APPENDIX B

BACKGROUND AND SURROUNDING AREA INVESTIGATION RESULTS

APPENDIX B-1

HISTORICAL AERIAL PHOTOGRAPHS OF FACILITY AREA (1950 to 2005)

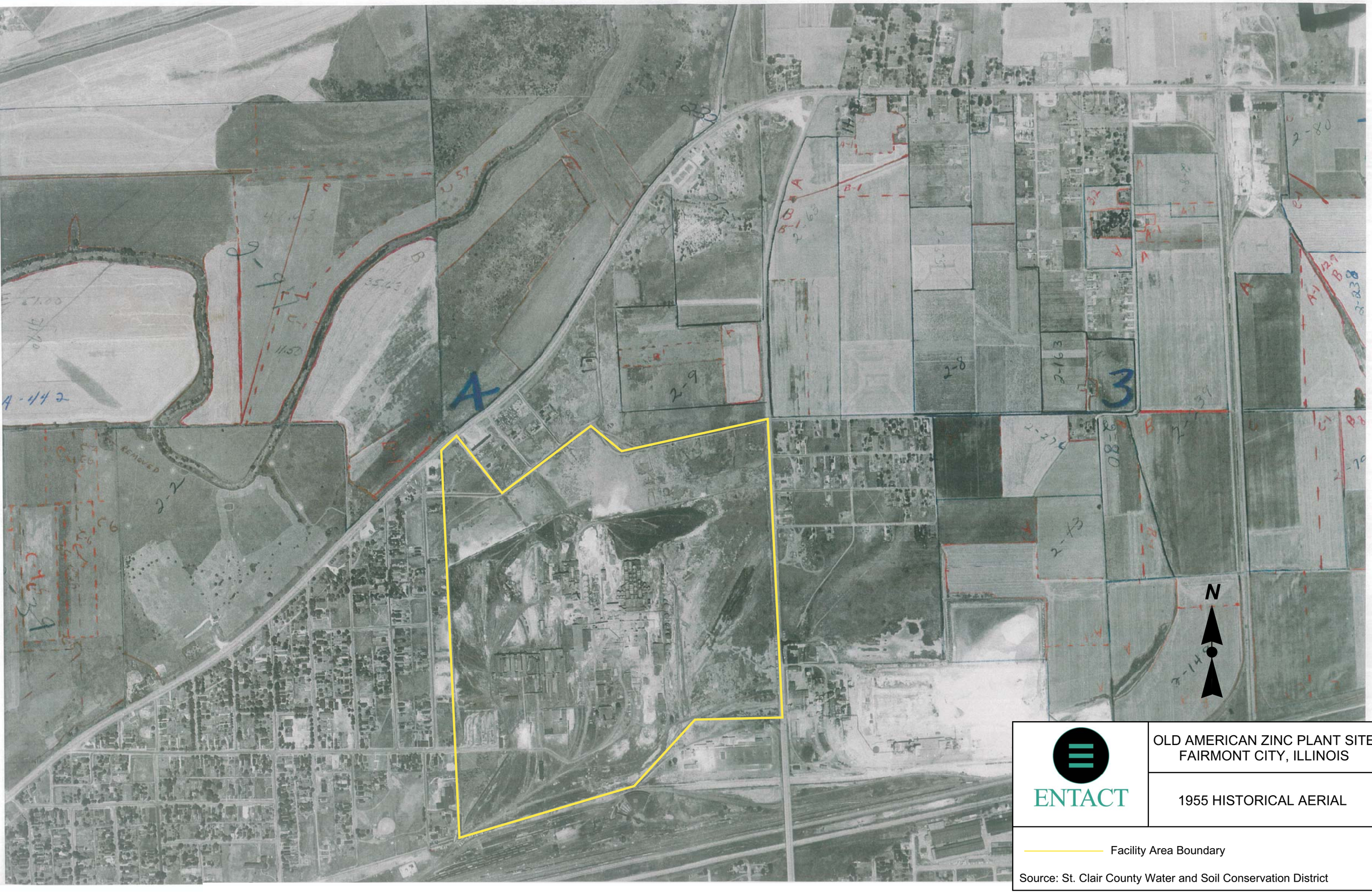
ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

1950 HISTORICAL AERIAL

Facility Area Boundary

Source: St. Clair County Water and Soil Conservation District



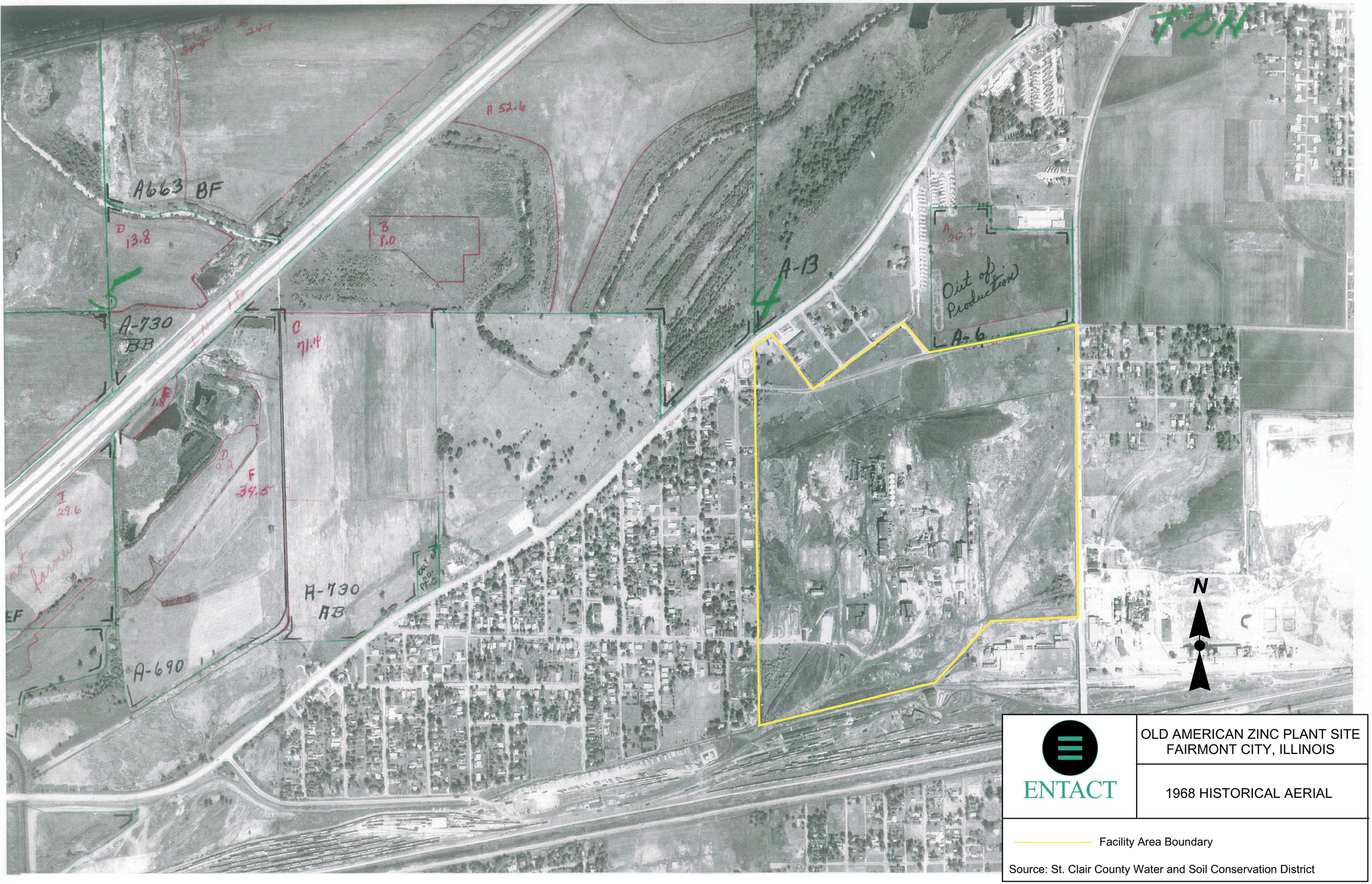
ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

1955 HISTORICAL AERIAL

Facility Area Boundary

Source: St. Clair County Water and Soil Conservation District



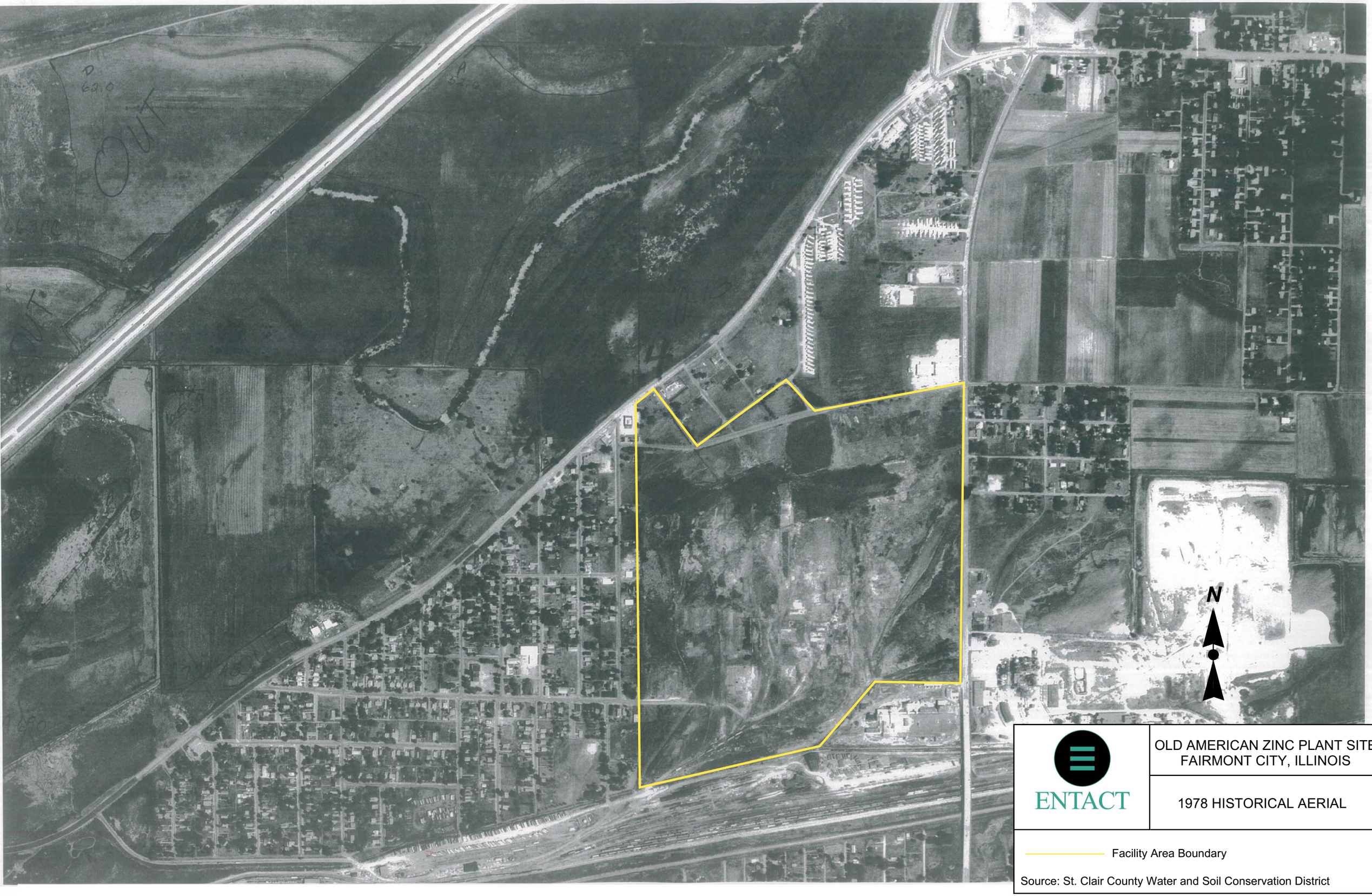
ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

1968 HISTORICAL AERIAL

Facility Area Boundary

Source: St. Clair County Water and Soil Conservation District



ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

1978 HISTORICAL AERIAL

Facility Area Boundary

Source: St. Clair County Water and Soil Conservation District

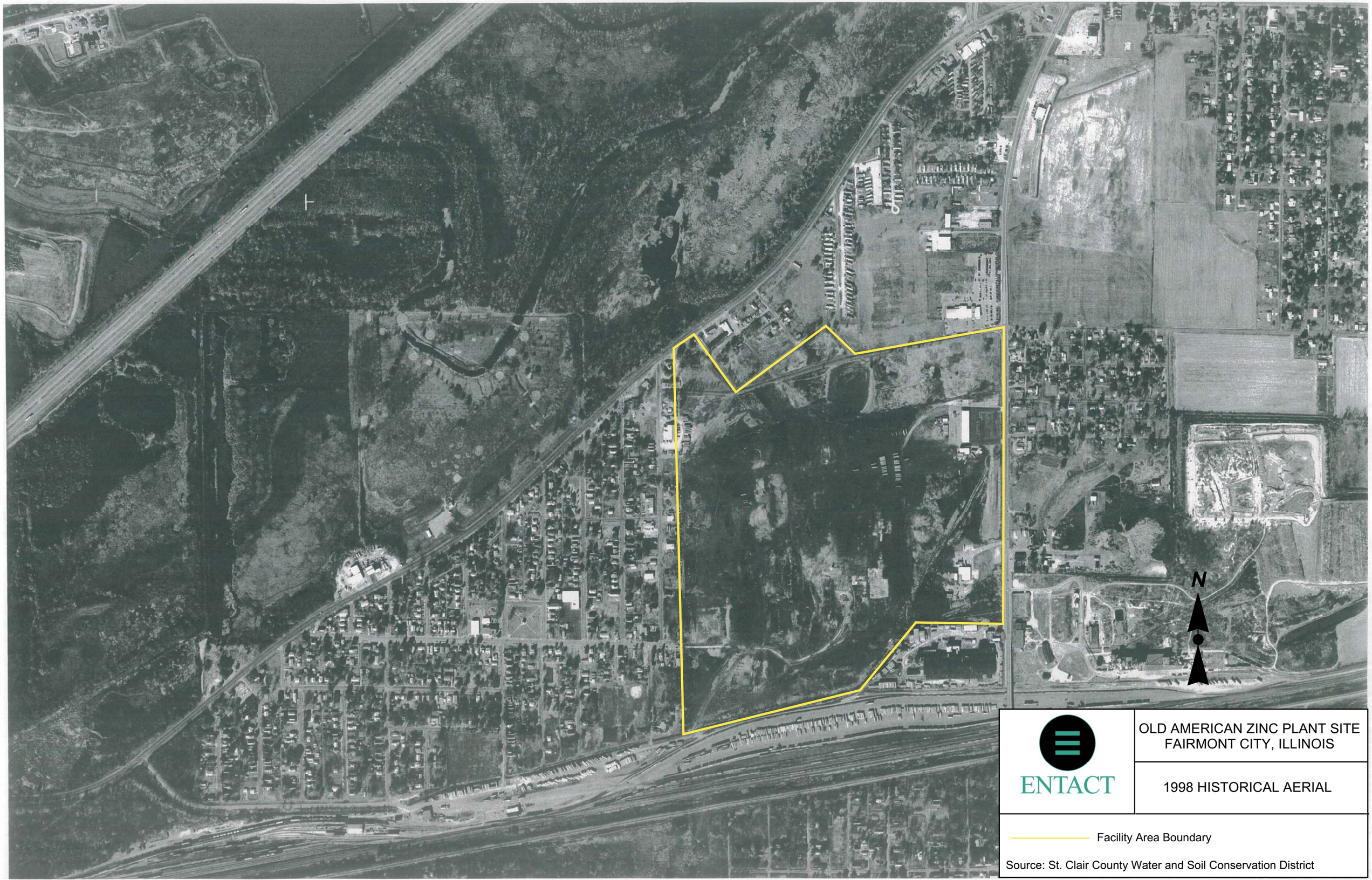
ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

1988 HISTORICAL AERIAL

Facility Area Boundary

Source: St. Clair County Water and Soil Conservation District



ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

1998 HISTORICAL AERIAL

Facility Area Boundary

Source: St. Clair County Water and Soil Conservation District

ENTACT

OLD AMERICAN ZINC PLANT SITE
FAIRMONT CITY, ILLINOIS

2005 HISTORICAL AERIAL

Facility Area Boundary

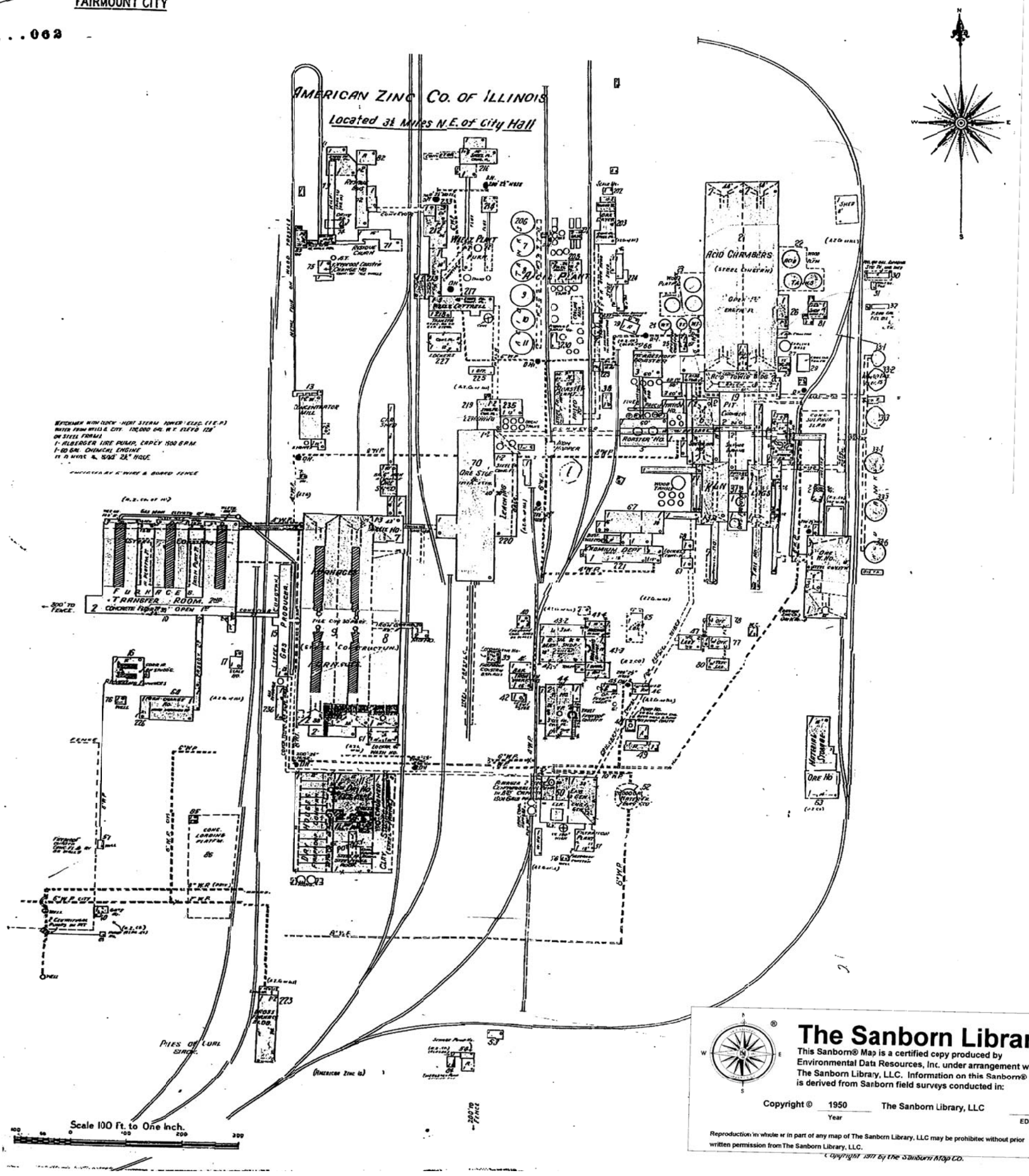
Source: ortho-rectified aerial photography provided by Surdex, Chesterfield, Mo.

