PLATTSBURGH FORMER MGP SITE
PLATTSBURGH, NEW YORK

DATA COMPILATION AND REVIEW REPORT

Prepared For:

NEW YORK STATE ELECTRIC AND GAS CORPORATION
Kirkwood Industrial Park
Kirkwood, New York 13795

Prepared By:

ATLANTIC ENVIRONMENTAL SERVICES, INC.
P.O. Box 297 • 188 Norwich Avenue
Colchester, Connecticut 06415

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ATLANTIC

ENVIRONMENTAL SERVICES, INC.

2232 WELSCH INDUSTRIAL COURT
ST. LOUIS, MO 63146-4222
(314) 569-9994

188 NORWICH AVENUE
COLCHESTER, CT 06415-0297
(860) 537-0751

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systems could be used in conjunction with the containment systems discussed above to help minimize the quantity of groundwater to be treated.

- The tar removal and groundwater treatment alternatives should be evaluated simultaneously to take advantage of redundant processes. For instance, the tar collection system could be integrated with the groundwater collection system. Both collection systems could be directed toward separator tanks. Coal tar could be periodically removed from the holding tank and groundwater could be directed to a treatment facility.

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1.0 INTRODUCTION

The Plattsburgh, New York former manufactured gas plant (MGP) has been the subject of several studies regarding the presence and characterization of coal tar contamination in both soil and groundwater. The purpose of this report is to present a compilation of information included in available environmental reports generated for the site and to evaluate current conditions relative to potential remedial response actions. This report includes a comprehensive summary of subsurface data, synopses of site environmental reports, a conceptual model of current site conditions, and an assessment of additional data that may be required for the purposes of evaluating and implementing site remediation. The report provides several potential remedial scenarios for the coal tar contamination documented in the northern portion of the site and describes recommended investigatory action for the southern portion of the site.

2.0 BACKGROUND

To date, the northern portion of the subject site has been extensively investigated. A former coal tar surface impoundment was located in this area and resulted in impacts to soil, groundwater and the adjacent river. Remedial efforts in the early 1980s included the containment of the impoundment, the removal of contaminated river sediments, and the construction of a slurry wall adjacent to the river. Subsequently, a groundwater treatment facility was installed in this area of the site. In spite of these efforts, impacts to the adjacent river are evident.

The southern portion of the property, the location of the former gasification plant and New York State Electric & Gas Corporation (NYSEG) service center, has experienced only limited subsurface characterization. However, coal tar impacts have been documented within the former plant area and in adjacent river sediments.

This report has been conducted with the intent of establishing site base-line conditions and assessing potential future action for the investigation/remediation of contaminants to mitigate impacts to the adjacent river.

3.0 SITE DESCRIPTION

The subject site occupies approximately 11 acres of land located southeast of downtown Plattsburgh, New York. A site location map is provided as Figure 1. Figures are provided in Exhibit 1. The property is currently undeveloped and consists primarily of open grassy areas with some woody vegetation, including trees and shrubs along the Saranac River which borders the site to the west and north. The site is bisected by Saranac Street which crosses the site generally from the southwest to the northeast. An MGP and utility service center site were formerly located on the southeastern side of the road. This area includes portions of former foundations associated with previous structures. A 65,000-square foot containment, including a former coal tar pond and coal tar impacted sediment, is located adjacent to the northwestern side of the road. The containment is constructed with soil/bentonite slurry walls and is capped with a plastic liner. Two small outbuildings, located adjacent to the northeastern corner of the containment, serve an on-site groundwater treatment system. The system collects groundwater on the upgradient side of a cement bentonite slurry wall which parallels a 700-foot section of the river, north of the containment area. An electrical substation is located east of the groundwater treatment system buildings. A site plan is provided as Figure 2.

4.0 SITE HISTORY

The following site history was established based on Sanborn Fire Insurance (Sanborn) maps and other information contained in subsequently discussed environmental reports.

The southwestern portion of the subject site was occupied by an electricity generating plant in 1891. The plant utilized a flume to generate electric power. By 1896, the site had expanded to include coal gasification operations. By 1949 the plant had expanded to its largest size and included three gas holders. The former electricity generating room had been converted into a garage and repair shop. Two underground gasoline storage tanks are shown on site in a 1949 Sanborn map. A heating and plumbing supply business also utilized several site buildings at that time. The three gas holders are no longer shown in the 1965 Sanborn map. The site coal gas operations apparently ceased around 1960 and the site was used as a New York State Electric and Gas (NYSEG) service center until 1980. The site has been vacant since that time. During the time of the on-site coal gas plant, coal tar generated at the site was apparently discharged to a surface impoundment north of the plant, on the opposite side of Saranac Street. Historic site features are provided in Figure 3. Sanborn maps are included as Appendix A.

5.0 SUMMARY OF PREVIOUS REPORTS

5.1 Introduction

Atlantic Environmental Services, Inc. (Atlantic) conducted a review of available environmental reports for the subject site. Except for site investigations conducted by Atlantic, the reports were provided by NYSEG. Thirteen separate environmental reports and various groundwater analytical data have been reviewed for the purposes of this document. These reports are summarized in the following sections of this report, in chronological order. The information presented below consists of both general report summaries and specific site information which may be useful for additional site investigative/remedial tasks.

Subsurface information, including lithologic sequences and physical evidence of coal tar impacted soil (staining, odor, sheen), obtained from these reports is summarized in Exhibit 1. The locations of borings, wells and test pits included in the table are provided in Plate 1. Based on this information, the estimated aerial extent of coal tar impacted soil was extrapolated, and is provided as Figure 4. River sediment assessment information obtained by Atlantic in 1995 is also included in this figure.

5.2 Investigation & Development of Solutions to Coal Tar Problem at Plattsburgh Service Center, Acres American, Inc., December 1979

This investigation consisted of subsurface exploration; field and laboratory analysis to assess the extent, chemical composition, and migration mechanisms of on-site coal tar; and the development of conceptual ideas for remediation. The subsurface investigation included the drilling of 26 borings at depths ranging from 10 to 40 feet, the installation of 16 piezometers, and the excavation of 3 test pits. The investigation was conducted entirely on the northern portion of the site, in the vicinity of the former on-site coal tar pond. The results of the exploration indicated that the coal tar had migrated from the pond to the river, through sand and gravel material and over the top of the dense till. The coal tar was found to have extended from the tar pond west, north and northeast toward the river. Wood chips, possibly indicating purifier waste as surmised by Atlantic, were found in borings east of the coal tar pond, across Saranac Street.

Chemical analysis of groundwater indicated total organic carbon (TOC) levels at concentrations of 130 parts per million (ppm). Calculations based on groundwater gradients, saturated thickness, and hydraulic conductivity indicated a total release of approximately 8 pounds per day of TOCs from the leaching of organic coal tar fractions at the site. Chemical analysis was performed on three soil samples, including metals, TOC, chemical oxygen demand (COD), nitrogen, pH, phosphate, chloride, cyanide, sulfate, sulfide, and phenols. In summary, several metals were found at what were considered to be elevated levels, including cadmium, chromium, selenium and zinc. COD and TOC concentrations ranged from 627 to 2650 ppm and

206 to 935 ppm, respectively, and were indicated as being directly related to the high organic content within the coal tar. The analytical methodologies consisted of both extraction procedures and total analyses. As described, these methods would not be acceptable methods of waste characterization today.

During the time of this investigation coal tar was observed on the river bottom and sheens were noted along the riverbank. The most extensive seepage was observed along the river, directly north of the coal tar pond. This area was sandbagged at the time of the report.

Based on the information obtained during this investigation, conceptual remedial alternatives developed included no action, source removal, isolation of contaminated soil, area grouting, contaminant plume management, chemical immobilization, biological reduction, injection and recovery, and rerouting the Saranac River. It was recommended that total on-site isolation of contaminated soil be implemented.

A subsurface investigation was conducted at the site in 1975 by Empire Soils Investigations, Inc. The investigation included the installation of 11 borings and 4 monitoring wells. Although no report for this investigation was available, subsurface information obtained during the investigation is provided in the 1979 Acres report.

5.3 Draft Environmental Impact Statement for River Bend Urban Renewal Site, for City of Plattsburgh, New York, by Dresdner Associates, P.A., June 1980

This report essentially summarizes information contained in the Acres American, Inc. report. It includes a description of the site geology and hydrology as well as the distribution of coal tar in the northern portions of the site. A section regarding coal tar constituents indicates that three samples of coal tar contaminated soil were analyzed for polychlorinated biphenyls (PCBs) and were found to be below detection limits. Detected constituents included polycyclic aromatic hydrocarbons (PAHs), silver, arsenic, chromium, and lead.

The report describes the Saranac River hydrology and classification. Reportedly, approximately 1.7 acres of the western and northern portions of the site are within the 100 year flood plain which ranges in elevation from 112 to 117 feet. Furthermore, the river is affected by daily fluctuations due to power and industrial dam operations.

The Saranac River is 83 miles long and drains a 618-square mile watershed. Its headwaters are located in the Saranac Lakes area of the Adirondack Mountains and it flows easterly to Lake Champlain, discharging to the lake approximately 0.5 mile northeast of the site. The lower Saranac River in the vicinity of the subject site is classified as "C(T)" for trout population and non-body contact recreation.

Two United States Geological Society (USGS) water quality monitoring stations are located to the north of the site, upstream and downstream of the sewage treatment plant. No significant impacts to surface water quality were indicated.

5.4 Coal Tar Confinement and Cleanup, Specification No. P1 and P2, New York State Gas and Electric Corporation, May 1982

These reports consist of bid specifications for the construction of the coal tar pond containment, the excavation of contaminated river sediments, and the construction of the riverside slurry wall. The specifications also outline the demolition of former plant and service center structures and the removal of aboveground storage tanks (ASTs) and underground storage tanks (USTs) at the service center.

The Phase I portion of the project was to consist of the construction of a soil and bentonite slurry wall around the coal tar pond. The slurry was specified with a permeability of not more than 1×10^{-7} cm/sec. The walls were to be vertical, 30 inches wide, and key into the underlying till a distance of 2 feet. A temporary liner was then to be placed on the containment.

The Phase II portion of the project was to commence with service center/plant demolition activity. This would include the removal of two fuel oil ASTs, one 2,500-gallon gasoline UST, and two riveted steel oil tanks full of water. The two latter tanks were indicated in the basement of the former NYSEG meter building (former battery and fuel storage building). A "tank to be removed" was also noted on building demolition plans, located adjacent to the west boundary of the current Phase II containment (see Figure 3).

The project was then to include the excavation of contaminated riverbed sediments along approximately 1,100 linear feet of the northern portion of the site. Riverbank soils were also to be removed at that time. Subsequently, the area was to be backfilled with sand and gravel and armored with riprap. The removed material was to be placed into a second containment, abutting the coal tar pond containment to the south. Again, a soil/bentonite slurry wall with similar specifications was to be constructed. Both cells were to be capped with a permanent liner and covered with topsoil and seeded.

A cement/bentonite slurry wall was to be constructed along the river, adjacent to the area of excavation, and a drainage line was to be installed upgradient of the wall and directed to a holding tank with a manhole cover. The tank was to include a discharge outlet which discharged to the river, through the slurry wall.

Based on site features observed by Atlantic in late 1994, and information provided by NYSEG, it appears that the tasks outlined above were completed.

The described remedial actions are depicted on Figure 5.

5.5 Engineering Report To The New York State Department of Environmental Conservation on the Plattsburgh Coal Tar Containment Facility, by New York State Electric and Gas Corporation; October 30, 1985

This report was prepared to establish conceptual design criteria to satisfy the initial submittal requirements of Consent Order 5-0285 regarding the discharge from the site's groundwater collection system. Final design was to be presented subsequent to New York State Department of Environmental Conservation (NYSDEC) approval. The report outlined the site history and project history; presented site groundwater treatment objectives; described groundwater characteristics, and provided groundwater treatment facility design parameters.

The site history indicated that the coal tar pond was constructed on the site by forming berms with surplus ash and "other solid materials". At that time all the surplus wastewater and tar was discharged to the pond. A tar separator was installed at the pond discharge by 1905 due to the expansion of the gas works. The report further indicates that in 1938 the tar separator size was increased and a 10,000 cubic foot holder for the collection of coal tar was added. It is likely that the tar holder was the former 10,000 cubic foot gas holder located in the far southwestern corner of the site. During the course of plant operations, some coal tar was dehydrated and burned on site as fuel. When the plant closed in 1960, the gas mains were purged, the equipment was removed and the coal tar pond was filled in. The remaining structures were used as office, warehouse and garage facilities by NYSEG until 1980.

The remainder of the report outlines the proposed groundwater treatment system to address total suspended solids, iron and pH parameters. Analytical results indicate exceedances of total suspended solids and iron. Metals and organic compound analysis of groundwater discharge samples collected in 1983, 1984 and 1985, provided in the report, do not indicate any SPDES exceedances of any parameter listed except for one incident where 1,2,4, trimethylbenzene was in excess of the 0.07 ppm action limit; it was found at 0.09 ppm.

The proposed treatment system was based on a design flow of 7,500 gallons per day and consisted chiefly of a chemical precipitator/settler, pH adjustments, and discharge to the river.

5.6 Plattsburgh Coal Tar Containment Facility Bench Scale Groundwater Treatment Study, E.C. Jordan Co., January 1986

This study consisted of the treatability analysis of groundwater obtained from the containment system drainage system. The program was designed to evaluate the effectiveness of hydrogen peroxide precipitation for the control of metals, organics and cyanide. The results indicated that hydrogen peroxide precipitation was an effective control of metals in the samples collected. None of the three experimental treatment methods was effective for TOC, cyanide or amenable cyanide.

5.7 Investigation of Slurry Trench Cutoff Walls, by Ray M. Teeter and Samuel P. Clemence, June 1986

The objective of this investigation was to develop a method for evaluating the in-place permeability of slurry walls. The report presents the results of the investigation of three on-site slurry walls: one wall surrounds the original coal tar pond (Phase I); another was added to the tar pond containment required as a result of the riverside excavation project (Phase II); and the riverside slurry wall. The investigation included the completion of 15 borings, 12 of which were completed as monitoring wells.

In general, the performance and quality of the slurry walls were determined to be poor. This was based on the measured coefficients of permeability being higher than those generally anticipated or specified, and other key properties, including moisture content, specific gravity, soil gradation, and density which fell outside the generally recommended limits. As indicated in subsection 5.12, it has been surmised that the borings/wells placed in the northern side of the containment (Phase I) may have missed the wall. Atlantic's review of the boring logs for two wells reportedly installed into the Phase I slurry wall did not indicate that bentonite slurry was encountered, as it was shown on other slurry wall logs. Therefore, it appears plausible that the wall was missed in this area.

5.8 Ground-Water Investigation and Proposed Remedial Program, by Roux Associates, Inc., January 1987

This investigation was conducted to determine the feasibility of installing an in-situ groundwater treatment system at the site. The report includes an overview of the status of the site's permitted wastewater discharge from the existing groundwater treatment system, describes the field investigation results, and provides a general description of the proposed treatment technology.

The report indicates that historically only iron and total suspended solids have exceeded the permit limitations. The iron content of the groundwater, coupled with oxidation and subsequent precipitation, was indicated as the cause of these exceedances. It was recommended that the addition of hydrogen peroxide to the groundwater be conducted to achieve the necessary oxygen concentrations to enhance naturally-occurring treatment.

The field investigation included the installation of 10 monitoring wells (RA-1 to RA-10), hydraulic conductivity testing, and chemical analysis of groundwater. The subsurface exploration took place to the northwest, north and northeast of the containment area and south of the riverside slurry wall. It indicated the presence of fine to medium sand and silt over coarse sand and gravel overlying dense gray till, consistent with other site geologic information. Coal tar impacts were noted in each boring. The report subsequently outlines the proposed design and operation of the in-situ groundwater treatment system which is described in the following section of this report.

5.9 In-Situ Groundwater Treatment System Operating Manual, Roux Associates, September 1987

This report describes the operation and maintenance of the in-situ groundwater treatment system installed at the site in 1987. The system essentially consisted of two leaching galleries located between the Phase I containment and the riverside slurry wall where hydrogen peroxide was injected into the groundwater. It also included service facilities to maintain the system (pumps, etc.). According to information found in subsequent reports, this system operated from October 1987 until some time in 1988 when it was discontinued because the desired iron levels had not been achieved.

5.10 Fate of Coal Tar at the Plattsburgh Site During Groundwater Recirculation and Peroxide Addition, Cambridge Analytical Associates, June 1988

This report outlines the results of a determination as to the effectiveness in treating on-site contaminants of the in-situ groundwater treatment system, including the addition of hydrogen peroxide. Analysis of tar constituents and total iron in groundwater samples indicated that no difference in dissolved tar or iron could be attributed to the treatment.

5.11 Composite Screening Analysis, Atlantic Environmental Services, January 1989

Atlantic conducted a limited research investigation at the site for the Western Research Institute. It consisted of the drilling of several test borings and the excavation of follow-up test pits. The purpose of the work was to collect coal tar contaminated materials for research and development of remedial technologies. No site investigation report was generated. However, Atlantic personnel recall the presence of apparent purifier wastes east of the coal tar pond area, across Saranac Street. The waste extended to a depth of at least 4 feet. Furthermore, subsurface exploration in the vicinity of the former plant site indicated coal tar contamination within a narrow band of sand and gravel, possibly a former streambed. No additional information regarding this exploration is available.

5.12 Saranac Street Containment Study, New York State Electric and Gas Corporation, February 7, 1990

This study was conducted to provide an evaluation of data collected to demonstrate the effectiveness of the coal tar containment at the site. It was performed to address concerns raised during the 1986 study of the slurry walls conducted by Teeter and Clemence. The study included extensive hydrologic studies and an evaluation of the slurry wall on the southern side of the Phase II containment. The slurry wall analyses were compared to those previously conducted on material from the northern wall of the containment.

Hydrologic information indicated that the site discharges to the Saranac River during both high and low groundwater regimes. Site discharge to the Saranac River was estimated to be 0.06 to 0.5 gallons per minute without significant seasonal variation. A mounding of groundwater upgradient of the containment cell and the riverside slurry wall was found. A water balance based on observed gradient through the entire containment indicated a flow of approximately 0.1 to 2.1 gallons per minute.

Field tests conducted on the slurry wall located in the southern portion of the Phase II containment indicated permeabilities of 1.4×10^{-6} cm/sec to 3.0×10^{-6} cm/sec. Moisture content, Atterburg Limits and particle size analysis of the 1990 samples were also compared to the previous study. Comparison of the particle size analysis indicates that the 1990 wall cuttings have approximately 10% more sand and gravel and 5% more silt/clay than the previous report. Both samples were non-plastic although the 1990 samples exhibited a 6% higher moisture content. Based on this information, it was surmised that the 1985 well cluster on the northern side of the containment may have missed the slurry wall. However, it was also noted that the 1990 well cluster was placed in a "clean" area of the site and was not subject to "chemical degradation" which could, over time, effect permeability.

5.13 Engineering Report for Treatment System Upgrade at New York State Electric and Gas Corporation's Plattsburgh, New York Manufactured Gas Plant Site, Remediation Technologies. Inc., August 1991

The purpose of this report was to present design criteria and propose changes to the existing groundwater treatment system at the subject site to meet new discharge limits established by NYSDEC. The previous system, operated under the provisions of a 1985 discharge permit, was designed to remove metals contaminants (primarily iron) by oxidation with hydrogen peroxide and filtration. The new requirements include the removal of organic compounds. The objectives of the modified system were to continue to reduce iron discharge levels and to implement the reduction of benzene, toluene, ethylbenzene and xylene (BTEX), and naphthalene. The new system called for the addition of a potassium permanganate pretreatment and carbon filtration. This system was installed and is currently operating at the site.

5.14 Plattsburgh MGP Site Investigation, Atlantic Environmental Services, January 1995

The purpose of this investigation was to assess potential pathways for coal tar at the site to enter the Saranac River. It also evaluated the impacts of coal tar and contaminated groundwater discharges on the river sediment quality. The investigation included the excavation of ten test pits; the drilling of 15 borings (two completed as piezometers and three as tar level monitoring wells); the collection of groundwater and river elevation data to assess groundwater flow; and a physical and chemical assessment of conditions along the riverbank adjacent to the site.

The results of the field investigation indicated that coal-tar constituents are entering the Saranac River from the subject site in three areas. Subsurface explorations adjacent to and through the riverside slurry wall in the northeastern portion of the site indicate that coal tar is apparently moving through and/or under the wall. Contaminated material, not included in the excavation of coal-tar impacted soil and sediments in 1982, also may be contributing to coal tar in the Saranac River at the northeastern end of the site. Coal tar is also going around the slurry wall, impacting the river on the northwestern portion of the site. Finally, coal-tar constituents were found in river sediments adjacent to the former MGP plant/service center site in the southwestern portion of the property. Since no free coal tar was observed in this area, the detected concentrations were likely the result of contaminated groundwater discharge. Soil encountered during a monitoring well installation in the southwestern portion of the site in 1990 (well 90-03) indicated the presence of "petroleum." The source of the material found in both areas may be former gas/tar holders or other MGP-related activities in this area.

A till contour map (Figure 6) was generated from information obtained in the investigation as well as previous reports. The till elevations were established using boring surface elevations from the Acres American, Inc. 1979 and 1980 borings, surveyed 1995 piezometer elevations, and approximate 1995 test pit and boring/tar well elevations. The till surface is generally trending northward with a dip in the till located to the northeast of the containment. However, measurable amounts of coal tar were observed in a piezometer in the northwestern portion of the site, indicating migration/collection of coal tar in this area. Groundwater contours (Figure 7) indicate radial groundwater flow across the site toward the river from the southeastern portion of the site. Coal tar contamination, based on the investigation and previous information, was found over a 5.5 acre area extending west, north and east of the containment area toward the river as depicted in Figure 4.

Site historic information was obtained during the course of this project and was primarily utilized to assess the relative stability of the riverbank over time. However, this information also provides valuable insights as to potential environmental concerns at the former MGP site and service center. Sanborn maps indicate three former gas holders, including one which was apparently transformed into a tar holder. A circular concrete pad and portions of two circular holder foundations or retaining walls are currently visible at the site in these locations. Sanborn maps also depict a battery and petroleum storage building, a carpentry and machine shop, and two oil houses. Two gasoline USTs and a large repair garage are shown on the site in 1949 and 1965. Limited subsurface exploration has occurred in this area of the site. Furthermore, blue-stained wood chips were observed on the ground surface in the eastern portion of the site during a site walkover conducted as part of the investigation. This material likely represents purifier wastes. The above features are depicted in Figures 2 and 3.

5.15 Groundwater Analytical Data Review

As part of the data review portion of this report, Atlantic reviewed groundwater analytical data for the site for the years 1984, 1987, 1992 and 1995 for the purpose of assessing the distribution of organic contaminant constituents in groundwater. Complete groundwater analytical results are provided in Appendix B. A summary of the groundwater analytical results is provided in Figure 8.

Groundwater analytical results for the monitoring wells installed within, upgradient and downgradient of the riverside and Phase I and Phase II slurry walls in 1984 are available. These wells were analyzed for limited organic parameters, including BTEX and naphthalene. Overall it appears that naphthalene has migrated beyond the containment structures while benzene has remained somewhat contained by the slurry walls. However, it is likely that areas downgradient of the slurry walls were impacted prior to the construction of the slurry walls.

Volatile and semivolatile organic analyses of selected wells from a December 1987 sampling round were examined. The results indicated significant concentrations of BTEX (1.3 to 7.6 ppm) in the three wells (86-01, 86-02 and 86-03) adjacent to the north side of the coal tar containment, and in well 86-05, adjacent to the northwestern corner of the containment. Lesser concentrations of BTEX were found in wells further to the northwest and northeast. No chlorinated compounds were found in the volatile organic screening. Semivolatile organic constituents results were found for only four of the wells located to the north and northwest of the containment.

Groundwater analytical results from selected wells sampled in 1992 and 1995 have also been examined. Organic analysis in 1992 included BTEX compounds and in 1995 it included selected semivolatile compounds and BTEX. Wells sampled in these years include 86-01, 86-05, 90-02, 90-04, 90-05, 90-08 and 90-12. In 1995 wells 90-03 and 90-11 were also sampled.

As indicated in previous years, BTEX concentrations to the north and northwest of the containment were significant. In 1995 naphthalene was detected in both wells and acenaphthylene was found in 86-05. Trace concentrations of BTEX were found in the southern portion of the Phase II containment. No organic constituents were found in the southeastern portion of the Phase II containment, in either year, likely indicating minimal coal tar impacts to groundwater in the Phase II containment.

Wells located adjacent to the western and eastern ends of the riverside slurry wall were found to contain BTEX, naphthalene, and acenaphthylene in both years. This indicates that contaminated groundwater is passing around the slurry wall.

No organic constituents were detected in 90-02, located in the far southeastern corner of the site. Significant BTEX concentrations, naphthalene, and acenaphthylene were found in well 90-03, located in the far southwestern corner of the site, near the former gas/tar holder. Evidence of coal tar contamination was observed in soils during the installation of this well. Trace levels of total xylenes and ethylbenzene were found in 90-04 in 1992 while none were detected in 1995. This well is located in the northern portion of the former MGP site.

Overall it appears that there are significant groundwater impacts north and northwest of the containment area, as well as within the Phase I (northern) portion of the containment. Impacted groundwater also appears to be migrating around both ends of the riverside slurry wall. Finally, the groundwater in the far southwestern portion of the site, adjacent to the former MGP plant, is impacted by coal tar constituents.

6.0 SITE CONCEPTUAL MODEL

A conceptual model of the site has been developed based on the information reviewed during this assessment.

6.1 Geology

The subject site geology consists of fill material, sand and gravel deposits, glacial till, and limestone bedrock. The fill material encountered consists of construction debris, including wood, metal, brick, and concrete intermixed with sand and gravel. The fill ranges in thickness from 1± foot to 7± feet. The sand and gravel deposits consist of orange brown, medium to coarse sand, gravel, cobbles, and boulders. This material was encountered from near the surface to depths of up to 14± feet and is underlain by glacial till. The till consists of dense grey, fine to medium silty sand with gravel and rock fragments. It was found at depths ranging from about 3 feet below grade to over 30 feet. Site bedrock consists of grey limestone which was encountered at depths ranging from 19 to 36 feet, according to the 1979 Acres report. The thickness of this grey limestone has not been determined.

6.2 Groundwater

Groundwater at the site flows radially from the southeastern portion of the site (at an approximate elevation of 128 feet), to the north, northwest and west toward the river. It falls to approximately 114 feet in the southwestern corner of the site and 101 feet along the northeastern portion. It is a shallow unconfined aquifer which is contained by the surface of the till. It tends to mound on the upgradient side of the containment and flows east and west around the riverside slurry wall. The groundwater elevations have been found to be relatively stable over time.

The 1985 NYSEG Engineering Report indicated a maximum observed groundwater flow of 5,760 gallons per day at the collection point (where the slurry wall drainage line discharges to the collection tank), and zero flow following periods of low precipitation. Reportedly, the groundwater flow is very responsive to precipitation and peak flow is reached within four hours of a precipitation event, with the recession lasting several days. Furthermore, it was indicated that from a period between June and October 1985 there was no groundwater discharge to the system. Also, hydrologic studies have indicated that the site groundwater discharges to the river, regardless of the river water elevation. Some continuous base flow to the river can be expected at all times, even if there is no discharge to the groundwater treatment collection system. This is due to the fact that the collected groundwater is from the top of the water table. The groundwater elevations may drop below the collection point but continue to flow to the river.

Permeability tests indicated that on-site hydraulic conductivity ranged from 2.39 x 10^{-2} cm/sec to 6.05 x 10^{-4} cm/sec with an average of 5.41 x 10^{-3} cm/sec. A similar range was calculated based on laboratory grain size analysis. The average hydraulic gradient in the vicinity of groundwater discharge to the river was found to be 1.7 x 10^{-2} cm/sec to 5.0 x 10^{-2} cm/sec with a standard thickness of 2.5 to 5 feet. These conductivities are for the fill and sand/gravel materials. No hydraulic conductivities for the till were available.

6.3 Coal Tar Impacts

6.3.1 Soil

Subsurface explorations at the site indicate the presence of coal tar contaminated soil with thicknesses ranging from several inches to 4 feet. The till has been found to be relatively impermeable to the coal tar; however, some limited penetration (2 to 3 inches) has been observed. The lateral extent of coal tar contaminated soil occupies approximately 5.5 acres of land in the northern portion of the site (based on observations of soil from borings and test pits) and is undefined in the southwestern portion of the property (Figure 4). The "pooling" of coal tar within localized depressions of the glacial till is possible. One such area was found in the northwestern portion of the site during Atlantic's investigation. Approximately 0.9 foot of coal tar was measured within piezometer PZ-10/94-02.

Coal tar and/or coal tar contaminated groundwater is entering the Saranac River from the northern and northwestern portions of the site. Test borings installed adjacent to and through the riverside slurry wall indicate that coal tar is apparently moving through the wall and/or possibly along the contact of the wall and till surface. The source of the coal tar along the wall is unclear, although it may be originating from the contained former coal tar pond or from coal tar which had migrated into adjacent soils prior to containment of the tar pond. Coal tar was found downgradient of the riverside slurry wall in areas that had previously been excavated as well as in areas that were not excavated due to the presence of utilities. Coal tar is also entering the river along the northwestern portion of the site, beyond the western end of the riverside slurry wall. Coal tar constituents were also found in river sediments adjacent to the southwestern portion of the site. This may be the result of current contaminated groundwater discharges or historic releases. Coal tar has also been found in soil in the southwestern portion of the site within and adjacent to the former MGP site.

The condition of the coal tar pond and sediment containment is not currently known although one study suggests that the installed slurry wall located on the northern (Phase I) and western (Phase II) portions of the containment are insufficient (see subsection 5.7, Teeter and Clemence, 1986). It is possible that the containment area is serving as a continuing source of contamination at the site.

Coal tar impacted soil and groundwater are documented in the southwestern corner of the site. It is possible that other impacted areas exist in this portion of the site Apparent purifier waste materials have been observed northeast of the former plant site, east of the containment area.

6.3.2 Groundwater

Significant groundwater impacts exist north and northwest of the containment area as well as within the Phase I (northern) portion of the containment. Impacted groundwater also appears to be migrating around both ends of the riverside slurry wall. The groundwater in the far southwestern portion of the site, adjacent to the former MGP plant, is also impacted by coal tar constituents.

7.0 CONCEPTUAL REMEDIAL ALTERNATIVES: Northern Portion of the Site

7.1 Introduction

Considering the site conceptual model, the nature and extent of coal tar contamination, and apparent migration pathways for coal tar entering river sediments, remedial options which focus on the mitigation of coal tar migration have been identified for the northern portion of the site. No remedial alternatives have been identified for the southern portion of the site as only limited information on the nature and extent of contamination and site geology exists for the area.

Three technologies identified to mitigate the migration of coal tar to the river include containment, in-situ stabilization, and source removal with off-site treatment of contaminated media. Considering past remediation efforts implemented at the site, it is desirable to expand upon previous efforts rather than to implement a removal action, although a more in-depth evaluation of effectiveness and cost of remedial options should be completed prior to selecting a remedial alternative. It appears that sufficient information presently exists to develop conceptual layouts of the remedial alternatives and to assess costs; however, additional information will be required to complete the final design of any given alternative.

