron (Dissolved)	mg/L	6010B	-	-	-	-	-	-	-	2.2	-	-	-
Iron (Total)	mg/L	6010B	88.2 J	1.5 J	22.7 J	0.84 J	0.84 J	10.1 J	0.60 J	212 J	123 J	2.1 J	121 J
Magnesium (Dissolved)	mg/L	6010B	42.2	42.8	36.9	54.5	55.3	34.2	15.9	38.3	37.0	25.0	41.7
Manganese	mg/L	6010B	1.1	0.6	3.5	1.5	1.5	2.7	0.025 J	6.0	2.1	0.7	5.2
Manganese (Dissolved)	mg/L	6010B	0.1	0.6	3.1	1.6	1.6	2.0	0.11 J	3.2	1.0	0.6	2.8
Methane	ug/L	SOP-175	0.6	2.3	340.0	7.9	4.7	41.0	4.2	200.0	5.0	3.3	180.0
Nitrogen, Nitrate	mg/L	353.2	2.0	2.7	-	3.3	NR	0.8	2.0	0.8	6.3	7.0	-
Potassium (Dissolved)	mg/L	6010B	-	10.1	4.0	4.4	4.5	6.4	7.6	3.3	3.4	5.5	3.4
Sulfate	mg/L	375.4	244.0	296.0	76.0	268.0	NR	163.0	142.0	143.0	153.0	121.0	105.0
Total Dissolved Solids	mg/L	160.1	934.0	906.0	878.0	927.0	NR	810.0	510.0	540.0	796.0	586.0	850.0
Total Organic Carbon	mg/L	415.1	1.2	2.2	3.1	2.2	NR	2.5	3.6	4.2	2.3	2.5	3.3

Notes:
N/A = None available
J = Value estimated due to quality control issues (see Data Validation discussion).
NR=Not Requested

Table 7
Groundwater Analytical Results for Detected Inorganic Parameters
April 2001
Safety-Kleen (Wichita) Facility

Parameter Name	Units	Method	SK-1S	SK-1D	SK-2S	SK-2D	SK-3S	SK-3D	SK-3Z (DUP - 3D)	SK-4S	SK-4Z (DUP - 4S)
Inorganics			**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**
Alkalinity, Bicarbonate	mg/L	310.1	289.0	274.0	428.0	321.0	308.0	265.0	275.0	39.0	386.0
Alkalinity, Total	mg/L	310.1	289.0	274.0	428.0	321.0	308.0	265.0	275.0	383.0	386.0
Ammonia as N	mg/L	350.1	-	-	0.1	-	0.1	-	-	-	0.1
Calcium (Dissolved)	mg/L	6010B	116.0	160.0	145.0	146.0	110.0	109.0	103.0	144.0	143.0
Chloride	mg/L	325.2	69.0	53.3	109.0	65.0	61.5	53.0	53.4	32.0	32.3
Ethane	ug/L	SOP-175	-	-	-	-	-	-	-	-	-
Iron (Dissolved)	mg/L	6010B	-	-	-	-	1.4	-	-	-	-
Iron (Total)	mg/L	6010B	81.4	0.6	216.0	4.7	181.0	8.7	7.1	435.0	495.0
Magnesium (Dissolved)	mg/L	6010B	45.5	62.8	36.9	58.3	39.3	41.2	39.0	37.5	39.2
Manganese	mg/L	6010B	1.7	0.1	7.3	0.8	2.5	0.5	0.5	5.9	6.9
Manganese (Dissolved)	mg/L	6010B	0.9	0.1	3.0	0.7	1.0	0.4	0.3	1.9	1.9
Methane	ug/L	SOP-175	50.0	0.7	200 E	9.9	11.0	0.7	0.6	3.3	3.4
Methane D	ug/L	SOP-175	-	-	160 D	-	-	-	-	-	-
Nitrogen, Nitrate	mg/L	353.2	1.2	2.0	-	3.2	4.8	6.7	6.6	2.4	2.1
Potassium (Dissolved)	mg/L	6010B	-	3.1	3.5	-	3.9	-	-	-	-
Sulfate	mg/L	375.4	261.0	391.0	138.0	316.0	183.0	195.0	174.0	172.0	200.0
Total Dissolved Solids	mg/L	160.1	1230.0	944.0	1090.0	972.0	829.0	736.0	738.0	1040.0	970.0
Total Organic Carbon	mg/L	415.1	1.8	1.2	3.3	1.1	3.9	1.3	1.4	5.9	4.0

Notes:
N/A = None available
J = Value estimated due to quality control issues (see Data Validation discussion).
NR=Not Requested

Table 7
Groundwater Analytical Results for Detected Inorganic Parameters
April 2001
Safety-Kleen (Wichita) Facility

Parameter Name	Units	Method	SK-5S	SK-5D	SK-6S	RSCI-1	HRI-03	UPMW-10	UPMW-11	UPMW-14	WND-32
Inorganics			**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**	**Apr-01**
Alkalinity, Bicarbonate	mg/L	310.1	500.0	299.0	445.0	328.0	298.0	450.0	116.0	459.0	321.0
Alkalinity, Total	mg/L	310.1	500.0	299.0	445.0	328.0	298.0	450.0	116.0	459.0	321.0
Ammonia as N	mg/L	350.1	0.2	-	-	-	-	0.3	0.1	0.4	0.2
Calcium (Dissolved)	mg/L	6010B	136.0	122.0	118.0	135.0	123.0	98.8	287.0	119.0	124.0
Chloride	mg/L	325.2	136.0	54.8	77.4	77.9	60.7	53.3	6.7	51.1	108.0
Ethane	ug/L	SOP-175	-	-	-	-	-	0.8	-	-	-
Iron (Dissolved)	mg/L	6010B	1.2	-	-	-	0.3	1.2	-	6.8	-
Iron (Total)	mg/L	6010B	48.9	1.3	123.0	12.8	4.6	188.0	152.0	285.0	51.8
Magnesium (Dissolved)	mg/L	6010B	37.4	49.1	43.9	53.2	45.4	27.1	19.1	31.1	31.8
Manganese	mg/L	6010B	3.9	0.5	6.2	0.9	1.0	3.8	1.4	5.7	4.9
Manganese (Dissolved)	mg/L	6010B	2.7	0.6	3.0	0.2	0.0	1.1	-	2.8	2.0
Methane	ug/L	SOP-175	210 E	1.2	9.8	0.9	0.8	520 E	1.4	420 E	3.0
Methane D	ug/L	SOP-175	170 D	-	-	-	-	1300 D	-	850 D	-
Nitrogen, Nitrate	mg/L	353.2	-	4.6	1.4	3.4	2.6	-	2.4	-	6.7
Potassium (Dissolved)	mg/L	6010B	4.2	-	3.1	3.5	-	-	3.0	-	5.1
Sulfate	mg/L	375.4	33.5	228.0	107.0	228.0	229.0	10.3	741.0	29.0	164.0
Total Dissolved Solids	mg/L	160.1	928.0	878.0	1020.0	862.0	781.0	592.0	313.0	488.0	693.0
Total Organic Carbon	mg/L	415.1	2.9	1.4	2.7	2.0	3.9	14.6	10.9	12.9	7.4

Notes:
N/A = None available
J = Value estimated due to quality control issues (see
NR=Not Requested

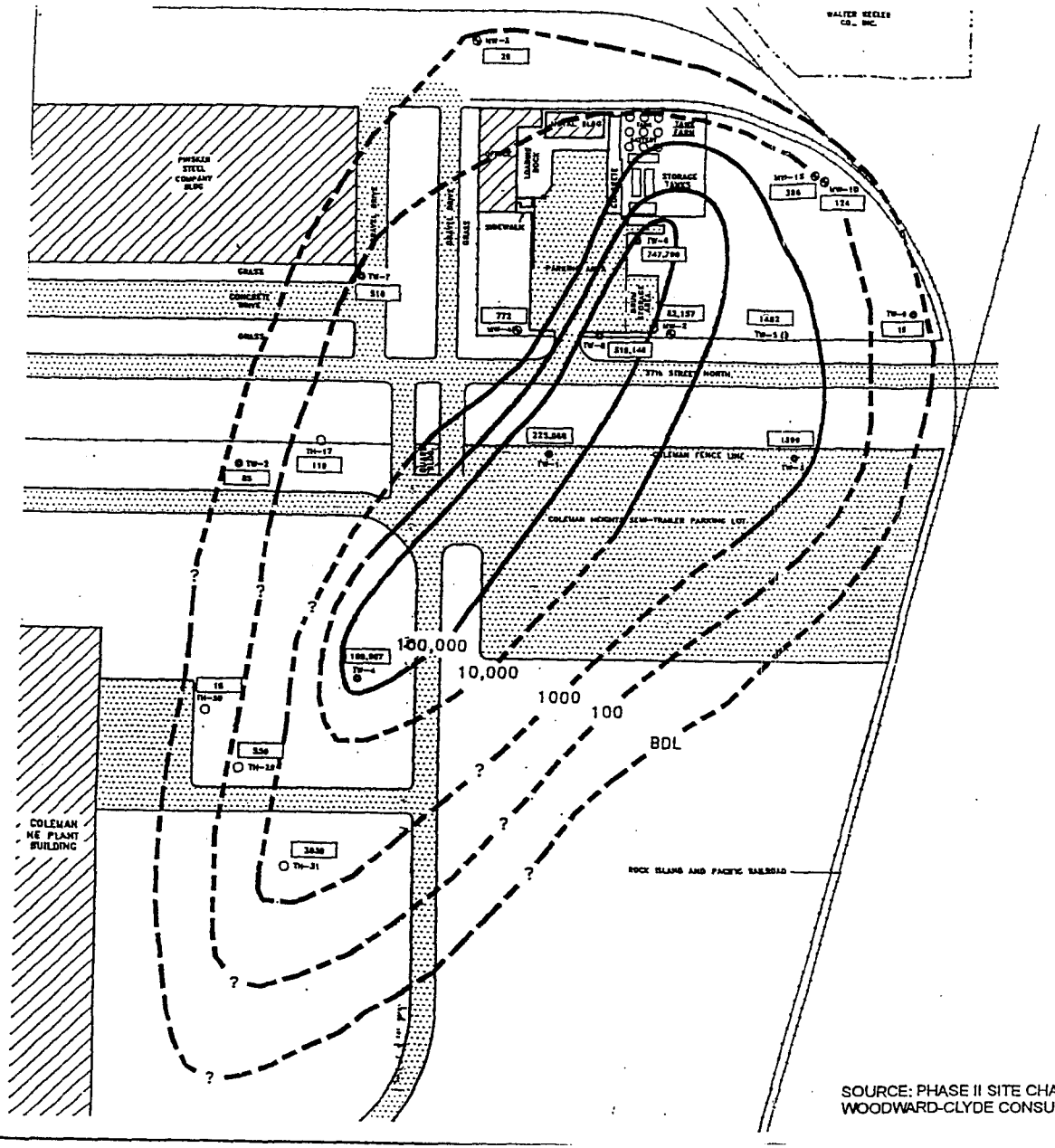
Table 8
Groundwater Analytical Results for Selected Offsite Wells and Geoprobe Locations
Safety-Kleen (Wichita) Facility

Parameter	Units	GP10F-02 March 10, 2000 (CDM) 24-26'	(CDM) 26-35'	GP10F-03 March 9, 2000 (CDM) 15-17'	(CDM) 24-26'	(CDM) 26-36'	GP10F-04 March 9, 2000 (SKC) 18-20'	(CDM) 18-20'	(SKC) 24-26'	(CDM) 24-26'	(SKC) 33-35'	(CDM) 33-35'
1,1,1-Trichloroethane	ug/L	-	-	2.7	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	2	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	1.7	-	-	-	1.1	-	5.1	-	2.8
1,1-Dichloroethene	ug/L	-	-	-	-	-	-	-	-	2.8	-	-
1,2-Dichloroethane	ug/L	-	-	1.4	-	-	-	-	-	2.2	-	-
2,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	-	-	32	26	1.3	410	310	-	24	-	3.1
Carbon tetrachloride	ug/L	-	-	20	15	2.2	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	1.2	-	-
Chloroform	ug/L	-	-	28	15	2	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	1.5	29	26	16	21	-	4.6	36	36	60	54
Ethylbenzene	ug/L	-	-	-	-	-	670	380	-	23	-	1.5
Methylene chloride	ug/L	-	-	1.5	-	-	-	-	-	-	-	-
m-Xylene & p-Xylene	ug/L	-	-	-	-	-	110	63	-	4.3	-	-
Naphthalene	ug/L	-	-	-	-	-	170	-	-	-	-	-
n-Propylbenzene	ug/L	-	-	-	-	-	100	-	-	-	-	-
o-Xylene	ug/L	-	-	-	-	-	-	6.1	-	-	-	-
Tetrachloroethene	ug/L	-	1.8	52	7.1	1.7	-	-	76	70	-	1.6
Toluene	ug/L	-	-	-	-	-	-	28	-	1.8	-	-
trans-1,2-Dichloroethene	ug/L	-	3.2	1.3	-	2.2	-	-	-	2.6	-	2
Trichloroethene	ug/L	-	130	70	68	70	-	-	-	37	-	8.3
Vinyl chloride	ug/L	-	-	1.6	-	-	-	1.7	-	6.7	-	13

Table 8
Groundwater Analytical Results for Selected Offsite Wells and Geoprobe Locations
Safety-Kleen (Wichita) Facility

Parameter	GP10F-05 March 9, 2000 (SKC) 15-17'	(CDM) 15-17'	(SKC) 21-24'	(CDM) 21-24'	(SKC) 32-35'	(CDM) 32-35'	MW-1 July 6, 2000	MW-3 July 6, 2000	MW-380 July 6, 2000	RW-20 July, 2000
1,1,1-Trichloroethane	-	-	-	11	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	5.3	-	8.6	-	-	-	-	2.9	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	45	-	-	-	-	-	-	-	-
2,2-Dichloropropane	-	-	-	-	-	-	-	2.7	-	-
Benzene	2700	1500	38	40	-	2	-	-	-	-
Carbon tetrachloride	-	-	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	-	-	-	-	-	-
Chloroform	-	-	-	1.6	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	2.4	44	42	-	14	4.5	2.2
Ethylbenzene	330	250	59	4.6	-	-	-	-	-	-
Methylene chloride	-	-	-	-	-	-	-	-	-	-
m-Xylene & p-Xylene	230	210	-	-	-	-	-	-	-	-
Naphthalene	190	-	-	-	-	-	-	-	-	-
n-Propylbenzene	100	-	-	-	-	-	-	-	-	-
o-Xylene	-	18	-	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	3.5	-	-	4.2	1.2
Toluene	120	85	-	2.5	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	4.5	-	-	-	-
Trichloroethene	-	-	-	3.9	310	260	-	-	1.3	3.6
Vinyl chloride	-	-	-	3.1	-	-	-	-	-	-

Appendix B-13
UCL - Unocal



NOTES:

1. ISOCONCENTRATION CONTOURS ARE PRESENTED IN LOGORITHMIC SCALE (ug/l).

LEGEND:

- TW-4 = TEMPORARY MONITORING WELL
- MW-4 = MONITORING WELL
- TH-24 = TEST HOLE
- 1000 = ISOCONCENTRATION CONTOURS
- = INFERRED
- 336 = TOTAL VOLATILE ORGANIC COMPOUNDS (ug/l)
- = PERIMETER FENCE
- = WALTER KEELER CO., INC.

SCALE

0 100 200 FEET

SOURCE: PHASE II SITE CHARACTERIZATION REPORT, WOODWARD-CLYDE CONSULTANTS, NOVEMBER 1991.

COMPREHENSIVE RI REPORT

Woodward-Clyde Consultants
Engineering & sciences applied to the earth & its environment
Houston, Texas

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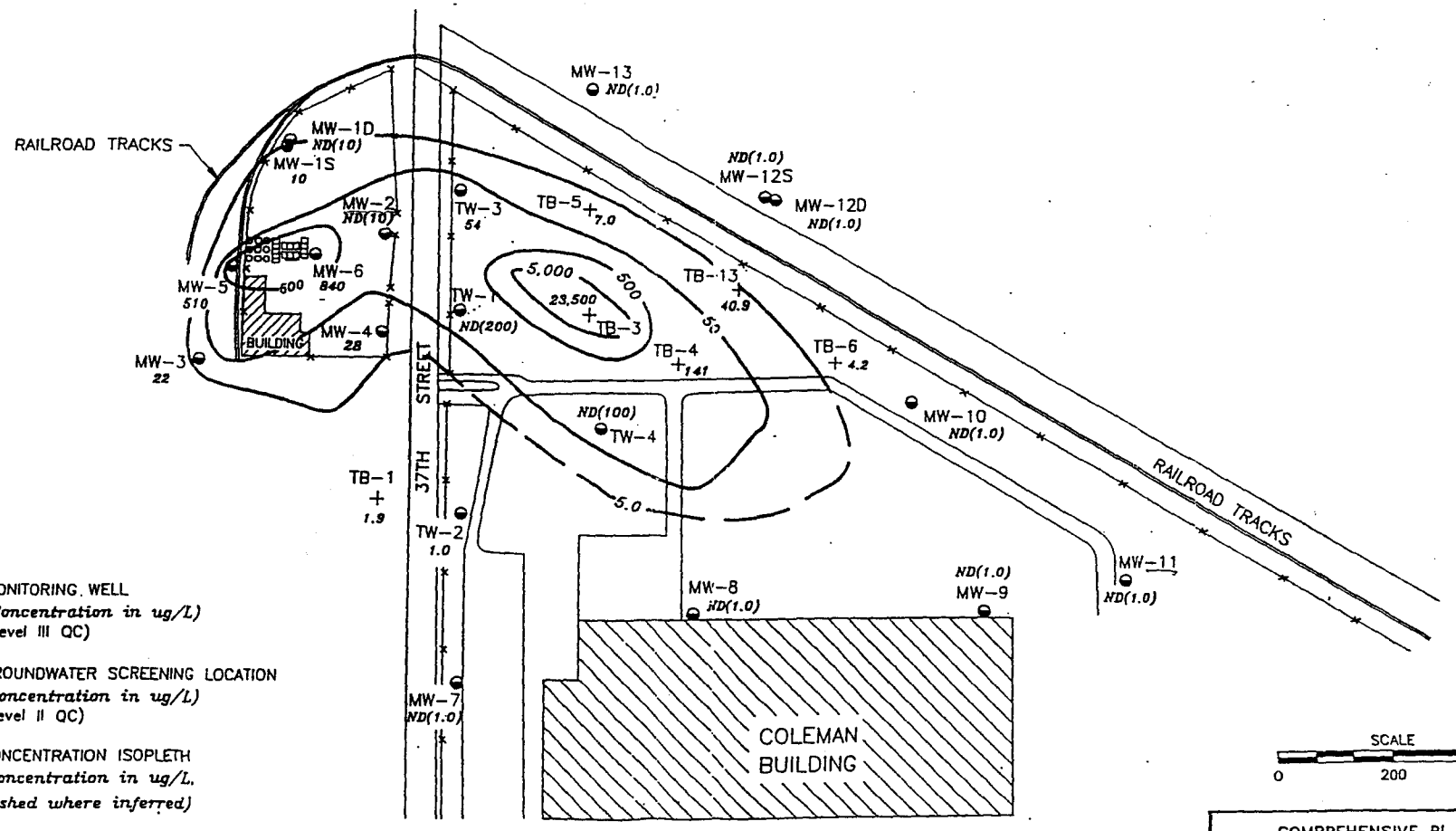
ISOCONCENTRATION CONTOURS OF TOTAL VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER

FIGURE 3-9

Location: HOUSTON, TX. CADD 2. File name: C:\DWG\957235\8000\COMPRITB.DWG Last edited: 06/13/96 @ 10:57



LEGEND

MW-5 840	MONITORING WELL *(Concentration in ug/L)* (Level III QC)
TB-1 1.9	GROUNDWATER SCREENING LOCATION *(Concentration in ug/L)* (Level II QC)
500	CONCENTRATION ISOPLETH *(Concentration in ug/L, dashed where inferred)*
ND(1.0)	NOT DETECTED (Detection Limit)

SOURCE: PHASE I REMEDIAL INVESTIGATION REPORT, MAUDE ENVIRONMENTAL, INC., NOVEMBER 11, 1993.

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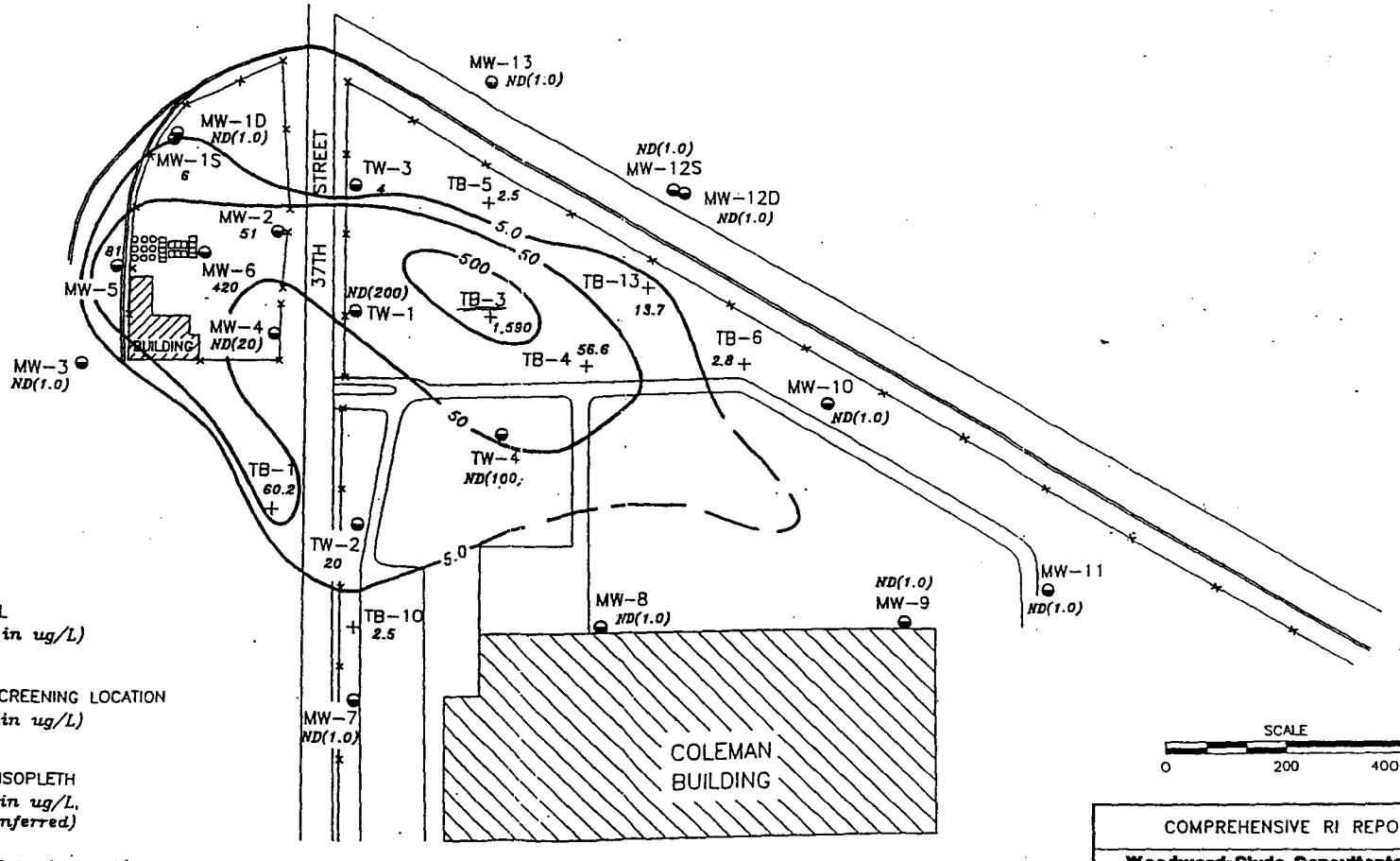
NOTED	CHECKED BY:	DATE:	95T235

TETRACHLOROETHENE CONCENTRATIONS IN GROUNDWATER NOVEMBER 1992

FIGURE 3-13

Location: HOUSTON, TX. CADD 2. File name: C:\DWG\95T235\8000\COMPRITB.DWG Last edited: 06/13/96 @ 10:57



LEGEND

MW-6 420	MONITORING WELL *(Concentration in ug/L)* (Level III QC)
TB-1 60.2 +	GROUNDWATER SCREENING LOCATION *(Concentration in ug/L)* (Level II QC)
5.0	CONCENTRATION ISOPLETH *(Concentration in ug/L, dashed where inferred)*
ND(1.0)	NOT DETECTED (Detection Limit)

SOURCE: PHASE I REMEDIAL INVESTIGATION REPORT, MAUDE ENVIRONMENTAL, INC., NOVEMBER 11, 1993.

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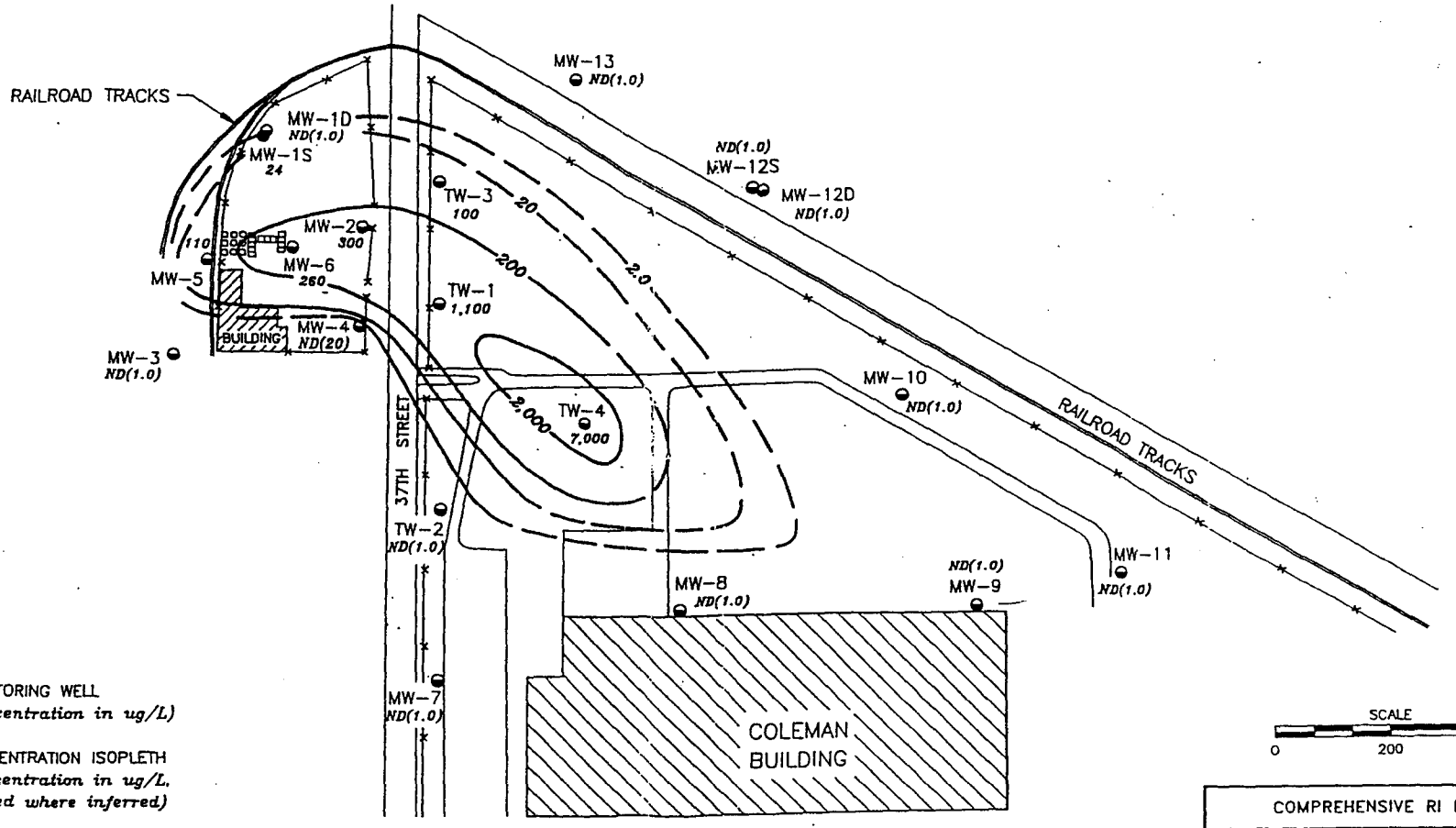
TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER NOVEMBER 1992

FIGURE 3-14

Location: HOUSTON, TX. CADD 2. File name: C:\DWG\95T235\8000\COUPRITB.DWG Last edited: 08/13/96 @ 10:57



LEGEND

MW-6 260 — MONITORING WELL (*Concentration in ug/L*)

20 — CONCENTRATION ISOPLETH (*Concentration in ug/L, dashed where inferred*)

ND(1.0) — NOT DETECTED (Detection Limit)

SOURCE: PHASE I REMEDIAL INVESTIGATION REPORT, MAUDE ENVIRONMENTAL, INC., NOVEMBER 11, 1993.

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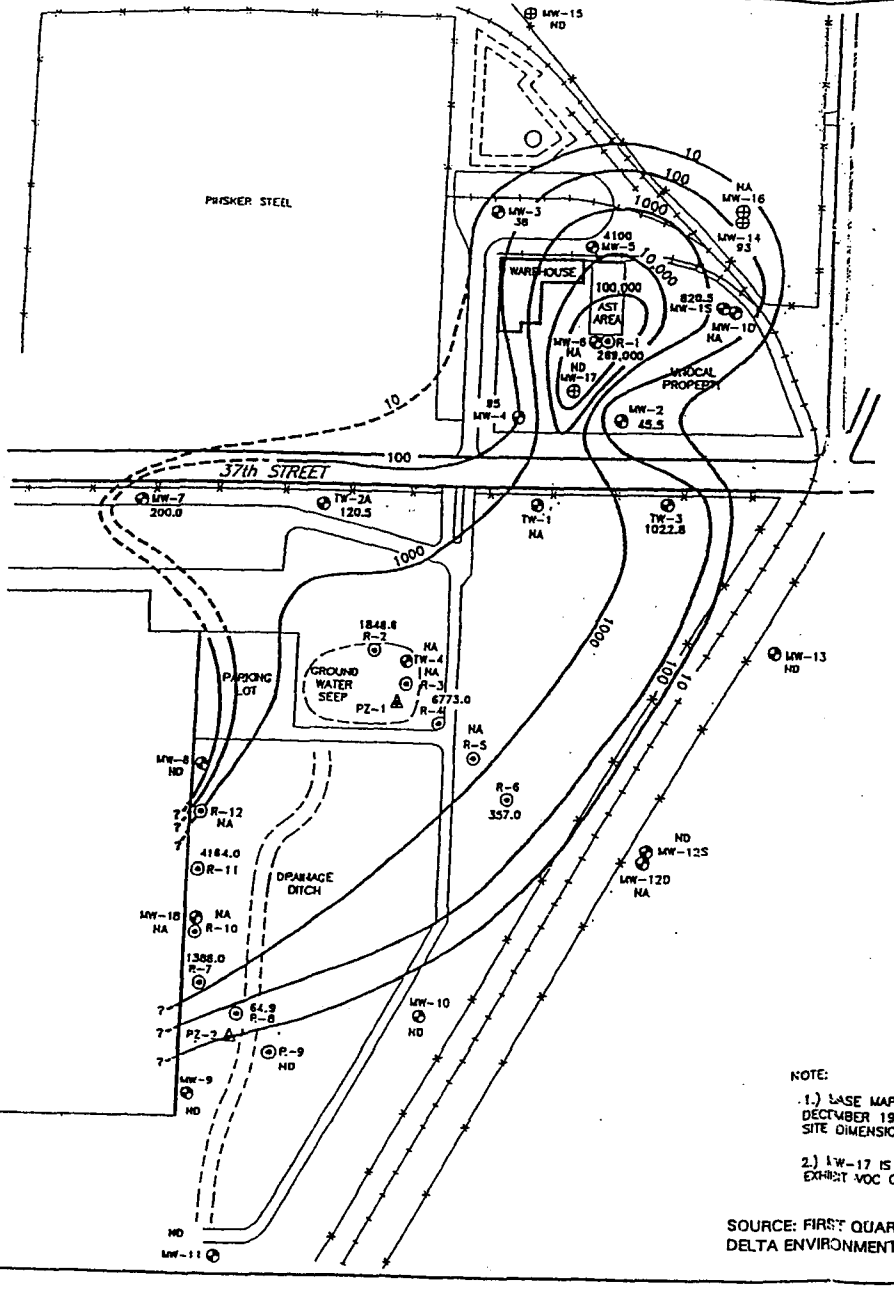
NOTED	CHECKED BY:	DATE: —	95T235

VINYL CHLORIDE CONCENTRATIONS IN GROUNDWATER NOVEMBER 1992

FIGURE 3-15

Location: HOUSTON, TX. CADD 2. File name: C:\DWG\95T235\8000\COMPRITB.DWG Last edited: 06/13/96 @ 10:57



LEGEND:

—×—×—	FENCE
—+—+—	RAILROAD TRACKS
⊕ MW-10	MONITORING WELL LOCATION (INSTALLED PRIOR TO PHASE II RI)
⊕ MW-17	PHASE II RI MONITORING WELL LOCATION
▲ PZ-1	PHASE II RI PIEZOMETER LOCATION
⊙ R-2	IRM EXTRACTION WELL LOCATION
100	ISOCONCENTRATION LINE (DASHED WHERE INFERRED)
1848.6 ⊙ R-2	WELL WITH DEPICTION OF TOTAL VOC CONCENTRATION IN GROUND WATER (UNITS = µg/l)
ND	VOC's NOT DETECTED
NA	NOT ANALYZED

SCALE IN FEET

0 200 400

NOTE:

1.) BASE MAP ADAPTED FROM FIGURE 10 OF CANONIE ENVIRONMENTAL'S DECEMBER 1994 DRAFT OF PHASE II REMEDIAL INVESTIGATION REPORT SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

2.) MW-17 IS A DEEP AQUIFER MONITORING WELL , AND DOES NOT EXHIBIT VOC CONCENTRATIONS.

SOURCE: FIRST QUARTER 1995 GROUNDWATER MONITORING RESULTS, DELTA ENVIRONMENTAL CONSULTANTS, INC., JUNE 8, 1995.

COMPREHENSIVE RI REPORT

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Engineering & sciences applied to the earth & its environment
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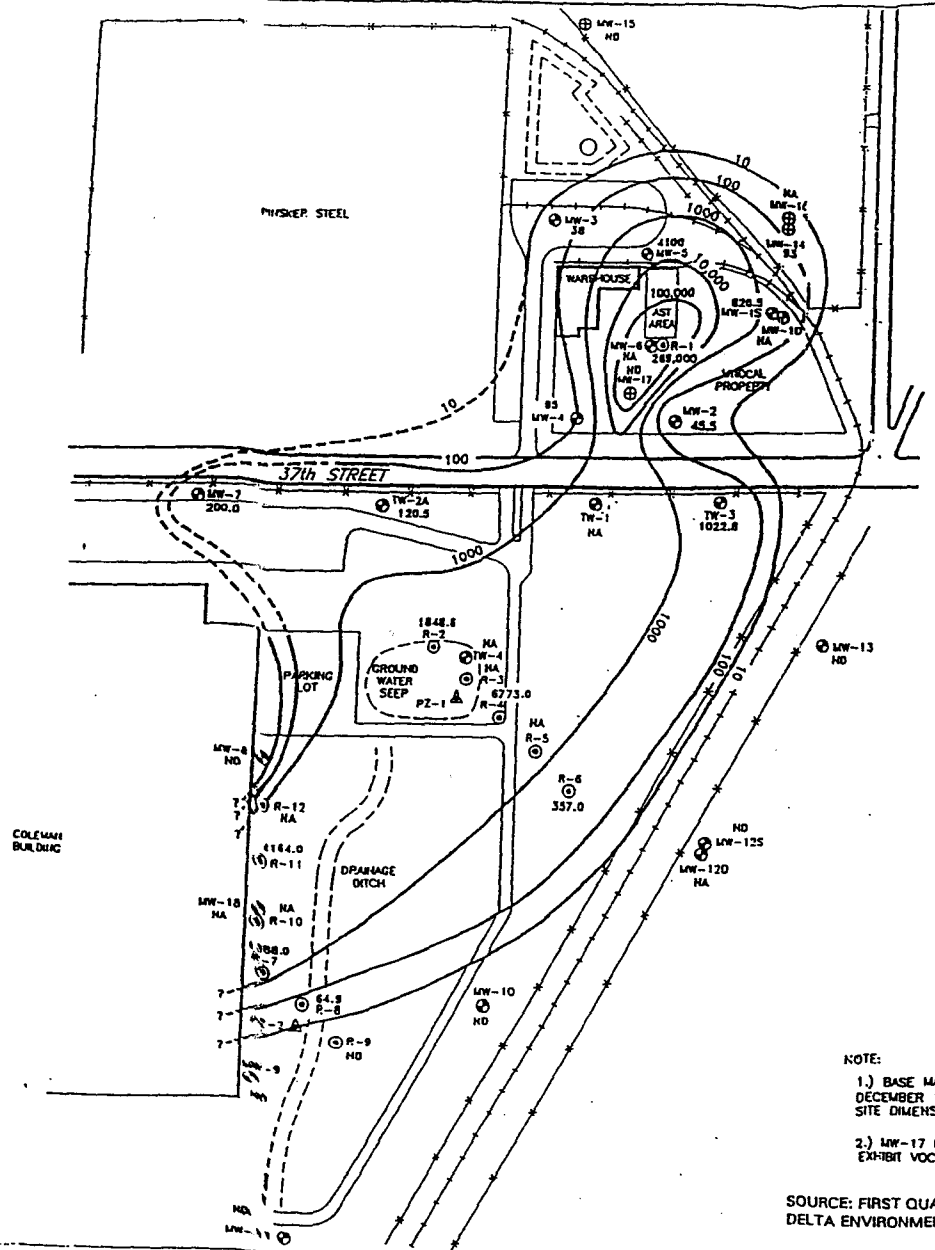
SCALE:	MADE BY: P.R./S.J.	DATE: 6/3/96	FILE NO.
NOTED	CHECKED BY:	DATE:	95T235

TOTAL DETECTED VOLATILE ORGANIC COMPOUNDS GENERALIZED ISOPLETH CONCENTRATION MAP

FIGURE 4-2

Location: HOUSTON, TX, CADD 3, File name: K:\DWG\95T235\4000\COMPRITB.DWG Last edited: 06/13/96 @ 15:37



North

LEGEND:

—x—x—	FENCE
—+—+—	RAILROAD TRACKS
⊗ MW-10	MONITORING WELL LOCATION (INSTALLED PRIOR TO PHASE II RI)
⊕ MW-17	PHASE II RI MONITORING WELL LOCATION
▲ PZ-1	PHASE II RI PIEZOMETER LOCATION
⊙ R-2	IRM EXTRACTION WELL LOCATION
100	ISOCONCENTRATION LINE (DASHED WHERE INFERRED)
1848.6 ⊙ R-2	WELL WITH DEPICTION OF TOTAL VOC CONCENTRATION IN GROUND WATER (UNITS = µg/l)
ND	VOC's NOT DETECTED
NA	NOT ANALYZED

0 200 FT
SCALE

NOTE:

1.) BASE MAP ADAPTED FROM FIGURE 10 OF CANONIE ENVIRONMENTAL'S DECEMBER 1994 DRAFT OF PHASE II REMEDIAL INVESTIGATION REPORT; SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

2.) MW-17 IS A DEEP AQUIFER MONITORING WELL , AND DOES NOT EXHIBIT VOC CONCENTRATIONS.

SOURCE: FIRST QUARTER 1995 GROUNDWATER MONITORING RESULTS, DELTA ENVIRONMENTAL CONSULTANTS, INC., JUNE 8, 1995.

LIMITED JOINT INVESTIGATION REPORT

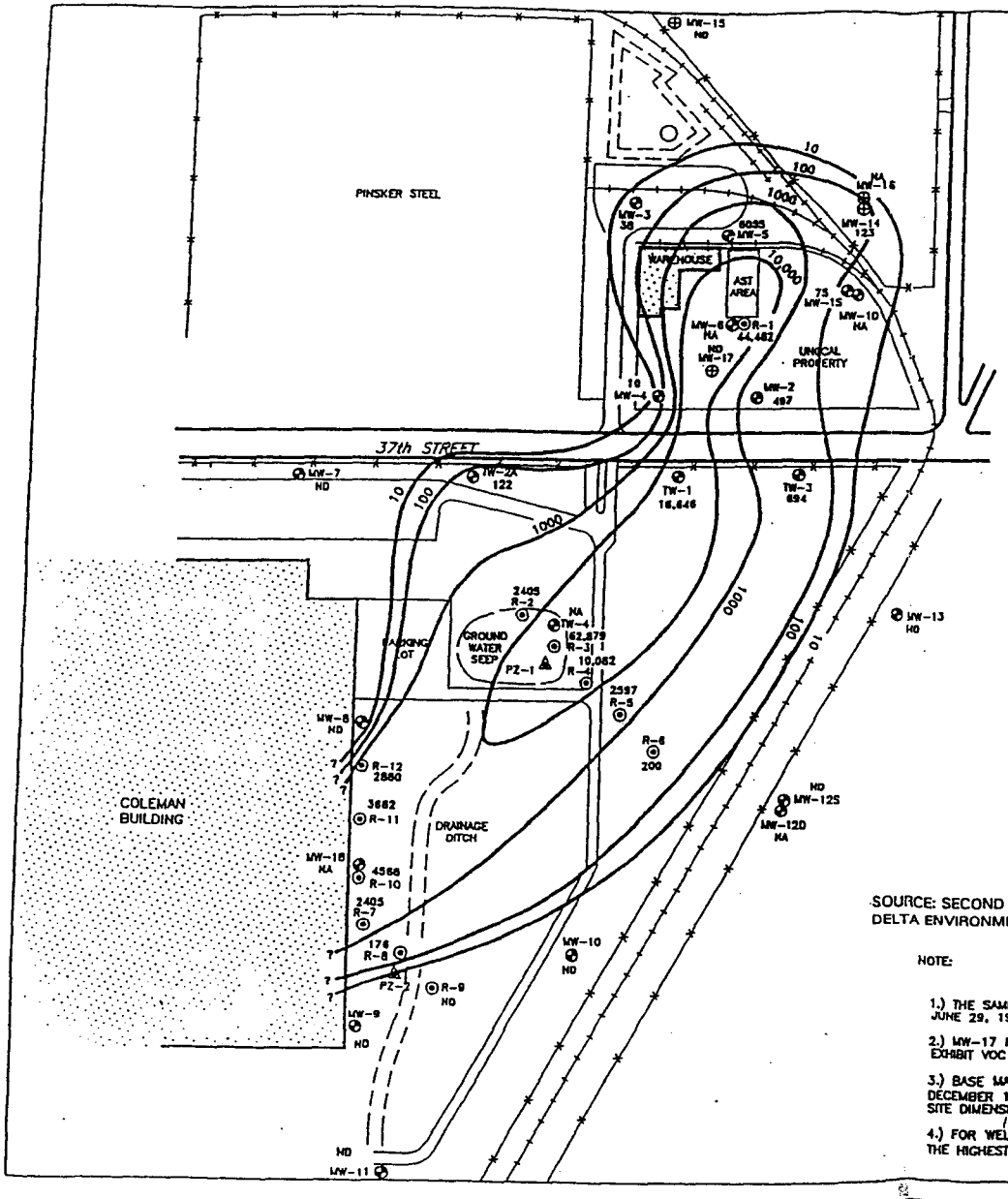
Woodward-Clyde Consultants
Consulting Engineers, Geologists and Environmental Scientists
Baton Rouge, Louisiana

UNOCAL CHEMICAL DIVISION
WICHITA, KANSAS

SCALE:	MADE BY	DATE	FILE NO
as shown	CHECKED BY	DATE	95T235

TOTAL DETECTED VOLATILE ORGANIC COMPOUNDS
GENERALIZED ISOPLETH CONCENTRATION MAP

FIGURE 4-16



LEGEND:

—×—×—	FENCE
—+—+—	RAILROAD TRACKS
⊗ MW-10	MONITORING WELL LOCATION (INSTALLED PRIOR TO PHASE II RI)
⊕ MW-17	PHASE II RI MONITORING WELL LOCATION
▲ PZ-1	PHASE II RI PIEZOMETER LOCATION
⊙ R-2	IRM EXTRACTION WELL LOCATION
100	INFERRED ISOCONCENTRATION LINE
2405 ⊙ R-2	WELL WITH DEPICTION OF TOTAL VOC CONCENTRATION IN GROUND WATER (UNITS = µg/l)
ND	VOC's NOT DETECTED
NA	NOT ANALYZED

0 200 FT
SCALE

SOURCE: SECOND QUARTER 1995 GROUNDWATER MONITORING REPORT, DELTA ENVIRONMENTAL CONSULTANTS, INC., AUGUST 9, 1995.

NOTE:

1.) THE SAMPLES WERE COLLECTED FROM JUNE 21 THROUGH JUNE 29, 1995.

2.) MW-17 IS A DEEP AQUIFER MONITORING WELL , AND DOES NOT EXHIBIT VOC CONCENTRATIONS.

3.) BASE MAP ADAPTED FROM FIGURE 10 OF CANONIE ENVIRONMENTAL'S DECEMBER 1994 DRAFT OF PHASE II REMEDIAL INVESTIGATION REPORT SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

4.) FOR WELLS FROM WHICH DUPLICATE SAMPLES WERE COLLECTED, THE HIGHEST CONCENTRATION FROM BOTH SAMPLES IS SHOWN.

LIMITED JOINT INVESTIGATION REPORT

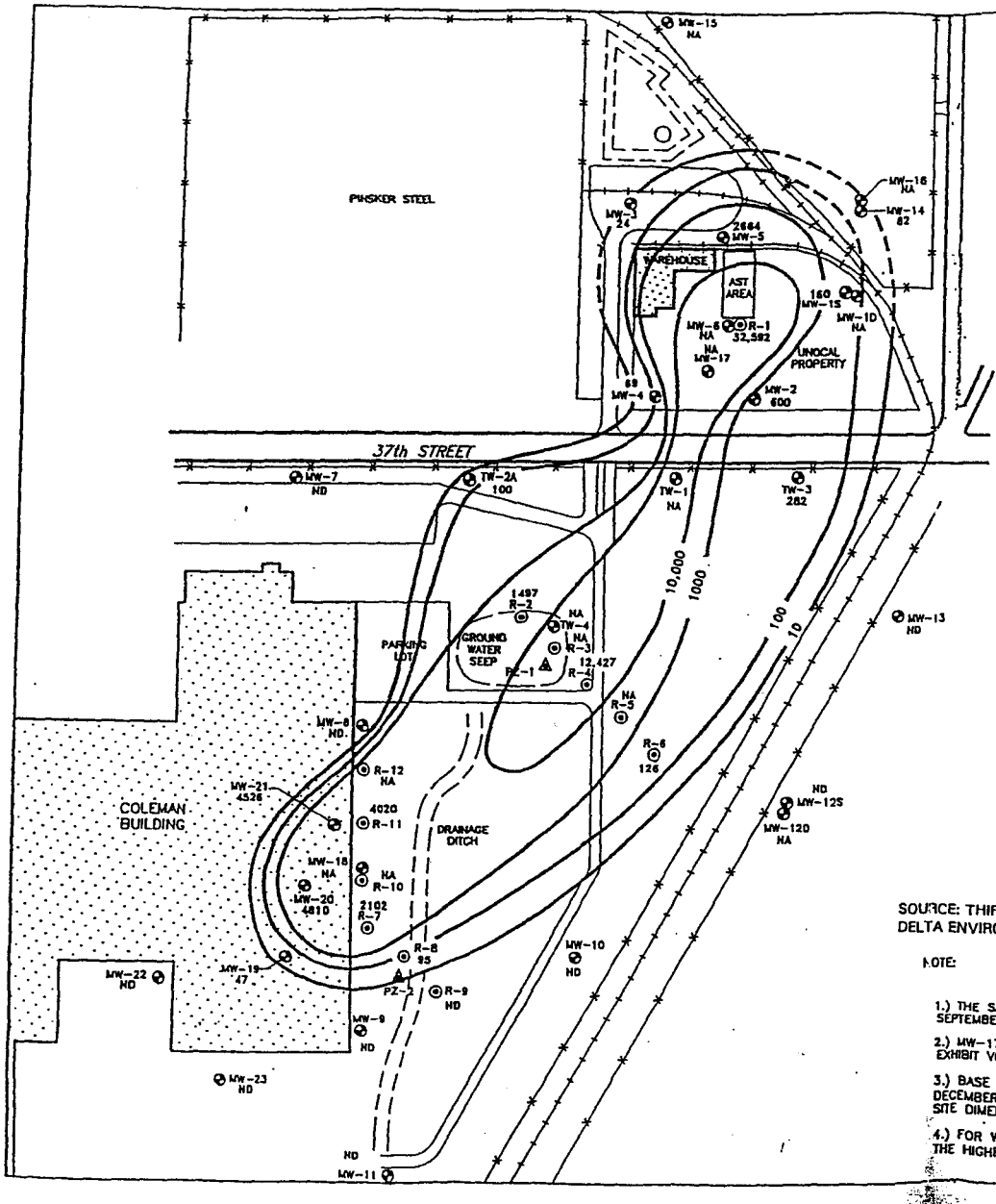
Woodward-Clyde Consultants
Consulting Engineers, Geologists and Environmental Scientists
Baton Rouge, Louisiana

UNOCAL CHEMICAL DIVISION
WICHITA, KANSAS

SCALE:	MADE BY:	DATE	FILE NO
as shown	CHECKED BY	DATE	95T235

TOTAL DETECTED VOLATILE ORGANIC COMPOUNDS INFERRED ISOPLETH CONCENTRATION MAP

FIGURE 4-18



SOURCE: THIRD QUARTER 1995 GROUNDWATER MONITORING REPORT, DELTA ENVIRONMENTAL CONSULTANTS, INC., NOVEMBER 8, 1995.

NOTE:

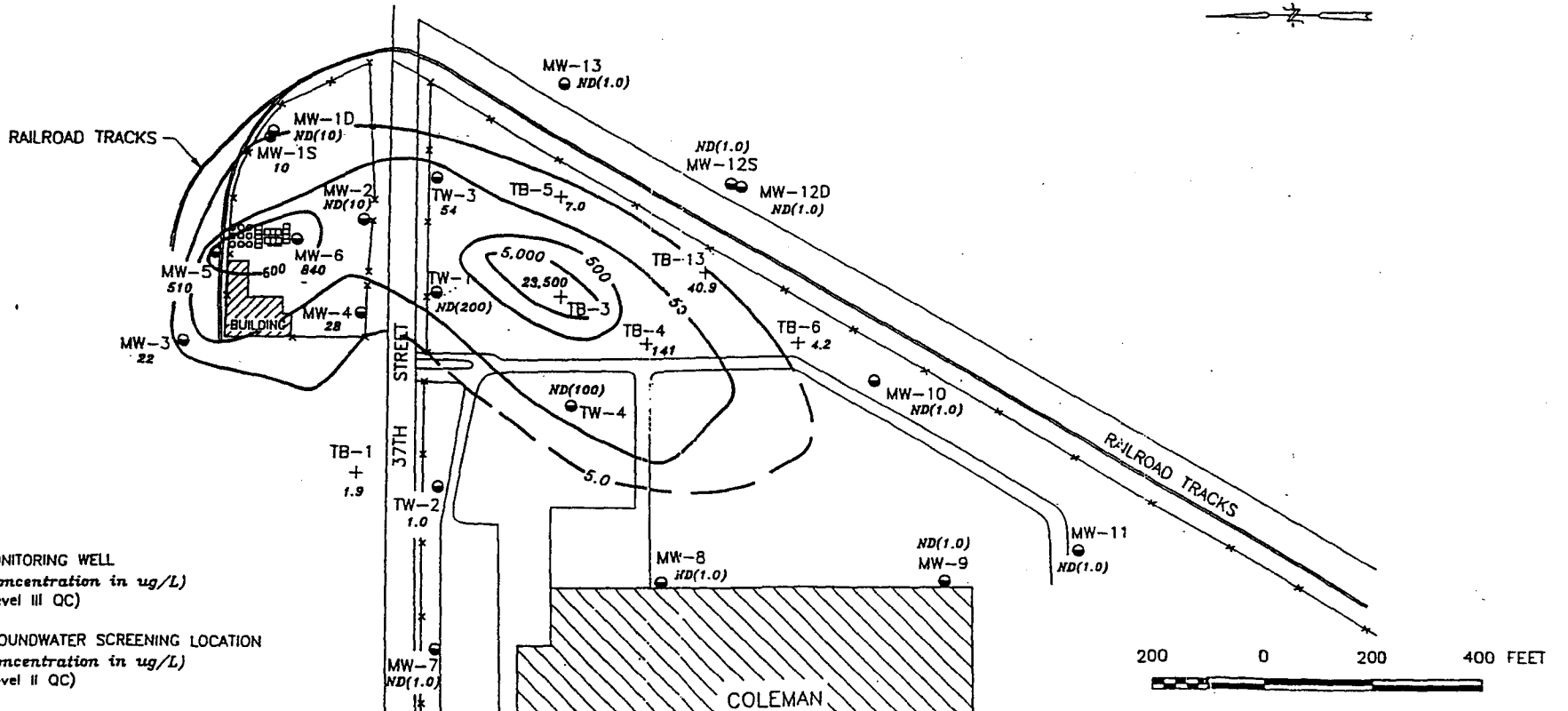
1.) THE SAMPLES WERE COLLECTED FROM SEPTEMBER 19 THROUGH SEPTEMBER 21, 1995.

2.) MW-17 IS A DEEP AQUIFER MONITORING WELL , AND DOES NOT EXHIBIT VOC CONCENTRATIONS.

3.) BASE MAP ADAPTED FROM FIGURE 10 OF CANONIE ENVIRONMENTAL'S DECEMBER 1994 DRAFT OF PHASE II REMEDIAL INVESTIGATION REPORT SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

4.) FOR WELLS FROM WHICH DUPLICATE SAMPLES WERE COLLECTED, THE HIGHEST CONCENTRATION FROM BOTH SAMPLES IS SHOWN.

LIMITED JOINT INVESTIGATION REPORT			
Woodward-Clyde Consultants			
UNOCAL CHEMICAL DIVISION WICHITA, KANSAS			
SCALE: as shown	MADE BY	DATE	FILE NO 95T235
	CHECKED BY	DATE	
TOTAL DETECTED VOLATILE ORGANIC COMPOUNDS INFERRED ISOPLETH CONCENTRATION MAP			FIGURE 4-20



LEGEND

MW-6 840	MONITORING WELL *(Concentration in ug/L)* (Level III QC)
TB-1 1.9	GROUNDWATER SCREENING LOCATION *(Concentration in ug/L)* (Level II QC)
500	CONCENTRATION ISOPLETH *(Concentration in ug/L, dashed where inferred)*
ND(1.0)	NOT DETECTED (Detection Limit)

SOURCE: PHASE I REMEDIAL INVESTIGATION REPORT, MAUDE ENVIRONMENTAL, INC., NOVEMBER 11, 1993.

LIMITED JOINT INVESTIGATION REPORT

Woodward-Clyde Consultants

UNOCAL CHEMICAL DIVISION
WICHITA, KANSAS

SCALE: as shown	MADE BY:	DATE	FILE NO 95T235
	CHECKED BY	DATE	

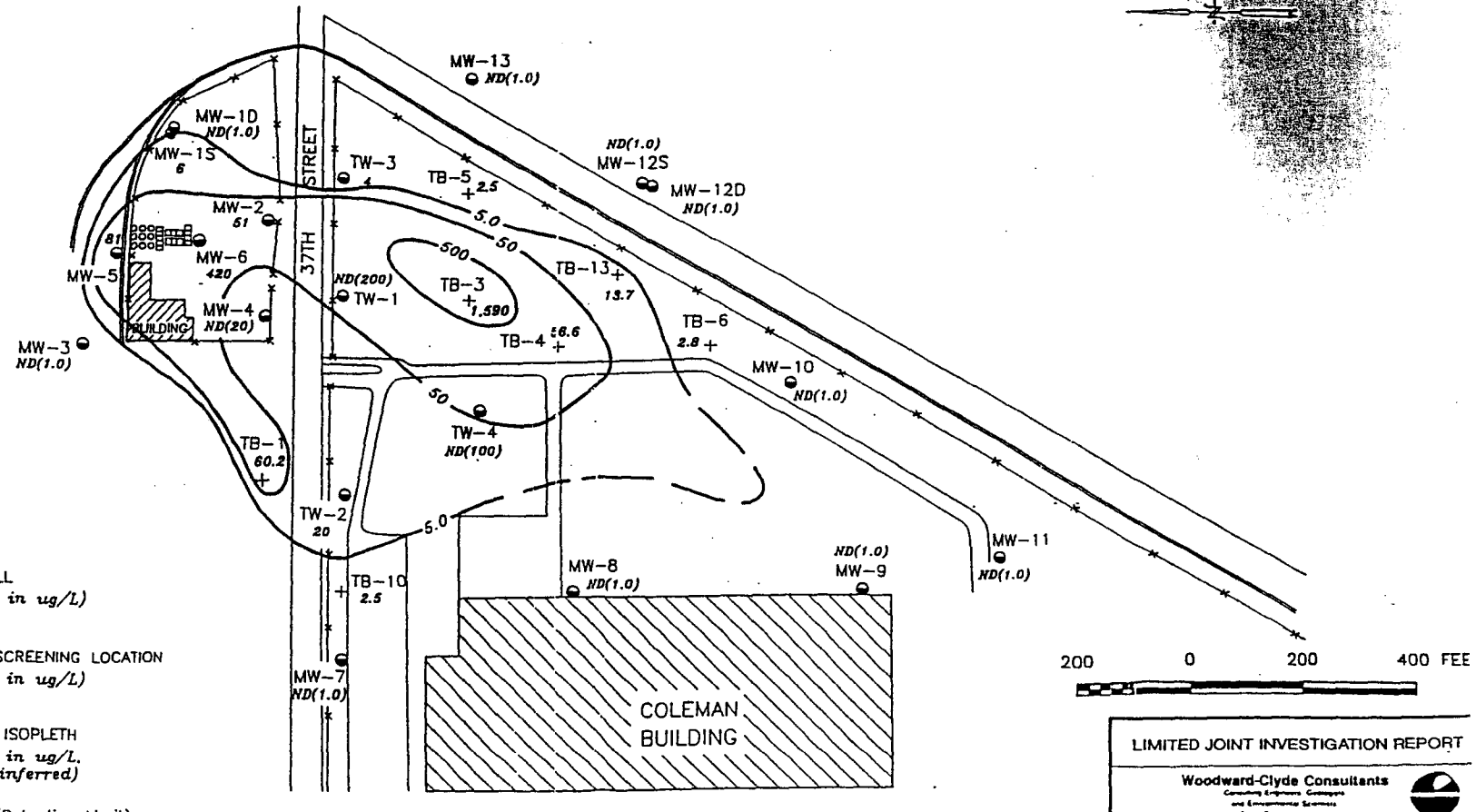
TETRACHLOROETHENE CONCENTRATIONS IN GROUNDWATER NOVEMBER 1992

FIGURE 5-12

MAUDE ENVIRONMENTAL, INC.
5600 SOUTH QUEBEC STREET, SUITE 113A
GREENWOOD VILLAGE, COLORADO 80111
303/220-9143

UNOCAL CHEMICALS DISTRIBUTION FACILITY
WICHITA, KANSAS

MEI NUMBER 91-1113
SCALE SHOWN
DATE 8/11/93
DRAWN BY NM
CHECKED BY JR



LEGEND

MW-6 420	MONITORING WELL (*Concentration in ug/L*) (Level III QC)
TB-1 60.2 +	GROUNDWATER SCREENING LOCATION (*Concentration in ug/L*) (Level II QC)
5.0	CONCENTRATION ISOPLETH (*Concentration in ug/L, dashed where inferred*)
ND(1.0)	NOT DETECTED (Detection Limit)

SOURCE: PHASE I REMEDIAL INVESTIGATION REPORT, MAUDE ENVIRONMENTAL, INC., NOVEMBER 11, 1993.

