EPA Region 5 Records Ctr.
355948

L1630455013-St. Clair Co.
Shippers Car Line/ACF Industries
ILD006273809
SF/HRS

NFRAP - PA 2
A. Altur
9/13/91

CERCLA
Screening Site Inspection Report

Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

RECEIVED
SEP 1991

Shippers Car Line/ACF Industries

Site Screening Inspection
Site Remediation

On January 24, 1991 the Illinois Environmental Protection Agency's (IEPA) Pre-Remedial Unit was tasked by the United States Environmental Protection Agency (USEPA) to conduct a Screening Site Inspection (SSI) of the Shippers Car Line/ACF Industries site (ACF) in East St. Louis, Illinois.

The site was initially discovered by USEPA and placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) on October 1, 1979. The site began undergoing environmental evaluation in 1979. The site was evaluated in the form of a Preliminary Assessment (PA) that was submitted to USEPA, prepared by Kenneth L. Page of the IEPA, and is dated June 12, 1986. The IEPA's Pre-Remedial Unit conducted a site reconnaissance in January 1991 and prepared an SSI workplan for the ACF site which was submitted to USEPA Region V for approval. A site safety plan was also prepared for the site. Upon review of the workplan, the USEPA recommended that the site undergo an extensive desk audit/SSI. This recommendation was based on information contained in the workplan that the site was being evaluated by the IEPA's Immediate Removal/Voluntary Clean-up Section. Environmental samples were taken by Allstates Environmental Services, Inc. (1989) and Dames & Moore (1990)

with reports written in conjunction with these samples describing the site and type and extent of contamination. The following is the result of the desk audit/SSI:

According to past and present employees and company records, Shippers Car Line operated as a railcar repair and servicing facility. The East St. Louis facility operated as one of several facilities under the Shippers Car Line leasing division of ACF Industries. This facility operated in this capacity from 1925 until 1982 when the company shutdown. The sites ground surface consists of soil, grass, weeds, asphalt, gravel and concrete. Structures located on site consisted of a paint storage building, paint shop, sand blast house, main repair shop, air compressor building, pole building, steam racks, an office building, numerous railroad side tracks and spurs and two diesel storage tanks. Most site structures were still standing and largely intact as of August 1991. Removed from the site are the railroad tracks, steam racks and the above ground diesel storage tanks.

The site is located at 100 Trendley Avenue, East St. Louis, Illinois in St. Clair County (Figure 1). The parcel of land which was occupied by ACF consists of approximately 20 acres in the N 1/2 of the SE 1/4 of Section 14, Township 2 North - Range 10 West (Figure 2). The site location is also described as being in the Mississippi River floodplain at the meeting of the Salem Plateau section in the Ozark Plateaus Province

and the Springfield Plain area of the Till Plains Section of the Central Lowland Province (Figure 3).

The site is currently owned and operated by ACF Industries, Inc., Earth City, Missouri. In 1925, ACF Industries began leasing the subject property from ACME Tank Company, the owner at that time. This property was later sold to Wiggins Ferry Company. ACF continued to lease the property until 1971. In 1971, ACF bought the property from Wiggins Ferry Company. ACF is the current owner of the property as of this writing (August 1991).

Citing sources mentioned above, Shippers Car Line Division of ACF maintained a fleet of tank cars (for pressurized gases and liquids) and hopper cars (for solids), which were leased to clients requiring bulk commodity transportation. Commodities usually hauled by these rail cars included plastic pellets, edible and inedible vegetable oils, tallow, fuel oils, aliphatic and aromatic hydrocarbons, chlorinated solvents, coal tar, asphalt, liquified petroleum gas (LPG), anhydrous ammonia, organic and inorganic acids, grain, flour, etc. Railcars requiring a variety of mechanical repairs would be periodically brought to this site where they would be repaired for safe transportation of bulk commodity items. Railcars were also brought to the site for other services including exterior painting, interior lining removal and

reapplication, hydrostatic testing and exterior/interior cleaning.

Railcars were cleaned using a number of different methods to remove residual commodity. Most cars requiring cleaning were brought in as "empty" (less than 3% residual commodity). The facility then had to remove enough of the residual to safely complete the required repairs or services. Facility records have indicated that from 1977 through 1982, residuals were containerized in 55 gallon drums prior to actual cleaning. In addition to the residual commodities, other wastes generated on site included spent paint solvent, paint solids and paint sludges from the railcar exterior painting operation, spent sand from the railcar sandblasting operation, interior lining waste and spent chlorinated solvents from the removal of interior linings of railcars. These containers were ultimately transported and disposed, recycled or reclaimed off-site. Upon removal of the residuals the railcars were then cleaned on a rail spur at the south side of the property which was referred to as the steam rack. A variety of cleaning methods were used to clean the cars based on the characteristics of what the contents of the car was. Generated rinse water was accumulated in an underground tank which was pumped out approximately once a week and discharged to the East St. Louis Sewage Treatment Plant for treatment prior to discharge into the Mississippi River. ACF had installed most of the components for their own wastewater

treatment system, beginning in early 1980 but failed to complete it prior to going out of business in 1982.

Prior to the installation of the steam rack, residuals were discharged and collected in a series of earthen impoundments located just southwest of where the steam rack was located. After the residuals were emptied the car was transferred to a small rail spur located east of the present location of the sand blast house. Rinse water from the cleaning operation was reportedly discharged into a ditch that ran near the spur in an east to west direction. Former ACF employees have indicated that railcar residuals had periodically been dumped in an area at the northcentral portion of the property.

A Remedial Investigation (RI) has been performed at the Shippers Car Line/ACF Industries site in East St. Louis, Illinois with a Removal Action scheduled to take place, beginning in mid September 1991.

The formal RI was performed by Dames & Moore Engineering in accordance with a request by Mr. Carl V. Smith, Senior Environmental Engineer, ACF Industries. The RI was based on a subsurface investigation conducted by Allstates Environmental Services, Inc. in August and September 1989. The Dames & Moore investigation was performed from October 24 through November 21, 1990 as an elaboration on the earlier site work to more accurately determine the quantity of subsurface

contamination and to further characterize the types and levels of constituents on site.

The 1989 subsurface investigation, conducted by Allstates Environmental Services was limited to the general characterization of the site relative to subsurface soil contamination and to determine the approximate volume of contamination if present. Soil samples were collected from approximately 32 soil boring locations across the entire site area. Depth of each boring varied from approximately 2 feet to 21 feet below ground surface. Each sample was analyzed for target compound list constituents. Results from sample analysis indicated there were five areas of suspected subsurface soil contamination (Figure 4):

1) Area south of the Paint Shop
2) Area north & east of the Paint Storage Building
3) Area north & east of the Paint Shop & Blast House
4) Localized area north & east of the Main Repair Shop
5) Area south of the west end of the Air Compressor Building

In October 1990, Dames & Moore performed a more indepth subsurface assessment of the areas investigated by Allstates. In addition to those areas, Dames & Moore investigated areas not included in the Allstates investigation. Seven soil borings were drilled to between 25 and 30 feet below ground surface (Figure 5). A total of fifteen soil samples were sent

to the laboratory for analysis in order to provide an initial assessment of the potential contamination in the underlying soil and fill. Eight soil samples were collected from five of the seven borings, the remainder were from composite trench excavations in or adjacent to the suspected points of contamination (Figure 6). The purpose of this activity was to confirm and determine as accurately as possible the lateral and, whenever feasible, the vertical extent of subsurface soil contamination. In six of the borings, monitor wells were installed to determine shallow groundwater levels, flow direction and concentrations of chemical constituents in water, if present. Results of the sampling indicated that the site was relatively clean (results ranging from no contamination detected to approximately 30 ppm total hydrocarbon contamination) outside of the areas suspected to be contaminated. Areas where contaminants were most prevalent were in the five above mentioned locations. Based on the analysis of samples throughout the RI process and the vertical and horizontal extent from which they were collected these 5 main areas of suspected contamination were confirmed and defined (Table 1).