7.2 Containment

The containment option has been used in the past at this site with limited success. A conceptual remedial alternative using this technology involves building upon the existing riverside slurry wall to assure its integrity in mitigating the migration of coal tar to the river. Extension of this wall to completely contain all coal tar contaminated media, concurrent with the installation of an impervious surface cap, may also be considered. This remedial alternative could involve one or more of the following components.

- Extend the existing riverside slurry wall to provide more coverage and contain migrating coal tar and impacted groundwater.

- Install interlocking, chemical resistant, steel or high-density polyethylene (HDPE) sheetpiles adjacent to the existing riverside slurry wall to provide a more complete containment. This technology may also be used as a long-term alternative around the coal tar containment area.

- Install a coal tar collection drain and sump along the upgradient toe of the riverside slurry wall at the interface of the wall and glacial till stratum. Coal tar buildup behind the wall may then be removed via pumping for disposal.

- Extend the riverside slurry wall to completely surround coal tar impacted media (including the presently contained tar pond) and install an impermeable surface cap to prevent the infiltration of rainwater into the contained area.

7.2.1 Additional Data Needs: Containment

The design of a containment system as outlined above will require the collection of additional data and the performance of laboratory tests to ensure the development of effective design parameters. Information required revolves around chemical and physical compatibility issues of site soils and groundwater with a bentonite slurry and soil/bentonite design mix, better definition of the till surface along the alignment of a coal tar collection trench, and better definition of site topography. Discussion regarding these issues follow.

- The design of a slurry wall is predicated upon two engineering parameters, those being: (1) maintaining the stability of the trench sidewalls prior to placing the impermeable backfill material, and (2) providing a backfill mix which exhibits the design permeability.

  (1) To maintain a stable trench, a slurry wall excavation support technique is used whereby a bentonite slurry is introduced into the trench as the excavation proceeds. The shear strength of the slurry must be sufficient to resist the earth pressures imposed at impending failure of the trench sidewalls. For the shear strength of the bentonite slurry to be effective, it must act on a surface which can transmit its effective pressure to the trench sidewalls. Such a surface is created by development of a filter cake along the trench sidewalls derived from the gelling of the bentonite slurry due to its rheologic properties.

  For slurry walls installed in coarse granular soils such as those exhibited at the site, penetration of the slurry into the pores of adjacent soils may be expected. As the slurry penetrates the soils, solid bentonite particles occupy void space between soil grains. As more solid particles accumulate in the soil pores, a tightly packed zone of gelled material forms to create the filter cake. Development of the filter cake creates a fairly impermeable barrier against further penetration of the slurry into adjacent soils. Upon cessation of the particle penetration, the pressure developed by the slurry acts on the barrier filter cake which effectively stabilizes the vertical sidewalls of the trench.

The ability of a bentonite slurry to form an effective filter cake will be dependent on the ability of the clay to gel given the physical and chemical parameters of the adjacent soils and groundwater. To evaluate this situation it is appropriate to conduct laboratory tests of different clay slurries using groundwater from the site and/or mix water (typically a locally available water source) which will be used for preparation of the slurry. Such tests include Marshall Funnel Viscosity used to evaluate the workability of the bentonite/water slurry and the development of a filter cake, chemical desiccation and sedimentation/flocculation used to evaluate the compatibility of the bentonite slurry with the contaminated groundwater, and filter cake permeability also used to assess the effect of contaminated groundwater on the cake and the ability of the cake to withstand blowout.

(2) Once the trench walls are stabilized against failure, backfill of a soil/bentonite mixture can be completed. The soil/bentonite mix must be designed to provide the required permeability given the site conditions under which it will be required to perform. Typical soil/bentonite mixes utilize soils excavated from the trench; however, performance will be dependent on the soils gradation and fines content. A mix which exhibits a low permeability should be developed from a well-graded soil with a fines content exceeding 20 percent by weight passing a number 200 sieve. Often it is necessary to supplement existing site soils to achieve this requirement. To develop a suitable soil/bentonite mix for the site it is appropriate to undertake a permeability and chemical compatibility testing program similar to that for the bentonite slurry mix. A successful slurry wall mix should: demonstrate compatibility of the soil/bentonite slurry with the contaminated groundwater at the site; provide adequate workability of the soil/bentonite backfill to permit efficient mixing and placement; and provide a long-term permeability of 1×10^{-7} cm/sec.

- Should a coal tar collection trench installed upgradient of the containment barrier be considered, additional data concerning the till surface will be required for design. As the trench and collection pipe must be elevated coincident with the till surface (to collect tar migrating along the till and minimize its migration beneath the trench) while providing a positive pitch towards a collection sump, a determination of the till surface along the collector trench alignment is appropriate. In addition, characterization of the tar for treatment and disposal purposes and a determination of its pumpability and subsequent recovery within the collector trench would be useful information.

- If reinforcement and extension of the existing riverside slurry wall and/or coal tar collection is selected for implementation, it may be appropriate to further evaluate the effectiveness of the existing system containing the former tar pond. Partial containment and/or collection of tar migrating through subsurface soils should only be considered if the source of the tar is that remaining in soils adjacent to the contained former tar pond. Otherwise, if tar is migrating from the containment, its removal from a collection trench may continue indefinitely, or in the event that a collection system is not installed, tar buildup behind a partial barrier may cause flow around the barrier.

- Should complete containment and capping of tar-impacted soils be considered, better definition of site topography will be necessary for design. As the function of a surface cap is to prevent infiltration of rainwater into the containment, the ground surface and the cap itself must be graded to provide positive drainage away from the containment area. To assess the ability of a cap and the ground surface to achieve this objective, and to complete the grading and drainage design, a review of existing site grades and drainage patterns is necessary.

7.3 In-Situ Stabilization

In-situ stabilization/solidification (S/S) technology has been used to immobilize organic and inorganic compounds in wet or dry soils, using chemical formulations which include a solidifying matrix and additives to achieve specific treatment characteristics and to produce a monolithic mass. In-situ S/S is implemented by injection of formulations into subsurface soils using mixing equipment. Stabilization of contaminants is achieved by creation of chemical bonds between the contaminants and the stabilizing additives or by physical entrapment of the contaminants within an impermeable, solidified matrix. The typical solidifying agent used in an S/S formulation is Portland cement.

For the Plattsburgh site, in-situ S/S may be considered for solidification of all tar-contaminated soils or for a barrier installation similar to that described for containment systems. The implementability of the in-situ stabilization technology will be dependent on potential subsurface conflicts, such as historic foundations and subsurface utilities, which may interfere with the mixing equipment.

7.3.1 Additional Data Needs: In-Situ Stabilization

The design of an in-situ stabilization program for the site will require the collection of additional data and the performance of a laboratory treatability study to develop an effective S/S formulation. Similar to that required for containment, the information required revolves around compatibility issues and site topography as well as a determination of the leachability of contaminants from the solidified mass. A discussion regarding these issues follows.

- To evaluate the effectiveness of an in situ S/S program, a treatability test of the coal tar contaminated site soils will be required. Using bulk samples of site soils and groundwater, several formulations should be developed and evaluated for durability and leachability of organic constituents from the solidified mass. Typical treatability tests for this technology include sample volume expansion used to determine the impact to site grades subsequent to the injection of S/S formulation into subsurface soils; compressive strength used to assess the durability of the solidified mass; leachate testing used to assess the ability of the solidified mass to immobilize the contaminants of concern; hydraulic conductivity used to measure the ability of the solidified mass to retard the flow of groundwater; and freeze/thaw and wet/dry tests, also used to assess the durability of the solidified mass.

- Given that Portland cement is the primary stabilization agent in an S/S formulation, some temperature and shrinkage cracks may be expected to develop along the surface of the stabilized mass. To prevent water from entering the cracks an in-situ stabilization program typically includes the installation of an impermeable surface cap. Similar to that discussed for complete containment, better definition of site topography will be required for design of the cap.

7.4 Coal Tar Removal

The removal of coal tar contaminated soil and coal tar product from the soil is a more permanent remedial solution. The complete removal of all on-site areas of coal tar impacted material does not appear cost-effective due to the large area of impact. However, several options are available as discussed below.

- The coal tar containment area may be acting as the source for the continued migration of coal tar at the site. The removal of the containment is one option for remediation. The material could be excavated and transported to an off-site treatment facility or treated on site using thermal desorption. The removal of the containment should minimize and eventually eliminate continued discharge of coal tar product from the site.

- The removal of flowable coal tar from the site subsurface would further mitigate impacts to the river. Similar to that discussed for partial containment, the installation of a subsurface collection system upgradient of the riverside slurry wall and along other areas of the northern portion of the site would mitigate product entry to the river. A passive collection system constructed partially into the confining till horizon would intercept DNAPL. A sloped trench system discharging to a collection point(s) would mitigate continued lateral migration. Such a system would require monitoring, collection and disposal of collected materials.

7.4.1 Additional Data Needs: Coal Tar Removal

Should coal tar removal be considered a remedial option for the Plattsburgh site, some additional characterization of the waste stream may be desirable. Typical waste stream characterization would include chemical and physical characterization, classification of the waste as hazardous or nonhazardous, total PAH and TPH concentrations, and other chemical parameters used to evaluate air emissions for thermal treatment units. Laboratory testing of samples of the contaminated soils would be required for this purpose.

7.5 Groundwater Treatment

The continued need for groundwater treatment at this site is evident unless complete containment or stabilization is implemented. As indicated by groundwater analysis, contaminated groundwater is present throughout the site, including areas not previously addressed (southwestern portion). Subsequent investigations have documented that contaminated groundwater is also passing by the eastern end of the slurry wall.

Various groundwater treatment/containment technologies can be applied to this site. These technologies include modifying the existing systems, installing new passive treatment systems and installing new active groundwater systems. The following is a list of alternatives for addressing the contaminated groundwater at this site.

- Expand and upgrade the current groundwater collection/treatment system to remove groundwater contaminants not intercepted by the current system. This could include improving or extending the slurry wall and passive collection system to collect more groundwater and to minimize the migration of contaminated groundwater.

- Install new passive systems, including a surficial cap and/or upgradient slurry wall. These systems would be designed to minimize the generation of contaminated groundwater.

- Install new active groundwater treatment systems, including pump and treat, air sparging or in-situ biological treatment systems. These systems would be designed to provide a more aggressive approach to the remediation of the groundwater. These systems could be used in conjunction with the containment systems discussed above to help minimize the quantity of groundwater to be treated.

- The tar removal and groundwater treatment alternatives should be evaluated simultaneously to take advantage of redundant processes. For instance, the tar collection system could be integrated with the groundwater collection system. Both collection systems could be directed toward separator tanks. Coal tar could be periodically removed from the holding tank and groundwater could be directed to a treatment facility.

8.0 RECOMMENDATIONS FOR ADDITIONAL DATA: Southern Portion of the Site

The former MGP, located on the southern portion of the site, has not been investigated to any great degree. Documented contamination exists on the southwestern corner of the MGP and in river sediments adjacent to it. Based on limited information, several other areas of concern are evident as indicated in this report.

Some site history information (i.e., Sanborn maps) was collected during the 1995 investigation and indicates several potential areas of concern. However, additional site historic information does appear to be available. Additional data, including anecdotal information provided by former employees, historic site plans, historic aerial and ground photographs, information regarding plant decommissioning, and any other pertinent site information, should be obtained and reviewed.

A detailed site walkover of the plant site and other areas east of Saranac Street should be conducted. This should be performed when the ground is free of snow and preferably with the accompaniment of a former site plant employee, if possible. Any physical evidence of potential areas of contamination should be documented photographically and surveyed.

Based on the above information, a comprehensive field investigation should be conducted of the former plant area. The investigation should include test pitting, test boring, and well installation, as well as soil and groundwater sampling and other necessary activities sufficient to identify and delineate areas of contamination, and to characterize the material for waste disposal.

EXHIBIT 1

FIGURES

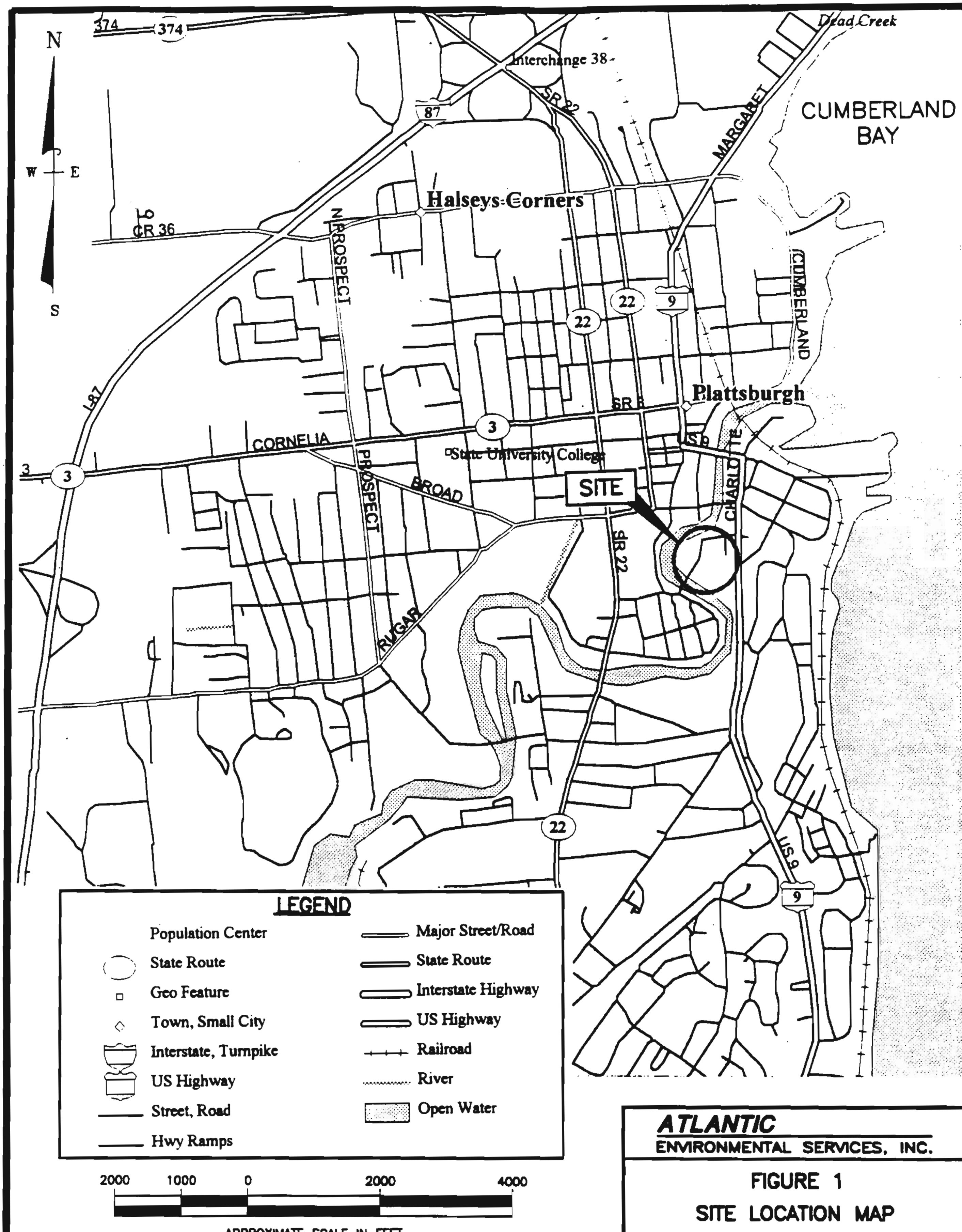

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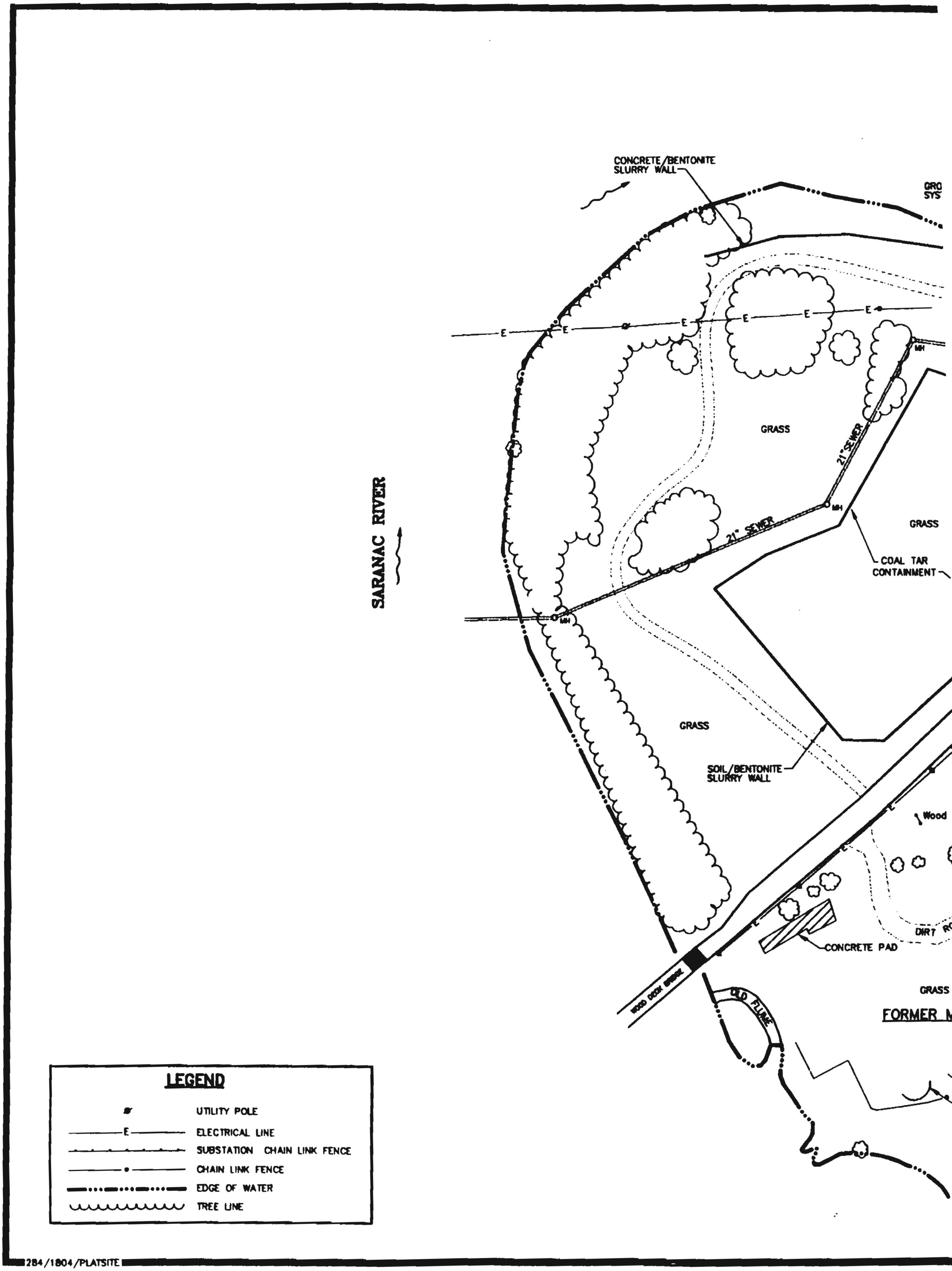
FIGURE 1
SITE LOCATION MAP

NEW YORK STATE ELECTRIC & GAS
PLATTSBURGH, NEW YORK

SOURCE: 1993 DeLORME MAPPING

ACAD\1284\1803\PLAT-LOC



284/1804/PLATSITE

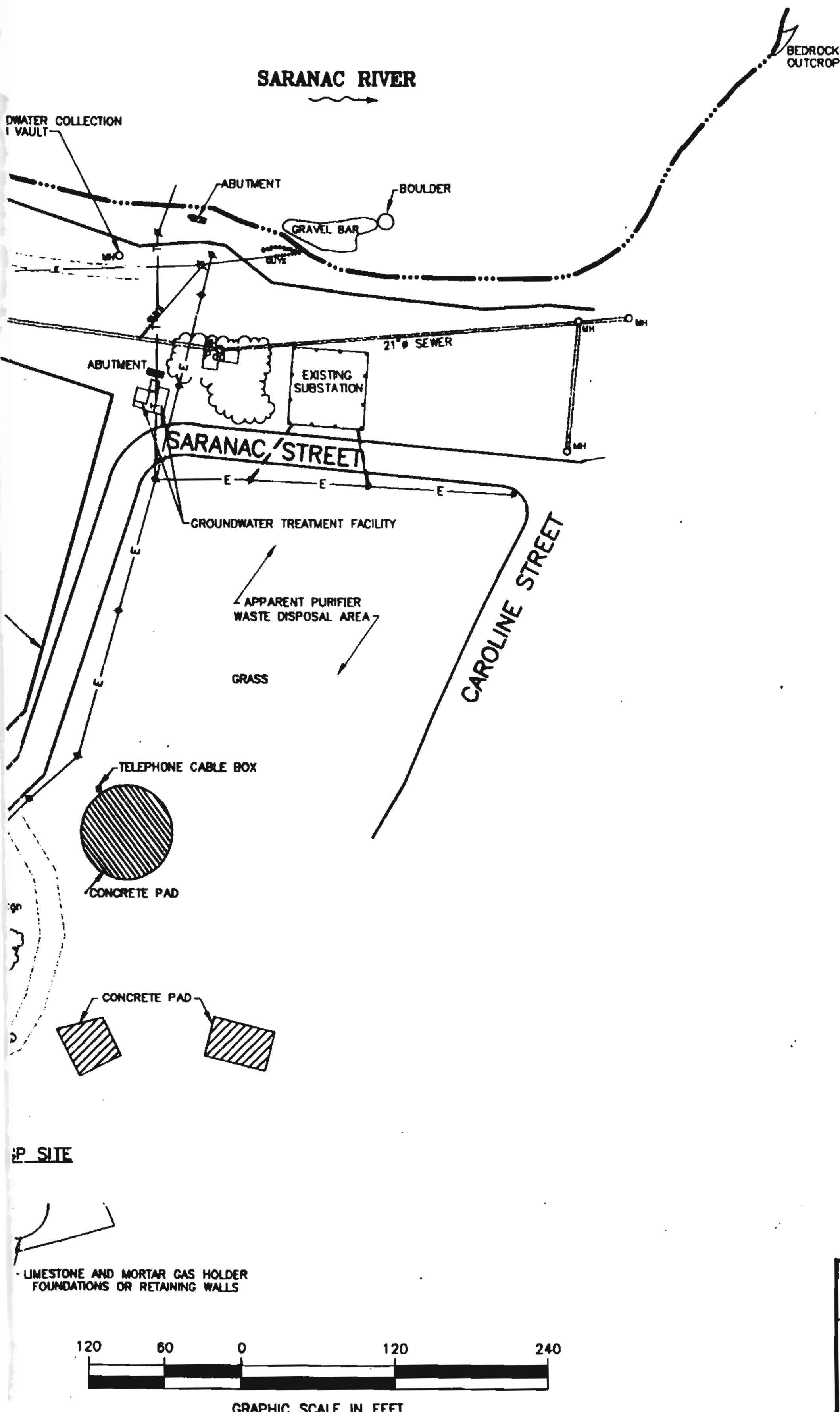


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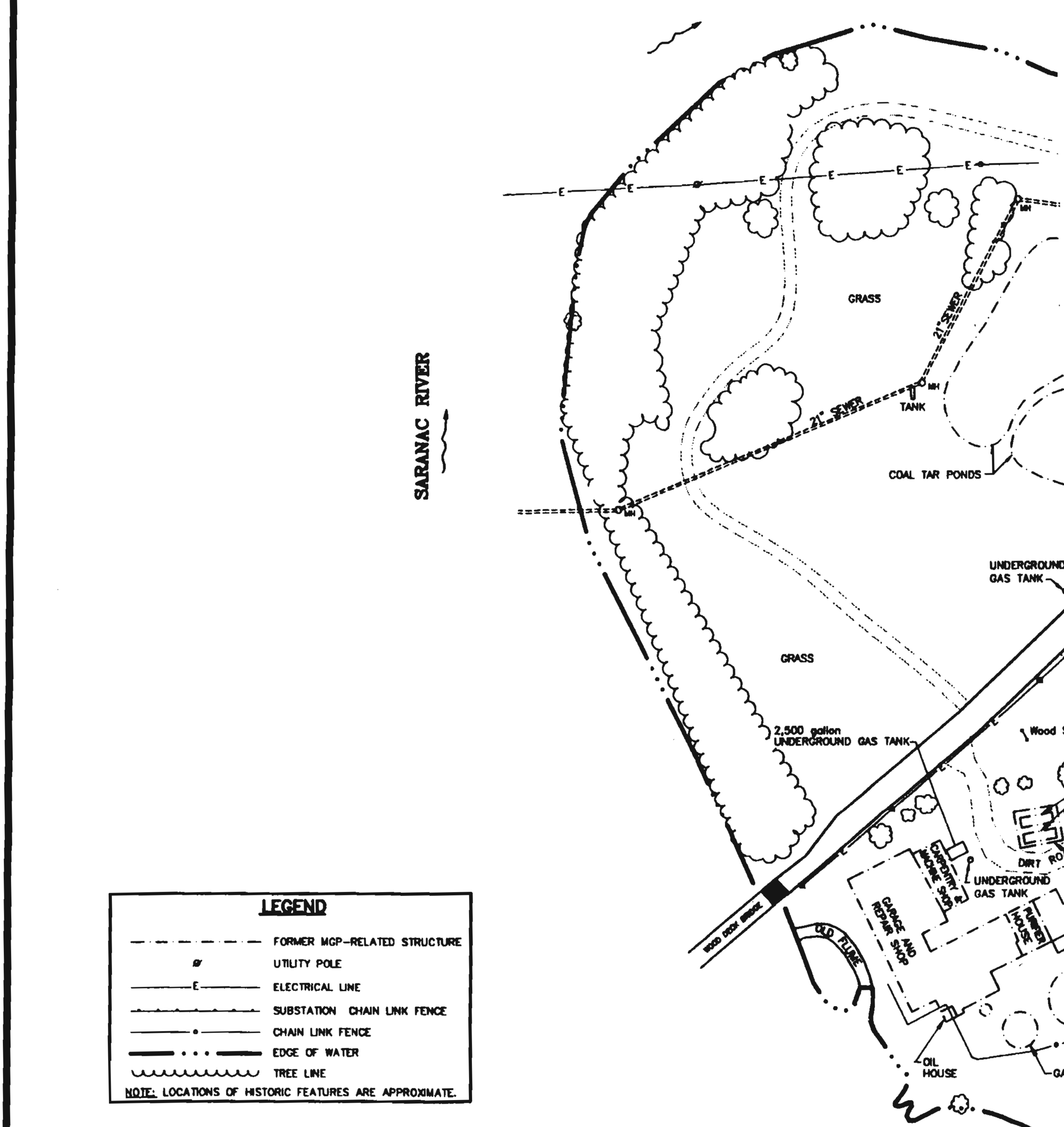
FIGURE 2

SITE PLAN

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK



SOURCES:

1. SANBORN FIRE INSURANCE MAPS.
2. PLATTSBURGH SERVICE CENTER COAL TAR CONFINEMENT AND CLEAN UP, DEMOLITION PLAN, MAY 1982.
3. INVESTIGATION AND DEVELOPMENT OF SOLUTIONS TO COAL TAR PROBLEMS AT PLATTSBURGH SERVICE CENTER, ACRES AMERICAN, INC., DECEMBER 1979.