APPENDIX B-2

HISTORICAL SANBORN FIRE INSURANCE MAPS (1950, 1955, and 1966)

FAIRMOUNT CITY

LL...062



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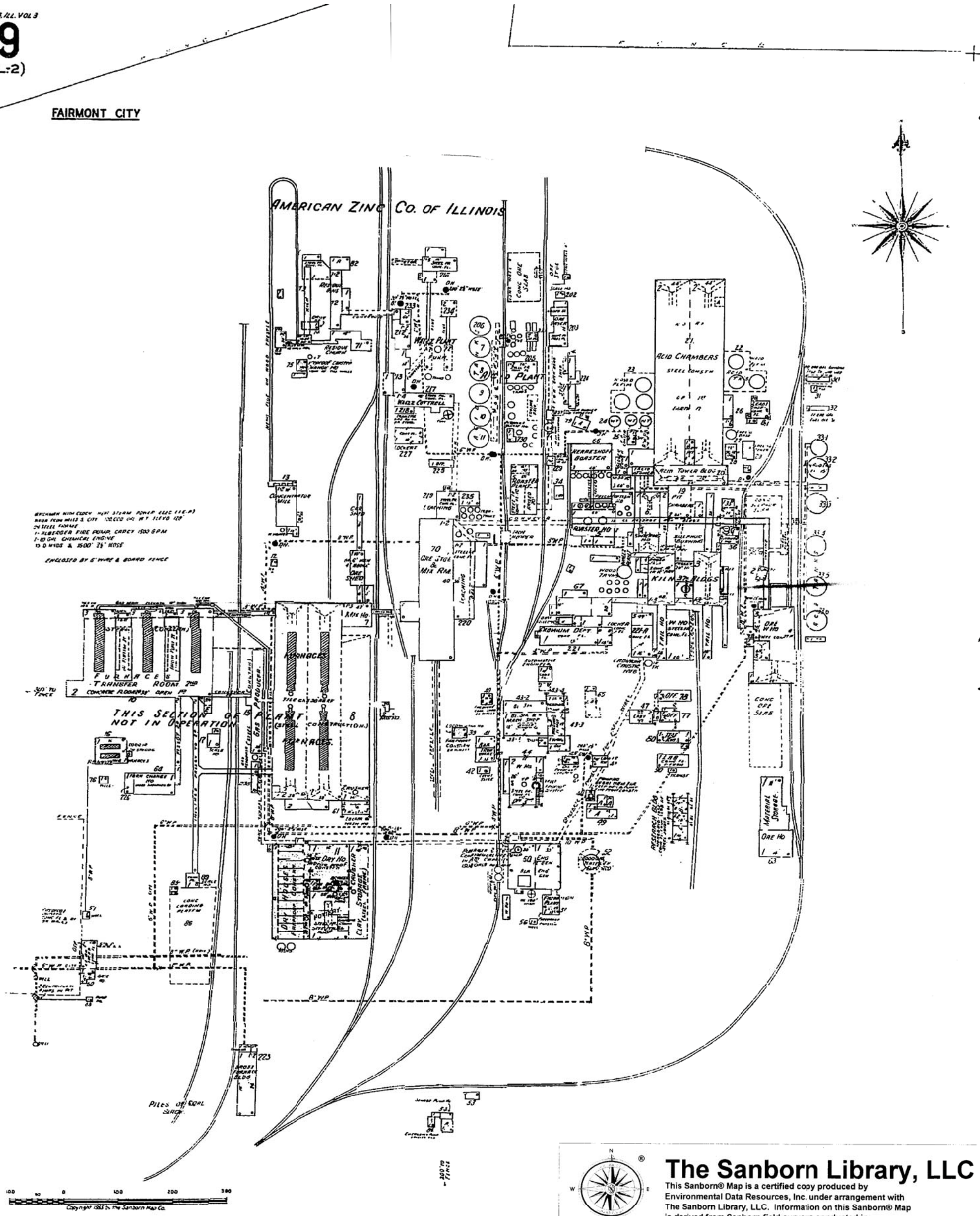
EAST ST. LOUIS, ILL. VOL 3

319

(199-VOL.-2)

FAIRMONT CITY



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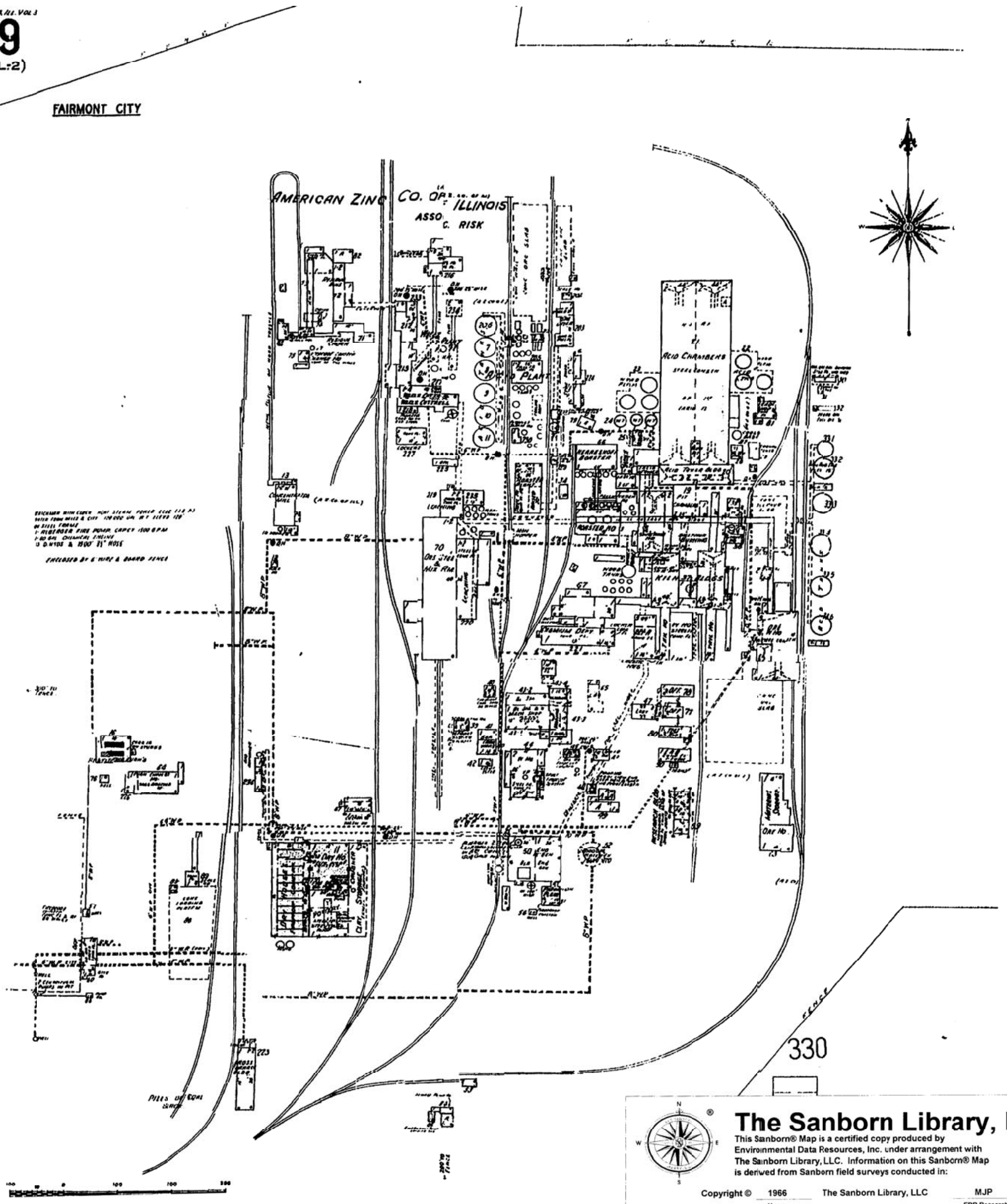
EAST ST. LOUIS, ILL. VOL 3

319

(199-VOL.:2)

FAIRMONT CITY



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APPENDIX B-3

SURROUNDING POTENTIAL SOURCE AREA INVESTIGATION RESULTS

Table 1

GROUNDWATER ELEVATION MEASUREMENTS

GENERAL CHEMICAL
EAST ST. LOUIS, ILLINOIS

Well. No.	T.O.C. Elevation	Depth to Water	Groundwater Elevation
DW-1	425.36	17.64	407.72
DW-2	427.46	20.04	407.42
DW-3	423.62	16.58	407.04
PZ-1	425.91	17.64	408.27
PZ-2	427.18	19.53	407.65
PZ-3	439.35	32.57	406.78
PZ-4	449.11	41.2	407.91
PZ-5	424.17	17.89	406.28
PZ-6a	424.78	17.04	407.74
PZ-7	442.35	34.44	407.91
PZ-8a	423.66	14.77	408.89
PZ-9	423.92	14.78	409.14
PZ-10	427.14	18.76	408.38
PZ-11	423.15	14.74	408.41

Depth to water measurements were obtained May 15, 1995.

T.O.C. = top of well casing. Elevations for T.O.C. of existing wells were obtained from report by D'Appolonia, 1984.

Table 2
SUMMARY OF DETECTED PARAMETERS IN SOIL SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	DW-02			DW-02			DW-02		
SAMPLE ID:	DW-2 2'-4'			DW-2 9.5-11.5			DW-2 12-14		
DATE:	03/09/95			03/09/95			03/09/95		
DEPTH (ft):	2.00			9.50			12.00		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/kg)									
Methylene chloride	< 6		6	< 7		7	< 7		7
Acetone	< 63		63	< 74	J	74	< 66	J	66
Semi-Volatile Organics (ug/kg)									
Acenaphthene	< 420		420	< 490		490	< 440		440
Dibenzofuran	< 420		420	< 490		490	< 440		440
Fluorene	< 420		420	< 490		490	< 440		440
Phenanthrene	< 420		420	< 490		490	< 440		440
Anthracene	< 420		420	< 490		490	< 440		440
Carbazole	< 420		420	< 490		490	< 440		440
Fluoranthene	(130)	J	420	(300)	J	490	< 440		440
Pyrene	(130)	J	420	(220)	J	490	< 440		440
Benzo(a)anthracene	(97)	J	420	(160)	J	490	< 440		440
Chrysene	(170)	J	420	(180)	J	490	< 440		440
Di-n-octyl phthalate	< 420		420	< 490		490	< 440		440
Benzo(b)fluoranthene	(220)	J	420	(180)	J	490	< 440		440
Benzo(k)fluoranthene	(100)	J	420	(68)	J	490	< 440		440
Benzo(a)pyrene	(170)	J	420	(110)	J	490	< 440		440
Indeno(1,2,3-cd)pyrene	(81)	J	420	(91)	J	490	< 440		440
Dibenzo(a,h)anthracene	< 420		420	< 490		490	< 440		440
Benzo(g,h,i)perylene	(100)	J	420	(82)	J	490	< 440		440
Pesticides and PCBs (ug/kg)									
Aldrin	< 10		10	< 10		10	< 11		11
Dieldrin	< 20		20	< 20		20	< 21		21
4,4'-DDT	< 20		20	< 20		20	< 21		21
Metals (mg/kg)									
Silver	< 1		1	< 2		2	< 1		1
Aluminum	13200		25	19200		29	10500		27
Barium	182		1	273		2	223		1
Beryllium	< 1		1	< 1		1	< 1		1
Calcium	92000		634	14600		735	2670		664
Cadmium	2.4		1	(1.9)		2	2.1		1
Cobalt	< 6		6	< 7		7	< 7		7
Chromium	25.5		3	21.9		3	18.9		3
Copper	14.3		1	74.4		2	14.5		1
Iron	4750		6	15200		7	11200		7
Potassium	2300		634	2330		735	1450		664
Magnesium	2350		634	3190		735	2510		664
Manganese	63.8		1	130		2	92.4		1
Sodium	710		634	< 735		735	< 664		664
Nickel	7.4		5	12.2		6	8.8		5
Lead	64.8		1	24.4			10.3		
Vanadium	34.1		6	38.1		7	21.0		7
Zinc	70.4		6	84.1		7	62.8		7
Arsenic	5.6		1	17.6		1	11.8		1
Mercury	0.29			0.40			0.17		
Selenium	< 1	*	1	< 1		1	< 1		1
TICs (ug/kg)									
Hexane	---			19			8		
Sulfur, mol. (S8)	---			---			---		

Result - Analysis Result, Q - Qualifiers, DL - Detection Limit
( ) - Indicates result less than detection limit
* - Indicates duplicate analysis not within control limits.
J - Indicates result is estimated
--- - Not analyzed.

Table 2
SUMMARY OF DETECTED PARAMETERS IN SOIL SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-09			PZ-09			PZ-09		
SAMPLE ID:	PZ-9 2'-4'			PZ-9 7'-9'			PZ-9 12'-13'		
DATE:	03/15/95			03/15/95			03/15/95		
DEPTH (ft):	2.00			7.00			12.00		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/kg)									
Methylene chloride	(4.8)	J	6	(4.4)	J	6	(4.7)	J	6
Acetone	(3.6)	J	62	< 60		60	< 63		63
Semi-Volatile Organics (ug/kg)									
Acenaphthene	< 410		410	< 400		400	< 420		420
Dibenzofuran	< 410		410	< 400		400	< 420		420
Fluorene	< 410		410	< 400		400	< 420		420
Phenanthrene	< 410		410	< 400		400	< 420		420
Anthracene	< 410		410	< 400		400	< 420		420
Carbazole	< 410		410	< 400		400	< 420		420
Fluoranthene	< 410		410	< 400		400	< 420		420
Pyrene	< 410		410	< 400		400	< 420		420
Benzo(a)anthracene	< 410		410	< 400		400	< 420		420
Chrysene	< 410		410	< 400		400	< 420		420
Di-n-octyl phthalate	(48)	J	410	< 400		400	< 420		420
Benzo(b)fluoranthene	< 410		410	< 400		400	< 420		420
Benzo(k)fluoranthene	< 410		410	< 400		400	< 420		420
Benzo(a)pyrene	< 410		410	< 400		400	< 420		420
Indeno(1,2,3-cd)pyrene	< 410		410	< 400		400	< 420		420
Dibenzo(a,h)anthracene	< 410		410	< 400		400	< 420		420
Benzo(g,h,i)perylene	< 410	J	410	< 400	J	400	< 420	J	420
Pesticides and PCBs (ug/kg)									
Aldrin	< 9.7		9.7	< 9.8		9.8	< 10		10
Dieldrin	< 19		19	< 20		20	< 20		20
4,4'-DDT	< 19		19	< 20		20	< 20		20
Metals (mg/kg)									
Silver	1.2		1	1.3		1	1.5		1
Aluminum	11200		25	8800		24	6180		25
Barium	187		1	148		1	101		1
Beryllium	< 1		1	< 1		1	< 1		1
Calcium	3310		622	3010		600	13600		629
Cadmium	< 1		1	< 1		1	< 1		1
Cobalt	7.8		6	7.8		6	< 6		6
Chromium	14.3		3	13.4		2	11.6		3
Copper	13.9		1	12.1		1	7.4		1
Iron	15500		6	13800		6	10800		6
Potassium	1770		622	1640		600	1290		629
Magnesium	3480		622	3160		600	5880		629
Manganese	365		1	371		1	234		1
Sodium	< 622		622	< 600		600	< 629		629
Nickel	18.2		5	18.7		5	11.8		5
Lead	10.8		1	7.1		1	5.4		1
Vanadium	27.1		6	26.5		6	22.8		6
Zinc	55.6		6	46.2		6	36.7		6
Arsenic	5.8		1	5.9		1	4.4		1
Mercury	0			0			0		
Selenium	< 1	*	1	< 1	*	1	< 1	*	1
TICs (ug/kg)									
Hexane	---			---			---		
Sulfur, mol. (S8)	12000			14000			---		

Result - Analysis Result, Q - Qualifiers, DL - Detection Limit
( ) - Indicates result less than detection limit
* - Indicates duplicate analysis not within control limits
J - Indicates result is estimated
--- - Not analyzed

Table 2
SUMMARY OF DETECTED PARAMETERS IN SOIL SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-10			PZ-10			PZ-10		
SAMPLE ID:	PZ-10 2'-4'			PZ-10 7'-9'			PZ-10 15'-17'		
DATE:	03/09/95			03/09/95			03/09/95		
DEPTH (ft):	2.00			7.00			15.00		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/kg)									
Methylene chloride	12		7	< 8		8	< 7		7
Acetone	< 70	J	70	< 76		76	< 73	J	73
Semi-Volatile Organics (ug/kg)									
Acenaphthene	< 460		460	< 500		500	< 480		480
Dibenzofuran	< 460		460	< 500		500	< 480		480
Fluorene	< 460		460	< 500		500	< 480		480
Phenanthrene	(120)	J	460	< 500		500	< 480		480
Anthracene	< 460		460	< 500		500	< 480		480
Carbazole	< 460		460	< 500		500	< 480		480
Fluoranthene	(250)	J	460	< 500		500	< 480		480
Pyrene	(190)	J	460	< 500		500	< 480		480
Benzo(a)anthracene	(110)	J	460	< 500		500	< 480		480
Chrysene	(120)	J	460	< 500		500	< 480		480
Di-n-octyl phthalate	< 460		460	< 500		500	< 480		480
Benzo(b)fluoranthene	(110)	J	460	< 500		500	< 480		480
Benzo(k)fluoranthene	< 460		460	< 500		500	< 480		480
Benzo(a)pyrene	(59)	J	460	< 500		500	< 480		480
Indeno(1,2,3-cd)pyrene	< 460		460	< 500		500	< 480		480
Dibenzo(a,h)anthracene	< 460		460	< 500		500	< 480		480
Benzo(g,h,i)perylene	< 460		460	< 500		500	< 480		480
Pesticides and PCBs (ug/kg)									
Aldrin	< 11		11	< 13		13	< 11		11
Dieldrin	< 21		21	< 25		25	< 23		23
4,4'-DDT	< 21		21	< 25		25	< 23		23
Metals (mg/kg)									
Silver	< 1		1	< 2		2	< 2		2
Aluminum	24300		28	39000		31	19500		29
Barium	339		1	230		2	226		2
Beryllium	< 1		1	< 1		1	1.0		1
Calcium	5970		700	809		765	11600		728
Cadmium	< 1		1	< 2		2	< 2		2
Cobalt	< 7		7	< 8		8	< 7		7
Chromium	31.8		3	55.7		3	22.3		3
Copper	18.2		1	9.9		2	24.5		2
Iron	3580		7	4550		8	18900		7
Potassium	5640		700	4170		765	3720		728
Magnesium	< 700		700	< 765		765	7430		728
Manganese	11.2		1	5.5		2	502		2
Sodium	2820		700	1040		765	< 728		728
Nickel	6.2		6	< 6		6	21.3		6
Lead	90.4		.	77.3		.	11.8		1
Vanadium	49.5		7	64.1		8	37.3		7
Zinc	23.1		7	15.7		8	81.6		7
Arsenic	7.5		1	3.9		1	5.3		2
Mercury	0			0			0		
Selenium	< 1		1	< 1		1	< 2	*	2
TICs (ug/kg)									
Hexane	---			---			---		
Sulfur, mol. (S8)	---			---			---		

Result - Analysis Result, Q - Qualifiers, DL - Detection Limit
( ) - Indicates result less than detection limit
* - Indicates duplicate analysis not within control limits
J - Indicates result is estimated
--- - Not analyzed

Table 2
SUMMARY OF DETECTED PARAMETERS IN SOIL SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-11			PZ-11			PZ-11		
SAMPLE ID:	PZ-11 2'-4'			PZ-11 7'-9'			PZ-11 12'-14'		
DATE:	03/07/95			03/07/95			03/07/95		
DEPTH (ft):	2.00			7.00			12.00		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/kg)									
Methylene chloride	< 7		7	< 7		7	< 6		6
Acetone	< 67		67	< 65		65	< 61		61
Semi-Volatile Organics (ug/kg)									
Acenaphthene	(90)	J	440	< 430		430	< 400		400
Dibenzofuran	(120)	J	440	< 430		430	< 400		400
Fluorene	(220)	J	440	< 430		430	< 400		400
Phenanthrene	2900		440	< 430		430	< 400		400
Anthracene	700		440	< 430		430	< 400		400
Carbazole	(160)	J	440	< 430		430	< 400		400
Fluoranthene	3200		440	< 430		430	< 400		400
Pyrene	2800		440	< 430		430	< 400		400
Benzo(a)anthracene	1700		440	< 430		430	< 400		400
Chrysene	1600		440	< 430		430	< 400		400
Di-n-octyl phthalate	< 440		440	< 430		430	< 400		400
Benzo(b)fluoranthene	1600		440	< 430		430	< 400		400
Benzo(k)fluoranthene	720		440	< 430		430	< 400		400
Benzo(a)pyrene	1200		440	< 430		430	< 400		400
Indeno(1,2,3-cd)pyrene	(370)	J	440	< 430		430	< 400		400
Dibenzo(a,h)anthracene	(130)	J	440	< 430		430	< 400		400
Benzo(g,h,i)perylene	(400)	J	440	< 430		430	< 400		400
Pesticides and PCBs (ug/kg)									
Aldrin	490	J	44	< 10		10	< 9.9		9.9
Dieldrin	370		88	< 21		21	< 20		20
4,4'-DDT	110		88	< 21		21	< 20		20
Metals (mg/kg)									
Silver	< 1		1	< 1		1	< 1		1
Aluminum	22900		27	14400		26	6110		24
Barium	710		1	279		1	63.7		1
Beryllium	< 1		1	< 1		1	< 1		1
Calcium	18100		669	4010		650	1140		609
Cadmium	7.8		1	< 1		1	< 1		1
Cobalt	< 7		7	< 7		7	< 6		6
Chromium	32.2		3	16.2		3	8		2
Copper	224	J	1	24.2	J	1	4.9	J	1
Iron	14000	J	7	16100	J	7	6590	J	6
Potassium	3450		669	2010		650	716		609
Magnesium	2450		669	3260		650	1450		609
Manganese	128	J	1	405	J	1	151	J	1
Sodium	< 669		669	< 650		650	< 609		609
Nickel	11.1		5	13		5	9.3		5
Lead	414	J	.	12.2	J	1	3.9	J	.
Vanadium	46.6		7	32.2		7	13		6
Zinc	718		7	244		7	55.9		6
Arsenic	38	J	1	7.1	J	1	2.7	J	1
Mercury	4			0.15			0		
Selenium	1.3	J	1	< 1	*J	1	< 1	J	1
TICs (ug/kg)									
Hexane	---			---			---		
Sulfur, mol. (S8)	---			---			---		

Result - Analysis Result. Q - Qualifiers. DL - Detection Limit
( ) - Indicates result less than detection limit
* - Indicates duplicate analysis not within control limits.
J - Indicates result is estimated.
--- - Not analyzed.

Table 4
SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	DW-01			DW-02			DW-03		
SAMPLE ID:	DW-1			DW-2			DW-3		
DATE:	03/23/95			03/23/95			03/22/95		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/L)									
Acetone	< 50		50	< 50		50	< 50		50
Chloroform	62		5	40		.	55		5
Bromodichloromethane	12		5	6		.	13		5
Tetrachloroethene	< 5		5	< 5		5	< 5		5
Toluene	< 5		5	2		.	< 5		5
Semi-Volatile Organics (ug/L)									
Phenol	< 10		10	(2.1)	J	10	(2.5)	J	10
Naphthalene	< 10		10	< 10	J	10	< 10		10
Dibenzofuran	< 10		10	< 10	J	10	< 10		10
Fluorene	< 10		10	< 10	J	10	< 10		10
Di-n-butyl phthalate	< 10		10	< 10	J	10	(1.4)	J	10
Bis(2-ethylhexyl)phthalate	< 10		10	(3.7)	J	10	< 10		10
Metals and Cyanide (mg/L)									
Silver	< 0.010		0.01	< 0.01		0.01	< 0.01		0.01
Aluminum	< 0.20		0.2	< 0.20		0.2	< 0.20		0.2
Barium	0.039		.	0.035		0.01	0.036		.
Beryllium	< 0.005		0.005	< 0.005		0.005	< 0.005		0.005
Calcium	80.1		5	77.8		5	407		5
Cadmium	< 0.01		0.01	< 0.010		0.01	< 0.01		0.01
Cobalt	< 0.05		0.05	< 0.050		0.05	< 0.05		0.05
Chromium	< 0.02		0.02	< 0.020		0.02	< 0.02		0.02
Copper	< 0.01		0.01	< 0.010		0.01	< 0.01		0.01
Iron	5.9		.	9.9		0.05	43.8		.
Potassium	5.3		5	48.6		5	13.9		5
Magnesium	27.2		5	27.1		5	111		5
Manganese	0.90		.	(0.57)		5	2.8		.
Sodium	28.7		5	72.1		5	105		5
Nickel	< 0.04		0.04	< 0.040		0.04	< 0.04		0.04
Lead	< 0.10		0.1	< 0.10		0.1	< 0.10		0.1
Vanadium	< 0.05		0.05	< 0.050		0.05	< 0.05		0.05
Zinc	0.17		.	0.053		0.05	0.13		.
Arsenic	< 0.005		0.005	< 0.005		0.005	< 0.005		0.005
Mercury	< 0.0002		0.0002	< 0.0002		0.0002	< 0.0002	J	0.0002
Cyanide, Total	0						0		
TICs (ug/L)									
2-Fluoro-6-nitrophenol	4			--			8		
Acetic acid, methyl ester-	---			---			---		
Ethanol, 2-(2-Ethoxyethoxy)-	---			---			5		
Phenol, 4,4'-(1-methylethylidene)bis	---			6	J		9		
Phenol, 4,4-butylidenebis[2	---			---			---		

Result - Analysis Result, Q - Qualifiers, DL- Detection Limit.
( ) - Indicates result less than detection limit.
* - Indicates duplicate analysis is not within control limits.
J - Indicates result is estimated.
--- - Not analyzed.

