SDMS US EPA REGION V -1

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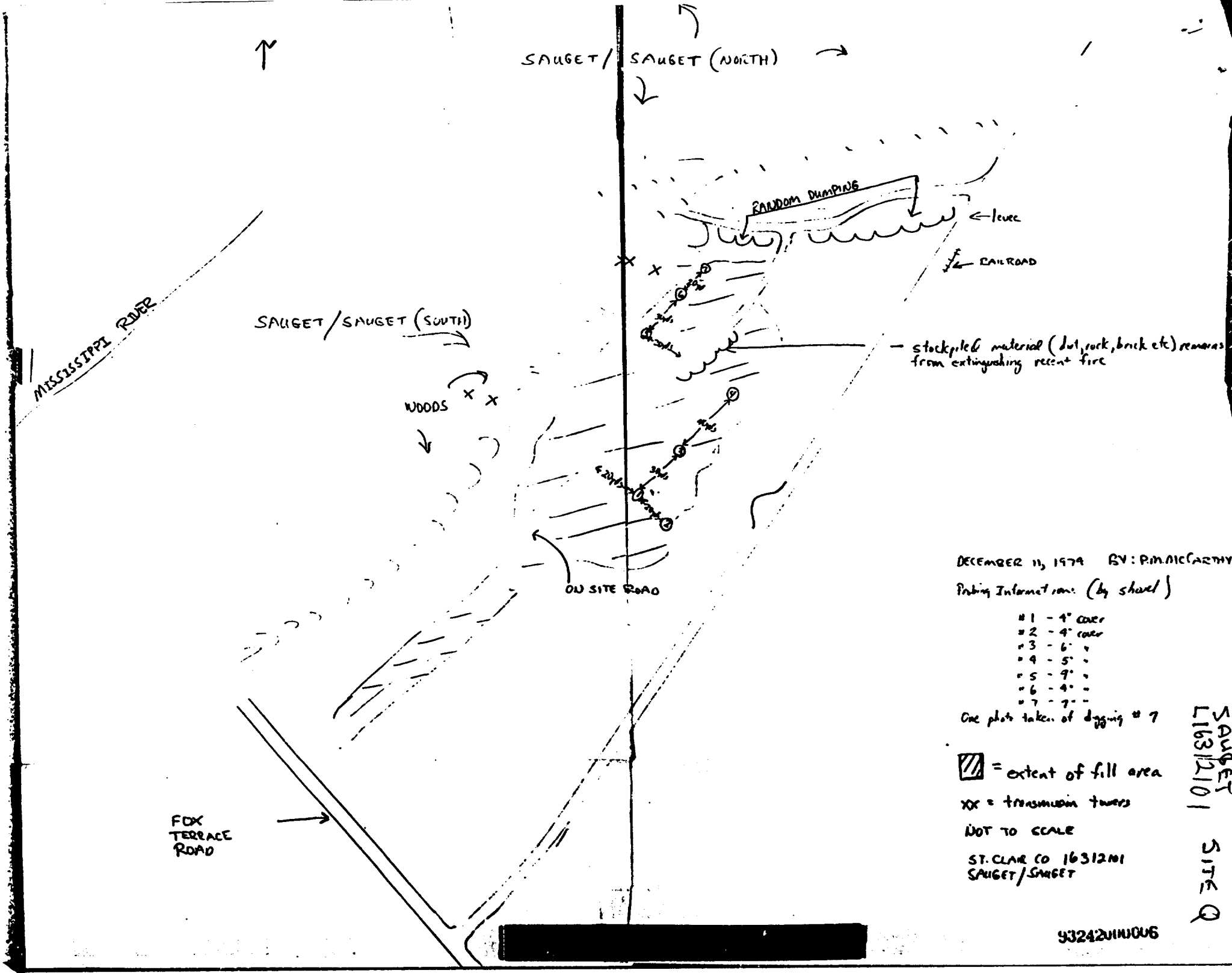
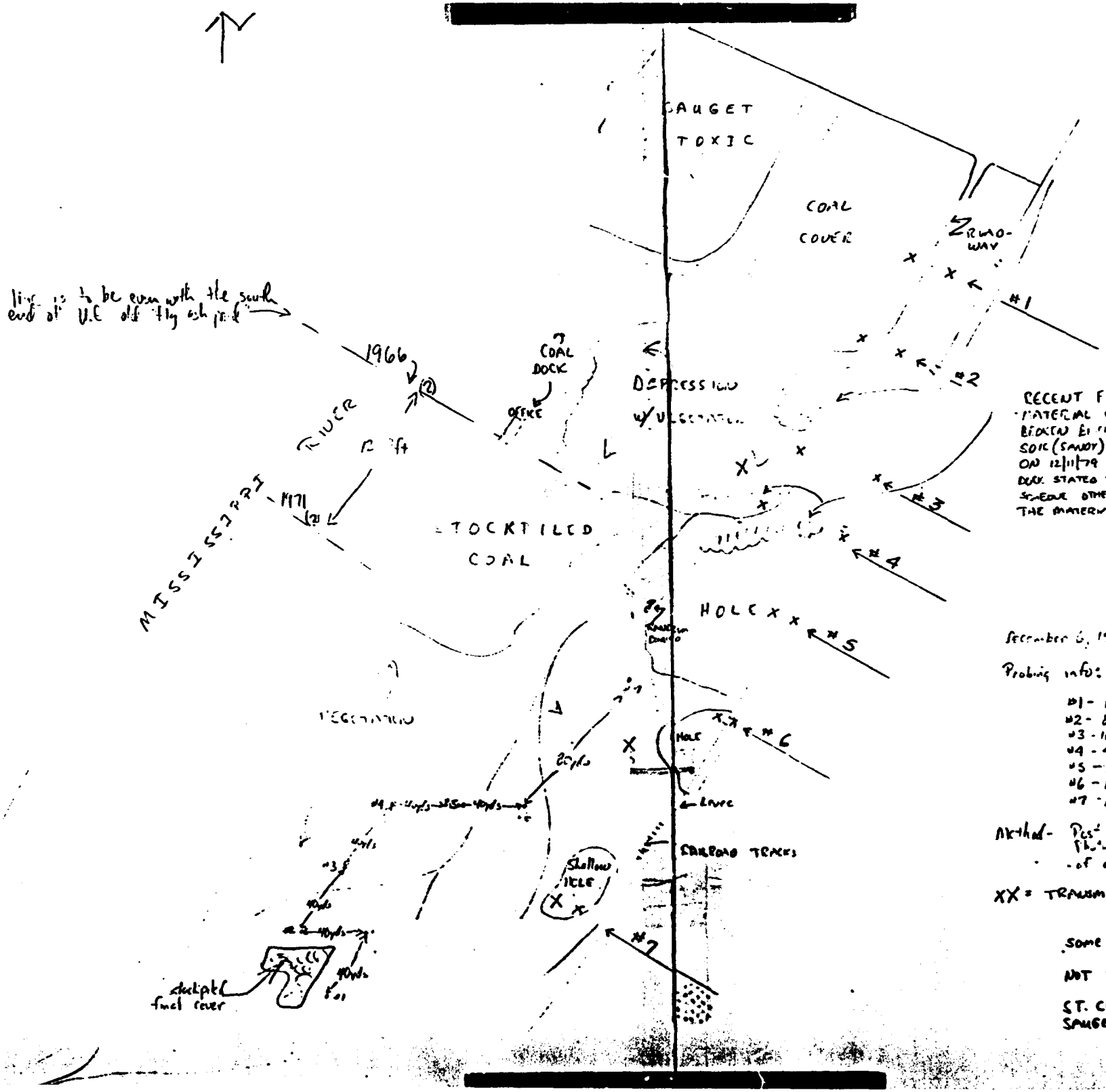