284/1804/PLATHIST

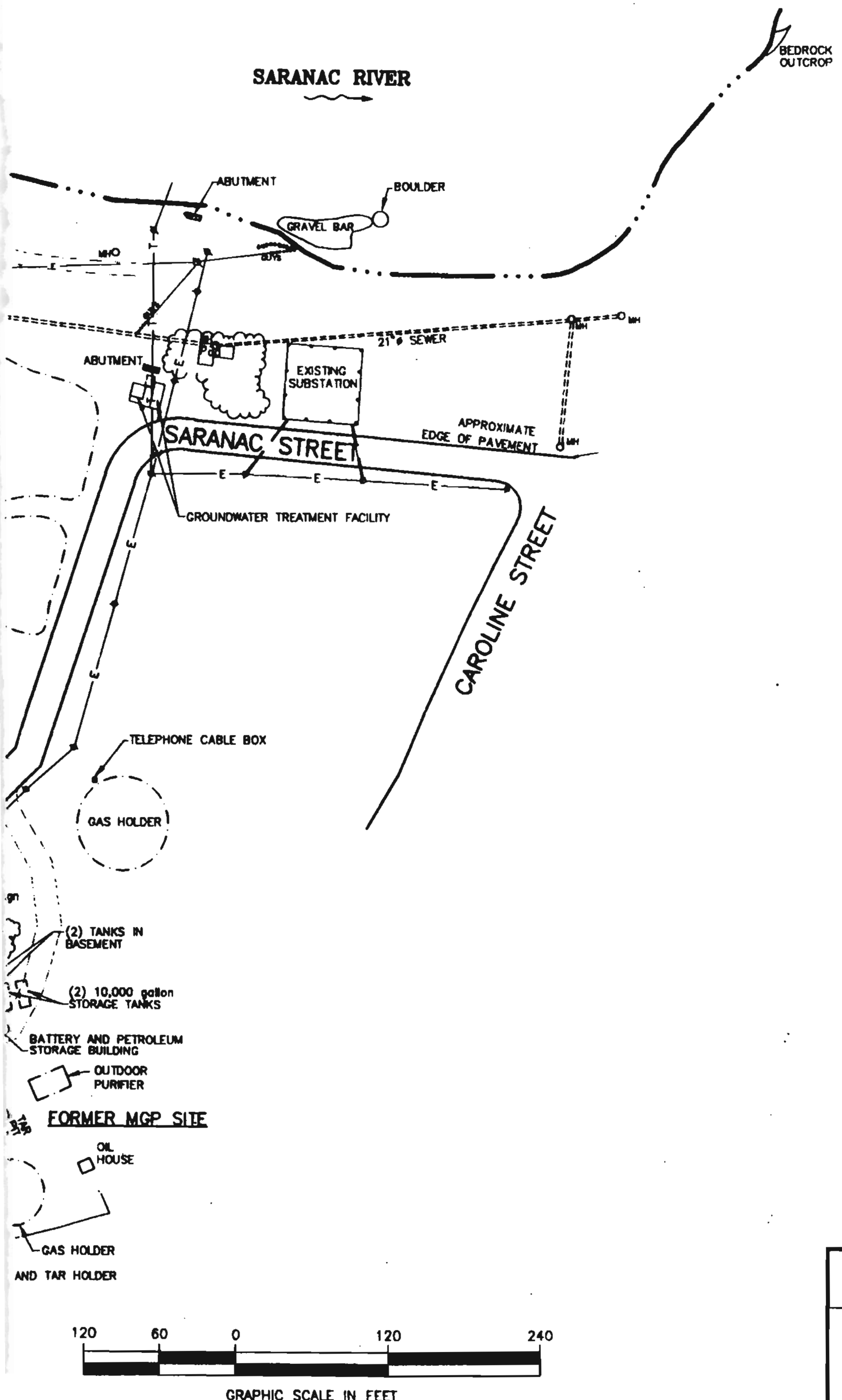


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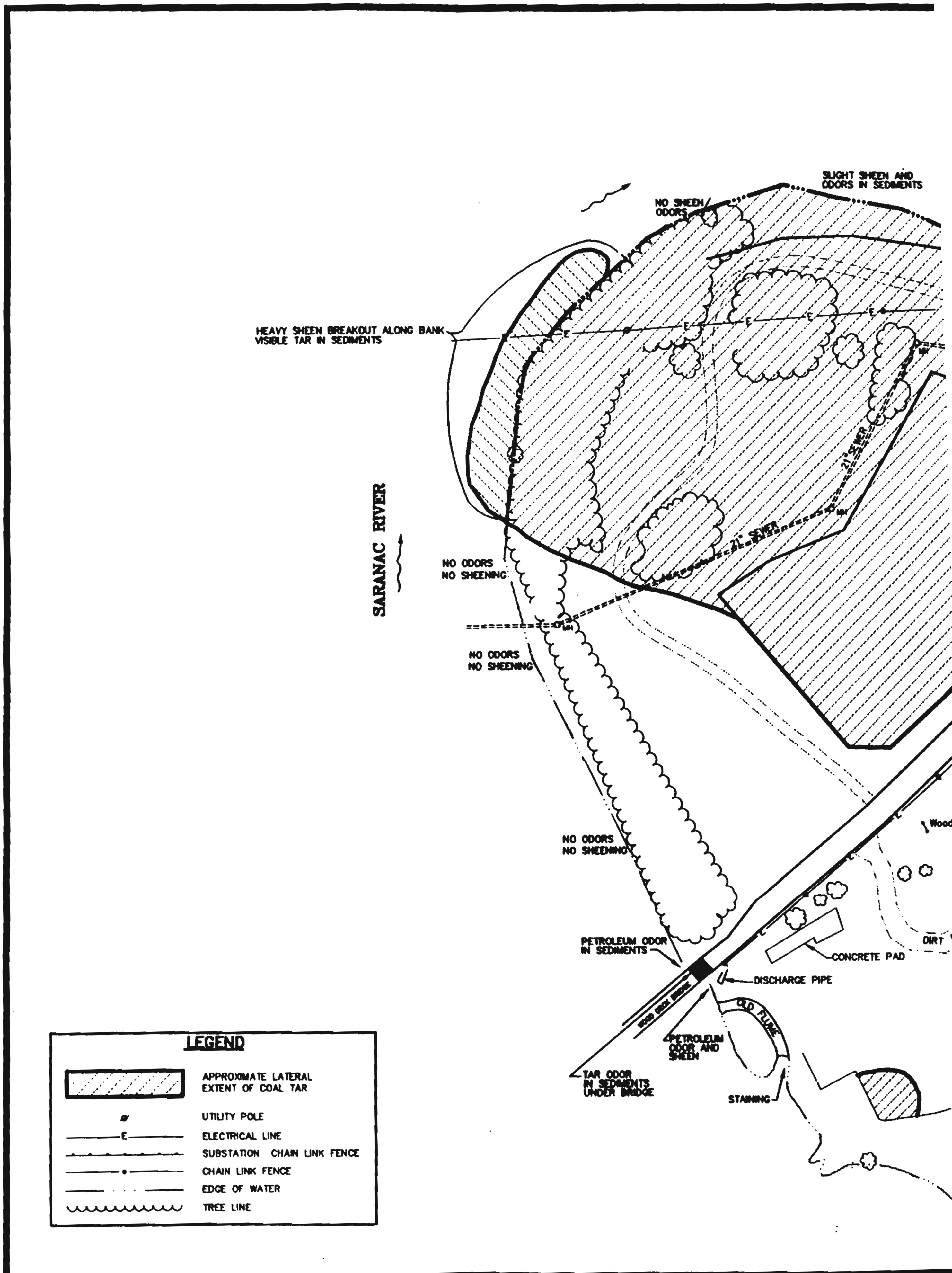
FIGURE 3
HISTORIC
SITE FEATURES

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK



284/1804/PLATT-CT

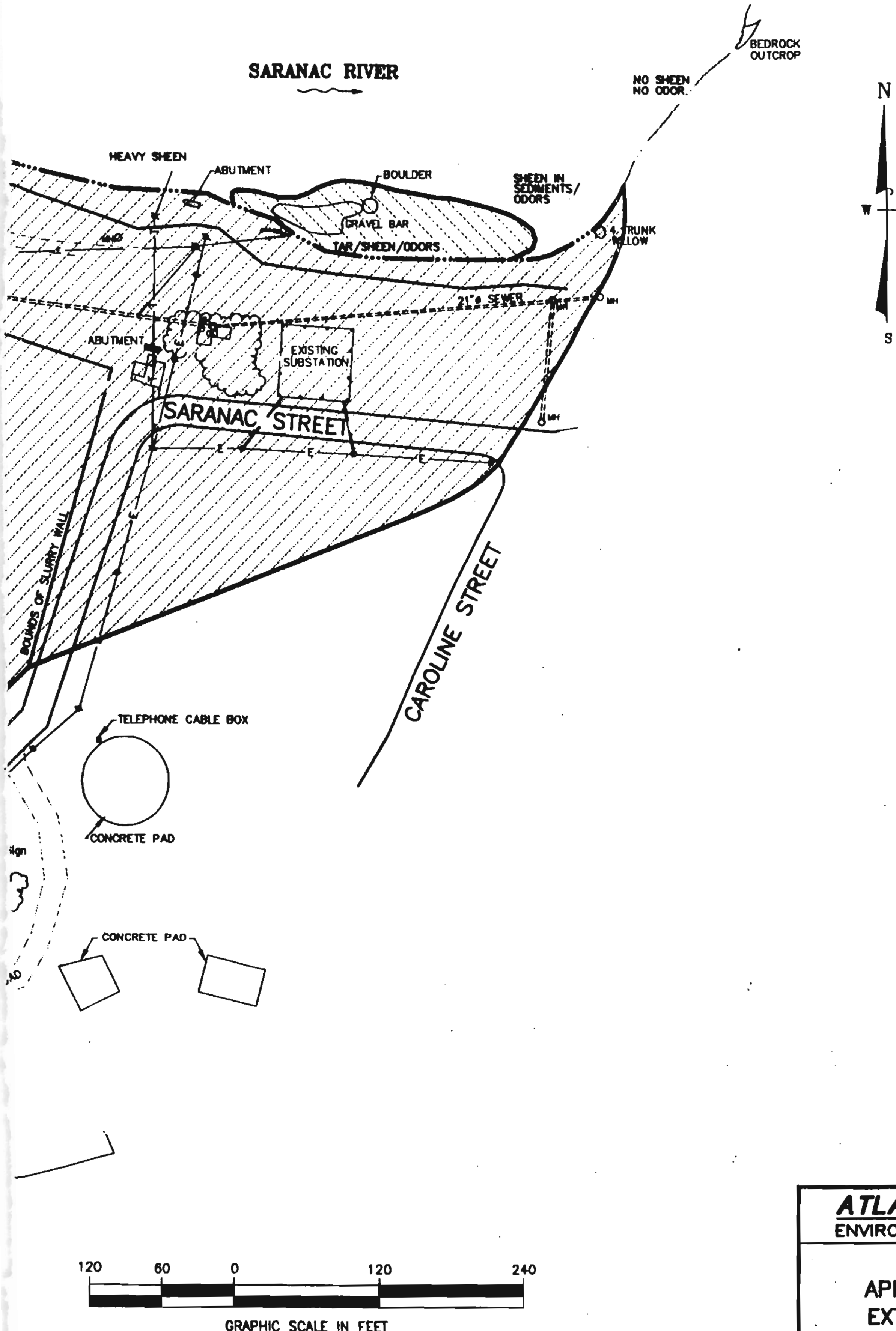


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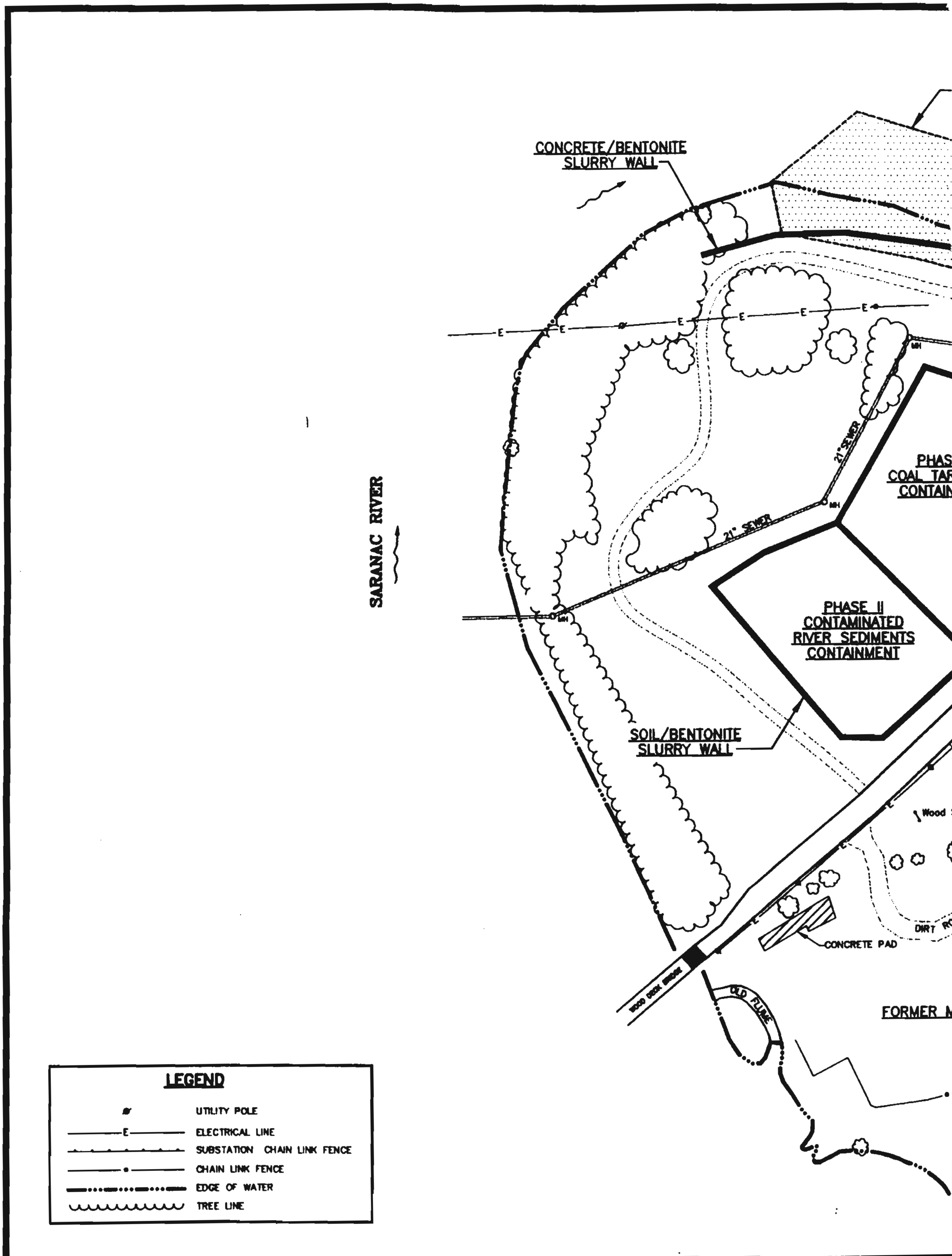
FIGURE 4
APPROXIMATE LATERAL EXTENT OF COAL TAR

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK


CONCRETE/BENTONITE SLURRY WALL
SARANAC RIVER
21" SEWER
21" SEWER
MH
PHASE II CONTAMINATED RIVER SEDIMENTS CONTAINMENT
SOIL/BENTONITE SLURRY WALL
CONCRETE PAD
WOOD DECK BRIDGE
OLD FLUME
LEGEND
UTILITY POLE
ELECTRICAL LINE
SUBSTATION CHAIN LINK FENCE
CHAIN LINK FENCE
EDGE OF WATER
TREE LINE
284/1804/PLATPREV

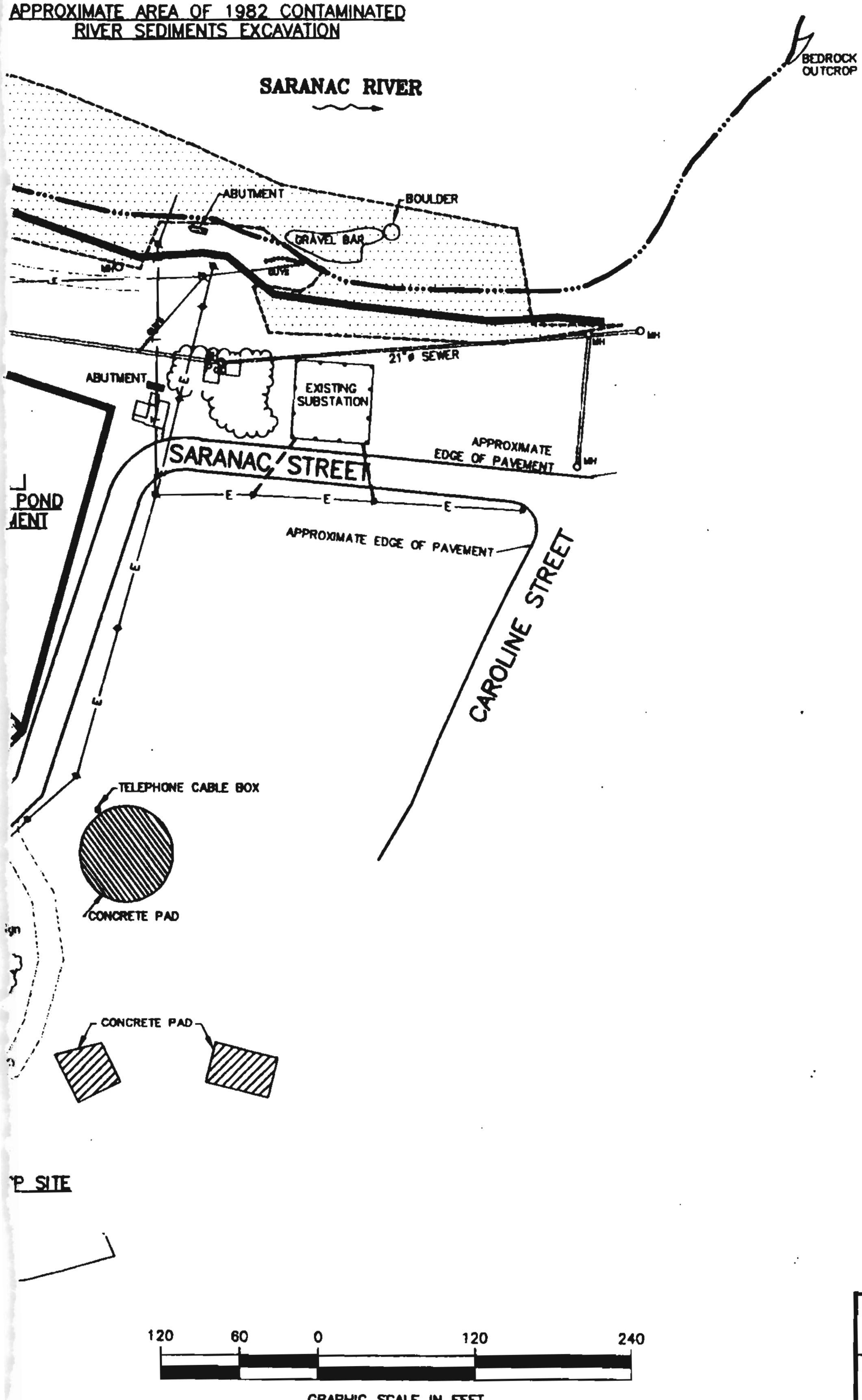


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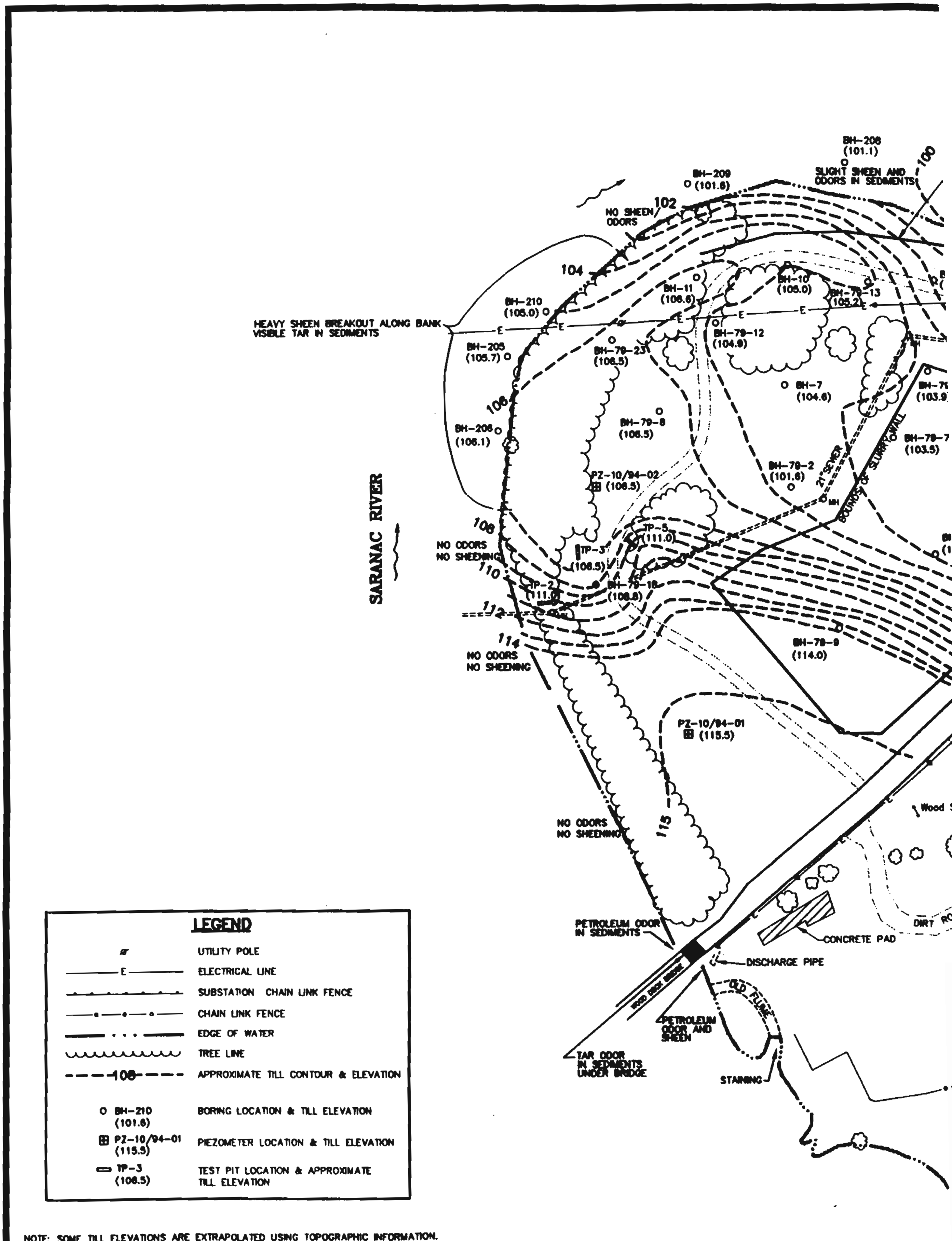
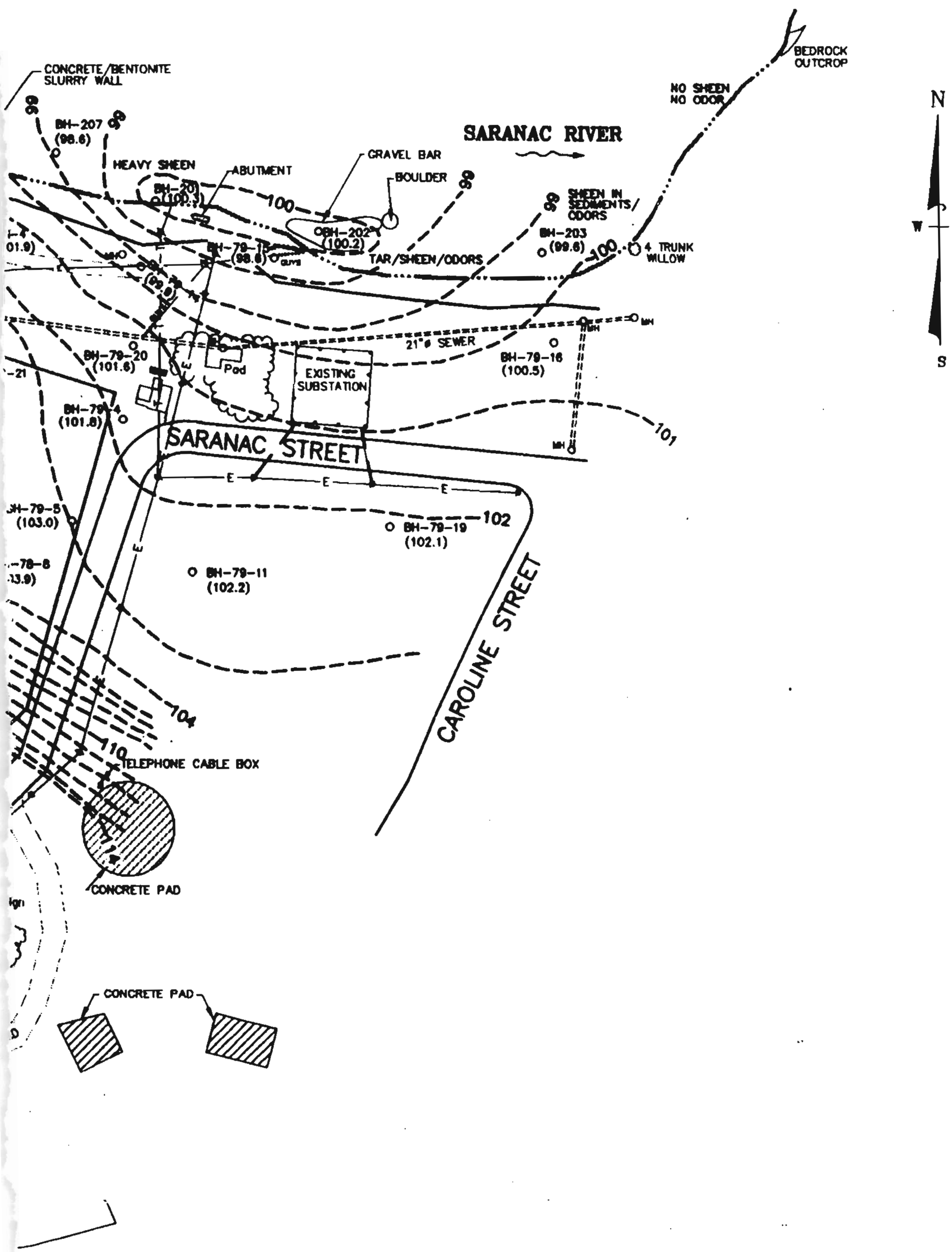
FIGURE 5
SUMMARY OF
PREVIOUS REMEDIATION

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK



NOTE: SOME TILL ELEVATIONS ARE EXTRAPOLATED USING TOPOGRAPHIC INFORMATION.

284/1804/PLATT-TL



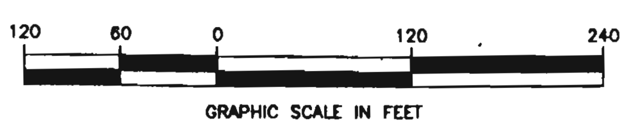


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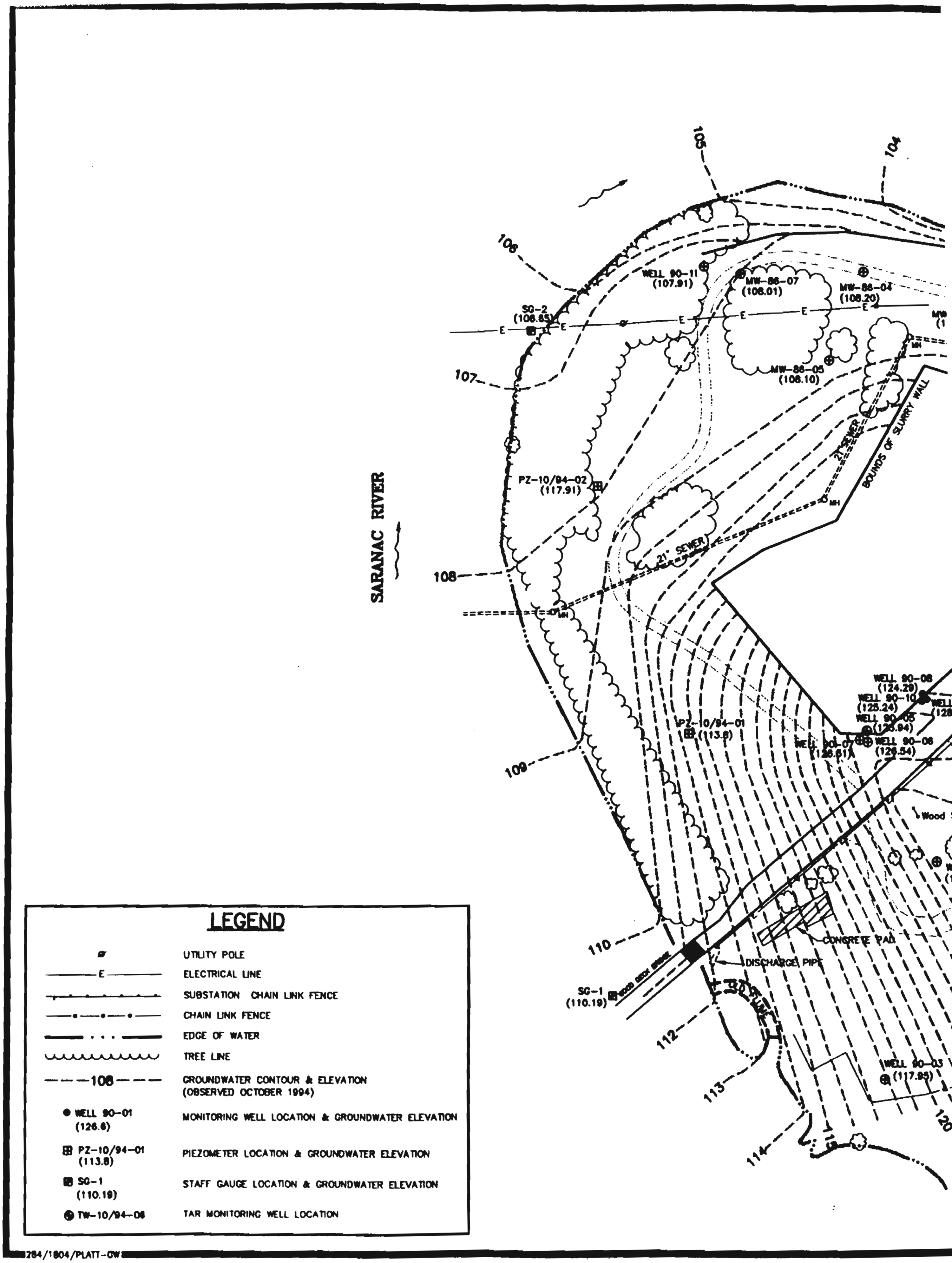
FIGURE 6
APPROXIMATE TILL SURFACE CONTOURS

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK


SARANAC RIVER
WELL 90-11
(107.91)
MW-86-07
(108.01)
MW-86-04
(108.20)
MW-86-05
(108.10)
SG-2
(106.65)
PZ-10/94-02
(117.91)
21" SEWER
BOUNDS OF SLURRY WALL
PZ-10/94-01
(113.8)
WELL 90-08
(124.29)
WELL 90-10
(125.24)
WELL 90-05
WELL 90-06
(126.54)
WELL 90-07
CONCRETE PAD
DISCHARGE PIPE
SG-1
(110.19)
WELL 90-03
(117.95)
LEGEND
UTILITY POLE
ELECTRICAL LINE
SUBSTATION CHAIN LINK FENCE
CHAIN LINK FENCE
EDGE OF WATER
TREE LINE
GROUNDWATER CONTOUR & ELEVATION (OBSERVED OCTOBER 1994)
WELL 90-01 (126.6)
MONITORING WELL LOCATION & GROUNDWATER ELEVATION
PZ-10/94-01 (113.8)
PIEZOMETER LOCATION & GROUNDWATER ELEVATION
SG-1 (110.19)
STAFF GAUGE LOCATION & GROUNDWATER ELEVATION
TW-10/94-08
TAR MONITORING WELL LOCATION
284/1804/PLATT-GW

