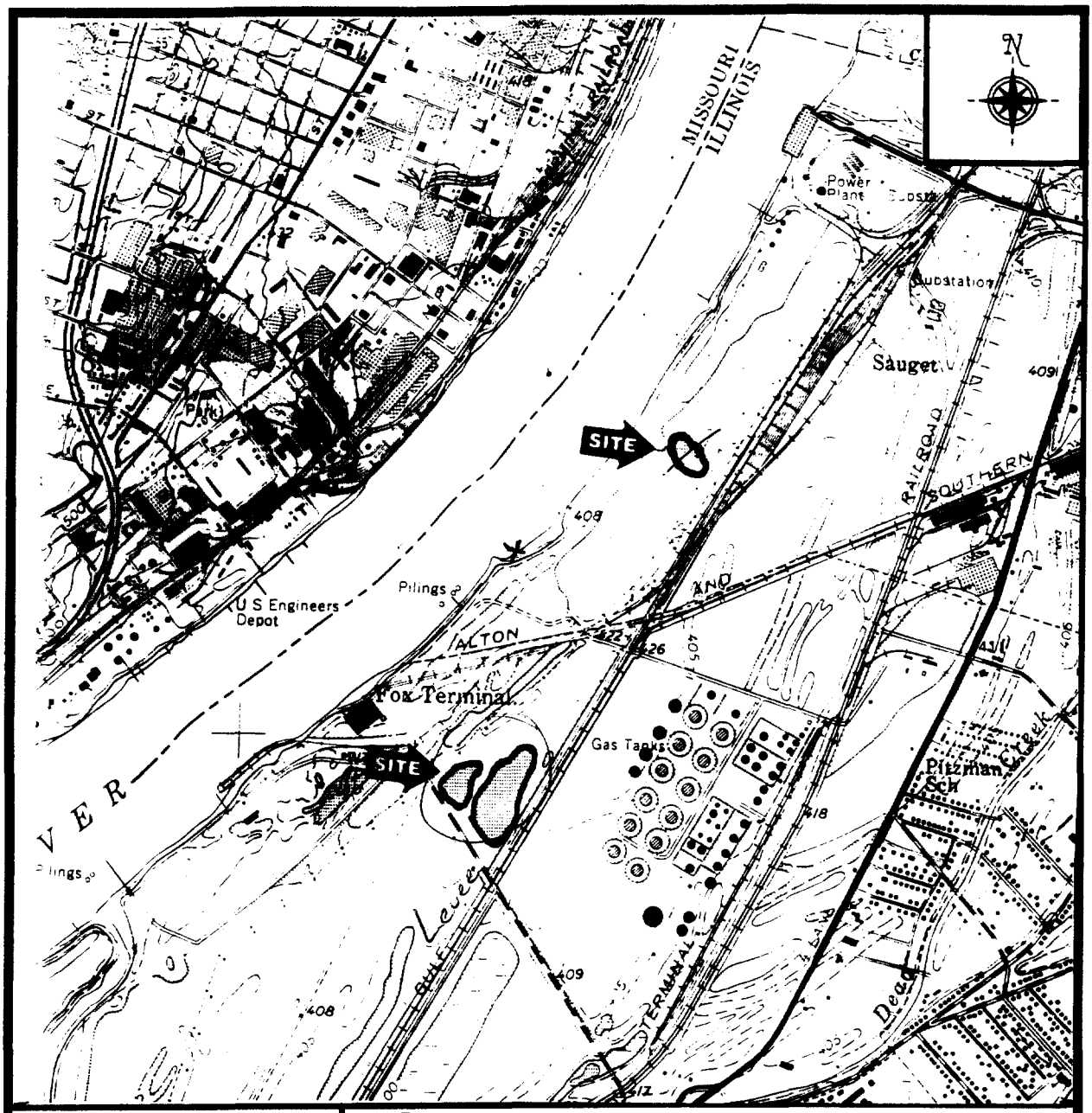
164722



Quadrangle Location

ecology and environment, inc.
Superfund Technical Assessment and Response Team
Region 5
33 North Dearborn Street, Chicago, Illinois 60602

TITLE Site Location Map	FIGURE # 2-1
SITE Sauget Area 2	SCALE 1:24000
CITY Sauget STATE Illinois	TDD S05-9703-013
SOURCE USGS Topographical Map, 7.5' Series Quadrangle: Cahokia, Illinois	DATE 1980