LIMITED JOINT INVESTIGATION REPORT

Woodward-Clyde Consultants

UNOCAL CHEMICAL DIVISION
WICHITA, KANSAS

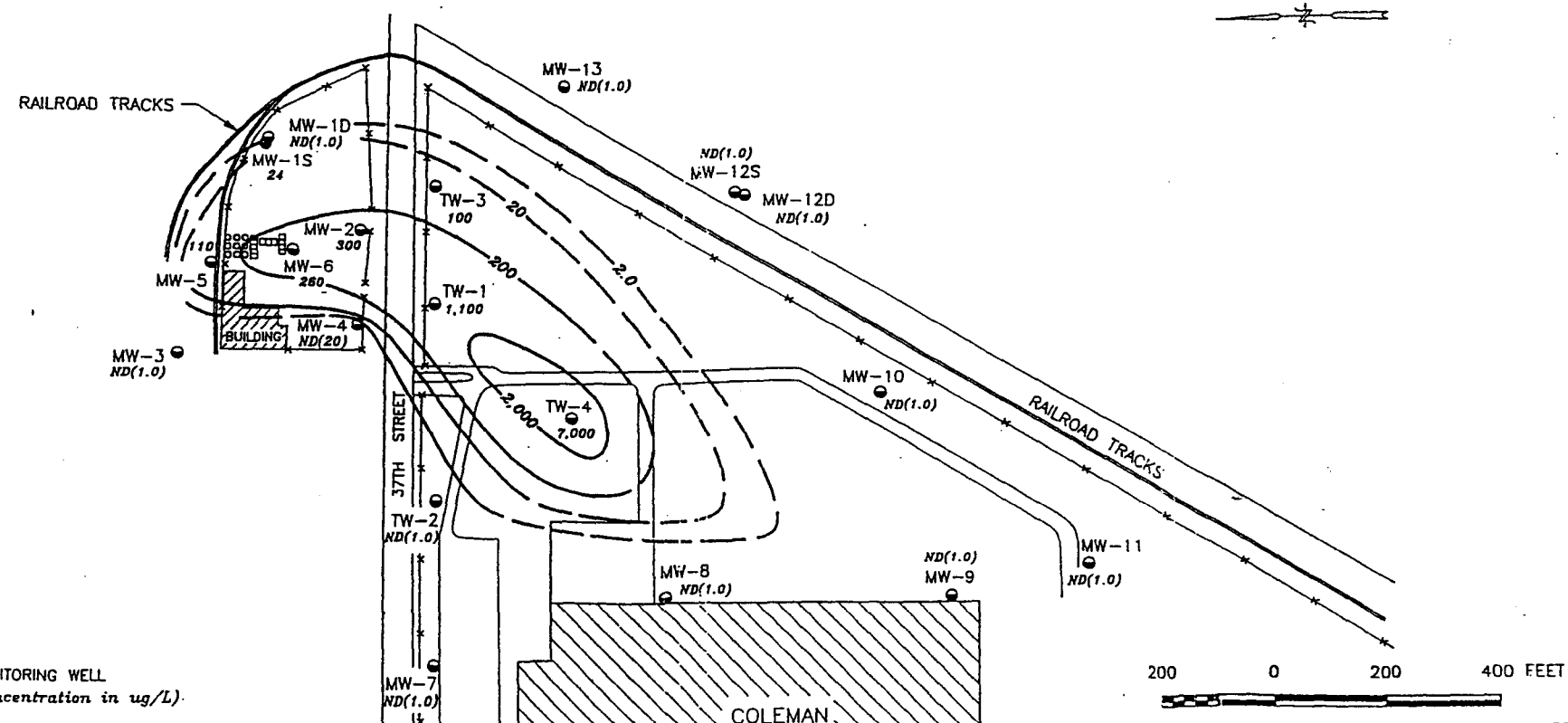
SCALE	MADE BY	DATE	FILE NO
as shown	CHECKED BY	DATE	95T235

TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER NOVEMBER 1992 — FIGURE 6-13

MAUDE ENVIRONMENTAL, INC.
5600 SOUTH QUEBEC STREET, SUITE 113A
GREENWOOD VILLAGE, COLORADO 80111
303/220-9143

UNOCAL CHEMICALS DISTRIBUTION FACILITY
WICHITA, KANSAS

MEI NUMBER 91-1113
SCALE SHOWN
DATE 8/11/93
DRAWN BY NM
CHECKED BY JR



LEGEND

MW-6 260 — MONITORING WELL (Concentration in ug/L)

20 — CONCENTRATION ISOPLETH (Concentration in ug/L, dashed where inferred)

ND(1.0) — NOT DETECTED (Detection Limit)

SOURCE: PHASE I REMEDIAL INVESTIGATION REPORT, MAUDE ENVIRONMENTAL, INC., NOVEMBER 11 1993.

LIMITED JOINT INVESTIGATION REPORT

Woodward-Clyde Consultants

UNOCAL CHEMICAL DIVISION
WICHITA, KANSAS

SCALE: as shown	MADE BY:	DATE	FILE NO 95T235
	CHECKED BY	DATE	

VINYL CHLORIDE CONCENTRATIONS IN GROUNDWATER NOVEMBER 1992

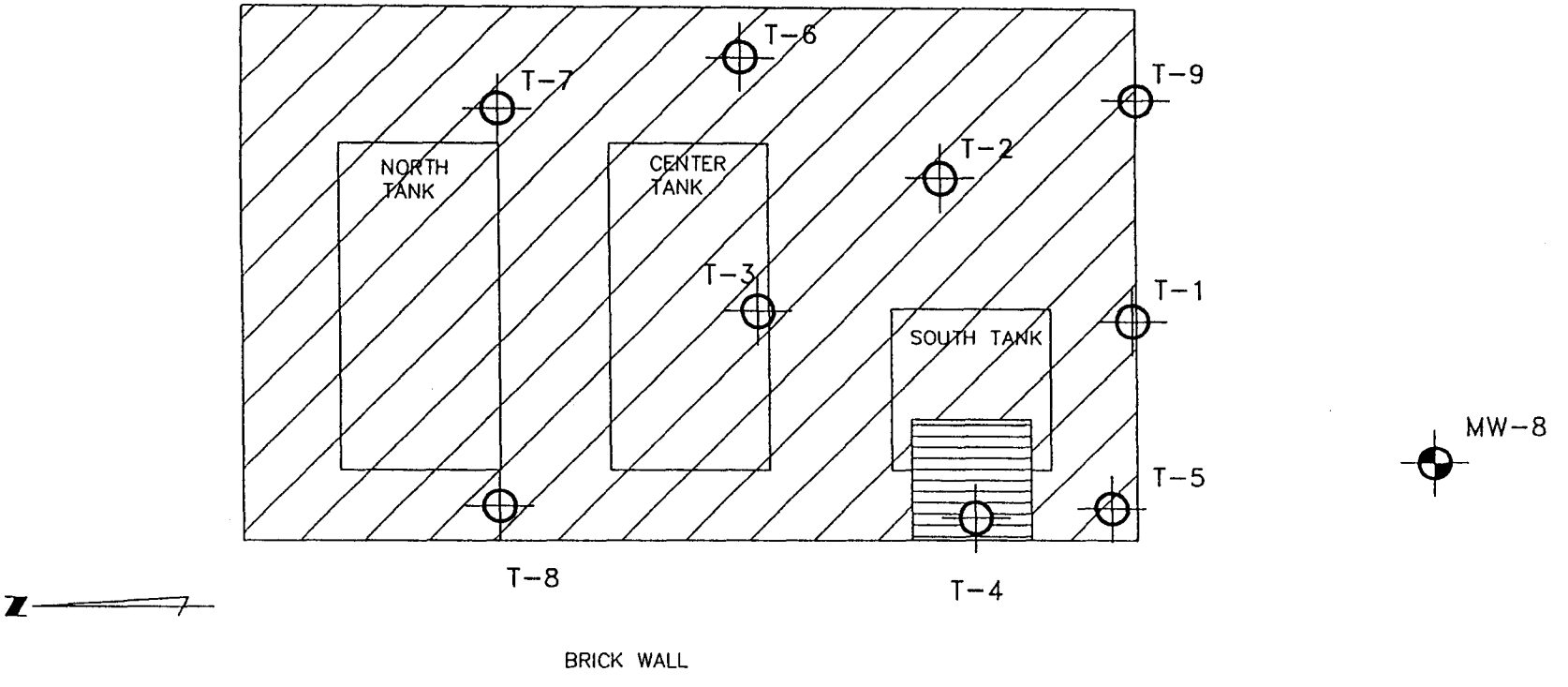
FIGURE 5-14

MAUDE ENVIRONMENTAL, INC.
5600 SOUTH QUEBEC STREET, SUITE 113A
GREENWOOD VILLAGE, COLORADO 80111
303/220-9143

UNOCAL CHEMICALS DISTRIBUTION FACILITY
WICHITA, KANSAS

MEI NUMBER 91-1113
SCALE 1" = 200'
DATE 3/8/93
DRAWN BY NM
CHECKED BY JR

Appendix B-14
USD - USD 259



LEGEND

GEOPROBE SAMPLING LOCATION

EXCAVATION DEPTHS

8' DEEP

16' DEEP

MONITORING WELL

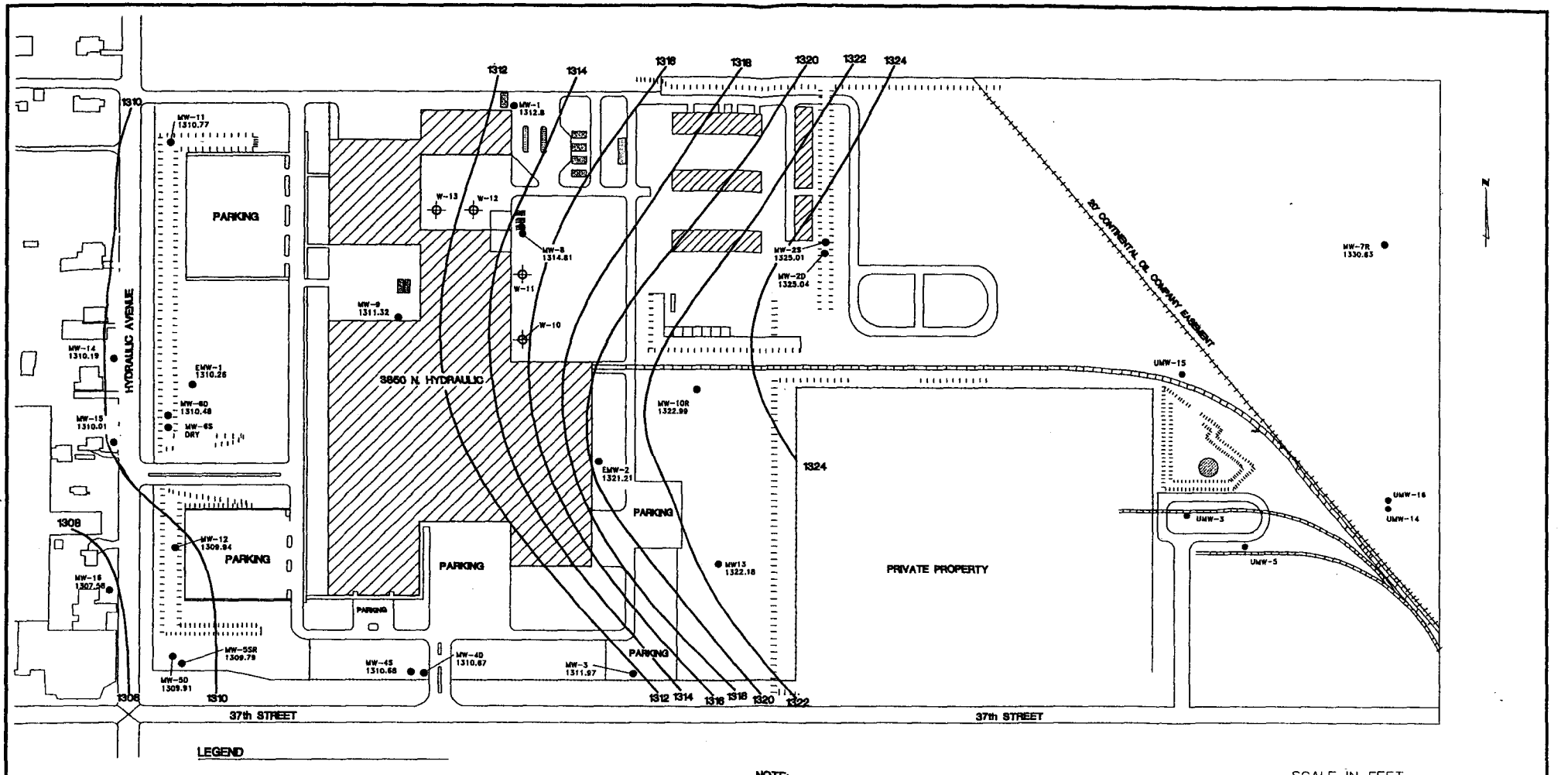
BUILDING

10

0 5 10 20

1"=10'

CLIENT						TITLE		
USD 259 SCHOOL SERVICE CENTER WICHITA, KANSAS			Golder Associates ST. LOUIS, MISSOURI			TANK BASIN DETAIL		
DRAWN MLE	CHECKED	REVIEWED	DATE FEBRUARY 1999	SCALE AS SHOWN	FILE NO.	JOB NO. 973-2209	DWG NO. 2209-019	FIGURE 1



LEGEND

WELL LOCATION AND POTENTIOMETRIC ELEVATION (FT. MSL)

● MW-9 1311.32

JANUARY 1999 GEOPROBE LOCATION

⊕ W-10

NOTE:

1. WATER LEVELS MEASURED FEBRUARY 7, 1999.

SCALE IN FEET

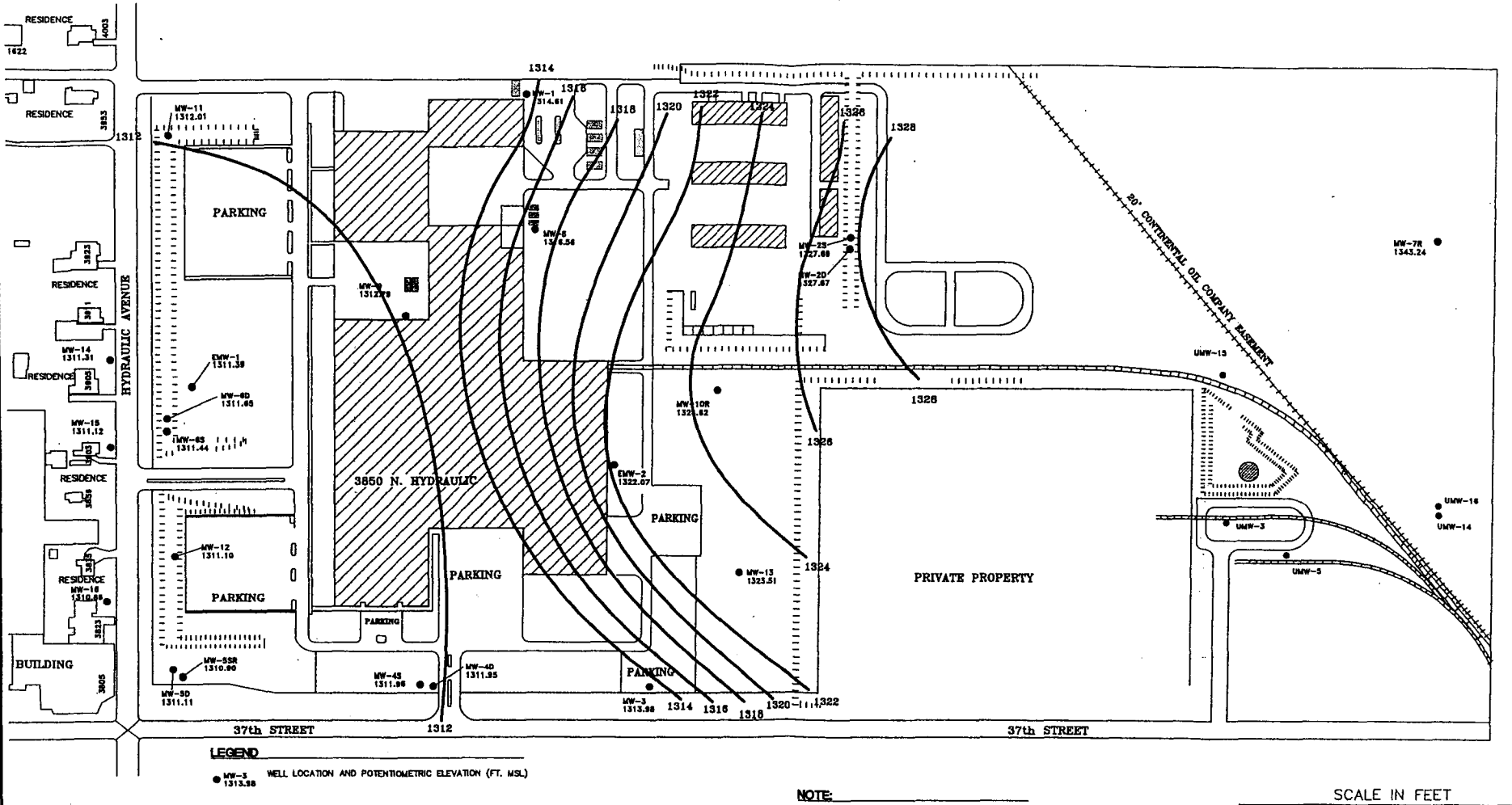
200 0 200 400

Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: **POTENTIOMETRIC SURFACE MAP FEBRUARY 1999**

DRAWN: JTL	DATE: MARCH 1999	JOB NO. 973-2209	
CHECKED: MRS	SCALE: AS SHOWN	DWG. NO. -2209-025	
REVIEWED: FMB	FILE NO.	FIGURE NO. 3	



LEGEND

● MW-3 1313.98 WELL LOCATION AND POTENTIOMETRIC ELEVATION (FT. MSL)

NOTE:

1. WATER LEVELS MEASURED JUNE 21, 1999.
2. UNOCAL DATA COLLECTED MARCH 1999.

SCALE IN FEET

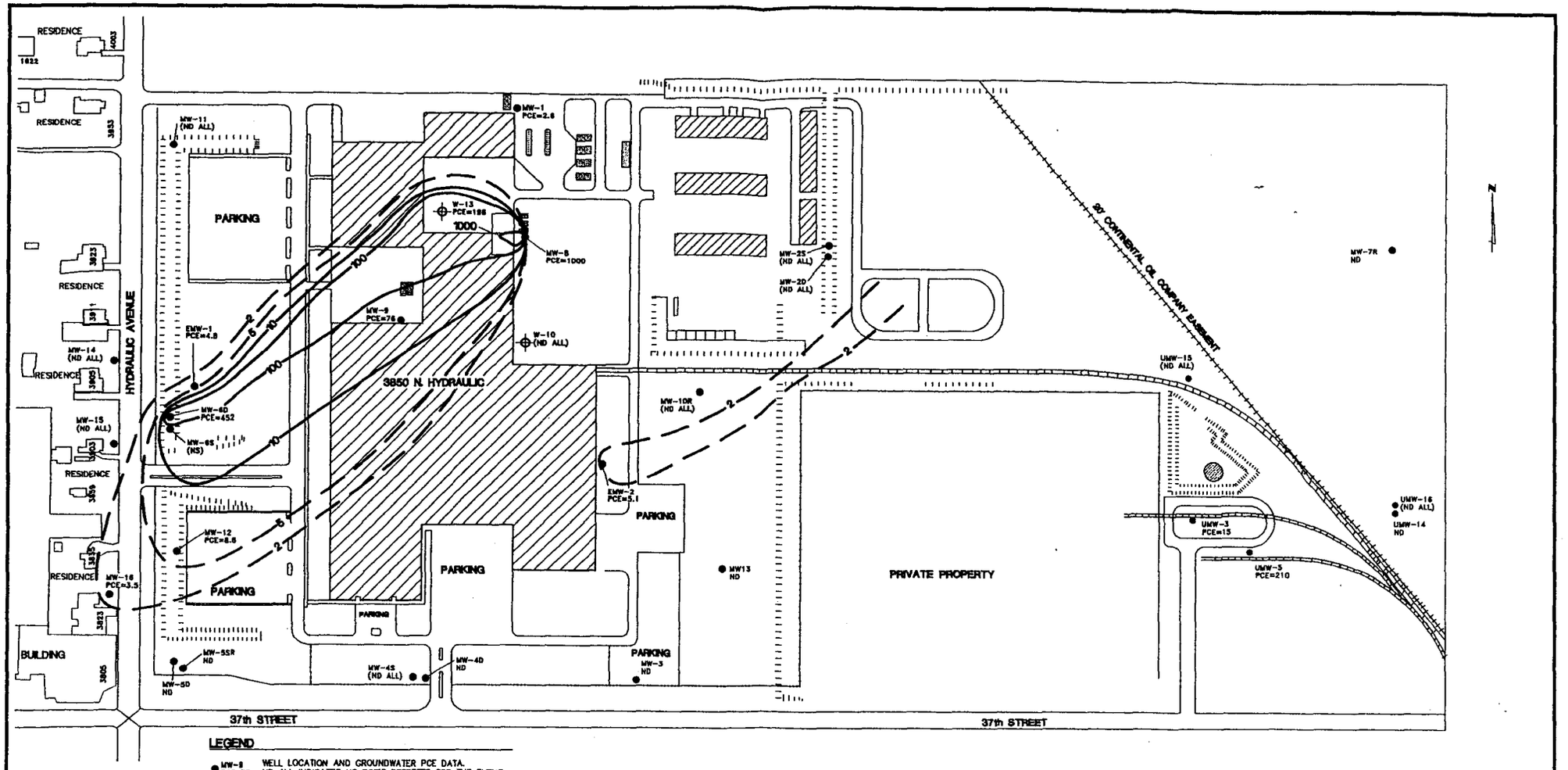
200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE
POTENTIOMETRIC SURFACE MAP
SEPTEMBER 1999

DRAWN ML	DATE NOVEMBER 1999	JOB NO. 973-2209	
CHECKED MRS	SCALE AS SHOWN	DWG. NO. 2209-039	
REVIEWED FMB	FILE NO.	FIGURE NO. 2	



LEGEND

● MW-9 PCE=76 — WELL LOCATION AND GROUNDWATER PCE DATA. ND ALL INDICATES NO PCE'S DETECTED FOR THE EVENT.

⊕ W-10 (ND ALL) — JANUARY 1999 GEOPROBE GROUNDWATER SAMPLE

PCE = TETRACHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 9-23-98 TO 9-25-98.

SCALE IN FEET

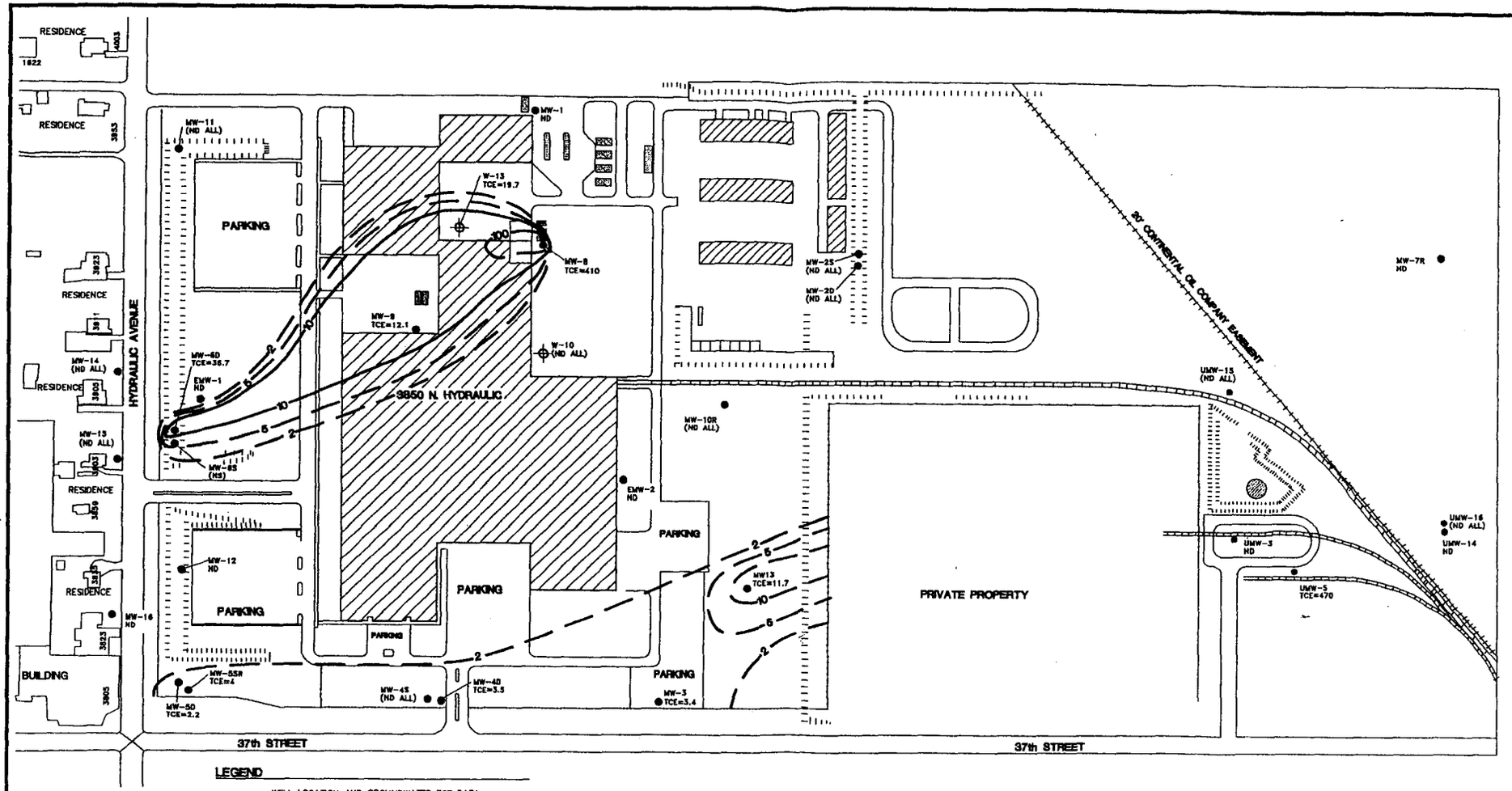
200 0 200 400

Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: PCE CONCENTRATIONS IN GROUNDWATER JANUARY 1999

DRAWN	JTL	DATE	MARCH 1999	JOB NO.	973-2209
CHECKED	MRS	SCALE	AS SHOWN	DWG. NO.	2209-023
REVIEWED	FMB	FILE NO.		FIGURE NO.	4



LEGEND

● MW-3 TCE=3.4 — WELL LOCATION AND GROUNDWATER TCE DATA. ND ALL INDICATES NO TCE'S DETECTED FOR THE EVENT.

⊕ W-10 (ND ALL) — JANUARY 1999 GEOPROBE GROUNDWATER SAMPLE

TCE = TRICHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 9-23-98 TO 9-25-98.

SCALE IN FEET

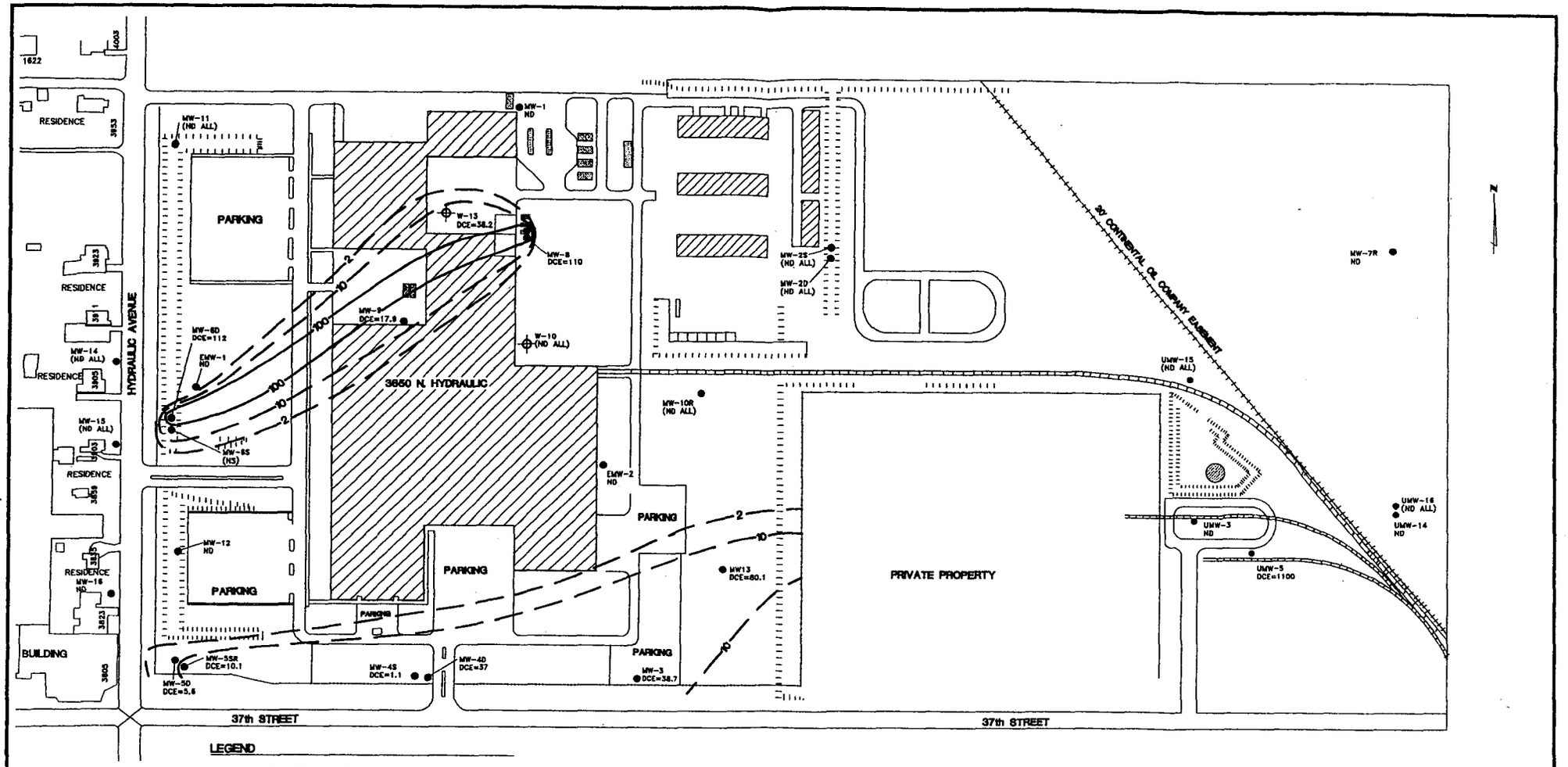
200 0 200 400

Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: TCE CONCENTRATIONS IN GROUNDWATER JANUARY 1999

DRAWN	JTL	DATE	MARCH 1999	JOB NO.	973-2209
CHECKED	MRS	SCALE	AS SHOWN	DWG. NO.	2209-022
REVIEWED	FMB	FILE NO.		FIGURE NO.	5



LEGEND

● MW-3 DCE=38.7 — WELL LOCATION AND GROUNDWATER PCE DATA. ND ALL INDICATES NO PCE DETECTED FOR THE EVENT.

⊕ W-10 (ND ALL) — JANUARY 1999 GEOPROBE GROUNDWATER SAMPLE

DCE = TOTAL TRANS- AND CIS-1,2-DICHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. TOTAL DCE = CIS-1,2-DCE EXCEPT AT MW-13, WHERE 2.6ppb OF TRANS-1,2-DCE IS INCLUDED.
3. UNOCAL DATA COLLECTED 9-23-98 TO 9-25-98.

SCALE IN FEET

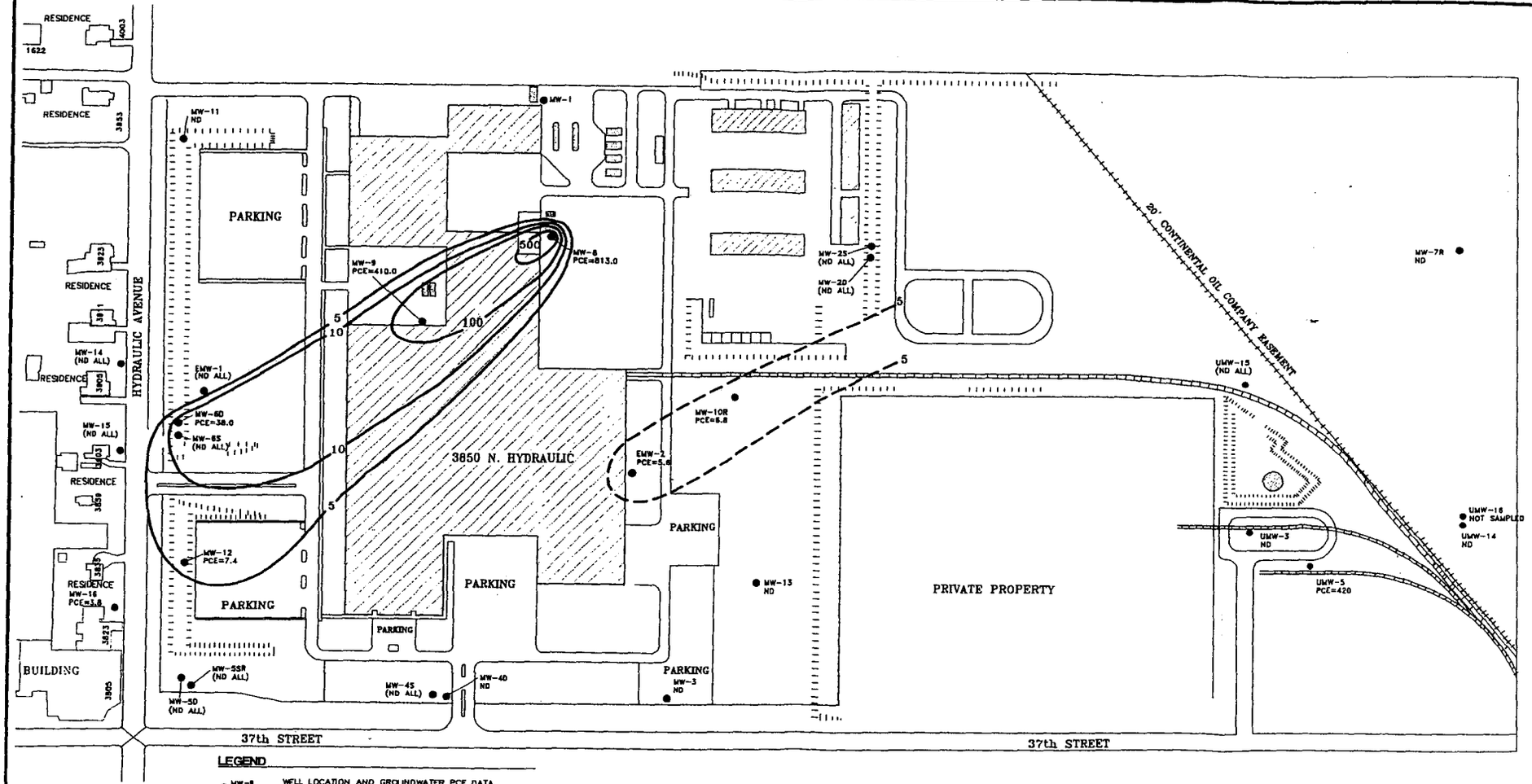
200 0 200 400

Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: DCE CONCENTRATIONS IN GROUNDWATER JANUARY 1999

DRAWN	JTL	DATE	MARCH 1999	JOB NO.	973-2209
CHECKED	MRS	SCALE	AS SHOWN	DWG. NO.	2209-021
REVIEWED	FMB	FILE NO.		FIGURE NO.	6



LEGEND

● MW-8 ND — WELL LOCATION AND GROUNDWATER PCE DATA. ND INDICATES NO PCE DETECTED FOR THE EVENT.

PCE = TETRACHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED MARCH 1999.

SCALE IN FEET

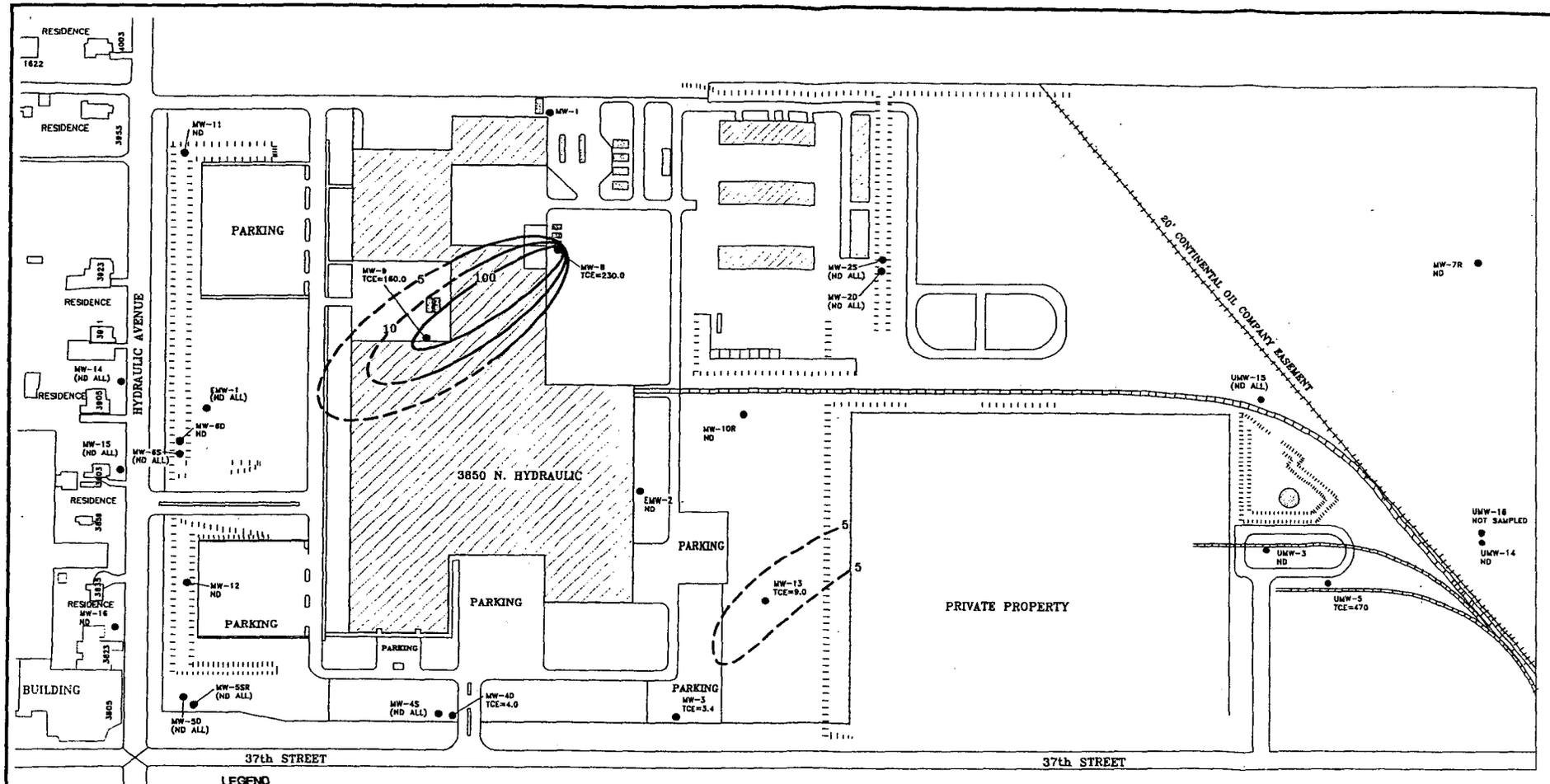
200 0 200 400

Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: PCE CONCENTRATIONS IN GROUNDWATER SEPTEMBER 1999

DRAWN ML	DATE NOVEMBER 1999	JOB NO. 973-2209	
CHECKED MRS	SCALE AS SHOWN	DWG. NO. 2209-040	
REVIEWED FMB	FILE NO.	FIGURE NO. 3	



LEGEND

● MW-3 TCE=3.4 — WELL LOCATION AND GROUNDWATER TCE DATA. ND INDICATES NO TCE DETECTED FOR THE EVENT.

TCE = TRICHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED MARCH 1999.

SCALE IN FEET

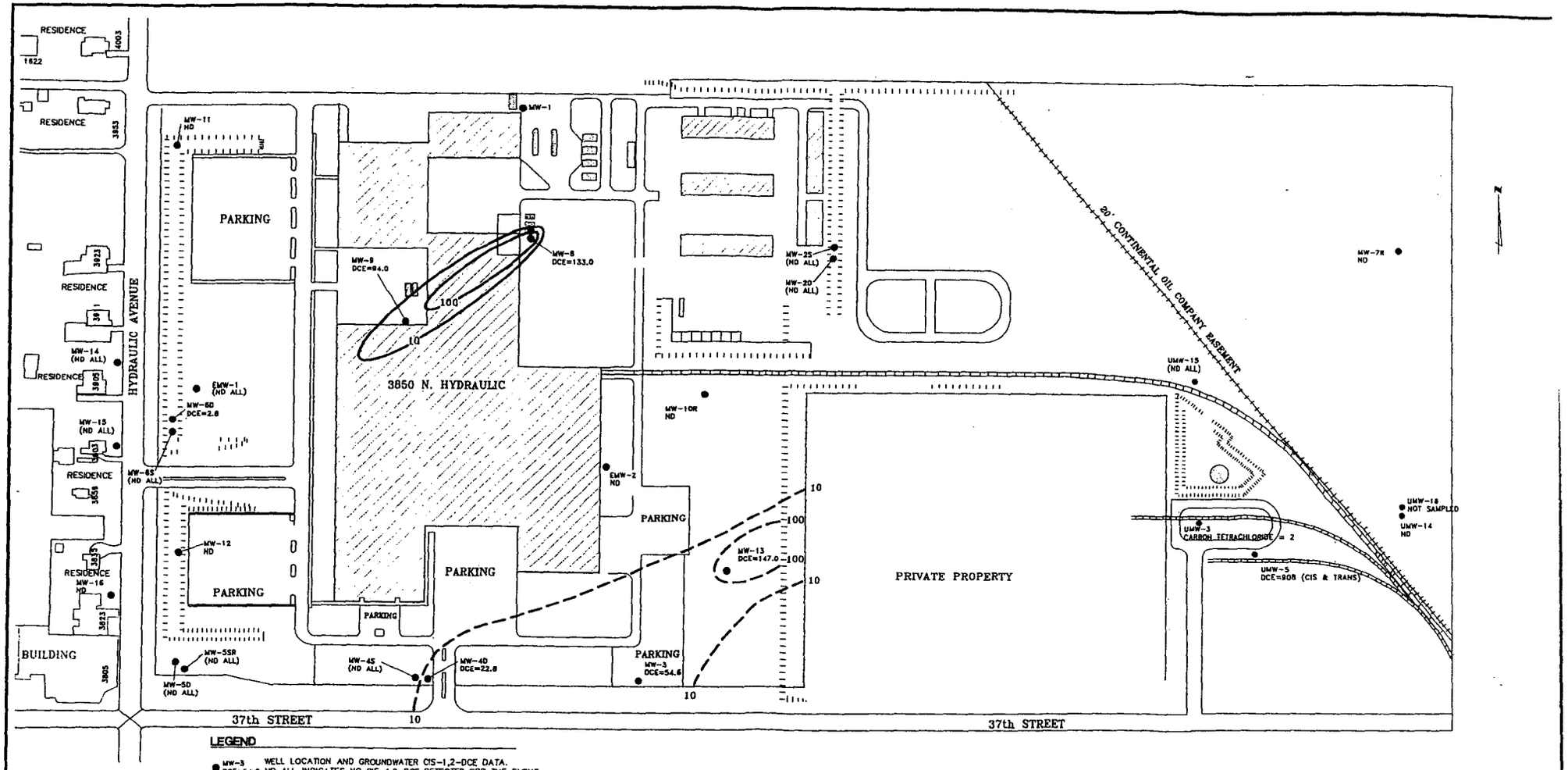
200 0 200 400

Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: TCE CONCENTRATIONS IN GROUNDWATER SEPTEMBER 1999

DRAWN ML	DATE NOVEMBER 1999	JOB NO. 973-2209
CHECKED MRS	SCALE AS SHOWN	DWG. NO.- 2209-041
REVIEWED FMB	FILE NO.	FIGURE NO. 4



LEGEND

● MW-3 DCE=54.6 WELL LOCATION AND GROUNDWATER CIS-1,2-DCE DATA. ND ALL INDICATES NO CIS-1,2-DCE DETECTED FOR THE EVENT.

DCE = CIS-1,2-DICHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 3-23-99 TO 3-25-99.
3. TRANS-1,2-DICHLOROETHENE WAS DETECTED 38 NG/L IN UMW-5.

SCALE IN FEET

200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE
DCE CONCENTRATIONS IN GROUNDWATER SEPTEMBER 1999

DRAWN ML	DATE NOVEMBER 1999	JOB NO. 973-2209
CHECKED MRS	SCALE AS SHOWN	DWG. NO. 2209-042
REVIEWED FMB	FILE NO.	FIGURE NO. 5

TABLE 1
WICHITA PUBLIC SCHOOLS
ANALYTICAL DATA -
FEBRUARY 1999
GEOPROBES

PROBE ID	MCL	T-1-S-6	T-1-S-9	T-2-S-6	T-3-S-6	T-4-S-14
MATRIX	WATER	SOIL	SOIL	SOIL	SOIL	SOIL
SAMPLE DEPTH (FT.)		6	9	6	6	14
	µg/L	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
VOC						
Methylene Chloride*	5	4.1BJ	2.3BJ	ND	ND	ND
Acetone	n/a	7.9J	ND	5.8J	ND	5.9J
2-Butanone	n/a	4.2J	3.9J	4.3J	4.6J	4.7J
Tetrachloroethene	5	6	24	7	53	334
cis-1,2 Dichloroethene	70	ND	16	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND
Trichloroethene	5	ND	7	ND	ND	6
Vinyl chloride	2	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND
Naphthalene**	n/a	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	75	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
ANALYTICAL DATA -
FEBRUARY 1999
GEOPROBES

PROBE ID	MCL	T-5-S-6	T-5-S-9	T-6-S-6	T-7-S-6	T-8-S-6
MATRIX	WATER	SOIL	SOIL	SOIL	SOIL	SOIL
SAMPLE DEPTH (FT.)		6	9	6	6	6
	µg/L	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
VOC						
Methylene Chloride*	5	ND	3.2BJ	2.4BJ	ND	ND
Acetone	n/a	5.3J	6.8J	ND	ND	9.7J
2-Butanone	n/a	3.7J	4.4J	4.9J	5.3J	4.1J
Tetrachloroethene	5	13	6	27	22	65
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	105
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	8
Vinyl chloride	2	ND	ND	ND	ND	6
Benzene	5	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	4
Ethylbenzene	700	ND	ND	ND	ND	29
Total Xylene	10000	ND	ND	ND	ND	71
Isopropylbenzene	n/a	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	2.0J
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND
Naphthalene**	n/a	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	75	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
ANALYTICAL DATA -
FEBRUARY 1999
GEOPROBES

PROBE ID	MCL	T-9-S-6	T-9-S-9	W-10-W-24	W-13-W-28
MATRIX	WATER	SOIL	SOIL	WATER	WATER
SAMPLE DEPTH (FT.)		6	9	24	24
	µg/L	(µg/kg)	(µg/kg)	(µg/l)	(µg/l)
VOC					
Methylene Chloride*	5	3.5BJ	4.1BJ	ND	ND
Acetone	n/a	7.8J	ND	ND	ND
2-Butanone	n/a	3.3J	8.0J	ND	ND
Tetrachloroethene	5	2	ND	ND	196
cis-1,2 Dichloroethene	70	ND	ND	ND	38.2
trans-1,2-Dichloroethene	100	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	19.7
Vinyl chloride	2	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND
Naphthalene**	n/a	ND	ND	ND	ND
1,4 Dichlorobenzene	75	ND	ND	ND	ND

TABLE 2
WICHITA PUBLIC SCHOOLS
ANALYTICAL DATA -
FEBRUARY 1999
GEOPROBE TCLP RESULTS

PROBE ID	REG.	T-3-S-6	T-4-S-14	T-8-S-6
MATRIX	LIMIT	SOIL	SOIL	SOIL
SAMPLE DEPTH (FT.)		6	14	6
	mg/L	(mg/L)	(mg/L)	(mg/L)
VOC				
Benzene	0.5	ND	ND	ND
Carbon Tetrachloride	0.5	ND	ND	ND
Chlorobenzene	100.0	ND	ND	ND
Chloroform	6.0	ND	ND	ND
1,2 Dichloroethane	0.5	ND	ND	ND
1,1 Dichloroethene	0.7	ND	ND	ND
Methylethylketone	200.0	ND	ND	ND
Tetrachloroethene	0.7	ND	ND	ND
Trichloroethene	0.5	ND	ND	ND
Vinyl chloride	0.2	ND	ND	ND

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	EMW-1 1/28/98 (µ/L)	EMW-1 6/16/98 (µ/L)	EMW-1 10/04/98 (µ/L)	EMW-1 1/27/99 (µ/L)	EMW-2 1/28/98 (µ/L)	EMW-2 6/17/98 (µ/L)	EMW-2 10/09/98 (µ/L)	EMW-2 1/28/99 (µ/L)
VOC									
Methylene Chloride*	5	ND	ND	ND	ND	9.2	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	2.7	ND	ND	4.8	6.8	5.7	6	5.1
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	15	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Metals (unfiltered)		1/28/98	6/16/98	10/4/98	1/27/99	1/28/98	6/17/98	10/9/98	1/29/99
Barium	2000	107	47.1	39.4	58	16.8	14.6	14.5	36
Cadium	5	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	100	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	50	ND	ND	ND	ND	ND	ND	ND	ND
Lead	15 (c)	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	2	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	50	ND	ND	ND	ND	7	9	9.5	ND
Silver	100 (b)	ND	ND	ND	ND	ND	ND	ND	ND
Metals (filtered)									
Barium	2000	106	43.8	47.6 (a)	NS	11.8	14.3	15.1 (a)	NS
Cadium	5	ND	ND	ND	NS	ND	ND	ND	NS
Chromium	100	ND	7.45	16.4 (a)	NS	ND	ND	ND	NS
Arsenic	50	ND	ND	ND	NS	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS	ND	ND	ND	NS
Mercury	2	ND	ND	ND	NS	ND	ND	ND	NS
Selenium	50	ND	ND	ND	NS	6.4	8	9.3	NS
Silver	100 (b)	ND	ND	10 (a)	NS	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-1 1/28/98 (µ/L)	6/12/98 (µ/L)	10/04/98 (µ/L)	1/26/99 (µ/L)
VOC					
Methylene Chloride*	5	ND	5.7	ND	ND
Chloroform *	100	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	2.6
cis-1,2 Dichloroethene	70	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND
Metals (unfiltered)		1/28/98	6/12/98	10/4/98	
Barium	2000	572	ND	ND	17
Cadium	5	ND	ND	ND	ND
Chromium	100	103	ND	ND	ND
Arsenic	50	41	ND	ND	ND
Lead	15 (c)	50	ND	ND	ND
Mercury	2	0.257	ND	ND	ND
Selenium	50	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND
Metals (filtered)					
Barium	2000	ND	ND	ND	NS
Cadium	5	ND	ND	ND	NS
Chromium	100	ND	ND	ND	NS
Arsenic	50	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS
Mercury	2	ND	ND	ND	NS
Selenium	50	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (μ/L)	MW-2S 1/28/98 (μ/L)	MW-2S 6/16/98 (μ/L)	MW-2S 10/08/98 (μ/L)	MW-2S 1/28/99 (μ/L)	MW-2D 1/29/98 (μ/L)	MW-2D 6/14/98 (μ/L)	MW-2D 10/07/98 (μ/L)	MW-2D 1/27/99 (μ/L)
VOC									
Methylene Chloride*	5	ND	ND	ND	ND	8.6	ND	5.0U	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	5.9	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	26	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Metals (unfiltered)		1/28/98	6/16/98	10/8/98	1/28/99	1/29/98	6/14/98	10/7/98	1/27/99
Barium	2000	1900	37.8	22.8	50	87.5	ND	2670	54
Cadium	5	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	100	226	ND	ND	12	ND	ND	373	ND
Arsenic	50	278	ND	ND	ND	ND	ND	159	ND
Lead	15 (c)	310	ND	ND	ND	ND	ND	204	ND
Mercury	2	3.15	ND	ND	ND	ND	ND	ND	ND
Selenium	50	ND	10.5	10.6	14	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND	ND	7.4	7.96	ND
Metals (filtered)									
Barium	2000	31.6	24	20.1	NS	24.6	ND	20.6	NS
Cadium	5	ND	ND	ND	NS	ND	ND	ND	NS
Chromium	100	ND	ND	ND	NS	ND	ND	11	NS
Arsenic	50	ND	ND	ND	NS	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS	ND	ND	11.1	NS
Mercury	2	ND	ND	ND	NS	ND	ND	ND	NS
Selenium	50	9.9	10.8	11.1 (a)	NS	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	NS	ND	ND	8.93	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-3 1/29/98 (µ/L)	6/14/98 (µ/L)	10/09/98 (µ/L)	1/28/99 (µ/L)
VOC					
Methylene Chloride*	5	2.1	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	13	63	ND	38.7
trans-1,2-Dichloroethene	100	ND	ND	ND	ND
Trichloroethene	5	2.2	5.5	ND	3.4
Vinyl chloride	2	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND
Metals (unfiltered)		1/29/98	6/14/98	10/9/98	1/28/99
Barium	2000	4730	40.6	16.3	37
Cadium	5	ND	ND	ND	ND
Chromium	100	277	ND	ND	ND
Arsenic	50	159	ND	ND	ND
Lead	15 (c)	281	ND	ND	ND
Mercury	2	0.541	ND	ND	ND
Selenium	50	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND
Metals (filtered)					
Barium	2000	24.6	13.1	10.5	NS
Cadium	5	ND	ND	ND	NS
Chromium	100	ND	ND	ND	NS
Arsenic	50	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS
Mercury	2	ND	ND	ND	NS
Selenium	50	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-4S 1/29/98 (µ/L)	MW-4S 6/12/98 (µ/L)	MW-4S 10/06/98 (µ/L)	MW-4S 1/26/99 (µ/L)	MW-4D 1/29/98 (µ/L)	MW-4D 6/15/98 (µ/L)	MW-4D 10/08/98 (µ/L)	MW-4D 1/27/99 (µ/L)
VOC									
Methylene Chloride*	5	ND	ND	2.7J	ND	8.2	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	1.1J	21	13	27	37
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	2.5	ND	ND	3.5
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Metals (unfiltered)		1/29/98	6/12/98	10/6/98	1/26/99	1/29/98	6/15/98	10/8/98	1/27/99
Barium	2000	1630	138	268	123	1610	941	20.7	43
Cadium	5	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	100	110	14.3	44.3	ND	129	93.1	ND	ND
Arsenic	50	88.9	6.1	9.3	ND	79.6	45.5	ND	ND
Lead	15 (c)	103	ND	7.5	ND	125	70.2	ND	ND
Mercury	2	0.524	ND	ND	ND	0.298	ND	ND	ND
Selenium	50	ND	ND	ND	ND	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND	ND	ND	ND	ND
Metals (filtered)									
Barium	2000	110	101	179	NS	35.7	48.9	20.5	NS
Cadium	5	ND	ND	ND	NS	ND	ND	ND	NS
Chromium	100	ND	ND	72.6 (a)	NS	ND	ND	ND	NS
Arsenic	50	ND	ND	6	NS	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS	ND	ND	ND	NS
Mercury	2	ND	ND	ND	NS	ND	ND	ND	NS
Selenium	50	ND	ND	ND	NS	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	NS	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-5S (1) 1/28/98 (µ/L)	MW-5S (1) 6/13/98 (µ/L)	MW-5SR (1) 10/07/98 (µ/L)	MW-5SR (1) 1/26/99 (µ/L)	MW-5D 1/28/98 (µ/L)	MW-5D 6/11/98 (µ/L)	MW-5D 10/08/98 (µ/L)	MW-5D 1/27/99 (µ/L)
VOC									
Methylene Chloride*	5	ND	ND	5.0U	ND	ND	6.7	5.0U	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	10.1	4.7	6.6	2.0J	5.6
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	4	ND	ND	ND	2.2
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Metals (unfiltered)		1/28/98	6/13/98	10/7/98	1/26/99	1/28/98	6/11/98	10/8/98	1/27/99
Barium	2000	959	430	161	63	909	276	ND	19
Cadium	5	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	100	36.9	15.6	ND	ND	81.3	26.7	ND	ND
Arsenic	50	101	55.9	9	6	38.7	9.8	ND	ND
Lead	15 (c)	55.2	18.8	9.1	ND	53	156	ND	ND
Mercury	2	0.404	ND	ND	ND	0.383	ND	ND	ND
Selenium	50	ND	ND	ND	ND	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND	ND	ND	10.4	ND
Metals (filtered)									
Barium	2000	214	205	75.1	NS	ND	ND	ND	NS
Cadium	5	ND	ND	ND	NS	ND	ND	ND	NS
Chromium	100	ND	ND	ND	NS	ND	ND	ND	NS
Arsenic	50	23	18	ND	NS	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS	ND	79	ND	NS
Mercury	2	ND	ND	ND	NS	ND	ND	ND	NS
Selenium	50	ND	ND	ND	NS	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	NS	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-6S 1/29/98 (µ/L)	MW-6S 6/13/98 (µ/L)	MW-6S 10/08/98 (µ/L)	MW-6S 1/26/99 (µ/L)	MW-6D 1/29/98 (µ/L)	MW-6D 6/11/98 (µ/L)	MW-6D 10/08/98 (µ/L)	MW-6D 1/28/99 (µ/L)
VOC									
Methylene Chloride*	5	8.2	ND	NS (5)	NS (5)	8.8	6.5	ND	ND
Chloroform *	100	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	NS (5)	NS (5)	96	22	220	452
cis-1,2 Dichloroethene	70	ND	ND	NS (5)	NS (5)	24	ND	40	112
trans-1,2-Dichloroethene	100	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Trichloroethene	5	ND	ND	NS (5)	NS (5)	9.4	ND	17	36.7
Vinyl chloride	2	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Benzene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Toluene	1000	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Total Xylene	10000	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Metals (unfiltered)		1/29/98	6/13/98	10/8/98	1/26/99	1/29/98	6/11/98	10/8/98	1/28/99
Barium	2000	312	550	NS (5)	NS (5)	56.8	521	13.6	50
Cadium	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Chromium	100	13.5	24.9	NS (5)	NS (5)	9.15	57.2	ND	ND
Arsenic	50	12.6	18.3	NS (5)	NS (5)	ND	27.8	ND	ND
Lead	15 (c)	9.9	17.4	NS (5)	NS (5)	5.4	16.4	ND	ND
Mercury	2	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Selenium	50	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Silver	100 (b)	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND
Metals (filtered)									
Barium	2000	174	170	NS (5)	NS	ND	ND	9.19	NS
Cadium	5	ND	ND	NS (5)	NS	ND	ND	ND	NS
Chromium	100	ND	ND	NS (5)	NS	ND	ND	ND	NS
Arsenic	50	9.7	10.8	NS (5)	NS	ND	ND	ND	NS
Lead	15 (c)	ND	ND	NS (5)	NS	ND	14.9	ND	NS
Mercury	2	ND	ND	NS (5)	NS	ND	ND	ND	NS
Selenium	50	ND	ND	NS (5)	NS	ND	ND	ND	NS
Silver	100 (b)	ND	ND	NS (5)	NS	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-7S (2) 1/30/98 (µ/L)	MW-7S (2) 6/17/98 (µ/L)	MW-7D (2) 1/30/98 (µ/L)	MW-7D (2) 6/14/98 (µ/L)	MW-7R (2) 10/09/98 (µ/L)	MW-7R (2) 1/28/99 (µ/L)
VOC							
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	3	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND
Benzene	5	180	340	ND	8	290	198
1,2 Dichloroethane	5	3.4	ND	ND	ND	ND	ND
Toluene	1000	32	43	ND	ND	21	18
Ethylbenzene	700	170	63	ND	ND	40	39.9
Total Xylene	10000	321	139.4	ND	ND	67	69.4
Isopropylbenzene	n/a	21	11	ND	ND	17	16.9
n-Propylbenzene	n/a	27	14	ND	ND	16	17.8
1,3,5-Trimethylbenzene	n/a	20	22	ND	ND	23	40.4
1,2,4-Trimethylbenzene	n/a	240	63	ND	6.2	41	75.9
sec-Butylbenzene	n/a	9.8	ND	ND	ND	ND	4.9
p-Isopropyltoluene	n/a	17	ND	ND	ND	8.1	3.8
n-Butylbenzene	n/a	17	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	1.4J
Naphthalene	n/a	68	ND	ND	ND	48	37.8
Metals (unfiltered)		1/30/98	6/17/98	1/30/98	6/14/98	10/9/98	1/28/99
Barium	2000	3040	451	368	1390	348	535
Cadium	5	ND	ND	ND	ND	ND	ND
Chromium	100	223	ND	32.9	118	ND	ND
Arsenic	50	66.3	12.7	8.7	29.4	18.7	24
Lead	15 (c)	249	ND	14.5	48.1	11.3	ND
Mercury	2	ND	ND	ND	ND	ND	ND
Selenium	50	ND	ND	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND	ND	ND
Metals (filtered)							
Barium	2000	620	423	73.5	251	329	NS
Cadium	5	ND	ND	ND	ND	ND	NS
Chromium	100	ND	ND	ND	ND	ND	NS
Arsenic	50	14.7	10.3	ND	ND	19.5 (a)	NS
Lead	15 (c)	ND	ND	ND	ND	ND	NS
Mercury	2	ND	ND	ND	ND	ND	NS
Selenium	50	ND	ND	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-8 1/30/98 (µ/L)	MW-8 6/18/98 (µ/L)	MW-8 10/9/98 (µ/L)	MW-8 1/28/99 (µ/L)	MW-9 1/29/98 (µ/L)	MW-9 6/17/98 (µ/L)	MW-9 10/09/98 (µ/L)	MW-9 1/28/99 (µ/L)
VOC									
Methylene Chloride*	5	ND	ND	ND	ND	3.1	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	1200	1600	650	1000	38	180	62	76.3
cis-1,2 Dichloroethene	70	380	150	180	110	4.7	54	ND	17.9
trans-1,2-Dichloroethene	100	2	ND	13	ND	ND	ND	ND	ND
Trichloroethene	5	1100	490	450	410	2.7	31	9.3	12.1
Vinyl chloride	2	3.3	ND	5.9	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	6.2	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Metals (unfiltered)		6/14/98	6/18/98	10/9/98	1/28/99	1/29/98	6/17/98	10/9/98	1/28/99
Barium	2000	1390	126	57.5	44	1010	79.2	87.7	110
Cadium	5	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	100	118	31.7	10.8	ND	47.5	ND	ND	11
Arsenic	50	29.4	7.7	ND	ND	36.6	ND	ND	ND
Lead	15 (c)	48.1	11.3	6	ND	33.7	ND	ND	ND
Mercury	2	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	50	ND	ND	ND	ND	ND	ND	ND	ND
Silver	100 (b)	ND	7.42	ND	ND	ND	ND	ND	ND
Metals (filtered)									
Barium	2000	251	8.77	28.4	NS	42.3	73.4	85.4	NS
Cadium	5	ND	ND	ND	NS	ND	ND	ND	NS
Chromium	100	ND	ND	ND	NS	ND	ND	11 (a)	NS
Arsenic	50	ND	ND	ND	NS	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	NS	ND	ND	ND	NS
Mercury	2	ND	ND	ND	NS	ND	ND	ND	NS
Selenium	50	ND	ND	ND	NS	ND	ND	ND	NS
Silver	100 (b)	ND	ND	ND	NS	ND	ND	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (µ/L)	MW-10S (3) 1/29/98 (µ/L)	MW-10S (3) 6/15/98 (µ/L)	MW-10D (3) 1/29/98 (µ/L)	MW-10D (3) 6/16/98 (µ/L)	MW-10R (3) 10/3/98 (µ/L)	MW-10R (3) 1/28/99 (µ/L)
VOC							
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	2.9	5.3	1.8	ND	7.2	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND
Trichloroethene	5	7.8	ND	ND	ND	4.2J	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND
Metals (unfiltered)		1/29/98	6/15/98	1/29/98	6/16/98	10/3/98	1/28/99
Barium	2000	3460	122	877	113	24.6	29
Cadium	5	ND	ND	ND	ND	ND	ND
Chromium	100	141	7.47	41.8	14.3	7.8	12
Arsenic	50	80.9	ND	14.4	ND	ND	ND
Lead	15 (c)	142	ND	52.8	6	ND	ND
Mercury	2	0.321	ND	ND	ND	ND	ND
Selenium	50	ND	ND	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND	ND	ND
Metals (filtered)							
Barium	2000	27.1	22.7	8.63	ND	16.9	NS
Cadium	5	ND	ND	ND	ND	ND	NS
Chromium	100	ND	9.55	ND	ND	20.5 (a)	NS
Arsenic	50	ND	ND	ND	ND	ND	NS
Lead	15 (c)	ND	ND	ND	ND	ND	NS
Mercury	2	ND	ND	ND	ND	ND	NS
Selenium	50	ND	ND	5.3	ND	ND	NS
Silver	100 (b)	ND	ND	ND	ND	8.87 (a)	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (μ/L)	MW-11 10/07/98 (μ/L)	MW-11 1/27/99 (μ/L)	MW-12 10/06/98 (μ/L)	MW-12 1/27/99 (μ/L)
VOC					
Methylene Chloride*	5	5.0U	ND	ND	ND
Chloroform *	100	5	7.6U	ND	ND
Tetrachloroethene	5	ND	ND	4.7J	8.8
cis-1,2 Dichloroethene	70	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND
Metals (unfiltered)		10/7/98	1/27/99	10/6/98	1/27/99
Barium	2000	1620	228	145	45
Cadium	5	ND	ND	ND	ND
Chromium	100	111	ND	ND	ND
Arsenic	50	188	8	12.6	ND
Lead	15 (c)	251	10	16.7	ND
Mercury	2	0.287	ND	ND	ND
Selenium	50	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND
Metals (filtered)					
Barium	2000	69.8	NS	37.9	NS
Cadium	5	ND	NS	ND	NS
Chromium	100	ND	NS	ND	NS
Arsenic	50	ND	NS	ND	NS
Lead	15 (c)	ND	NS	ND	NS
Mercury	2	ND	NS	ND	NS
Selenium	50	ND	NS	ND	NS
Silver	100 (b)	ND	NS	ND	NS

TABLE 3
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS

Well ID	MCL (μ/L)	MW-13 2/5/99 (μ/L)	MW-14 2/5/99 (μ/L)	MW-15 2/6/99 (μ/L)	MW-16 2/6/99 (μ/L)
VOC					
Methylene Chloride*	5	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	3.5
cis-1,2 Dichloroethene	70	77.5	ND	ND	ND
trans-1,2-Dichloroethene	100	2.6	ND	ND	ND
Trichloroethene	5	11.7	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND
p-Isopropyltoluene	n/a	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND
Metals (unfiltered)		2/5/99	2/5/99	2/6/99	2/6/99
Barium	2000	31	132	120	83
Cadium	5	ND	ND	ND	ND
Chromium	100	ND	ND	ND	7
Arsenic	50	ND	ND	ND	ND
Lead	15 (c)	ND	ND	ND	ND
Mercury	2	ND	ND	ND	ND
Selenium	50	ND	ND	ND	ND
Silver	100 (b)	ND	ND	ND	ND
Metals (filtered)					
Barium	2000	NS	NS	NS	NS
Cadium	5	NS	NS	NS	NS
Chromium	100	NS	NS	NS	NS
Arsenic	50	NS	NS	NS	NS
Lead	15 (c)	NS	NS	NS	NS
Mercury	2	NS	NS	NS	NS
Selenium	50	NS	NS	NS	NS
Silver	100 (b)	NS	NS	NS	NS

TABLE NOTES

* Methylene Chloride and Chloroform were detected in laboratory QA samples and therefore are likely laboratory artifacts

(a) Filtered metals concentrations higher than dissolved metals concentrations
(b) Secondary Maximum Contaminant Levels, not enforceable
(c) Lead action level.