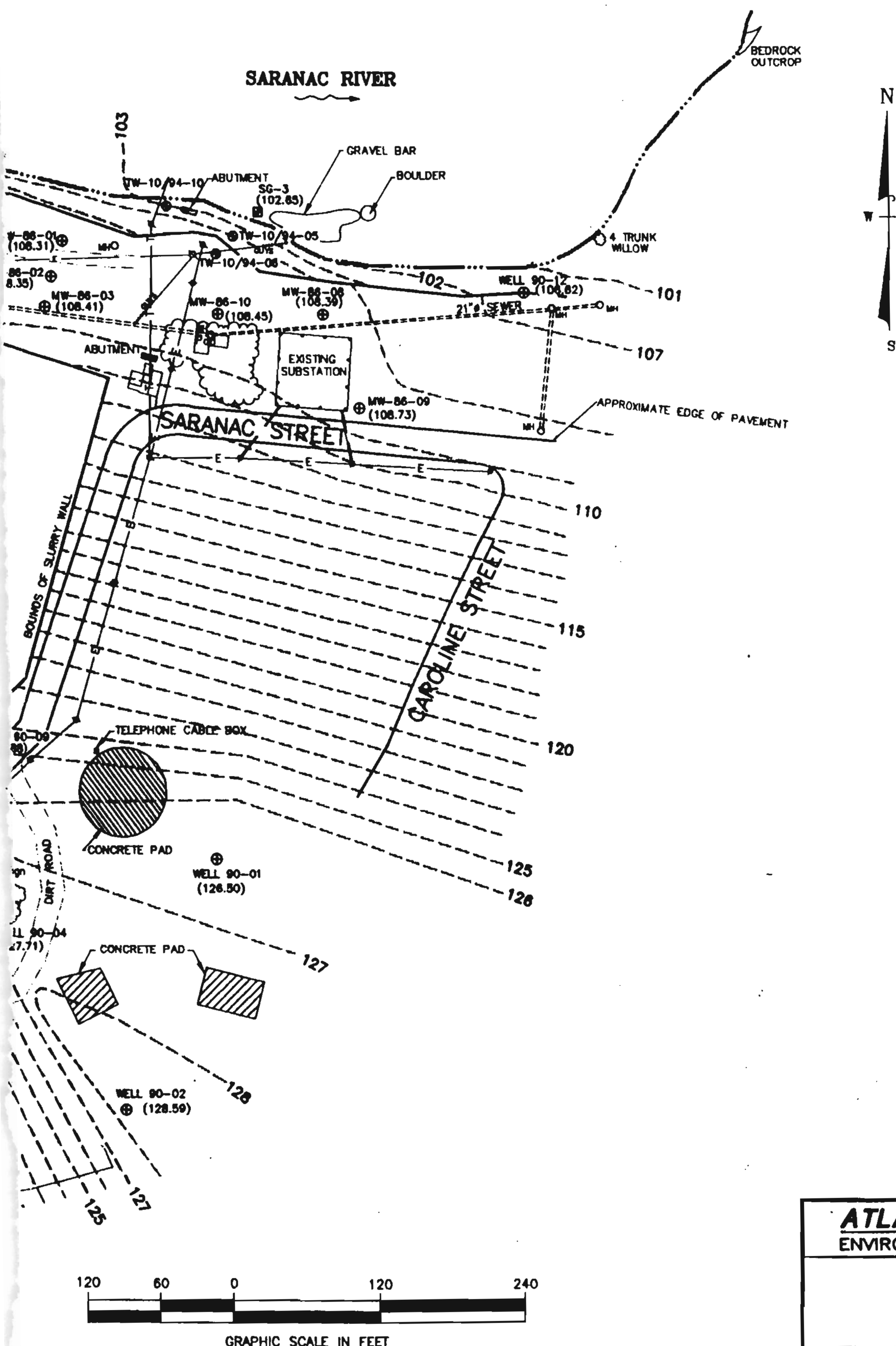


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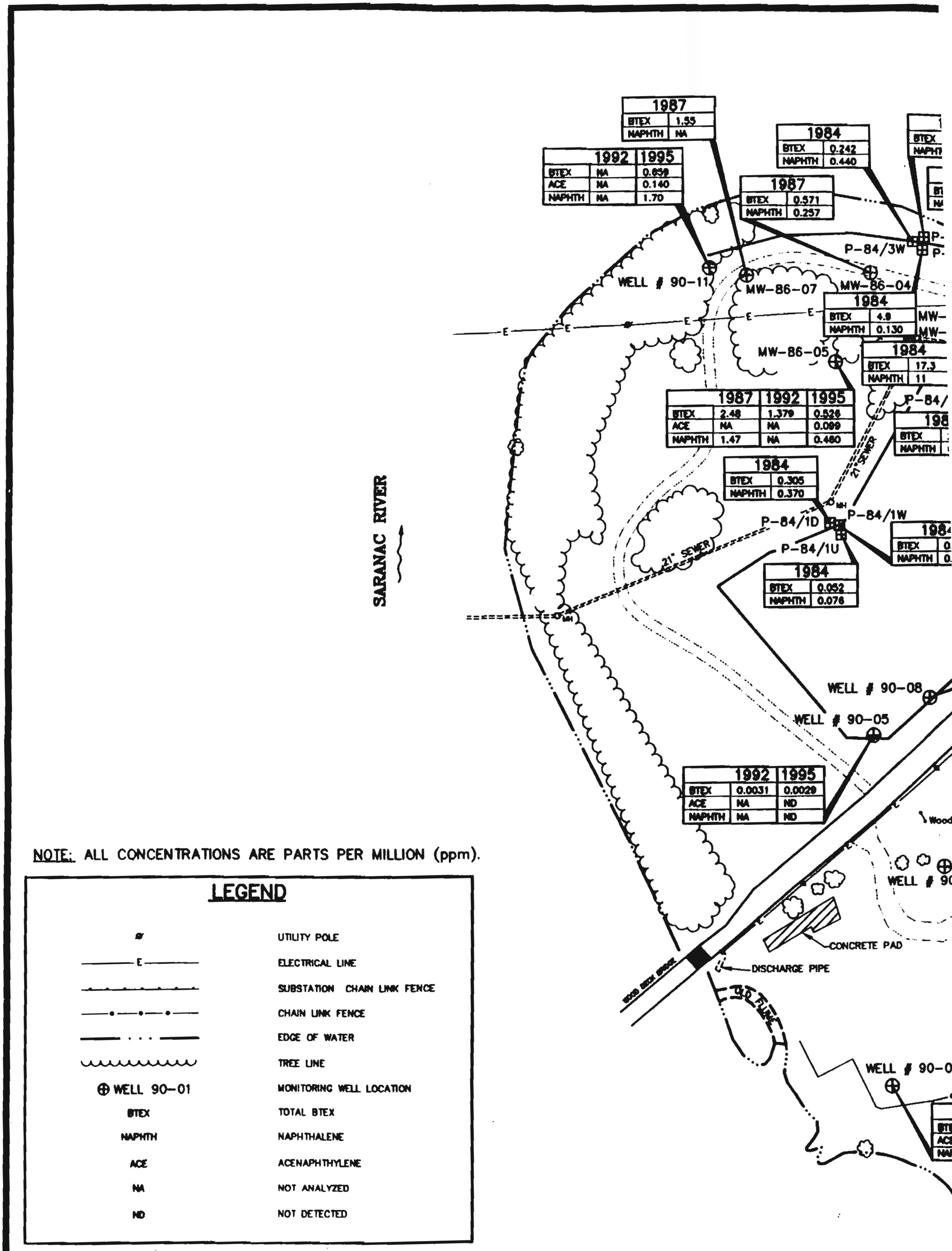
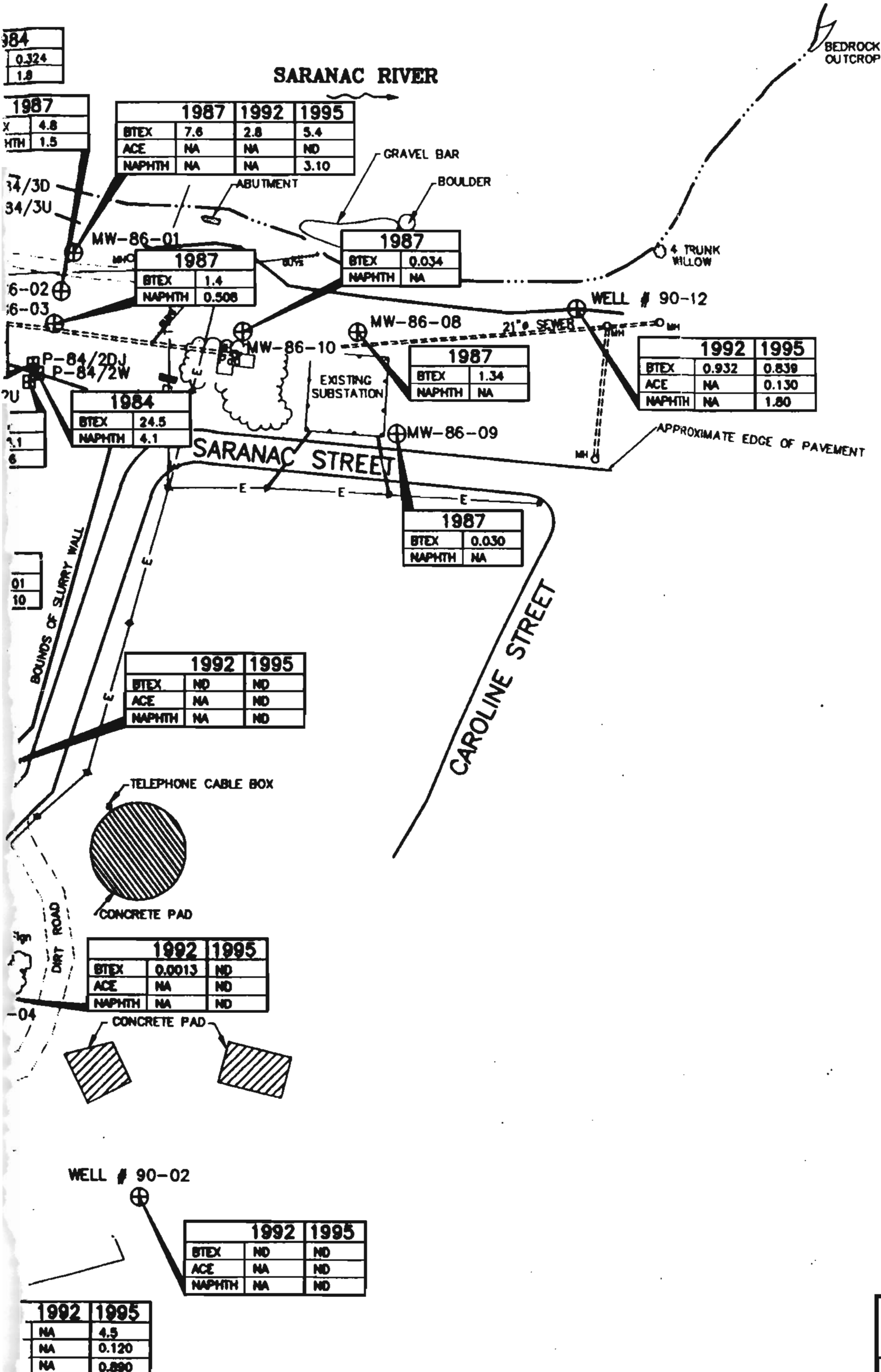
FIGURE 7
GROUNDWATER
CONTOURS

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK



1987
BTEX 1.55
NAPHTH NA
1992 1995
BTEX NA 0.659
ACE NA 0.140
NAPHTH NA 1.70
1984
BTEX 0.242
NAPHTH 0.440
1987
BTEX 0.571
NAPHTH 0.257
P-84/3W
WELL # 90-11
MW-86-07
MW-86-04
1984
BTEX 4.9
NAPHTH 0.130
MW-86-05
1984
BTEX 17.3
NAPHTH 11
1987 1992 1995
BTEX 2.48 1.379 0.526
ACE NA NA 0.099
NAPHTH 1.47 NA 0.480
1984
BTEX 0.305
NAPHTH 0.370
21" SEWER
P-84/1D
P-84/1W
P-84/1U
1984
BTEX 0.052
NAPHTH 0.076
SARANAC RIVER
WELL # 90-08
WELL # 90-05
1992 1995
BTEX 0.0031 0.0029
ACE NA ND
NAPHTH NA ND
CONCRETE PAD
DISCHARGE PIPE
NOTE: ALL CONCENTRATIONS ARE PARTS PER MILLION (ppm).
LEGEND
UTILITY POLE
ELECTRICAL LINE
SUBSTATION CHAIN LINK FENCE
CHAIN LINK FENCE
EDGE OF WATER
TREE LINE
WELL 90-01 MONITORING WELL LOCATION
BTEX TOTAL BTEX
NAPHTH NAPHTHALENE
ACE ACENAPHTHYLENE
NA NOT ANALYZED
ND NOT DETECTED
284/1604/PLATTGWR



120 60 0 120 240

GRAPHIC SCALE IN FEET

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FIGURE 8
GROUNDWATER ANALYTICAL RESULTS SUMMARY

NEW YORK STATE ELECTRIC AND GAS
PLATTSBURGH, NEW YORK

EXHIBIT 2

SUMMARY OF GEOLOGY TABLE

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
1	BH-79-12	0	7.4	13.6	Light brown to yellow brown fine sand, some medium sand and silt	12.2	Water table at 9.5'	NAPL
		7.4	12.2		Medium brown to yellow brown fine to coarse sand and gravel		11.1-12.2 totally saturated with coal tar, thick tar/oil	
		12.2	13.6		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles			
1	BH-79-13	0	0.5	10.7	Dark brown to black topsoil.	8.2	Water table at 6'	Sheen
		0.5	7		Medium brown fine sand, trace coarse sand, gravel, and silt		8-8.2 black drops of coal tar on soil	
		7	8.2		Light gray to black fine to coarse sand and gravel.		8-8.2 oil sheen and strong odor	
		8.2	10.7		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			
1	BH-79-14	0	2	27.8	Dark brown to black topsoil.	12.8	Water table at 7.5'.	Sheen
		2	8.7		Dark brown fine sand, trace medium sand, gravel, and silt.		5.5-8.7 strong coal tar odor, no visible tar	
		8.7	12.8		Gray black to black fine to coarse sand and gravel.		8.7-12 black drops of coal tar on soil	
		12.8	23.6		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles		8.7-12 oil sheen and strong odor	
		23.6	27.8		Dark gray to black very fine-grained limestone.			
1	BH-79-15	0	7.2	12.9	Light to dark brown fine sand, some medium sand and silt.	10.8	Water table at 4.7'.	Sheen
		7.2	10.8		Black gravel and fine to medium sand.		5.3-7.2 black sand coated with coal tar, slight odor	
		10.8	12.9		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		7.2-10.8 black drops of coal tar on soil	
							7.2-10.8 oil sheen and strong odor.	
1	BH-79-16	0	3.7	21.3	Light brown to yellow brown fine sand, some medium sand and silt.	18.1	Water table at 13.7	
		3.7	6.9		Dark brown coarse sand and gravel, some silt, clay, and wood chips		18.5-18.8 black drops of coal tar on soil, slight odor	
		6.9	12		Dark brown leaves and plant fibers.			
		12	15.3		Light to dark brown fine sand, trace silt and gravel.			
		15.3	18.1		Light to dark brown fine sand, some silt and gravel.			
		18.1	18.9		Gray fine to medium sand and gravel, trace silt and cobbles.			
		18.9	21.3		Dark gray to black fine limestone.			
1	BH-79-17	0	2	14.7	Medium brown fine silty sand, trace clay layers.	12.7	Water table at 6.6'.	
		2	6		Medium brown fine sand and gravel.		4.3-4.7 very clean.	
		6	10		Light to dark brown gravel and fine to medium sand.			
		10	12.7		Gray fine to coarse sand.			
		12.7	14.7		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			
1	BH-79-18	0	1.8	10.5	Light brown fine sand.	9.5	Water table at 9.4'.	
		1.8	9.5		Medium brown fine sand and gravel.			
		9.5	10.5		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			
1	BH-79-18A	0	6	15	No geology recorded.	10.3	No water level indicated	NAPL/Sheen
		6	10.3		Medium brown to gray fine sand and gravel.		.5 inch layer saturated with coal tar at 5.5'	
		10.3	15		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		Oil sheen and strong odor at 5.5'	
1	BH-79-19	0	0.2	20	Light brown topsoil.	18.9	Water table at 14.4'.	Sheen
		0.2	4		Dark brown cinder and ash fill with some coal, brick, sand, and gravel.		8.5-11.8 strong chemical odor-not coal tar	
		4	6		Medium brown silty clay with silty sand lenses.		11.8-13.5 numerous thin layers of wood chips	
		6	8		No geology recorded.		18.5-18.9 black drops of coal tar on soil	
		8	11.8		Light to medium brown wood chips.		18.5-18.9 oil sheen and strong odor	
		11.8	17.6		Light brown to brownish gray fine sand, trace coarse sand and gravel			
		17.6	18.9		Medium brown fine to coarse grained sand and gravel.			
		18.9	20		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles			
1	BH-79-20	0	0.3	13.8	Black topsoil	11.7	Water table at 6.9'	Sheen
		0.3	11.7		Light to medium brown fine sand, trace silt and gravel		9.8-11.7 black drops of coal tar on soil	
		11.7	13.8		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles		9.8-11.7 oil sheen and strong odor	
1	BH-79-20A	0	8	10	No geology recorded.	9.7	No water level indicated	Sheen
		8	9.7		Dark brown to black, fine to coarse, sand and gravel		8-9.7 black drops of coal tar on soil	
		9.7	10		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		8-9.7 oil sheen and strong odor	

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
1	BH-79-21	0	3.4	14.7	Dark brown cinder and ash fill with some coal, brick, sand, and gravel	13.3	Water table at 9.6'	Sheen
		3.4	6.5		Medium brown fine sand with trace silt		12.3-13.3 black drops of coal tar on soil	
		6.5	13.3		Medium brown fine to coarse sand with some gravel		12.3-13.3 oil sheen and strong odor	
		13.3	14.7		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles			
1	BH-79-22	0	2.7	14	Dark brown cinder and ash fill with some coal, brick, sand, and gravel	12.8	Water table at 9.9'.	NAPL/Sheen
		2.7	9.3		Medium to dark brown fine sand with trace silt.		4.4-8.3 saturated with coal tar.	
		9.3	12.8		Medium brown fine to coarse sand with some gravel		4.4-8.3 strong coal tar odor, no visible tar	
		12.8	14		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles		9.3-11.7 saturated with coal tar.	
							9.3-11.7 strong coal tar odor, no visible tar	
							11.7-12.8 black drops of coal tar on soil	
							11.7-12.8 oil sheen and strong odor.	
1	BH-79-23	0	0.2	13	Dark brown topsoil.	11.2	Water table at 9.9'.	
		0.2	5.5		Light brown to yellow brown fine sand.		4.5-5 slight coal tar odor	
		5.5	11.2		Light to medium brown fine to coarse sand and gravel.			
		11.2	13		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			
1	BH-79-23A	0	9.7	11.2	No geology recorded.	10.1	No water level indicated	Sheen
		9.7	10.1		Light to medium brown fine to coarse sand and gravel.		9.9-10.1 black drops of coal tar on soil.	
		10.1	11.2		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		9.9-10.1 oil sheen and strong odor.	
1	BH-79-24	0	6.8	12.5	Light to medium brown fine sand with trace silt.	11.4	Water table at 6.8'.	NAPL/Sheen
		6.8	11.4		Medium to dark gray to black medium to coarse sand and gravel.		8.3-8.8 saturated with coal tar	
		11.4	12.5		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		8.3-8.8 strong coal tar odor, no visible tar.	
							8.3-11.4 black drops of coal tar on soil.	
							8.3-11.4 oil sheen and strong odor.	
1	79-T1	0	5	9	Light to dark brown fine-grained sand, some medium sand and silt.		Water table at 4.7'.	
		5	9		Black gravel and fine to medium sand.		Sand coated with coal tar and slight odor at 4.5'.	Sheen
							5-9 soil coated with coal tar, oil sheen, strong odor.	
1	79-T2	0	4	11	Cinder, ash, and fine sand fill.		No water level indicated.	NAPL
		4	10.5		Black woodchips, some cinders, ash, fine sand and silt.		4-10.5 saturated with coal tar, strong odor.	
		10.5	11		Brownish gray, fine sand, trace gravel and silt.		10.5-11 no visible tar, strong odor.	
1	79-T3	0	7.5	10.5	Light to yellow brown fine sand, trace to some gravel and boulders.		Water table at 10'.	
		7.5	10.5		Yellow brown medium to coarse sand and gravel.		No tar or odor.	
2	BH-201	0	1.5	4	Brown coarse sand and gravel, trace fine sand and silt.	3	Riverbed	NAPL
		1.5	3		Medium to coarse sand.		1.5-3 saturated with tar.	
		3	4		Medium gray sandy silt, trace coarse sand and gravel.		3-4 clean, no tar.	
2	BH-202	0	1.3	5	Brown coarse to fine sand and gravel.	2.5	Riverbed	NAPL/Sheen
		1.3	2.5		Coarse to very coarse sand.		0-0.1 has a sheen of tar from the river.	
		2.5	5		Medium gray silt and sand, some gravel.		1.1-1.3 tar saturated	
							2.5-5 clean no tar.	
2	BH-203	0	1	2.5	Brown medium to coarse sand and gravel.	2.5	Riverbed	NAPL
		1	1.5		Coarse brown sand and gravel.		1.5-2 saturated with coal tar	
		1.5	2.5		Black brittle limestone.		2-2.5 clean, no tar.	
2	BH-204	0	1.3	1.3	Fine brown sand and silt, some gravel	1.3	Riverbed	
							Refusal at 1.3'	
2	BH-205	0	1.5	1.8	Brown coarse sand and gravel	1.5	Riverbed	NAPL
		1.5	1.8		Medium gray silty sand.		1.3-1.5 saturated with coal tar	
							1.5-1.8 clean, no tar.	
2	BH-205A	0	1.5	2	Brown coarse sand and gravel	1.8	Riverbed	NAPL
		1.8	2		Gray silty sand.		1.3-1.5 saturated with coal tar	
							1.8-2 clean, no tar.	

SUMMARY OF GEOLOGY

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
1	B-1	0	6	13.2	Creosoted wood and brick fill, trace rock fragments	13.2	Water Table at 12.1'	NAPL
		6	8		Fine sand, silt, trace roots, and wood (residue soaked)		4-5 chemical residue	
		8	12.5		Gray to black fine sand and silt.		6-13.2 residue soaked wood and fibrous material	
		12.5	13.2		Black fine to medium sand, silt, and gravel			
1	B-1A	0	10	35.6	No geology recorded	31	No water level indicated	NAPL
		10	14.5		Black gravel with some fine sand and silt		10-14.5 sand and silt residue soaked	
		14.5	29		Gray silt with some embedded gravel and shale			
		29	31		Gray alternating layers of fine sand and silt.			
		31	35.6		Dark gray to black limestone			
1	B-2	0	5.3	5.3	Dark brown sand, some silt, trace gravel and fibrous material.	5.3	No water level indicated	
							Slight residue odor.	
							Refusal at 5.3'.	
1	B-2A	0	4	5.0	Dark brown fine sand, some silt, trace wood and gravel	5	No water table encountered	
		4	5		Brown fine to medium sand and gravel.		2-5 slight residue odor	
							Refusal at 5.0'.	
1	B-3	0	8	17.5	Ash, wood, and silt fill, trace gravel		No water level indicated	NAPL
		8	12		Fine sand, silt, and wood fill, trace brick.		4-8 residue saturated.	
		12	15.5		Gray fine to medium sand, little silt and gravel.		8-12 residue soaked	
		15.5	17.5		Gray silt, little fine to coarse embedded sand and gravel.		14-15 residue saturated	
1	B-4	0	10	11.4	Dark brown fine sand, some silt, trace organic and gravel.	11.4	No water level indicated	
		10	11.4		Gray silt, some embedded sand and gravel.		4-6 and 8-10 slight residue odor	
							Refusal at 11.4'.	
1	B-4A	0	7.5	13.5	Brown fine sand, some silt, trace root fibers.		No water table encountered.	NAPL
		7.5	11		Dark brown to gray fine sand & gravel		7.5-11 residue saturated.	
		11	13.5		Gray silt, little fine sand and embedded gravel.			
1	B-5	0	6	20.9	Black cinder and ash fill, with some silt, sand, and gravel.	20.9	Water table at 9.8'.	
		6	10		Brown silt, trace fine sand, wood, and clay.		Slight residue odor at 6.0'.	
		10	14		Brown fine sand, little silt and trace gravel.			
		14	19.5		Boulders and cobbles			
		19.5	20.9		Gray silt with little embedded fine gravel and fine sand.			
1	B-6	0	12	17.4	Wood, ash, and concrete fill with fine sand.	17.4	No water level indicated	NAPL
		12	16		Black fine to coarse sand and gravel with trace silt.		2-4 residue soaked.	
		16	17.4		Gray silt, little embedded gravel and sand.		12-16 residue saturated	
							16-17.4 residue soaked	
							Refusal at 17.4'.	
1	B-7	0	8	13.4	Dark brown fine sand and some silt with trace wood.	13.4	No water level indicated	
		8	12		Brown fine to coarse sand and gravel.		4-10 little or no residue odor	
		12	13.4		Gray silt with some fine sand and little embedded gravel.		Refusal at 13.4'.	
1	B-8	0	11.5	11.5	No geology recorded.		Water table at 10.0'	NAPL
							4-10.5' residue soaked and saturated material	
1	B-9	0	13	13	No geology recorded.		Water table at 10.8'	
							Refusal at 13.0'.	
1	B-10	0	9.5	11	Brown fine sand and silt, trace organic silt	11	No water level indicated	NAPL
		9.5	11		Dark brown fine to medium sand, trace fibrous material		Slight odor at 6.0'	
							9.5-11 residue soaked, scattered cobbles	
1	B-11	0	5	11	No geology recorded		No water table encountered	
		5	10.5		Brown fine sand and little silt, some fine gravel at 9.5'		Possible boulder at 11.0'	
		10.5	11		Gray silt, some embedded gravel and fine sand.			

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
1	BH-79-1	0	17	40.2	Gray fine silty sand with some gravel and trace clay	17	Water table at 7.1'.	
		17	26		Gray fine silty sand, some gravel, trace clay and boulders.			
		26	26.7		Dark gray silty clay.			
		26.7	36.2		Gray fine silty sand, some gravel, trace clay and boulders			
		36.2	40.2		Dark gray to black fine-grained limestone.			
1	BH-79-2	0	0.5	15	Grayish-brown sand and gravel.	13.3	Water table at 10.6'	Sheen
		0.5	4		Black cinder and ash fill, some sand, gravel, brick, and coal.		5.3-5.5 strong coal tar odor, no visible tar	
		4	11.3		Yellow-brown silty sand, trace gravel and clay.		11.3-13.3 black drops of coal tar on soil	
		11.3	13.3		Brown to black fine to coarse-grained sand and gravel.		11.3-13.3 oil sheen and strong odor	
		13.3	15		Gray silt and fine sand till, some gravel, clay, and cobbles			
1	BH-79-3	0	6	12.2	Yellow brown fine silty sand, trace clay, gravel, and organics.	10.2	Water table at 6.6'.	Sheen
		6	10.2		Yellow brown to dark brown fine to coarse sand, some gravel		8.5-10.2 black drops of coal tar on soil	
		10.2	12.2		Gray silt and fine sand till, trace gravel, clay, and cobbles.		8.5-10.2 oil sheen and strong odor.	
1	BH-79-4	0	7.5	20.3	Black cinder and ash fill, some sand, gravel, brick, and coal.	19	Water table at 13.0'.	NAPL/Sheen
		7.5	12		Yellow-brown sand, trace silt, gravel, and wood chip layers.		9-12 strong coal tar odor, dark color, no visible tar	
		12	13.5		Black cinder and ash fill, some sand, gravel, brick, and coal.		12-13.5 saturated with coal tar.	
		13.5	19		Brown fine to coarse sand and gravel, trace silt.		13.5-19 black drops of coal tar on soil	
		19	20.3		Gray silt and fine sand till, some gravel, trace clay and cobbles.		13.5-19 oil sheen and strong odor	
1	BH-79-5	0	0.8	18.8	Light brown fine-grained sand.	18	Water table at 12.8'.	NAPL/Sheen
		0.8	8		Black cinder and ash fill, some sand, gravel, brick, and coal.		8.5-15.3 saturated with coal tar.	
		8	15.3		Black fine sand with wood chips, trace silt, gravel, cinders, and roots.		8.5-15 strong coal tar odor, no visible tar	
		15.3	18		Black fine to coarse sand and gravel.		15.3-18 black drops of coal tar on soil	
		18	18.8		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		15.3-18 oil sheen and strong odor.	
1	BH-79-6	0	4	20	Black cinder and ash fill, some sand, gravel, brick, and coal.	17	Water table at 10.4'.	NAPL
		4	10.7		Black wood chips, some cinders and ash, trace sand and silt.		4-10.5 saturated with coal tar.	
		10.7	14.7		Dark gray to black fine sand, trace gravel.		4-17 black drops of coal tar on soil.	
		14.7	17		Dark brown gravel and fine to medium sand.		4-10.7 strong odor.	
		17	20		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		14.7-17 strong odor.	
1	BH-79-7	0	4	17	Black cinder and ash fill, some sand, gravel, brick, and coal.	14.6	Water table at 10.4'.	
		4	9.6		Yellow to rusty brown to black fine sand, trace silt and gravel.		12.8-14.6 black drops of coal tar on soil	
		9.6	14.6		Brown to dark gray gravel, some sand, trace silt and cobbles.		12.8-14.6 strong odor.	
		14.6	17		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			
1	BH-79-8	0	1.7	13	Light brown fine sand, trace gravel and silt.	10.8	Water table at 9.2'.	NAPL
		1.7	6.5		Brown to grayish green fine silty sand, trace roots.		1.7-6.5 partially saturated with coal tar.	
		6.5	13		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.		1.7-6.5 strong coal tar odor, no visible tar	
							9.6-10.8 black drops of coal tar on soil	
							9.6-10.8 strong odor	
1	BH-79-9	0	3.8	24	Medium to dark brown very fine to fine silty sand, trace gravel.	12.6	Water table at 11.1'	
		3.8	7		Medium brown fine sand, trace coarse sand, gravel, and silt.			
		7	8.3		Medium to dark brown fine sandy silt, trace clay and coarse sand.			
		8.3	12.6		Medium to dark brown clayey silt, trace fine sand and gravel			
		12.6	14.8		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			
		14.8	24		No geology recorded.			
1	BH-79-11	0	5	20	Dark brown fine sand fill, some cinders, ash, coal, and brick.	19.2	Water table at 13.6'	Sheen
		5	9		Yellow brown to gray fine sand, trace gravel, ash, and coal fill		12.2-16.1 very clean	
		9	12.2		Medium brown wood chips and fine sand		16.1-19.2 black drops of coal tar on soil	
		12.2	16.1		Black to greenish gray very fine sand with trace to some silt		16.1-19.2 oil sheen and strong odor	
		16.1	19.2		Black fine to coarse sand and gravel.			
		19.2	20		Gray silt and sand till, coarse sand and gravel, trace clay and cobbles.			

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
2	BH-206	0	1.5	2	Brown coarse sand and gravel	1.5	Riverbed	NAPL
		1.5	2		Gray fine silty sand, trace shale and gravel		1.3-1.5 saturated with coal tar	
							1.5-2 clean, no tar	
2	BH-207	0	2.5	7.5	Brown medium to coarse sand and gravel, trace silt	5	Riverbed	NAPL
		2.5	5		Coarse sand and gravel, occasional cobbles.		2.5-5 saturated with coal tar	
		5	7.5		Gray fine silty sand, trace shale and gravel (till).		5-7 clean, no tar	
2	BH-208	0	2	4.8	Brown coarse sand and gravel	4	Riverbed	NAPL/Sheen
		2	4		Brown coarse sand.		0-1 slight tar sheen on top	
		4	4.8		Gray fine sandy silt, trace coarse sand and gravel (till)		2-4 saturated with coal tar	
							4-4.8 clean, no tar.	
2	BH-209	0	1.5	6	Brown coarse sand and gravel, trace silt.	4.3	Riverbed	NAPL
		1.5	4.3		Brown coarse sand		1.5-3.5 saturated with coal tar.	
		4.3	5.5		Boulders.		4.3' refusal on boulder	
		5.5	6		Dark gray limestone		5.1' refusal on boulder	
2	BH-209A	0	2	3.5	Brown coarse sand and gravel.		Riverbed	NAPL
		2	3.5		Brown coarse sand.		2-3.5 saturated with coal tar	
2	BH-210	0	2	2.3	Brown coarse sand and gravel.	2	Riverbed	NAPL
		2	2.3		Gray dense silty fine sand (till).		1.5-2 saturated with coal tar	
							2-2.3 clean, no tar.	
2	BH-210A	0	2	2.1	Brown coarse sand and gravel	2	Riverbed	NAPL
		2	2.1		Gray dense silty fine sand (till)		1.5-2 saturated with coal tar.	
							2-2.1 clean, no tar.	
2	BH-211	0	0.5	13	Organic topsoil.	12	No water level indicated	
		0.5	2		Loose brown silty sand , some organics and pebbles.			
		2	5		Ash fill material with some coal chips.			
		5	6		Silty sand, decomposed brick, and wood chip fill material			
		6	8		Clayey fill.			
		8	10		Silty sand, decomposed brick, and wood chip fill material.			
		10	12		Boulder.			
		12	13		Dense gray sandy silt (till).			
2	BH-213	0	0.5	11.5	Organic topsoil.	10	Water table at 8.2'.	
		0.5	5		Brown coarse to fine sand, trace silt and pebbles.			
		5	10		Asphalt and brick fill.			
		10	11.5		Gray clayey sand, trace gravel (till).			
2	BH-215	0	0.5	11.5	Black organic topsoil.	11	No water level indicated	
		0.5	11		Brown medium to fine sand, organic material, gravel, and brick fill.		11.5 refusal on rock	
		11	11.5		Gray dense clayey material, trace shale and sand (till).			
2	BH-215A	0	8	12.5	No geology recorded.	12	No water level indicated	
		8	12		Brown silty sand, with rubble and stone chips		12.5' refusal on rock	
		12	12.5		Gray dense clayey sand, trace gravel (till).			
2	BH-217	0	5	15.5	Organic silt with some brown medium to fine grained sand	11.5	Water table dry	
		5	11.5		Clayey silt with coarse sand, and trace gravel		15.5' refusal on shale	
		11.5	15		Gray dense clayey silt with rock fragments and gravel (till)			
		15	15.5		Shale bedrock.			