Area 1 - 241 feet (east to west) x 96 feet (north to south) with an approximate maximum depth of 17.0 feet. Average depth of 10.5 feet.
Total = 8,997 cu. yds.
* Volatile Organics - 160-358 ppb
* Semi-Volatiles - (coal tar derivatives) 1,481 ppm
* Oil & Grease - 3,673-5,740 ppm (AES study)

Area 2 - 162 feet (east to west) x 110 feet (north to south) with an approximate depth of 6 feet.
Total = 3,960 cu. yds.
* Volatile Organics - 2.7 ppm
* Semi-Volatiles - (coal tar derivatives) 2,091 ppm
* Oil & Grease - 3,924 ppm (AES study)

Area 3 - 248 feet (east to west) x 113 feet (north to south) with an approximate depth of 4.1 feet.
Total = 4,256 cu. yds.
* Volatile Organics - 165 ppm
* Semi-Volatiles - 2,618-3,731 ppm
* Pesticides - 1.1 ppm
* PCBs - 2.8 ppm

Area 4 - 39 feet (north to south) x 28 feet (east to west) with an approximate depth of 5 feet.
Total = 202 cu. yds.
* Volatile Organics - 0
* Semi-Volatiles - 787 ppm

Area 5 - 24 feet (east to west) x 6 feet (north to south) with an approximate depth of 7 feet.
Total = 37 cu. yds.
* No samples taken, however, petroleum contamination was observed.

The approximate locations of the above mentioned areas are shown in Figure 4. Adding the individual volumes of contaminated soil calculated from each of the five areas, the total volume of affected subsurface soil is 17,452 cubic yards.

Water levels from the six groundwater monitoring wells showed a water table ranging from approximately 20 feet below grade to 28.5 feet below grade. Groundwater flow patterns in the area depend on the level of the Mississippi River. At the time of the October 1990 investigation the groundwater flow was found to be in a south-southwest direction. The wells were constructed of schedule 80 PVC with a 10 foot section of

#10 slot size (0.010 inch) screen installed at the bottom of the well. Total depth for all well bores was 30 feet below grade. Screens were set from 20 to 30 feet below grade except Monitor Well #5 which was set at 28 feet. Three of the six wells indicated the presence of Volatile Organics, four of the six showed Semi-Volatiles and arsenic was detected in one of the wells above drinking water standards. Volatiles ranged from 0.001 ppm (estimated) to 0.010 ppm while Semi-Volatiles ranged from 0.003 ppm (estimated) to 0.059 ppm. Arsenic was detected at 0.364 ppm (Table 2).

Removal of contaminated soil from the ACF/Shippers Car Line facility is proposed to begin in September 1991. John Mathes and Associates has been selected as the consultant for this removal action. They are responsible for developing a Risk Assessment, Site Work Plan and Site Health and Safety Plan along with coordination of site activities. The actual soil removal has been tasked to Brooks Grading & Excavating. Brooks had also been contracted during the Remedial Investigation for the previous site trenching operations. All site activities are proposed to be completed under the direct supervision of an ACF/Shippers Car Line representative with supplemental oversight provided by Mathes & Associates. All site activities are to be performed in accordance with the Illinois EPA approved Work Plan for the Removal Action of Contaminated Soils upon approval of said plan. Reference

Figure 4 for the approximate locations and extent of soil removal.

Contaminated soil is proposed to be excavated from the site using a track mounted backhoe and loaded into plastic lined, twelve cubic yard dump trucks. The excavated soil is proposed to be transported by the Illinois-licensed special-waste hauler trucks (under contract to Brooks Excavating & Grading) to Granite City, Illinois for disposal at Waste Management's Chain of Rocks Recycling & Disposal Facility (a permitted, secure special-waste disposal facility). The removal action is expected to produce approximately 17,452 cu. yds. of excavated, contaminated soil at the site. Perimeter and bottom samples will be taken from in and around each excavation to assure contamination is removed. The excavated areas will then be backfilled and regraded with soil primarily brought in from an off-site location.

According to the Illinois State Water Survey and Illinois State Geological Survey the area is underlain by alluvial materials (Cahokia Alluvium) deposited on the floodplain of the Mississippi River. The alluvial materials consist of 60-75 feet of silt, clay and silty sand, overlying 40-45 feet of sand and gravel of the Henry Formation, which rests on massive limestones and or dolomites of Mississippian Age. Within a four mile radius of the site there are approximately 25 groundwater wells utilized by manufacturers. Water

obtained from these wells is used as non-contact cooling water, contact cooling water and process water. At no time is it used as drinking water. No public drinking water wells are located within four miles of the ACF site. There are, however, 3 non-community public wells located within the four mile radius of the site. These are noted to be 2 lounges and the National Stock Yards. All three are between 1 and 2 miles of the site. No information is available on these wells. A Southwestern Illinois Metropolitan and Regional Planning Commission (SIMRPC) report (1983) listed 69 residents (according to 1980 census questionnaires) in Centreville Township (including the towns of Sauget, Cahokia, Alorton and Centreville) which use private ground water systems. This report also lists 57 residences in East St. Louis which use private systems. These systems are used for drinking water or irrigation purposes. It is estimated that approximately 50% of these wells fall within the four mile radius of the ACF site.

There are no permanent surface water bodies on site. The Mississippi River is located approximately 75 feet west of the site. There are no documented surface water intakes along the 15-mile in-water segment (Mississippi River) downstream of the site. The nearest known downstream surface intake on the Illinois side of the Mississippi River is located at river mile 110, approximately 67 miles downstream of ACF. The nearest known downstream surface intake on the

Missouri side of the river is located at river mile 149, approximately 30 miles downstream of ACF. The Illinois American Water Company obtains water from the Mississippi River for distribution throughout the area, however, the intakes are between 2 and 24 miles upstream of the ACF site. The ACF site is located in the Mississippi River floodplain and is protected by the Metro East Sanitary District Levee. The levee is designed to protect the area from a 500 year "plus" event. The "plus" indicates that the levee was constructed to a point just above the 500 year mark. Flood insurance maps indicate the area as one of minimal flooding, referred to as Zone C on the national flood insurance rate maps.

Population within a mile of the site is estimated at 3500 people while the population within four miles is greater than 50,000 (1990 census).

A reconnaissance visit conducted on October 29, 1990 noted that the entire facility was surrounded by eight foot tall chain link fence topped with three strands of barbed wire which was, upon inspection, intact. One gate on the west side of the facility is the only entry point to the site. When no one is on site this gate is locked at all times. At the time of the reconnaissance visit there were no visible signs of vandalism. The site representative indicated that there has not been any problems with that type of activity.