Table 4
SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-01			PZ-02			PZ-03		
SAMPLE ID:	PZ-1			PZ-2			PZ-3		
DATE:	03/29/95			03/23/95			03/24/95		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/L)									
Acetone	< 50		50	(5.6)	J	50	< 62		62
Chloroform	< 5		5	< 5		5	210		6
Bromodichloromethane	< 5		5	< 5		5	< 6		6
Tetrachloroethene	< 5		5	6.3		5	< 6		6
Toluene	< 5		5	< 5		5	< 6		6
Semi-Volatile Organics (ug/L)									
Phenol	< 10		10	< 10		10	(1.6)	J	10
Naphthalene	< 10	J	10	< 10		10	< 10	R	10
Dibenzofuran	< 10	J	10	< 10		10	< 10	R	10
Fluorene	< 10	J	10	< 10		10	< 10	R	10
Di-n-butyl phthalate	< 10	J	10	< 10		10	< 10	R	10
Bis(2-ethylhexyl)phthalate	< 10	J	10	(9.4)	J	10	(5.7)	J	10
Metals and Cyanide (mg/L)									
Silver	0.014		.	< 0.010		0.01	0.018		.
Aluminum	108		.	4.2		.	478		.
Barium	0.015		.	0.20		.	0.41		.
Beryllium	0.0060		.	< 0.005		0.005	0.026		.
Calcium	438		5	506		5	365		5
Cadmium	0.31		.	< 0.010		0.01	0.074		.
Cobalt	0.15		.	< 0.05		0.05	0.30		.
Chromium	< 0.02		0.02	< 0.02		0.02	0.040		.
Copper	0.14		.	0.015		.	0.22		.
Iron	74.0		.	8.5		.	385		5
Potassium	6.7		5	11.3		5	23.9		5
Magnesium	128		5	122		5	351		5
Manganese	58.5		.	0.15		.	48.3		.
Sodium	147		5	28.3		5	544		5
Nickel	0.28		.	< 0.04		0.04	0.79		.
Lead	< 0.10		0.1	< 0.10		0.1	< 0.1		0.1
Vanadium	< 0.05		0.05	< 0.05		0.05	0.11		.
Zinc	2.1		.	0.066		.	0.91		.
Arsenic	< 0.020	*	0.02	0.0059		.	< 0.05	*	0.05
Mercury	< 0.0002		0.0002	< 0.0002		0.0002	0.00026		.
Cyanide, Total	0.008			0			0		
TICs (ug/L)									
2-Fluoro-6-nitrophenol	---			---			---		
Acetic acid, methyl ester-	---			6			---		
Ethanol, 2-(2-Ethoxyethoxy)-	---			---			---		
Phenol, 4,4'-(1-methylethylidene)bis	---			---			---		
Phenol, 4,4-butylidenebis[2	---			14			---		

Result - Analysis Result, Q - Qualifiers, DL- Detection Limit.
( ) - Indicates result less than detection limit.
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J - Indicates result is estimated.
--- - Not analyzed.

Table 4
SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-04			PZ-05			PZ-06A		
SAMPLE ID:	PZ-4			PZ-5					
DATE:	03/24/95			03/23/95			03/22/95		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/L)									
Acetone	< 50	J	50	< 50		50	< 50		50
Chloroform	< 5		5	< 5		5	[illegible]	J	5
Bromodichloromethane	< 5		5	< 5		5	< 5		5
Tetrachloroethene	< 5		5	< 5		5	< 5		5
Toluene	< 5		5	< 5		5	8		5
Semi-Volatile Organics (ug/L)									
Phenol	< 10		10	(1.2)	J	10	< 10		10
Naphthalene	< 10		10	< 10	R	10	< 10		10
Dibenzofuran	< 10		10	< 10	R	10	< 10		10
Fluorene	< 10		10	[illegible]	R	10	< 10		10
Di-n-butyl phthalate	< 10		10	< 10	R	10	< 10		10
Bis(2-ethylhexyl)phthalate	(5.4)	J	10	< 10	R	10	< 10		10
Metals and Cyanide (mg/L)									
Silver	< 0.01		0.01	< 0.01		0.01	< 0.010		0.01
Aluminum	77.6		.	106		.	29.5		0.2
Barium	0.15		.	0.28		.	0.53		0.01
Beryllium	< 0.005		0.005	< 0.005		0.005	< 0.005		0.005
Calcium	497		5	377		5	347		5
Cadmium	0.070		.	0.015		.	< 0.010		0.01
Cobalt	< 0.05		0.05	< 0.05		0.05	< 0.050		0.05
Chromium	0.028		.	0.027		.	0.044		0.02
Copper	0.20		.	0.043		.	0.042		0.01
Iron	12.5		.	8.6		.	39.7		0.05
Potassium	25.4		5	15.4		5	12.0		5
Magnesium	8.9		5	22.4		5	72.7		5
Manganese	0.44		.	2.3		.	0.79		0.01
Sodium	37.8		5	27.0		5	29.1		5
Nickel	0.077		.	0.11		.	0.091		0.04
Lead	< 0.1		0.1	< 0.10		0.1	< 0.10		0.1
Vanadium	0.068		.	< 0.05		0.05	0.086		0.05
Zinc	0.19		.	0.18		.	0		.
Arsenic	0.020		.	< 0.010	*	0.01	0.018		0.005
Mercury	< 0.0002		0.0002	< 0.0002		0.0002	< 0.00020	J	0.0002
Cyanide, Total	0			0			0		
TICs (ug/L)									
2-Fluoro-6-nitrophenol	6			---			---		
Acetic acid, methyl ester-	---			---			---		
Ethanol, 2-(2-Ethoxyethoxy)-	---			---			---		
Phenol, 4,4'-(1-methylethylidene)bis	---			---			---		
Phenol, 4,4-butylidenebis[2	---			---			---		

Result - Analysis Result, Q - Qualifiers, DL- Detection Limit.
( ) - Indicates result less than detection limit.
* - Indicates duplicate analysis is not within control limits.
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Table 4
SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-07			PZ-08A			PZ-09		
SAMPLE ID:	PZ-7			PZ-8			PZ-9		
DATE:	03/23/95			03/22/95			03/22/95		
	Result	Q	DL	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/L)									
Acetone	< 50	J	50	< 50		50	< 50		50
Chloroform	< 5		5	< 5		5	(2.6)	J	5
Bromodichloromethane	< 5		5	< 5		5	< 5		5
Tetrachloroethene	< 5		5	< 5		5	< 5		5
Toluene	< 5		5	12		5	(4.6)	J	5
Semi-Volatile Organics (ug/L)									
Phenol	< 10		10	< 10		10	< 10		10
Naphthalene	< 10		10	< 10		10	< 10		10
Dibenzofuran	< 10		10	< 10		10	< 10		10
Fluorene	< 10		10	< 10		10	< 10		10
Di-n-butyl phthalate	< 10		10	< 10		10	< 10		10
Bis(2-ethylhexyl)phthalate	40		10	< 26		26	< 16		16
Metals and Cyanide (mg/L)									
Silver	< 0.01		0.01	0.01		.	< 0.010		0.01
Aluminum	28.5		.	11.2		.	21.2		.
Barium	0.56		.	0.44		.	0.76		.
Beryllium	< 0.005		0.005	< 0.005		0.005	< 0.0050		0.005
Calcium	320		5	113		5	122		5
Cadmium	0.056		.	< 0.01		0.01	< 0.01		0.01
Cobalt	< 0.05		0.05	< 0.05		0.05	< 0.05		0.05
Chromium	0.041		.	0.023		.	0.043		.
Copper	0.044		.	0.024		.	0.038		.
Iron	23.8		.	22.6		.	50.5		.
Potassium	10.6		5	< 5		5	7.0		5
Magnesium	89.0		5	27.2		5	37.3		5
Manganese	8.6		.	0.23		.	0.64		.
Sodium	32.5		5	10.6		5	12.8		5
Nickel	0.19		.	< 0.04		0.04	0.082		.
Lead	< 0.10		0.1	< 0.1		0.1	< 0.10		0.1
Vanadium	0.056		.	< 0.05		0.05	0.076		.
Zinc	0.26		.	0.14		.	0.20		.
Arsenic	0.012		.	0.014		.	0.012		.
Mercury	0.00061		.	< 0.00020	J	0.0002	< 0.0002	J	0.0002
Cyanide, Total	0			0			0		
TICs (ug/L)									
2-Fluoro-6-nitrophenol	---			---			---		
Acetic acid, methyl ester-	---			---			---		
Ethanol, 2-(2-Ethoxyethoxy)-	---			---			---		
Phenol, 4,4'-(1-methylethylidene)bis	---			---			---		
Phenol, 4,4-butylidenebis[2	---			---			---		

Result - Analysis Result, Q - Qualifiers, DL- Detection Limit.
( ) - Indicates result less than detection limit.
* - Indicates duplicate analysis is not within control limits
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--- - Not analyzed.

Table 4
SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER SAMPLES

GENERAL CHEMICAL CORPORATION
EAST ST. LOUIS, IL

SITE:	PZ-10			PZ-11		
SAMPLE ID:	PZ-10			PZ-11		
DATE:	03/22/95			03/22/95		
	Result	Q	DL	Result	Q	DL
Volatile Organics (ug/L)						
Acetone	< 50		50	< 50		50
Chloroform	7.3		5	< 5		5
Bromodichloromethane	< 5		5	< 5		5
Tetrachloroethene	< 5		5	< 5		5
Toluene	64		5	< 5		5
Semi-Volatile Organics (ug/L)						
Phenol	(2.1)	J	10	< 10		10
Naphthalene	44		10	< 10		10
Dibenzofuran	(3.6)	J	10	< 10		10
Fluorene	(3.5)	J	10	< 10		10
Di-n-butyl phthalate	< 10		10	< 10		10
Bis(2-ethylhexyl)phthalate	< 250		250	< 10		10
Metals and Cyanide (mg/L)						
Silver	< 0.020	*	0.02	< 0.01		0.01
Aluminum	225		.	10.5		.
Barium	0.97		.	0.17		.
Beryllium	0.0080		.	< 0.005		0.005
Calcium	459		5	346		5
Cadmium	0.044		.	0.014		.
Cobalt	0.19		.	< 0.05		0.05
Chromium	0.084		.	< 0.02		0.02
Copper	0.21		.	0.015		.
Iron	126		.	8.4		.
Potassium	22.6		5	5.4		5
Magnesium	151		5	21.3		5
Manganese	15.6		.	0.39		.
Sodium	584		10	68.5		5
Nickel	0.44		.	< 0.04		0.04
Lead	0.17		.	< 0.10		0.1
Vanadium	0.14		.	< 0.05		0.05
Zinc	1.1		.	0.32		.
Arsenic	0.059		.	0.0055		.
Mercury	< 0.00020	J	0.0002	< 0.0002	J	0.0002
Cyanide, Total	0			0		
TICs (ug/L)						
2-Fluoro-6-nitrophenol	---			---		
Acetic acid, methyl ester-	---			---		
Ethanol, 2-(2-Ethoxyethoxy)-	---			4		
Phenol, 4,4'-(1-methylethylidene)bis	---			---		
Phenol, 4,4-butylidenebis[2	---			---		

Result - Analysis Result, Q - Qualifiers, DL- Detection Limit.
( ) - Indicates result less than detection limit.
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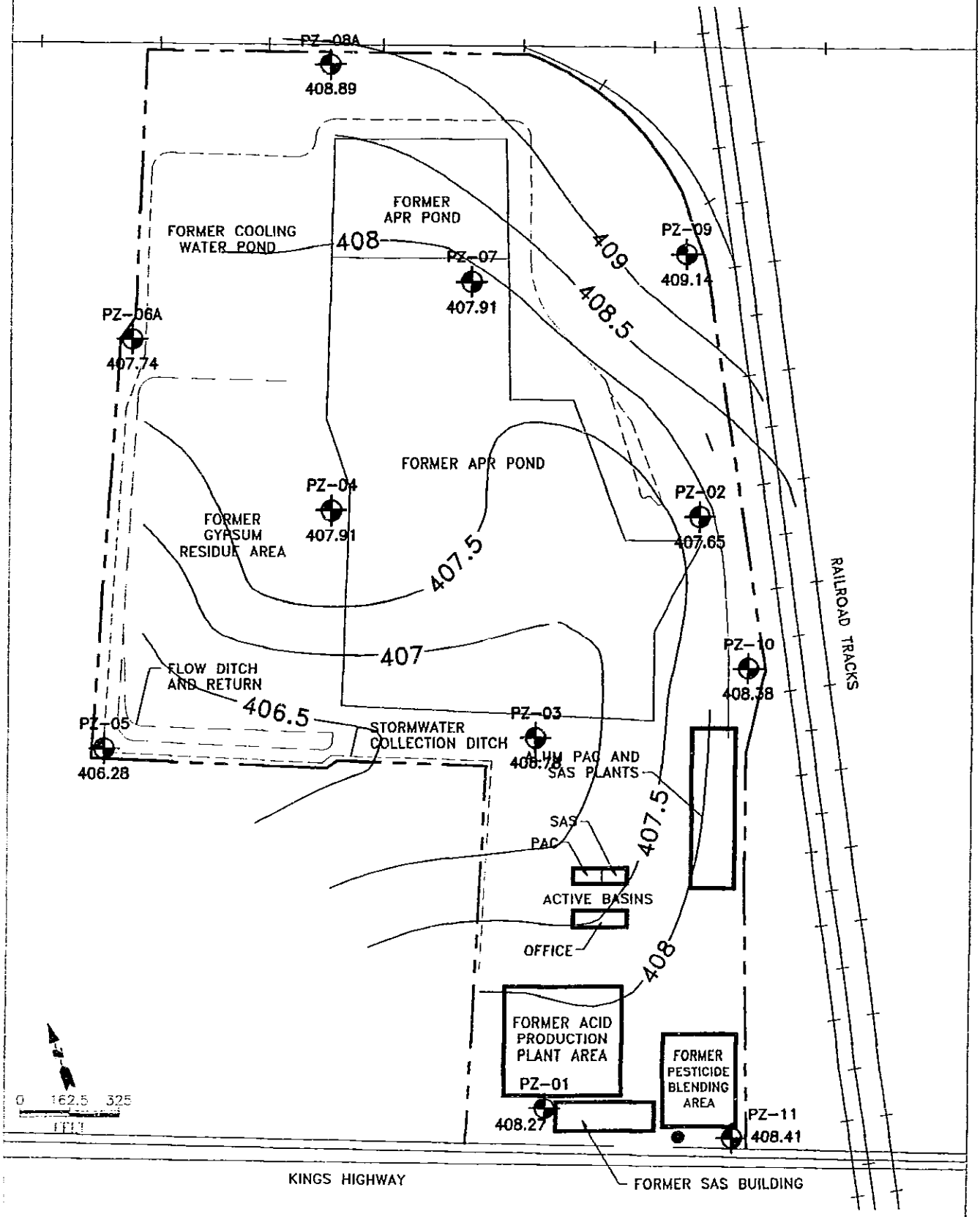

EXPLANATION

—408— PIEZOMETRIC SURFACE (FT. MSL) MEASURED MAY 15, 1995

PHILIP ENVIRONMENTAL

PIEZOMETRIC SURFACE MAP
SHALLOW WELLS

SCALE	DATE	PROJECT NO: 426215
DWN: MFH	05/20/95	GENERAL CHEMICAL EAST ST. LOUIS, IL
DES:		
CHKD:		FIGURE 7
APPD:		REV:

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Biggs Brothers – Fairmont City

GROUNDWATER INVESTIGATION
ANALTICAL SUMMARY

Table 1

(Reported in ppb)

Sample ID	Benzene	Toluene	Ethyl-Benzene	Xylenes	PNAs
TACO Class I GW Quality Standard	**5**	**1,000**	**700**	**10,000**	
Class II	**25**	**2,500**	**1,000**	**10,000**	
MW-1	18,900	26,800	3,020	14,000	
MW-2	5,780	8,700	2,210	8,100	Nap 381
MW-3	ND	5	3	9	
MW-4	1,640	5,360	1,610	5,760	Nap 322
MW-5	ND	ND	ND	ND	
MW-6	ND	ND	ND	ND	
MW-7	ND	ND	ND	ND	
MW-8	13,000	42,900	3,430	16,700	Nap 59,300
MW-9	1,030	11,200	1,940	12,000	
MW-10	ND	ND	ND	ND	
MW-11	ND	ND	ND	ND	
MW-12	29,700	64,300	13,200	65,500	Nap 8,290
MW-13	29,300	45,300	3,040	15,100	
MW-14	24,700	33,700	4,700	22,900	
MW-15	507	2,240	1,440	2,810	
MW-16	ND	ND	ND	ND	
MW-17	16,000	210,000	98,000	430,000	Nap 1,600
MW-18	.84	ND	ND	4.8	
MW-19	8,100	28,000	2,900	14,000	Nap 1,300
MW-20	18,000	74,000	19,000	98,000	Nap 4,400
MW-21	2,800	6,400	2,400	14,000	Nap 63
MW-22	450	7,600	9,700	49,000	Nap 3,900 Fluoranthene 350 Fluorene 11
MW-23	ND	73	120	640	Nap 59
MW-24	ND	ND	ND	ND	
MW-25	ND	ND	ND	ND	
MW-26	ND	ND	1.2	8	
MW-27	ND	ND	ND	ND	
MW-28	ND	ND	ND	ND	
MW-29	ND	ND	ND	ND	
MW-30	ND	ND	ND	ND	
MW-31	ND	ND	ND	ND	
MW-32	ND	ND	ND	ND	

Shading - Exceeds Class II Groundwater Ingestion Cleanup Objective
ND -- Not Detected above detection (reporting) limit

Biggs Brothers – Fairmont City

SOIL ANALTICAL SUMMARY

Table 2

(Reported in ppb)

Sample ID	Depth Ft.	Benzene	Toluene	Ethyl-Benzene	Xylenes
TACO Tier 1 Clean-up Objectives for the Soil Component for the Migration to Class I Groundwater:		**30**	**12,000**	**13,000**	**150,000**
Ingestion Objective		**22,000**	**16,000,000**	**7,800,000**	**160,000,000**
Inhalation Objective		**800**	**650,000**	**400,000**	**410,000**
BH-2	16.5'	ND	ND	ND	ND
BH-3	11.5'	552	5,540	4,290	21,300
BH-4	19.5'	683	1,740	882	3,670
BH-6	2.5'	16,600	148,000	61,700	219,000
BH-7	7.5'	234	193	43	280
BH-8	14.5'	98,300	288,000	171,000	437,000
BH-9	19'	17,800	77,600	26,800	104,000
BH-10	17.5'	16	15	222	252
BH-11	14'	ND	4	ND	10
BH-12	18.5'	7,430	64,000	26,000	101,000
BH-13	18.5'	154	13	1,560	302
BH-14	2.5'	ND	ND	ND	ND
BH-15	15.5'	120,000	499,000	300,000	811,000
BH-16	18.5'	27,700	192,000	80,900	314,000
BH-17	15.5'	ND	ND	ND	ND
BH-18	12.5'	641	49	541	217
BH-19	12.5'	ND	ND	ND	9
BH-20	12.5'	3	10	19	106
BH-21A	9'	166	249	64	334
BH-21B	13'	5180	96,900	76,600	255,000
BH-22	13.5'	ND	11	19	181
BH-23A	9.5'	ND	ND	ND	ND
BH-23B	14.5'	3,040	1,180	3,560	6,020
BH-24A	10'	ND	ND	ND	ND
BH-24B	13.5'	21	6	657	151
BH-25	13.5'	ND	ND	ND	ND
BH-26A	9.5'	ND	ND	ND	ND
BH-26B	14'	ND	ND	ND	ND
BH-27	14'	ND	ND	ND	ND
BH-28	13.5'	ND	ND	ND	ND

Shading indicates an exceedence of TACO Tier 1 Residential Soil cleanup Objectives for Inhalation

ND -- Not Detected above detection (reporting) limit

SOIL ANALTICAL SUMMARY (CONT.)

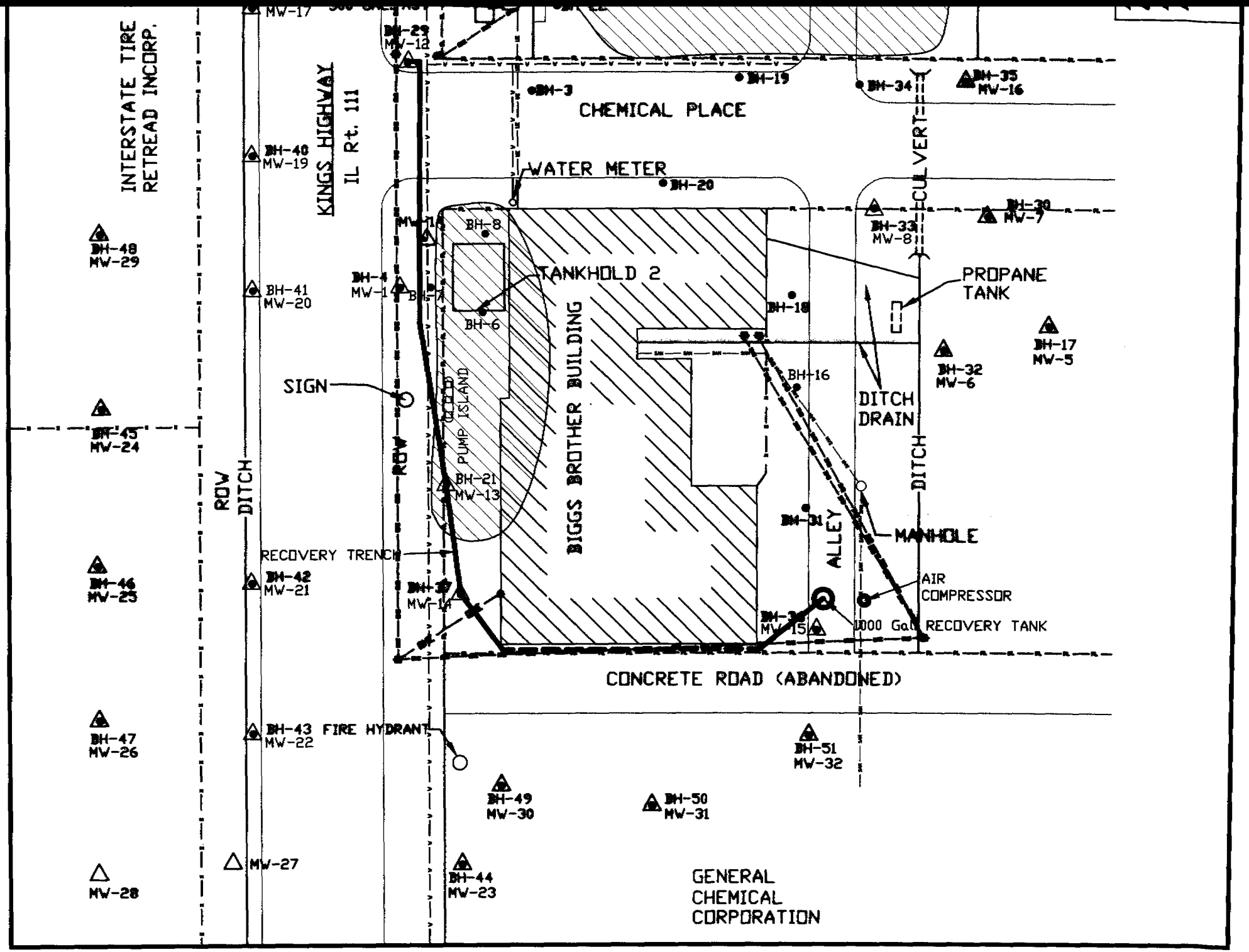
Table 2

(Reported in ppb)