SAUGET / SAUGET (NORTH)
RANDOM DUMPING
levee
RAILROAD
MISSISSIPPI RIVER
SAUGET / SAUGET (SOUTH)
stockpiled material (dirt, rock, brick etc) removed from extinguishing recent fire
WOODS
ON SITE ROAD
FOX TERRACE ROAD
DECEMBER 11, 1979 BY: P.M. McCARTHY
Probing Information: (by shovel)
#1 - 4" cover
#2 - 4" cover
#3 - 6" "
#4 - 5" "
#5 - 9" "
#6 - 4" "
#7 - 7" "
One photo taken of digging #7
= extent of fill area
xx = transmission towers
NOT TO SCALE
ST. CLAIR CO 16312101
SAUGET / SAUGET
SAUGET
L16312101
SITE Q
93242UNU006



RECENT FILLING (CULVERWORK) OPERATIONS
MATERIAL CONSISTS OF A MIXTURE OF BROKEN BRICK, PAVEMENT, ROCK, CONCRETE, SOIL (SANDY) WOOD & BRUSH -
ON 12/11/79 RUSSELL SELPH OF COAL UNLOADING DOCK STATED THAT HIS COMPANY HAS ALLOWED SOMEONE OTHER THAN PAUL SAUGET TO DUMP THE MATERIAL - THEY HAVE CEASED

December 6, 1979 by Patrick Cassidy

Probing info:

#1 - 10" cover - 4" soil plus 6" cinders
#2 - 8.5" cover
#3 - 10" cover
#4 - 9" cover
#5 - no probing - no cover (exposed cinders)
#6 - 11" cover (mixture of soil and cinders)
#7 - no trash at 14" - hit cinders at 16"