Based on removal activities which are scheduled to be undertaken and confirmation of contaminant free perimeter samples (collected from each area of concern after removal of known contamination), the author has assigned a No Further Remedial Action Planned (NFRAP) rating to this site. In addition, the author recommends, at such time that the property owners remediation efforts are completed the Region V offices of the U.S. EPA make a decision on weather additional CERCLA investigatory action is warranted.

BIBLIOGRAPHY

Allstates Environmental Services, Inc., August 9, 1989; ACF/East St. Louis Phase I Site Investigation.

Allstates Environmental Services, Inc., September 22, 1989; ACF/East St. Louis Phase II Environmental Investigation.

Baggett, Louis, 1990-1991; ACF Industries, Inc., Earth City, Missouri, Environmental Chemist.

Dames & Moore, January 29, 1991; ACF Industries/East St. Louis Facility Phase III Site Investigation.

Dames & Moore, January 29, 1991; ACF Industries/East St. Louis Facility Phase III Site Investigation Attachment document.

Hyink, Richard, 1991; ACF Industries, Inc., Earth City, Missouri, Manager - Safety & Environment.

Illinois Environmental Protection Agency, 1986; Potential Hazardous Waste Site Preliminary Assessment for ACF/Shippers Car Line, ILD006273809; prepared by Kenneth L. Page, Springfield, Illinois.

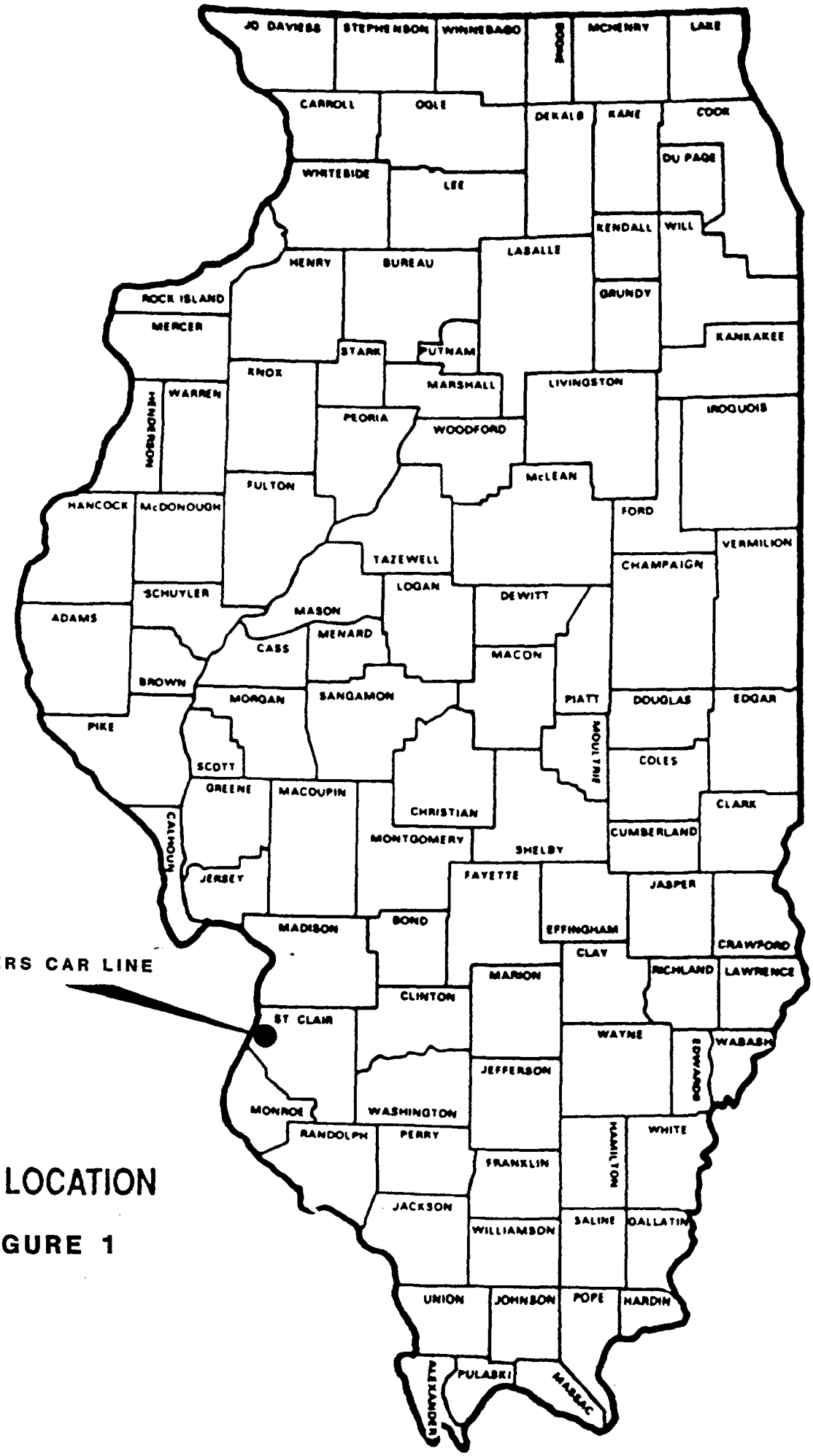
Illinois State Geological Survey, Bulletin 95, Handbook of Illinois Stratigraphy.

U.S. Geological Survey, 1954, photorevised 1968 & 1974, Cahokia Quadrangle, 7.5 Minute Series 1:24,000.

U.S. Geological Survey, 1954, photorevised 1982, French Village Quadrangle, 7.5 Minute Series 1:24,000.