Sample ID	Depth Ft.	Benzene	Toluene	Ethyl-Benzene	Xylenes
TACO Tier 1 Clean-up Objectives for the Soil Component for the Migration to Class I Groundwater:		**30**	**12,000**	**13,000**	**150,000**
Ingestion Objective		**22,000**	**16,000,000**	**7,800,000**	**160,000,000**
Inhalation Objective		**800**	**650,000**	**400,000**	**410,000**
BH-29A	7.5'	ND	ND	ND	ND
BH-29B	12.5'	ND	ND	ND	ND
BH-30	13'	ND	ND	ND	ND
BH-31	12.5'	ND	ND	ND	ND
BH-32	11.5'	ND	ND	ND	ND
BH-33	13.5'	51	ND	137	ND
BH-34A	9.5'	253	ND	309	514
BH-34B	12.5'	101	252	3,902	16,700
BH-35	13'	ND	ND	ND	ND
BH-36	12.5'	107	ND	51	90
BH-37	13'	51	196	97	496
BH-38	7'	1.9	5	.61	2.8
BH-39	7'	.98	ND	.58	2.5
BH-40	7'	160	ND	ND	41
BH-41A	3'	320	8.4	13	8.4
BH-41B	12'	1,400	4,400	2,200	9,100
BH-42A	8'	57	ND	ND	6.7
BH-42B	12'	240	ND	ND	280
BH-43A	9'	1.9	ND	ND	ND
BH-43B	12'	4	ND	ND	6.8
BH-44A	8'	ND	ND	ND	1.6
BH-44B	12'	ND	ND	ND	ND
BH-45A	6.5'	ND	ND	ND	ND
BH-45B	11.5'	ND	ND	ND	ND
BH-46A	6.5'	ND	ND	ND	ND
BH-46B	11.5'	1.2	ND	ND	ND
BH-47A	6.5'	ND	ND	ND	ND
BH-47B	11.5'	ND	ND	ND	ND
BH-48	11.5'	ND	ND	ND	ND
BH-49	12'	ND	ND	ND	ND
BH-50	11.5'	ND	ND	ND	ND
BH-51	12'	ND	ND	ND	ND

Shading indicates an exceedence of TACO Tier 1 Residential Soil cleanup Objectives for Inhalation

ND -- Not Detected above detection (reporting) limit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KINGS HIGHWAY
IL Rt. 111
CHEMICAL PLACE
WATER METER
TANKHOLD 2
BIGGS BROTHER BUILDING
PUMP ISLAND
PROPANE TANK
DITCH DRAIN
CULVERT
DITCH
ALLEY
MANHOLE
AIR COMPRESSOR
1000 Gal RECOVERY TANK
RECOVERY TRENCH
SIGN
ROW
ROW DITCH
CONCRETE ROAD (ABANDONED)
FIRE HYDRANT
GENERAL CHEMICAL CORPORATION
BH-3
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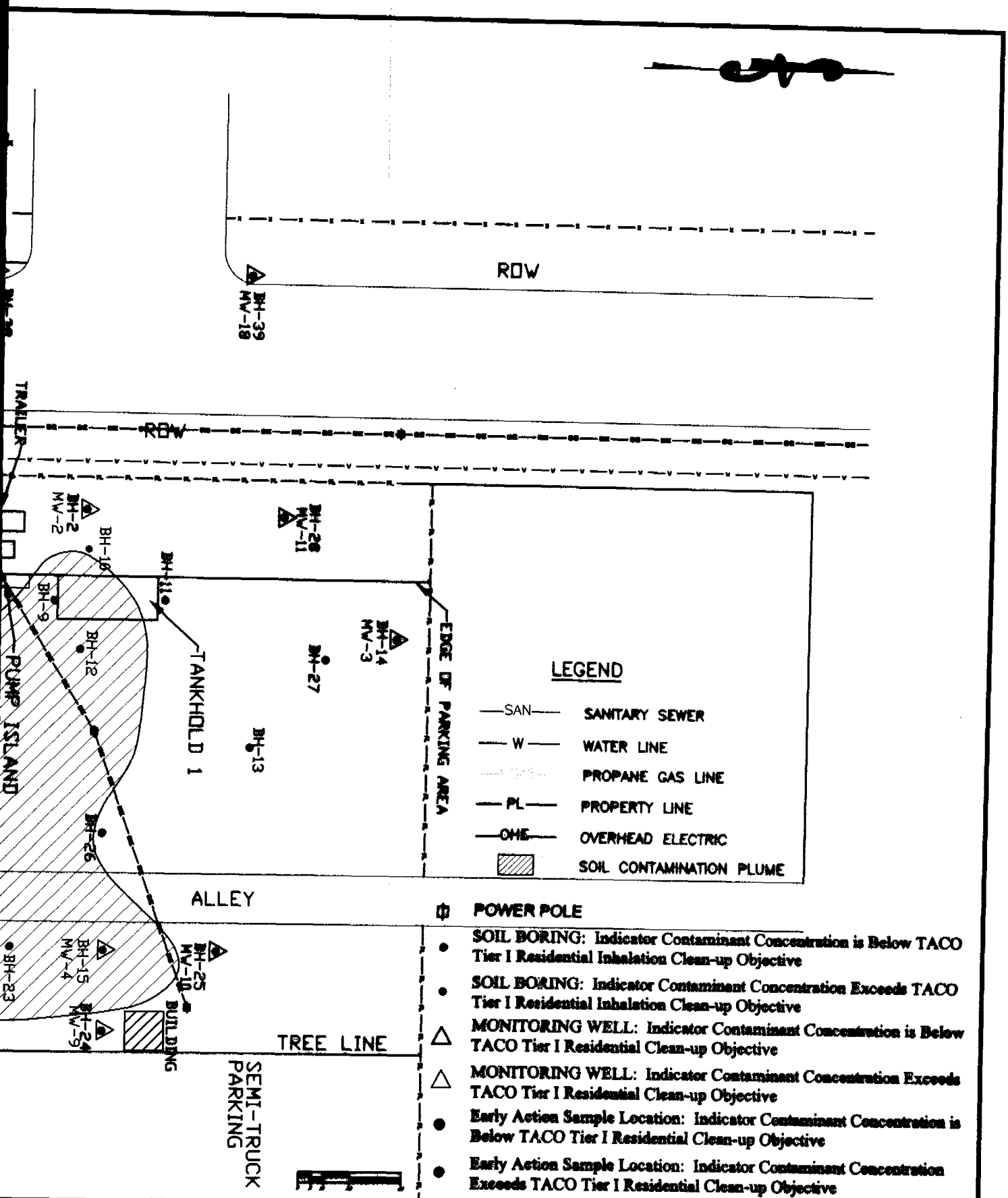
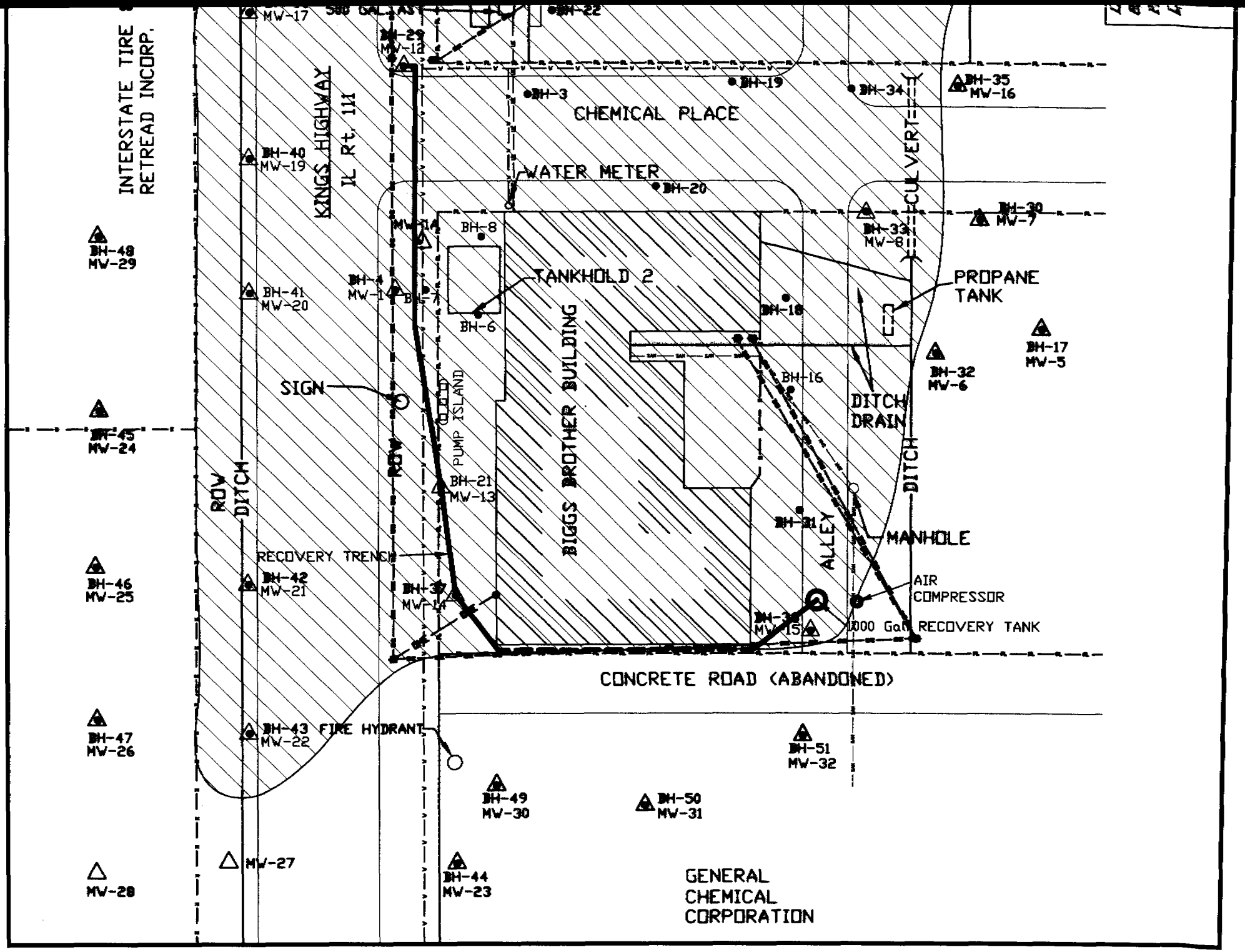


C#M34255004--ST. CLAIR County
GGS BROTHERS
AIRMONT CITY, IL.
IST Incident No. 990762

PROJECT NAME: BIGGS BROTHERS-FAIRMONT CITY	
DRAWN BY: NKA	PROJECT NO.: 1859032
CHECKED BY:	TITLE: SOIL CONT. MAP
DATE: JUNE 2002	
SCALE: 1"=40'	DWG NO. Figure 2


INTERSTATE TIRE
RETREAD INCORP.
KINGS HIGHWAY
IL Rt. 111
CHEMICAL PLACE
WATER METER
TANKHOLD 2
BIGGS BROTHER BUILDING
PUMP ISLAND
SIGN
ROW
ROW DITCH
RECOVERY TRENCH
CULVERT
DITCH
DITCH DRAIN
PROPANE TANK
ALLEY
MANHOLE
AIR COMPRESSOR
1000 Gal. RECOVERY TANK
CONCRETE ROAD (ABANDONED)
FIRE HYDRANT
GENERAL
CHEMICAL
CORPORATION
MW-17
BH-29
MW-12
BH-22
BH-3
BH-19
BH-34
BH-35
MW-16
BH-40
MW-19
BH-20
BH-30
MW-7
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MW-8
BH-8
MW-11
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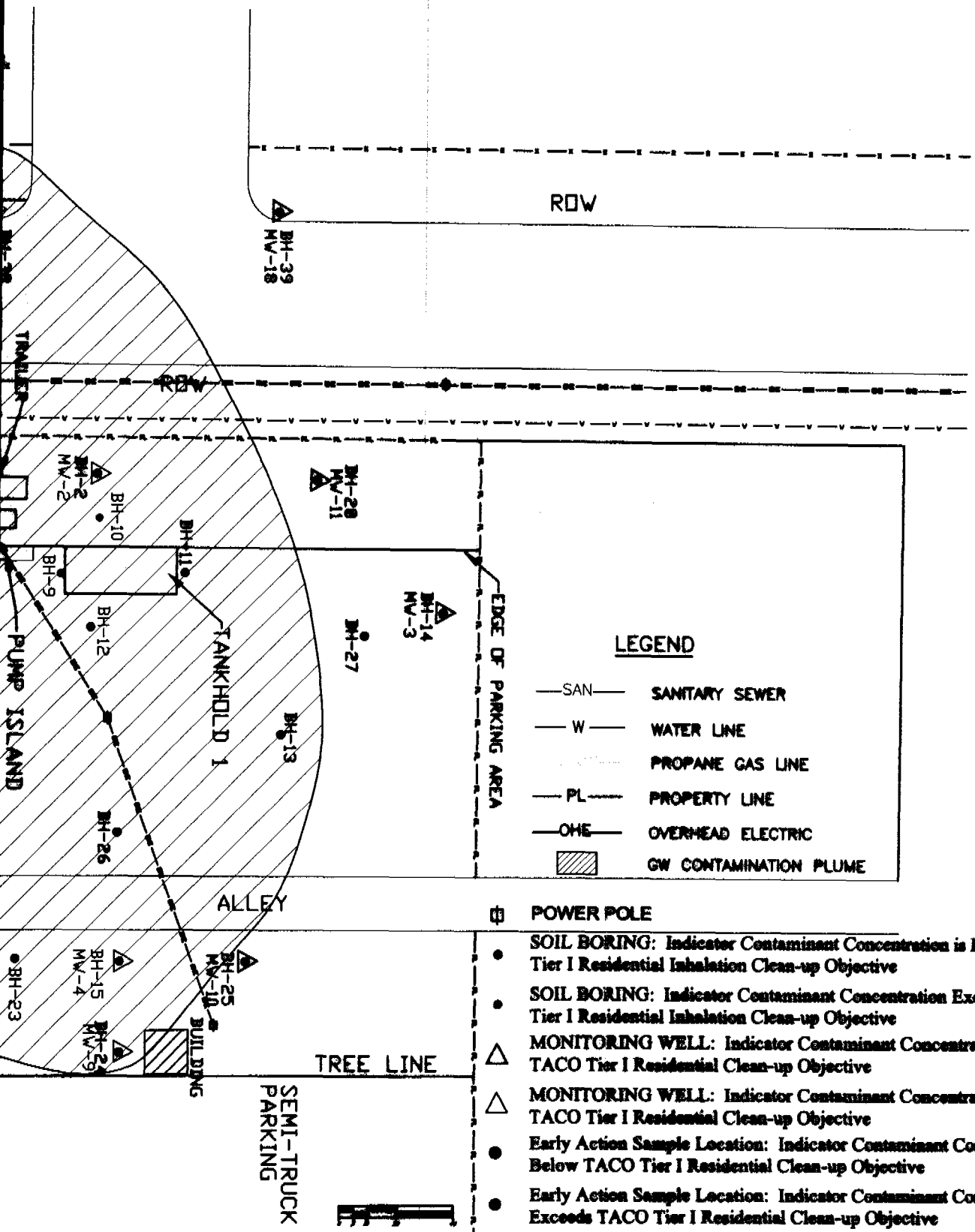
BH-44
MW-23



PC# 1639255004—ST. CLAIR County
BIGGS BROTHERS
FAIRMONT CITY, IL.
UST Incident No. 990762

PROJECT NAME: BIGGS BROTHERS-FAIRMONT CITY	
DRAWN BY: NKA	PROJECT NO.: 1839032
CHECKED BY:	TITLE: GW CONT. MAP
DATE: JUNE 2002	
SCALE: 1"=40'	DWG NO: Figure 3

CERTIFICATION

This Swift Agricultural Chemicals Corporation Site Health Consultation was prepared by the Illinois Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was begun.

Gail D. Godfrey
Technical Project Officer
Division of Health Assessment and Consultation
ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this health consultation and concurs with its findings.

Lisa C. Hayes for
Richard E. Gillig
Chief, State Programs Section
Division of Health Assessment and Consultation
ATSDR

APPENDICES

Table 1 Summary of Environmental Monitoring Results

Table 2 On-Site Soil and Sediment Sampling Results

Table 3 Off-Site Sediment Sampling Results

Table 4 1996 Groundwater Monitoring Results

Table 5 Calculated Doses and Health Guidelines

Table 6 Completed Exposure Pathways

Figure 1 Swift Agricultural Chemicals Corporation Site Location Map

Figure 2 Soil and Sediment Sample Location Map

Figure 3 1996 Soil and Groundwater Sampling Location Map

TABLES

In the data tables that follow, the listing of a contaminant does not mean that it will cause adverse health effects from exposures. The tables summarize data from both the 1989 and 1996 investigations. The tables include the following abbreviations:

J = estimated value, qualitatively correct but quantitatively suspect
B = analyte found in the associated blank and indicates possible/probable blank contamination
P = alternative analytical method used to analyze for this compound
C = Confirmed by GC/MS (for pesticides)
D = Analyzed at a secondary dilution factor
E = Estimated value of a compound that exceeded the calibration range
U = Compound analyzed for but not detected
N = Spiked sample
W = Post digestion spike for furnace AA analysis

Table 1 - Summary of Analyses Conducted at the Swift Agrichemical Facility

Compound/CV	1989 Samples taken by E & E (results in ppm)												Sample Date June 4 and 5, 1996 (results in ppm)								
	Soil	Soil	OS Sed	Sub-Soil	Soil	ONS Sed	OS Sed	OS Sed	OS Sed	OS Sed	OS Sed	SOIL (BKG)	X101	X102	X103	X104	G101	G102	G103	G104	G105
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12									
Methylene Chloride	.006J	.009	.027	.013	.005J	.009J	.030J	-	-	.030J	.028J	.014	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	-	-	.033	-	.054	.046	.240J	.057J	-	.210J	.130J	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	-	-	-	-	-	-	.022J	-	-	.021J	.021J	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	-	-	.004J	-	-	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachoroethene	-	-	-	-	-	-	-	.013J	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	.005J	.016	.036	.014	.11	-	-	.009J	-	.005J	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl Benzene	-	-	.005J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003J
Xylenes (total)	-	-	.022	-	-	-	-	-	-	-	-	-	-	-	-	-	.003J	-	-	-	-
SEMIVOLATILES																					
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	.042J	-	.0005J	-	.0006J	-	-
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	.094J	-	.065J	-	-	-	-	-
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	.0005J	-
2,4-Dichlorophenol	-	-	-	-	-	-	-	-	-	1.3	-	-	.1J	.094J	.042J	.058J	-	-	.0001J	-	-
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	.054J	-	-	-	-	-	-

Naphthalene	-	0.082J	-	-	-	-	-	-	.13J	.36J	.17J	.04J	.048J	.12J	.11J	.07J	.005J	.003J	-	-	-
4-Chloro-3-Methylphenol	-	-	-	-	.2J	-	-	-	-	-	-	-	-	.06J	-	.04J	-	-	-	-	-
2-Methylnaphthalene	-	.046J	-	-	-	-	-	13J	.29J	.87J	.11J	.045J	.054J	.13J	.098J	.077J	.012	.006J	-	-	-
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.055J	-	-	-	-	-	-	-	-
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	-	-	.001J	.0007J	-	-	-
Acenaphthalene	-	.045J	-	-	.1J	-	-	-	-	-	-	-	-	.01J	.45J	.1J	-	-	-	-	-
Acenaphthene	-	-	-	-	.087J	-	-	-	.17J	.21J	.1J	-	-	-	.04J	-	.018	.013	-	-	-
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	.002J	-
Dibenzofuran	-	-	-	-	-	-	-	-	.23J	.27J	.11J	-	.041J	.068J	-	.041J	.01	.009J	-	-	-
Diethyl Phthalate	-	-	-	-	-	-	-	-	-	-	.45J	-	.034J	.04J	.036J	-	.001J	-	-	-	.002J
Fluorene	-	-	-	-	-	-	-	3.7J	.24J	.27J	.16J	-	-	.069J	.047J	.046J	.014	.011	-	-	-
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	.064J	-	-	.016	-	-	-	-
Hexachlorobenzene	-	.098J	-	-	.24J	-	-	-	-	-	-	-	-	.66J	.16J	.38J	-	-	-	-	-
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.1	.036J	-	-	-	-	-	-	-
Phenanthrene	.66	.26J	-	-	1.1	-	.67J	14J	3.6	4.3	1.3	.051J	.041J	1.5	.57J	.87	.045	.032	-	-	-
Anthracene	.12J	-	-	-	.26J	-	-	-	.63	.52J	.25J	-	.074J	.39J	.72	.25J	.005J	.003J	-	-	-
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.048J	.27J	.13J	.18J	.02	.017	-	-	-
Di-n-butyl	-	-	-	-	-	-	-	-	-	.17J	-	-	2	-	-	.039J	-	.0006	-	-	-

phthalate																		J			
Fluoranthene	2.3	.29J	-	2.7	1.8	.78J	2J	-	3.8	5.2	1.9	.05J	.49J	3.9	1.1	2.6D	.009J	.0005 J	-	-	-
Pyrene	3.9J	.48	.5J	3.9J	1.9J	.87J	2.6J	-	3.4	4J	2J	.055J	.52J	3.7	1.5	2.3D	.002J	.001J	-	-	-
Butylbenzyl Phthalate	.16J	-	-	-	-	-	-	-	-	-	.23J	-	-	.22J	.08J	.18J	-	-	-	-	-
Benz(a)Anthracene	1.2J	.23J	-	.64J	1.1	-	1.7J	-	1.7	1.8	.95	-	.22J	2.1	1.4	4.3	-	-	-	-	-
bis(2-ethylhexyl) phthalate	6.1J	1.4	.6J	5	.27J	-	3.4J	-	4.3	1.6	2.5	-	1.6	2.3	2.1	1.7	-	-	-	-	-
Chrysene	2J	.36J	.33J	.83J	.99	1.7J	2.6J	-	1.6	1.8	1.1	.046J	.44J	3.4	2.2	2.2	-	-	-	-	-
Benzo(b)Fluoranthene	2.8J	.43J	.29J	.26J	1.2	-	5.3	-	1.8	1.7	1.2	.066J	.31J	4.8	2.3	3	-	-	-	-	-
Benzo(k)Fluoranthene	1.3J	.31J	-	.25J	.8J	1.3J	-	-	1.2	.53J	.85	-	.51J	3.5	1.5	2	-	-	-	-	-
Benzo(a)Pyrene	1.7J	.27J	-	.35J	.62J	.84J	21J	-	1.2	.63J	.99	-	.18J	3.1	1.6	1.9	-	-	-	-	-
Indeno(1,2,3-cd) Pyrene	1.4J	.32J	-	-	.53J	-	1.8J	-	.84	.83J	.76	-	.075J	3.1	1.1	1.8	-	-	-	-	-
Benzo(g,h,i)Perylene	-	.32J	-	-	.43J	-	1.8J	-	.8	.44J	-	-	.38J	3.5	1.2	1.9	-	-	-	-	-
Dibenz(a,h)Anthracene	.24J	-	-	-	-	-	-	-	.19J	-	.13J	-	.15J	-	.58J	-	-	-	-	-	-
PESTICIDES/PCBs																					
Alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.0011JP	.0054JP	.004J	1.2C	-	-	.000006 JP	.000079P	-
Beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.0026JP	.0098JP	.008JP	.032	-	.000009 JP	-	.00004JP	-

Delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.012JP	.044P	.019JP	.09P	.000005 JP	-	-	-	-
Gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	-	.19	.000038 JP	-	-	.000008J	.000004J
Heptachlor	-	-	4.8DC	-	-	-	.051	-	-	-	-	-	.17	.059	.037	.011JP	-	-	-	.000005 JP	.000015J
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9PEC	.31P	.14P	.0059JP	-	-	-	-	-
Heptachlor Epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.03P	.021JP	.016JP	.039P	.000009 JP	-	-	-	-
Dieldrin	.39	.25	.29	-	1.4J	4D	.34DJ	.27	.088	.36	.21	-	-	.33UX	.32	-	-	-	-	-	-
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.0062JP	.013JP	.0084JP	.0051JP	-	-	-	-	-
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	-	-	.0047JP	-	.000004J	-	-	-
Endosulfan Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.0084JP	-	-	-	-	-	-	-	-
4,4'-DDD	-	-	-	-	-	-	-	-	.049	1.5DJ	-	-	.0059JP	.012JP	.0068J	-	-	-	-	-	-
4,4'-DDT	-	-	-	-	-	-	-	-	.033J	1.7DJ	-	-	0.12	.0074JP	-	-	-	-	-	-	-
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	.021JP	.016JP	.0071JP	.0059JP	-	-	-	-	-
Endrin Ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	.035JP	.018JP	.022J	-	-	-	-	-

alpha-Chlorodane	-	-	-	-	-	-	-	-	-	-	.027J	-	.046P	.056P	.061P	.0028JP	-	-	-	-	-
gamma'Chlorodane	.23J	-	1.7DJ	-	.16J	.35J	.43DJ	.14J	.0064J	-	.035J	-	.31PE	.33UX	.34	.012JP	.000009J	.000015 JP	-	-	-
INORGANICS																					
Antimony	13.4B	-	-	-	-	-	-	-	-	12.2B	-	-	6.5B	14.9B	14.5B	47.5	16.1B	-	-	-	-
Arsenic	13.7JNWB	6.2JNB	4.4JN	-	28.5JN	13.3JNB	26.9JNB	24.6J+N	18.6JN	27.8JN	5.5JN	8.4JN	30.9	17.9	18.7	25.3	27.8	46	14.8	30.9	-
Barium	121	83.9	458	628	179	585	197	345	304	571	159	116	447	177	172	248	531	478	27.7B	24.3B	40.1B
Beryllium	1.8	1.6	.56B	3.1	1.3	2.1	2.1B	1.7B	.45B	.74B	.89B	.48B	.7B	1.4B	1.3B	1B	-	-	1.8B	1.7B	.6B
Cadmium	28.7	27.8	14	13.7	67	76.2	344	330	5.7	6.4	14.1	-	19.2	35.3	33.4	37.3	-	-	3150	193	29.2
Chromium,trivalent hexavalent	51.6	48	33.3	397	56.8	83	76.6	455	29.5	90.1	46.9	15.3	68.1	77.7	63.1	44.8	-	-	-	7.2B	-
Cobalt	14	6.7B	3.2B	27.6B	11.5B	9.1B	6.5B	11B	3.3B	4.1B	3.6B	8.3B	9.9B	10.5B	10.1B	10.5B	-	-	91.4	53.7	56.5
Copper	1,530J*	688J*	112J*	84.8J*	618J*	457J*	728J*	446J*	144J*	359J*	187J*	18.9J*	336	1,680	968	452	3.3B	1.9B	4.5B	100	55.7
Lead	523JN	1,790JN	526JN	281JN	3,510JN	1,300JN	1,667JN	2,200JN	669JN	1,800JN	2,030JN	35.3JN	1,010	887	793	1,200	203B	1.6B	2.8B	1.5B	3.8
Manganese	3,980	2,650	462	1,830	883	254	930	735	182	118	754	785	806	1,820	1,830	481	3,070	4,180	11,500	6,070	3,130
Mercury	.4JN	.6JN	5.3JN	-	6.4JN	2.7JN	8.8JN	12JN	6.2JN	10JN	.5JN	-	2.1	.6	.5	.2	-	-	-	-	-
Nickel	59.4	32	22.2	79.7	39.3	8.2B	21.9B	26.6	8.9B	3B	13.9	15.7	40.4	56.2	60.9	28.2	-	-	236	183	106
Selenium	-	-	.35JNWB	-	-	-	3.1JNB	1.8JNB	.57JN	.91JNW	-	-	1.3B	1.4B	1.1B	.7B	-	-	1.6B	-	-

									WB	B											
Silver	31.5 J*N	2.2J *NB	1.4J* NB	3.4J* NB	6.6 J*N	6J*N	12J* N	7.2J* N	2.2J *N	2.6J* NB	3.9J* N	-	.9B	4.3	9.1	1.1B	-	-	-	-	-
Thallium	1.2J +B	-	-	-	2J+B	-	2.4J WB	1.3J WB	.7J WB	-	-	-	-	.4B	.6B	.2B	-	-	-	-	.8B
Vanadium	59.3	56.2	38.3	124	43.6	119	85.4	77.2	28.5	61.4	45.9	21.5	68.7	66.7	64	54.2	2.1B	2.8B	5.8B	16.2B	-
Zinc	8,210	27,400	3,760	2,660	21,600	8,230	32,700	23,400	839	1,370	1,680	147	4,590	9,320	9,480	16,000	10.2B	9B	121,000	31,500	731
Cyanide	-	2.0J N	-	4.2JN	1.1J N	2.3JN	-	-	-	-	-	-	2.7	1.2	1	1.2	.9B	2.7B	5.6	27.2	7

ppm - parts per million
-: compound analyzed, but not detected in the sample

Table 2 - Onsite Soil and Sediment Contaminants of Concern for Swift Agricultural Chemical Facility													
Compound/CV	Soil	Soil	Sub-Soil	Soil	ONS Sed	SOIL (BKG)	X101	X102	X103	X104	Field Blank	Comparison Value Soil (ppm)	Source
	S1	S2	S4	S5	S6	S12							
SEMIVOLATILES													
Benzo(a)Pyrene	1.7J	.27J	.35J	.62J	.84J	-	.18J	3.1	1.6	1.9	-	0.1	CREG
PESTICIDES/PCBs													
Heptachlor	-	-	-	-	-	-	.17	.059	.037	.011JP	-	0.2	CREG
Aldrin	NA	NA	NA	NA	NA	NA	3.9PEC	.31P	.14P	.0059JP	-	0.06/2/20	RMEG
Heptachlor Epoxide	NA	NA	NA	NA	NA	NA	.03P	.021JP	.016JP	.039P	-	0.08	CREG
Dieldrin	.39	.25	-	1.4J	4D	-	-	.33UX	.32	-	-	0.1/3/40:0.04	CEMEG/CREG
INORGANICS													
Antimony	13.4B	-	-	-	-	-	6.5B	14.9B	14.5B	47.5	-	0.8/20/300	RMEG
Arsenic	13.7JNWB	6.2JNB	-	28.5JN	13.3JNB	8.4JN	30.9	17.9	18.7	25.3	-	0.6/20/200	C EMEG
Beryllium	1.8	1.6	3.1	1.3	2.1	.48B	.7B	1.4B	1.3B	1B	-	0.2	CREG
Cadmium	28.7	27.8	13.7	67	76.2	-	19.2	35.3	33.4	37.3	-	1/40/500	C EMEG
Lead	523JN	1790JN	281JN	3510JN	1300JN	35.3JN	1,010	887	793	1,200	1.6B	NONE	NONE
Manganese	3980	2650	1830	883	254	785	806	1,820	1,830	481	1B	300/7,000/100,000	rmeg
Thallium	1.2J+B	-	-	2J+B	-	-	-	.4B	.6B	.2B	-	NONE	NONE
Zinc	8,210	27,400	2,660	21,600	8,230	147	4,590	9,320	9,480	16,000	17.8B	600/20,000/200,000	I EMEG & RMEG

Table 3 - Off-site Sediment Contaminants of Concern for Swift Agricultural Chemical Facility (in ppm)									
Compound/CV	OS Sed	OS Sed	OS Sed	OS Sed	OS Sed	OS Sed	Field Blank	Comparison Value	
	S3	S7	S8	S9	S10	S11		Soil Concentration	Source
SEMIVOLATILES									
Benzo(a)Pyrene	-	21J	-	1.2	.63J	.99	-	0.1	CREG
PESTICIDES/PCBs									
Heptachlor	4.8DC	.051	-	-	-	-	-	0.2	CREG
Aldrin	NA	NA	NA	NA	NA	NA	-	0.06/2/20	RMEG
Heptachlor Epoxide	NA	NA	NA	NA	NA	NA	-	0.08	CREG
Dieldrin	.29	.34DJ	.27	.088	.36	.21	-	0.1/3/40:0.04	CEMEG/CREG
INORGANICS									
Antimony	-	-	-	-	12.2B	-	-	0.8/20/300	RMEG
Arsenic	4.4JN	26.9JNB	24.6J+N	18.6JN	27.8JN	5.5JN	-	0.6/20/200	C EMEG
Beryllium	.56B	2.1B	1.7B	.45B	.74B	.89B	-	0.2	CREG
Cadmium	14	344	330	5.7	6.4	14.1	-	1/40/500	C EMEG
Lead	526JN	1,667JN	2,200JN	669JN	1,800JN	2,030JN	1.6B	NONE	NONE
Manganese	462	930	735	182	118	754	1B	300/7,000/100,000	rmeg
Thallium	-	2.4JWB	1.3JWB	.7JWB	-	-	-	NONE	NONE
Zinc	3,760	32,700	23,400	839	1,370	1,680	17.8B	600/20,000/200,000	I EMEG & RMEG

NA: Compound not analyzed for in the sample.
- : Compound analyzed for, but not detected in the sample.
ppm - parts per million

Table 4 - June 4 and 5, 1996 Groundwater Sample Results (in ppb).								
Compound/CV	G101	G102	G103	G104	G105	Field Blank	Comparison Value for Water (ppb)	Source
SEMIVOLATILES								
Benzo(a)Pyrene	-	-	-	-	-	-	0.000005	CREG
PESTICIDES/PCBs								
Heptachlor	-	-	-	.000005JP	.000015J	-	0.000008	CREG
Aldrin	-	-	-	-	-	-	0.000002/0.0003	CREG/CEMEG
Heptachlor Epoxide	.000009JP	-	-	-	-	-	0.000004	CREG
Dieldrin	-	-	-	-	-	-	0.000002	CREG
INORGANICS								
Antimony	0.016B	-	-	-	-	-	0.004/0.010	RMEG
Arsenic	0.0278	0.046	0.015	0.031	-	-	0.003/0.010 0.00002	CEMEG CREG
Beryllium	-	-	0.0018B	0.0017B	.0006B	-	0.000008	CREG
Cadmium	-	-	3.150	0.193	0.029	-	0.07/0.02	CEMEG
Lead	0.203B	0.0016B	0.0028B	0.0015B	0.0038	0.0016B	NONE	NONE
Manganese	3.070	4.180	11.500	6.070	3.130	0.001B	0.050/0.200	RMEG
Thallium	-	-	-	-	.0008B	-	0.0004	LTHA
Zinc	0.0102B	0.009B	121.0	31.500	0.731	0.0178B	3/10	I EMEG

- Compound not detected in the sample.
  ppb = parts per billion

-

Table 5 - Calculated Doses and a Comparison to Health Guidelines							
Compound/CV	Sediment Concentration Range (in ppm)	Estimated Ingestion Dose (in mg/kg/day)	Health Guidelines		USEPAs Oral Slope Factor	Estimated Increased Cancer Risk	Exceeds The MRL/RfD
			Source	Health Guideline for Soil in mg/kg/day			
SEMIVOLATILES							
Benzo(a)Pyrene	ND - 21J	2.6×10^{-6}	Acute Oral MRL	0.1	7.3	1.9×10^{-5}	NO
PESTICIDES/PCBs							
Heptachlor	ND - 4.8DC	6×10^{-7}	C.O. MRL	0.0005	4.5	2.7×10^{-6}	NO
Aldrin	NA/3.9 (3)	NE/4.9×10^{-7}	Chronic Oral MRL	NE	17	NE/8.3×10^{-6}	NO
Heptachlor Epoxide	NA/0.039(3)	NE/4.9×10^{-9}	C.O. MRL	0.000013	9.1	NE/4.5×10^{-8}	NO
Dieldrin	0.088-0.36	4.5×10^{-8}	C.O. MRL	.00005	16	7.2×10^{-7}	NO
INORGANICS							
Antimony	ND-12.2	1.5×10^{-6}	Chronic Oral RFD	0.0004	N Appl	N Appl	NO
Arsenic	4.4JN-27.8JN	3.4×10^{-6}	Chronic Oral MRL	0.0003	1.5	5.1×10^{-6}	NO
Beryllium	0.45B-2.1B	2.6×10^{-7}	Chronic Oral RFD	0.005	4.3	1.1×10^{-6}	NO
Cadmium	5.7-344	4.3×10^{-5}	C.O. MRL	0.0007	None	None	NO
Lead	526-2,200	2.7×10^{-4}	NAV	NAV	NAV	-	NO
Manganese	182-930	1.16×10^{-4}	NAV	NAV	N Appl	N Appl	NO
Thallium	ND-2.4JWB	3.0×10^{-6}	NAV	NAV	N Appl	N Appl	NO
Zinc	17.8B-32700	4×10^{-3}	C.O. MRL	0.3	N Appl	N Appl	NO
Total Cancer Risk						3.6×10^{-5}	NO

NA: Compound not analyzed for in the sample.

1 - See attached sheet with calculations and assumptions

2 - Calculated using highest sediment concentration

NE - Not estimated

N Appl - Not Applicable

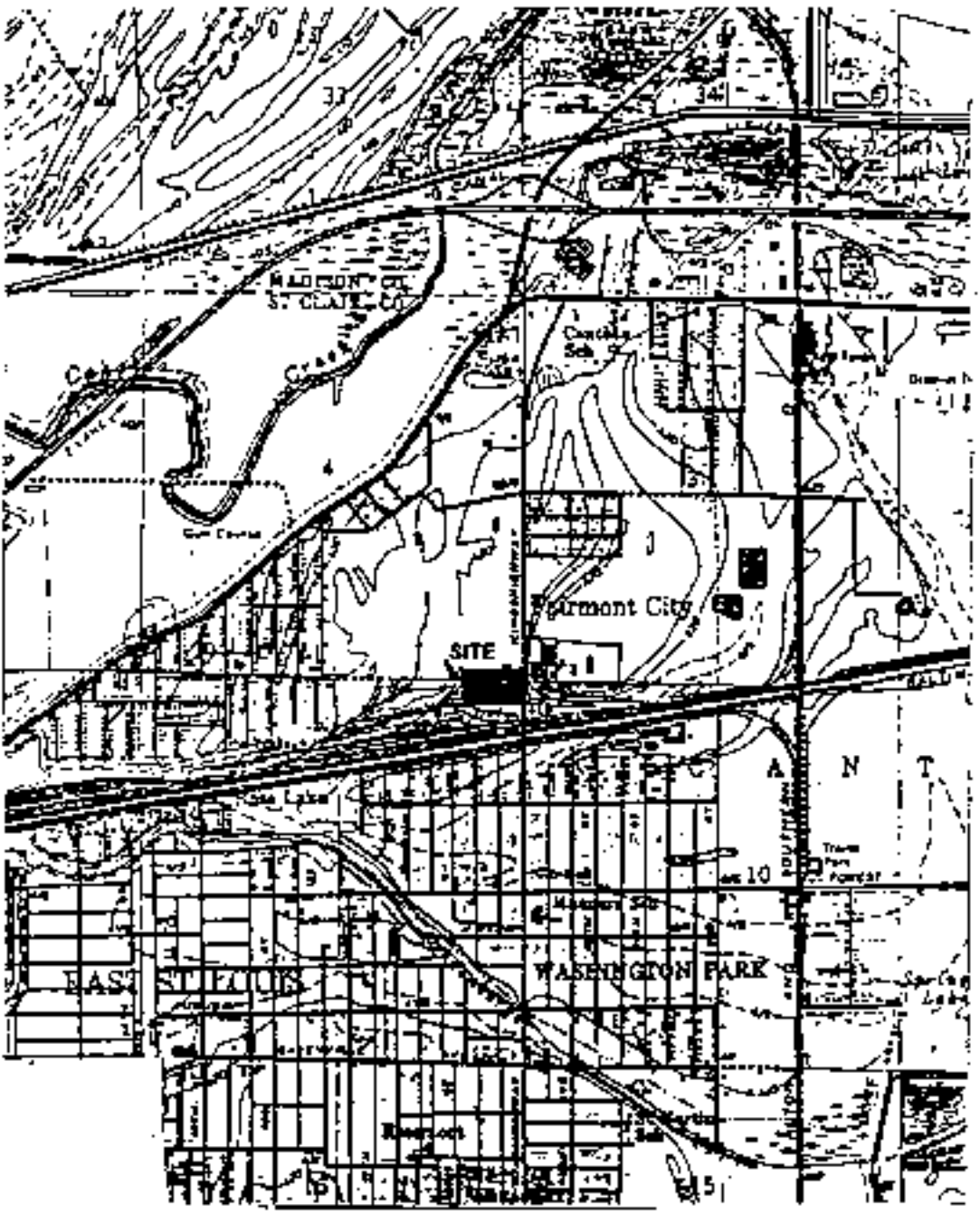
NAV - Not Available

3 - Highest On-site soil results substituted twice it was not analyzed for in sample

4 - Assumes similar mechanisms and cancer types

Table 6. Completed Exposure Pathways

Pathway Name:	Source	Medium	Exposure Point	Exposure Route	Receptor Population	Time of Exposure	Exposure Activities	Estimated Number Exposed	Chemicals (identify by name or reference to table in document)
On-site Surface Soil & Sediment	Contaminated Soil & Sediment	Soil & Sediment	On the site	Ingestion Inhalation	On-site Workers	Past Present Future	Working outside on the site	25	Table 2
Off-site Sediment	Contaminated sediment off the site	Sediment	Children playing in sediment areas.	Ingestion Inhalation	Area Children	Past Present Future	Playing in and with sediments	20	Table 3



SOURCE: Ecology and Environment, Inc. 1990; BASE MAP: USGS, Monks Mound, IL-Quadrangle, 7.5 Minute Series, 1954, photorevised 1974.

SCALE

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Figure 1 - Swift Agricultural Chemicals Corporation Site Location Map

Source: E & E, 1995

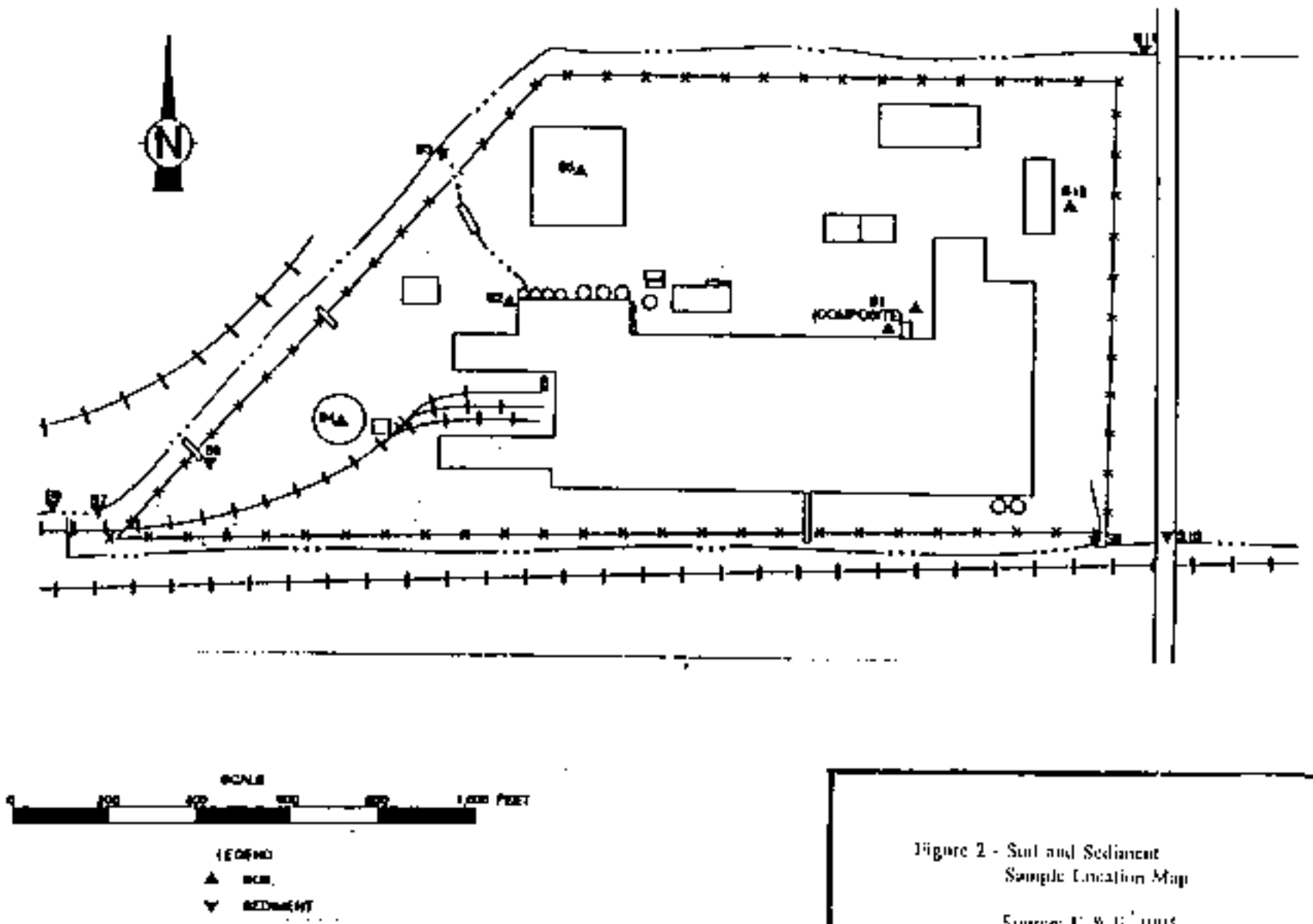
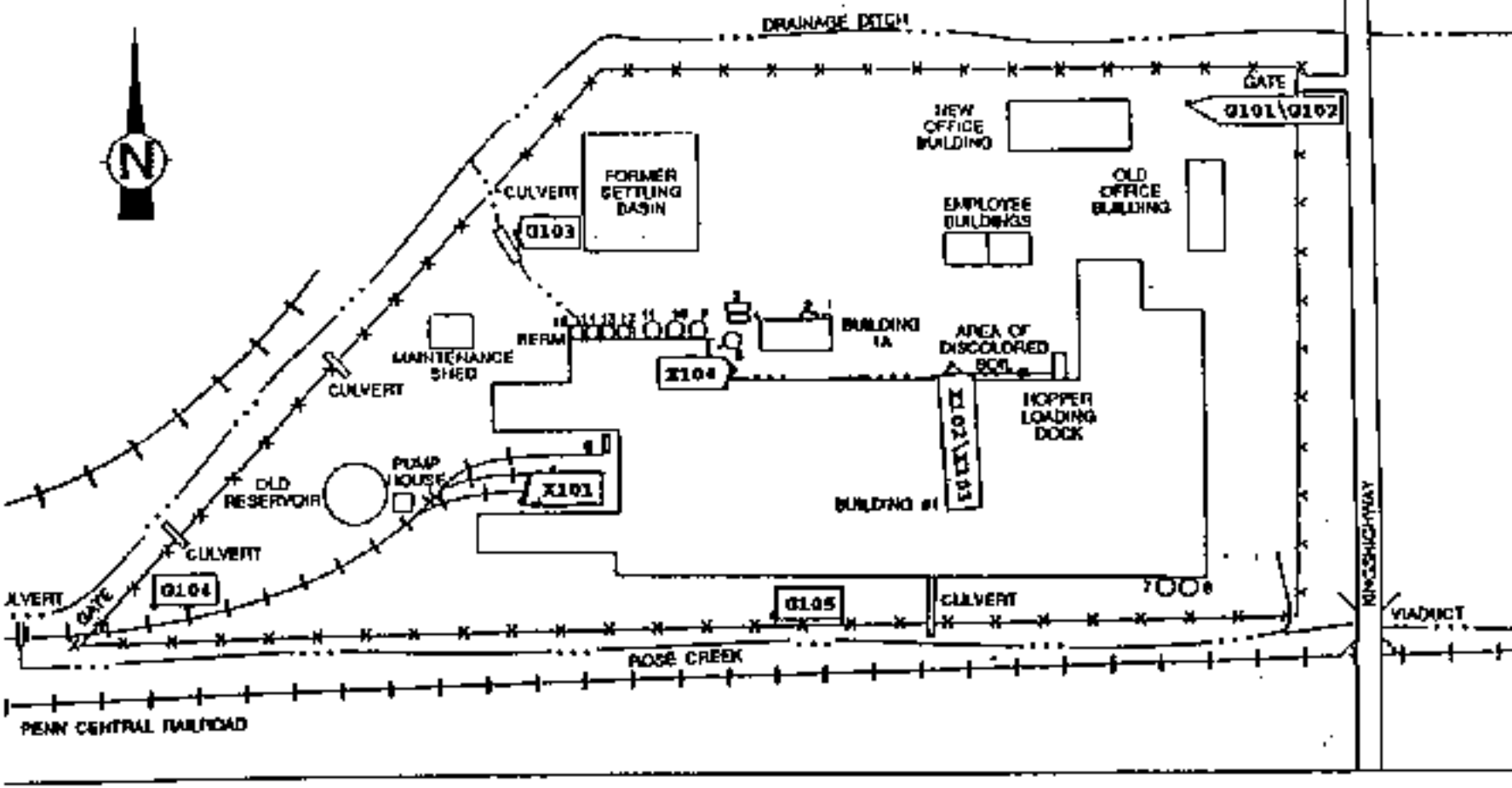


Figure 2 - Soil and Sediment Sample Location Map

Source: E & E, 1995



SOURCE: Ecology and Environment, Inc. 1989.