SUMMARY OF GEOLOGY

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
2	BH-221	0	1	20	Organic silt fill.	14	Water table at 10.5'.	
		1	6		Brown coarse to fine sand, black cinder, organic clay, and silt fill		2-4 coal tar odor.	
		6	10		Black silty fine sand with wood chips		5' trace of coal tar.	
		10	12		Black silty sand.		6-14 coal tar residue.	
		12	14		Coarse sand and gravel.			
		14	16		Gray silty fine sand (till).			
		16	20		No geology recorded.			
2	BH-222	0	5.5	18.5	Brown coarse to fine sand, cinders, brick, and organic fill	14	Water table at 7.8'.	NAPL
		5.5	11.5		Black fine silty sand.		5.5-8 coal tar odor.	
		11.5	14		Black coarse to fine sand, some gravel.		8-8.5 strong coal tar odor.	
		14	16		Dense gray clayey silt with medium grained sand, trace gravel.		Piece of wood saturated with coal tar at 8.5'.	
		16	18.5		No geology recorded.		10-14 saturated with coal tar.	
3	B-1-D	0	0.3	19	Topsoil.	18.5	Water table at 11.6'.	
		0.3	11.5		Fill material.			
		11.5	18.5		Medium to fine sand layers and fill, trace gravel.			
		18.5	19		Gray glacial till.			
3	B-1-U	0	0.3	20.5	Topsoil.	19	No water level indicated	
		0.3	11.7		Dark brown fine to medium sand, trace cobbles.			
		11.7	15		Coal and brick fill material			
		15	19		Coarse sand.			
		19	20.5		Gray glacial till.			
3	B-1-W	0	0.3	21	Topsoil.	20	Water table at 15'.	
		0.3	3.5		Brown clay.			
		3.5	20		Brown bentonite slurry.			
		20	21		Gray glacial till.			
3	B-1-P	0	0.5	19	Topsoil.	18.5	Water table at 5.9'.	
		0.5	5		Silty clay.			
		5	10		Sand with little gravel.			
		10	18.5		Bentonite slurry.			
		18.5	19		Gray glacial till.			
3	B-2-D-J	0	12.9	13	No geology recorded.	13	No water level indicated.	
		12.9	13		Gray glacial till.			
3	B-2-D	0	0.3	14	Topsoil.		Water table at 7.7'.	NAPL
		0.3	4.5		Gray sandy silt.			
		4.5	9.5		Medium to fine sand, trace gravel.			
		9.5	14		Coal, tar, and sand.			
3	B-2-U	0	0.3	15.5	Topsoil.	15	No water level indicated.	
		0.3	15		Brick, stone, coal, and organic fill material.			
		15	15.5		Gray glacial till.			
3	B-2-W	0	3	16	No recovery.	15.5	Water table at 7.6'.	
		3	15.5		Medium to fine sand			
		15.5	16		Gray glacial till			
3	B-2-W-A	0	1	8	Topsoil.	1.5	No water level indicated	
		1	1.5		Medium to fine sand		4.5-8.0 coal tar	
		1.5	8		Gray glacial till fill.			
3	B-2-P	0	0.17	13.5	Topsoil.	13	Water table dry	
		0.17	6.5		Sand, cinder, and brick fill.			
		6.5	13		No geology recorded			
		13	13.5		Gray glacial till			

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
3	B-3-D	0	2.5	12	Cobbles	11.5	Water table at 4.5'	
		2.5	7.9		Coarse gravel			
		7.9	11.5		Medium to fine sand and medium to fine gravel			
		11.5	12		Gray glacial till			
3	B-3-U	0	0.24	12	Topsoil.	11.5	Water table at 8'	
		0.24	5		Sand and cobbles.			
		5	11.5		Dense medium to fine sand with trace medium to fine gravel			
		11.5	12		Gray glacial till.			
3	B-3-W	0	0.24	14.4	Topsoil.	14	Water table at 6'.	
		0.24	2		Brown clay.			
		2	14		Brown bentonite slurry			
		14	14.4		Gray glacial till.			
3	B-3-P	0	1	15	Topsoil.	14.5	No water level indicated	
		1	14.5		Brown bentonite slurry			
		14.5	15		Gray glacial till.			
4	RA-1	0	0.3		Organic topsoil.	11	Water table at 4.07'	
		0.3	6	11.4	Light brown to gray fine to medium sand, some silt and wood fragments		5-8 oil odor, increasing with depth	
		6	9.2		Brown fine sand and silt, wood fragments and trace clay.		8-11 strong oil odor, sand coated with oil	
		9.2	11		Black medium to coarse sand, some pebbles.			
		11	11.4		Gray dense, tight, clay, silt, fine sand and occasional pebbles.			
4	RA-2	0	0.2	11.4	Organic topsoil.	8.5	Water table at 4.63'.	
		0.2	2		Very fine to fine brown to dark brown sand and silt.		2-4 slight oil odor.	
		2	6.3		Dark brown to gray medium sand with very fine sand and silt lenses.		4-6.3 strong oil odor.	
		6.3	8		Gray fine sand, trace medium sand.		6.3-8.5 strong oil odor, sand coated with oil	
		8	8.5		Black fine to medium sand, some coarse sand, trace pebbles.			
		8.5	11.4		Gray, dense, tight, clay and silt, trace fine sand and pebbles.			
4	RA-3	0	0.3	11	Organic topsoil.	10	Water table at 5.94'.	Sheen
		0.3	4		Brown fine to medium sand and silt, some gravel and wood.		2.4-4 strong oil odor, black-stained sand	
		4	7		Black very fine to fine sand and silt.		4-7 strong oil odor and sheen, black stained sand	
		7	9.9		Black gravel, coarse sand and fine pebbles, trace rock fragments.		7-9.9 Strong odor, black oily gravel	
		9.9	11		Gray clay silt, fine sand, tight and dense.		9.9-11 slight oil odor, trace sheen	
4	RA-4	0	0.4	8.75	Organic topsoil.	8	Water table at 5.66'.	Sheen
		0.4	5		Brown fine to medium sand, some silt and wood fragments.		2.5-4 oil odor.	
		5	8		Dark gray rock fragments, clay, silt, and sand.		Gray shale fragments at 5'.	
		8	8.75		Gray, dense, tight, stiff, clay and silt, trace pebbles (till).		6-8 strong oil odor and sheen	
							8-8.75 strong odor.	
4	RA-5	0	0.4	10.9	Organic topsoil.	10.5	Water table at 8.4'	Sheen
		0.4	5.4		Brown fine to medium sand, some iron staining, silt, and wood fragments		7-9 strong oil odor	
		5.4	6		Gray very fine sand and silt.		Boulder at 8'.	
		6	7		Brown and orange iron-stained coarse sand and pebbles		9-10.5 strong oil odor and sheen	
		7	10.5		Black iron-stained coarse sand and pebbles.			
		10.5	10.9		Gray clay, silt, sand, and pebbles (till).			
4	RA-6	0	0.4	10.4	Organic topsoil.	10	Water table at 10.86'	
		0.4	4		Brown medium to coarse sand, trace pebbles and silt.		4-6 strong oil odor	
		4	8		Gray and brown very fine to fine sand, some silt.		6-10 strong oil odor and oil coating	
		8	10		Black rock fragments, coarse sand, and silt.			
		10	10.4		Gray, tight, dense clay, silt, sand, and rock fragments (till).			

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
4	RA-7	0	0.4	11.4	Organic topsoil.	11	Water table at 8.58'	
		0.4	2.5		Gray to brown to black very fine sand and silt.		4-8 oil odor.	
		2.5	4.2		Brown medium sand.		8-10.5 boulders and cobbles.	
		4.2	6		Brown to black very fine silt some sand and some wood		8-11 strong oil odor and coating	
		6	10.5		Gray to black gravel, sand, cobbles, some silt, trace clay.		11-11.4 oil odor	
		10.5	11		Gray weathered till and gravel.			
		11	11.4		Gray, hard, dense tight clay, silt, trace fine sand			
4	RA-8	0	0.4	21	Organic topsoil.	20	Water table at 12.11'.	Sheen
		0.4	6		Brown fine sand and silt, some coal, pebbles, and slag fill		9-10 slight odor.	
		6	8		Medium to coarse sand, pebbles, coal, slag, brick, ash, and cement fill		17.7-19 strong oil odor.	
		8	12		Black to gray fine to medium sand, some silt, trace pebbles.		18-19 oil sheen.	
		12	14		Brown medium sand and gray silt, trace clay.		19-20 strong oil odor and coating	
		14	17.7		Black to gray fine to medium sand in silt, some clay, very wet.			
		17.7	20		Gray coarse to medium sand, some pebbles and cobbles, trace silt			
		20	21		Gray tight, dense silt, clay, and trace sand and rock fragments			
4	RA-9	0	0.1	20	Organic topsoil.	18.5	Water table at 12.03'	
		0.1	9		Brown to black silt and fine sand, coal, slag, ash, brick, and pebbles fill		13-16 organic odor.	
		9	13		Gray fine sand and gray silt.		16-17.3 oily sand and gravel	
		13	14		Dark gray very fine sandy silt, trace clay, peat.			
		14	18.5		Gray fine to medium sand, some silt, and gravel.			
		18.5	20		Gray silt, clay, fine sand, and trace pebbles.			
4	RA-10	0	0.2	12.8	Organic topsoil.	11.5	Water table at 6.02.	Sheen
		0.2	2.5		Black sand, slag, cinder, and coal fill.		9.5-11 oil coating	
		2.5	9.5		Gray to brown fine to medium sand and silt, trace pebbles.		Oil sheen at 11'	
		9.5	11.5		Black to brown coarse sand, pebbles, and cobbles.		11.5-12.8 oil odor and trace oil in seams	
		11.5	12.8		Gray, tight, dense silty clay, trace fine sand and pebbles.			
5	B-90-1	0	5	21.3	No geology recorded.		Water table dry.	
		5	20		Gray coarse, medium, and fine sand and silt, trace gravel.			
		20	21.3		Gray silt, some sand, glacial till			
5	B-90-2	0	5	17	No geology recorded.		No water level indicated	
		5	10		Brown clay, little silt, trace sand.			
		10	16		Gray clay, little silt, trace fine sand			
		16	17		Gray silt, some sand, trace gravel.			
5	B-90-3	0	5	17	No geology recorded.		Water table at 6.7'.	NAPL
		5	13		Gray coarse, medium, and fine sand and silt, trace gravel		5-15 strong petroleum odor	
		13	17		Gray clay, some silt, little sand, glacial till.		Free petroleum at 15'.	
5	B-90-4	0	5		No geology recorded.			
		5	8	16	Brown clay and silt, little sand.		Water table dry	
		8	15		Brown silt, some clay, little fine sand, trace gravel, glacial till			
		15	16		Gray silt and medium to fine sand, trace gravel.			
5	B-90-5	0	10	14	No geology recorded.		Water table at 5'	
		10	12		Gray coarse, medium, and fine sand, little silt, trace gravel and clay			
		12	14		Gray clay, little silt and sand, trace gravel, glacial till.			
5	B-90-6	0	10	12	No geology recorded.		Water table dry	
		10	12		Gray clay, little silt, trace sand and gravel, glacial till			
5	B-90-7	0	12.5	12.5	Silty clayey sand, glacial till		Water table at 6.8'	
5	B-90-8	0	10	12	No geology recorded.		Water table at 10.5'	
		10	12		Gray coarse to fine sand, some silt, little clay, trace gravel, glacial till			

SUMMARY OF GEOLOGY (continued)
NEW YORK STATE ELECTRIC AND GAS CORPORATION
PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
5	B-90-9	0	10	12	No geology recorded.		No water level indicated	
		10	12		Gray coarse to fine sand, trace silt, clay, and gravel, glacial till			
5	B-90-10	0	11	11	No geology recorded.		No water level indicated	
5	B-90-11	0	5	12	No geology recorded.		No water level indicated	
		5	10		Brown coarse to fine sand, some gravel, little silt, glacial till.		5-10 strong petroleum odor	
		10	12		Gray silt, some medium to fine sand, trace gravel, glacial till.			
5	B-90-12	0	5	12	No geology recorded.		No water level indicated	
		5	9		Brown coarse to fine sand, little silt and gravel, trace concrete debris, fill		5-10 strong petroleum odor.	
		9	12		Brown coarse to fine sand and gravel, little silt.			
6	BH-10/94-1	0	5	11	No geology recorded.	8.5	No water level indicated	NAPL
		5	7		Light brown/gray fine to medium sand, some orange mottles.		7-8 slight tar odor.	
		7	8		Orange brown medium sand and gravel.		8-9 heavy tar odor and visible contamination	
		8	8.5		Black medium to coarse sand and gravel.			
		8.5	11		Dense, gray, fine, silty, sand and gravel, till.			
6	BH-10/94-2	0	0.5	16	Dark brown fine sandy loam, organic matter and gravel	14.5	No water level indicated	Sheen/Staining
		0.5	6		Orange brown medium sand and gravel.		12-13.5 moderate tar odor and sheen	
		6	8		Dark brown, medium to coarse sand and gravel, trace silt and organics		13.5-14 strong tar odor and staining	
		8	12		Light brown fine to medium sand with orange mottling.		14-15 moderate tar odor and sheen.	
		12	15		Brown to black fine to medium sand and gravel, trace clay.			
		15	16		Gray, dense, fine to medium, silty sand and gravel, till.			
6	BH-10/94-3	0	0.5	16	Dark brown to medium sand and gravel, organics	14.5	No water level indicated	NAPL/Staining
		0.5	4		Dark brown medium to coarse sand and gravel, some mottling.		6-8 slight tar odor.	
		4	8		Dark brown to gray fine to medium sand.		8-10 heavy odor and visual contamination	
		8	10		Light brown fine sand to black medium to coarse sand and gravel.		10-12 heavy tar odor and staining	
		10	14		Dark gray fine to medium sand and crushed cobbles.		12-14 heavy tar odor and staining	
		14	16		Dense gray, fine to medium sand and gravel, till.			
6	BH-10/94-4	0	0.5	16	Dark brown fine sandy loam with organics.	14	No water level indicated	NAPL/Sheen
		0.5	4		Loose orange brown, medium to coarse sand and gravel.		6-8 sheen.	
		4	8		Light to dark brown fine to coarse sand.		7.5-8 slight tar odor.	
		8	12		Black medium to coarse sand and gravel.		8-12 heavy tar odor, visual contamination, sheen	
		12	14		No recovery (cobbles and boulders).			
		14	16		Dense gray, fine sand and gravel, trace silt, till.			
6	TW-10/94-5	0	2	13	Dark brown fine sandy loam.		No water level indicated	LNAPL/Sheen
		2	5		No geology recorded.		6-8 tar staining.	
		5	6		Orange fine to medium sand.		6-7 slight tar odor.	
		6	7		Dark brown to black medium sand.		7-11 heavy tar odor.	
		7	8		Orange to black stained wood chips.		8-9 tar sheening.	
		8	12		Black medium to coarse sand and gravel.		9-12 heavy visual contamination	
		12	13		Dense, gray, fine to medium sand and gravel.			
6	TW-10/94-6	0	0.5	14	Dark brown, fine, sandy loam.	13	No water level indicated	NAPL/Sheen
		0.5	4		Orange brown medium to coarse sand and gravel.		6-7 tar sheening	
		4	6		No recovery.		7-8 heavy tar odor, sheening and staining	
		6	7		Dark brown to black fine to medium sand and dark brown sawdust		8-13 heavy tar odor and visual contamination	
		7	12		Black fine sand, gravel, and some wood fragments.		13-14 moderate tar odor	
		12	13		Black medium to coarse sand and gravel with cobbles and boulders			
		13	14		Gray dense, silty fine sand and gravel.			

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
6	BH-10/94-7	0	0.5	14	Dark brown fine sandy loam	12	No water level indicated	NAPL/Sheen
		0.5	3		Orange brown, medium to coarse sand.		3-8 moderate tar odor.	
		3	6		Dark brown, fine to coarse sand		5-5 24 wood chip layer	
		6	12		Black/dark gray, fine to coarse sand, gravel, and wood fragments, cobbles.		6-8 tar sheen.	
		12	14		Dense, gray, silty fine sand and gravel		8-12 heavy tar odor and visual contamination	
							12-14 slight tar odor.	
6	BH-10/94-8	0	0.5	14	Dark brown, fine sandy loam.	12	No water level indicated	NAPL/Sheen
		0.5	5		Light brown, fine to coarse sand.		2-5 slight tar odor.	
		5	7		Black stained and gray fine sand.		Wood chip layer at 4'.	
		7	10		Black stained, medium to coarse sand and gravel with cobbles.		5-6 heavy tar odor and staining	
		10	12		No recovery.		6-7 heavy tar odor and sheening	
		12	14		Dense gray, silty fine sand and gravel, till.		7-10 heavy tar odor and visual contamination	
							12-14 slight tar odor.	
6	BH-10/94-9	0	16.5	17	Light gray, wet, bentonite and soil/cement mixture, slurry.	16.5	No water level indicated.	NAPL
		16.5	17		Dense, gray, silty fine sand and gravel, till.		9-13 moderate tar odor, heavy visual contamination	
							13-16 slight tar odor and sheening	
							16-16 5 heavy visual tar contamination	
							16-17 slight tar odor, visible tar at wall/till interface.	
6	TW-10/94-10	0	6	13	Light brown, fine to medium sand and gravel.	11	No water level indicated	NAPL/Staining
		6	11		Black stained, fine to coarse sand and gravel, trace silt.		5-6 slight tar odor.	
		11	13		Dense, dark gray, silty fine sand and gravel.		6-7 heavy tar odor and staining	
							7-11 heavy tar odor and visual contamination.	
							11-13 slight tar odor.	
6	BH-10/94-11	0	0.5	12	Dark brown, fine, sandy loam.	11.5	No water level indicated	NAPL/Sheen
		0.5	4		Orange brown, fine to coarse sand and gravel.		4-5 moderate tar odor, staining, and sheening	
		4	5		Black fine to medium sand, organic matter and wood chips.		5-6 moderate tar odor and sheening	
		5	6		Light brown fine to medium sand.		6-7 moderate tar odor, staining, and sheening	
		6	11.5		Black fine to coarse sand and gravel, trace silt.		7-11 5 heavy tar odor and visual contamination	
		11.5	12		Dense, gray, fine sand and gravel, till.			
6	BH-10/94-12	0	0.5	11	Dark brown, fine sandy loam, with organic matter.	11	No water level indicated	NAPL/Sheen
		0.5	3		Brown fine to medium sand, trace organics.		5.5-7 heavy tar odor and staining	
		3	5		Dark brown, fine to coarse sand, with light brown sand lenses		7-8 heavy tar odor and sheening	
		5	5.5		Brown wood chips.		8-11 heavy tar odor and visual contamination	
		5.5	11		Gray/black stained fine to coarse sand and gravel, trace silt.		Refusal on boulder at 11'.	
6	BH-10/94-13	0	0.5	14	Dark brown, fine loamy sand.	13.5	No water level indicated.	NAPL
		0.5	12		Orange and light brown, fine to coarse sand and gravel, trace silt, cobbles.		4-6 slight tar odor.	
		12	13.5		Black stained, fine to coarse sand and gravel, trace silt and cobbles.		12-13 5 heavy tar odor and visual contamination	
		13.5	14		Dense, dark gray, silty fine sand and gravel, till.			
6	PZ-10/94-1	0	4	16	Brown, loose, fine sandy loam with organic matter	6	No water level indicated	
		4	10		Light brown to gray, silty fine sand with dark gray gravel, and mottling		4-12 slight odor.	
		10	14		Brown, dense, silty fine sand with dark gray gravel and orange mottling			
		14	16		Dark gray, dense, silty coarse sand with dark gray angular gravel, till			
6	PZ-10/94-2	0	5	14	Brown fine sand, fill	11	No water level indicated	NAPL
		5	10		Orange, medium to coarse sand and gravel		0-5 heavy naphthalene odor	
		10	11		Black, loose, medium to coarse sand and gravel		5-10 slight naphthalene odor	
		11	14		Gray dense fine silty sand and gravel, till.		10-11 heavy tar odor and visual contamination	
							11-12 moderate tar odor	
							12-14 moderate odor, heavy visual contamination	

SUMMARY OF GEOLOGY (continued)

NEW YORK STATE ELECTRIC AND GAS CORPORATION

PLATTSBURGH, NEW YORK,

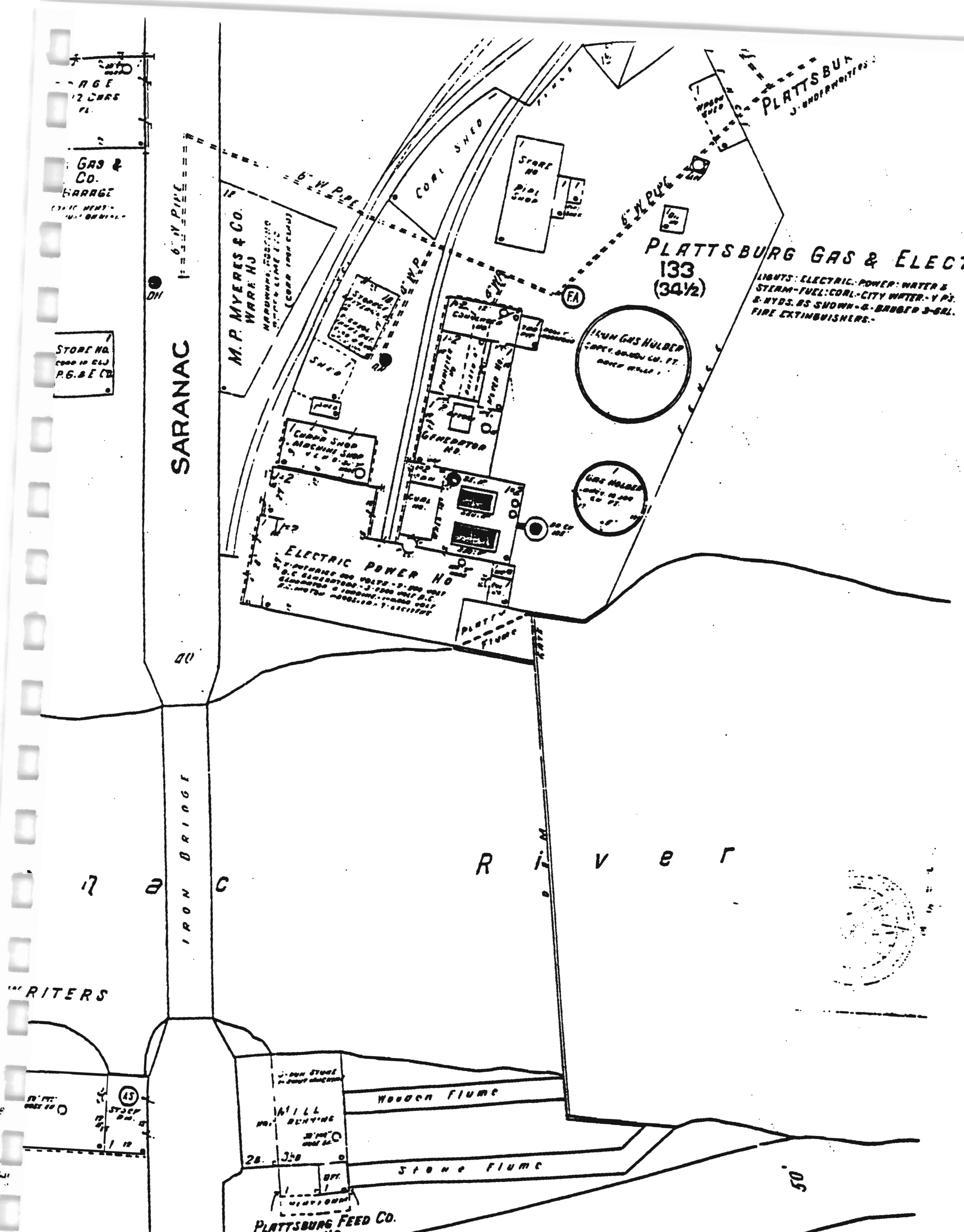
Source	ID	Start Depth (ft bgs)	End Depth (ft bgs)	Depth of Boring (ft bgs)	Geology Description	Depth to Till (ft bgs)	Other	DNAPL/ LNAPL
6	TP-1	0	4	10	Organic horizon mixed with light brown medium sand, rubbles, cables		Water table at 9 5'	NAPL
		4	8		Orange/brown medium to coarse sand, gravel, and cobbles		Heavy tar odor, visible tar, and sheen at 9 5'	
		8	8 5		Six inch organic horizon.			
		8.5	10		Brown medium to coarse sand, gravel, cobbles, and boulders			
6	TP-2	0	1	9	Organic "A" horizon.		Water table at approximately 8'	
		1	2		Loose, light brown fine to medium sand with gravel and cobbles		No visual or instrument evidence of contamination	
		2	9		Dense, dark gray, silty fine sand with gravel, cobbles, and boulders, till			
6	TP-3	0	3	12	Light brown fine sand, organic matter, rubble, bricks, concrete, metal		Water table at 11'	Sheen
		3	12		Orange-brown medium sand and gravel		11-12 moderate odor and sheen on groundwater	
			12		Dense, dark gray silty fine sand, gravel, cobble, and boulder, till			
6	TP-4	0	1 5	11	Organic "A" horizon.		No water table encountered	
		1.5	4 5		Black medium to coarse sand, brick, coal ash, clinkers, wood and glass.		1 5-4 5 moderate tar odor	
		4.5	6 5		Orange medium to coarse sand and gravel.			
		6.5	10		Dense, light brown, fine silty sand and gravel.			
		10	11		Dense, dark gray fine silty sand and gravel, till.			
6	TP-5	0	3	9	Light brown fine to medium sand mixed with organic "A" horizon.		Water table at approximately 9'	Sheen
		2	3		Black medium to coarse sand, gravel, cables, and brick in NW pit corner.		NW corner of pit had heavy tar odor and sheen	
		3	8		Orange brown medium to coarse sand and gravel		8-9 moderate tar odor and sheen	
		8	9		Dense, dark gray fine silty sand and gravel, till.			
6	TP-6	0	0.5	9	Organic "A" horizon.		Water table at 9'	NAPL
		0.5	5		Medium to coarse orange sand and gravel, cobbles, trace boulders.		5-9 heavy tar odor and visible tar in groundwater	
		5	9		Dark gray fading to black medium to coarse sand and gravel.			
6	TP-7	0	1	9	Organic "A" horizon.		Water table at 9'.	NAPL
		1	5		Light brown fine to medium sand with fine roots.		5-9 heavy tar odor and visible tar in groundwater	
		5	9		Black, medium to coarse sand with lumber.			
6	TP-8	0	1	8	Organic "A" horizon.		Water table at 7'.	NAPL
		1	3		Light brown medium sand with many roots.		7-8 heavy odor and visible tar	
		3	4		Dark brown fine to medium sand and gravel.			
		4	7		Orange brown fine to medium sand and gravel, cobbles and boulders.			
		7	8		Black, medium to coarse sand and gravel, cobbles and boulders.			
6	TP-9	0	0 5	11	Organic "A" horizon.		Water table at 9 5'.	NAPL
		0 5	3.5		Light brown medium to coarse sand and gravel with cobbles.		3 5-8 moderate tar odor	
		3.5	8		Black medium to coarse sand and gravel with brick, coal, ash, and metal.		8-10 sheen on groundwater	
		8	10		Brown medium to coarse sand and gravel.		10-11 moderate to heavy tar odor, 1-3% tar in water	
		10	11		Gray fine silty sand and gravel, till.			
6	TP-10	0	7	7	Wet, black, coarse sand and gravel and fine black sand horizons.		Pit excavated in riverbank Heavy tar odor.	

Sources:

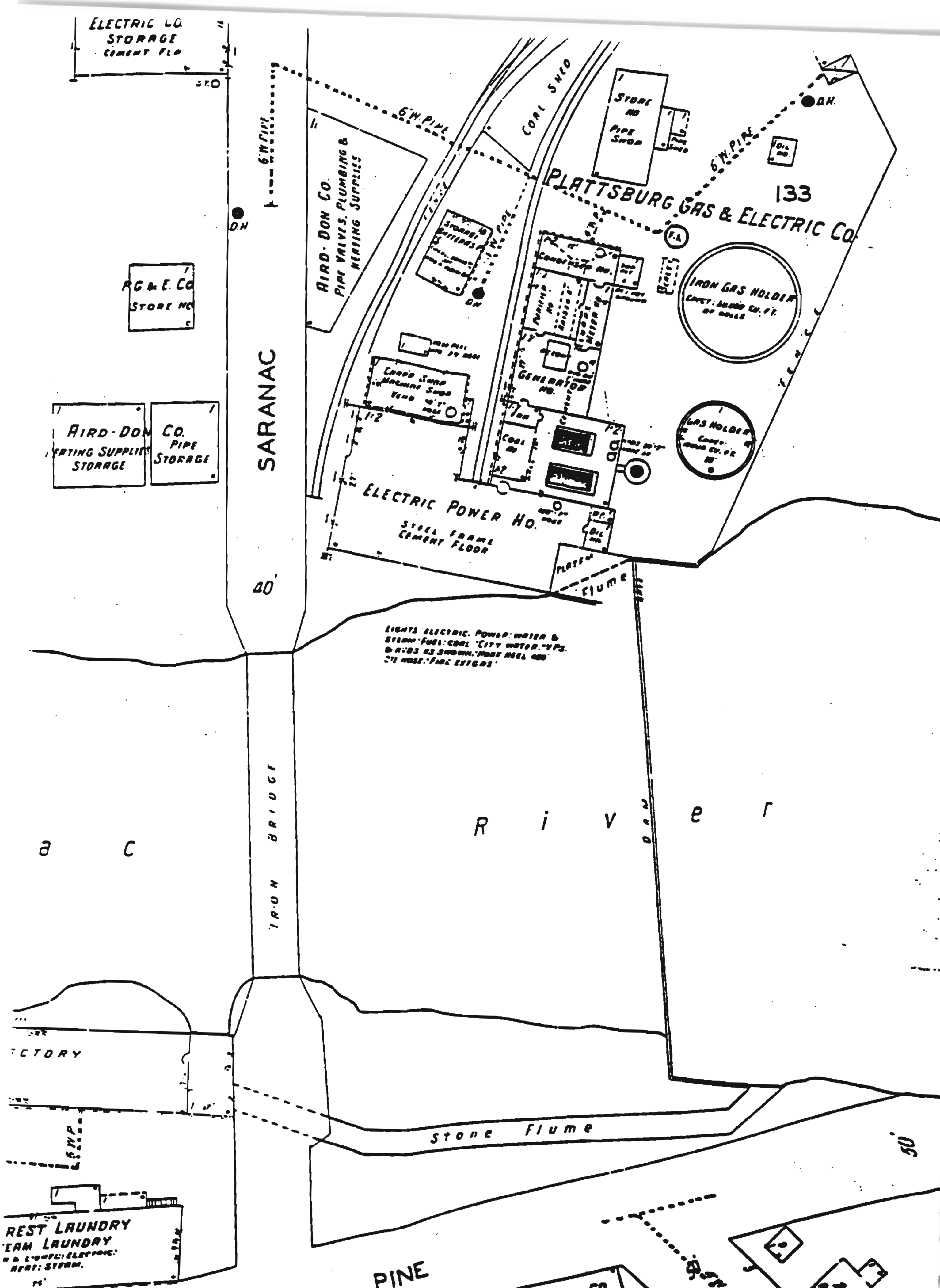
1. New York State Electric and Gas, Investigation and Development of Solutions to Coal Tar Problem at Plattsburgh Service Center, Acres American Inc , December 1979 Borings installed August 1975 and June/July 1979
2. New York State Electric and Gas, Coal Tar Confinement and Cleanup, August 1981. Installed November 1980.
3. Investigation of Slurry Trench Cut-off Walls, New York State Electric and Gas, Syracuse University, June 1986. Installed July 1984.
4. Groundwater Investigation and Proposed Remedial Program, Roux Associates, Inc., January 1987. Installed October 1986.
5. New York State Electric and Gas, Saranac Street Containment Study, February 1991. Installed May 1990.
6. Plattsburgh MGP Site Investigation, Atlantic Environmental Services, Inc., January 1995. Installed October 1994.