(1) MW-5S replaced with MW-5SR.
(2) MW-7S and MW-7D replaced with MW-7R.
(3) MW-10S and MW-10D replaced with MW-10R.
(4) EMW-3 abandoned
(5) MW-6S had insufficient water to collect samples 10/98, 1/99

NS = Not sampled. Filtered metals samples not collected after 10/98.
ND = Not detected.
NA = Not analyzed.
n/a = No MCL given.

U = The analyte was analyzed for, but was not detected above the reported sample quantition limit.

UJ = The analyte was not dectected above the reported sample quantition limit. However, the reported quantition limit is approximate and may not represent the actual limit of quantition necessary to accurately and precisely measure the analyte in the sample.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

B = The analyte was detected in the associated blank(s).

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	EMW-1							
TOP OF SCREEN ELEV.		NA							
BOTTOM OF WELL ELEV.		1297.1 ft. MSL							
TOP OF CASING ELEV.		1328.10 ft. MSL							
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		18.51	18.49	20.80	17.84	15.04	12.16	16.71	
WATER ELEV. (ft. MSL)		1311.06	1311.10	1308.77	1310.26	1313.06	1315.94	1311.39	
SAMPLE DATE		1/28/98	6/16/98	10/04/98	1/27/99	4/28/99	6/22/99	9/21/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC									
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND		
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethene	5	2.7	ND	ND	4.8	ND	ND	ND	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	EMW-2						
TOP OF SCREEN ELEV.		NA						
BOTTOM OF WELL ELEV.		1293.4 ft. MSL						
TOP OF CASING ELEV.		1329.69 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		9.25	9.11	9.30	8.48	7.59	5.64	7.62
WATER ELEV. (ft. MSL)		1321.63	1321.80	1321.58	1321.21	1322.10	1324.05	1322.07
SAMPLE DATE		1/28/98	6/17/98	10/09/98	1/28/99	4/28/99	6/23/99	9/22/99
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)
VOC								
Methylene Chloride*	5	9.2	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	6.8	5.7	6	5.1	6	5.7	5.6
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	15	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-1						
TOP OF SCREEN ELEV.		1326.1 ft. MSL						
BOTTOM OF WELL ELEV.		1293.4 ft. MSL						
TOP OF CASING ELEV.		1332.61 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		18.42	18.33	22.08	19.93	15.57	11.30	18.00
WATER ELEV. (ft. MSL)		1314.19	1314.28	1310.53	1312.68	1317.04	1321.31	1314.61
SAMPLE DATE		1/28/98	6/12/98	10/04/98	1/26/99	4/27/99	6/22/99	9/21/99
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)
VOC								
Methylene Chloride*	5	ND	5.7	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	2.6	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-2S						
TOP OF SCREEN ELEV.		1327.5 ft. MSL						
BOTTOM OF WELL ELEV.		1312.5 ft. MSL						
TOP OF CASING ELEV.		1334.53 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		8.96	8.14	10.43	9.52	8.66	6.14	6.84
WATER ELEV. (ft. MSL)		1325.57	1326.39	1324.10	1325.01	1325.87	1328.39	1327.69
SAMPLE DATE		1/28/98	6/16/98	10/08/98	1/28/99	4/27/99	6/23/99	9/20/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC								
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	5.9	ND	ND	ND	ND	2	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	26	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-2D							
TOP OF SCREEN ELEV.		1291.6 ft. MSL							
BOTTOM OF WELL ELEV.		1281.1 ft. MSL							
TOP OF CASING ELEV.		1334.61 ft. MSL							
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		8.80	8.01	10.56	9.57	8.69	6.21	6.94	
WATER ELEV. (ft. MSL)		1325.81	1326.60	1324.05	1325.04	1325.92	1328.40	1327.67	
SAMPLE DATE		1/29/98	6/14/98	10/07/98	1/27/99	4/27/99	6/23/99	9/22/99	
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	
VOC									
Methylene Chloride*	5	8.6	ND	5.0U	ND	ND	ND	ND	
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-3						
TOP OF SCREEN ELEV.		1322.2 ft. MSL						
BOTTOM OF WELL ELEV.		1299.7 ft. MSL						
TOP OF CASING ELEV.		1327.73 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		14.92	14.61	16.92	15.76	12.98	9.98	13.75
WATER ELEV. (ft. MSL)		1312.81	1313.12	1310.81	1311.97	1314.75	1317.75	1313.98
SAMPLE DATE		1/29/98	6/14/98	10/09/98	1/28/99	4/29/99	6/24/99	9/22/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC								
Methylene Chloride*	5	2.1	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	13	63	ND	38.7	21.2	80.3	54.6
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	2.2	5.5	ND	3.4	3.8	6.6	3.4
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-4S						
TOP OF SCREEN ELEV.		1319.9 ft. MSL						
BOTTOM OF WELL ELEV.		1304.9 ft. MSL						
TOP OF CASING ELEV.		1327.87 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		16.52	16.48	18.40	17.19	14.38	11.59	15.91
WATER ELEV. (ft. MSL)		1311.35	1311.39	1309.47	1310.68	1313.49	1316.28	1311.96
SAMPLE DATE		1/29/98	6/12/98	10/06/98	1/26/99	4/28/99	6/22/99	9/21/99
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)
VOC								
Methylene Chloride*	5	ND	ND	2.7J	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	1.1J	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-4D						
TOP OF SCREEN ELEV.		1303.0 ft. MSL						
BOTTOM OF WELL ELEV.		1293.0 ft. MSL						
TOP OF CASING ELEV.		1327.97 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		16.58	16.58	18.55	17.30	14.48	11.69	16.02
WATER ELEV. (ft. MSL)		1311.39	1311.39	1309.42	1310.67	1313.49	1316.28	1311.95
SAMPLE DATE		1/29/98	6/15/98	10/08/98	1/27/99	4/28/99	6/24/99	9/22/99
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)
VOC								
Methylene Chloride*	5	8.2	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	21	13	27	37	ND	19.2	22.8
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	2.5	ND	ND	3.5	ND	3.2	4
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-5S (1)		MW-5SR (1)				
TOP OF SCREEN ELEV.		1318.5 ft. MSL		1303.4 ft. MSL				
BOTTOM OF WELL ELEV.		1303.5 ft. MSL		1298.4 ft. MSL				
TOP OF CASING ELEV.		1327.46 ft. MSL		1327.39 ft. MSL				
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		16.88	16.92	18.89	17.60	15.55	12.21	16.49
WATER ELEV. (ft. MSL)		1310.58	1310.54	1308.50	1309.79	1311.84	1315.18	1310.90
SAMPLE DATE		1/28/98	6/13/98	10/07/98	1/26/99	4/28/99	6/23/99	9/22/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC								
Methylene Chloride*	5	ND	ND	5.0U	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	10.1	2.4	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	4	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
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GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-5D						
TOP OF SCREEN ELEV.		1296.0 ft. MSL						
BOTTOM OF WELL ELEV.		1286.0 ft. MSL						
TOP OF CASING ELEV.		1327.47 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		16.84	16.95	18.78	17.56	14.80	12.12	16.36
WATER ELEV. (ft. MSL)		1310.63	1310.52	1308.69	1309.91	1312.67	1315.35	1311.11
SAMPLE DATE		1/28/98	6/11/98	10/08/98	1/27/99	4/28/99	6/24/99	9/22/99
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)
VOC								
Methylene Chloride*	5	ND	6.7	5.0U	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	4.7	6.6	2.0J	5.6	3.9	3.0	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	2.2	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
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GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-6S						
TOP OF SCREEN ELEV.		1323.8 ft. MSL						
BOTTOM OF WELL ELEV.		1308.8 ft. MSL						
TOP OF CASING ELEV.		1330.78 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		19.76	19.88	21.79	20.51	17.71	14.87	19.34
WATER ELEV. (ft. MSL)		1311.02	1310.90	1308.99	1310.27	1313.07	1315.91	1311.44
SAMPLE DATE		1/29/98	6/13/98	10/08/98	1/26/99	4/28/99	6/22/99	9/23/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC								
Methylene Chloride*	5	8.2	ND	NS (5)	NS (5)	ND	ND	ND
Chloroform *	100	ND	ND	NS (5)	NS (5)	ND	ND	ND
Tetrachloroethene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	NS (5)	NS (5)	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	NS (5)	NS (5)	ND	ND	ND
Trichloroethene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND
Vinyl chloride	2	ND	ND	NS (5)	NS (5)	ND	ND	ND
Benzene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	NS (5)	NS (5)	ND	ND	ND
Toluene	1000	ND	ND	NS (5)	NS (5)	ND	ND	ND
Ethylbenzene	700	ND	ND	NS (5)	NS (5)	ND	ND	ND
Total Xylene	10000	ND	ND	NS (5)	NS (5)	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND
Naphthalene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-6D						
TOP OF SCREEN ELEV.		1303.9 ft. MSL						
BOTTOM OF WELL ELEV.		1291.9 ft. MSL						
TOP OF CASING ELEV.		1330.89 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		19.60	19.80	22.10	20.41	17.58	14.74	19.24
WATER ELEV. (ft. MSL)		1311.29	1330.89	1308.79	1310.48	1313.31	1316.15	1311.65
SAMPLE DATE		1/29/98	6/11/98	10/08/98	1/28/99	4/29/99	6/24/99	9/23/99
UNITS	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)	(µ/L)
VOC								
Methylene Chloride*	5	8.8	6.5	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	96	22	220	452	ND	58.2	38
cis-1,2 Dichloroethene	70	24	ND	40	112	14.4	3.4	2.8
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	9.4	ND	17	36.7	ND	2.8	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-7S (2)		MW-7D (2)		MW-7R (2)				
TOP OF SCREEN ELEV.		1345.4 ft. MSL		1329.4 ft. MSL		1334.2 ft. MSL				
BOTTOM OF WELL ELEV.		1330.4 ft. MSL		1318.4 ft. MSL		1329.2 ft. MSL				
TOP OF CASING ELEV.		1348.38 ft. MSL		1348.38 ft. MSL		1348.17 ft. MSL				
WATER LEVEL DATE		1/27/98	6/10/98	1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		2.14	3.15	2.08	3.02	7.20	4.30	1.38	0.10	4.93
WATER ELEV. (ft. MSL)		1346.24	1345.23	1346.30	1345.36	1340.97	1343.87	1346.79	1348.07	1343.24
SAMPLE DATE		1/30/98	6/17/98	1/30/98	6/14/98	10/09/98	1/28/99	4/29/99	6/22/99	9/23/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC										
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	3	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	180	340	ND	8	290	198	25.8	350	500
1,2 Dichloroethane	5	3.4	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	32	43	ND	ND	21	18	2.8	24.4	ND
Ethylbenzene	700	170	63	ND	ND	40	39.9	4.8	58.9	37
Total Xylene	10000	321	139.4	ND	ND	67	69.4	8.8	100	58
Isopropylbenzene	n/a	21	11	ND	ND	17	16.9	4.6	22.2	ND
n-Propylbenzene	n/a	27	14	ND	ND	16	17.8	2.4	23.7	ND
1,3,5-Trimethylbenzene	n/a	20	22	ND	ND	23	40.4	ND	51	ND
1,2,4-Trimethylbenzene	n/a	240	63	ND	6.2	41	75.9	6	94.7	36
sec-Butylbenzene	n/a	9.8	ND	ND	ND	ND	4.9	ND	5.8	ND
4-Isopropyltoluene	n/a	17	ND	ND	ND	8.1	3.8	ND	4.9	ND
n-Butylbenzene	n/a	17	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	1.4J	ND	ND	ND
Naphthalene	n/a	68	ND	ND	ND	48	37.8	ND	50	41

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-8						
TOP OF SCREEN ELEV.		1326.4 ft. MSL						
BOTTOM OF WELL ELEV.		1305.4 ft. MSL						
TOP OF CASING ELEV.		1332.35 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		16.89	16.44	18.61	17.54	14.78	12.58	15.79
WATER ELEV. (ft. MSL)		1315.46	1315.91	1313.74	1314.81	1317.57	1319.77	1316.56
SAMPLE DATE		1/30/98	6/18/98	10/9/98	1/28/99	4/29/99	6/22/99	9/23/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC								
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	1200	1600	650	1000	18150	2275	813
cis-1,2 Dichloroethene	70	380	150	180	110	3000	490	133
trans-1,2-Dichloroethene	100	2	ND	13	ND	3.7	3.1	ND
Trichloroethene	5	1100	490	450	410	8100	1220	230
Vinyl chloride	2	3.3	ND	5.9	ND	19.7	14.8	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	6.2	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-9						
TOP OF SCREEN ELEV.		1321.1 ft. MSL						
BOTTOM OF WELL ELEV.		1301.1 ft. MSL						
TOP OF CASING ELEV.		1332.56 ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		20.35	20.27	22.89	21.24	18.55	15.60	19.77
WATER ELEV. (ft. MSL)		1312.21	1312.29	1309.67	1311.32	1314.01	1316.96	1312.79
SAMPLE DATE		1/29/98	6/17/98	10/09/98	1/28/99	4/29/99	6/24/99	9/23/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC								
Methylene Chloride*	5	3.1	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	38	180	62	76.3	151	226.5	410
cis-1,2 Dichloroethene	70	4.7	54	ND	17.9	17.3	106	94
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	2.7	31	9.3	12.1	22.8	113	160
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-10S (3)		MW-10D (3)		MW-10R (3)				
TOP OF SCREEN ELEV.		1325.3 ft. MSL		1305.3 ft. MSL		1318.1 ft. MSL				
BOTTOM OF WELL ELEV.		1305.3 ft. MSL		1295.3 ft. MSL		1313.1 ft. MSL				
TOP OF CASING ELEV.		1330.27 ft. MSL		1330.26 ft. MSL		1330.14 ft. MSL				
WATER LEVEL DATE		1/27/98	6/10/98	1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99
WATER DEPTH (BGS)		6.70	6.27	6.70	6.24	8.09	7.15	6.25	4.01	5.52
WATER ELEV. (ft. MSL)		1323.57	1324.00	1323.56	1324.02	1322.05	1322.99	1323.89	1326.13	1324.62
SAMPLE DATE		1/29/98	6/15/98	1/29/98	6/16/98	10/3/98	1/28/99	4/28/99	6/24/99	9/22/99
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)
VOC										
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	2.9	5.3	1.8	ND	7.2	ND	7	6	6.8
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	7.8	ND	ND	ND	4.2J	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-11					
TOP OF SCREEN ELEV.		1308.5 ft. MSL					
BOTTOM OF WELL ELEV.		1303.5 ft. MSL					
TOP OF CASING ELEV.		1330.53 ft. MSL					
WATER LEVEL DATE		10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		21.80	19.76	16.58	13.60	18.52	
WATER ELEV. (ft. MSL)		1308.73	1310.77	1313.95	1316.93	1312.01	
SAMPLE DATE		10/07/98	1/27/99	36277	6/22/99	9/21/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC							
Methylene Chloride*	5	5.0U	ND	ND	ND	ND	
Chloroform *	100	5	7.6U	ND	2.6	3	
Tetrachloroethene	5	ND	ND	ND	ND	ND	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-12					
TOP OF SCREEN ELEV.		1305.4 ft. MSL					
BOTTOM OF WELL ELEV.		1300.4 ft. MSL					
TOP OF CASING ELEV.		1329.94 ft. MSL					
WATER LEVEL DATE		10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		21.70	20.00	17.30	14.54	18.84	
WATER ELEV. (ft. MSL)		1308.24	1309.94	1312.64	1315.40	1311.10	
SAMPLE DATE		10/06/98	1/27/99	4/28/99	6/24/99	9/22/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC							
Methylene Chloride*	5	ND	ND	ND	ND	ND	
Chloroform *	100	ND	ND	ND	ND	ND	
Tetrachloroethene	5	4.7J	8.8	8.8	7.5	7.4	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-13				
TOP OF SCREEN ELEV.		1322.5 ft. MSL				
BOTTOM OF WELL ELEV.		1312.5 ft. MSL				
TOP OF CASING ELEV.		1330.52 ft. MSL				
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		8.34	7.30	5.29	7.01	
WATER ELEV. (ft. MSL)		1322.18	1323.22	1325.23	1323.51	
SAMPLE DATE		2/5/99	4/29/99	6/24/99	9/23/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC						
Methylene Chloride*	5	ND	ND	ND	ND	
Chloroform *	100	ND	ND	ND	ND	
Tetrachloroethene	5	ND	2.4	ND	ND	
cis-1,2 Dichloroethene	70	77.5	113	95.4	147	
trans-1,2-Dichloroethene	100	2.6	ND	ND	ND	
Trichloroethene	5	11.7	12.9	12.8	9	
Vinyl chloride	2	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-14				
TOP OF SCREEN ELEV.		1307.4 ft. MSL				
BOTTOM OF WELL ELEV.		1297.4 ft. MSL				
TOP OF CASING ELEV.		1327.12 ft. MSL				
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		16.93	14.08	11.24	15.81	
WATER ELEV. (ft. MSL)		1310.19	1313.04	1315.88	1311.31	
SAMPLE DATE		2/5/99	4/27/99	6/23/99	9/21/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC						
Methylene Chloride*	5	ND	ND	ND	ND	
Chloroform *	100	ND	ND	ND	ND	
Tetrachloroethene	5	ND	ND	ND	ND	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-15				
TOP OF SCREEN ELEV.		1301.8 ft. MSL				
BOTTOM OF WELL ELEV.		1296.8 ft. MSL				
TOP OF CASING ELEV.		1327.09 ft. MSL				
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		17.08	14.31	11.53	15.97	
WATER ELEV. (ft. MSL)		1310.01	1327.09	1315.56	1311.12	
SAMPLE DATE		2/6/99	4/27/99	6/23/99	9/21/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC						
Methylene Chloride*	5	ND	ND	ND	ND	
Chloroform *	100	ND	ND	ND	ND	
Tetrachloroethene	5	ND	ND	ND	ND	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH SEPTEMBER 1999

	MCL	MW-16				
TOP OF SCREEN ELEV.		1302.5 ft. MSL				
BOTTOM OF WELL ELEV.		1297.5 ft. MSL				
TOP OF CASING ELEV.		1326.22 ft. MSL				
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	
WATER DEPTH (BGS)		18.64	14.85	11.32	15.36	
WATER ELEV. (ft. MSL)		1307.58	1311.37	1314.90	1310.86	
SAMPLE DATE		2/6/99	4/28/99	6/23/99	9/23/99	
UNITS	(μ/L)	(μ/L)	(μ/L)	(μ/L)	(μ/L)	
VOC						
Methylene Chloride*	5	ND	ND	ND	ND	
Chloroform *	100	ND	ND	ND	ND	
Tetrachloroethene	5	3.5	3.7	5.8	3.8	
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	
Benzene	5	ND	ND	ND	ND	
1,2 Dichloroethane	5	ND	ND	ND	ND	
Toluene	1000	ND	ND	ND	ND	
Ethylbenzene	700	ND	ND	ND	ND	
Total Xylene	10000	ND	ND	ND	ND	
Isopropylbenzene	n/a	ND	ND	ND	ND	
n-Propylbenzene	n/a	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	
sec-Butylbenzene	n/a	ND	ND	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	ND	ND	
n-Butylbenzene	n/a	ND	ND	ND	ND	
t-Butylbenzene	n/a	ND	ND	ND	ND	
Naphthalene	n/a	ND	ND	ND	ND	

TABLE 1 NOTES

* Methylene Chloride and Chloroform (where flagged) were detected in laboratory QA samples and therefore are likely laboratory artifacts

(a) Filtered metals concentrations higher than dissolved metals concentrations
(b) Secondary Maximum Contaminant Levels, not enforceable
(c) Lead action level.

(1) MW-5S replaced with MW-5SR.
(2) MW-7S and MW-7D replaced with MW-7R.
(3) MW-10S and MW-10D replaced with MW-10R.
(4) EMW-3 abandoned
(5) MW-6S had insufficient water to collect samples 10/98, 1/99

NS = Not sampled. Filtered metals samples not collected after 10/98.
ND = Not detected.
NA = Not analyzed.
n/a = No MCL given.

U = The analyte was analyzed for, but was not detected above the reported sample quantition limit.

UJ = The analyte was not dectected above the reported sample quantition limit. However, the reported quantition limit is approximate and may not represent the actual limit of quantition necessary to accurately and precisely measure the analyte in the sample.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

B = The analyte was detected in the associated blank(s).

Synonyms:

tetrachoroethene =	PCE, perchloroethene, tetrachloroethylene, perchloroethylene
trichoroethene =	TCE, trichloroethylene
cis-1,2-dichloroethene =	cis-1,2-DCE, cis-1,2-dichloroethylene
trans-1,2-dichloroethene =	trans-1,2-DCE, trans-1,2-dichloroethylene
4-isopropyltoluene =	p-isopropyltoluene

Golder Associates Inc.

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Golder Associates

July 19, 2001

Our Ref: 973-2209

Wichita Public Schools
School Service Center
3850 North Hydraulic
Wichita, Kansas 67219

Attention: Mr. Timothy Phares

RE: FIRST SEMIANNUAL 2001 / NIC-WIDE GROUNDWATER AND SOUTHEAST PLUME INVESTIGATION CONFIRMATION SAMPLING RESULTS - JUNE 2001
WICHITA PUBLIC SCHOOLS
USD 259 SCHOOL SERVICE CENTER SITE

Dear Mr. Phares:

Golder Associates Inc. (Golder) was contracted by Wichita Public Schools USD 259 (USD 259) to conduct Phase II Remedial Investigations (RI) of the School Service Center Site (Site) located at 37th and Hydraulic, Wichita, Kansas. As part of the Phase II RI, semiannual sampling of groundwater at the Site was scheduled for the spring of 2001. The sampling event was rescheduled to coincide with the North Industrial Corridor (NIC)-wide sampling event, which was originally to have been conducted in late 2000.

In addition, results of investigations performed to-date have indicated the presence of volatile organic compounds (VOCs) in the groundwater at the southern extent of the Site. Impacted areas include the southeastern part of the Site, apparently entering the Site via its border with the neighboring Pinsker Steel Incorporated (Pinsker) facility and extending thence to the west-southwest, impacting wells MW-13, MW-3, and the MW-4 well pair.

Golder prepared a proposed investigation on and around the Pinsker facility to investigate the potential source and pathway for these impacts, which were believed to originate either

from the Pinsker facility or from the Unocal facility to the east of Pinsker. The proposed investigation was discussed with Pinsker, who granted access for the investigation. The proposed investigative program was then presented to KDHE. Approval to conduct the proposed scope of work was granted by KDHE on November 3, 2000. This program was implemented in November 2000, with results generally indicating the origin of impacts to groundwater, chiefly trichloroethene (TCE) and cis-1,2-dichloroethene (DCE), to originate from a source east of the Pinsker facility. Confirmation sampling of the temporary Site and Pinsker wells was conducted during the June 2001 sampling event.

Locations of the monitoring wells are shown on Figure 1.

Water Level Measurements

Water level measurements were made at each of the monitoring well locations. Water level measurements are shown on Tables 1 and 2. Elevations have been plotted and a potentiometric surface map prepared as Figure 1. Groundwater elevations continue to indicate a general flow toward the west and southwest. Groundwater gradients are generally much flatter through the west and southwest part of the Site and steeper beneath eastern portions of the Site and the Pinsker facility. May or June 2001 groundwater elevation data for the Unocal facility are not yet available.

Groundwater Sampling Results

Groundwater samples were collected using methods described in the Work Plan. Table 1 presents results for analytes detected during the ten groundwater sampling events conducted by Golder (wells MW-1 through MW-20, and EMW-1 and EMW-2), while Table 2 presents data for the temporary wells installed in November 2000 (TW-1 and TW-2, and PMW-2 through PMW-6). EPA Maximum Contaminant Levels (MCLs) are shown on the tables for analytes for which MCLs have been promulgated, as well as the screened intervals for the wells (except at EMW-1 and EMW-2, where well construction details are not known), measured water level depths and calculated water level elevations. Analytical data are summarized on Tables 1 and 2, and on Figure 2. Figure 2 also shows Unocal sampling results for September 1999 (the most recent event for which USD 259 has received data) for

reference. Sampling forms, chain of custody forms and analytical data are presented in Attachment 1. All of the wells were purged prior to sample collection, per protocols described in the Work Plan.

Samples were collected and analyzed for VOCs using EPA method 8260B. KDHE did not collect split groundwater samples during this sampling event.

The sample analyses indicated:

- EMW-1. No VOCs were detected.
- EMW-2. PCE was detected at 3.2 μg/l, lower than concentrations detected during previous sampling events. PCE concentrations in this well have been trending downward since April 1999.
- MW-1. No VOCs were detected.
- MW-2S. No VOCs were detected, nor have they been detected since June 1999.
- MW-3. DCE was detected at 29.4 μg/l. TCE was detected at 3.3 μg/l.
- MW-4S. No VOCs were detected. DCE has been detected at low concentrations during three previous events.
- MW-4D. DCE was detected at 27.4 μg/l. TCE was detected at 2.5 μg/l.
- MW-5SR. No VOCs were detected. DCE was detected during two sampling events prior to June 1999.
- MW-5D. No VOCs were detected. DCE has not been detected since June 1999.
- MW-6S. No VOCs were detected.
- MW-6D. PCE was detected at 115 μg/l, TCE was detected at 10.3 μg/l and DCE was detected at 19.7 μg/l. VOC concentrations were higher than those measured during the November 2000 sampling event.
- MW-7R. Benzene was detected at 300.5 μg/l, similar to previous sampling events. Toluene, ethylbenzene, toluene, isopropylbenzene, n-propyl-benzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene and naphthalene were also detected.
- MW-8R. No VOCs were detected in this well, which replaces the original MW-8. Well MW-8 was removed by excavation during the soil IRM in the former UST basin.

- MW-9. Concentrations of PCE (286.5 μg/l), TCE (167 μg/l) and DCE (50.5 μg/l) were lower than detected during the November 2000 sampling event.
- MW-10R. PCE was detected at 5.2 μg/l, similar to detections during previous sampling events.
- MW-11. No VOCs were detected. Only chloroform has previously been detected in this well.
- MW-12. PCE was detected at a concentration of 5.0 μg/l, similar to concentrations detected during previous sampling events.
- MW-13. DCE was detected at 66.9 μg/l, TCE was detected at 10.2 μg/l and DCE was detected at 2.0 μg/l.
- MW-14. No VOCs were detected. No VOCs have historically been detected in this well.
- MW-15. No VOCs were detected. No VOCs have historically been detected in this well.
- MW-16. PCE was detected at 3.7 μg/l, similar to concentrations detected during previous sampling events.
- MW-17. No VOCs were detected.
- MW-18. PCE (89.7 μg/l) and TCE (4.0 μg/l) were detected, similar to the November 2000 event.
- MW-19. No VOCs were detected.
- MW-20. No VOCs were detected.
- PMW-2. No VOCs were detected.
- PMW-3. DCE (150 μg/l) and TCE (4.9 μg/l) were detected, higher than detected in November 2000.
- PMW-4. No VOCs were detected.
- PMW-5. DCE (729 μg/l of cis-1,2-DCE and 2.4 μg/l of trans-1,2-DCE), TCE (18.9 μg/l), PCE (4.6 μg/l), 1,1-DCA (16.4 μg/l), and 1,2-dichloroethane (1,2-DCA, at an estimated concentration of 1.8 μg/l) were detected. These results are similar than November 2000 data.
- PMW-6. DCE (12.3 μg/l) and TCE (20.6 μg/l) were detected, similar to November 2000 results.
- TW-1. No VOCs were detected.
- TW-2. No VOCs were detected. PCE was detected at 3.2 μg/l in November 2000.

On the USD 259 Site:

- Concentrations of PCE were above the EPA Maximum Contaminant Level (MCL) of 5 μg/l at MW-6D, MW-9 and MW-10R;
- Concentrations of TCE were above the MCL (5 μg/l) at MW-6D, MW-9 and MW-13; and
- The concentration of benzene was above the MCL (5 μg/l) at MW-7R.

Groundwater samples collected from wells installed near the center of the Pinsker facility indicated that:

- The concentration of cis-1,2-DCE was above the MCL (70 μg/l) at PMW-3; and
- The concentration of TCE was above the MCL (5 μg/l) at PMW-6.

Groundwater samples collected from wells installed on or near the border between Pinsker and Unocal indicated that:

- The concentration of PCE was above the MCL (5 μg/l) at MW-18;
- The concentration of TCE was above the MCL (5 μg/l) at PMW-5; and
- The concentration of cis-1,2-DCE was above the MCL (70 μg/l) at PMW-5.

Analytical results for VOCs are summarized on Figure 2. Isoconcentration contours for PCE, TCE and DCE are presented as Figures 3, 4, and 5, respectively. For reference, the most recent available data from Unocal (September 1999) are also shown on these figures.

Conclusions and Recommendations

The results of the confirmation sampling confirm previous conclusions:

- As indicated during previous sampling events, data from new and existing wells show a well-defined northern boundary to the VOC plume associated with the former UST basin. While the southern boundary is less well defined, it appears to pass through the USD 259 building. Current data near the western site boundary do not indicate off-Site migration of VOCs above MCLs. The absence of PCE in the wells along

37th Street suggested that compounds detected in those wells originate from an off-Site source or sources. This was confirmed by data from the new wells on and near the Pinsker facility (see below).

- The lack of VOC detections in MW-8R suggests that, first, impacted soils have been successfully removed to the southern excavation boundary of the IRM; and, second, that VOC impacts from the former UST basin do not migrate south from the source area.
- The minor detection of PCE in TW-2 in November 2000 was not repeated in June 2001. Results in this area, as well as historical consistency of the results for MW-10R and EMW-2, suggests that PCE impacts above MCL originating from the suspected drum disposal area are limited in lateral to extent to a point somewhere between EMW-2 and TW-2.
- Data from new wells PMW-3, PMW-5, PMW-6, and MW-18 indicate the presence of a plume passing beneath the Pinsker facility. The constituents detected in these wells appear to associate them with similar detections in groundwater monitoring wells located on the Unocal facility, especially data from UMW-3, UMW-4 and UMW-5. These data also appear to associate the same plume with detections in MW-13, MW-3 and the MW-4 wells on the USD 259 Site. The lack of detections at MW-17 appears to be anomalous, except that the lack of sufficient permeability to allow installation of a well at the proposed PMW-1 location likely indicates that bedrock conditions below the southwestern part of the Pinsker facility and the extreme southeast corner of USD 259 likely prevent flow from the Unocal source through that area, thereby forcing groundwater to flow around that area to the north. Potentiometric data show a northwestward component of flow in the area. Preferential pathways may also be a factor in the area.
- None of the data appear to indicate that impacts to soil or groundwater occur due to sources located on the Pinsker facility.
- General petroleum-related impacts continue to be detected in MW-7R in MW-7R along the eastern Site border with Phillips.

Only limited interpretation of data is presented in this report. Detailed evaluation of soil, groundwater, and chemistry data will be included in the RI Report. Based upon the meeting between KDHE, USD 259 and Golder, we believe that it is appropriate at this time to move forward with the RI Report. In addition, Golder is developing and evaluating options for a second Interim Remedial Measure (IRM) to address the primary groundwater impacts originating in the former UST basin.

Per the access agreement with Pinsker, Golder will propose to properly plug and abandon wells PMW-2 through 6, MW-17 and MW-19. Several other wells do not provide data relevant to long term monitoring at the Site. Golder proposes the following wells remain in the monitoring program, with wells not listed being properly plugged and abandoned to KDHE specifications:

- Wells to be sampled semiannually (spring/summer and fall/winter):
  - EMW-1;
  - EMW-2;
  - MW-5SR;
  - MW-5D;
  - MW-6S;
  - MW-6D;
  - MW-9;
  - MW-10R;
  - MW-12;
  - MW-15; and
  - MW-16.
- Wells to be sampled annually (spring/summer):
  - MW-3;
  - MW-4S;
  - MW-4D;
  - MW-8R;
  - MW-13; and
  - MW-18.

Golder also recommends that we negotiate with Pinsker to retain PMW-3 and PMW-5, if possible.

Golder appreciates the opportunity to conduct this work for USD 259. Please contact us if you have questions or desire additional information regarding the data or recommendations discussed above.

Sincerely,

GOLDER ASSOCIATES INC.

Mark R. Sandfort, P.G., P.E.
Senior Geological Engineer
Associate

Frederick M. Booth, P.G
Manager, St. Louis Operations
Principal

MRS/FMB/ce
Enclosures - Tables, Figures and Attachments

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	EMW-1									
TOP OF SCREEN ELEV.		NA			NA						
BOTTOM OF WELL ELEV.		1297.1 ft. MSL			1297.1 ft. MSL			*Flush mount prot. Casings*			
TOP OF CASING ELEV.		1329.57 ft. MSL			1328.10 ft. MSL			*installed 1/99, new TOC elev.*			
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		18.51	18.49	20.80	17.84	15.04	12.16	16.71	15.73	18.65	16.05
WATER ELEV. (ft. MSL)		1311.06	1311.08	1308.77	1310.26	1313.06	1315.94	1311.39	1312.37	1309.45	1312.05
SAMPLE DATE		1/28/98	6/16/98	10/04/98	1/27/99	4/28/99	6/22/99	9/21/99	3/15/00	11/10/00	6/8/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	2.7	ND	ND	4.8	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	EMW-2									
TOP OF SCREEN ELEV.		NA			NA						
BOTTOM OF WELL ELEV.		1293.4 ft. MSL			1293.4 ft. MSL		*Flush mount prot. Casings*				
TOP OF CASING ELEV.		1330.88 ft. MSL			1329.69 ft. MSL		*installed 1/99, new TOC elev.*				
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		9.25	9.11	9.30	8.48	7.59	5.64	7.62	7.32	9.02	8.18
WATER ELEV. (ft. MSL)		1321.63	1321.77	1321.58	1321.21	1322.10	1324.05	1322.07	1322.37	1320.67	1321.51
SAMPLE DATE		1/28/98	6/17/98	10/09/98	1/28/99	4/28/99	6/23/99	9/22/99	3/15/00	11/10/00	6/11/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	9.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	6.8	5.7	6	5.1	6	5.7	5.6	4.2	3.8	3.2
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	15	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-1									
TOP OF SCREEN ELEV.		1326.1 ft. MSL									
BOTTOM OF WELL ELEV.		1293.4 ft. MSL									
TOP OF CASING ELEV.		1332.61 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		18.42	18.33	22.08	19.93	15.57	11.30	18.00	16.79	20.44	18.21
WATER ELEV. (ft. MSL)		1314.19	1314.28	1310.53	1312.68	1317.04	1321.31	1314.61	1315.82	1312.17	1314.40
SAMPLE DATE		1/28/98	6/12/98	10/04/98	1/26/99	4/27/99	6/22/99	9/21/99	3/15/00	11/18/00	6/5/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	5.7	ND	ND	ND	ND	ND	ND	NS	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Tetrachloroethene	5	ND	ND	ND	2.6	ND	ND	ND	ND	NS	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-2S									
TOP OF SCREEN ELEV.		1327.5 ft. MSL									
BOTTOM OF WELL ELEV.		1312.5 ft. MSL									
TOP OF CASING ELEV.		1334.53 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		8.96	8.14	10.43	9.52	8.66	6.14	6.84	7.68	10.14	9.15
WATER ELEV. (ft. MSL)		1325.57	1326.39	1324.10	1325.01	1325.87	1328.39	1327.69	1326.85	1324.39	1325.38
SAMPLE DATE		1/28/98	6/16/98	10/08/98	1/28/99	4/27/99	6/23/99	9/20/99	3/14/00	11/11/00	6/7/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	5.9	ND	ND	ND	ND	2	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	26	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-3									
TOP OF SCREEN ELEV.		1322.2 ft. MSL									
BOTTOM OF WELL ELEV.		1299.7 ft. MSL									
TOP OF CASING ELEV.		1327.73 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		14.92	14.61	16.92	15.76	12.98	9.98	13.75	13.61	16.54	13.36
WATER ELEV. (ft. MSL)		1312.81	1313.12	1310.81	1311.97	1314.75	1317.75	1313.98	1314.12	1311.19	1314.37
SAMPLE DATE		1/29/98	6/14/98	10/09/98	1/28/99	4/29/99	6/24/99	9/22/99	3/18/00	11/17/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	13	63	ND	38.7	21.2	80.3	54.6	28.4	10.3	29.4
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	2.2	5.5	ND	3.4	3.8	6.6	3.4	2.5	ND	3.3
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-4S									
TOP OF SCREEN ELEV.		1319.9 ft. MSL									
BOTTOM OF WELL ELEV.		1304.9 ft. MSL									
TOP OF CASING ELEV.		1327.87 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		16.52	16.48	18.40	17.19	14.38	11.59	15.91	15.14	17.95	14.93
WATER ELEV. (ft. MSL)		1311.35	1311.39	1309.47	1310.68	1313.49	1316.28	1311.96	1312.73	1309.92	1312.94
SAMPLE DATE		1/29/98	6/12/98	10/06/98	1/26/99	4/28/99	6/22/99	9/21/99	3/15/00	11/11/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	ND	2.7J	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	1.1J	ND	ND	ND	3.2	2.1	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-4D									
TOP OF SCREEN ELEV.		1303.0 ft. MSL									
BOTTOM OF WELL ELEV.		1293.0 ft. MSL									
TOP OF CASING ELEV.		1327.97 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		16.58	16.58	18.55	17.30	14.48	11.69	16.02	15.28	18.19	15.05
WATER ELEV. (ft. MSL)		1311.39	1311.39	1309.42	1310.67	1313.49	1316.28	1311.95	1312.69	1309.78	1312.92
SAMPLE DATE		1/29/98	6/15/98	10/08/98	1/27/99	4/28/99	6/24/99	9/22/99	3/18/00	11/18/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	21	13	27	37	ND	19.2	22.8	33.8	11.1	27.4
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	2.5	ND	ND	3.5	ND	3.2	4	3.3	ND	2.5
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-5S (1)		MW-5SR (1)							
TOP OF SCREEN ELEV.		1318.5 ft. MSL		1303.4 ft. MSL							
BOTTOM OF WELL ELEV.		1303.5 ft. MSL		1298.4 ft. MSL							
TOP OF CASING ELEV.		1327.46 ft. MSL		1327.39 ft. MSL							
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		16.88	16.92	18.89	17.60	15.55	12.21	16.49	15.68	18.42	15.63
WATER ELEV. (ft. MSL)		1310.58	1310.54	1308.50	1309.79	1311.84	1315.18	1310.90	1311.71	1308.97	1311.76
SAMPLE DATE		1/28/98	6/13/98	10/07/98	1/26/99	4/28/99	6/23/99	9/22/99	3/18/00	11/11/00	6/7/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	ND	5.0U	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	10.1	2.4	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	4	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-5D									
TOP OF SCREEN ELEV.		1296.0 ft. MSL									
BOTTOM OF WELL ELEV.		1286.0 ft. MSL									
TOP OF CASING ELEV.		1327.47 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		16.84	16.95	18.78	17.56	14.80	12.12	16.36	15.98	18.30	15.51
WATER ELEV. (ft. MSL)		1310.63	1310.52	1308.69	1309.91	1312.67	1315.35	1311.11	1311.49	1309.17	1311.96
SAMPLE DATE		1/28/98	6/11/98	10/08/98	1/27/99	4/28/99	6/24/99	9/22/99	3/18/00	11/11/00	6/8/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	6.7	5.0U	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	4.7	6.6	2.0J	5.6	3.9	3.0	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-6S									
TOP OF SCREEN ELEV.		1323.8 ft. MSL									
BOTTOM OF WELL ELEV.		1308.8 ft. MSL									
TOP OF CASING ELEV.		1330.78 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		19.76	19.88	21.79	20.51	17.71	14.87	19.34	17.37	21.31	18.68
WATER ELEV. (ft. MSL)		1311.02	1310.90	1308.99	1310.27	1313.07	1315.91	1311.44	1313.41	1309.47	1312.10
SAMPLE DATE		1/29/98	6/13/98	10/08/98	1/26/99	4/28/99	6/22/99	9/23/99	3/18/00	11/18/00	6/5/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	8.2	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	NS (5)	NS (5)	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-6D									
TOP OF SCREEN ELEV.		1303.9 ft. MSL									
BOTTOM OF WELL ELEV.		1291.9 ft. MSL									
TOP OF CASING ELEV.		1330.89 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		19.60	19.80	22.10	20.41	17.58	14.74	19.24	18.30	21.25	18.58
WATER ELEV. (ft. MSL)		1311.29	1311.09	1308.79	1310.48	1313.31	1316.15	1311.65	1312.59	1309.64	1312.31
SAMPLE DATE		1/29/98	6/11/98	10/08/98	1/28/99	4/29/99	6/24/99	9/23/99	3/19/00	11/18/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	8.8	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	96	22	220	452	ND	58.2	38	37.4	34.3	115
cis-1,2 Dichloroethene	70	24	ND	40	112	14.4	3.4	2.8	ND	2.8	19.7
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	9.4	ND	17	36.7	ND	2.8	ND	ND	ND	10.3
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-7S (2)		MW-7D (2)		MW-7R (2)							
TOP OF SCREEN ELEV.		1345.4 ft. MSL		1329.4 ft. MSL		1334.2 ft. MSL							
BOTTOM OF WELL ELEV.		1330.4 ft. MSL		1318.4 ft. MSL		1329.2 ft. MSL							
TOP OF CASING ELEV.		1348.38 ft. MSL		1348.38 ft. MSL		1348.17 ft. MSL							
WATER LEVEL DATE		1/27/98	6/10/98	1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		2.14	3.15	2.08	3.02	7.20	4.30	1.38	0.10	4.93	1.87	7.15	4.03
WATER ELEV. (ft. MSL)		1346.24	1345.23	1346.30	1345.36	1340.97	1343.87	1346.79	1348.07	1343.24	1346.30	1341.02	4.14
SAMPLE DATE		1/30/98	6/17/98	1/30/98	6/14/98	10/09/98	1/28/99	4/29/99	6/22/99	9/23/99	3/19/00	11/18/00	6/13/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC													
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	[illegible]
Tetrachloroethene	5	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	[illegible]
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	[illegible]
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	[illegible]
Benzene	5	180	340	ND	8	290	198	25.8	350	500	295	NS	[illegible]
1,2 Dichloroethane	5	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Toluene	1000	32	43	ND	ND	21	18	2.8	24.4	ND	18.7	NS	20.5
Ethylbenzene	700	170	63	ND	ND	40	39.9	4.8	58.9	37	52.2	NS	[illegible]
Total Xylene	10000	321	139.4	ND	ND	67	69.4	8.8	100	58	91.4	NS	163
Isopropylbenzene	n/a	21	11	ND	ND	17	16.9	4.6	22.2	ND	27.2	NS	20.5
n-Propylbenzene	n/a	27	14	ND	ND	16	17.8	2.4	23.7	ND	32.2	NS	29
1,3,5-Trimethylbenzene	n/a	20	22	ND	ND	23	40.4	ND	51	ND	24.1	NS	32
1,2,4-Trimethylbenzene	n/a	240	63	ND	6.2	41	75.9	6	94.7	36	58.8	NS	59.5
sec-Butylbenzene	n/a	9.8	ND	ND	ND	ND	4.9	ND	5.8	ND	5.2	NS	ND
4-Isopropyltoluene	n/a	17	ND	ND	ND	8.1	3.8	ND	4.9	ND	ND	NS	ND
n-Butylbenzene	n/a	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	1.4J	ND	ND	ND	ND	NS	ND
Naphthalene	n/a	68	ND	ND	ND	48	37.8	ND	50	41	94.2	NS	69
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-8								MW-8R	
TOP OF SCREEN ELEV.		1326.4 ft. MSL								1314.8	
BOTTOM OF WELL ELEV.		1305.4 ft. MSL								1309.8	
TOP OF CASING ELEV.		1332.35 ft. MSL								1332.36	
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		16.89	16.44	18.61	17.54	14.78	12.58	15.79	15.47	18.12	16.57
WATER ELEV. (ft. MSL)		1315.46	1315.91	1313.74	1314.81	1317.57	1319.77	1316.56	1316.88	1314.24	1315.79
SAMPLE DATE		1/30/98	6/18/98	10/9/98	1/28/99	4/29/99	6/22/99	9/23/99	3/19/00	11/18/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	1200	1600	650	1000	18150	2275	813	2150	ND	ND
cis-1,2 Dichloroethene	70	380	150	180	110	3000	490	133	370	ND	ND
trans-1,2-Dichloroethene	100	2	ND	13	ND	3.7	3.1	ND	4.0	ND	ND
Trichloroethene	5	1100	490	450	410	8100	1220	230	1365	ND	ND
Vinyl chloride	2	3.3	ND	5.9	ND	19.7	14.8	ND	3.2	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	6.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-9									
TOP OF SCREEN ELEV.		1321.1 ft. MSL									
BOTTOM OF WELL ELEV.		1301.1 ft. MSL									
TOP OF CASING ELEV.		1332.56 ft. MSL									
WATER LEVEL DATE		1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		20.35	20.27	22.89	21.24	18.55	15.60	19.77	18.97	21.93	19.23
WATER ELEV. (ft. MSL)		1312.21	1312.29	1309.67	1311.32	1314.01	1316.96	1312.79	1313.59	1310.63	1313.33
SAMPLE DATE		1/29/98	6/17/98	10/09/98	1/28/99	4/29/99	6/24/99	9/23/99	3/19/00	11/18/00	6/13/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC											
Methylene Chloride*	5	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	38	180	62	76.3	151	226.5	410	483	345	286.5
cis-1,2 Dichloroethene	70	4.7	54	ND	17.9	17.3	106	94	74.5	54.0	50.5
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	2.7	31	9.3	12.1	22.8	113	160	156	186	167
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-10S (3)		MW-10D (3)		MW-10R (3)							
TOP OF SCREEN ELEV.		1325.3	ft. MSL	1305.3	ft. MSL	1318.1	ft. MSL						
BOTTOM OF WELL ELEV.		1305.3	ft. MSL	1295.3	ft. MSL	1313.1	ft. MSL						
TOP OF CASING ELEV.		1330.27	ft. MSL	1330.26	ft. MSL	1330.14	ft. MSL						
WATER LEVEL DATE		1/27/98	6/10/98	1/27/98	6/10/98	10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		6.70	6.27	6.70	6.24	8.09	7.15	6.25	4.01	5.52	5.63	7.79	6.87
WATER ELEV. (ft. MSL)		1323.57	1324.00	1323.56	1324.02	1322.05	1322.99	1323.89	1326.13	1324.62	1324.51	1322.35	1323.27
SAMPLE DATE		1/29/98	6/15/98	1/29/98	6/16/98	10/3/98	1/28/99	4/28/99	6/24/99	9/22/99	3/15/00	11/18/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC													
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	2.9	5.3	1.8	ND	7.2	ND	7	6	6.8	6.1	4.5	5.2
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	7.8	ND	ND	ND	4.2J	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-11							
TOP OF SCREEN ELEV.		1308.5 ft. MSL							
BOTTOM OF WELL ELEV.		1303.5 ft. MSL							
TOP OF CASING ELEV.		1330.53 ft. MSL							
WATER LEVEL DATE		10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		21.80	19.76	16.58	13.60	18.52	17.34	20.60	18.02
WATER ELEV. (ft. MSL)		1308.73	1310.77	1313.95	1316.93	1312.01	1313.19	1309.93	1312.51
SAMPLE DATE		10/07/98	1/27/99	36277	6/22/99	9/21/99	3/14/00	11/18/00	6/05/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC									
Methylene Chloride*	5	5.0U	ND	ND	ND	ND	ND	NS	ND
Chloroform *	100	5	7.6U	ND	2.6	3	ND	NS	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	NS	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	NS	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	NS	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	NS	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	NS	ND
Benzene	5	ND	ND	ND	ND	ND	ND	NS	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	NS	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	NS	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	NS	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	NS	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	NS	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	NS	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-12							
TOP OF SCREEN ELEV.		1305.4 ft. MSL							
BOTTOM OF WELL ELEV.		1300.4 ft. MSL							
TOP OF CASING ELEV.		1329.94 ft. MSL							
WATER LEVEL DATE		10/3/98	2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		21.70	20.00	17.30	14.54	18.84	18.03	20.84	18.20
WATER ELEV. (ft. MSL)		1308.24	1309.94	1312.64	1315.40	1311.10	1311.91	1309.10	1311.74
SAMPLE DATE		10/06/98	1/27/99	4/28/99	6/24/99	9/22/99	3/17/00	11/11/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC									
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	4.7J	8.8	8.8	7.5	7.4	4.8	4.6	5.0
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-13						
TOP OF SCREEN ELEV.		1322.5 ft. MSL						
BOTTOM OF WELL ELEV.		1312.5 ft. MSL						
TOP OF CASING ELEV.		1330.52 ft. MSL						
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		8.34	7.30	5.29	7.01	7.06	8.69	8.08
WATER ELEV. (ft. MSL)		1322.18	1323.22	1325.23	1323.51	1323.46	1321.83	1322.44
SAMPLE DATE		2/5/99	4/29/99	6/24/99	9/23/99	3/18/00	11/18/00	6/12/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC								
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	2.4	ND	ND	ND	ND	2.0
cis-1,2 Dichloroethene	70	77.5	113	95.4	147	143	184	66.9
trans-1,2-Dichloroethene	100	2.6	ND	ND	ND	ND	ND	ND
Trichloroethene	5	11.7	12.9	12.8	9	8.7	10.4	10.2
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	3.0	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-14						
TOP OF SCREEN ELEV.		1307.4 ft. MSL						
BOTTOM OF WELL ELEV.		1297.4 ft. MSL						
TOP OF CASING ELEV.		1327.12 ft. MSL						
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		16.93	14.08	11.24	15.81	14.79	17.72	15.18
WATER ELEV. (ft. MSL)		1310.19	1313.04	1315.88	1311.31	1312.33	1309.40	1311.94
SAMPLE DATE		2/5/99	4/27/99	6/23/99	9/21/99	3/14/00	11/17/00	6/7/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC								
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-15						
TOP OF SCREEN ELEV.		1301.8 ft. MSL						
BOTTOM OF WELL ELEV.		1296.8 ft. MSL						
TOP OF CASING ELEV.		1327.09 ft. MSL						
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		17.08	14.31	11.53	15.97	15.04	17.87	15.33
WATER ELEV. (ft. MSL)		1310.01	1327.09	1315.56	1311.12	1312.05	1309.22	1311.76
SAMPLE DATE		2/6/99	4/27/99	6/23/99	9/21/99	3/14/00	11/17/00	6/7/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC								
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-16						
TOP OF SCREEN ELEV.		1302.5 ft. MSL						
BOTTOM OF WELL ELEV.		1297.5 ft. MSL						
TOP OF CASING ELEV.		1326.22 ft. MSL						
WATER LEVEL DATE		2/7/99	4/26/99	6/21/99	9/20/99	3/14/00	11/18/00	6/13/01
WATER DEPTH (BGS)		18.64	14.85	11.32	15.36	15.36	16.85	14.77
WATER ELEV. (ft. MSL)		1307.58	1311.37	1314.90	1310.86	1310.86	1309.37	1311.45
SAMPLE DATE		2/6/99	4/28/99	6/23/99	9/23/99	3/18/00	11/18/00	6/8/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC								
Methylene Chloride*	5	ND	ND	ND	ND	ND	ND	ND
Chloroform *	100	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	3.5	3.7	5.8	3.8	3.0	3.9	3.7
cis-1,2 Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	ND	ND	ND	ND

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-17			
TOP OF SCREEN ELEV.		1328.0	ft. MSL		
BOTTOM OF WELL ELEV.		1328.0	ft. MSL		
TOP OF CASING ELEV.		1340.66	ft. MSL		
WATER LEVEL DATE		11/18/00	6/13/01		
WATER DEPTH (BGS)		15.21	14.02		
WATER ELEV. (ft. MSL)		1325.45	1326.64		
SAMPLE DATE		11/17/00	6/6/01		
UNITS	(µg/L)	(µg/L)	(µg/L)		
VOC					
Methylene Chloride*	5	ND	ND		
Chloroform *	100	ND	ND		
Tetrachloroethene	5	ND	ND		
cis-1,2 Dichloroethene	70	ND	ND		
trans-1,2-Dichloroethene	100	ND	ND		
Trichloroethene	5	ND	ND		
Vinyl chloride	2	ND	ND		
Benzene	5	ND	ND		
1,2 Dichloroethane	5	ND	ND		
Toluene	1000	ND	ND		
Ethylbenzene	700	ND	ND		
Total Xylene	10000	ND	ND		
Isopropylbenzene	n/a	ND	ND		
n-Propylbenzene	n/a	ND	ND		
1,3,5-Trimethylbenzene	n/a	ND	ND		
1,2,4-Trimethylbenzene	n/a	ND	ND		
sec-Butylbenzene	n/a	ND	ND		
4-Isopropyltoluene	n/a	ND	ND		
n-Butylbenzene	n/a	ND	ND		
t-Butylbenzene	n/a	ND	ND		
Naphthalene	n/a	ND	ND		
1,1-Dichloroethane	n/a	ND	ND		

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-18		
TOP OF SCREEN ELEV.		1333.2	ft. MSL	
BOTTOM OF WELL ELEV.		1323.2	ft. MSL	
TOP OF CASING ELEV.		1345.81	ft. MSL	
WATER LEVEL DATE		11/18/00	6/13/01	
WATER DEPTH (BGS)		7.93	6.10	
WATER ELEV. (ft. MSL)		1337.88	1339.71	
SAMPLE DATE		11/17/00	6/12/01	
UNITS	(µg/L)	(µg/L)	(µg/L)	
VOC				
Methylene Chloride*	5	ND	ND	
Chloroform *	100	ND	ND	
Tetrachloroethene	5	70.8	89.7	
cis-1,2 Dichloroethene	70	ND	ND	
trans-1,2-Dichloroethene	100	ND	ND	
Trichloroethene	5	3.1	4.0	
Vinyl chloride	2	ND	ND	
Benzene	5	ND	ND	
1,2 Dichloroethane	5	ND	ND	
Toluene	1000	ND	ND	
Ethylbenzene	700	ND	ND	
Total Xylene	10000	ND	ND	
Isopropylbenzene	n/a	ND	ND	
n-Propylbenzene	n/a	ND	ND	
1,3,5-Trimethylbenzene	n/a	ND	ND	
1,2,4-Trimethylbenzene	n/a	ND	ND	
sec-Butylbenzene	n/a	ND	ND	
4-Isopropyltoluene	n/a	ND	ND	
n-Butylbenzene	n/a	ND	ND	
t-Butylbenzene	n/a	ND	ND	
Naphthalene	n/a	ND	ND	
1,1-Dichloroethane	n/a	ND	ND	

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TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-19				
TOP OF SCREEN ELEV.		1332.3 ft. MSL				
BOTTOM OF WELL ELEV.		1322.3 ft. MSL				
TOP OF CASING ELEV.		1344.97 ft. MSL				
WATER LEVEL DATE		11/18/00	6/13/01			
WATER DEPTH (BGS)		7.05	4.28			
WATER ELEV. (ft. MSL)		1337.92	1340.69			
SAMPLE DATE		11/17/00	6/7/01			
UNITS	(µg/L)	(µg/L)	(µg/L)			
VOC						
Methylene Chloride*	5	ND	ND			
Chloroform *	100	ND	ND			
Tetrachloroethene	5	ND	ND			
cis-1,2 Dichloroethene	70	ND	ND			
trans-1,2-Dichloroethene	100	ND	ND			
Trichloroethene	5	ND	ND			
Vinyl chloride	2	ND	ND			
Benzene	5	ND	ND			
1,2 Dichloroethane	5	ND	ND			
Toluene	1000	ND	ND			
Ethylbenzene	700	ND	ND			
Total Xylene	10000	ND	ND			
Isopropylbenzene	n/a	ND	ND			
n-Propylbenzene	n/a	ND	ND			
1,3,5-Trimethylbenzene	n/a	ND	ND			
1,2,4-Trimethylbenzene	n/a	ND	ND			
sec-Butylbenzene	n/a	ND	ND			
4-Isopropyltoluene	n/a	ND	ND			
n-Butylbenzene	n/a	ND	ND			
t-Butylbenzene	n/a	ND	ND			
Naphthalene	n/a	ND	ND			
1,1-Dichloroethane	n/a	ND	ND			

TABLE 1
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - MONITORING WELLS - THROUGH NOVEMBER 2000

	MCL	MW-20				
TOP OF SCREEN ELEV.		1329.2 ft. MSL				
BOTTOM OF WELL ELEV.		1319.2 ft. MSL				
TOP OF CASING ELEV.		1341.76 ft. MSL				
WATER LEVEL DATE			11/18/00	6/13/01		
WATER DEPTH (BGS)			18.92	18.17		
WATER ELEV. (ft. MSL)			1322.84	1323.59		
SAMPLE DATE			11/17/00	6/6/01		
UNITS	(µg/L)		(µg/L)	(µg/L)		
VOC						
Methylene Chloride*	5		ND	ND		
Chloroform *	100		ND	ND		
Tetrachloroethene	5		ND	ND		
cis-1,2 Dichloroethene	70		ND	ND		
trans-1,2-Dichloroethene	100		ND	ND		
Trichloroethene	5		ND	ND		
Vinyl chloride	2		ND	ND		
Benzene	5		ND	ND		
1,2 Dichloroethane	5		ND	ND		
Toluene	1000		ND	ND		
Ethylbenzene	700		ND	ND		
Total Xylene	10000		ND	ND		
Isopropylbenzene	n/a		ND	ND		
n-Propylbenzene	n/a		ND	ND		
1,3,5-Trimethylbenzene	n/a		ND	ND		
1,2,4-Trimethylbenzene	n/a		ND	ND		
sec-Butylbenzene	n/a		ND	ND		
4-Isopropyltoluene	n/a		ND	ND		
n-Butylbenzene	n/a		ND	ND		
t-Butylbenzene	n/a		ND	ND		
Naphthalene	n/a		ND	ND		
1,1-Dichloroethane	n/a		ND	ND		

TABLE 1 NOTES

* Methylene Chloride and Chloroform (where flagged) were detected in laboratory QA samples and therefore are likely laboratory artifacts

(a) Filtered metals concentrations higher than dissolved metals concentrations
(b) Secondary Maximum Contaminant Levels, not enforceable
(c) Lead action level.