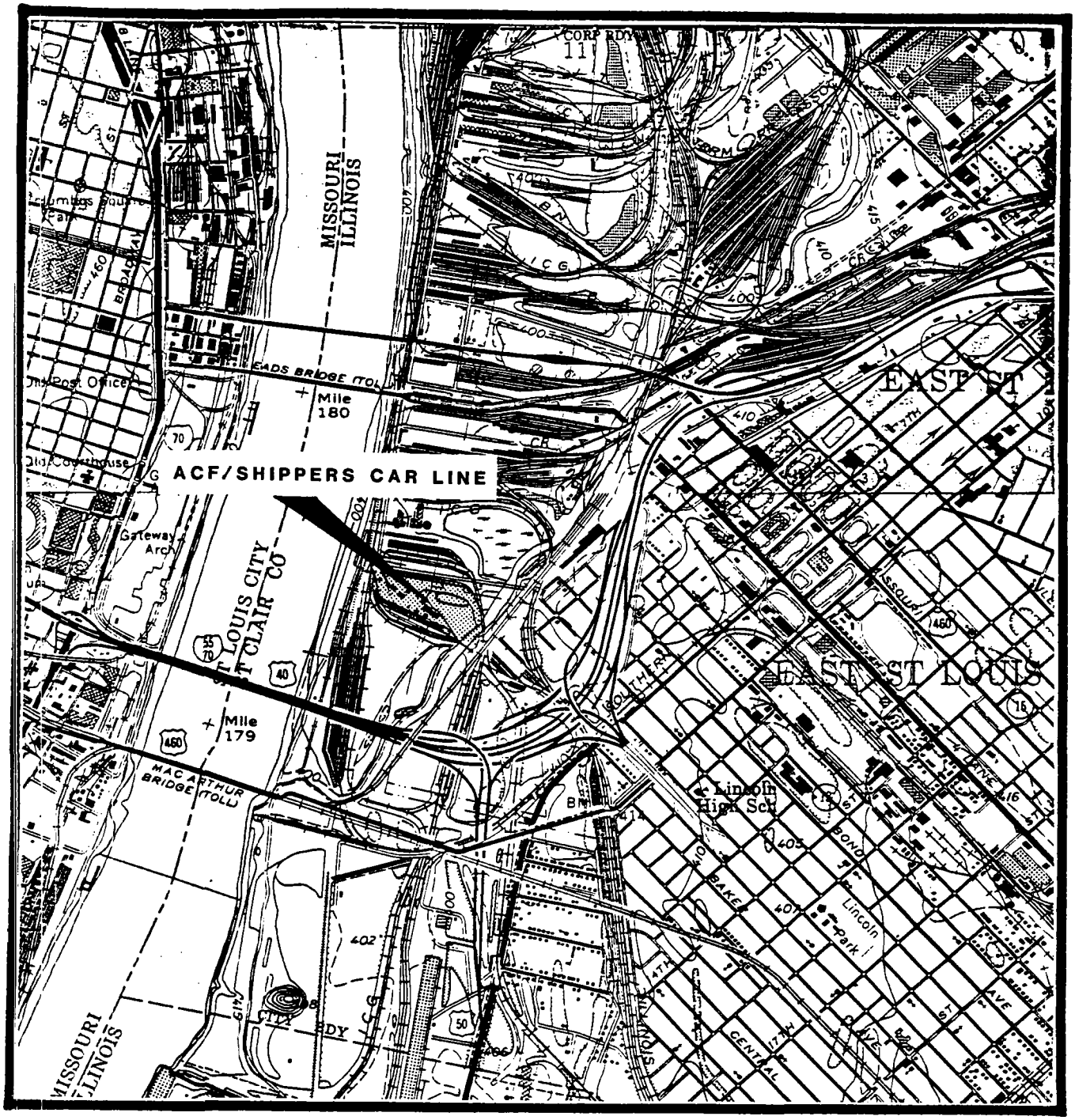
U.S. Geological Survey, 1954, photorevised 1982, Granite City Quadrangle, 7.5 Minute Series 1:24,000.

U.S. Geological Survey, 1954, photorevised 1968 & 1974, Monks Mound Quadrangle, 7.5 Minute Series 1:24,000.



SITE LOCATION

FIGURE 1



IEPA 1991

SITE MAP

FIGURE 2

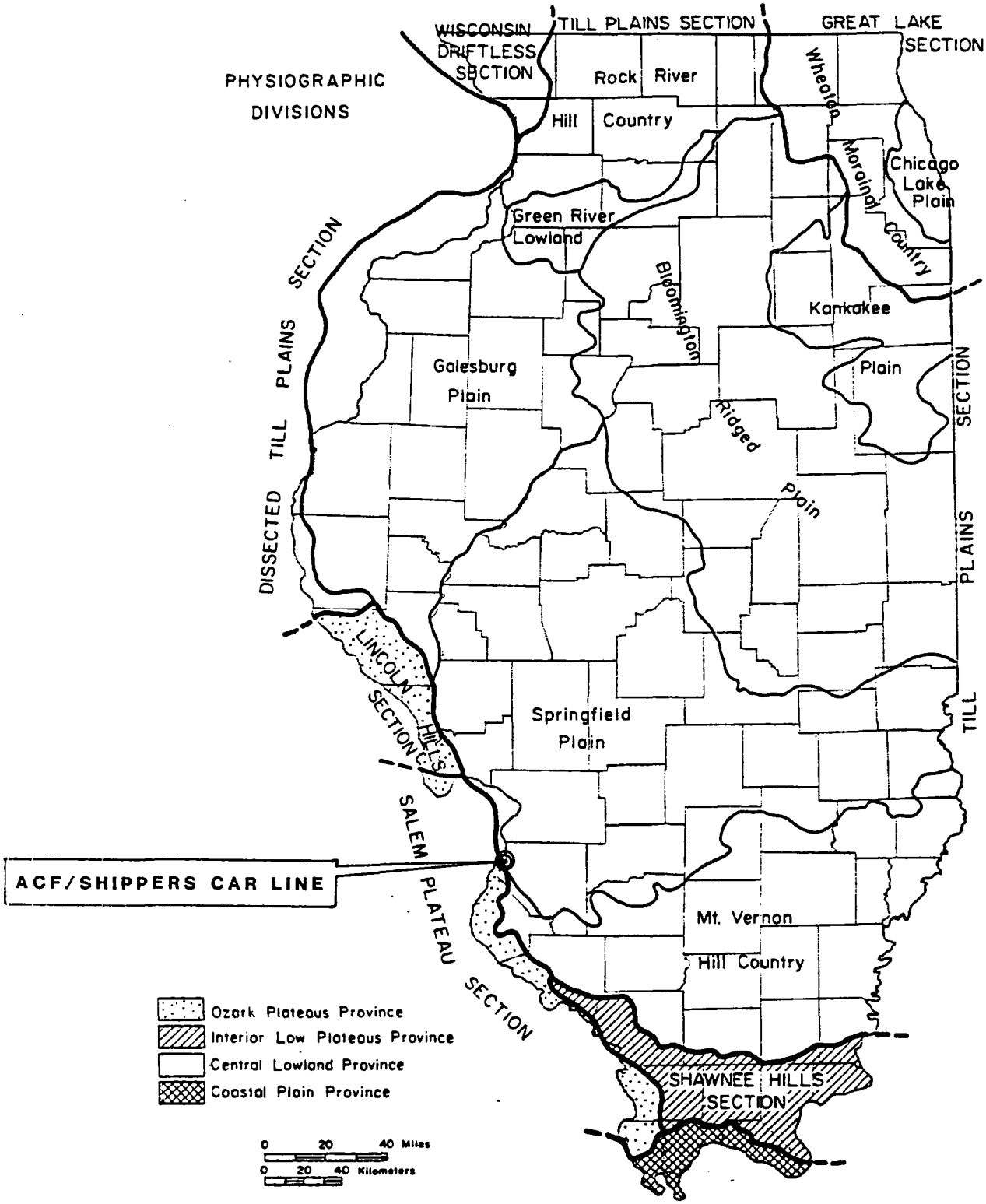
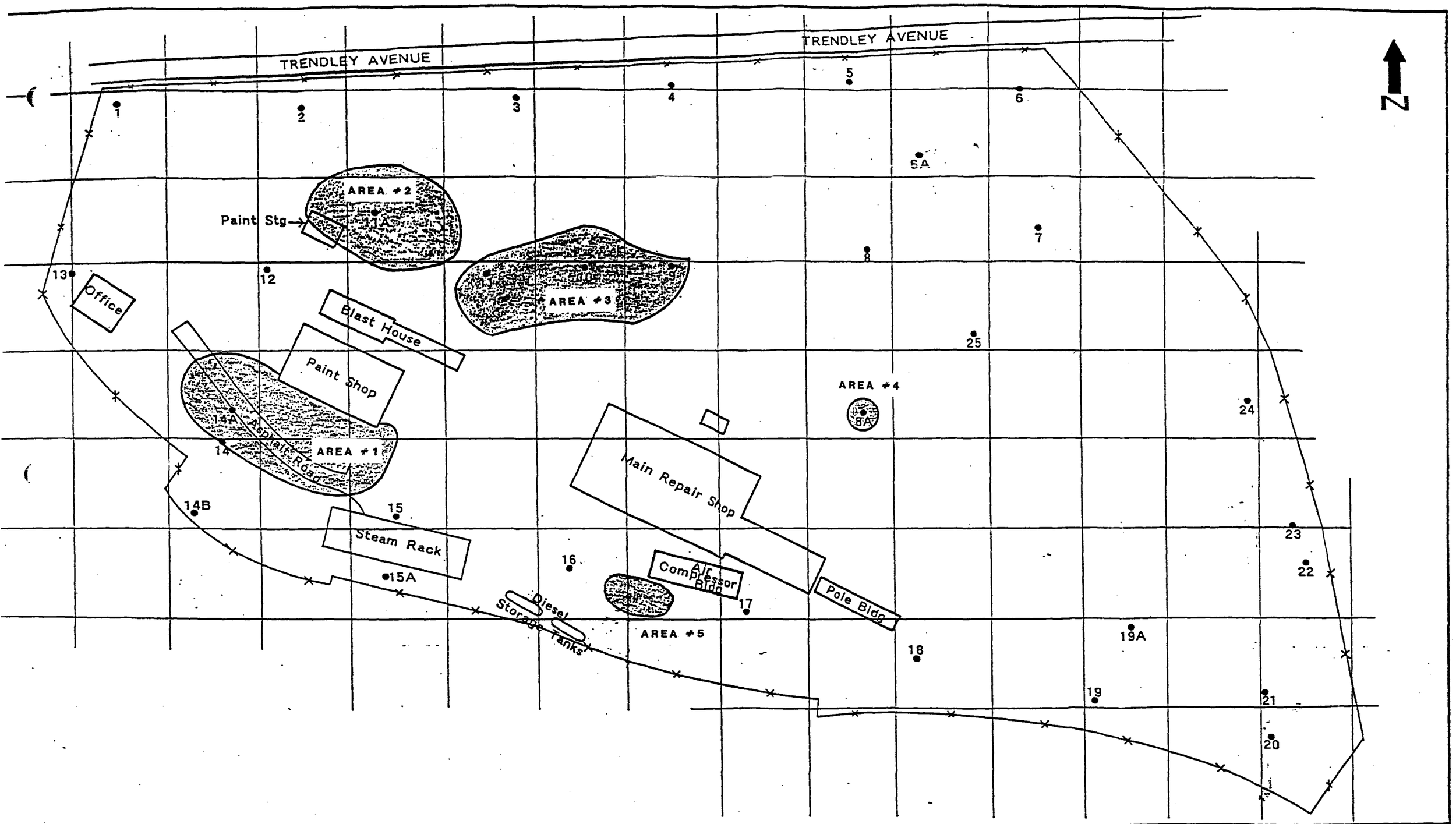