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0 200 400 600 800 1,000 FEET

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T-16 TANKS

Figure 3 - Soil and Groundwater Samples taken by IEPA in 1996

APPENDIX B

1990 SCREENING SITE INVESTIGATION SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS

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RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information / Parameters	Sample Number											
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
Date	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89	8/3/89
Time	1100	1210	1320	1340	1355	1350	1305	1315	1400	1410	1420	1430
CLP Organic Traffic Report Number	EFA12	EFA13	EFA14	EFA15	EFA16	EFA17	EFA18	EFA19	EFA20	EFA21	EFA22	EFA23
CLP Inorganic Traffic Report Number	MEEF12	MEEF13	MEEF14	MEEF15	MEEF16	MEEF17	MEEF18	MEEF19	MEEF20	MEEF21	MEEF22	MEEF23
Compound Detected (values in ug/kg)												
Volatile Organics												
methylene chloride	53	9	37	12	52	51	23J	--	--	30J	28J	14
acetone	--	--	32	--	54	46	240J	57J	--	210J	120J	--
2-butanone (MEK)	--	--	--	--	--	--	22J	--	--	21J	21J	--
benzene	--	--	42	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	13J	--	--	--	--
toluene	5J	16	36	14	110	--	--	9J	--	5J	--	--
ethylbenzene	--	--	5J	--	--	--	--	--	--	--	--	--
xylenes (total)	--	--	22	--	--	--	--	--	--	--	--	--
Semivolatile Organics												
2,4-dichlorophenol	--	--	--	--	--	--	--	--	--	1,300	--	--
naphthalene	--	82J	--	--	--	--	--	--	130J	360J	170J	40J
4-chloro-3-methylphenol	--	--	--	--	200J	--	--	--	--	--	--	--
2-methylnaphthalene	--	46J	--	--	--	--	--	13,000J	290J	870J	110J	45J
acenaphthylene	--	45J	--	--	100J	--	--	--	--	--	--	--
acenaphthene	--	--	--	--	87J	--	--	--	170J	210J	100J	--
dibenzofuran	--	--	--	--	--	--	--	--	230J	270J	110J	--
diethylphthalate	--	--	--	--	--	--	--	--	--	--	450J	--
fluorene	--	--	--	--	--	--	--	3,700J	240J	270J	160J	--
hexachlorobenzene	--	98J	--	--	240J	--	--	--	--	--	--	--
phenanthrene	660	950J	--	--	1,100	--	670J	14,000J	3,600	4,300	1,300	51J
anthracene	120J	--	--	--	250J	--	--	--	630	520J	250J	--
di-n-butylphthalate	--	--	--	--	--	--	--	--	--	170J	--	--
fluoranthene	2,300	270J	--	2,700	1,800	780J	2,000J	--	3,800	5,200	1,900	50J
pyrene	3,900J	480	520J	3,500J	1,700J	870J	2,600J	--	3,400	4,000J	2,000J	55J
butylbenzylphthalate	160J	--	--	--	--	--	--	--	--	--	220J	
benzo(a)anthracene	1,200J	220J	--	540J	1,100J	--	1,700J	--	1,700	1,800	700	--
chrysene	2,000J	360J	330J	800J	900	1,700J	2,300J	--	1,600	1,800	1,100	45J
bis(2-ethylhexyl)phthalate	6,100J	1,400	600J	5,000	270J	--	3,400J	--	4,300	1,600	2,500	--
benzo(b)fluoranthene	2,600J	430J	190J	650J	1,210	--	5,300	--	1,800	1,700	1,200	66J
benzo(k)fluoranthene	1,300J	310J	--	250J	800J	1,300J	--	--	1,200	530J	850	--
benzo(a)pyrene	1,700J	270J	--	350J	820J	840J	2,100J	--	1,200	630J	990	--
indeno(1,2,3-cd)pyrene	1,400J	320J	--	--	500J	--	1,800J	--	840	430J	750	--
dibenzo(a,h)anthracene	240J	--	--	--	--	--	--	--	190J	--	130J	--
benzo(g,h,i)perylene	--	320J	--	--	420J	--	1,800J	--	800	440J	--	--

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Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
Pesticides(ug/kg)												
Heptachlor	-	--	4,8[illegible]	--	-	--	5[illegible]	--	--	--	--	
Dieldrin	290	[illegible]	[illegible]	--	[illegible]	4,[illegible]	34[illegible]	[illegible]	89	330	210	-
4,4'-DDD	--	--	--	--	--	--	--	--	4[illegible]	1,50[illegible]	--	-
4,4'-DDT	--	--	--	--	--	--	--		[illegible]	1,70[illegible]	--	--
alpha Chlordane	--	--	--	--	--	--	-	--	--	--	[illegible]	--
gamma Chlordane	230J	--	1,70[illegible]J	--	160J	[illegible]	4[illegible]J	140J	[illegible]	-	35J	--
Analyte Detected Values in mg/kg												
aluminum	10,400	7,600	7,550	26,100	10,100	20,700	13,970	19,700	12,200	26,000	6,360	1,840
antimony	13.4B	--	--	--	--	--	--	--	--	12.2B	--	--
arsenic	13.7JNWB	6.2JNB	4.4JN	--	28.5JN	13.3JNB	26.[illegible]JNB	24.[illegible]JN	16.6JN	27.8JN	5.5JN	3.4JN
barium	121	83.9	45B	63B	179	555	157	345	304	571	155	116
beryllium	1.8	1.6	0.55B	3.1	1.3	2.1	2.1[illegible]	1.7B	0.45B	0.74B	0.69B	0.46B
cadmium	28.7	27.8	14	13.7	67	75.2	84[illegible]	330	5.7	6.4	14.1	--
calcium	163,000	172,000	56,200	130,000	111,[illegible]	32,[illegible]	36,14[illegible]	62,300	19,[illegible]	13,700	113,000	55,700
chromium	51.6	48	33.3	397	55.8	83	76.1	455	28.5	50.1	45.9	15.3
cobalt	14	6.7B	3.2B	27.6B	11.5B	9.1B	6.5B	11B	3.3B	4.1B	3.6B	8.3B
copper	1,530JN	688JN	112JN	84.8JN	618JN	457JN	728JN	446JN	144JN	359JN	187JN	18.9JN
iron	21,800	18,500	14,500	38,400	24,500	45,600	26,953	33,100	14,900	21,300	17,100	17,400
lead	523JN	1,790JN	526JN	281JN	2,510JN	1,300JN	1,687JN	2,200JN	659JN	1,800JN	2,030JN	35.3JN
magnesium	8,690	6,690	1,740	46,500	6,800	2,340	3,252	7,270	2,940	2,680	9,280	19,800
manganese	3,980	2,650	462	1,830	893	254	93[illegible]	725	192	118	754	785
mercury	0.4JN	0.6JN	5.3JN	--	6.4JN	2.7JN	8.[illegible]JN	12JN	6.2JN	10JN	0.5JN	--
nickel	59.4	32	22.2	79.7	35.3	8.2B	21.9B	26.6	8.9B	3.0B	13.9	15.7
potassium	6,310	3,980	6,130	33,900	6,750	13,200	6,669	3,820	1,960	6,940	809B	797B
selenium	--	--	0.353JNWB	--	--	--	3.[illegible]JNB	1.8JNB	0.572JNWB	0.91JNWB	--	--
silver	31.5JAN	2.2JANB	1.4JANB	3.4JANB	6.6JAN	6.0JAN	1[illegible]JAN	7.2JAN	2.2JANB	2.6JANB	3.9JAN	--
sodium	--	--	68[illegible]B	1,360B	--	--	--	--	--	4,630	--	--
thallium	1.2JWB	--	--	--	2.0JWB	--	2.4JWB	1.3JWB	0.70JWB	--	--	--
vanadium	59.2	56.2	38.3	124	43.6	119	85.4	77.2	28.5	61.4	45.2	21.5
zinc	8,210	27,400	3,760	2,660	21,300	8,250	32,70[illegible]	25,400	82[illegible]	1,370	1,680	147
cyanide	--	2.8JN	--	4.2JN	1.1JN	2.2JN	--	--	--	--	--	--

-- Not detected.

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides detected in the final extract shall be confirmed by GC/MS.	Compound was confirmed by GC/MS and is quantitative. Use pesticide/PCB listed values.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL. Data is quantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semi-quantitative.
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CRQL.	Value may be quantitative or semi-quantitative.
J	Value is above CRQL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

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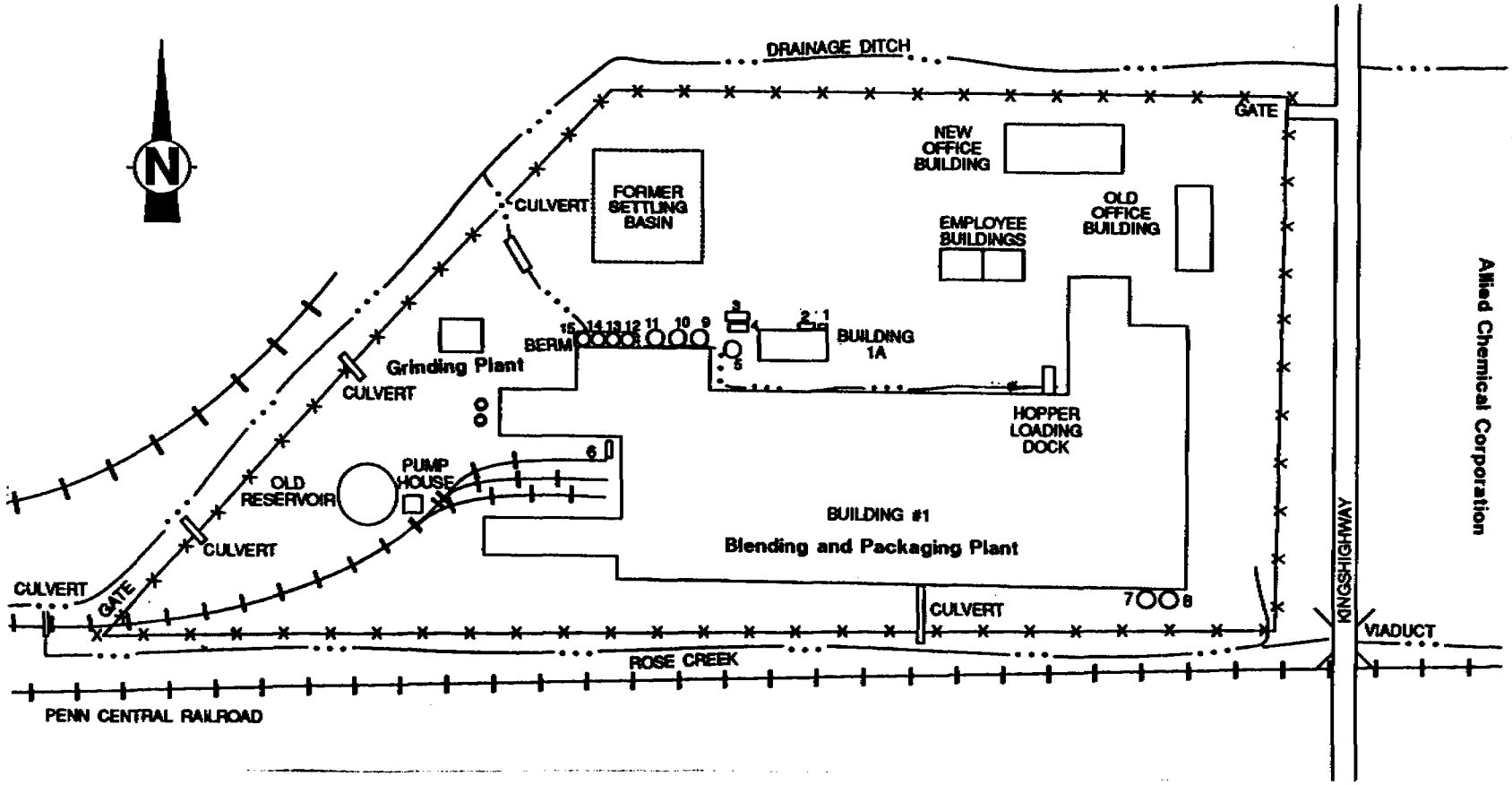


SCALE

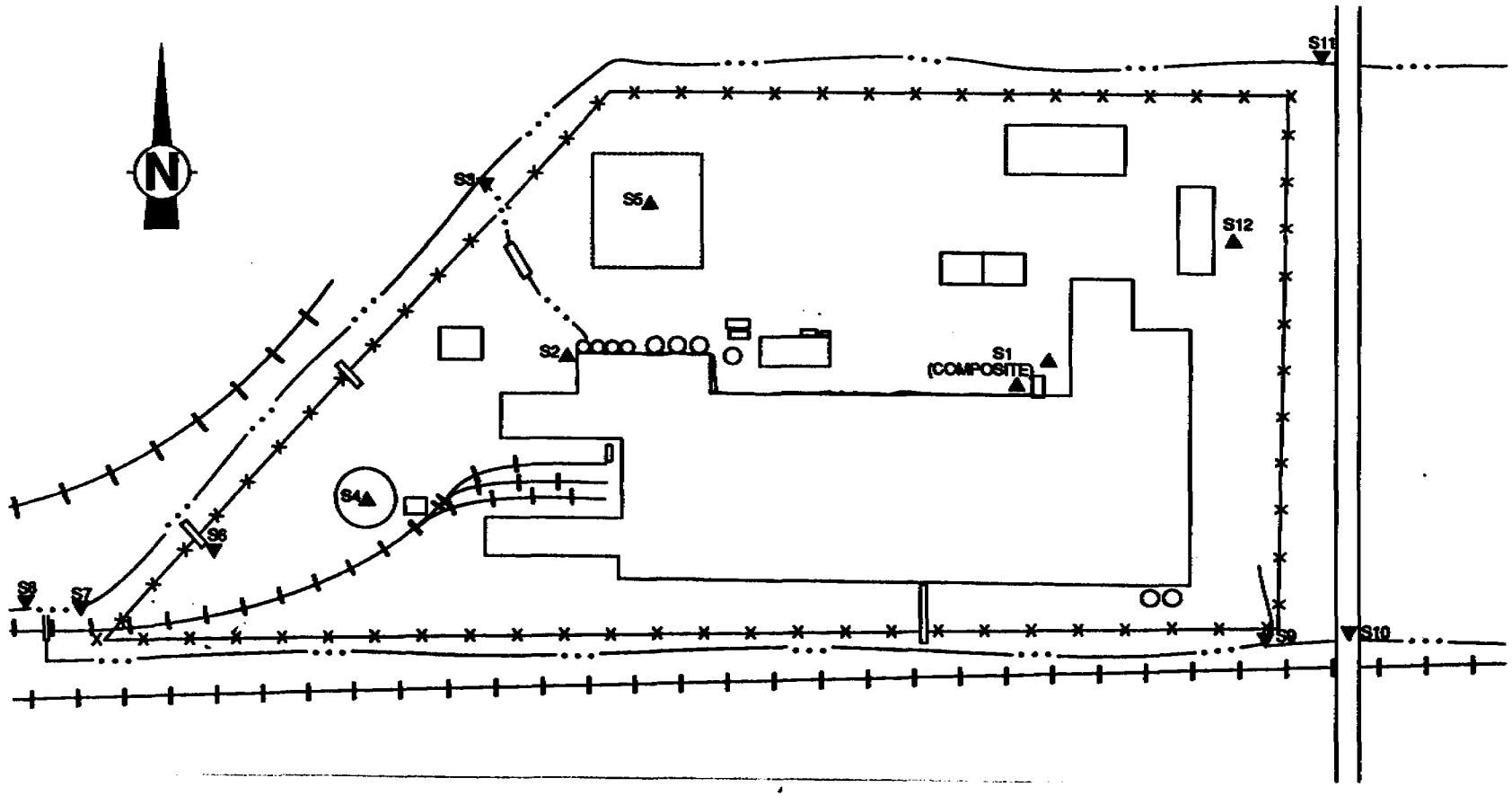
0 200 400 600 800 1,000 FEET

LEGEND

1-15 TANKS

ecology and environment, inc.
Technical Assistance Team
Region V

TITLE Site Features Map	FIGURE # 2-2
SITE Swift Ag Chemical Corp.	TDD# T05-9503-237
CITY East St. Louis STATE Illinois	SCALE Not to scale
SOURCE Ecology and Environment, Inc.	DATE 1990 REVISED 1995



SCALE

0 200 400 600 800 1,000 FEET

LEGEND

▲ SOIL

▼ SEDIMENT

ecology and environment, inc.
Technical Assistance Team
Region V

TITLE Soil/Sediment Location Map	FIGURE # 2-3
SITE Swift Ag Chemical Corp.	TDD# T05-9503-237
CITY East St. Louis STATE Illinois	SCALE Not to scale
SOURCE Ecology and Environment, Inc.	DATE 1990 REVISED 1995

printed 06/05/2008 4:30PM by epa4535 p. 15/114

Table 1. Soil Analytical Data
CSXT Diesel Release
East Saint Louis, Illinois

Sample ID	Industrial/Commercial		Construction Worker		Soil Component of Groundwater	MSA Background	S1	S2	S3	S4	S5	S6
Depth (ft bgs)	Ingestion	Inhalation	Ingestion	Inhalation	Ingestion (Class II)	Concentration	--	--	--	--	--	--
Date							10/20/2004	10/20/2004	10/20/2004	10/20/2004	10/20/2004	10/20/2004
Volatile Organic Compounds (BTEX/MTBE)												
Benzene	100	1.6	2300	2.2	0.17		<0.0751	<0.0322	<0.0613	0.0025	<0.129	<0.0324
Toluene	410,000	650	410,000	42	29		<0.375	<0.161	<0.307	<0.0091	<0.643	<0.162
Ethylbenzene	200,000	400	20,000	58	19		<0.375	<0.161	<0.307	<0.0091	<0.643	<0.162
Xylenes (total)	1,000,000	320	410,000	320	150		<0.375	<0.161	<0.307	<0.0091	<0.643	<0.162
MTBE	20,000	8800	2,000	140	0.32		NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds												
1-Methylnaphthalene	—	—	—	—	—		NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	—	—	—	—	—		NA	NA	NA	NA	NA	NA
Acenaphthene	120,000	—	120,000	—	2,900		1.1	<0.4	0.47	1.1	<0.62	<0.62
Acenaphthylene	—	—	—	—	—		<0.7	<0.4	<0.37	<0.64	<0.62	<0.62
Anthracene	610,000	—	610,000	—	59,000		<0.23	<0.13	0.38	<0.21	<0.21	<0.21
Benzo (a) anthracene	8	—	170	—	8		1.5	0.19	1.6	1.8	1	0.31
Benzo (a) pyrene	0.8	—	17	—	82	2.10	**1.2**	0.29	**1.2**	**3.2**	1.1	0.48
Benzo (b) fluoranthene	8	—	170	—	25		1.4	0.14	**1.2**	3.3	1.1	0.54
Benzo (g,h,i) perylene	—	—	—	—	—		1.3	0.26	**1.2**	3	1.1	0.97
Benzo (k) fluoranthene	78	—	1,700	—	250		0.72	<0.13	0.6	1.4	0.43	0.25
Chrysene	780	—	17,000	—	800		1.8	0.33	1.4	2.3	1.1	0.47
Dibenzo (a,h) anthracene	0.8	—	17	—	7.6		<0.23	<0.13	<0.12	<0.21	<0.21	<0.21
Fluoranthene	82,000	—	82,000	—	21,000		2.4	0.71	2.1	2.5	2.2	0.46
Fluorene	82,000	—	82,000	—	2,800		<0.23	<0.13	<0.12	<0.21	<0.21	<0.21
Indeno (1,2,3-cd) pyrene	8	—	170	—	69		1.1	<0.13	0.86	2	0.9	0.43
Naphthalene	41,000	270	4,100	1.8	18		<0.94	0.62	<0.49	**2.3**	<0.82	<0.82
Phenanthrene	—	—	—	—	—		1.3	0.33	0.82	1.6	1.3	0.39
Pyrene	61,000	—	61,000	—	21,000		1.1	0.53	1.7	2.4	1.4	0.53

Notes:

Concentrations in mg/kg

Bold Exceeds a Tier 1 remediation objective and is below MSA Background Concentration.

Bold (boxed) Exceeds a Tier 1 remediation objective and MSA Background Concentration (if applicable).