(1) MW-5S replaced with MW-5SR.
(2) MW-7S and MW-7D replaced with MW-7R.
(3) MW-10S and MW-10D replaced with MW-10R.
(4) EMW-3 abandoned
(5) MW-6S had insufficient water to collect samples 10/98, 1/99

NS = Not sampled. Filtered metals samples not collected after 10/98.
ND = Not detected.
NA = Not analyzed.
n/a = No MCL given.

U = The analyte was analyzed for, but was not detected above the reported sample quantition limit.

UJ = The analyte was not dectected above the reported sample quantition limit. However, the reported quantition limit is approximate and may not represent the actual limit of quantition necessary to accurately and precisely measure the analyte in the sample.

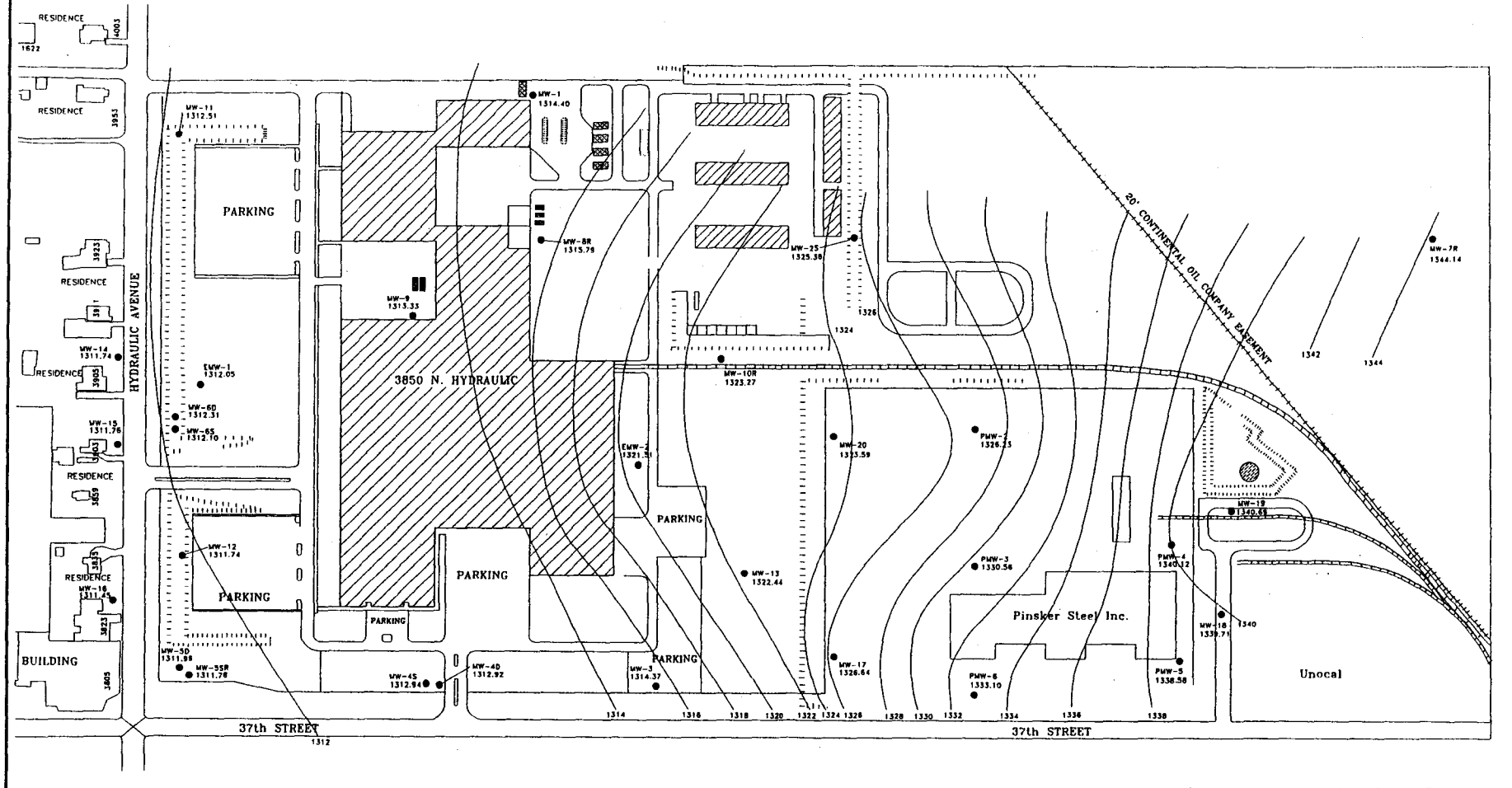
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

B = The analyte was detected in the associated blank(s).

TABLE 2
WICHITA PUBLIC SCHOOLS
GROUNDWATER ANALYTICAL DATA - TEMPORARY WELLS

	MCL	PMW-2		PMW-3		PMW-4		PMW-5		PMW-6		TW-1		TW-2	
TOP OF SCREEN ELEV.		1330.4	ft. MSL	1330.4	ft. MSL	1331.3	ft. MSL	1331.4	ft. MSL	1331.4	ft. MSL	1309.0	ft. MSL	1308.9	ft. MSL
BOTTOM OF WELL ELEV.		1320.4	ft. MSL	1320.4	ft. MSL	1321.3	ft. MSL	1321.4	ft. MSL	1321.4	ft. MSL	1304.0	ft. MSL	1303.9	ft. MSL
TOP OF CASING ELEV.		1342.95	ft. MSL	1343.96	ft. MSL	1343.92	ft. MSL	1343.81	ft. MSL	1340.63	ft. MSL	1331.75	ft. MSL	1328.48	ft. MSL
WATER LEVEL DATE		11/18/00	6/13/01	11/18/00	6/13/01	11/18/00	6/13/01	11/18/00	6/13/01	11/18/00	6/13/01	11/18/00	6/13/01	11/18/00	6/13/01
WATER DEPTH (BGS)		18.31	16.72	14.39	13.40	6.20	3.80	6.46	5.23	9.21	7.53	20.35	17.33	17.72	14.78
WATER ELEV. (ft. MSL)		1324.64	1326.23	1329.57	1330.56	1337.72	1340.12	1337.35	1338.58	1331.42	1333.10	1311.40	1314.42	1310.76	1313.70
SAMPLE DATE		11/17/00	6/6/01	11/17/00	6/6/01	11/17/00	6/6/01	11/17/00	6/6/01	11/17/00	6/6/01	11/18/00	6/7/01	11/18/00	6/8/01
UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOC															
Methylene Chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	4.6	4.6	ND	ND	ND	ND	3.2	ND
cis-1,2 Dichloroethene	70	ND	ND	67.2	150	ND	ND	838	729	8.2	12.3	ND	ND	ND	ND
trans-1,2-Dichloroethene	100	ND	ND	ND	ND	ND	ND	2.2	2.4	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	3.6	4.9	ND	ND	15.7	18.9	16	20.6	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	ND	ND	ND	ND	ND	ND	2.0	1.8	ND	ND	ND	ND	ND	ND
Toluene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butylbenzene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	n/a	ND	ND	ND	2.6	ND	ND	13.6	16.4	ND	ND	ND	ND	ND	ND

DRAFT



LEGEND

● MW-9 1313.33 WELL LOCATION AND POTENTIOMETRIC ELEVATION (FT. MSL)

NOTE:

1. WATER LEVELS MEASURED JUNE 13, 2001.

SCALE IN FEET

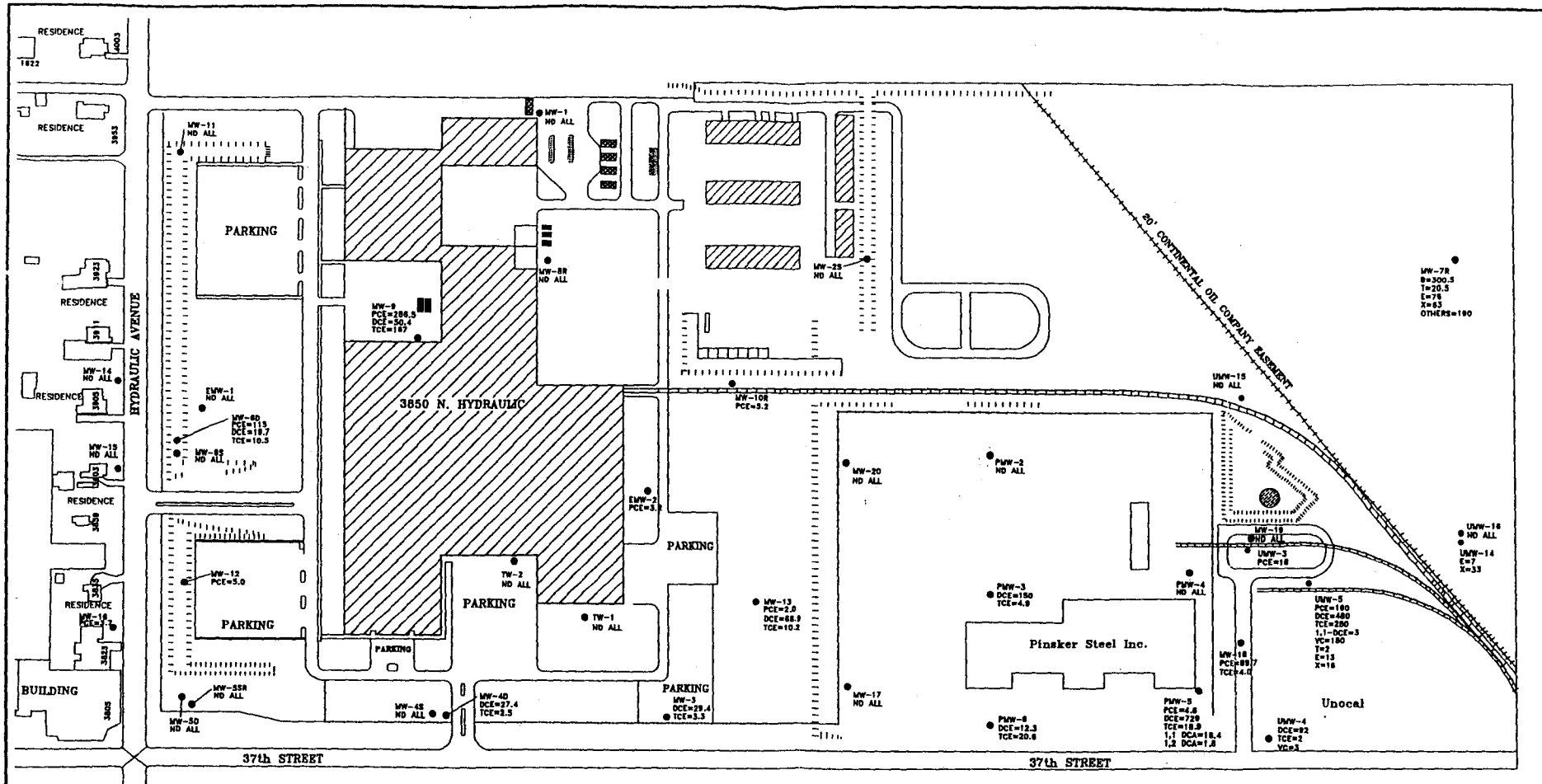
200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: POTENTIOMETRIC SURFACE MAP JUNE 2001

DRAWN	JAC	DATE	APRIL 2002	JOB NO.	973-2209
CHECKED	MRS	SCALE	AS SHOWN	NO.	1st01 fig 1 v3
REVIEWED	MRS	FILE NO.		REV. NO.	1



LEGEND

● MW-3 PCE=286.5 DCE=50.5 TCE=167 — WELL LOCATION AND GROUNDWATER VOC DATA. ND ALL INDICATES NO VOC'S DETECTED FOR THE EVENT.

PCE = TETRACHLOROETHENE

DCE = CIS-1,2-DICHLOROETHENE

TCE = TRICHLOROETHENE

1,1 DCA = 1,1-DICHLOROETHANE

1,2 DCA = 1,2-DICHLOROETHANE

VC = VINYL CHLORIDE

B = BENZENE

T = TOLUENE

E = ETHYLBENZENE

X = XYLENE

OTHERS = N-PROPYLBENZENE, ISOPROPYLBENZENE, 1,3,5,-TRIMETHYLBENZENE, 1,2,4-TRIMETHYLBENZENE, NAPHTHALENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 9-22-99 TO 9-23-99.
3. TRANS-1,2-DICHLOROETHENE WAS DETECTED AT 2.4 ug/L IN PMW-5.

SCALE IN FEET

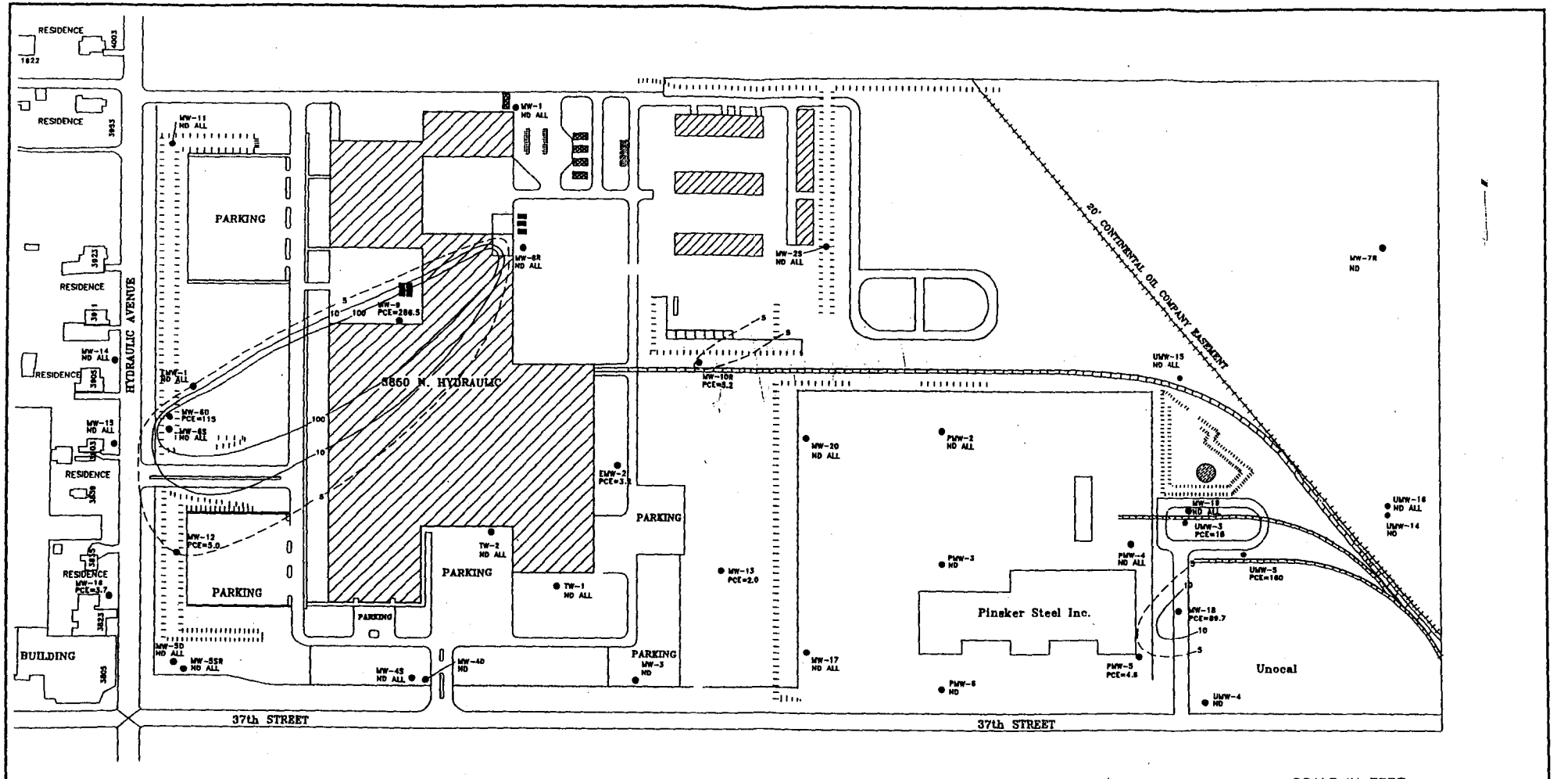
200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: USD 259 SCHOOL SERVICE CENTER & ADJACENT PROPERTIES VOC Data June 2001

DRAWN NLC	DATE JUN 2001	NO. 973-2209	
CHECKED MRS	SCALE AS SHOWN	JOB 1st01 fig 2	
REVIEWED FMB	FILE NO.	FIGURE NO. 2	



LEGEND

● MW-9 PCE=286.5 WELL LOCATION AND GROUNDWATER PCE DATA. ND ALL INDICATES NO VOC DETECTED FOR THE EVENT. ND INDICATES NO PCE DETECTED FOR THE EVENT

PCE = TETRACHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 9-22-99 TO 9-23-99.

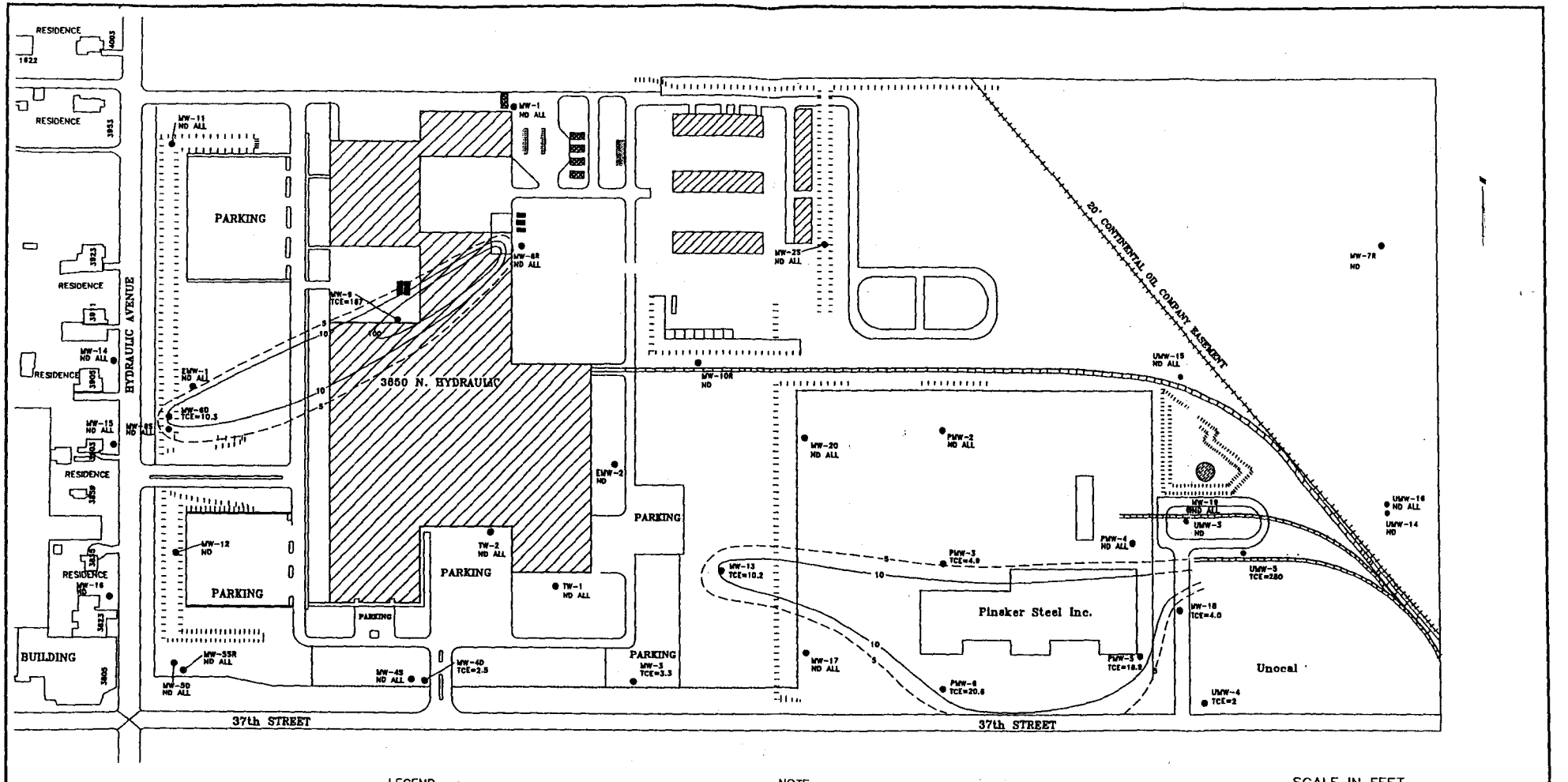
SCALE IN FEET

200 0 200 400

Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE	USD 259 SCHOOL SERVICE CENTER & ADJACENT PROPERTIES PCE Concentrations, June 2001		
DRAWN	NLC	DATE	JUN 200
CHECKED	MRS	SCALE	AS SHOWN
REVIEWED	FMR	FILE NO.	
NO.	973-2209		
NO.	2209 1st01 fig 3		



LEGEND

● MW-13 TCE=10.2 — WELL LOCATION AND GROUNDWATER TCE DATA. ND INDICATES NO TCE DETECTED FOR THE EVENT. ND ALL INDICATES NO VOC'S DETECTED FOR THE EVENT.

TCE = TRICHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 9-22-99 TO 9-23-99.

SCALE IN FEET

200 0 200 400

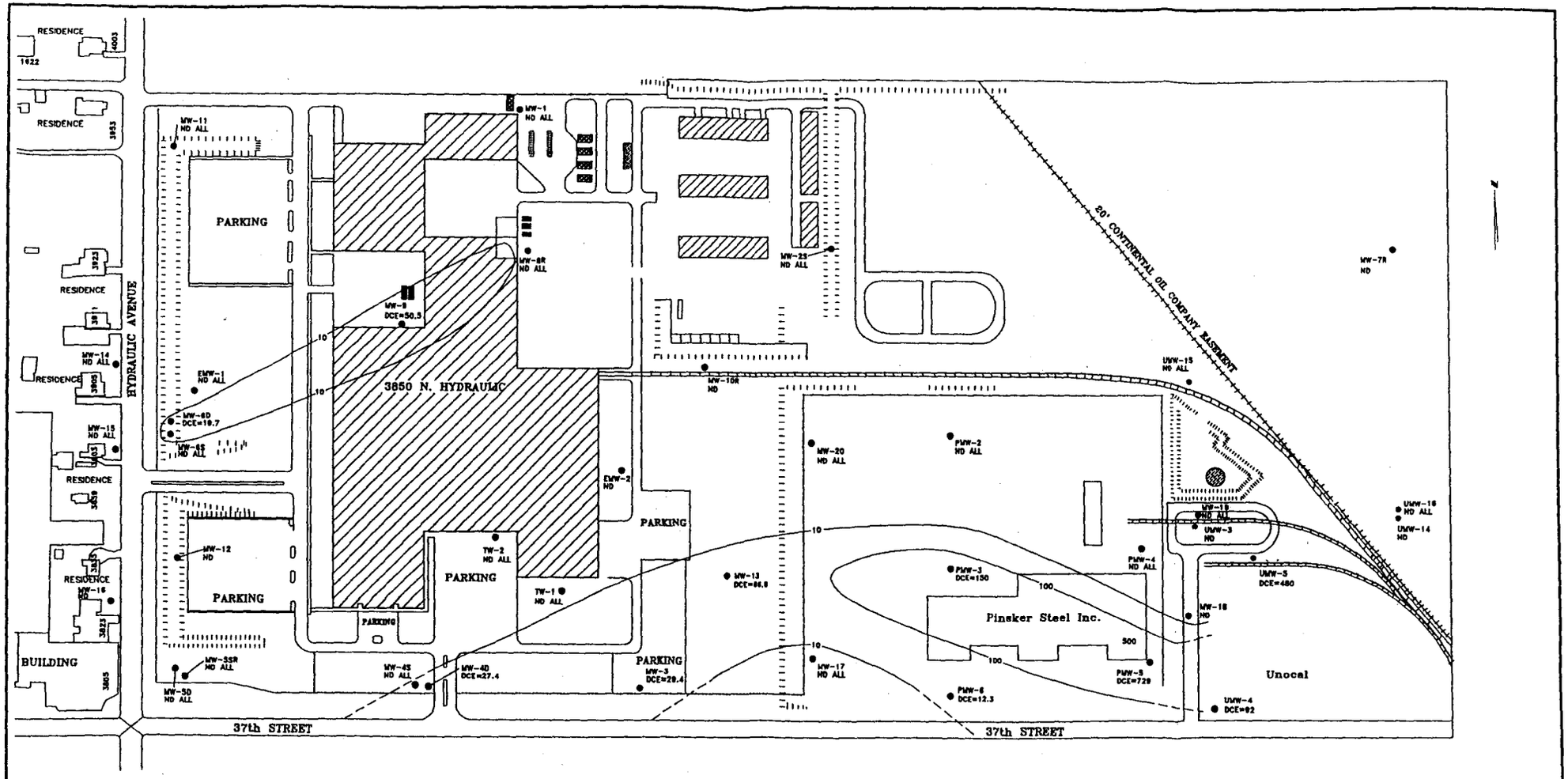
Golder Associates — St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: USD 259 SCHOOL SERVICE CENTER & ADJACENT PROPERTIES TCE Concentrations, June 2001

DRAWN	NLC	DATE	JUN 2001
CHECKED	MRS	SCALE	AS SHOWN
REVIEWED	FMB	FILE NO.	

973-2209
1st01 fig 4
FIGURE NO. A



LEGEND

● MW-9 DCE=50.5 WELL LOCATION AND GROUNDWATER DCE DATA.
ND INDICATES NO DCE DETECTED FOR THE EVENT.
ND ALL INDICATES NO VOC'S DETECTED FOR THE EVENT.

DCE = CIS-1,2-DICHLOROETHENE

NOTE:

1. ALL CONCENTRATIONS IN MICROGRAMS PER LITER.
2. UNOCAL DATA COLLECTED 9-22-99 TO 9-23-99.
3. TRANS-1,2-DICHLOROETHENE WAS DETECTED AT 2.4 ug/L IN PMW-5.

SCALE IN FEET

200 0 200 400

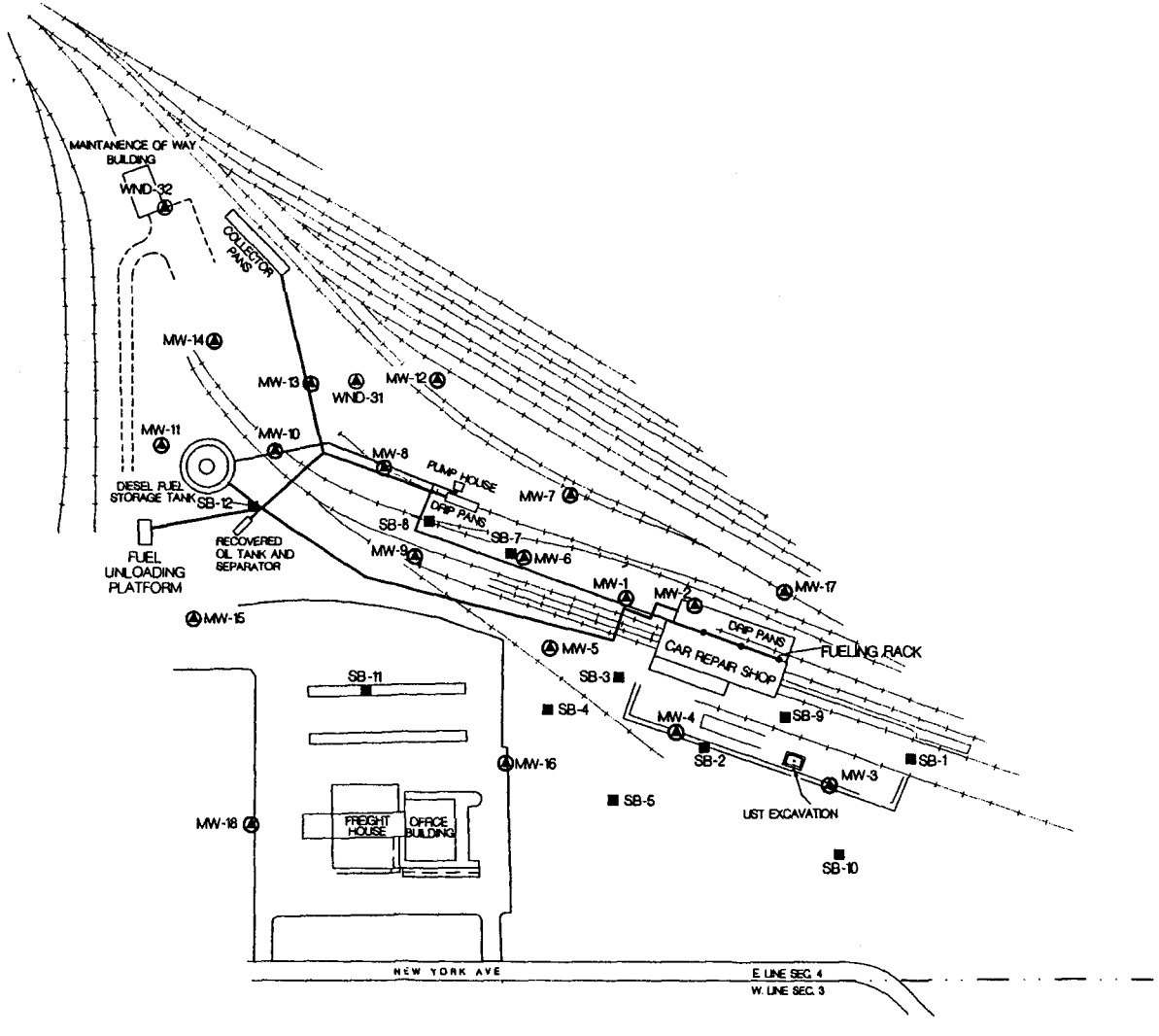
Golder Associates St. Louis, Missouri

USD 259
SCHOOL SERVICE CENTER
WICHITA, KANSAS

TITLE: USD 259 SCHOOL SERVICE CENTER & ADJACENT PROPERTIES DCE Concentrations, June 2001

DRAWN	NLC	DATE	JUN 200	PROJ. NO.	973-2209
CHECKED	MRS	SCALE	AS SHOW.	DWG. NO.	209 1st01 fig 5
REVIEWED	FMB	FILE NO.		FIGURE NO.	

Appendix B-15
UPRF - Union Pacific Railroad, Wichita Fueling Facility



LEGEND

MW-14 MONITORING WELL LOCATION

SB-4 SOIL BORING

DRIP PAN PIPELINE

DIESEL FUEL PIPELINE

North

0 200

FEET

BY	DATE
DRAWN WRB	3/13/95
DRAWN	
APPROVED	
APPROVED	
APPROVED	

USPCI

FIGURE 2

WICHITA, KANSAS

UPRR WICHITA FUELING FACILITY
SITE MAP

SCALE 1" = 200'

DWG. NO. 96258-30

KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Gary R. Mitchell, Secretary

January 6, 1999

Andy Horn
Camp Dresser & McKee Inc.
1331 17th Street, Suite 1200
Denver, Colorado 80202-1562

RE: Gil~~bert and Mosley~~ Site, Wichita, Kansas
NIC Site

Dear Mr. Horn:

This letter is in response to your letter request dated January 6, 1999. Three samples were collected from Union Pacific Rail Road (UPRR) Facility monitoring wells by the Underground Storage Tank (UST) Trust Fund Program . Enclosed are the data sheets you requested. I have also enclosed a well location map for the site. The project manager for the UPRR facility is Leticia Arzate of the Storage Tank Section. Her phone number is 785-296-5542. It is my understanding that the UST Program is currently arranging for another round of sampling at this site. They will only be analyzing samples for petroleum compounds. If you would like to make arrangements to collect split samples with them, please contact Ms. Arzate directly. You may also contact her for any additional site specific information. Please copy me on all requests.

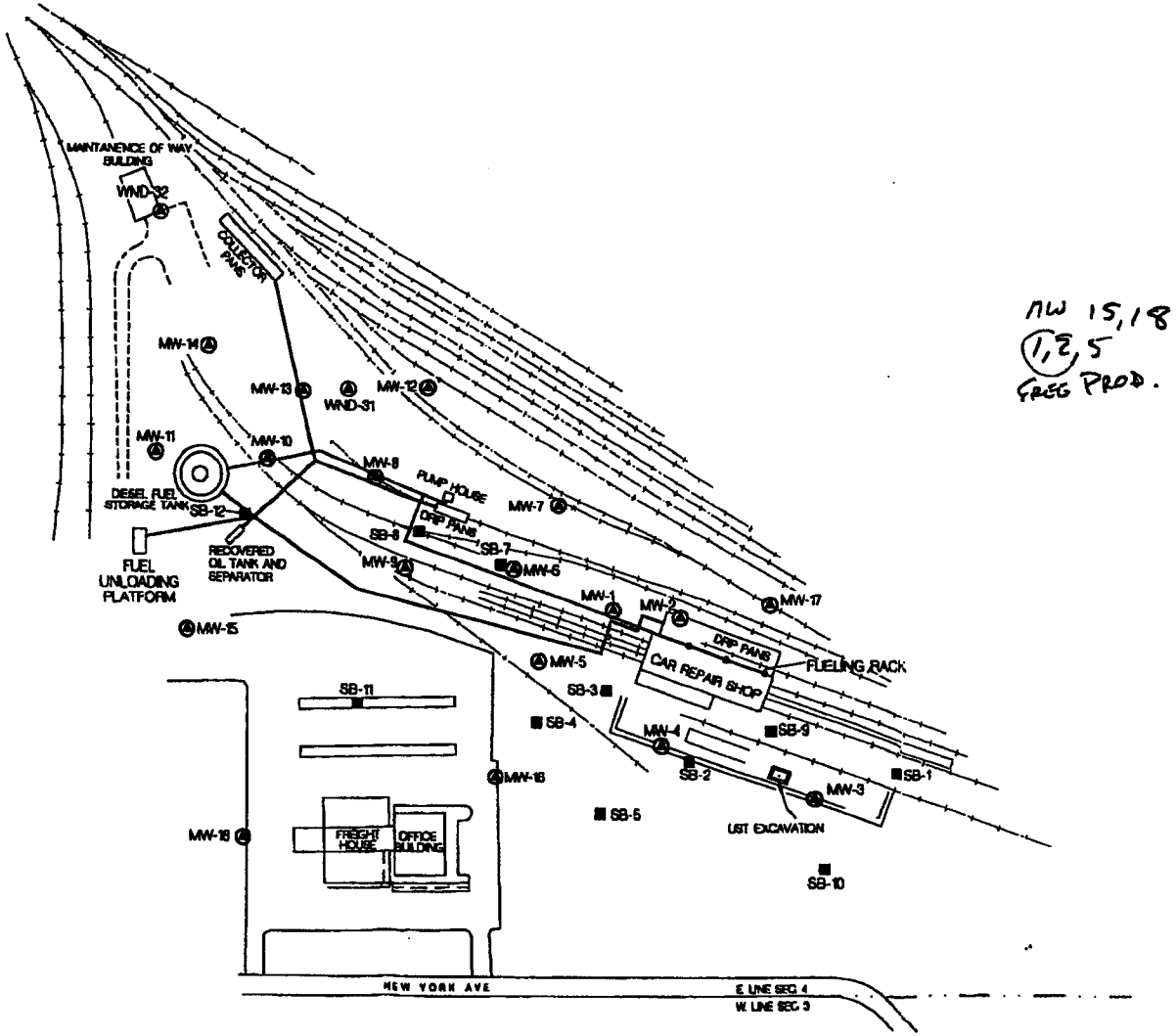
It appears that deep analytical data may be very useful in this area for evaluating the NIC site. If CDM anticipates proposing deep sample locations on this property, KDHE strongly recommends that they initiate access discussions/negotiations with UPRR in the near future. Ms. Arzate may be able to assist you with information about who to contact at UPRR.

Sincerely,

Christine R. Jump
Environmental Geologist
State Remedial Unit/Remedial Section
Bureau of Environmental Remediation

CRJ/lgs

cc: Rob Elder->NIC Site File
Leticia Arzate, UST
Jack Brown



NW 15,18
(1,2,5
FREG PROD.

LEGEND

MW-14 MONITORING WELL LOCATION

SB-4 SOIL BORING

DRIP PAN PIPELINE

DIESEL FUEL PIPELINE

North

0 200
FEET

BY	DATE
WRB	3/18/95

USPCI

FIGURE 2

WICHITA, KANSAS

UPRR WICHITA FUELING FACILITY SITE MAP

SCALE 1" = 200'

DWG NO. 96258-30

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: LETICIA ARZATE-BER/UST PROGRAM
Address: FORBES FIELD, BLDG. 740,
TOPEKA, KS 66620

HT

Lab Number: 900589VG
Date Rec'd: 07/22/98
Report Date: 08/05/98

Site ID No.:
Acct No: Sample Type: WATER Program Code: ET
Site: U2-087-11017, UPRR-WICHITA/MW-16- UST REPLICATE PROGRAM No. Composited: 0
Collected By: MARCOTTE-ARZATE/BER Depth: Date: 07/21/98 Time:

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION (ug/L)	Analysis Date	EPA Method
Vinyl Chloride	< 0.5	08/04/98	8260
1,1-Dichloroethylene	< 0.5	08/04/98	8260
Dichloromethane	< 0.5	08/04/98	8260
trans 1,2-Dichloroethylene	< 0.5	08/04/98	8260
cis 1,2-Dichloroethylene	< 0.5	08/04/98	8260
1,1,1-Trichloroethane	< 0.5	08/04/98	8260
Tetrachloromethane	< 0.5	08/04/98	8260
Benzene	3.5	08/04/98	8260
1,2-Dichloroethane	< 0.5	08/04/98	8260
Trichloroethylene	0.5	08/04/98	8260
1,2-Dichloropropane	< 0.5	08/04/98	8260
Toluene	< 0.5	08/04/98	8260
1,1,2-Trichloroethane	< 0.5	08/04/98	8260
Tetrachloroethylene	< 0.5	08/04/98	8260
Chlorobenzene	< 0.5	08/04/98	8260
Ethylbenzene	< 0.5	08/04/98	8260
Xylene	< 0.5	08/04/98	8260
Styrene	< 0.5	08/04/98	8260
1,4-Dichlorobenzene	< 0.5	08/04/98	8260
1,2-Dichlorobenzene	< 0.5	08/04/98	8260
1,2,4-Trichlorobenzene	< 0.5	08/04/98	8260
Chloromethane	< 0.5	08/04/98	8260
Bromomethane	< 0.5	08/04/98	8260
Chloroethane	< 0.5	08/04/98	8260
1,1-Dichloroethane	< 0.5	08/04/98	8260
2,2-Dichloropropane	< 0.5	08/04/98	8260
Trichloromethane (THM)	< 0.5	08/04/98	8260
1,1-Dichloropropene	< 0.5	08/04/98	8260
Dibromomethane	< 0.5	08/04/98	8260
Bromodichloromethane (THM)	< 0.5	08/04/98	8260
1,3-Dichloropropane	< 0.5	08/04/98	8260
Dibromochloromethane (THM)	< 0.5	08/04/98	8260
1,1,1,2-Tetrachloroethane	< 0.5	08/04/98	8260
Bromoform (THM)	< 0.5	08/04/98	8260
1,1,2,2-Tetrachloroethane	< 0.5	08/04/98	8260
Bromobenzene	< 0.5	08/04/98	8260
1,2,3-Trichloropropane	< 0.5	08/04/98	8260
ortho-Chlorotoluene	< 0.5	08/04/98	8260
para-Chlorotoluene	< 0.5	08/04/98	8260
1,3-Dichlorobenzene	< 0.5	08/04/98	8260
Ethylene Dibromide (EDB)	< 0.01	08/04/98	8260
1,2-Dibromo-3-chloropropane	< 0.02	08/04/98	8260
Fluorotrichloromethane	< 0.5	08/04/98	8260
Dichlorodifluoromethane	< 0.5	08/04/98	8260
Isopropylbenzene	< 0.5	08/04/98	8260
n-Propylbenzene	< 0.5	08/04/98	8260
1,3,5-Trimethylbenzene	< 0.5	08/04/98	8260
tert-Butylbenzene	< 0.5	08/04/98	8260
1,2,4-Trimethylbenzene	< 0.5	08/04/98	8260
sec-Butylbenzene	< 0.5	08/04/98	8260
para-Isopropyltoluene	< 0.5	08/04/98	8260
n-Butylbenzene	< 0.5	08/04/98	8260
Naphthalene	1.0	08/04/98	8260
Methyl tert-butyl ether	< 0.5	08/04/98	8260

Comment: Several petroleum type hydrocarbons were indicated. See Chart... 9/6

Chemist: Richard L. Pierce Richard L. Pierce - Not Detected at Indicated Level

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: LETICIA ARZATE-BER/UST PROGRAM
Address: FORBES FIELD, BLDG. 740,
TOPEKA, KS 66620

HT

Lab Number: 900588VG
Date Rec'd: 07/22/98
Report Date: 08/05/98

Site ID No.:
Acct No:
Sample Type: WATER
Program Code: ET
Site: U2-087-11017, UPRR-WICHITA/MW-4 - UST REPLICATE PROGRAM
No. Composited: 0
Collected By: MARCOTTE-ARZATE/BER
Depth:
Date: 07/21/98
Time:

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION (ug/L)	Analysis Date	EPA Method
Vinyl Chloride	< 0.5	08/04/98	8260
1,1-Dichloroethylene	< 0.5	08/04/98	8260
Dichloromethane	< 0.5	08/04/98	8260
trans 1,2-Dichloroethylene	< 0.5	08/04/98	8260
cis 1,2-Dichloroethylene	< 0.5	08/04/98	8260
1,1,1-Trichloroethane	< 0.5	08/04/98	8260
Tetrachloromethane	< 0.5	08/04/98	8260
Benzene	< 0.5	08/04/98	8260
1,2-Dichloroethane	< 0.5	08/04/98	8260
Trichloroethylene	< 0.5	08/04/98	8260
1,2-Dichloropropane	< 0.5	08/04/98	8260
Toluene	< 0.5	08/04/98	8260
1,1,2-Trichloroethane	< 0.5	08/04/98	8260
Tetrachloroethylene	< 0.5	08/04/98	8260
Chlorobenzene	< 0.5	08/04/98	8260
Ethylbenzene	< 0.5	08/04/98	8260
Xylene	< 0.5	08/04/98	8260
Styrene	< 0.5	08/04/98	8260
1,4-Dichlorobenzene	< 0.5	08/04/98	8260
1,2-Dichlorobenzene	< 0.5	08/04/98	8260
1,2,4-Trichlorobenzene	< 0.5	08/04/98	8260
Chloromethane	< 0.5	08/04/98	8260
Bromomethane	< 0.5	08/04/98	8260
Chloroethane	< 0.5	08/04/98	8260
1,1-Dichloroethane	< 0.5	08/04/98	8260
2,2-Dichloropropane	< 0.5	08/04/98	8260
Trichloromethane (THM)	< 0.5	08/04/98	8260
1,1-Dichloropropene	< 0.5	08/04/98	8260
Dibromomethane	< 0.5	08/04/98	8260
Bromodichloromethane (THM)	< 0.5	08/04/98	8260
1,3-Dichloropropane	< 0.5	08/04/98	8260
Dibromochloromethane (THM)	< 0.5	08/04/98	8260
1,1,1,2-Tetrachloroethane	< 0.5	08/04/98	8260
Bromoform (THM)	< 0.5	08/04/98	8260
1,1,2,2-Tetrachloroethane	< 0.5	08/04/98	8260
Bromobenzene	< 0.5	08/04/98	8260
1,2,3-Trichloropropane	< 0.5	08/04/98	8260
ortho-Chlorotoluene	< 0.5	08/04/98	8260
para-Chlorotoluene	< 0.5	08/04/98	8260
1,3-Dichlorobenzene	< 0.5	08/04/98	8260
Ethylene Dibromide (EDB)	< 0.01	08/04/98	8260
1,2-Dibromo-3-chloropropane	< 0.02	08/04/98	8260
Fluorotrichloromethane	< 0.5	08/04/98	8260
Dichlorodifluoromethane	< 0.5	08/04/98	8260
Isopropylbenzene	< 0.5	08/04/98	8260
n-Propylbenzene	< 0.5	08/04/98	8260
1,3,5-Trimethylbenzene	< 0.5	08/04/98	8260
tert-Butylbenzene	< 0.5	08/04/98	8260
1,2,4-Trimethylbenzene	< 0.5	08/04/98	8260
sec-Butylbenzene	< 0.5	08/04/98	8260
para-Isopropyltoluene	< 0.5	08/04/98	8260
n-Butylbenzene	< 0.5	08/04/98	8260
Naphthalene	< 0.5	08/04/98	8260
Methyl tert-butyl ether	< 0.5	08/04/98	8260

Chemist: Richard L. Pierce Richard L. Pierce - Not Detected at Indicated Level

Sub Sample to: 916
Post Analysis Disp.

Environmental Laboratories
Inorganic Chemistry (785) 296-1637
Organic Chemistry (785) 296-1647
Radiochemistry (785) 296-1629
Env. Microbiology (785) 296-0971

Roger H. Carlson, Ph.D., Director - (785) 296-1620
Laboratory Information and Reporting - (785) 296-1627
Laboratory Fax - (785) 296-1641

Health Laboratories
Diagnostic Micro. (785) 296-1636
Neonatal Screening (785) 296-1651
Serology (785) 296-1653
Virology (785) 296-1645

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: LETICIA ARZATE-BER/UST PROGRAM
Address: FORBES FIELD, BLDG. 740,
TOPEKA, KS 66620

HT

Lab Number: 900587VG
Date Rec'd: 07/22/98
Report Date: 08/05/98

Site ID No.:
Acct No: Sample Type: WATER Program Code: ET
Site: U2-087-11017, UPRR-WICHITA/MW-3 - UST REPLICATE PROGRAM No. Composited: 0
Collected By: MARCOTTE-ARZATE/BER Depth: Date: 07/21/98 Time: 11:00

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION (ug/L)	Analysis Date	EPA Method
Vinyl Chloride	< 0.5	08/04/98	8260
1,1-Dichloroethylene	< 0.5	08/04/98	8260
Dichloromethane	< 0.5	08/04/98	8260
trans 1,2-Dichloroethylene	< 0.5	08/04/98	8260
cis 1,2-Dichloroethylene	< 0.5	08/04/98	8260
1,1,1-Trichloroethane	< 0.5	08/04/98	8260
Tetrachloromethane	< 0.5	08/04/98	8260
Benzene	< 0.5	08/04/98	8260
1,2-Dichloroethane	< 0.5	08/04/98	8260
Trichloroethylene	< 0.5	08/04/98	8260
1,2-Dichloropropane	< 0.5	08/04/98	8260
Toluene	< 0.5	08/04/98	8260
1,1,2-Trichloroethane	< 0.5	08/04/98	8260
Tetrachloroethylene	< 0.5	08/04/98	8260
Chlorobenzene	< 0.5	08/04/98	8260
Ethylbenzene	< 0.5	08/04/98	8260
Xylene	< 0.5	08/04/98	8260
Styrene	< 0.5	08/04/98	8260
1,4-Dichlorobenzene	< 0.5	08/04/98	8260
1,2-Dichlorobenzene	< 0.5	08/04/98	8260
1,2,4-Trichlorobenzene	< 0.5	08/04/98	8260
Chloromethane	< 0.5	08/04/98	8260
Bromomethane	< 0.5	08/04/98	8260
Chloroethane	< 0.5	08/04/98	8260
1,1-Dichloroethane	< 0.5	08/04/98	8260
2,2-Dichloropropane	< 0.5	08/04/98	8260
Trichloromethane (THM)	< 0.5	08/04/98	8260
1,1-Dichloropropene	< 0.5	08/04/98	8260
Dibromomethane	< 0.5	08/04/98	8260
Bromodichloromethane (THM)	< 0.5	08/04/98	8260
1,3-Dichloropropane	< 0.5	08/04/98	8260
Dibromochloromethane (THM)	< 0.5	08/04/98	8260
1,1,1,2-Tetrachloroethane	< 0.5	08/04/98	8260
Bromoform (THM)	< 0.5	08/04/98	8260
1,1,2,2-Tetrachloroethane	< 0.5	08/04/98	8260
Bromobenzene	< 0.5	08/04/98	8260
1,2,3-Trichloropropane	< 0.5	08/04/98	8260
ortho-Chlorotoluene	< 0.5	08/04/98	8260
para-Chlorotoluene	< 0.5	08/04/98	8260
1,3-Dichlorobenzene	< 0.5	08/04/98	8260
Ethylene Dibromide (EDB)	< 0.01	08/04/98	8260
1,2-Dibromo-3-chloropropane	< 0.02	08/04/98	8260
Fluorotrichloromethane	< 0.5	08/04/98	8260
Dichlorodifluoromethane	< 0.5	08/04/98	8260
Isopropylbenzene	< 0.5	08/04/98	8260
n-Propylbenzene	< 0.5	08/04/98	8260
1,3,5-Trimethylbenzene	< 0.5	08/04/98	8260
tert-Butylbenzene	< 0.5	08/04/98	8260
1,2,4-Trimethylbenzene	< 0.5	08/04/98	8260
sec-Butylbenzene	< 0.5	08/04/98	8260
para-Isopropyltoluene	< 0.5	08/04/98	8260
n-Butylbenzene	< 0.5	08/04/98	8260
Naphthalene	< 0.5	08/04/98	8260
Methyl tert-butyl ether	< 0.5	08/04/98	8260

Chemist: Richard L. Pierce Richard L. Pierce - Not Detected at Indicated Level 9/16
See Sample Log
See Analysis Date

Environmental Laboratories
Inorganic Chemistry (785) 296-1637
Organic Chemistry (785) 296-1647
Radiochemistry (785) 296-1629
Env. Microbiology (785) 296-0971

Roger H. Carlson, Ph.D., Director - (785) 296-1620
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Health Laboratories
Diagnostic Micro. (785) 296-1636
Neonatal Screening (785) 296-1651
Serology (785) 296-1653
Virology (785) 296-1645

Appendix B-16
VCM - Via Christi Medical Center

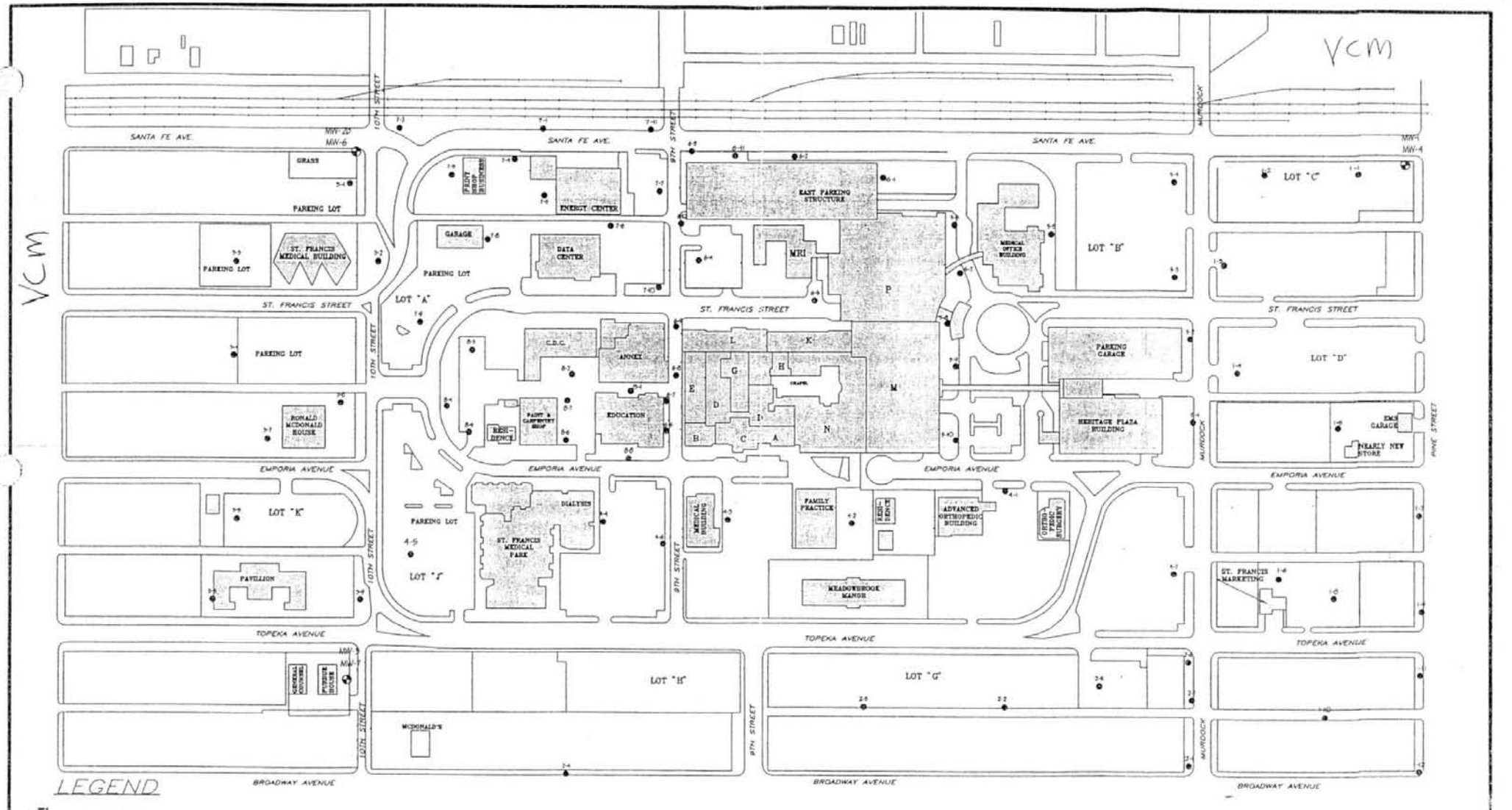
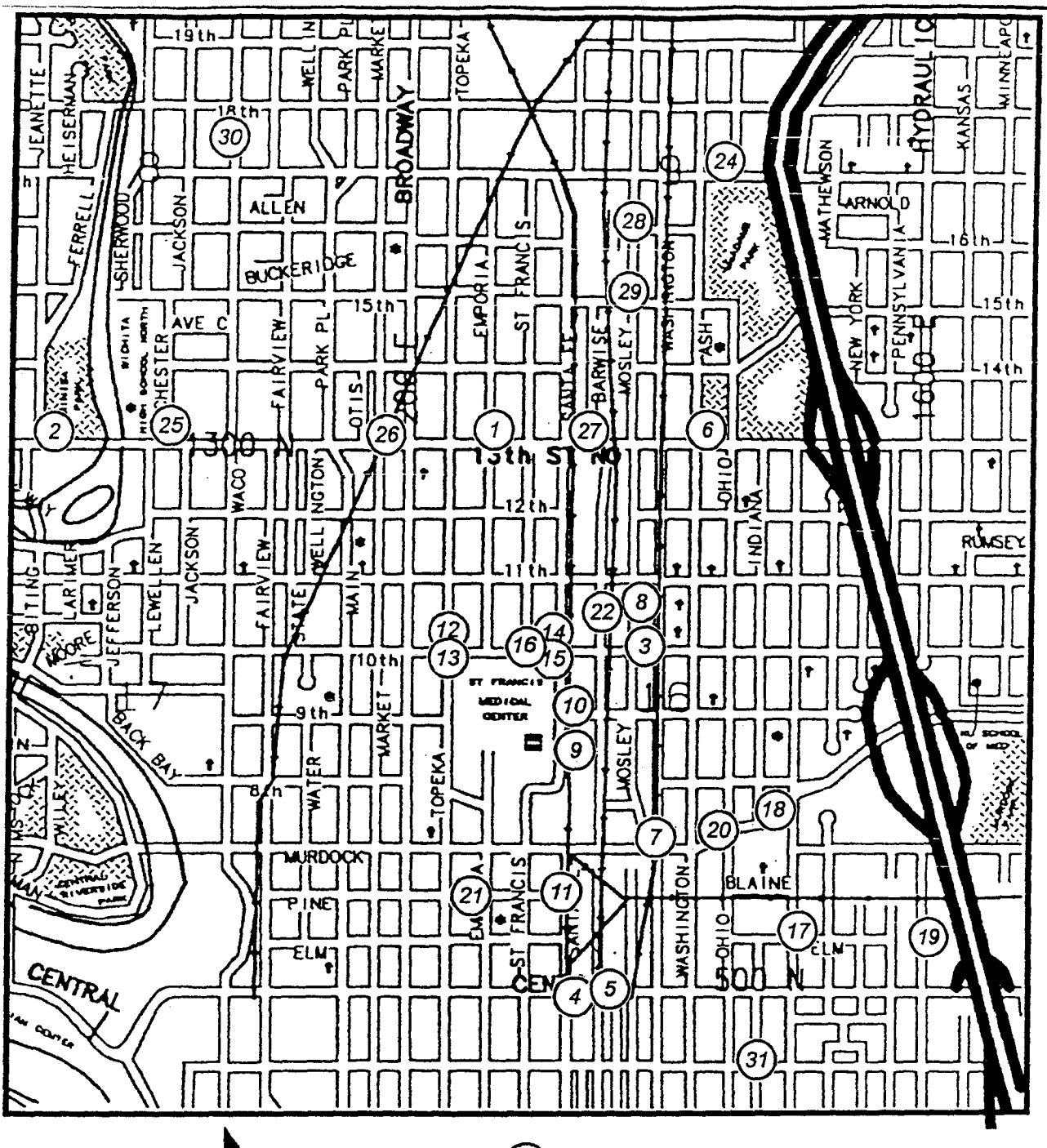