Fig. 7—Physiographic divisions of Illinois (after Leighton et al., 1948).

FIGURE 3



LEGEND:

PLUME AREA

BOREHOLE LOCATIONS FROM AES INVESTIGATION

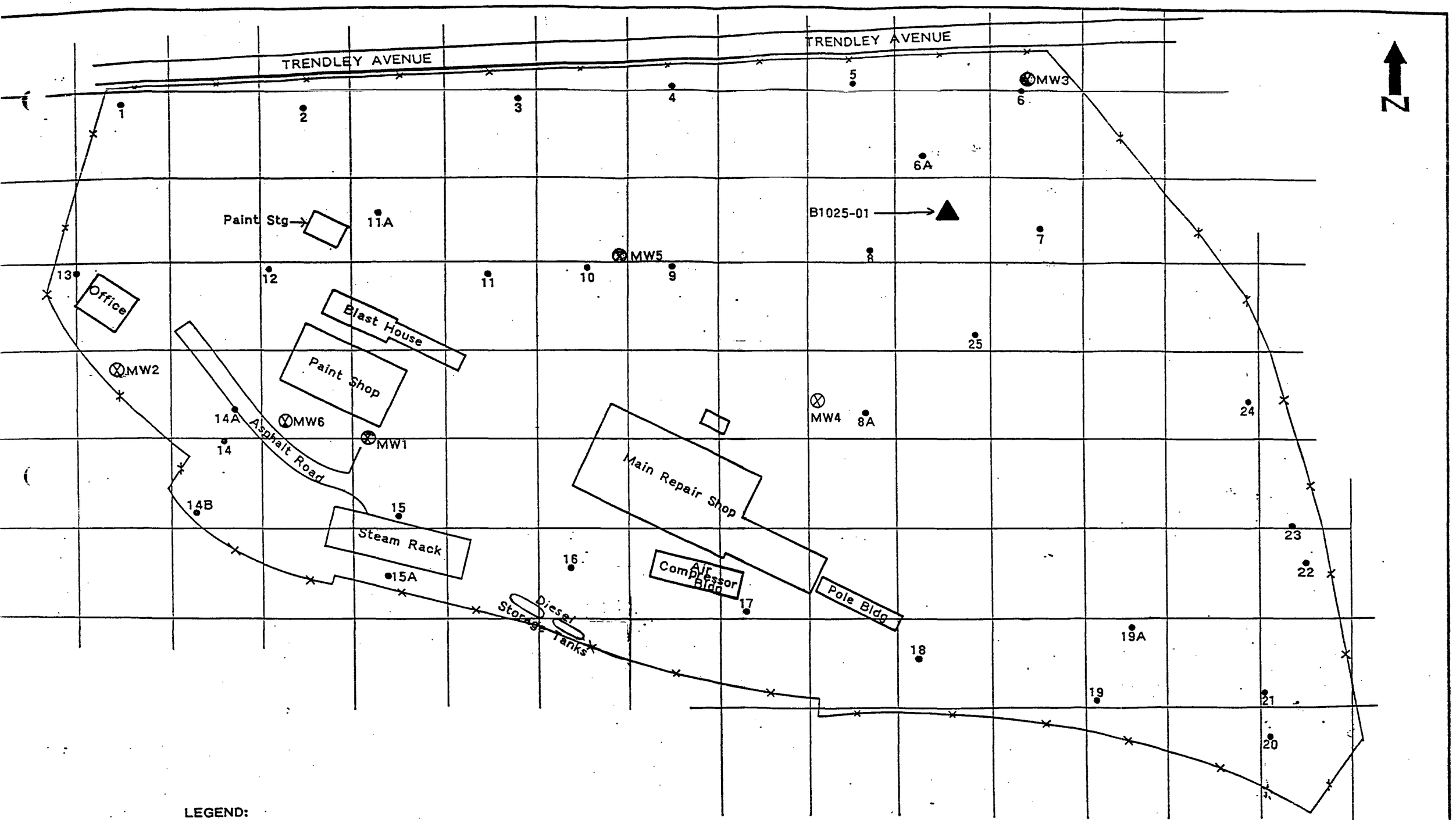
NOTE: NOT ALL BUILDINGS SHOWN.