Sauget Site Q

1994 STATE DATA — Drum & Waste Pile Areas ppm

Sample #	PCB	Sb	Cd	Cr	Pb	Hg	Ni	Se	CN^-
X101	223	157	2,260	3,650	7,690	4.9	153	59.9	3.3
X103		17,900			195,000				
X110					5,320		371		

Eco. Assessment

Non-NPL Site

Previous Cleanup of PCB drums

[redacted]

Annual flooding/erosion/displacement of drums 6-7' 150-200

Fishery

~ 2 Acres

6500-7,000 yds

6750
x 120/yd
$810,000

Total 1.5-2.0 million

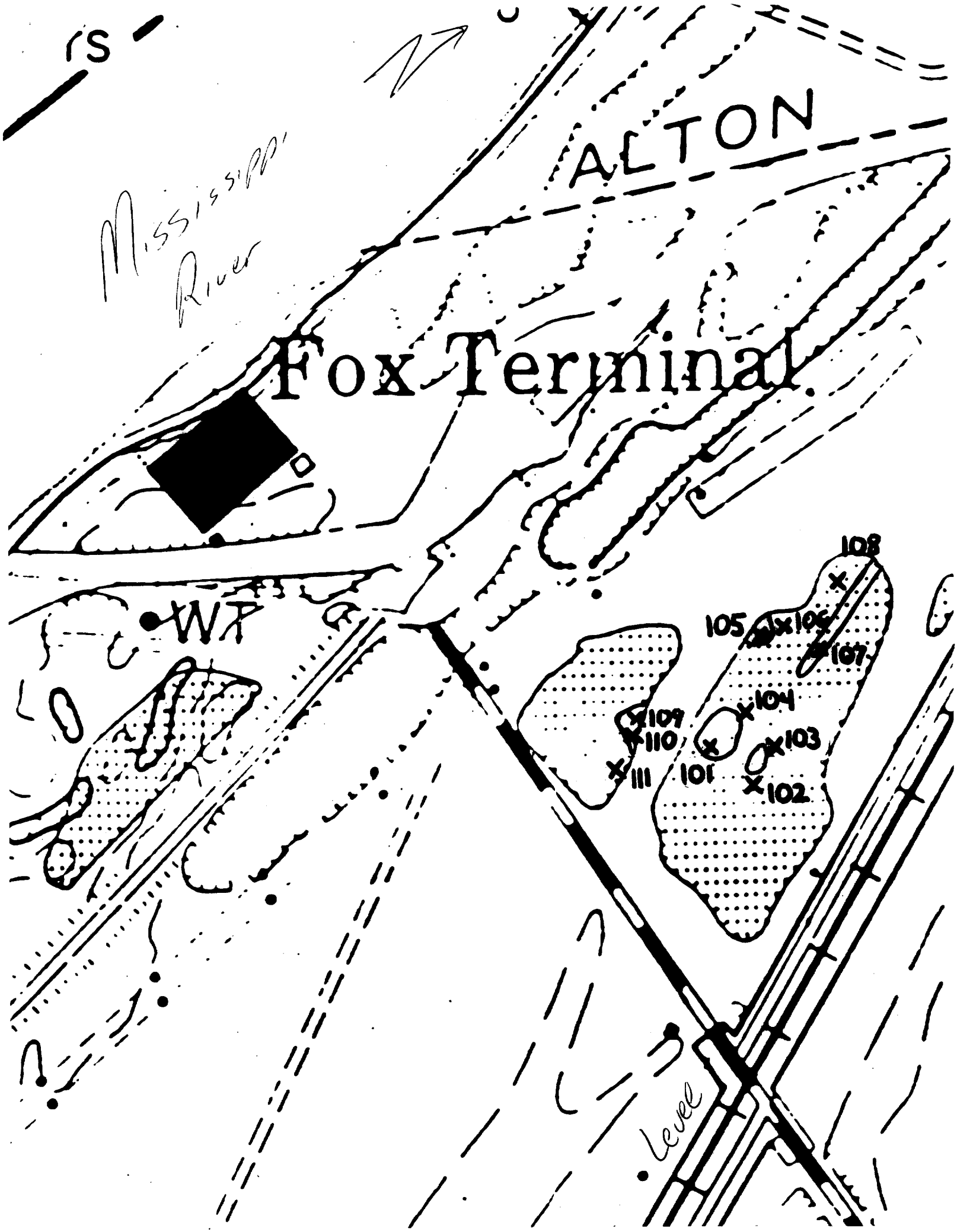

ALTON
Mississippi River
Fox Terminal
WR
108
105
106
107
104
109
110
103
111
101
102
Levee