— No Remediation Objective established for this constituent.

ft bgs Feet Below Ground Surface

NA Not Analyzed

MSA Background Concentrations greater than Tier I ROs from Electric Power Research Institute, *Final Report on Background PAHs in Surface Soil in Illinois.*

printed 06/05/2008 4:30PM by epa4535 p. 16/114

Table 1. Soil Analytical Data
CSXT Diesel Release
East Saint Louis, Illinois

Sample ID Depth (ft bgs) Date	Industrial/Commercial Ingestion	Industrial/Commercial Inhalation	Construction Worker Ingestion	Construction Worker Inhalation	Soil Component of Groundwater Ingestion (Class II)	MSA Background Concentration	MW-1 0.5-2.5 8/2/2005	MW-2 0.5-2.5 8/2/2005	MW-3 0.5-2.5 8/2/2005	MW-4 0.5-2.5 8/2/2005	MW-5 0.5-2.5 8/2/2005	SB-6 0.5-2.5 5/9/2006	SB-7 0.5-2.5 5/9/2006
Volatile Organic Compounds (BTEX/MTBE)													
Benzene	100	1.6	2300	2.2	0.17		<0.0062	<0.0068	<0.0066	<0.0062	<0.0049	NA	NA
Toluene	410,000	650	410,000	42	29		<0.0062	<0.0068	<0.0066	<0.0062	<0.0049	NA	NA
Ethylbenzene	200,000	400	20,000	58	19		<0.0062	<0.0068	<0.0066	<0.0062	<0.0049	NA	NA
Xylenes (total)	1,000,000	320	410,000	320	150		<0.012	<0.014	<0.013	<0.012	<0.0097	NA	NA
MTBE	20,000	8800	2,000	140	0.32		<0.062	<0.068	<0.066	<0.062	<0.049	NA	NA
Semi-Volatile Organic Compounds													
1-Methylnaphthalene	---	---	---	---	---		0.17	0.2	0.27	0.29	<0.074	0.063	0.11
2-Methylnaphthalene	---	---	---	---	---		0.21	0.19	0.32	0.3	<0.074	0.064	0.13
Acenaphthene	120,000	---	120,000	---	2,900		<0.092	<0.079	<0.088	<0.088	<0.074	0.0096	<0.0081
Acenaphthylene	---	---	---	---	---		0.14	<0.079	0.13	0.11	<0.074	0.073	0.024
Anthracene	610,000	---	610,000	---	59,000		0.2	<0.079	0.16	0.14	<0.074	0.062	0.031
Benzo (a) anthracene	8	---	170	---	8		0.93	<0.079	0.76	0.42	0.098	0.2	0.093
Benzo (a) pyrene	0.8	---	17	---	82	2.10	**1.3**	<0.079	**0.93**	0.41	0.12	0.24	0.076
Benzo (b) fluoranthene	8	---	170	---	25		2.4	0.24	1.7	0.85	0.29	0.35	0.11
Benzo (g,h,i) perylene	---	---	---	---	---		1.2	0.19	0.86	0.43	0.13	0.18	0.061
Benzo (k) fluoranthene	78	---	1,700	---	250		<0.092	0.24	<0.088	<0.088	<0.074	0.24	0.088
Chrysene	780	---	17,000	---	800		1.4	0.17	0.98	0.57	0.13	0.27	0.13
Dibenzo (a,h) anthracene	0.8	---	17	---	7.6		0.33	<0.079	<0.088	<0.088	<0.074	0.089	0.026
Fluoranthene	82,000	---	82,000	---	21,000		1.7	0.2	1.2	0.71	0.14	0.24	0.11
Fluorene	82,000	---	82,000	---	2,800		<0.092	<0.079	<0.088	<0.088	<0.074	<0.0088	<0.0081
Indeno (1,2,3-cd) pyrene	8	---	170	---	69		1.1	0.13	0.7	0.32	0.093	0.16	0.06
Naphthalene	41,000	270	4,100	1.8	18		0.096	<0.079	0.11	0.12	<0.074	0.037	0.064
Phenanthrene	---	---	---	---	---		0.84	0.26	0.9	0.79	0.13	0.19	0.15
Pyrene	61,000	---	61,000	---	21,000		1.4	0.42	1	0.75	0.14	0.34	0.14

Notes:

Concentrations in mg/kg

Bold Exceeds a Tier 1 remediation objective and is below MSA Background Concentration.

Bold (boxed) Exceeds a Tier 1 remediation objective and MSA Background Concentration (if applicable).

--- No Remediation Objective established for this constituent.

ft bgs Feet Below Ground Surface

NA Not Analyzed

MSA Background Concentrations greater than Tier 1 ROs from Electric Power Research Institute, *Final Report on Background PAHs in Surface Soil in Illinois.*

ARCADIS

Table 2. Groundwater Elevation Data,
CSXT Diesel Release
East St. Louis, Illinois

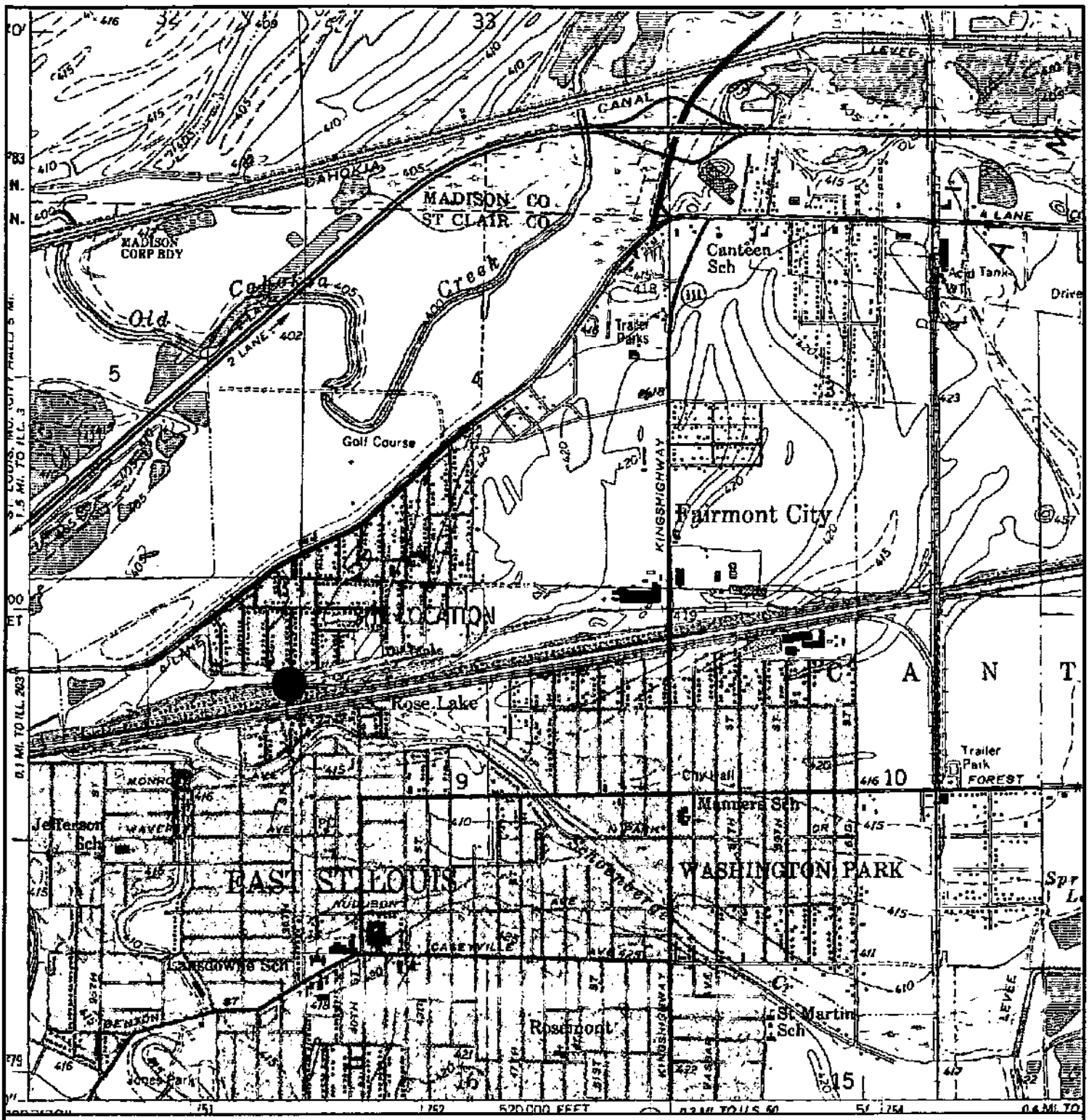
Observation Well	Date Measured	Depth to Groundwater (feet below TOC)
MW-1	10-28-05	0.78
MW-2	10-28-05	1.01
MW-3	10-28-05	0.84
MW-4	10-28-05	0.96
MW-5	10-28-05	2.43

Note:
TOC top of casing

Table 3. Groundwater Analytical Data
CSXT Diesel Release
East St. Louis, Illinois.

Observation Well Sample Date	Class II Groundwater Remediation Objective (mg/L)	MW-1 10/28/2005	MW-2 10/28/2005	MW-3 10/28/2005	MW-4 10/28/2005	MW-5 10/28/2005
VOCs						
Benzene	0.025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	2.5	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	1	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Xylenes	10.0	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
MTBE	0.07	<0.010	<0.010	<0.010	<0.010	<0.010
PAHs						
Acenapthene	2.1	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Acenapthylene	---	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Anthracene	10.5	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Benzo (a) anthracene	0.00065	<0.00012	0.00025	<0.00012	<0.00012	<0.00012
Benzo (a) pyrene	0.002	<0.00019	0.00026	<0.00019	<0.00019	<0.00019
Benzo (b) fluoranthene	0.0009	<0.00017	0.00062	<0.00017	<0.00017	<0.00017
Benzo (ghi) perylene	---	<0.00019	0.00022	<0.00019	<0.00019	<0.00019
Benzo (k) fluoranthene	0.00085	<0.00016	0.00060	<0.00016	<0.00016	<0.00016
Chrysene	0.0075	<0.00019	0.00037	<0.00019	<0.00019	<0.00019
Dibenzo (a,h) anthracene	0.0015	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Fluoranthene	1.4	<0.00019	0.00021	<0.00019	<0.00019	<0.00019
Fluorene	1.4	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Indeno (1,2,3-cd) pyrene	0.00215	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Naphthalene	0.22	<0.00019	0.00020	<0.00019	0.00030	<0.00019
Phenanthrene	---	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Pyrene	1.05	<0.00019	0.00034	<0.00019	<0.00019	<0.00019
1-Methylnaphthalene	---	<0.00019	<0.00019	0.00052	0.00023	<0.00019
2-Methylnaphthalene	---	<0.00019	<0.00019	0.00061	0.00026	<0.00019

Notes:
All data reported in milligrams per liter (mg/L).
--- No Tier 1 remediation objective is available.
Bold Exceeds the Tier 1 remediation objective.



SOURCE: USGS 7.5 MIN. TOPOGRAPHIC MAP, MONKS MOUND, ILLINOIS QUADRANGLE, 1993.

0' 1000' 2000' 4000'

SCALE IN FEET

N

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35 East Wacker Drive, Suite 1000
Chicago, IL 60601
Tel (312)263-6703 Fax (312)263-7897

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Drawing Date	File Name	File Location	Drawn BY	Checked BY	Project Manager
11/17/05	AGMSITE.DWG	G:\drafting\CSX	PS	T. HOOGMAN	JOOOX

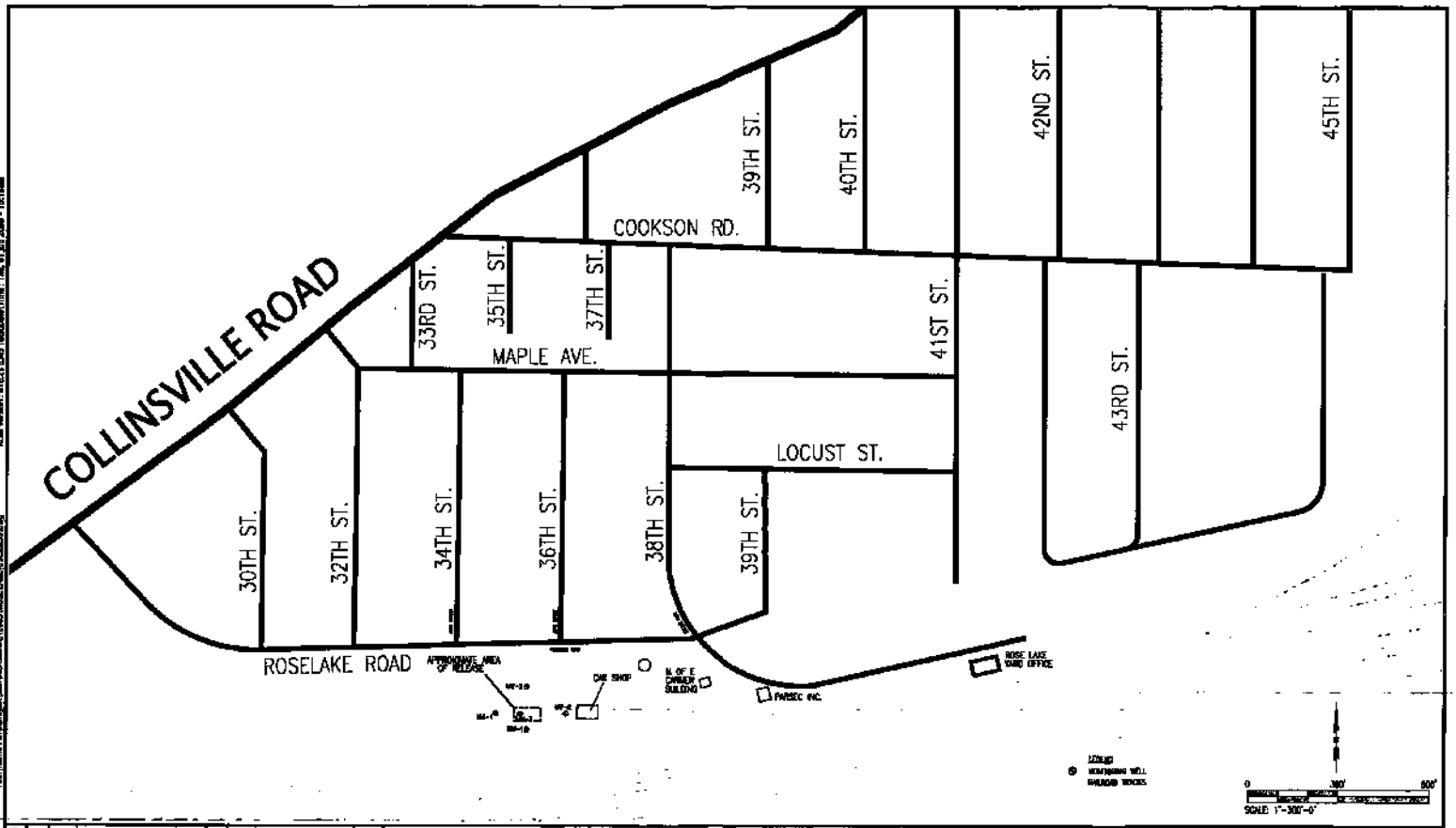
CSX - ROSE LAKE YARD

SITE LOCATION MAP

EAST ST. LOUIS, ILLINOIS

Department Manager	Unique Number
P. DELAHUNT	
Project Number	**Figure**
CI001323.0001	1

Path(Name : G:\Aproject\CSX\ACAD.DWG\2005\ROSE LAKE\SITELOCATION.DWG Acad Version : R16.2s (LMS Tech) Date(Time : Thu, 01 Jun 2006 - 10:40am User Name : fsoto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COOKSON RD.
MAPLE AVE.
LOCUST ST.
ROSELAKE ROAD
30TH ST.
32TH ST.
33RD ST.
34TH ST.
35TH ST.
36TH ST.
37TH ST.
38TH ST.
39TH ST.
39TH ST.
40TH ST.
41ST ST.
42ND ST.
43RD ST.
45TH ST.
APPROXIMATE AREA OF RELEASE
MW-2D
MW-2
MW-1D
MW-1
GAS SHOP
N. OF E. OWNER BUILDING
PARSEC INC.
ROSE LAKE YARD OFFICE
SCALE: 1"=300'-0"
0
300'
600'
ARCADIS
ROSE LAKE YARD
SITE LAYOUT
EAST ST. LOUIS, ILLINOIS
K. PETRAURS
2/28/05
FS
S. GLANN
CI001323.0001
2
NO. DATE REVISION DESCRIPTION
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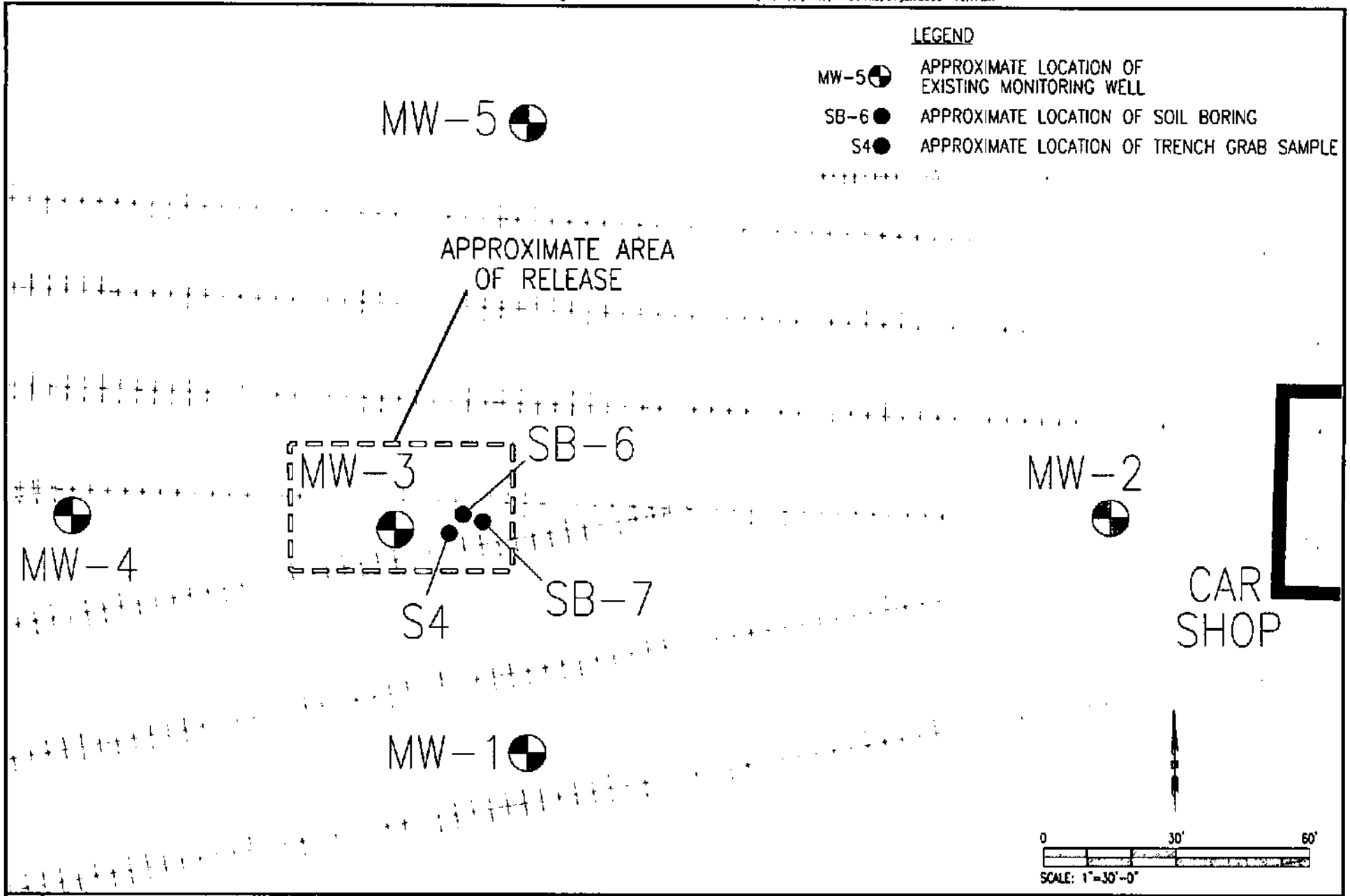
User Name : fsotu Path\Name : G:\Aproject\CSX\ACAD.DWG\2005\ROSE LAKE\05CI0255.dwg Acad Version : R16.2s (LMS Tech)Date\Time : Thu, 01 Jun 2006 - 10:17am



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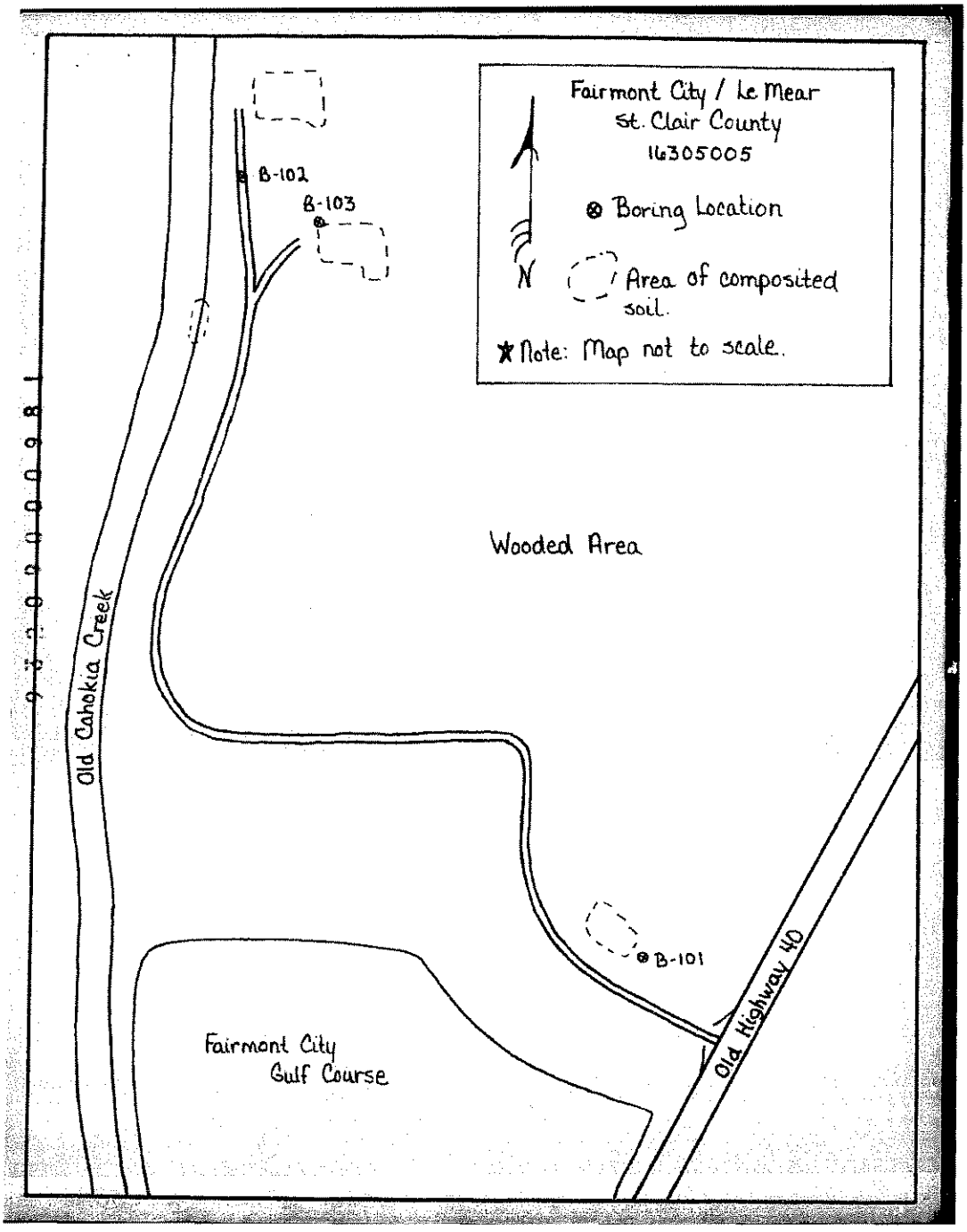
ARCADIS
35 East Wacker Drive, Suite 1000
Chicago, IL 60601
Tel (312)263-6703 Fax (312)263-7897