Method - Post hole digger
Photos of all diggings with use of a yardstick

XX = TRANSMISSION towers as reference points

SOME OBJECTS GETTING OBSERVED

NOT TO SCALE

ST. CLAIR CO - 16312101
SAUGET / SAUGET

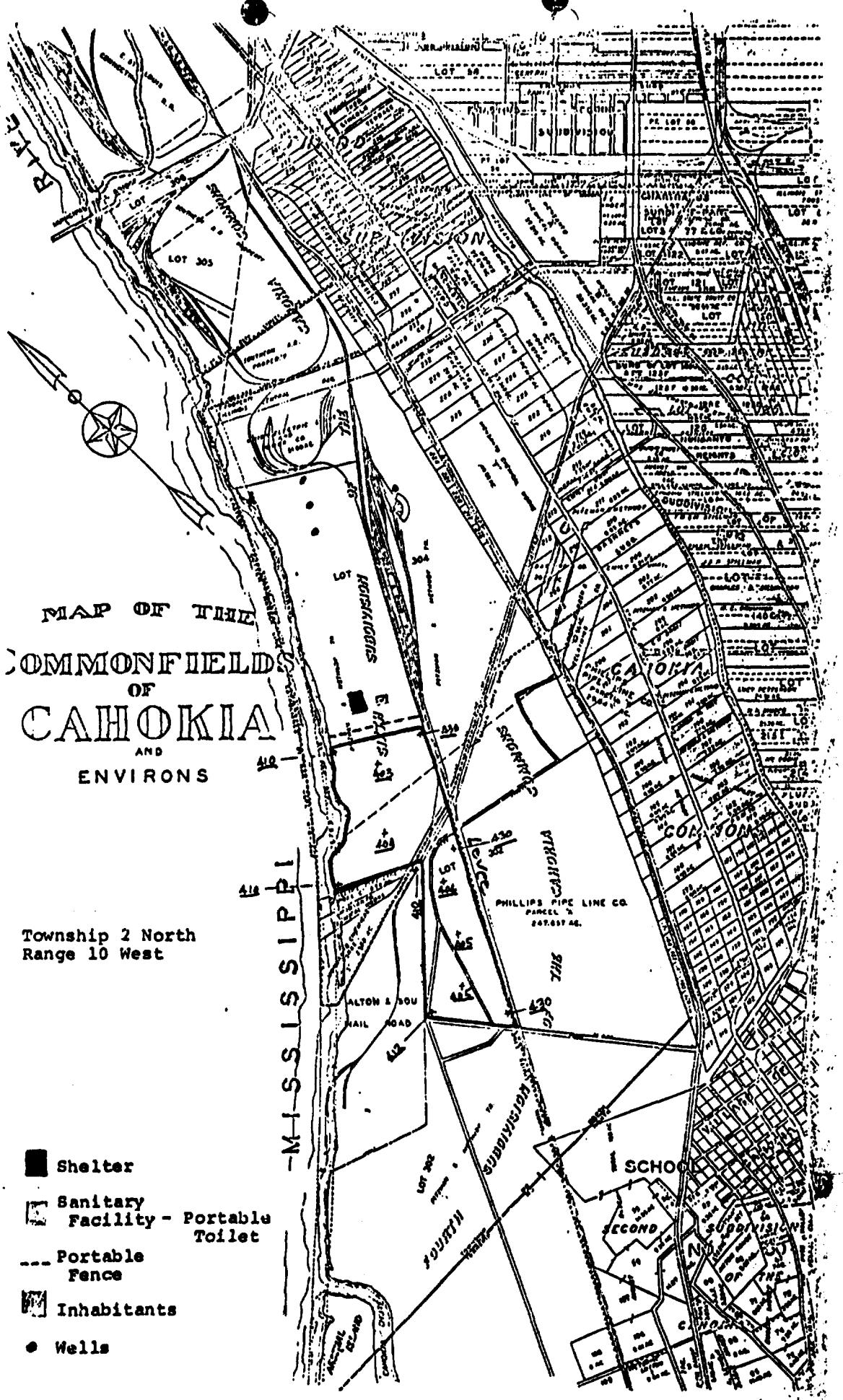
93242000005

1163181101 St Clair

Baugst/Baugst

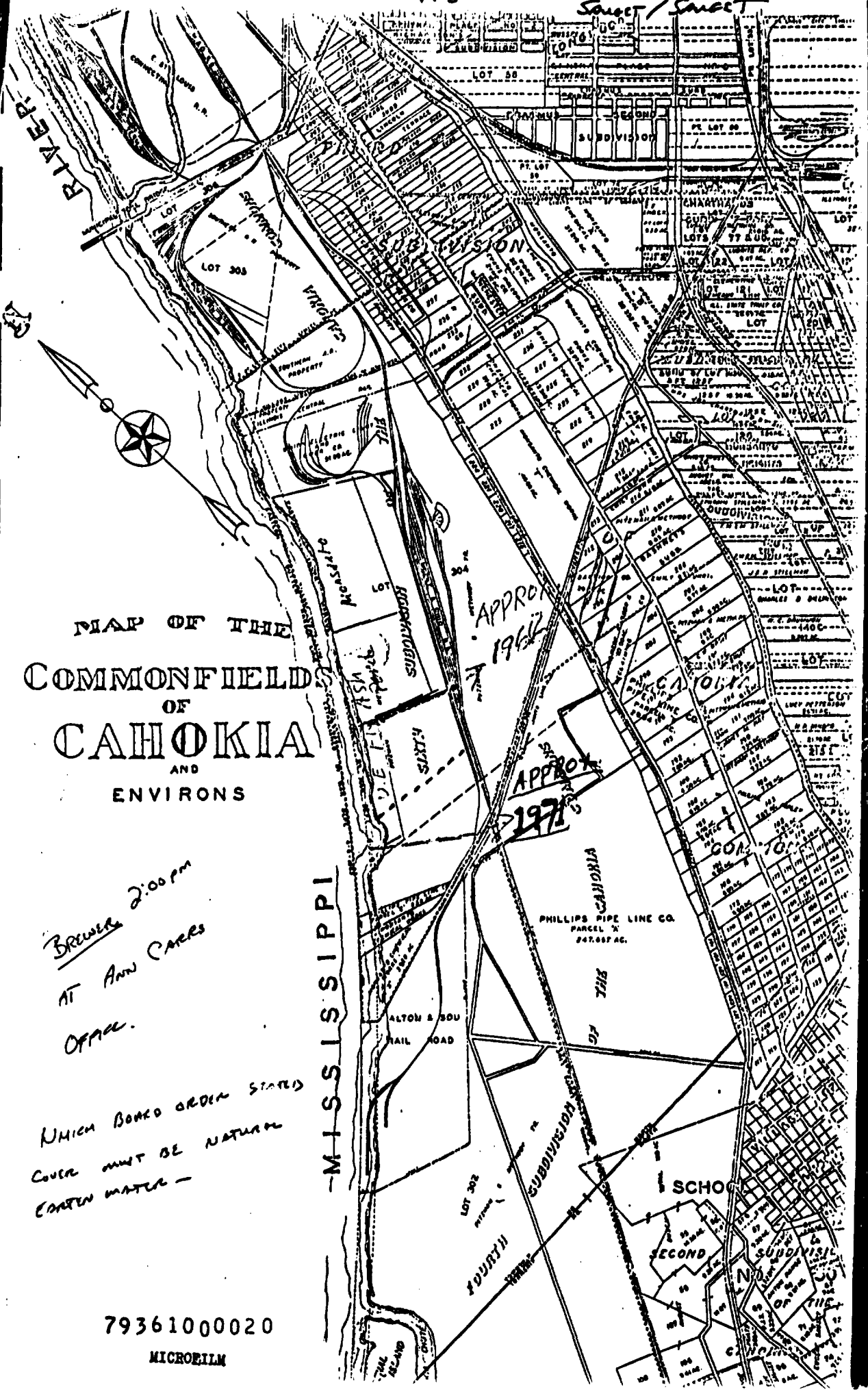
FILE Ω a

PERMIT __/__ __/__ __ __ __/__ __


MAP OF THE
COMMONFIELDS
OF
CAHOKIA
AND
ENVIRONS
Township 2 North
Range 10 West
Shelter
Sanitary Facility - Portable Toilet
Portable Fence
Inhabitants
Wells
MISSISSIPPI
PHILLIPS PIPE LINE CO.
SCHOOL
SECOND
FOURTH
LOT 305
LOT 304
LOT 306
410
412
420
430

File St. Clair Co.

Sauget / Sauget



Brewer 2:00 pm
at Ann Carrs
office.

Which board order stated
cover must be natural
earth mater —

79361000020

MICROFILM

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY

The preceding 2 image(s) are partially illegible in the copy sent to be microfilmed. The resulting microfilm may be illegible for use.

Signed: Leon C. Baker

ADM-1041A REV. (4/77)

7936100022

MICROFILM

ENVIRONMENTAL PROTECTION AGENCY • STATE OF ILLINOIS
William L. Blaser, Director • Richard B. Ogilvie, Governor

August 7, 1972

ST. CLAIR COUNTY - Land Pollution Control
Sauget/Sauget South Landfill

Sauget and Company
2902 Monsanto Avenue
Sauget, Illinois 62206

Gentlemen:

This will acknowledge receipt of your Application for Permit to install and operate a solid waste disposal site, dated June 29, 1972, and received by this Agency on July 3, 1972.

A review of the application has been completed and the following comments are made pursuant to that review:

1. Additional information is required regarding the characteristics of the soils that will be used for final and daily covers.

   a. According to recent Environmental Protection Agency photographs, the cover over the existing dump appears to be a fine grained, highly permeable material such as cinders or fly ash. Since one purpose of the final cover is generally to prevent the infiltration of precipitation into the refuse, the use of a highly permeable material for the final cover is inadvisable unless leachate collection and treatment is utilized. In addition, the present cover does not appear to be capable of supporting a dense vegetative cover. Information should be submitted indicating the origin, the infiltration characteristics, the crop support capabilities, and the resistance to erosion of the material on the surface of the existing dump. In addition, the expected rate of solution and the types of pollutants that can be leached from the cover material on the existing dump should be indicated.

   b. Because the final cover in the existing dump appears to be fairly thin, some difficulty may be experienced in removing significant quantities of cover material from that area for use on the proposed landfill.

   c. The source area, the expected quantity required, the infiltration characteristics, the crop support capabilities, and the resistance to erosion of the material that is to be hauled to the site for use as cover should be indicated. In addition, the expected rate at which pollutants will be released and the type of pollutants that can be leached from the cover material(s) unless it is a natural earth material should be indicated. Are sufficient quanities of this material available to provide adequate coverage of the refuse?