FIGURE 1

SITE BASE MAP

VIA CHRISTI HOSPITAL SITE
WICHITA, KANSAS



ALLIED ENVIRONMENTAL CONSULTANTS, Inc.
WICHITA, KANSAS
(316) 262-5698

VIA CHRISTI HOSPITAL SITE
WICHITA, KANSAS

PROJECT No. 95734-8

FIGURE 9
MONITORING WELL
LOCATION MAP
(ALL LOCATIONS ARE APPROXIMATE)

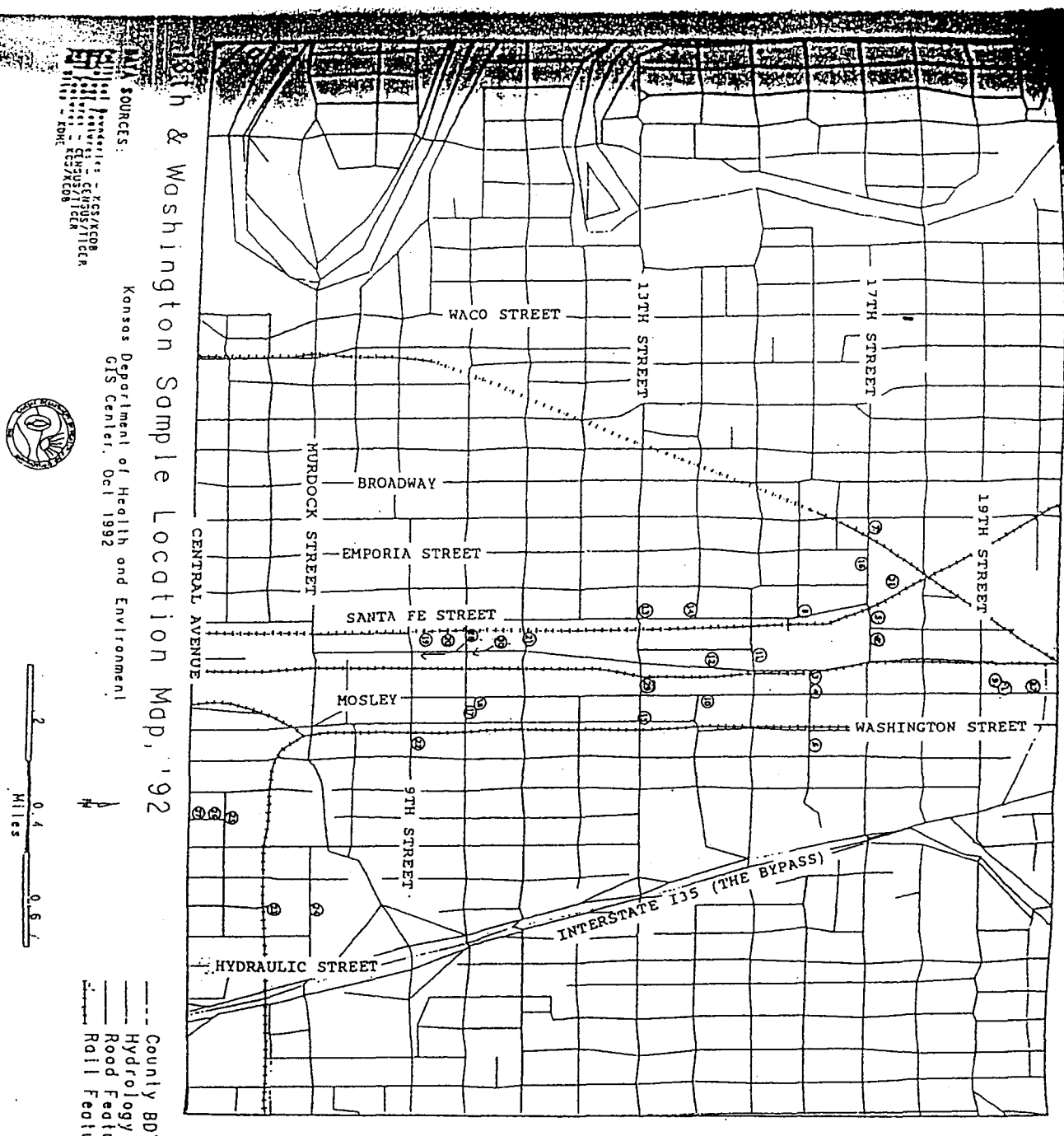


FIGURE 6
GROUND WATER SAMPLING LOCATION MAP
13TH AND WASHINGTON ESI
SEPTEMBER, 1992

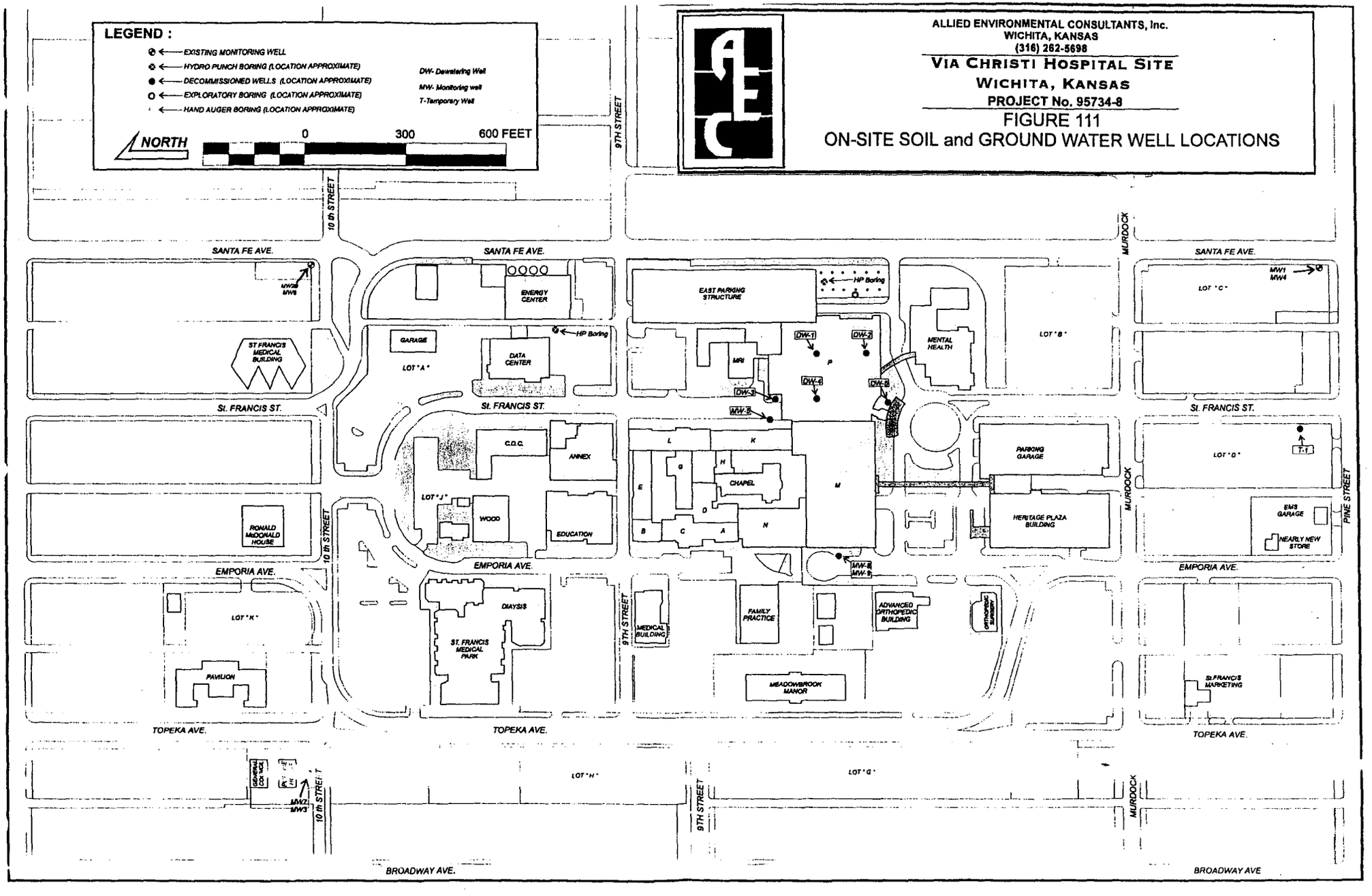
①-㉜ = 32 SAMPLING LOCATIONS COLLECTED WITH GEOPROBE

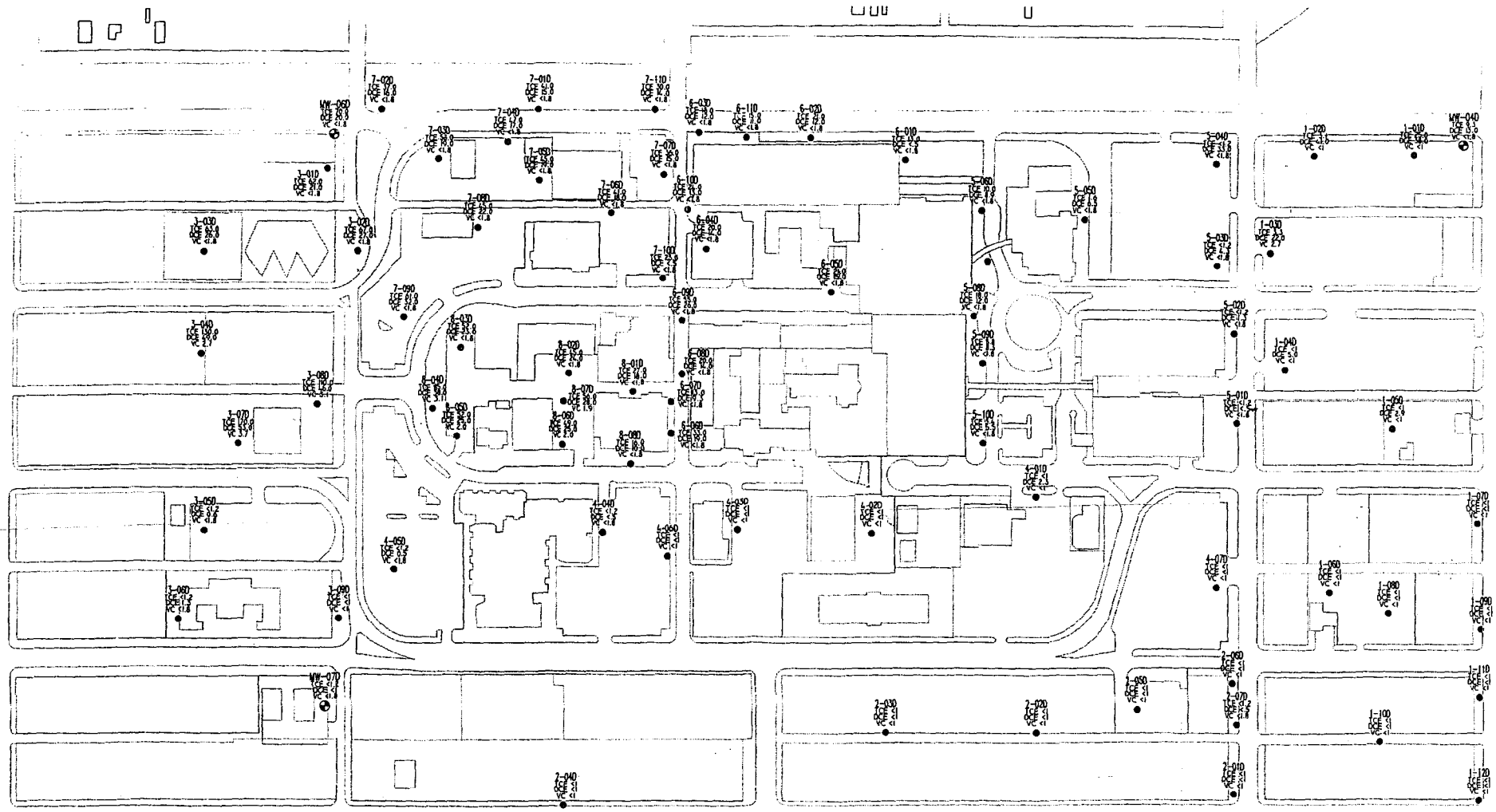
Source: KDHE/BER Field Notes and 13th and Washington Site File

Prepared by the KDHE/BER November, 1992

Allied Environmental Consultants, Inc.

FIGURE 13
GROUND WATER SAMPLING LOCATION MAP


LEGEND :
EXISTING MONITORING WELL
HYDRO PUNCH BORING (LOCATION APPROXIMATE)
DECOMMISSIONED WELLS (LOCATION APPROXIMATE)
EXPLORATORY BORING (LOCATION APPROXIMATE)
HAND AUGER BORING (LOCATION APPROXIMATE)
DW- Dewatering Well
MW- Monitoring well
T-Temporary Well
NORTH
0
300
600 FEET
ALLIED ENVIRONMENTAL CONSULTANTS, Inc.
WICHITA, KANSAS
(316) 262-5698
VIA CHRISTI HOSPITAL SITE
WICHITA, KANSAS
PROJECT No. 95734-8
FIGURE 111
ON-SITE SOIL and GROUND WATER WELL LOCATIONS
SANTA FE AVE.
ST. FRANCIS ST.
EMPORIA AVE.
TOPEKA AVE.
BROADWAY AVE.
10th STREET
9TH STREET
MURDOCK
PINE STREET
ST FRANCIS MEDICAL BUILDING
GARAGE
LOT "A"
ENERGY CENTER
DATA CENTER
HP Boring
C.D.C.
ANNEX
LOT "J"
WOOD
EDUCATION
RONALD McDONALD HOUSE
LOT "K"
PAVILION
DIAYSIS
ST. FRANCIS MEDICAL PARK
MEDICAL BUILDING
EAST PARKING STRUCTURE
MRI
CHAPEL
MENTAL HEALTH
LOT "B"
PARKING GARAGE
HERITAGE PLAZA BUILDING
FAMILY PRACTICE
ADVANCED ORTHOPEDIC BUILDING
ORTHOPEDIC SURGERY
MEADOWBROOK MANOR
LOT "C"
LOT "D"
EMS GARAGE
NEARLY NEW STORE
ST.FRANCIS MARKETING
LOT "H"
LOT "G"
DW-1
DW-2
DW-3
DW-4
DW-5
MW-5
MW-6
MW-7
MW-8
MW-9
MW1
MW2
MW3
MW4
T-1



LEGEND

— EXISTING MONITORING WELL

— GEOPROBE SOIL BORING LOCATION

0 100 200 FEET

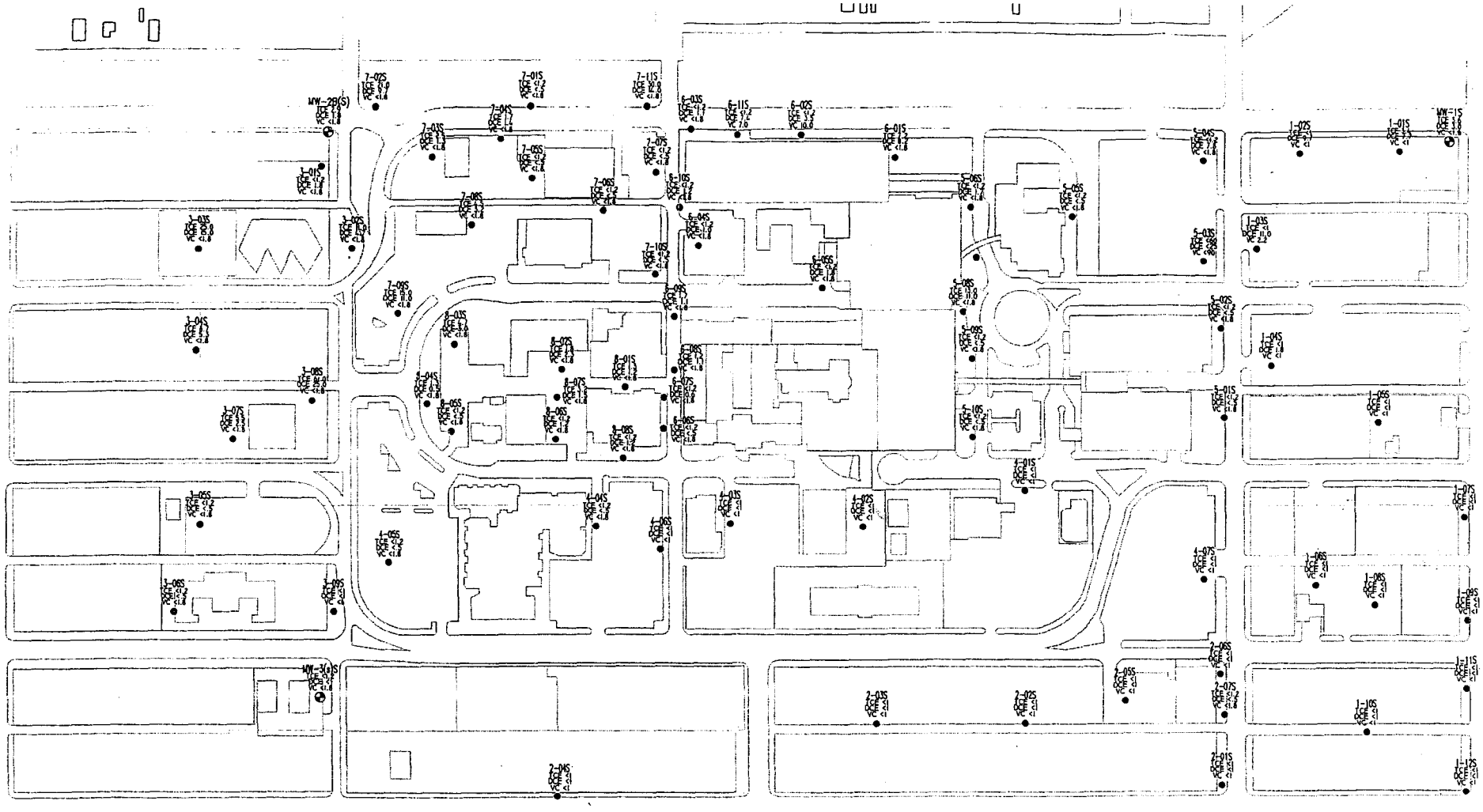
LIST OF ABBREVIATIONS

Trichloroethene, (ug/L)	TCE
cis-1,2-Dichloroethene, (ug/L)	DCE
Vinyl Chloride, (ug/L)	VC

FIGURE 9

Concentrations of TCE, cis-1,2-DCE &Vinyl Chloride Detected in Lower Portion of the Aquifer

VIA CHRISTI HOSPITAL SITE



LEGEND

MW-4 — EXISTING MONITORING WELL

6-4 — GEOPROBE SOIL BORING LOCATION

0 100 200 FEET

LIST OF ABBREVIATIONS

Trichloroethene, (ug/L)	TCE
cis-1,2-Dichloroethene, (ug/L)	DCE
Vinyl Chloride, (ug/L)	VC

FIGURE 8

Concentrations of TCE, cis-1,2-DCE &Vinyl Chloride Detected in Upper Portion of the Aquifer

VIA CHRISTI HOSPITAL SITE
WICHITA, KANSAS

TABLE 4-5
SUMMARY OF OFF-SITE GROUND WATER ANALYTICAL RESULTS

WELL I.D.	WELL ADDRESS	WELL LOCATION	DETECTED ANALYTES	Concentration (ug/L)	KAL (ug/L)
49-D	15th and Santa Fe (Near the NE corner of 15th and Santa Fe)	Up-gradient	Cis-1,2-Dichloroethylene	140	70
			Trans-1,2-Dichloroethylene	8.0	100
			Trichloroethylene	760	5
49-S	15th and Santa Fe (Near the NE corner of 15th and Santa Fe)	Up-gradient	Cis-1,2-Dichloroethylene	0.7	70
			Trichloroethylene	6.7	5
46-D	605 E. 13th (Near the NW corner of Santa Fe and 13th Streets)	Up-gradient	Cis-1,2-Dichloroethylene	12	70
			Trichloroethylene	37	5
46-S	605 E. 13th (Near the NW corner of Santa Fe and 13th Streets)	Up-gradient	Trichloroethylene	0.6	5
47-D	1001 E. 13th (Near the SW corner of 13th and Wabash Streets)	Up-gradient	Cis-1,2-Dichloroethylene	78	70
			Tetrachloroethylene	5	5
			Trichloroethylene	240	5
47-S	1001 E. 13th (Near the SW corner of 13th and Wabash Streets)	Up-gradient	Cis-1,2,-Dichloroethylene	8.6	70
			Tetrachloroethylene	5.3	5
			Trichloroethylene	7.0	5
48-D	Mosley and Murdock (Near the NW corner of Mosley and Murdock)	East and Down Gradient	Cis-1,2-Dichloroethylene	0.4	70
			Trichlorcethylene	1.7	5
48-S	Mosley and Murdock (Near the NW corner of Mosley and Murdock)	East and Down Gradient	Bromodichloromethane	1.9	100
			Chloroform	3.6	100
44-D	9th and Santa Fe (Near SW corner of Santa Fe and 9th Streets)	Adjacent to East Side	1,1-Dichloroethane	11	5
			Benzene	1.6	5
			Cis-1,2-Dichloroethylene	41	70
			Trichloroethylene	1.9	5
			Vinyl Chloride	4.9	2

Ug/l - Micrograms per Liter: Approximately Equal to Parts per Billion (ppb)
D - Deep Well. Well Screened Just Above the Bedrock Surface

S - Shallow Well. Well Screen Penetrates the Upper Aquifer
* - All wells were sampled on April 4, 1993

TABLE 4-5 (tinued)
SUMMARY OF OFF-SITE GROUND WATER ANALYTICAL RESULTS

WELL I.D.	WELL ADDRESS	WELL LOCATION	DETECTED ANALYTES	Concentratio n (ug/L)	KAL (ug/L)
44-S	9th and Santa Fe (Near SW corner of Santa Fe and 9th Streets)	Adjacent to East Side	1,1-Dichloroethane	71	5
			1,1-Dichloroethylene	4.8	7
			Cis-1,2-Dichloroethylene	92	70
			Vinyl Chloride	25	2
45-D	404 E. 13th Street (Near NE corner of Topeka and 13th Streets)	Up-gradient	1,1,1-Trichloroethane	2.8	200
			1,1-Dichloroethane	3.3	5
			1,1-Dichloroethylene	7.8	7
			Chloroform	4.9	100
			Cis-1,2-Dichloroethylene	7.7	70
			Trichloroethylene	52	5
45-S	404 E. 13th Street (Near NE corner of Topeka and 13th Streets)	Up-gradient	1,1,1-Trichloroethane	4.6	200
			Cis-1,2-Dichloroethylene	4.3	70
			Tetrachloroethylene	7.4	5
			Trichloroethylene	17	5
41-D	1655 N. Mosley (Near SW Corner of Mosley and 16th Streets)	East and Up-gradient	1,1-Dichloroethane	6.7	5
			1,1-Dichloroethylene	3.3	7
			Chloroform	2.3	100
			Cis-1,2-Dichloroethylene	140	70
			Tetrachloroethylene	7.7	5
			Trans-1,2-Dichloroethylene	5.1	100
			Trichloroethylene	560	5
			Trichlorofluoromethane	17	8000
41-S	1655 N. Mosley (Near SW Corner of Mosley and 16th Streets)	East and Up-gradient	Cis-1,2-Dichloroethylene	25	70
			Tetrachloroethylene	5.7	5
			Toluene	4.8	1000
			Trichloroethylene	44	5
			Trichlorofluoromethane	3.2	8000
			Xylene(s)	11	10000

Ug/l - Micrograms per Liter: Approximately Equal to Parts per Billion (ppb)
D - Deep Well. Well Screened Just Above the Bedrock Surface

S - Shallow Well. Well Screen Penetrates the Upper Aquifer
* - All wells were sampled on April 4, 1993

TABLE 4-5 (Continued)
SUMMARY OF OFF-SITE GROUND WATER ANALYTICAL RESULTS

WELL I.D.	WELL ADDRESS	WELL LOCATION	DETECTED ANALYTES	Concentration (ug/L)	KAL (ug/L)
40-D	1050 N. Mosley (Near SE Corner of Mosley and 10th Streets)	East and Up-gradient	1,1,1-Trichloroethane	59	200
			1,1-Dichloroethane	18	5
			1,1-Dichloroethylene	22	7
			Cis-1,2-Dichloroethylene	16	70
			Trichloroethylene	13	5
40-S	1050 N. Mosley (Near SE Corner of Mosley and 10th Streets)	East and Up-gradient	1,1,1-Trichloroethane	23	200
			1,1-Dichloroethane	15	5
			1,1-Dichloroethylene	11	7
			Chloroform	5.1	100
			Cis-1,2-Dichloroethylene	10	70
			Trichloroethylene	3.9	5
42-D	918 N. Santa Fe (Near SE Corner of Santa Fe and 9th Streets)	Adjacent to East Side	1,1-Dichloroethane	10	5
			Chloroform	2.1	100
			Cis-1,2-Dichloroethylene	32	70
			Trichloroethylene	18	5

Ug/l - Micrograms per Liter: Approximately Equal to Parts per Billion (ppb)
D - Deep Well. Well Screened Just Above the Bedrock Surface

S - Shallow Well. Well Screen Penetrates the Upper Aquifer
* - All wells were sampled on April 4, 1993

TABLE 6-2
SUMMARY OF ANALYTICAL RESULTS (Off Site Monitoring Wells)

WELL IDENTIFICATION	WELL ADDRESS	WELL LOCATION	DETECTED ANALYTES	CONCENTRATION (ug/l)
49-D	15th and Santa Fe Near the NE corner of 15th and Santa Fe	Up-gradient	Cis-1,2-Dichloroethylene	140
			Trans-1,2-Dichloroethylene	8.0
			Trichloroethylene	760
49-S	15th and Santa Fe Near the NE corner of 15th and Santa Fe	Up-gradient	Cis-1,2-Dichloroethylene	0.7
			Trichloroethylene	6.7
46-D	605 E. 13th Near the NW corner of Santa Fe and 13th Streets	Up-gradient	Cis-1,2-Dichloroethylene	12
			Trichloroethylene	37
46-S	605 E. 13th Near the NW corner of Santa Fe and 13th Streets	Up-gradient	Trichloroethylene	0.6
47-D	1001 E. 13th Near the SW corner of 13th and Wabash Streets	Up-gradient	Cis-1,2-Dichloroethylene	78
			Tetrachloroethylene	5
			Trichloroethylene	240
47-S	1001 E. 13th Near the SW corner of 13th and Wabash Streets	Up-gradient	Cis-1,2,-Dichloroethylene	8.6
			Tetrachloroethylene	5.3
			Trichloroethylene	7.0
48-D	Mosley and Murdock Near the NW corner of Mosley and Murdock	East and Down Gradient	Cis-1,2-Dichloroethylene	0.4
			Trichloroethylene	1.7
48-S	Mosley and Murdock Near the NW corner of Mosley and Murdock	East and Down Gradient	Bromodichloromethane	1.9
			Chloroform	3.6
44-D	9th and Santa Fe Near SW corner of Santa Fe and 9th Streets	Adjacent to East Side	1,1-Dichloroethane	11
			Benzene	1.6
			Cis-1,2-Dichloroethylene	41
			Trichloroethylene	1.9
			Vinyl Chloride	4.9

ug/l - Micrograms per Liter [approximately equal to parts per billion (ppb)]
D - Deep Well (well screened immediately above bed rock surface)
S - Shallow Well (well screen penetrates the upper aquifer)
* - All wells were sampled on April 4, 1993.

Table 6-2 (Continued)
SUMMARY OF ANALYTICAL RESULTS (Off Site Monitoring Wells)

WELL IDENTIFICATION	WELL ADDRESS	WELL LOCATION	DETECTED ANALYTES	CONCENTRATION (ug/l)
44-S	9th and Santa Fe Near SW corner of Santa Fe and 9th Streets	Adjacent to East Side	1,1-Dichloroethane	71
			1,1-Dichloroethylene	4.8
			Cis-1,2-Dichloroethylene	92
			Vinyl Chloride	25
45-D	404 E. 13th Street Near NE corner of Topeka and 13th Streets	Up-gradient	1,1,1-Trichloroethane	2.8
			1,1-Dichloroethane	3.3
			1,1-Dichloroethylene	7.8
			Chloroform	4.9
			Cis-1,2-Dichloroethylene	7.7
			Trichloroethylene	52
45-S	404 E. 13th Street Near NE corner of Topeka and 13th Streets	Up-gradient	1,1,1-Trichloroethane	4.6
			Cis-1,2-Dichloroethylene	4.3
			Tetrachloroethylene	7.4
			Trichloroethylene	17
41-D	1655 N. Mosley Near SW Corner of Mosley and 16th Streets	East and Up-gradient	1,1-Dichloroethane	6.7
			1,1-Dichloroethylene	3.3
			Chloroform	2.3
			Cis-1,2-Dichloroethylene	140
			Tetrachloroethylene	7.7
			Trans-1,2-Dichloroethylene	5.1
			Trichloroethylene	560
			Trichlorofluoromethane	17
41-S	1655 N. Mosley Near SW Corner of Mosley and 16th Streets	East and Up-gradient	Cis-1,2-Dichloroethylene	25
			Tetrachloroethylene	5.7
			Toluene	4.8
			Trichloroethylene	44
			Trichlorofluoromethane	3.2
			Xylene	11

ug/l - Micrograms per Liter [approximately equal to parts per billion (ppb)]
D - Deep Well (well screened immediately above bed rock surface)
S - Shallow Well (well screen penetrates the upper aquifer)
* - All wells were sampled on April 4, 1993.

Table 6-2 (Continued)
SUMMARY OF ANALYTICAL RESULTS (Off Site Monitoring Wells)

WELL IDENTIFICATION	WELL ADDRESS	WELL LOCATION	DETECTED ANALYTES	CONCENTRATION (ug/l)
40-D	1050 N. Mosley Near SE Corner of Mosley and 10th Streets	East and Up-gradient	1,1,1-Trichloroethane	59
			1,1-Dichloroethane	18
			1,1-Dichloroethylene	22
			Cis-1,2-Dichloroethylene	16
			Trichloroethylene	13
40-S	1050 N. Mosley Near SE Corner of Mosley and 10th Streets	East and Up-gradient	1,1,1-Trichloroethane	23
			1,1-Dichloroethane	15
			1,1-Dichloroethylene	11
			Chloroform	5.1
			Cis-1,2-Dichloroethylene	10
			Trichloroethylene	3.9
42-D	918 N. Santa Fe Near SE Corner of Santa Fe and 9th Streets	Adjacent to East Side	1,1-Dichloroethane	10
			Chloroform	2.1
			Cis-1,2-Dichloroethylene	32
			Trichloroethylene	18

ug/l - Micrograms per Liter [approximately equal to parts per billion (ppb)]
D - Deep Well (well screened immediately above bed rock surface)
S - Shallow Well (well screen penetrates the upper aquifer)
* - All wells were sampled on April 4, 1993.

Appendix B-17
VIM - Former Vim Trailer

Allied Environmental Consultants, Inc.

Site
Prefix
VIM

April 29, 1997

Camp Dresser and McKee, Inc.
1331 17th Street, Suite 1200
Denver, Colorado 80202

Attention: Mr. Darren Brown

Reference: VIM Trailer Mfg. Site, Wichita, Kansas

Dear Mr. Brown:

Mr. Jay Swanson, owner of the above referenced site, has requested that Allied Environmental Consultants, Inc. forward available ground water data for the VIM Trailer site to your office (see attachments). To assist you in your review of the analytical data, we have also included a map showing the location of each sample collection point. If you have any questions regarding the attached analytical data or map, please contact our office at your convenience.

Sincerely yours,

ALLIED ENVIRONMENTAL CONSULTANTS, INC.

Cole D. Knight

Cole D. Knight, C.P.G.
Environmental Geologist

Attachments

CDK:epd

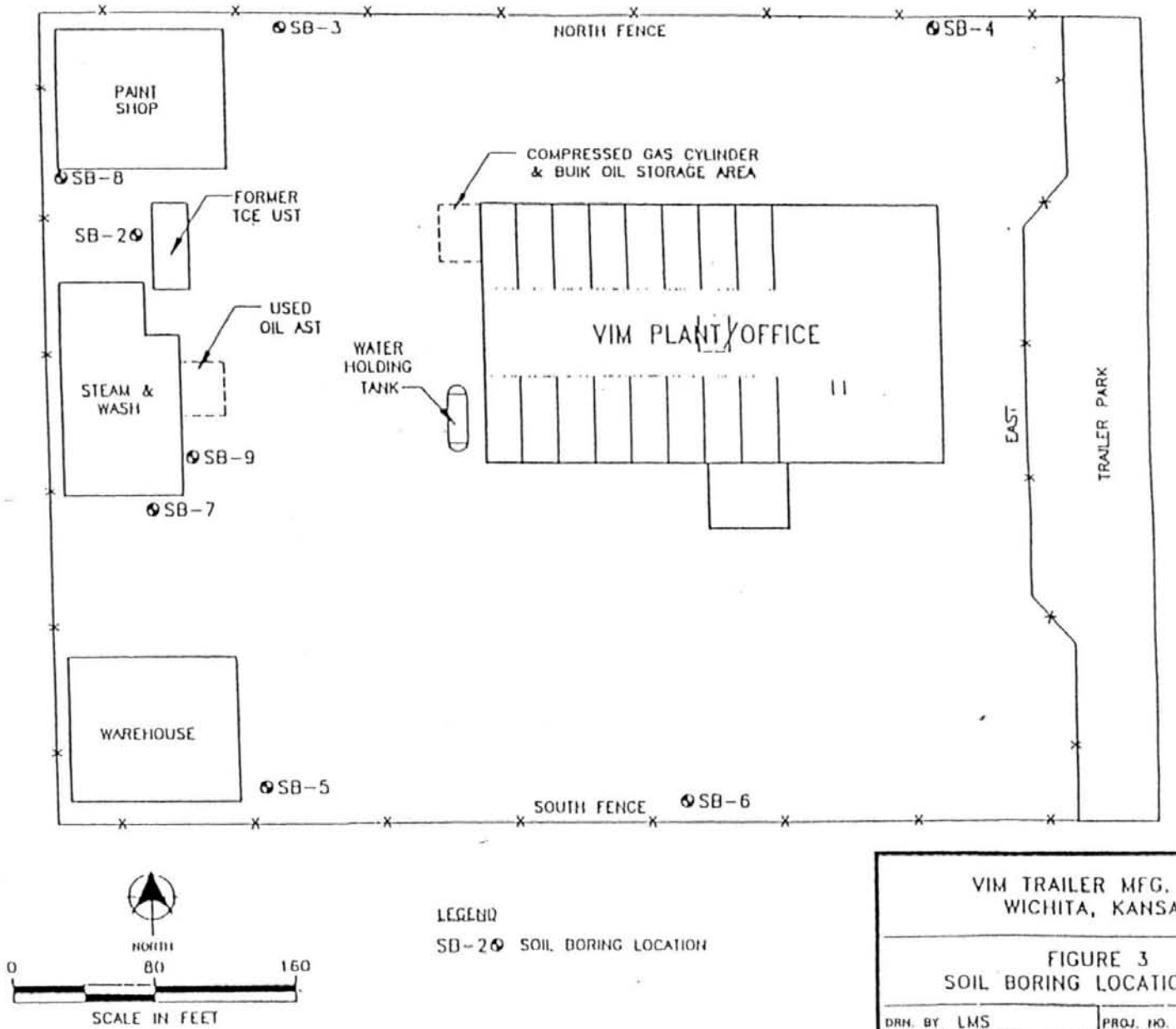
Location: 349 Ida
Mailing: P.O. Box 234 (67201-0234)
Wichita, Kansas
Phone: (316) 262-5698
Fax: (316) 262-0736

Table 1
Soil and Ground Water In-Field Laboratory Analytical Results
VIM Trailer Manufacturing, Inc.
Wichita, Kansas
14-Jul-95

Parameter	SB-2\11-13 Soil	SB-3 Shallow Ground Water	SB-3 Deep Ground Water	SB-4 Shallow Ground Water	SB-4 Deep Ground Water	SB-5 Shallow Ground Water	SB-5 Deep Ground Water	SB-6 Shallow Ground Water	SB-6 Deep Ground Water	SB-7 Shallow Ground Water	SB-8 Shallow Ground Water	SB-9 Shallow Ground Water	Federal Maximum Contaminant Limit[1]
Trichloroethene	2371 µg/kg	1 µg/l	0.1 µg/l	3 µg/l	5 µg/l	100 µg/l	14 µg/l	29 µg/l	28 µg/l	172 µg/l	116 µg/l	139 µg/l	5 µg/l
1,2-Dichloroethene	659 µg/kg	5 µg/l	6 µg/l	4 µg/l	2 µg/l	37 µg/l	7 µg/l	9 µg/l	9 µg/l	281 µg/l	40 µg/l	402 µg/l	100 µg/l
Trichloroethane	3086 µg/kg	3 µg/l	3 µg/l	4 µg/l	3 µg/l	19 µg/l	4 µg/l	2 µg/l	3 µg/l	69 µg/l	4 µg/l	2131 µg/l	200 µg/l
Perchloroethene	BQL	ND	ND	ND	ND	BQL	ND	ND	ND	BQL	BQL	BQL	5 µg/kg

ND : Parameter Not Detected
BQL : Parameter Detected At Concentration Below Instrument Quantification Limit
µg/kg : Micrograms per Kilogram - Approximately Equivalent to Parts Per Billion
µg/l : Micrograms per Liter - Approximately Equivalent to Parts Per Billion
[1] : December 1992
: Shaded Area Exceeds Federal Maximum Contaminant Limit

Note: Shallow ground water samples were collected at a depth of approximately 16 feet to 18 feet below ground surface. Deep ground water samples were collected at a depth of approximately 28 feet to 30 feet below ground surface.



VIM TRAILER MFG. INC.
WICHITA, KANSAS

FIGURE 3
SOIL BORING LOCATION MAP

DRN. BY LMS	PROJ. NO. 25697-005
DATE 24JUL95	DAMES & MOORE

FILE: C:\DATA\DWGS\BRENNER\SBLOC.DWG

DM 00842

Appendix B-18
VWRS - Van Water & Rogers (South)

SECOR
International Incorporated

July 10, 2001

Ms. Christine R. Jump
Environmental Geologist
Bureau of Environmental Remediation
Kansas Department of Health and Environment
Forbes Field, Building 740
Topeka, KS 66620-0001

Subject: **VOC Analytical Sampling Results**
Vopak USA Facility
2041 North Mosely, Wichita, Kansas

Dear Ms. Jump:

On behalf of Vopak USA, attached please find copies of the analytical results pertaining to sampling conducted at the above referenced facility on May 23rd and 24th. This sampling was done in accordance with the correspondence from you dated April 10, 2001.

In addition to the results from wells requested by KDHE, we have also attached results from additional wells sampled onsite during the same mobilization. If you should have any questions regarding these results, or need additional information regarding field conditions at the time of sampling, please do not hesitate to contact me at your convenience.

Sincerely,

SECOR International Incorporated

Lynden Peters
Senior Engineer

Copy to: Mr. Darren Brown, CDM w/ attachments
Mr. Tony Pirelli, Vopak USA w/o attachments

Certificate of Analysis

STL Austin
14046 Summit Drive
Austin, Texas 78728

Tel: 512 244 0855
Fax: 512 244 0160
www.stl-inc.com

SEVERN TRENT SERVICES
STL Austin

ANALYTICAL REPORT

PROJECT NO. 003.60001.001

VOPAK

Lot #: I1E250161

Lynden Peters

Secor International, Inc.
120 S. Market Street
Suite 204
Wichita, KS 67202

SEVERN TRENT LABORATORIES, INC.

Chris J. Schepcoff
Project Manager

June 13, 2001

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

STL Austin is a part of Severn Trent Laboratories, Inc.

EXECUTIVE SUMMARY - Detection Highlights

I1E250161

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW4S 05/23/01 15:43 001				
1,1-Dichloroethane	5.5	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	7.4	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	84	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	3.2	2.5	ug/L	SW846 8260B
Trichloroethene	82	5.0	ug/L	SW846 8260B
Vinyl chloride	16	10	ug/L	SW846 8260B
MW4D 05/23/01 15:37 002				
1,1-Dichloroethane	5.4	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	6.5	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	76	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	2.5	2.5	ug/L	SW846 8260B
Trichloroethene	110	5.0	ug/L	SW846 8260B
Vinyl chloride	29	10	ug/L	SW846 8260B
MW1S 05/23/01 14:08 003				
cis-1,2-Dichloroethene	50	2.5	ug/L	SW846 8260B
Trichloroethene	25	5.0	ug/L	SW846 8260B
MW1D 05/23/01 14:00 004				
1,1-Dichloroethane	6.1	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	7.2	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	100	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	3.4	2.5	ug/L	SW846 8260B
Trichloroethene	94	5.0	ug/L	SW846 8260B
Vinyl chloride	26	10	ug/L	SW846 8260B
MW8D 05/24/01 12:01 005				
1,1-Dichloroethane	7.4	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	10	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	86	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	3.4	2.5	ug/L	SW846 8260B
Trichloroethene	170	5.0	ug/L	SW846 8260B
Vinyl chloride	30	10	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

I1E250161

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW8S 05/24/01 11:58 006				
1,1-Dichloroethane	5.7	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	5.0	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	70	2.5	ug/L	SW846 8260B
Trichloroethene	120	5.0	ug/L	SW846 8260B
MW6S 05/24/01 10:48 007				
1,1-Dichloroethane	5.1	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	6.0	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	56	2.5	ug/L	SW846 8260B
Trichloroethene	120	5.0	ug/L	SW846 8260B
Vinyl chloride	11	10	ug/L	SW846 8260B
MW5S 05/24/01 10:14 008				
cis-1,2-Dichloroethene	33	2.5	ug/L	SW846 8260B
Trichloroethene	77	5.0	ug/L	SW846 8260B
MW5D 05/24/01 10:10 009				
1,1-Dichloroethane	7.2	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	9.9	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	84	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	3.1	2.5	ug/L	SW846 8260B
Trichloroethene	170	5.0	ug/L	SW846 8260B
Vinyl chloride	28	10	ug/L	SW846 8260B
MW3S 05/24/01 08:00 010				
Chloroform	5.4	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	3.2	2.5	ug/L	SW846 8260B
Trichloroethene	50	5.0	ug/L	SW846 8260B

Appendix B-19
VWRN - Former Van Water & Rogers (North)

Van Waters & Rogers Inc.
A ROYAL PAKHOED COMPANY

Environmental Affairs Department

Anthony J. Pirelli
W205 N6849 Woodward Ct.
Menomonee Falls, WI 53051

Writer's Direct Dial: (262) 250-1381
Writer's Facsimile: (262) 250-1386
E-mail: Anthony.Pirelli@VWR-inc.com

February 5, 2001

Ms. Christine Jump
Kansas Department of Health & Environment
Forbes Field, Building 283
Topeka, KS 66620

RE: Submittal of Preliminary Investigation Report
Former Van Waters & Rogers Inc. Facility
3105 North Mead Street
Wichita, Kansas

Ms. Jump:

I have enclosed the Preliminary Investigation (PI) Report for the former Van Waters & Rogers Inc. (VW&R) facility located at 3105 Mead Street in Wichita, Kansas. This PI report is being submitted to the Kansas Department of Health & Environment (KDHE) for review and approval in accordance with the Administrative Order of Consent (Case No. 98-E-0096).

VW&R and SECOR are confident that the results of this PI clearly indicate that operations at the former VW&R facility have not impacted the environment. As such, I have also submitted two copies of this report to Mr. Jack Brown of the Wichita-Sedgwick County Department of Community Health with a request that the Certificate and Release for Environmental Conditions originally requested by VW&R in April of 1997 now be granted.

Please contact either myself at 262-250-1381, or Brad Barquest at 651- 653-9112 with any questions or comments that you may have regarding this document or any portion of the PI.

Sincerely,

Brad W. Barquest (SECOR) for

Anthony J. Pirelli
Senior Project Manager

cc: Mr. Jack Brown
Mr. Brad Barquest

Van Waters & Rogers Inc.
A ROYAL PAKHOED COMPANY

Environmental Affairs Department

Anthony J. Pirelli
W205 N6849 Woodward Ct.
Menomonee Falls, WI 53051

Writer's Direct Dial: (262) 250-1381
Writer's Facsimile: (262) 250-1386
E-mail: Anthony.Pirelli@VWR-inc.com

February 5, 2001

Mr. Jack Brown
Director of Environmental Health
Wichita-Sedgwick County Department of Community Health
1900 East Ninth Street
Wichita, KS

RE: Submittal of Preliminary Investigation Report
Former Van Waters & Rogers Inc. Facility
3105 North Mead Street
Wichita, Kansas

Mr. Brown:

Van Waters & Rogers Inc. (VW&R) has submitted the Preliminary Investigation (PI) Report (2 copies of which are enclosed) for the former Van Waters & Rogers Inc. (VW&R) facility located at 3105 Mead Street in Wichita, Kansas. As we state in the cover letter to Ms. Chris Jump of the Kansas Department of Health & Environment (KDHE), VW&R and SECOR are confident that the results of this PI clearly indicate that operations at the former VW&R facility have not impacted the environment. Therefore, VW&R respectfully requests that the Wichita-Sedgwick County Department of Community Health now grant the Certificate and Release for Environmental Conditions originally requested by VW&R in April of 1997.

Please contact either myself at 262-250-1381, or Brad Barquest at 651- 653-9112, with any questions or comments that you may have regarding this document or any portion of the PI.

Sincerely,

Brad A. Barquest (SECOR) for

Anthony J. Pirelli
Senior Project Manager

cc: Ms. Chris Jump, KDHE
Mr. Brad Barquest, SECOR

SECOR
International Incorporated

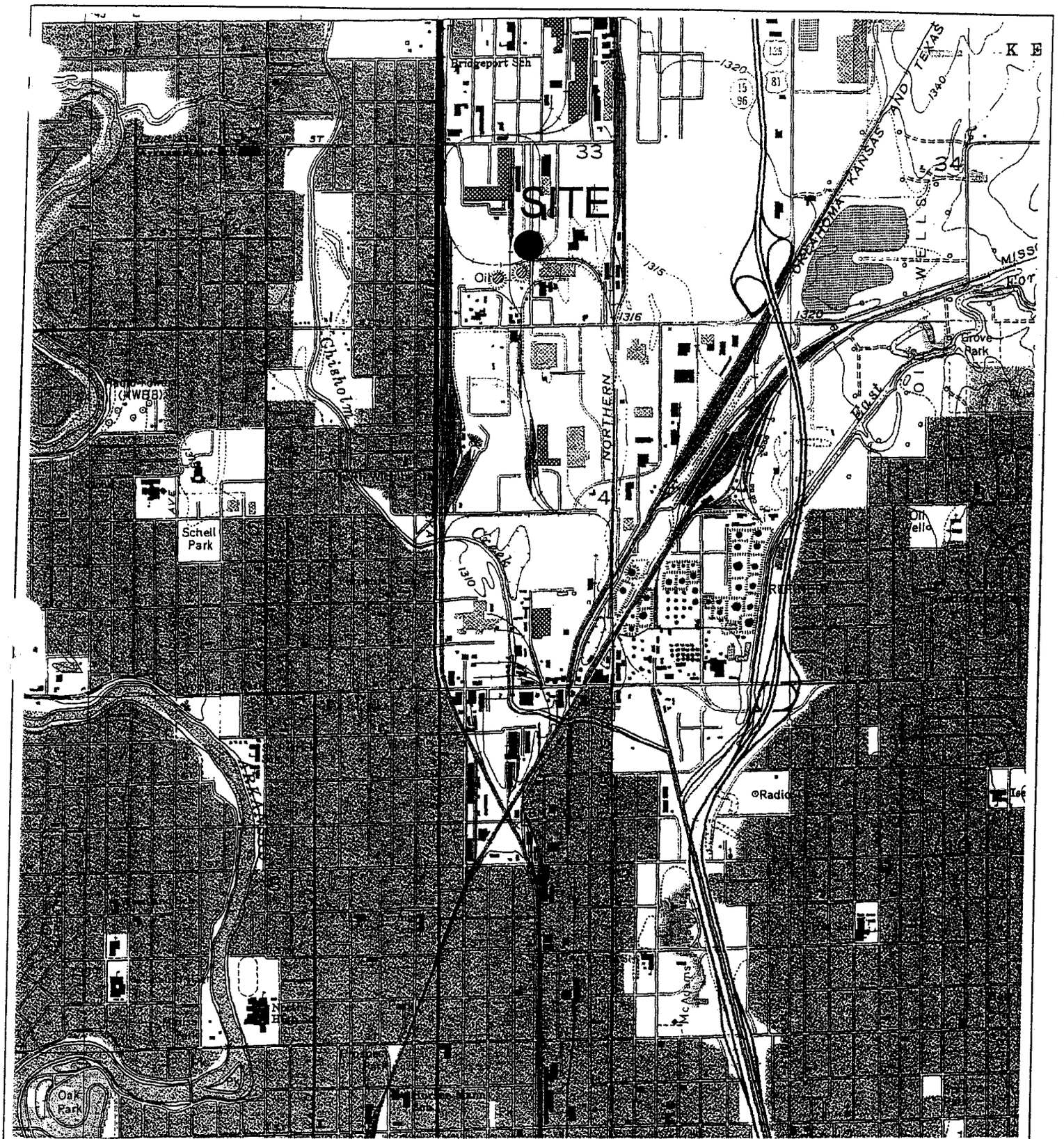
PRELIMINARY INVESTIGATION REPORT
FORMER VW&R
MEAD STREET FACILITY
WICHITA, KANSAS

SECOR Project No. 006.03264

Prepared by

SECOR International Incorporated
4463 White Bear Parkway, Suite 106
White Bear Lake, MN 55110
(651) 653-9112
(651) 653-1751 FAX

February 2, 2001



SOURCE:
SGS 1:24,000
TOPOGRAPHIC MAP–
WICHITA EAST, KS QUADRANGLE

KANSAS
QUADRANGLE LOCATION

0 1000 2000
SCALE IN FEET

N

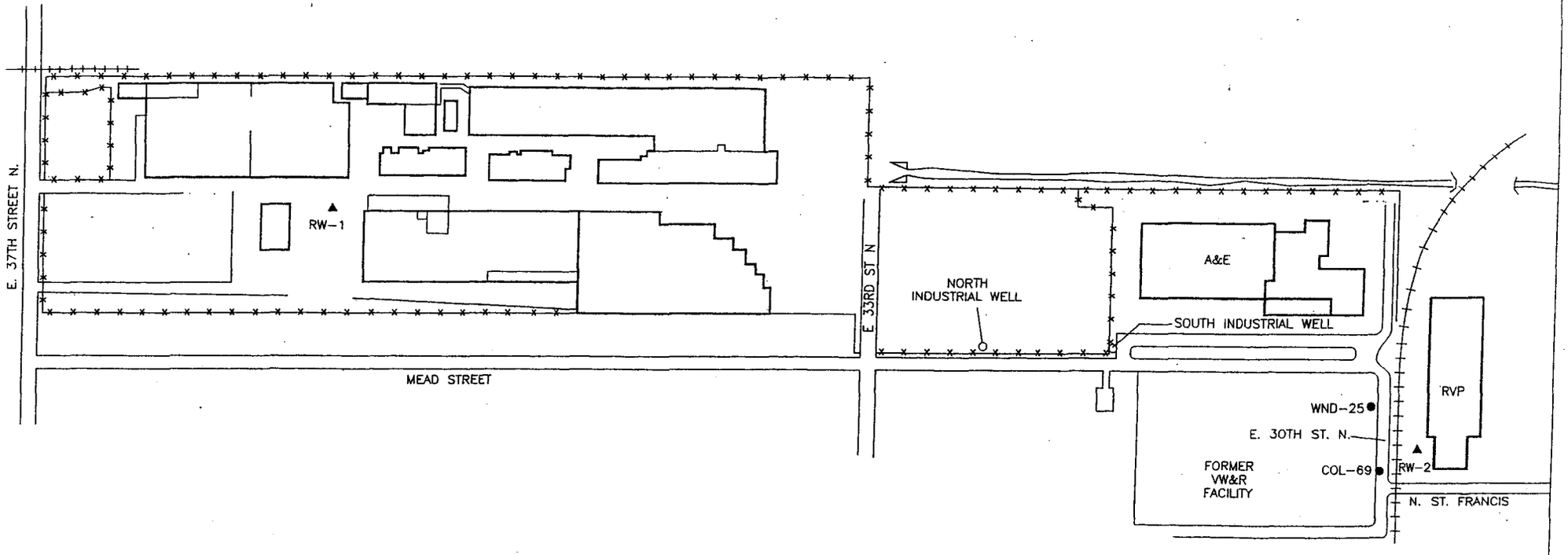
SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY, SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VAN WATERS AND ROGERS – MEAD STREET FACILITY
WICHITA, KANSAS

SITE LOCATION MAP

FIGURE 1

SECOR PROJECT #: 006.03247.127 | FILENAME: SITEMAP | DATE: 02/05/01



LEGEND:

- ● MONITORING WELL LOCATION
- ○ INDUSTRIAL WELL LOCATION
- ▲ RECOVERY WELL LOCATION

← N →

0 300
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	CKD.	APP.