CSX ROSE LAKE YARD

RELEASE AREA DETAIL

EAST ST. LOUIS, ILLINOIS

File Name	Drawn BY	Checked BY	Project Manager
05CI0255.DWG	FS	T. HODGMAN	S. GLENN
		Department Manager P. DELAHUNT	Unique Number
Drawing Date	File Location	Project Number	Figure
5/23/06	G:\aproject\CSX	C1001323.0001	3


Fairmont City / Le Mear
St. Clair County
16305005
Boring Location
N
Area of composited soil.
Note: Map not to scale.
B-102
B-103
Wooded Area
Old Cahokia Creek
B-101
Old Highway 40
Fairmont City
Gulf Course

0009963

Time Collected: 9:30A

Date Collected: 9-5-84

Lab #

SPECIAL ANALYSIS FORM

Date Received SEP - 6 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St Clair	Fairmont City Mc Mac	1163050005

SOURCE OF SAMPLE: (Exact Location) Composite Sample 0-6" from site #1 Sample: [redacted]

PHYSICAL OBSERVATIONS, REMARKS: soil sample

TESTS REQUESTED: run totals (acid digest)

COLLECTED BY: TRANSPORTED BY:

LABORATORY

RECEIVED BY: DATE COMPLETED: DATE FORWARDED: FEB 6 1985

Arsenic	9.0	Mercury	0.273
Barium	330	Cyanide	0.7 mg/Kg
Cadmium	43.6	Sulfide	5.0 mg/Kg
Chromium	26.4		
Copper	126.6		
Nickel	37.9		
Zinc	2341		
Silver	1.8		
Lead	512		
Selenium	1.1		

RECEIVED
FEB 08 1985
IEPA-DLPC

IL 532-0314
LPC 8A 4/77

(NOT FOR DATA PROCESSING)

9300900975

BW9964

Time Collected: 3:50 P

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 9-5-84

Date Received SEP - 6 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	Fairmont City LeMay	1630505005

SOURCE OF SAMPLE: (Exact Location) Composite sample 0-6" from pits #4 and #5 Sample: [redacted]

PHYSICAL OBSERVATIONS, REMARKS: soil sample

TESTS REQUESTED: run totals (acid digest)

COLLECTED BY: TRANSPORTED BY:

LABORATORY

RECEIVED BY: DATE COMPLETED: DATE FORWARDED: FEB 6 1985

Arsenic	9.2	Mercury	0.084
Barium	330	Cyanide	0.2 mg/Kg
Cadmium	36.6	Sulfide	3.2 mg/Kg
Chromium	30.0		
Copper	71.8		
Nickel	35.		
Zinc	220		
Silver	1.3		
Lead	149		
Selenium	0.		

CHAMPAIGN

8 1985

IL 532-0314
LPC GA 4/77

(DO NOT USE FOR DATA PROCESSING)

9 3 0 9 0 0 0 9 7 6

Time Collected: 10:50A

Date Collected: 9-5-84

SPECIAL ANALYSIS FORM

Lab # B009965 M

Date Received SEP - 6 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St Clair	Fairmont City McMeal	1630505005

SOURCE OF SAMPLE: (Exact Location) Composite Sample 0-6" from site #6 and #7 Sample: [redacted]

PHYSICAL OBSERVATIONS, REMARKS: soil sample

TESTS REQUESTED: run Totals (acid digest)

COLLECTED BY: TRANSPORTED BY:

LABORATORY

RECEIVED BY: DATE COMPLETED: DATE FORWARDED: FEB 6 1985

Arsenic	8.2	Mercury	0.047
Barium	360	Cyanide	0.1 mg/Kg
Cadmium	22.4	Sulfide	6.8 mg/Kg
Chromium	59.2		
Copper	63.4		
Nickel	39.3		
Zinc	1703		
Silver	<1.0		
Lead	124.7		
Selenium	0.8		

COMPARED

RECEIVED FEB 08 1985 IEPA-DLPC

IL 532-0314
LPC 8A 4/77

(NOT FOR DATA PROCESSING)

9320900977

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Page 1 of 2

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: LPCSM 1 2 — TRANS CODE: LA

REPORT DUE DATE: M 9 D 6 Y 84 — FEDERAL ID NUMBER: 6

SITE INVENTORY NUMBER: 1 6 3 6 5 0 0 0 0 5 — MONITOR POINT NUMBER: 7 1 0 1 BB

REGION: Sout[illegible] — CO: St. Clair

LOCATION: Belleville — RESPONSIBLE PARTY: [illegible]

DATE COLLECTED: 23 M 8 D 5 Y 84

IEPA LAB (x or Blank) (see Instructions): 25

FOR IEPA USE ONLY — COMPLAINT NO

DATE RECEIVED: M D Y

SAMPLING PURPOSE CODE (see Instructions): 48

TIME CARD

PROGRAM CODE: 49 52 & UNIT CODE: 53

BACKGROUND SAMPLE (X): 54 — TIME COLLECTED (24 HR CLOCK): 55 H ~~1950~~ M 58 — 7 50

UNABLE TO COLLECT SAMPLE (see Instructions): 59

MONITOR POINT SAMPLED BY (see Instructions): 60 — OTHER (SPECIFY):

SAMPLE FIELD FILTERED: INORGANICS (X): 61 — ORGANICS (X): 62

SAMPLE APPEARANCE: 63

COLLECTOR COMMENTS: 100 — 102

SPECIAL INSTRUCTIONS TO LAB: 142

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
[illegible]	JME	DLPC / IEPA	Jane Ehrlich	DLPC / IEPA

LAB USE ONLY — ENVIRONMENTAL PROTECTION AGENCY

LAB SAMPLE NO: 060757

DATE RECEIVED: SEP - 6 1984

TIME RECEIVED: 3:43P

LAB NAME AND ADDRESS: [illegible] Services, [illegible] Chemical, Illinois 61820

LAB ID NO: 0003 (146–149)

SAMPLE TEMP OKAY: Y — SAMPLE PROPERLY PRESERVED: Y — DATE COMPLETED: ____ — FORWARD: OCT 26 1984

LAB COMMENTS: 150 — X No unpreserved bottle Rec'd Ass — 199

SUPERVISOR SIGNATURE: [illegible]

RECORD CODE: LPCSM 1 2 — TRANS CODE: A (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
	DEPTH TO WATER (ft. below LS)	507F	72019						
	ELEVATION OF GW SURFACE (ft. rel MSL)	508F	71993						
	TOTAL WELL DEPTH (ft. below LS)	509F	72008						
	ALKALINITY TOTAL (mg/l as CaCO3) Field	505F	00631						
	REDOX POTENTIAL (millivolts) Field	506F	00090						
X	pH (units) Field	500F	00400				6.5		
	SPEC CONDUCTANCE (umhos) Field	503F	00094				[illegible]		
	TEMP OF WATER SAMPLE (°C) Field	502F	00010						

RECEIVED OCT 29 1984 IEPA-DLPC

*The Agency is authorized to require this information under Illinois Revised Statutes 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IL 532-1218
LPC 160 3/84

002-002

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

Page 2 of 2

RECORD CODE L P C S N

TRANS CODE A

SITE INVENTORY NUMBER 1 6 2 C A 5 18

REGION Southern CO

Fairmont City

LOCATION

RESPONSIBLE PARTY

AQUEOUS LIQUIDS OTHER THAN GROUNDWATER

G

MONITOR POINT NUMBER 8 1 0 1 22

DATE COLLECTED 09 05 84 (M D Y)

IEPA LAB (x or Blank) K

	LAB MEASUREMENT CONSTITUENT DESCRIPTION REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LIMIT	
	119T COD, MG/L	00335						
	100T PH, LAB - S	00403						
	103T ALKALINITY AS CA	00410						
	111T AMMONIA NITROGEN L	00610						
	110T NITRITE + NITRATE MG/L	00630						
X	116T CYANIDE, TOTAL M CN	00720			<	0.005		
	160T SODIUM, TOTAL M	00929						
	108T CHLORIDE, MG/L	00940						
	105T SULFATE, TOTAL SO4	00945						
	107T FLUORIDE, TOTAL F	00951						
X	144T ARSENIC, TOTAL AS	01002				2.	1	<
X	145T BARIUM, TOTAL BA	01007			<	100.		
	106T BORON, TOTAL UG	01022						
X	146T CADMIUM TOTAL CD	01027			<	5.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	10.		
X	149T COPPER, TOTAL UG/L AS CU	01042			<	10.		
	150T IRON, TOTAL UG/L AS FE	01045						
X	151T LEAD, TOTAL UG/L AS PB	01051			<	50.		
	152T MANGANESE, TOTAL UG/L AS MN	01055						
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	50.		
X	156T SILVER, TOTAL UG/L AS AG	01077				10.		
X	157T ZINC, TOTAL UG/L AS ZN	01092				70.		
X	155T SELENIUM, TOTAL UG/L AS SE	01147			<	1.	1	<
X	112T PHENOLS, TOTAL UG/L	32730	H					
X	102T RESIDUE ON EVA.-180DEG MG/L	70300	X					
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.1	1	R
X	Sulfides, Total	00745			<	0.04		
		BB						

OCT 29 1984 IEPA/DLPC

LPC 160 3/84

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Page 1 of 2

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE 09 / 05 / 84 (36 M, D, Y 41)

FEDERAL ID NUMBER G

SITE INVENTORY NUMBER 1 6 3 0 5 0 0 0 0 5 (18)

REGION Southern CO St. Clair

Fairmont City — LOCATION

Le Mear — RESPONSIBLE PARTY

MONITOR POINT NUMBER 1 0 2 (19–22)

(see Instructions)

DATE COLLECTED 09 / 05 / 84 (23 M, D, Y 28)

IEPA LAB (x or Blank) (see Instructions) Y (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 10 / 05 / 84 (42 M, D, Y 47)

SAMPLING PURPOSE CODE (see Instructions) 1 (48)

TIME CARD

PROGRAM CODE LP52 (49–52) & UNIT CODE T (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) ~~20 10~~ 8 10 (55 H, M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) H (60)

OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63–102)

COLLECTOR COMMENTS (103–142)

SPECIAL INSTRUCTIONS TO LAB

Jane Ehrat — COLLECTED BY (143)

JME (135) — INITIALS

DLPC / IEPA — DIVISION OR COMPANY

Jane Ehrat — TRANSPORTED BY

DLPC / IEPA — DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. BL09968

LAB NAME ~~Environmental Protection Agency~~ Division of Laboratory Services

AND ADDRESS 2125 South First Street Champaign, Illinois 61820

LAB ID NO. 0003 (146–149)

DATE RECEIVED SEP - 6 1984

TIME RECEIVED 3:45 P

SAMPLE TEMP OKAY Y (Y/N)

SAMPLE PROPERLY PRESERVED Y (Y/N)

DATE COMPLETED

FORWARD OCT 26 1984

LAB COMMENTS (150–199)

X-No unpreserved bottle Rec'd AL

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER (30–34)	(35)	(36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	REPORTING LEVEL (49)
	DEPTH TO WATER (ft. below LS)	507F	72019						
	ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
	TOTAL WELL DEPTH (ft. below LS)	509F	72008						
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
	REDOX POTENTIAL (millivolt) - Field	506F	00090						
X	pH (units) - Field	500F	00400				6.5		
	SPEC CONDUCTANCE (umhos) - Field	503F	00094						
	TEMP OF WATER SAMPLE (°C) - Field	502F	00010						

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IL 532-1218
LPC 160 3/84

002-002

9320900016

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 6 3 0 5 0 0 5 (9–15)

MONITOR POINT NUMBER B 1 0 2 (19–22)

REGION Southern CO. St Clair

DATE COLLECTED 0 9 0 5 8 4 (23 M, 24 D, 25 Y)

Fairmont City / Le Mecir

LOCATION / RESPONSIBLE PARTY

AQUEOUS LIQUIDS OTHER THAN GROUNDWATER

IEPA LAB (x or Blank) X (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	(35)	(36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	REPORTING LEVEL (49)
	119T COD, MG/L	00335						
	100T PH, LAB - SU	00403						
	103T ALKALINITY AS CACO3 MG/L	00410						
	111T AMMONIA NITROGEN, TOT MG/L	00610						
	110T NITRITE + NITRATE, TOT MG/L	00630						
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
	160T SODIUM, TOTAL MG/L AS NA	00929						
	108T CHLORIDE, MG/L AS CL	00940						
	109T SULFATE, TOTAL MG/L AS SO4	00945						
	107T FLUORIDE, TOTAL MG/L AS F	00951						
X	144T ARSENIC, TOTAL UG/L AS AS	01002				26.	L	L
X	145T BARIUM, TOTAL UG/L AS BA	01007				400.		
	106T BORON, TOTAL UG/L AS B	01022						
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	5.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	10.		
X	149T COPPER, TOTAL UG/L AS CU	01042			<	10.		
	150T IRON, TOTAL UG/L AS FE	01045						
X	151T LEAD, TOTAL UG/L AS PB	01051			<	50.		
	152T MANGANESE, TOTAL UG/L AS MN	01055						
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	30.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	5.		
X	157T ZINC, TOTAL UG/L AS ZN	01092				50.		
X	155T SELENIUM, TOTAL UG/L AS SE	01147			<	1.	L	L
X	112T PHENOLS, TOTAL UG/L	32730	H					
X	102T RESIDUE ON EVA.-180°C MG/L	70300	A	N				
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.1	1	R
X	Sulfides, Total	00745			<	0.04		

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AGENCY USE ONLY

Page 1 of 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 1 — TRANS CODE: A

REPORT DUE DATE: 09 06 84 — FEDERAL ID NUMBER: G

SITE INVENTORY NUMBER: 1 6 3 0 5 0 0 0 0 5 — MONITOR POINT NUMBER (see Instructions): 1 1 C 3 BB

REGION: Southern — CO: St. Clair

DATE COLLECTED: 09 05 84

Fairmont City — LOCATION

Ice Plant — RESPONSIBLE PARTY

IEPA LAB (x or Blank) (see Instructions): X

FOR IEPA USE ONLY — COMPLAINT NO

DATE RECEIVED: M D Y

SAMPLING PURPOSE CODE (see Instructions): 1

TIME CARD

PROGRAM CODE: 6 2 & UNIT CODE

BACKGROUND SAMPLE (X): BB

TIME COLLECTED (24 HR CLOCK): 1 2 1 2 H M

UNABLE TO COLLECT SAMPLE (see Instructions):

MONITOR POINT SAMPLED BY (see Instructions): A — OTHER (SPECIFY)

SAMPLE FIELD FILTERED — INORGANICS (X): — ORGANICS (X):

SAMPLE APPEARANCE

COLLECTOR COMMENTS

SPECIAL INSTRUCTIONS TO LAB

Jane Ehrat — COLLECTED BY — INITIALS: J R E — DLPC/IEPA — DIVISION OR COMPANY

Jane Ehrat — TRANSPORTED BY — DLPC/IEPA — DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO — LAB NAME: ~~ENVIRONMENTAL PROTECTION AGENCY~~ ~~Division of Laboratory Services~~ — LAB ID NO

DATE RECEIVED: SEP 6 1984 — LAB ADDRESS

TIME RECEIVED: 2:45 P

SAMPLE TEMP OKAY: Y — SAMPLE PROPERLY PRESERVED: Y — DATE COMPLETED — FORWARD: OCT 26 1984

LAB COMMENTS: X - No unpreserved bottle Rec'd AK

SUPERVISOR SIGNATURE

RECORD CODE: L P C S M 0 1 — TRANS CODE: A (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER			OR	VALUE	REPORTING LEVEL	
	DEPTH TO WATER (ft below LS	507F	7 2 2 1 9						
	ELEVATION OF GW SURFACE (ft rel MSL)	508F	7 1 9 9 3						
	TOTAL WELL DEPTH (ft below LS	509F	7 2 0 0 8						
	ALKALINITY TOTAL (mg/L as CaCO3) Field	505F	0 0 4 3 1						
	REDOX POTENTIAL (millivolt) Field	506F	0 0 0 9 0						
X	pH (units) Field	500F	0 0 4 0 0				7.0		
	SPEC CONDUCTANCE (umhos) Field	503F	0 0 0 9 4						
	TEMP OF WATER SAMPLE (°C) Field	502F	0 0 0 1 0						

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LPC 160 3/84

002-002

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2

TRANS CODE A

SITE INVENTORY NUMBER 1 6 3 5 5 5 5

MONITOR POINT NUMBER 6 1 5 3

REGION Southern CO St. Clair

DATE COLLECTED 6 9 5 5 4

Fairmont City — LOCATION

Le Mear — RESPONSIBLE PARTY

AQUEOUS LIQUIDS OTHER THAN GROUNDWATER

IEPA LAB (x or Blank) X

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
	119T COD, MG/L	00335						
	100T PH, LAB - SU	00403						
	103T ALKALINITY AS CACO3 MG/L	00410						
	111T AMMONIA NITROGEN, TOT MG/L	00610						
	110T NITRITE + NITRATE, TOT MG/L	00630						
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
	160T SODIUM, TOTAL MG/L AS NA	00929						
	108T CHLORIDE, MG/L AS CL	00940						
	109T SULFATE, TOTAL MG/L AS SO4	00945						
	107T FLUORIDE, TOTAL MG/L AS F	00951						
X	144T ARSENIC, TOTAL UG/L AS AS	01002				[illegible]	1	L
X	145T BARIUM, TOTAL UG/L AS BA	01007				500		
	106T BORON, TOTAL UG/L AS B	01022						
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	5.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	10.		
X	149T COPPER, TOTAL UG/L AS CU	01042			<	10.		
	150T IRON, TOTAL UG/L AS FE	01045						
X	151T LEAD, TOTAL UG/L AS PB	01051			<	50.		
	152T MANGANESE, TOTAL UG/L AS MN	01055						
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	50.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	5.		
X	157T ZINC, TOTAL UG/L AS ZN	01092			<	50.		
X	155T SELENIUM, TOTAL UG/L AS SE	01147			<	1.	1	L
X	112T PHENOLS, TOTAL UG/L	32730	H		<	~~1.0~~	~~1~~	~~9~~
X	102T RESIDUE ON EVA.-180°C MG/L	70300	X					
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.1	1	R
X	Sulfides, Total	00745			<	0.09		
		BB						

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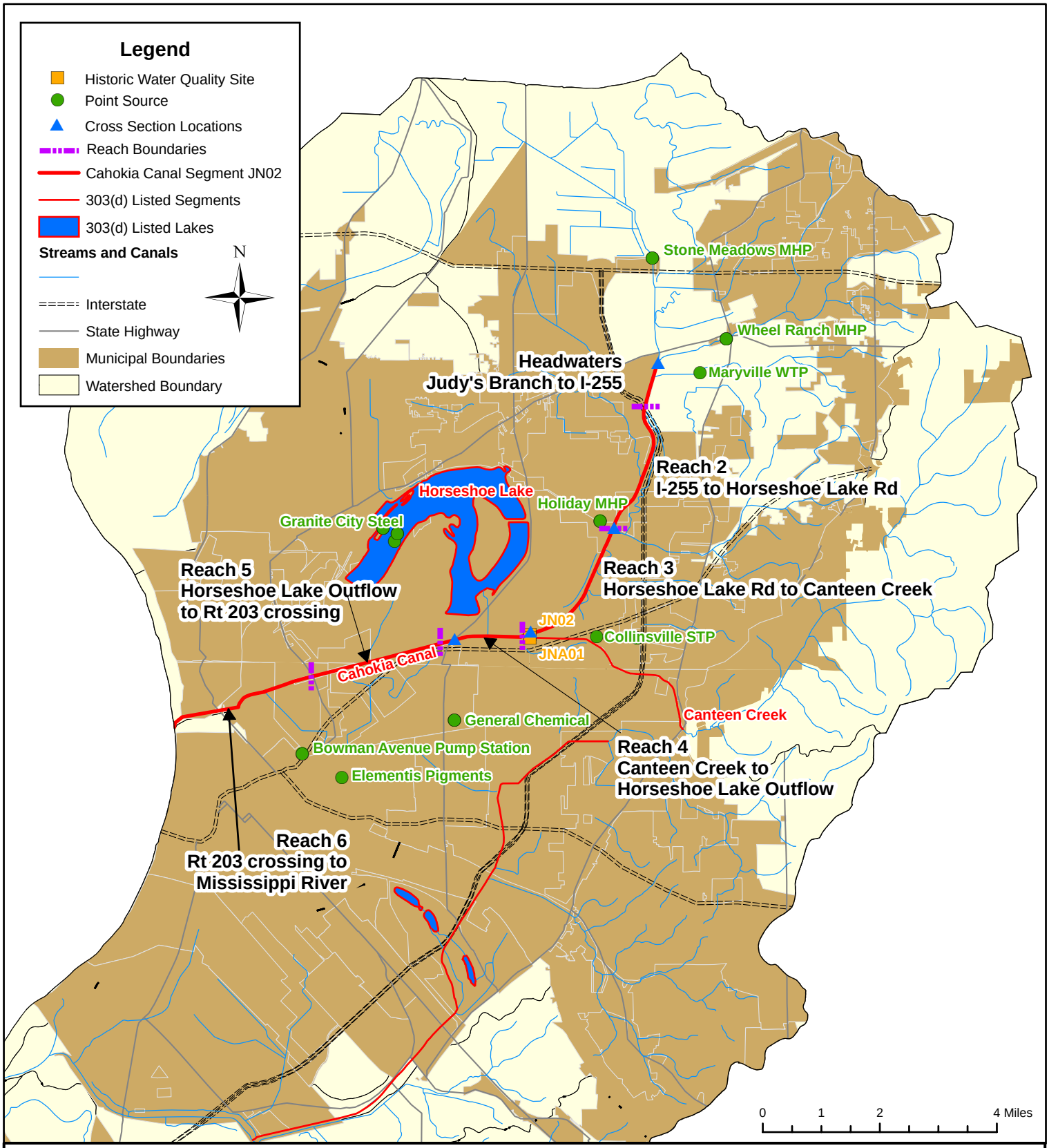

Figure 7-1
QUAL2K Segmentation
Cahokia Canal

DRAFT