2. Since the leachate produced by a landfill is often corrosive in nature or may induce corrosion, pipelines burried near landfills may fail because of corrosion. The problem of corrosion can be particularly severe if fly ash or other acid-producing materials are deposited in landfills. Has fly ash or other acid-producing material been deposited in the existing on-site dump? Will fly ash or other acid-producing materials be deposited in the proposed landfill? What features of the existing pipelines located near the landfill would protect the pipelines from excessive corrosion?

3. Details on the methods of construction and installation of the piezometers should be indicated. Data such as the I.D. of the standpipe, types of standpipe and well screen materials used (nonmetallic is best since corrosion of the pipe is not possible), I.D. and length of screen, the depth interval screened, the size of the screen openings, the borehole diameter, the method used to seal the piezometers, and the method used and the extent of piezometer development, if any, should be indicated.

4. It appears that the locations of cross section 7 and borehole TH 66-II have not been indicated on the submitted plan. Please indicate the locations of the borehole and cross section on the plans.

5. The direction(s) of groundwater flow will define to a large extent the area of the aquifer that could be polluted by the landfill. Consequently, the expected direction(s) of groundwater movement in the vicinity of the landfill site throughout the year should be indicated. In addition, the expected flow path of groundwater passing under the proposed landfill site should be indicated. The path of groundwater flow from the landfill to the expected sink or point of discharge should be indicated.

6. The high potential for pollution of the underlying groundwater is of considerable concern at the proposed landfill site. Commonly, 6 inches to 12 inches of precipitation infiltrates annually into the refuse through the final cover. If a permeable material such as fly ash or cinders is used as a cover material, considerably larger quantities of infiltration into the refuse could be expected. Approximately 5.7 million gallons of leachate could be expected per year if only 6 inches of precipitation infiltrates into the refuse. The effect of millions of gallons of leachate that will be produced by the proposed landfill on the quality of the groundwater in the underlying aquifer would be quite significant.

   a. The quantity of pollutants contained in the leachate would certainly result in a significant degradation of the groundwater in the vicinity of the landfill. Since the proposed

landfill is to be placed over a former dump, pollutants that will be leached from the underlying dump must also be considered when determining the quality of the underlying groundwater. Thus, the quantity of pollutants contained in the leachate will be the sum of those leached from both the existing dump and the proposed landfill. To evaluate the quality of the leachate currently being produced by the existing dump, water quality analyses should be made on the undiluted leachate currently being produced. Calculations should be submitted indicating the expected maximum concentrations of pollutants in the aquifer in the vicinity of the proposed landfill.

b. An unacceptably large slug of leachate would be released to both surface water and groundwater if the landfill were flooded. The rise of the water table to a considerable height within the refuse during a flood would result in the release of a large slug of pollutants after the flood waters receded. If the specific yield of the refuse is 0.38, approximately 4.3 million gallons would be released per feet of decline of the water table in the proposed landfill. In the existing dump, if the specific yield is approximately 0.20, about 2.26 million gallons of leachate would be released per unit decline of the water table. Assuming 10 feet of refuse in the underlying dump, and 13 feet of refuse in the proposed landfill, approximately 78.5 million gallons of leachate would be released if the landfill were saturated and then drained. How will the uncontrolled release of these contaminants be prevented in the event the landfill is flooded by a Standard Project Flood? How will the resulting contaminants be rendered innocuous before reaching an aquifer or body of surface water? The expected quantities of leachate that will be discharged to the various sinks should be indicated.