DESIGNED BY: B. BARQUEST
DRAWN BY: K. MITCHELL
APPROVED BY: B. BARQUEST
DATE: 12/14/00

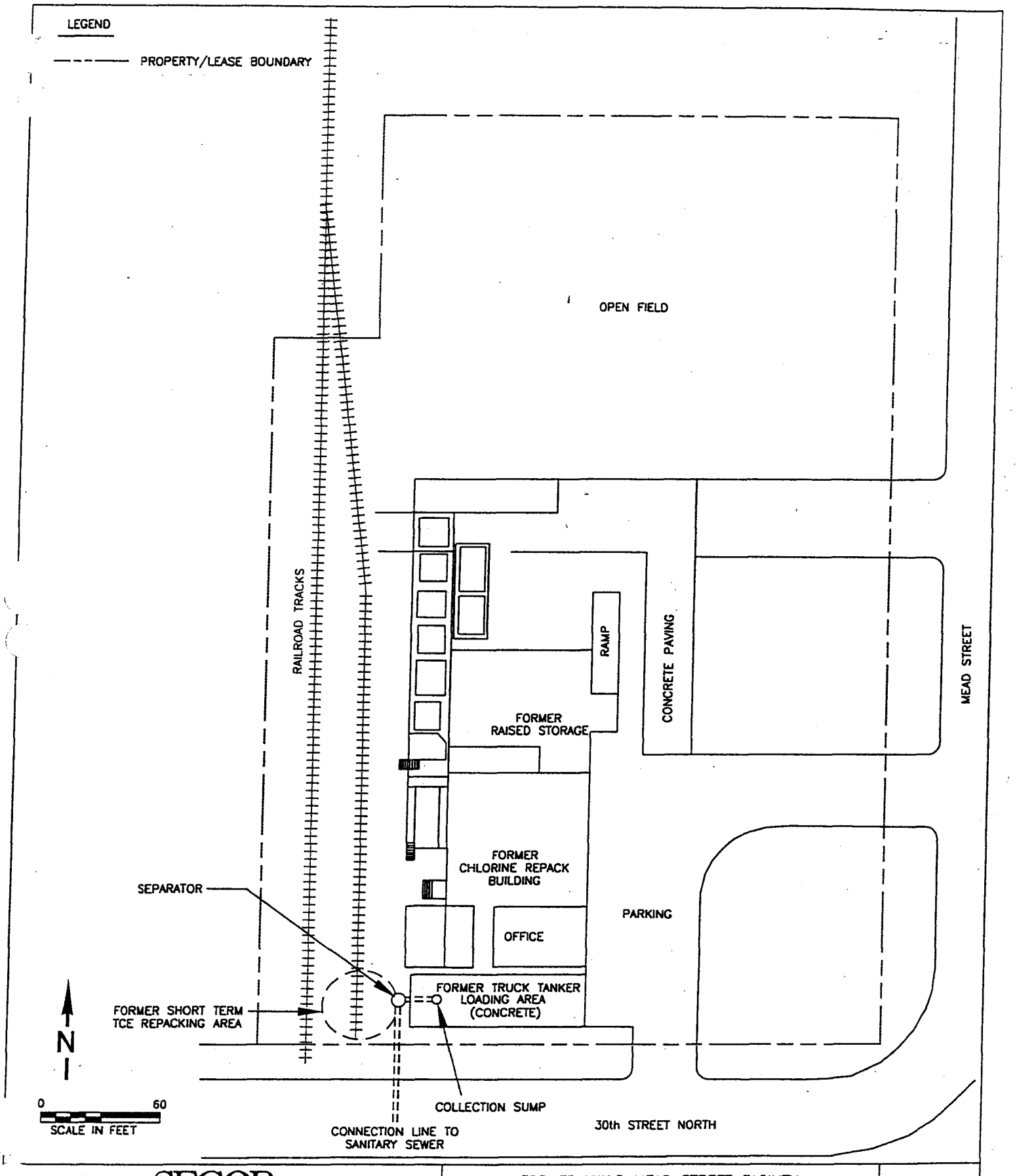
SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY, SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VAN WATERS AND ROGERS – MEAD STREET FACILITY
WICHITA, KANSAS

GENERAL SITE MAP

PROJECT NUMBER: 006.03247.127
CAD FILE NUMBER: 03247-F2
DATE: 02/02/01

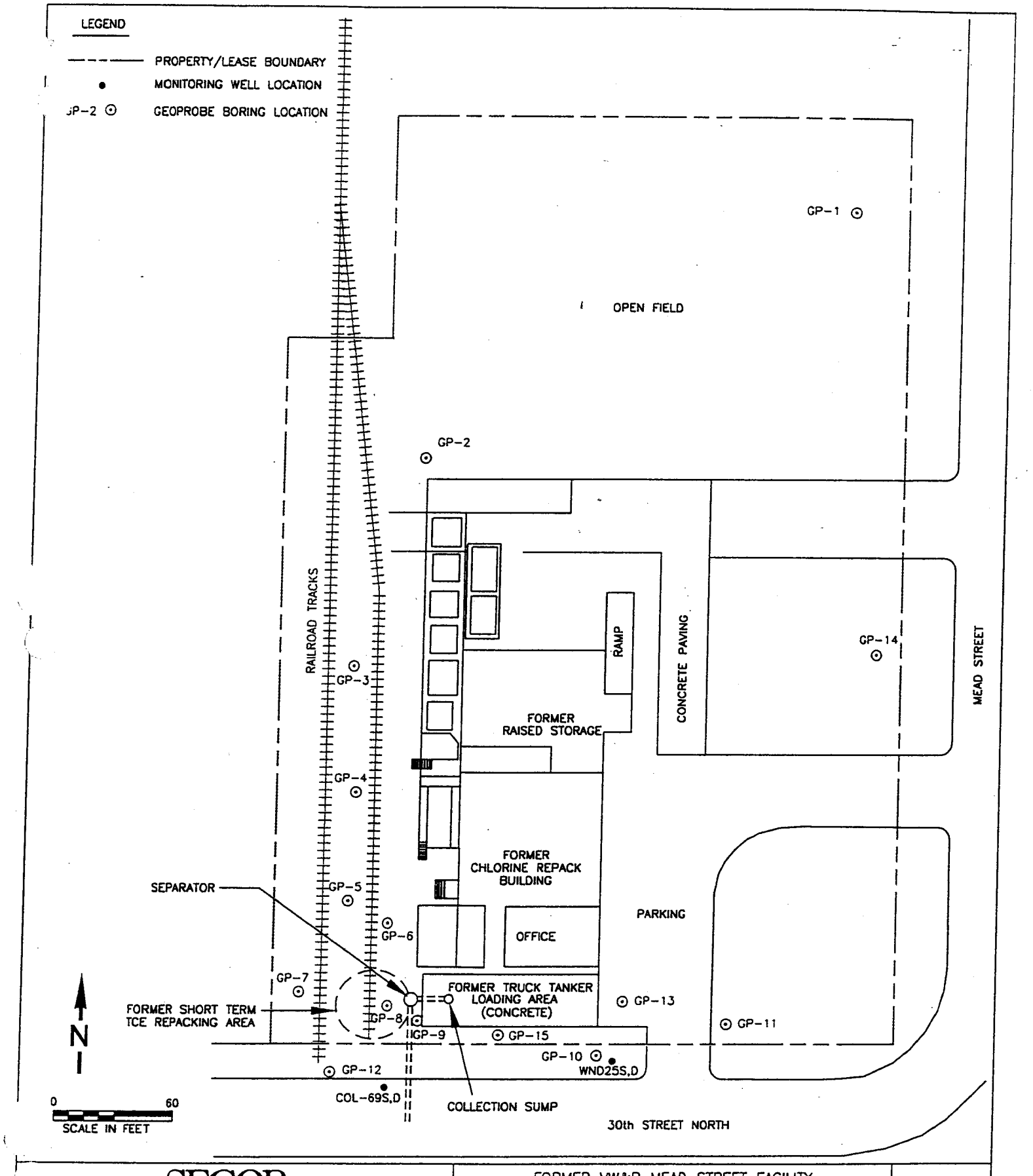
FIGURE 2



SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS
SITE MAP

FIGURE 3



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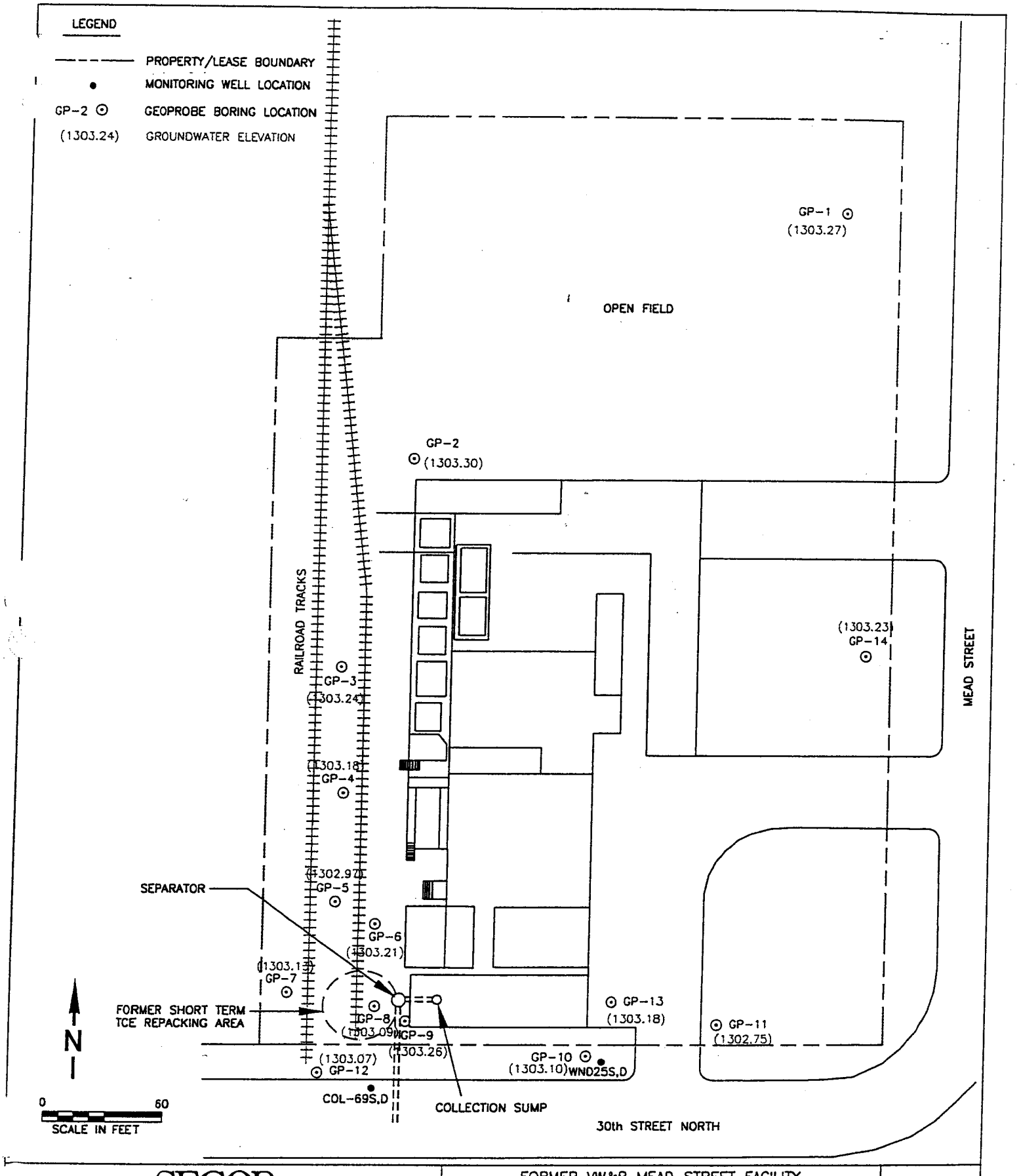
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS

GEOPROBE BORING LOCATION MAP

FIGURE 4

SECOR PROJECT #: 006.03247.127 | FILENAME: MEADSITE.DWG | DATE: 01/22/01

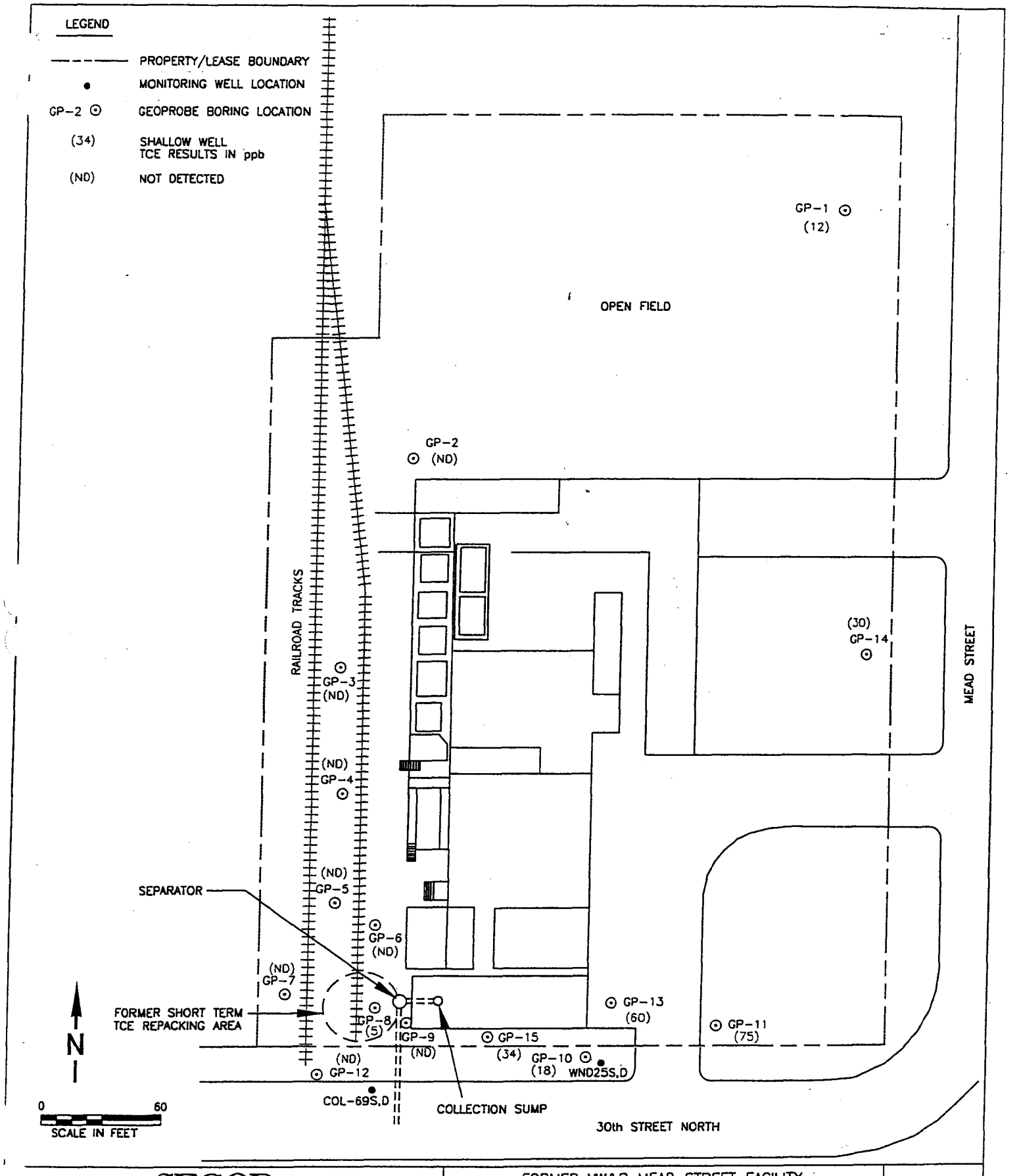


SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS

GROUNDWATER ELEVATION DATA MAP
(SEPTEMBER 2000)

FIGURE
6

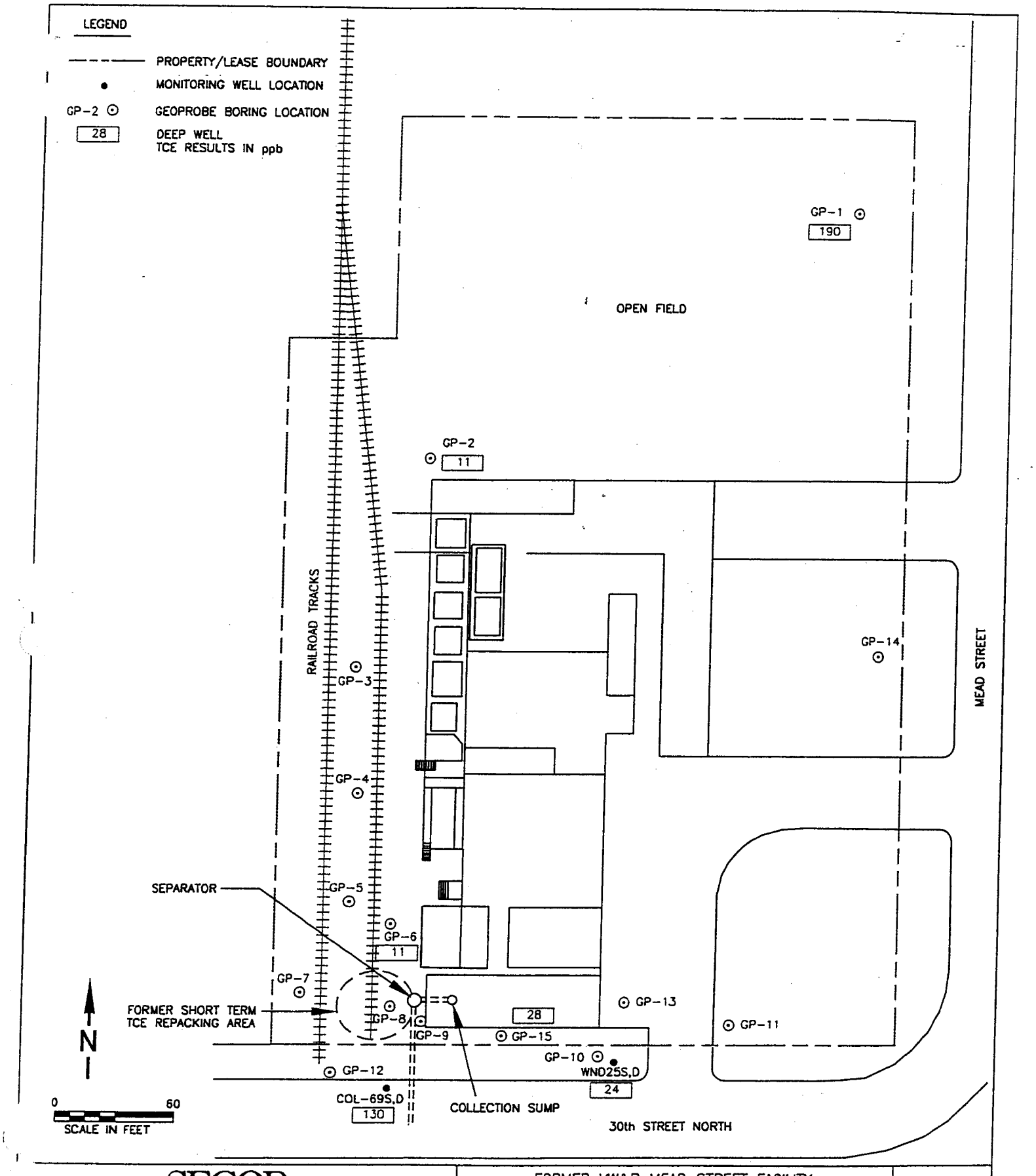


SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS

SHALLOW GROUNDWATER
TCE ANALYTICAL RESULTS

FIGURE 7



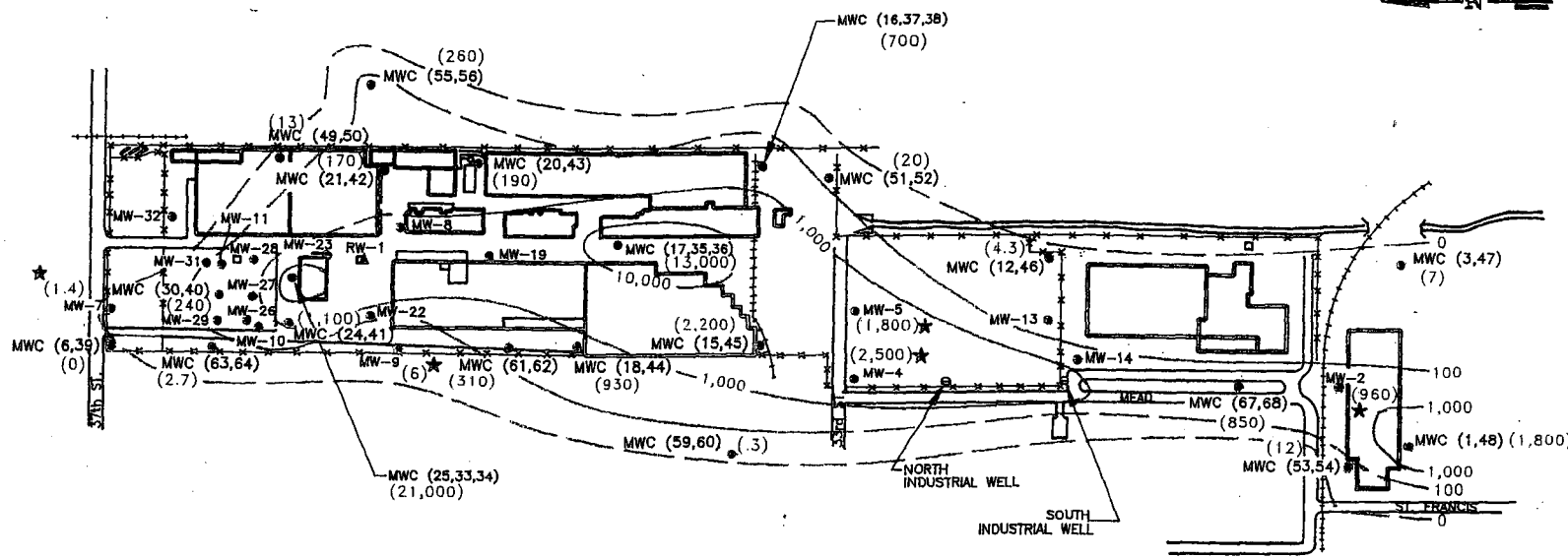
SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS

DEEP GROUNDWATER
TCE ANALYTICAL RESULTS

FIGURE
8

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

● = MONITORING WELL

MWC = MONITORING WELL CLUSTER

★(20) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)

400 0 400 800

SCALE FEET

FIG. 39

GROUNDWATER TECHNOLOGY, INC. 443 N. MAIZE ROAD WICHITA, KS 67212

PROJECT No: 042209733 DATE 5/4/90

DETAILED RHW

TITLE: **SHALLOW TCE ISOCONCENTRATION MAP**

MAY 1990

CLIENT: COLEMAN CO.

LOCATION: WICHITA, KS.

CAD DWG. FILE No. 9430-SM

REV.	DATE	DESCRIPTION	BY	CKD.	APP.

DESIGNED BY B. BARQUEST
DRAWN BY K. MITCHELL
APPROVED BY B. BARQUEST
DATE 12/14/00

SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY, SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

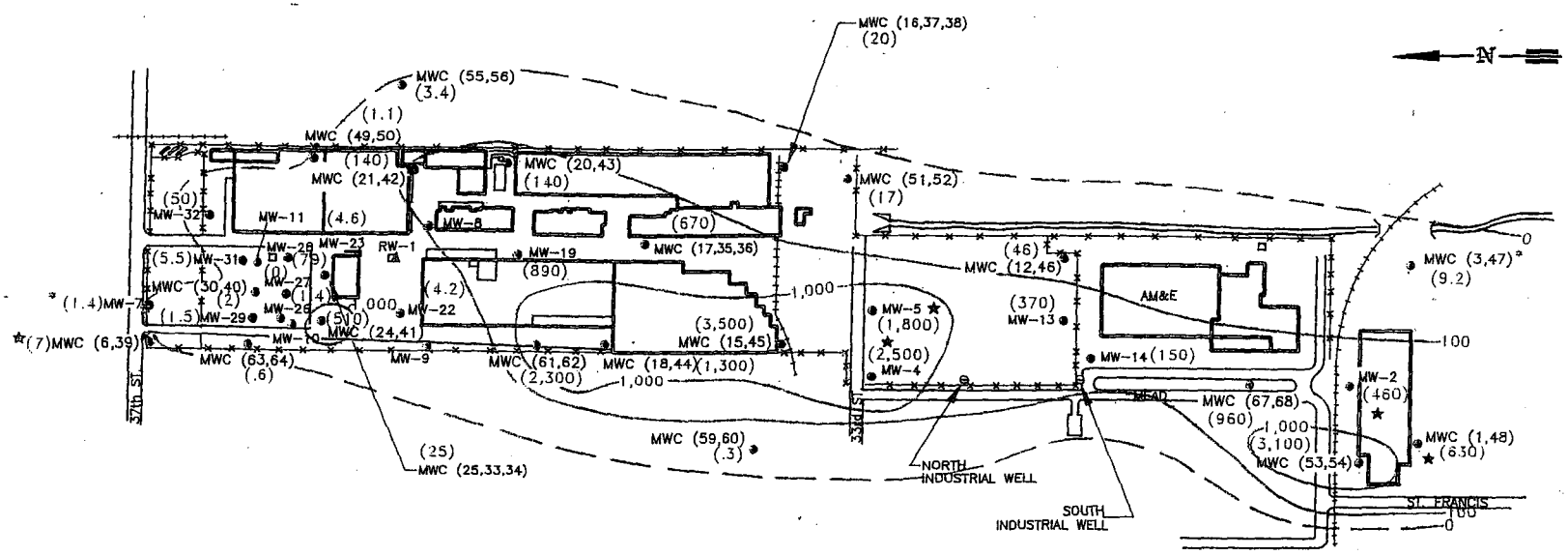
FORMER VAN WATERS AND ROGERS – MEAD STREET FACILITY
WICHITA, KANSAS

SHALLOW TCE ISOCONCENTRATION MAP
MAY, 1990 – THE COLEMAN COMPANY

PROJECT NUMBER 008.03247.127
CAD FILE NUMBER 03247-F11
DATE 01/22/01

FIGURE 9

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
	-		



BENCHMARK = TOP OF PIPE IN CENTER OF NORTH WEST DRIVE ENTRANCE ELEVATION = 1322.12

LEGEND

- ● = MONITORING WELL
- MWC = MONITORING WELL CLUSTER
- ★(20) = CONCENTRATION FROM FULLY PENETRATING WELL (ug/L)
- * = FULLY PENETRATING WELL

400 0 400 800
SCALE FEET

FIG. 16

GROUNDWATER TECHNOLOGY, INC. 443 N. MAIZE ROAD WICHITA, KS. 67212

PROJECT No: 042209733	DATE 5/4/90
DETAILED RHW	TITLE: DEEP TCE ISOCONCENTRATION MAP MAY 1990
CLIENT: COLEMAN CO.	LOCATION: WICHITA, KS.
CAD DWG. FILE No. 9430-SM	

REV.	DATE	DESCRIPTION	BY	CKD.	APP.

DESIGNED BY B. BARQUEST
DRAWN BY K. MITCHELL
APPROVED BY B. BARQUEST
DATE 12/14/00

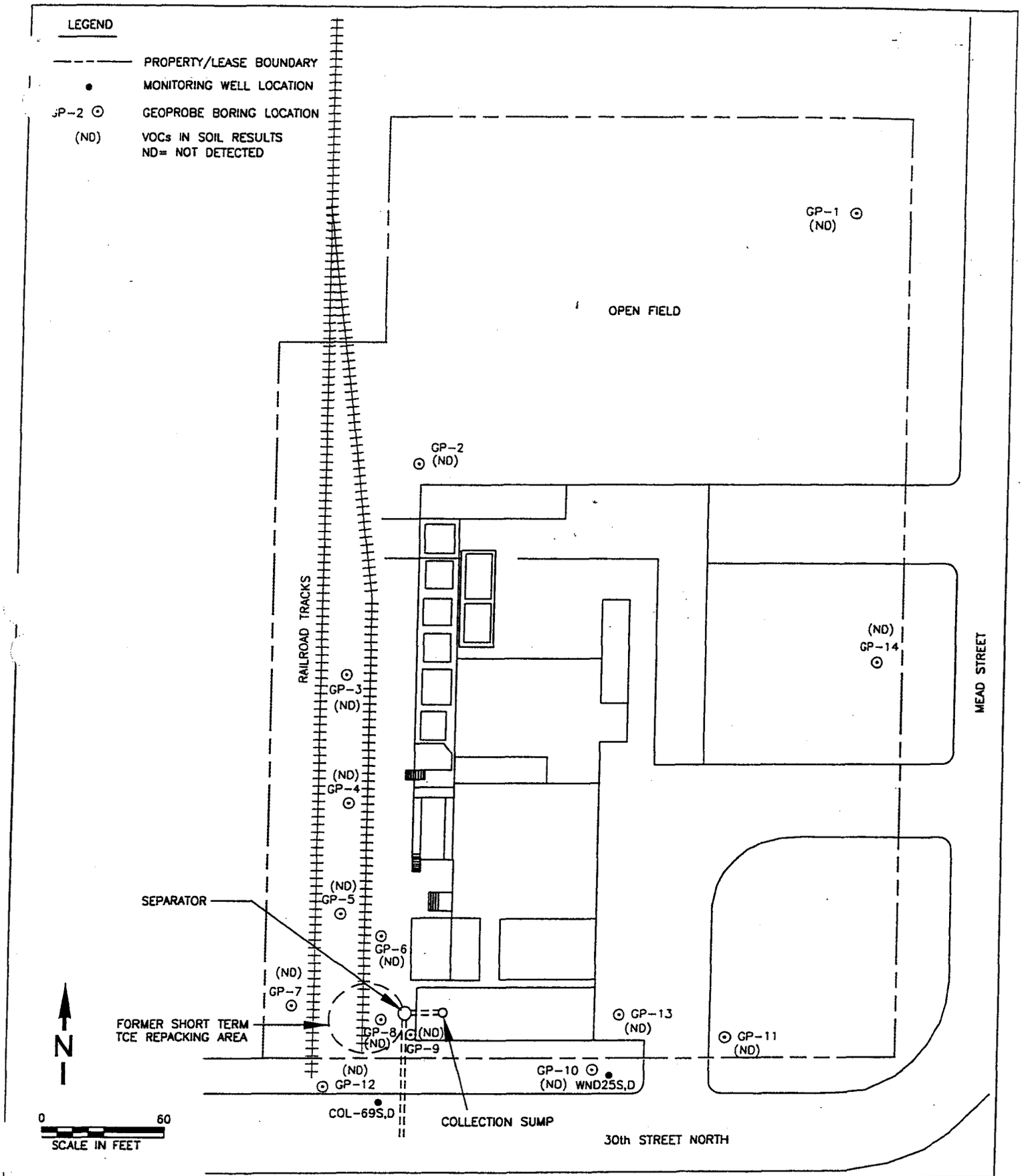
SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY, SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VAN WATERS AND ROGERS - MEAD STREET FACILITY
WICHITA, KANSAS

DEEP TCE ISOCONCENTRATION MAP
MAY, 1990 - THE COLEMAN COMPANY

PROJECT NUMBER: 006.03247.127
CAD FILE NUMBER: 03247-F12
DATE: 01/22/01

FIGURE 10



SECOR
INTERNATIONAL INCORPORATED
4463 WHITE BEAR PARKWAY
SUITE 106
WHITE BEAR LAKE, MINNESOTA 55110

FORMER VW&R MEAD STREET FACILITY
WICHITA, KANSAS

SOIL ANALYTICAL RESULTS

FIGURE 5

SECOR PROJECT #: 006.03247.127 | FILENAME: MEADSITE.DWG | DATE: 01/22/01

TABLE 1

Soil Analytical Results – VOC Compounds
Former VW&R Facility
Mead Street, Wichita, Kansas
Project # 006.03264

Geo-Probe Sample Location	VOC Results (ppb)
GP-1-3.0'	ND
GP-1-10.0'	ND
GP-2-3.0'	ND
GP-2-9.0'	ND
GP-3-3.0'	ND
GP-3-7.0'	ND
GP-4-3.0'	ND
GP-4-9.0'	ND
GP-5-3.0'	ND
GP-5-9.0'	ND
GP-6-3.0'	ND
GP-6-9.0'	ND
GP-7-3.0'	ND
GP-7-5.5'	ND
GP-8-3.0'	ND
GP-8-7.5'	ND
GP-9-3.0'	ND
GP-9-7.0'	ND
GP-10-3.0'	ND
GP-10-9.0'	ND
GP-11-3.0'	ND
GP-11-7.0'	ND
GP-12-3.0'	ND
GP-12-9.0'	ND
GP-13-3.0'	ND
GP-13-5.0'	ND
GP-14-3.0'	ND
GP-14-9.0'	ND

ND = Non Detect

TABLE 2

Groundwater Analytical Results – Shallow Wells
Former VW&R Facility
Mead Street, Wichita, Kansas
Project # 006.03264

Geoprobe Sample Location	VOC Result – ppb		pH Result
GP-1	Trichloroethylene	12	6.6
GP-2	ND		6.8
GP-3	ND		6.6
GP-4	ND		6.7
GP-5	ND		6.7
D-1 (Dup 1)	ND		NA
GP-6	Chloroform	7.2	6.7
GP-7	ND		6.5
GP-8	Trichloroethylene Chloroform	5 25	6.5
GP-9	ND		7.0
Dup-2	Chloroform	5.5	7.0
GP-10	Trichloroethylene	18	6.7
GP-11	Trichoroethylene	75	6.6
GP-12	ND		6.8
GP-13	Trichloroethylene	60	6.6
GP-14	Trichloroethylene	30	6.5
GP-15	Trichloroethylene Chloroform	34 22	NA
T-1 (Trip Blank)	Chloroform	6.9	NA
FB-1 (Field Blank)	Chloroform	6.7	NA

ND = Non Detect
ppb = parts per billion
NA = Not Analyzed

TABLE 3

Groundwater Analytical Results – Deep Wells
Former VW&R Facility
Mead Street, Wichita, Kansas
Project # 006.03264

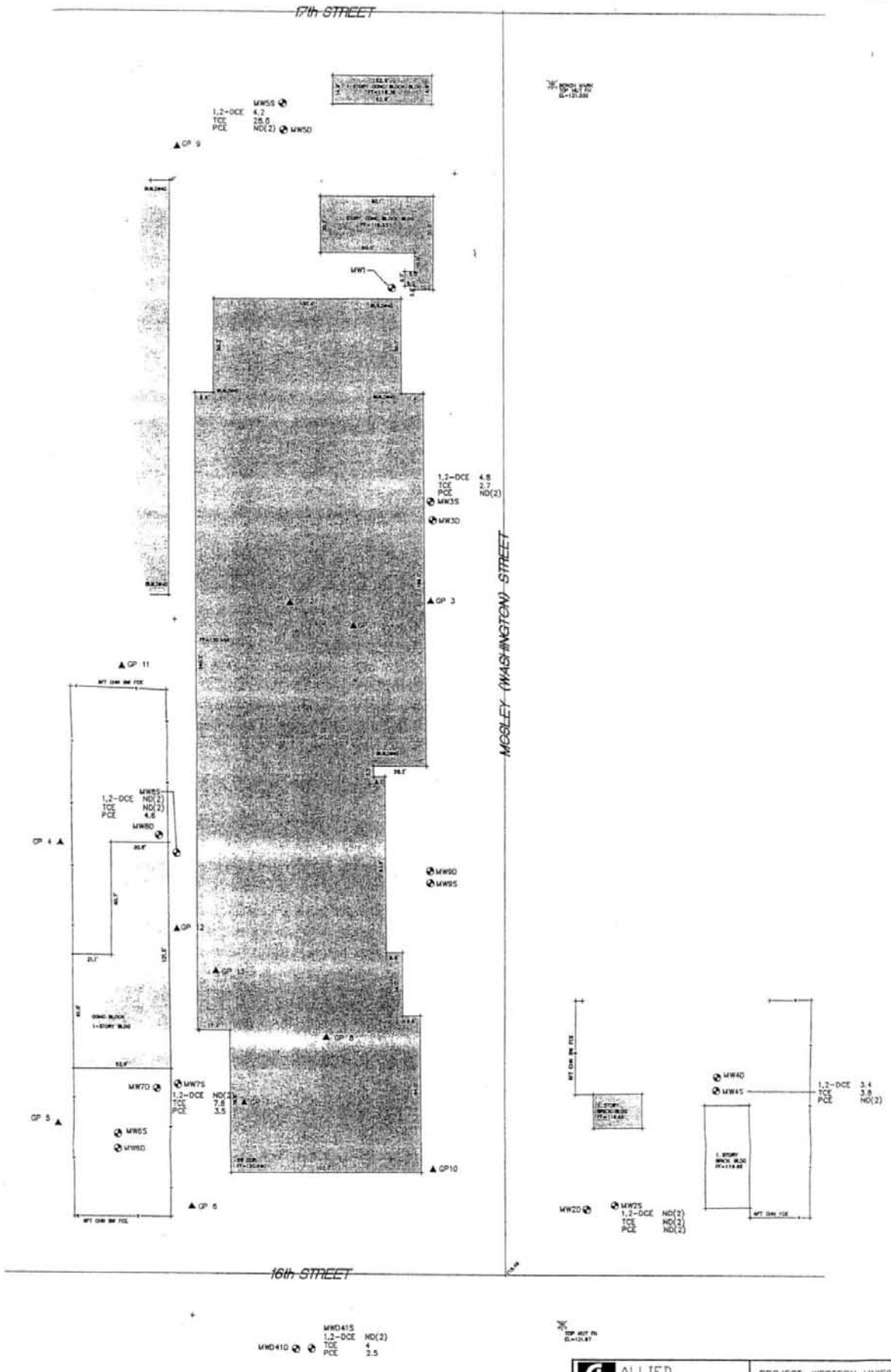
Geoprobe Sample Location	VOC Result – ppb	
MWD-25-D	Trichloroethylene	24
COL-69-D	Trichloroethylene	120
	Cis-1,2-Dichloroethene	7.5
	1,2-Dibromoethane	21
GP-1D	Trichloroethylene	190
	Cis-1,2-Dichloroethene	17
GP-2D	Trichloroethylene	11
GP-6D	Trichloroethylene	11
	1,2-Dibromoethane	14
GP-15D	Trichloroethylene	28
	Cis-1,2-Dichloroethene	2.5
	Chloroform	8.2

ND = Non Detect
Ppb = parts per billion

Appendix B-20
WU - Western Uniform

FILENAME: H:\...\0504\99122\CADD\FIG2.DWG

STD17P



LEGEND

▲ GEOPROBE LOCATION

MONITOR WELL LOCATION

ALLIED ENVIRONMENTAL CONSULTANTS, INC.	PROJECT: WESTERN UNIFORM SCALE: 1" = 50' DATE: 12-22-99
CIS 1,2-DCE, TCE, PCE GROUNDWATER CONCENTRATIONS (ppb)	
FIGURE: 2	DWN BY: GAW / CHKD BY: DAB

TABLE 1
GROUND WATER ELEVATION DATA

	MW-2s	MW-3s	MW-4s	MW-5s	MW-7s	MW-8s	MWD-41s
TOC Elevation	1306.01	1305.88	1306.62	1306.85	1306.82	1306.98	1306.40
Depth to Ground Water	11.06	10.48	11.63	11.10	11.42	11.45	11.25
Ground Water Elevation	1294.95	1295.40	1294.99	1295.75	1295.40	1295.53	1295.15

TOC - top of casing. Water levels measured on December 8, 1999.

TABLE 2A
GROUND WATER ANALYTICAL RESULTS (ug/l)

DETECTED ANALYTE	RSK VALUE	MW-2s		MW-3s		MW-4s		MW-5s	
		9/97	12/99	9/97	12/99	9/97	12/99	9/97	12/99
Benzene	5	ND (0.5)	ND (2)	7.0	4.8	ND (0.5)	ND (2)	11	ND (2)
Toluene	1,000	ND (1.0)	ND (2)	10	ND (2)	ND (1.0)	ND (2)	17	ND (2)
Ethylbenzene	7	ND (1.0)	ND (2)	170	4.8	ND (1.0)	ND (2)	170	ND (2)
Xylenes	10,000	ND (1.0)	ND (2)	61	ND (2)	ND (1.0)	ND (2)	180	ND (2)
1,2-Dichloroethane	5	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (2.0)	ND (2)
Vinyl Chloride	2	ND (1.0)	ND (2)	8.8	ND (2)	3.8	ND (2)	ND (2.0)	ND (2)
1,1,1-Trichloroethane	200	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (2.0)	ND (2)
Cis-1,2-Dichloroethene	70	13	ND (2)	33	4.8	51	3.4	14	4.2
Trans-1,2-Dichloroethene	100	ND (1.0)	ND (2)	ND (1.0)	ND (2)	1.2	ND (2)	ND (2.0)	ND (2)
n-Butylbenzene	NL	NA	ND (2)	NA	4.1	NA	ND (2)	NA	ND (2)
Sec-Butylbenzene	NL	NA	ND (2)	NA	2.9	NA	ND (2)	NA	ND (2)
Isopropylbenzene	NL	NA	ND (2)	NA	18.1	NA	ND (2)	NA	ND (2)
Naphthalene	100	NA	ND (2)	NA	25	NA	ND (2)	NA	ND (2)
n-Propylbenzene	NL	NA	ND (2)	NA	40.6	NA	ND (2)	NA	ND (2)
Trichloroethene	5	49	ND (2)	1.3	2.7	48	3.8	100	28.6
Tetrachloroethene	5	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (2.0)	ND (2)

TABLE 2B
GROUND WATER ANALYTICAL RESULTS (ug/l)

DETECTED ANALYTE	RSK VALUE	MW-7s		MW-8s		MW-41s	
		9/97	12/99	9/97	12/99	9/97	12/99
Benzene	5	ND (0.5)	ND (2)	ND (0.5)	ND (2)	ND (0.5)	ND (2)
Toluene	1,000	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
Ethylbenzene	7	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
Xylenes	10,000	1.1	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
1,2-Dichloroethane	5	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
Vinyl Chloride	2	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
1,1,1-Trichloroethane	200	4.6	ND (2)	ND (1.0)	ND (2)	5.1	ND (2)
Cis-1,2-Dichloroethene	70	2.7	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
Trans-1,2-Dichloroethene	100	ND (1.0)	ND (2)	ND (1.0)	ND (2)	ND (1.0)	ND (2)
n-Butylbenzene	NL	NA	ND (2)	NA	ND (2)	NA	ND (2)
Sec-Butylbenzene	NL	NA	ND (2)	NA	ND (2)	NA	ND (2)
Isopropylbenzene	NL	NA	ND (2)	NA	ND (2)	NA	ND (2)
Naphthalene	100	NA	ND (2)	NA	ND (2)	NA	ND (2)
n-Propylbenzene	NL	NA	ND (2)	NA	ND (2)	NA	ND (2)
Trichloroethene	5	20	7.8	ND (1.0)	ND (2)	12	4
Tetrachloroethene	5	7.6	3.5	8.5	4.6	7.2	2.5

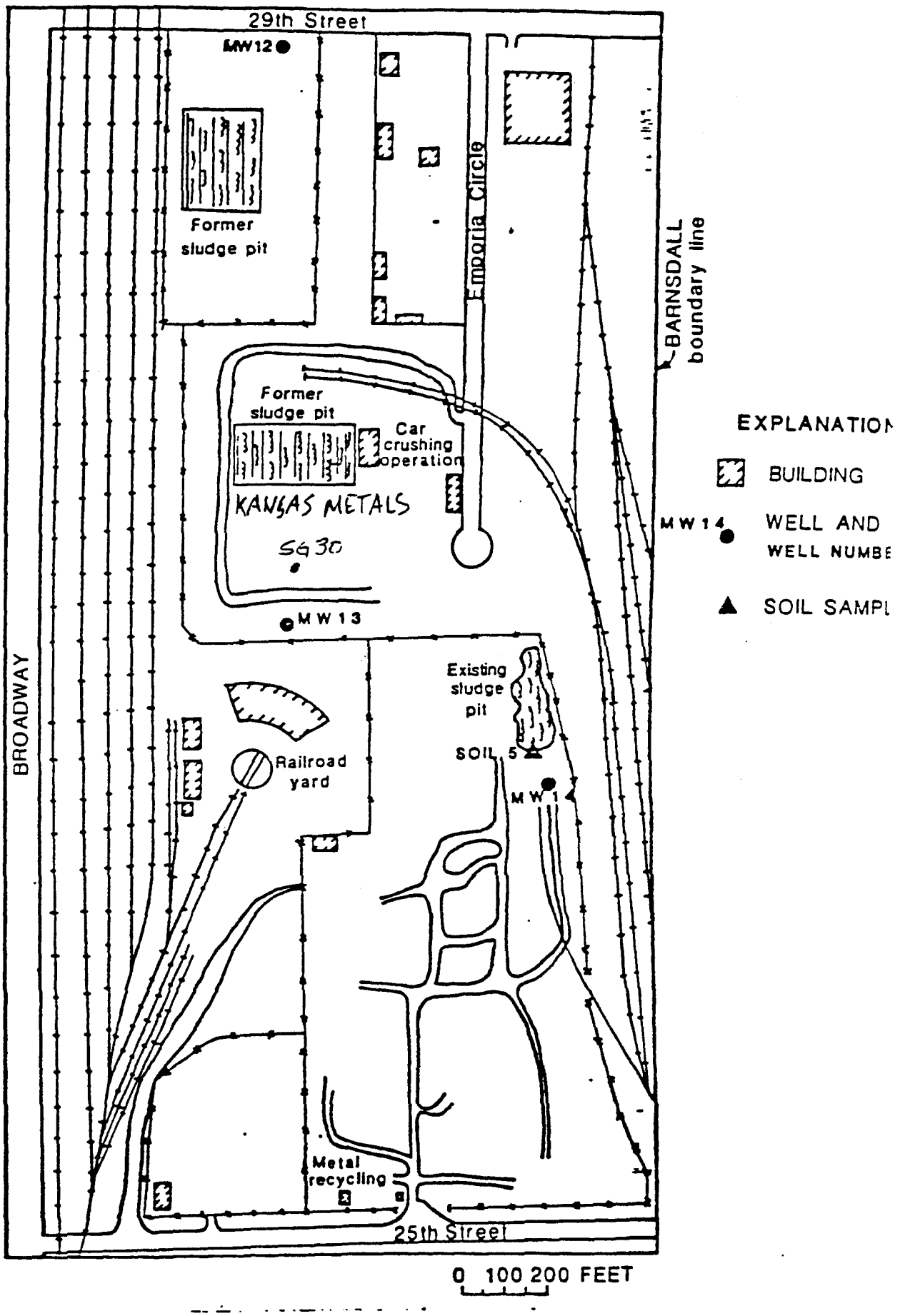
Notes:

Ug/l – micrograms per liter or parts per billion. ND - not detected with detection limits in parentheses. NL – not listed.
RSK – Risk-Based Standards for Kansas (Tier 2 – Residential Scenario). Shaded entries exceed the RSK values.

Appendix B-21
Miscellaneous Other Facilities

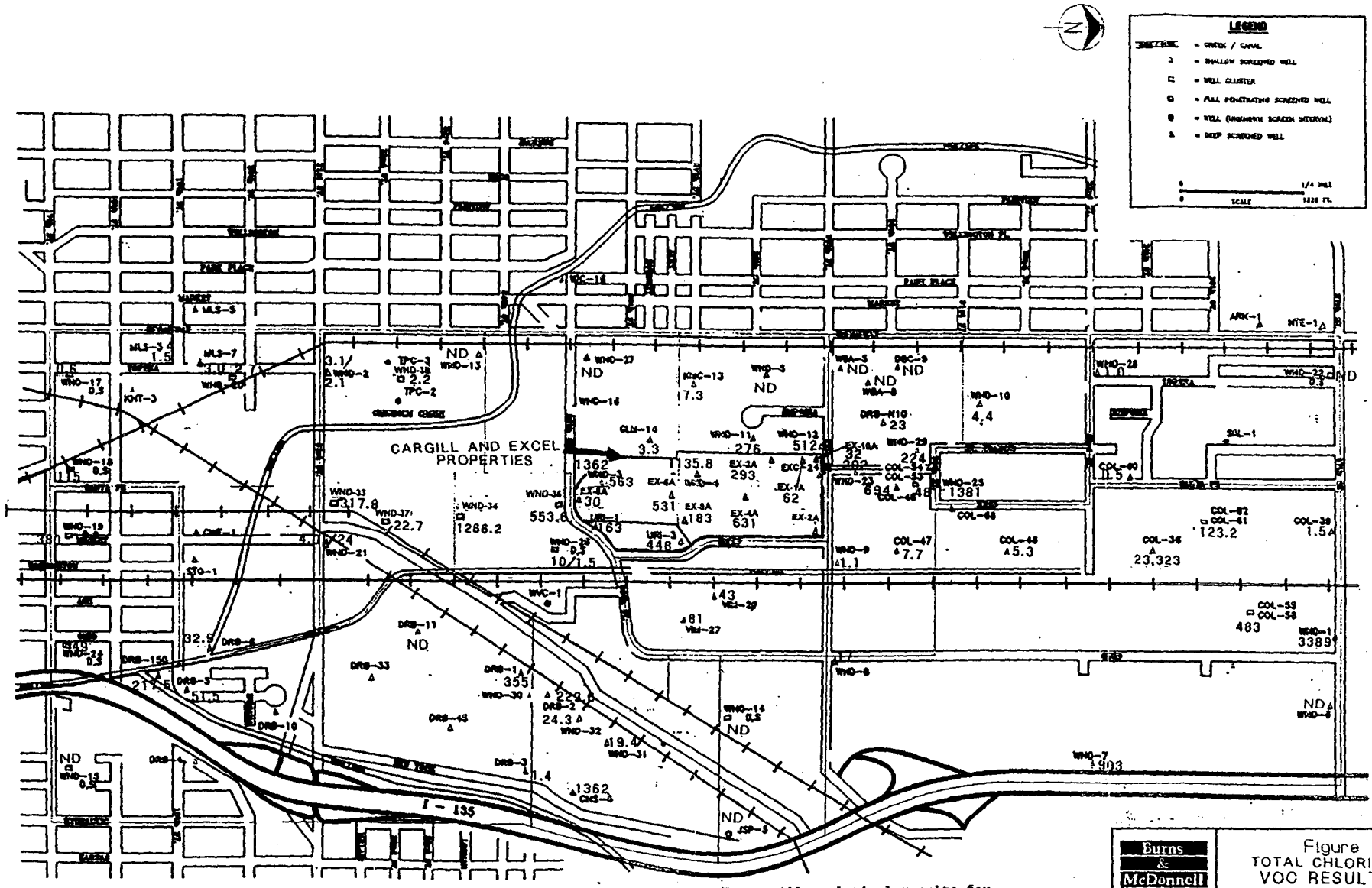
North Industrial Corridor (NIC) Site
Appendix B-21, List of Facilities

Abbreviation	Facility
BRN	Former Barnsdall Refinery
EXC	Excel
GPC	Glacier Park Company
GRR	Former Golden Rule Refinery
I-135	I-135 Spill Report
JRC	J.R. Custom
JSP	Johns' Sludge Pond
NBPN	National Byproducts (North)
NOV	Novick Iron and Metal Salvage
OHSE	Ohse Meats
PPL	Phillips Pipe Line
SOC	Security Oil Company
ULI	Universal Lubricants Inc.
URS	United Refrigerated Services
WBA	Wichita Brass and Aluminum
RCA	RC Allen



Location and detailed characteristics of the former Barnsdal refinery.

BRN



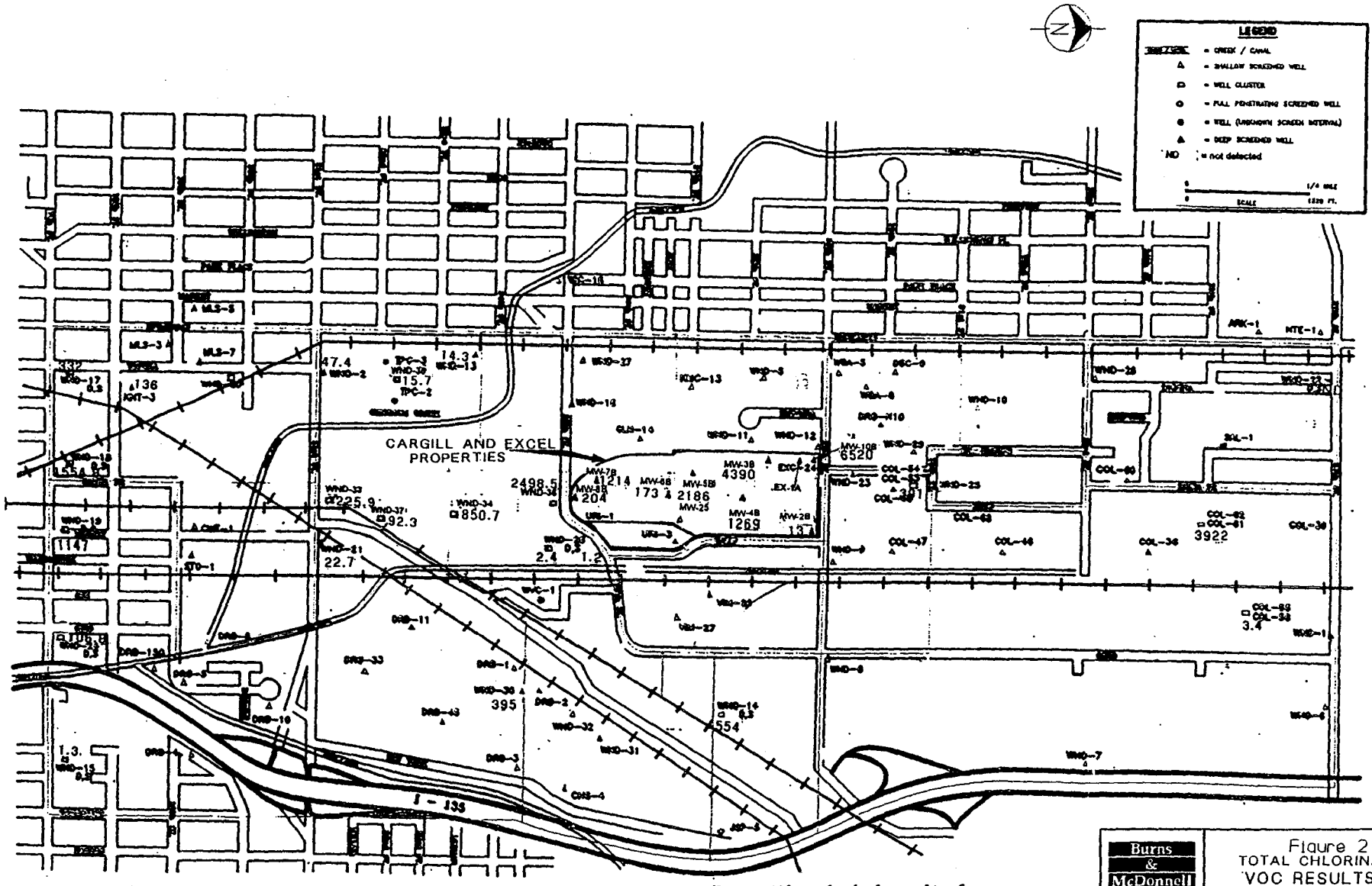
Note: All analytical results for total volatile organic compounds (TVOCs) are in micrograms per Liter (µg/L).

Base map created by CTI on 8/7/91.

Burns & McDonnell Waste Consultants, Inc.

Figure 1
TOTAL CHLORINATED VOC RESULTS FOR SHALLOW MONITORING WELLS
WICHITA, KANSAS

EXC



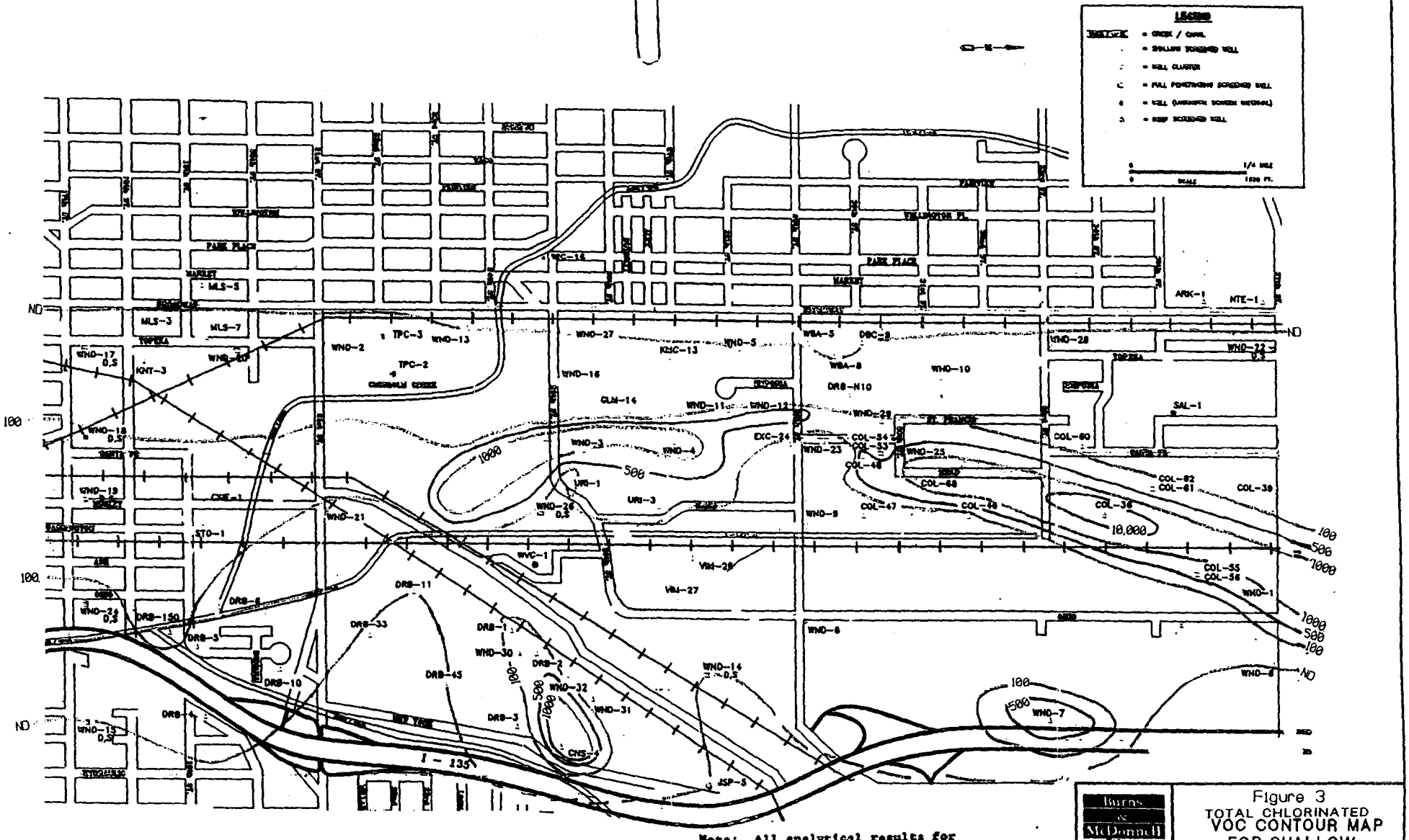
Note: All analytical results for total volatile organic compounds (TVOCs) are in micrograms per Liter (μg/L).

Burns & McDonnell Waste Consultants, Inc.

Figure 2
TOTAL CHLORINATED VOC RESULTS FOR DEEP MONITORING WELLS
WICHITA, KANSAS

Base map created by GTI on 8/7/91

EXC



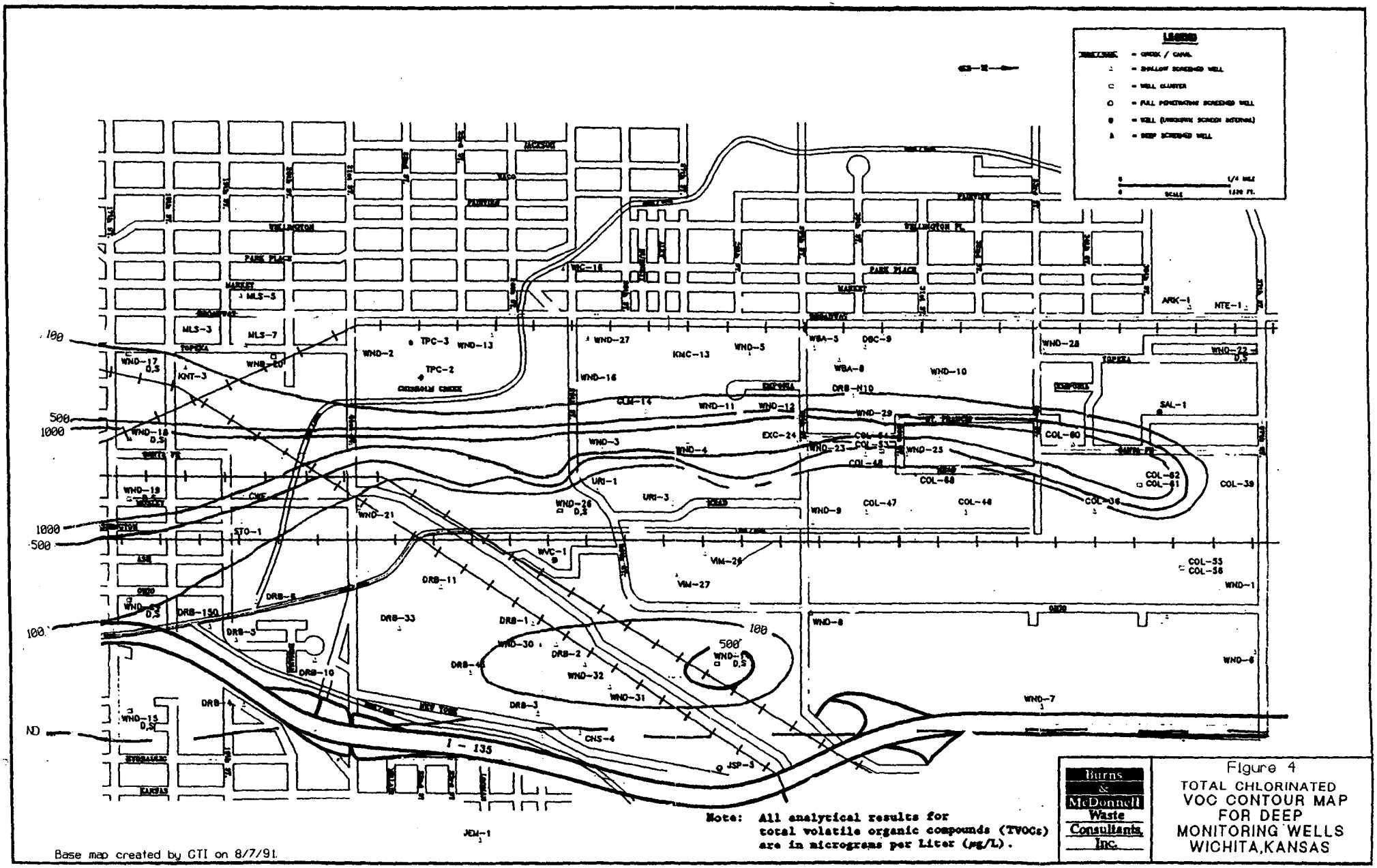
Note: All analytical results for total volatile organic compounds (TVOCs) are in micrograms per liter (µg/L).

Burns & McDonnell Waste Consultants Inc.

Figure 3
TOTAL CHLORINATED VOC CONTOUR MAP FOR SHALLOW MONITORING WELLS WICHITA, KANSAS

Base map created by GTI on 8/7/91.

EXC



Base map created by GTI on 8/7/91.

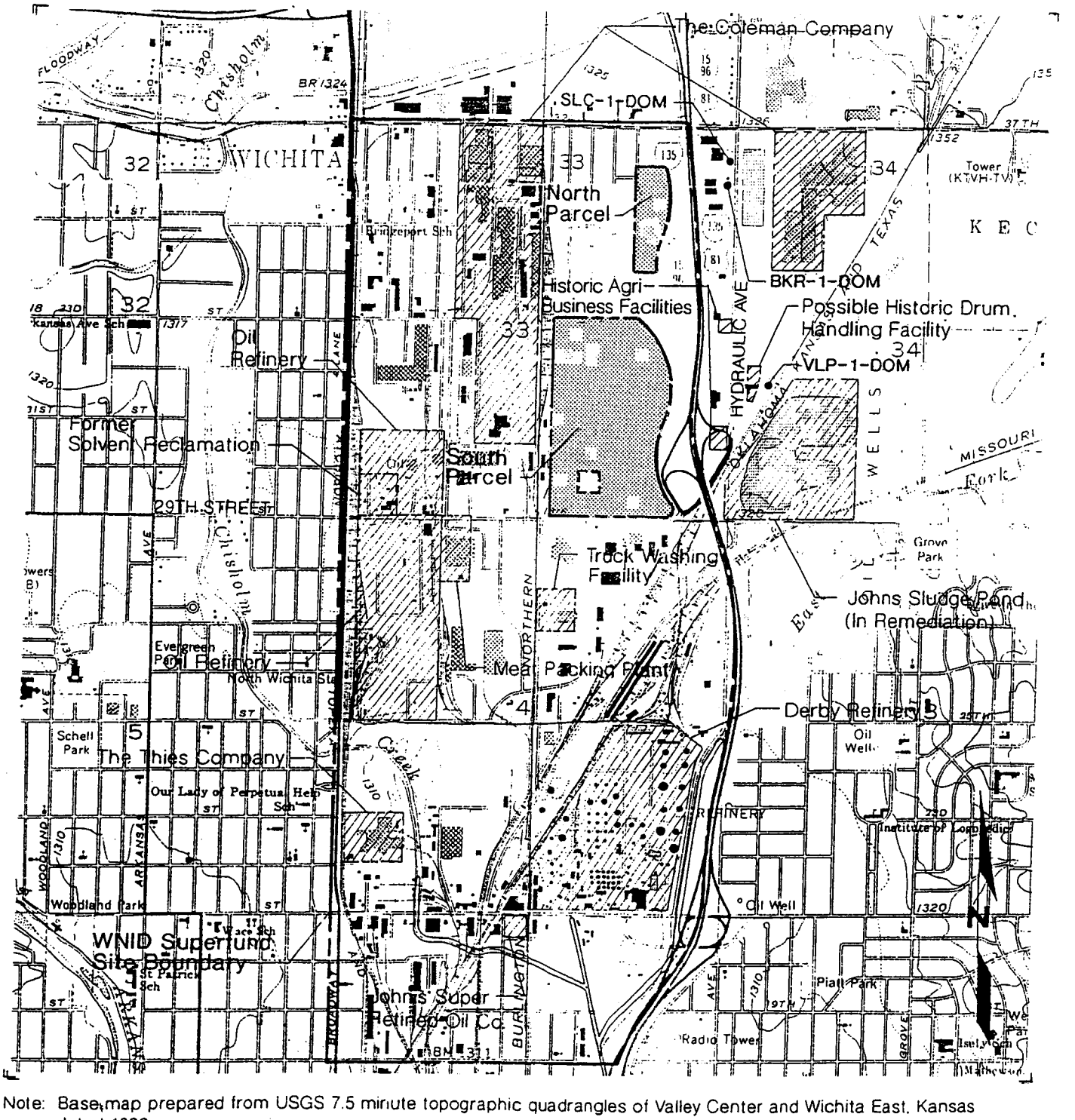
Note: All analytical results for total volatile organic compounds (TVOCs) are in micrograms per Liter (µg/L).