Table 2-1

COMPARISON OF NORTHERN POND SOIL DATA (Q202) WITH NONREGULATORTY SOIL QUALITY GUIDELINES
SAUGET AREA 2
SAUGET, ILLINOIS
APRIL 17, 1997

Parameter	Sample Results (mg/kg)	Risk-Based Level[a] (mg/kg)	SQG (mg/kg)		Hazard Quotient[b] (no units)	
			B	C	B	C
Arsenic	9.4	310	30.0	50.0	0.3	0.2
Barium	232	72,000	400	2000	0.6	0.5
Cadmium	4.4	510	5	20.0	0.9	0.2
Chromium	15.9	5,100	250	800	0.1	0.0
Lead	92.4	NA	150	600	0.6	0.2
Mercury	1.6	310	2.0	10.0	0.8	0.2
Selenium	1.9	5,100	3.0	10.0	0.6	0.2
Silver	0.71	5,100	10.0	40.0	0.1	0.0
PCB-1248	1.7	NA	NA	NA	NA	NA
PCB-1254	1.6	NA	NA	NA	NA	NA
PCB-1260	0.76	NA	NA	NA	NA	NA
Total PCBs	4.06	NA	1.0	10.0	4.1	0.4
Benzo(a)anthracene	1.7	3.9	1.0	10.0	1.7	0.2
Benzo(a)pyrene	1.6	0.39	1.0	10.0	1.6	0.2
Benzo(b)fluoranthene	1.8	3.9	NA	NA	NA	NA
Benzo(g,h,i)perylene	1.2	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1.8	39	NA	NA	NA	NA
Chrysene	2.0	39,000	5.0	50.0	0.4	0.0
Dibenz(a,h)anthracene	0.61	0.39	1.0	10.0	0.6	0.1
Fluoranthene	1.8	41,000	10.0	100	0.2	0.0
Phenanthrene	0.79	NA	5.0	50.0	0.2	0.0
Pyrene	1.9	31,000	10.0	100	0.2	0.0
Total PAHs	16.3	NA	20.0	200	0.8	0.1

Key:
[a] = Human health risk-based concentrations for industrial soil (U.S. EPA 1993b).
[b] = Sample concentration/SQG.
SQG = Soil Quality Guidelines: Based on the Netherland and Quebec soil criteria (Beyer 1990).
B = Refers to moderate soil contamination that requires additional study.
C = Refers to severe soil contamination.
mg/kg = Milligrams per kilogram.
NA = Not available.

Source: Ecology and Environment, Inc., Lancaster, New York; Analytical TDD S05-9704-807.

Table 2-2

COMPARISON OF NORTHERN POND SEDIMENT DATA (Q201) WITH NONREGULATORY SEDIMENT QUALITY CRITERIA
SAUGET AREA 2
SAUGET, ILLINOIS
APRIL 17, 1997

Parameter	Sample Results (mg/kg)	Risk-Based Level[a] (mg/kg)	SQC (mg/kg)		Hazard Quotient[b] (no units)	
			LEL	SEL	LEL	SEL
Arsenic	6.9	310	6.0	33.0	1.2	0.2
Barium	191	72,000	NA	NA	NA	NA
Cadmium	0.15	510	0.6	10.0	0.3	0.2
Chromium	10.3	5,100	26.0	110	0.4	0.1
Lead	28.7	NA	31.0	250	0.9	0.1
Mercury	0.18	310	0.2	2.0	0.9	0.1
Selenium	1.0	5,100	NA	NA	NA	NA
Silver	0.36	5,100	NA	NA	NA	NA
PCB-1248	0.48	NA	0.03	150	16.0	0.0
PCB-1254	0.72	NA	0.06	34.0	12.0	0.0
PCB-1260	0.61	NA	0.005	24.0	122	0.0

Key:
[a] = Human health risk-based concentrations for industrial soil (U.S. EPA 1993).
[b] = Sample concentration/SQC.
SQC = Based on the Ontario Provincial Sediment Quality Guidelines (Persaud, et al. 1994).
LEL = Lowest Effect Level: Refers to marginally polluted sediments in which ecotoxic effects become apparent, but the majority of sediment-dwelling organisms are not affected.
SEL = Severe Effect Level: Refers to heavily polluted sediments likely to affect the health of sediment-dwelling organisms.
mg/kg = Milligrams per kilogram.
NA = Not available.