FIGURE 4
SUBSURFACE SOIL CONTAMINATION PLUMES

ACF INDUSTRIES, INC.
EAST ST. LOUIS, ILLINOIS

Scale: 1"=100'

Dames & Moore



LEGEND:

- • BOREHOLE LOCATIONS FROM AES INVESTIGATION
- ⊗ MONITORING WELL
- ▲ BOREHOLE

NOTE: NOT ALL BUILDINGS SHOWN.

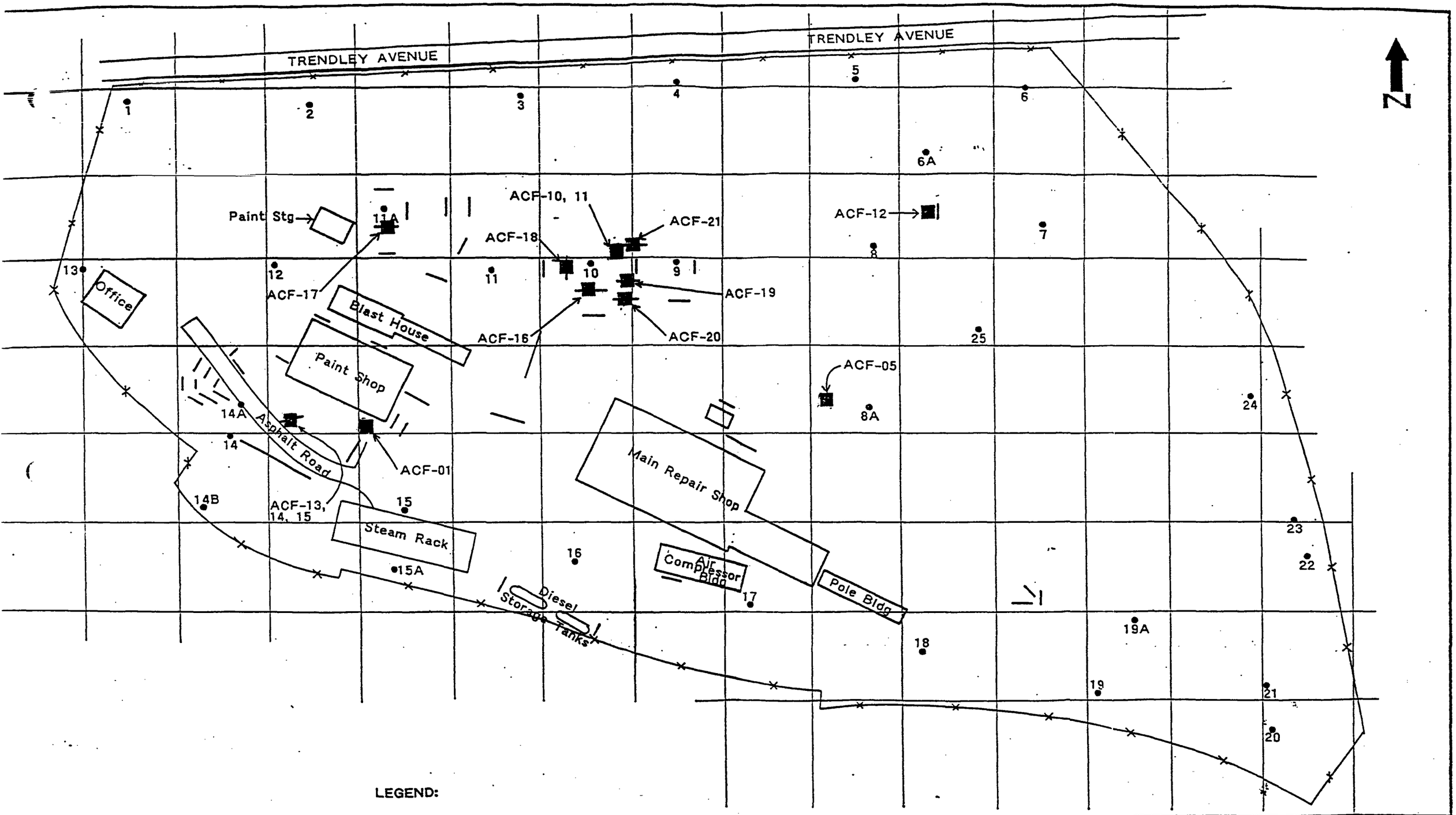
FIGURE 5

7 SOIL BORING LOCATIONS

ACF INDUSTRIES, INC.
EAST ST. LOUIS, ILLINOIS

Scale: 1"=100'

Dames & Moore



LEGEND:

● BOREHOLE LOCATIONS FROM AES INVESTIGATION

■ SOIL SAMPLE

— TRENCH

NOTE: NOT ALL BUILDINGS SHOWN.

FIGURE 6

TRENCH & SOIL SAMPLE LOCATIONS

ACF INDUSTRIES, INC.
EAST ST. LOUIS, ILLINOIS

Scale: 1"=100'

Dames & Moore

15-MILE SURFACE WATER MAP

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	N	SITE NAME: ACF/Shippers Car Line SITE ILD#: ILD006273809
USGS TOPOGRAPHIC MAPS		LEGEND
NAME: Webster Groves MO DATE: 1954 REVISED: 1968 & 1974	NAME: Cahokia IL-MO DATE: 1954 REVISED: 1968 & 1974	SITE LOCATION PUBLIC WELLS NEAREST PRIVATE WELL
NAME: Oakville MO DATE: 1954 REVISED: 1982	NAME: DATE: REVISED:	ILLINOIS
MAP SCALE 1:32,000 (0 – 1 MILE)		QUADRANGLE LOCATION

ACF/SHIPPERS CAR LINE
NEAREST PRIVATE WELL
4-MILE GROUNDWATER MAP
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
N
SITE NAME: ACF/Shippers Car Line
SITE ILD#: ILD006273809
USGS TOPOGRAPHIC MAPS
NAME: Granite City, IL-MO
DATE: 1954
REVISED: 1982
NAME: Monks Mound, IL
DATE: 1954
REVISED: 1968 & 1974
NAME: Cahokia IL-MO
DATE: 1954
REVISED: 1968 & 1974
NAME: French Village IL
DATE: 1954
REVISED: 1982
MAP SCALE
1:24,000
0
1 MILE
LEGEND
SITE LOCATION
PUBLIC WELLS
NEAREST PRIVATE WELL
ILLINOIS
QUADRANGLE LOCATION
ST LOUIS
EAST ST LOUIS
CENTREVILLE
MADISON
MISSISSIPPI RIVER
MISSOURI
ILLINOIS
MADISON CO.
ST CLAIR CO
ST LOUIS CITY
T 1N R 10W

TABLE 1:
SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg	Pesticides	ug/kg	PCB's	ug/kg
ACF-01	Vinyl Chloride	11		Not Detected		Not Detected		Not Detected	
	Methylene Chloride	4	JB						
MW #1	Acetone	9	J						
(Located near	Chloroform	1	JB						
former paint	Toluene	26							
stencil wash	Ethylbenzene	194							
shed; 2-3'deep)	Total Xylenes	113							

B= Analyte Detected In Blank And In Sample
J= Estimated Value: Concentration Below Limit Of Quantitation
Not Detected= Not Detected Above Quantitation Limit