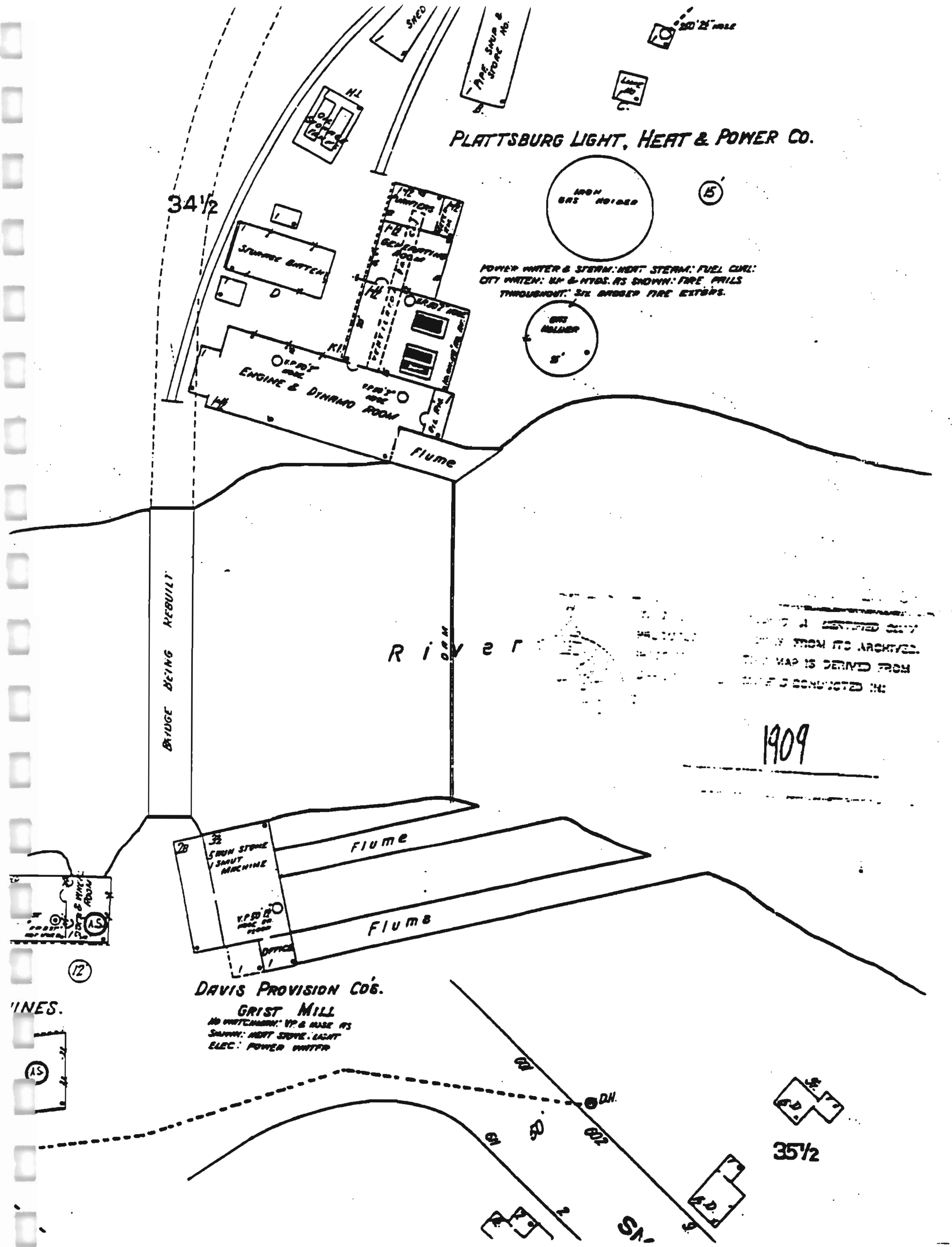
APPENDIX A

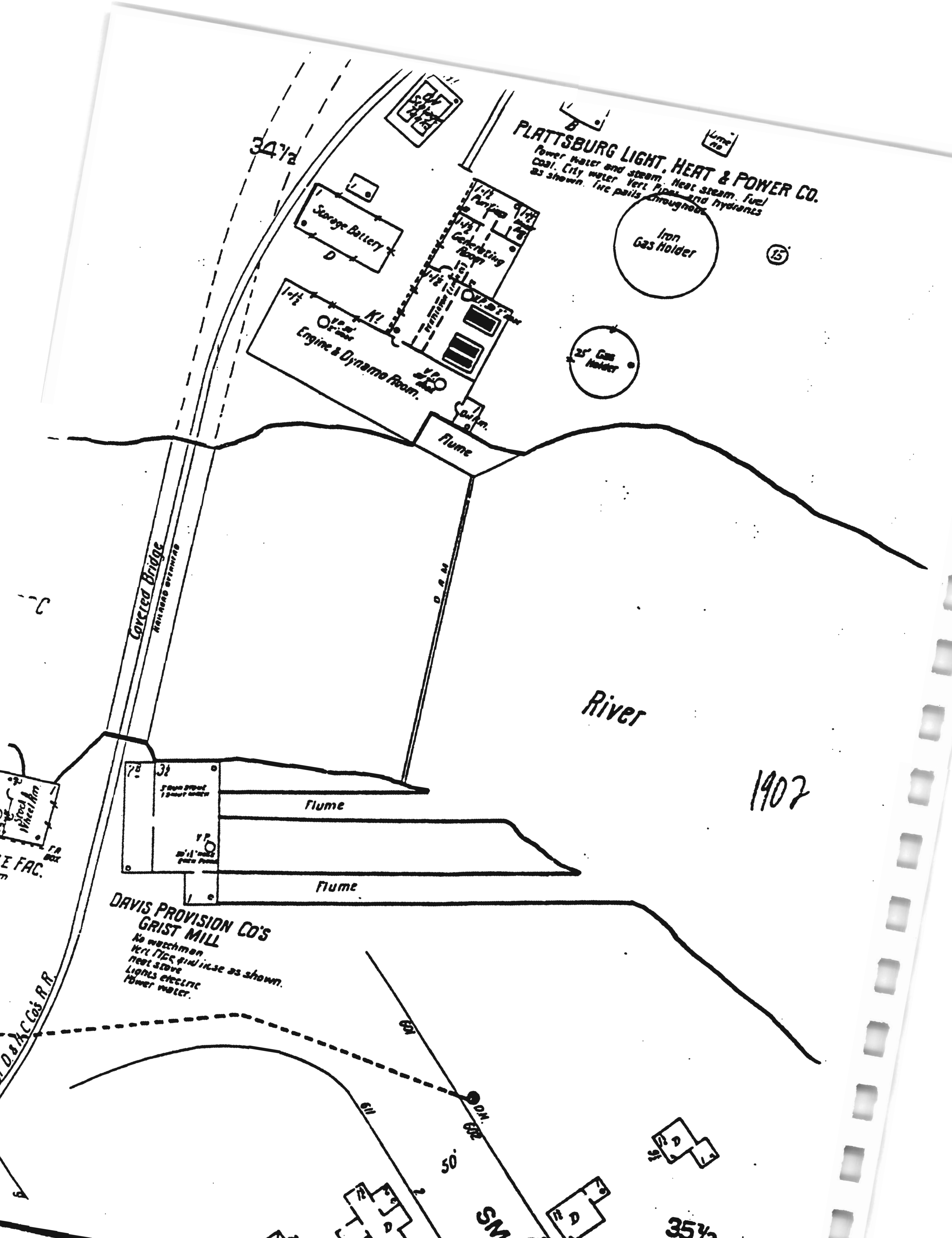
SANBORN FIRE INSURANCE MAPS



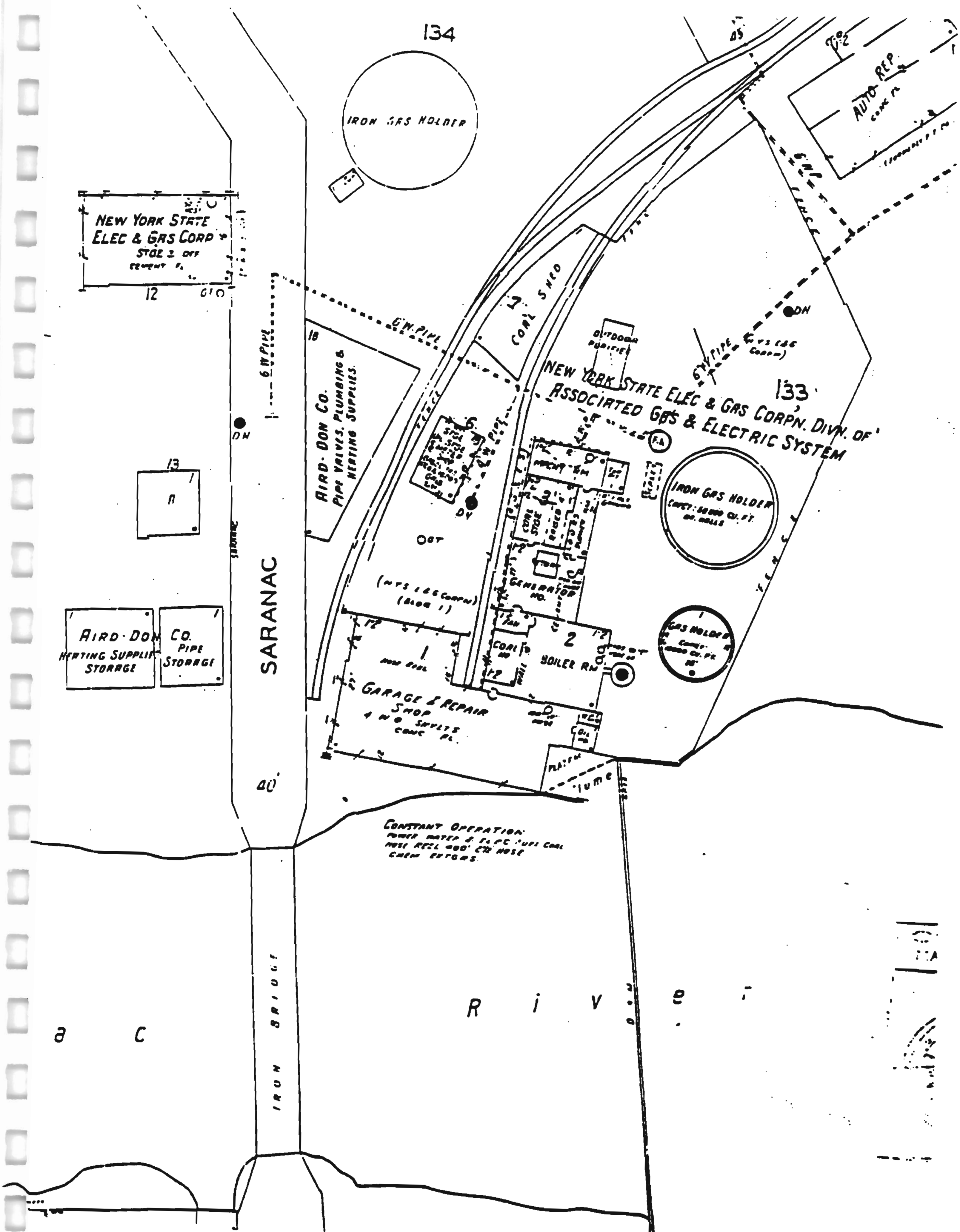
SARANAC
6" W. PIPE
M.P. MYERES & CO.
WARE HO
Gas &
Co.
GARAGE
STORE HO.
P.G.&E CO.
COAL SHED
STORE HO
PIPE SHOP
PLATTSBURG GAS & ELECT
133
(34½)
LIGHTS: ELECTRIC-POWER: WATER &
STEAM-FUEL: COAL-CITY WATER-
FIRE EXTINGUISHERS.
IRON GAS HOLDER
GAS HOLDER
GENERATOR HO.
CARP'N SHOP
MACHINE SHOP
ELECTRIC POWER HO
PLATTSBURG
UNDERWRITERS
IRON BRIDGE
River
WRITERS
Wooden Flume
Stone Flume
MILL
BUNTING
PLATTSBURG FEED CO.
50'

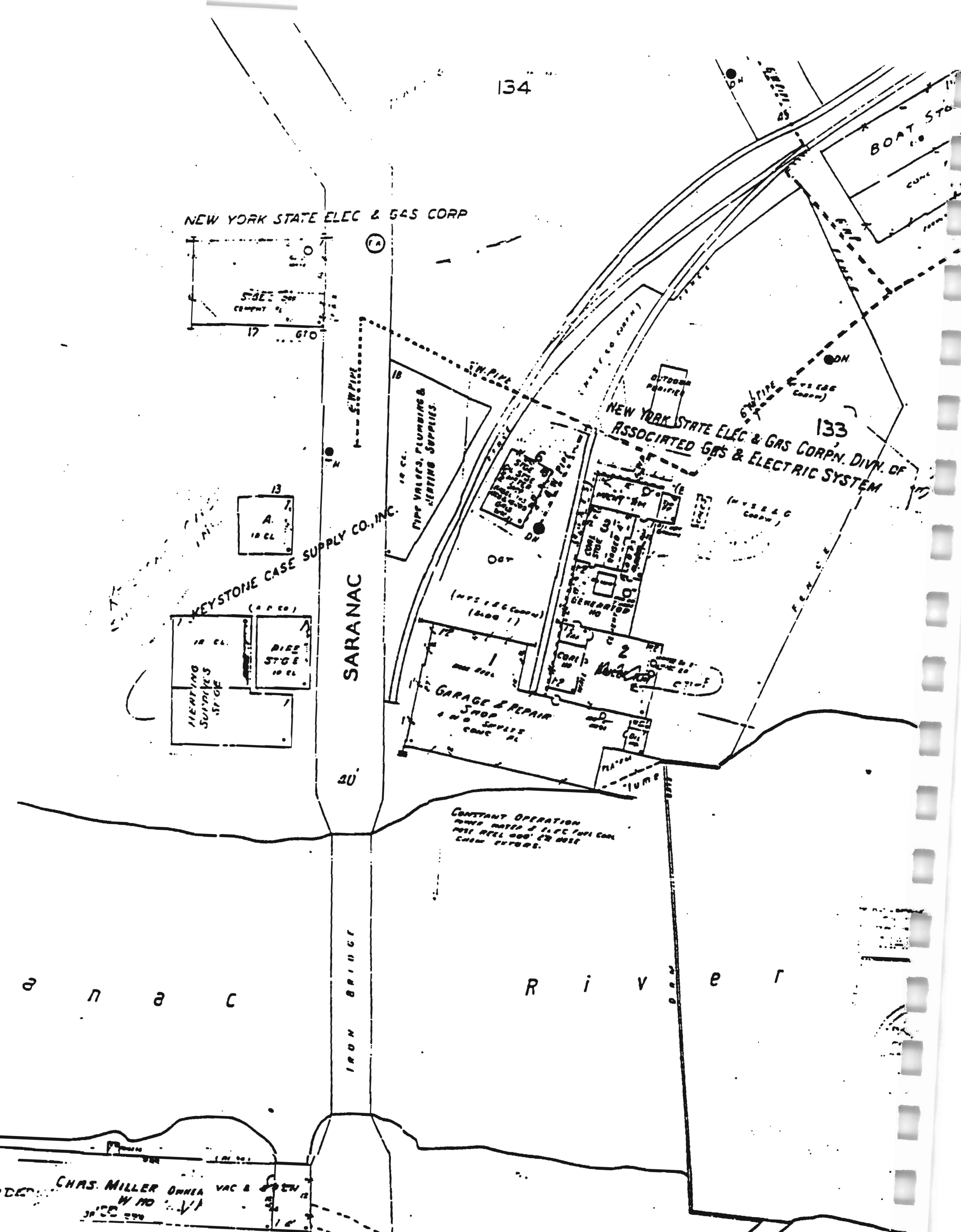

ELECTRIC CO.
STORAGE
CEMENT FLR
6" W. PIPE
AIRD-DON CO.
PIPE VALVES, PLUMBING & HEATING SUPPLIES
COAL SHED
STORE HO
PIPE SHOP
PLATTSBURG GAS & ELECTRIC CO.
133
D.H.
P.G.& E. CO.
STORE HO.
SARANAC
GENERATOR HO.
IRON GAS HOLDER
GAS HOLDER
AIRD-DON CO.
HEATING SUPPLIES STORAGE
PIPE STORAGE
ELECTRIC POWER HO.
STEEL FRAME
CEMENT FLOOR
FLUME
40'
IRON BRIDGE
DAM
a c
R i v e r
Stone Flume
50'
FACTORY
REST LAUNDRY
STEAM LAUNDRY
PINE

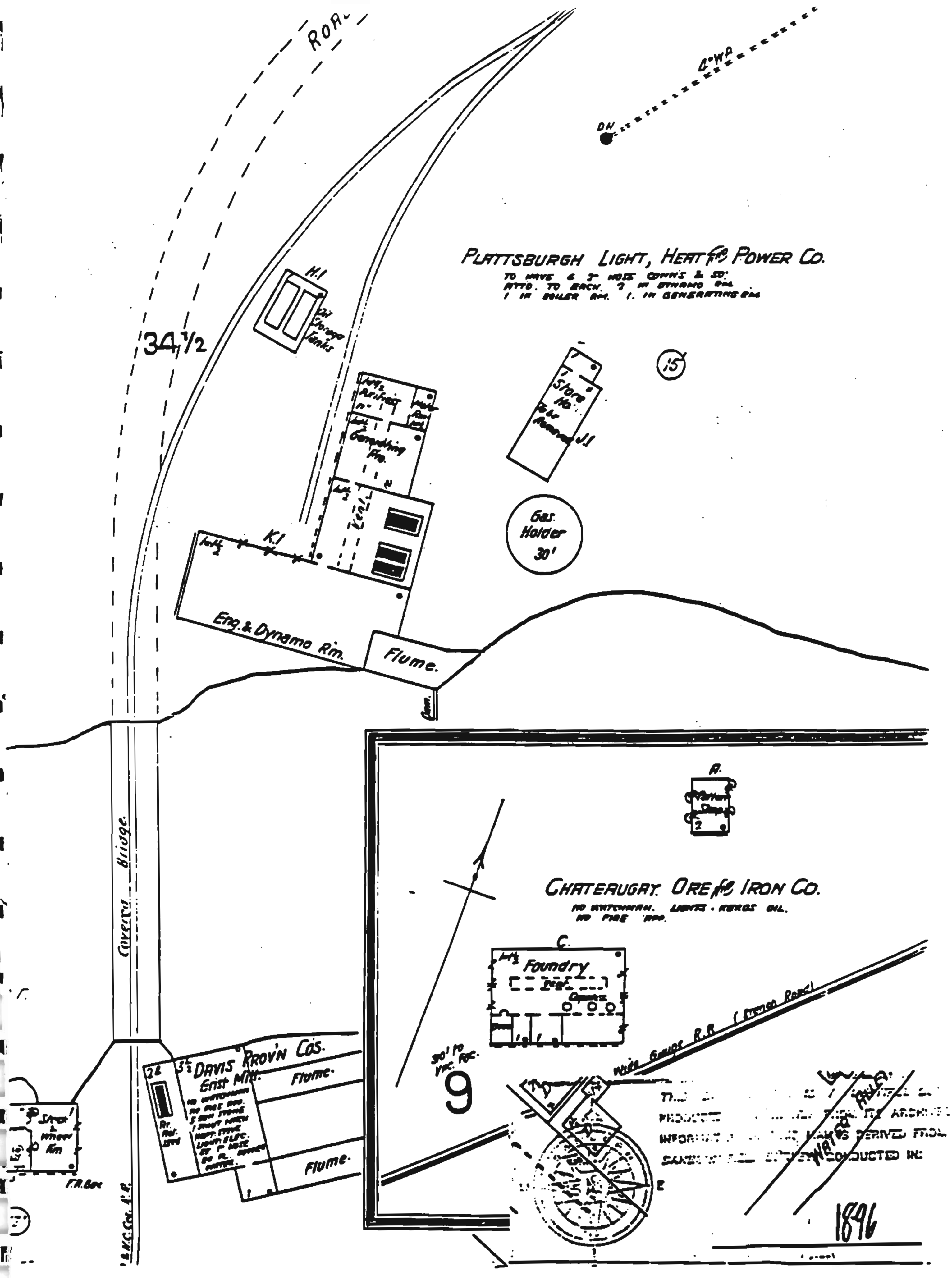

PLATTSBURG LIGHT, HEAT & POWER CO.
POWER WATER & STEAM: HEAT STEAM: FUEL COAL: CITY WATER: HY. & HYDS. AS SHOWN: FIRE PAILS THROUGHOUT: SIX BABBED FIRE EXTGRS.
ENGINE & DYNAMO ROOM
Flume
BRIDGE BEING REBUILT
River
34½
15
1909
DAVIS PROVISION CO'S.
GRIST MILL
Flume
Flume
OFFICE
12
35½
D.H.

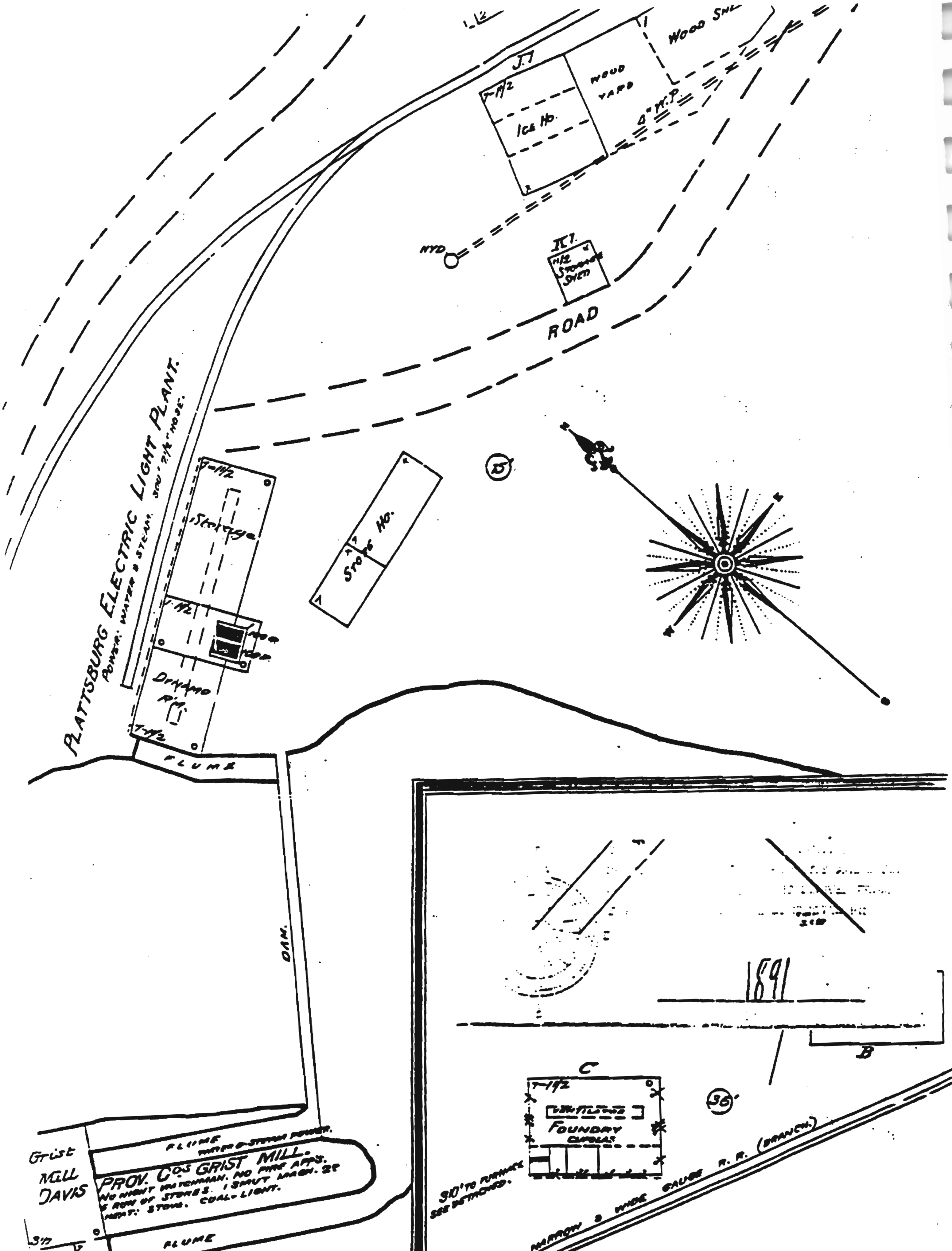


34½
PLATTSBURG LIGHT, HEAT & POWER CO.
Power water and steam. Heat steam. Fuel coal. City water. Vert. Pipes and hydrants as shown. Fire pails throughout.
Storage Battery
Generating Room
Engine & Dynamo Room.
Iron Gas Holder
25' Gas Holder
15
Flume
Covered Bridge
DAM
River
1907
Flume
Flume
DAVIS PROVISION CO'S
GRIST MILL
No watchman
Vert. Pipe and hose as shown.
Heat stove
Lights electric
Power water.
50'
35½


134
IRON GAS HOLDER
NEW YORK STATE ELEC & GAS CORP
STGE & OFF
CEMENT FL
12
6" W. PIPE
AIRD-DON CO.
PIPE VALVES, PLUMBING & HEATING SUPPLIES
DH
13
SARANAC
AIRD-DON CO. HEATING SUPPLIES STORAGE
CO. PIPE STORAGE
40'
COAL SHED
OUTDOOR PURIFIER
NEW YORK STATE ELEC & GAS CORPN. DIVN. OF ASSOCIATED GAS & ELECTRIC SYSTEM
133
AUTO REP.
CONC FL
DY
(N.Y.S. E & G CORPN)
(BLDG 1)
GENERATOR HO.
COAL STGE
IRON GAS HOLDER
GAS HOLDER
BOILER RM
2
1
GARAGE & REPAIR SHOP
CONC FL
PLATFM
flume
CONSTANT OPERATION
IRON BRIDGE
R i v e r
a c


134
NEW YORK STATE ELEC & GAS CORP
17
13
A.
KEYSTONE CASE SUPPLY CO., INC.
HEATING SUPPLIES STGE
DIES STGE
SARANAC
18
PIPE VALVES, PLUMBING & HEATING SUPPLIES.
S.W. PIPE
BOAT STO
OUTDOOR PURIFIER
NEW YORK STATE ELEC & GAS CORPN. DIVN. OF
ASSOCIATED GAS & ELECTRIC SYSTEM
133
GENERATOR HO
1
2
3
6
GARAGE & REPAIR SHOP
CONSTANT OPERATION
IRON BRIDGE
anac
River
CHAS. MILLER


ROAD
DH
PLATTSBURGH LIGHT, HEAT & POWER CO.
34 1/2
H.1
Oil Storage Tanks
Generating Rm.
Store Ho. To be Removed
J.1
15
Gas Holder 30'
K.1
Eng. & Dynamo Rm.
Flume.
Covered Bridge
A.
Pattern Shop
CHATEAUGAY ORE & IRON CO.
NO WATCHMAN. LIGHTS - KEROS. OIL.
NO FIRE APP.
C.
Foundry
Wide Gauge R.R. (French Road)
9
DAVIS PROVIN COS.
Grist Mill.
Flume.
Flume.
F.A. Box
1896


WOOD SH
WOOD YARD
ICE HO.
ROAD
PLATTSBURG ELECTRIC LIGHT PLANT.
POWER: WATER & STEAM.
STORE HO.
DYNAMO RM.
FLUME
DAM.
1891
B
C
FOUNDRY
36
NARROW & WIDE GAUGE R. R. (BRANCH)
Grist Mill DAVIS
PROV. CO'S GRIST MILL.
FLUME

APPENDIX B

GROUNDWATER ANALYTICAL RESULTS

Technical Services, Inc.
6601 Kirkville Road
Post Office Box 546
E. Syracuse, N.Y. 13057
Tel: (315) 432-0506

Client: NYSEG
Task Number: 84110906
Location: PLATTSBURGH COAL TAR SITE

Job Number: 84172
Date Sampled: 08-NOV-1984

PARAMETER	WELL BY MANHOLE	WELL 1D	WELL 1W	WELL 1U	WELL 2D	WELL 2W	WELL 2U	WELL 2DJ	WELL 3D	WELL 3W	WELL 3U
BENZENE UG/L	4300	~150*	24	<10	6100	21,000	18,000	8900	58	90	4900
P-XYLENE UG/L	69	33	25	13	720	290	500	750	33	29	21
M-XYLENE UG/L	76	21	21	<10	1200	520	940	1400	39	32	17
O-XYLENE UG/L	170	34	26	<10	1000	370	680	980	41	39	23
1,3,5-TRI-METHYLBENZENE UG/L	490	<10	<10	<10	280	41	80	150	16	<10	<10
1,2,4-TRI-METHYLBENZENE UG/L	<10	23	12	<10	1200	180	380	710	48	24	16
2,3-BENZOFURAN UG/L	<10	<10	<10	<10	<10	55	<10	<10	<10	<10	<10
NAPHTHALENE UG/L	180	370	310	76	14,000	4100	6600	11,000	1800	440	130
TOLUENE UG/L	110	<10	<10	<10	590	350	2500	830	55	12	<10
ETHYLBENZENE MG/L	35	97	25	39	3200	2000	3500	5700	98	40	<10

(<) - Less Than
(>) - Greater Than
NA - Not Applicable
ND - Not Detectable
NS - Not Specified

Footnotes: EPA METHOD 503.1
*SAMPLE INTERFERENCE
Submitted by: [signature]
Approved by: [signature]
Date: 11-JAN-1985