Source: Ecology and Environment, Inc., Lancaster, New York; Analytical TDD S05-9704-807.

Table 2-3

COMPARISON OF SOUTHERN SITE SOIL DATA WITH NONREGULATORY SOIL QUALITY GUIDELINES
SAUGET AREA 2
SAUGET, ILLINOIS
APRIL 17, 1997

Parameter	Maximum Detection[a] (mg/kg)	Risk-Based Level[b] (mg/kg)	SQG (mg/kg)		Hazard Quotient[c] (no units)	
			B	C	B	C
Arsenic	32.9	310	30.0	50.0	1.1	0.7
Barium	969	72,000	400	2000	2.4	0.5
Cadmium	139	510	5	20.0	27.8	7.0
Chromium	3900	5,100	250	800	15.6	4.9
Lead	2450	NA	150	600	16.3	4.1
Mercury	12.2	310	2.0	10.0	6.1	1.2
Selenium	8.1	5,100	3.0	10.0	2.7	0.8
Silver	18.7	5,100	10.0	40.0	1.9	0.5
PCB-1248	120	NA	NA	NA	NA	NA
PCB-1254	1.8	NA	NA	NA	NA	NA
PCB-1260	1.8	NA	NA	NA	NA	NA
Total PCBs[d]	120	NA	1.0	10.0	120.0	12.0

Key:
[a] = Refers to the highest level of contaminant detected in the samples collected during the assessment.
[b] = Human health risk-based concentrations for industrial soil (U.S. EPA 1993).
[c] = Sample concentration/SQG.
[d] = Refers to the soil sample with the highest total amount of PCBs (PCB-1248 + PCB-1254 + PCB-1260)(Sample Q208).
SQG = Soil Quality Guidelines: Based on the Netherland and Quebec soil criteria (Beyer 1990).
B = Refers to moderate soil contamination that requires additional study.
C = Refers to severe soil contamination.
mg/kg = Milligrams per kilogram.
NA = Not available.

Source: Ecology and Environment, Inc., Lancaster, New York; Analytical TDD S05-9704-807.