Burns & McDonnell Waste Consultants, Inc.

Figure 4
TOTAL CHLORINATED VOC CONTOUR MAP FOR DEEP MONITORING WELLS WICHITA, KANSAS

EXC

Vicinity Map



Note: Base map prepared from USGS 7.5 minute topographic quadrangles of Valley Center and Wichita East, Kansas dated 1960.

0 2000 4000

Scale in Feet

GPC Property Boundaries

• SLC-1-DOM Domestic Well Location and Number

HARTCROWSER

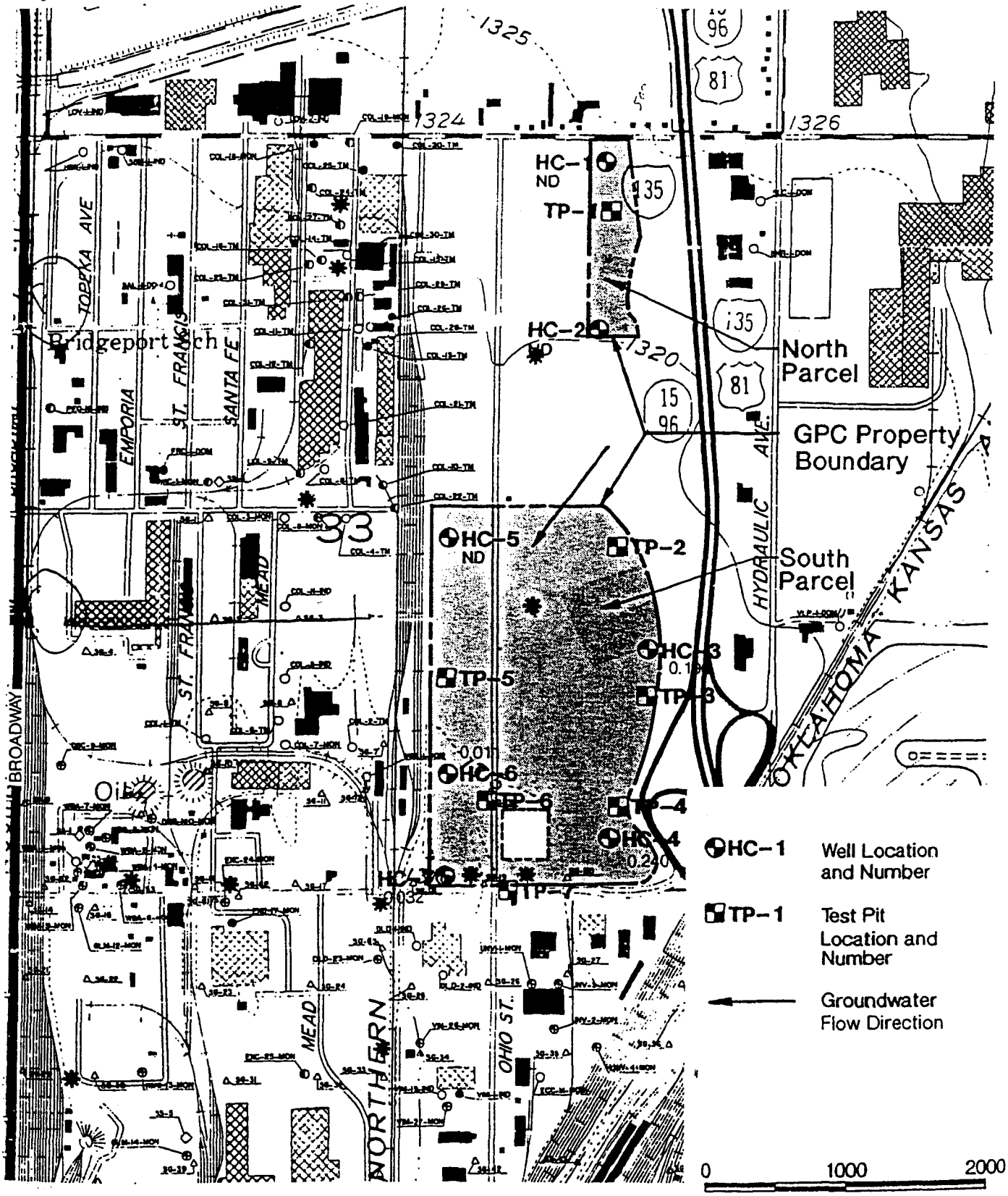
J-3221 6/91

Figure 1

GPC

Trichloroethene Concentration in Groundwater

April 1991 Groundwater Sampling



0.190 Trichloroethene Concentration in mg/L Groundwater Sampled April 1991

ND Trichloroethene Not Detected

HARTCROWSER

J-3221 6/91

Figure 7 GPC

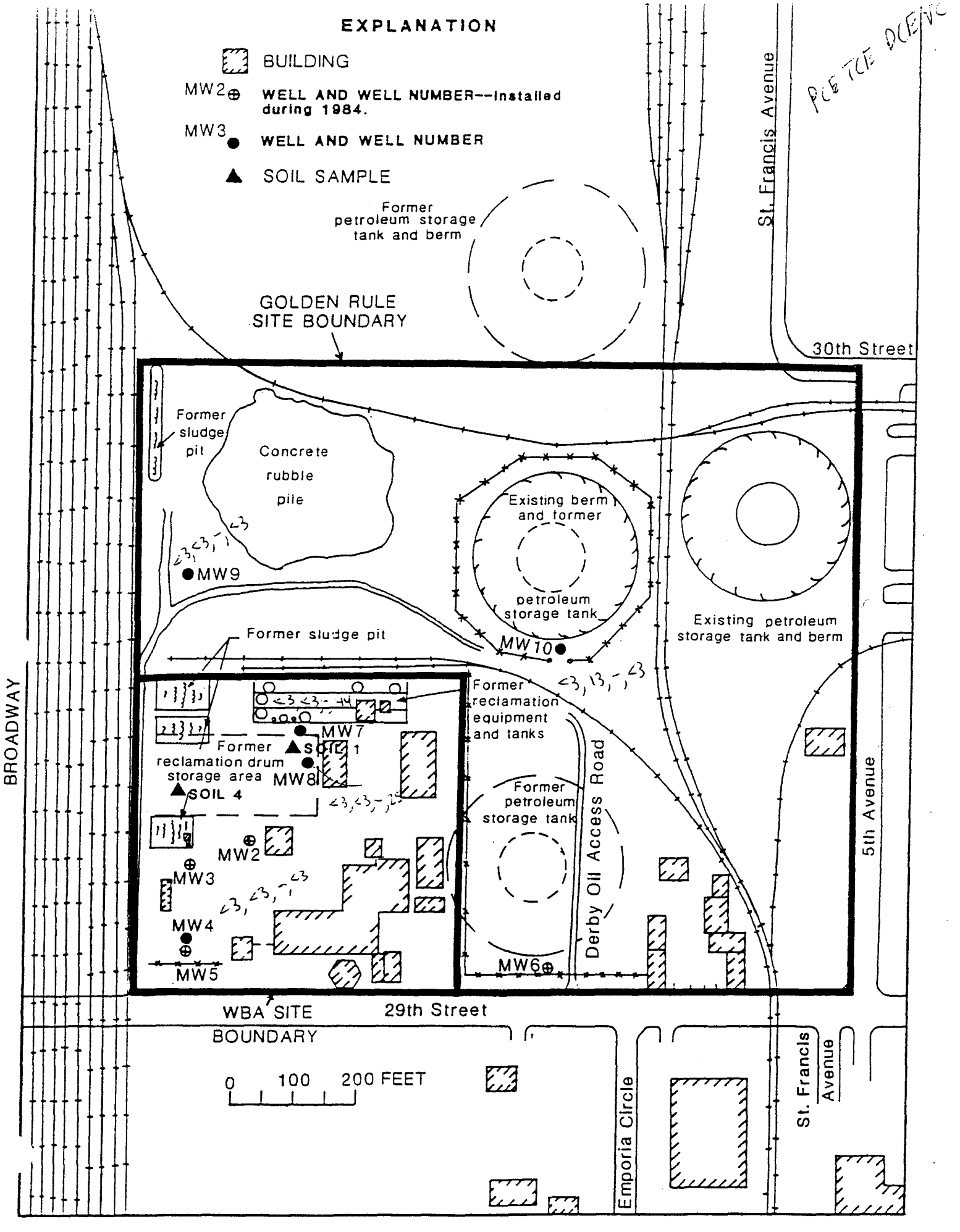


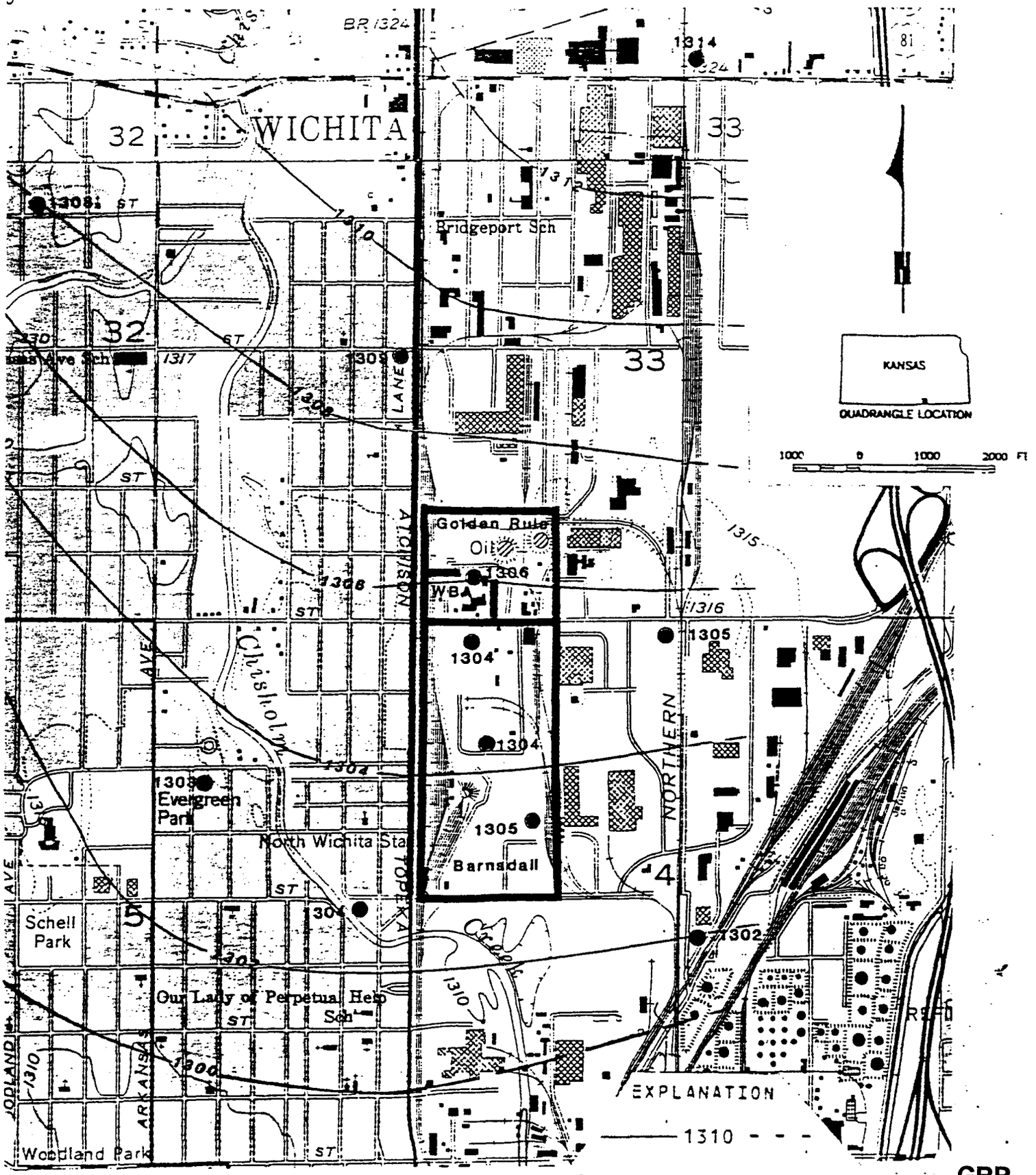
Figure 2. Location and detailed characteristics of the former Golden Rule refinery.

GRR

Figure 1. Location of Wichita Brass and Aluminum, Golden Rule refinery, Barnsdall refinery, ground-water, surface-water, soil, and sediment sampling points, and augered test holes.

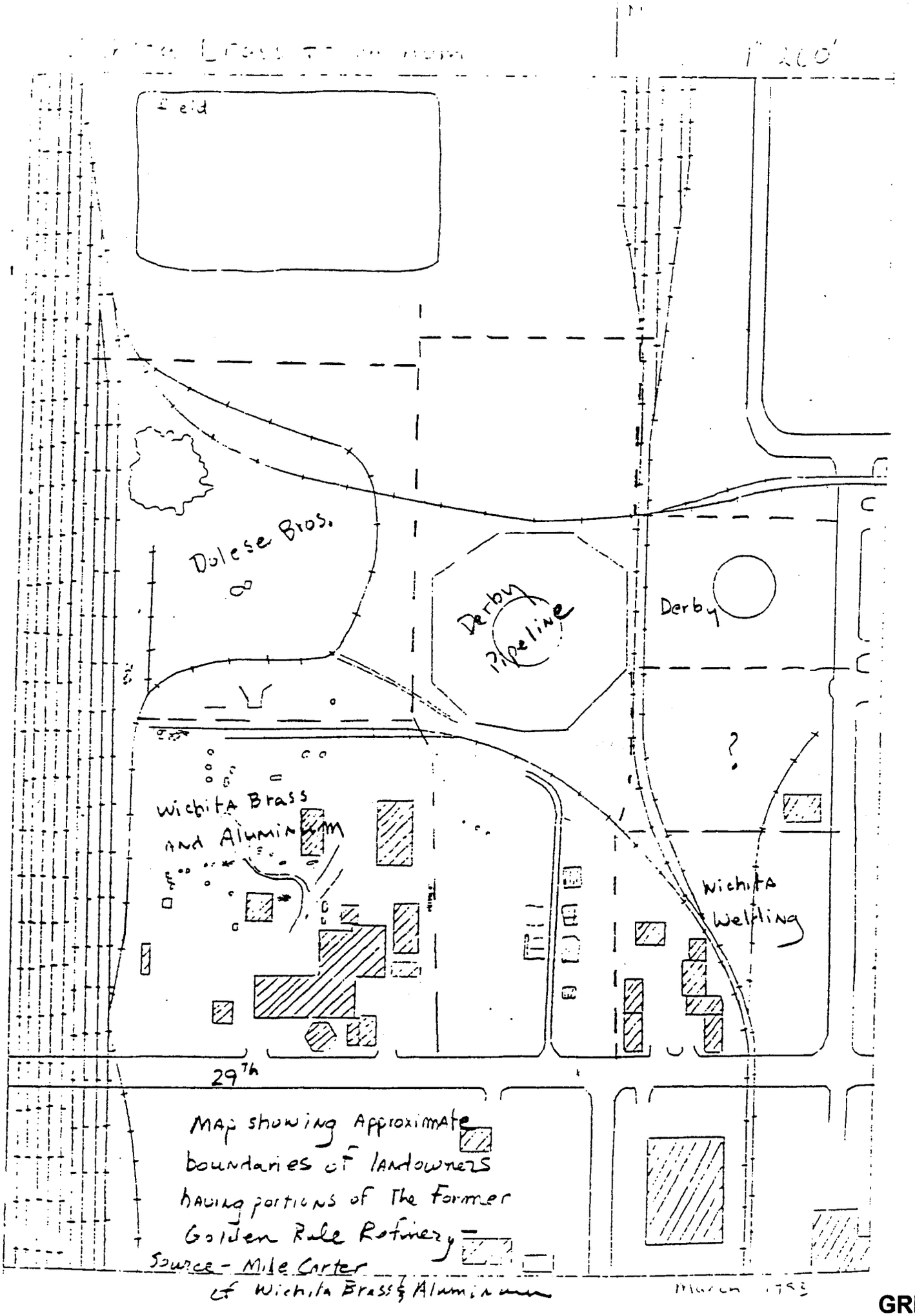
GRR

Figure 6. Potentiometric surface for the alluvial aquifer during October 30, 1985.



● Measured water level (altitude).

Shows altitude of potentiometric surface. Contour interval 2 feet. National Geodetic Vertical Datum of 1929.

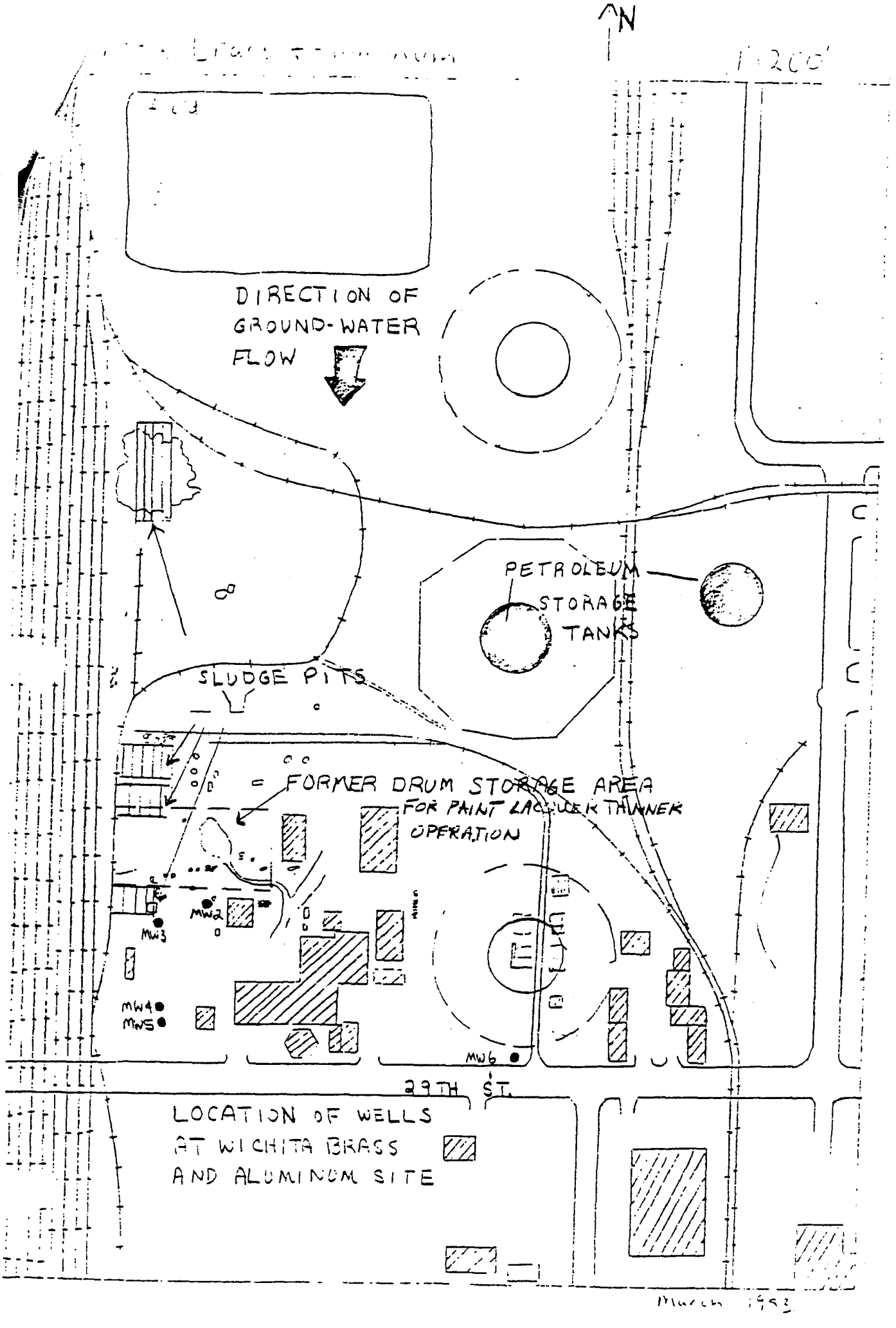


Map showing Approximate boundaries of landowners having portions of the Former Golden Rule Refinery —

Source - Mile Carter of Wichita Brass & Aluminum

March 1993

GRR


N
1"=200'
DIRECTION OF
GROUND-WATER
FLOW
PETROLEUM
STORAGE
TANKS
SLUDGE PITS
= FORMER DRUM STORAGE AREA
FOR PAINT LACQUER THINNER
OPERATION
MW2
MW3
MW4
MW5
MW6
29TH ST.
LOCATION OF WELLS
AT WICHITA BRASS
AND ALUMINUM SITE
March 1993

GRR

SPILL REPORT FORM

I. DATE REPORTED: Darrer ___/___/___ date closed

Spill No. 10/28/91 .26#P1 10:30 (mo day year initials time reported (2400hr)) Initial Report ✓ Update ___ (check one)

II. INITIAL REPORT BY: (If other than spiller)

Name JOHN STARK Telephone 316-268-8351

Address WICH/SG CO HEALTH DEPT.

(circle one)
2. NRC
7. KDHE
8. private citizen
9. EPA
13. Kansas agency
14. federal agency
15. anonymous
16. other Local
17. DEP

EPA Spill No. ___ DEP Spill No. ___

III. SPILLER: Did spiller report incident? X yes ___ no

Contact RICH SPADONI-DRIVER/TRANSP. Telephone 417-624-3131

Company TRI-STATE MTR-JEFF COONEY Street E. 7th ST. Box 113

City JOPLIN State MO Zip 64802

IV. SPILL DESCRIPTION: KDHE District SC

Spill: Date 10/28/91 (mo da yr) Time 9:00 (2400hr) Discovery: Date 10/28/91 (mo da yr) Time 9:00 (2400hr)

Location SOUTH OFFRAMP AT 29th/I-135 City WICHITA

Legal SE¼ of 33-26-01E County SG State KS

Material Spilled	Material Code	Amount Spilled	Amount Recovered	Unit Code	CAS Id. No
A. WASTE PERCHLOROETHYLENE	20	20	20	1	
B. (STILL-BOTTOMS)					
C.					

Material Codes:
1. PCB
3. crude oil
4. gasoline
5. diesel fuel
6. other fuel
7. asphalt
8. animal/veg. oil
9. waste oil
10. other oil
14. agric. chemicals
15. herbicides
16. insecticides
17. fertilizer
18. metals
19. acids
20. organic solvents
21. caustics
22. alcohol
25. other
26. unknown
28. brine

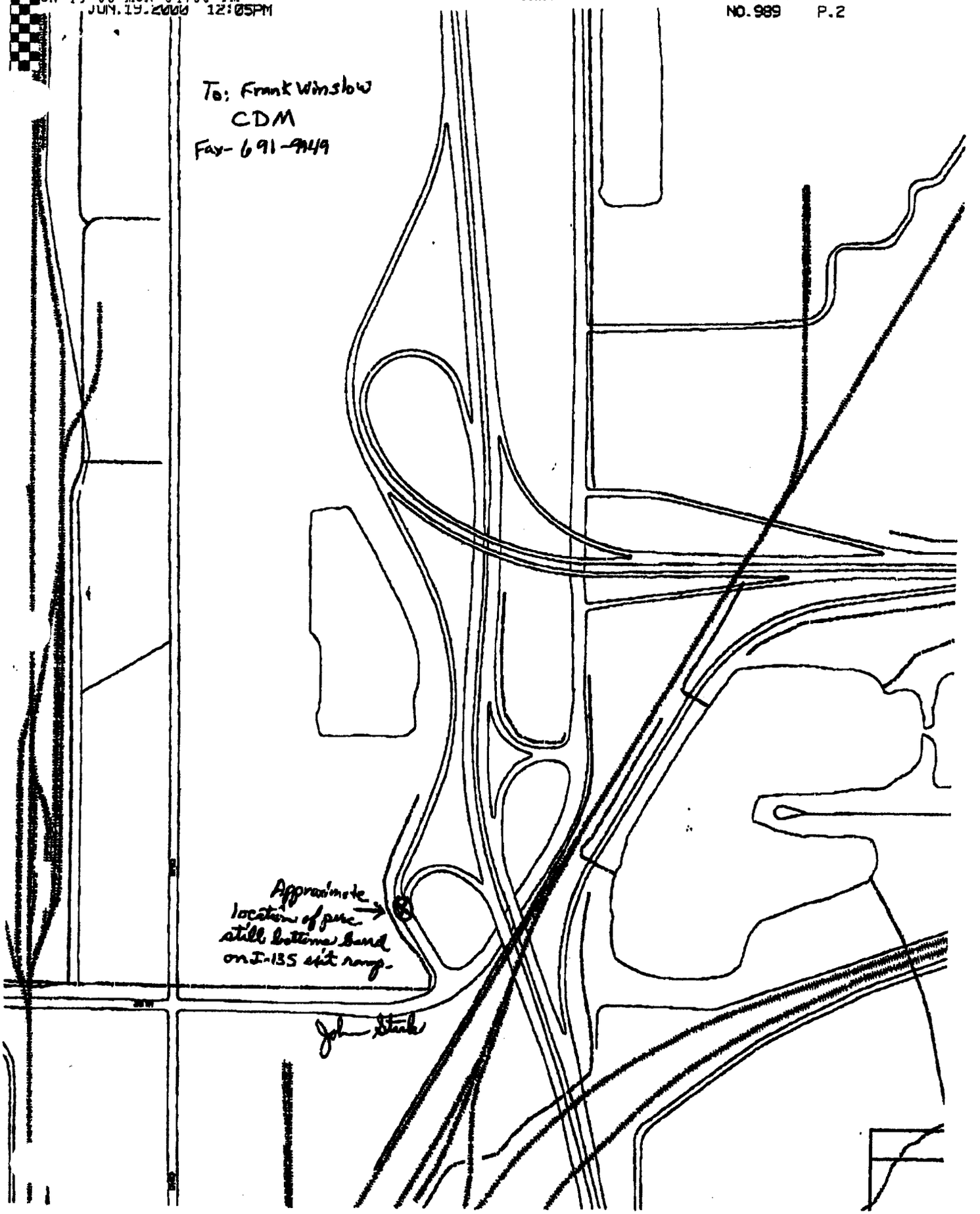
Unit Codes:
1. gallons
2. pounds
3. barrels
4. tons
5. sheen
6. unknown
7. ppm
8. pints
9. quarts

RECEIVED OCT 29 1991 ENVIRONMENTAL REMEDIATION

SPILL TYPE: (Circle ALL that pertain)
1. motor vehicle
2. rail
3. marine
4. pipeline
5. aircraft
6. tank
7. U.G. tank
8. discharge
9. fixed facility
10. other 20 gal container perc still-bottoms
11. fire
12. oil lease
13. transformer
14. explosion
15. evacuation

I-135

To: Frank Winslow
CDM
Fax- 691-9149



I-135

PHASE III OFFSITE REMEDIAL INVESTIGATION
COLEMAN NORTHEAST PLANT
WICHITA, KANSAS

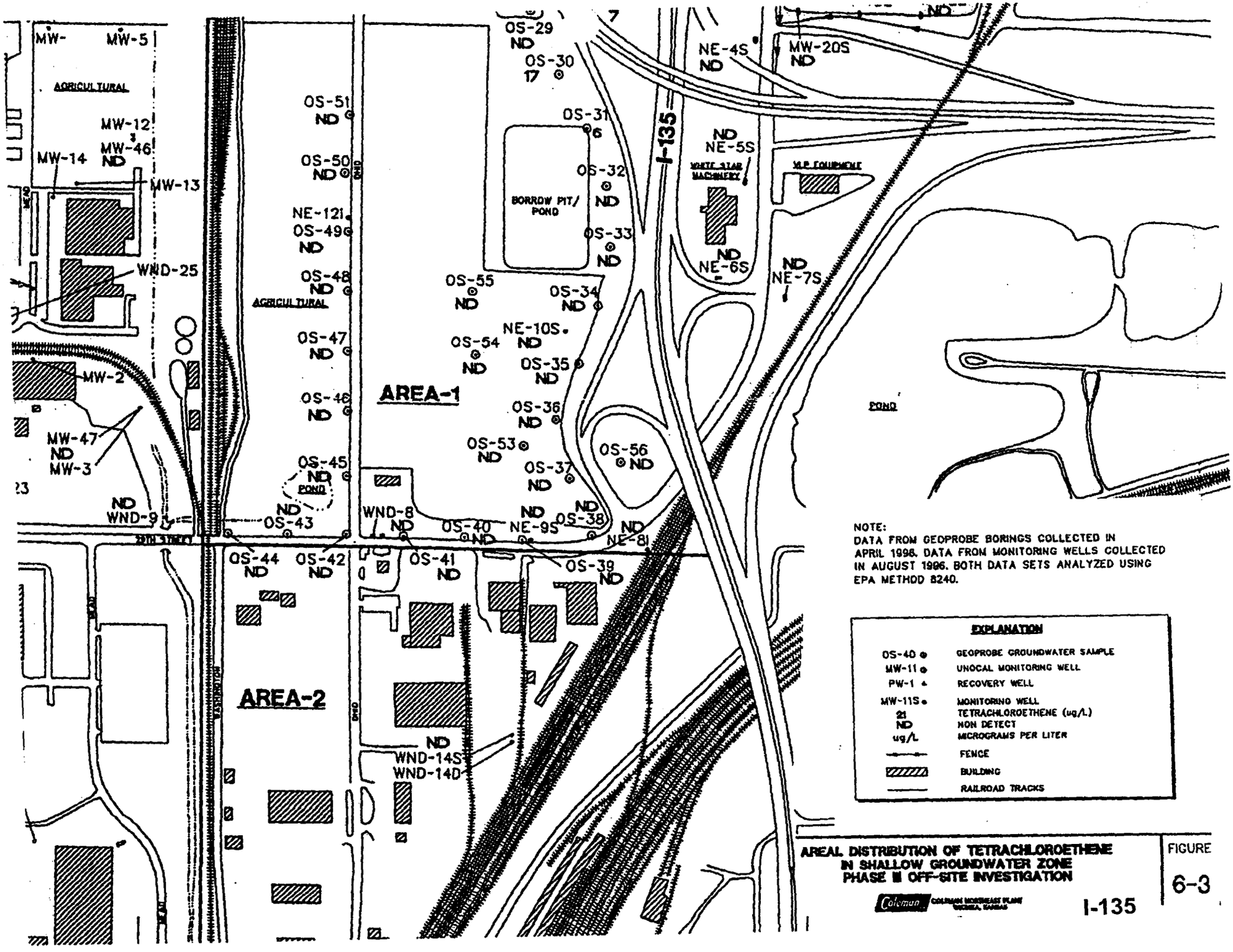
February 1997

Prepared for

The Coleman Company
3600 N. Hydraulic Avenue
Wichita, Kansas 67219

Prepared by

Geraghty & Miller, Inc.
5100 E. Skelly Drive, Suite 1000
Tulsa, Oklahoma 74135
(918) 664-9900



NOTE:
DATA FROM GEOPROBE BORINGS COLLECTED IN APRIL 1996. DATA FROM MONITORING WELLS COLLECTED IN AUGUST 1996. BOTH DATA SETS ANALYZED USING EPA METHOD 8240.

EXPLANATION

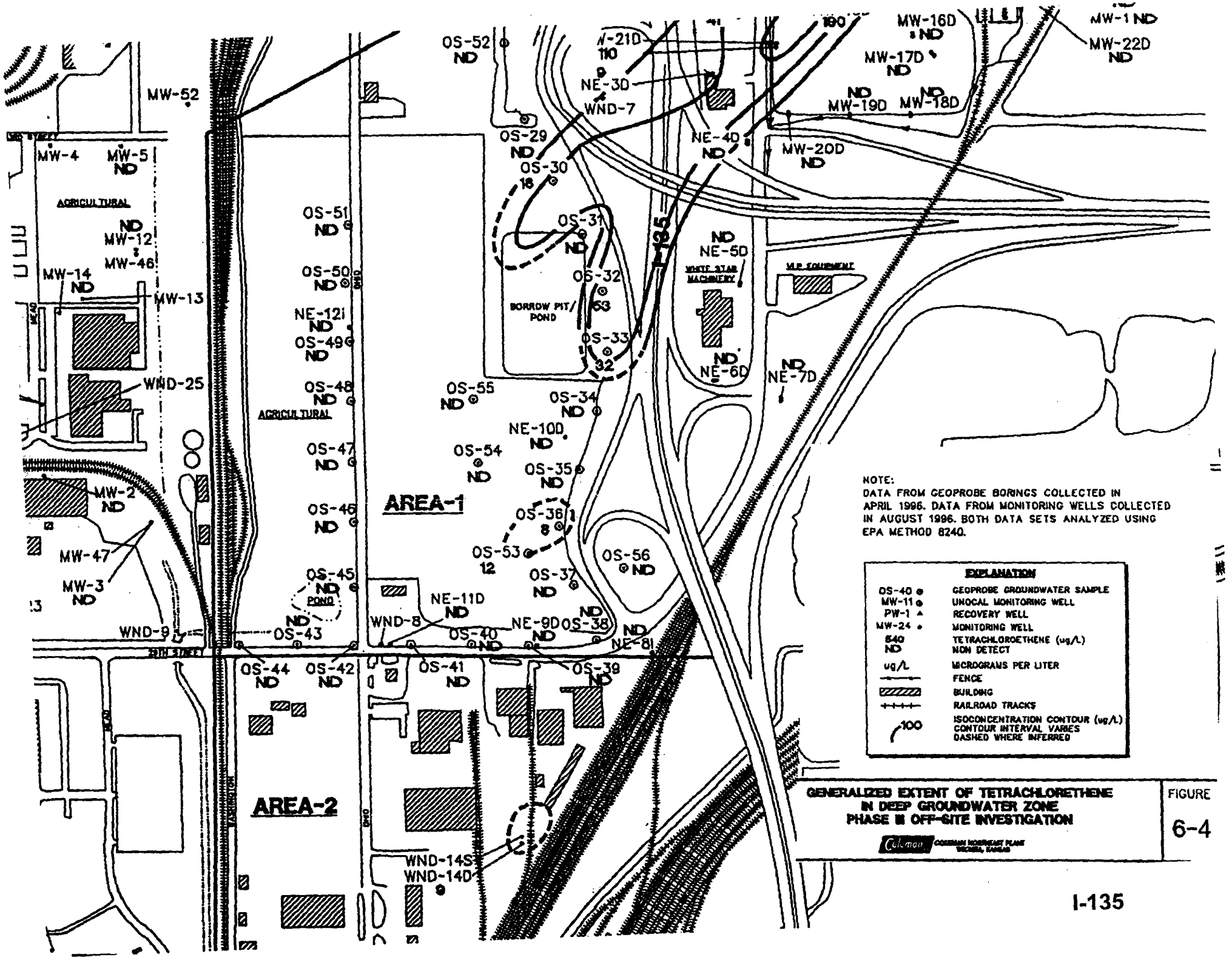
OS-40 ●	GEOPROBE GROUNDWATER SAMPLE
MW-11 ●	UNOCAL MONITORING WELL
PW-1 ▲	RECOVERY WELL
MW-11S ●	MONITORING WELL
21	TETRACHLOROETHENE (ug/L)
ND	NON DETECT
ug/L	MICROGRAMS PER LITER
—●—	FENCE
▨	BUILDING
——	RAILROAD TRACKS

AREAL DISTRIBUTION OF TETRACHLOROETHENE IN SHALLOW GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

I-135

FIGURE 6-3



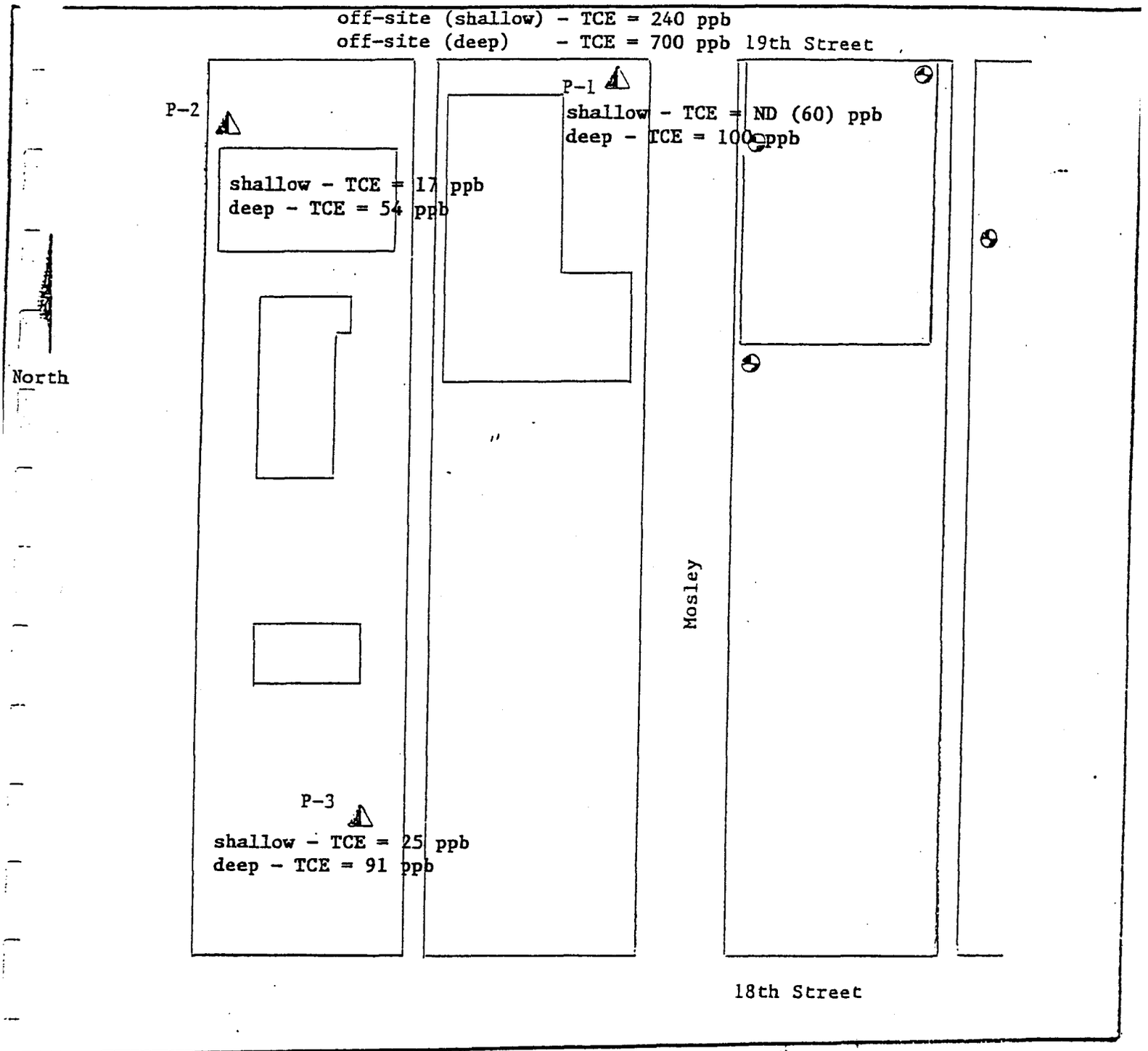
GENERALIZED EXTENT OF TETRACHLORETHENE IN DEEP GROUNDWATER ZONE PHASE III OFF-SITE INVESTIGATION

FIGURE 6-4

Coleman COLEMAN NORTHEAST PLANT WICHITA, KANSAS

TerraTech Environmental Service, Inc.

1760 South Baehr ~ Wichita, KS 67209
Phone 316-941-4444 ~ Fax 316-941-9311 ~ Email TTES KS@aol.com
Mailing Address: PO Box 427 ~ Wichita, KS 67201-0427

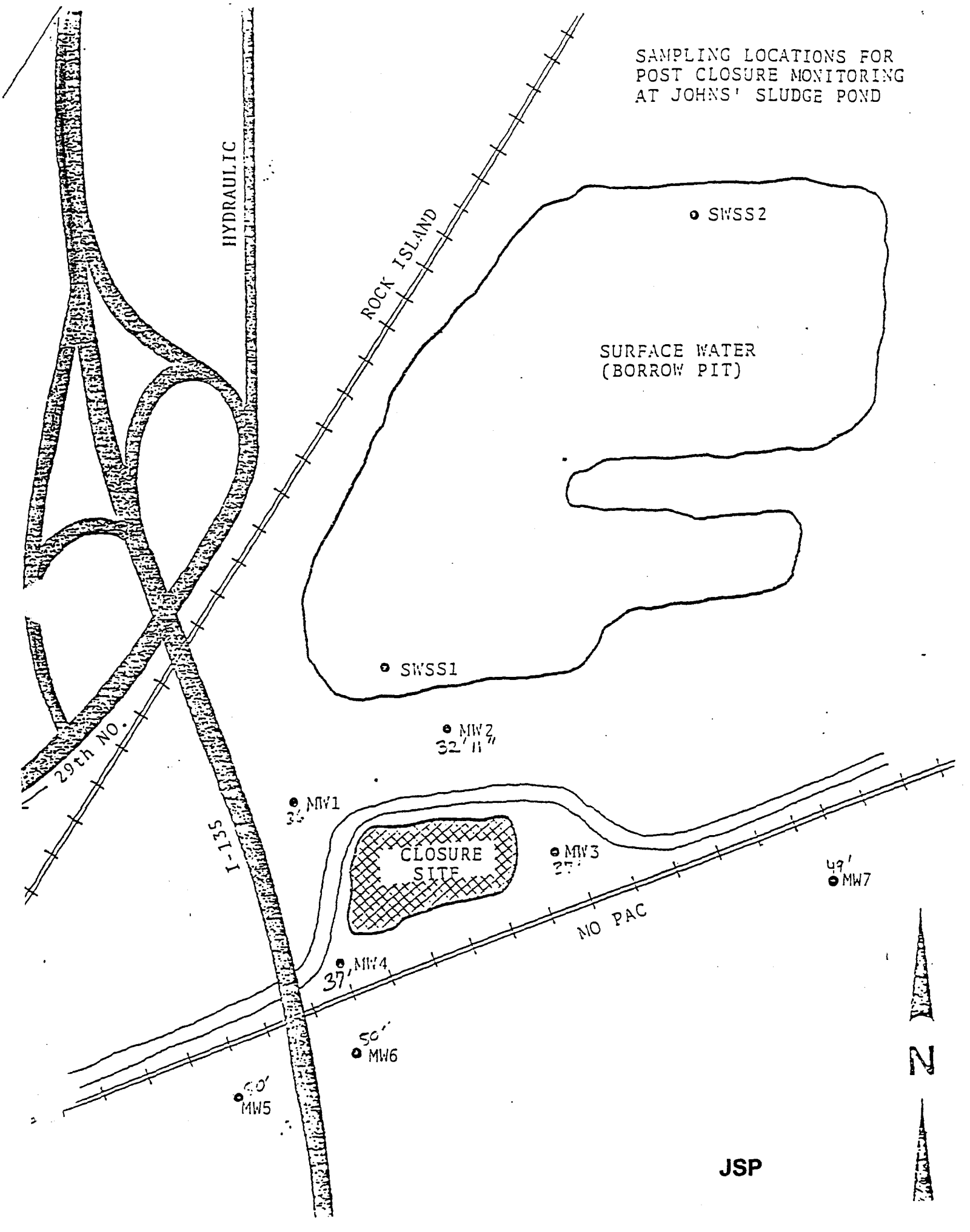


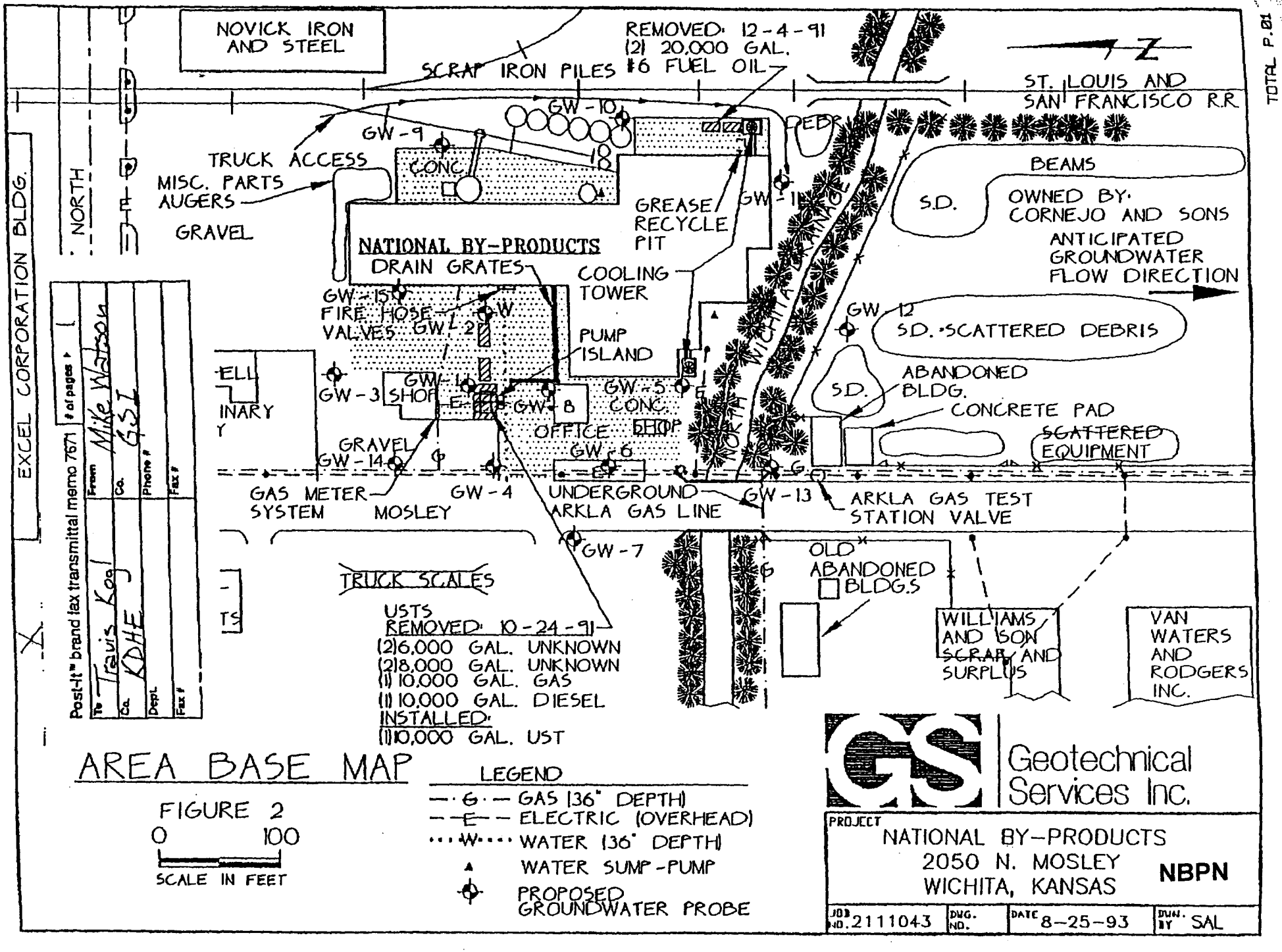
Site: J.R. Custom Project
Location: North Mosley, Wichita

Figure - 2, Sample Locations

Scale:
Key
= Existing KDHE Monitoring Well
= Proposed piezometer location and nested sampling point
= Alternative Geoprobe sampling location (nested)

JRC


SAMPLING LOCATIONS FOR
POST CLOSURE MONITORING
AT JOHNS' SLUDGE POND
HYDRAULIC
ROCK ISLAND
SWSS2
SURFACE WATER
(BORROW PIT)
SWSS1
MW2
32' 11"
29th NO.
MW1
I-135
CLOSURE
SITE
MW3
49'
MW7
NO PAC
MW4
37'
50'
MW6
MW5
N
JSP



Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1
To Travis Koegel | From Mike Watson
Co. KDHE | Co. GSI
Dept. | Phone #
Fax # | Fax #

AREA BASE MAP

FIGURE 2

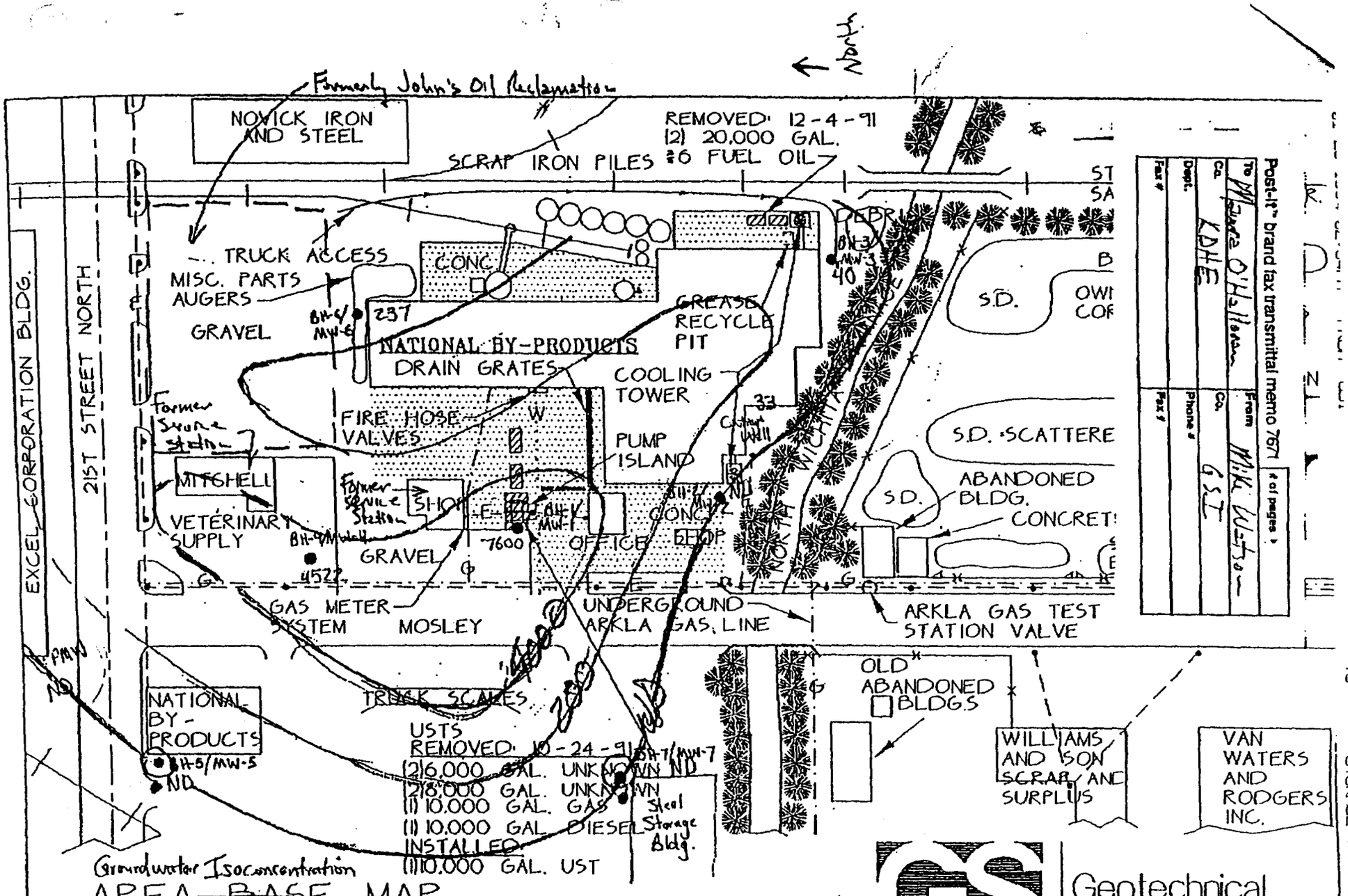
0 100
SCALE IN FEET

LEGEND
- GAS (36" DEPTH)
- ELECTRIC (OVERHEAD)
- WATER (36" DEPTH)
- WATER SUMP-PUMP
- PROPOSED GROUNDWATER PROBE

Geotechnical Services Inc.

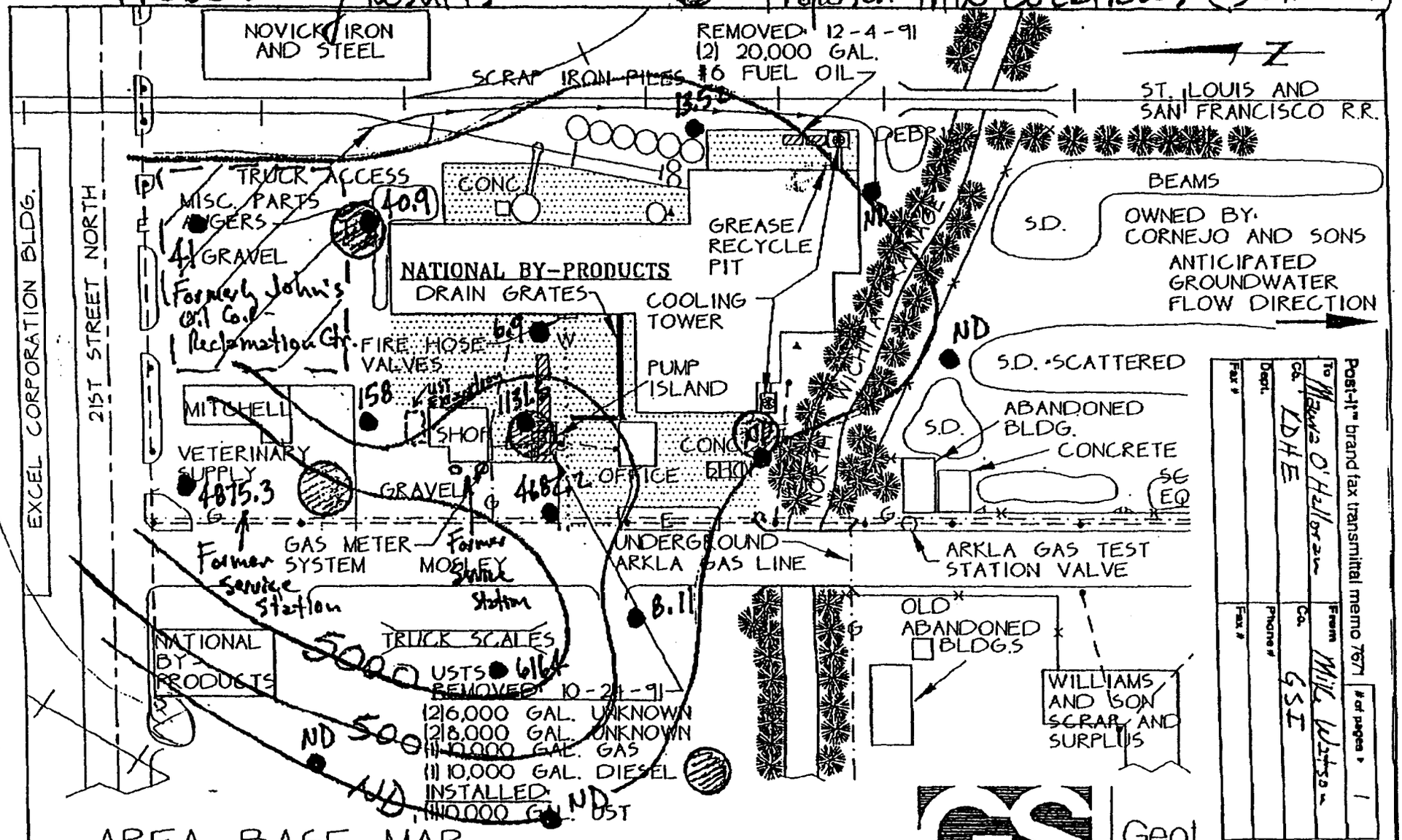
PROJECT
NATIONAL BY-PRODUCTS
2050 N. MOSLEY
WICHITA, KANSAS
NBPN

JOB NO. 2111043	DWG. NO.	DATE 8-25-93	DWN. BY SAL


Formerly John's Oil Reclamation
NOVICK IRON AND STEEL
REMOVED: 12-4-91
(2) 20,000 GAL.
#6 FUEL OIL
SCRAP IRON PILES
TRUCK ACCESS
MISC. PARTS
AUGERS
GRAVEL
CONC.
NATIONAL BY-PRODUCTS
DRAIN GRATES
GREASE RECYCLE PIT
COOLING TOWER
FIRE HOSE VALVES
PUMP ISLAND
Former Service Station
MITCHELL
VETERINARY SUPPLY
SHOP
OFFICE
GRAVEL
GAS METER SYSTEM
MOSLEY
UNDERGROUND ARKLA GAS LINE
ARKLA GAS TEST STATION VALVE
S.D.
S.D. SCATTERE
ABANDONED BLDG.
CONCRET
EXCEL CORPORATION BLDG.
21ST STREET NORTH
NATIONAL BY-PRODUCTS
TRUCK SCALES
USTS REMOVED: 10-24-91
(2) 6,000 GAL. UNKNOWN
(2) 8,000 GAL. UNKNOWN
(1) 10,000 GAL. GAS
(1) 10,000 GAL DIESEL
INSTALLED:
(1) 10,000 GAL. UST
Steel Storage Bldg.
OLD ABANDONED BLDGS
WILLIAMS AND SON SCRAP AND SURPLUS
VAN WATERS AND RODGERS INC.
Groundwater Isoconcentration
AREA BASE MAP
Total BTEX (PPB)
FIGURE #6
0 100
SCALE IN FEET
LEGEND
GAS (36" DEPTH)
ELECTRIC (OVERHEAD)
WATER (36" DEPTH)
WATER SUMP-PUMP
Geotechnical Services Inc.
PROJECT
NATIONAL BY-PRODUCTS
2050 N. MOSLEY
WICHITA, KANSAS
NBPN
JOB NO. 2111043
DWG. NO.
DATE 8-25-93
DWN. BY SAI
Post-it™ brand fax transmittal memo 7671
To Bruce O'Hara
Co. KDHE
From Mike Watson
Co. GST
Dept.
Phone #
Fax #
# of pages ▸

Probe Survey Results

● = Proposed MW Locations (5 allowed)



AREA BASE MAP

FIGURE 2

0 100

SCALE IN FEET

LEGEND

- —G— GAS (36" DEPTH)
- —E— ELECTRIC (OVERHEAD)
- ···W··· WATER (36" DEPTH)
- ▲ WATER SUMP-PUMP

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To: Wayne O'Halloran | Co. KDHE | Dept. | Fax #

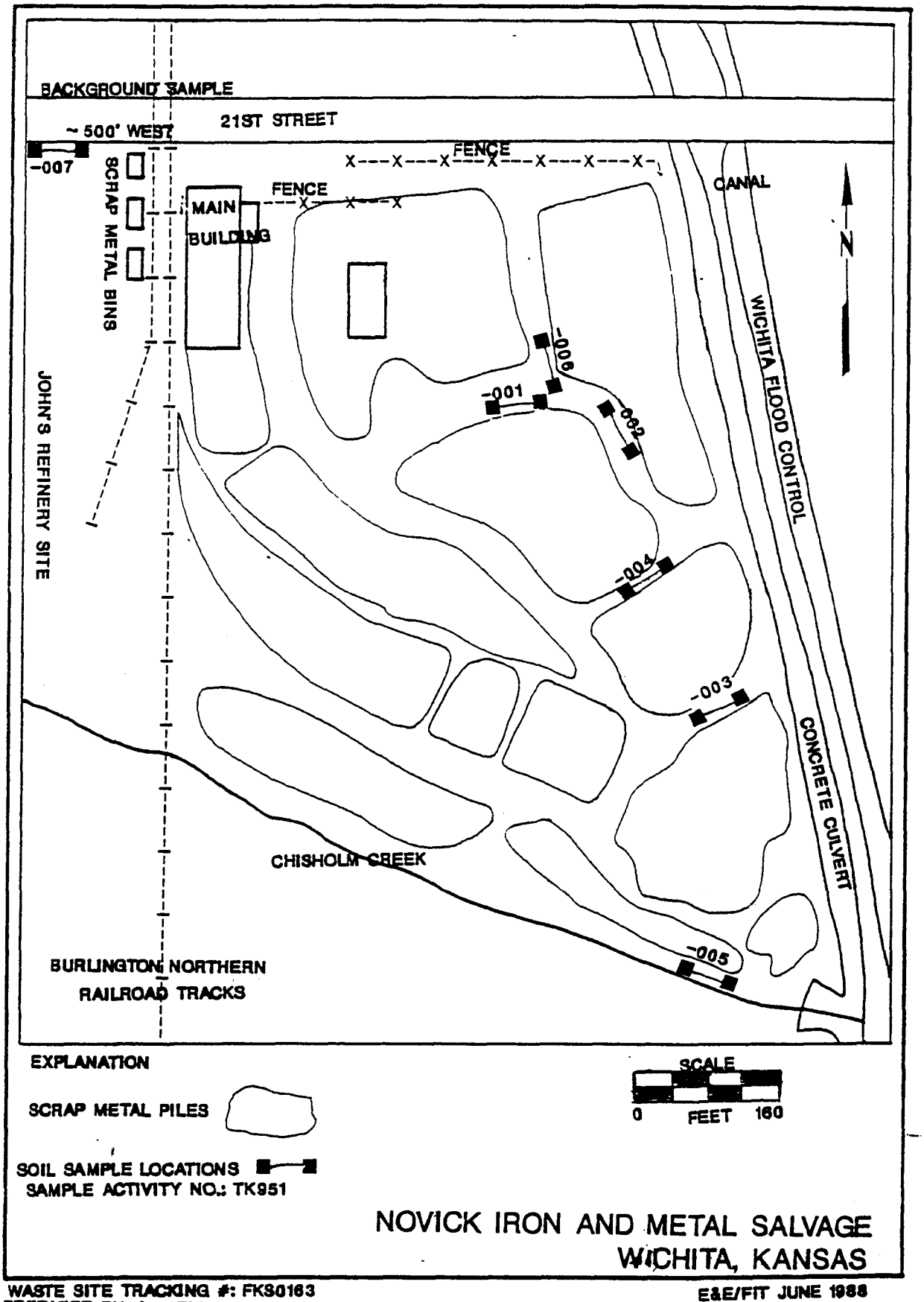
From: Mike Watson | Co. GSI | Phone # | Fax #

GS Geot Services II Inc.