ENVIRONMENTAL LABORATORY

Project: Plattsburgh Coal Tar	Sampling Date: 12/1/87

Report To: B. Looky	Dept: Env	Location: K-1	Date:

Copies To:	Charge No:

Sample Collector: CMG Staff	Analyst(s):

Remarks: results expressed in mg/l	well PLGSH8606 was dry

SAMPLE	PARAMETER														
	AL-D	BE-D	CO-D	CR-D	CU-D	FE-D	HG-D	MG-D	MN-D	NI-D	ZN-D	PB-D			
PLGSH8601	<0.5	<0.01	<0.05	<0.01	<0.03	10.5	<0.0002	23.6	2.70	<0.05	0.01	<0.01			
PLGSH8602	<0.5	<0.01	<0.05	<0.01	<0.03	21.6	<0.0002	19.0	1.38	0.05	0.02	<0.01			
PLGSH8603	1.81	<0.01	<0.05	<0.01	<0.03	119	<0.0002	23.8	2.03	0.06	0.21	<0.01			
PLGSH8604	<0.5	<0.01	<0.05	<0.01	<0.03	29.2	<0.0002	18.3	2.72	0.08	0.03	<0.01			
PLGSH8605	<0.5	<0.01	<0.05	<0.01	<0.03	34.5	<0.0002	23.6	1.02	<0.05	0.02	<0.01			
PLGSH8606	—	—	—	—	—	—	—	—	—	—	—	—			
PLGSH8607	<0.5	<0.01	<0.05	<0.01	<0.03	0.81	<0.0002	27.6	5.61	<0.05	<0.01	<0.01			
PLGSH8608	0.60	<0.01	<0.05	<0.01	<0.03	5.13	<0.0002	25.6	1.54	<0.05	<0.01	<0.01			
PLGSH8609	<0.5	<0.01	<0.05	<0.01	<0.03	3.60	<0.0002	12.0	0.57	<0.05	<0.01	<0.01			
PLGSH8610	<0.5	<0.01	<0.05	<0.01	<0.03	23.4	<0.0002	3.25	0.64	<0.05	0.07	<0.01			

Project: ... Swgh Coal Tar Sampling Date: 12/1/18

 Report Date: Charge No:

SAMPLE	PARAMETER															
	PH-F	F2--	SO4-	TDS-	TSS-	CN--										
PLGSH8601	6.8	<1.0	36	843	175	0.62										
PLGSH8602	7.0	<1.0	16	551	265	0.87										
PLGSH8603	6.3	2.75	640	1291	160	0.68										
PLGSH8604	6.9	<1.0	44	696	263	0.69										
PLGSH8605	7.1	<1.0	32	814	519	2.0										
PLGSH8606	—	—	—	—	—	—										
PLGSH8607	7.4	<1.0	19	860	326	0.73										
PLGSH8608	7.4	<1.0	8	939	499	0.47										
PLGSH8609	7.2	<1.0	17	214	936	0.15										
PLGSH8610	7.3	<1.0	18	629	928	0.10										

CONTRACTOR: ______

REPORT TO: B Looky

ANALYST ID: JM

SAMPLE/RECEIVED: 12/1/87

ANALYSIS COMPLETED: 12/8/87

RESULTS IN: µg/l

VOLATILE ORGANICS ANALYSIS

BY EPA METHOD 624

- Data Report -

LOCATION	PLGSH8609	PLGSH8610		
COMPOUND				
Chloromethane	<10	<100		
Bromomethane	↓	↓		
Vinyl chloride	↓	↓		
Chloroethane	↓	↓		
Methylene chloride	4.5 J	48 J		
Acetone	6 J	102		
Carbon disulfide	<5	<50		
1,1-Dichloroethene	↓	↓		
1,1-Dichloroethane	↓	↓		
trans-1,2-Dichloroethene	↓	↓		
Chloroform	↓	↓		
1,2-Dichloroethane	↓	↓		
2-Butanone	<10	<100		
1,1,1-Trichloroethane	<5	<50		
Carbon tetrachloride	↓	↓		
Vinyl acetate	<10	<100		
Bromodichloromethane	<5	<50		
1,2-Dichloropropane	↓	↓		
trans-1,3-Dichloropropene	↓	↓		
Trichloroethene	↓	↓		
Dibromochloromethane	↓	↓		
1,1,2-Trichloroethane	↓	↓		
Benzene	2 J	11 J		
cis-1,3-Dichloropropene	<5	<50		
2-Chloroethyl vinyl ether	<10	<100		
Bromoform	<5	<50		
2-Hexanone	<10	<100		
4-Methyl-2-pentanone	<10	<100		
Tetrachloroethene	<5	<50		
1,1,2,2-Tetrachloroethane	↓	↓		
Toluene	3.3 J	11 J		
Chlorobenzene	<5	<50		
Ethylbenzene	3.3 J	12 J		
Styrene	<5	<50		
Total xylenes	19	↓		

CONTRACTOR: ____________________

REPORT TO: B. Leedy

ANALYST ID: JAL

SAMPLE/RECEIVED: 12/1/87

ALYSIS COMPLETED: 12/8/87

RESULTS IN: ug/l

VOLATILE ORGANICS ANALYSIS

BY EPA METHOD 624

- Data Report -

LOCATION	Blank	PLGSH8601	PLGSH8602	PLGSH8603
COMPOUND				
Chloromethane	<10	<100	<100	<100
Bromomethane				
Vinyl chloride				
Chloroethane	↓	↓	↓	↓
Methylene chloride	<5	<50	<50	<50
Acetone	<10	<100	156	112
Carbon disulfide	<5	<50	<50	<50
1,1-Dichloroethene				
1,1-Dichloroethane				
trans-1,2-Dichloroethene				
Chloroform				
1,2-Dichloroethane	↓	↓	↓	↓
2-Butanone	<10	<100	<100	<100
1,1,1-Trichloroethane	<5	<50	<50	<50
Carbon tetrachloride	↓	↓	↓	↓
Vinyl acetate	<10	<100	<100	<100
Bromodichloromethane	<5	<50	<50	<50
1,2-Dichloropropane				
trans-1,3-Dichloropropene				
Trichloroethene				
Dibromochloromethane				
1,1,2-Trichloroethane		↓	↓	↓
Benzene		2840	1610	363
cis-1,3-Dichloropropene	↓	<50	<50	<50
2-Chloroethyl vinyl ether	<10	<100	<100	<100
Bromoform	<5	<50	<50	<50
2-Hexanone	<10	<100	<100	<100
4-Methyl-2-pentanone	<10	<100	<100	<100
Tetrachloroethene	<5	<50	<50	<50
1,1,2,2-Tetrachloroethane		↓	↓	↓
Toluene		340	178	70
Chlorobenzene		<50	<50	<50
Ethylbenzene		2540	1380	591
Styrene		<50	<50	<50
Total xylenes	↓	1380	1620	362

[illegible] [illegible] [illegible] [illegible]

CONTRACTOR: ______

REPORT TO: B. Looky

ANALYST ID: JAL

SAMPLE/RECEIVED: 12/1/87

ANALYSIS COMPLETED: 12/5/87

RESULTS IN: µg/l

VOLATILE ORGANICS ANALYSIS

BY EPA METHOD 624

- Data Report -

LOCATION	PLGSH8604	PLGSH8605	PLGSH8607	PLGSH8608
COMPOUND				
Chloromethane	<100	<100	<100	<100
Bromomethane	↓	↓	↓	↓
Vinyl chloride	↓	↓	↓	↓
Chloroethane	↓	↓	↓	↓
Methylene chloride	<50	<50	<50	<50
Acetone	<100	176	101	<100
Carbon disulfide	<50	<50	<50	<50
1,1-Dichloroethene	↓	↓	↓	↓
1,1-Dichloroethane	↓	↓	↓	↓
trans-1,2-Dichloroethene	↓	↓	↓	↓
Chloroform	↓	↓	↓	↓
1,2-Dichloroethane	↓	↓	↓	↓
2-Butanone	<100	<100	<100	<100
1,1,1-Trichloroethane	<50	<50	<50	<50
Carbon tetrachloride	↓	↓	↓	↓
Vinyl acetate	<100	<100	<100	<100
Bromodichloromethane	<50	<50	<50	<50
1,2-Dichloropropane	↓	↓	↓	↓
trans-1,3-Dichloropropene	↓	↓	↓	↓
Trichloroethene	↓	↓	↓	↓
Dibromochloromethane	↓	↓	↓	↓
1,1,2-Trichloroethane	↓	↓	↓	↓
Benzene	493	1240	795	106
cis-1,3-Dichloropropene	<50	<50	<50	<50
2-Chloroethyl vinyl ether	<100	<100	<100	<100
Bromoform	<50	<50	<50	<50
2-Hexanone	<100	<100	<100	<100
4-Methyl-2-pentanone	<100	<100	<100	<100
Tetrachloroethene	<50	<50	<50	<50
1,1,2,2-Tetrachloroethane	<50	↓	↓	↓
Toluene	<50	85	46 J	138
Chlorobenzene	<50	<50	<50	<50
Ethylbenzene	36 J	573	353	687
Styrene	<50	<50	<50	<50
Total xylenes	47 J	556	355	410

CONTRACTOR:

REPORT TO: B. Lasky

ANALYST ID: JRL

SAMPLE/RECEIVED: PLGSH8602 12/1

ANALYSIS COMPLETED: 12/31/87

RESULTS IN: µg/l

SUMMARY OF

ORGANIC PRIORITY POLLUTANT ANALYSIS

BY EPA METHOD 625

- Data Report -

ACID COMPOUNDS

21A	2,4,6-Trichlorophenol	<50
22A	p-Chloro-m-cresol	<10
24A	2-Chlorophenol	↓
31A	2,4-Dichlorophenol	↓
34A	2,4-Dimethylphenol	↓
57A	2-Nitrophenol	<50
58A	4-Nitrophenol	↓
59A	2,4-Dinitrophenol	↓
60A	4,6-Dinitor-o-cresol	↓
64A	Pentachlorophenol	↓
65A	Phenol	<10

BASE/NEUTRAL COMPOUNDS

1B	Acenaphthene	386
5B	Benzidine	<80
8B	1,2,4-Trichlorobenzene	<10
9B	Hexachlorobenzene	↓
12B	Hexachloroethane	↓
18B	Bis(2-chloroethyl)ether	↓
20B	2-Chloronaphthalene	↓
25B	1,2-Dichlorobenzene	↓
26B	1,3-Dichlorobenzene	↓
27B	1,4-Dichlorobenzene	↓
28B	3,3-Dichlorobenzidine	<20
35B	2,4-Dinitrotoluene	<10
36B	2,6-Dinitrotoluene	↓
37B	1,2-Diphenylhydrazine	↓
39B	Fluoranthene	77.7
40B	4-Chlorophenyl phenyl ether	<10

BASE/NEUTRAL COMPOUNDS

41B	4-Bromophenyl phenyl ether	<10
42B	Bis(2-chloroisopropyl)ether	
43B	Bis(2-chloroethoxy)methane	↓
52B	Hexachlorobutadiene	↓
53B	Hexachlorocyclopentadiene	↓
54B	Isophorone	↓
55B	Naphthalene	1540
56B	Nitrobenzene	<10
61B	n-Nitrosodimethylamine	↓
62B	n-Nitrosodiphenylamine[a]	↓
63B	n-Nitrosodi-n-propylamine	↓
66B	Bis(2-ethylhexyl)phthalate	37
67B	Butyl benzyl phthalate	<10
68B	Di-n-butyl phthalate	↓
69B	Di-n-octyl phthalate	↓
70B	Diethyl phthalate	↓
71B	Dimethyl phthalate	↓
72B	Benzo(a)anthracene	32
73B	Benzo(a)pyrene	26
74B	Benzo(b)fluoranthene	28
75B	Benzo(k)fluoranthene	28
76B	Chrysene	30
77B	Acenaphthylene	<10
78B	Anthracene	71.9
79B	Benzo(ghi)perylene	<10
80B	Fluorene	224
81B	Phenanthrene	71.9
82B	Dibenzo(a,h)anthracene	<10
83B	Ideno(1,2,3-cd)pyrene	↓
84B	Pyrene	84

alyzed as diphenylamine.

CONTRACTOR: ____________________

REPORT TO: B Lasky

ANALYST ID: JRL

SAMPLE/RECEIVED: DL65H8603 12/1

ANALYSIS COMPLETED: 12/31/87

RESULTS IN: µg/l

SUMMARY OF

ORGANIC PRIORITY POLLUTANT ANALYSIS

BY EPA METHOD 625

- Data Report -

ACID COMPOUNDS

21A	2,4,6-Trichlorophenol	<50
22A	p-Chloro-m-cresol	<10
24A	2-Chlorophenol	↓
31A	2,4-Dichlorophenol	↓
34A	2,4-Dimethylphenol	↓
57A	2-Nitrophenol	<50
58A	4-Nitrophenol	↓
59A	2,4-Dinitrophenol	↓
60A	4,6-Dinitor-o-cresol	↓
64A	Pentachlorophenol	↓
65A	Phenol	<10

BASE/NEUTRAL COMPOUNDS

1B	Acenaphthene	85
5B	Benzidine	<80
8B	1,2,4-Trichlorobenzene	<10
9B	Hexachlorobenzene	↓
12B	Hexachloroethane	↓
18B	Bis(2-chloroethyl)ether	↓
20B	2-Chloronaphthalene	↓
25B	1,2-Dichlorobenzene	↓
26B	1,3-Dichlorobenzene	↓
27B	1,4-Dichlorobenzene	↓
28B	3,3-Dichlorobenzidine	<20
35B	2,4-Dinitrotoluene	<10
36B	2,6-Dinitrotoluene	↓
37B	1,2-Diphenylhydrazine	↓
39B	Fluoranthene	18
40B	4-Chlorophenyl phenyl ether	<10

BASE/NEUTRAL COMPOUNDS

41B	4-Bromophenyl phenyl ether	<10
42B	Bis(2-chloroisopropyl)ether	↓
43B	Bis(2-chloroethoxy)methane	↓
52B	Hexachlorobutadiene	↓
53B	Hexachlorocyclopentadiene	↓
54B	Isophorone	↓
55B	Naphthalene	508
56B	Nitrobenzene	<10
61B	n-Nitrosodimethylamine	↓
62B	n-Nitrosodiphenylamine[a]	↓
63B	n-Nitrosodi-n-propylamine	↓
66B	Bis(2-ethylhexyl)phthalate	110
67B	Butyl benzyl phthalate	<10
68B	Di-n-butyl phthalate	12
69B	Di-n-octyl phthalate	25
70B	Diethyl phthalate	<10
71B	Dimethyl phthalate	↓
72B	Benzo(a)anthracene	9 J
73B	Benzo(a)pyrene	9 J
74B	Benzo(b)fluoranthene	11
75B	Benzo(k)fluoranthene	10
76B	Chrysene	8 J
77B	Acenaphthylene	<10
78B	Anthracene	<10
79B	Benzo(ghi)perylene	<10
80B	Fluorene	42.7
81B	Phenanthrene	10
82B	Dibenzo(a,h)anthracene	<10
83B	Ideno(1,2,3-cd)pyrene	<10
84B	Pyrene	25

alyzed as diphenylamine.

CONTRACTOR: ______

REPORT TO: B. Lady

ANALYST ID: JK

SAMPLE/RECEIVED: PL65#8604 12/1

ANALYSIS COMPLETED: 12/31/87

RESULTS IN: μg/l

SUMMARY OF

ORGANIC PRIORITY POLLUTANT ANALYSIS

BY EPA METHOD 625

- Data Report -

ACID COMPOUNDS

21A	2,4,6-Trichlorophenol	<50
22A	p-Chloro-m-cresol	<10
24A	2-Chlorophenol	↓
31A	2,4-Dichlorophenol	↓
34A	2,4-Dimethylphenol	↓
57A	2-Nitrophenol	<50
58A	4-Nitrophenol	↓
59A	2,4-Dinitrophenol	↓
60A	4,6-Dinitor-o-cresol	↓
64A	Pentachlorophenol	↓
65A	Phenol	<10

BASE/NEUTRAL COMPOUNDS

1B	Acenaphthene	13
5B	Benzidine	<80
8B	1,2,4-Trichlorobenzene	<10
9B	Hexachlorobenzene	↓
12B	Hexachloroethane	↓
18B	Bis(2-chloroethyl)ether	↓
20B	2-Chloronaphthalene	↓
25B	1,2-Dichlorobenzene	↓
26B	1,3-Dichlorobenzene	↓
27B	1,4-Dichlorobenzene	↓
28B	3,3-Dichlorobenzidine	<20
35B	2,4-Dinitrotoluene	<10
36B	2,6-Dinitrotoluene	↓
37B	1,2-Diphenylhydrazine	↓
39B	Fluoranthene	↓
40B	4-Chlorophenyl phenyl ether	↓

BASE/NEUTRAL COMPOUNDS

41B	4-Bromophenyl phenyl ether	<10
42B	Bis(2-chloroisopropyl)ether	
43B	Bis(2-chloroethoxy)methane	↓
52B	Hexachlorobutadiene	↓
53B	Hexachlorocyclopentadiene	↓
54B	Isophorone	↓
55B	Naphthalene	257
56B	Nitrobenzene	<10
61B	n-Nitrosodimethylamine	↓
62B	n-Nitrosodiphenylamine[a]	↓
63B	n-Nitrosodi-n-propylamine	↓
66B	Bis(2-ethylhexyl)phthalate	376
67B	Butyl benzyl phthalate	<10
68B	Di-n-butyl phthalate	9J
69B	Di-n-octyl phthalate	33
70B	Diethyl phthalate	<10
71B	Dimethyl phthalate	↓
72B	Benzo(a)anthracene	↓
73B	Benzo(a)pyrene	↓
74B	Benzo(b)fluoranthene	↓
75B	Benzo(k)fluoranthene	↓
76B	Chrysene	↓
77B	Acenaphthylene	↓
78B	Anthracene	↓
79B	Benzo(ghi)perylene	↓
80B	Fluorene	19
81B	Phenanthrene	<10
82B	Dibenzo(a,h)anthracene	↓
83B	Ideno(1,2,3-cd)pyrene	↓
84B	Pyrene	↓

nalyzed as diphenylamine.

CONTRACTOR:

REPORT TO: B Lasky

ANALYST ID: RL

SAMPLE/RECEIVED: DL6SH8605 12/1

ANALYSIS COMPLETED: 12/31/87

RESULTS IN: µg/l

SUMMARY OF

ORGANIC PRIORITY POLLUTANT ANALYSIS

BY EPA METHOD 625

- Data Report -

ACID COMPOUNDS

21A	2,4,6-Trichlorophenol	<50
22A	p-Chloro-m-cresol	<10
24A	2-Chlorophenol	↓
31A	2,4-Dichlorophenol	↓
34A	2,4-Dimethylphenol	↓
57A	2-Nitrophenol	<50
58A	4-Nitrophenol	↓
59A	2,4-Dinitrophenol	↓
60A	4,6-Dinitor-o-cresol	↓
64A	Pentachlorophenol	↓
65A	Phenol	<10

BASE/NEUTRAL COMPOUNDS

1B	Acenaphthene	52
5B	Benzidine	<80
8B	1,2,4-Trichlorobenzene	<10
9B	Hexachlorobenzene	↓
12B	Hexachloroethane	↓
18B	Bis(2-chloroethyl)ether	↓
20B	2-Chloronaphthalene	↓
25B	1,2-Dichlorobenzene	↓
26B	1,3-Dichlorobenzene	↓
27B	1,4-Dichlorobenzene	↓
28B	3,3-Dichlorobenzidine	<20
35B	2,4-Dinitrotoluene	<10
36B	2,6-Dinitrotoluene	↓
37B	1,2-Diphenylhydrazine	↓
39B	Fluoranthene	67
40B	4-Chlorophenyl phenyl ether	<10

BASE/NEUTRAL COMPOUNDS

41B	4-Bromophenyl phenyl ether	<10
42B	Bis(2-chloroisopropyl)ether	↓
43B	Bis(2-chloroethoxy)methane	↓
52B	Hexachlorobutadiene	↓
53B	Hexachlorocyclopentadiene	↓
54B	Isophorone	↓
55B	Naphthalene	1410
56B	Nitrobenzene	<10
61B	n-Nitrosodimethylamine	↓
62B	n-Nitrosodiphenylamine[a]	↓
63B	n-Nitrosodi-n-propylamine	↓
66B	Bis(2-ethylhexyl)phthalate	667
67B	Butyl benzyl phthalate	<10
68B	Di-n-butyl phthalate	↓
69B	Di-n-octyl phthalate	26
70B	Diethyl phthalate	<10
71B	Dimethyl phthalate	↓
72B	Benzo(a)anthracene	34
73B	Benzo(a)pyrene	29
74B	Benzo(b)fluoranthene	31
75B	Benzo(k)fluoranthene	<10
76B	Chrysene	31
77B	Acenaphthylene	30
78B	Anthracene	49
79B	Benzo(ghi)perylene	11
80B	Fluorene	194
81B	Phenanthrene	49
82B	Dibenzo(a,h)anthracene	<10
83B	Ideno(1,2,3-cd)pyrene	10
84B	Pyrene	98

alyzed as diphenylamine.

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
9/24/92	PLGDSH8601		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH8601		.0006		MERCURY, DISSOLVED
9/24/92	PLGDSH8601		.45		CYANIDE, AMENABLE
9/24/92	PLGDSH8601		.45		CYANIDE, TOTAL
9/24/92	PLGDSH8601		.65		MANGENESE, DISSOLVED
9/24/92	PLGDSH8601		1.01		FLOURIDE
9/24/92	PLGDSH8601		1150		CONDUCTIVITY
9/24/92	PLGDSH8601		1370		ETHYLBENZENE
9/24/92	PLGDSH8601		14.7		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGDSH8601		19.8		MAGNESIUM, DISSOLVED
9/24/92	PLGDSH8601		269		TOTAL SUSPENDED SOLIDS (NON-FILTERABL
9/24/92	PLGDSH8601		32.7		IRON, DISSOLVED
9/24/92	PLGDSH8601		35		TOLUENE
9/24/92	PLGDSH8601		37.6		SULFATE
9/24/92	PLGDSH8601		4		TURBIDITY
9/24/92	PLGDSH8601		540		TOTAL XYLENES
9/24/92	PLGDSH8601		6.5		PH-FIELD
9/24/92	PLGDSH8601		624		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGDSH8601		852		BENZENE
9/24/92	PLGDSH8601	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGDSH8601	LT	0.01		COPPER,DISSOLVED
9/24/92	PLGDSH8601	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGDSH8601	LT	0.02		NICKEL, DISSOLVED
9/24/92	PLGDSH8601	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGDSH8601	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGDSH8601	LT	0.08		ALUMINUM, DISSOLVED
9/24/92	PLGDSH8605		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH8605		.48		FLOURIDE
9/24/92	PLGDSH8605		.8		MANGENESE, DISSOLVED
9/24/92	PLGDSH8605		1.7		CYANIDE, AMENABLE
9/24/92	PLGDSH8605		1.7		CYANIDE, TOTAL
9/24/92	PLGDSH8605		1280		CONDUCTIVITY
9/24/92	PLGDSH8605		15		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGDSH8605		16		IRON, DISSOLVED
9/24/92	PLGDSH8605		22		TURBIDITY
9/24/92	PLGDSH8605		24.2		MAGNESIUM, DISSOLVED
9/24/92	PLGDSH8605		327		TOTAL XYLENES
9/24/92	PLGDSH8605		361		ETHYLBENZENE
9/24/92	PLGDSH8605		40.6		TOLUENE
9/24/92	PLGDSH8605		42.1		SULFATE
9/24/92	PLGDSH8605		6.6		PH-FIELD
9/24/92	PLGDSH8605		651		BENZENE
9/24/92	PLGDSH8605		734		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGDSH8605		90		TOTAL SUSPENDED SOLIDS (NON-FILTERABL
9/24/92	PLGDSH8605	LT	0.0002		MERCURY, DISSOLVED
9/24/92	PLGDSH8605	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGDSH8605	LT	0.01		COPPER,DISSOLVED
9/24/92	PLGDSH8605	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGDSH8605	LT	0.02		NICKEL, DISSOLVED
9/24/92	PLGDSH8605	LT	0.04		ALUMINUM, DISSOLVED
9/24/92	PLGDSH8605	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGDSH8605	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGDSH8605	LT	0.08		LEAD, DISSOLVED

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
9/24/92	PLGDSH9008		3850		CONDUCTIVITY
9/24/92	PLGDSH9008		6.9		PH-FIELD
9/24/92	PLGDSH9008		8.94		IRON, DISSOLVED
9/24/92	PLGDSH9008		80		TURBIDITY
9/24/92	PLGDSH9008	LT	0.0002		MERCURY, DISSOLVED
9/24/92	PLGDSH9008	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGDSH9008	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGDSH9008	LT	0.02		NICKEL, DISSOLVED
9/24/92	PLGDSH9008	LT	0.04		ALUMINUM, DISSOLVED
9/24/92	PLGDSH9008	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGDSH9008	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGDSH9008	LT	0.08		LEAD, DISSOLVED
9/24/92	PLGDSH9008	LT	0.2		BENZENE
9/24/92	PLGDSH9008	LT	0.2		ETHYLBENZENE
9/24/92	PLGDSH9008	LT	0.2		FLOURIDE
9/24/92	PLGDSH9008	LT	0.2		TOLUENE
9/24/92	PLGDSH9008	LT	0.2		TOTAL XYLENES
9/24/92	PLGDSH9012		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH9012		-4		TOLUENE
9/24/92	PLGDSH9012		.26		CYANIDE, AMENABLE
9/24/92	PLGDSH9012		.26		CYANIDE, TOTAL
9/24/92	PLGDSH9012		1.1		SULFATE
9/24/92	PLGDSH9012		1.14		MANGENESE, DISSOLVED
9/24/92	PLGDSH9012		1090		TURBIDITY
9/24/92	PLGDSH9012		14.2		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGDSH9012		1435		CONDUCTIVITY
9/24/92	PLGDSH9012		1784		TOTAL SUSPENDED SOLIDS (NON-FILTERAB
9/24/92	PLGDSH9012		20.9		MAGNESIUM, DISSOLVED
9/24/92	PLGDSH9012		22.5		IRON, DISSOLVED
9/24/92	PLGDSH9012		329		TOTAL XYLENES
9/24/92	PLGDSH9012		522		ETHYLBENZENE
9/24/92	PLGDSH9012		6.8		PH-FIELD
9/24/92	PLGDSH9012		754		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGDSH9012		77.2		BENZENE
9/24/92	PLGDSH9012	LT	0.0002		MERCURY, DISSOLVED
9/24/92	PLGDSH9012	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGDSH9012	LT	0.01		COPPER,DISSOLVED
9/24/92	PLGDSH9012	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGDSH9012	LT	0.02		NICKEL, DISSOLVED
9/24/92	PLGDSH9012	LT	0.04		ALUMINUM, DISSOLVED
9/24/92	PLGDSH9012	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGDSH9012	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGDSH9012	LT	0.08		LEAD, DISSOLVED
9/24/92	PLGDSH9012	LT	0.2		FLOURIDE
9/24/92	PLGUSH9001		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGUSH9001		.014		COPPER,DISSOLVED
9/24/92	PLGUSH9001		.032		MANGENESE, DISSOLVED
9/24/92	PLGUSH9001		.037		IRON, DISSOLVED
9/24/92	PLGUSH9001		1.06		FLOURIDE
9/24/92	PLGUSH9001		12.5		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGUSH9001		1430		TURBIDITY
9/24/92	PLGUSH9001		151		SULFATE
9/24/92	PLGUSH9001		429		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGUSH9001		52.9		MAGNESIUM, DISSOLVED
9/24/92	PLGUSH9001		565		CONDUCTIVITY
9/24/92	PLGUSH9001		801		TOTAL SUSPENDED SOLIDS (NON-FILTERAB
9/24/92	PLGUSH9001	LT	0.0002		MERCURY, DISSOLVED
9/24/92	PLGUSH9001	LT	0.01		BERYLLIUM, DISSOLVED

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
9/24/92	PLGDSH9003		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH9004		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH9004		.05		CYANIDE, AMENABLE
9/24/92	PLGDSH9004		.05		CYANIDE, TOTAL
9/24/92	PLGDSH9004		.4		TOTAL XYLENES
9/24/92	PLGDSH9004		.66		MANGENESE, DISSOLVED
9/24/92	PLGDSH9004		.9		ETHYLBENZENE
9/24/92	PLGDSH9004		1.9		IRON, DISSOLVED
9/24/92	PLGDSH9004		11.7		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGDSH9004		1155		CONDUCTIVITY
9/24/92	PLGDSH9004		202		SULFATE
9/24/92	PLGDSH9004		49.5		MAGNESIUM, DISSOLVED
9/24/92	PLGDSH9004		630		TURBIDITY
9/24/92	PLGDSH9004		7.1		PH-FIELD
9/24/92	PLGDSH9004		762		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGDSH9004		836		TOTAL SUSPENDED SOLIDS (NON-FILTERAB
9/24/92	PLGDSH9004	LT	0.0002		MERCURY, DISSOLVED
9/24/92	PLGDSH9004	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGDSH9004	LT	0.01		COPPER,DISSOLVED
9/24/92	PLGDSH9004	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGDSH9004	LT	0.02		NICKEL, DISSOLVED
9/24/92	PLGDSH9004	LT	0.04		ALUMINUM, DISSOLVED
9/24/92	PLGDSH9004	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGDSH9004	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGDSH9004	LT	0.08		LEAD, DISSOLVED
9/24/92	PLGDSH9004	LT	0.2		BENZENE
9/24/92	PLGDSH9004	LT	0.2		FLOURIDE
9/24/92	PLGDSH9004	LT	0.2		TOLUENE
9/24/92	PLGDSH9005		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH9005		.024		COPPER,DISSOLVED
9/24/92	PLGDSH9005		.12		ALUMINUM, DISSOLVED
9/24/92	PLGDSH9005		.2		ETHYLBENZENE
9/24/92	PLGDSH9005		.9		TOTAL XYLENES
9/24/92	PLGDSH9005		10.2		IRON, DISSOLVED
9/24/92	PLGDSH9005		1340		TURBIDITY
9/24/92	PLGDSH9005		14.3		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGDSH9005		2		BENZENE
9/24/92	PLGDSH9005		2320		SULFATE
9/24/92	PLGDSH9005		2784		TOTAL SUSPENDED SOLIDS (NON-FILTERAB
9/24/92	PLGDSH9005		43		CYANIDE, AMENABLE
9/24/92	PLGDSH9005		43		CYANIDE, TOTAL
9/24/92	PLGDSH9005		4330		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGDSH9005		4600		CONDUCTIVITY
9/24/92	PLGDSH9005		6.8		PH-FIELD
9/24/92	PLGDSH9005	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGDSH9005	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGDSH9005	LT	0.2		FLOURIDE
9/24/92	PLGDSH9005	LT	0.2		TOLUENE
9/24/92	PLGDSH9008		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGDSH9008		.026		COPPER,DISSOLVED
9/24/92	PLGDSH9008		1.43		MANGENESE, DISSOLVED
9/24/92	PLGDSH9008		14.8		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGDSH9008		172		TOTAL SUSPENDED SOLIDS (NON-FILTERAB
9/24/92	PLGDSH9008		186		MAGNESIUM, DISSOLVED
9/24/92	PLGDSH9008		1980		SULFATE
9/24/92	PLGDSH9008		32		CYANIDE, AMENABLE
9/24/92	PLGDSH9008		32		CYANIDE, TOTAL
9/24/92	PLGDSH9008		3617		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
9/24/92	PLGUSH9001	LT	0.01		CYANIDE, AMENABLE
9/24/92	PLGUSH9001	LT	0.01		CYANIDE, TOTAL
9/24/92	PLGUSH9001	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGUSH9001	LT	0.02		NICKEL, DISSOLVED
9/24/92	PLGUSH9001	LT	0.04		ALUMINUM, DISSOLVED
9/24/92	PLGUSH9001	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGUSH9001	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGUSH9001	LT	0.08		LEAD, DISSOLVED
9/24/92	PLGUSH9001	LT	0.2		BENZENE
9/24/92	PLGUSH9001	LT	0.2		TOLUENE
9/24/92	PLGUSH9001	LT	0.2		TOTAL XYLENES
9/24/92	PLGUSH9002		-1		VOLATILE ORGANIC VAPORS
9/24/92	PLGUSH9002		.098		NICKEL, DISSOLVED
9/24/92	PLGUSH9002		.23		MANGENESE, DISSOLVED
9/24/92	PLGUSH9002		.28		FLOURIDE
9/24/92	PLGUSH9002		.47		IRON, DISSOLVED
9/24/92	PLGUSH9002		11.3		TEMPERATURE-CENTIGRADE (DEGREES C.)
9/24/92	PLGUSH9002		22.8		MAGNESIUM, DISSOLVED
9/24/92	PLGUSH9002		565		TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
9/24/92	PLGUSH9002		6.7		PH-FIELD
9/24/92	PLGUSH9002		63.3		SULFATE
9/24/92	PLGUSH9002		790		TURBIDITY
9/24/92	PLGUSH9002		821		TOTAL SUSPENDED SOLIDS (NON-FILTERAB
9/24/92	PLGUSH9002		990		CONDUCTIVITY
9/24/92	PLGUSH9002	LT	0.0002		MERCURY, DISSOLVED
9/24/92	PLGUSH9002	LT	0.01		BERYLLIUM, DISSOLVED
9/24/92	PLGUSH9002	LT	0.01		COPPER,DISSOLVED
9/24/92	PLGUSH9002	LT	0.01		CYANIDE, AMENABLE
9/24/92	PLGUSH9002	LT	0.01		CYANIDE, TOTAL
9/24/92	PLGUSH9002	LT	0.01		ZINC,DISSOLVED
9/24/92	PLGUSH9002	LT	0.04		ALUMINUM, DISSOLVED
9/24/92	PLGUSH9002	LT	0.05		CHROMIUM, DISSOLVED
9/24/92	PLGUSH9002	LT	0.05		COBALT, DISSOLVED
9/24/92	PLGUSH9002	LT	0.08		LEAD, DISSOLVED
9/24/92	PLGUSH9002	LT	0.2		BENZENE
9/24/92	PLGUSH9002	LT	0.2		ETHYLBENZENE
9/24/92	PLGUSH9002	LT	0.2		TOLUENE
9/24/92	PLGUSH9002	LT	0.2		TOTAL XYLENES