PCB= Polychlorinated Biphenyl
ug/kg= micrograms per kilogram

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SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg		Pesticides ug/kg	PCB's ug/kg
ACF-05	Methylene Chloride	6	B	Acenaphthene	1952	J	Not Detected	Not Detected
	Chloroform	1	JB	Dibenzofuran	2366	J		
MW #4	Toluene	1	J	Fluorene	5031	J		
(Located near	Chlorobenzene	1	J	Hexachlorobenzene	3430	J		
"8A" from AES				Phenanthrene	14114			
investigation;				Anthracene	27540			
3-4' deep)				Fluoranthene	13057			
				Pyrene	10719			
				Benzo (A) Anthracene	2656	J		
				Bis (2-Ethylhexyl) Phthalate	34463			
				Chrysene	7897			
				Benzo (b) Fluoranthene	5470	J		
				Benzo (K) Fluoranthene	3978	J		
				Benzo (G,H,I) Perylene	1867	J		
				1,2-Dichlorobenzene	355611			
				2,4-Dichlorophenol	25749	J		
				Naphthalene	128366			
				2-Methylnaphthalene	142280			

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ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg		Pesticides	ug/kg	PCB's	ug/kg
ACF-10	Methylene Chloride	438	JB	Acenaphthene	89056	J	Endrin	229.1	Not Detected	
	Chloroform	160	JB	Dibenzofuran	75183	J				
MW #5	Chlorobenzene	39350		Fluorene	145694					
(Located near				N-Nitrosodiphenylamine	41323	J				
"9" from AES				Phenanthrene	429967					
investigation;				Anthracene	287389					
2-3' deep)				Fluoranthene	88311	J				
				Pyrene	112461	J				
				Butylbenzylphthalate	126207					
				3,3-Dichlorobenzidine	20763	J				
				Benzo (A) Anthracene	48892					
				Bis (2-Ethylhexyl) Phthalate	305120					
				Chrysene	90606					
				Benzo (b) Fluoranthene	41630	J				
				Benzo (K) Fluoranthene	21018	J				
				Benzo (A) Pyrene	42557	J				
				1,2-Dichlorobenzene	355611					
				2,4-Dichlorophenol	25749	J				
				Naphthalene	128366					
				2-Methylnaphthalene	142280					

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PCB= Polychlorinated Biphenyl
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ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg		Pesticides	ug/kg	PCB's	ug/kg
ACF-11	Methylene Chloride	6	B	Bis (2-Ethylhexyl) Phthalate	82	J	Endosulfan Sulfate	104.5		
	Acetone	72					Endrin	229.1		
MW #5	Toluene	1	J							
(11-12' deep)	Chlorobenzene	24								
ACF-12	Methylene Chloride	4	JB	Acenaphthene	175	J	Not Detected		Not Detected	
	Acetone	94		Phenanthrene	804	J				
B1025-01	Chloroform	1	JB	Anthracene	464	J				
Boring	2-Butanone	14		Fluoranthene	1132					
(Located near	Toluene	2	J	Pyrene	818	J				
"6B" from AES	Chlorobenzene	5		Benzo (A) Anthracene	408	J				
Investigation;	Ethylbenzene	1	J	Bis (2-Ethylhexyl) Phthalate	1083					
20-21' deep)	Total Xylenes	5		Chrysene	497	J				
				Benzo (b) Fluoranthene	309	J				
				Benzo (K) Fluoranthene	301	J				
				Benzo (A) Pyrene	397	J				
				Indeno (1,2,3-CD) Pyrene	193	J				

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J= Estimated Value: Concentration Below Limit Of Quantitation
Not Detected= Not Detected Above Quantitation Limit
PCB= Polychlorinated Biphenyl
ug/kg= micrograms per kilogram

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ACF-13	Methylene Chloride	29	B	Acenaphthene	24692	J	Not Detected	Not Detected
	Acetone	131		Dibenzofuran	34805	J		
MW #6				Fluorene	88355	J		
(Located south				Phenanthrene	272881			
of west central				Anthracene	198905			
end of paint				Di-N-Butylphalate	24424	J		
shop; 5-6' deep)				Fluoranthene	246362			
				Pyrene	209445			
				Benzo (A) Anthracene	82307	J		
				Bis (2-Ethylhexyl) Phthalate	22746	J		
				Chrysene	110485	J		
				Benzo (b) Fluoranthene	50658	J		
				Benzo (K) Fluoranthene	39154	J		
				Benzo (A) Pyrene	55123	J		
				2-Methylnaphthalene	8058	J		
				Acenaphthylene	12464	J		

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SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg	Pesticides	ug/kg	PCB's	ug/kg
ACF-14	Methylene Chloride	5	B	Not Detected		Not Detected		Not Detected	
	Acetone	39							
MW #6	Chloroform	1	JB						
(18-19' deep)	Benzene	4	J						
	Toluene	1	J						

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Not Detected= Not Detected Above Quantitation Limit
PCB= Polychlorinated Biphenyl
ug/kg= micrograms per kilogram

TABLE 1:
SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg	Pesticides	ug/kg	PCB's	ug/kg
ACF-15	Methylene Chloride	3	JB	Not Detected		Not Detected		Not Detected	
	Acetone	36							
Duplicate of	Chloroform	1	JB						
ACF-14	Benzene	5							
(MW #6	Total Xylenes	1	J						
18-19' deep)									

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SOIL SAMPLES ANALYTICAL SUMMARY
ACF– EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg		Pesticides ug/kg	PCB's ug/kg
ACF-15	Methylene Chloride	37	B	Acenaphthene	26214	J		
LAB ID#	Acetone	213		Dibenzofuran	23939	J		
1323.01	Chloroform	6	JB	Fluorene	51704	J		
	Toluene	56		N-Nitosodiphenylamine (1)	34733	J		
T1029-12	Chlorobenzene	54		Phenanthrene	155135			
(Located 25'	Ethylbenzene	18	J	Anthracene	88846	J		
south of "10"	Total Xylenes	80		Fluoranthene	39334	J		
from AES				Pyrene	59252	J		
Investigation;				Butylbenzylphalate	78648	J		
2-5' deep)				Benzo (A) Anthracene	30141	J		
				Bis (2-Ethylhexyl) Phthalate	17426	J		
				Chrysene	49038	J		
				Benzo (A) Pyrene	22544	J		
				1,2-Dichlorobenzene	14545	J		
				Naphtalene	88277	J		
				2-Methylnaphthalene	110604	J		

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SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg		Pesticides ug/kg	PCB's ug/kg
ACF-16	Methylene Chloride	3363	J	Acenaphthene	2471	J	Not Detected	Not Detected
	Tetrachloroethene	1588	J	Dibenzofuran	3406	J		
T1029-12	Toluene	29350		Fluorene	5105	J		
(Located 25'	Chlorobenzene	14813		N-Nitosodiphenylamine (1)	1991	J		
south of "10"	Ethylbenzene	8088		Phenanthrene	13048			
from AES	Total Xylenes	43275		Anthracene	7957	J		
investigation;				Fluoranthene	4137	J		
2-5' deep)				Pyrene	4818	J		
				Butylbenzylphalate	4044	J		
Duplicate of				Benzo (A) Anthracene	2289	J		
ACF-15				Bis (2-Ethylhexyl) Phthalate	3533	J		
Lab ID #				Chrysene	3602	J		
1323.01				2,4-Dichlorophenol	3128	J		
				Naphtalene	2771	J		
				2-Methylnaphthalene	4005	J		