PROJECT
NATIONAL BY-PRODUCTS
2050 N. MOSLEY
WICHITA, KANSAS

NBPN

JOB NO.	DWG. NO.	DATE	DWN. BY
2111043		8-25-93	SAL

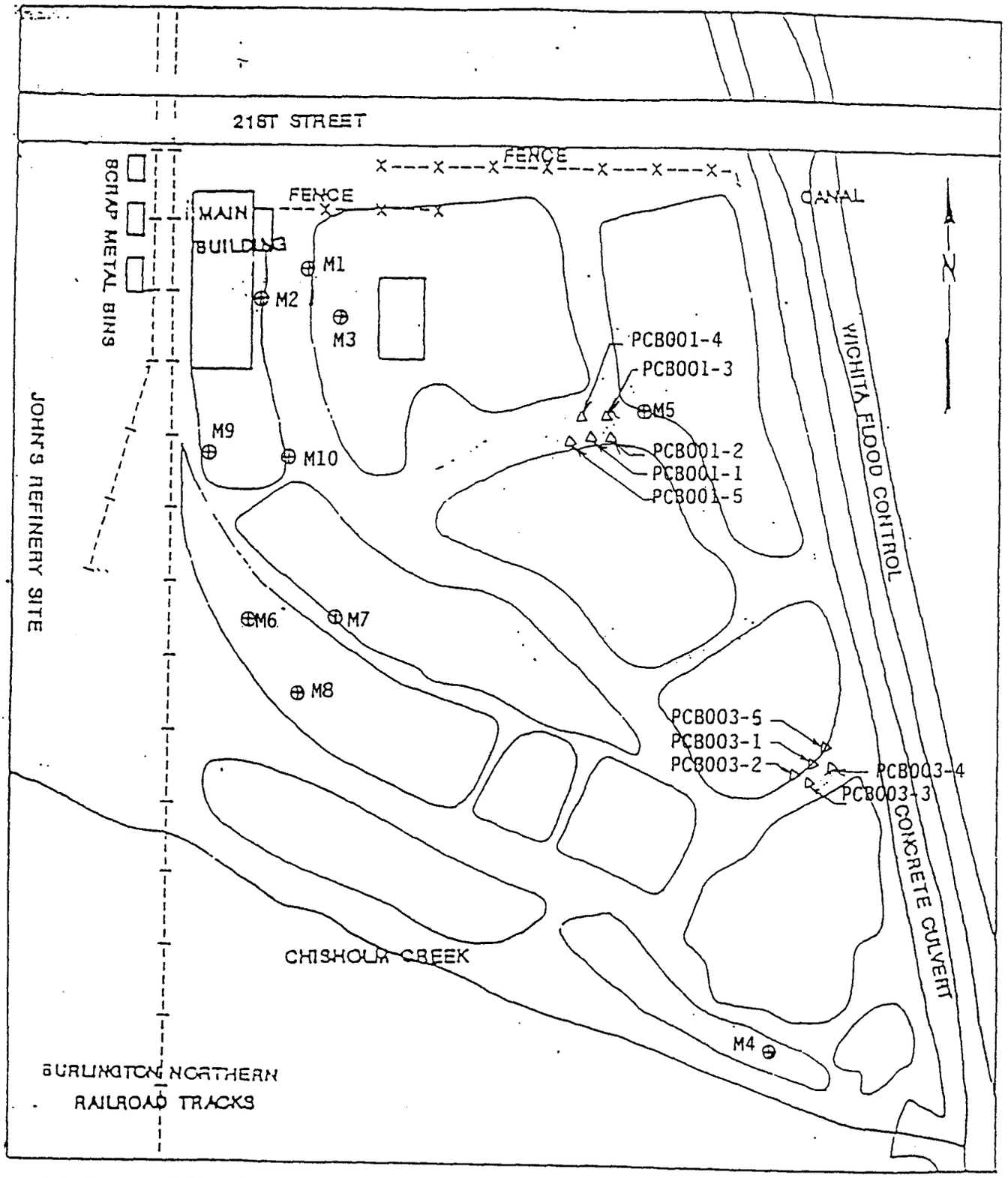


WASTE SITE TRACKING #: FKS0163
PREPARED BY: A. MELIA

E&E/FIT JUNE 1988

NOV

FIGURE 6-1: SOIL SAMPLE LOCATIONS



Novick Iron and Metal
Project No. 52895028

Figure Provided by the Client

Approximate Locations

⊕ Metal Samples

△ PCB Samples

NOV

Terracon

Form 101—1/87

Table 6-1
Summary of Sampling
Novick Iron and Metal Salvage
Wichita, Kansas
E & E/FIT, June 8, 1988

Sample Number	Matrix	Location
001	Soil	150 feet east on dirt road which parallels 21st Street
002	Soil	100 feet east of 001
003	Soil	400 feet south of the NE Corner of the property
004	Soil	150 feet south of 002
004D	Soil	Same as 004
005	Soil	Along the southeast boundary of the site
006	Ash/soil	50′ northwest of 002
007	Soil	Background

NOTE: Sample series TK951.

All samples were analyzed for BNA, pesticides, metals and pH. All samples were located on-site, except 007 (background) which was collected from 21st Street city right-of-way.

See Figure 2 for sample locations. Each sample consisted of 10 aliquots collected at a depth interval of 0 to 6 inches.

NOV

SECTION 7: ANALYTICAL DATA

7.1 METALS DATA

Five metals were detected in significant concentrations in all soil samples: chromium, copper, lead, mercury, and zinc. These results are summarized in Table 7-1. In all cases the background sample contained the lowest detected metals concentrations. Chromium was detected on site at a concentration as high as 1,400 ppm (Sample 003), which is approximately 108 times the background concentration of 13 ppm (Sample 007). Copper was detected on site at a concentration as high as 430,000 ppm (Sample 006), nearly 2,700 times the background level. Lead was also detected on site at elevated levels. Sample 005 contained 18,000 ppm of this toxic metal, approximately 62 times the concentration of 280 ppm found in the background sample. The background sample was not analyzed for mercury, but on site concentrations ranged from 0.563 ppm in sample 003 to 3.65 ppm in sample 005. The zinc concentrations ranged from 450 ppm in sample 007 to 5,700 ppm in sample 006.

Table 7-1
Selected Metal Analysis Results
Novick Iron and Metal Salvage
E & E/FIT, June 8, 1988
Sample Series TK951

	Sample No. and Concentration in mg/kg (ppm)							
Contaminant	001	002	003	004	004D	005	006	007
Chromium	130	78	1,400	240	180	620	36	13
Copper	4,300	1,600	1,300	1,700	1,900	2,500	430,000	160
Lead	1,500	5,400	920	2,400	1,900	18,000	7,300	280
Mercury	2.81	1.29	0.563	2.79	2.27	3.65	1.23	No analysis
Zinc	3,800	1,700	1,400	3,500	3,000	3,900	5,700	450

NOV

7.2 PESTICIDES/PCBs

PCBs were detected in various concentrations in all the samples collected. The only pesticide detected was chlordane, which was found in the background sample at a concentration of 120 ppb. The background sample also contained 290 ppb PCB 1254. The on-site samples general contained much higher concentrations of PCBs. The Pesticide/PCB results are summarized in Table 7-2.

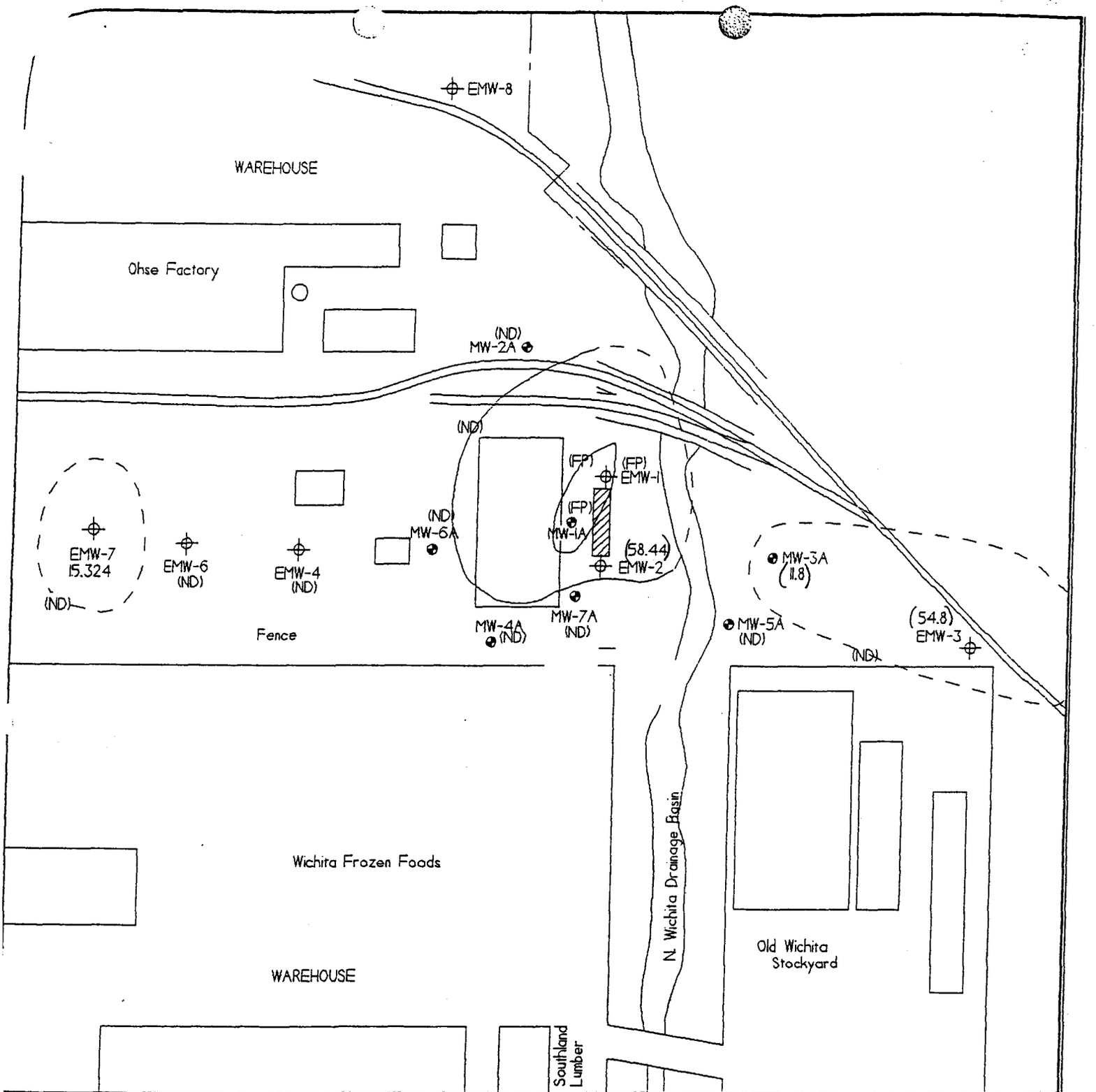
Table 7-2
Pesticide/PCB Results
Novick Iron and Metal Salvage
E & E/FIT, June 8, 1988
Sample Series TK951

	Sample No. and Concentration in µg/kg (ppb)							
Contaminant	001	002	003	004	004D	005	006	007
Chlordane	---	---	---	---	---	----	---	120
PCB 1248	37,000	---	---	---	---	----	---	---
PCB 1254	41,000	---	---	17,000	16,000	31,000	1,100	290
PCB 1260	15,000	44,000	13,000,000	15,000	10,000	10,000	1,100	---

7.3 OTHER RESULTS

Appendix D presents the pH data, other metals results, and the semi-volatile organic chemical analysis.

NOV



PROJECT:	Ohse Meats
ADDRESS:	2300 N. Broadway
LOCATION:	Wichita, KS
DRAWN BY:	A. Duncan — DATE: 02\27\97
REVIEWED BY:	B. Johnson — DATE: 03\01\97
AEI JOB #:	TF137 — KDHE JOB #: U2 087 1274

TITLE: **Figure 2 Groundwater Contamination Map**

ASSOCIATED ENVIRONMENTAL INC.

1"=100'-0"

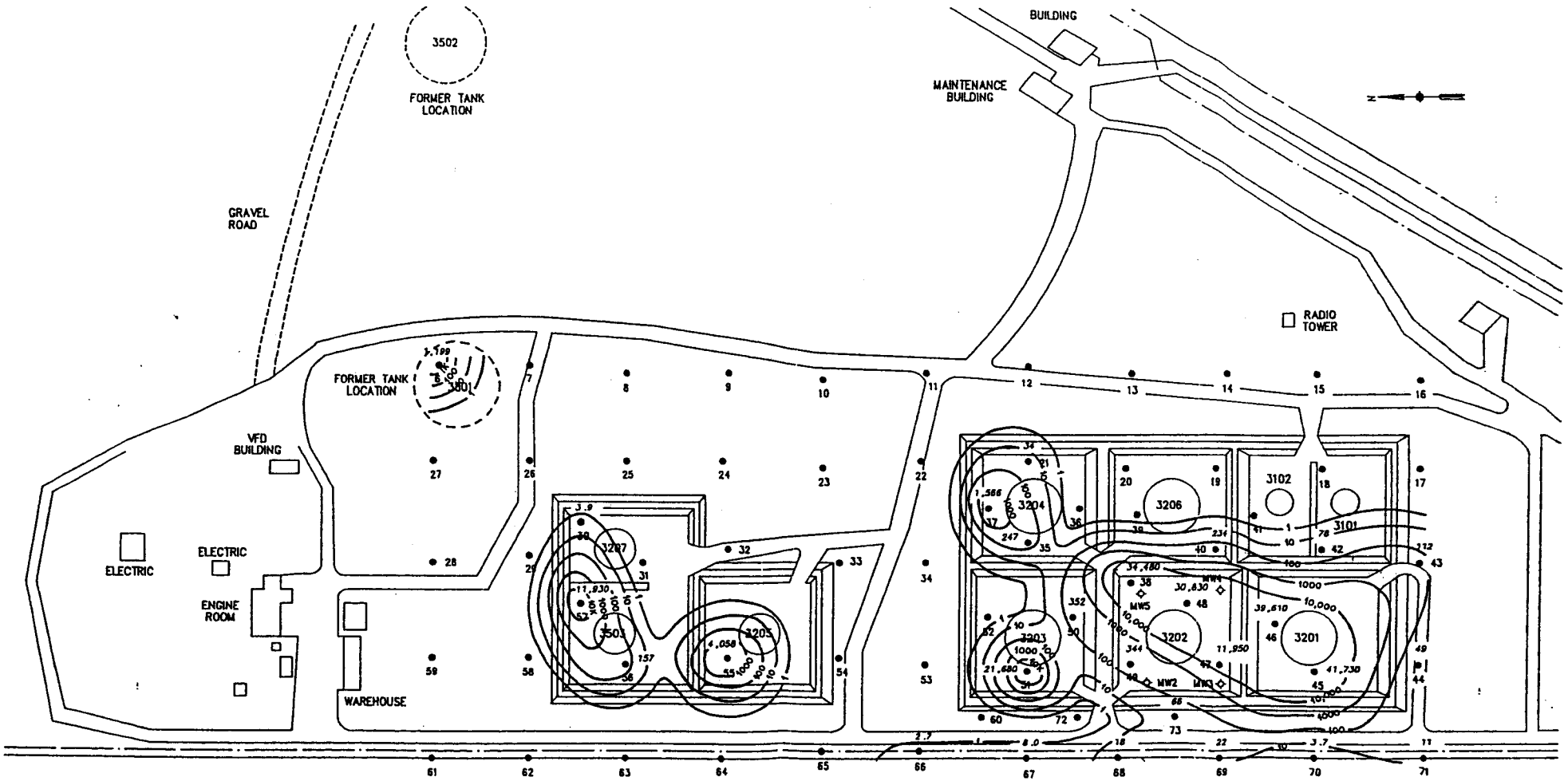
0 50 100

NOTES: Quarterly Monitoring
Third Quarter: Sampling Date 02\27\97

LEGEND:

- Abandonned UST: 75,000 gallon concrete fuel oil
- Monitoring well locations
- Pre-existing monitoring well locations
- (ND) - Total BTEX concentration (ppb)

OHSE



TARGET ENVIRONMENTAL SERVICES, INC.

This map is integral to a written report and should be viewed in that context.

0 75 150

FEET

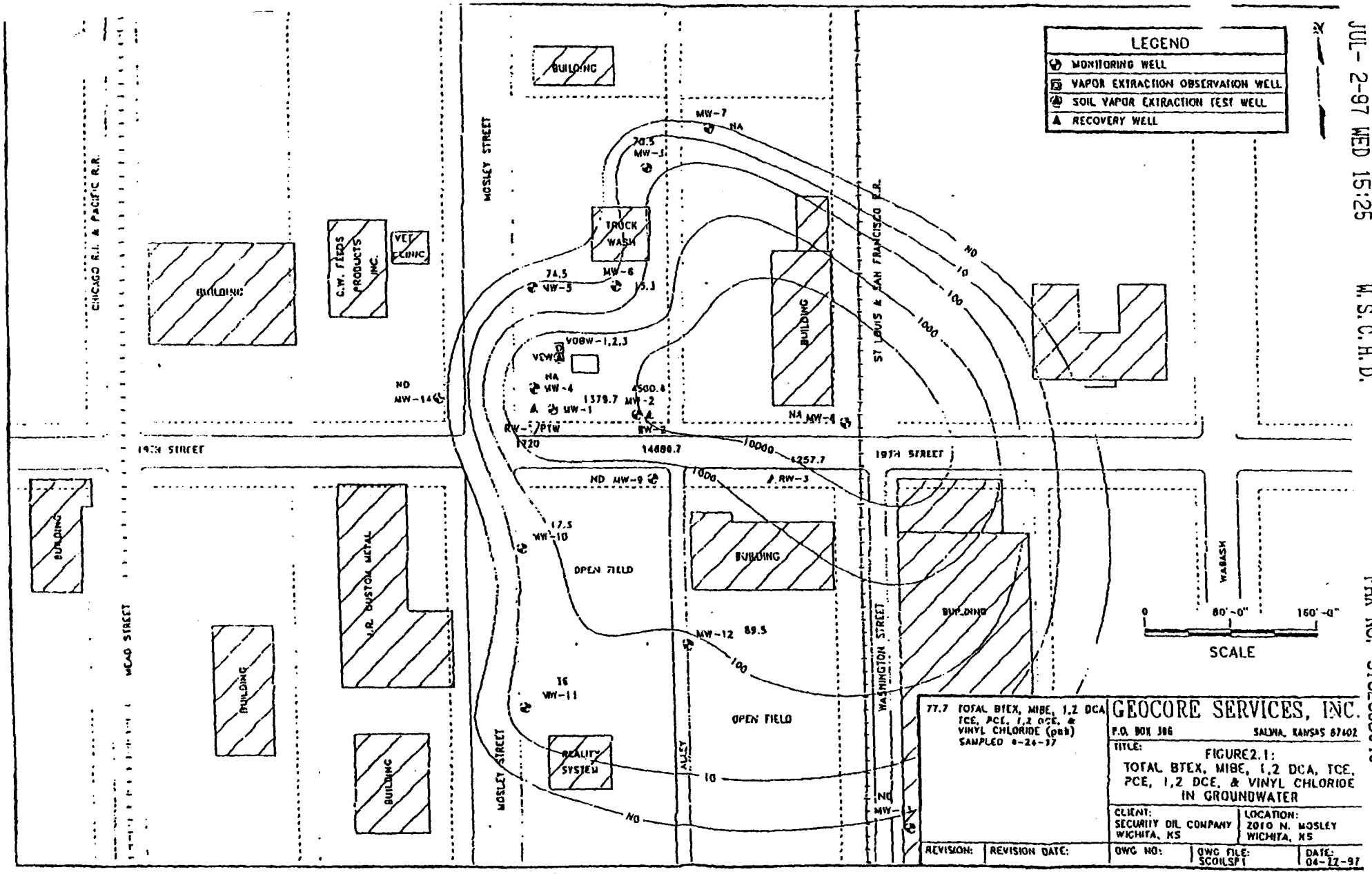
● SOIL GAS SAMPLE LOCATION

◇ MONITORING WELL

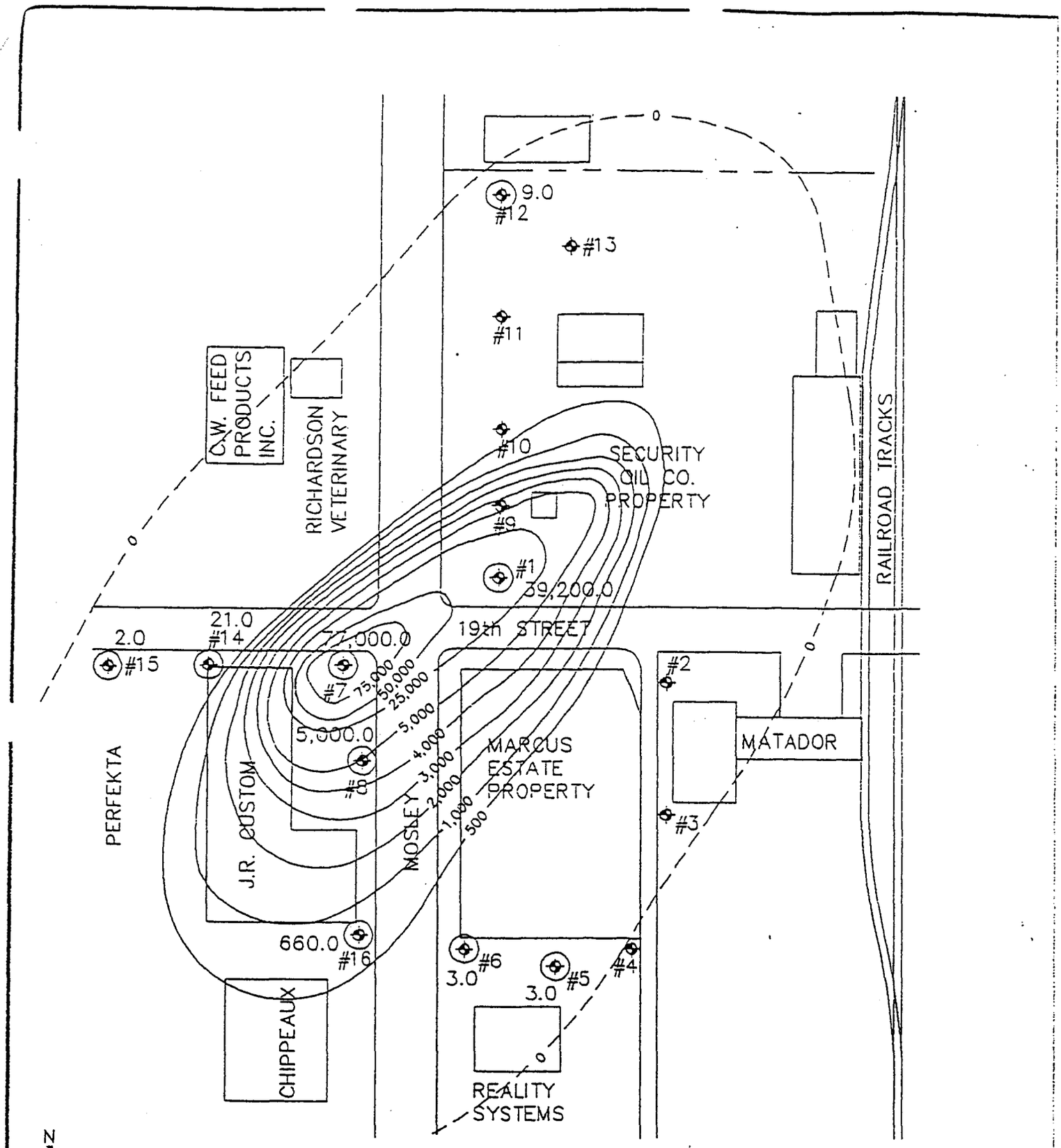
FIGURE 2. FID Total Volatiles (calc'd µg/l)

PHILLIPS BULK TERMINAL
TANK FARM
WICHITA, KANSAS

PPL


LEGEND
MONITORING WELL
VAPOR EXTRACTION OBSERVATION WELL
SOIL VAPOR EXTRACTION TEST WELL
RECOVERY WELL
BUILDING
C.W. FIELDS PRODUCTS INC.
VET CLINIC
TRUCK WASH
MOSLEY STREET
CHICAGO R.I. & PACIFIC R.R.
ST LOUIS & SAN FRANCISCO R.R.
WASHINGTON STREET
WABASH
ALLEY
OPEN FIELD
REALITY SYSTEM
J.R. DUSTON METAL
MEAD STREET
19TH STREET
MW-7
NA
70.5
MW-3
74.5
MW-5
MW-6
5.1
VOBW-1,2,3
VEW
NA
MW-4
1379.7
MW-1
4500.4
MW-2
RW-2
RW-1/PTW
720
14880.7
10000
4257.7
ND MW-9
1000
RW-3
17.5
MW-10
MW-12
89.5
100
16
MW-11
10
ND
ND
MW-14
NA MW-8
0
80'-0"
160'-0"
SCALE
77.7 TOTAL BTEX, MIBE, 1,2 DCA TCE, PCE, 1,2 DCE, & VINYL CHLORIDE (ppb) SAMPLED 8-26-97
GEOCORE SERVICES, INC.
P.O. BOX 386
SALINA, KANSAS 67402
TITLE:
FIGURE 2.1:
TOTAL BTEX, MIBE, 1,2 DCA, TCE, PCE, 1,2 DCE, & VINYL CHLORIDE IN GROUNDWATER
CLIENT:
SECURITY OIL COMPANY
WICHITA, KS
LOCATION:
2010 N. MOSLEY
WICHITA, KS
REVISION:
REVISION DATE:
DWG NO:
DWG FILE:
SCOILSP1
DATE:
04-22-97

SOC



N

GROUNDWATER ANALYSIS
TOTAL VOLATILE ORGANICS

PLUME MAP

Total VOC's by ZHS

UNITS=ug/l

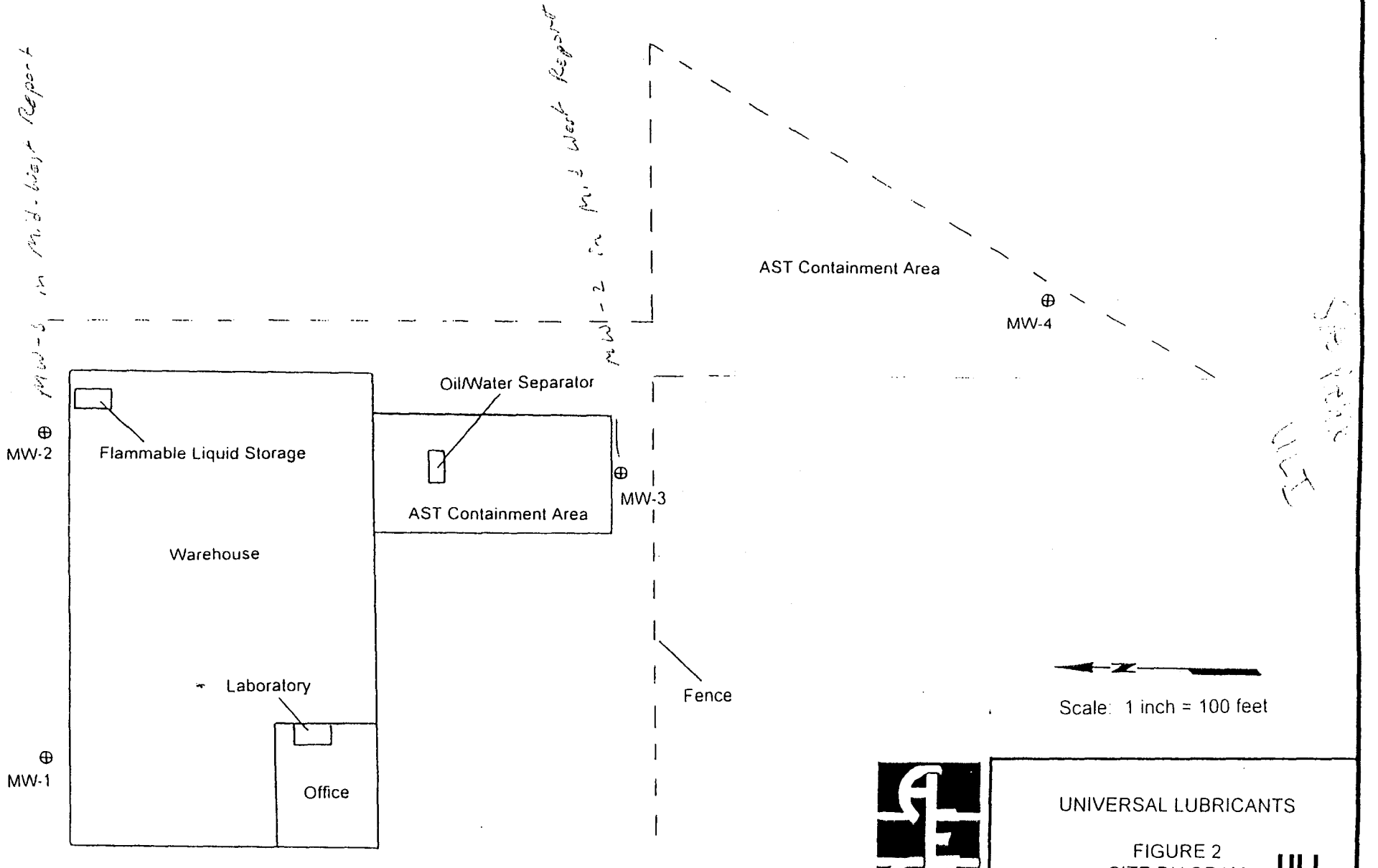
0' 50' 100'

1"=100'-0"

C.I.= 500, 1000, 20,000, & 25,000 ug/l **SOC**

TERRATECH ENVIRONMENTAL SERVICE, INC.
1330 East First, Suite 104, Wichita, Kansas 67214
Office (316) 262-0735 Fax (316) 262-4783

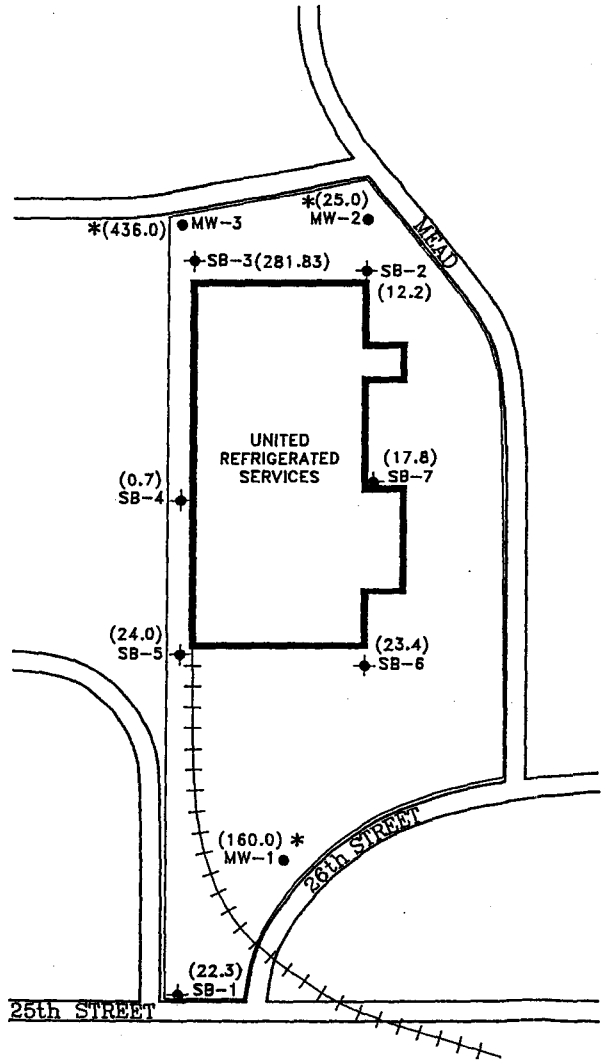
SECURITY OIL CO.
WICHITA, KANSAS



UNIVERSAL LUBRICANTS

FIGURE 2
SITE DIAGRAM

ULI



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

N

LEGEND

● = MONITORING WELL

✦ = SOIL BORING

(17.8) = CONCENTRATION OF TVOC IN GROUNDWATER (ppb)

DATA COLLECTED 11/04/91 AND 11/05/91

*DATA COLLECTED DURING PHASE 1 ASSESSMENT 05/24/91

200 0 200 400

SCALE FEET

FIG. 4

GROUNDWATER TECHNOLOGY, INC.
443 N. MAIZE ROAD
WICHITA, KS 67212

PROJECT No: 042201278
DATE 11/13/91

DETAILED MCH

TITLE:
TVOC IN GROUNDWATER CONCENTRATION MAP

CLIENT: UNITED REFRIGERATED SERVICES

LOCATION: URS

CAD DWG. FILE No. 1278-SM

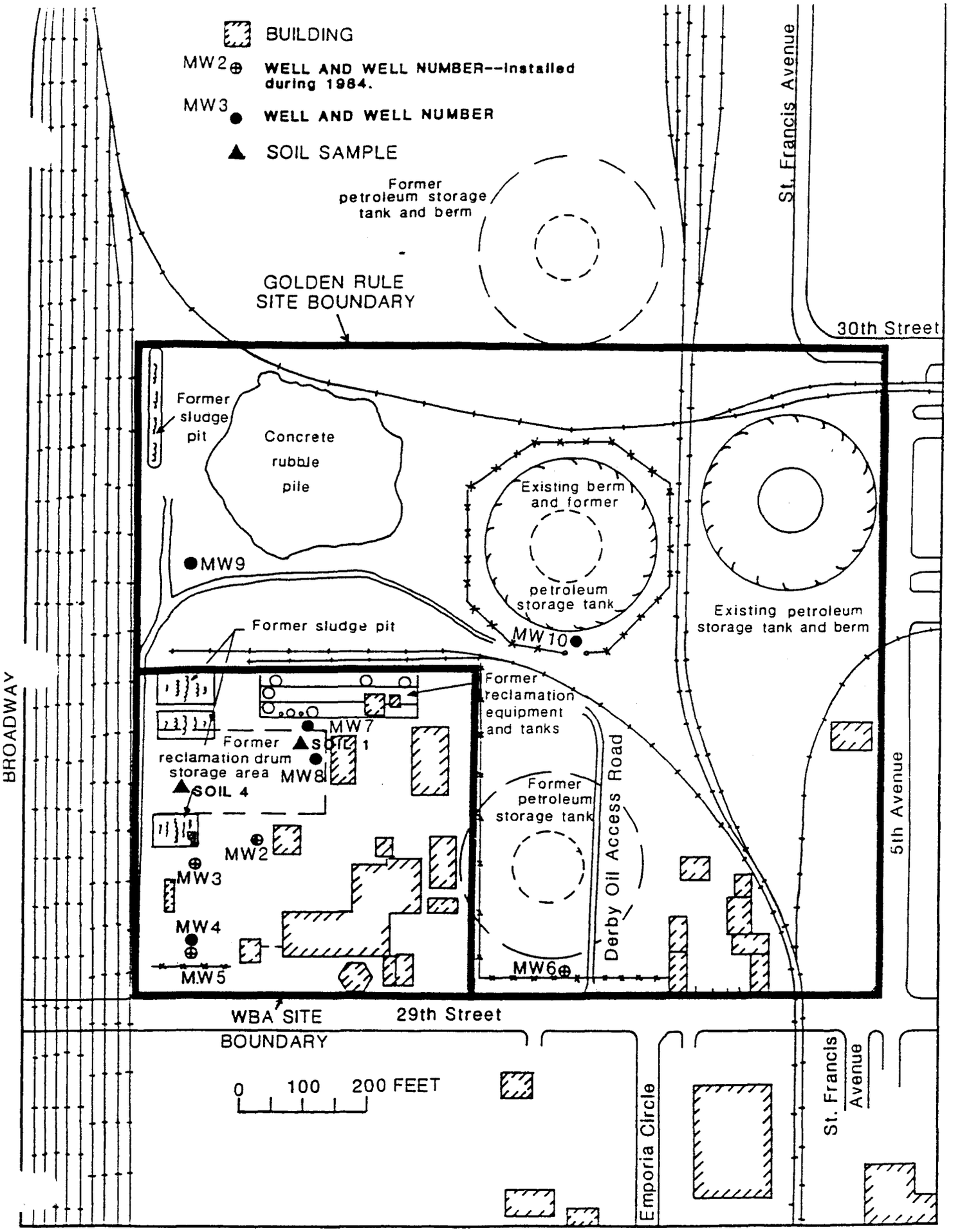


Figure 2. Location and detailed characteristics of the Nichols Trail and Aluminum site (WBA).

WBA

DRAFT

Environmental Site Investigation Report and Recommendations for Remediation of Groundwater

for

Ritchie Corporation

at the

Allen's Concrete Facility

1820 North Mosley

Wichita, Kansas

Butler Environmental Consultants Inc.
1804 Glendale Road
Salina, Kansas
(913) 827-1682

Butler Consultants File No. 90-012A
January 1991

PREPARED AT DIRECTION OF COUNSEL
PRIVILEGED AND CONFIDENTIAL
WORK PRODUCT

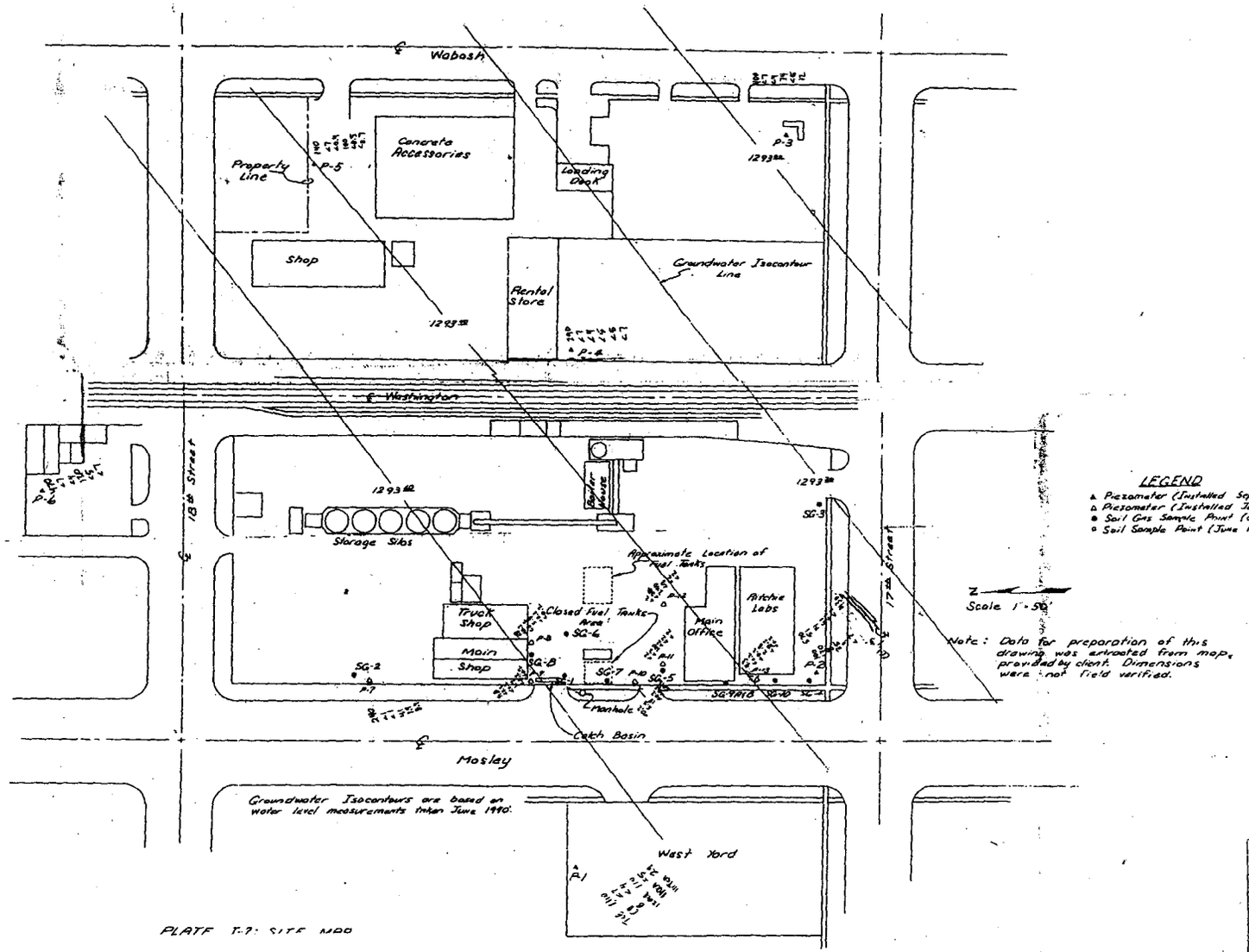
TABLE II-2
Chemical Analytical Results of Groundwater Samples

Compounds	P-1	P-2	P-3	P-4	P-5	P-6	KAL
pH (standard units)	6.9	7.1	6.9	6.8	6.7	7.1	—
Specific Conductance (umhos/cm)	940	1650	1390	855	1400	1300	—
Total Organic Halogen (ug/L)	640	350	280	250	160	470	—
Trichloroethylene (ug/L)	1100	100	400	290	140	470	5
Ethylbenzene (ug/L)	ND (7.0)	170	ND (7.0)	ND (7.0)	ND (0.7)	ND (7.0)	680
Benzene (ug/L)	ND (4.0)	8.0	ND (4.0)	ND (4.0)	ND (0.4)	ND (4.0)	5
1,2-Dichloroethylene, total (ug/L)	110	35	74	ND (5.0)	100	120	70
1,1-Dichloroethane (ug/L)	ND (5.0)	9.0	ND (5.0)	ND (5.0)	ND (0.5)	ND (5.0)	5
1,1,1-Trichloroethane (ug/L)	29	ND (7.0)	12	ND (7.0)	ND (0.7)	ND (7.0)	200
Hexachlorobenzene (ug/L)	5.8	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	0.2
Bis (2-Ethylhexyl) Phthalate (ug/L)	ND (5.0)	ND (5.0)	17	ND (5.0)	ND (5.0)	ND (5.0)	4200
Naphthalene (ug/L)	ND (5.0)	25	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	143
Lead, total (mg/L)	0.007	0.010	0.020	0.067	ND (0.003)	0.003	0.05
Zinc, total (mg/L)	0.37	0.14	0.22	0.16	0.20	0.13	5

TABLE II–5
Chemical Analytical Results for Groundwater Samples

Ritchie Corporation – Allen's Concrete Facility Wichita, Kansas									
Laboratory Number	90060585	90060681	90060682	90060685	90060687	90060684	90060683	90060686	Kansas Action Limits
Sample Date	6-13-90	6-18-90	6-18-90	6-18-90	6-18-90	6-18-90	6-18-90	6-18-90	
Piezometer Number / Contaminants (Units)	P-7	P-8	P-9	P-10	P-11	P-12	P-13	P-2	
CHLORINATED SOLVENTS									
Trichloroethylene (ug/L)	240	28	4.0	ND (0.2)	ND (2.0)	ND (20)	4.3	570	5
Chloroform (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	110	100
Carbon Tetrachloride (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	430	5
1,2 – Dichloroethylene (ug/L)	41	5.8	1.2	ND (0.2)	ND (2.0)	ND (20)	2.8	61	70
1,1 – Dichloroethylene (ug/L)	36	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	7
1,1 – Dichloroethane (ug/L)	1.9	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	5
1,1,1 – Trichloroethane (ug/L)	8.4	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	200
Tetrachloroethylene (ug/L)	3.3	0.9	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	7
GASOLINE CONSTITUENTS									
Benzene (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	18	110	340	ND (0.2)	14	5
Toluene (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	1.5	ND (2.0)	ND (20)	ND (0.2)	16	2000
m and/or p – Xylene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	12	ND (1.0)	ND (1.0)	ND (1.0)	17	440
o – Xylene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	74	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	440
Ethylbenzene (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	5.5	ND (2.0)	ND (20)	ND (0.2)	51	680
p – Isopropyltoluene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	11	ND (1.0)	ND (1.0)	110	—
Naphthalene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	260	1.5	ND (1.0)	ND (1.0)	ND (10)	143
n – Propylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	100	4.6	ND (1.0)	ND (1.0)	180	—
n – Butylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	320	ND (1.0)	4.9	ND (1.0)	17	—
1,3,5 – Trimethylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	66	ND (1.0)	ND (1.0)	ND (1.0)	57	—
1,2,4 – Trimethylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	410	1.6	ND (1.0)	ND (1.0)	16	—
Isopropylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	—
Lead, soluble (mg/L)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	0.004	.05
OTHER									
Total Organic Halogen (ug/L)	190	50	18	44	90	146	190	146	—
Specific Conductance (umhos/cm)	1380	1410	664	1140	1350	1470	1130	1314	—
pH (st'd)	6.7	6.9	6.6	7.1	6.9	6.9	6.8	7.1	—

NOTE: Only compounds detected in any sample are reported in this table. Complete laboratory reports are appended.



LEGEND

- ▲ Piezometer (Installed Sept. 1989)
- △ Piezometer (Installed June 1990)
- ● Soil Gas Sample Point (Oct 1989)
- ○ Soil Sample Point (June 1990)

Groundwater Isocontours are based on water level measurements taken June 1990.

PLATE 1-2: SITE MAP

Butler Environmental Consultants Inc

Client:	Ruskin Corporation Allen's Concrete Facility
Title:	SITE MAP
Date:	June 1991
Job #:	90-012A
	PLATE 1-2

Environmental Site Investigation

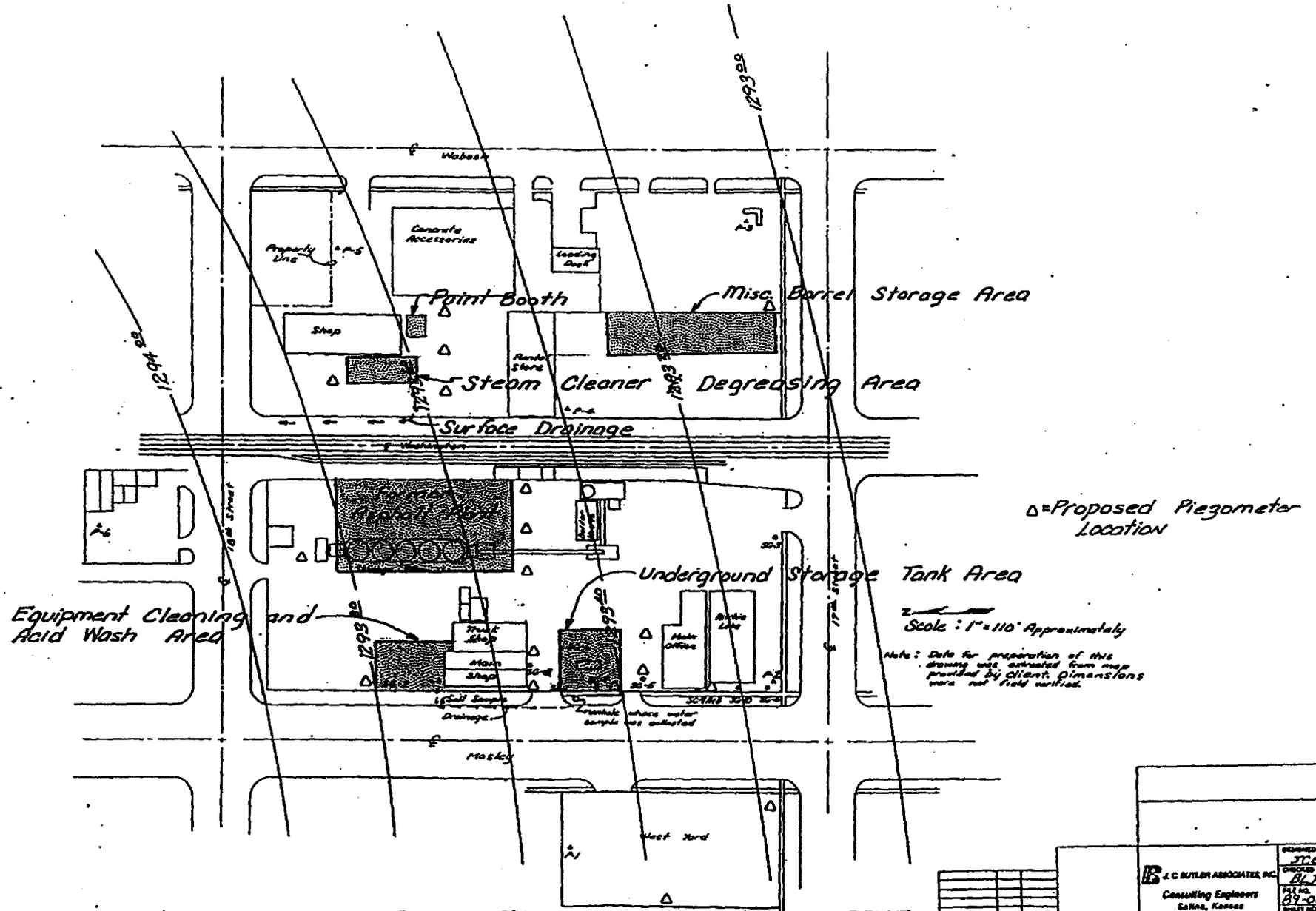
for

Ritchie Corporation at the
Allen's Concrete Facility
Wichita, Kansas

PREPARED AT DIRECTION OF COUNSEL
PRIVILEGED AND CONFIDENTIAL
WORK PRODUCT

Butler Environmental Consultants Inc.
1804 Glendale Road
Salina, Kansas
(913) 827-1682

Butler Associates File No. 90-012
September 1990



AREAS OF ENVIRONMENTAL CONCERN @ ALLEN'S CONCRETE

J.C. BUTLER ASSOCIATES, INC.
Consulting Engineers
Salina, Kansas

DESIGNED JCE
CHECKED BLJ
FILE NO. 89-022
SHEET NO.

DATE Nov. 89

BY	CK'D	APPR.

APPROVED	TITLE	DATE

TABLE III-1
Chemical Analytical Results for Groundwater Samples

Ritchie Corporation – Allen's Concrete Facility Wichita, Kansas										
Laboratory Number	90060585	90060681	90060682	90060685	90060687	90060684	90060683	90060686	89100209	Kansas Action Limits
Sample Date	6-13-90	6-18-90	6-18-90	6-18-90	6-18-90	6-18-90	6-18-90	6-18-90	9-14-89	
Piezometer Number / Contaminants (Units)	P-7	P-8	P-9	P-10	P-11	P-12	P-13	P-2	P-2	
CHLORINATED SOLVENTS										
Trichloroethylene (ug/L)	240	28	4.0	ND (0.2)	ND (2.0)	ND (20)	4.3	570	100	5
Chloroform (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	110	ND (5.0)	100
Carbon Tetrachloride (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	430	ND (7.0)	5
1,2 – Dichloroethylene (ug/L)	41	5.8	1.2	ND (0.2)	ND (2.0)	ND (20)	2.8	61	35	70
1,1 – Dichloroethylene (ug/L)	36	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	ND (6.0)	7
1,1 – Dichloroethane (ug/L)	1.9	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	9.0	5
1,1,1 – Trichloroethane (ug/L)	8.4	ND (0.2)	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	ND (7.0)	200
Tetrachloroethylene (ug/L)	3.3	0.9	ND (0.2)	ND (0.2)	ND (2.0)	ND (20)	ND (0.2)	ND (2.0)	ND (11)	7
GASOLINE CONSTITUENTS										
Benzene (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	18	110	340	ND (0.2)	14	8.0	5
Toluene (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	1.5	ND (2.0)	ND (20)	ND (0.2)	16	ND (4.0)	2000
m and/or p – Xylene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	12	ND (1.0)	ND (1.0)	ND (1.0)	17	600	440
o – Xylene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	74	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	ND (10)	440
Ethylbenzene (ug/L)	ND (1.0)	ND (0.2)	ND (0.2)	5.5	ND (2.0)	ND (20)	ND (0.2)	51	170	680
p – Isopropyltoluene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	11	ND (1.0)	ND (1.0)	110	ND (10)	—
Naphthalene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	260	1.5	ND (1.0)	ND (1.0)	ND (10)	25	143
n – Propylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	100	4.6	ND (1.0)	ND (1.0)	180	770	—
n – Butylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	320	ND (1.0)	4.9	ND (1.0)	17	770	—
1,3,5 – Trimethylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	66	ND (1.0)	ND (1.0)	ND (1.0)	57	680	—
1,2,4 – Trimethylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	410	1.6	ND (1.0)	ND (1.0)	16	2600	—
Isopropylbenzene (ug/L)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	460	—
Lead, soluble (mg/L)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	ND (0.003)	0.004	ND (0.003)	.05
OTHER										
Total Organic Halogen (ug/L)	190	50	18	44	90	146	190	146	350	—
Specific Conductance (umhos/cm)	1380	1410	664	1140	1350	1470	1130	1314	1650	—
pH (st'd)	6.7	6.9	6.6	7.1	6.9	6.9	6.8	7.1	7.1	—

NOTE: Only compounds detected in any sample are reported in this table. Complete laboratory reports are appended.

TABLE III-2

Chemical Analytical Results of Soil Samples from Easement

(Northwest of Main Shop)

Ritchie Corporation – Allen's Concrete Facility, Wichita, Kansas									
Laboratory Number	90060565	90060564	90060566	90060567	90060568	90060569	90060570	90060571	89100526
Soil Sample Location [1] / Contaminants (Units)	A	B	C	D	E	F	G	H	Soil – near concrete trough
CHLORINATED SOLVENTS									
Tetrachloroethylene (ug/L)	2.0	1.9	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA[2]
GASOLINE CONSTITUENTS									
Total Petroleum Hydrocarbons (mg/kg)	1500	2200	2100	1600	8300	990	850	1100	NA[2]
Barium, EP Toxicity (mg/L)	25	ND (0.2)	ND (0.2)	0.8	0.7	0.7	ND (0.2)	0.5	NA[2]
Cadmium, EP Toxicity (mg/L)	ND (0.05)	0.05	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	NA[2]
Ethylbenzene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	1.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	240
p – Isopropyltoluene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	6.4	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1000)
o – Xylene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1400
Naphthalene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	9.6	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	11,000
n – Propylbenzene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	5800
n – Butylbenzene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	7.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	17,000
m & p – Xylene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	2.3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	3300
Isopropylbenzene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	11	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	8800
1,3,5 – Trimethylbenzene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	10	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	16,000
1,2,4 – Trimethylbenzene (ug/kg)	ND (1.0)	ND (1.0)	ND (1.0)	9.3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	20,000

NOTES:
1. Samples A through H were from 0 – 6-inch depth.
2. Not Analyzed

The results of a soil sample collected on October 12, 1989, from the area adjacent to the concrete trough, which carries drainage from the equipment cleaning and acid wash area, are also presented in Table III-2 for comparison with the new data. This sample and Sample D (collected during the recent investigation) contained similar contaminants; however, contaminants in Sample D were detected at significantly lower concentrations than in the October, 1989, sample.

The soil samples collected from 12-feet below grade during the installation of Piezometers P-11 and P-12, and analyzed for VOCs and PAIs (procedures for analyzing volatile compounds), resulted in the non-detection of these parameters. The hydrocarbon odor detected during piezometer installation may be attributed to heavy organics from gasoline or oil which are not volatile compounds.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The results of this investigation and the previous environmental site investigation, performed at Ritchie Corporation's Allen's Concrete facility, permit the following conclusions to be presented:

1. The soil west of the equipment cleaning and acid wash area has been contaminated. The source of this contamination appears to be surface drainage containing oils, hydrocarbon solvents, and organic compounds from the equipment washing area. This surface drainage flows to the road gutter via a small concrete trough. Soil samples were collected on five-foot horizontal intervals to the north and south of the concrete trough at a depth from surface to six inches below grade. The sample locations are shown on Plate II-1. The total petroleum hydrocarbon (TPH) concentrations of the samples ranged from 8300 to 850 milligrams per kilogram. The Kansas Department of Health and Environment (KDHE) generally requires that TPH-contaminated soils be removed or treated if the TPH level is greater than 100 milligrams per kilogram. Brooks landfill will not accept soils for disposal with an average TPH concentration of greater than 500 milligrams per kilogram.

2. The contamination present in Piezometer P-2, located at the southwest corner of the property, appears to be from multiple sources. It is probable that the benzene, toluene, and ethylbenzene present in Piezometer P-2 are the result of gasoline releases from the closed underground fuel tanks on the property prior to their closure. The trichloroethylene and 1,2-dichloroethylene present in Piezometer P-2 appear to be associated with the generalized chlorinated hydrocarbon contamination that has migrated onto the Ritchie property. Other contaminants present in Piezometer P-2 were also detected in a water sample collected from the water flowing in the manhole located southwest of the main shop area. The location of this manhole is shown on Plate II-1. Surface drainage from the area around the main shop flows into this manhole. This surface drainage may be exfiltrating from the storm sewer piping or flowing along the sand backfill around the storm sewer piping and entering the groundwater in the vicinity of Piezometer P-2.

3. It does not appear that contaminants generated from operations at the equipment cleaning and acid wash area have leached from the soil and entered the groundwater. The contaminants found in the soil samples collected in September, 1990, probably originated from contaminated surface drainage from the equipment cleaning and acid wash area. These contaminants were not detected in the groundwater samples collected from Piezometers P-8 and P-9, located downgradient of the equipment cleaning and acid wash area.

4. Hydrocarbon contamination found in Piezometers, P-10, P-11, and P-12, and in Soil Gas Sample SG-5, collected in the original study in the fall of 1989, appears to originate from the former underground storage tanks. The presence of petroleum hydrocarbons in these piezometers, located hydraulically-downgradient of the closed underground fuel storage tanks, and the absence of these petroleum hydrocarbons in the piezometers, located hydraulically-upgradient of the closed fuel tanks, indicates that a release of fuel from the closed underground storage tanks or piping occurred prior to closure of the tanks.

5. The groundwater level elevations measured in the piezometers installed in this investigation and in the piezometers installed in 1989 confirm the northwest to southeast hydraulic gradient and groundwater flow direction that generally exists across the property.

6. There was no evidence that the current underground storage tanks, the piping to the tanks, the ancillary equipment, or the fuel handling practices contributed to the contamination found in soil gas sample, SG-5 collected in 1989, or in groundwater from Piezometer P-2.