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGDSH8601		0.3		VOLATILE ORGANIC VAPORS
6/27/95	PLGDSH8601		3100	ug/l	NAPHTHALENE
6/27/95	PLGDSH8601	LT	250	ug/l	ACENAPHTHENE
6/27/95	PLGDSH8601	LT	250	ug/l	ACENAPHTHYLENE
6/27/95	PLGDSH8601	LT	250	ug/l	ANTHRACENE
6/27/95	PLGDSH8601	LT	250	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDSH8601	LT	250	ug/l	BENZO (A) PYRENE
6/27/95	PLGDSH8601	LT	250	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDSH8601	LT	250	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDSH8601	LT	250	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDSH8601	LT	250	ug/l	CHRYSENE
6/27/95	PLGDSH8601	LT	250	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDSH8601	LT	250	ug/l	FLUORANTHENE
6/27/95	PLGDSH8601	LT	250	ug/l	FLUORENE
6/27/95	PLGDSH8601	LT	250	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGDSH8601	LT	250	ug/l	PHENANTHRENE
6/27/95	PLGDSH8601	LT	250	ug/l	PYRENE
6/27/95	PLGDSH8601		0.62	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGDSH8601		12.5	mg/l	IRON, DISSOLVED
6/27/95	PLGDSH8601		24.5	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGDSH8601	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGDSH8601	LT	0.010	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGDSH8601	LT	0.010	mg/l	COBALT, DISSOLVED
6/27/95	PLGDSH8601	LT	0.010	mg/l	COPPER,DISSOLVED
6/27/95	PLGDSH8601	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGDSH8601	LT	0.020	mg/l	NICKEL, DISSOLVED
6/27/95	PLGDSH8601	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDSH8601		1606	UMHO/CM	CONDUCTIVITY
6/27/95	PLGDSH8601		6.7		PH-FIELD
6/27/95	PLGDSH8601		918	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDSH8601		38.9	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDSH8601		11.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGDSH8601		7.5	NTU	TURBIDITY
6/27/95	PLGDSH8601	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGDSH8601		0.64	MG/L	FLOURIDE
6/27/95	PLGDSH8601	LT	10.0	mg/l	SULFATE
6/27/95	PLGDSH8601	LT	0.02	MG/L	CYANIDE, AMENABLE
6/27/95	PLGDSH8601		0.50	MG/L	CYANIDE, TOTAL
6/27/95	PLGDSH8601	LT	0.005	mg/l	LEAD, DISSOLVED
6/27/95	PLGDSH8601		1290	ug/l	TOTAL XYLENES
6/27/95	PLGDSH8601		1610	ug/l	BENZENE
6/27/95	PLGDSH8601		2180	ug/l	ETHYLBENZENE
6/27/95	PLGDSH8601		303	ug/l	TOLUENE
6/27/95	PLGDSH8601	LT	10	ug/l	CHLOROBENZENE
6/27/95	PLGDSH8605		460	ug/l	NAPHTHALENE
6/27/95	PLGDSH8605		99	ug/l	ACENAPHTHYLENE
6/27/95	PLGDSH8605	LT	0.1		VOLATILE ORGANIC VAPORS
6/27/95	PLGDSH8605	LT	50	ug/l	ACENAPHTHENE
6/27/95	PLGDSH8605	LT	50	ug/l	ANTHRACENE
6/27/95	PLGDSH8605	LT	50	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDSH8605	LT	50	ug/l	BENZO (A) PYRENE
6/27/95	PLGDSH8605	LT	50	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDSH8605	LT	50	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDSH8605	LT	50	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDSH8605	LT	50	ug/l	CHRYSENE
6/27/95	PLGDSH8605	LT	50	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDSH8605	LT	50	ug/l	FLUORANTHENE
6/27/95	PLGDSH8605	LT	50	ug/l	FLUORENE

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGDSH8605	LT	50	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGDSH8605	LT	50	ug/l	PHENANTHRENE
6/27/95	PLGDSH8605	LT	50	ug/l	PYRENE
6/27/95	PLGDSH8605		0.64	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGDSH8605		24.4	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGDSH8605		8.00	mg/l	IRON, DISSOLVED
6/27/95	PLGDSH8605	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGDSH8605	LT	0.010	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGDSH8605	LT	0.010	mg/l	COBALT, DISSOLVED
6/27/95	PLGDSH8605	LT	0.010	mg/l	COPPER,DISSOLVED
6/27/95	PLGDSH8605	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGDSH8605	LT	0.020	mg/l	NICKEL, DISSOLVED
6/27/95	PLGDSH8605	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDSH8605		1093	UMHO/CM	CONDUCTIVITY
6/27/95	PLGDSH8605		6.5		PH-FIELD
6/27/95	PLGDSH8605		740	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDSH8605		45.6	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDSH8605		11.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGDSH8605		21.4	NTU	TURBIDITY
6/27/95	PLGDSH8605	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGDSH8605		0.31	MG/L	FLOURIDE
6/27/95	PLGDSH8605		80.3	mg/l	SULFATE
6/27/95	PLGDSH8605		0.93	MG/L	CYANIDE, AMENABLE
6/27/95	PLGDSH8605		2.68	MG/L	CYANIDE, TOTAL
6/27/95	PLGDSH8605		0.009	mg/l	LEAD, DISSOLVED
6/27/95	PLGDSH8605		128	ug/l	ETHYLBENZENE
6/27/95	PLGDSH8605		13	ug/l	TOLUENE
6/27/95	PLGDSH8605		134	ug/l	TOTAL XYLENES
6/27/95	PLGDSH8605		251	ug/l	BENZENE
6/27/95	PLGDSH8605	LT	4	ug/l	CHLOROBENZENE

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGDXX9005	LT	5	ug/l	NAPHTHALENE
6/27/95	PLGDXX9005	LT	5	ug/l	PHENANTHRENE
6/27/95	PLGDXX9005	LT	5	ug/l	PYRENE
6/27/95	PLGDXX9005		0.027	mg/l	COBALT, DISSOLVED
6/27/95	PLGDXX9005		0.027	mg/l	COPPER,DISSOLVED
6/27/95	PLGDXX9005		1.69	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGDXX9005		168	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGDXX9005		7.18	mg/l	IRON, DISSOLVED
6/27/95	PLGDXX9005	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGDXX9005	LT	0.010	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGDXX9005	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGDXX9005	LT	0.020	mg/l	NICKEL, DISSOLVED
6/27/95	PLGDXX9005	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDXX9005		4650	UMHO/CM	CONDUCTIVITY
6/27/95	PLGDXX9005		6.6		PH-FIELD
6/27/95	PLGDXX9005		4050	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDXX9005		998	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDXX9005		11.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGDXX9005		872	NTU	TURBIDITY
6/27/95	PLGDXX9005	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGDXX9005	LT	0.2	MG/L	FLOURIDE
6/27/95	PLGDXX9005		1876	mg/l	SULFATE
6/27/95	PLGDXX9005	LT	0.02	MG/L	CYANIDE, AMENABLE
6/27/95	PLGDXX9005		10.8	MG/L	CYANIDE, TOTAL
6/27/95	PLGDXX9005	LT	0.005	mg/l	LEAD, DISSOLVED
6/27/95	PLGDXX9005		0.4	ug/l	TOLUENE
6/27/95	PLGDXX9005		0.5	ug/l	TOTAL XYLENES
6/27/95	PLGDXX9005		1.5	ug/l	BENZENE
6/27/95	PLGDXX9005	LT	0.2	ug/l	CHLOROBENZENE
6/27/95	PLGDXX9005	LT	0.2	ug/l	ETHYLBENZENE
6/27/95	PLGDXX9008	LT	0.1		VOLATILE ORGANIC VAPORS
6/27/95	PLGDXX9008	LT	5	ug/l	ACENAPHTHENE
6/27/95	PLGDXX9008	LT	5	ug/l	ACENAPHTHYLENE
6/27/95	PLGDXX9008	LT	5	ug/l	ANTHRACENE
6/27/95	PLGDXX9008	LT	5	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDXX9008	LT	5	ug/l	BENZO (A) PYRENE
6/27/95	PLGDXX9008	LT	5	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDXX9008	LT	5	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDXX9008	LT	5	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDXX9008	LT	5	ug/l	CHRYSENE
6/27/95	PLGDXX9008	LT	5	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDXX9008	LT	5	ug/l	FLUORANTHENE
6/27/95	PLGDXX9008	LT	5	ug/l	FLUORENE
6/27/95	PLGDXX9008	LT	5	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGDXX9008	LT	5	ug/l	NAPHTHALENE
6/27/95	PLGDXX9008	LT	5	ug/l	PHENANTHRENE
6/27/95	PLGDXX9008	LT	5	ug/l	PYRENE
6/27/95	PLGDXX9008		0.024	mg/l	COBALT, DISSOLVED
6/27/95	PLGDXX9008		0.027	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGDXX9008		0.061	mg/l	NICKEL, DISSOLVED
6/27/95	PLGDXX9008		0.063	mg/l	COPPER,DISSOLVED
6/27/95	PLGDXX9008		0.29	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDXX9008		1.29	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGDXX9008		186	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGDXX9008		9.31	mg/l	IRON, DISSOLVED
6/27/95	PLGDXX9008	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGDXX9008	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGDXX9008		4110	UMHO/CM	CONDUCTIVITY

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGDXX9008		6.8		PH-FIELD
6/27/95	PLGDXX9008		3370	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDXX9008		236	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDXX9008		12.1	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGDXX9008		107	NTU	TURBIDITY
6/27/95	PLGDXX9008	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGDXX9008	LT	0.2	MG/L	FLOURIDE
6/27/95	PLGDXX9008		1727	mg/l	SULFATE
6/27/95	PLGDXX9008		1.4	MG/L	CYANIDE, AMENABLE
6/27/95	PLGDXX9008		18.4	MG/L	CYANIDE, TOTAL
6/27/95	PLGDXX9008	LT	0.005	mg/l	LEAD, DISSOLVED
6/27/95	PLGDXX9008	LT	0.2	ug/l	BENZENE
6/27/95	PLGDXX9008	LT	0.2	ug/l	CHLOROBENZENE
6/27/95	PLGDXX9008	LT	0.2	ug/l	ETHYLBENZENE
6/27/95	PLGDXX9008	LT	0.2	ug/l	TOLUENE
6/27/95	PLGDXX9008	LT	0.2	ug/l	TOTAL XYLENES
6/27/95	PLGDXX9011		140	ug/l	ACENAPHTHYLENE
6/27/95	PLGDXX9011		1700	ug/l	NAPHTHALENE
6/27/95	PLGDXX9011	LT	100	ug/l	ACENAPHTHENE
6/27/95	PLGDXX9011	LT	100	ug/l	ANTHRACENE
6/27/95	PLGDXX9011	LT	100	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDXX9011	LT	100	ug/l	BENZO (A) PYRENE
6/27/95	PLGDXX9011	LT	100	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDXX9011	LT	100	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDXX9011	LT	100	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDXX9011	LT	100	ug/l	CHRYSENE
6/27/95	PLGDXX9011	LT	100	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDXX9011	LT	100	ug/l	FLUORANTHENE
6/27/95	PLGDXX9011	LT	100	ug/l	FLUORENE
6/27/95	PLGDXX9011	LT	100	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGDXX9011	LT	100	ug/l	PHENANTHRENE
6/27/95	PLGDXX9011	LT	100	ug/l	PYRENE
6/27/95	PLGDXX9011			mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDXX9011			UMHO/CM	CONDUCTIVITY
6/27/95	PLGDXX9011			mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDXX9011			mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDXX9011			mg/l	MERCURY, DISSOLVED
6/27/95	PLGDXX9011			mg/l	FLOURIDE
6/27/95	PLGDXX9011			mg/l	SULFATE
6/27/95	PLGDXX9011			MG/L	CYANIDE, AMENABLE
6/27/95	PLGDXX9011			MG/L	CYANIDE, TOTAL
6/27/95	PLGDXX9011			mg/l	LEAD, DISSOLVED
6/27/95	PLGDXX9011		17.4	ug/l	TOLUENE
6/27/95	PLGDXX9011		186	ug/l	ETHYLBENZENE
6/27/95	PLGDXX9011		225	ug/l	TOTAL XYLENES
6/27/95	PLGDXX9011		231	ug/l	BENZENE
6/27/95	PLGDXX9011	LT	2	ug/l	CHLOROBENZENE
6/27/95	PLGDXX9012		0.4		VOLATILE ORGANIC VAPORS
6/27/95	PLGDXX9012		130	ug/l	ACENAPHTHYLENE
6/27/95	PLGDXX9012		1800	ug/l	NAPHTHALENE
6/27/95	PLGDXX9012	LT	100	ug/l	ACENAPHTHENE
6/27/95	PLGDXX9012	LT	100	ug/l	ANTHRACENE
6/27/95	PLGDXX9012	LT	100	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDXX9012	LT	100	ug/l	BENZO (A) PYRENE
6/27/95	PLGDXX9012	LT	100	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDXX9012	LT	100	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDXX9012	LT	100	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDXX9012	LT	100	ug/l	CHRYSENE

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGDXX9012	LT	100	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDXX9012	LT	100	ug/l	FLUORANTHENE
6/27/95	PLGDXX9012	LT	100	ug/l	FLUORENE
6/27/95	PLGDXX9012	LT	100	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGDXX9012	LT	100	ug/l	PHENANTHRENE
6/27/95	PLGDXX9012	LT	100	ug/l	PYRENE
6/27/95	PLGDXX9012		0.014	mg/l	COPPER,DISSOLVED
6/27/95	PLGDXX9012		1.36	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGDXX9012		22.8	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGDXX9012		26.4	mg/l	IRON, DISSOLVED
6/27/95	PLGDXX9012	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGDXX9012	LT	0.010	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGDXX9012	LT	0.010	mg/l	COBALT, DISSOLVED
6/27/95	PLGDXX9012	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGDXX9012	LT	0.020	mg/l	NICKEL, DISSOLVED
6/27/95	PLGDXX9012	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDXX9012		1572	UMHO/CM	CONDUCTIVITY
6/27/95	PLGDXX9012		6.7		PH-FIELD
6/27/95	PLGDXX9012		829	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDXX9012		948	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDXX9012		12.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGDXX9012	GT	1000	NTU	TURBIDITY
6/27/95	PLGDXX9012	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGDXX9012	LT	0.2	MG/L	FLOURIDE
6/27/95	PLGDXX9012	LT	10.0	mg/l	SULFATE
6/27/95	PLGDXX9012	LT	0.02	MG/L	CYANIDE, AMENABLE
6/27/95	PLGDXX9012		0.23	MG/L	CYANIDE, TOTAL
6/27/95	PLGDXX9012	LT	0.005	mg/l	LEAD, DISSOLVED
6/27/95	PLGDXX9012		11.7	ug/l	TOLUENE
6/27/95	PLGDXX9012		321	ug/l	TOTAL XYLENES
6/27/95	PLGDXX9012		434	ug/l	ETHYLBENZENE
6/27/95	PLGDXX9012		73.4	ug/l	BENZENE
6/27/95	PLGDXX9012	LT	2	ug/l	CHLOROBENZENE
6/27/95	PLGUSH9001	LT	0.1		VOLATILE ORGANIC VAPORS
6/27/95	PLGUSH9001	LT	5	ug/l	ACENAPHTHENE
6/27/95	PLGUSH9001	LT	5	ug/l	ACENAPHTHYLENE
6/27/95	PLGUSH9001	LT	5	ug/l	ANTHRACENE
6/27/95	PLGUSH9001	LT	5	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGUSH9001	LT	5	ug/l	BENZO (A) PYRENE
6/27/95	PLGUSH9001	LT	5	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGUSH9001	LT	5	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGUSH9001	LT	5	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGUSH9001	LT	5	ug/l	CHRYSENE
6/27/95	PLGUSH9001	LT	5	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGUSH9001	LT	5	ug/l	FLUORANTHENE
6/27/95	PLGUSH9001	LT	5	ug/l	FLUORENE
6/27/95	PLGUSH9001	LT	5	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGUSH9001	LT	5	ug/l	NAPHTHALENE
6/27/95	PLGUSH9001	LT	5	ug/l	PHENANTHRENE
6/27/95	PLGUSH9001	LT	5	ug/l	PYRENE
6/27/95	PLGUSH9001		0.020	mg/l	IRON, DISSOLVED
6/27/95	PLGUSH9001		0.024	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGUSH9001		75.5	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGUSH9001	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGUSH9001	LT	0.010	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGUSH9001	LT	0.010	mg/l	COBALT, DISSOLVED
6/27/95	PLGUSH9001	LT	0.010	mg/l	COPPER,DISSOLVED
6/27/95	PLGUSH9001	LT	0.010	mg/l	ZINC,DISSOLVED

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGDXX9004	LT	0.1		VOLATILE ORGANIC VAPORS
6/27/95	PLGDXX9004	LT	5	ug/l	ACENAPHTHENE
6/27/95	PLGDXX9004	LT	5	ug/l	ACENAPHTHYLENE
6/27/95	PLGDXX9004	LT	5	ug/l	ANTHRACENE
6/27/95	PLGDXX9004	LT	5	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDXX9004	LT	5	ug/l	BENZO (A) PYRENE
6/27/95	PLGDXX9004	LT	5	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDXX9004	LT	5	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDXX9004	LT	5	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDXX9004	LT	5	ug/l	CHRYSENE
6/27/95	PLGDXX9004	LT	5	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDXX9004	LT	5	ug/l	FLUORANTHENE
6/27/95	PLGDXX9004	LT	5	ug/l	FLUORENE
6/27/95	PLGDXX9004	LT	5	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGDXX9004	LT	5	ug/l	NAPHTHALENE
6/27/95	PLGDXX9004	LT	5	ug/l	PHENANTHRENE
6/27/95	PLGDXX9004	LT	5	ug/l	PYRENE
6/27/95	PLGDXX9004		0.11	mg/l	NICKEL, DISSOLVED
6/27/95	PLGDXX9004		0.64	mg/l	IRON, DISSOLVED
6/27/95	PLGDXX9004		1.05	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGDXX9004		61.2	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGDXX9004	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGDXX9004	LT	0.010	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGDXX9004	LT	0.010	mg/l	COBALT, DISSOLVED
6/27/95	PLGDXX9004	LT	0.010	mg/l	COPPER,DISSOLVED
6/27/95	PLGDXX9004	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGDXX9004	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGDXX9004		1748	UMHO/CM	CONDUCTIVITY
6/27/95	PLGDXX9004		7.0		PH-FIELD
6/27/95	PLGDXX9004		1020	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGDXX9004		581	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGDXX9004		10.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGDXX9004		510	NTU	TURBIDITY
6/27/95	PLGDXX9004	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGDXX9004	LT	0.2	MG/L	FLOURIDE
6/27/95	PLGDXX9004		183	mg/l	SULFATE
6/27/95	PLGDXX9004	LT	0.02	MG/L	CYANIDE, AMENABLE
6/27/95	PLGDXX9004		0.09	MG/L	CYANIDE, TOTAL
6/27/95	PLGDXX9004	LT	0.005	mg/l	LEAD, DISSOLVED
6/27/95	PLGDXX9004	LT	0.2	ug/l	BENZENE
6/27/95	PLGDXX9004	LT	0.2	ug/l	CHLOROBENZENE
6/27/95	PLGDXX9004	LT	0.2	ug/l	ETHYLBENZENE
6/27/95	PLGDXX9004	LT	0.2	ug/l	TOLUENE
6/27/95	PLGDXX9004	LT	0.2	ug/l	TOTAL XYLENES
6/27/95	PLGDXX9005	LT	0.1		VOLATILE ORGANIC VAPORS
6/27/95	PLGDXX9005	LT	5	ug/l	ACENAPHTHENE
6/27/95	PLGDXX9005	LT	5	ug/l	ACENAPHTHYLENE
6/27/95	PLGDXX9005	LT	5	ug/l	ANTHRACENE
6/27/95	PLGDXX9005	LT	5	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGDXX9005	LT	5	ug/l	BENZO (A) PYRENE
6/27/95	PLGDXX9005	LT	5	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGDXX9005	LT	5	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGDXX9005	LT	5	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGDXX9005	LT	5	ug/l	CHRYSENE
6/27/95	PLGDXX9005	LT	5	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGDXX9005	LT	5	ug/l	FLUORANTHENE
6/27/95	PLGDXX9005	LT	5	ug/l	FLUORENE
6/27/95	PLGDXX9005	LT	5	ug/l	INDENO (1,2,3-CD) PYRENE

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGUSH9001	LT	0.020	mg/l	NICKEL, DISSOLVED
6/27/95	PLGUSH9001	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGUSH9001		929	UMHO/CM	CONDUCTIVITY
6/27/95	PLGUSH9001		7.6		PH-FIELD
6/27/95	PLGUSH9001		604	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGUSH9001		791	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGUSH9001		10.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGUSH9001		416	NTU	TURBIDITY
6/27/95	PLGUSH9001	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGUSH9001		0.78	MG/L	FLOURIDE
6/27/95	PLGUSH9001		218	mg/l	SULFATE
6/27/95	PLGUSH9001		0.20	MG/L	CYANIDE, AMENABLE
6/27/95	PLGUSH9001		0.20	MG/L	CYANIDE, TOTAL
6/27/95	PLGUSH9001	LT	0.005	mg/l	LEAD, DISSOLVED
6/27/95	PLGUSH9001	LT	0.2	ug/l	BENZENE
6/27/95	PLGUSH9001	LT	0.2	ug/l	CHLOROBENZENE
6/27/95	PLGUSH9001	LT	0.2	ug/l	ETHYLBENZENE
6/27/95	PLGUSH9001	LT	0.2	ug/l	TOLUENE
6/27/95	PLGUSH9001	LT	0.2	ug/l	TOTAL XYLENES
6/27/95	PLGUSH9002	LT	0.1		VOLATILE ORGANIC VAPORS
6/27/95	PLGUSH9002	LT	5	ug/l	ACENAPHTHENE
6/27/95	PLGUSH9002	LT	5	ug/l	ACENAPHTHYLENE
6/27/95	PLGUSH9002	LT	5	ug/l	ANTHRACENE
6/27/95	PLGUSH9002	LT	5	ug/l	BENZO (A) ANTHRACENE
6/27/95	PLGUSH9002	LT	5	ug/l	BENZO (A) PYRENE
6/27/95	PLGUSH9002	LT	5	ug/l	BENZO (B) FLUORANTHENE
6/27/95	PLGUSH9002	LT	5	ug/l	BENZO (G,H,I,) PERYLENE
6/27/95	PLGUSH9002	LT	5	ug/l	BENZO (K) FLUORANTHENE
6/27/95	PLGUSH9002	LT	5	ug/l	CHRYSENE
6/27/95	PLGUSH9002	LT	5	ug/l	DIBENZO (A,H) ANTHRACENE
6/27/95	PLGUSH9002	LT	5	ug/l	FLUORANTHENE
6/27/95	PLGUSH9002	LT	5	ug/l	FLUORENE
6/27/95	PLGUSH9002	LT	5	ug/l	INDENO (1,2,3-CD) PYRENE
6/27/95	PLGUSH9002	LT	5	ug/l	NAPHTHALENE
6/27/95	PLGUSH9002	LT	5	ug/l	PHENANTHRENE
6/27/95	PLGUSH9002	LT	5	ug/l	PYRENE
6/27/95	PLGUSH9002		0.079	mg/l	CHROMIUM, DISSOLVED
6/27/95	PLGUSH9002		0.57	mg/l	NICKEL, DISSOLVED
6/27/95	PLGUSH9002		0.92	mg/l	MANGENESE, DISSOLVED
6/27/95	PLGUSH9002		4.27	mg/l	IRON, DISSOLVED
6/27/95	PLGUSH9002		45.0	mg/l	MAGNESIUM, DISSOLVED
6/27/95	PLGUSH9002	LT	0.010	mg/l	BERYLLIUM, DISSOLVED
6/27/95	PLGUSH9002	LT	0.010	mg/l	COBALT, DISSOLVED
6/27/95	PLGUSH9002	LT	0.010	mg/l	COPPER,DISSOLVED
6/27/95	PLGUSH9002	LT	0.010	mg/l	ZINC,DISSOLVED
6/27/95	PLGUSH9002	LT	0.10	mg/l	ALUMINUM, DISSOLVED
6/27/95	PLGUSH9002		2400	UMHO/CM	CONDUCTIVITY
6/27/95	PLGUSH9002		6.7		PH-FIELD
6/27/95	PLGUSH9002		1300	mg/l	TOTAL DISSOLVED SOLIDS(FILTERABLE RESI
6/27/95	PLGUSH9002		133	mg/l	TOTAL SUSPENDED SOLIDS (NON-FILTERABL
6/27/95	PLGUSH9002		10.0	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/27/95	PLGUSH9002		246	NTU	TURBIDITY
6/27/95	PLGUSH9002	LT	0.0002	mg/l	MERCURY, DISSOLVED
6/27/95	PLGUSH9002		0.23	MG/L	FLOURIDE
6/27/95	PLGUSH9002		71.2	mg/l	SULFATE
6/27/95	PLGUSH9002	LT	0.02	MG/L	CYANIDE, AMENABLE
6/27/95	PLGUSH9002	LT	0.02	MG/L	CYANIDE, TOTAL
6/27/95	PLGUSH9002	LT	0.005	mg/l	LEAD, DISSOLVED

Collection Date	Sample Id	Notation	Concentration	Units	Parameter
6/27/95	PLGUSH9002	LT	0.2	ug/l	BENZENE
6/27/95	PLGUSH9002	LT	0.2	ug/l	CHLOROBENZENE
6/27/95	PLGUSH9002	LT	0.2	ug/l	ETHYLBENZENE
6/27/95	PLGUSH9002	LT	0.2	ug/l	TOLUENE
6/27/95	PLGUSH9002	LT	0.2	ug/l	TOTAL XYLENES
6/28/95	PLGUXX9003		120	ug/l	ACENAPHTHYLENE
6/28/95	PLGUXX9003		2.0		VOLATILE ORGANIC VAPORS
6/28/95	PLGUXX9003		890	ug/l	NAPHTHALENE
6/28/95	PLGUXX9003	LT	100	ug/l	ACENAPHTHENE
6/28/95	PLGUXX9003	LT	100	ug/l	ANTHRACENE
6/28/95	PLGUXX9003	LT	100	ug/l	BENZO (A) ANTHRACENE
6/28/95	PLGUXX9003	LT	100	ug/l	BENZO (A) PYRENE
6/28/95	PLGUXX9003	LT	100	ug/l	BENZO (B) FLUORANTHENE
6/28/95	PLGUXX9003	LT	100	ug/l	BENZO (G,H,I,) PERYLENE
6/28/95	PLGUXX9003	LT	100	ug/l	BENZO (K) FLUORANTHENE
6/28/95	PLGUXX9003	LT	100	ug/l	CHRYSENE
6/28/95	PLGUXX9003	LT	100	ug/l	DIBENZO (A,H) ANTHRACENE
6/28/95	PLGUXX9003	LT	100	ug/l	FLUORANTHENE
6/28/95	PLGUXX9003	LT	100	ug/l	FLUORENE
6/28/95	PLGUXX9003	LT	100	ug/l	INDENO (1,2,3-CD) PYRENE
6/28/95	PLGUXX9003	LT	100	ug/l	PHENANTHRENE
6/28/95	PLGUXX9003	LT	100	ug/l	PYRENE
6/28/95	PLGUXX9003				ALUMINUM, DISSOLVED
6/28/95	PLGUXX9003			UMHO/CM	CONDUCTIVITY
6/28/95	PLGUXX9003		8.5	Deg. C	TEMPERATURE-CENTIGRADE (DEGREES C.)
6/28/95	PLGUXX9003			mg/l	FLOURIDE
6/28/95	PLGUXX9003			MG/L	CYANIDE, AMENABLE
6/28/95	PLGUXX9003			MG/L	CYANIDE, TOTAL
6/28/95	PLGUXX9003		134	ug/l	TOLUENE
6/28/95	PLGUXX9003		229	ug/l	TOTAL XYLENES
6/28/95	PLGUXX9003		4080	ug/l	BENZENE
6/28/95	PLGUXX9003		50	ug/l	ETHYLBENZENE
6/28/95	PLGUXX9003	LT	10	ug/l	CHLOROBENZENE