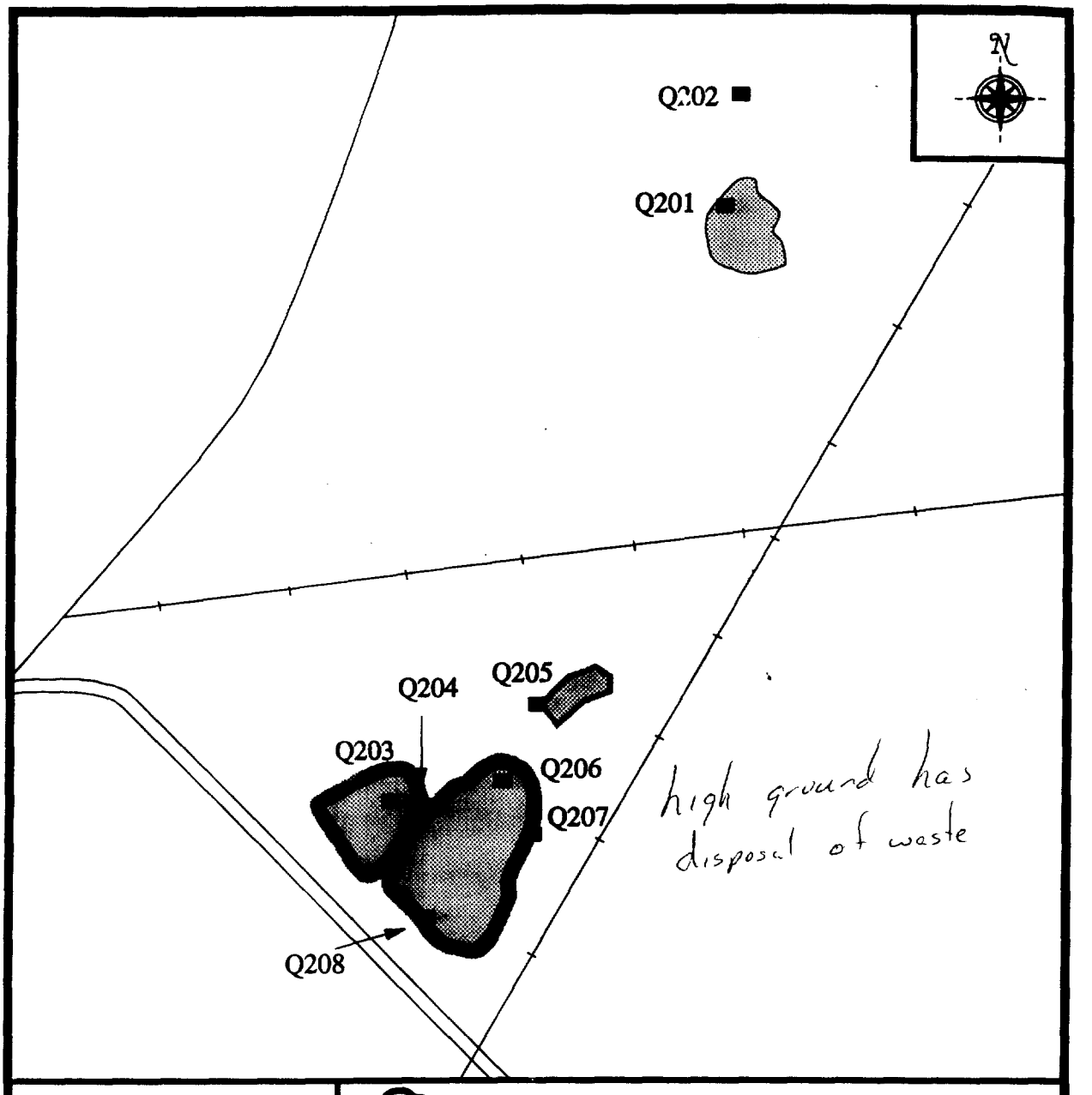
Table 2-4

COMPARISON OF SOUTHERN SITE SEDIMENT DATA WITH NONREGULATORY SEDIMENT QUALITY CRITERIA
SAUGET AREA 2
SAUGET, ILLINOIS
APRIL 17, 1997

Parameter	Maximum Detection[a] (mg/kg)	Risk-Based Level[b] (mg/kg)	SQC (mg/kg)		Hazard Quotient[c] (no units)	
			LEL	SEL	LEL	SEL
Arsenic	4.7	310	6.0	33.0	0.8	0.1
Barium	135	72,000	NA	NA	NA	NA
Cadmium	3.2	510	0.6	10.0	5.3	0.3
Chromium	13.3	5,100	26.0	110	0.5	0.1
Lead	139	NA	31.0	250	4.5	0.6
Mercury	0.28	310	0.2	2.0	1.4	0.1
Selenium	1.1	5,100	NA	NA	NA	NA
Silver	1.4	5,100	NA	NA	NA	NA
PCB-1248	2.6	NA	0.03	150	86.7	0.0
PCB-1254	4.2	NA	0.06	34.0	70.0	0.1
PCB-1260	1.9	NA	0.005	24.0	380.0	0.1

Key:
[a] = Refers to the highest level of contaminant detected in the samples collected during the assessment.
[b] = Human health risk-based concentrations for industrial soil (U.S. EPA 1993).
[c] = Sample concentration/SQC.
SQC = Based on the Ontario Provincial Sediment Quality Guidelines (Persaud, et al. 1994).
LEL = Lowest Effect Level: Refers to marginally polluted sediments in which ecotoxic effects become apparent, but the majority of sediment-dwelling organisms are not affected.
SEL = Severe Effect Level: Refers to heavily polluted sediments likely to affect the health of sediment-dwelling organisms.
mg/kg = Milligrams per kilogram.
NA = Not available.

Source: Ecology and Environment, Inc., Lancaster, New York; Analytical TDD S05-9704-807.



Legend

■ Sample Location

ecology and environment, inc.
Superfund Technical Assessment and Response Team
Region 5
33 North Dearborn Street, Chicago, Illinois 60602

TITLE Sample Location Map	FIGURE # 2-3
SITE Sauget Area 2	SCALE Not to scale
CITY Sauget STATE Illinois	TDD S05-9703-013
SOURCE Ecology and Environment, Inc.	DATE 1997