7. If the information is available, a series of water table contour maps should be prepared using data collected at different times during the year. These maps should be used to indicate the general direction(s) of groundwater flow and the annual fluctuations of the water table. Perhaps water level data collected from surrounding wells could be used to supplement the data collected on the proposed landfill site. Expected future long term changes in the elevation and annual fluctuations of the water table should be indicated.

8. In Appendix A 3(c), is the top face to be covered with earth rather than fill as indicated?

9. The provisions made for the drainage of surface water from the site should be given in detail. Data such as the location, dimen-

sions, slope, and capacity of any peripheral ditches around the landfill, the location and size of culverts to drain the surface water from the landfill site and provisions, if any, for drainage of runoff to the Mississippi River if the stage of the Mississippi River is higher than the height of water in the ditches should be indicated.

10. The problem of preventing severe erosion of the landfill side-slopes has not been adequately resolved.

    Since the maximum length of accumulation of surface water runoff is in excess of 500 feet, a significant rate of flow of surface water can be expected to occur down the side slopes of the landfill during a large runoff event. The erosion of the side slopes will be further enhanced because of a nonuniform rate of settlement of the landfill surface which will result in channel flow rather than sheet flow across the top of the landfill and down the side slopes.

    This problem can be minimized by constructing drainage basins on the landfill surface. A berm around the periphery of the landfill can be used to divert the surface water runoff to a structure such as a culvert that can convey the runoff from the top of the landfill to the surrounding land surface or ditch without causing excessive erosion. The system designed to minimize surface water erosion of side slope should be capable of handling runoff generated by a 100 year storm.

11. The proposed landfill site does not have adequate flood protection. The flooding of a landfill can produce many undesirable results.

    a. If the normal landfill operation had to be terminated on short notice because of flooding, any refuse covered with only a 6 inch daily cover could be easily eroded. To prevent the erosion of refuse, a cover of soil at least 2 feet in depth would have to be placed over the refuse. Since it appears that a considerable portion of the daily cover will have to be hauled to the site, a sufficient quantity of soil should be either stockpiled on the site or it should be indicated that sufficient quantities of soil could be hauled to the site on fairly short notice.

    b. Because the density of dry compacted refuse (approximately 1000 lb/yard^3) is less than the density of water (1685 lb/yard^3), the refuse will have a tendency to float when the landfill is flooded. Calculations should be submitted indicating the stability of: 1) the dump existing at present on the proposed landfill site; and 2) the proposed landfill when placed over the existing dump.

12. Since the final use of the landfill site often affects the hydrology of the site, the expected final use of the site should be indicated.

The conditions of this landfill site are topographically and geologically similar to the previously-submitted site nearby to the north. As we discussed, relative to that site, some rather extensive preparations must be made to minimize the pollutional potential of the site.

Based upon the above conditions, this Agency must deny the Permit pending receipt of complete information.

Please be assured of our willingness to cooperate with you in every way possible. When the required data is received you may be assured of our prompt attention.

Very truly yours,

ENVIRONMENTAL PROTECTION AGENCY

David W. Allman

David W. Allman
Environmental Geologist
Division of Land Pollution Control

cc Record 18

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RICHARD B. OGILVIE
Governor

November 17, 1972

WILLIAM L. BLASER
DIRECTOR

STATE OF ILLINOIS

ST. CLAIR COUNTY ENVIRONMENTAL PROTECTION AGENCY

Sauget/Sauget

Sauget and Company
2902 Monsanto Avenue
Sauget, Illinois 62206

Dear Sirs:

This will acknowledge receipt of an application for permit for the subject solid waste management site.

The Agency does not grant permits for sanitary landfills which do not comply with local zoning requirements. Therefore, please provide the Agency with documented evidence of compliance with all local zoning ordinances and requirements.

If you have any questions regarding the above, please contact the Permit Section, Division of Land Pollution Control.

Very truly yours,

ENVIRONMENTAL PROTECTION AGENCY

Douglas Andrews

Douglas Andrews, Manager
Permit Section
Division of Land Pollution Control

DA:bja

cc: Region IV