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SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg	Semi-Volatile Organics	ug/kg		Pesticides	ug/kg	PCB's	ug/kg
ACF-17	Ethylbenzene	1486	Acenaphthene	42751	J	Not Detected		Not Detected	
	Total Xylenes	1191	Dibenzofuran	45242	J				
T1029-06			Fluorene	107447	J				
(Located 25'			N-Nitosodiphenylamine (1)	43620	J				
south of "11A"			Phenanthrene	415773					
from AES			Anthracene	244054					
investigation;			Di-N-Butylphthalate	50324	J				
2-5' deep)			Fluoranthene	246056					
			Pyrene	244159					
			Benzo (A) Anthracene	101615	J				
			Bis (2-Ethylhexyl) Phthalate	59296	J				
			Chrysene	132880					
			Benzo (b) Fluoranthene	71868	J				
			Benzo (K) Fluoranthene	59923	J				
			Benzo (A) Pyrene	76034	J				
			Benzo (G,H,I) Perylene	26659	J				
			Naphtalene	83448	J				
			2-Methylnaphthalene	39634	J				

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TABLE 1:
SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg		Semi-Volatile Organics	ug/kg		Pesticides	ug/kg	PCB's	ug/kg
ACF--18	Methylene Chloride	2575	J	Acenaphthene	117804	J	Dieldrin	1078	Not Detected	
	Tetrachloroethene	425	J	Dibenzofuran	112788	J				
T1029-10	Toluene	146638		Fluorene	205284					
(Located 25' west	Ethylbenzene	3125		N-Nitosodiphenylamine (1)	127562					
of "10" from AES	Total Xylenes	11850		Phenanthrene	561483					
investigation;				Anthracene	332537					
2-4' deep)				Fluoranthene	90935	J				
				Pyrene	249762					
				Butylbenzylphthalate	401742					
				Benzo (A) Anthracene	109794					
				Bis (2-Ethylhexyl) Phthalate	84441	J				
				Chrysene	227090					
				Benzo (A) Pyrene	121068	J				
				Benzo (G,H,I) Perylene	45606	J				
				Phenol	18595	J				
				1,4-Dichlorobenzene	33626	J				
				1,2-Dichlorobenzene	29163	J				
				4-Methylphenol	33681	J				
				2,4-Diclorophenol	69433	J				
				Naphtalene	242631	J				
				2-Methylnaphthalene	516296					

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TABLE 1:
SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/kg	Semi-Volatile Organics	ug/kg	Pesticides	ug/kg	PCB's	ug/kg
ACF-19 T1029-18 (Located 20' south of MW #5; 7-9'deep)	Not Tested		Not Tested		Not Tested		Arochlor 1260	488
ACF-20 T1029-19 (Located 46' south of MW #5; 3-5' deep)	Not Tested		Not Tested		Not Tested		Arochlor 1260	2806

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TABLE 1:
SOIL SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics ug/kg	Semi-Volatile Organics ug/kg	Pesticides ug/kg	PCB's ug/kg
ACF-21 T1029-20 (Located 15' north of MW #5; 4' deep)	Not Tested	Not Tested	Not Tested	Not Detected

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PCB= Polychlorinated Biphenyl
ug/kg= micrograms per kilogram

TABLE 2:
GROUNDWATER SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-23	Vinyl Chloride	1 J	Bis (2-Ethylhexyl) Phthalate	5 J	Not Detected	Not Detected	Aluminum	8330
	Trans-1,2-Dichloroethene	3 J					Arsenic	27.4
MW #1							Barium	667
(Located							Calcium	152000
near former							Chromium	46.7
paint stencil							Cobalt	27.2
wash shed)							Copper	37.0
							Iron	24900
							Magnesium	32300
							Manganese	2530
							Lead	47.0
							Nickel	51.7
							Potassium	30500
							Sodium	19000
							Vanadium	41.9
							Zinc	27.4

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PCB= Polychlorinated Biphenyl
ug/L= microgram per liter

TABLE 2:
GROUNDWATER SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-24	Vinyl Chloride	2 J	Not Detected		Not Detected	Not Detected	Aluminum	1680
	Acetone	7 J					Arsenic	364
MW #6	Trans-1,2-Dichloroethene	10					Barium	259
(Located south							Calcium	162000
of west							Chromium	10.6
central end							Cobalt	17.9
of paint shop)							Iron	22000
							Magnesium	28100
							Manganese	2340
							Lead	14.9
							Nickel	12.2
							Potassium	13900
							Sodium	199000
							Vanadium	14.4
							Zinc	60.8

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GROUNDWATER SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-25	Acetone	3 J	Not Detected		Not Detected	Not Detected	Aluminum	1230
							Barium	52.6
MW #2							Calcium	233000
(Down gradient							Chromium	7.7
well;							Iron	3580
located just							Magnesium	24300
south of the							Manganese	231
main office							Lead	4.1
and proximal to							Nickel	11.0
the former							Sodium	19500
metal garage)							Potassium	13200
							Zinc	35.8

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ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-26	Methylene Chloride	1 J	Not Detected		Not Detected	Not Detected	Aluminum	3940
	Chlorobenzene	4 J					Barium	766
MW #5							Calcium	271000
(Located near							Chromium	11.4
"9" from AES							Cobalt	13.6
investigation)							Iron	11800
							Magnesium	55300
							Manganese	5700
							Lead	17.6
							Nickel	86.8
							Potassium	27300
							Sodium	70100
							Vanadium	12.0
							Zinc	84.7

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ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-27	Not Detected		Bis (2-Ethylhexyl) Phthalate	27	Not Detected	Not Detected	Aluminum	3930
							Arsenic	27.4
MW #4							Barium	244
(Located near							Calcium	524000
"8A" from AES							Chromium	26.1
investigation)							Cobalt	14.0
							Iron	64700
							Magnesium	113000
							Manganese	4230
							Lead	15.4
							Nickel	21.6
							Potassium	11300
							Sodium	2470000
							Vanadium	21.9
							Zinc	78.9

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GROUNDWATER SAMPLES ANALYTICAL SUMMARY
ACF- EAST ST. LOUIS

Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-28	Not Detected		Bis (2-Ethylhexyl) Phthalate	59	Not Detected	Not Detected	Aluminum	3220
							Arsenic	32.5
MW #3							Barium	280
(Up-gradient							Calcium	133000
well							Chromium	10.1
located in							Cobalt	10.6
northeast							Iron	12000
corner of							Magnesium	26700
property)							Manganese	1680
							Lead	12.2
							Potassium	5820
							Sodium	25600
							Zinc	63.2

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Sample ID	Volatile Organics	ug/L	Semi-Volatile Organics	ug/L	Pesticides	PCB's	Total Metals	ug/L
ACF-29	Not Detected		Bis (2-Ethylhexyl) Phthalate	3 J	Not Detected	Not Detected	Aluminum	3110
							Arsenic	31.7
MW #3							Barium	349
(Duplicate of							Calcium	130000
ACF-28)							Chromium	27.4
							Copper	414
							Magnesium	19200
							Manganese	393
							Lead	12.6
							Potassium	7920
							Sodium	57600
							Zinc	57.1

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